



# ALABAMA DEPARTMENT OF TRANSPORTATION

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Governor

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Transportation Director

January 30, 2024

Mr. Lance LeFleur, Director  
Alabama Department of Environmental Management  
1400 Coliseum Boulevard  
Montgomery, Alabama 36110-2059

Attn: Mr. James Carlson, PE, Water Division

Re: **ALDOT MS4 SWMP Plan**  
NPDES Permit No. ALS000006  
**SWMPP Revision**

Dear Mr. Carlson:

Attached is a revision of the Stormwater Management Program Plan (SWMPP) for the ALDOT MS4 program. The SWMPP addresses the requirements of NPDES Permit No. ALS000006, reissued to ALDOT on September 30, 2019. It is a minor revision of the SWMPP version dated January 30, 2023. SWMPP modifications are explained in the FY 2023 ALDOT MS4 annual report, which is being submitted concurrently under a different cover.

If you should have any questions concerning the revised SWMPP or wish to discuss any of the content in the SWMPP, please contact Dr. Scott Rogers, Environmental Coordination Engineer, at (334) 353-6214.

Sincerely,

Edward N. Austin, PE  
Chief Engineer

ENA/KML/SCB/ASA/SWR

Attachment: SWMPP revision

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**MS4  
STORMWATER  
MANAGEMENT  
PROGRAM  
PLAN**


NPDES Permit No. ALS000006  
October 1, 2019 - September 30, 2024

*Last Updated  
January 30, 2024*



## Certification Statement

I certify under the penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

  
\_\_\_\_\_  
Edward N. Austin, PE  
Chief Engineer

1/26/24  
\_\_\_\_\_  
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*(reserved)*

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# 1 Introduction

## 1.1 MS4 Regulation History

Stormwater management in the more urban areas of the United States has received heightened regulatory attention in the past few decades. When compared with more rural areas, urban areas are, on average, a greater source for more pollutants in greater amounts. Such a pollutant could find its way into stormwater runoff and then be carried to natural surface waters if the pollutant source or stormwater runoff is mismanaged. Also, urban areas contain greater numbers of citizens that may be adversely affected by polluted waters.

In the 1990s, the U.S. Environmental Protection Agency (EPA) began to regulate urban stormwater management under the National Pollutant Discharge Elimination System (NPDES). EPA refers to this regulation in short as the “MS4” program. The acronym “MS4” stands for “Municipal Separate Storm Sewer System.” It is commonly used to describe both (i) a stormwater conveyance system owned by a public entity and (ii) the public entity that owns the system.

EPA issued “Phase I” MS4 regulations in 1990. A “Phase I” MS4 is also referred to as a “medium or large” MS4 and is defined as an incorporated area with a population of 100,000 or greater. Phase I MS4s are required to apply for and maintain NPDES permit coverage in order to manage stormwater according to targeted regulations for larger urban areas.

In 1999, EPA issued “Phase II” MS4 regulations. A “Phase II” MS4, or a “small” MS4, is an area not already under Phase I MS4 regulation meeting the definition of an “Urbanized Area” according to the effective decennial U.S. Census. Urbanized Areas contain at least 50,000 residents and at least 1,000 residents per square mile. Areas outside of Urbanized Areas can also be declared Phase II MS4s by individual permitting authorities (e.g., state regulator). Phase II MS4s are required to apply for and maintain NPDES permit coverage to manage stormwater according to regulations different from those governing Phase I MS4s.

Following the lead of EPA, the Alabama Department of Environmental Management (ADEM) in 1995 began issuing MS4 Phase I individual permits for the major urban areas in Alabama. Five Phase I individual permits in total would eventually be issued for coverage of designated areas near and around Birmingham (NPDES Permit No. ALS000001), Mobile (No. ALS000002), Shelby County (No. ALS000003), Montgomery (No. ALS000004), and Huntsville (No. ALS000005). In 2003, ADEM first issued an MS4 Phase II general permit (No. ALR04XXXX) under which smaller urban areas in the state began to be covered.

The Alabama Department of Transportation (ALDOT) was covered initially under the five Phase I permits as a co-permittee for its MS4 in the Phase I areas defined by those permits and under the Phase II general permit (specifically No. ALR040002) for its MS4 in Phase II areas. But, to better account for the unique characteristics of the ALDOT MS4, ADEM in 2013 issued a comprehensive MS4 individual permit (NPDES No. ALS000006) covering the entire ALDOT MS4 in both Phase I and Phase II areas. Under the 2013 MS4 permit, ALDOT maintained

regulatory compliance, met its stormwater management objectives, and completed a 2016 ADEM MS4 program audit with mostly favorable ratings. Given the effectiveness of ALDOT's stormwater management program under the 2013 permit's coverage, ADEM reissued the permit on September 30, 2019, after making only a small number of substantive modifications to the permit's language. The reissued permit became effective on October 1, 2019, and is set to expire on September 30, 2024. (The 2019 version of the ALDOT MS4 permit is simply referred to as the "Permit" in many places in this document henceforth.)

The map titled "Alabama MS4 Areas & ALDOT Facilities" in Appendix A depicts the areas of the state eligible for Phase I or Phase II regulations as of the issuance of the 2013 ALDOT MS4 permit. The MS4 regulation-eligible areas throughout the state have been redefined in various ways by MS4 permits issued to many public entities throughout Alabama since the 2013 ALDOT MS4 permit issuance, but the redefined regulation-eligible areas likely lie within the 2013 areas with perhaps very few exceptions. For the sake of efficiency, ALDOT will use the 2013 MS4 area delineations as a starting point for determining true MS4 regulation eligibility based on the MS4 permits that are in effect for other public entities.

Some regulation-eligible areas contain individual MS4s that have not been issued permits by ADEM. Thus, these MS4s are not yet officially regulated, and in turn the ALDOT MS4 is not regulated within the boundaries of those MS4s. However, in many cases, ALDOT carries out MS4-applicable activities in regulation-eligible areas without distinguishing between MS4s officially covered under an MS4 permit and other MS4s that are unregulated in order to streamline operations. As a result, ALDOT will often exceed Permit requirements by performing activities in unregulated areas.

## **1.2 ALDOT Organization**

ALDOT is an Alabama state government agency with a wide array of responsibilities in facilitating the transportation of people and goods throughout the state. The breadth of responsibility is apparent in ALDOT's delegation of responsibility to various bureaus and offices and its apportioning of the state geographically into different jurisdictional polygons. This section provides an overview regarding the delegation of responsibility throughout the ALDOT organization and the parties of the ALDOT organization involved in the MS4 program.

The ALDOT central office organization consists of 21 "bureaus" and two "offices." Of these central office parties, the following bureaus are participating directly in the MS4 program during this term of Permit coverage:

- Computer Services Bureau,
- Construction Bureau,
- Design Bureau,
- Equipment, Procurement, & Services Bureau (more concisely referred to as "Equipment Bureau"),

- Maintenance Bureau,
- Materials & Tests Bureau,
- Media & Community Relations Bureau,
- Research & Development Bureau, and
- Training Bureau.

Regarding ALDOT's field offices, ALDOT has divided the state into five "Regions" that operate as local authorities. Each Region is subdivided into two "Areas" to make a total of ten Areas in the state. Eight of the ten Areas contain MS4 regulation-eligible areas. Each Area is further divided into "Districts" ranging from three to six in number. The typical District organization includes the main District office and project offices located at active construction project sites within the District.

The ALDOT organizational structure as it relates to participation in MS4 activities is depicted by a chart in Appendix A. As indicated by the chart, the Transportation Director is the official responsible party for ALDOT operations. However, the Director delegates responsibility to three major branches of the organization led by the Chief Engineer, the Deputy Director of Administration, and the Deputy Director of Operations, individually. The Chief Engineer has authority over the Design, Computer Services, and Research & Development Bureaus. The Media & Community Relations Bureau and Training Bureau report to the Deputy Director of Administration. Under the Deputy Director of Operations are the Construction, Equipment, Maintenance, and Materials & Tests Bureaus along with the five Region sub-organizations consisting of Areas, Districts, and projects. The typical Area sub-organization is similar in setup to that of ALDOT as a whole with groups devoted to roadway design, roadway construction, roadway maintenance, employee training, and other functions necessary in DOT operations.

The ALDOT organizational structure does not communicate the more realistic connections among central office bureaus and field offices that have been established in order to accomplish MS4 program goals. To illustrate the connections more accurately, an internal MS4 coordination diagram is also provided in Appendix A. The complexity of the diagram implies that the MS4 program cannot be implemented properly with ALDOT parties acting in isolation. For many MS4 activities, a particular bureau or field office must interact with at least one other bureau or field office to successfully meet program goals.

The Training Bureau is an example of a bureau that must coordinate significantly with other bureaus and field offices. The Training Bureau assigns to each "large" bureau in the central office a training coordinator who reports directly to the Training Bureau regarding the training of the bureau's employees in order to streamline coordination. (The Design, Maintenance, and Materials & Tests Bureaus are among the bureaus considered "large.") The smaller bureaus have training contacts who are employees of those particular bureaus but are responsible for coordinating with the Training Bureau. All five Regions have at least one training coordinator who is an employee of the given Region but coordinates with the Training Bureau regarding

field office employee training. The ways in which other bureaus and the field offices coordinate with each other will be explained as appropriate going forward in this document.

Given the extensive coordination needed to successfully complete MS4 and other environmental-oriented activities, the Environmental Coordination Section (ECS) of the Design Bureau facilitates internal coordination typically by acting as a liaison between ALDOT parties and facilitates communication with external parties often by acting as the ALDOT point-of-contact and public face of the organization for environmental matters. ECS operates under the following policy that governs ALDOT activities from an environmental perspective:

*While providing a safe, efficient, economically-sound, and environmentally-sound transportation system, it is the policy of the Alabama Department of Transportation to promote the preservation and enhancement of the natural and cultural resources of the State of Alabama*

- *through internal and external communication, coordination, and cooperation, and*
- *by integrating the principles of environmental stewardship, innovation, and compliance into the planning, design, construction, operation, and maintenance of Alabama's transportation facilities.*

To better facilitate internal coordination for MS4-specific matters, ALDOT designates an MS4 point-of-contact for every MS4-participating bureau and Area office. These points-of-contact are listed in Appendix A.

### **1.3 ALDOT Facilities**

ALDOT owns, operates, and maintains ‘transportation facilities’ and ‘support facilities,’ as defined in Part V.Z of the Permit. Approximately 12,000 miles of roadways (consisting of mostly Interstate Highways, U.S. Highways, and Alabama Highways) under ALDOT’s jurisdiction are spread throughout Alabama. ALDOT’s transportation facilities in MS4 regulation-eligible areas are less than 25 percent of those roadways. ALDOT’s support facilities in MS4 areas include its central office complex in Montgomery, five Area offices, eleven District offices, and the Tunnel Office in Mobile. The map in Appendix A (referenced in Section 1.1) depicts the locations of ALDOT transportation and support facilities throughout the state.

Since they are set up as temporary facilities with very little direct environmental impact, project offices are not included in the tally of support facilities. The tracking of construction projects in MS4 areas is discussed in Chapter 5.

### **1.4 Unique Characteristics & Challenges of ALDOT as an MS4**

While ALDOT has maintained an MS4 program since the 1990s, ALDOT’s characteristics as a state DOT versus those of the typical MS4, such as a municipality or a county, have made for unique challenges in the implementation of the ALDOT MS4 program.



The ALDOT MS4 is largely situated alongside ALDOT's transportation facilities, which are linear in contrast to the non-linear area associated with a municipality or a county. ALDOT transportation facilities are very small with respect to the much larger municipalities and counties surrounding them. By extension, ALDOT's transportation facilities are relatively small contributors to watershed stormwater runoff, are relatively small contributors to urban surface water pollution, and contain relatively limited space for the installation of field best management practices (BMPs).

ALDOT has jurisdiction over facilities mostly belonging to one category of land use (i.e., transportation), whereas the typical municipality has jurisdiction over all types of land use including industrial, commercial, and residential. In addition, Section 23-1-40 of the Code of Alabama, 1975, as amended, gives ALDOT specific authority to regulate the construction and maintenance of facilities on its property; ALDOT's authority to regulate other entities performing activities that could impact the quality of stormwater runoff entering or leaving ALDOT property is rather limited.

The widespread nature of ALDOT's facilities poses certain logistical challenges when compared to the more spatially-focused nature of a municipality or a county. In order to perform stormwater management activities for transportation facilities throughout the state, ALDOT must deploy limited resources over greater distances, and such large-scale deployment can require elaborate coordination among the mostly independent bureaus, offices, Regions, Areas, and Districts comprising the ALDOT organization.

The unique characteristics and challenges associated with ALDOT and other state DOTs are further discussed in an American Association of State Highway and Transportation Officials (AASHTO) white paper (Center for Environmental Excellence by AASHTO, 2012) as well as on an EPA Web page concerning stormwater discharges from transportation sources (EPA, 2020).

ALDOT must also account for the varied characteristics of different areas of Alabama:

- **Topography.** Hilly terrain in some northern areas of the state contrasts with the relatively flat terrain in the southern areas of the state. Hilly terrain creates the potential for higher-velocity, channelized stormwater runoff that has to be managed.
- **Soil.** Subsurface soil composition varies widely throughout the state (Mitchell and Loerch, 2008). Some soils are sandy and are more likely to promote stormwater infiltration. Many other soils are clayey, making stormwater infiltration much less feasible.
- **Precipitation.** Mobile and nearby areas experience significantly greater annual rainfall totals on average than do areas of the state to the north (NOAA National Centers for Environmental Information, n.d.), creating the potential for greater stormwater amounts to be managed in and near Mobile.
- **Winter weather.** Northern areas of the state experience winter weather much more frequently than do southern areas (Runkle et al., 2017). Thus, the possible effects of

snow and ice control on surface water quality requires greater attention in the northern areas.

## **1.5 ALDOT MS4 Permit Requirements**

The Permit's requirements largely fall under six minimum control measures that are found in Part II of the Permit:

- Structural Controls
- Public Education & Public Involvement (on Stormwater Impacts)
- Illicit Discharge Detection & Elimination
- Construction Site Stormwater Runoff Control
- Post-Construction Stormwater Management (for New Development & Re-Development)
- Pollution Prevention / Good Housekeeping (for ALDOT Support Facilities)

In addition, Part III of the Permit also contains specific MS4 monitoring requirements.

The requirements of the Permit apply equally to the ALDOT MS4 in the areas of the state covered by some other MS4 Phase I or Phase II permit, as indicated in Part I.A of the Permit. As noted in Section 1.1, ALDOT will often exceed Permit requirements by also performing MS4-applicable activities in unregulated areas in order to streamline operations.

## **1.6 The Stormwater Management Program Plan**

### 1.6.1 Purpose & General Content

ALDOT developed a stormwater management program (SWMP) to address the requirements of the Permit and other MS4 stormwater management objectives, as required by II.A.1 of the Permit. This document is the "Stormwater Management Program Plan" (SWMPP) developed by the ALDOT Design Bureau with the input of the other MS4-participating ALDOT parties; it provides the details of the ALDOT SWMP in accordance with Permit requirement II.A.2. (The SWMPP is often referred to simply as the "Plan" henceforth.)

This Plan version is the fifth revision of the SWMPP developed for the term of the 2019 ALDOT MS4 permit to accommodate Permit item II.C.1. (The initial version of the Plan is dated June 30, 2020, the first four revisions are dated January 29, 2021, April 27, 2021, January 10, 2022, and January 30, 2023, respectively.) Additional revisions of the Plan will be developed as warranted in light of the outcomes of annual program reviews required by Permit item II.C.1 and adjustments to the SWMP that ALDOT considers appropriate.

The Permit in item II.A.2 specifies the content that should be included in the Plan. Following the Permit requirement, the Plan explains the ALDOT MS4 stormwater management activities that are expected, the goals corresponding to the activities for the Permit term, and the intended timeframes for the implementation and completion of activities. Also, the specific ALDOT parties most associated with particular stormwater management activities are indicated as appropriate throughout the Plan. Technically, the ALDOT Transportation Director is responsible for all ALDOT activities, but the parties identified in the Plan more directly influence program outcomes. In addition, signatory authority for the Plan and other documents associated with the MS4 program has been delegated to the Chief Engineer by the Transportation Director.

Maps included in the Plan further satisfy II.A.2. The map in Appendix A (discussed in Sections 1.1 and 1.3) provides an overview of all ALDOT facilities, and maps in Appendix D (discussed in detail in Chapter 4) provide more detailed depictions at local levels. In general, the ALDOT MS4 flanks the ALDOT roads depicted on the maps. As explained in Section 1.1, the MS4 areas depicted on the maps were delineated based on 2013 MS4 permits and will be used as a starting point during this Permit term to determine the parts of the ALDOT MS4 that are actually MS4 regulation-eligible.

### 1.6.2 Annual Reports

ALDOT will submit an MS4 annual report to ADEM by January 31 of each year during which the Permit is in effect, as stipulated by Permit item IV.A.1. The annual report will cover the previous fiscal year (i.e., October 1 – September 30). The MS4 stormwater management activities ALDOT conducted during the previous fiscal year and the progress made toward goals identified in the SWMPP will be explained in the annual report. The outcomes of the annual program review mentioned above in Section 1.6.1 will also be provided in the annual report. Generally, the material included in the annual report will be governed by Permit items IV.A.4 and IV.B. In addition, the annual report will describe and provide rationale for any modifications to the SWMPP that ALDOT deems necessary, in accordance with Permit item II.C.1.

As of this version of the Plan, ALDOT has submitted five annual reports covering activities conducted during Fiscal Years (FYs) 2019, 2020, 2021, 2022, and 2023, respectively. ALDOT submitted both annual reports on time (i.e., by January 31 of the following calendar year).

### 1.6.3 Plan Organization

This chapter of the Plan is serving as general orientation for the reader. With respect to Chapters 2 through 7, each chapter is devoted to one of the minimum control measures listed in Section 1.5. Chapter 8 addresses MS4 monitoring. Chapter 9 provides brief concluding remarks to close the Plan. Appendices A through H provide materials that supplement the narrative supplied in the chapters. The narrative will refer to material in an appendix where appropriate as it did throughout this chapter.

## 1.7 Activities Summary

The activities table in Appendix A summarizes the activities detailed throughout this Plan that ALDOT will employ to meet Permit requirements and other stormwater management objectives. The ALDOT parties associated with the activities are indicated in the table as they are either identified or implied by the narrative in the chapters. The goals ALDOT has set for the activities and the statuses of the activities are also indicated. The table includes the activities related to the SWMP and the Plan themselves described in this chapter.

### References

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## **2 Structural Controls**

### **2.1 Introduction**

As it did throughout the 2013 MS4 permit term, ALDOT in this Permit term will consider structural controls as being structural BMPs for post-construction stormwater management, which are designed to manage possible stormwater runoff flow and volume increases that may result from the new development or re-development of ALDOT-constructed facilities. More specifically, a structural BMP, according to the definition in Part V.Z of the Permit, is “constructed with rigid walls and/or weirs and piped drainage” and utilizes “active or passive treatment and/or mechanical systems for the purpose of treating storm water runoff.”

This chapter focuses on ALDOT’s long-term management of fully operational structural BMPs on ALDOT-constructed facilities, which is needed to satisfy Permit item II.B.1.a. The three major aspects of ALDOT’s management strategy are the development and updating of a structural BMP inventory, conducting regular inspections of structural BMPs, and performing appropriate maintenance on structural BMPs as warranted. Post-construction BMPs are more comprehensively discussed in Chapter 6. Structures that manage stormwater runoff in the ALDOT MS4 but are not primarily intended as BMPs to treat stormwater runoff (e.g., roadside ditches) are separately inspected and maintained under the ALDOT Pollution Prevention / Good Housekeeping program, which is discussed in Chapter 7.

The ALDOT Maintenance Bureau will be responsible for overseeing structural BMP management for ALDOT transportation facilities. The ALDOT Equipment Bureau or an ALDOT Region, as appropriate, will be responsible for overseeing structural BMP management at each ALDOT support facility, unless the oversight is delegated to the Maintenance Bureau.

### **2.2 Inventory of Structural BMPs**

In accordance with Permit item II.B.1.c, ALDOT will keep an inventory of structural BMPs and update it as structural BMPs become fully operational at sites of ALDOT-constructed new development and re-development associated with projects let for bidding after April 1, 2015. (“Fully operational” implies that project construction activities are officially terminated and an ALDOT maintenance authority is officially responsible for BMP operation and maintenance.) As required by Permit item II.B.1.b.1, the locations of fully operational structural BMPs on the inventory will be depicted on maps to be kept on file.

The form ALDOT will use to inventory fully operational structural BMPs (and post-construction BMPs generally) is provided in Appendix F. The form was developed by the ALDOT Maintenance Bureau using the Survey123 application, which will allow for ease of use in the field and compilation of BMP identification information in an electronic database.



### **2.3 Inspection of Structural BMPs**

ALDOT will inspect fully operational structural BMPs at transportation and support facilities at least once every two years, as per Permit item II.B.1.b.2. The Survey123 BMP inspection form developed by the ALDOT Maintenance Bureau can be found in Appendix F; this form meets the requirement of Permit item II.B.1.b.3. Each inspection will be associated with a structural BMP on inventory in the electronic database. Further satisfying Permit item II.B.1.c, BMP inspections will be tracked, and records of the inspections will be kept on file.

### **2.4 Maintenance of Structural BMPs**

Structural BMP maintenance recommendations will be provided based on the findings of BMP inspections or legitimate concerns submitted on an ad hoc basis by ALDOT field personnel or citizens. The recommended maintenance activities will then be scheduled based on relative urgency and resource availability. Maintenance activities may include structural repair, erosion control, vegetation management, drainage repair, sediment/debris removal, soil improvement, inlet maintenance, outlet maintenance, and miscellaneous upkeep; performing these activities as needed will satisfy Permit items II.B.1.b.4 and II.B.1.b.5. BMP maintenance activities performed will be tracked, in accordance with Permit items II.B.1.c and II.B.1.d.2, using completed maintenance work reports. A work report generated after maintenance recommendations for a BMP are made will meet the checklist requirement of Permit item II.B.1.b.3.

### **3 Public Education & Public Involvement**

#### **3.1 Introduction**

The ALDOT Public Education & Public Involvement (PEPI) program is designed to facilitate broader awareness regarding the potential impacts that transportation-related activities can have on natural waters and, by extension, on the health and well-being of the public, which aligns with Permit item II.B.2.a. Target audiences of the PEPI program include those both within and outside of the ALDOT organization. By educating the many citizens of Alabama who use ALDOT transportation facilities and those who perform work on ALDOT facilities (employees and non-employees) about the possible impacts of activities, ALDOT with its PEPI program aims to reduce the amount of pollution that must be managed with field practices. Also, by involving citizens as stormwater management practices are being developed and implemented, the PEPI program allows ALDOT to address public concerns about ALDOT's stormwater management practices more directly. The communication and engagement with the public that the PEPI program intends to achieve is recognized widely as an important tool in successful stormwater management and in other environmental endeavors (National Academies of Sciences, Engineering, and Medicine, 2019).

The PEPI program consists of contributions from a large group of ALDOT MS4-participating parties. This group includes the Media & Community Relations Bureau, Design Bureau, Maintenance Bureau, Construction Bureau, Materials & Tests Bureau, Training Bureau, Research & Development Bureau, Computer Services Bureau, and all five ALDOT Regions. The specific contributions to the PEPI program are explained in this chapter.

#### **3.2 Potential Pollution Sources Addressed**

As required by Permit item II.B.2.b.2, ALDOT has identified specific potential pollutants targeted by the PEPI program. These potential pollutants were identified through soliciting input from ALDOT parties, accounting for the operation of ALDOT facilities, and considering public concerns received by ALDOT over time. The ALDOT parties that jointly identified potential pollutants were the Media & Community Relations Bureau, Design Bureau, Construction Bureau, Maintenance Bureau, Materials & Tests Bureau, and field offices comprising the ALDOT Regions. Field office input was especially important because it provided insight on any significant pollution concerns observed in the field and the concerns of local citizens.

Users of ALDOT facilities largely consist of citizen motorists who travel by way of ALDOT roadways. ALDOT believes the chief source of pollution from motorists using ALDOT roadways is litter, and stormwater is considered the primary means by which litter on the ground in urban MS4s enters receiving waters (EPA, 2019). Therefore, ALDOT focuses its PEPI program with respect to motorists on litter in hopes of reducing the amount of litter that would be carried to receiving waters via ALDOT MS4 discharges.

For ALDOT construction projects, sediment is the primary pollutant of concern, so erosion and sediment control is a major focus of employee and contractor education. Regarding the

maintenance of transportation facilities, herbicide application and other vegetation control practices are addressed in education opportunities for employees and non-employees. At ALDOT support facilities, various toxic chemicals and waste materials are stored, handled, transported, and disposed-of, so employee education prepares ALDOT support facility employees for the management of those materials.

In summary, the PEPI program targets explicitly litter, sediment, herbicides, and chemicals and waste materials as potential pollutants. Moreover, ALDOT goes beyond Permit requirements to conduct many activities in its PEPI program that address pollution potential generally without focusing on a specific pollutant.

The specific activities performed by ALDOT in its PEPI program that meet Permit items II.B.2.b.1, II.B.2.b.3, II.B.2.b.4, II.B.2.c, and II.B.2.d are discussed in sections that follow.

### **3.3 Activities Addressing Potential Pollution Sources**

#### **3.3.1 Litter**

ALDOT facilitates multiple anti-litter efforts targeted for the traveling public. It also sponsors or participates in additional anti-litter efforts facilitated by external organizations.

In 2018, ALDOT began an anti-litter public awareness campaign. The ALDOT Media & Community Relations Bureau facilitates this campaign in partnership with the Alabama Law Enforcement Agency and in collaboration with anti-litter organizations like Alabama People Against a Littered State (PALS) and Keep Alabama Beautiful (KALB). In short, the campaign is centered around a public service announcement (PSA) mechanism intended to remind citizens of the fines incurred (i.e., personal, tangible, monetary consequences) if they are cited for littering by law enforcement. ALDOT is uniquely positioned as the agency that maintains major roadways in Alabama to target with this campaign citizens who may litter while traveling on those roadways. Different versions of a PSA are produced and broadcasted throughout Alabama via television and radio. Social media (e.g., Twitter) and press releases provide additional awareness of the PSA. The 2020 strategic plan for the campaign is included in Appendix C. The TV and radio advertisements with campaign content produced, social media posts related to the campaign, and press releases related to the campaign will be tracked.

Signage is another major way ALDOT communicates anti-litter messages to the traveling public. To discourage motorists from littering, ALDOT developed signs with messages such as “Please Do Not Litter” and “Keep Alabama the Beautiful” and other signs informing motorists of littering fines. Examples of anti-litter signs developed are pictured in Appendix C. Signs are posted along ALDOT roadways as well as at rest areas (typically on trash receptacles discussed in Chapter 7). As resources allow, ALDOT may concentrate sign deployment in specific areas where ALDOT or the public-at-large observes litter frequently in significant quantities. In addition, signs targeting ALDOT employees are posted at multiple ALDOT offices. In all, ALDOT anti-litter signs deployed throughout Alabama number in the hundreds. The number of active anti-litter signs posted is tracked, and the total number of signs posted in each ALDOT Area will be provided in annual reports. The ALDOT Maintenance Bureau oversees anti-litter

sign deployment and tracking, as well as the implementation and tracking of the other anti-litter efforts discussed below.

ALDOT also, in coordination with ADEM, deploys signage to notify motorists that they are entering an important watershed. Appendix C provides photographs of example watershed boundary signs and the initial watershed boundary sign deployment plan. Deployment of signs will be tracked.

ALDOT will partner with at least one anti-litter organization throughout the Permit term. ALDOT has partnered with PALS since 1988 and is currently a sustaining corporate sponsor of PALS. The formal agreement in effect as of the writing of this version of the Plan is provided in Appendix C. Through the agreement, ALDOT can contribute up to \$295,000 per fiscal year to fund PALS activities; ALDOT tracks the funds provided during each fiscal year to support PALS. By contributing funding, ALDOT is supporting volunteer litter pickup programs overseen by PALS, including the following:

- **Adopt-a-Mile.** Through this program, hundreds of individual miles of U.S. highways, Alabama highways, and county roads have been adopted by hundreds of volunteer groups that pledge to remove litter from the roadway. ALDOT, specifically the Maintenance Bureau, is directly involved in the facilitation of this program by providing logistics (e.g., trash bags) for pickup events, providing removal and disposal of litter collected, erecting signage on a U.S. highway or an Alabama highway that notifies motorists of the volunteer group that has adopted a mile in question, and processing adoption applications submitted by potential volunteer groups. To measure the public's participation in the Adopt-a-Mile program, the groups that apply to participate and the active miles adopted throughout the state are tracked by the Maintenance Bureau.
- **Adopt-a-Stream.** This program focuses volunteer group efforts on removing litter from adopted locations where streams cross U.S. highways, Alabama highways, and county roads. Hundreds of groups participate in this program and protect hundreds of stream crossings. ALDOT erects signage notifying motorists of the volunteer group that has adopted a particular stream crossing if the road crossing the stream is a U.S. highway or an Alabama highway.
- **Adopt-an-Area.** Volunteer groups adopt discrete areas, such as city parks and schoolyards, through this program and pledge to remove litter from the adopted areas.
- **"Don't Drop It On Alabama" Spring Cleanup.** PALS encourages and facilitates local litter cleanup efforts for any Alabama community or county that wishes to participate during April of each year. Typically, dozens of communities participate, and hundreds of tons of litter are collected across the state.
- **Alabama Coastal Cleanup.** This cleanup effort is held by PALS annually on the third Saturday in September. In recent years, thousands of volunteers clean trash from coastal and waterway zones in Mobile and Baldwin Counties as well as from watersheds beyond those counties that drain water to coastal areas.

- Alabama Clean Campus Program. This program provides a vehicle for schoolchildren at hundreds of Alabama schools to actively participate in litter control on their school grounds. PALS makes available a “Clean Campus Coordinator” to participating schools and holds the annual Statewide Clean Campus Competition as further incentive for children to participate earnestly.

With respect to activities for which logistical support is not provided directly by ALDOT, PALS provides logistical support using funding contributed by ALDOT and other organizations.

To educate the public more broadly, PALS also maintains a Web site and produces brochures, PSAs, and a quarterly newsletter. An example of the quarterly newsletter is provided in Appendix C.

ALDOT also maintains a formal agreement with KALB; the agreement in effect as of the writing of this version of the Plan is provided in Appendix C. Given its emphasis on local-level engagement, KALB has a large network of “affiliates” spread throughout Alabama. The affiliate network consists of volunteer citizen groups, private organizations in local communities, municipalities, and counties. Some affiliates take the initiative to request participation in KALB; others are recruited by KALB. Recruiting can be motivated by the demand for better litter control for some specific locality. Many affiliates are located within MS4 areas, which is not surprising given heightened trash concerns in more urban areas. A list of affiliates from the KALB Web site is provided in Appendix C.

Local litter pickup events are common among KALB affiliates. One event in which most affiliates participate every year is the Great American Cleanup. During the Great American Cleanup, participating KALB affiliates hold hundreds of individual litter pickup events, attracting thousands of adult and student volunteers that collect thousands of bags of litter. KALB also makes available programs like “CleanYOURBlock,” designed to target smaller areas like neighborhoods, and the Cigarette Litter Prevention Program. In addition, KALB has its own versions of Adopt-a-Mile and Adopt-a-Stream as well as Adopt-a-Park (similar in purpose to the PALS Adopt-an-Area program).

From a broader education standpoint, KALB facilitates a statewide educational campaign through traditional, digital, and social media. KALB maintains a Web site and a Facebook account for communication with the public. It also produces billboards and PSAs. Moreover, some local affiliates pursue in-person education opportunities like school talks and lunch-and-learn events.

Per its agreement with KALB, ALDOT provides up to \$250,000 per fiscal year to fund KALB activities; the actual funding provided each year is tracked. ALDOT also provides most of the logistical support for litter pickup activities.

The ALDOT Maintenance Bureau reviews the activities conducted by the anti-litter organizations ALDOT supports. Both PALS and KALB are required per the respective agreements with ALDOT to report in some form expenses and the activities facilitated



corresponding to those expenses. Outcomes of activity reviews are summarized in annual reports.

### 3.3.2 Sediment

ALDOT actively encourages as well as provides erosion and sediment control (ESC) education through the Qualified Credentialed Inspector (QCI) program. Construction site inspectors and other contractor representatives are required by contract to obtain and maintain QCI certification. In addition, ALDOT encourages (and requires as needed) its employees to undergo QCI training for the sake of informed contractor oversight or for general orientation purposes. QCI certification is initially obtained by participating in an eight-hour training course conducted by an ADEM-approved provider. The ALDOT Construction Bureau facilitates a four-hour QCI recertification training course annually that is attended by hundreds of people that include ALDOT employees and contractors along with ADEM employees, county representatives, municipal representatives, and other interested parties. The participants must pass a quiz after the training in order to be recertified. The particulars of QCI training are also discussed in Chapter 5.

The employees participating in QCI initial certification training from a third party, the QCI recertification training sessions facilitated by ALDOT, and the ALDOT employees undergoing QCI recertification training are tracked by the ALDOT Training Bureau. The non-ALDOT individuals participating in QCI recertification training are tracked by the Construction Bureau.

In addition to encouraging QCI training, ALDOT encourages participation in the Certified Professional in Erosion and Sediment Control (CPESC) program facilitated by Envirocert International, Inc. Numerous ALDOT employees participate in the CPESC course for enrichment purposes or to earn the certification. Employees participating in the CPESC course are tracked in the way described in Section 3.6.2 below.

ALDOT plays an integral role in the recommendation of erosion and sediment control practices for the professional community. An ALDOT representative sits on the steering committee of the Alabama Erosion and Sediment Control Program facilitated by the Alabama Soil and Water Conservation Committee (SWCC). The main outcome of the program is the ongoing development of the *Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas* (SWCC, 2018). ALDOT's representation on the steering committee is tracked as significant participation in a professional organization in the manner described in Section 3.5.4 below.

To address existing sedimentation concerns, usually beyond ALDOT property boundaries, ALDOT has participated in stream restoration projects in partnership with other watershed constituents. Participation varies greatly with the time and resources available to ALDOT. The ALDOT Design Bureau tracks any restoration activity supported.

### 3.3.3 Herbicides

Regarding herbicide and other aspects of vegetation control, the ALDOT Maintenance Bureau coordinates vegetation management training for employees and non-employees involved in the maintenance of ALDOT facilities. Vegetation management training is designed to meet the requirements of the Pesticides General Permit (NPDES No. ALG870000) and the ALDOT-developed Pesticide Discharge Management Plan.

A key component of the vegetation management training program is a comprehensive, one-day vegetation management training course. Course sessions are facilitated at different locations throughout the state. It is designed for ALDOT employees, but the course is often attended by others, such as contractors and representatives from other MS4s. Hundreds of ALDOT employees and others attend the course each year. A course session can consist of speakers from ALDOT, regulatory agencies, industry, and academia. The agenda of the course is approved by the Alabama Department of Agriculture & Industries (ADAI) for educational credit toward renewal of the “Commercial Applicator” certification. An example of an agenda from a vegetation management training course session and a crossword puzzle used during the course to reinforce learning are provided in Appendix C. The sessions of the vegetation management training course held and the employees attending particular sessions are tracked by the ALDOT Training Bureau; non-ALDOT participants in the course are tracked by the Maintenance Bureau.

Another component of the vegetation management training program is a newsletter distributed multiple times each year. A given newsletter may provide a review of application practices as appropriate for the season, information on upcoming events, updates regarding equipment, information about invasive plant species, or other information of interest. An example of the newsletter can be found in Appendix C. The newsletters distributed are tracked by the ALDOT Maintenance Bureau.

The Commercial Applicator certification requires passing of an examination administered by ADAI. To better facilitate certification of ALDOT herbicide applicators, ALDOT offers a review course for the examination. The sessions of this course held and the employees participating in particular sessions are tracked by the Training Bureau.

ALDOT herbicide applicators are encouraged to attend the Alabama Vegetation Management Society annual meeting in order to supplement training. In fact, approximately 75 percent of ALDOT Commercial Applicators attend the meeting each year. Employee attendance of the Alabama Vegetation Management Society annual meeting is tracked as part of ALDOT employee participation in professional events, which is discussed in Section 3.6.1.

ALDOT’s vegetation management training opportunities are also discussed in Chapter 7.

### 3.3.4 Chemicals & Waste Materials

Several training opportunities are offered and required for ALDOT support facility personnel in order to promote proper management of materials. Training related to the Spill Prevention, Control, and Countermeasure (SPCC) Plan for a given support facility is usually the most

comprehensive of such opportunities. Key SPCC Plan training topics include regulations for storage containers, secondary containment, tank inspections, spill reporting, and spill cleanup. Support facility personnel who have duties involving potentially hazardous materials must undergo this training within six months of assignment to those duties and then participate in annual reviews of the training.

More specific opportunities include universal waste training and general hazardous material awareness training in which ALDOT Area “environmental coordinators” participate. Universal waste training covers accumulation time considerations, maintenance of records, proper storage conditions, and disposal methods. General hazardous waste training covers hazardous materials recognition, toxicity of materials, correcting mismanagement of materials, and spill responsibilities. In addition, employees participating in Globally Harmonized System (GHS) and Hazardous Waste Operations and Emergency Response (HAZWOPER) training receive environmental management-related training as a secondary benefit.

Samples of training materials for SPCC training, universal waste training, hazardous material training, and GHS training are provided in Appendix C.

The ALDOT Materials & Tests Bureau accounts for the training of support facility personnel. The attendance of employees participating in any type of official support facility good housekeeping training and the particular training courses conducted are tracked by the Materials & Tests Bureau for the ALDOT central office complex and by the appropriate field offices of ALDOT Regions for other support facilities.

Support facility good housekeeping employee training is discussed in Chapter 7 as well.

### **3.4 Activities Addressing General Stormwater & Environmental Matters**

ALDOT plays substantial roles in other educational activities more broadly related to stormwater management and the environment-at-large.

#### **3.4.1 Youth Education**

As opportunities arise and employee availability allows, ALDOT participates in various youth education activities. For example, ALDOT employees participate as instructors and supporting staff in water festivals held for elementary school students. At the typical water festival, students learn about the water cycle, water treatment, and other concepts related to drinking water; concepts covered at a water festival are at least tangentially related to stormwater management. ALDOT has participated in water festivals in Montgomery County, Mobile County, Baldwin County, Escambia County, Atmore, Gadsden, and other locations. Other youth education opportunities have included miscellaneous talks at schools and colleges throughout Alabama as well as the tours of the Mobile Tunnel conducted for thousands of schoolchildren each year. The ALDOT Media & Community Relations Bureau, Design Bureau, Maintenance Bureau, and field offices comprising the ALDOT Regions track the participation of their employees in youth education activities.

### 3.4.2 Academic Research Support

ALDOT supports contributions to the stormwater management body-of-knowledge by funding university research on stormwater management practices. Research findings are often published in peer-reviewed journal articles, presented at conferences, or reported to the professional community in other manners. In addition to the educational benefits for the professional community, research outcomes inform new ALDOT practices and modifications to existing practices. The stormwater management-applicable research funded typically relates to erosion and sediment control or vegetation management. Most notably, ALDOT funds a multitude of research activities at the Auburn University Erosion and Sediment Control Testing Facility. The ALDOT Research & Development Bureau tracks academic research projects conducted for MS4 purposes along with the funding provided for those projects.

## **3.5 Interaction with the Community**

### 3.5.1 Online Mechanisms

ALDOT uses its online presence to communicate with the public and encourage involvement from the public.

The ALDOT Environmental Information Web page is a source of assorted stormwater management-related information readily available to the public. (The page is located at <https://www.dot.state.al.us/programs/Environmental.html> as of this version of the Plan.) The page serves as an online hub for the environmental activities ALDOT performs and facilitates. When visiting the page, a citizen can access ALDOT's overarching environmental policy (stated in Chapter 1), find information about anti-litter organizations like PALS and KALB, learn about an array of recent ALDOT environmental accomplishments, connect to ALDOT parties involved in environmental activities, and learn how to share their environmental concerns (including those about the ALDOT MS4 program and the SWMPP specifically) with ALDOT. A link on the page takes the citizen to an MS4-specific page where they can find comprehensive information about ALDOT's MS4 program (including the SWMPP and the most recent annual report, in accordance with Permit item II.B.2.d). The citizen can access the Environmental Information Web page easily through the ALDOT homepage (<http://www.dot.state.al.us>). The page (or a suitable replacement) will be maintained throughout the Permit term. The ALDOT Design Bureau and Computer Services Bureau manage page content.

The specific means by which citizens share environmental concerns is the "Environmental Concern Submission Form." Citizen concerns are received and tracked by the ALDOT Design Bureau. If a submission is valid, it is distributed to an appropriate ALDOT party for any needed follow-up action. The Environmental Concern Submission Form is an important tool in the ALDOT PEPI program, but it also serves in promoting the reporting of possible illicit discharges (discussed in Chapter 4), construction site discharge concerns (discussed in Chapter 5), and concerns regarding the other control measures of the MS4 program. A citizen can access the Environmental Concern Submission Form through the Environmental Information Web page, as discussed above, or directly through the ALDOT homepage.

ALDOT's use of Twitter to advance public awareness regarding MS4-applicable matters and other matters has grown significantly in recent years. The Twitter accounts of local ALDOT offices in the ALDOT Southwest Region (specifically Mobile Area), West Central Region, and East Central Region have attracted thousands of followers and are posting dozens of environmentally-relevant messages annually. Twitter has been a tool in the ALDOT anti-litter public awareness campaign discussed in Section 3.3.1. Appendix C provides a sample of some of the PEPI-applicable messages posted. The MS4-applicable messages posted on Twitter will be tracked by the ALDOT field offices that post them.

### 3.5.2 Interaction with Citizens at the Local Level

ALDOT proactively communicates with citizen groups regarding stormwater/environmental aspects of ALDOT work. The communication helps ALDOT to understand the expectations and concerns of the public so that they can be taken into account before work begins or as work progresses. Community outreach group meetings take place regularly for ALDOT projects of public concern such as the Birmingham Northern Beltline, the Coliseum Boulevard Plume (Montgomery), and the Capital City Plume (Montgomery). (ALDOT's role in the Capital City Plume project is collaboration-only through membership in the organization managing the project.) ALDOT participation in such community outreach group meetings is tracked by the ALDOT Media & Community Relations Bureau.

Besides the online material discussed in Section 3.5.1, ALDOT owns other Web sites dedicated to specific public involvement efforts. Web sites for the Birmingham Northern Beltline project ([www.betterbeltline.org](http://www.betterbeltline.org)) and the Coliseum Boulevard Plume project ([www.coliseumboulevardplume.com](http://www.coliseumboulevardplume.com)) are key involvement mechanisms that inform the public of recent news concerning the projects, ALDOT points-of-contact, community outreach group meeting outcomes, and opportunities to become further involved.

The Web sites also invite citizen reports of concerns by providing hotlines or reporting tools similar to the Environmental Concern Submission Form (discussed in Section 3.5.1). In the case of the Birmingham Northern Beltline, meetings are held, as warranted, with central office and local field office personnel in attendance in part to address citizen concerns promptly.

ALDOT maintains dialogue with citizen environmental advocacy groups associated with waterbodies and watersheds throughout Alabama. Most notably, ALDOT collaborates with the Cahaba River Society and other members of the Alabama Stormwater Partnership regarding ALDOT's MS4-relevant stormwater management activities. Dialogue takes place by way of in-person meetings, conference calls, and e-mail exchanges.

While the online Environmental Concern Submission Form is the official mechanism for submitting an environmental concern to ALDOT, some citizens choose to express concerns directly to ALDOT personnel, often assigned to local field offices, by phone or in person. When a concern is received in such a way, ALDOT personnel make a good-faith effort to address the concern or notify more appropriate personnel of the concern.

### 3.5.3 Interaction with Other MS4s

Since ALDOT owns and has control of only a small amount of property in a given watershed, ALDOT understands the importance of establishing relationships with neighbor MS4s for effective watershed stormwater management to meet mutual goals, in line with Permit item II.F.1.b. ALDOT coordinates and collaborates with other MS4s in various ways. A key example of collaboration is the One Clean Mobile Partnership (incorporated into the Litter-Free Mobile Task Force) between the ALDOT Southwest Region and the City of Mobile that has yielded multiple successful activities, such as the Spring Hill Avenue Litter Cleanup (first held in 2016). Also, ALDOT has cooperative maintenance agreements with local municipalities (e.g., City of Montgomery, City of Huntsville) and counties (e.g., Etowah County) so that field offices in ALDOT Regions and neighbor MS4s can work jointly and more efficiently with respect to litter pickup and other roadway maintenance activities.

ALDOT's participation in the Alabama Stormwater Association (ASA) has provided numerous opportunities for collaboration with MS4s located throughout Alabama. ALDOT employees have served on the ASA Board of Directors since ASA's establishment in 2017, and ALDOT contributes to stormwater-related connection in ASA by (i) maintaining a comprehensive contact list of Alabama stormwater professionals and (ii) facilitating or co-facilitating seminars for continuing education and professional networking.

The ALDOT Design Bureau, ALDOT Maintenance Bureau, or a field office in an ALDOT Region, as applicable, tracks each effort in which ALDOT coordinates or collaborates significantly with another MS4.

### 3.5.4 Service in Professional Organizations

In addition to ALDOT's roles in the Alabama Stormwater Association described in Section 3.5.3, ALDOT employees serve in integral roles in many professional organizations that represent public environmental interests. ALDOT employees often hold elected or appointed positions in the administrations of organizations, are members of organization committees and subcommittees, and contribute significantly to individual activities. The International Erosion Control Association (IECA) and the American Association of State Highway & Transportation Officials (AASHTO) are among the organizations at the national/international level in which ALDOT employees have served. The Alabama Chapter of the Soil & Water Conservation Society (SWCS-AL) and the Alabama Vegetation Management Society (AVMS) are examples at the state level. Also, ALDOT has worked with more local organizations, such as the Choccolocco Creek Watershed Alliance, in significant ways. The applicable ALDOT party will track the significant participation by any of its employees in the efforts of professional organizations.

## **3.6 Education of Employees & Others**

### 3.6.1 Professional Events

ALDOT employees participate in numerous conferences, seminars, workshops, and other professional meetings on a regular basis in order to both learn from and contribute to the evolving body-of-knowledge concerning stormwater management. At the national/international level, ALDOT employees have participated in such events facilitated by EPA, IECA, AASHTO, and other well-established organizations. At the state level, ADEM, SWCS-AL, and various other organizations have hosted events in which ALDOT participates. ALDOT also hosts its own professional events in which ALDOT employees and other interested parties (e.g., contractors, regulatory agencies, other MS4s) participate. Key examples are annual conferences like the Pre-Construction Conference, Construction & Materials Engineers' Conference, and Maintenance Management Meeting. The significant professional educational events attended by ALDOT employees and the numbers of employees attending those events are tracked by the ALDOT Training Bureau.

### 3.6.2 Training Courses

ALDOT's robust employee training courses include those mentioned above: QCI training (discussed in Section 3.3.2 and in Chapter 5), vegetation management training (discussed in Section 3.3.3 and in Chapter 7), support facility good housekeeping training (discussed in Section 3.3.4 and in Chapter 7), and other courses associated with stormwater management that cannot be wholly compartmentalized according to target pollutant. Such an additional course is the Certified Professional in Municipal Stormwater Management (CPMSM) certification course, which requires employees to understand the goals and current practices of MS4 stormwater management. Also, employees take advantage of online courses, such as Web seminars facilitated by organizations (e.g., EPA, IECA, AASHTO). Employees participate in online courses as groups or as individuals on a more informal or impromptu basis. The tracking of QCI training, vegetation management training, and support facility good housekeeping training courses is according to ways described in sections above. Other courses in which ALDOT participates are noted in annual reports, as appropriate.

### 3.6.3 Internal Awareness Mechanisms

ALDOT implements mechanisms for fostering employee awareness of the goals and activities of its MS4 program. For instance, the ALDOT Design Bureau sends memorandums to other MS4-participating parties annually, or more frequently when warranted, to request review of MS4 program activities (as required by Permit item II.C.1), to coordinate annual report data collection, to provide updates regarding progress toward meeting Plan goals, or to remind specific parties about upcoming activity deadlines. An example memorandum is provided in Appendix C. Other mechanisms can include ad hoc internal MS4 coordination meetings and annual meetings attended by construction stormwater coordinators assigned to the Construction Bureau and field offices comprising ALDOT Regions. The Design Bureau, Construction Bureau, and Maintenance Bureau, as applicable, track the internal MS4 awareness mechanisms employed.

### 3.6.4 Tracking Employee Training

As implied by discussion above, most employee training tracking is handled by the ALDOT Training Bureau. The Training Bureau coordinates training and other education activities for ALDOT employees stationed at the central office and at field offices statewide. ALDOT is one of the few Alabama state agencies with a centralized training office with the sole purpose of accounting for employee training. The annual ALDOT training budget typically exceeds \$3.5 million, which is larger than most other DOT budgets in the Southeast U.S.

The Training Bureau relies on extensive coordination within the ALDOT organization in order to account for the training needs of employees and to track the training activities in which employees participate. As explained in Chapter 1, the Training Bureau assigns to each “large” bureau in the central office a training coordinator who reports directly to the Training Bureau regarding the training of the bureau’s employees in order to streamline coordination. The smaller bureaus have training contacts who are employees of those particular bureaus but are responsible for coordinating with the Training Bureau. All five Regions have at least one training coordinator who is an employee of the given Region but coordinates with the Training Bureau regarding field office employee training.

To assist in the tracking, the Training Bureau developed human capital management (HCM) software in-house. Activities are identified as being MS4-applicable using a comprehensive list of keywords generated by MS4-participating ALDOT parties and are flagged in the HCM system for more effective tracking. Activity specifics (e.g., name of activity, date held, duration) and the employees attending particular activities are the data types tracked by the HCM system.

It is more sensible, however, to track some employee training outside of the Training Bureau. Many training activities at the field office level, such as toolbox/tailgate talks, are informal or impromptu in nature, given the challenge of calling many employees away from their duties in the field at one time for a formal course. The necessary flexibility of this training approach would make it difficult for the Training Bureau to manage training records from afar, which is why, as discussed in Section 3.3.4, support facility good housekeeping training is tracked at the field office rather than by the Training Bureau.

### **References**

Alabama Soil and Water Conservation Committee. (2018). *Alabama handbook for erosion control, sediment control and stormwater management on construction sites and urban areas*, Alabama Soil and Water Conservation Committee, Montgomery, AL.

National Academies of Sciences, Engineering, and Medicine. (2019). *Environmental engineering for the 21st century: Addressing grand challenges*, The National Academies Press, Washington, DC.

U.S. Environmental Protection Agency. (2019). “The Clean Water Act and trash-free waters.” *Trash-free waters*, <<https://www.epa.gov/trash-free-waters/clean-water-act-and-trash-free-waters>> (June 15, 2020).



## **4 Illicit Discharge Detection & Elimination**

### **4.1 Introduction**

The ALDOT Illicit Discharge Detection & Elimination (IDDE) program is designed to promote, to the maximum extent practicable, the detection of possible illicit discharges on ALDOT property and the addressing of possible illicit discharges appropriately given ALDOT's capabilities and limited legal authority. Prevention measures are part of the IDDE program along with methods to identify surface waters significant enough to warrant IDDE practices, identify significant locations of potential discharge into those surface waters, periodically screen those locations of potential discharge, and address reports from citizens regarding possible illicit discharge. This chapter presents detailed discussion on these components of the IDDE program.

### **4.2 Non-Stormwater Discharge Policies & Procedures**

With the intention to prevent illicit discharges and to satisfy Permit item II.B.3.a.2, the ALDOT Maintenance Bureau developed overarching policies to communicate the prohibition of the discharge of "qualifying" non-stormwater to the ALDOT MS4 as well as procedures to hold accountable, within the bounds of ALDOT legal authority, any entity or individual that discharges qualifying non-stormwater. Those policies and procedures follow:

- ALDOT does not allow, to the extent of its authority granted by State law (specifically under Section 23-1-40 of the Code of Alabama, 1975, as amended), "qualifying non-stormwater discharge" onto its property by others. A "qualifying non-stormwater discharge" is defined by ALDOT as a discharge not composed entirely of stormwater runoff that does not fit a category explicitly addressed in 40 CFR 122.26(d)(2)(iv)(B)(1).
- ALDOT will notify all entities or individuals applying for or that are required to apply for drainage structure permits (Form MB-07) or grading and landscaping permits (Form MB-05) of this policy. (Further discussion regarding the notification of third parties performing work on ALDOT property can be found in Chapter 5. Forms MB-05 and MB-07 are provided in Appendix D.)
- Should ALDOT become aware of a possible non-stormwater discharge, ADEM will be notified. The notification will include observations made regarding the possible discharge, the location of the possible discharge, and appropriate ALDOT staff contact information. If a particular entity or individual is suspected to be accountable for the possible qualifying non-stormwater discharge, ALDOT will inform that entity or individual, if feasible, about the possible discharge and ALDOT's obligation to notify ADEM. (Section 4.6 provides details about ALDOT's notification procedures.)

Of course, the policies and procedures cannot completely prevent all illicit discharges from occurring. The remainder of this chapter is devoted to ALDOT's strategy for detecting and addressing possible illicit discharges.

### 4.3 Inventory of ALDOT MS4 Major Outfalls

Points of potentially significant, channelized stormwater runoff discharge into Waters of the State (i.e., “major outfalls”) are accounted-for on ALDOT facilities by maintaining the ALDOT Major Outfall Inventory. (A specific definition of “major outfall” can be found in Part V.Z of the Permit.) ALDOT undertook a comprehensive major outfall inventory effort during the 2013 MS4 permit term. The major outfalls identified during that effort made up the ALDOT Major Outfall Inventory at the start of the Permit term. The inventory objective for the Permit term is to update the ALDOT Major Outfall Inventory in a surgical manner.

The ALDOT facilities in each MS4 area will be evaluated to determine if any location not studied during the 2013 MS4 permit term should be studied because a facility in question is a new, ALDOT-constructed facility, significant drainage work was performed on the facility, or the facility is now considered MS4 regulation-eligible. Any additional, field-verified major outfall identified during an ad hoc location study will be added to the ALDOT Major Outfall Inventory.

In some cases, an ALDOT facility is no longer under ALDOT jurisdiction or is no longer considered eligible for MS4 regulation. ALDOT will remove major outfalls associated with such facilities from the inventory. As noted in Chapter 1, the MS4 areas delineated in 2013 will be used as a starting point for determining a facility’s MS4 regulation eligibility; ALDOT will examine facilities on a case-by-case basis to determine if regulation eligibility still applies under MS4 permits in effect.

ALDOT depicts the locations of identified major outfalls on the inventory on maps, as required by Permit item II.B.3.a.1. The locations of major outfalls depicted on the maps in Appendix D are current as of this version of the SWMPP. Those maps will continue to be updated throughout the Permit term, as appropriate. Map updates will be explained and provided in annual reports, in accordance with Permit item II.B.3.b.4.

With respect to locations not previously studied, ALDOT considers a search for major outfalls warranted at a location on a transportation facility where a roadway intersects an identified Water of the State. A search for major outfalls is warranted at an ALDOT support facility if a Water of the State is present on the support facility’s property.

ALDOT identifies Waters of the State for the purposes of its MS4 program as being

- waters depicted on USGS topographic maps (including streams, lakes, reservoirs, bays, and estuaries) and verified by ALDOT in the field during a major outfall search,
- waters named explicitly or given a special designation (including 303(d), TMDL, Outstanding Alabama Water, Outstanding National Resource Water, and Treasured Alabama Lake) by ADEM or EPA, and
- waters ALDOT considers as meeting the definition of a Water of the State given in Section 22-22-1(b)(2) of the Code of Alabama, 1975, as amended.

The ALDOT Maintenance Bureau will carry out major outfall inventory activities for transportation facilities, and the ALDOT Equipment Bureau or a particular ALDOT Region, as appropriate given the specific location in question, will carry out inventory activities for support facilities, unless support facility inventory activities are delegated to the Maintenance Bureau.

The forms ALDOT uses for major outfall inventory are provided in Appendix D. One form is for transportation facilities, and the other form is for support facilities. These forms are electronic and can be completed in the field, which makes outfall data collection and the compilation of the ALDOT Major Outfall Inventory more efficient.

#### **4.4 Major Outfall Dry-Weather Screening**

Major outfalls under MS4 regulation as of the effective date of the Permit will undergo dry-weather screening at least once during the five-year Permit term, as required by Permit item II.B.3.a.4. If a major outfall is identified as being located in a “priority area,” the outfall may be screened at a greater frequency determined by ALDOT. As of this version of the Plan, no ALDOT major outfall lies in a “priority area.”

The ALDOT Maintenance Bureau developed an indicator strategy, as required by Permit item II.B.3.a.6, that relies on sensory observations made at a major outfall location by screening personnel to indicate the possible presence of an illicit discharge. Guidance developed with EPA support (Brown et al., 2004) relates such sensory observations to particular types of non-stormwater discharge. In addition to inferences about the type of discharge, water quality inferences, such as the broad pH range and a reasonable estimate of the total dissolved solids concentration of the discharge, can be made from the sensory observations. Other links between sensory observations and type of discharge are more intuitive. For example, the smell of sewage and the sight of sewage floatables like toilet paper would be strong evidence of a sanitary sewer overflow. If the resources available allow, ALDOT may quantitatively measure water quality parameters (e.g., pH, conductivity, ammonia concentration) to supplement the sensory observations. If any indicator of a possible illicit discharge is found, the screening personnel will attempt to trace the discharge, as required by Permit item II.B.3.a.5, to its source or at least to the ALDOT property boundary. This strategy provides important data for initiating a follow-up investigation by ALDOT, ADEM, or an adjacent MS4, as appropriate.

The ALDOT Major Outfall Screening Form (provided in Appendix D) is used to collect indicator data. Brown et al. (2004) encourages the adaptation of the “Outfall Reconnaissance Inventory (ORI) Field Sheet” according to the particular characteristics and IDDE objectives of an MS4. Thus, the ALDOT Major Outfall Screening Form is an adaptation of the ORI Field Sheet with more focus on sensory observations.

The ALDOT Maintenance Bureau will be responsible for the execution of dry-weather screening for ALDOT transportation facilities, and the ALDOT Equipment Bureau or a particular ALDOT Region, as appropriate, will be responsible for the execution of screening for support facilities, unless screening is delegated to the Maintenance Bureau.

#### **4.5 Citizen Discoveries of Possible Illicit Discharges**

The participation of the general public is as important – if not more important – than ALDOT major outfall screening efforts in the detection of possible illicit discharges on ALDOT property. The online Environmental Concern Submission Form developed for the Public Education & Public Involvement program (discussed in Chapter 3) will serve the ALDOT IDDE program as well by receiving citizen reports of possible illicit discharges, satisfying Permit item II.B.3.a.8.

The ALDOT Design Bureau manages reports received via the Environmental Concern Submission Form and encourages follow-up investigations by appropriate ALDOT parties when warranted. If a follow-up investigation has a field component, the citizen report in question will often be delegated to the Area Maintenance Engineer of the ALDOT Area within which the possible illicit discharge is located so that the field work can be done in a timely manner by local-level personnel. If the location of the possible illicit discharge is the ALDOT central office complex, the ALDOT Equipment Bureau may be asked to participate in the investigation.

Initial follow-up investigations will be carried out with the aid of the ALDOT Illicit Discharge Concern Incident Tracking Form that can be found in Appendix D. Additional, in-depth investigations may be performed if ALDOT believes they are warranted; the ALDOT Non-Stormwater Discharge Investigation Form in Appendix D may be used in those investigations.

#### **4.6 Illicit Discharge Reporting Procedures**

As required by Permit items II.B.3.a.7 and II.B.3.b.5, ALDOT will notify ADEM of possible illicit discharges discovered in MS4 areas by either personnel conducting major outfall screening or citizens submitting reports to ALDOT that warranted follow-up investigation. Outcome summaries for major outfall screenings and investigations performed in MS4 areas will be submitted to ADEM by way of annual reports. ALDOT will also inform adjacent MS4s regarding possible illicit discharges entering ALDOT property in a timely manner after the ALDOT-confirmed discovery of a possible illicit discharge. The notification of adjacent MS4s may consist of informing an emergency response entity (e.g., fire department) or a municipal/county official. In a case of a more severe illicit discharge, the adjacent MS4 will be responsible for informing ADEM in a prompt manner defined specifically by the MS4 permit under which the adjacent MS4 is regulated.

#### **4.7 IDDE Training**

ALDOT personnel and consultants implementing the ALDOT IDDE program will undergo IDDE-related training, in accordance with Permit item II.B.3.a.3. For ALDOT field personnel conducting major outfall inventory or screening activities, the participation in at least one training session per calendar year devoted to illicit discharge identification and reporting will be required. Any consultant assisting in ALDOT's major outfall inventory or screening efforts is expected to handle this training internally.

As of this version of the Plan, all major outfall inventory and screening activities have been conducted by a consultant, which handles IDDE training internally. The ALDOT Maintenance

Bureau will develop a training program for ALDOT personnel if in the future a consultant does not conduct inventory and screening activities. A description of that training program would be provided in a future version of the Plan or in an annual report, as required by Permit item II.B.3.b.3.

The Maintenance Bureau provides general IDDE orientation to hundreds of ALDOT employees involved in field activities at the annual ALDOT Maintenance Management Meeting. To serve as an example, the IDDE training material presented at the 2021 Maintenance Management Meeting is included in Appendix D.

ALDOT will also give general orientation with regard to illicit discharge identification and reporting as a component of other training offerings (e.g., field safety briefings). This type of training will be provided for ALDOT personnel who have the greatest potential to encounter a possible illicit discharge while carrying out their primary duties in the field.

### **Reference**

Brown, E., Caraco, D., and Pitt, R. (2004). *Illicit discharge detection and elimination: A guidance manual for program development and technical assessments*, Center for Watershed Protection, Ellicott City, MD.

## **5 Construction Site Stormwater Runoff Control**

### **5.1 Introduction**

ALDOT has a robust construction stormwater management program for its transportation facilities motivated primarily by the requirements of the current version of the Construction General Permit (CGP), NPDES Permit No. ALR100000, issued by ADEM. All ALDOT-contracted construction activities in the development of new roadways and re-development of existing roadways are required to have CGP coverage if they disturb one acre of land or more, in accordance with (ALDOT MS4) Permit items II.B.4.a.1, II.B.4.a.3, and II.B.4.b.1. Since the construction stormwater management requirements of the ALDOT MS4 permit mostly align with those of the CGP, the work performed by ALDOT to meet the CGP mostly mirrors the work of the ALDOT Construction Site Stormwater Runoff Control program intended to satisfy the requirements of the MS4 permit. The program also addresses the construction stormwater requirements unique to the MS4 permit and recognizes the important participation of various ALDOT parties to meet construction stormwater management goals. The Construction Site Stormwater Runoff Control program is explained in the sections that follow.

### **5.2 “Five Pillars of Construction Stormwater Management”**

ALDOT has adopted the “Five Pillars of Construction Stormwater Management” (Fagan, 2011) as the foundation for its CGP-oriented practices. This approach emphasizes the reasonable prevention of sediment, the primary construction stormwater pollutant of concern (EPA, 2007), by ensuring preparation of and coordination among all involved parties prior to the start of construction and by making the appropriate planning and design decisions to minimize opportunities for sediment loss.

The Five Pillars of Construction Stormwater Management, in the order of importance, are as follows:

- **Communication.** Multiple plans addressing aspects of stormwater management are developed at different points in the planning, design, and construction processes and are updated as needed. Meetings with ALDOT central office and field office parties are held frequently during planning, design, and construction.
- **Work.** ALDOT has numerous policies and procedures for carrying out construction stormwater management work and for verifying work is done properly. Policies and procedures include those for construction waste management, spill prevention and control, and site inspections. Site inspections are especially important in the detection of issues that may eventually lead to erosion and sediment control problems.
- **Water.** Managing the natural flow of water on the construction site is key for ALDOT’s prevention strategy. The control of stormwater runoff flow through means such as temporary piping can prevent erosion from occurring. Also, natural waters can be

protected from sediment contamination by implementing stream diversions or other measures.

- **Erosion.** The control of erosion is guided by two underlying objectives: (i) limiting the exposure of erodible soil and (ii) protecting soil that is already exposed. ALDOT encourages the disturbance of soil only where needed to perform work and the preservation of existing vegetation when possible to protect soil. Exposed soil can be protected with rolled erosion control products. Vegetation is expected to be established on exposed soil in short order at locations where construction activity is not taking place.
- **Sediment.** If sediment is generated despite the measures described above, ALDOT can employ practices like silt fences and sediment basins to capture a significant amount of sediment before it is discharged into a natural water.

Practices inspired by the Five Pillars of Construction Stormwater Management are prevalent in both the planning and design phase as well as the construction phase of an ALDOT roadway construction project.

### **5.3 Planning & Design Phase Practices**

The planning and design process begins with the authorization of a roadway design project and ends with the letting of the finalized design of the project for construction bidding. So that this process is implemented proficiently and consistently, ALDOT has developed standards and guidance for the process, which are detailed below.

#### 5.3.1 Guide for Developing Construction Plans

The ALDOT *Guide for Developing Construction Plans* (GDCP) directs a designer step-by-step through the planning and design process. The GDCP consists of 100 steps and many sub-steps; a significant proportion of the steps and sub-steps pertain to stormwater management or other environmental matters. The ALDOT Design Bureau maintains the GDCP, but the Design Bureau coordinates with other ALDOT parties so that final roadway designs meet various standards over which particular parties are authorities. Appendix E contains a list of key GDCP steps from the stormwater/environmental perspective and excerpts from the GDCP.

Stormwater management consideration occurs early in the process at GDCP Step 5.02 when coordination between the designer and ALDOT stormwater/environmental personnel first takes place, at Step 15.04 when preliminary drainage design is conducted, and at Step 15.07 when preliminary right-of-way requirements with respect to both construction and post-construction BMPs are determined. At steps later in the process, construction stormwater management practices that fit specific site conditions are selected and designed.

In order to facilitate a smoother transition from the planning and design phase to the construction phase as well as a more outcomes-focused design approach, ALDOT encourages personnel involved in the construction phase to participate in the planning and design phase when appropriate and as early in the GDCP process as possible. These personnel may attend

walkthroughs of the construction site, meetings at the site concerning stormwater management, and design reviews.

The six major reviews included in the GDCP process give opportunities to review construction stormwater management practices being designed for the site as project design progresses. A table in Appendix E indicates the ALDOT parties participating in each review.

### 5.3.2 Standard & Special Highway Drawings

Promoting consistency in the design of BMPs, the ALDOT Design Bureau maintains Standard & Special Highway Drawings. The drawings are revised as appropriate annually. There is a section in the drawings devoted to erosion control devices and hydraulic devices. An example of a drawing from that section is provided in Appendix E.

### 5.3.3 Construction Best Management Practices Plan: Design Component

The Construction Best Management Practices Plan (CBMPP) contains information about construction stormwater management activities and other environmental matters associated with a specific construction site. In the planning and design phase, the CBMPP provides a comprehensive summary of project specifics and planned practices that allows for efficient recordkeeping and review. During the construction phase, the CBMPP is kept at the construction site as a reference and as an activity log.

The ALDOT Construction Bureau maintains a CBMPP template exclusive to ALDOT roadway projects. It is revised as needed and at reasonable intervals; ALDOT considers a two-year interval between revisions, for example, to be reasonable. The CBMPP template has two components: design and operational. The design component is prepared during the planning and design phase and is discussed in this section. The operational component is maintained during the construction phase and is discussed in Section 5.4.

The design component is prepared by the “Design” Qualified Credentialed Professional (QCP), which is a representative of either ALDOT or a consultant. In brief, the design component includes general project information (e.g., Notice of Intent for submission to ADEM, project plan sheets, project site soil properties, hydraulics and hydrology), environmental concerns and commitments applicable to the project site, and BMPs specific to the project’s needs for stormwater management. Upon providing his or her signature on the design component certification statement, the Design QCP attests that the technical standards of the version of the *Alabama Handbook for Erosion Control, Sediment Control, and Stormwater Management on Construction Sites and Urban Areas* (SWCC, 2018) in effect at the time of project letting are met, satisfying Permit item II.B.4.a.8. The design component is reviewed by the ALDOT Design Bureau prior to the end of the planning and design phase.

### 5.3.4 Stormwater Tracking System

The Stormwater Tracking System (SWTS) is the electronic hub where all data associated with a roadway project, from both the planning and design phase and the construction phase, are stored.



In the planning and design phase, information documented in the CBMPP is transferred into SWTS by the designer, and the Design Bureau is able to examine the information as part of the CBMPP review process.

Stormwater Map Services (SMS) is a tool developed as a supplement to the SWTS as a visual means for ALDOT personnel to review project data tracked by SWTS. SMS was designed to mirror the user-friendliness of online maps from commercial Web sites so that it would be straightforward for any ALDOT user. Particular projects can be located using a built-in search engine. Construction site discharge points can be superimposed onto a street map, a topographic map, or satellite images. MS4 areas and items of environmental concern (e.g., 303(d) waters) can be displayed as well.

## **5.4 Construction Phase Practices**

Once a contractor has been awarded the construction contract, the construction phase of a roadway project begins. The mechanisms ALDOT employs to carry out construction work are summarized in this section.

Typically, ALDOT is permitted by ADEM to perform construction work, and then ALDOT oversees the construction work actually performed by a contractor. However, in some cases, the contractor is permitted directly by ADEM to perform the construction work. The mechanisms described below apply to work for which ALDOT is permitted, but ALDOT holds the same standards for work performed under an ALDOT permit and work performed under a contractor permit.

### 5.4.1 Roles of ALDOT Parties in the Construction Phase

Flowcharts depicting generally the ALDOT organization as it applies to the construction phase of a roadway project are given in Appendix E. While there is some variance among ALDOT field offices, the organizations at different field offices are at least very similar to the flowchart depiction.

With regard to the ALDOT central office, the Construction Bureau plays a mostly administrative role in the construction phase. The Construction Bureau administers contracts, provides guidance documents and other technical insight, reviews CBMPPs as needed, inspects projects as needed, and facilitates Qualified Credentialed Inspector (QCI) training (discussed in Chapter 3 and in Section 5.6 below). The field offices, in contrast, are charged with actually implementing the construction phase at the project site.

The Region Engineer usually serves as the Responsible Official for a project. Typically, the Responsible Official delegates signatory authority to the Area Operations Engineer. This authority makes the Area Operations Engineer the senior ALDOT representative in the construction phase for a given project.

The Area Construction Engineer reports to the Area Operations Engineer. The duties of the Area Construction Engineer include staffing project offices and supervising the Area Stormwater

Coordinator. The Area Construction Engineer is the “Engineer” referenced in contract specifications.

The Area Stormwater Coordinator oversees stormwater management activities for Area projects. He or she is responsible for communication of CBMPP stormwater management requirements to appropriate Region and Area personnel, project personnel, and contractors. He or she usually serves as the Project QCP (also referred to as the Operational QCP) and is the *official* point-of-contact for each project in the Area.

At the project level specifically, the Project Engineer / Project Manager is the official ALDOT field representative. The Project Engineer / Project Manager is often the *practical* point-of-contact for the public and project stakeholders. The Project Engineer / Project Manager reports to the District Administrator who, in turn, reports to the Area Operations Engineer.

The staff of the Project Engineer / Project Manager includes the Project QCI. Along with the Contractor QCI, the Project QCI performs daily observations of the site and site inspections (discussed in Section 5.4.4 below).

#### 5.4.2 Construction Manual

The Construction Bureau provides guidance for implementing project construction in the *ALDOT Construction Manual*. Section 2.5 of the manual is devoted to construction stormwater management. Among the topics covered in that section are the process of developing a CBMPP, construction stormwater inspections, monitoring for sediment in site discharges, site stabilization requirements, and QCI training requirements. *Construction Manual* Section 2.5 is provided in Appendix E.

#### 5.4.3 Standard Specifications for Highway Construction

The Construction Bureau provides more direct guidance for contractors about ALDOT’s expectations for construction outcomes at the site in the *ALDOT Standard Specifications for Highway Construction*. Excerpts in Appendix E highlight some of the more notable stipulations in the *Standard Specifications for Highway Construction* with respect to stormwater management.

#### 5.4.4 Observations, Inspections, Evaluations, & Reviews

In accordance with Permit items II.B.4.a.5 and II.B.4.b.3, ALDOT employs multiple mechanisms at the project site to verify that BMPs are functioning properly and to monitor for any potential sediment loss from the site.

As noted in Section 5.4.1, the ALDOT Project QCI and the Contractor QCI perform daily observations of the site. Specifically, they observe the conditions of site drainage areas, discharge points, and BMPs. If the status of any of those items is “needs improvement,” “turbid discharge,” or “sediment loss,” then a site inspection is required.

In addition to the site inspections triggered by daily observations, site inspections are performed by the Project QCI and Contractor QCI after every rain event with a total rainfall amount of 0.75 inches or more and at least once per week during active construction. Observations of drainage areas, discharge points, BMPs, and temporary soil stabilization are made. If ADEM considers the site a “Priority Construction Site,” turbidity measurements are taken if ten or more acres of land are disturbed or if there is a visible color contrast observed in runoff at a discharge point. If the inspection results in a rating of “turbid discharge” or “sediment loss,” corrective actions are required within five days of the inspection. In the case of a rain event, the QCIs prepare an inspection report within 48 hours of the event. The Project QCP reviews the inspection report within five days of the event, and the inspection report is approved by the Responsible Official.

“Site evaluations” are site inspections performed by the Project QCP in order to provide administrative perspective. During active construction, the Project QCP conducts a site evaluation at least once every three months in the case of a Priority Construction Site or at least once every six months otherwise. As indicated in Section 5.4.1, the Construction Bureau also inspects the site on an ad hoc basis.

#### 5.4.5 Construction Best Management Practices Plan: Operational Component

The CBMPP is kept at the construction site as a reference and as an activity log during the construction phase, as explained above in Section 5.3.3. The operational component of the CBMPP is maintained throughout the construction phase by the Project Engineer / Project Manager. Contents of the operational component include the “contractor stormwater management plan” (discussed below), correspondence between ALDOT and the contractor, inspection reports, a rainfall journal, a regulatory actions log, and a CBMPP modifications log.

After a construction contract is awarded and prior to the start of any construction activity, the contractor must submit a contractor stormwater management plan (not to be confused with this SWMPP associated with the MS4 permit) for approval. This stormwater management plan provides details of the work that can impact erosion and sediment control at the site, including clearing and grubbing, grading, and establishing permanent erosion control features. Proper compliance documentation for offsite waste areas or material pits, details for proposed temporary encroachments into waterbodies, and requests for fuel storage on ALDOT property are also included in the plan. For the sake of consistency, the contractor must use a template for the plan developed by ALDOT.

The Area Stormwater Coordinator typically reviews the contractor stormwater management plan. Once accepted, the contractor stormwater management plan becomes part of the operational component of the CBMPP, as indicated above.

With respect to administrative review, the Project QCP reviews the CBMPP during active construction at least once every three months in the case of a Priority Construction Site or at least once every six months otherwise. The CBMPP is also reviewed by the Construction Bureau as needed, as mentioned in Section 5.4.1.

#### 5.4.6 Stormwater Tracking System

SWTS is used during the construction phase as well to track project information. For practical purposes, SWTS provides an electronic version of the CBMPP that is accessible online anytime during the construction phase of the project. It allows for quick review of construction site activities even if a user, such as an ALDOT employee in the Construction Bureau, is not physically present at the project site.

ALDOT construction sites within MS4 areas active during a given fiscal year will be listed in the annual report corresponding to that fiscal year, in accordance with Permit requirement II.B.4.c.2. An active construction site, for the purposes of the MS4 program, is one for which (i) the application for CGP coverage has been processed by ADEM and (ii) coverage has not been terminated by ADEM. SWTS records will be used to generate the list of construction sites.

#### 5.4.7 Contractor Consequences for Non-Compliance

ALDOT expects contractors to comply with the erosion and sediment control measures prescribed for an ALDOT project, which is in line with Permit items II.B.4.a.2 and II.B.4.b.2. If a contractor fails to comply with the requirements given in the erosion and sediment control plan included in the project plan set, the CBMPP, the contractor stormwater management plan, or other authorized directions, the contractor may be ordered to discontinue all operations except the work involved in erosion and sediment control until the requirements are met. Should a regulatory enforcement action or complaint of damage to public or private property arise from sediment leaving the ALDOT construction site, the contractor shall participate in the investigation, reporting, and mitigation that is required to address the action or complaint. The contractor would only be reimbursed for the portion of the cost of the mitigation work that is determined to be ALDOT's responsibility. Contractor consequences for non-compliance are further explained in the *Standard Specifications for Highway Construction* and in *Construction Manual* Section 2.5.

### **5.5 Citizen Construction Site Discharge Concerns**

ALDOT invites citizens to use the online Environmental Concern Submission Form developed for the Public Education & Public Involvement program (discussed in detail in Chapter 3) to communicate concerns regarding ALDOT construction site discharges. Such a reporting mechanism is required by Permit item II.B.4.a.4. The ALDOT Design Bureau manages citizen concerns received and sees that follow-up investigations are initiated when warranted. If a follow-up investigation has a field component, the ALDOT Construction Bureau will oversee the field component. Any site mitigation recommended as a result of the investigation will be handled through existing construction oversight mechanisms. In accordance with Permit item II.B.4.d.1, records of submitted citizen concerns and any follow-up actions taken will be kept on file.

## **5.6 Construction Stormwater BMP Selection Training**

As discussed in Chapter 3, ALDOT actively encourages and facilitates QCI training, which includes training on the selection of construction stormwater BMPs. As required by Permit items II.B.4.a.6 and II.B.4.b.4, construction site inspectors must obtain and maintain QCI certification, and other contractor representatives are required by contract to undergo certification. In addition, ALDOT encourages (and requires as needed) its employees to undergo QCI training for the sake of informed contractor oversight or for general orientation purposes. These individuals attend an initial eight-hour QCI initial certification training course conducted by an ADEM-approved provider, and then those participants are eligible to attend a four-hour recertification course facilitated by the ALDOT Construction Bureau. Hundreds of people including ALDOT employees and contractors as well as ADEM employees, county representatives, municipal representatives, and other interested parties attend the recertification training course each year. The participants must pass a quiz after the training in order to be recertified.

The employees participating in initial QCI certification training from a third party, the QCI recertification training sessions facilitated by ALDOT, and the ALDOT employees undergoing QCI recertification training are tracked, in accordance with II.B.4.d.2, by the ALDOT Training Bureau. The non-ALDOT individuals participating in QCI recertification training are tracked by the Construction Bureau.

## **5.7 Miscellaneous Construction Activities**

At times, third parties perform construction activities on ALDOT roadways that do not relate to the new development or re-development of an ALDOT transportation facility. Typical examples are the installation of electrical power lines by a utility company and the installation of a turn lane for an entrance to private property. In such cases, ALDOT requires the party performing the work to have all necessary permit coverage. That party must complete Form MB-05 or Form MB-07 (discussed in Chapter 4), as applicable, and thereby attest that any work performed will be covered under relevant permits. ALDOT must approve the form before work can begin, further satisfying Permit item II.B.4.b.1. Forms MB-05 and MB-07 can be found in Appendix D. The ALDOT Maintenance Bureau coordinates the application and approval process for third-party work.

If construction activity that has not undergone the application and approval process is discovered, ALDOT uses its limited legal authority to attempt to force the party in violation to undergo the process. The process usually begins immediately after the unauthorized construction activity is discovered. If the unauthorized activity remains unauthorized even after ALDOT intervention, ALDOT will refer the activity to ADEM within 30 days of the ALDOT-confirmed discovery of the activity, as required by Permit items II.B.4.a.7 and II.B.4.b.5.

## References

Alabama Soil and Water Conservation Committee. (2018). *Alabama handbook for erosion control, sediment control and stormwater management on construction sites and urban areas*, Alabama Soil and Water Conservation Committee, Montgomery, AL.

Fagan, B. (2011). "The five pillars of construction stormwater management." *Environmental connection 2011*, International Erosion Control Association, Orlando, FL.

U.S. Environmental Protection Agency. (2007). *Developing your Stormwater Pollution Prevention Plan: A guide for construction sites*, U.S. Environmental Protection Agency, Washington, DC.

## **6 Post-Construction Stormwater Management**

### **6.1 Introduction**

The construction of ALDOT facilities often requires some replacement of natural ground cover and vegetation with more impervious surfaces and the alteration of natural topography. These changes can alter the characteristics of stormwater runoff flows within a watershed and create potential environmental impacts. ALDOT sets out to offset potential impacts associated with developing ALDOT facilities through its Post-Construction Stormwater Management program (or simply “Post-Construction program”).

ALDOT experiences unique challenges relative to other MS4s in that it *must* construct a great deal of impervious roads and roadside features in order to serve the citizens of Alabama by providing for safe, effective transportation facilities. Those challenges include the linear nature of roadways, limited roadside space for BMPs, and maintenance resources spread over a statewide network of roadways. Additional discussion about state DOT-specific challenges can be found in Chapter 1 and in an AASHTO white paper (Center for Environmental Excellence by AASHTO, 2012). Despite the challenges, the ALDOT Post-Construction program manages post-development impacts to the maximum extent practicable and in manners that best fit ALDOT’s specific characteristics and capabilities as a non-traditional MS4.

This chapter describes the aspects of the ALDOT Post-Construction program, as stipulated by Permit items II.B.5.a and II.B.5.b.

### **6.2 Definitions**

Terms applicable specifically to the ALDOT Post-Construction program are defined and discussed in this section.

#### 6.2.1 New Development & Re-Development

As stated in Permit item II.B.5.a, the implementation of post-construction field measures is required only for “new development” and “re-development” on ALDOT facilities.

The creation of a new public transportation facility or a new support facility where no such facility existed prior to the Permit becoming effective constitutes new development, as the definition in Part V.Z of the Permit indicates. The land disturbance of the work must be greater than one acre to qualify as new development. Roadway features associated with access to an existing public transportation facility such as turn lanes, crossovers, auxiliary lanes, acceleration lanes, and deceleration lanes do not constitute new development.

For work on an existing transportation facility to count as re-development, two conditions must be met:

- the work creates additional thru-lanes for travel, and

- the width of pavement increases beyond that of the existing pavement.

As in the case of new development, re-development on an existing transportation facility entails a land disturbance of greater than one acre, and roadway features associated with access to an existing public transportation facility turn lanes, crossovers, auxiliary lanes, acceleration lanes, and deceleration lanes are not counted.

For existing support facilities, any non-maintenance work that results in a land disturbance of greater than one acre is considered re-development.

### 6.2.2 Structural & Non-Structural BMPs

The Permit categorizes the physical, in-field BMPs that ALDOT will use in post-construction stormwater management as either “structural” or “non-structural.” A “structural” BMP, as defined by Part V.Z of the Permit, has “rigid walls and/or weirs and piped drainage” and utilizes “active or passive treatment and/or mechanical systems for the purpose of treating stormwater runoff from ALDOT property.” A “non-structural” BMP employs vegetation or topographical manipulations to provide passive treatment.

### 6.2.3 Low-Impact Development & Green Infrastructure

“Low-Impact Development” (LID) is an approach intended to minimize the potential adverse impacts of stormwater runoff attributed to the construction of a facility. In general, LID is implemented through policies and BMPs designed to preserve or recreate natural landscape features, thereby reducing the influence of human development activity on stormwater runoff.

“Green Infrastructure” (GI) refers to BMPs that use or mimic natural processes to infiltrate or evapotranspire stormwater in order to decrease stormwater runoff to an amount approximating that associated with natural, undeveloped conditions. Both structural and non-structural BMPs can qualify as GI.

LID and GI are referred to in the Permit and widely in practice collectively as “Low-Impact Development/Green Infrastructure” (LID/GI).

## **6.3 Post-Construction Stormwater Management Strategies**

### 6.3.1 Post-Construction Policies

The ALDOT “Guideline for Operations (GFO) 3-73: Post-Development Stormwater Runoff Management” serves as a set of design directives for ALDOT personnel and consultants in implementing post-construction measures. GFO 3-73 was developed by the ALDOT Design Bureau and can be found in Appendix F. It requires projects let for construction bidding on or after April 1, 2015, to follow its directives. For new-development and re-development of ALDOT-constructed facilities under Permit regulation, GFO 3-73 explicitly sets the design storm for post-construction as the 95th-percentile storm event for the site in question (as stipulated by



Permit item II.B.5.a.2), encourages decentralized practices and features near runoff sources, and calls for design elements that utilize natural materials and processes whenever possible.

While ALDOT makes a good-faith effort to employ post-construction measures, some conditions and circumstances make the implementation of post-construction measures impractical or even infeasible. Soil impermeability, pre-existing soil saturation, space constraints on a linear transportation facility, the possibility of structural roadway damage, and prohibitive costs are factors that can interfere with implementation. A comprehensive discussion regarding these factors and others can be found in a Transportation Research Board guidance manual (National Academies of Sciences, Engineering, and Medicine, 2019). GFO 3-73 allows the ALDOT Chief Engineer to grant exceptions if a formidable post-construction implementation barrier exists and if it can be demonstrated that the receiving water and downstream land areas would not be significantly negatively impacted by the absence of measures.

In addition to GFO 3-73, other ALDOT policies are in place to reduce the possible runoff flow impact of development. For instance, ALDOT limits the slope of terrain on newly-developed ALDOT roadways to a three-to-one ratio when feasible and practical in order to reduce erosion potential. Also, ALDOT has encouraged for years the design of facilities to preserve existing vegetation and provide hospitable conditions for vegetation growth, leading in part to the abundance of vegetated filter strips and grassed channels on ALDOT roadways.

### 6.3.2 Post-Construction Design Guidance

The ALDOT Design Bureau has two guidance documents, “Determining Runoff for Small Storm Events” and “Post-Development Stormwater Risk Assessment,” developed to aid designers of post-construction BMPs. “Determining Runoff for Small Storm Events” provides methods for calculating the differences in stormwater runoff volume and peak discharge between pre-development and post-development conditions given the design storm (i.e., 95th-percentile storm event) precipitation. With those volumetric differences, a designer can confidently select and size post-construction BMPs for a given site. To assist the designer in the analysis called for by “Determining Runoff for Small Storm Events,” ALDOT developed a supplemental electronic spreadsheet which computes pre-development and post-development flow rates and runoff volumes given user-specified site characteristics. “Post-Development Stormwater Risk Assessment” allows designers to consider the effects of larger storm events on post-construction BMP capacity. ALDOT-developed Forms HYD-100 and HYD-101 are completed as prompted by “Post-Development Stormwater Risk Assessment.” These documents and the supplemental materials referenced can be found in Appendix F.

ALDOT determined the specific 95th-percentile storm events for all locations in Alabama by using a procedure largely mirroring the one recommended by EPA (2009). With precipitation data over a 30-year range from 681 National Oceanic and Atmospheric Administration rain gauges (each with at least 10 years of consecutive daily measurements), ALDOT estimated the precipitation depth that 95 percent of runoff-producing rainfall events do not exceed at each rain gauge location (i.e., the 95th-percentile storm event for the location). Given the 95th-percentile storm event estimates at the particular rain gauge locations, ALDOT used GIS-facilitated spatial interpolation to estimate the 95th-percentile storm events for all locations throughout Alabama.

The isohyetal distribution of 95th-percentile storm events provided in “Determining Runoff for Small Storm Events” was generated by rounding point estimates up to the next multiple of 0.2 inches and then depicting the rounded values at corresponding locations in Alabama.

The designer also receives general guidance throughout the planning and design phase of a roadway project by following the ALDOT Design Bureau’s GDCP process, which is also discussed in Chapter 5. Stormwater management consideration occurs early in the process at Step 5.02 (out of 100) when coordination between the designer and ALDOT stormwater/environmental personnel first takes place, at Step 15.04 when preliminary drainage design is conducted, and at Step 15.07 when preliminary right-of-way requirements with respect to both construction and post-construction BMPs are determined. At steps later in the process, post-construction and other stormwater management practices that fit specific site conditions are selected and designed. The six major reviews included in the GDCP process give opportunities to review post-construction stormwater management practices being designed for the site as project design progresses. Appendix E contains a list of key GDCP steps and excerpts from the GDCP.

### 6.3.3 Post-Construction BMP Options

ALDOT has reviewed the limited technical guidance available on post-construction BMP selection, such as the ADEM-supported LID handbook for Alabama (Delewski et al., 2014), and has done considerable trial-and-error to determine post-construction BMPs that will be adequately effective and feasible for implementation on ALDOT facilities with unique challenges relative to other types of regulated MS4s. As of the writing of this version of the Plan, the ALDOT Design Bureau advises designers to employ “infiltration swales” when reasonable. The “infiltration swale” is a variant of the “vegetated swale,” as defined by EPA (Heare, 2008). Put simply, the infiltration swale looks like a standard roadside grassed channel, but it has a designed subsurface soil matrix that promotes infiltration at a rate intended to approximate pre-development conditions. Thus, the infiltration swale is an LID/GI BMP that is only a slight adaptation of the grassed channel employed by ALDOT for many years. When employing an infiltration swale is not reasonable, the Design Bureau encourages the use of a detention pond to manage post-development runoff flow and volume differences. Other BMPs, such as step pools and level spreaders, may be used to better control detention pond discharge behavior.

As discussed in Section 6.3.1, some conditions and circumstances make the implementation of post-construction measures impractical or infeasible. Therefore, designers are instructed to collaborate continually with stormwater-oriented personnel in the ALDOT Design Bureau during the BMP selection process in order to account for project-specific issues.

As mentioned above, ALDOT has encouraged the use of vegetated filter strips and grassed channels for many years. These BMPs provide much LID/GI benefit, but ALDOT does not classify them as official post-construction BMPs because the abundance and continuous nature of these BMPs pose data tracking challenges.

## **6.4 Inventory of Post-Construction BMPs**

ALDOT will keep an inventory of post-construction BMPs and update it as post-construction BMPs become fully operational at sites of ALDOT-constructed new development and re-development associated with projects let for bidding after April 1, 2015. (“Fully operational” implies that project construction activities are officially terminated and an ALDOT maintenance authority is officially responsible for BMP operation and maintenance.) Updates to the inventory will be presented in annual reports, in accordance with Permit item II.B.5.c.1. The locations of fully operational structural BMPs on the inventory will be depicted on updates to the maps to be kept on file, as noted in Chapter 2.

The form ALDOT will use to inventory fully operational post-construction BMPs is provided in Appendix F. The form was developed by the ALDOT Maintenance Bureau using the Survey123 application, which will allow for ease of use in the field and compilation of BMP identification information in an electronic database. The Maintenance Bureau will oversee the inventory of post-construction BMPs on ALDOT transportation facilities. The Equipment Bureau or an ALDOT Region is responsible for inventory updating at each ALDOT support facility; the particular party with inventory responsibility will depend on the support facility in question. However, the Maintenance Bureau may carry out support facility inventory oversight when authorized to do so.

## **6.5 Inspection of Post-Construction BMPs**

ALDOT will inspect fully operational structural BMPs at transportation and support facilities at least once every two years, as per Permit item II.B.5.a.6. These inspections will be key in promoting the proper use and long-term management of post-construction BMPs required by Permit item II.B.5.a.5. The condition of non-structural BMPs will be evaluated as part of condition assessments conducted in the Pollution Prevention / Good Housekeeping program discussed in Chapter 7.

The Survey123 BMP inspection form developed by the ALDOT Maintenance Bureau can be found in Appendix F. Each inspection will be associated with a BMP on inventory in the electronic database. As in the case of BMP inventory updating, the ALDOT Maintenance Bureau will oversee BMP inspection implementation on ALDOT transportation facilities; the Equipment Bureau or an ALDOT Region, as appropriate, will be responsible for BMP inspections at each ALDOT support facility, though the Maintenance Bureau may carry out support facility inspection oversight when authorized to do so. Satisfying Permit items II.B.5.c.2 and II.B.5.d.1, BMP inspections will be tracked, and records of the inspections will be kept on file.

## **6.6 Maintenance of Post-Construction BMPs**

BMP maintenance recommendations will be provided based on the findings of post-construction BMP inspections or legitimate concerns submitted on an ad hoc basis by ALDOT field personnel or citizens. The recommended maintenance activities will then be scheduled based on relative urgency and resource availability. Maintenance activities may include structural repair, erosion

control, vegetation management, drainage repair, sediment/debris removal, soil improvement, inlet maintenance, outlet maintenance, and miscellaneous upkeep. BMP maintenance activities performed will be tracked, as required by Permit item II.B.5.c.3, using completed maintenance work reports.

The ALDOT Maintenance Bureau will be responsible for the oversight of BMP maintenance activities performed on transportation facilities. The ALDOT Equipment Bureau or an ALDOT Region, as appropriate, will be responsible for BMP maintenance oversight at each support facility, unless the oversight is delegated to the Maintenance Bureau.

## **6.7 Addressing Requirements of the Coastal Zone Act Reauthorization Amendments**

According to EPA comprehensive guidance for Coastal Zone Act Reauthorization Amendments (CZARA) compliance (EPA, 1993), post-construction stormwater management requirements stipulated by CZARA apply specifically to new development in coastal *urban* areas. The guidance indicates that discharges are exempt from CZARA regulation where MS4 regulation applies. ADEM differentiates urban areas from non-urban areas for regulatory purposes by issuing MS4 permits for particular areas. Thus, any ALDOT discharge considered by ADEM as being urban is already regulated by the ALDOT MS4 permit in effect and should not be regulated under CZARA. In other words, any CZARA-inspired post-construction stormwater management requirements in a non-MS4 permit are already being addressed by the ALDOT MS4 program.

### **References**

Center for Environmental Excellence by AASHTO. (2012). "Connecting the DOTs through collaboration in stormwater management." *Proc., 2012 AASHTO National Stormwater Practitioners Meeting*, American Association of State Highway and Transportation Officials, Washington, DC.

Delewski, K. L., Brown, J. T. R., LeBleu, C. M., and Brantley, E. F. (2014). *Low impact development handbook for the State of Alabama*, Alabama Department of Environmental Management, Montgomery, AL.

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National Academies of Sciences, Engineering, and Medicine. (2019). *Stormwater infiltration in the highway environment: Guidance manual*, The National Academies Press, Washington, DC.

U.S. Environmental Protection Agency. (1993). *Guidance specifying management measures for sources of nonpoint pollution in coastal waters*, U.S. Environmental Protection Agency, Washington, DC.

U.S. Environmental Protection Agency. (2009). *Technical guidance on implementing the stormwater runoff requirements for federal projects under Section 438 of the Energy Independence and Security Act*, U.S. Environmental Protection Agency, Washington, DC.

## **7 Pollution Prevention / Good Housekeeping**

### **7.1 Introduction**

The intent of the ALDOT Pollution Prevention / Good Housekeeping (PPGH) program is to lower the risk of significant pollutant discharge from the ALDOT MS4 that may negatively impact the natural environment or public health. The normal operations ALDOT conducts at support facilities or on transportation facilities, if not managed adequately, may cause significant pollutant discharge. Also, the traveling public in its use of ALDOT transportation facilities may introduce pollutants into the ALDOT MS4. In the sections that follow, ALDOT's management of potential sources of significant pollutant discharge is discussed.

### **7.2 Pollution Prevention / Good Housekeeping at Support Facilities**

The ALDOT Materials & Tests Bureau provides oversight of PPGH practices at support facilities. These PPGH practices are tracked as required by the MS4 permit, but they are primarily regulated by other NPDES permits.

#### 7.2.1 Applicable Support Facilities

ALDOT employs PPGH practices at all support facilities located throughout Alabama. However, certain support facilities within MS4 areas require more attention due to specific functions or characteristics. The potential of pollution from these facilities is mostly attributed to the storage and handling of chemicals or other materials associated with vegetation control, the maintenance of equipment and vehicles, and transportation facility maintenance. ALDOT has identified eighteen support facilities in MS4 areas warranting heightened attention. Appendix G provides an inventory that lists these support facilities, satisfying Permit items II.B.6.a.1 and II.B.6.b.1. Any updates to the inventory will be submitted with annual reports as stipulated by Permit item II.B.6.c.1.

#### 7.2.2 Good Housekeeping Standard Operating Procedures

Support facility operations include the storage, maintenance, and repair of vehicles and equipment as well as the storage and handling of petroleum materials (e.g., motor fuels, lubricants), herbicides, road construction materials, and paint products. The wastes generated from operations are similar at all ALDOT support facilities, with the exception of an additional, unique waste stream produced by the sign shop located at the Central Office Complex.

ALDOT support facility employees are guided in PPGH practices by standard operating procedures (SOPs), as required by Permit item II.B.6.a.3. The SOPs are compiled in the *ALDOT Support Facility Environmental Procedures Manual*. Excerpts from this manual are provided in Appendix G, in compliance with Permit item II.B.6.b.3. Any updates to the support facility good housekeeping SOPs will be noted in annual reports, as required by Permit item II.B.6.c.3. Some of the SOPs outlined in the manual are summarized below.

With respect to the management of petroleum, aboveground storage tanks containing petroleum are selected for use and operated in accordance with ADEM Administrative Code Chapter 335-14-17. Underground storage tanks containing petroleum are selected for use and operated as governed by Chapter 335-6-15. Used oil is managed and disposed of in manners consistent with the requirements in Chapter 335-14-17. Containers with petroleum products are stored indoors and on elevated platforms. Drainage in areas where these containers are located is isolated from surface water runoff outside. Photographs of a typical aboveground storage tank containing motor oil and the typical storage of petroleum containers in shops are given in Appendix G.

Herbicide storage at support facilities is done in accordance with the Pesticides General Permit (PGP) issued by ADEM (NPDES Permit No. ALG870000) and the ALDOT Pesticide Discharge Management Plan (PDMP) required by the PGP. (The PDMP is provided in Appendix G.) As is the case with petroleum containers, containers with herbicide are stored indoors and on elevated platforms, and drainage in herbicide storage areas is isolated from surface water runoff outside. Over 70 percent of empty herbicide containers are returned to the supplier as opposed to being stored on site in order to eliminate potential for contamination of container rinse water or landfill discharge flow by container residuals. Herbicide in a container is transferred to a tank on a truck for application using a closed loading system to reduce exposure to both the environment and the applicator. The reader is referred to the PDMP to learn more about herbicide-related storage practices at ALDOT support facilities and to Section 7.3.6 for discussion regarding herbicide application practices at ALDOT transportation facilities.

Many of the objectives and practices associated with herbicide storage also apply to paint storage. Paint containers are stored indoors, above floor level, and removed from possible stormwater runoff paths. The dispensing of paint from the containers is controlled by nozzle. Containers are returned to the supplier after use instead of being stored on site in order to eliminate the management and disposal of containers and residue.

Universal waste can consist of unused herbicide, batteries, lamp bulbs, and mercury thermostats. It is stored and disposed of in accordance with ADEM Administrative Code Chapter 335-14-11. Used batteries are traded with the supplier for new batteries in order to reduce the need for storage on site. While waiting to be returned to the supplier, used batteries are stored indoors in a designated area and above floor level. A picture of a used battery storage area is provided in Appendix G.

Materials classified properly as “hazardous” are handled heeding ADEM Administrative Code Chapters 335-14-1 through 335-14-7 and in accordance with Resource Conservation and Recovery Act standards. However, significant amounts of hazardous material are present only at the ALDOT Central Office Complex. Hazardous materials are kept indoors when possible and in relatively protective isolation. A picture in Appendix G shows an example of a hazardous material locker.

The storage and disposal of maintenance shop wastes, such as solvents, coolant, petroleum, spray cans, rags, and paper, are controlled in appropriate manners. Scrap tires are managed in line with Division 335-4 of the ADEM Administrative Code. As part of that proper management, scrap

tires are stored indoors so that they do not come into contact with surface water runoff or other weather elements.

ALDOT utilizes the sanitary sewer when available for wash water disposal. When not available, ALDOT attempts to retain wash water on site by using wash water filter systems, basins, traps as well as by sealing drains to neighboring MS4s, as illustrated by pictures in Appendix G. When the discharge of wash water occurs, discharge into septic tanks, sanitary sewers, and storm sewers is to meet the requirements of applicable NPDES permits and the ADEM Administrative Code, as necessary. Permission is sought from adjacent municipalities to discharge wash water into neighboring sanitary sewers and MS4s.

Though the practice is not specified in the SOPs, “everyday wastes” generated by office work and personal activities of ALDOT employees at support facilities (e.g., scrap paper) are controlled to prevent litter, in accordance with Permit items II.B.6.a.5 and II.B.6.b.5. Trash receptacles and recycling bins are provided at support facilities for proper everyday waste disposal, as required by Permit item II.B.6.a.6. The ALDOT Equipment Bureau is responsible for maintaining these trash receptacles for the ALDOT Central Office Complex, and the appropriate ALDOT Regions maintain receptacles for other support facilities.

Insufficient shop upkeep could also lead to an unanticipated pollutant discharge. Thus, in addition to the managing the materials used or generated in support facility operations, the general conditions of shops and shop equipment are monitored and addressed, as appropriate.

When possible, ALDOT endeavors to eliminate the need for a potential pollutant to be on site through its product selection process. The selection of phosphate-free, biodegradable detergents for vehicle and equipment washing, for instance, is an outcome of this process.

The Materials & Tests Bureau accounts for the implementation of the PPGH practices described above by conducting annual self-audit inspections (discussed in Section 7.2.4 below) of all support facilities.

### 7.2.3 Spill Prevention & Response

ALDOT maintains a Spill Prevention, Control, and Countermeasure (SPCC) Plan at each one of its support facilities in order to meet the regulations of 40 CFR 112. In addition to addressing the intended prevention of and response to the improper discharge of petroleum materials to surface waters as required by 40 CFR 112, an SPCC Plan for a given ALDOT support facility doubles as the general stormwater pollution prevention plan for the facility. Thus, the SPCC Plan applies to both petroleum materials and non-petroleum materials. Many of the materials discussed in Section 7.2.2 receive attention in an SPCC Plan.

A typical SPCC Plan provides information about the facility itself, the materials with pollution potential present at the facility, and the standard means of storage, handling, transport, and disposal for the materials. Points where a non-stormwater discharge may leave the ALDOT facility property are given in the SPCC Plan along with the expected flow path of the discharge and the surface waterbody that would receive the discharge. In the event of a spill at the facility,

the SPCC Plan governs support facility personnel in spill characterization, reporting to ADEM as well as to other entities (e.g., federal agencies, first responders), control of the spill material, and cleanup of the spill site. A detailed record of any spill event is kept. The SPCC Plan calls for monthly inspections by facility personnel of assets identified in the SPCC Plan that are relevant to spill prevention and response; less formal weekly inspections are also conducted. Training in the procedures of the SPCC Plan is conducted for applicable support facility employees; this training is discussed in Chapter 3 and in Section 7.2.5 below.

In short, a current ALDOT support facility SPCC Plan adequately accommodates Permit items II.B.6.a.7 and II.B.6.b.6. Excerpts of an example ALDOT support facility SPCC Plan (for the “Central Office campus,” which includes the Central Office Complex, the Montgomery Area Office, and the Montgomery District Office) can be found in Appendix G.

While the Materials & Tests Bureau oversees the broad PPGH program for support facilities, individual support facilities (under the oversight of ALDOT Regions, Areas, and Districts) are responsible for maintaining their own SPCC Plans. SPCC Plans are updated every five years and as needed per the requirements of other NPDES permits. Updates to SPCC Plans during the Permit term will be tracked, as per Permit item II.B.6.c.5.

#### 7.2.4 Annual Inspection of Support Facilities

ALDOT conducts environmental self-audit inspections of its support facilities. (For clarity, these self-audit inspections are separate from the SPCC Plan-related inspections discussed in Section 7.2.3.) The self-audit inspections meet Permit item II.B.6.a.2 and act as the comprehensive inspection mechanism for support facilities as they are designed to evaluate the implementation of the PPGH practices discussed in Section 7.2.2. The self-audit inspection checklists, current as of the submission of this version of the Plan, are provided in Appendix G to satisfy Permit item II.B.6.b.2.

Self-audit inspections are conducted at least once per year at all ALDOT support facilities. After an inspection, Materials & Tests Bureau personnel meet with appropriate facility personnel to discuss any significant findings and later send a formal inspection report to the facility. All inspection reports are kept on file at the Materials & Tests Bureau and at the facility in question, which is necessary in order to meet Permit item II.B.6.d.1. If a violation was found during the inspection, the facility is required to address the violation and notify the Materials & Tests Bureau in writing of the corrective actions taken within three weeks of the facility’s receipt of the inspection report. Failure of a facility to respond to a violation triggers an additional inspection and the involvement of higher-ranking personnel associated with the facility.

If a change is made to the support facility annual inspection approach described here, it will be discussed in the appropriate annual report, in accordance with Permit item II.B.6.c.2.



### 7.2.5 Support Facility Good Housekeeping Employee Training

As discussed in Chapter 3, various opportunities are available for training ALDOT support facility personnel to properly follow the PPGH practices described above. The training described below satisfies Permit items II.B.6.a.4 and II.B.6.b.4.

The SPCC Plan-related training mentioned in Section 7.2.3 serves as a mostly comprehensive means of PPGH training. Key SPCC Plan training topics include regulations for storage containers, secondary containment, tank inspections, spill reporting, and spill cleanup. Support facility personnel who have duties involving potentially hazardous materials must undergo this training within six months of assignment to those duties and then participate in annual reviews of the training.

More specific opportunities include universal waste training and general hazardous material awareness training in which ALDOT Area “environmental coordinators” participate. Universal waste training covers accumulation time considerations, maintenance of records, proper storage conditions, and disposal methods. General hazardous waste training covers hazardous materials recognition, toxicity of materials, correcting mismanagement of materials, and spill responsibilities. In addition, employees participating in Globally Harmonized System (GHS) and Hazardous Waste Operations and Emergency Response (HAZWOPER) training receive environmental management-related training as a secondary benefit.

Samples of training materials for SPCC training, universal waste training, hazardous material training, and GHS training are provided in Appendix C.

The ALDOT Materials & Tests Bureau accounts for the training of support facility personnel. The attendance of employees participating in any type of official support facility good housekeeping training and the particular training courses conducted are tracked by the Materials & Tests Bureau for the ALDOT Central Office Complex and by the appropriate field offices of ALDOT Regions for other support facilities. This tracking satisfies Permit item II.B.6.d.2.

## **7.3 Pollution Prevention / Good Housekeeping at Transportation Facilities**

The ALDOT Maintenance Bureau runs a robust maintenance program for transportation facilities. Activities conducted under this program could adversely affect stormwater management if they are not performed properly. The following transportation facility maintenance activity categories are most connected to MS4 stormwater management and apply to Permit items II.B.6.a.5, II.B.6.a.6, II.B.6.a.8, and II.B.6.b.5:

- litter pickup,
- snow and ice control,
- drainage structure maintenance,
- erosion control, and

- herbicide treatment and surveillance.

Details about the activities in these categories are given in sections that follow. In addition, Appendix G provides excerpts from the ALDOT *Maintenance Performance Guidelines* manual that describe the particular work methods employed for each relevant activity. Each activity is designated a title and a four-digit code that links the activity with its performance guidelines.

### 7.3.1 Roadway Feature Condition Assessments

The ALDOT Maintenance Bureau conducts annual condition assessments of transportation facilities statewide. In short, these assessments are done by taking a statistically-viable sample of 0.1-mile roadway segments for each road classification (i.e., Interstate, U.S. Highway, or Alabama Highway) in each ALDOT District, rating the condition of the road itself and other roadway features (e.g., drainage structures, ground cover) in the sample relative to accepted standards of function or appearance, and inferring from sample ratings the on-average condition of roadway segments belonging to individual road classifications in individual ALDOT Districts.

Assessment work is tracked under the “Condition Assessments” activity (code 6000); the performance guidelines for the work are given in Appendix G. The ALDOT *Level of Service Condition Assessments Data Collection Manual* contains more specific details about the condition assessment method. The specific ways in which the assessments can inform stormwater management-related maintenance activities are discussed below where appropriate, and the role the assessments play in the larger-scale process of planning and implementing maintenance work is discussed in Section 7.3.7 below.

### 7.3.2 Litter Pickup

As discussed in Chapter 3, litter is a pollutant generated as motorists use ALDOT transportation facilities, and stormwater is most responsible for conveying uncontrolled litter in urban MS4s to a receiving water (EPA, 2019). Appropriately, litter pickup is an integral part of ALDOT transportation facility maintenance. Litter pickup is addressed in two different activities: “Litter Pickup (Full-Width)” (code 6300) and “Spot Litter Pickup” (code 6301).

Full-width litter pickup entails the systematic combing of large roadside areas and the removal of litter of significant size when seen. As appropriate for the scale of the work, the productivity of full-width litter pickup is tracked in “shoulder miles cleaned.” A shoulder mile is a linear mile measured along one side of an ALDOT road, though it is still a somewhat subjective measurement. For example, a one-mile span of a four-lane, divided highway with a median could be considered as containing either three or four shoulder miles. The one-mile segments of shoulders and other connected ALDOT property flanking the outside edges of the divided highway would together be considered two shoulder miles without question. But the one-mile segment of median may be considered one or two shoulder miles, depending on factors such as the size of the median, the presence of a concrete ditch, and the abstract judgment of the maintenance personnel performing litter pickup. Despite the fuzziness of the measurement,

“shoulder miles cleaned” is an overall reliable indicator of the scale of work performed and satisfies the measurement requirement of Permit items II.B.6.a.5 and II.B.6.c.4.

Spot litter pickup is a more focused activity involving litter pickup at unconnected locations on ALDOT property and is typically tracked by ALDOT in “employee hours.” However, for MS4 purposes, spot litter pickup is tracked by the number of work reports completed in order to provide more insight regarding the amount of spot litter pickup performed.

Condition assessments indicate the degree to which substantial litter is present, on average, on ALDOT transportation facility property. ALDOT uses this data to gauge the effectiveness of its litter pickup practices and the need for adjustment of those practices.

Litter pickup is also performed by non-ALDOT entities. For example, citizen groups volunteering through Alabama PALS or Keep Alabama Beautiful (discussed in Chapter 3) pick up litter on ALDOT property in a manner and in a frequency not regulated by ALDOT. Litter is also picked up by neighbor MS4s under cooperative maintenance agreements, as noted in Chapter 3; neighbor MS4s track litter pickup in their own ways. Inmates incarcerated by the Alabama Department of Corrections pick up litter on ALDOT roadways according to an interagency agreement as well. In addition, ALDOT hires contractors to supplement employee litter pickup efforts. While ALDOT may receive productivity data for these efforts, there is no guarantee that ALDOT will have completely accurate productivity data or data suited for a particular purpose. Thus, ALDOT will not actively track the productivity of non-ALDOT litter pickup efforts. However, ALDOT understands the importance of these other efforts to its overall PPGH program.

Though no rest areas currently lie within MS4 areas, ALDOT deploys trash receptacles to all rest areas throughout Alabama to further control litter, which is in line with Permit item II.B.6.a.6.

### 7.3.3 Snow & Ice Control

The use of salt as a roadway deicing agent is common, but it can have negative environmental impacts (EPA, 2002). ALDOT aims to prevent and manage the accumulation of snow and ice on roadways in ways intended to reduce the amount of salt required.

Salt storage is an important aspect of minimizing the salt contamination of runoff. Salt that is ready for deployment is stored in an enclosed shelter to prevent exposure of the salt to rain and wind. The floor of the shelter is elevated and is designed for drainage control so that salt is kept separate from surface runoff.

Calcium magnesium acetate (CMA) has been used by ALDOT for approximately 25 years in lieu of traditional salt (i.e., sodium chloride), when supply allows, to melt snow and ice on ALDOT roads. Beyond CMA, ALDOT has used sand, small gravel, and limestone as traditional salt deicing alternatives.

Since 2011, ALDOT has pretreated roadways at an increasing frequency with “salt brine,” a solution with a relatively small concentration of sodium chloride. It is applied to roadways prior

to winter weather occurring to make pavements less conducive for keeping water frozen and, in turn, less likely to accumulate snow or ice. By preventing the accumulation of snow or ice in the first place, the need for deicing agents such as traditional salt at full concentration to melt accumulations is reduced.

All snow and ice control-related work is tracked under the ALDOT maintenance activity “Snow and Ice Control” (code 6650). While “employee hours” is the normal measurement unit by which ALDOT tracks this activity, the “number of work reports completed” is the measurement unit for the purposes of the MS4 program as it provides a more meaningful metric for the amount of snow and ice control performed.

#### 7.3.4 Drainage Structure Maintenance

Drainage structures such as culverts and inlets on ALDOT roadways are inspected at least annually to determine if cleaning is warranted. Maintenance personnel inspecting the drainage structures look for debris and undesirable vegetation that may adversely affect the hydraulic functionality of the structure. Without proper cleaning when warranted, significant clogging of the structure may divert water in ways that could create safety hazards for motorists (i.e., flooded travel lanes), lead to broader public health concerns (e.g., vector-borne diseases resulting from mosquito breeding in pooled runoff water), erode vegetated ground cover, or carry sediment and debris to natural waters. If cleaning is indeed warranted for a given structure, maintenance personnel clean the structure while on the inspection visit. Both inspection and cleaning are performed under the “Cleaning Minor Drainage Structures” activity (code 6170); the number of drainage structures inspected (and cleaned if warranted) is tracked.

Repair of a drainage structure is warranted when significant damage to or deterioration of the structure is evident. Drainage structure repair is performed as needed under the “Repairing Minor Drainage Structures” activity (code 6180). The repair work is tracked for MS4 purposes by the number of work reports completed as opposed to employee hours as it is typically tracked by ALDOT.

The clogging and structural integrity of drainage structures are evaluated through condition assessments. Different assessment procedures are implemented for side drains, cross drains, unpaved ditches, paved ditches, drop inlets, slotted drains, catch basins, and curb-and-gutter systems. Assessment outcomes inform drainage structure inspection, cleaning, and repair frequencies.

#### 7.3.5 Erosion Control

To prevent soil erosion and promote stormwater infiltration, ALDOT restores roadside vegetation where it has been compromised on ALDOT roadways under the “Erosion Control” activity (code 6280). This activity includes seeding, sodding, mulching, and other practices to promote the growth of vegetation on land flanking ALDOT roads. Typically, ALDOT tracks the number of employee hours of erosion control work performed. But, for MS4 purposes, ALDOT tracks the number of work reports completed in order to make for a better count of the number of erosion control projects undertaken on ALDOT transportation facilities.

The need for erosion control projects can be inferred from condition assessments. Statewide proportions of front slopes (between the road and a drainage channel) and back slopes (between the drainage channel and the ALDOT property boundary) of ALDOT roads with either evidence of erosion or exposed soil in jeopardy of erosion are estimated in the assessments.

### 7.3.6 Herbicide Treatment & Surveillance

While roadside vegetation is important for the management of stormwater runoff, certain species of vegetation are considered undesirable and should be removed from the roadside. These species, if allowed to grow without intervention, may overtake other species that promote better management of runoff, and they may become safety hazards for motorists (e.g., travel lane obstructions, interference with motorist sight). ALDOT controls the growth of undesirable vegetation through the application of herbicide, handled under the “Herbicide Treatment” (code 6260) and “Spot Herbicide Treatment” (code 6310) activities. However, applying herbicide in an improper manner may cause environmental harm, so ALDOT regulates the application of herbicide rigorously. As in the case of herbicide storage at support facilities, herbicide application on roadways is governed by the PGP and the ALDOT PDMP (provided in Appendix G). The formulation and spraying of herbicide is further guided by the ALDOT *Roadside Vegetation Management Manual*, developed as an outcome of ALDOT-funded research conducted by Auburn University. The above-discussed excerpts of the ALDOT *Maintenance Performance Guidelines* in Appendix G refer to the *Roadside Vegetation Management Manual* explicitly for guidance.

Condition assessments determine the degree to which undesirable vegetation is present, on average, on ALDOT transportation facilities. ALDOT uses assessment outcomes to adjust herbicide application practices if necessary so that herbicide may be applied in a more focused manner.

Another key measure ALDOT uses to reduce unnecessary exposure of herbicide to the environment is equipment selection and management. Herbicide storage and truck tank loading practices that reduce the potential for runoff contamination are discussed in Section 7.2.2. In addition to those practices, the herbicide tanks on trucks are limited in volume in order to reduce the volume of herbicide that would require control in case of a spill. Trucks are equipped with shovels and absorbent socks for spill control. Herbicide is applied to a roadside area by the trucks using a rotating head / solid stream delivery system, which allows for specific targeting. The herbicide application rate is precisely controlled by a computer on board the truck.

Efficient application of herbicide also depends significantly on the proficiency of the applicator. ALDOT requires employees and contractors to hold “Commercial Applicator” certification issued by the Alabama Department of Agriculture & Industries (ADAI) in order to apply restricted-use herbicides. This requirement goes beyond any of the permits under which ALDOT is regulated. As discussed in Chapter 3 and Section 7.3.8 below, ALDOT offers a review course to prepare applicators for ADAI permit examinations. Applicators can also gain application-related knowledge through the ALDOT vegetation management training course and newsletter, which are discussed in Chapter 3 and Section 7.3.8 as well.

After an application of herbicide is performed, the applicator submits an “Herbicide Work Report” to the ALDOT Maintenance Bureau for review. This form is provided in Appendix G. Information sought by the form includes environmental conditions, equipment maintenance performed, and herbicide specifics such as product used and application amount.

Post-application surveillance to determine whether herbicide has been applied at a given site in accordance with the PDMP is handled under the “Herbicide Treatment Surveillance” activity (code 6262). This surveillance takes place ten to twenty days after a given herbicide application. With ADEM’s approval, ALDOT transitioned in May 2016 from conducting surveillance for every herbicide application to an approach of spot-check surveillances with more weight on applications made around bridge ends or near water. This surveillance approach allows for the focusing of resources onto applications of higher concern.

Herbicide treatment for transportation facilities is tracked and reported in the manner specified in the PDMP and, therefore, not as an official part of the work performed for the ALDOT MS4 program. Herbicide-related records are made available in the manner prescribed by the PGP. Additional details about herbicide treatment practices can be found in the PDMP.

### 7.3.7 The RoadMAP Process

Transportation facility maintenance activities are carried out using the “RoadMAP process.” The term “RoadMAP” is shorthand for “Road Maintenance Accountability Program.” RoadMAP is a computer-based system employing a “Maintenance Quality Assurance” approach to the planning of and budgeting for maintenance activities. To elaborate, the RoadMAP process governs the setting of maintenance goals and the implementation of maintenance work, and it requires the active involvement of both office and field personnel. The process is best described as a cycle (as illustrated by a diagram in Appendix G) with the following order of six steps:

1. Evaluate. The annual condition assessments of roadways are performed as explained above. Scorecards with assessment results are provided to ALDOT District Administrators to aid in setting goals and allocating resources.
2. Plan. The maintenance work performed is statistically analyzed. At the annual Maintenance Management Meeting, the work performed and the performance guidelines are compared, and revisions to maintenance activities are voted-on. New maintenance activities may also be developed. Materials that may be revised include the *Maintenance Performance Guidelines* manual and the ALDOT Maintenance Bureau field operations manual.
3. Budget. Using condition assessment results, an iterative process takes place to set goals for roadway feature conditions and determine the annual maintenance budget for working toward those goals. The “Maintenance Budget Allocation” diagram in Appendix G illustrates this process. This process is implemented throughout ALDOT in a bottom-up manner. It begins with individual ALDOT Districts generating preliminary goals and budgets. The goals and budgets are communicated to the appropriate ALDOT Areas; the Areas may revise the goals and budgets in coordination with their Districts. The ALDOT

Areas subsequently communicate with the Maintenance Bureau in the central office. The Maintenance Bureau may wish to revise the goals and budgets submitted from the Areas in coordination with the Areas and, by extension, the Districts. Once the Maintenance Bureau determines that the individual budgets are acceptable, a statewide budget is generated from the individual budgets and is submitted for review to the ALDOT authorities responsible for budget allocation for the agency. Those authorities then approve a final budget for the Maintenance Bureau, and that budget is allocated appropriately throughout the organization.

4. **Schedule.** The “Maintenance Workflow” diagram in Appendix G illustrates the process of actually implementing maintenance work. The scheduling of work is motivated by either the annual plan developed earlier in the cycle or a request made internally (usually because of an observation by field personnel) or by a citizen because of an acute concern in the field. The citizen concern may be received via the Environmental Concern Submission Form (discussed in Chapter 3) or through some other means. A “work order” is completed in order to formally assign work to a particular party.
5. **Perform.** Performing the work is the most important step of the cycle. The other steps of the cycle are rendered moot if the work is not carried out properly.
6. **Report.** As indicated by the “Maintenance Workflow” diagram, a “work report” is completed to document the outcomes of the work. If the work was motivated by a citizen report, then ALDOT would follow-up with the citizen if warranted. Individual work report data is harvested to create more comprehensive reports, such as “Daily Activity Reports” showing the crew makeup, equipment, and materials used for different work assignments, updated annual budgets, and reports summarizing work performed with regard to MS4-applicable maintenance activities in the different ALDOT Regions, Areas, and Districts. These comprehensive reports play important roles as the six-step process begins a new cycle.

#### 7.3.8 Transportation Facility Good Housekeeping Employee Training

Though not explicitly stipulated by the Permit, ALDOT facilitates training for field personnel performing the transportation facility maintenance activities described above. The ALDOT Maintenance Bureau coordinates vegetation management training for employees involved in the maintenance of ALDOT transportation facilities. A summary of the vegetation management training program is given here; the program is more comprehensively discussed in Chapter 3.

A key component of the vegetation management training program is a comprehensive, one-day vegetation management training course. Course sessions are facilitated each year at different locations throughout the state. It is designed for ALDOT employees, but the course is often attended by others, such as contractors and representatives from other MS4s. A course session can consist of speakers from ALDOT, regulatory agencies, industry, and academia. The agenda of the course is approved by ADAI for educational credit toward renewal of the Commercial Applicator certification. An example of an agenda from a vegetation management training

course session and a crossword puzzle used during the course to reinforce learning are provided in Appendix C.

Another component of the vegetation management training program is a newsletter distributed multiple times each year. A given newsletter may provide reviews of application practices as appropriate for the season, information on upcoming events, updates regarding equipment, information about invasive plant species, or other information of interest. An example of the newsletter can be found in Appendix C.

The Commercial Applicator certification requires passing of an examination administered by ADAI. To better facilitate certification of ALDOT herbicide applicators, ALDOT offers a review course for the examination.

ALDOT herbicide applicators are encouraged attend the Alabama Vegetation Management Society annual meeting in order to supplement training. In fact, approximately 75 percent of ALDOT Commercial Applicators attend the meeting each year.

Tracking of these training activities is done in ways explained in Chapter 3.

## **References**

U.S. Environmental Protection Agency. (2002). *Source water protection practices bulletin: Managing highway deicing to prevent contamination of drinking water*, U.S. Environmental Protection Agency, Washington, DC.

U.S. Environmental Protection Agency. (2019). "The Clean Water Act and trash-free waters." *Trash-free waters*, <<https://www.epa.gov/trash-free-waters/clean-water-act-and-trash-free-waters>> (June 15, 2020).



## **8 MS4 Monitoring**

### **8.1 Introduction**

ALDOT has conducted water quality monitoring associated with its MS4 since ADEM first issued ALDOT and its co-permittees the MS4 Phase I individual permit. Before the issuance of the 2013 ALDOT MS4 permit, MS4 monitoring mostly consisted of conducting wet-weather characterization of urban stormwater discharges (i.e., taking grab and composite samples of a discharge after a storm event and analyzing the samples with respect to an array of water quality parameters). Unfortunately, this approach typically yielded little useful information about the impacts of the ALDOT MS4 on the quality of surface waters because (i) in-stream water quality outcomes of ALDOT MS4 discharges were not directly assessed, (ii) the number of storm events for which sampling took place was very small, (iii) sampling usually took place after “first flush” conditions due to the travel time after the onset of a storm of sampling personnel to a selected sample site, and (iv) water quality parameters specified in the MS4 permits in effect at the time did not align with the potential pollutants that would originate on ALDOT facilities.

After the issuance of the 2013 MS4 permit, ALDOT set out to develop a more meaningful MS4 monitoring strategy that would better indicate any significant impact of ALDOT MS4 discharges on surface water quality. The 2013 MS4 permit monitoring requirements, which mirror those of the 2019 permit, were in line with that ALDOT objective. Permit item III.A.1 in both the 2013 and 2019 MS4 permits implies that ALDOT should monitor in order to provide for (i) the overall evaluation of the long-term effectiveness of stormwater management practices implemented by ALDOT within MS4 areas and (ii) the characterization of the impacts of ALDOT MS4 discharges on 303(d)-listed waters and waters with an EPA-approved or EPA-developed TMDL.

This chapter reviews the monitoring strategy ALDOT implemented during the 2013 MS4 permit term and explains how ALDOT will improve its monitoring strategy for this Permit term. It serves as the monitoring plan required by Permit item III.A.2.

### **8.2 Review of Previous Monitoring Strategy**

In short, the monitoring strategy implemented during the 2013 MS4 permit term consisted of

- identifying ALDOT MS4 discharge potential pollutants of concern (POCs),
- selecting six representative locations in Alabama where an ALDOT roadway intersects a 303(d) or TMDL water associated with an identified potential POC,
- deploying two continuous monitoring sondes (one placed upstream of the roadway and the other placed downstream) at each of the six selected locations for periods of approximately six months to capture some seasonal variability, and
- analyzing data collected by the sonde pair for each location to determine if a significant, average difference in upstream and downstream water quality parameter measurements

with respect to a potential POC exists, which would indicate that a pollutant contribution to the stream originated from the ALDOT facility in question.

The POCs potentially applicable to ALDOT identified are correlated with sediment loading (i.e., siltation and turbidity) for reasons explained in Section 8.3. The surrogate water quality parameter used to indicate sediment concentration was turbidity because the sondes could efficiently measure it. Ultimately, ALDOT found no definitive evidence that it is a significant contributor of sediment pollution to waters receiving discharge from the ALDOT MS4. In other words, ALDOT found no significant, average differences in upstream and downstream sonde turbidity measurements. However, many of the turbidity measurements taken seem to have been affected by external factors beyond ALDOT control (e.g., pooling at the sonde site, fouling of the sonde by vegetative debris in the stream, variable internal flow behavior of the stream, sediment loss upstream of ALDOT property). Additional monitoring details and outcomes from the 2013 MS4 permit term can be found in past annual reports.

While no evidence of significant ALDOT pollution contribution was found, ALDOT seeks to improve upon the strategy implemented during the 2013 MS4 permit term to obtain even more meaningful and more viable data.

### **8.3 Pollutants Applicable to the ALDOT MS4**

As it did for the 2013 MS4 permit term, and in accordance with Permit items II.D, ALDOT examined the POCs associated with Alabama 303(d) and TMDL waters current as of this Permit term that lie within MS4 areas and considered their potential to originate in significant quantities on ALDOT property. The final 2018 303(d) and TMDL waters were studied as the 2018 designations were in effect at the beginning of this Permit term.

The named POCs for those waters include pathogens, organic enrichment (BOD), pH, pesticides, metals, nutrients, total dissolved solids, perfluorooctane sulfonate (PFOS), priority organics (PCBs), siltation, and turbidity. Most of these POCs would not originate on the ALDOT MS4 for all practical purposes. ALDOT does not own or operate sanitary sewer collection systems or wastewater treatment facilities on its property in MS4 areas, so the ALDOT MS4 should not be a significant source of pathogens or BOD. Causes of significantly non-neutral pH conditions (e.g., mining, industrial discharge) are not present on ALDOT property. The specific pesticide of concern is dieldrin (i.e., aldrin), which has been outmoded for decades. Regarding metals, mercury is the metal of most concern as indicated by the listed 303(d) and TMDL waters, but its presence is attributed to atmospheric deposition and, therefore, is not directly connected to ALDOT operations. ALDOT does not advise the use of fertilizers in the vegetation management of its fully operational transportation facilities, own or operate possible sources of sanitary sewage in MS4 areas (as stated above), or use detergents with phosphates at support facilities (as discussed in Chapter 7), so the ALDOT MS4 should not be a significant source of nutrients. Issues with total dissolved solids and PFOS are attributed to industrial sources not associated with ALDOT. Pollutants for which the ALDOT MS4 is not a significant source will not be considered explicitly in the monitoring strategy, as per Permit item III.A.6.

With respect to siltation and turbidity, the major sources indicated by the 303(d) list and TMDL reports are mining operations (which ALDOT does not perform), land development, and urban runoff. The primary ALDOT source of siltation and turbidity is construction activity (i.e., land development), but the acute sedimentation effects of construction are addressed by work to meet CGP requirements (discussed in Chapter 5). However, comparatively small amounts of sediment or other solids may discharge into surface waters from ALDOT facilities after construction is complete. Given that potential, ALDOT will continue to consider siltation and turbidity as possible pollutants discharged from the ALDOT MS4.

In addition to the multiple other purposes they serve for this Plan, the maps in Appendix D depict the 2018 designated 303(d) and TMDL waters located throughout Alabama, in accordance with Permit item III.A.2.a. Since ALDOT focuses on the sediment-related POCs, the 303(d) and TMDL waters associated with siltation or turbidity are highlighted uniquely on the maps.

Beyond the 303(d) and TMDL water considerations, herbicide may cause a pollution issue if applied improperly. As discussed in Chapter 7, ALDOT applies herbicide on transportation facilities in accordance with the Pesticides General Permit (PGP) and the ALDOT Pesticide Discharge Management Plan. The surveillance of herbicide application is addressed in the work to satisfy the PGP and, therefore, is not addressed as part of the MS4 monitoring strategy.

#### **8.4 Monitoring Methods for This Permit Term**

As indicated in Section 8.2, the monitoring strategy for the 2013 MS4 permit term produced noisy data due to external factors beyond ALDOT's control. Thus, ALDOT will implement a visual observation approach for this Permit term. With this approach, the noise associated with precise quantitative data collection will no longer be an issue, and the "big picture" of any significant impact that a typical ALDOT MS4 discharge has on a receiving water will be more apparent.

Visual observations will be made at selected monitoring locations during both dry-weather and wet-weather conditions. A total precipitation amount of less than 0.1 inches during the 72-hour period preceding a time in question constitutes dry-weather conditions; wet-weather conditions are those during or immediately after a storm event. Dry-weather observations will include an evaluation of any deposited sediment, the presence of any erosion most likely caused by stormwater runoff flow, and the condition of ground cover on ALDOT property over which stormwater runoff travels. Wet-weather observations will determine if a visible sediment plume in the receiving water is clearly a result of an ALDOT MS4 discharge. Visual observations may be made by ALDOT personnel visiting a monitoring location, reviewing photographs or video recordings captured by a camera installed at a monitoring location, or surveying a monitoring location using an unmanned aerial system (i.e., drone). To promote consistency in data collection, ALDOT will develop a form to document visual observations.

Six representative monitoring locations where an ALDOT-maintained road crosses a receiving water will be selected. (The six locations may be different than the six selected for the 2013 MS4 permit term.) ALDOT intends to select locations in both Phase I MS4 areas and Phase II MS4 areas. Preference will be given to a location where a road crosses a 303(d) water or TMDL

water with siltation or turbidity as a POC. Among other criteria that will be considered are accessibility for making visual observations and the potential to discern significant impacts due to ALDOT MS4 discharges from the impacts of other influences (e.g., an adjacent MS4). At each selected location, ALDOT will identify one outfall that discharges stormwater runoff into the receiving water; the drainage basin of that outfall and the ALDOT right-of-way will be delineated to determine the area of ALDOT property that should be studied at the monitoring location.

To better understand any long-term impact ALDOT MS4 discharges may have on receiving waters, each selected monitoring location will be studied over a period of three years. Dry-weather observations will occur at a minimum frequency of twice per year over the three-year period, and wet-weather observations will occur at least once per year over that period.

## **8.5 Monitoring Implementation**

With respect to the scheduling of monitoring implementation as per Permit item III.A.2.c, ALDOT aimed to have the visual observation form developed and six tentative monitoring locations selected by the end of the first year of the Permit term. Six monitoring locations were indeed selected during the first year of the Permit term. The monitoring locations selected are the following:

- U.S. Highway 431 at Brier Fork (Flint River) in Madison County,
- U.S. Highway 431 at Beaverdam Creek in Madison County,
- Alabama Highway 152 at Three Mile Branch in Montgomery County,
- Alabama Highway 110 at Jenkins Creek in Montgomery County,
- U.S. Highway 90 at Halls Mill Creek in Mobile County, and
- U.S. Highway 98 at D'Olive Creek in Baldwin County.

The monitoring locations are depicted on a map provided in Appendix H as well as on the MS4 area maps found in Appendix D, satisfying Permit item III.A.2.a. The three-year study period for each selected monitoring location will commence sometime after the first year of the Permit term, though the date on which the three-year period starts for one location may be different than the starting date for another location in order to more efficiently focus monitoring resources.

Visual observation form development began during the first year of the Permit term, and the form was finalized soon after the end of the first year. The form was developed using the Survey123 application, which will allow for ease of use in the field and compilation of observation information in an electronic database. The form can be found in Appendix H. Observation data collection using the form commenced during the second year of the Permit term.

Monitoring actions will be tracked as implemented, as required by Permit item III.A.4. As necessary, ALDOT will adjust the implementation of monitoring to accommodate changing conditions in the field, the need for additional data, observations from data collected, and other unforeseen circumstances that arise. Progress made and any needed updates to the monitoring strategy will be explained in annual reports, as required by Permit item IV.B.

ALDOT will analyze the data collected, in accordance with Permit item III.A.3, after the end of each fiscal year during the Permit term and will summarize the results in the annual report for the fiscal year. If appropriate, ALDOT will also provide its assessment of the overall effectiveness of its stormwater management practices based on data analysis results, in alignment with Permit items III.A.1 and III.B. To further meet Permit item III.B, adjustments to stormwater management practices that ALDOT performs in response to effectiveness assessments will be explained in the annual reports.

The ALDOT Maintenance Bureau will oversee the implementation of the MS4 monitoring strategy, including any needed equipment deployment, management of collected data, data analysis, any appropriate coordination with other MS4s, and any needed training of personnel. The ALDOT Design Bureau may provide recommendations on changes to the MS4 monitoring strategy or stormwater management practices implemented based on monitoring findings.

## **9 Concluding Remarks**

### **9.1 The Expected Evolution of the Stormwater Management Program Plan**

One of the keys to ALDOT's successful MS4 program, especially since the issuance of the 2013 MS4 permit, is ALDOT's willingness to assess the program frequently and honestly and then to provide room for improvement as needs emerge. Fortunately, the SWMPP is intended to be a "living" document. The Permit implies that the Plan *should* evolve given the provisions in the Permit for the modification of the Plan (e.g., Permit item II.C.1). ALDOT will continue to learn as it implements stormwater management practices and will adjust those practices based on observations made. In the end, the Plan should change continually in minor ways and perhaps in major ways whenever ALDOT believes change will serve the citizens of Alabama better.

### **9.2 Acknowledgments**

ALDOT acknowledges the many contributions that made the development of this Plan possible. The ALDOT bureaus and offices that provided information about their specific stormwater management-related duties and capabilities, reviewed drafts of this Plan, and committed to performing activities that make up the ALDOT MS4 program deserve much credit. Also, ALDOT is grateful for the healthy dialogue it has established with ADEM that continues to inform ALDOT's MS4 program. In addition, ALDOT also thanks the citizens of Alabama for the input and feedback ALDOT receives on a continual basis regarding its MS4 program and other programs intended to serve those citizens.

**Appendix A:**  
**Supplemental Material for Chapter 1**

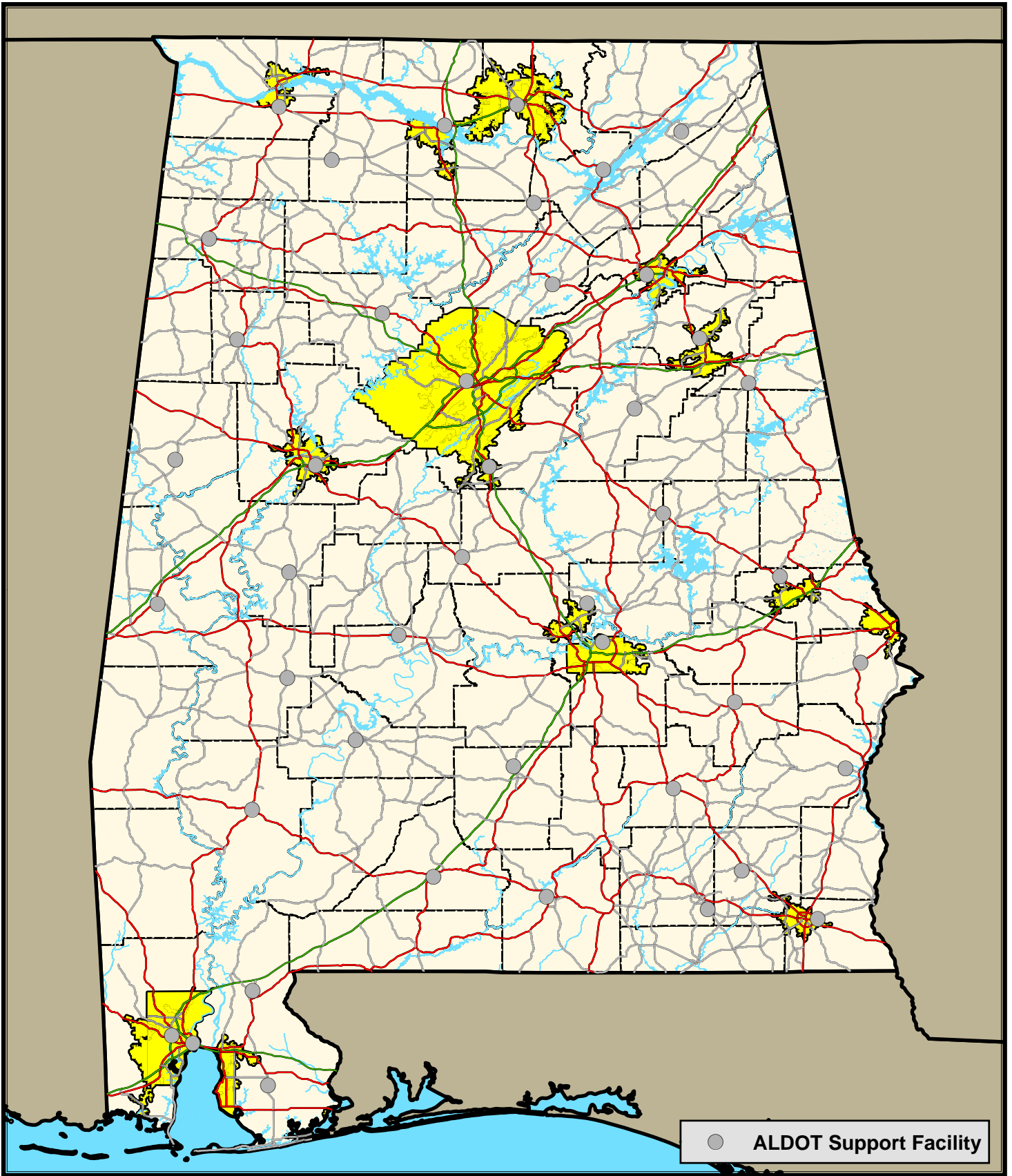
Alabama MS4 Areas & ALDOT Facilities

ALDOT Organizational Chart: MS4 Participating Parties

ALDOT Internal Coordination: MS4 Participating Parties

ALDOT MS4 Contacts

ALDOT MS4 Stormwater Management Activities:  
October 1, 2019 - September 30, 2024



  
DEPARTMENT OF TRANSPORTATION  
DESIGN BUREAU - STORMWATER

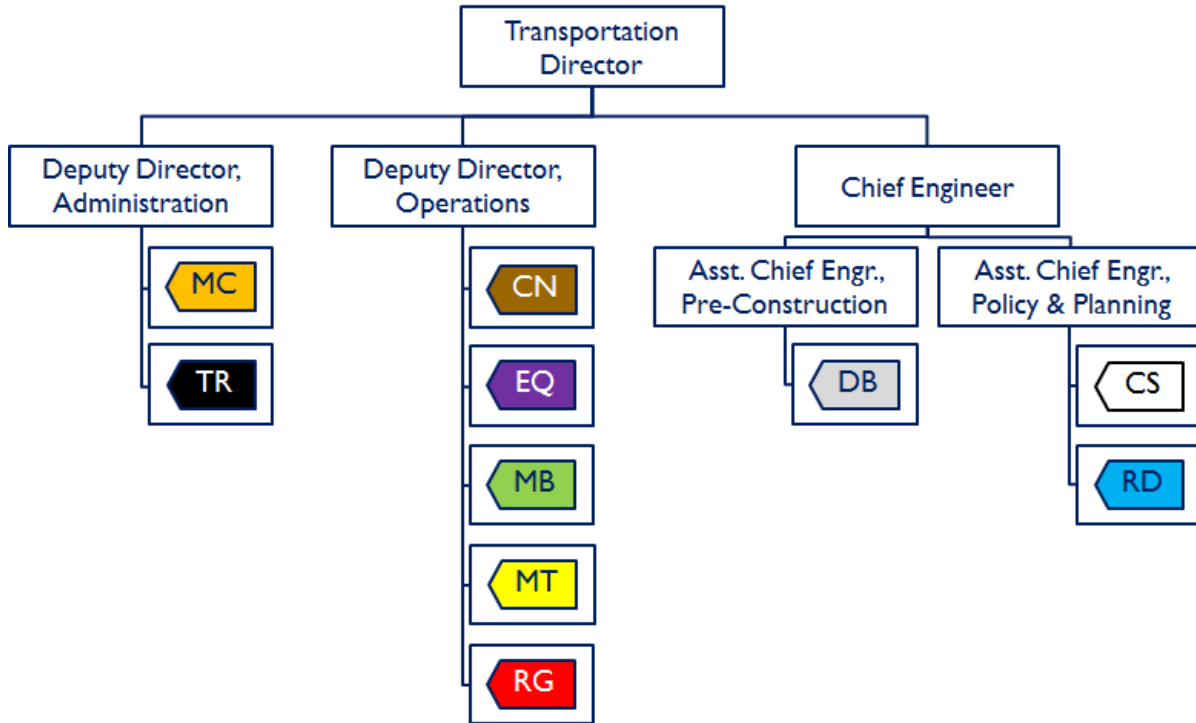
# Alabama MS4 Areas\* & ALDOT Facilities



\* MS4 regulation-eligible areas as designated in March 2013.

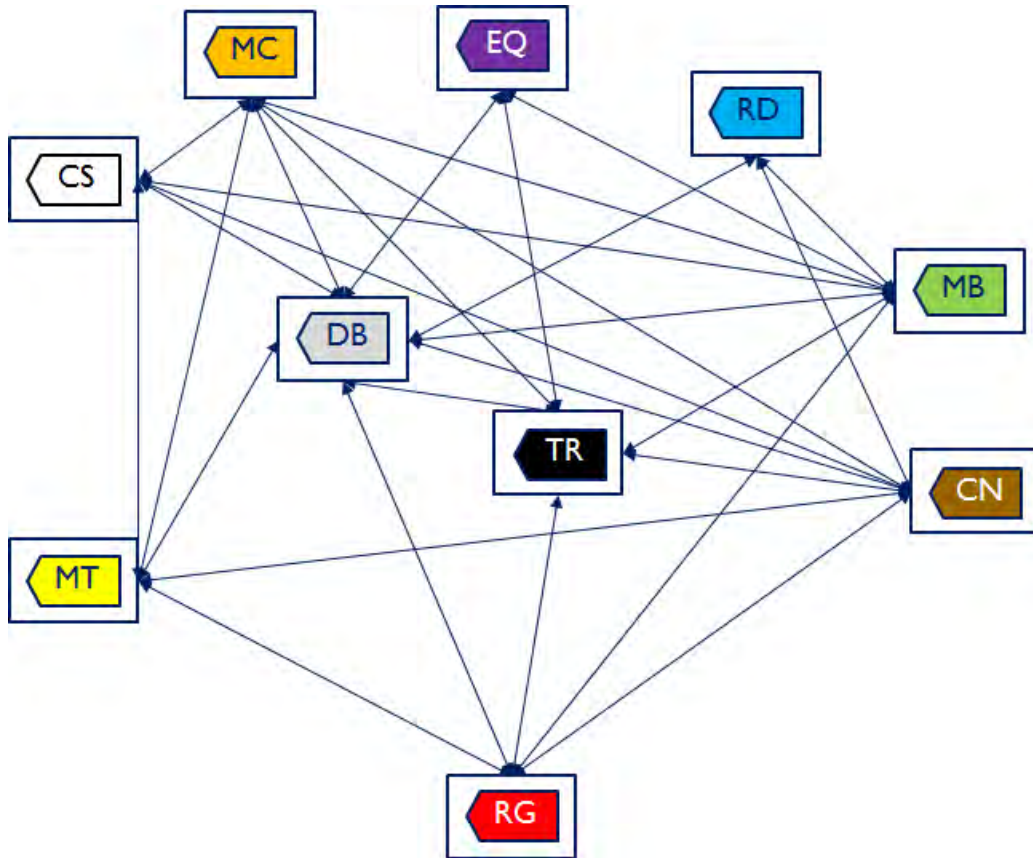


## ALDOT Organizational Chart: MS4 Participating Parties



	Computer Services Bureau
	Construction Bureau
	Design Bureau
	Equipment, Procurement, & Services Bureau
	Maintenance Bureau
	Materials & Tests Bureau
	Media & Community Relations Bureau
	Regions (5 total)
	Research & Development Bureau
	Training Bureau


**ALDOT Internal Coordination:  
MS4 Participating Parties**



**ALDOT MS4 Contacts:  
Central Office Participating Parties**

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	Tamika London	(334) 213-2053	londont@dot.state.al.us

**ALDOT MS4 Contacts:  
Field Office Participating Parties**

	North Region	Tuscumbia Area	Dallon Ogle, PE	(256) 389-1413	ogled@dot.state.al.us	
		Guntersville Area	Sean Butler, PE	(256) 571-7300	butlerw@dot.state.al.us	
	East Central Region	Birmingham Area	Roddy Mitchell, PE	(205) 581-5612	mittchellr@dot.state.al.us	
		Alexander City Area	Holly McCain, PE	(256) 234-8495	mccainh@dot.state.al.us	
	West Central Region	Fayette Area	<i>(no regulated MS4 facilities)</i>			
		Tuscaloosa Area	Shane Trippany, PE	(205) 554-3230	trippanys@dot.state.al.us	
	Southeast Region	Montgomery Area	Randall Harrell	(334) 261-3234	harrellr@dot.state.al.us	
		Troy Area	Matt Wilson, PE	(334) 670-2453	wilsonma@dot.state.al.us	
	Southwest Region	Grove Hill Area	<i>(no regulated MS4 facilities)</i>			
		Mobile Area	Jason White	(251) 450-2632	whitejoh@dot.state.al.us	

### ALDOT MS4 Stormwater Management Activities:

October 1, 2019 - September 30, 2024

(Last Revised: January 30, 2024)

Permit Requirement(s)	Activity	Associated ALDOT Personnel	Permit Term Goal(s)	Actions / Status as of Jan. 30, 2024
<b>Stormwater Management Program Plan</b>				
II.A.1; II.A.2; II.C.1; II.C.2	Stormwater Management Program Plan (SWMPP)	State Design Engineer	Develop SWMPP. Revise SWMPP as needed throughout Permit term.	SWMPP developed during period designated by Permit. 5 ad hoc revisions prepared.
IV.A.1; IV.A.2; IV.A.4; IV.B	MS4 annual reports	State Design Engineer	Compile and submit to ADEM an annual report for the previous fiscal year by January 31 of every year during which Permit is in effect.	Annual reports for FY 2019, FY 2020, FY 2021, and FY 2022 compiled and submitted to ADEM on time. (FY 2023 report submitted concurrently with this SWMPP revision.)
<b>Structural Controls</b>				
II.B.1.b.1; II.B.1.c; II.B.1.d.1	Inventory & map of structural BMPs	State Maintenance Engineer; Equipment Bureau Chief; Region Engineers	Develop inventory forms. Update inventory with fully operational structural BMPs. Develop map depicting structural BMP locations; update map as structural BMPs become fully operational.	Electronic inventory form developed. Inventory updated. Map developed and updated.
II.B.1.b.2; II.B.1.b.3; II.B.1.c; II.B.1.d.1	Inspection of structural BMPs	State Maintenance Engineer; Equipment Bureau Chief; Region Engineers	Develop a checklist (inspection form) for structural BMP inspection. Inspect each structural BMP after fully operational at least once every 2 years. Track inspections of structural BMPs performed.	Electronic inspection form developed. Fully operational BMPs inspected at acceptable frequencies.
II.B.1.b.3; II.B.1.b.4; II.B.1.b.5; II.B.1.c; II.B.1.d.1; II.B.1.d.2	Maintenance of structural BMPs	State Maintenance Engineer; Equipment Bureau Chief; Region Engineers	Develop a checklist for structural BMP inspection maintenance. Stabilize eroded areas of structural BMPs as needed. Remove sediment and debris from structural BMPs as needed. Track maintenance work reports completed for each structural BMP.	BMP maintenance activity performed as informed by inspection outcomes. (Maintenance checklist is a work report generated in accordance with BMP maintenance recommendations for each specific case.)

ALDOT MS4 Stormwater Management Activities:  
October 1, 2019 - September 30, 2024

Permit Requirement(s)	Activity	Associated ALDOT Personnel	Permit Term Goal(s)	Actions / Status as of Jan. 30, 2024
<b>Public Education &amp; Public Involvement</b>				
II.B.2.a; II.B.2.c.1	Implementation of ALDOT Public Education & Public Involvement (PEPI) program	Media & Community Relations Bureau Chief; State Design Engineer; State Maintenance Engineer; State Construction Engineer; Materials & Tests Engineer; Training Bureau Chief; Computer Services Bureau Chief; Region Engineers	Implement PEPI program in areas served by the ALDOT MS4. Adjust program as needed.	Program implementation ongoing and adjusted as necessary.
II.B.2.b.1; II.B.2.b.3; II.B.2.b.4.a; II.B.2.c.2	Mechanism(s) to provide public with stormwater management information & opportunities for involvement	State Design Engineer; Computer Services Bureau Chief; Region Engineers	Maintain stormwater management content on the ALDOT Web site. Post stormwater/environmental messages online via Twitter, as appropriate. Track the number of MS4-applicable Twitter messages posted.	Web site stormwater management content published on Web site and updated as necessary. Messages posted on Twitter as appropriate.
II.B.2.b.1; II.B.2.b.3; II.B.2.b.4.a.i; II.B.2.b.4.a.ii; II.B.2.b.4.a.iv; II.B.2.c.2; II.B.2.d	Publish SWMPP & MS4 annual reports online	State Design Engineer; Computer Services Bureau Chief	Publish SWMPP and annual reports on the ALDOT Web site.	Current version of SWMPP and most recent annual report published on the ALDOT Web site.
II.B.2.b.1; II.B.2.c.2	Mechanism to engage public in the development of SWMPP	State Design Engineer; Computer Services Bureau Chief	Encourage citizens to express concerns about ALDOT's SWMP through the Environmental Concern Submission Form (accessible through the ALDOT Web site).	Environmental Concern Submission Form in use to receive citizen concerns. Encouragement to express SWMP concerns provided on ALDOT Web site.

ALDOT MS4 Stormwater Management Activities:  
October 1, 2019 - September 30, 2024

Permit Requirement(s)	Activity	Associated ALDOT Personnel	Permit Term Goal(s)	Actions / Status as of Jan. 30, 2024
II.B.2.b.2	Identification of potential pollutants to be targeted by PEPI program	Media & Community Relations Bureau Chief; State Design Engineer; State Construction Engineer; State Maintenance Engineer; Materials & Tests Engineer; Region Engineers	Identify potential pollutants.	Potential pollutants (litter, sediment, herbicide, and chemicals & waste materials) identified.
II.B.2.b.3; II.B.2.b.4.a.i; II.B.2.b.4.a.ii; II.B.2.b.4.a.iv; II.B.2.c.3; II.B.2.c.4	Coordination with anti-litter organizations to support litter awareness campaigns & litter pickup activities	State Maintenance Engineer	Maintain agreement with at least one organization throughout Permit term. Track funding of anti-litter organizations (for PSAs, brochures, litter pickup logistics, etc.). Review activities conducted by anti-litter organization(s) supported. Track participation metrics (i.e., applications, participant totals, miles adopted) while an ALDOT-Alabama PALS agreement is in effect.	Agreements with Alabama PALS and Keep Alabama Beautiful maintained and renewed to be effective through the end of FY 2023.
II.B.2.b.3; II.B.2.b.4.a.i; II.B.2.b.4.a.ii; II.B.2.b.4.a.iv; II.B.2.c.3; II.B.2.c.4	Facilitation of an ALDOT anti-litter public awareness campaign	Media & Community Relations Bureau Chief	Continue implementation of the ALDOT public awareness campaign centered around anti-litter PSA. Track TV and radio ads with campaign content produced, social media posts related to campaign, and press releases related to campaign.	Implementation of public awareness campaign continues.
II.B.2.b.3; II.B.2.b.4.a.i; II.B.2.b.4.a.ii; II.B.2.b.4.a.iv; II.B.2.c.4	ALDOT signage with anti-litter messaging for motorists	State Maintenance Engineer	Maintain sign designs and guidelines for sign placement. Track total anti-litter signs deployed in each ALDOT Area.	Sign designs and placement guidelines maintained.
II.B.2.b.3; II.B.2.b.4.a.iii; II.B.2.c.2; II.B.2.c.3	Mechanism for citizen reporting of stormwater management-related concerns	State Design Engineer; Computer Services Bureau Chief	Maintain the Environmental Concern Submission Form (accessible through the ALDOT Web site) to receive citizen concerns. Track reports received from the Environmental Concern Submission Form.	Environmental Concern Submission Form in use to receive citizen concerns.
II.B.2.b.4.a.i; II.B.2.b.4.a.ii; II.B.2.b.4.a.iv; II.B.2.c.4	ALDOT signage notifying motorists of watershed boundaries	State Maintenance Engineer	Maintain watershed boundary sign designs and guidelines for sign placement. (Deployment depends on availability of ADEM funding.) Track signs deployed.	Sign designs and placement guidelines maintained. Sign deployment completed during FY 2021. (In all, 34 signs posted at the boundaries of 10 Alabama watersheds).
II.B.2.b.4.a.iv	Support of environmental restoration activities	State Design Engineer	Track support (funding, logistics, insight, etc.) of environmental restoration activities.	No support given so far in the Permit term.

ALDOT MS4 Stormwater Management Activities:  
October 1, 2019 - September 30, 2024

Permit Requirement(s)	Activity	Associated ALDOT Personnel	Permit Term Goal(s)	Actions / Status as of Jan. 30, 2024
II.B.2.b.4.b; II.B.2.b.4.c; II.B.2.c.3; II.B.2.c.4	Construction stormwater awareness program	State Construction Engineer; Training Bureau Chief	Implement QCI training program. Track employees participating in QCI initial certification course. Track sessions of QCI recertification course facilitated and participants in each session.	Program implementation ongoing.
II.B.2.b.4.b; II.B.2.b.4.c; II.B.2.c.3; II.B.2.c.4	Vegetation management training program	State Maintenance Engineer; Training Bureau Chief	Implement vegetation management training program. Track vegetation management training sessions facilitated and the participants in each session. Track "Review for Commercial Applicator Examination" course sessions facilitated and employees participating in each session. Track vegetation management training newsletters distributed.	Program implementation ongoing.
II.B.2.b.4.c; II.B.2.c.3; II.B.2.c.4	Support facility good housekeeping training program	Materials & Tests Engineer; Region Engineers	Implement good housekeeping training program for support facility employees. Track good housekeeping training sessions facilitated and employees participating in each session.	Program implementation ongoing.
II.B.2.c.3	Support & funding of academic research projects	Research & Development Engineer	Track particular projects actively supported by ALDOT and amounts of funding provided for those projects.	Projects continue to be supported.
II.B.2.c.3; II.B.2.c.4; II.F.1.b	Efforts to coordinate or collaborate with other MS4s	State Design Engineer; State Maintenance Engineer; Region Engineers	Track ALDOT coordination or collaboration with other MS4s.	Coordination/collaboration on multiple efforts ongoing
II.B.2.c.4	Participation in professional educational events (e.g., conferences, seminars, workshops) in which employees participate	Training Bureau Chief	Track events with ALDOT participation.	ALDOT participation in events continues.
II.B.2.c.4	Youth education activities with ALDOT participation	Media & Community Relations Bureau Chief; State Design Engineer; State Maintenance Engineer; Region Engineers	Track activities with ALDOT participation.	ALDOT continues participation in youth education activities as opportunities arise and resources allow.



ALDOT MS4 Stormwater Management Activities:  
October 1, 2019 - September 30, 2024

Permit Requirement(s)	Activity	Associated ALDOT Personnel	Permit Term Goal(s)	Actions / Status as of Jan. 30, 2024
II.B.2.c.4	Internal MS4 awareness mechanisms for employees	State Design Engineer; State Construction Engineer; State Maintenance Engineer	Track mechanisms employed.	Mechanisms continue to be employed as needed.
II.B.2.c.4	Significant participation in environmental-related efforts of applicable professional organizations	Media & Community Relations Bureau Chief; State Design Engineer; State Maintenance Engineer; State Construction Engineer; Materials & Tests Engineer; Training Bureau Chief; Region Engineers	Track efforts of professional organizations in which ALDOT participated.	ALDOT participation in various efforts continues.
II.B.2.c.4	Participation in community outreach meetings	Media & Community Relations Bureau Chief	Track meetings with ALDOT participation.	ALDOT continues participation in community outreach group meetings.
<b>Illicit Discharge Detection &amp; Elimination</b>				

ALDOT MS4 Stormwater Management Activities:  
October 1, 2019 - September 30, 2024

Permit Requirement(s)	Activity	Associated ALDOT Personnel	Permit Term Goal(s)	Actions / Status as of Jan. 30, 2024
II.B.3.a.1; II.B.3.b.4	Updating of MS4 major outfall inventory & maps	State Maintenance Engineer; Equipment Bureau Chief; Region Engineers	Update major outfall inventory after ad hoc outfall identification efforts. Update existing maps annually with major outfalls added to inventory.	Initial outfall inventory and maps developed based on inventory outcomes of previous MS4 permit term. Major outfalls on inventory reviewed for Anniston, Florence, Huntsville, Dothan, Auburn/Opelika, Phenix City, Montgomery, Decatur, Tuscaloosa, Gadsden, Baldwin County, and Mobile MS4 areas as well as for Anniston District Office, Tuscumbia Area Office / Tuscumbia District Office, Huntsville District Office, Dothan District Office, Central Office Complex / Montgomery Area Office / Montgomery District Office, Tuscaloosa Area Office / Tuscaloosa District Office, Gadsden District Office, Mobile Area Office / Mobile District Office, and Tunnel Office. Inventory and maps adjusted accordingly.
II.B.3.a.2	Implement non-stormwater discharge policies & procedures	State Maintenance Engineer	Implement policies and procedures.	Implementation of established policies and procedures ongoing.
II.B.3.a.3; II.B.3.b.3	IDDE training for ALDOT personnel	State Maintenance Engineer	Develop training program. Conduct training once per calendar year.	IDDE inventory and screening activities delegated to consultant to date; consultant handles training internally. ALDOT personnel receive general IDDE orientation at the annual ALDOT Maintenance Management Meeting and through other training offerings.

ALDOT MS4 Stormwater Management Activities:  
October 1, 2019 - September 30, 2024

Permit Requirement(s)	Activity	Associated ALDOT Personnel	Permit Term Goal(s)	Actions / Status as of Jan. 30, 2024
II.B.3.a.4; II.B.3.b.2	Dry-weather screening of major outfalls	State Maintenance Engineer; Equipment Bureau Chief; Region Engineers	Screen each major outfall at least once during Permit term. If an outfall is located within a "priority area," screening will be conducted at a frequency appropriate for specific conditions. If a flow is observed during outfall screening, source tracing/identification and reporting procedures will be implemented. Track major outfalls screened during each fiscal year.	Screening approach for the Permit term developed. All accessible major outfalls for Anniston, Florence, Huntsville, Dothan, Auburn/Opelika, Phenix City, Montgomery, Decatur, Tuscaloosa, Gadsden, Baldwin County, and Mobile MS4 areas as well as for Anniston District Office, Tusculumbia Area Office / Tusculumbia District Office, Huntsville District Office, Dothan District Office, Central Office Complex / Montgomery Area Office / Montgomery District Office, Tuscaloosa Area Office / Tuscaloosa District Office, Gadsden District Office, Mobile Area Office / Mobile District Office, and Tunnel Office screened.
II.B.3.a.5	Source tracing procedure for possible illicit discharges	State Maintenance Engineer	Implement source tracing procedure.	Implementation of established tracing procedure ongoing.
II.B.3.a.6	Indicator monitoring strategy for evaluating possible illicit discharges	State Maintenance Engineer	Implement indicator monitoring strategy.	Implementation of established monitoring strategy ongoing.
II.B.3.a.7	Procedures to notify ADEM of possible illicit discharges originating from sources adjacent to the ALDOT MS4	State Maintenance Engineer	Implement notification procedures.	Implementation of established notification procedures ongoing.
II.B.3.a.8	Mechanism for citizen reporting of possible illicit discharges	State Design Engineer; Computer Services Bureau Chief	Maintain the Environmental Concern Submission Form (accessible through the ALDOT Web site) to receive citizen concerns.	Environmental Concern Submission Form in use to receive citizen concerns.
II.B.3.b.5	Recordkeeping of possible illicit discharges reported / discovered	State Design Engineer	Track reports processed and follow-up actions taken.	Reports of possible illicit discharges processed after submission, and appropriate follow-up actions taken. Possible illicit discharges located in MS4 areas tracked.
<b>Construction Site Stormwater Runoff Control</b>				

ALDOT MS4 Stormwater Management Activities:  
October 1, 2019 - September 30, 2024

Permit Requirement(s)	Activity	Associated ALDOT Personnel	Permit Term Goal(s)	Actions / Status as of Jan. 30, 2024
II.B.4.a.1; II.B.4.b.1	Procedures to require Construction General Permit coverage for ALDOT construction sites	State Construction Engineer; State Design Engineer	Implement procedures.	Procedures incorporated into Guide for Developing Construction Plans (State Design Engineer), ALDOT Construction Best Management Practices Plan template (State Construction Engineer), Construction Manual (State Construction Engineer), and Standard Specifications for Highway Construction (State Construction Engineer).
II.B.4.a.2; II.B.4.b.2	Contract requirements for erosion & sediment control on ALDOT construction sites	State Construction Engineer	Implement requirements.	Requirements implemented in contracts with ALDOT roadway construction contractors.
II.B.4.a.3	Internal policies for proper permit coverage of ALDOT-contracted construction activities	State Construction Engineer; State Design Engineer; State Maintenance Engineer	Implement policies.	Policies for ALDOT-contracted roadway construction activities incorporated into Guide for Developing Construction Plans (State Design Engineer), ALDOT Construction Best Management Practices Plan template (State Construction Engineer), Construction Manual (State Construction Engineer), and Standard Specifications for Highway Construction (State Construction Engineer). Policies for third-party construction on ALDOT property developed and incorporated implicitly into Forms MB-05 and MB-07 (State Maintenance Engineer).
II.B.4.a.4; II.B.4.d.1	Mechanism for citizen reporting of construction site discharge concerns	State Design Engineer; Computer Services Bureau Chief; State Construction Engineer	Maintain the Environmental Concern Submission Form (accessible through the ALDOT Web site) to receive citizen concerns. Track concerns received from the Environmental Concern Submission Form and follow-up actions.	Environmental Concern Submission Form in use to receive citizen concerns. Information regarding concerns and follow-up actions kept on file.
II.B.4.a.5; II.B.4.b.3	Inspection of ALDOT construction sites at appropriate frequencies to evaluate BMP use & maintenance	State Construction Engineer	Implement inspection procedures.	Implementation of procedures detailed in ALDOT Construction Manual and Standard Specifications for Highway Construction ongoing.

ALDOT MS4 Stormwater Management Activities:  
October 1, 2019 - September 30, 2024

Permit Requirement(s)	Activity	Associated ALDOT Personnel	Permit Term Goal(s)	Actions / Status as of Jan. 30, 2024
II.B.4.a.6; II.B.4.b.4; II.B.4.d.2	Construction stormwater BMP training program	State Construction Engineer; Training Bureau Chief	Implement QCI training program. Track employees participating in QCI initial certification course. Track sessions of QCI recertification course facilitated and participants in each session.	Program implementation ongoing.
II.B.4.a.7; II.B.4.b.5	Referral of unauthorized construction activity to ADEM	State Maintenance Engineer	Implement referral policy.	Implementation of established referral policy ongoing. (No referrals made.)
II.B.4.a.8	Policy for site plan reviews & erosion/sediment controls to satisfy Alabama Handbook technical standards	State Construction Engineer	Implement policy.	Policy for ALDOT roadway construction activities incorporated into ALDOT Construction Best Management Practices Plan template.
II.B.4.c.2	List of construction sites in MS4-regulated areas	State Construction Engineer	Maintain list with updates as needed annually.	Maintenance of list ongoing.
<b>Post-Construction Stormwater Management</b>				
II.B.5.a.1; II.B.5.b.1	Post-construction program with specific stormwater management goals	State Design Engineer	Implement program.	Implementation of program, including "GFO 3-73: Post-Development Stormwater Management" and design guidance components, ongoing.
II.B.5.a.2; II.B.5.a.4; II.B.5.b.1; II.B.5.b.3	Implementation of BMPs (including LID/GI practices) to mimic site predevelopment hydrology to design standard on ALDOT-constructed sites	State Design Engineer	Implement post-construction BMPs on ALDOT-constructed sites.	Implementation of BMPs ongoing. (Projects let for construction bidding on or after 04/01/2015 must be carried out in accordance with GFO 3-73.)
II.B.5.a.3; II.B.5.b.2	LID/GI SOP for ALDOT-constructed facilities	State Design Engineer	Implement SOP.	SOP (GFO 3-73) implementation ongoing.
II.B.5.a.5	Implementation of management policies (inspection & maintenance) for post-construction BMPs at new ALDOT-constructed facilities	State Maintenance Engineer; Equipment Bureau Chief; Region Engineers	Implement post-construction BMP inspection and maintenance policies.	Policies implemented.
II.B.5.a.6; II.B.5.b.4; II.B.5.c.2; II.B.5.d.1	Inspection of structural BMPs	State Maintenance Engineer; Equipment Bureau Chief; Region Engineers	Develop a checklist for structural BMP inspection. Inspect each structural BMP after fully operational at least once every 2 years. Track inspections of structural BMPs performed.	Electronic inspection form developed. Fully operational BMPs inspected at acceptable frequencies.

ALDOT MS4 Stormwater Management Activities:  
October 1, 2019 - September 30, 2024

Permit Requirement(s)	Activity	Associated ALDOT Personnel	Permit Term Goal(s)	Actions / Status as of Jan. 30, 2024
II.B.5.b.5; II.B.5.c.3	Post-construction BMP operation & maintenance	State Maintenance Engineer; Equipment Bureau Chief; Region Engineers	Implement post-construction BMP O&M procedures. Track maintenance work reports completed.	BMP maintenance activity performed as informed by inspection outcomes. (Maintenance checklist is a work report generated in accordance with BMP maintenance recommendations for each specific case.)
II.B.5.c.1	Inventory of post-construction BMPs (let for bidding after April 2015)	State Maintenance Engineer; Equipment Bureau Chief; Region Engineers	Develop inventory form. Update inventory with fully operational BMPs.	Electronic inventory form developed. Inventory updated.
<b>Pollution Prevention / Good Housekeeping</b>				
II.B.6.a.1; II.B.6.b.1; II.B.6.c.1	Inventory of support facilities with pollution potential	Materials & Tests Engineer	Update inventory as needed annually.	Inventory maintained.
II.B.6.a.2; II.B.6.b.2; II.B.6.c.2; II.B.6.d.1	Support facility PPGH inspection program	Materials & Tests Engineer	Implement program to inspect support facilities on inventory annually that include checklists and correction procedures. Update program as necessary. Report inspection outcomes.	Inspection program implementation ongoing.
II.B.6.a.3; II.B.6.b.3; II.B.6.c.3	Good housekeeping SOPs for support facilities	Materials & Tests Engineer	Implement SOPs. Update SOPs as necessary.	Implementation of established SOPs ongoing.
II.B.6.a.4; II.B.6.a.7.d; II.B.6.b.4; II.B.6.d.2	Support facility good housekeeping training program	Materials & Tests Engineer; Region Engineers	Implement good housekeeping training program for support facility employees. Track good housekeeping training sessions facilitated and employees participating in each session.	Training program implementation ongoing.
II.B.6.a.5; II.B.6.a.6; II.B.6.a.8; II.B.6.b.5; II.B.6.c.4	Trash management program	State Maintenance Engineer; Equipment Bureau Chief; Region Engineers	Implement program. Deploy trash receptacles at rest areas for motorists and at ALDOT support facilities for employees. Track maintenance work for full-width litter pickup (shoulder miles cleaned) and spot litter pickup (work reports completed) on roadways. (Additional roadway litter pickup done under contract or interjurisdictional agreement and tracked through other mechanisms.)	Trash receptacles deployed at rest areas and ALDOT support facilities. Roadway litter pickup work ongoing.
II.B.6.a.7; II.B.6.b.6; II.B.6.c.5	Support facility spill prevention & response program	Materials & Tests Engineer; Region Engineers	Implement program. Update program as necessary.	Implementation of general ALDOT spill prevention and response program and SPCC Plans for individual support facilities ongoing.

ALDOT MS4 Stormwater Management Activities:  
October 1, 2019 - September 30, 2024

Permit Requirement(s)	Activity	Associated ALDOT Personnel	Permit Term Goal(s)	Actions / Status as of Jan. 30, 2024
II.B.6.a.8	Miscellaneous transportation facility maintenance with measures for potential pollution reduction	State Maintenance Engineer	Conduct annual condition assessments of roadway features with respect to stormwater management performance-related attributes. Track maintenance work using pollution reduction methods for snow and ice control (work reports completed), cleaning minor drainage structures (structures inspected/cleaned), repairing minor drainage structures (work reports completed), and erosion control (work reports completed). (Herbicide treatment, spot herbicide treatment, and herbicide treatment surveillance addressed in work associated with Pesticides General Permit.)	Condition assessments continue to be conducted according to established procedure. Maintenance work ongoing.
II.B.6.d.2	Vegetation management training program	State Maintenance Engineer; Training Bureau Chief	Implement vegetation management training program. Track vegetation management training sessions facilitated and the participants in each session. Track "Review for Commercial Applicator Examination" course sessions facilitated and employees participating in each session. Track vegetation management training newsletters distributed.	Training program implementation ongoing.
<b>MS4 Monitoring</b>				
II.D.2; II.D.3; II.D.4; III.A.1; III.A.6	Determination of the ALDOT MS4's potential as a practical source of POCs for 303(d) waters, TMDL waters, & receiving waters generally	State Design Engineer; State Maintenance Engineer	Assess ALDOT potential impacts with respect to various POCs on 303(d) waters, TMDL waters, and receiving waters generally in MS4-regulated areas. Reassess ALDOT impact as needed considering collected monitoring data. Forego monitoring with respect to POCs of which the ALDOT MS4 is not a practical source.	Assessment performed by considering the potential of ALDOT activities in MS4 areas as possible, significant sources of 303(d)/TMDL POCs. Determined that possible ALDOT-relevant POCs are siltation and turbidity.
II.D.3; II.D.4; III.A.1	Determination of the effectiveness of ALDOT stormwater management practices in controlling POC discharges to meet applicable 303(d) & TMDL requirements	State Design Engineer; State Maintenance Engineer	Demonstrate that stormwater management practices employed are controlling any POC discharges to ALDOT-applicable 303(d) and TMDL waters sufficiently; use monitoring data in the demonstration for TMDLs. Adjust practices as needed.	Overall effectiveness of practices supported by monitoring observation data collected to date.
III.A.1; III.B	Assessments of the overall effectiveness of stormwater management practices with respect to stormwater management goals	State Design Engineer; State Maintenance Engineer	Conduct annual assessments of practices based on monitoring data collected. Adjust practices as needed in response to assessment.	Overall effectiveness of practices supported by monitoring observation data collected to date.

ALDOT MS4 Stormwater Management Activities:  
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Permit Requirement(s)	Activity	Associated ALDOT Personnel	Permit Term Goal(s)	Actions / Status as of Jan. 30, 2024
III.A.2; III.A.4; IV.B	Development & implementation of monitoring strategy	State Design Engineer; State Maintenance Engineer	Develop monitoring strategy. Update strategy as needed annually. Track monitoring activities.	Monitoring strategy developed. (Strategy summary: Dry-weather and wet-weather visual observations over a 3-year period to find any evidence of significant stormwater-related erosion or significant sediment discharge into receiving water at 6 selected representative monitoring locations.) Monitoring locations selected. Visual observation form developed. Field observations have commenced; wet-weather and dry-weather observations conducted at all 6 monitoring locations in accordance with monitoring strategy during FY 2021, FY 2022, and FY 2023.
III.A.3	Analysis of monitoring data	State Maintenance Engineer	Analyze monitoring data collected.	Data from all observations conducted to date analyzed.
III.A.5	Coordination of monitoring with other MS4s	State Maintenance Engineer	Coordinate with other MS4s as appropriate.	No explicit coordination with other MS4s needed for monitoring so far in the Permit term.



**Appendix B:**  
**Supplemental Material for Chapter 2**

*(reserved)*

**Appendix C:**  
**Supplemental Material for Chapter 3**

ALDOT Anti-Litter PSA: 2020 Strategic Plan  
ALDOT Anti-Litter Signage  
ALDOT Watershed Boundary Signage  
ALDOT-Alabama PALS Agreement, Fiscal Years 2020-21  
ALDOT-Alabama PALS Agreement, Fiscal Years 2022-23  
PALS Quarterly Newsletter, Winter 2020  
ALDOT-KALB Agreement, Fiscal Years 2020-21  
ALDOT-KALB Agreement, Fiscal Years 2022-23  
KALB Affiliates (May 26, 2020)  
ALDOT Twitter Messages  
Vegetation Management Training Agenda, 2019  
Vegetation Management Training Crossword Puzzle (2019)  
Vegetation Management Newsletter, July 2019  
SPCC Training Presentation  
Universal Waste Training Presentation  
Hazardous Materials Training Presentation  
Globally Harmonized System Training Presentation  
MS4 Coordination Memorandum, October 2019

## ALDOT Anti-Litter PSA: 2020 Strategic Plan

### Situation Analysis

Litter is a statewide issue having a safety, environmental and economic impact on Alabama. Almost \$7 million of the Alabama Department of Transportation annual budget is spent on litter clean up across Alabama. Also, counties and cities spend a significant amount of their budgets on litter cleanup. Much of the litter along the roadside is created by trash haulers not completely containing their loads, allowing the trash to blow out as the trucks move down the road.

There is an opportunity cost associated with litter pickup. ALDOT could be using the funds going to litter pick-up for maintenance and construction of our state transportation system.

To promote a clean state, ALDOT contributes funds each year to Keep Alabama Beautiful, which focuses on enabling volunteers throughout Alabama to improve litter prevention practices, recycling, beautification and community greening efforts. ALDOT also contributes funds to People Against a Littered State (PALS), which focuses on making Alabama more beautiful by sponsoring programs focused on cleaning up litter in Alabama's streets, streams, campuses and coastlines.

In Alabama, littering fines were increased in 2019, and criminal littering was reclassified from a Class C misdemeanor to a Class B misdemeanor. The minimum fine is now \$500, up from \$250 for a first conviction. Second conviction is now \$1,000 and up to 100 hours community service. It is challenging for law enforcement to catch people in the act of littering; therefore, there aren't enough citations and fines given to discourage people from littering.

To reinforce compliance with the anti-littering law, the public needs to be informed and reminded of the law and associated fines. ALDOT and ALEA will work together to inform the public, and ALEA will have a focused effort on enforcing the anti-littering law and writing tickets for violation of the law.

**Objective:** Reduce the litter on Alabama roads by informing the public of the costs generated by litter, including the 2019 increased financial fines outlined in state law.

**Target Audience:** The general public traveling around and through Alabama.

### Marketing Tools

- Social Media: Region Twitter accounts; Anti-litter advocacy group social media accounts; ALEA and other law enforcement organizations social media accounts.
- Earned Media: Region-specific press releases
- Alabama Broadcasters Association Public Education Partnership Program TV and radio buy
- ALDOT and stakeholder partner websites
- ALDOT employee newsletter and stakeholder newsletters
- Collaboration with stakeholders (ALEA, ADPH, ADECA, Keep Alabama Beautiful, PALS, Sheriff's Assoc., County Commissioner's Assoc., League of Municipalities, city governments)

## **Measurement**

- Number of TV and radio ads
- Number social media posts
- Number of press releases sent

## **Timeline/Schedule**

### **July 2020**

- Anti-litter press release distributed statewide in late July.
- Anti-litter “Trash Costs Cash” PSA explaining related fine to run on TV and radio statewide July 1 – Sept. 30, via Alabama Broadcasters Association Public Education Partnership program.
- Share plan with stakeholder partners to get their buy-in on plan and their support to educate the public on the litter law.

### **August 2020**

- Collaborate with ALDOT Region personnel to work with local cities and county organizations on anti-litter campaign.

### **September 2020**

- Region public information officers distribute anti-litter press release in cooperation with local city and county organizations.

**ALDOT Anti-Litter Signage**

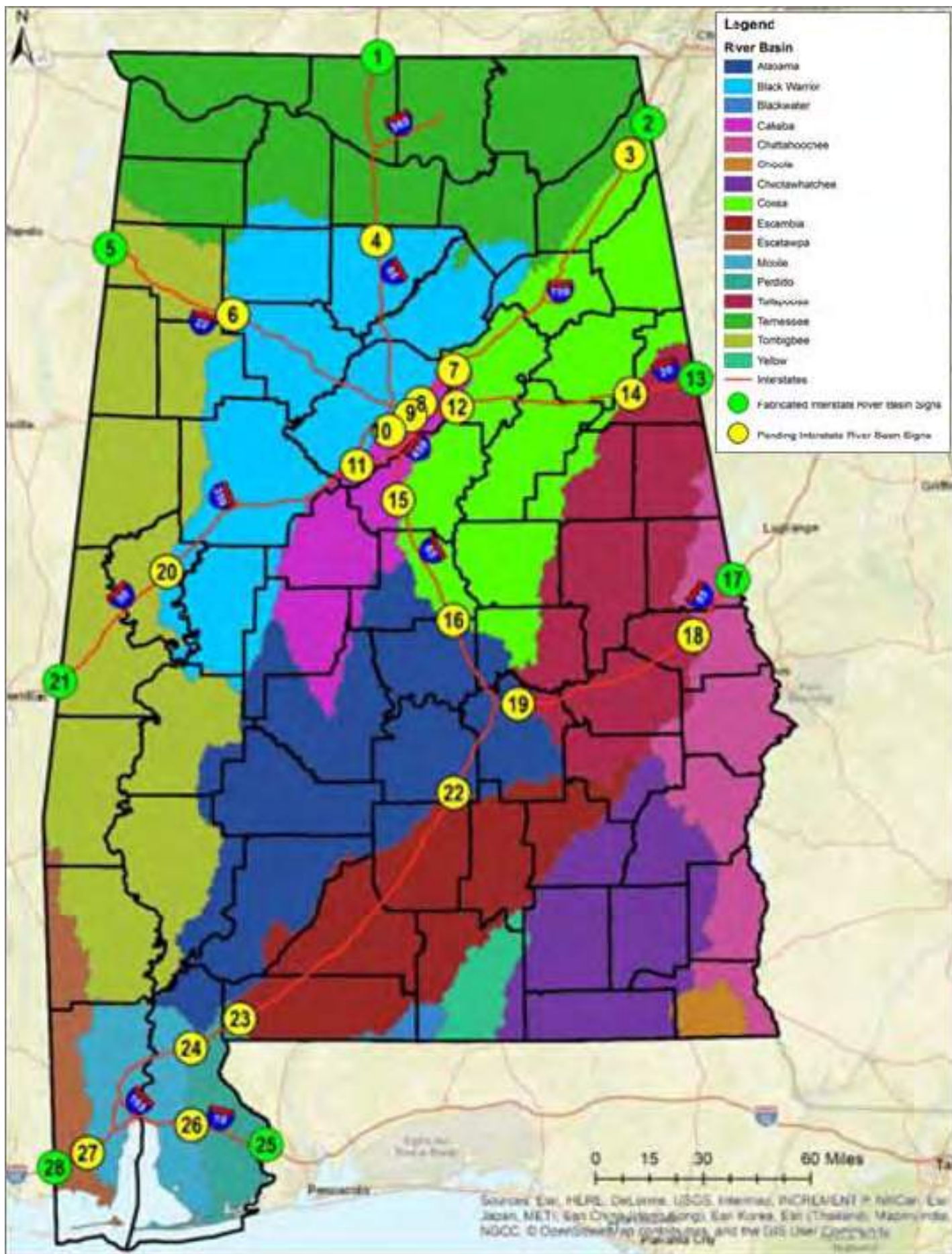


# ALDOT Watershed Boundary Signage





# Watershed Boundary Signage Deployment Plan



## AGREEMENT

### ALABAMA PALS (People Against a Littered State)

AND

### STATE OF ALABAMA DEPARTMENT OF TRANSPORTATION

THIS AGREEMENT is made and entered into by and between the Alabama PALS (People Against a Littered State), hereinafter referred to as PALS, and the Alabama Department of Transportation, hereinafter referred to as (ALDOT), for the purposes expressed herein whereas, the parties desire to engage in public promotion of the ALDOT Adopt-a-Mile program. Now, therefore, the parties, in consideration of the premises herein, do agree as follows:

**Alabama PALS will:**

- (1) Oversee and promote the Alabama PALS City and County Chapters Network.
- (2) Produce quarterly newsletters for Adopt-a-Mile.
- (3) Produce Adopt-a-Mile Brochures with applications.
- (4) Print, label, mail and distribute Adopt-a-Mile quarterly newsletters and brochures.
- (5) Producing public service announcements for the Adopt-a-Mile Program in accordance with the total yearly budget and services listed below:

**Total Yearly Budget for Public Service Announcements                    \$25,000.00**

- a) Filming and Editing of .30 PSA (Beta Format)
  - b) In Town Travel
  - c) Out of Town Travel (1 day)
  - d) Purchase & Copying of three (3) ¾" Format Tapes
  - e) Purchase & Copying of two (2) VHS Format Tapes
  - f) Seven (7) DVD Copies (TV)
  - g) One Hundred and Eighty (180) CDs for Radio
  - h) Forty-four (44) Beta SP Copies (TV)
  - i) Seven (7) DVD Pro Copies (TV)
  - j) MP3 Copy for ABA (for AA Web Page) – Allowance for additional Copies for Chapters, etc.
  - k) Three (3) Month Contract with Alabama Broadcaster's Association
- (6) Notify all Adopt-a-Mile participants of PALS statewide events such as Statewide Spring Cleanup.
  - (7) Submit quarterly itemized invoices, along with all supporting documentation, covering the actual costs of providing public promotion of the ALDOT Adopt-a-Mile Program. Invoices should be submitted to: Maintenance Engineer, Dept. of Transportation, 1409 Coliseum Blvd., Montgomery, AL 36110.



(8) Provide two full-time employees to be fully supported by Alabama PALS. These employees will serve as liaisons to ALDOT to ensure that the program is fully serviced to provide exposure statewide, as well as ensuring that maximum compliance of the program is serviced, including the following:

- a) State Adopt-a-Mile Director.
- b) State Adopt-a-Mile Coordinator.
- c) These two employees shall also:
  - 1) Oversee the maintenance and compliance of miles adopted through the Alabama Adopt-a-Mile program.
  - 2) Perform annual site visits, in-person or through the County PALS Chapters, of one-third ( $\frac{1}{3}$ ) of all known current recorded Adopt-a-Miles on federal and/or state routes to determine which groups and individuals are currently maintaining their respective miles. This will result in all Adopt-a-Mile locations being inspected at least once in every three-year period. Produce, distribute and maintain records for all miles that are inspected in each county. This list should be provided at least quarterly to ALDOT.
  - 3) Keep records of miles that are not being maintained and contact “adoptees” to determine if the group or individual wishes to remain in the Adopt-a-Mile program. In the next two newsletters PALS will include that ALL Adopt-a-Mile participants must provide to PALS current information including address, phone number, approximate number of participants, and whether they wish to continue participation in the Adopt-a-Mile program no later than May 31, 2020. All participants who fail to notify PALS by this date will be declared inactive. PALS must notify ALDOT in its July quarterly report of all inactive participants for sign removal.
  - 4) Provide list to ALDOT quarterly of miles that are not being maintained on a regular basis.
  - 5) Provide a list quarterly of all Adopt-a-Mile signs that need to be removed for failure to comply with the requirements of the program.
  - 6) Recruit new “adoptees” for miles where signs have been removed.

Programs Coordinated:

Adopt-a-Mile

Adopt-a-Stream

Statewide “Don’t Drop It On Alabama” Spring Cleanup

Alabama Coastal Cleanup

Annual Awards Program

(9) Providing a written report quarterly to ALDOT of the PALS activities to include:

- a) Listing of new participants & miles adopted
- b) Listing and date of contacts made
- c) Listing of groups terminating participation
- d) Report of statewide mailings
- e) Listing of all public service announcements that ran including which stations and dates and times

(10) Obtain or fabricate signs that meet ALDOT specifications for signage for local routes and provide signs for adopted county routes. These signs should be shipped at the lowest United States Postal Rate to the District Office listed on the Adopt-a-Mile application.

(11) Review Adopt-a-Mile applications to ensure that they are in final form before submitting them to ALDOT District Office.

(12) Maintain the Adopt-a-Mile database and provide at least quarterly to ALDOT or upon request at the same time providing the quarterly report.

(13) Provide safety vests for all individuals participating in the Adopt-a-Mile litter campaign. PALS will also be responsible for informing all Adopt-a-Mile groups that all participants are required to wear these safety vests at any time they are picking up trash on the right-of-way. This notification must take place no later than January 1, 2020.

**ALDOT will:**

(14) Oversee the Adopt-a-Mile program.

(15) Process the Adopt-a-Mile applications.

(16) Erect Adopt-a-Mile signs on State routes in accordance with the ALDOT Adopt-a-Mile program.

(17) Provide litterbags for Adopt-a-Mile participants as required.

(18) Provide removal and disposal of litter collected by Adopt-a-Mile participants as required.

(19) Reimburse Alabama PALS a maximum of two hundred and ninety-five thousand dollars (\$295,000.00) for each fiscal year in accordance with the proposed budget listed below:

<b><u>Salaries</u></b>	<b><u>Budgeted Amount</u></b>
Adopt-a-Mile Coordinator	\$ 45,500.00
Director	\$ 82,000.00
<b><u>Travel (actual expenses)</u></b>	
Coordinator	\$ 1,000.00
Director	\$ 2,500.00
<b><u>Insurance Allowance</u></b>	
Coordinator	\$ 2,580.00
Compliance Liaison	\$ 3,757.00
<b><u>Other (actual expenses)</u></b>	
Telephone	\$ 4,000.00
Power	\$ 4,000.00
Gas	\$ 2,500.00
Office Supplies	\$ 2,000.00
Postage Meter	\$ 2,000.00
Statewide Cleanup Materials, Supplies, and Shipping	\$ 50,000.00
Newsletters and Promotion	\$ 21,000.00
Office	\$ 10,500.00
Brochures (All Programs)	\$ 3,000.00

Public Service Announcements (as specified in section 5 of this Agreement)	\$ 25,000.00
Signage costs, including shipping	\$ 31,000.00
Safety Vests	\$ 2663.00
<hr/>	
<b>Total Yearly Budget</b>	<b>\$295,000.00</b>

Alabama PALS agrees that all promotional materials and programs must receive final approval of ALDOT prior to distribution or implementation.

Alabama PALS agrees that all reimbursed expenses will be for those expenses solely expended for the public promotion of the ALDOT Adopt-a-Mile program.

(20) It is agreed that the terms and commitments contained herein shall not be constituted as a debt of the State of Alabama in violation of Article 11, Section 213 of the Constitution of Alabama 1901, as amended by Amendment Number 26. It is further agreed that if any provision of this Agreement shall contravene any statute or Constitutional provision of amendment, either now in effect of which may, during the course of this Agreement, be enacted, then the conflicting provision in the Agreement shall be deemed null and void.

(21) If the Agreement term is to exceed more than one fiscal year, then said Agreement is subject to termination in the event that funds should not be appropriated for the continued payment of the Agreement in subsequent fiscal years. In the event of proration of the fund, from which payment under this Agreement is to be made, Agreement will be subject to termination. This Agreement can be terminated by either party upon thirty days written notice to the other party.

(22) For any and all disputes arising under the terms of this contract, the parties hereto agree, in compliance with the recommendation of the Governor and Attorney General, when considering settlement of such disputes, to utilize appropriate forms of non-binding alternative dispute resolution including, but not limited to, mediation by and through the Attorney General Office of Administrative Hearings or where appropriate, private mediators.

(23) Alabama PALS, its employees, agents, successors, assigned, contractors, or subcontractors shall defend, indemnify and hold harmless the State of Alabama, Alabama Department of Transportation and their officials, employees, contractors, servants, or agents, in both their official and individual capacities, from and against any and all claims, damages, losses, actions, causes of actions, losses or expenses of any nature whatsoever, regulatory actions, administrative actions, quasi-administrative or quasi-judicial actions or procedures, State, Federal or otherwise, of any nature whatsoever, whether known or unknown, including but not limited to compensatory damages, punitive damages, damages for any injury to person or property, tangible or intangible, or any form of monetary or compensatory relief declaratory or injunctive relief, or any form of relief or remedy of any nature whatsoever, whether known or unknown, or attorney fees, costs, or expenses, caused by or rising out of, resulting from or in any way related to the performance of any work, conduct or activity performed or failed to be performed by the Alabama PALS in connection with the performance of any of the provisions of this Agreement.

(24) By entering into this agreement, Alabama PALS is not an agent of the State, its officers, employees, agents or assigns. Alabama PALS is an independent entity from the State and nothing in this agreement creates an agency relationship between the parties.

(25) The Alabama PALS and its employee(s) will not be subject to the provisions of, nor entitled to, the benefits of the State merit law or State employee benefits, including State employee health insurance.

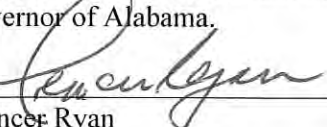
(26) The Alabama PALS will permit access to its books, records, accounts, other sources of information and its facilities as may be determined by the State of Alabama Department of Transportation to be pertinent to ascertain compliance with its instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the Alabama PALS shall so certify to the State of Alabama Department of Transportation and shall set forth what efforts he has made to obtain the information.

(27) By signing this contract, the contracting parties affirm, for the duration of the agreement, that they will not violate federal immigration law or knowingly employ an unauthorized alien within the State of Alabama. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of the agreement and shall be responsible for all damages resulting therefrom.

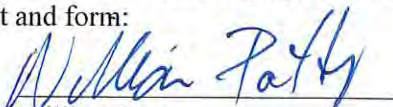

(28) In compliance with Act 2016-312, the Contractor is not currently engaged in, and will not engage in, the boycott of a person or an entity based in or doing business with a jurisdiction with which this state can enjoy open trade.

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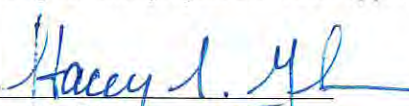
IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their respective officials thereunto duly authorized, the Agreement to be effective on the approval date by the Governor of Alabama.

By:   
Spencer Ryan  
Director, Alabama PALS

This agreement has been legally reviewed as to content and form:

By:   
William Patty  
ALDOT Chief Counsel 

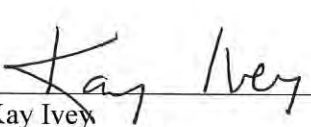
Funding for this project has been approved and obligated.

By:   
Stacey N. Glass  
Maintenance Engineer

APPROVED

By:   
John R. Cooper  
Transportation Director

The foregoing Agreement is hereby approved by the Governor of Alabama, on the 26  
day of July, 2019.

  
Kay Ivey  
Governor of Alabama



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AND

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Adopt-a-Stream

Statewide “Don’t Drop It On Alabama” Spring Cleanup

Alabama Coastal Cleanup

Annual Awards Program

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Adopt-a-Mile Coordinator	\$ 45,500.00
Director	\$ 82,000.00
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Director	\$ 2,500.00
<b><u>Insurance Allowance</u></b>	
Coordinator	\$ 2,580.00
Compliance Liaison	\$ 3,757.00
<b><u>Other (actual expenses)</u></b>	
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Power	\$ 4,000.00
Gas	\$ 2,500.00
Office Supplies	\$ 2,000.00
Postage Meter	\$ 2,000.00
Statewide Cleanup Materials, Supplies, and Shipping	\$ 50,000.00
Newsletters and Promotion	\$ 21,000.00
Office	\$ 10,500.00
Brochures (All Programs)	\$ 3,000.00
Public Service Announcements (as specified in section 5 of this Agreement)	\$ 25,000.00

Signage costs, including shipping	\$ 31,000.00
Safety Vests	\$ 2663.00
<hr/>	
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Alabama PALS agrees that all reimbursed expenses will be for those expenses solely expended for the public promotion of the ALDOT Adopt-a-Mile program.

(20) It is agreed that the terms and commitments contained herein shall not be constituted as a debt of the State of Alabama in violation of Article 11, Section 213 of the Constitution of Alabama 1901, as amended by Amendment Number 26. It is further agreed that if any provision of this Agreement shall contravene any statute or Constitutional provision of amendment, either now in effect of which may, during the course of this Agreement, be enacted, then the conflicting provision in the Agreement shall be deemed null and void.

(21) If the Agreement term is to exceed more than one fiscal year, then said Agreement is subject to termination in the event that funds should not be appropriated for the continued payment of the Agreement in subsequent fiscal years. In the event of proration of the fund, from which payment under this Agreement is to be made, Agreement will be subject to termination. This Agreement can be terminated by either party upon thirty days written notice to the other party.

(22) In the event of any dispute between the parties, senior officials of both parties shall meet and engage in a good faith attempt to resolve the dispute. Should that effort fail and the dispute involves the payment of money, a party's sole remedy is the filing of a claim with the Board of Adjustment of the State of Alabama. For any other disputes arising under the terms of this Agreement which are not resolved by negotiation, the parties agree to utilize appropriate forms of non-binding alternative dispute resolution including, but not limited to, mediation. Such dispute resolution shall occur in Montgomery, Alabama utilizing where appropriate, mediators selected from the roster of mediators maintained by the Center for Dispute Resolution of the Alabama State Bar.

(23) Alabama PALS, its employees, agents, successors, assigned, contractors, or subcontractors shall defend, indemnify and hold harmless the State of Alabama, Alabama Department of Transportation and their officials, employees, contractors, servants, or agents, in both their official and individual capacities, from and against any and all claims, damages, losses, actions, causes of actions, losses or expenses of any nature whatsoever, regulatory actions, administrative actions, quasi-administrative or quasi-judicial actions or procedures, State, Federal or otherwise, of any nature whatsoever, whether known or unknown, including but not limited to compensatory damages, punitive damages, damages for any injury to person or property, tangible or intangible, or any form of monetary or compensatory relief declaratory or injunctive relief, or any form of relief or remedy of any nature whatsoever, whether known or unknown, or attorney fees, costs, or expenses, caused by or rising out of, resulting from or in any way related to the performance of any work, conduct or activity performed or failed to be performed by the Alabama PALS in connection with the performance of any of the provisions of this Agreement.

(24) By entering into this agreement, Alabama PALS is not an agent of the State, its officers, employees, agents or assigns. Alabama PALS is an independent entity from the State and nothing in this agreement creates an agency relationship between the parties.

(25) The Alabama PALS and its employee(s) will not be subject to the provisions of, nor entitled to, the benefits of the State merit law or State employee benefits, including State employee health insurance.



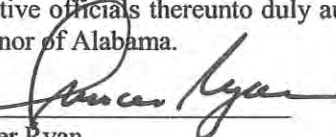
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(27) By signing this contract, the contracting parties affirm, for the duration of the agreement, that they will not violate federal immigration law or knowingly employ an unauthorized alien within the State of Alabama. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of the agreement and shall be responsible for all damages resulting therefrom.

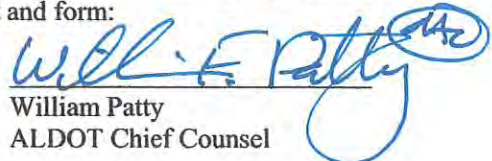
(28) In compliance with Act 2016-312, the Contractor is not currently engaged in, and will not engage in, the boycott of a person or an entity based in or doing business with a jurisdiction with which this state can enjoy open trade.

(29) THIS AGREEMENT is in effect for the period beginning October 1, 2021 and ending September 30, 2023.


IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their respective officials thereunto duly authorized, the Agreement to be effective on the approval date by the Governor of Alabama.

By:   
Spencer Ryan  
Director, Alabama PALS

This agreement has been legally reviewed as to content and form:

By:   
William Patty  
ALDOT Chief Counsel


Funding for this project has been approved and obligated.

By:   
~~Stacey N. Glass~~  
Maintenance Engineer

APPROVED

By:   
John R. Cooper  
Transportation Director

The foregoing Agreement is hereby approved by the Governor of Alabama, on the 5<sup>th</sup> day of August, 2021.

  
Kay Ivey  
Governor of Alabama

# THE PALS PRINTS

THE NEWSLETTER OF ALABAMA PALS AND THE ALABAMA ADOPT-A-MILE PROGRAM

WINTER QUARTER 2020 • VOLUME 40

## DIRECTOR'S NOTES BY SPENCER RYAN:

### CHALLENGE

Let me begin by thanking each of you that made 2019 the most successful and memorable year in PALS history. The dedication, energy, support, friendship and stewardship displayed by PALS from every corner of Alabama continues to inspire me, as well as the staff and Board of Directors of this remarkable organization. YOUR Organization, Alabama PALS. Your sincere vision of a cleaner and more beautiful Alabama for the future continues to pay huge dividends for our great state, both aesthetically and economically. Thank you for your ongoing support and we look forward to working with you in 2020! Let's Challenge each other to truly make 2020 a banner year for all PALS programs!

I also want to give sincere appreciation to our Corporate Sponsors that make

*Continued on page 3*



## 2020 Alabama PALS

“Don't Drop It On Alabama”

Statewide Spring Cleanup

Entire Month of April, 2020

## 2020 ALABAMA PALS MEMBERSHIP FORM

Form/Application can be submitted online at [alpals.org](http://alpals.org)

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Email Address \_\_\_\_\_ Phone # \_\_\_\_\_

### MEMBERSHIP CATEGORIES

- Sustaining Partner: \$500       Sustaining Steward: \$ 250       Litter Free Leader: \$100  
 PALS Advocate: \$50       PALS Partner: \$25

(Membership Dues are paid Annually)

Alabama PALS is a 501C3 non-profit organization.

Your contribution to Alabama PALS is tax deductible

Please Make Checks Payable to:

Alabama PALS, 340 North Hull Street, Montgomery, AL 36106



*“Working Together for an Unlittered Alabama”*

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*spencer@alpals.org*

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*Jamie@alpals.org*

Phone: 334-263-7737 or

In-State Watts 800-ALA-PALS

Fax # 334-832-9400

NEW WEBSITE: [www.alpals.org](http://www.alpals.org)

340 North Hull Street

Montgomery, AL 36104

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### ALABAMA PALS MISSION STATEMENT

*"Alabama Communities Working  
Together for A Cleaner and  
More Beautiful Alabama"*

## THE CHAIRMAN'S CORNER

BY JEFF HELMS, CHAIRMAN, ALABAMA PALS

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As we prepare for the year 2020, people will once again make resolutions – most which won't be kept – and organizations big and small will use the numeric designation for the year to "focus" on a new "vision."

If hindsight truly is 2020, perhaps this year should also be one of reflection. Could it be 2020 provides us an opportunity to learn from the past, understand the present and improve our future?

Fewer people every year remember our state before Alabama PALS. Even those who do seldom credit our volunteers for their role in removal of roadside dumps, cleaner beaches and increased litter literacy in our schools.

Instead, we tend to focus on the negative. The proliferation of plastic bottles and food containers certainly makes our job harder. But constant complaining about littered roadways or the irresponsibility of polluters fails to acknowledge the good work being done.

Worse yet, obsessing over the magnitude of our litter problem can breed helplessness and complacency.

Why do we even try? Who cares if another fast food bag is added to the dozens in the ditch?

As 2020 dawns, I challenge us to get rid of that stinking thinking.

Imagine what would have happened if the late Bill Moody and other founders of PALS had thought that way. After all, they often found household trash, broken furniture and construction debris dumped on public and private land. What would have happened if they had been intimidated or paralyzed by the size of the problem?

Nothing. That's what would have happened. Nothing at all.

No Adopt-a-Mile. No Spring Cleanup. No Clean Campus. No Alabama Coastal Cleanup.

We must look back with clarity and embrace the courage, determination and ingenuity of our founders.

2020 cannot be a year of looking ahead unless we thoughtfully understand our past and appreciate our present. Visionary slogans and well-intended plans will fail without a clear mission and focused action.

In November, our Governor's Awards honored Alabama PALS volunteers who not only have adopted the ideals of PALS, but who have also fully embraced its mission and taken consistent and meaningful action to change our future.

By educating children about litter and recycling, we are preventing young people from developing bad habits as they become positive role models for their friends and families. The resources given by our sponsors are equipping volunteers to expand cleanup efforts. Programs started by business and community leaders are providing opportunity for employees and residents to engage in rewarding work while building lifelong friendships. And, support by government, judicial and law enforcement officials reinforces the value and importance of Alabama PALS.

Those honored at the Governor's Awards – and countless more throughout the state – aren't waiting on a clever logo or tagline for 2020. You already have a clear vision for what Alabama the Beautiful can be. You are focused on a cleaner future. And, thanks to you, people are seeing the positive impact of Alabama PALS.

Happy New Year. May God bless you and your family and help you be a blessing to others.

–Jeff



# DIRECTOR'S NOTES

Continued from page 1

the statewide programs of Alabama PALS a reality. PALS continues to be blessed with Sponsors and Partners that not only share the PALS vision, but give freely of their time and resources to benefit all Alabama communities in their anti-litter and recycling efforts. ALDOT, ALFA, Coca-Cola, The Poarch Band of Creek Indians, Vulcan Materials Company, Association of County Commissions of Alabama, Honda Manufacturing of Alabama, Alabama Farmers Cooperatives, and of course our Partner in the Alabama Coastal Cleanup, ADCNR/State Lands/Coastal Section, are all to be thanked continually for their support and leadership, as well as their hands on commitment to your organization.

**The 2020 "Don't Drop It On Alabama" Spring Cleanup will be held the Entire Month of April.** We are so pleased that Coca-Cola will once again be the Title Sponsor for the 2020 Spring Cleanup. After many requests to allow cities, counties and communities to hold their Spring Cleanup events throughout the month of April, we have decided that this is the best approach moving into the future. All materials and supplies will be available for pickup, as always, on March 15th. We are once again blessed to work with Marcia Collier with ACCA to coordinate pickup up schedules for all 67 counties. Beginning in January, you will begin receiving pertinent information regarding the 2020 Spring Cleanup. As in 2019, all documents will be sent to you by email, hard copy and will be available online at alpals.org. We are also extremely proud to work with the Alabama Community College Systems in 2020. Their most successful Clean Home Alabama effort in November was a huge success, and PALS is proud of the forming of this new partnership for the future. Let's make a commitment to have counties CHALLENGE neighboring counties, cities CHALLENGE cities, schools CHALLENGE schools, civic clubs CHALLENGE civic clubs., and let's make the 2020 "Don't Drop It On Alabama" Spring Cleanup one that will truly "Make A Difference" for all Alabama communities.

The 2019 Alabama Coastal Cleanup was another monumental effort by so many! Over 5,500 volunteers removed approximately 45,000 pounds of litter and debris from bays, bayous, beaches, rivers and roadways during the 2019 cleanup effort, and 2,000 pounds of aluminum cans and plastic bottles were recycled. I can't give enough thanks to Angela Underwood and our special team at ADCNR/State Lands/Coastal Section, Yael Girard with Weeks Bays, Osprey and Thompson Engineering for their remarkable coordination of the cleanup and the recycling effort. Also, a special thank you to the Poarch Band of Creek Indians for their continued Title Sponsorship of the Alabama Coastal Cleanup for another 5 years! Please see inside this issue, a list of our dedicated and faithful Sponsors of the Alabama Coastal Cleanup. They meet the CHALLENGE every year and allow us to coordinate the best coastal cleanup in the country. Be sure to thank each of them.

In closing, it was a pleasure and an honor to see so many of you and your volunteers at the 2019 Governors Awards in November. The Governors Awards are special to all of us at Alabama PALS, as it is the time that we can personally thank those that do so much for the PALS mission all over Alabama. Thank you to each of the winners and nominators! It was our pleasure to recognize each of you and your groups. Congratulation to all schools, cities, counties and volunteers that we had the pleasure to recognize. Each of you absolutely meet the CHALLENGE!

We have so many new things coming your way in 2020. One will be the creation and implementation of the Alabama Clean Campus Program video. This will be available on line and will present all schools the opportunity

to experience Jamie's special On Campus program through an online program. We are extremely appreciative of ADECA for assisting with making this a reality. We plan to have the online program available in August 2020 and Jamie will keep all schools posted on the release of this exciting program.

CHALLENGES? Yes 2020 will present many challenges and I know that you and your organization are up to the task. I know that we are extremely excited about 2020 and we look forward to working with each of you as we continue the mission of Alabama PALS in 2020 and in the future.

May you and you families be truly blessed in this exciting New Year!

## PALS SUSTAINING CORPORATE SPONSORS



# HONDA

# Vulcan Materials Company



The "Don't Drop It On Alabama" Spring Cleanup

The Alabama Clean Campus Program

Adopt-A-Mile

Adopt-A-Stream

Alabama Coastal Cleanup

Adopt-An-Area

Adopt-A-Beach

Litter Education Curriculum

Annual Governor's Awards

Statewide Chapter Network

## ALDOT REGIONAL ENGINEERS AND AREA OFFICES

### JOHNNY HARRIS

North Regional Engineer  
256-505-6141

### DEJARVIS LEONARD

East Central  
Regional Engineer  
256-234-8401

### GEORGE CONNER

SE Regional Engineer  
334-353-6850

### VINCENT E. CALAMETTI

SW Regional Engineer  
251-404-8204

### JAMES D. BROWN

West Central  
Regional Engineer  
205-562-3100



"Working Together for an Unlittered Alabama"

## MESSAGE FROM:

JAMIE MITCHELL – Clean Campus State Coordinator

Happy 2020!! A new decade is the perfect timing to implement new and fresh ideas into the lives of our students! It is a wonderful time of year to kick off your Clean Campus Program initiatives and introduce the Alabama PALS Poster and Recycled Art contests into your curriculum. Both contests give teachers and students the opportunity to have a conversation about waste, litter and recycling. These contests also involve many areas of study...from art to science to environmental studies to social studies...which is an excellent (and fun!) way to implement a cross-curriculum activity.

*Continued on page 6*

## CLEAN CAMPUS PROGRAM PARTICIPATION FORM

Either fill out form and mail to Alabama PALS Attn: Jamie Mitchell

340 N. Hull Street, Montgomery, AL 36104 or apply online at [www.alpals.org](http://www.alpals.org)

Current Member? \_\_\_\_ Y or \_\_\_\_ N      Circle One:    City School    County School    Private School

City: \_\_\_\_\_ County: \_\_\_\_\_

Participating School: \_\_\_\_\_

Address: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_ Phone Number: \_\_\_\_\_

Email for Contact Person: \_\_\_\_\_

Our school has reviewed the requirements for the Alabama PALS Clean Campus Program and is therefore applying to be a participating school in this statewide program.

Signed: \_\_\_\_\_ (Contact Person)

Date: \_\_\_\_\_ Phone: \_\_\_\_\_

### PRINCIPAL PERMISSION

I, \_\_\_\_\_ (Principal), give consent for \_\_\_\_\_ school to participate in the Alabama PALS Clean Campus Program for the 2017-2018 school year.

Signed: \_\_\_\_\_ (Principal) Date: \_\_\_\_\_

# ALABAMA ADOPT-A-MILE PARTICIPATION FORM

Please Complete and Return to The PALS Office  
340 North Hull Street / Montgomery, AL 36104

Name of Participating Group \_\_\_\_\_  
Name of Group or Individual on Sign \_\_\_\_\_  
City \_\_\_\_\_ County \_\_\_\_\_  
Contact Person \_\_\_\_\_ Phone \_\_\_\_\_  
Address \_\_\_\_\_ Zip \_\_\_\_\_  
Email Address of Contact Person \_\_\_\_\_  
State Highway Number \_\_\_\_\_ Federal Highway # \_\_\_\_\_ County Highway or Road # \_\_\_\_\_  
Location of Sign: Mile Marker# \_\_\_\_\_ to Mile Marker # \_\_\_\_\_  
\_\_\_\_ Currently Participating  
\_\_\_\_ Not Participating at This time and want sign taken down  
\_\_\_\_ Participating But Sign Needs Replacing or Repaired

## Adopt-A-Mile Program Application for Highway Adoption - State/Federal

City \_\_\_\_\_  
County \_\_\_\_\_  
Applicant (Participating Organization) \_\_\_\_\_  
\_\_\_\_\_  
Mailing Address: \_\_\_\_\_  
\_\_\_\_\_  
Telephone Number: \_\_\_\_\_  
Email Address: \_\_\_\_\_  
Highway section(s) you propose to adopt:  
(minimum of one mile)  
State or U.S. Highway Number \_\_\_\_\_  
Milepost Number \_\_\_\_\_ to Milepost Number \_\_\_\_\_  
State or U.S. Highway Number \_\_\_\_\_  
Milepost Number \_\_\_\_\_ to Milepost Number \_\_\_\_\_  
\_\_\_\_\_  
Authorized Signature of Applicant  
Recommended for Approval:  
Approved: \_\_\_\_\_  
District Engineer, Alabama Dept. of Transportation

### Interested in "adopting"

Fill out application form and mail to:

#### Alabama PALS

340 North Hull Street, Montgomery, AL 36104  
Form/Application can be submitted  
online at [alpals.org](http://alpals.org)

## County Adopt-A-Mile Program Application for County Road Adoption

County \_\_\_\_\_  
Applicant (Participating Organization) \_\_\_\_\_  
\_\_\_\_\_  
Mailing Address: \_\_\_\_\_  
\_\_\_\_\_  
Telephone Number: \_\_\_\_\_  
Email Address: \_\_\_\_\_  
Road section(s) you propose to adopt:  
(minimum of one mile)  
County Road Number \_\_\_\_\_  
Milepost Number \_\_\_\_\_ to Milepost Number \_\_\_\_\_  
County Road Number \_\_\_\_\_  
Milepost Number \_\_\_\_\_ to Milepost Number \_\_\_\_\_  
\_\_\_\_\_  
Authorized Signature of Applicant  
Recommended Approval:  
\_\_\_\_\_  
County Engineer  
\_\_\_\_\_  
Chairman, County Commission  
Approved: \_\_\_\_\_  
District Engineer, Alabama Dept. of Transportation

### Interested in "adopting"

Fill out application form and mail to:

#### Alabama PALS

340 North Hull Street, Montgomery, AL 36104  
Form/Application can be submitted  
online at [alpals.org](http://alpals.org)

## MESSAGE FROM:

JOHN COOPER

Director, Alabama Department  
of Transportation

Alabama's natural beauty is threatened more and more every year by litter. That's why it is more important than ever that the Department of Transportation and PALS partnership keep flourishing. Our partnership with PALS is a model for how state government can work with non-profit groups and volunteers to make our state better.

The men, women and particularly young people who volunteer their time to helping keep Alabama's environment beautiful and roads clean are the most important factor in our efforts. When these dedicated volunteers remove hundreds of tons of litter from highways every year it saves Alabama taxpayers millions of dollars in cleanup costs. The impact on the environment is immeasurable.

With programs such as Adopt-a-Mile, volunteers can see their hard work payoff, not only with clean and beautiful highways, but with road signs highlighting the groups that keep a particular stretch of road litter-free. Recognizing outstanding groups is one of the small ways we can let the volunteers know how thankful we, as Alabamians, are. So the next time you see someone pick up a piece of garbage from the ground or see a crew of volunteers, let them know how grateful you are. Better yet, join them.

On behalf of ALDOT, thank you for your commitment to our ongoing battle against litter. Together, we're making a difference.

— John

# PALS 2020 POSTER CONTEST

## GUIDELINES:

- Theme: “Litter Just Isn’t Normal”
- K-6th (Two categories K-3rd and 4th-6th)
- Standard White Poster or Foam Board (May be split in half)
- All mediums acceptable
- Posters will be judged on clarity of theme, age-appropriate neatness, originality, overall design and inclusion of helpful information or tips.
- Back of Poster must include the following:  
**\*\*We really need ALL this information!!\*\***

Student Name: \_\_\_\_\_

Current Grade: \_\_\_\_\_

Phone Number & Email for Parent: \_\_\_\_\_

School: \_\_\_\_\_

Point of Contact at School: \_\_\_\_\_

Phone Number & Email of Point of Contact at School: \_\_\_\_\_

ALL posters are **due in the PALS office by Friday, April 24th, 2020**

## WINNERS:

First Place: \$200 & Award

Second Place: \$25 & Award

Third Place: \$25 & Award

Honorable Mention: Award

**\*\*All winners will be recognized at our Governor’s Awards Luncheon in November 2020\*\***

# 2020 PO RECYCLED A

*Continued from page 4*

The theme of the **poster** contests this year is **“Litter Just Isn’t Normal.”** Remember to have your own contest at the school first, then send in only your 1st and 2nd place winners for statewide judging. Please note the judging guidelines that will help your students when planning their posters and for judging at the local contests. Be sure to have your winners include ALL contact information requested on the backside of their posters. Entries are due April 24th, 2020.

While there is no set theme this year for the **recycled art** contest, we encourage lots of creativity and imagination! We will accept both 2-D and 3-D works. The project should be made entirely from recycled materials other than a small amount of fastening materials. As with the poster contest, please only send in your school’s 1st and 2nd place winners to the statewide judging. You may either deliver the pieces or enter digitally. If sending a digital entry and chosen as a winner, that piece will need to be delivered to the Alabama PALS office after notification. Be sure to have ALL contact information

# STER AND RT CONTEST

included with entries. Entries are due April 24th, 2020.

The PALS office will notify each winner, school and PALS county contact by May 15th, 2020.

Winners will be recognized and presented with their respective awards at the Annual Governor's Awards Luncheon in November 2020.

In closing, I would like to thank every school that is enrolled in the Clean Campus Program for your commitment to teaching students how to be lifelong stewards of our beautiful state! It is my pleasure to travel around the state and meet each of you and all your amazing students! If your school is not currently enrolled, head to [www.alpals.org](http://www.alpals.org) to sign up! The Clean Campus Program is FREE to all Alabama public, private, city and county schools thanks to the generosity of ALFA, the Alabama Farmer's Cooperative and Coca-Cola. Please call or email me with any questions regarding the Clean Campus Program or our contests at (334) 263-7737 or [jamie@alpals.org](mailto:jamie@alpals.org).

~Jamie

## PALS 2020 RECYCLED ART CONTEST

### GUIDELINES:

- No set theme, so get CREATIVE and ORIGINAL!!
- 7th-12th grades
- May work alone or with one friend
- Piece may be 2-D or 3-D and any size, as long as it can be easily moved.
- Art must be made entirely of materials that are eligible for recycling or that would be otherwise considered trash, except for a small amount of fastening materials such as screws, bolts, wire, welding, glue, tape and twine.
- Pieces will be judged on originality, visual impact, overall design and craftsmanship.
- Please include the following information with each submitted piece:

**\*\*We really need ALL this information!\*\***

Student(s) Name(s): \_\_\_\_\_

\_\_\_\_\_

Current Grade: \_\_\_\_\_

Phone Number & Email for Parent: \_\_\_\_\_

School: \_\_\_\_\_

Point of Contact at School: \_\_\_\_\_

Phone Number & Email of Point of Contact at School: \_\_\_\_\_

\_\_\_\_\_

**Art pieces due by mail, delivery or email by  
April 24th, 2020**

### WINNERS:

- First Place: \$200 (to be divided if working with a friend) & Award
- Second Place: \$25 & Award
- Third Place: \$25 & Award
- Honorable Mention: Award





## Boaz Intermediate Continues Clean Campus Program

Boaz Intermediate School in Marshall County is making great strides with the Clean Campus Program! I had the pleasure of speaking with the students from Boaz Intermediate back in May, and they were already making plans for the 2019-2020 school year. These students are the older ones on campus this school year and wanted to be a great example to the younger class just coming into the school.

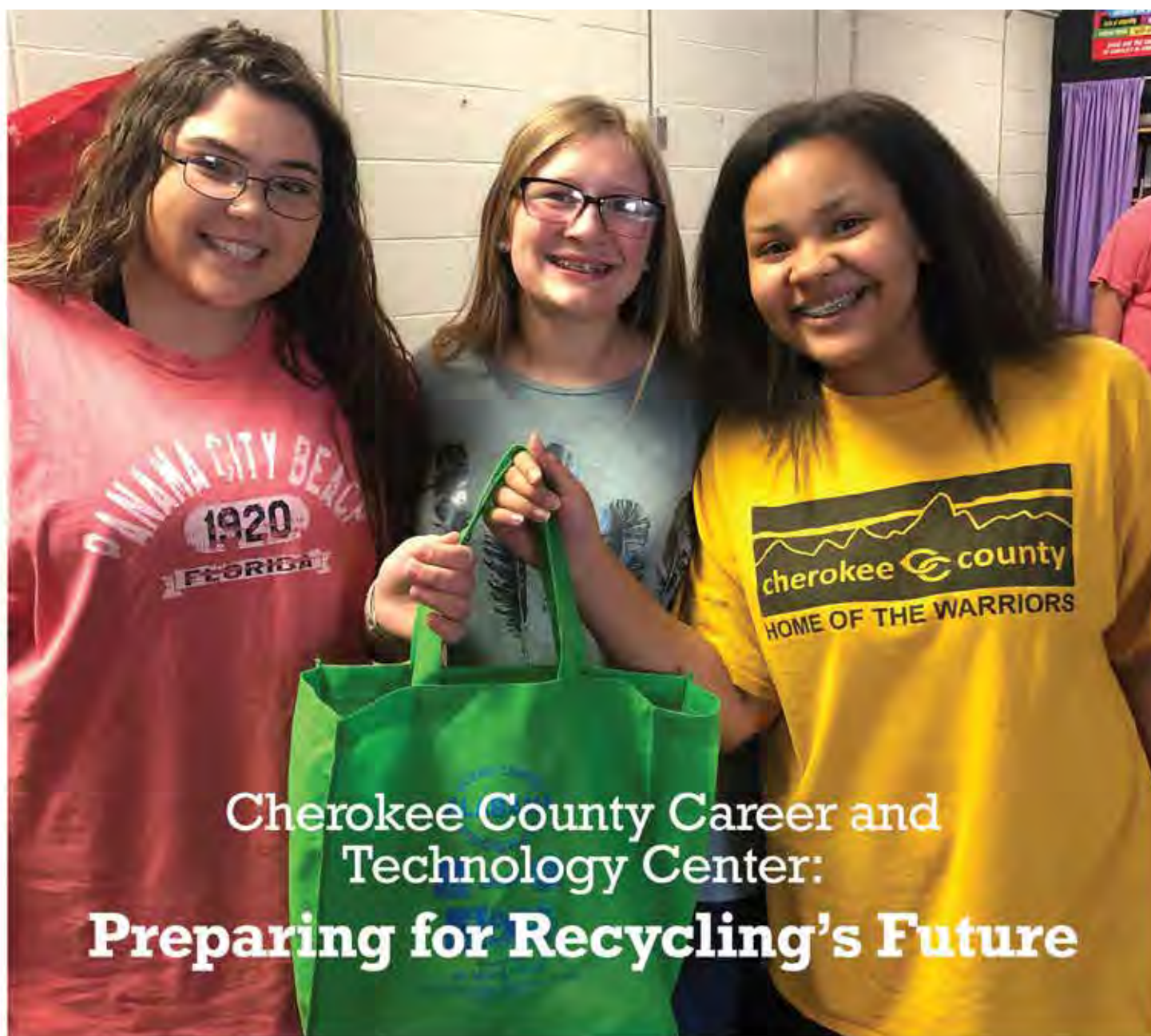
Under the direction of teacher Amanda Duckett, the school plans to start a "Green Team" that will spearhead all the Clean Campus activities. They plan to recycle as well as host regular on-campus cleanups. I provided the students with more ideas that would be easy to implement, as well, such as making posters for the hallways to reminding fellow students to stay litter-free!

Alabama PALS is happy to continue our partnership with Boaz Intermediate and the very supportive and active local chapter of Marshall County PALS. Cecilia Pullen and Micky Hunt, local Marshall County PALS representatives, regularly speak to students around the county at schools and other local events, as well as organize additional cleanups in the county.

Does your county have a local PALS chapter? Are you interested in getting involved? For more information on becoming a member of PALS or to get involved in your local chapter, give us a call at 334-263-7737 or check out our website at [www.alpals.org](http://www.alpals.org). We would love to help as you journey toward a litter-free county! 🌻







## Cherokee County Career and Technology Center: Preparing for Recycling's Future

Cherokee County Career and Technology Center is producing future anti-litter leaders! I have gone to speak to their Jobs for Alabama's Graduates group for the past three years, and these students are not only preparing themselves for the workforce but to be exemplary citizens, as well. The students of Cherokee County Career and Tech Center are always attentive and inquisitive, often bringing fresh and innovative ideas to the conversation.

This year, I challenged the students to really consider plastic consumption and waste. Since there is not a convenient recycling center near the school, we discussed in depth what they could do to forgo plastics as well as formulate new ways to reuse it. The students were also

asked to consider future packaging and alternative materials besides plastics. As I was leaving, I heard some interesting ideas I hope they will continue to explore!

The students from Cherokee County Career and Tech School truly are the future of Alabama and our nation. Sometimes it just takes starting a conversation to spark innovation and creativity that may change the world one day!

If you would like to schedule a Clean Campus visit to your local school, please contact Jamie Mitchell at 334-263-7737 for more information. You may also learn more about PALS and how to become an individual member at [www.alpals.org](http://www.alpals.org). We are here to help as you journey toward a litter-free community! 🌻





## Stephens Elementary Brings Clean Campus Program to Alex City

Stephens Elementary in Alex City is new to the Clean Campus Program this year! We are so excited to have them onboard with the program. The students may be new to the PALS program, but they have already been working with cleanups and events at nearby Lake Martin. The Clean Campus Program was a natural fit for these students!

Jacob Meacham from the Alex City Chamber of Commerce along with local Clean City Partnership Chairman John Thompson have taken on the Clean Campus Program for their area. These two men are working tirelessly to clean up around Lake Martin and Alex City. They believe that starting young is the best way to make a permanent change in behavior, and we couldn't agree more! We visited Stephens Elementary in August and spoke to over 500 students to help spread the anti-litter message. Meacham and Thompson even brought each student a "litter grabber" compliments of Alabama Power.

We believe partnerships like these are the key to cleaner communities. Is your local Chamber of Commerce plugged in with PALS? Is your local school a

member of the Clean Campus Program? If not, please check us out online at [www.alpals.org](http://www.alpals.org). You may also give us a call at 334-263-7737 for more information. We are here to help you as you journey toward a litter-free community! 🌻







## Thanks to Junior Beta Club, Kinston School Joins Clean Campus Program

Kinston School in Coffee County is now a proud member of the Clean Campus Program! Kinston's Junior Beta Club will be leading the program and encouraging their classmates to keep their campus clean, participate in recycling and create posters for our spring poster contest. Their commitment and enthusiasm for the program is certainly contagious!

I had the privilege of speaking recently to the Junior Beta Club and their sponsor, teacher Lougener Wyrso-dick, about the big impact a small group can make. The students were very attentive and ready to learn the many ways they could communicate the "Clean Campus" message. PALS provided the school with recycling bins (pictured) so they can easily manage their recycling program. They also planned to make posters to spread the word about recycling and keeping their campus litter-free. These Junior Beta Club members are both smart and great stewards of our beautiful state! What a great combination!

Is there a school near you that would benefit from hearing the Clean Campus message? If so, please contact Jamie Mitchell at 334- 263-7737 for more informa-

tion. I am available to present a 30-minute presentation to your local school on the importance of keeping our state litter-free. As always, the Clean Campus Program is available at no cost to schools thanks to our corporate sponsors. We are here to help you as you journey toward a litter-free community! 🌟





## Alabama PALS working towards cleaner campuses, cleaner roads, cleaner shores – A *CLEANER STATE*



*Sponsored - Students at Flowers Elementary in Montgomery. Photo courtesy of Alabama PALS*



*Picking up litter with Alabama PALS. Photo courtesy of Alabama PALS*

No one likes seeing litter on the side of the road. Alabama People Against a Littered State (Alabama PALS) is teaching kiddos about the negative effects of litter in Birmingham and beyond through educational programs. Learn more about how to get your child involved, and check out ways you can help.

### “DON’T DROP IT ON ALABAMA” SPRING CLEANUP

Another focus of Alabama PALS is the “Don’t Drop It On Alabama” Spring Cleanup, which takes place every April across Alabama. During this week, about 500 tons—TONS!—of trash are picked up throughout the state. In 2020, the Spring Cleanup will run for the entire month of April. Anyone can get involved. Contact your county commission to identify a cleanup site or start one of your own. You can also visit Alabama PALS’ website for more info.



*Students at George Washington Carver Elementary School in Tuskegee. Photo courtesy of Alabama PALS*

### CLEAN CAMPUS

The goal of Alabama PALS’ Clean Campus program is to promote environmental awareness through litter control, campus cleanups and recycling. We only have one Earth, and it’s important to take care of it! Through the Clean Campus Program, schools are provided with essential materials to promote environmental stewardship and campus beautification. The program is FREE for all Alabama schools.

Interested in participating? Alabama PALS can help your child’s school get started. Jamie Mitchell, Clean Campus Coordinator, recommends schools identify a point person to manage the program—a teacher, librarian or administrator. Mitchell travels to schools across the state and teaches kids how litter negatively affects our planet and ways to protect the environment.

“Becoming a member of Clean Campus equips the school to teach litter education and include environmental activities in school lessons,” she said. “The program can be as simple or involved as the schools would like—it’s their program.”



*Alabama PALS volunteers. Photo courtesy of Alabama PALS*

### ADOPT-A-MILE AND ADOPT-A-STREAM PROGRAMS

Have you ever wondered who is behind those “Adopt-A-Mile” and “Adopt-A-Stream” signs across the state? It’s Alabama PALS! These free programs are a partnership between Alabama PALS and the Alabama Department of Transportation. Groups that want to get involved—and have their very own signs on Alabama highways and streams—can visit this link to adopt a state, federal or county road or stream. The programs are two-year commitments where groups clean their adopted road or stream four times per year.



# New litter law now in effect in Alabama

The new law brings harsher punishments for those caught littering in the state.

By Ashley Knight | September 1, 2019 at 9:45 PM  
(Source: {WBRC})

BIRMINGHAM, Ala. (WBRC) -The state of Alabama is cracking down on people who litter. A new law goes into effect today, bringing with it harsher penalties.

“One thing that we struggle with constantly in the city of Birmingham is the amount of litter, specifically litter that’s thrown from motor vehicles,” says Birmingham City Council Member Hunter Williams.

The Alabama State Legislature passed a law that has upgraded littering, especially litter thrown from cars, from a Class C to a Class B misdemeanor. That means possible jail time up to six months and fines up to \$3,000, plus court fees. The new law also mentions mandatory community service. Williams is glad state lawmakers are acting, but says we have a bigger problem locally.

“But we’ve also experienced companies coming into the city limits of Birmingham and throwing their garbage somewhere within the city limits hoping that public works would pick it up instead of paying the dumping fees.”

Because of that, those responsible can face more than just the jail time and fees from the state.



“If you decide to litter within the city of Birmingham, not only will the city go after you for that criminal littering but we will also try to withhold a business license so that company will not be able to do business in the city limits.”

And 50% of any fines issued will be put to the state’s general fund.

*Copyright 2019 WBRC. All rights reserved.*



## ADAMSVILLE CLEAN-UP

The Neighborhood Clean-Up was a huge success! We got at a little over 100 bags of trash filled (guestimate the weight to be 1.5 tons). We also have a few more spots that need to be finished so we scheduled a follow-up clean-up for Tuesday, November 5th at 10:30am for whoever choose to come back and help. 22 volunteers participated. They obtained breakfast from Jack’s and Food Giant served lunch. The group likes to be known as the Adamsville Forward Association.







Anyone who has spent much time outdoors in Alabama has seen it – trash on the roadside; litter tossed from car windows or blown out the back of a pickup truck heading down the highway. But, many people may not realize how much litter is intentionally dumped in mass out in our more remote woods.

As a hiker and backpacker for many years, I have seen ravines off of remote roadsides being used as extreme-rural residential landfills, with piles of trash bags, old tires, broken furniture, and even rusted out household appliances resting against otherwise majestic old trees growing from the hillside. I have also seen regular dumping areas closer into towns, yet still on remote roads. Once there was even a flowing creek



*Officer Shawn Nixon found his own garbage in an illegal dumping in the CRWMA, which led him to the culprit.*

at the bottom of the roadside dump, with bags of garbage spilling out into the water.

**“WHY FOCUS ON LITTER? BECAUSE IT IS CONSERVATION. IF IT AFFECTS THE ENVIRONMENT, IT AFFECTS FISH AND WILDLIFE TOO ... DISEASE CAN BE SPREAD TO AND BY FISH AND WILDLIFE AND TO HUMANS BECAUSE OF GARBAGE.”**

— LT. CLIFTON A. ROBINSON

These scenes have always bewildered me. Even as a kid growing up in the Oakmulgee Ranger District of the Talledega National Forest, I became appalled at the amount of trash I ran across in the woods, not just on the roadside. It always made me feel gross and want a shower, as though I had rolled around in it myself. I wondered then – and still do – why do people do this? I also wondered why they couldn't be caught and stopped.

Alabama Department of Conservation and Natural Resources officer Lieutenant Clifton Robinson took the idea of “why can't we catch them and stop them” and made it an initiative within his command as Assistant Supervisor over seven west Alabama counties.

“Operation Oscar (an Oscar the Grouch reference) was a challenge I issued April 2018, to the ten officers in the counties I supervise of Bibb, Chilton, Shelby, Perry, Dallas, Autauga, and Lowndes,” Lt. Robinson said, “They were all challenged to make at least one litter case within a year. They all did that! And two officers literally made cases for dump truck loads of garbage.”

Officer Shawn Nixon initiated a case on Cahaba River Wildlife Management Area (CRWMA) in Shelby County in which his garbage was found and it led him to a trash company employee taking a shortcut he was not authorized by the company to do. The culprit dumped an entire garbage truck in the management area. Nixon said the company assisted with the investigation with great zeal and immediately fired the employee.

In Bibb County, Officer Ricky Corn made a dump truck load case on the Cahaba River National Wildlife Refuge, too. Corn made 16 total cases, with one pending investigation. 13 of these cases involved national forest dumping on Cahaba WMA, or Cahaba National Wildlife Refuge.

#### **Operation Oscar successes in other counties:**

- Chilton County: Officer Clint Tyus - 1 case. Officer Shannon Calfee – 1 case.
- Shelby County: Officer Marcus Rowell – 1 on CWMA. Officer Shawn Nixon – 1 “but what a doozy” and 1 assist made on Cahaba WMA.
- Dallas County: Sgt. Alan Roach- 1 on Autauga WMA. Sgt. Joe Johnston – 2 cases.
- Autauga County: Officer Jason McHenry – 4 with one on Autauga WMA.
- Lowndes County: Officer Jeffrey Nimmer- 2 both on Lowndes WMA.
- Perry County: Officer Michael Duncan – 3 cases. Recently retired to take over his family's recycling business.

#### **Lt. Robinson notes:**

“During my 33 year plus career I estimate that I have made at least 100 litter cases. Knowing the state of our public lands as well as private lands and knowing that many officers may go an entire career without making a litter case I have made it my mission to see to it that all of my officers have the knowledge and ability to work a litter case. You can certainly make a litter case you witness but you can also make a litter case under title 13 criminal statutes in Alabama.

13A-7-29 provides that if certain identifying information is found in garbage that there is a rebuttable presumption that that person is responsible for said garbage. They can be interviewed and given 15 days to present evidence that they are not the person that illegally disposed of their trash. Oftentimes the suspect either confesses right





*Lt. Clifton Robinson recently received the award for MISSISSIPPI FLYWAY WATERFOWL OFFICER OF THE YEAR and is an Assistant Supervisor in charge of the enforcement activities of 7 counties in West Central Alabama. [Bibb, Shelby, Chilton, Dallas, Perry, Autauga and Lowndes].*

away or is able to direct an officer to the guilty party.

Why focus on litter? Because it is conservation. If it affects the environment it affects fish and wildlife too. Fish and wildlife can become entangled or injured on or in garbage. Fish and wildlife can ingest garbage and become sick and/or die. Disease can be spread to and by fish and wildlife and to humans because of garbage. Land values for recreational purposes like hunting and fishing can be lowered due to illegal garbage dumping. The overall outdoor aesthetic experience is damaged by the presence of garbage. The great majority of the litter cases have been made on national forest, wildlife management areas, and public boat launches and public rivers.”

With the dedicated efforts of Lt. Robinson and his fellow officers, as well as others like them and the help of concerned citizens who are also tired of the perpetual litter, perhaps one day we will be rid of the problem. Perhaps one day people will no longer see an empty patch of ground in the woods as a place to get rid of their trash, but as a piece of nature to enjoy and help tend through conservation. It can only benefit all of us to do so.

If you see or know of illegal dumping in Bibb forests (Oakmulgee Ranger District), call and report it to the local office at (205) 926-9765. Or call the game and fish violations number 1-800-272-GAME.

## Willie Mays Park gets facelift as part of WORLDWIDE SERVE DAY

### *Dozens of volunteers cleaned up Willie Mays Park in Fairfield as part of worldwide “Serve Day”*

By Christina Chambers | July 13, 2019 at 8:48 PM CDT | BIRMINGHAM, Ala. (WBRC)

Willie Mays Park in Fairfield got a major facelift Saturday, thanks to dozens of volunteers from Church of the Highlands and the UAB Men’s Basketball team.

UAB guard Tavin Lovan has loved basketball since he was a little boy, so when he saw overgrown courts at Willie Mays Park in Fairfield, he wanted to help out.

“Not a lot of kids get the opportunity to even have a park in their neighborhood, so rebuilding this court is big for me, but not only me, for this community too,” Lovan said.

Thousands of churches and volunteers are giving back to communities all across the world on Saturday, as part of world wide “Serve Day” and fixing up Willie Mays Park was at the top of Julie Smith’s list.

“About a year ago I saw a little boy playing basketball out here with grass grown all around him, the basketball courts were just crumpled so as a mom I felt that was very heartbreaking,” said Church of Highlands project coordinator Julie Smith.

From taking down fences, mowing, picking up trash and raking up brush, dozens of volunteers brought the park and basketball courts back to life.

“It means a lot to me because I had a lot of people come out to give back to my community, I’m from Southside Chicago so you know it’s about giving back to the young kids,” said UAB forward Tamell Pearson.

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# 2020 Alabama PALS

“Don’t Drop It On Alabama”

Statewide Spring Cleanup

Entire Month of April, 2020

## MATERIALS FURNISHED FOR CLEANUPS

Large Trash Bags, Ad Slicks, Reporting Forms, Safety Tips Sheet,  
Window Decals, Recycling Bags for Participating Groups,  
All PALS Brochures

We look forward to working with each of you and your respective groups, municipalities, schools and volunteer groups as we make the 2020 “Don’t Drop It On Alabama” Spring Cleanup the largest and most successful cleanup in Alabama history





# 2020 “Don’t Drop It On Alabama” SPRING CLEANUP CONTACT INFORMATION FORM

Name \_\_\_\_\_ Phone \_\_\_\_\_ Email \_\_\_\_\_

Affiliation \_\_\_\_\_ County \_\_\_\_\_

Mailing Address \_\_\_\_\_ City \_\_\_\_\_ Zip \_\_\_\_\_

Shipping Address \_\_\_\_\_ City \_\_\_\_\_ Zip \_\_\_\_\_

We are interested in RECYCLING aluminum CANS and Plastic Bottles  
during the 2020 Spring Cleanup?

YES \_\_\_\_\_ NO \_\_\_\_\_

PLEASE send completed Form to  
Alabama PALS, 340 North Hull Street, Montgomery, AL 36104

## SISTERS OF PROMISE #442 HELPING TO CLEAN UP ALABAMA With Juniel Whitfield-Tidwell and 2 others.





## Sheriff Gentry Wins PALS Governor's Award for Reducing Litter on Cullman Roads

Cullman County Sheriff, Matt Gentry, recently received the 2019 PALS Governor's Award for helping reduce litter on the roads in Cullman County. AL PALS (People Against a Littered State) helps cities by offering programs that are free and combat litter through prevention, cleanup and control.

Alabama PALS strives to create, maintain and implement statewide anti-litter programs which impact Alabama cities, counties, communities and schools.

Each November, PALS holds The Governor's Awards to recognize groups in following categories: Media, Adopt-A-Mile, Special Category, County Commission Award, City, County, Law Enforcement, Judicial, Litter Education, Business and Industry, Honda Manufacturing "Don't Drop It On Alabama" Award and the Vulcan Volunteer of the Year Award.

Cullman County Sheriff's Office deputies and inmates helped remove, as of the award date, over 48,275 lbs. of trash from 217 miles of roads of Cullman County. CCSO also picked up 3,209 pounds of scrap and cans from Cullman County Roadways which resulted in \$533.97 being donated to Cullman Caring for Kids.

"This is truly a team award for all the deputies and personnel who worked hard to clean up our county. I really believe it's better to have these non violent inmates cleaning our roads than just sitting in jail", said Sheriff Matt Gentry.

Individuals and businesses may become a member of PALS through our website or by calling (334) 263-7737. Sponsorship information is also available at [www.alpals.org](http://www.alpals.org).



## City of Orange Beach Award at 2019 Alabama PALS Governor's Award Ceremony



By Melanie LeCroy

The City of Orange Beach was the recipient of the 2019 Coastal Cleanup Award in Montgomery Nov. 13 at the 2019 Alabama PALS Governor's Awards ceremony.

On hand to accept the award were City of Orange Beach Coastal Resources Director Phillip West, Wade Stevens and Nicole Woerner.

The city was selected for this award by the ADCNR State Lands Coastal Section and the Alabama People Against a Littered State (PALS).

A big thank you goes out to Coastal Resources and city staff, as well as volunteers, for their work each year during the Annual Coastal Cleanup.

*On hand to accept the award City of Orange Beach Coastal Resources Director Phillip West, Wade Stevens and Nicole Woerner. They are pictured with Jeff Helms, Chairman of board of directors for Alabama PALS.*

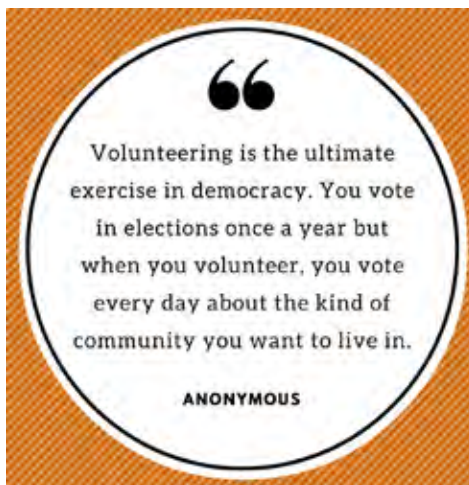
## Marshall County was well represented Wednesday when Alabama PALS held its annual Governor's Awards in Montgomery.

The Editor's Pen – County Represented at Anti-Litter Awards by Anthony Campbell Nov 16, 2019

Marshall County PALS is a small but well-organized group and they are very active. They could use your help both within the organization (officer elections are coming up and they'd love to have some "new blood") as well as more "boots on the ground" in their many litter clean-ups.

Winning statewide Governor's Awards for Marshall County were:

- **Marshall County PALS itself.** The state organization realizes what a stalwart outpost of the organization the Marshall County group is.
- **The Marshall County Democratic Club.** They're part of the Adopt-A-Mile program with one of the most visible miles in Marshall County, the section of Highway 431 just in front of County Park No. 1 north of the river bridge. The group has at least 4 clean-ups a year of its mile that I'm aware of. They don't just clean their mile, but also pick up the shoreline in the County Park. Politics aside, you have to give credit where credit is due. They do a great job with their litter project.
- **Federal Mogul.** They recently received Marshall County PALS Business Pride Award that goes to a business that goes the extra mile in keeping their property clean. My pals at PALS tell me they do an outstanding job.
- **Sheriff Phil Sims and the Marshall County Sheriff's Office.** The sheriff's office has an inmate litter patrol (using non-violent offenders in for things like bad checks and child support) and they've picked up dozens and dozens of bags of roadside litter in Marshall County. Sims couldn't be at the awards luncheon, but his able employees Steve Guthrie and Matt Cooper represented him.
- **Nickie Simpson and *The Sand Mountain Reporter*** received a media award for their reporting on PALS and its anti-litter activities.
- ***The Advertiser-Gleam* also received a media award.** The Gleam not only reports on PALS, but under the leadership of general manager Christine Hammers recently adopted the mile of Taylor Street in front of the Gleam office to Lurleen Wallace Drive to regularly pick up litter.



In addition to the 6 Governor's Awards, two Marshall County students, both from the Arab school system, received honorable mentions in PALS statewide anti-litter poster contest and recycled art project.

- **Ashlyn Stephens** of Arab Junior High received her award in the recycled art contest.
- **Bella Partington** of Arab Elementary received her award in the poster contest.

In addition to those awards:

- One of Alabama PALS' most prestigious state awards is named "the Jean McCrady Service Award" for MCPALS' longtime member Jean McCrady. McCrady served on the Alabama PALS Board for years and was instrumental in seeing the organization through its early years. She continues to be a part of the Marshall County group.
- Micky Hunt is the president of MCPALS and really the soul of the organization. He's donated countless hours to the organization over the last 15-20 years. He was all smiles at the awards ceremony, proud that his home county was represented. Remember that the Governor's Awards are for the entire state, so Marshall County was competing against the Jefferson, Madison and Baldwin counties as well as counties its own size.
- Boaz mayor David Dyar, proud that Federal Mogul was representing his hometown, was in attendance at the awards.

PALS acknowledges that its future lies in educating youth not to litter. The statewide organization started the Clean Campus initiative a few years ago and now 500 schools statewide are involved.

If you think PALS efforts aren't making a difference, consider the statistics shared at Wednesday's luncheon.

- The 2019 Coastal Cleanup included 5,500 volunteers in 30 different clean-up zones on Alabama's coast. In a single day, the group picked up 45,000 pounds of litter and debris.
- The "Don't Drop It On Alabama" spring cleanup – which Marshall County and its cities participate in – resulted in over 600 tons of litter picked up statewide, all by volunteers.
- PALS estimates the economic value of the cleanup at over \$7 million.

Wednesday was a day to celebrate, PALS officials said. With numbers like that, we tend to agree.



## POSTER CONTEST K-3RD – WINNERS



1st Place: Grayson Hatchett  
Piney Chapel Elementary School, Limestone County



2nd Place: Brinley Baum  
Prattville Primary School, Autauga County



3rd Place: Braydon Nichols  
Leroy High School, Washington County

## POSTER CONTEST K-3RD – HONORABLE MENTION



Gene Baldwin  
Crestline Elementary, Morgan County



Arleigh Mansell  
Gordo Elementary, Pickens County



Shyann Daszczuk  
Fruitdale Elementary, Washington County



Bella Partington  
Arab Elementary, Marshall County

## CLEAN CAMPUS SCRAPBOOK CONTEST



1st Place: Bear Exploration Center, Montgomery County



2nd Place: Hanceville Elementary School, Cullman County

## EDUCATION AWARD



MLK Day Cleanup / Minor High School and Jr. High School, Jefferson County



Highland Home School "Blue Crew," Crenshaw County



## POSTER CONTEST 4-6TH – WINNERS



1st Place: Stanley Chen  
Bear Exploration Center, Montgomery County



2nd Place: Halle McCrary  
Arab Elementary, Marshall County

3rd Place: Lucie Gardner, Hubbertville School, Fayette County – Not Pictured

## POSTER CONTEST 4-6TH – HONORABLE MENTION

Naveah Hoobler, Hubbertville School, Fayette County – Not Pictured



Mirfaizan Iqbal  
Riverchase Elementary School, Jefferson County



Katie Waters  
Meek Elementary School, Winston County

## RECYCLED ART CONTEST 7-12TH – WINNERS



1st Place: Skylar Rollins  
Brookwood High School, Tuscaloosa County



2nd Place: Bella Ratliff  
Thompson High School, Shelby County

3rd Place: Haley Hazelrig, Brookwood High School, Tuscaloosa County – Not Pictured

TEST



3rd Place: Parkside School, Cullman County



Honorable Mention: Ashlynn Stephens  
Arab Jr. High, Marshall County



Litter Quitters Competition Winners, Jefferson County



Honorable Mention: Ma'Zairo Speigner  
Thompson High School, Shelby County

## RECYCLED ART CONTEST 7-12TH – WINNERS

Honorable Mention: Naveah Hoobler  
Hubbertville School Fayette County – Not Pictured





Marcia Collier  
Association of County Commissions



**PALS PARTNERSHIP AWARD**  
Sharon Tinsley  
Alabama Broadcaster's Assn.



ADCNR/State Lands/Coastal Section



**VULCAN VOLUNTEER OF THE YEAR AWARD**  
Judie Swan, Baldwin County



Officer Ricky Corn, ADCNR  
Bibb County



Sheriff Phil Sims  
Marshall County



Sheriff Heath Taylor  
Russell County



Sheriff Matt Gentry  
Cullman County

**LAW ENFORCEMENT AWARD**



Marshall County Democratic Club



**ADOPT-A-MILE AWARD**

Southside HS/Air Force JROTC/AL 961, Dallas County



**JEAN MCCRADY SERVICE AWARD**  
Mulga Loop Road Cleanup Committee  
Jefferson County



**COASTAL CLEANUP AWARD**  
City of Orange Beach



**MEDIA AWARD**  
The Sand Mountain Reporter  
Marshall County, Nickie Simpson



The Advertiser Glean  
Marshall County



Jeff Ziss



# PALS AWARDS



**DON HINES MEMORIAL AWARD**  
Melanie Stokley, Washington County



City of Cullman Sanitation Dept.



**CITY AWARD**

City of Florence, Lauderdale Co.



**BUSINESS & INDUSTRY AWARD**  
Home Depot, Jefferson County – 9135  
Federal Mogul Group, Marshall Co. – 9136



**COUNTY AWARD**

Jefferson County Roads and Transportation Dept. – 9143  
Marshall County PALS - 9145



Jefferson County



**COCA-COLA "DON'T DROP IT ON ALABAMA" SPRING CLEANUP AWARD**

Cullman County



ette



Timothy Howle



**SPECIAL CATEGORY AWARD**

Keith Evans



Ronnie Tew



Catherine Coleman



## Tackling Litter with New Law, Coastal Cleanup, Litter Gitter

By David Rainer - Alabama Department of Conservation and Natural Resources

Very few things irritate me more than litter, especially when the litterbugs toss their trash on public land or in public waterways.

The Conservation Enforcement Officers at the Alabama Department of Conservation and Natural Resources (ADCNR) are in a constant battle to deal with litter on public lands and waterways.

Hopefully, a new law sponsored by Rep. Margie Wilcox of Mobile will provide a deterrent for those who toss their trash without regard for the environment or fellow man.

The law, which went into effect this month, increases the fine for the first offense of littering to up to \$500. The second offense includes penalties of a fine of up to \$1,000 to \$3,000 and up to 100 hours of community service picking up litter along the highways or waterways. The law also changes violations from a Class C misdemeanor to a Class B misdemeanor.

The law kicks in additional penalties for certain types of littering from a vehicle or vessel, including tossing cigarette butts, cigars, containers of urine and food containers. Those violations will cost you an additional up to \$500.

"The genesis of this is I used to live on Dog River, so I saw first-hand the litter I had to clean up on my own property," Rep. Wilcox said. "I've been a longtime member of the Dog River Clearwater Revival.

"When I read the (previous) law, I felt like the fines for some of these offenses were horribly inadequate. An important thing that came out of my discussions from the public was that they wanted people punished by making them pick up the litter. That was my favorite part of the bill. On the second offense, you have to start picking up litter. It's great that we have people volunteer for the coastal cleanups, but people need to be picking up their own litter."

Speaking of the Alabama Coastal Cleanup, which was held last weekend, Angela Underwood of the ADCNR's State Lands Division said that close to 5,000 showed up to pick up trash along waterways, rivers, lakes, beaches and bays. While most of the work was concentrated in Baldwin and Mobile counties, she said that other volunteer groups picked up trash in the Montgomery and Troy vicinities. Between 30,000 and 40,000 pounds of trash were picked up.

"We always have great support from groups that cover all ages," Underwood said. "We get a lot of Scout groups, student groups, individuals and corporate and business partners.

"For example, Airbus had supported the cleanup in the past, but they wanted to take on a zone of their own this year. So, we established a new zone in Mobile County where Airbus took the lead. Alabama Power helps us along the Causeway (Battleship Parkway) with their boats. We have great support from the community and within our own agency and division."

Underwood said Don Bates, who developed the Litter Gitter trash collection device, Thompson Engineering and Weeks Bay Foundation have partnered with Coastal Cleanup to oversee the recycling aspect of the cleanup.

"Those three partners really take the lead on getting volunteers at each site to hand out recycling bags and talk about what can and can't be recycled," Underwood said. "Then they sort through the recycling material to make sure the things the volunteers are putting in the bags are what we want and that it's clean enough to be recycled. Plastics and such, if they're not relatively clean, can't be recycled."

The recycling partners then collect all the potential recyclable material at the end of the day, sort it, and transport the material to the proper recycling facilities.

Speaking of the Litter Gitter, Underwood said one of the sites monitored by the City of Mobile has installed a device to capture litter coming down 3 Mile Creek.

"I talked to one of the people in charge of monitoring that site, and they said that since the Litter Gitter had been installed they are finding less garbage there during Coastal Cleanup," Underwood said. "From our perspective, it would be better if we had enough outreach to prevent people from littering in the first place."

Meanwhile, Bates is busy with his company, Osprey Initiative, and updating his Litter Gitter at a new facility in Mobile. Most of the previous Litter Gitters were made of PVC; the new ones are being made of aluminum.

The Fairhope resident, who gave up an executive position with Thompson Engineering to start this venture, said he's been working as a volunteer for many years to pick up trash, mainly in waterways.

"I grew up in the swamps of south Louisiana. I've been playing in ditches my



Jack Bates and Deric Martin, right, deploy a Litter Gitter in d'Olive Creek in Daphne.

whole life," Bates said. "I'm really tied to the water. Three years ago, working with the Mobile Bay National Estuary Program (NEP) on a volunteer cleanup on Maple Street in Mobile, I had the idea of a small, tactical trap that you could place where the litter is entering our waterways and collect it closer to the source."

Bates started working on a prototype with the support of the City of Mobile.

"We put a prototype at the exact spot on Maple Street right before it flows into 1 Mile Creek, and it just worked," he said. "It was amazing. We had some rain events, and it captured a lot of the litter that would normally have been flushed downstream. I was able to get in there and clean it out before any went into the waterway.

Bates won grants from the Mobile Bay NEP and EPA (Environmental Protection Agency) to install the Litter Gitters at 10 sites in the 3 Mile Creek watershed.

"Our role is to help these areas that are concentrating on restoring their urban waterways," he said. "These waterways are at your back door and you should be able to enjoy them. We're playing a role in attacking the litter in those watersheds and promoting their resurgence. I think that's a critical gap for what we're doing."

Bates said his team is working with Dog River Clearwater Revival on a project in Dog River, while four Litter Gitters have been deployed in Decatur, Ala., as well as several in Atlanta. Bates expects Cincinnati and Charlotte, N.C., will be the next to get Litter Gitters.

The first Litter Gitter was basically a wire cylinder, which couldn't hold up during significant rain events.

Bates reached out to Brunson Net Company in Foley for help, and netting material was incorporated into a PVC frame. The latest Litter Gitter is made of aluminum fabricated by Custom Metal Fabricators on Dauphin Island Parkway.

"We are working out the final details, but a neat thing is we might be able to take the aluminum we're collecting and get the material recycled into ingots in Robertsdale," Bates said. "Then there's a company in Gulfport (Miss.) that will make the ingots into roll aluminum. Then Custom Metal Fabricators will make the traps out of that roll aluminum. Hopefully soon, we'll be making our devices out of aluminum we're pulling out of our waterways."

Bates sure hopes this venture is the wave of the future for mitigation of litter in the environment.

"I sure hope it is," he said. "I quit my job of 19 years as an executive vice president with Thompson Engineering. It's a great company. Three years ago, I never intended to leave Thompson. As the Litter Gitter took off, I left Thompson last spring. I still support them, and they support me.

"This project just stirred an entrepreneurial spirit. This gives me the opportunity to live my passion in a different way than Thompson. We're talking to four or five other states, so the energy is there. I decided to take a shot."

Bates has six employees in Mobile with a new warehouse facility and actually does more than deploy litter traps.

"I was trained by Thompson to be very adaptable," he said. "It's bigger than litter traps. We actually help by assessing where the litter is, developing litter removal plans, and we actually help handle the material after we clean it up. Our plastic from the Alabama Coastal Cleanup will be going to a facility in Atlanta that makes graduation caps and gowns out of recycled plastic.

"We started a little company in south Alabama from a vision that is really getting lot of attention across the country."

## ALABAMA COASTAL CLEANUP

The next big event for Alabama PALS is the Alabama Coastal Cleanup. The event is in partnership with the Alabama Department of Conservation and Natural Resources, and it's happening September 21 from 8:00 a.m. to 12:00 p.m. along Alabama's coastline. Even though we're landlocked here in Bham, people from all over the state participate. Last year, approximately 5,800 volunteers picked up 50,000 pounds of trash. Visit [alabamacoastalcleanup.com](http://alabamacoastalcleanup.com) for more info.

*"PALS is so unique. It brings together environmentalists, communities, state agencies, cities, counties and volunteer groups to accomplish a common goal. It's fun to watch generations of Alabamians working to protect and preserve our home."* – Spencer Ryan, Executive Director of Alabama PALS

This article is brought to you by Vulcan Materials Company, a proud partner of Alabama PALS. Vulcan Materials Company believes that environmental stewardship is key to building strong communities.

Sponsored by: Vulcan Materials Company



*PALS volunteers pick up 123,440 pounds of litter this year in Jefferson County, Wenonah High School Wins Litter Quitter Campaign  
Photo via the Alabama Coastal Cleanup on Facebook*

## OSPREY INITIATIVE TEAM Over 300 pounds of litter recycled from Alabama Coastal Cleanup



For the fourth year in a row, members of the Osprey Initiative team participated in the Alabama Coastal Cleanup efforts on Saturday, September 21st.

Four employees and two volunteers were on the Osprey team, who coordinated the recycling for all 28 sites of the cleanup. The team started at 6:30 a.m. and completed the last bit of data collection and sorting around 5 p.m.

The long day was worth it: the final tally was 385 cubic feet of recycling.

What does this mean? Roughly 126 pounds of aluminum, 200 pounds of plastic, and five super sacks were removed from the coast and sorted to go to recycling. This not only cleaned up the coast, but helped to keep these items out of the landfill.

The Osprey mission isn't just to remove litter from our waterways, but to also find sustainable solutions to prevent litter and determine second uses for litter collected. We work with the local Materials Recovery Facility (MRF) in each area to get as much of the materials we recover into the recycling stream. All items collected are tagged and included in the data we record at each site.

This was the 32nd year for this annual event, coordinated through the Alabama Department of Conservation & Natural Resources State Lands Division, Coastal Section, and the Alabama People Against A Littered State (PALS). Since its start in 1987, over 87,000 volunteers have helped to "get the trash out of the splash."

Thanks to all the volunteers who worked to clean up our coast. We hope that you will get involved next year and find out everyday ways you can prevent marine debris. Learn more on the Alabama Coastal Cleanup website.



## Sun Coast Team Volunteer Day

September 21, 2019 was International Coastal Cleanup day, and teams from Mobile and Robertsdale Coca-Cola UNITED were there to lend their support to this worthy cause. Alabama People Against a Littered State (PALS) first began in 1987, and Coca-Cola UNITED is proud to be a regular supporter.

### PALS around the Canal

The team from Mobile were tireless as they worked around Theodore Industrial Canal, a 110+ acre industrial area that offers direct access to the Gulf of Mexico in Theodore, Alabama. Volunteers decked out in Coca-Cola t-shirts spent their morning clearing litter along the streets, and having fun while doing it!

### PALS in the Park

The Robertsdale team worked around May Day Park, which was opened in 1887 and was a festival site for over 60 years. Offering a playground, fishing pier, and beach & water access for canoes and kayaks, this park is a popular recreational site on Mobile Bay. The Robertsdale team did a fantastic job clearing the park of litter, even bringing along their children to teach them the importance of responsible garbage disposal.

We thank our Coca-Cola UNITED volunteers for taking time out of their busy weekend to make a difference in our local communities. Way to go!



*Mobile Coca-Cola UNITED employees helping with Coastal Cleanup around Theodore Industrial Canal*



*Mobile Coca-Cola UNITED employees cleaning up litter around Theodore Industrial Canal*



*Robertsdale Coca-Cola UNITED employees helping with Coastal Cleanup around May Day Park*





## Help Keep Our Shorelines Beautiful at the Alabama Coastal Cleanup

No matter how many litter laws we pass, and no matter how efficient our waste management services become, there will always be a need for good citizens helping to keep our beaches clean.

That's why the Alabama Coastal Cleanup has been going strong for three decades here on the Gulf Coast. And in a couple weeks, they'll need all the help they can get to maximize this year's efforts.

From 8am to 12pm on Saturday, September 21 (rain or shine!), thousands of volunteers will split into teams to clean up Alabama's coastal waterways and beaches along 30+ different locations. Volunteers are needed by foot and by boat, so whether you come by land or by sea, there's a cleanup zone nearby that needs your help.

"It is always amazing to me how much litter is recovered from our shorelines and beaches every year during the Coastal Cleanup," said Chris Blankenship, Commissioner of the Department of Conservation and Natural Resources (ADCNR). "We appreciate all the volunteers and groups that come out and participate."

The Alabama Coastal Cleanup is more than just a morning of feel-good community service—it's a crucial part of maintaining our coastal ecosystems.

Since the origins of the Alabama Coastal Cleanup in 1987, a coordinated effort between Alabama People Against a Littered State (PALS) and the ADCNR to join the

International Coastal Cleanup, more than 98,000 volunteers have helped clean the beaches on a sunny day in September. More than 5,000 volunteers have pitched in each of the last few years.

This includes a tremendous recycling effort. Over the past two years, more than 4,000 pounds of recycling have been collected from our waterways and shores. This year, the Alabama Coastal Cleanup is partnering with Coca-Cola, Weeks Bay Foundation, Thompson Engineering, and Osprey Initiative to recycle aluminum cans and plastic bottles. The goal is to use recycled aluminum in Osprey Initiative's "Litter Gitters" and use recycled plastic for t-shirt products.

Live on the Alabama Coast? Want to pitch in? We thought you might.

Find a cleanup zone near you, then click on the location to find contact information for the zone captain. Or you can call 251-928-9792 for general information. There's always room for more volunteers when we're keeping Alabama beautiful!

And if you can't make it to this year's events, don't worry—there are plenty of ways to get involved and help keep our coast clean.

"Besides making our beaches more pristine, removing litter protects fish, bird, dolphins, sea turtles, and other wildlife," Blankenship said. "It gives me good feeling every year to see how much trash can be removed when many of us work together."

## Thousands pick up trash in Alabama Coastal Cleanup

*By Dennis Washington  
September 24, 2019*

Thousands of people volunteered several hours Saturday morning picking up trash along Alabama's coastal waterways and beaches.

The 32nd Annual Alabama

Coastal Cleanup was held at more than 30 locations in Mobile and Baldwin counties. Volunteers took "trash out of the splash," recycling as much of it as possible.

"It's very important to the communities," said Amy Hunter, one

of the zone captains for the Alabama Coastal Cleanup. "It changes behavior, creating a connection to our waterways. It makes everything look better."

The Alabama Coastal Cleanup was coordinated through the Alabama Department of Conservation & Natural Resources State Lands Division, Coastal Section, and the Alabama People Against A Littered State (PALS). Organizers say more than 87,000 volunteers have assisted in this event since Alabama joined the International Coastal Cleanup in 1987.

"We have folks from Alabama Power and several other companies throughout the area who volunteer their time, pick up the trash and transport it to the dumpsters," Hunter said. "This can't happen without them."

The Alabama Coastal Cleanup is made possible by the generosity of many businesses, including Alabama Power Company, Poarch Band of Creek Indians, National Oceanic and Atmospheric Administration, Ike's Beach Service, Airbus, LogoBranders, Bebo's, LuLu's, city of Gulf Shores, city of Orange Beach, Riviera Utilities, Utility Board of Gulf Shores, Baldwin EMC, Flora-Bama, The Home Depot, Mobile Area Water and Sewer System, Evonik, ExxonMobil, Republic Services, Volkert Inc, Coastal Conservation Association Alabama, Compass Media, Coast 360, Alabama Department of Transportation, ALFA Insurance, Coca-Cola, Vulcan Materials, Honda Manufacturing of Alabama, Alabama Farmers Cooperative, Association of County Commissions of Alabama, Weeks Bay Foundation, Osprey Initiative and Thompson Engineering.

For more information about the Alabama Coastal Cleanup, visit [AlabamaCoastalCleanup.com](http://AlabamaCoastalCleanup.com).



*Volunteers pick up trash across Mobile and Baldwin counties during the Alabama Coastal Cleanup. (Dennis Washington / Alabama NewsCenter)*



*Thousands volunteer for Alabama Coastal Cleanup 2019 from Alabama NewsCenter on Vimeo.*



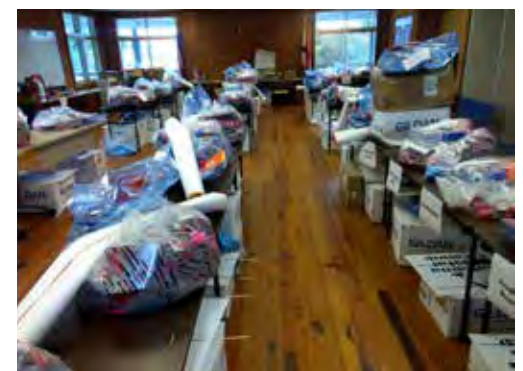
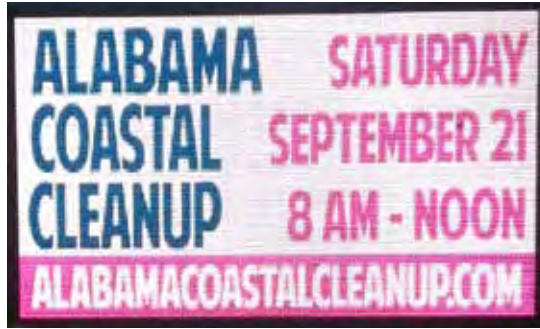




# ALABAMA PALS 32ND ANNUAL ALABAMA COASTAL CLEANUP









# ALABAMA PALS 32ND ANNUAL ALABAMA COASTAL CLEANUP



**BON SECOUR**



**CAUSEWAY**



**FIVE RIVERS**



**FOWL RIVER**







**BAYKEEPER**



**LIPSCOMB LANDING**



**ARLINGTON**



**ORANGE BEACH  
FIRE DEPARTMENT**



**DOG RIVER**



## Dates to Remember

### January

2020 Spring Cleanup Materials  
Prepared

### January

Winter Newsletter Mailed and Online

### March 3rd

PALS Board Meeting

### March 15th

Spring Cleanup Supplies Ready for  
Pickup

### All of April

“Don’t Drop it On Alabama” Spring  
Cleanup

### April 24

Posters and Recycled Art Due in  
PALS Office

### July (Date TBD)

PALS Board Meeting

### September 17th

Alabama Coastal Cleanup Materials  
Distribution Day

### September 19th

2020 Alabama Coastal Cleanup

### October

Governors Awards Nominations  
Due Date

### November

- Alabama PALS Governors Awards
- wAlabama PALS Board Meeting

## 2019 ALABAMA PALS QUICK FACTS

### 2019 Alabama Coastal Cleanup Partnership with ADCNR/State Lands/Coastal Section

5,500 + Volunteers

31 Cleanup Zones

45,000 Pounds of Litter Removed

1,000 Pounds of Recycled Plastics and Aluminum

All Materials and Supplies Furnished  
Through Corporate Sponsors

Recycled at ALL Zones

Recycling Super Sorter Training Provided

### 2019 “Don’t Drop It On Alabama” Spring Cleanup

Over 220 Cleanups Organized Statewide

Over 650 tons of litter Reported

Provided Approx. 185,000 Trash Bags Statewide

Provided All Supplies and Support Materials

Continued Promoting Recycling during  
Spring Cleanup efforts

### 2018-19 Alabama Clean Campus Program

500 Alabama Schools Enrolled

Updated Clean Campus Data Base

20+ On Campus Programs

Clean Campus On Line Video Initiated  
*(Will be Available August 2020)*

Clean Campus Scholarships and Awards Presented  
at 2019 Governor’s Awards Program

### Alabama Adopt A Mile Program Partnership with ALDOT

Total Miles Adopted Statewide – 832

Federal Miles – 222

State Miles – 244

County Highways – 365

# Millry Resident Melanie Stokley Wins Highest Alabama PALS Award

Millry resident Melanie Stokley has won the highest award given by Alabama PALS (People Against a Littered State), at the organization's Annual Governor's Awards.

The "Don Hines Memorial Award" is awarded to one individual each year that has given years of their life to serving their communities in litter removal, education and has generally gone "above and beyond" the call of duty for PALS.

Stokley has worked with all five Washington County elementary schools, even creating her own local contest for recycled art. She has also invited the state Clean Campus Coordinator, Jamie Mitchell, to speak to schools in the county for the past six years.

She has served at the Annual Coastal Cleanup and has volunteered for local cleanups in Washington County, and works closely with the local Alfa Women's Committee to ensure student participation in the PALS' Annual Poster Contest.

For the fifth year in a row, two Washington County students were statewide winners in the poster contest. In addition to her work for PALS, Stokley volunteers for her church and regularly sews and cooks for others in the community.



*From left, Margaret McElroy and Jamie Mitchell from Alabama PALS, Melenie Stokley and Jeff Helms, ALFA representative.*



*Braydon Nichols, of Leroy High School, left photo, and Shyann Daszczuk, Fruitdale Elementary student, right, were among the statewide winners in the PALS poster contest.*

## ADOPT-A-STREAM APPLICATION FORM

Name of Participating Group \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Email: \_\_\_\_\_

Contact Person: \_\_\_\_\_

Location of Proposed Stream Crossing: \_\_\_\_\_

\_\_\_\_\_ County: \_\_\_\_\_

Location for Adopt-A-Stream Signs (Hwy #'s, Mile Markers, etc.) \_\_\_\_\_

\_\_\_\_\_

Send Applications to Alabama PALS, 340 N. Hull Street, Montgomery, AL 36104

Application can be submitted online at [alpals.org](http://alpals.org)



*"Working Together for an Unlittered Alabama"*

**Alabama PALS Newsletter**

*People Against A Littered State*

340 North Hull St.  
Montgomery AL 36104

Non Profit Organization  
U.S. Postage  
**PAID**  
Montgomery, AL  
Permit No. 571

# **2019 ALABAMA COASTAL CLEANUP SPONSORS AND PARTNERS**

## **THE POARCH BAND OF CREEK INDIANS**

*Ike's Beach Service • AirBus America's • Bebo's • LogoBranders  
CCAA • Alabama Power • ExxonMobil • City of Orange Beach  
City of Gulf Shores • Riviera Utilities • Baldwin EMC  
Gulf Shores Utilities Board • Flora-Bama • Home Depot • MAWSS  
Evonic • Volkert • Republic Services • The Original Oyster House  
Mobile Bay NEP • Baldwin County Sewer Service • TurnKey Vacation Rentals  
ALDOT • ALFA • Coca-Cola • Vulcan Materials  
Honda Manufacturing of Alabama • Alabama Farmer's Cooperative  
Association of County Commissions of Alabama*

*Thank You  
To Our Valued Sponsors and Partners!*





**AGREEMENT****BETWEEN KEEP ALABAMA BEAUTIFUL (KALB)  
AND  
THE STATE OF ALABAMA  
DEPARTMENT OF TRANSPORTATION (ALDOT)**

This agreement is made and entered into by and between the State of Alabama, (acting by and through the Alabama Department of Transportation), hereinafter referred to as ALDOT; and Keep Alabama Beautiful, hereinafter referred to KALB, for the purpose of providing public promotion of the ALDOT anti-litter program.

**A. KALB agrees to provide the following:**

1. Oversee and promote the KALB affiliate network
2. Create and maintain a KALB online presence with a website
3. Develop and maintain a social media presence via Facebook and Twitter
4. Coordinate and notify all KALB affiliates of statewide events including the Great American Cleanup
5. Organize and implement programs to increase awareness to reduce littering
6. Develop and hold public education events
7. Submit quarterly itemized invoices with all supporting documentation, covering actual costs of providing public promotion of the KALB Program
8. Provide two part-time employees to be paid by KALB. These employees, along with KALB's Director (State Leader), will serve as liaisons to ALDOT to ensure that the program is fully serviced to provide exposure statewide, as well as ensuring that maximum compliance of the program is serviced including the following:
  - a) Keep Alabama Beautiful Director
  - b) Keep Alabama Beautiful Affiliate Coordinator
9. The employees listed in Section 8 shall also:
  - a) Oversee the Keep Alabama Beautiful education and cleanup events
  - b) Perform annual site visits to KALB affiliates
  - c) Keep records of all KALB cleanup events and education events to include specifics on number of volunteers, volume of litter collected, volume of recyclables collected, list of material collected for recycling, number of education events held, number of volunteers assisting with education events, number of adult attendees, number of student attendees. These lists shall be

submitted on a collective statewide basis, unless otherwise requested by ALDOT.

- d) Provide quarterly updates to ALDOT on new KALB affiliates and any KALB affiliates that become inactive
  - e) Recruit new KALB affiliates to maximize the number of cleanups across the state and increase the awareness and education programs parameters
10. Provide a written quarterly report to ALDOT of KALB activities to include:
- a) List of cleanups held, volumes of litter collected, number of volunteers, list of partner organizations
  - b) List of education events held, number of volunteers, list of partner organizations, number of attendees
  - c) List of new KALB affiliates, inactivated affiliates, etc.
  - d) List of all public service announcements that air to include air schedules
  - e) List of all billboard messages and locations
11. Provide safety vests for all individuals participating in cleanup events and participating in other KALB activities where litter will be removed. KALB will also be responsible for informing all participants that safety vests should be worn when they are picking up litter. KALB is also responsible for making sure that KALB affiliates are aware that Hold Harmless documents should be signed and maintained by KALB affiliates holding cleanup events.

**B. ALDOT agrees to provide the following:**

- 1. Oversee KALB oversight and promotion of the affiliate network
- 2. Provide litterbags for KALB participants as required
- 3. Provide removal and disposal of litter collected by KALB participants as required
- 4. Reimburse KALB a maxim for the fiscal year in accordance with the proposed budget listed below:

**Salaries**

KALB State Director	\$ 41,000
KALB Coordinator	\$ 9,000

**Travel (Actual Expenses)\*\***

State Director	\$ 6,500
Coordinator	\$ 500

<b>Other (Actual Expenses)**</b>	
Statewide Cleanup Materials, Storage, Supplies, & Shipping	\$ 80,000
Promotion*	\$ 98,000
Public Service Announcements*	\$ 5,000
Safety Vests	\$ 10,000
<b>Total Yearly Budget</b>	<b>\$ 250,000</b>

\*KALB agrees that all promotional materials and programs must receive final approval of ALDOT prior to distribution or implementation.

\*\*KALB agrees that all reimbursed expenses will be for those expenses solely expended for the public promotion of the ALDOT anti-litter program.

**C. Funds shall not be constituted as a debt:**

It is agreed that the terms and commitments contained herein shall not be constituted as a debt of the State of Alabama in violation of Article 11, Section 213 of the Constitution of Alabama 1901, as amended by Amendment Number 26. It is further agreed that if any provision of this Agreement shall contravene any statute or Constitutional provision of amendment, either now in effect of which may, during the course of this Agreement, be enacted, then the conflicting provision in the Agreement shall be deemed null and void.

**D. Termination due to Insufficient funds:**

1. If the Agreement term is to exceed more than one fiscal year, then said Agreement is subject to termination in the event that funds should not be appropriated for the continued payment of the Agreement in subsequent fiscal years.
2. In the event of proration of the fund, from which payment under this Agreement is to be made, Agreement will be subject to termination.
3. This Agreement can be terminated by either party upon thirty days written notice to the other party.

**E. ADR Clause:**

For any and all disputes arising under the terms of this contract, the parties hereto agree, in compliance with the recommendation of the Governor and Attorney General, when considering settlement of such disputes, to utilize appropriate forms of non-binding alternative dispute resolution including, but not limited to, mediation by and through the Attorney General's Office of Administrative Hearings or where appropriate, private mediators.

**F. Hold Harmless:**

KALB, its employees, agents, affiliates, successors, assigned, contractors, or subcontractors shall defend indemnify and hold harmless the State of Alabama, Department of Transportation and their officials, employees, contractors, servants, or



agents, in both their official, employees, contractors, servants, or agents, in both their official and individual capacities, from and against any and all claims, damages, losses, actions, causes of actions, losses or expenses of any nature whatsoever, regulatory actions, administrative actions, quasi-administrative or quasi-judicial actions or procedures, State, Federal, or otherwise, of any nature whatsoever, whether known or unknown, including but not limited to compensatory damages, punitive damages, damages for any injury to person or property, tangible or intangible, or any form of monetary or compensatory relief declaratory or injunctive relief, or any nature whatsoever, whether known or unknown, or attorney fees, costs, or expenses, caused by or rising out of, resulting from or in any way related to the performance of any work, conduct or activity performed or failed to be performed by KALB in connection with the performance of any of the provisions of this Agreement.

**G. Non-Agent Clause:**

By entering into this agreement, KALB is not an agent of the State, its officers, employees, agents or assigns. KALB is an independent entity from the State and nothing in this agreement creates an agency relationship between the parties.

**H. Merit Law:**

KALB employees and affiliates will not be subject to the provisions of, nor entitled to, the benefits of the State merit law or State employee benefits, including State employee health insurance.

**I. Information and Reports:**

KALB will permit access to its books, records, accounts, other sources of information and its facilities as may be determined by the ALDOT to be pertinent to ascertain compliance with its instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, KALB shall so certify to ALDOT and shall set forth what efforts he has made to obtain the information.

**J. Certificate of Compliance with ACT 2016-312:**

In compliance with Act 2016-312, the Contractor is not currently engaged in, and will not engage in, the boycott of a person or an entity based in or doing business with a jurisdiction with which this state can enjoy open trade.

**K. Period of Agreement:**

THIS AGREEMENT is in effect for the period beginning October 1, 2019 and ending September 30, 2021.

IN WITNESS WHEREOF, the parties hereto cause this agreement to be executed by those officers, officials, and persons thereunto duly authorized, and the agreement is deemed to be effective on the date stated hereinafter as the date of the approval of the Governor of Alabama.

BY: Denise Taylor  
Denise Taylor, KALB Director

APPROVED AS TO FORM:

William Patty  
William Patty, Chief Counsel  
BY PMAD

Funding for this project has been approved and obligated.

Stacey N. Glass  
Stacey N. Glass, State Maintenance Engineer

STATE OF ALABAMA  
ACTING BY AND THROUGH THE  
ALABAMA DEPARTMENT OF TRANSPORTATION

George Conner  
Deputy Director  
George Conner

John R. Cooper  
Transportation Director  
John R. Cooper

THE WITHIN AND FOREGOING AGREEMENT IS HEREBY APPROVED ON  
THE 13 DAY OF August, 20 19.

Kay Ivey  
GOVERNOR OF ALABAMA  
Kay Ivey

## AGREEMENT

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In the event of any dispute between the parties, senior officials of both parties shall meet and engage in a good faith attempt to resolve the dispute. Should that effort fail and the dispute involves the payment of money, a party's sole remedy is the filing of a claim with the Board of Adjustment of the State of Alabama. For any other disputes arising under the terms of this Agreement which are not resolved by negotiation, the parties agree to utilize appropriate forms of non-binding alternative dispute resolution including, but not limited to, mediation. Such dispute resolution shall occur in Montgomery, Alabama utilizing where appropriate, mediators selected from the roster of mediators maintained by the Center for Dispute Resolution of the Alabama State Bar.

**F. Hold Harmless:**

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official and individual capacities, from and against any and all claims, damages, losses, actions, causes of actions, losses or expenses of any nature whatsoever, regulatory actions, administrative actions, quasi-administrative or quasi-judicial actions or procedures, State, Federal, or otherwise, of any nature whatsoever, whether known or unknown, including but not limited to compensatory damages, punitive damages, damages for any injury to person or property, tangible or intangible, or any form of monetary or compensatory relief declaratory or injunctive relief, or any nature whatsoever, whether known or unknown, or attorney fees, costs, or expenses, caused by or rising out of, resulting from or in any way related to the performance of any work, conduct or activity performed or failed to be performed by KALB in connection with the performance of any of the provisions of this Agreement.

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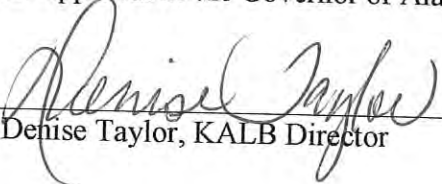
**K. Immigration Clause:**

By signing this contract, the contracting parties affirm, for the duration of the agreement, that they will not violate federal immigration law or knowingly employ, hire for employment, or continue to employ an unauthorized alien within the State of Alabama. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of the agreement and shall be responsible for all damages resulting therefrom.

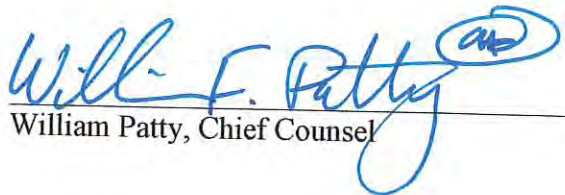
**L. Period of Agreement:**

THIS AGREEMENT is in effect for the period beginning October 1, 2021 and ending September 30, 2023.

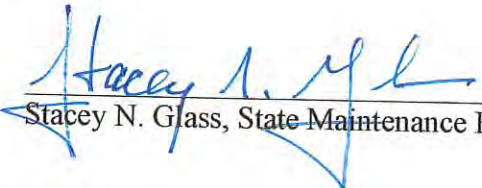
IN WITNESS WHEREOF, the parties hereto cause this agreement to be executed by those officers, officials, and persons thereunto duly authorized, and the agreement is deemed to be effective on the date stated hereinafter as the date of the approval of the Governor of Alabama.

BY:   
Denise Taylor, KALB Director

**APPROVED AS TO FORM:**

  
William Patty, Chief Counsel

**Funding for this project has been approved and obligated.**

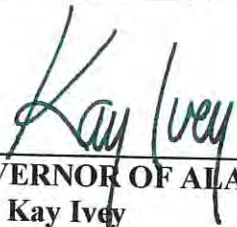
  
Stacey N. Glass, State Maintenance Engineer

**STATE OF ALABAMA  
ACTING BY AND THROUGH THE  
ALABAMA DEPARTMENT OF TRANSPORTATION**

  
Deputy Director  
George Conner

  
Transportation Director  
John R. Cooper

THE WITHIN AND FOREGOING AGREEMENT IS HEREBY APPROVED ON  
THE 6<sup>th</sup> DAY OF August, 2021.

  
GOVERNOR OF ALABAMA  
Kay Ivey






## Affiliates



### Become an Affiliate

There are no fees, dues or donations required to become a Keep Alabama Beautiful affiliate. Through the support of our state and local sponsors, cleanup tools and resources are provided free of charge.

We are stewards of a state with beautiful waterways, forests, coastal areas, hills and valleys to enjoy! Join us to Keep Alabama Beautiful!



#### Affiliate Form

Contact Name \*

First Last

Phone \*

Contact Email \*

Website

Address \*

Street Address

Address Line 2

City State / Province / Region

ZIP / Postal Code Country

**Submit**

### FIND AN AFFILIATE

**City of Bay Minette**  
Dollie Mims  
dmims@ci.bay-minette.al.us

**City of Arab**  
Joy Privett  
www.arabcity.org

**City of Brighton**  
Hazel Williams or Barbara Watkins  
cityofbrighton@att.net

**City of Eva**  
City Mayor Livingston or Judy Forthenberry  
townofeva@bellsouth.net

**City of Warrior**  
Mayor Johnny Ragland  
www.cityofwarrior.com

**City of Clay**  
Mayor Charles Webster  
cwebster7393@bellsouth.net

**Town of Clio**  
Michelle Parker  
shellpark73@yahoo.com

**Town of Coosada**  
Kate Houston  
kateyoung.houston@gmail.com

**Foley, Gulf Shores & Orange Beach**  
Alabama Coastal Business Chamber  
info@mygulfoastchamber.net

**City of Gardendale**  
Jeff Holliman or Jessica Baron  
jholliman@cityofgardendale.com

**Town of Hurtsboro**  
Vivian Covington  
hurtsboromayor@gmail.com

**Keep Albertville Beautiful**  
Kelly Godwin  
www.albertvillebeautiful.org

**Keep Athens-Limestone Beautiful**  
Lynne Hart  
KALBCares@gmail.com  
www.KALBCares.com

**Keep Birmingham Beautiful**  
Sa'de McClanney-Hammond  
sadecc.mcclaney@ci.birmingham.al.us  
www.birminghamal.gov/live/keep-birmingham-beautiful-commission/

**Keep Auburn Beautiful**  
Catrina Cook  
https://www.auburnalabama.org/environmental-services/

**City of Decatur**  
City Council President Paige Bibbee  
http://decaturalabamausa.com

**Keep Calhoun County Beautiful**  
ccc@calhouncounty.org  
www.calhouncounty.org

**Keep Daphne Beautiful**  
Graham Cox  
gcox@daphneal.com  
www.daphneal.com

**Keep Ditto Landing Beautiful**  
Brandi Quick  
bquick@dittoLanding.org  
www.dittoLanding.org

**Keep Etowah Co. Beautiful**  
Lisa Dover  
etowahcounty.org/keep-etowah-beautiful/

**Keep Guntersville Beautiful**  
Nicole Reyes  
www.guntersvilleal.org

**Hartselle Beautification Association**  
Carolyn Wallace

**Operation Green Team Keeping Huntsville Beautiful**  
Joy McKee  
green.team@huntsvilleal.gov  
www.huntsvilleal.gov/environment/green-team

**Keep Jackson County Beautiful**  
Anna Lewis  
www.jacksoncountyal.com

**Keep Mobile Beautiful**  
Dianne S. Martin, President  
hello@keepmobilebeautiful.org  
www.keepmobilebeautiful.org

**Keep Opelika Beautiful**  
Tiji Miller  
www.opelika.org

**Keep Saraland Beautiful**  
Janice Harvison  
kalifield@bellsouth.net  
keepsaralandbeautiful.com

**Keep The Shoals Beautiful**  
Kate Brown  
kbrown@shoalschamber.com  
www.keeptheshoalsbeautiful.com

**Keep Troy Beautiful**  
Melissa Sanders  
ktb@troyal.info troyal.gov

**Lawrence County**  
http://www.lawrencecountyal.org/

**Keep Tuscaloosa Beautiful**  
Todd Hester  
www.tuscaloosacares.com

**Keep Vestavia Hills Beautiful**  
Brian Davis  
bdavis@vha1.org  
www.facebook.com/vestaviahillskab/

**Keep Lay Lake Beautiful**  
Mary Lee Brown  
swindallj@bellsouth.net

**Town of Marion**  
Pam Jackson  
pamjackson64@yahoo.com

**City of Montevallo**  
Mayor Hollie C. Cost, Ph.D.  
costhc@montevallo.edu

**Neighborhood Services/Montgomery Clean City Commission**  
Amanda Miller  
amiller@montgomeryal.gov

**Poarch Band of Creek Indians**  
Tiffany Jones  
www.poarchcreekindians.org

**Town of Falkville**  
Mayor-Bob Ramey Clerk/Treasurer- Dawn Estes  
destes@falkville.org www.falkville.org

**Town of Glen Allen**  
Mayor Dunavant or Shirley Stewart  
townglenallen@yahoo.com

**Town of Hobson City**  
deneva1953@gmail.com

**Town of Oak Grove**  
Robin Caler  
clerk@townofoakgrove.org

**Town of Pleasant Grove**  
Mayor Jerry Brasseale/Karen Duncan, Clerk  
pgcityclerk@cityofpg.net  
www.cityofpg.com

**Dallas County**  
Commissioner Valerie Reubin  
dallascounty-al.org

**City of Selma**  
City Council Member Jannie Thomas  
http://selma-al.gov

**Keep Oxford Beautiful**  
Bill Burns  
http://oxfordal.org

**City of Madison**  
Mitzi Adams,  
Beautification & Tree Board  
https://www.madisonal.gov/92/Beautification-Tree-Board



# ALDOT Twitter Messages

**ALDOT Mobile Area**  
@ALDOTMobileArea

Over 120 volunteers participated in today's #littercleanup. Great turnout, Mobile. Thank you all for your support!  
#CommunityInvolvement



**ALDOT Mobile Area**  
@ALDOTMobileArea

It's almost time for the #OneCleanMobile Litter Cleanup! Join us tmrw from 8-11 a.m. @ Public Safety Memorial Park.  
@City\_of\_Mobile



AT&T LTE 8:12 AM 27%

**ALDOT Mobile Area**  
@ALDOTMobileArea

Help "Get the Trash Out of the Splash" @ the 30th Annual Alabama Coastal Cleanup! - Sept. 16  
[alabamacoastalcleanup.com](http://alabamacoastalcleanup.com)



Tweet your reply

**ALDOT Mobile Area**  
@ALDOTMobileArea

It's time to clean up our community!  
#OneCleanMobile Litter Cleanup is kicking off now!



**ALDOT West Central**  
@ALDOT\_WCRegion

Did you know ALDOT has picked up approximately 39 tons (TONS!) of litter in Tuscaloosa County since November? That's about the equivalent of filling 14 dump trucks. Please take pride in your area and dispose of waste appropriately.



2:32 PM · Apr 16, 2019 · Twitter Web Client

**ALDOT Mobile Area**  
@ALDOTMobileArea

Littering is a Class C misdemeanor that comes with a minimum fine of \$250 for the first conviction. The second and any subsequent conviction is \$500.  
#TrashCostsCash. Don't toss your trash out of the window while driving. Instead, dispose of it properly in a trash bin.

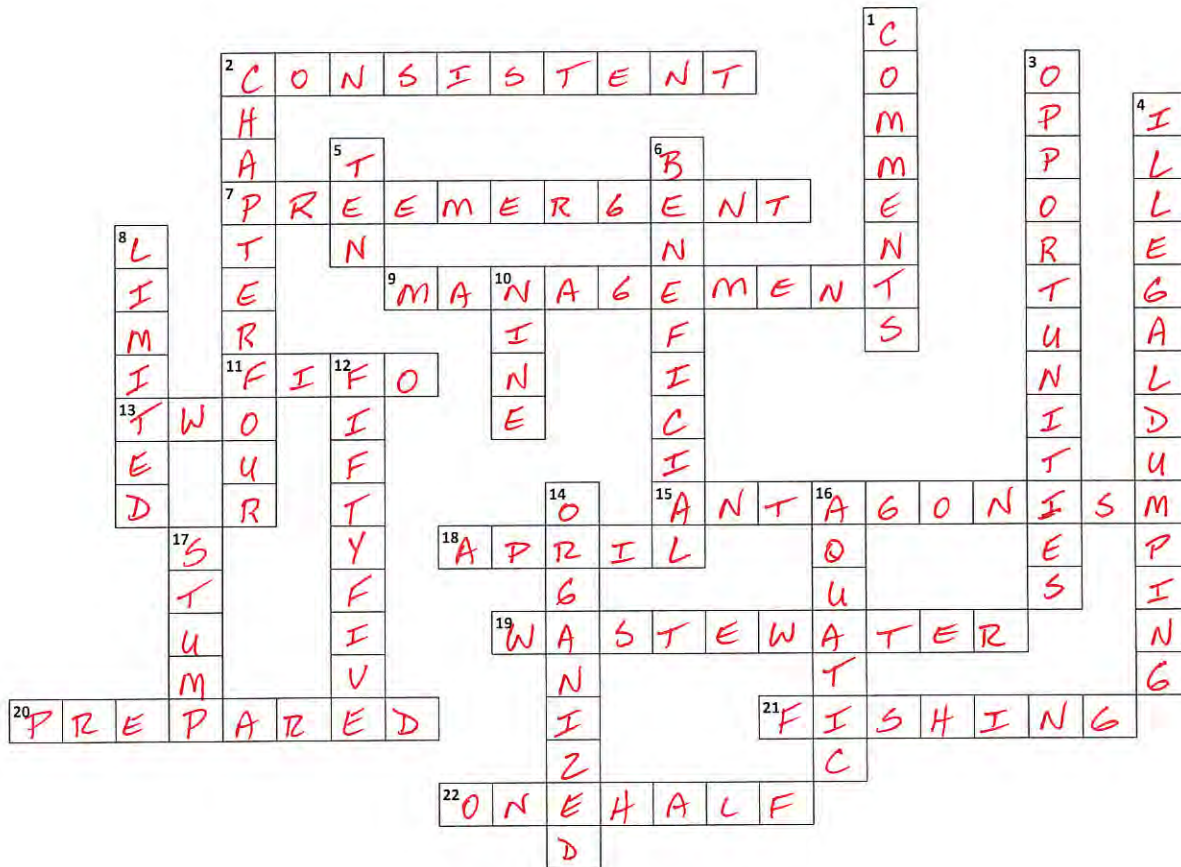


**Alabama Department of Transportation  
Vegetation Management Training  
2019 Program Agenda**

- 8:30 A.M.      **Howard Peavey, ALDOT Agronomist**  
- Welcome & Introductions  
- Miscellaneous Vegetation Management & Herbicide Issues
- 9:15 A.M.      **Logan Martin, Corteva AgriSciences**  
- Herbicides: Communicating with the Public
- 10:00 A.M.      BREAK
- 10:15 A.M.      **AL Department of Ag & Industries Representative**  
- ADAI Investigation Updates
- 10:45 A.M.      **Jacob Hodnett, ALDOT Agronomist**  
-Herbicide Inventory, Herbicide Safety & NPDES
- 11:15 A.M.      **Paul Carter, Assistant State Maintenance Eng. , Scour/ Hydraulics**  
-Environmentally Sensitive Areas/Issues
- 11:45 P.M.      LUNCH (on your own)
- 1:00 P.M.      **Jacob Hodnett, ALDOT Agronomist**  
-Herbicide Applications around Bridges & Bodies of Water
- 1:30 P.M.      BREAK
- 1:45 P.M.      **Randy Rankin, ALDOT Herbicide Truck SME**  
- Electronic Herbicide Treatment Documentation
- 2:30 P.M.      **Howard Peavey, ALDOT Agronomist**  
-Research / New Project Updates
- 3:00 P.M.      Final Comments
- 3:15 P.M.      Adjourn

2019 VEGETATION MANAGEMENT TRAINING

CROSSWORD PUZZLE



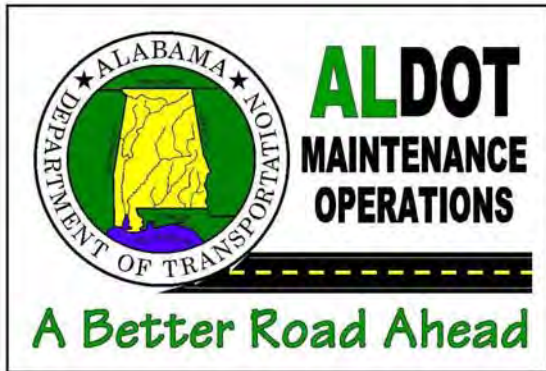
DOWN

- 1 Other ----- are an important addition to the new interactive green sheet
- 2 All ALDOT herbicide treatments should come from -----
- 3 The new interactive green sheet will reduce ----- for errors
- 4 ----- is a source of illicit discharge
- 5 "Chemical" Sky Trim operations may postpone the need for mechanical trimming for five to ----- years
- 6 Public communication should convey that vegetation management is necessary, -----, and carefully planned
- 8 Weed Rhap (and other 2,4-D formulations) turf applications are ----- by label to two per year
- 10 Fifteen gallon drums should be returned on a full pallet of ----- drums
- 12 Non-verbal actions account for ----- percent of what you communicate
- 14 Herbicide storage areas should be -----
- 16 When treating vegetation around water you must use an ----- labeled herbicide
- 17 To prevent a cut tree from re-sprouting, you should use the cut ----- treatment

ACROSS

- 2 When communicating with the public concerning herbicide treatments, communications should be -----
- 7 ----- control of Wild Poinsettia is "iffy" at the present
- 9 The ----- unit must be entered first when using the new interactive green sheet
- 11 Inventory management should follow the ----- rule
- 13 When using induction nozzles, drift retardants should not exceed ----- ounces per one hundred gallons
- 15 Early trials seem to indicate ----- when Derigo and MSMA are combined
- 18 Trials show that Derigo treatments may be started as early as the first of -----
- 19 ----- is a source of illicit discharge
- 20 We keep an inventory record to be -----
- 21 When treating around bridges, we should watch out for people -----
- 22 The ALDOT buffer for all Weed Rhap applications is ----- mile from sensitive crops





**ALDOT**  
**VEGETATION MANAGEMENT**  
**NEWSLETTER**

**July 2019**

MONTHLY HERBICIDE COUNTS

- Remember that a **physical count** of herbicides present at each location is due by the 10<sup>th</sup> of each month. Please email one spreadsheet per Area to Jacob Hodnett in the Central Office.

MONTHLY HERBICIDE REPORTS AND POST APPLICATION SURVEILLANCE

- Jonathan Woodham has moved on to UAS (unmanned aerial systems) responsibilities and is no longer associated with the Vegetation Management Section. All herbicide reports (green sheets), associated scouting reports, and surveillance tracking forms should be forwarded to Randy Rankin in the Central Office by the 10<sup>th</sup> of each month.

DRY PRODUCTS

- Water Dispersible Granules (WDG's) or Dry Flowables (DF's), those dry products designed to be mixed with a liquid carrier for application, such as Oust® XP, Outrider®, and Derigo® should not be left in the herbicide cones or in the lines overnight, nor should they be tank mixed and left overnight. These products are suspended in water and gravity will cause them to settle out when left without agitation for an extended period. This can result in 3 things: 1) an eventual uneven rate of herbicide application even if your spray system is properly calibrated, 2) an eventual reduction of the inside diameter of the lines of the system due to the build-up of product within the lines, and 3) the release of the afore mentioned build-up of product in particle sizes that can temporarily clog spray heads and result in application streaking. **It is critical that tanks, herbicide cones and lines be rinsed and cleared of these type products daily.**
- When treating Johnsongrass, be sure to take note of and use the correct Outrider® rates which can be found on page 46 in the 2019 edition of Chapter IV: ALDOT Herbicide Treatment Recommendations.



## TANK MIXING

- More and more of you are making applications using tractor mounted or skid mount units; in other words, you are tank mixing your products. Tank mixing, if not done correctly, can lead to a variety of problems; the least of which can be reduced weed control. In the absence of a specific label directed mixing sequence the mixing method shown below should be followed.
  1. Fill the spray tank until it is approximately half full of water.
  2. Pre-slurry Water Dispersible Granules (WDG's) and Dry Flowables (DF's). Use a separate pail for each product.
  3. With the agitator operating, add the pre-slurries to the spray tank, rinse the pre-slurry pail, and add the rinsate into the spray tank.
  4. Measure and add liquid products (not the emulsified concentrates) into the spray tank; continue to agitate.
  5. Measure and add emulsified concentrates into the spray tank; continue to agitate.
  6. Fill the spray tank close to the final desired volume; continue to agitate.
  7. If required, add any necessary surfactants and/or drift retardants into the spray tank; continue to agitate until all tank additions are well mixed.
  8. **If you plan to use a defoamer, read the label directions before beginning the fill process as some labels will direct you to add the defoamer before adding any other product and other labels will direct you to add the defoamer as foam is generated by the fill process.** The label on current contract product (ALLIGARE DEFOAMER) says to add the product if foaming becomes a problem.
  9. Finally, the spray hoses should be primed by running them into the spray tank until the mix is circulating throughout the entire spray system.

## RETURNABLE HERBICIDE DRUMS

- Please keep in mind that products in the returnable drums can be mixed to complete a full pallet of 9 drums; this applies to ordering product as well as returning the empty containers. When removing or using drums, especially from a pallet of mixed products, be sure to check the label before loading product onto the herbicide truck. **Make sure you are loading the product you intend to load.** We are getting better regarding the timely return of empty drums but there is still room for improvement. During periods of peak use, drum shortages have been experienced. As soon as 9 drums are emptied, place them on a pallet and call or email for pick-up. The freight is included up front in the contract price, so you are not saving any money by accumulating drums. If a bill of lading has not been received within 4 days of contacting Eco-Pak for drum pickup, contact Howard Peavey in the Central office.

- In at least one situation this year, we ordered a full pallet of one product and received a drum with another product label on that pallet. Please make sure that whoever receives the product for your location ensures that the product received is the product ordered. If there is a discrepancy, please contact Howard Peavey in the Central Office.

## INJECTION SYSTEM VS TANK MIX

- A big benefit of the injection system that ALDOT uses on our herbicide trucks is that the on-board computer maintains a constant herbicide delivery rate regardless of the speed of the vehicle. In other words, if you calibrate to deliver 32 ounces per acre of herbicide, the on-board computer will insure that 32 ounces is delivered no matter if the vehicle travels at 11 mph or at 8 mph. In tank mix situations the delivery of the herbicide is a function of travel speed. If you calibrate a tractor to deliver 25 gallons of mix per acre at a speed of 4 mph and then get on a slope or other difficult terrain and drop the speed to 2 mph you have doubled the output of the spray system; the herbicide rate has also been doubled. If you drop down to 1 mph the system output and corresponding herbicide rate has been doubled again. In dropping from 4 mph to 1 mph the herbicide delivery has essentially been increased to a 4 X rate. When using a tractor, or any other tank mixed unit, to make a broadcast application, the application must be made at the same speed used to calibrate the equipment. Said another way, the expected application travel speed should be the speed at which the spray unit is calibrated. Deviations can result in poor results including severe turf damage.

## UPCOMING EVENTS

- A one-day review for the Commercial Applicator Examinations is being scheduled for August; contact your respective Training Coordinator to let them know if you have someone to enroll. The enrollment deadline is July 19.
- 2019 Vegetation Management Training Classes have been scheduled as shown below; please mark your calendars.
  - Aug 27: Guntersville in the Area Auditorium
  - Aug 28: Sheffield at the Clarion Hotel \*
  - Aug 29: Birmingham in the Area Training Annex
  - Sept 11: Fayette in the Area Auditorium
  - Sept 12: Tuscaloosa in the W.C. Region Training Facility \*\*
  - Oct 1: Alex City in the Area Auditorium
  - Oct 2: Montgomery in the Area Training Facility (660 Chisholm Street)
  - Oct 3: Troy in the Area Auditorium
  - Oct 16: Mobile on the Area Complex; Building T Auditorium
  - Oct 17: Grove Hill in the Area Auditorium

\* The Sheffield Clarion Hotel is located at 4900 Hatch Blvd, Sheffield, AL

\*\* The W.C. Region Training Facility is located at 2015 McFarland Blvd. East

Questions or comments concerning topics in this newsletter should be referred to Howard Peavey at (334) 242-6282 in the Central Office.

## SILVER BEARDGRASS

Silver Beardgrass is a native perennial bunch type grass. Its bloom can easily be confused with that of Cogongrass; however, look closely and you will see the difference. Before starting a Cogongrass control program make sure you have correctly identified the target.



SILVER BEARDGRASS BUNCH GROWTH



SILVER BEARDGRASS  
SEEDHEAD

Here are some keys to identification of the 2 grasses:

**Bloom** – Cogongrass blooms early in the spring and, in most parts of Alabama, will be finished or in its last stages by the end of May. Silver Beardgrass will just be beginning its bloom as the Cogongrass bloom ends.

**Leaves** – Cogongrass leaf margins are finely serrated, Silver Beardgrass leaf margins are not. The Cogongrass leaf midrib is prominent and can be off-center. Silver Beardgrass has no apparent midrib.

**Plant Base** – Cogongrass vegetation does not arise from a single clump; the plants are spread out and the leaves appear to grow stemless from the ground. Silver Beardgrass grows in bunches and has readily apparent stems.

**Rhizomes / Root System** – The root system of Cogongrass is a dense mat. The rhizomes are segmented and covered by scales or flakes. The rhizomes are sharply pointed. The root system of Silver Beardgrass is fibrous and lacks rhizomes.

## Spill Prevention Control and Countermeasures (SPCC) Plan



Alabama Department of Transportation

### SPCC Plan

- The Spill Prevention Control and Countermeasures (SPCC) Plan is governed under the requirements of 40 CFR part 112.
- A Facility must comply with SPCC Plan requirements if that facility has the capacity to store 1320 gallons of petroleum or chemicals in any container which is 55 gallons or greater. (i.e. equals to 24 – 55 gallon drums)

### SPCC Plan

#### Why Training

- According to 40 CFR part 112, all personnel must be properly trained in the operation and maintenance of equipment to prevent the discharge of petroleum products or chemicals.

### SPCC Plan

- Regulated containers at ALDOT facilities:
  - Liquid Asphalt Tanks
  - Used Oil Tanks
  - 55-gallon drums of hydraulic oil, motor oil, etc.
  - List can go on and on!

### SPCC Plan

- According to 40 CFR part 112, each container with the capacity to hold 55-gallons or greater must have secondary containment.
  - Concrete walls or Earthen berms around Liquid Asphalt Tanks
  - Double walls or catchment units for Used Oil Tanks
  - Spill pallets for 55-gallon drums
- According to 40 CFR part 112, the Liquid Asphalt Tanks and Used Oil Tanks must be inspected weekly for:
  - Corrosion
  - Leaks around the valves, welds, etc.
  - Storm water accumulation within secondary containment
 (Each of these inspections has its respective checklist and records must be kept with the SPCC Plan.)

### SPCC Plan

#### What to do in case of a spill?

1. Identify material spilled
2. Report spill to proper ALDOT personnel
3. Contain the release
4. Cleanup the released material and dispose of properly
5. Complete incident report in SPCC Plan.



## SPCC Plan

### Report Spill Immediately!

Report the release of material to your immediate supervisor, and they should make the determination if/or which agencies need to be contacted.

1. Local EMA/Fire Department (in case of fire)
2. ADEM (only if 25 gallons or more of the material has been released, or spill can not be contained)

## SPCC Plan

### Containment and Cleanup of Spill

- Use oil dry, spill socks, spill blankets, or even sand in any way possible to contain the release of material.
- These used materials should be cleaned up and disposed of properly.

(Contact your Division Environmental Contact with any questions regarding disposal)

## SPCC Plan

### Internal Reporting of Incident

1. Date, time, and duration of release
2. Type of Incident
3. Materials Involved
4. Extent of injuries (if any)
5. Assessment of potential hazards (i.e. fire)
6. Recovered Materials
7. SPCC Plan discrepancies (if any)
8. Prevention Plan for similar incidents

## SPCC Plan

### Contacts

1. Adam Anderson (ALDOT Environmental Analysis and Compliance Engineer) – (334) 206-2278
2. Alabama Department of Environmental Management (ADEM) – (334) 270-7700
3. US Environmental Protection Agency (EPA) Emergency Response Number  
1-800-241-1754

## Universal Waste Management Awareness



Alabama Department of Transportation

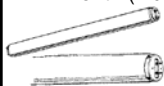


### Small Quantity Handlers

- **Accumulate** 11,020 pounds or less of universal waste at any one time
- Not required to notify ADEM
- **Manage** UW in a manner that prevents release to the environment
- Properly **label** or mark containers of UW
- **Accumulate** UW for no more than one year
- Be able to **demonstrate** length of accumulation time (Placing the date on each piece or dating the accumulation area with the date the first piece was placed in the accumulation area)
- **Inform** employees of proper handling and emergency procedures
- **Contain** releases of UW and manage recovered waste properly
- Manifest/tracking documents not required
- Regulations for Small Quantity Handlers can be found at ADEM Code 335-14-11-.02.

### Universal Waste

- Universal Waste Rule was established to streamline requirements for certain widely generated hazardous wastes
  - Recalled, Unused Pesticides
  - Thermostats that contain mercury switches
  - Mercury-containing lamps
  - Batteries
- Must comply with Rule if facility generates over 220 pounds of hazardous waste in any calendar month (includes weight of universal waste items)



### Large Quantity Handlers

- **Accumulate** more than 11,020 pounds of UW at any one time
- Same requirements as for Small Quantity Handlers, plus
- **Must** annually notify ADEM of UW generating activities
- Ensure employees are familiar with proper waste handling and emergency procedures
- **Maintain** record of shipments of UW for at least 3 years
- Regulations for Large Quantity Handlers can be found at ADEM Code 335-14-11-.03



### Universal Waste


- Handlers of universal wastes fall into two categories:
  - Small Quantity Handler
  - Large Quantity Handler
- Benefits of handling universal wastes over hazardous wastes:
  - Lessens the regulatory burden
  - Less strict labeling and storage requirements than hazardous wastes

### Mercury-Containing Lamps

- Includes:
  - Fluorescent bulbs
  - Metal halide
  - Mercury vapor
  - High pressure sodium
  - Neon
- Hazard is primarily from mercury, may also contain lead and cadmium
- Proper Storage
  - Container must be sturdy, and in good condition
  - Container must be kept closed except when adding to or removing from it
  - Must label container as "Universal Waste Lamps", "Waste Lamps", or "Used Lamps."
  - Date each bulb or put the date the first bulb was placed in the container for proof of accumulation time.



## Fluorescent Bulbs



- Low-mercury bulbs may be an option
  - At least 3 manufacturers
    - GE
    - Philips
    - Sylvania

## More Info: Batteries




- Environmental Protection Agency
  - [www.epa.gov](http://www.epa.gov)
- Rechargeable Battery Recycling Corporation
  - 1 (800) 8-BATTERY
  - [www.rbrcc.com](http://www.rbrcc.com)
- Battery Solutions, Inc.
  - (810) 494-5010
  - [www.batteryrecycling.com](http://www.batteryrecycling.com)
- The Big Green Box
  - (714) 879-2067
  - [www.biggreenbox.com](http://www.biggreenbox.com)

## More Info – Mercury-Containing Lamps

- Environmental Protection Agency
  - [www.epa.gov](http://www.epa.gov)
- Association of Lighting and Mercury Recyclers
  - Provides information on bulbs and lists recyclers
  - [www.almr.org](http://www.almr.org)
- Mercury Waste Solutions
  - [www.mwsi.com](http://www.mwsi.com)




## Universal Waste Disposal

- Recycling is required if managing waste under the Universal Waste Rule
- Can manage wastes as potentially hazardous wastes
  - Must perform hazardous waste determination
  - Dispose at permitted disposal facility
  - Transport waste under manifest



## Batteries

- Rule applies to all batteries: alkaline, Ni-Cd, lead acid
- Main hazards are from lead, cadmium, and mercury (heavy metals)
- Store damaged batteries within containment
- All batteries or battery containers need to be labeled as "Universal Waste Batteries", "Waste Batteries", or "Used Batteries."
- Accumulate for no more than one year
  - Label each battery with the date it was placed in the accumulation area or label the accumulation area with the date the first battery was placed there. This meets the requirements for providing proof of accumulation time.


This is improper storage of batteries. There is no label stating that these are used batteries. There is no date indicating the accumulation time, and some of the batteries are damaged.



This picture showing battery acid underneath the pallets. Damaged batteries should be placed in containment to prevent the acid from escaping.

Is this box labeled correctly?



Answer:

NO. The box should be labeled "Universal Waste Lamps", "Waste Lamps", or "Used Lamps." They should also have the date that the first bulb was placed in the box and be closed securely except when adding or removing bulbs. If bulbs are stored in a recycling box such as Onyx or Lamp Tracker boxes, there is no need to label them with the above words; however, the date should still be placed on the outside of the box and it should be closed securely.



# Hazardous Materials Awareness

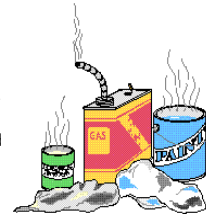


Alabama Department of Transportation



## Purpose of Training

- Provide information on recognizing hazardous materials
- Actions to take if hazardous materials, unidentified containers or suspicious materials/activities are encountered
- Spill responsibilities
- Reporting requirements
- **NOT** First Responder Training



## Physical vs. Chemical Hazards

- Hazard – A possible source of danger; a chance of **being harmed or injured (Webster's)**
- Physical hazards
  - Flying objects
  - Falling off elevated areas
  - Traffic
- Chemical hazards
  - Inhalation of toxic vapors – chlorine gas
  - Liquids that can burn – acids
  - Flammable materials - gasoline



## QUIZ QUESTION

Name a physical hazard.



## Agencies that Regulate Hazardous Materials



■ U.S. DOT

■ OSHA



■ EPA/ADEM

## U.S. DOT

- U. S. Department of Transportation
- Regulates hazardous materials in transport



## OSHA

- Occupational Safety and Health Administration
- Regulates worker exposure to hazardous materials



## EPA/ADEM

- Environmental Protection Agency/Alabama Department of Environmental Management
- Regulates hazardous materials that have been released to the environment
- Regulates management of hazardous materials when they are no longer needed



## QUIZ QUESTION

What does EPA stand for?



## Hazardous Material

- A material which has the potential to cause harm to human health or the environment
- *Note: All hazardous wastes are hazardous materials, but not all hazardous materials are hazardous waste*

## QUIZ QUESTION

What 3 agencies regulate hazardous materials?



## General Chemical Hazards

- Corrosive – can burn the skin or eyes
- Explosive – violent expansion of gases
- Flammable – can catch fire easily
- Reactive – can burn, explode or release toxic vapor if exposed to other chemicals, heat, air or water
- Radioactive – can emit harmful radiation
- Toxic – causes illness or sometimes death

## Chemical Health Effects

- Acute effects – Shows up right away
  - Rash
  - Burns
- Chronic effects – Develops over time
  - Cancer
  - Allergies
- Routes of entry
  - Dermal contact (skin or eye)
  - Inhalation (breathing)
  - Ingestion (eating/swallowing)

## QUIZ QUESTION

Chemicals can be reactive, toxic, corrosive, flammable, and can explode or emit harmful radiation.

TRUE or FALSE



## Hazard Recognition

- Markings
- Placards
- Labels
  - Fire Diamond
- Shipping Papers
- References

## Markings

- A description required by DOT on non-bulk outer packages containing hazardous materials
  - non-bulk – smaller packages
    - ≤ 119 gallons if contains a liquid
    - ≤ 882 pounds if contains a solid
    - ≤ 1000 pounds if contains a gas
- Certain information required

## QUIZ QUESTION

Health effects that develop over a long period of time are known as acute effects.

TRUE or FALSE



## Marking Requirements

- Proper Shipping Name
- UN or NA Identification Number
- Other required instructions or cautions



## Identification Numbers

- UN numbers – identification numbers for hazardous materials used for international and domestic shipments
- Each hazardous chemical is assigned a unique number
  - Helps avoid confusion due to complex chemical names or use of jargon

## Placards

- Signs placed on motor vehicles, railcars and freight containers used to transport hazardous materials
- Alerts transporter and emergency responders to type of materials transported
- Located on each side and end of vehicle
- Diamond-shaped
- Contains pictures, words and class numbers of materials



## QUIZ QUESTION

The only way you can come into harmful contact with a chemical is through skin and eye contact.

TRUE or FALSE





## Hazard Classes

- Universal classes used to identify a hazardous material
- Nine classes into which materials are assigned based on a specific definition
- Defined by U.S. DOT

## Nine Classes

- Class 1 – Explosives
- Class 2 – Gases
- Class 3 – Flammable Liquids
- Class 4 – Flammable Solids
- Class 5 – Oxidizing Substances
- Class 6 – Poisons
- Class 7 – Radioactive Materials
- Class 8 – Corrosive Materials
- Class 9 – Miscellaneous Hazardous Materials
- ORM-D – Consumer Commodities

## Class 1 - Explosive

- A chemical that can explode under certain conditions
- Examples:
  - Fireworks
  - Dynamite
  - Flares
  - Grenades



## QUIZ QUESTION

Where are placards placed?



## Class 2 - Gases

- Flammable gases
  - hydrogen
- Non-flammable gases
  - nitrogen
- Poisonous by inhalation
  - chlorine



## Class 3 – Flammable Liquids

- A chemical that can catch fire easily
- Flammable – flashpoint  $\leq 141^{\circ}\text{F}$
- Combustible – flashpoint  $>141^{\circ}\text{F}$  &  $<200^{\circ}\text{F}$
- Examples
  - Gasoline
  - Acetone
  - Diesel
  - Alcoholic beverages



## QUIZ QUESTION

What agency regulates the transportation of hazardous materials?



## Class 4 – Flammable Solids

- Solids that can ignite through friction, exposure to air or water, or spontaneous chemical change
- Three Divisions: flammable solid, spontaneously combustible, dangerous when wet
- Examples
  - Charcoal
  - Sulfur
  - Black powder
  - Calcium



## Class 5 - Oxidizers

- A chemical that causes combustion of other materials, and then can burn itself or give off oxygen or other gases
- Two divisions: oxidizers and organic peroxides
- Examples
  - Ammonium nitrate fertilizer
  - Hydrogen peroxide



## Class 6 - Poisons

- A substance that causes the disturbance, disease or death of an organism
- Two divisions – poisonous materials and infectious substances
- Examples:
  - Methyl isocyanate (cyanide)
  - Arsenic
  - Nicotine



## QUIZ QUESTION

Under what DOT Hazard Class would sulfur be classified?



## Class 7 - Radioactive

- A material that emits radiation and can cause damage to skin and/or internal organs
- Examples:
  - Radioactive instrument like a nuclear density gauge
  - Certain medicines/medical waste



## Class 8 - Corrosive

- A chemical that can burn the skin or eyes on contact and corrode standard containers
- Examples:
  - Battery acid
  - Muriatic acid
  - Ammonia



## QUIZ QUESTION

Which Hazard Class is gasoline classified in?



## Class 9 – Miscellaneous Hazardous Materials

- Miscellaneous materials not otherwise listed
- Examples:
  - Asbestos
  - Lithium batteries



## ORM-D Materials

- Other Regulated Materials
- Material packaged for consumption by individuals

## Dangerous Placard

- A 'Dangerous' placard is placed on a freight container, transport vehicle, or a rail car which contains non-bulk packages with two or more categories (hazard classes) of hazardous materials that require two different placards.



## QUIZ QUESTION

How many DOT classes are used to identify a hazardous material?





## Labels

- Designed to show at a glance what a container holds
- Color-coded according to hazard class
- Diamond-shaped
- Provides:
  - Picture to represent hazard
  - Name of the hazard
  - Hazard class number



## Fire Diamond

- Located on buildings, tanks, containers or packages to indicate level of hazard
- Red – Fire Hazard
- Blue – Health Hazard
- Yellow – Instability Hazard
- White – Special Hazard



## Levels of Danger

- Level 0 – Minimum to no hazard
- Level 1 – Slight hazard
- Level 2 – Moderate hazard
- Level 3 – Serious hazard
- Level 4 – Severe hazard



## Fire Hazards

- Level 0 – will not burn
  - Chlorine
- Level 1 – Will burn after preheating
  - PCBs
- Level 2- Needs moderate heat to burn
  - Diesel fuel
- Level 3 – Can be ignited under normal conditions
  - Gasoline: Asphalt (cutback)
- Level 4 – Will vaporize and burn readily
  - Propane



## QUIZ QUESTION

Markings are not required on packages of hazardous materials

TRUE or FALSE





## Health Hazards

- Level 0 – Non-toxic
  - Ammonium Nitrate
- Level 1 – minor irritation, short duration
  - Acetone
- Level 2 – Could cause you to pass out, may cause chronic health effects
  - Benzene
- Level 3 – serious injury, likely causes chronic health effects
  - Anhydrous Ammonia
- Level 4 – death or serious injury
  - Chlorine



## Instability Hazards

- Level 0 – stable
  - Carbon monoxide
- Level 1 – may become unstable at elevated temperatures
  - Potassium hydroxide (lye)
- Level 2 – normally unstable, but does not detonate
  - Parathion
- Level 3 – capable of detonation or explosive reaction, requires source
  - Ethylene oxide
- Level 4 – readily capable of detonation under normal conditions
  - Compressed fluorine



## Special Hazards

- OX = Oxidizer
  - Hydrogen peroxide solution
- W with line through it = Use no water
  - Calcium
- Other symbols may be used



## Shipping Papers

- Document, such as a shipping order, bill of lading, or manifest, that accompanies each shipment of hazardous materials
- Required information:
  - Description of material (proper shipping name)
  - Hazards
  - Precautions
  - Actions to take in an emergency
  - Emergency response telephone number
- Must be kept in the cab (typically driver's side door pocket) of the motor vehicle**

## QUIZ QUESTION

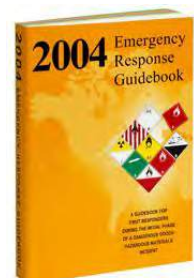
The color RED stands for a fire hazard in the Fire Diamond

TRUE or FALSE



## Resources

- Emergency Response Guidebook
- Material Safety Data Sheets



## Emergency Response Guidebook

- Provides guidance during the initial phase of a hazardous materials incident
- Pages are color coded for easy reference
  - **Yellow** – Chemicals listed by UN Number
  - **Blue** – Chemicals listed alphabetically
  - **Orange** – Chemicals listed by guide number
  - **Green** – Table of initial isolation and protective action distances

## ERG – Yellow & Blue Pages

- Both sections list
  - Chemical name
  - UN ID Number
  - Guide Number
- **If the Guide Number is supplemented with a "P",** then chemical could undergo violent polymerization
- If entry is highlighted, it is a Toxic Inhalation Hazard (TIH), chemical warfare agent or Dangerous Water Reactive Material
  - These entries will have corresponding entries in the green pages

## ERG – Orange Pages

- 62 individual guides
- Each guide covers a group of materials which possess similar characteristics
- Three main sections
  - Potential hazards
  - Public safety
  - Emergency response

## QUIZ QUESTION

Level 1 is the most severe hazard on the Fire Diamond.

TRUE or FALSE



## ERG – Green Pages

- Lists TIH materials, certain chemical warfare agents, and water-reactive materials which produce toxic gases
- Two types of recommended safe distances:
  - Initial Isolation Distances
  - Protective Action Distances
- Provides distances for both small (200 liters or less) and large (more than 200 liters) spills
- Further subdivided by daytime and nighttime

## ERG – Green Pages, Cont'd

- Initial Isolation Distance
  - Distance all persons should be considered for evaluation
  - Measure distance in all directions from the spill
- Protective Action Distance
  - Represents downwind distance from spill within which protective actions could be implemented
  - Protective actions are steps taken to preserve the health and safety of emergency responders and the public
    - Evacuate or shelter in place

## ERG – Criminal/Terrorist Incidents

- Chemical Incidents
  - Rapid onset of medical symptoms
  - Easily observable signatures (dead foliage, pungent or unexplained odors, dead animals/insects)
  - Look for:
    - Numerous dead animals/insects in the same area
    - Unexplained odors
    - Unusual numbers of sick/dying people
    - Pattern of casualties (downwind, near air ventilation systems if indoors)
    - Unexplained blisters/rashes on people
    - Illness in confined area
    - Unusual liquid droplets
    - Low-lying clouds



## ERG – Criminal/Terrorist Incidents

- Biological Incidents
  - Medical symptoms require hours to days
    - Dependent on agent used
  - No characteristic signatures
  - Unscheduled and unusual spray being disseminated
  - Abandoned spray devices

## ERG – Criminal/Terrorist Incidents

- Radiological Incidents
  - Medical symptoms require days to weeks
  - Primary hazard likely an explosion
  - No characteristic signature
  - Requires specialized equipment to detect
  - Look for:



- containers with "propeller" symbol
- unexplained bomb/munitions-like material
- Material that is hot or emits heat

## Exercise

- **Truck contains chemical with UN ID No. 1203**
  - What is the chemical?
  - What is the guide number?
  - What placard?

## Exercise

- **Dump load of Ammonium Nitrate fertilizer**
  - What is the Guide Number?
  - Name 3 potential fire or explosion hazards.

## Exercise

- **Chlorine leak from tanker**
  - What is the UN ID number?
  - What is the initial isolation distance?
  - What is the protective action distance?

## Exercise

### Truck with "Dangerous" Placard

- What is the Guide Number?
- What are two potential health concerns?



## QUIZ QUESTION

Shipping papers are documents that accompany each shipment of hazardous materials



TRUE or FALSE

## Material Safety Data Sheets (MSDS)

*Employees have a right to know about the hazardous chemicals used on the job*



- Identifies the hazardous ingredients
- Describes physical and health hazards
- Discusses procedures and equipment that enable you to work safely with the chemical

## MSDS (Cont'd)

- MSDSs are required to be developed by the manufacturer or importer
- Required to send an MSDS with
  - Initial shipment of a chemical
  - First shipment after an MSDS has been updated
- No required format, but must address certain information

## MSDS Contents

- Manufacturer's Information**
  - Address, phone number, emergency contact
- Date of MSDS**
- Hazardous Ingredients**
  - Hazardous chemical names, % of chemical in the product
- Permissible Exposure Limits**

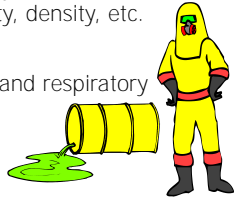
## MSDS Contents (cont'd)

- Health effects**
- Routes of entry**
- Symptoms of exposure**
- First Aid Measures**
  - Eye wash, skin, inhalation, ingestion
- Fire and Explosion Data**
  - Flashpoint, flammable limits
- Stability and Reactivity**
  - Conditions to avoid



## MSDS Contents (cont'd)

- Storage and handling
- Physical and Chemical Data
  - Appearance, odor, physical state, pH, boiling point, solubility, density, etc.
- Personal protection
  - PPE, eye, face, skin, and respiratory protection
- Spill Response



## MSDS Contents (cont'd)

- Other information
  - Toxicological, ecological, transportation, and any additional regulatory requirements



## Spills - What to Do?



Act Fast!

Don't Panic!

## Safety Procedures

- If a hazardous material is encountered:
  - Approach from upwind
  - Secure the scene
  - Identify the hazard
  - Assess the situation
  - Obtain Help
  - NO SMOKING



## QUIZ QUESTION

What does MSDS stand for?





## Spill Response Actions

- Non-ALDOT spills, unidentified containers, and suspicious activities on DOT right-of-way
  - Hazard unknown
    - Chemicals/materials are unfamiliar to ALDOT employees
    - ALDOT employees not trained in spill response
- ALDOT spills
  - Hazard known
    - Employees familiar with material and necessary safety precautions
    - Employees should be knowledgeable in spill response



## Non-ALDOT Spills

- **Do's and Don'ts:**
  - DO identify chemical through placards, etc.
  - DO identify initial isolation distance (if applicable) provided in ERG
  - DO evacuate the area
  - DO notify others in the area
  - DO stay out of the area until further instructions

## Non-ALDOT Spills

- **Do's and Don'ts:**
  - DO NOT be a hero if it puts you at risk
  - DO NOT initiate spill cleanup
  - DO NOT walk into or touch spilled material
  - DO NOT inhale fumes, smoke or vapors
  - DO NOT assume gases or vapors are harmless if there is no smell
  - **DO NOT act on local authority's directives, await ALDOT direction**

## QUIZ QUESTION



In the Fire Diamond, the white section is used to tell a **chemical's health** hazard.

TRUE or FALSE

## Spill Reporting

- Gather the following information, if known:
  - Type of chemical (placards, labels, etc.)
  - Cause of spill
  - Container type and size
  - Amount of substance spilled
  - Flow rate estimate
  - Location of the incident

## Spill Reporting

- Information needed (continued):
  - Shipper/point of origin (specify ALDOT/commercial)
  - Carrier name and truck number (specify ALDOT/commercial)
  - Local conditions (weather, terrain, nearby schools, hospitals, etc.)
  - Any injuries or exposures

## QUIZ QUESTION

Which of the following information is NOT needed if reporting a spill?



- A. Cause of spill
- B. Type of chemical
- C. Your age
- D. Location of spill

## Unidentified Containers

- Actions to avoid:
  - DO NOT pick up or move the container
  - DO NOT attempt to open the container
  - DO NOT go near spilled contents
  - DO NOT smoke near unidentified containers



## Unidentified Containers

- Actions to take:
  - Look for a label (at a safe distance)
  - Isolate the immediate area
  - Identify the container type
  - Take a picture, if possible
  - Report it
    - Same reporting procedures as for a Non-ALDOT spill

## Suspicious Activities

- Anything that appears out of the ordinary or unusual
- Be sensitive to your environment
- Recognize suspicious activities
- Can you identify some potential suspicious activities?

## Potential Suspicious Activities

- Unidentified person trying to access equipment such as tractors or trailers
- Unidentified person in unauthorized location (ex. shop yard)
- Any person who appears to be hiding something
- Any person acting nervous, anxious or secretive

## Potential Suspicious Activities

- Any person requesting information regarding chemical storage areas
- Any person or group loitering near a hazardous materials transport vehicle
- Any person claiming to be a utility employee or regulator that cannot produce an I.D.

## Potential Suspicious Activities

- Any person carrying a weapon
- Any vehicle driving by shop yard (or elsewhere) with lights off after hours
- Occupied vehicle parked in one location for a long period of time
- An unfamiliar vehicle that appears to be abandoned near a building

## Potential Suspicious Activities

- Any vehicle that appears to be following hazardous materials transporter
- Unidentified containers or packages near a vehicle, building, or other occupied area
- Any unauthorized person taking photos of buildings, shop yards, vehicles, etc.

## QUIZ QUESTION

If a non-crew person asks you repeatedly where the ALDOT stores fertilizers; you **should be....**

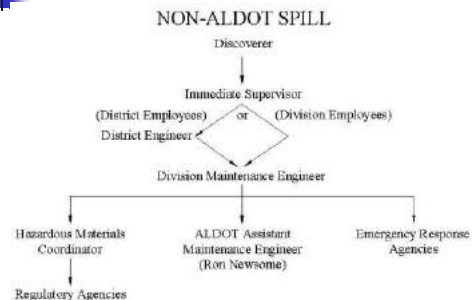


- A. Friendly and helpful
- B. Suspicious

## Preventing Security Breaches

- Do not leave keys to critical areas or equipment unattended
- Do not provide information about DOT operations without permission or to unknown persons without proper identification

## Reporting Requirements



## QUIZ QUESTION

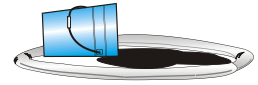
If you find a drum in the grass on the right-of-way; first knock on it and tip it to see if there is any material in it.

TRUE or FALSE



## ALDOT Spills

- Stop the spill, if possible
- Contain the spill, if possible
- Cover or dike drains, if possible
- Absorb the spill, if possible
- Report to supervisor



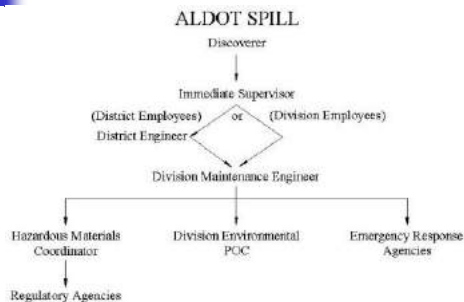
## What to Report?

- Type of material
- Quantity spilled
- Location
- Actions taken
- Injuries/Exposures
- Any other hazards? (i.e., fire, runoff to waterbody)

## ALDOT Spills

- Await direction from supervisor on managing the spilled material
- Minimize the amount spilled to minimize the amount to clean-up
- Containerize spillage and clean-up material, if appropriate
- **Don't spray with water**

## Reporting Requirements



## Post Spill Requirements

- Perform a Post-Spill Review to assess the following:
  - Determine the cause of the spill
  - Actions to avoid future spills
  - Was the spill reported as required?
  - Was the spill cleaned up?



## Remember...

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- Chemicals that you encounter everyday can be hazardous when released into the environment
- Exposure to hazardous chemicals can be harmful to human health
- **If it is not an ALDOT spill, act responsibly, but don't put yourself in danger**
- If it is an ALDOT spill, prompt attention is necessary to stop the spill, clean it up, and report it
- Quick action on your part can save the State \$\$\$ and prevent headaches!



## The Globally Harmonized System – Changes in Hazard Communication



## Definitions

- **Globally Harmonized System (GHS)** - An international effort to provide criteria for classification of chemical hazards and standardize labeling and safety data sheets.
- **Hazard Communication Standard (HCS)** – OSHA standard which ensures information about a material's hazards and associated protective measures is conveyed to those that come in contact with the material through labeling and safety data sheets.
- **Safety Data Sheets (SDS)** – Formerly known as Material Data Safety Sheets (MSDS). Document that outlines information and procedures for handling and working with particular material. Also identifies physical and chemical properties.
- **National Fire Protection Agency (NFPA) 704 Hazard Identification System** – A system in the National Fire Code used for identifying the hazards associated with materials. Recognizable by a color coded diamond shape that uses numbers and letters to identify material hazards. This is an alternative method of identifying materials commonly used by fire protection agencies.



## Why was Hazard Communication Standard modified?

- A more standardized approach to classifying the hazards and conveying the information of particular chemicals around the world
  - In the past diverse and sometimes conflicting national and international requirements have created confusion among those who seek to use hazard information effectively.
- A harmonized format of Safety Data Sheets will enable employers, workers, health professionals, and emergency responders to access the information more efficiently and effectively.

## Significant Dates

- **December 1, 2013** – Train employees on the new label elements and safety data sheets (SDS) format
- **June 1, 2015** – Compliance with all modified provisions of the final rule
- **December 1, 2015** – The distributor shall not ship containers labeled by the chemical manufacturer or importer unless it is a GHS label
- **June 1, 2016** – Update alternative workplace labeling and hazard communication program as necessary, and provide additional employee training for newly identified physical or health hazards.

## What are the Major Changes to the Hazard Communication Standard?

- **Hazard Classification** – Specific criteria has been set for the classification of health and physical hazards.
  - This will help to ensure that evaluations of hazardous effects are consistent across manufactures
  - Will make labels and safety data sheets more accurate.
- **Labels** – Chemical labels will include a harmonized signal word, pictogram, and hazard statement for each hazard class and category.
- **Safety Data Sheets (SDS)** – Will now have a specified 16-section format.


## Changes to Chemical Labels

### Labels will require the following elements:

- **Signal Words** – A single word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label.
  - The signal words used are "danger" and "warning". "Danger" is used for the more severe hazards, while "warning" is used for less severe hazards.
- **Pictogram** – A symbol plus other graphic elements, such as a border, background pattern, or color that is intended to convey specific information about the hazards of a chemical.
  - Each pictogram consists of a different symbol on a white background within a red diamond.
  - There are nine pictograms under the GHS.
  - All pictograms that apply are on the chemical label.
- **Hazard Statement** – A statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard
- **Precautionary Statement** – A phrase that describes recommended measures to be taken to minimize or prevent adverse effects resulting from exposure to hazardous chemical, or improper storage or handling of a hazardous chemical.



### HCS PICTOGRAMS & HAZARDS

<p><b>Health Hazard</b></p>  <ul style="list-style-type: none"> <li>• Carcinogen</li> <li>• Mutagenicity</li> <li>• Reproductive Toxicity</li> <li>• Respiratory Sensitizer</li> <li>• Target Organ Toxicity</li> <li>• Aspiration Toxicity</li> </ul>	<p><b>Flame</b></p>  <ul style="list-style-type: none"> <li>• Flammable</li> <li>• Pyrophoric</li> <li>• Self-Heating</li> <li>• Extremely Flammable Gas</li> <li>• Self-Reactives</li> <li>• Organic Peroxides</li> </ul>	<p><b>Exclamation Mark</b></p>  <ul style="list-style-type: none"> <li>• Irritant (Skin and eye)</li> <li>• Skin Sensitizer</li> <li>• Acute Toxicity (harmful)</li> <li>• Narcotic Effects</li> <li>• Respiratory Tract Irritant</li> <li>• Hazardous to Ozone Layer (Non-Mandatory)</li> </ul>
<p><b>Gas Cylinder</b></p>  <ul style="list-style-type: none"> <li>• Gases under pressure</li> </ul>	<p><b>Corrosion</b></p>  <ul style="list-style-type: none"> <li>• Skin Corrosive/ Burns</li> <li>• Eye Damage</li> <li>• Corrosive to Metals</li> </ul>	<p><b>Explosing Bomb</b></p>  <ul style="list-style-type: none"> <li>• Explosives</li> <li>• Self-Reactives</li> <li>• Organic Peroxides</li> </ul>
<p><b>Flame over Circle</b></p>  <ul style="list-style-type: none"> <li>• Oxidizers</li> </ul>	<p><b>Environment (Non-mandatory)</b></p>  <ul style="list-style-type: none"> <li>• Aquatic Toxicity</li> </ul>	<p><b>Skull &amp; Crossbones</b></p>  <ul style="list-style-type: none"> <li>• Acute Toxicity (fatal or toxic)</li> </ul>

### Revised Hazard Communication labeling for chemicals

- 1) Signal Word
- 2) Pictogram
  - All pictograms that apply should be included
- 3) Hazard Statement
- 4) Precautionary Statement
- 5) Supplier Identification

**PRODUCT IDENTIFIER**


**SIGNAL WORD**

Hazard Statement

Precautionary statements & instructions

Net Weight, Gross Weight, Net Content, Lot Number, Pallet Date, Expiration Date

Company Name, Street Address, City, State, Zip, Country, Phone Number, Emergency Phone




### Safety Data Sheets (SDS) format

The Revised HCS requires that the information on the SDS be presented using specific headings and a specified sequence. MSDS had no required format.

- Section 1. Identification
- Section 2. Hazard(s) Identification
- Section 3. Composition
- Section 4. First Aid Measures
- Section 5. Fire-fighting measures
- Section 6. Accidental release measures
- Section 7. Handling and storage
- Section 8. Exposure controls/ personal protection
- Section 9. Physical and chemical properties
- Section 10. Stability and reactivity
- Section 11. Toxicological information
- Section 12. Ecological information
- Section 13. Disposal considerations
- Section 14. Transport information
- Section 15. Regulatory information
- Section 16. Other information, including date of preparation or last revision

### ALDOT Safety Data Sheet Policies


- SDS are required at each facility that stores chemicals.
- A hard copy of SDS are required for each chemical at the facility and on the product purchasing log.
- SDS should be available to all workers at the facility.
- SDS should be organized so a specific SDS can be found in a timely manner.
- MSDS should be replaced with revised SDS as they become available.
- SDS will be checked during facility environmental audits.



### Other forms of Hazard Communication: NFPA

- NFPA hazard identification signal is a "fire diamond" which is used by emergency personnel to quickly identify hazards associated with a hazardous material.
- Red Indicates flammability
- Blue indicates Health
- Yellow indicates Instability
- White space is the "special notice" area which can contain symbols that indicate whether material is oxidizer, reacts with water, or is asphyxiate gas

OX




SA

- Flammability, Health, and Instability are rated on a scale from 0 (No hazard) to 4 (Severe Risk)
- Fire diamonds are present on tanker trucks, storage tanks, chemical drums, etc.

### HCS vs. National Fire Protection Agency (NFPA)


- See attached OSHA/NFPA quick card for additional information

**HCS**



The HCS pictograms do not include numerical rating system but SDS sheets do, with "1" being the most serious level of hazard.

**NFPA**



NFPA 704 rating system assigns a "4" for the most serious level of hazard.

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## Contacts

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# ALABAMA DEPARTMENT OF TRANSPORTATION

Design Bureau

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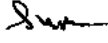
Kay Ivey  
Governor

John R. Cooper  
Transportation Director

October 1, 2019

## MEMORANDUM

**TO:** Region Engineers

**FROM:** Scott W. Rogers, Ph.D., P.E.   
Environmental Coordination Engineer

**RE:** Reporting Requirements of Regions for FY 2019 MS4 Annual Report;  
ADEM Issuance of New MS4 Permit

Per the ALDOT MS4 permit, ALDOT must submit an MS4 annual report to ADEM by January 31 each year the permit is in effect. The next annual report (covering FY 2019) is due at ADEM by **January 31, 2020**. Design Bureau is responsible for collecting MS4 activity information from each Region and other applicable ALDOT parties to include in the report for submittal.

The specific activity information required from each Region is listed in the table attached. The Stormwater Management Program Plan (SWMPP) provides additional details about the activities listed in the table; it can be found online at <https://www.dot.state.al.us/dsweb/divPed/EnvironmentalCoordination/pdf/MS4/MS4SWMPP.pdf>. Note that the activity list in the table is not intended to be a comprehensive list of all MS4 permit and SWMPP requirements. The list consists only of activities with reporting requirements applicable to the FY 2019 annual report. If a Region has conducted MS4-related activities beyond those required by the permit or the SWMPP during FY 2019, details of those activities should be included in the annual report, too, to reduce any chance of a formal requirement being issued by ADEM in the future.

Ample time is needed for various ALDOT parties and administrative personnel to review the annual report prior to the January 31 submittal deadline. Therefore, Design Bureau requests that required information is received by **November 15, 2019**. If for some reason the information cannot be provided by that date, please notify Design Bureau as soon as possible.

Also, ADEM has issued ALDOT a new MS4 permit, which is in effect now and replaces the MS4 permit issued in 2013. There are some differences relative to the old permit, but the new permit largely mirrors the old permit. The new permit can be found online at <https://www.dot.state.al.us/dsweb/divPed/EnvironmentalCoordination/pdf/MS4/MS4PERMIT2019.pdf>. For clarity, the FY 2019 annual report due on January 31 covers activities under the old permit, so the issuance of the new permit does not affect FY 2019 activity reporting requirements.

The new MS4 permit gives ALDOT until June 30, 2020, to revise its SWMPP. Design Bureau will soon begin coordinating with applicable ALDOT offices to start the revision process. Until then, please review the current SWMPP and consider any modifications that may be warranted.

Thank you very much for your help. Please communicate directly with me (334.353.6214; rogerssc@dot.state.al.us) regarding the FY 2019 MS4 annual report as well as the new MS4 permit.

Attachment: MS4 SWMPP Activities & Data Required for Annual Report

<b>CC:</b> Mr. Don Arkle, P.E.	Mr. Dallon Ogle, P.E. (Tuscumbia Area MS4 POC)
Mr. George Conner, P.E.	Mr. Sean Butler, P.E. (Guntersville Area MS4 POC)
Mr. William Adams, P.E.	Mr. Roddy Mitchell, P.E. (Birmingham Area MS4 POC)
Mr. Steven Walker, P.E.	Mr. John Moon, P.E. (Alexander City Area MS4 POC)
Ms. Bridget Jones	Mr. Shane Trippany, P.E. (Tuscaloosa Area MS4 POC)
Mr. Adam Anderson, P.E.	Mr. Vance Beck, P.E. (Montgomery Area MS4 POC)
Mr. Paul Carter, P.E.	Mr. Matt Wilson, P.E. (Troy Area MS4 POC)
Region PIOs	Mr. David Hollowell (Mobile Area MS4 POC)
DB File	

**MS4 SWMPP ACTIVITIES & DATA REQUIRED FOR ANNUAL REPORT**  
**All Regions - Fiscal Year 2019**

Activity	Information Required	Notes
Employee good housekeeping training (SPCC, UW, hazardous materials awareness for Area coordinators, & GHS)	Session locations, session dates, & participant totals for all sessions for all course types conducted during FY 2019	M&T Bureau and Regions are jointly responsible for this data tracking. Training Bureau tracks HAZWOPER training, so no need to provide that data. If the training program changed during FY 2019, a description of the change needs to be submitted to the Design Bureau for inclusion in the annual report.
Youth education activities	Environmental/stormwater-oriented youth education activities (e.g., school talks, water festivals) in which Region personnel participated during FY 2019	No specific activity is required, but tracking of activities conducted is required.
Online public education mechanisms	Summary describing any mechanisms developed or implemented by Region personnel & outcomes of implementing those mechanisms during FY 2019	Not officially an SWMPP requirement, but reporting may prevent a future ADEM-issued requirement. Examples of online mechanisms include, but are not limited to, Twitter, Facebook, and a Web site. Outcomes of implementation can include positive feedback from the public, increased participation by the public, or more "followers" of online accounts.
Community education / involvement activities	Details about environmental/stormwater-oriented activities for the local community with Region personnel participation or facilitation during FY 2019	Not officially an SWMPP requirement, but reporting may prevent a future ADEM-issued requirement. Can include litter pickup events, public information booths, public information forums, stream restoration projects, interjurisdictional agreements regarding roadway maintenance, or other activities.
Participation in professional organizations	Participation by Region personnel in professional organizations (activities attended, contributions to activity facilitation, & leadership roles) during FY 2019	No specific participation is required, but tracking of participation is required. Professional organizations include ASCE, AASHTO, Soil & Water Conservation Society, watershed partnerships/alliances, and others.
Professional education events & training attended by employees	Environmental/stormwater-oriented education events & training courses attended by Region personnel during FY 2019	Covers activity not already reported to the Training Bureau and not considered employee good housekeeping training (see above).
Inventory & screening of outfalls located on MS4 regulation-eligible support facility property	Data from all outfall inventory & screening work performed during FY 2019	Currently, this work is delegated to Maintenance Bureau, but in the future support facilities may have to perform the work.
Inventory, inspection, & maintenance of post-construction BMPs (structural & non-structural) at MS4 regulation-eligible support facilities	Summary of any post-construction BMP inventory, inspection, or maintenance actions performed at each facility during FY 2019	Most support facilities have no fully-operational post-construction BMP currently. If there is no fully-operational post-construction BMP at a given facility, no information needs to be submitted for that facility.
SPCC program for MS4 regulation-eligible support facilities	Revisions made to each facility SPCC Plan during FY 2019	While M&T Bureau maintains the overall AIDOT facility spill prevention and response program, individual facilities are responsible for maintaining their own SPCC Plans. If no revision of a given facility's SPCC Plan took place, no information needs to be submitted for that facility. Design Bureau will assume that the SPCC Plan version in effect prior to FY 2019 at that facility remained in effect throughout FY 2019.
Annual SWMPP review & revision	Suggestions for revisions to SWMPP	Suggestions beyond the scope of Region responsibilities are welcome.
<i>Other activities conducted by Regions during FY 2019 not listed above</i>	<i>Applicable details for each Region</i>	



**Appendix D:**  
**Supplemental Material for Chapter 4**

Form MB-05

Form MB-07

IDDE Outfall Index Map

ALDOT MS4 Area Maps

ALDOT Support Facility Outfall Maps:

Central Office Complex / Montgomery Area Office / Montgomery District Office

Tuscumbia Area Office / Tuscumbia District Office

Huntsville District Office

Birmingham Area Office / Birmingham District Office

Calera District Office

Gadsden District Office

Anniston District Office

Tuscaloosa Area Office / Tuscaloosa District Office

Dothan District Office

Mobile Area Office / Mobile District Office

Tunnel Office

ALDOT Major Outfall Inventory Form: Transportation Facilities

ALDOT Major Outfall Inventory Form: Support Facilities

ALDOT Major Outfall Screening Form

ALDOT Illicit Discharge Incident Tracking Form

ALDOT Non-Stormwater Discharge Investigation Form

ALDOT Employee IDDE Orientation: 2021 Maintenance Management Meeting

**ALABAMA DEPARTMENT OF TRANSPORTATION  
AGREEMENT FOR GRADING AND/OR LANDSCAPING  
ON RIGHT OF WAY**

County \_\_\_\_\_

Route Number \_\_\_\_\_

Milepost \_\_\_\_\_

Bonding Agency \_\_\_\_\_ Bond Number \_\_\_\_\_

Associated Permits and/or Documents \_\_\_\_\_

<p><i>FOR OFFICIAL USE ONLY</i></p> <p>DATE RECEIVED FROM APPLICANT: ___/___/___</p> <p>PERMIT NUMBER: _____</p>
--

THIS AGREEMENT is entered into this the \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by and between the Alabama Department of Transportation acting by and through its Transportation Director hereinafter referred to as ALDOT and \_\_\_\_\_, hereinafter referred to as the APPLICANT.

**WITNESSETH**

WHEREAS, the APPLICANT proposes to grade and/or landscape ALDOT Right of Way located and described as follows: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

NOW, THEREFORE, in order to preserve the right-of-way in an appropriate functional condition it is agreed between the parties hereto as follows:

1. All grading on the right-of-way will be confined to and coextensive with the limits of the APPLICANT's own property which is adjacent to and coextensive with the right-of-way.
2. All work shall be subject to the inspection and approval of ALDOT and located as shown on the approved plans previously submitted to ALDOT which are hereby made a part of this Agreement by reference.
3. A copy of the Agreement and the plans will be kept at the site of work, at all times, by the APPLICANT.
4. ALDOT does not grant the APPLICANT any right, title, or claim to any highway right-of-way.

5. The APPLICANT will not store material, excess dirt, or equipment on the shoulders or pavement and in event of multi-lane highways, in the median strips. The pavement will be kept free by the APPLICANT from mud and from excavation waste from trucks or other equipment. On completion of the work, all excess material will be removed from the right-of-way by the APPLICANT.

6. All disturbed areas shall be top-soiled and re-vegetated by the APPLICANT in accordance with the standard specifications of ALDOT.

7. In accomplishment of the work by the APPLICANT, no drainage structures or channels will be changed or altered other than as shown on the plans.

8. In no case shall post development drainage from beyond the ROW Limits, directed toward the roadway, be greater than the pre-construction runoff nor shall the post development increase the runoff within the ROW. Should the post development drainage increase to unacceptable levels, the property owner shall restore drainage to the pre-construction levels and restore the ROW to pre-construction conditions.

9. The Federal Water Pollution Control Act, The Federal Insecticide, Fungicide, and Rodenticide Act, The Alabama Water Pollution Control Act, The Alabama Environmental Management Act, The Clean Water Act (1987), and the Alabama Nonpoint Source Management Program (1989) are hereby made a part of this permit by reference.

10. The APPLICANT will conform to the regulations of the Environmental Protection Agency (EPA) and of the Alabama Department of Environmental Management (ADEM), latest edition, for both installation and maintenance of such facilities.

The APPLICANT will provide proof of applicable permit coverage and conform to the above referenced regulations for both the facility installation and maintenance of permitted facilities and areas of rights-of-way. The APPLICANT must provide a copy of the Notice of Intent (NOI) issued by ADEM. This will assure compliance with Phase II of storm-water construction requirements. In the event a NOI is not required, APPLICANT must submit to ALDOT a Best Management Practices (BMP) plan to control sediment run-off.

11. In the event that ALDOT is issued a citation or any other enforcement document by ADEM/EPA for failure to comply with applicable requirements, it shall be the responsibility of the APPLICANT to bring all BMPs into compliance and to pay for any fines, assessments, etc. that may be issued to ALDOT by ADEM/EPA.

12. Underground Damage Prevention Legislation, Alabama Act 94-487, is hereby made a part of this permit by reference. The APPLICANT will conform to the above referenced regulations for both the facility installation and maintenance of permitted facilities and areas of rights-of-way. Should the permitted work require a locate request ticket, no work shall begin until a copy of such ticket is obtained and the APPLICANT shall keep a copy of such ticket at the site of work.

13. The APPLICANT will provide all necessary and adequate safety precautions such as signs, flags, lights, barricades, and flagmen in accordance with the national Manual on Uniform Traffic Control Devices, of record in ALDOT.

14. If hazardous material is encountered in the execution of this Agreement it will be the responsibility of the APPLICANT to notify the proper agency responsible for said hazardous material and to comply with any and all environmental regulations as established by the Environmental Protection Agency (EPA), Alabama Department of Environmental Management (ADEM), and of the Occupational Safety and Health Administration (OSHA) in the proper disposition of the hazardous material encountered.

15. Any utility adjustment will be by agreement between the APPLICANT and the Utility, and any such agreement shall be subject to the approval of ALDOT.

16. This permit is valid for the contract period which is defined as follows: All proposed work as described and submitted in the permit documents must be completed within one year from the approved date of the permit and for a period covering one year from ALDOT acceptance of proposed work.

17. The APPLICANT will perform or cause to be performed the work applied for in this permit contract and will restore the highway in the work area in as good condition as the same was prior to the work and will maintain the accomplished work and highway work area in a condition satisfactory to ALDOT. Should the APPLICANT not maintain the work or create an unsafe condition during the contract period, ALDOT reserves the right to remove any work and restore the ROW to a safe condition at the expense of the APPLICANT and the APPLICANT agrees to pay ALDOT all such costs as a result.

18. Once work is begun, the APPLICANT shall pursue the work continuously and diligently until completion. Should the APPLICANT feel that the work cannot be completed in a one year period, they shall submit in writing (30 days prior to the termination date) to ALDOT the reasons for an extension of time. ALDOT will determine whether an extension may be approved.

19. The APPLICANT will file with ALDOT an acceptable certified check or bond in the penal amount of \$\_\_\_\_\_ (Bond Number: \_\_\_\_\_) to guarantee the faithful performance of this permit contract in its entirety during the contract period as defined in item 16. Upon satisfactory completion and acceptance of all work provided for in this permit contract, the check or bond, as applicable, will be returned to the APPLICANT; otherwise, the proceeds from the check, or any amount received by ALDOT as a result of the bond, will be applied to complete and fulfill the permit contract terms.

20. Indemnification Provisions. Please check the appropriate type of applicant:

By entering into this agreement, the APPLICANT is not an agent of the State, its officers, employees, agents or assigns. The APPLICANT is an independent entity from the State and nothing in this agreement creates an agency relationship between the parties.

\_\_\_\_\_ If the applicant is an incorporated municipality or gas district then:

Subject to the limitations on damages applicable to municipal corporations under Ala. Code § 11-47-190 (1975), the APPLICANT shall defend, indemnify, and hold harmless the State of Alabama, ALDOT, its officers, officials, agents, servants, and employees, in both their official and individual capacities, from and against (1) claims, damages, losses, and expenses, including but not limited to attorneys' fees arising out of, connected with, resulting from or related to the work performed by the APPLICANT, or its officers, employees, contracts, agents or assigns (2) the provision of any services or expenditure of funds required, authorized, or undertaken by the APPLICANT pursuant to the terms of this Agreement, or (3) any damage, loss, expense, bodily injury, or death, or injury or destruction of tangible property (other than the work itself), including loss of use therefrom, and including but not limited to attorneys' fees, caused by the negligent, careless or unskillful acts of the APPLICANT its agents, servants, representatives or employees, or the misuse, misappropriation, misapplication, or misexpenditure of any source of funding, compensation or reimbursement by the APPLICANT, its agents, servants, representatives or employees, or anyone for whose acts the APPLICANT may be liable.

\_\_\_\_\_ If the applicant is county government then:

The APPLICANT shall be responsible at all times for all of the work performed under this agreement and, as provided in Ala. Code § 11-93-2 (1975), the APPLICANT shall protect, defend, indemnify and hold harmless the State of Alabama, The Alabama Department of Transportation, its officials, officers, servants, and employees, in their official capacities, and their agents and/or assigns.

For all claims not subject to Ala. Code § 11-93-2 (1975), the APPLICANT shall indemnify and hold harmless the State of Alabama, the Alabama Department of Transportation, the officials, officers, servants, and employees, in both their official and individual capacities, and their agents and/or assigns from and against any and all action, damages, claims, loss, liabilities, attorney's fees or expense whatsoever or any amount paid in compromise thereof arising out of, connected with, or related to the (1) work performed under this Agreement, (2) the provision of any services or expenditure of funds required, authorized, or undertaken by the APPLICANT pursuant to the terms of this agreement, or (3) misuse, misappropriation, misapplication, or misexpenditure of any source of funding, compensation or reimbursement by the APPLICANT, its agents, servants, representatives, employees or assigns.

\_\_\_\_\_ If the applicant is a state governmental agency or institution then:

The APPLICANT shall be responsible for damage to life and property due to activities of the APPLICANT of employees of APPLICANT in connection with the work or services under this Agreement. The APPLICANT agrees that its contractors, subcontractors, agents, servants, vendors or employees of APPLICANT shall possess the experience, knowledge and skill necessary to perform the particular duties required or necessary under this Agreement. The APPLICANT is a state institution and is limited by the Alabama Constitution in its ability to indemnify and hold harmless another entity. The APPLICANT maintains self-insurance coverage applicable to the negligent acts and omissions of its officers and employees, which occur within the scope of their employment by the APPLICANT. The APPLICANT has no insurance coverage applicable to third-party acts, omissions or claims, and can undertake no obligation that might create a debt on the State Treasury. The APPLICANT agrees ALDOT shall not be responsible for the willful, deliberate, wanton or negligent acts of the APPLICANT, or its officials, employees, agents, servants, vendors, contractors or subcontractors. The APPLICANT shall require, its contractors and its subcontractors, agents, servants or vendors, as a term of its contract with the APPLICANT, to include ALDOT as an additional insured in any insurance policy providing coverage for the work to be performed pursuant to and under this Agreement and to provide the APPLICANT a copy of the insurance policy declaration sheet confirming the addition of ALDOT thereto.

\_\_\_\_\_ If the applicant is not a county, incorporated municipality, or state governmental agency or institution then:

The APPLICANT will protect, defend, indemnify and hold harmless the State of Alabama, ALDOT, the officials, officers, and employees, in both their official and individual capacities, and their agents and/or assigns, from and against any and all actions, damages, claims, loss, liabilities, attorney's fees or expense whatsoever or any amount paid in compromise thereof arising out of or connected with the work performed under this Permit, and/or the APPLICANT's failure to comply with all applicable laws or regulations.

21. This agreement when executed will not be valid or binding until the APPLICANT has complied with all existing ordinances, laws, and zoning boards that have jurisdiction in the county, city, or municipality in which the facilities are located.



This Agreement is deemed to be executed on the date hereinabove set forth by the parties hereto in their respective names by those persons and officials thereunto duly authorized. Witness our hands and seals, this the \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

WITNESS:

\_\_\_\_\_

\_\_\_\_\_  
Legal Name of Applicant

By: \_\_\_\_\_  
Authorized Signature and Title for Applicant

\_\_\_\_\_  
Typed or Printed Name of Signee

\_\_\_\_\_  
Address Line 1

\_\_\_\_\_  
Address Line 2

\_\_\_\_\_  
Telephone Number

**FOR OFFICIAL USE ONLY**

**RECOMMENDED FOR APPROVAL:**

DISTRICT: \_\_\_\_\_  
Printed Name Signature Date

AREA: \_\_\_\_\_  
Printed Name Signature Date

REGION: \_\_\_\_\_  
Printed Name Signature Date

**APPROVED:**  
**ALABAMA DEPARTMENT OF TRANSPORTATION**  
**ACTING BY AND THROUGH ITS TRANSPORTATION**  
**DIRECTOR**

**(PLEASE CHECK APPROPRIATE BOX)**

- CENTRAL OFFICE
- REGION
- AREA
- DISTRICT

By: \_\_\_\_\_  
Printed Name Signature Date

ALABAMA DEPARTMENT OF TRANSPORTATION  
SPECIAL AGREEMENT FOR  
INSTALLATION OF DRAINAGE STRUCTURES ON HIGHWAY RIGHT-OF-WAY

County \_\_\_\_\_

Route Number \_\_\_\_\_

Milepost \_\_\_\_\_

Bonding Agency \_\_\_\_\_

Bond Number \_\_\_\_\_

Associated Permits and/or Documents \_\_\_\_\_

*FOR OFFICIAL USE ONLY*

DATE RECEIVED FROM APPLICANT: \_\_\_/\_\_\_/\_\_\_

PERMIT NUMBER: \_\_\_\_\_

THIS AGREEMENT is entered into this the \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by and between the Alabama Department of Transportation acting by and through its Transportation Director hereinafter referred to as ALDOT and \_\_\_\_\_, hereinafter referred to as the APPLICANT.

WITNESSETH

WHEREAS, the APPLICANT desires to have its facilities accommodated on public highway right-of-way in \_\_\_\_\_ County, Alabama, on the maintenance section being designated as \_\_\_\_\_, and consisting approximately of the following \_\_\_\_\_.

NOW, THEREFORE, it is agreed between the parties hereto as follows:

1. ALDOT hereby permits to the APPLICANT approval to cross or locate its facilities on the public right-of-way at the location and in the manner as shown on plans previously submitted to and approved by ALDOT, which plans are hereby made a part of this Agreement by reference.
2. All work shall be subject to the inspection and approval of ALDOT, and located as shown on the approved plans previously submitted to ALDOT which are hereby made a part of this Agreement by reference.
3. A copy of the Agreement and the plans will be kept at the site of work at all times by the APPLICANT.
4. ALDOT does not grant the APPLICANT any right, title, or claim to any highway right-of-way.
5. The APPLICANT will not store material, excess dirt or equipment on the shoulders or pavement and, in event of multi-lane highways, in the median strips. The pavement will be kept free, by the APPLICANT, from mud and from excavation waste from trucks or other equipment. On completion of the work, all excess material will be removed from the right-of-way by the APPLICANT.

6. The Federal Water Pollution Control Act, The Federal Insecticide, Fungicide, and Rodenticide Act, The Alabama Water Pollution Control Act, The Alabama Environmental Management Act, The Clean Water Act (1987), and the Alabama Nonpoint Source Management Program (1989) are hereby made a part of this permit by reference.

7. The APPLICANT will conform to the regulations of the Environmental Protection Agency (EPA) and of the Alabama Department of Environmental Management (ADEM), latest edition, for both installation and maintenance of such facilities.

The APPLICANT will provide proof of applicable permit coverage and conform to the above referenced regulations for both the facility installation and maintenance of permitted facilities and areas of rights-of-way. The APPLICANT must provide a copy of the Notice of Intent (NOI) issued by ADEM. This will assure compliance with Phase II of stormwater construction requirements. In the event a NOI is not required, APPLICANT must submit to ALDOT a Best Management Practices (BMP) plan to control sediment run-off.

8. In the event that ALDOT is issued a citation or any other enforcement document by ADEM/EPA for failure to comply with applicable requirements, it shall be the responsibility of the APPLICANT to bring all BMP's into compliance and to pay for any fines, assessments, etc. that may be issued to ALDOT by ADEM/EPA.

9. Underground Damage Prevention Legislation, Alabama Act 94-487, is hereby made a part of this permit by reference. The APPLICANT will conform to the above referenced regulations for both the facility installation and maintenance of permitted facilities and areas of rights-of-way. Should the permitted work require a locate request ticket, no work shall begin until a copy of such ticket is obtained and the APPLICANT shall keep a copy of such ticket at the site of work.

10. If hazardous material is encountered in the execution of this Agreement, it will be the responsibility of the APPLICANT to notify the proper agency responsible for said hazardous material and comply with any and all environmental regulations as established by the Environmental Protection Agency (EPA), Alabama Department of Environmental Management (ADEM), and of the Occupational Safety and Health Administration (OSHA) in the proper disposition of the hazardous material encountered.

11. The APPLICANT will provide all necessary and adequate safety precautions such as signs, flags, lights, barricades, and flagmen in accordance with the national Manual on Uniform Traffic Control Devices, of record in ALDOT.

12. This permit is valid for the contract period which is defined as follows: All proposed work as described and submitted in the permit documents must be completed within one year from the approved date of the permit and for a period covering one year from ALDOT acceptance of proposed work.

13. The APPLICANT will perform or cause to be performed the work applied for in this permit contract and will restore the highway in the work area in as good condition as the same was prior to the work and will maintain the accomplished work and highway work area in a condition satisfactory to ALDOT. Should the APPLICANT not maintain the work or create an unsafe condition during the contract period, ALDOT reserves the right to remove any work and restore the ROW to a safe condition at the expense of the APPLICANT and the APPLICANT agrees to pay ALDOT all such costs as a result.

14. Once work is begun, the APPLICANT shall pursue the work continuously and diligently until completion. Should the APPLICANT feel that the work cannot be completed in a one year period, they shall submit in writing (30 days prior to the termination date) to ALDOT the reasons for an extension of time. ALDOT will determine whether an extension may be approved.

15. The APPLICANT will file with ALDOT an acceptable certified check or bond in the penal amount of \$\_\_\_\_\_ (Bond Number: \_\_\_\_\_) to guarantee the faithful performance of this permit contract in its entirety during the contract period as defined in item 12. Upon satisfactory completion and acceptance of all work provided for in this permit contract, the check or bond, as applicable, will be returned to the APPLICANT; otherwise, the proceeds from the check, or any amount received by ALDOT as a result of the bond, will be applied to complete and fulfill the permit contract terms.

16. Indemnification Provisions. Please check the appropriate type of applicant:

By entering into this agreement, the APPLICANT is not an agent of the State, its officers, employees, agents or assigns. The APPLICANT is an independent entity from the State and nothing in this agreement creates an agency relationship between the parties.

\_\_\_\_\_ If the applicant is an incorporated municipality or gas districts then:

Subject to the limitations on damages applicable to municipal corporations under Ala. Code § 11-47-190 (1975), the APPLICANT shall defend, indemnify, and hold harmless the State of Alabama, ALDOT, its officers, officials, agents, servants, and employees, in both their official and individual capacities, from and against (1) claims, damages, losses, and expenses, including but not limited to attorneys' fees arising out of, connected with, resulting from or related to the work performed by the APPLICANT, or its officers, employees, contracts, agents or assigns (2) the provision of any services or expenditure of funds required, authorized, or undertaken by the APPLICANT pursuant to the terms of this Agreement, or (3) any damage, loss, expense, bodily injury, or death, or injury or destruction of tangible property (other than the work itself), including loss of use therefrom, and including but not limited to attorneys' fees, caused by the negligent, careless or unskillful acts of the APPLICANT its agents, servants, representatives or employees, or the misuse, misappropriation, misapplication, or misexpenditure of any source of funding, compensation or reimbursement by the APPLICANT, its agents, servants, representatives or employees, or anyone for whose acts the APPLICANT may be liable.

\_\_\_\_\_ If the applicant is county government then:

The APPLICANT shall be responsible at all times for all of the work performed under this agreement and, as provided in Ala. Code § 11-93-2 (1975), the APPLICANT shall protect, defend, indemnify and hold harmless the State of Alabama, The Alabama Department of Transportation, its officials, officers, servants, and employees, in their official capacities, and their agents and/or assigns.

For all claims not subject to Ala. Code § 11-93-2 (1975), the APPLICANT shall indemnify and hold harmless the State of Alabama, the Alabama Department of Transportation, the officials, officers, servants, and employees, in both their official and individual capacities, and their agents and/or assigns from and against any and all action, damages, claims, loss, liabilities, attorney's fees or expense whatsoever or any amount paid in compromise thereof arising out of, connected with, or related to the (1) work performed under this Agreement, (2) the provision of any services or expenditure of funds required, authorized, or undertaken by the APPLICANT pursuant to the terms of this agreement, or (3) misuse, misappropriation, misapplication, or misexpenditure of any source of funding, compensation or reimbursement by the APPLICANT, its agents, servants, representatives, employees or assigns.

\_\_\_\_\_ If the applicant is a state governmental agency or institution then:

The APPLICANT shall be responsible for damage to life and property due to activities of the APPLICANT of employees of APPLICANT in connection with the work or services under this Agreement. The APPLICANT agrees that its contractors, subcontractors, agents, servants, vendors or employees of APPLICANT shall possess the experience, knowledge and skill necessary to perform the particular duties required or necessary under this Agreement. The APPLICANT is a state institution and is limited by the Alabama Constitution in its ability to indemnify and hold harmless another entity. The APPLICANT maintains self-insurance coverage applicable to the negligent acts and omissions of its officers and employees, which occur within the scope of their employment by the APPLICANT. The APPLICANT has no insurance coverage applicable to third-party acts, omissions or claims, and can undertake no obligation that might create a debt on the State Treasury. The APPLICANT agrees ALDOT shall not be responsible for the willful, deliberate, wanton or negligent acts of the APPLICANT, or its officials, employees, agents, servants, vendors, contractors or subcontractors. The APPLICANT shall require, its contractors and its subcontractors, agents, servants or vendors, as a term of its contract with the APPLICANT, to include ALDOT as an additional insured in any insurance policy providing coverage for the work to be performed pursuant to and under this Agreement and to provide the APPLICANT a copy of the insurance policy declaration sheet confirming the addition of ALDOT thereto.

\_\_\_\_\_ If the applicant is not a county, incorporated municipality, or state governmental agency or institution then:

The APPLICANT will protect, defend, indemnify and hold harmless the State of Alabama, ALDOT, the officials, officers, and employees, in both their official and individual capacities, and their agents and/or assigns, from and against any and all actions, damages, claims, loss, liabilities, attorney's fees or expense whatsoever or any amount paid in compromise thereof arising out of or connected with the work performed under this Permit, and/or the APPLICANT's failure to comply with all applicable laws or regulations.

17. Any utility adjustment will be by agreement between the APPLICANT and the Utility, and any such agreement shall be subject to the approval of ALDOT.

18. This Agreement when executed will not be valid or binding until the APPLICANT has complied with all existing ordinances, laws, and zoning boards that have jurisdiction in the county, city, or municipality in which the facilities are located.

19. In no case shall post development drainage from beyond the ROW Limits, directed toward the roadway, be greater than the pre-construction runoff nor shall the post development increase the runoff within the ROW. Should the post development drainage increase to unacceptable levels, the property owner shall restore drainage to the pre-construction levels and restore the ROW to pre-construction conditions.



This Agreement is deemed to be executed on the date hereinabove set forth by the parties hereto in their respective names by those persons and officials thereunto duly authorized. Witness our hands and seals, this the \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

WITNESS:

\_\_\_\_\_

\_\_\_\_\_  
Legal Name of Applicant

By: \_\_\_\_\_  
Authorized Signature and Title for Applicant

\_\_\_\_\_  
Typed or Printed Name of Signee

\_\_\_\_\_  
Address Line 1

\_\_\_\_\_  
Address Line 2

\_\_\_\_\_  
Telephone Number

**FOR OFFICIAL USE ONLY**

**RECOMMENDED FOR APPROVAL:**

DISTRICT: \_\_\_\_\_  
Printed Name Signature Date

AREA: \_\_\_\_\_  
Printed Name Signature Date

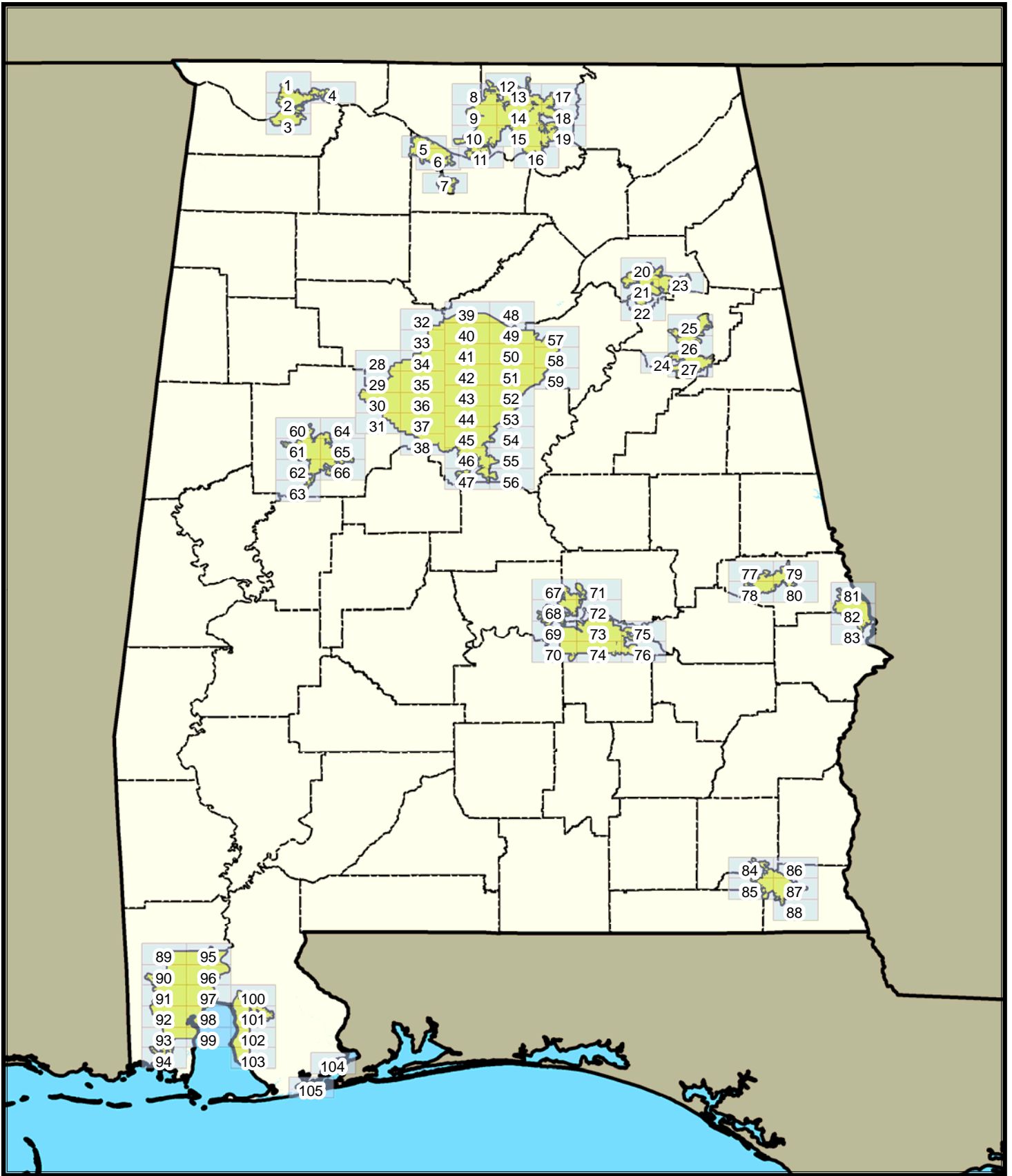
REGION: \_\_\_\_\_  
Printed Name Signature Date

**APPROVED:**  
**ALABAMA DEPARTMENT OF TRANSPORTATION**  
**ACTING BY AND THROUGH ITS TRANSPORTATION**  
**DIRECTOR**

**(PLEASE CHECK APPROPRIATE BOX)**

- CENTRAL OFFICE
- REGION
- AREA
- DISTRICT

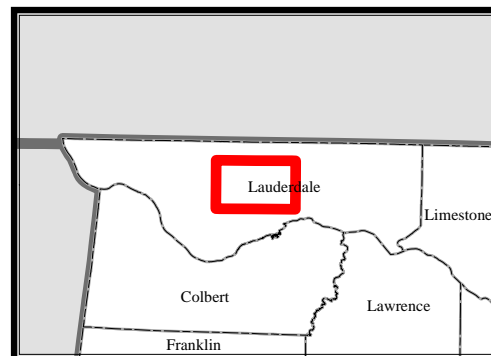
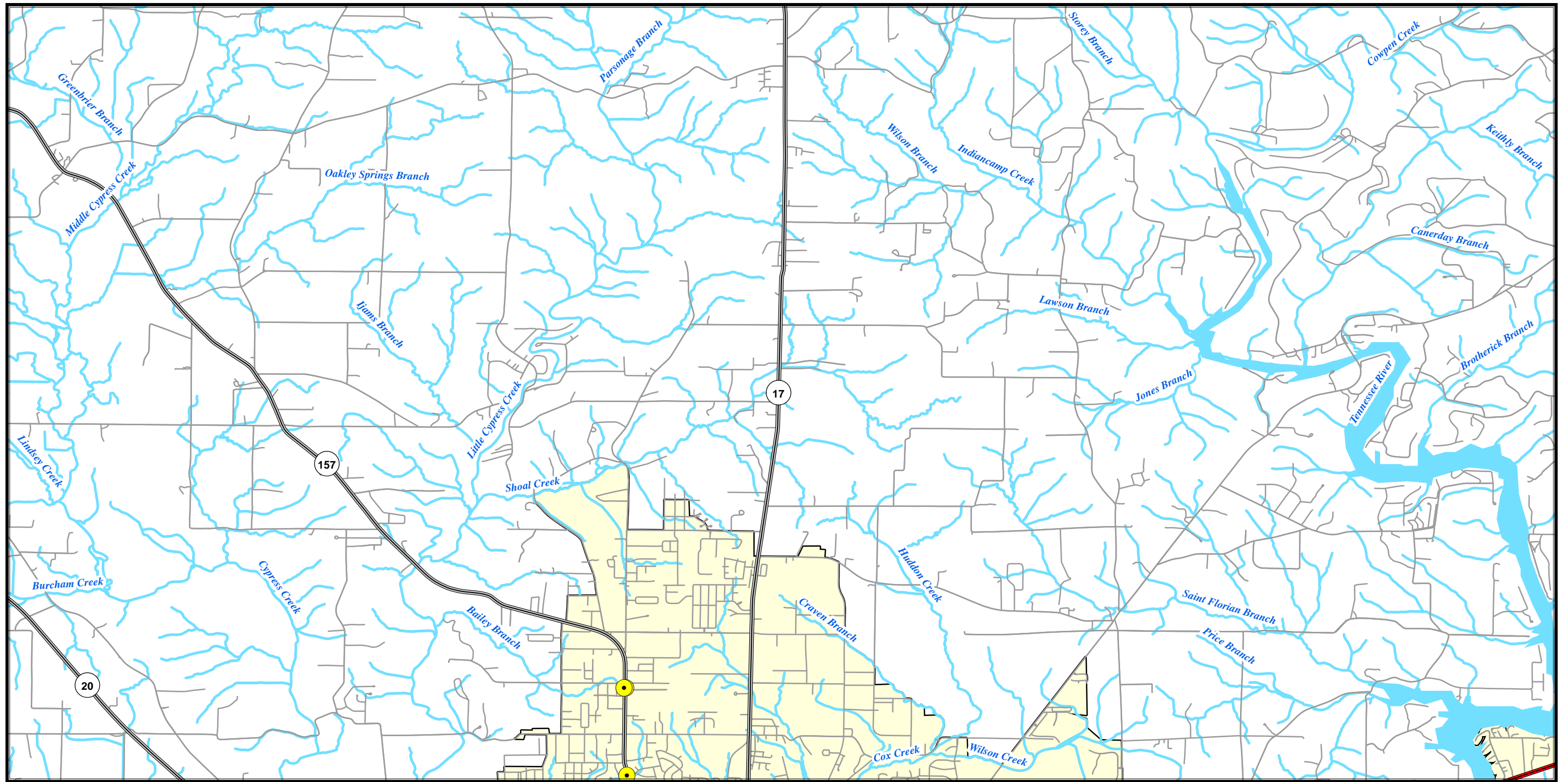
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Printed Name Signature Date



DEPARTMENT OF TRANSPORTATION  
DESIGN BUREAU - STORMWATER

# IDDE Outfall Map Index





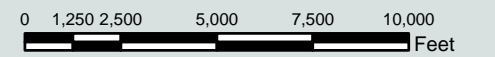
## ALDOT MS4 Areas Florence Map: 1

-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

303(d) / TMDL Listed Waters

 Sediment POC

 Other POCs

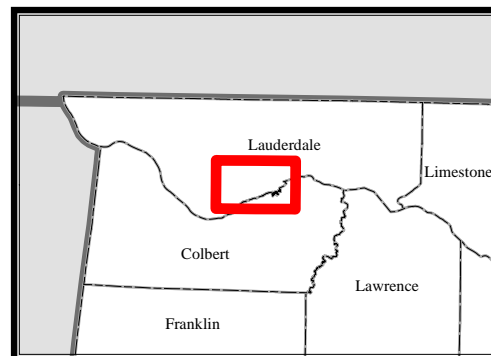
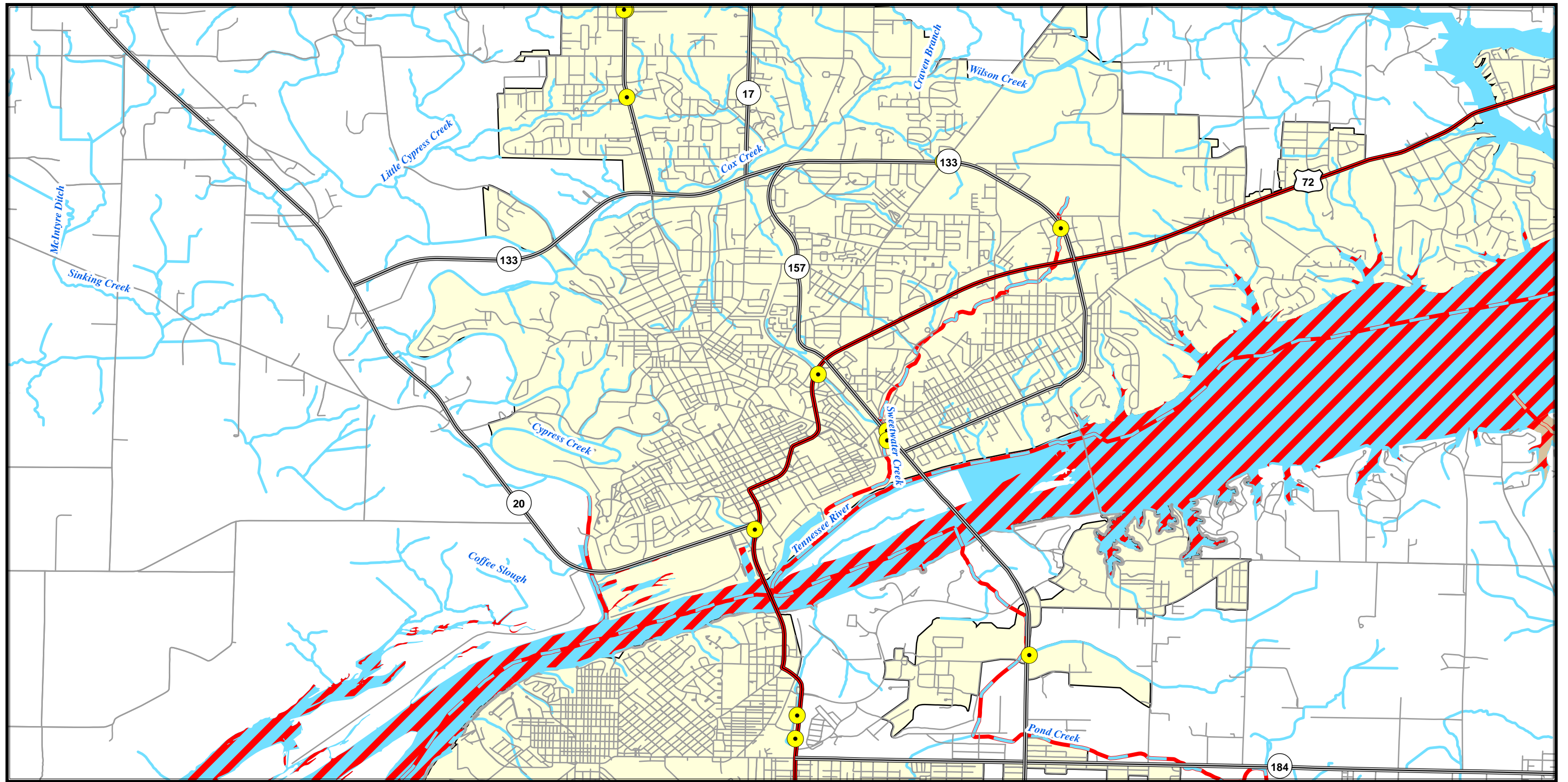


1 inch = 5,000 feet

Index #: 1





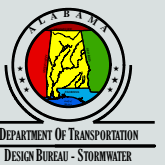
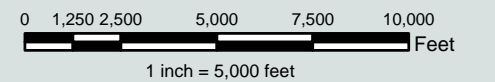




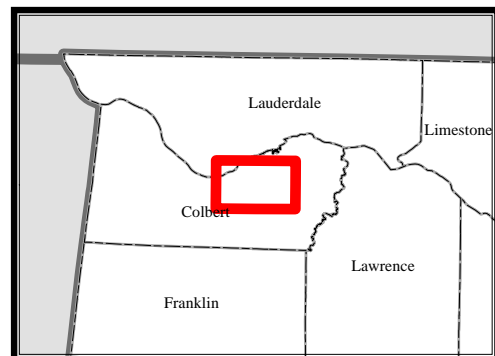
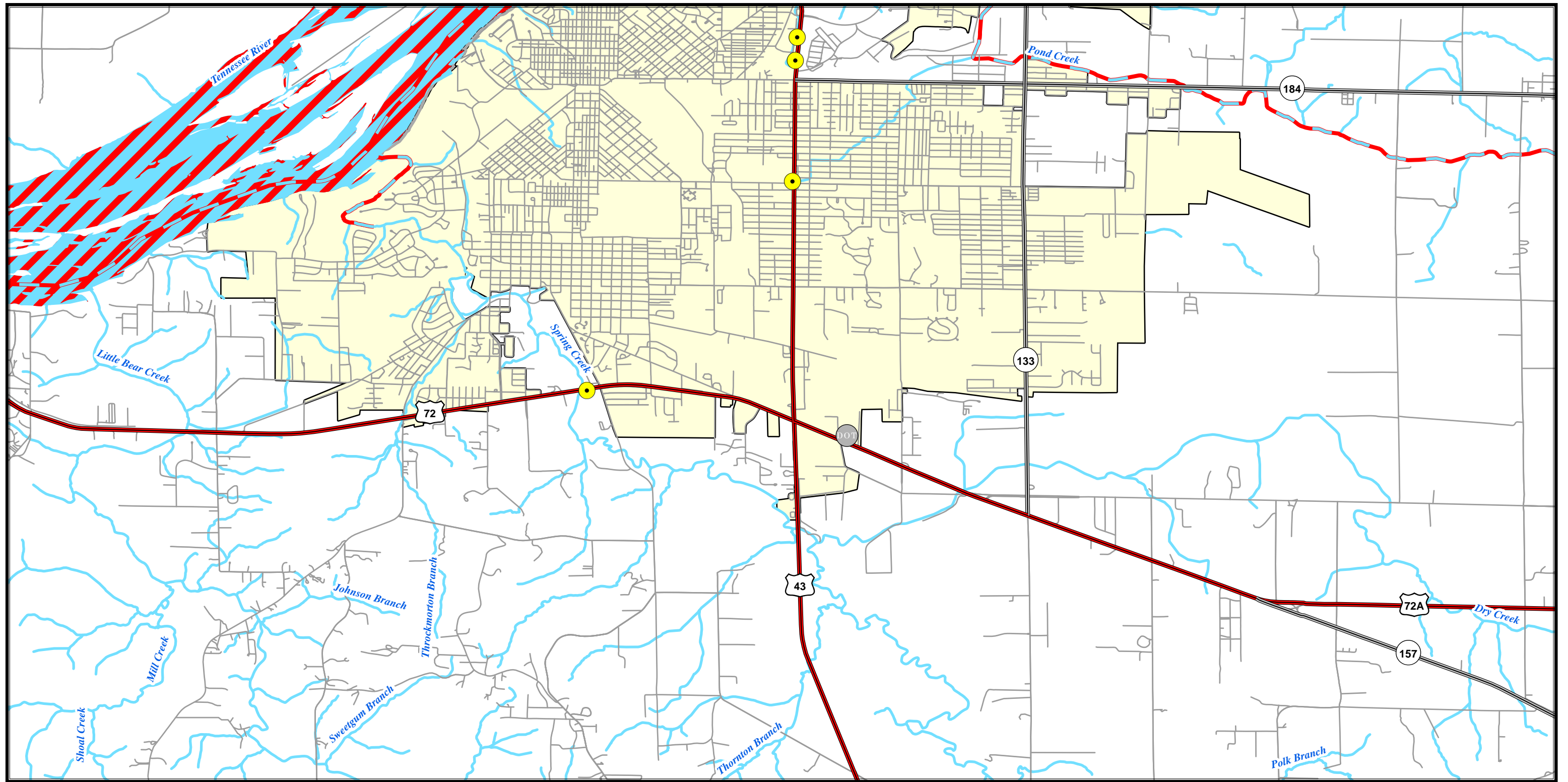
## ALDOT MS4 Areas Florence Map: 2

-  MS4 Area
-  MS4 Monitoring Location
-  Major Outfall on Inventory
-  ALDOT Support Facility

- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs




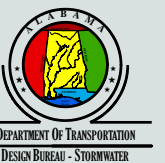
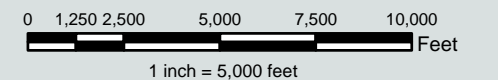
Index #: 2



## ALDOT MS4 Areas Florence Map: 3

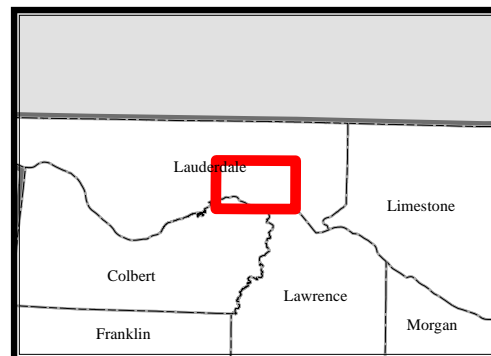
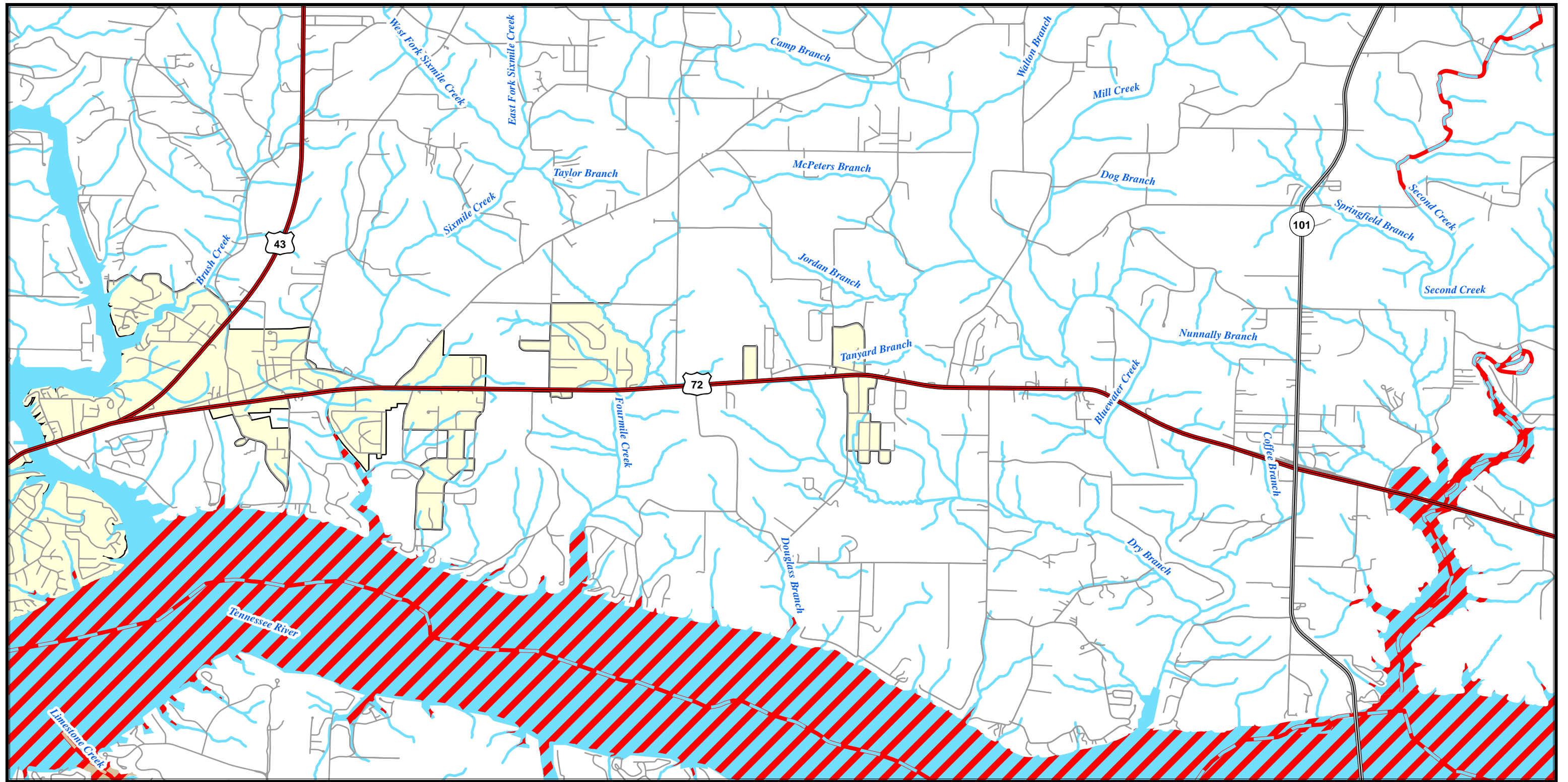
-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs



Index #: 3

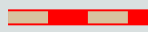
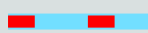


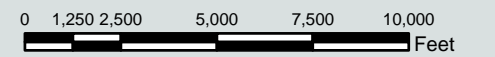


## ALDOT MS4 Areas Florence Map: 4

-  MS4 Area
-  ALDOT Support Facility
-  MS4 Monitoring Location
-  Major Outfall on Inventory

303(d) / TMDL Listed Waters

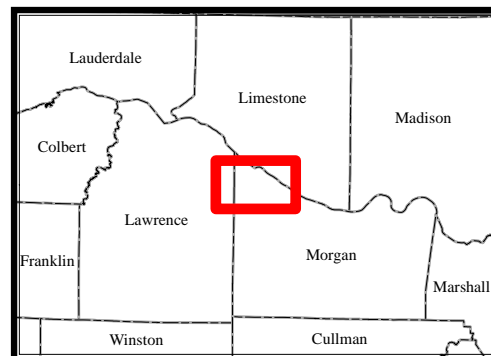
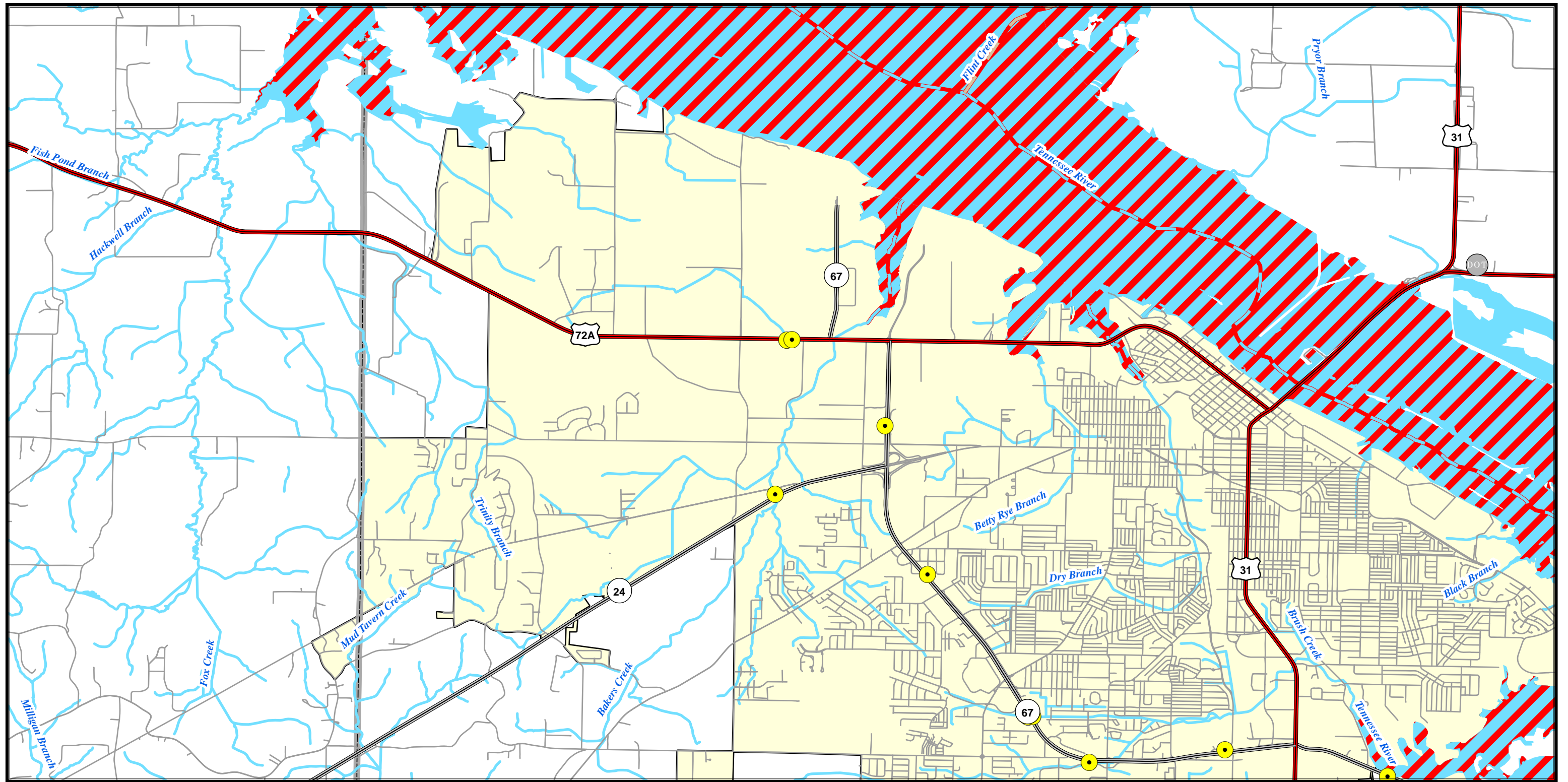
-  Sediment POC
-  Other POCs



1 inch = 5,000 feet

Index #: 4

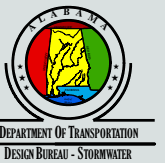
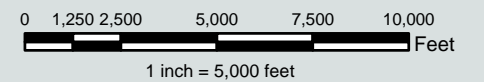




# ALDOT MS4 Areas Decatur Map: 1

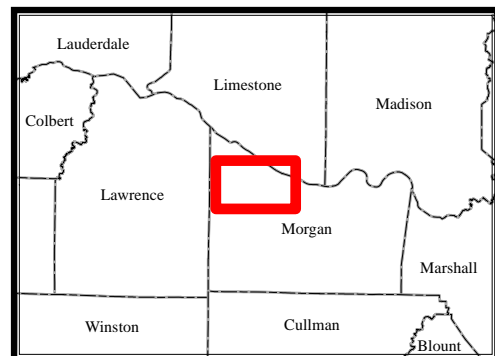
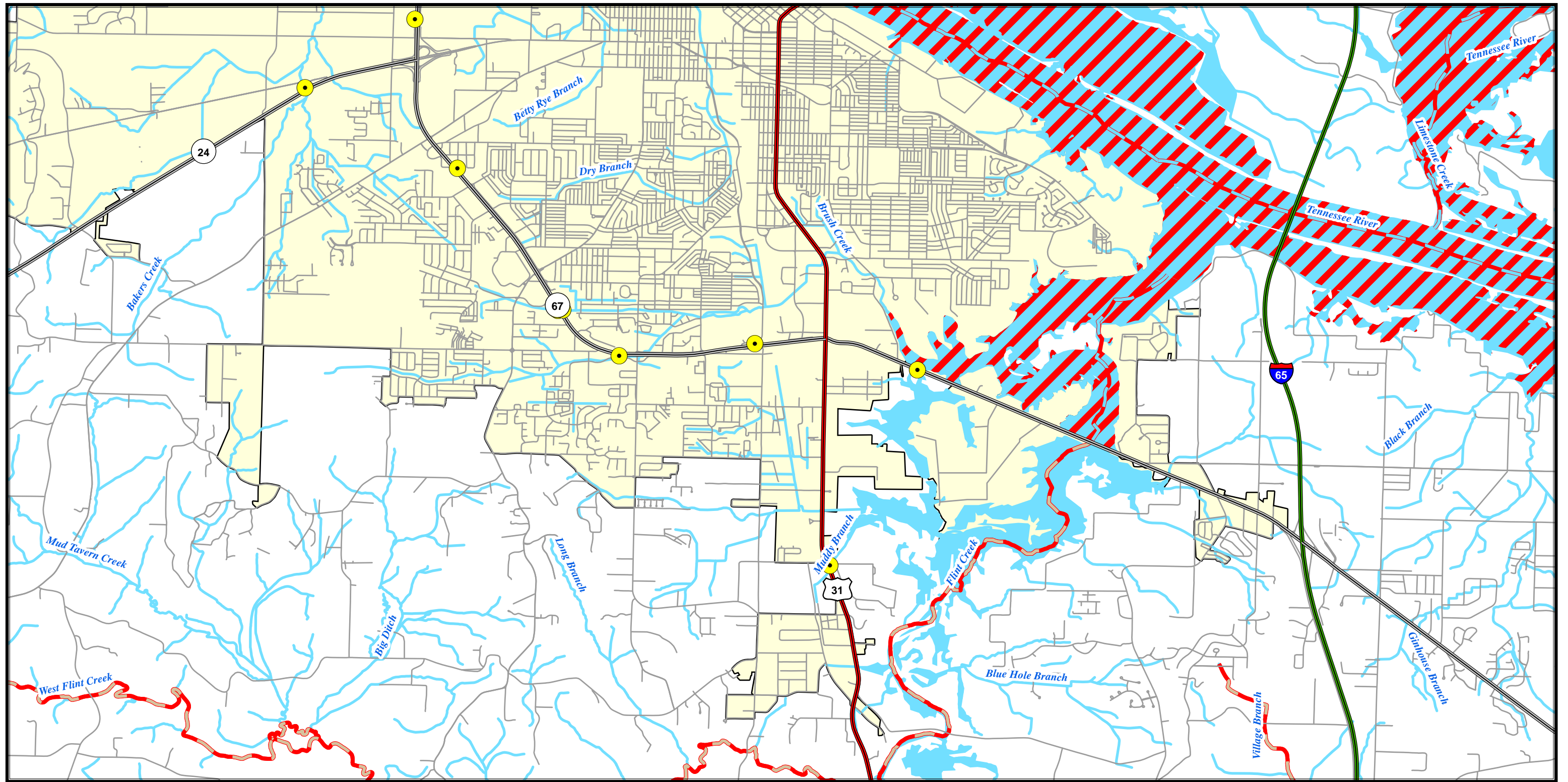
-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs




Index #: 5

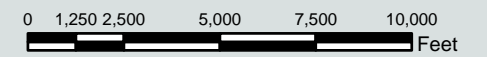




## ALDOT MS4 Areas Decatur Map: 2

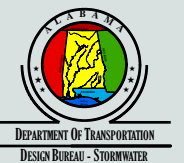
-  MS4 Area
-  MS4 Monitoring Location
-  Major Outfall on Inventory
-  ALDOT Support Facility

-  303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs

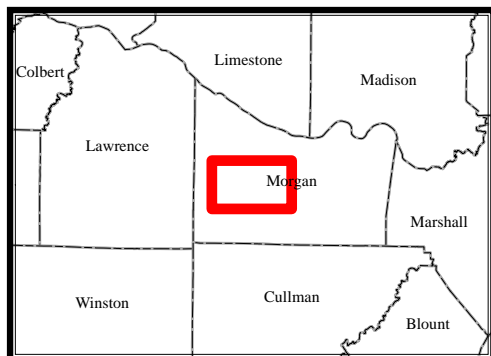
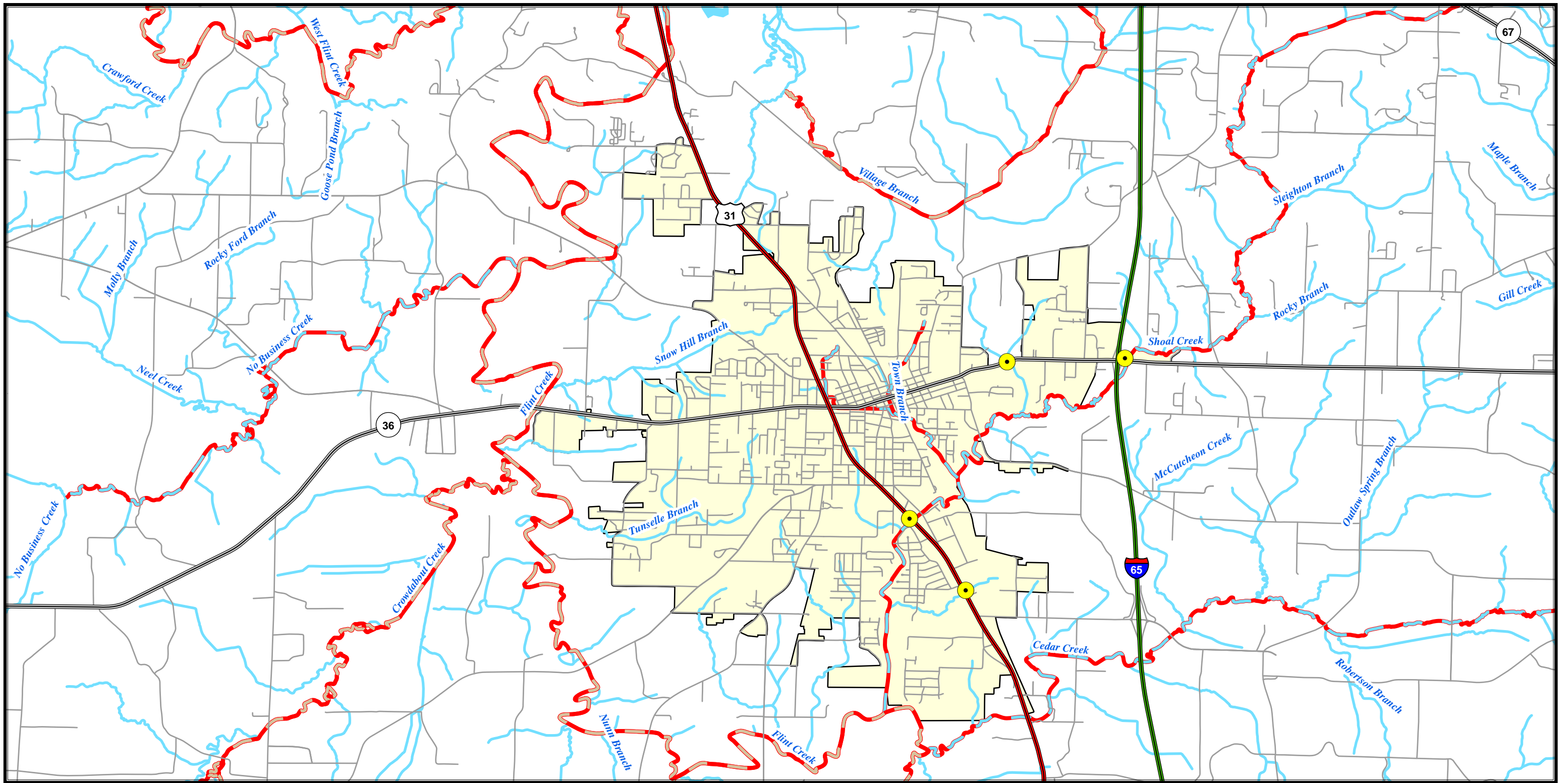


1 inch = 5,000 feet

Index #: 6



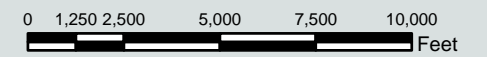
DEPARTMENT OF TRANSPORTATION  
DESIGN BUREAU - STORMWATER



## ALDOT MS4 Areas Decatur Map: 3

-  MS4 Area
-  MS4 Monitoring Location
-  Major Outfall on Inventory
-  ALDOT Support Facility

-  303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs

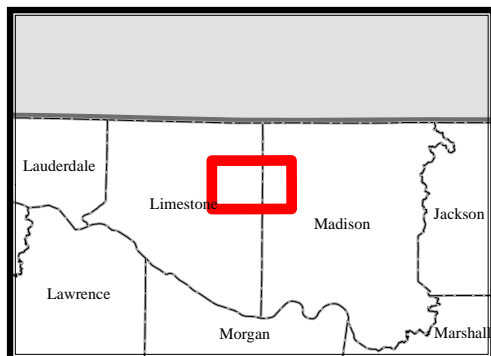
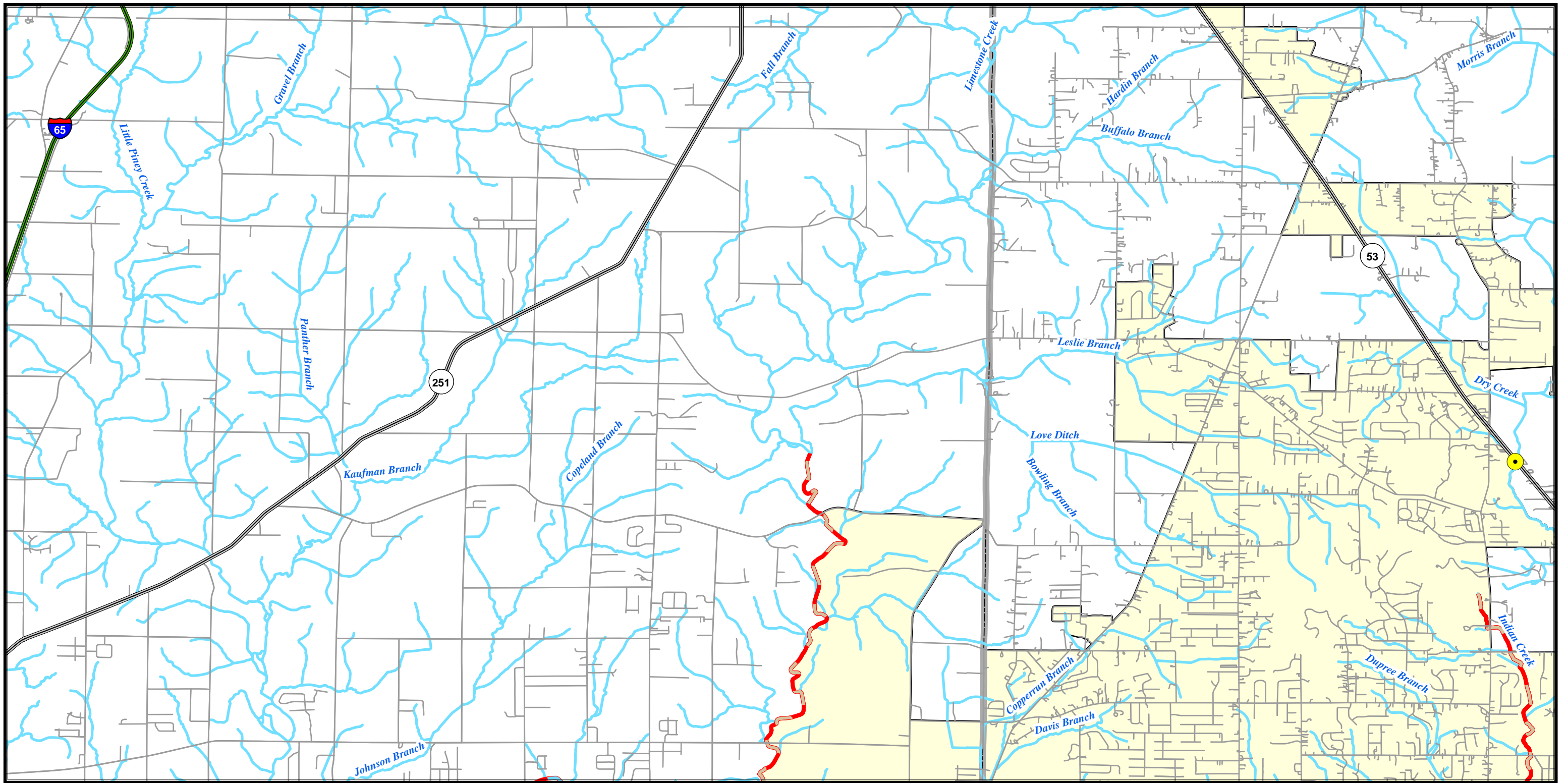


1 inch = 5,000 feet




Index #: 7

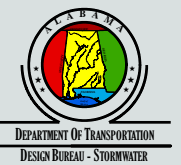




# ALDOT MS4 Areas Huntsville Map: 1

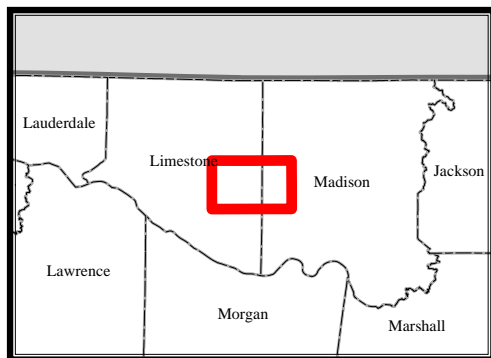
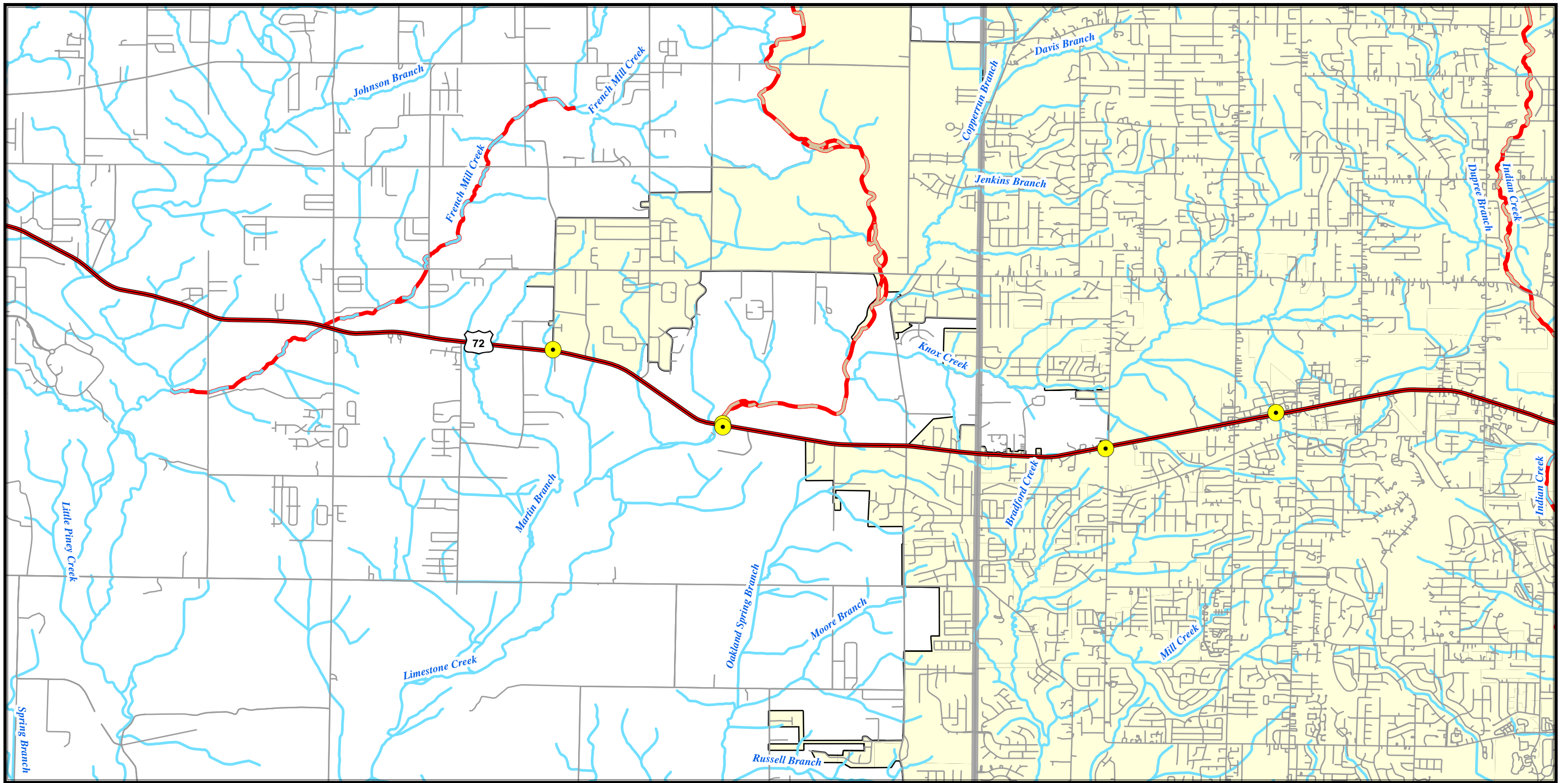
-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

- 303(d) / TMDL Listed Waters
-  Sediment POC
  -  Other POCs



Index #: 8





## ALDOT MS4 Areas Huntsville Map: 2

-  MS4 Area
-  MS4 Monitoring Location
-  Major Outfall on Inventory
-  ALDOT Support Facility

303(d) / TMDL Listed Waters

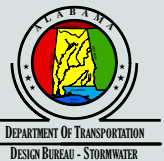
 Sediment POC

 Other POCs

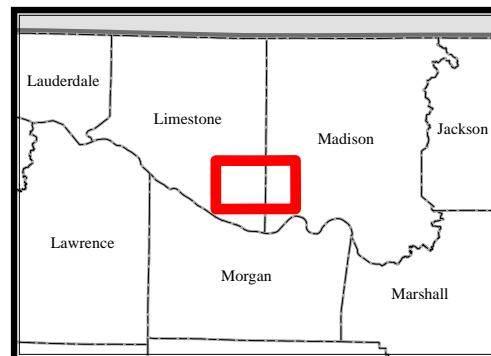
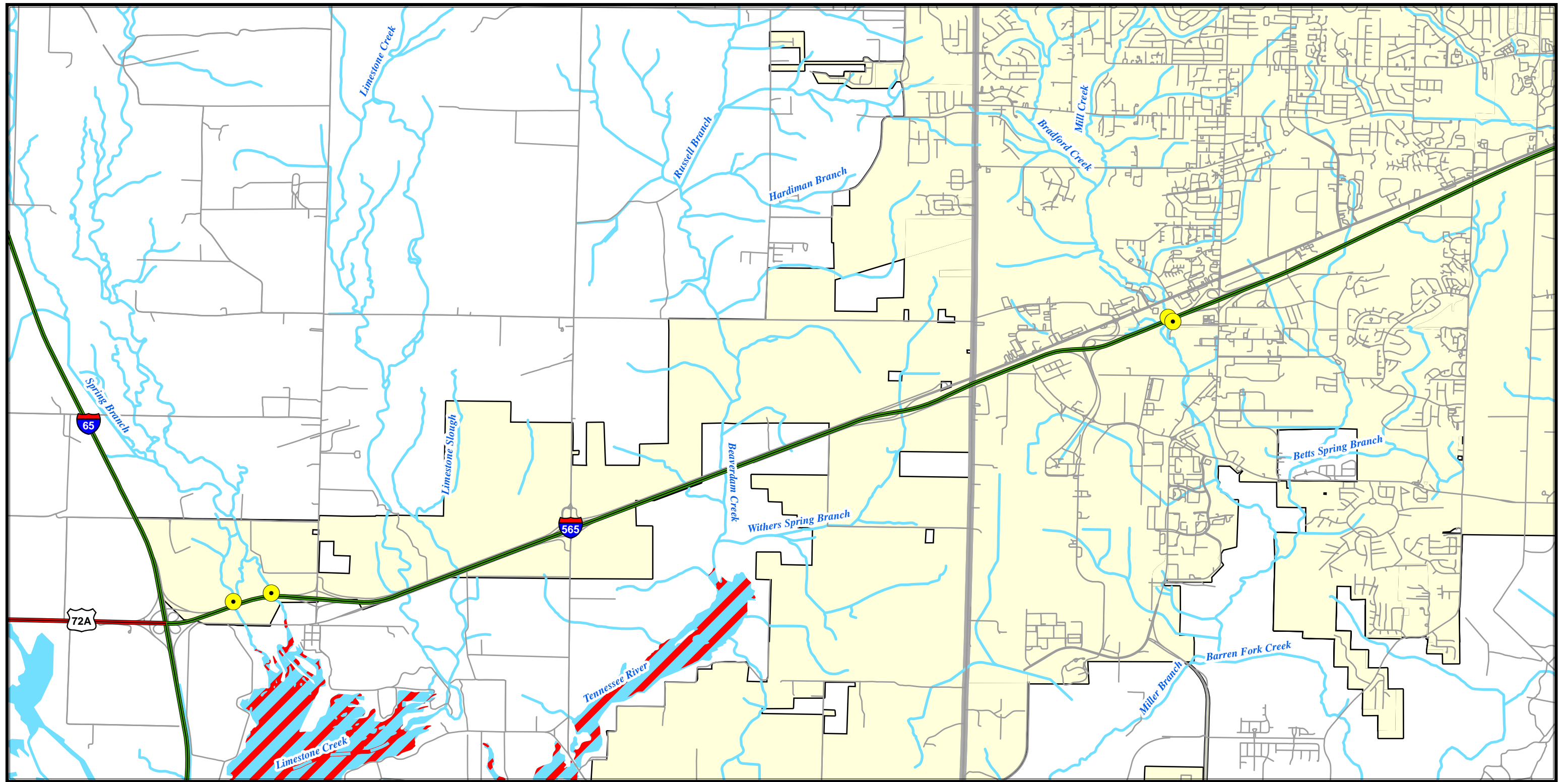


1 inch = 5,000 feet

Index #: 9




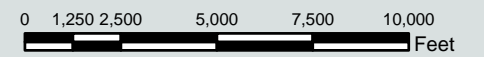
ALABAMA  
DEPARTMENT OF TRANSPORTATION  
DESIGN BUREAU - STORMWATER



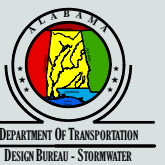
## ALDOT MS4 Areas Huntsville Map: 3

-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

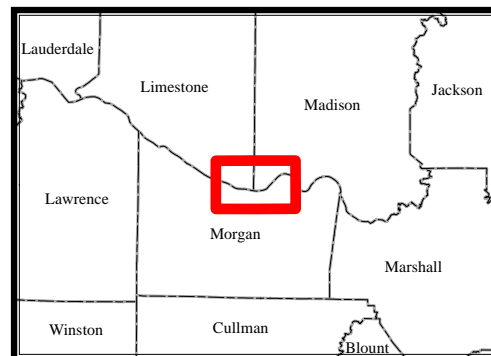
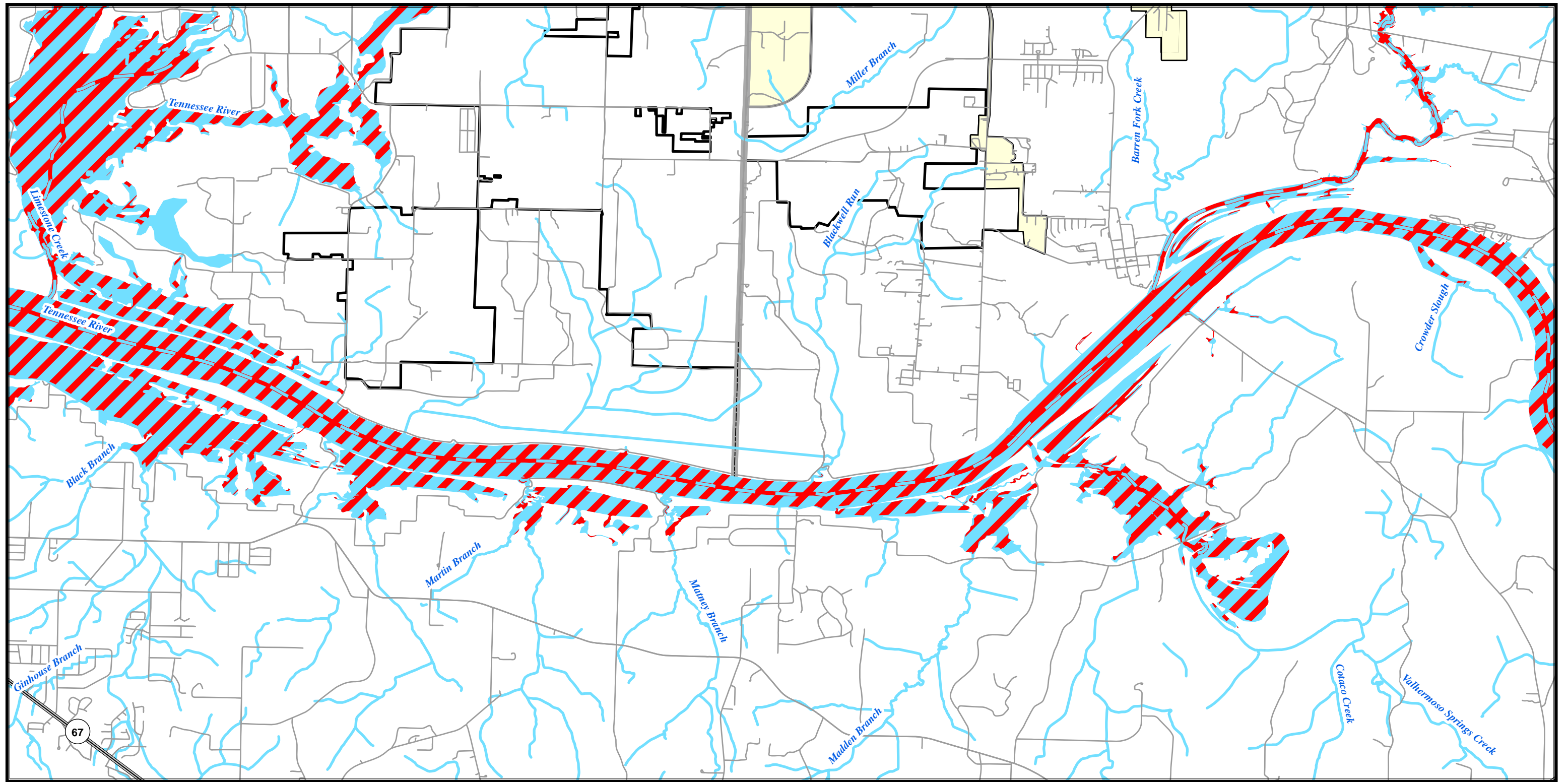
- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs



Index #: 10







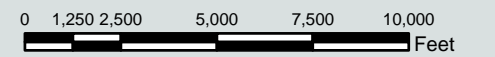


## ALDOT MS4 Areas Huntsville Map: 4

-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

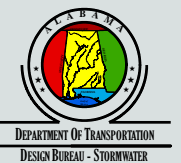
303(d) / TMDL Listed Waters

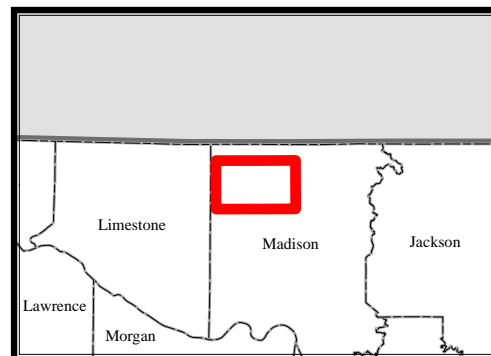
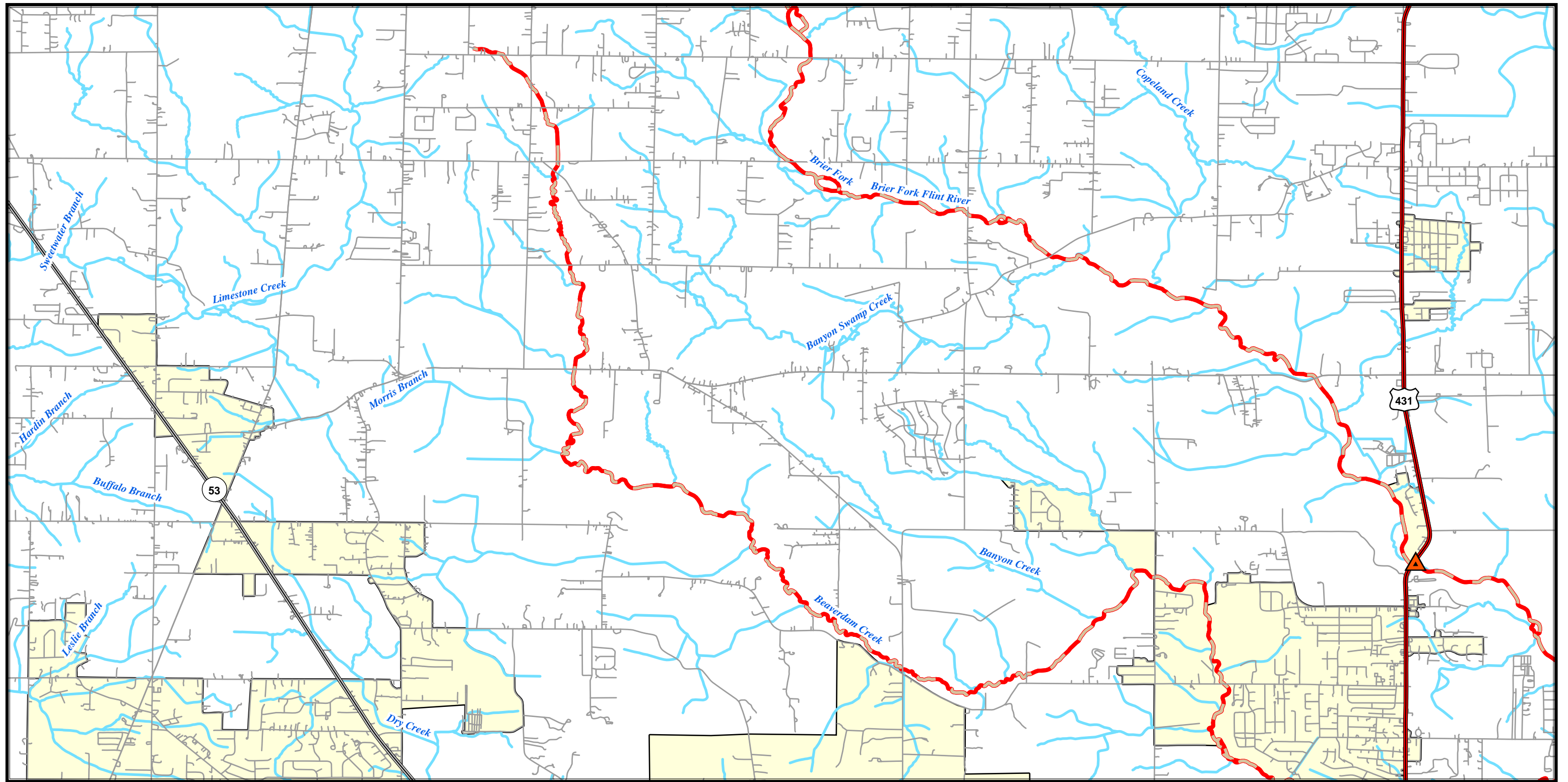
-  Sediment POC
-  Other POCs



1 inch = 5,000 feet

Index #: 11


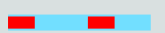


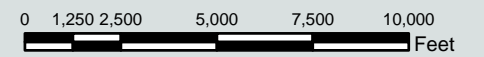


## ALDOT MS4 Areas Huntsville Map: 5

-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

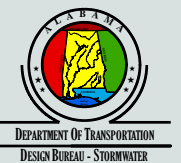
303(d) / TMDL Listed Waters

-  Sediment POC
-  Other POCs

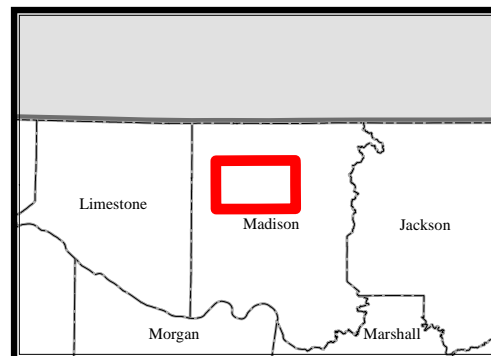
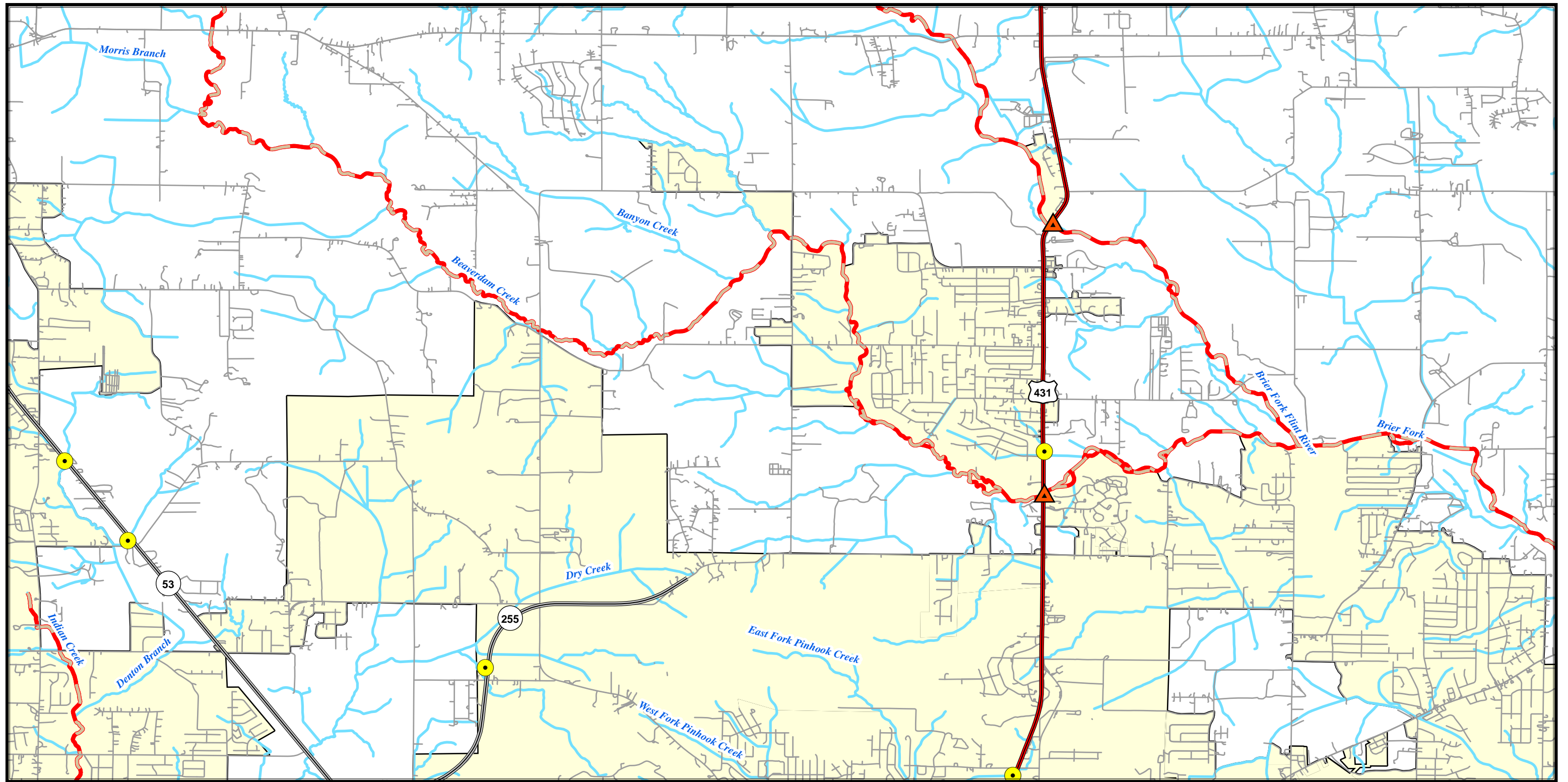


1 inch = 5,000 feet

Index #: 12





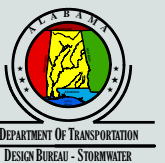
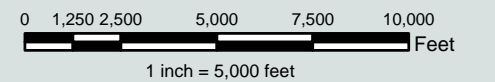




## ALDOT MS4 Areas Huntsville Map: 6

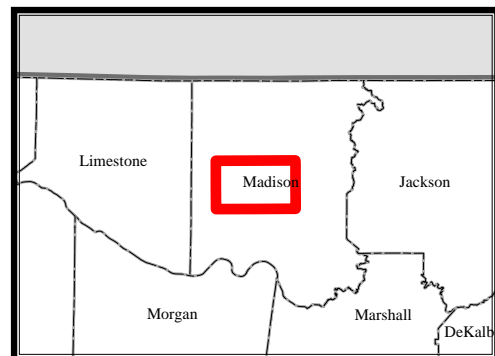
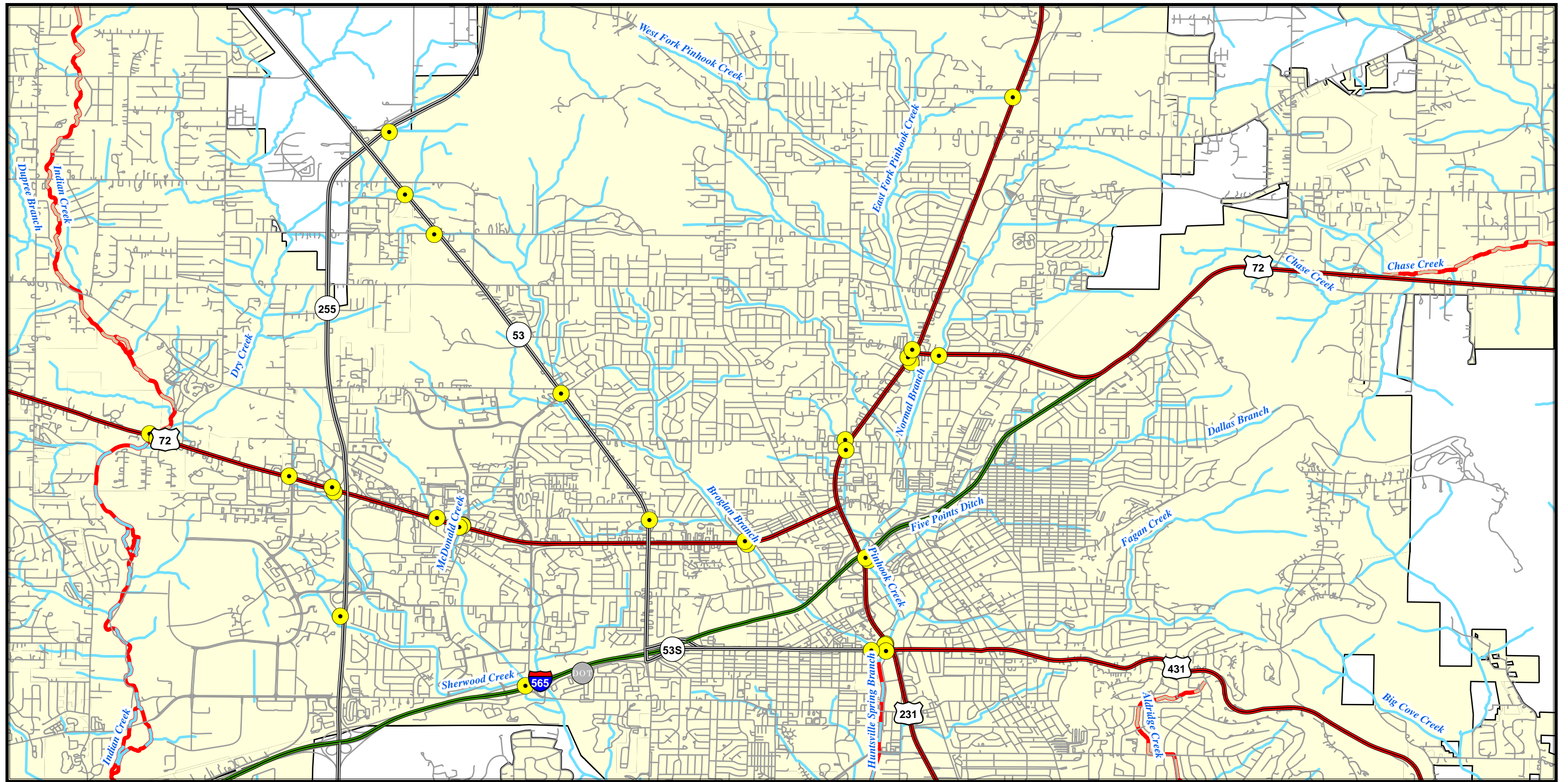
-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs



Index #: 13

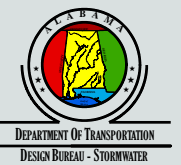
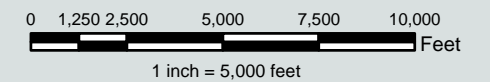




# ALDOT MS4 Areas Huntsville Map: 7

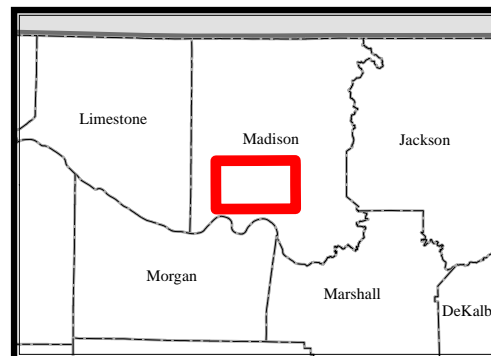
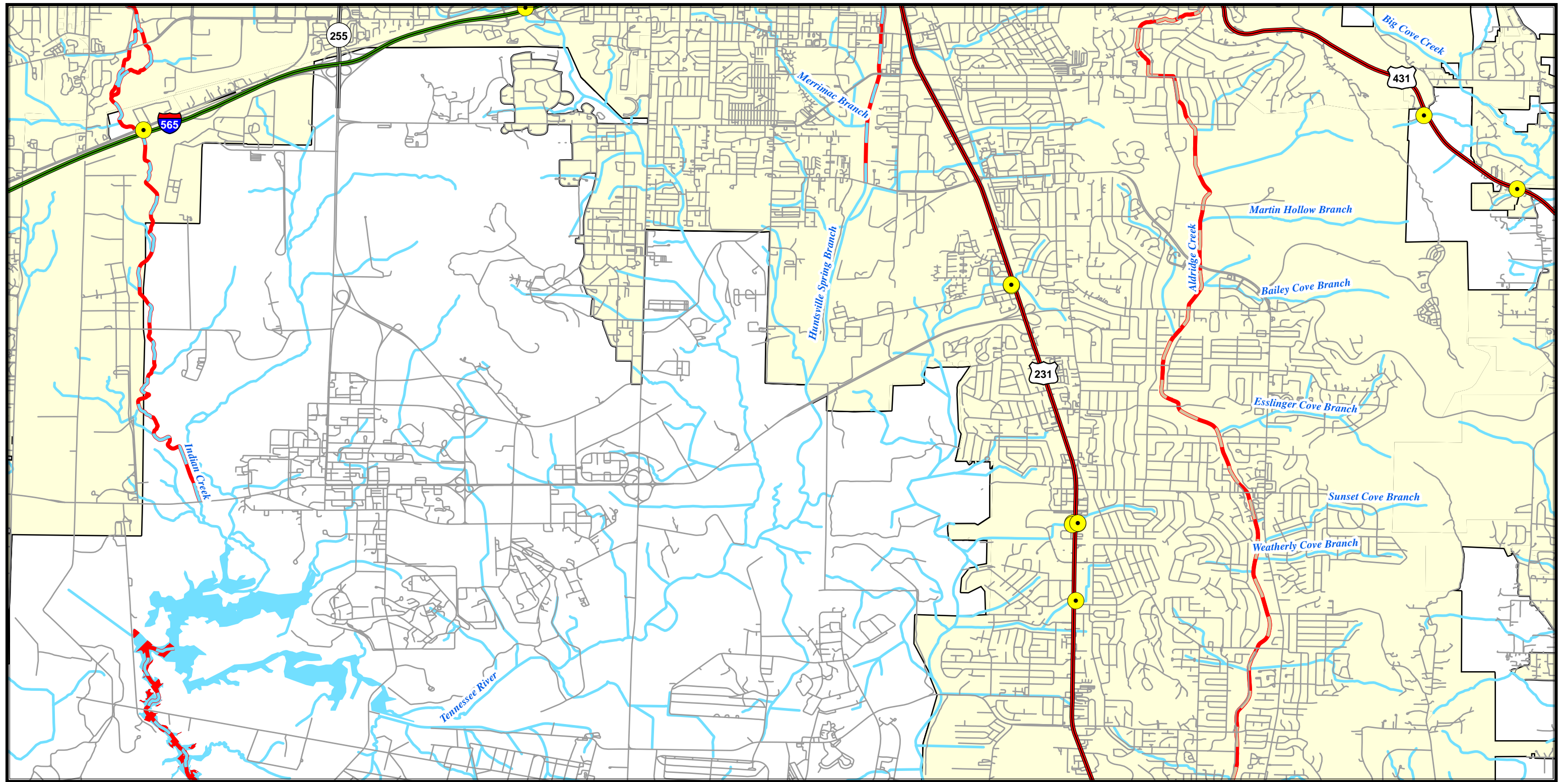
-  MS4 Area
-  Major Outfall on Inventory
-  ALDOT Support Facility
-  MS4 Monitoring Location

- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs



Index #: 14







## ALDOT MS4 Areas Huntsville Map: 8

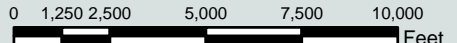
-  MS4 Area
-  MS4 Monitoring Location
-  Major Outfall on Inventory
-  ALDOT Support Facility

- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs

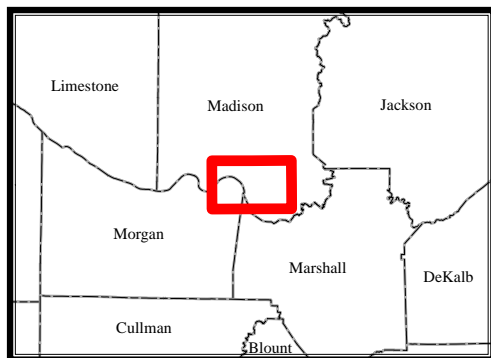
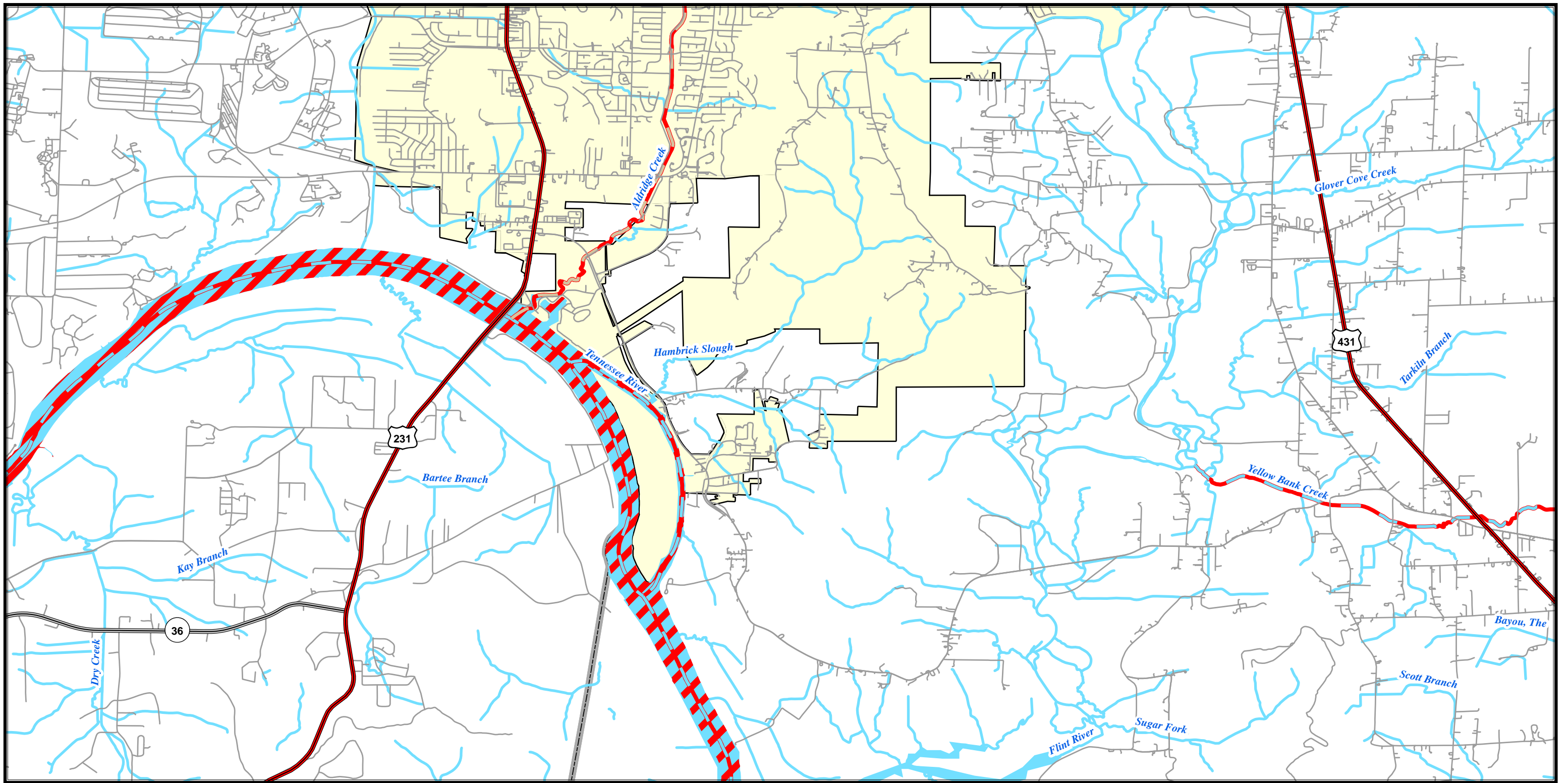
Index #: 15









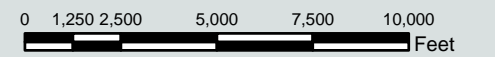
1 inch = 5,000 feet



## ALDOT MS4 Areas Huntsville Map: 9

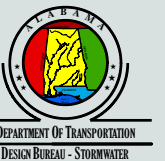
-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs

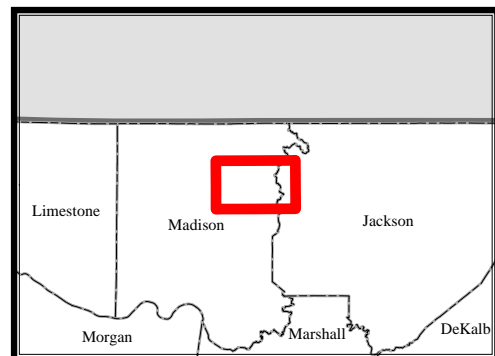
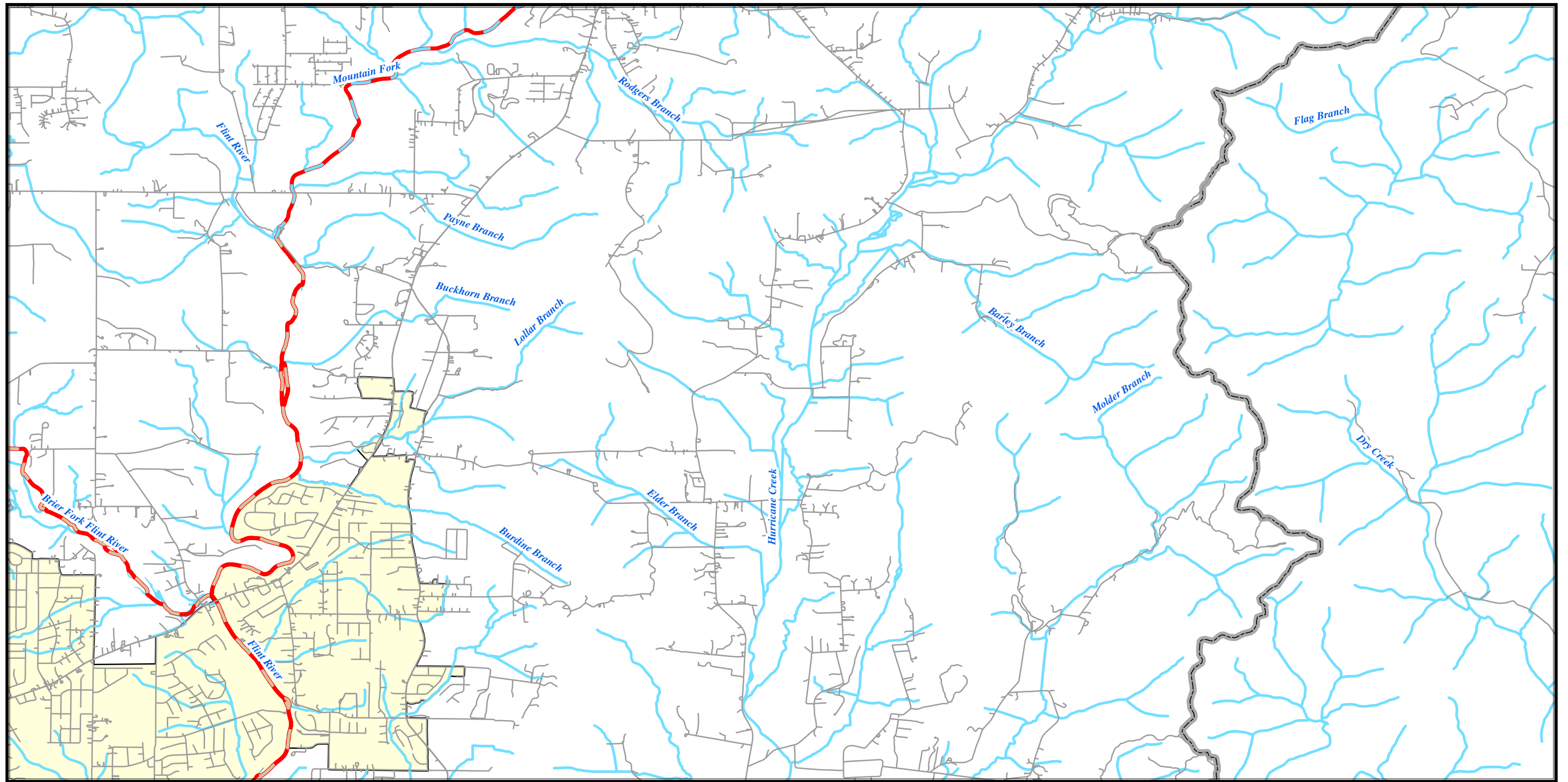


1 inch = 5,000 feet

Index #: 16



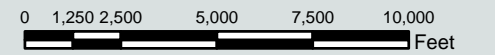




## ALDOT MS4 Areas Huntsville Map: 10

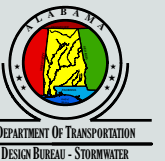
-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

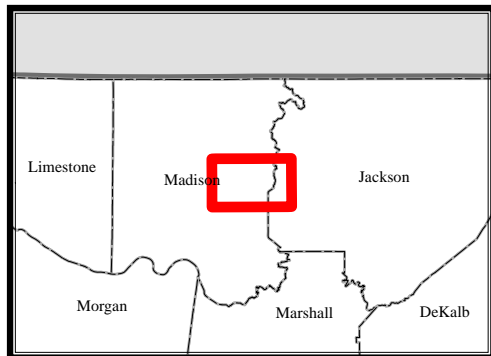
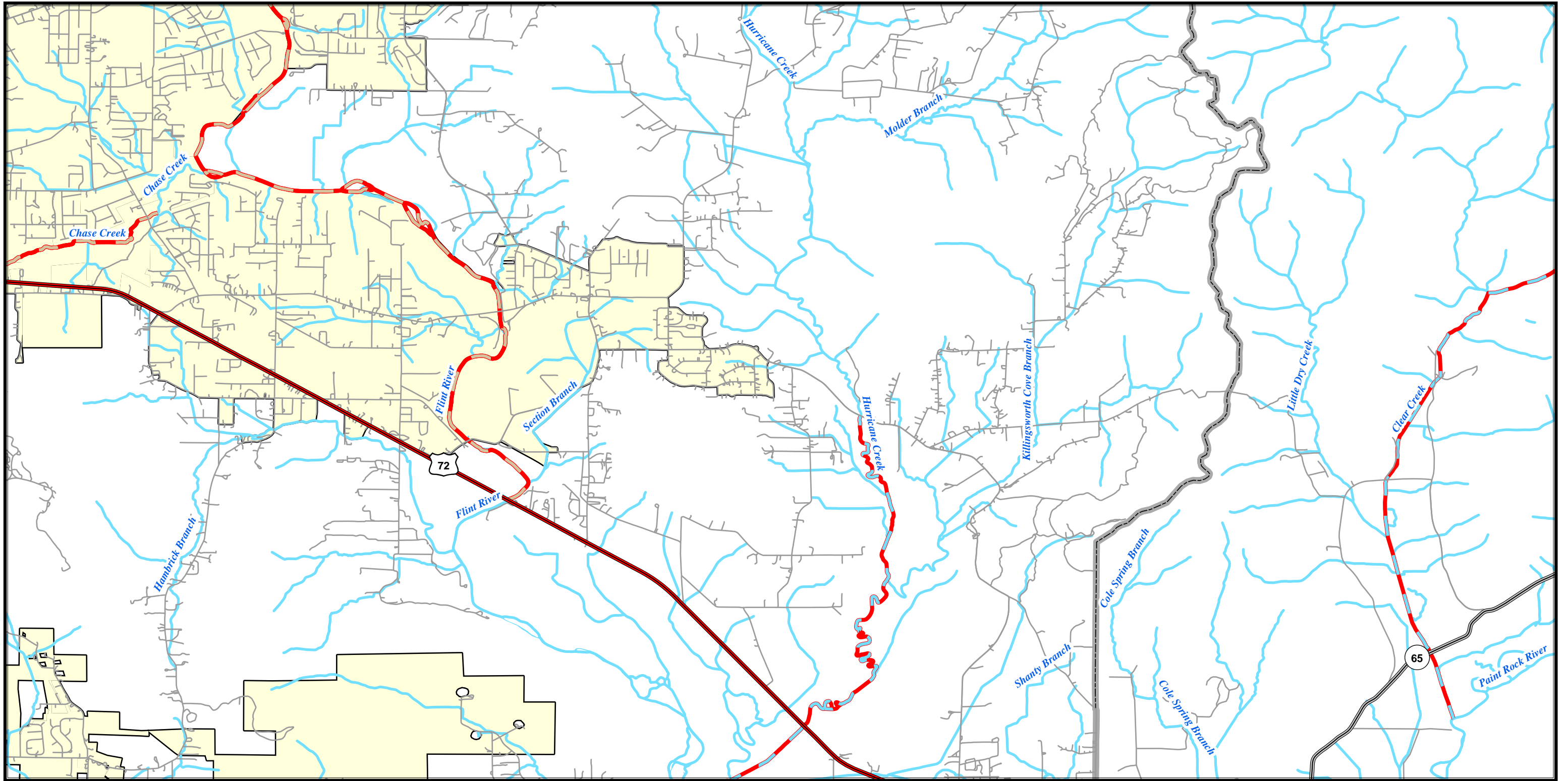
- 303(d) / TMDL Listed Waters
-  Sediment POC
  -  Other POCs





1 inch = 5,000 feet



Index #: 17



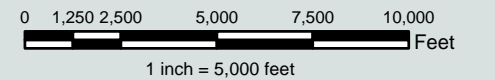


# ALDOT MS4 Areas Huntsville Map: 11

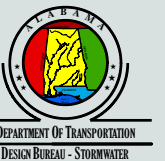
-  MS4 Area
-  ALDOT Support Facility

-  MS4 Monitoring Location
-  Major Outfall on Inventory

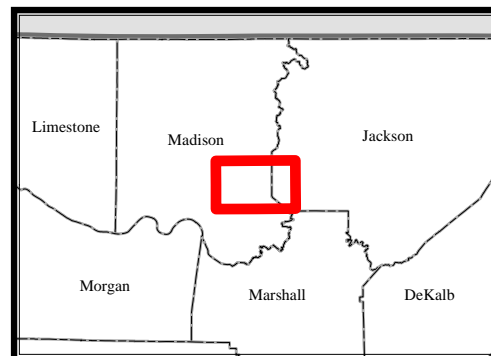
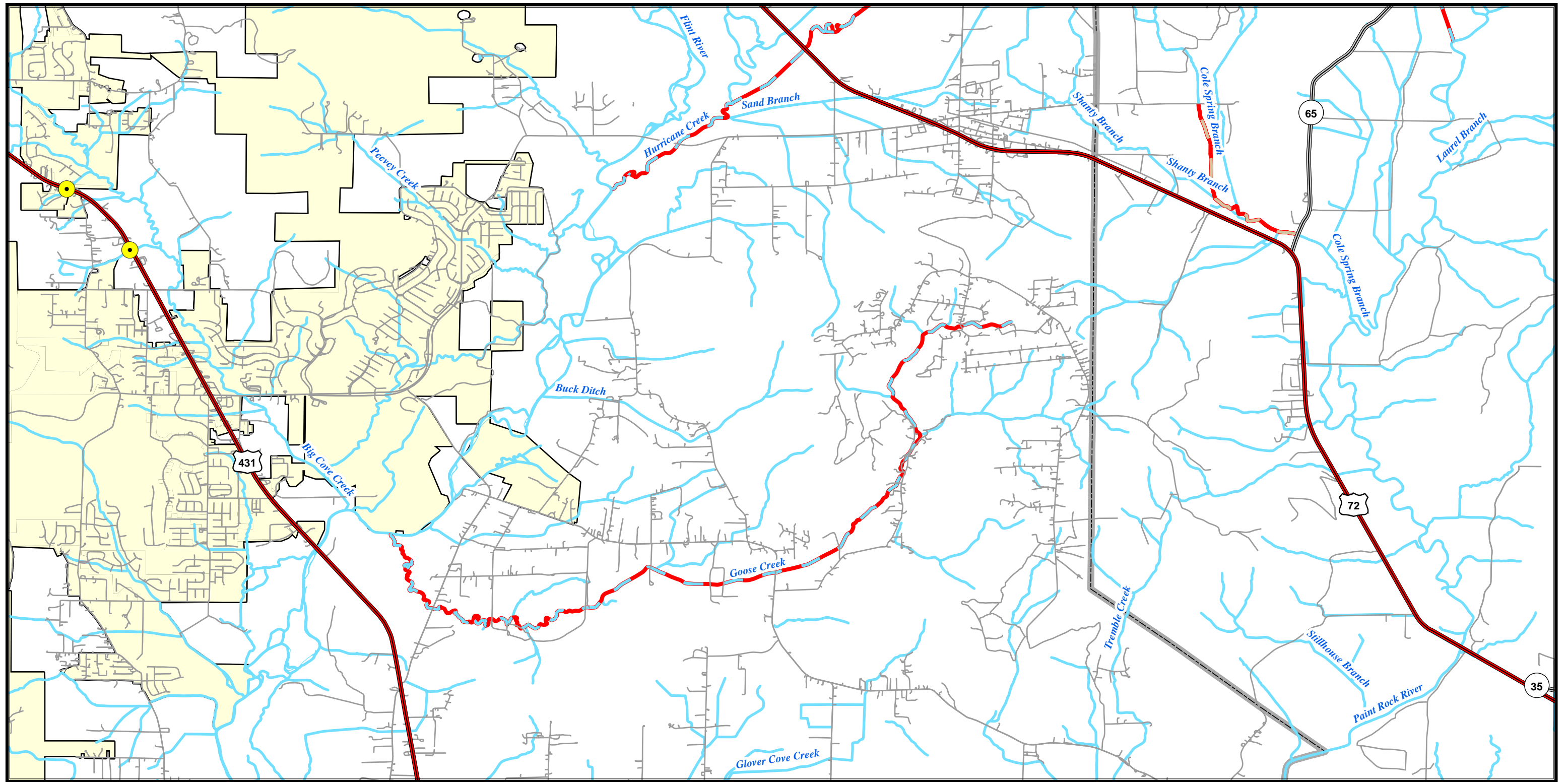
- 303(d) / TMDL Listed Waters
-  Sediment POC
  -  Other POCs



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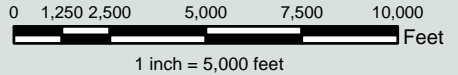
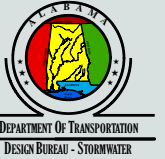


## ALDOT MS4 Areas Huntsville Map: 12

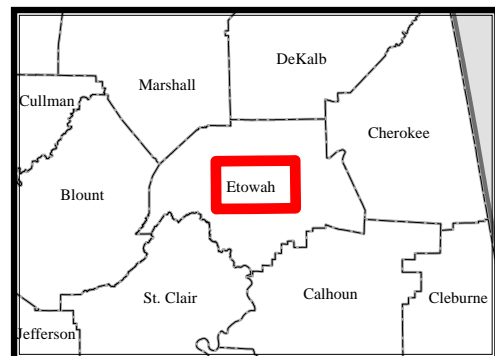
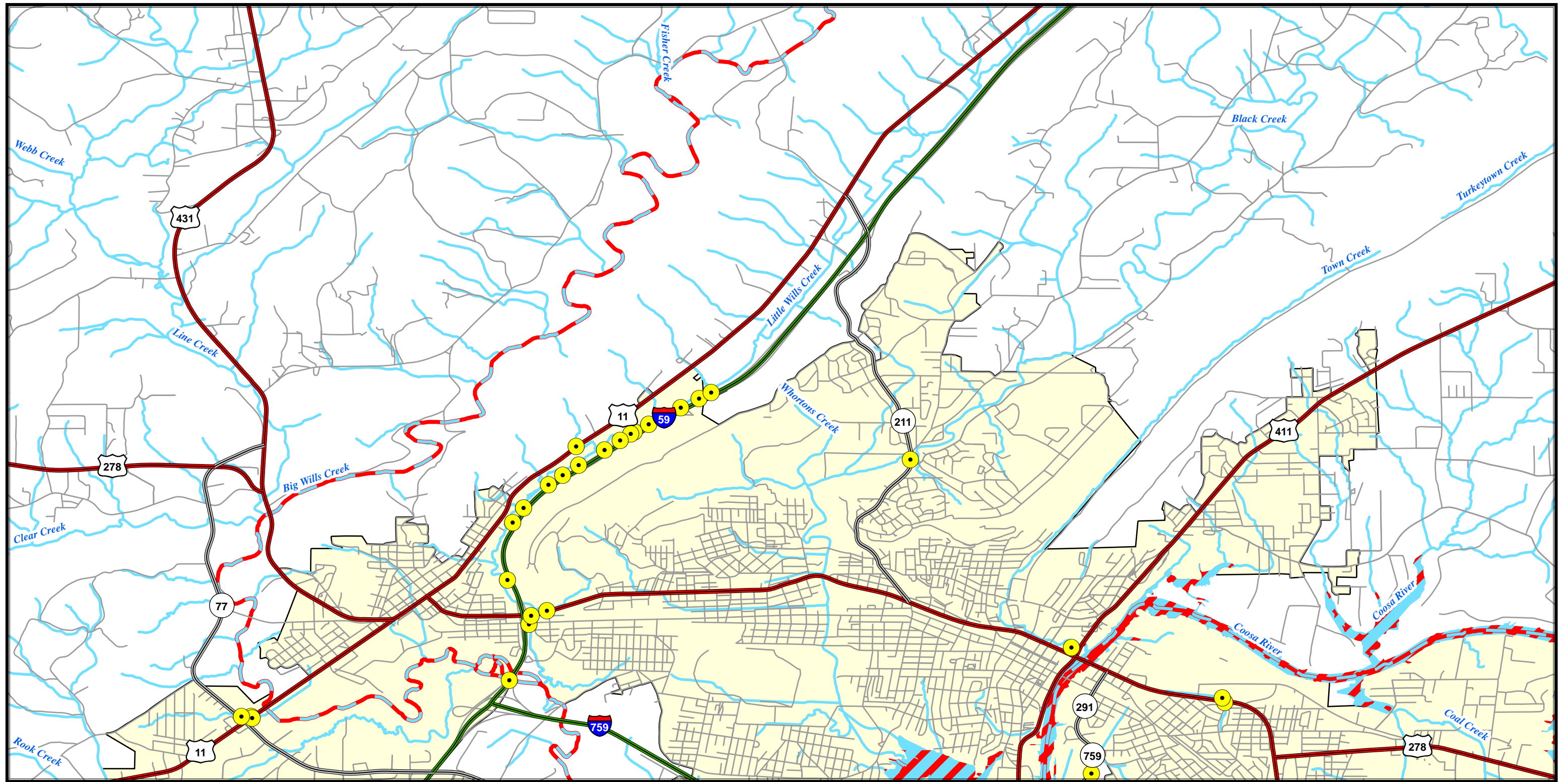
-  MS4 Area
-  MS4 Monitoring Location
-  Major Outfall on Inventory
-  ALDOT Support Facility

-  303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs

Index #: 19






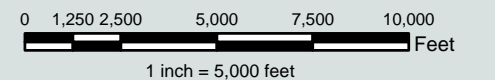
DEPARTMENT OF TRANSPORTATION  
DESIGN BUREAU - STORMWATER



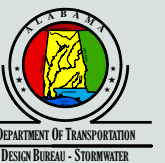
## ALDOT MS4 Areas Gadsden Map: 1

-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

- 303(d) / TMDL Listed Waters
-  Sediment POC
  -  Other POCs

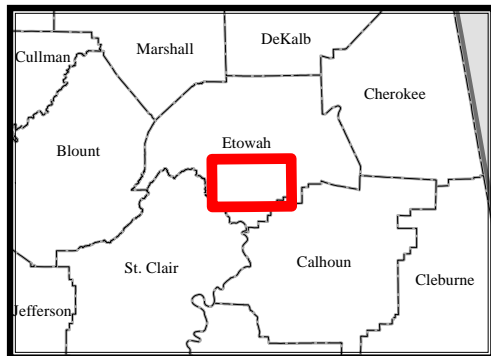
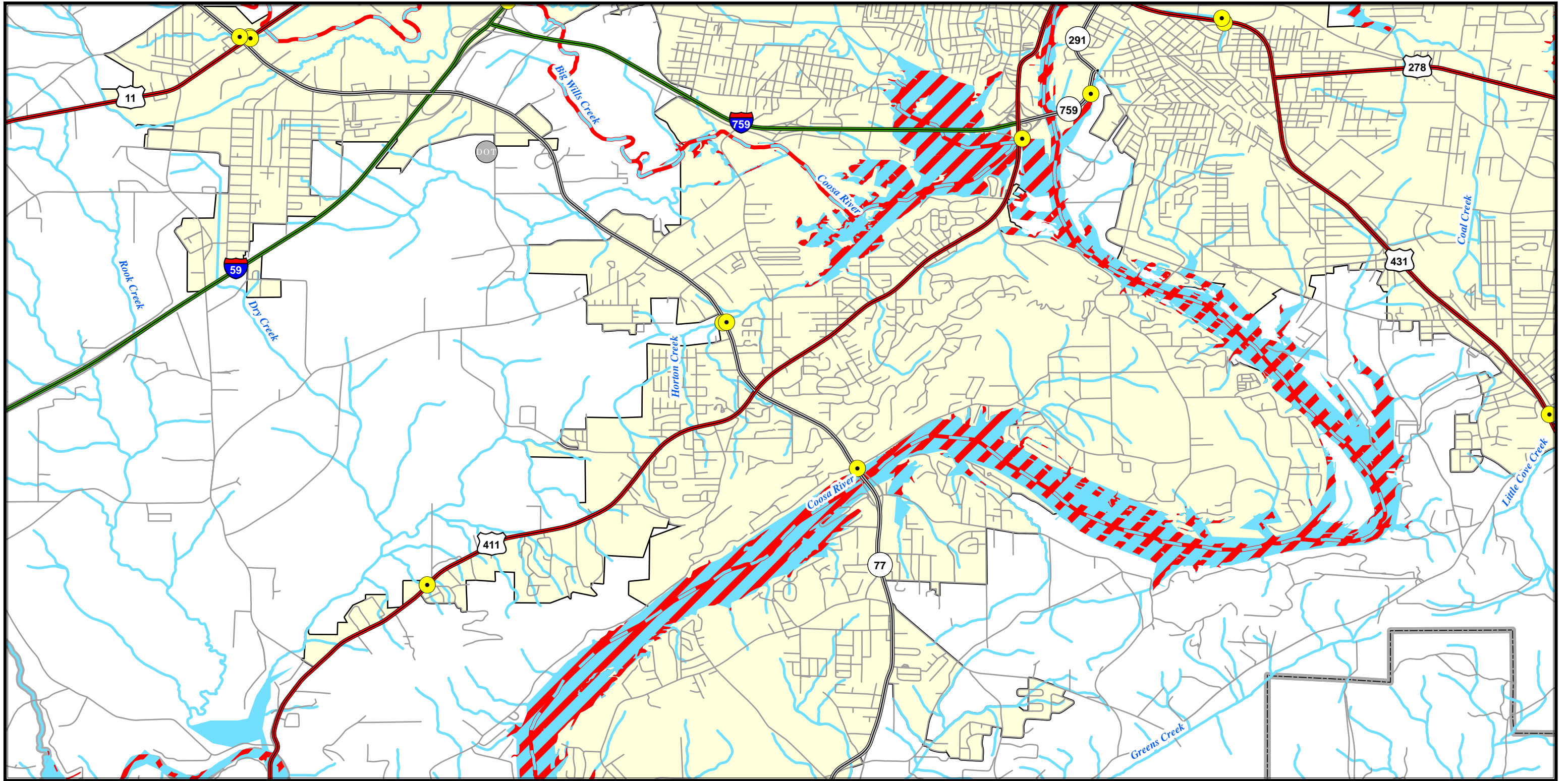


Index #: 20



DEPARTMENT OF TRANSPORTATION  
DESIGN BUREAU - STORMWATER

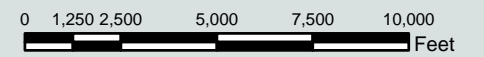




## ALDOT MS4 Areas Gadsden Map: 2

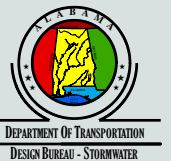
-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

- 303(d) / TMDL Listed Waters
-  Sediment POC
  -  Other POCs

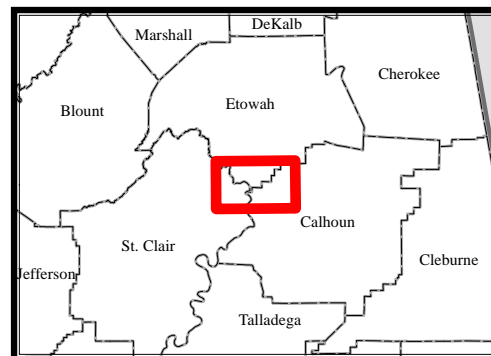
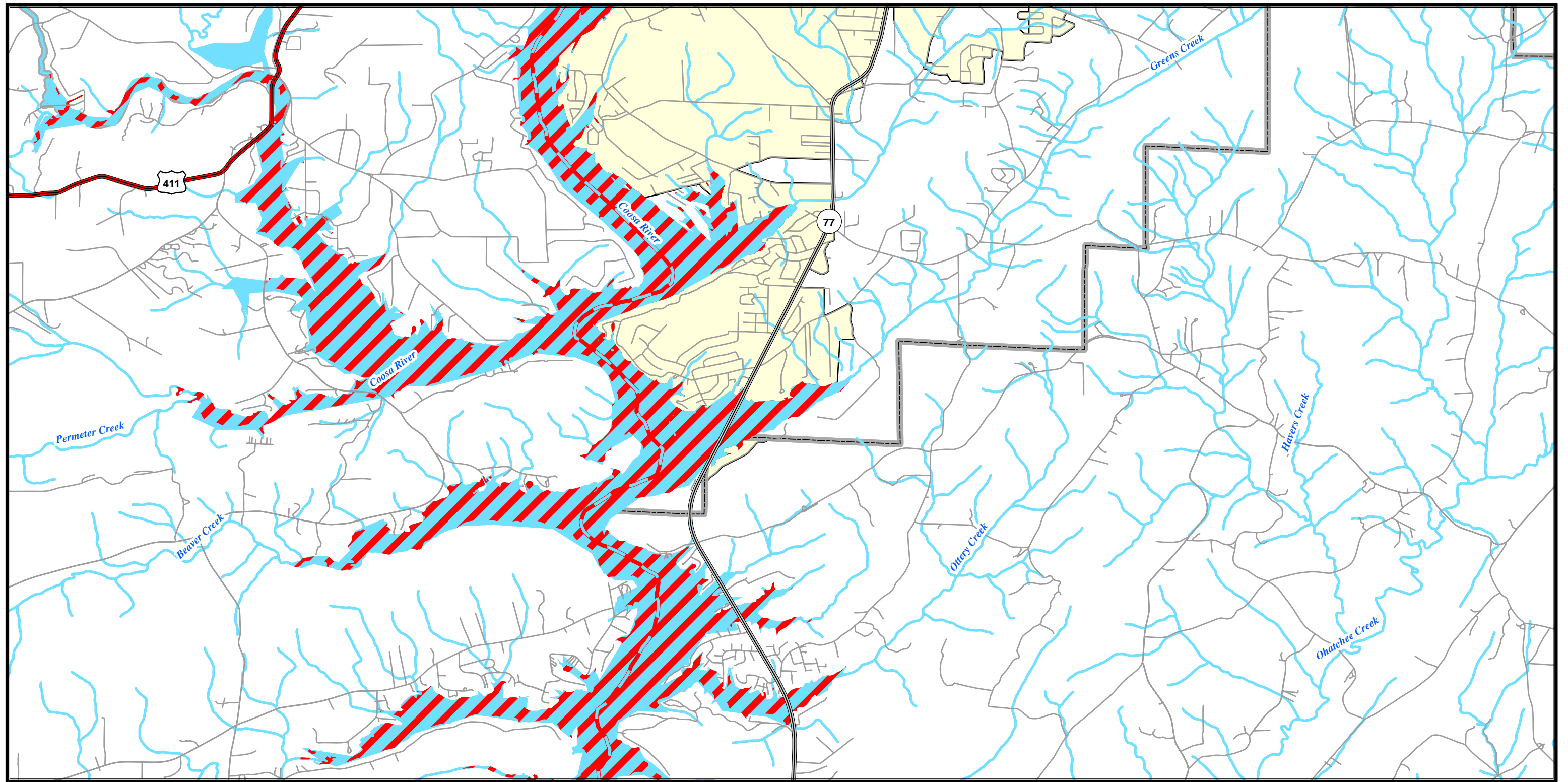


1 inch = 5,000 feet





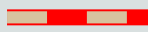

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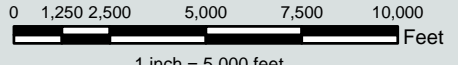
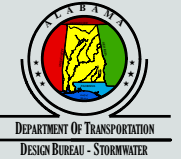
DEPARTMENT OF TRANSPORTATION  
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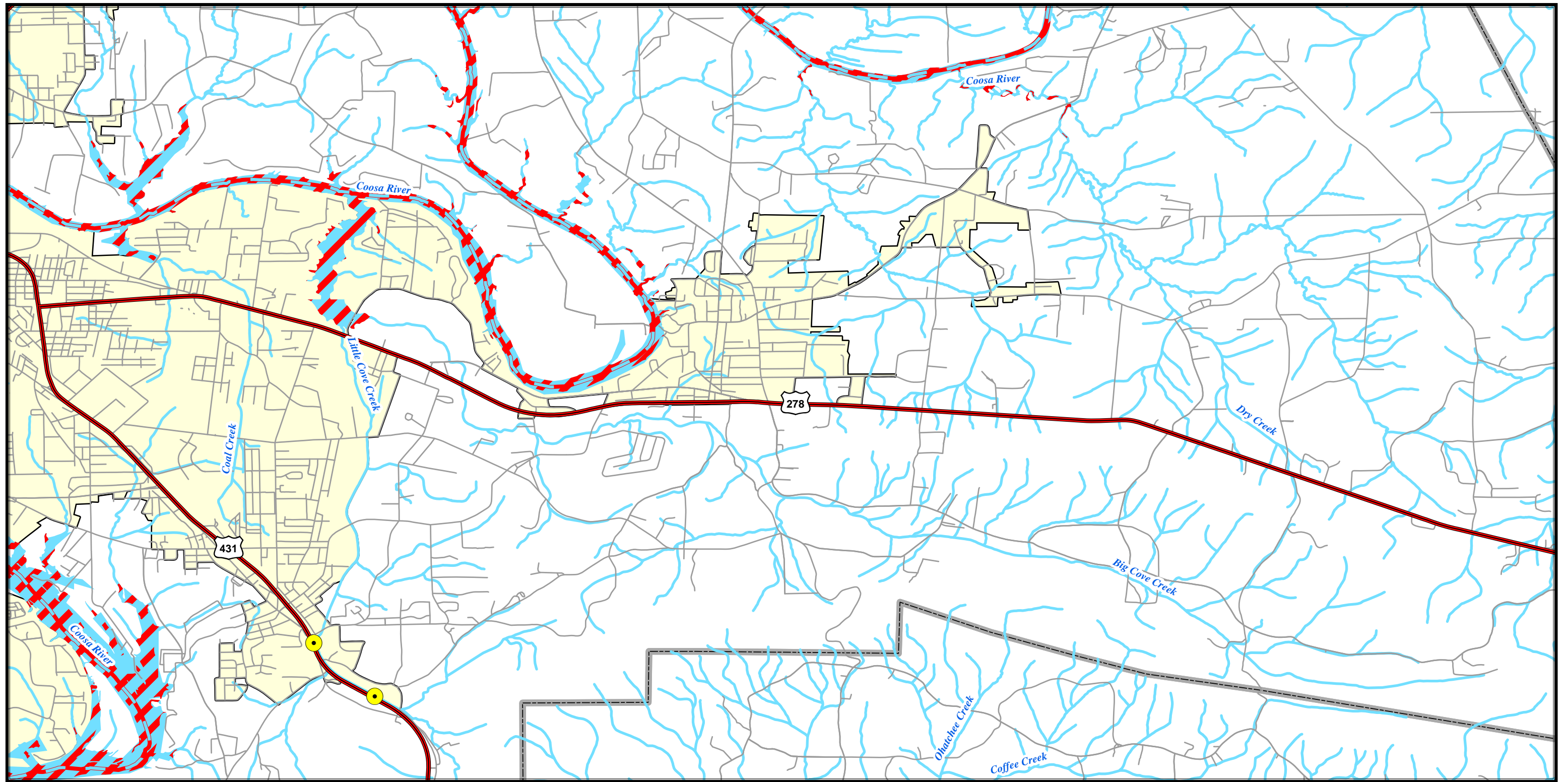
## ALDOT MS4 Areas Gadsden Map: 3

 MS4 Area	 MS4 Monitoring Location	303(d) / TMDL Listed Waters
 ALDOT Support Facility	 Major Outfall on Inventory	 Sediment POC
		 Other POCs



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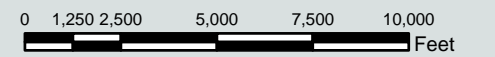


## ALDOT MS4 Areas Gadsden Map: 4

-  MS4 Area
-  ALDOT Support Facility

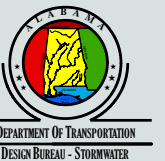
-  MS4 Monitoring Location
-  Major Outfall on Inventory

- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs

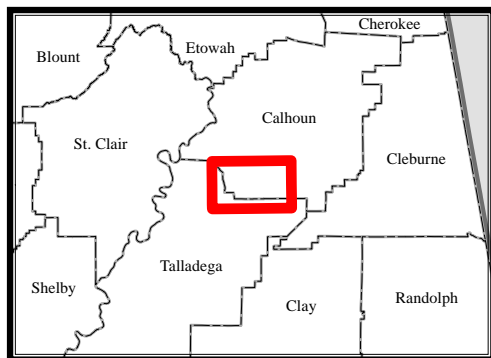
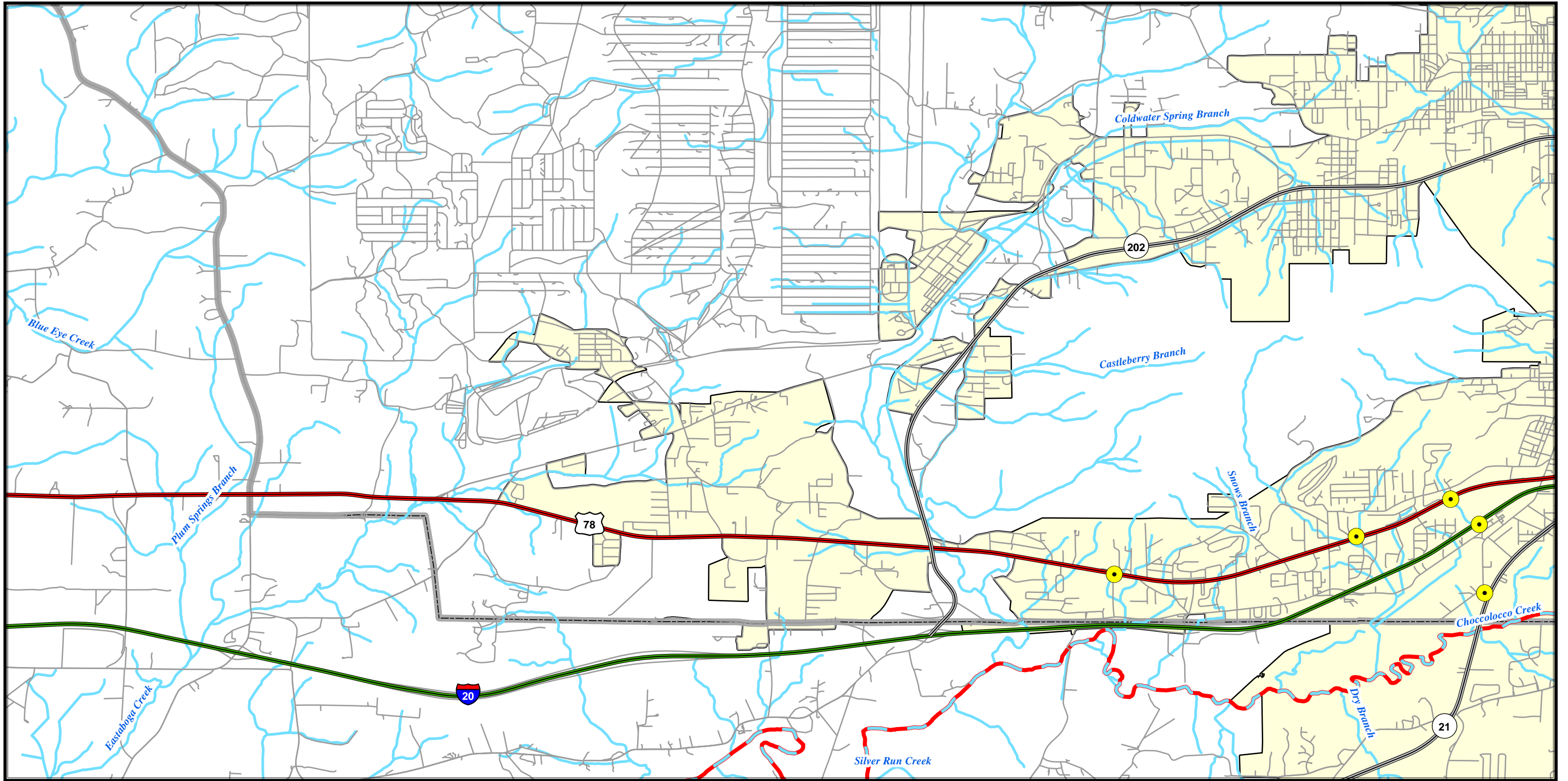


1 inch = 5,000 feet

Index #: 23



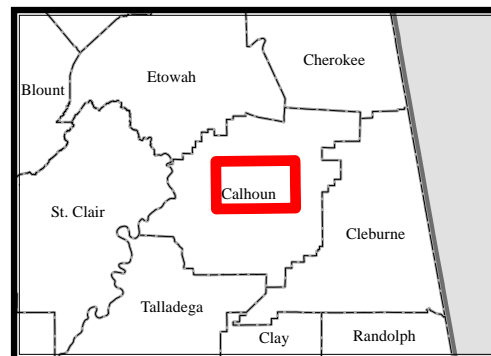
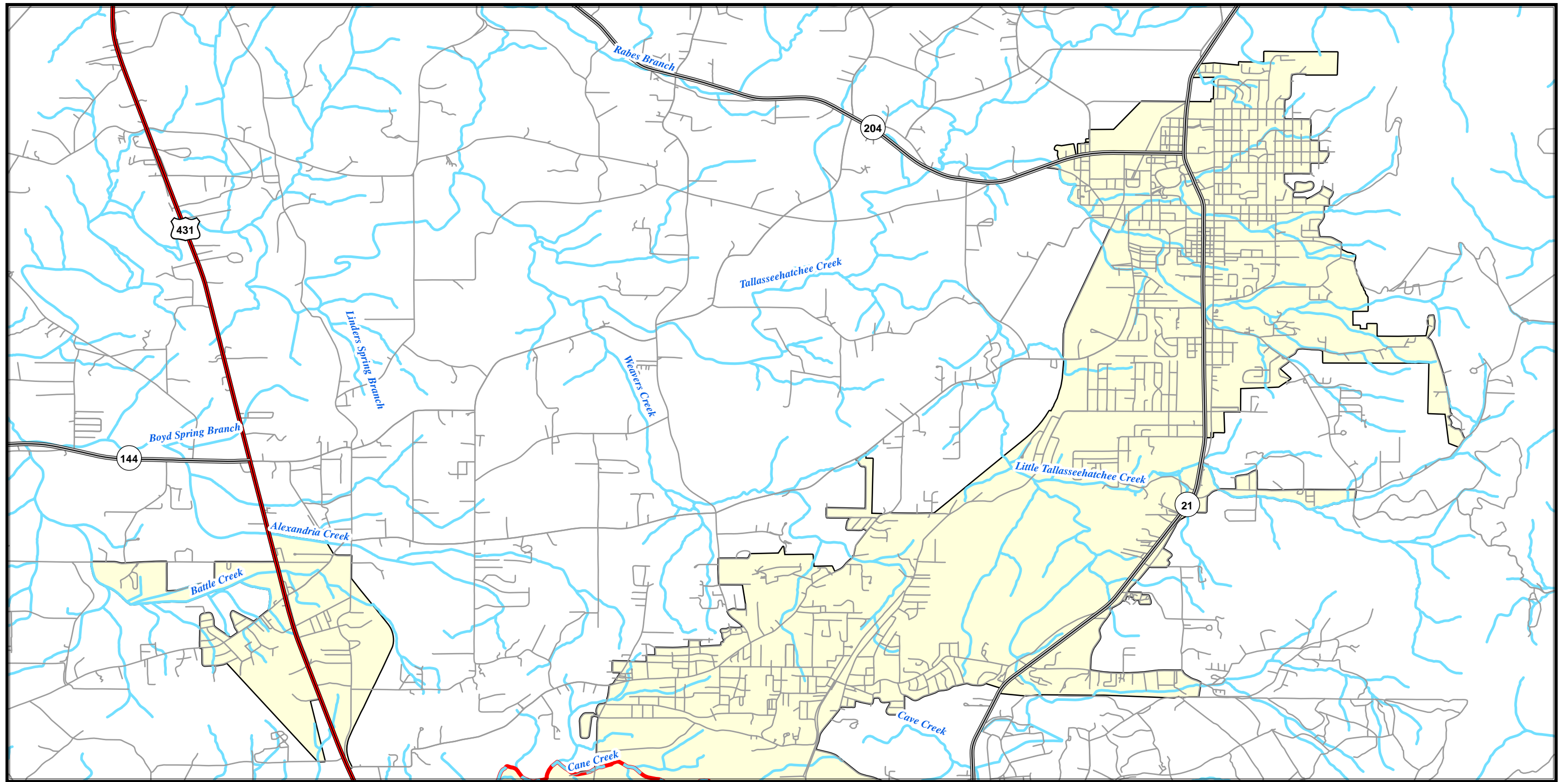




## ALDOT MS4 Areas Anniston Map: 1


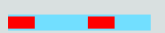
<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: yellow; border: 1px solid black; border-radius: 5px; margin-right: 5px;"></span> MS4 Area</li> <li><span style="display: inline-block; width: 15px; height: 15px; border: 1px solid gray; border-radius: 50%; margin-right: 5px; text-align: center; vertical-align: middle;">DOT</span> ALDOT Support Facility</li> </ul>	<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 0; height: 0; border-left: 5px solid transparent; border-right: 5px solid transparent; border-bottom: 8px solid orange; margin-right: 5px;"></span> MS4 Monitoring Location</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: yellow; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span> Major Outfall on Inventory</li> </ul>	<p>303(d) / TMDL Listed Waters</p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 20px; height: 5px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, red 2px, red 4px); border: 1px solid black; margin-right: 5px;"></span> Sediment POC</li> <li><span style="display: inline-block; width: 20px; height: 5px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, red 2px, blue 4px); border: 1px solid black; margin-right: 5px;"></span> Other POCs</li> </ul>
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## ALDOT MS4 Areas Anniston Map: 2

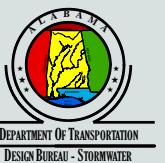
-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs

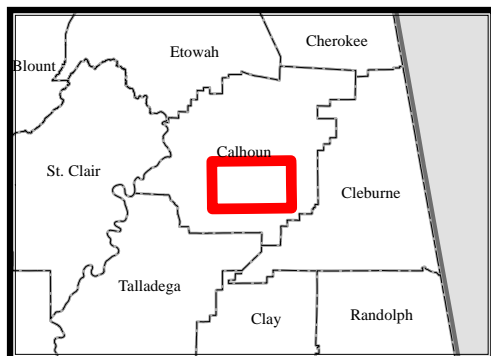
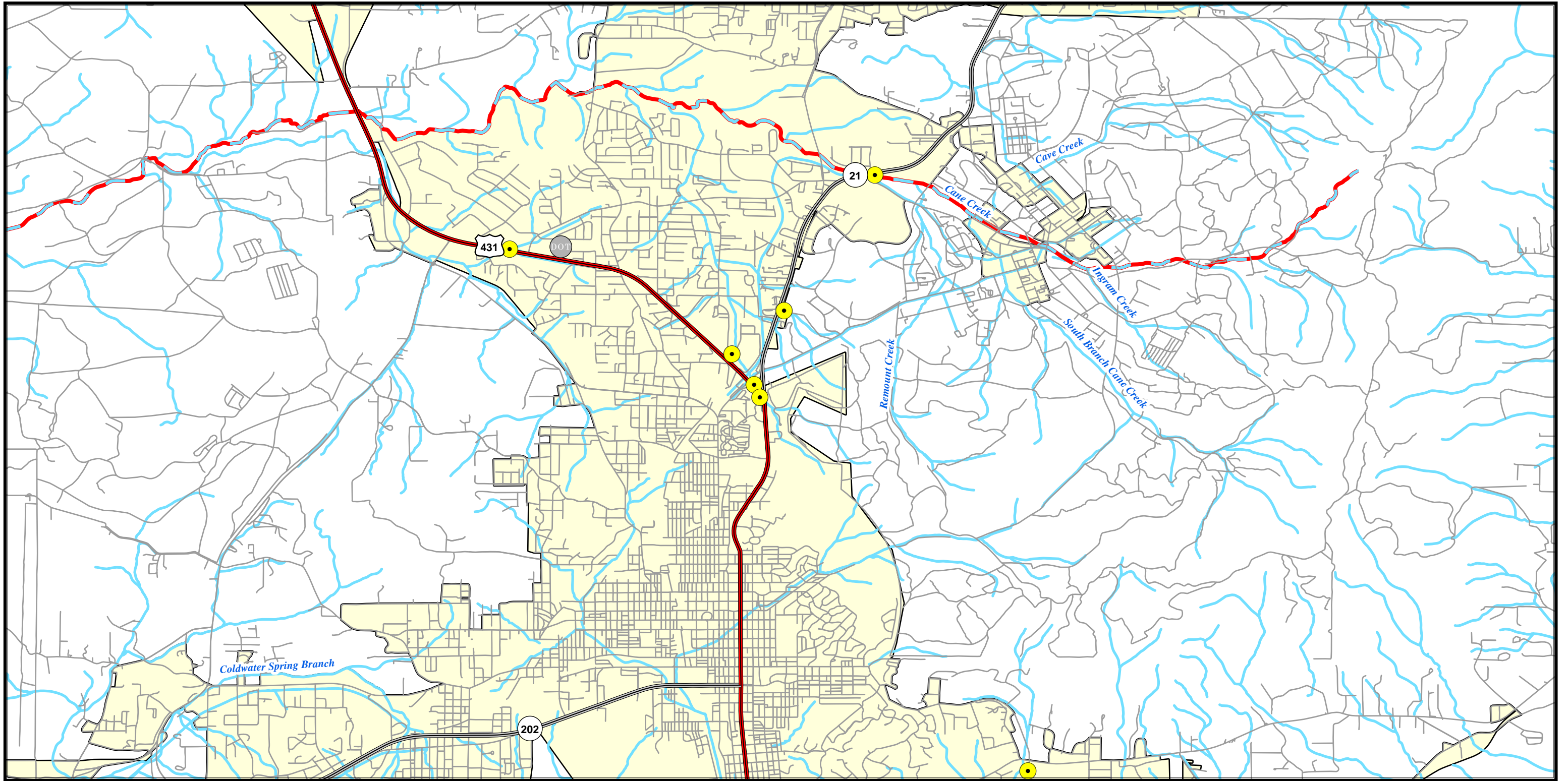


1 inch = 5,000 feet

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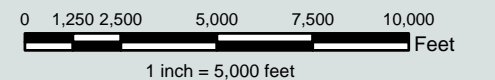




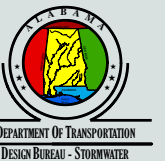
## ALDOT MS4 Areas Anniston Map: 3

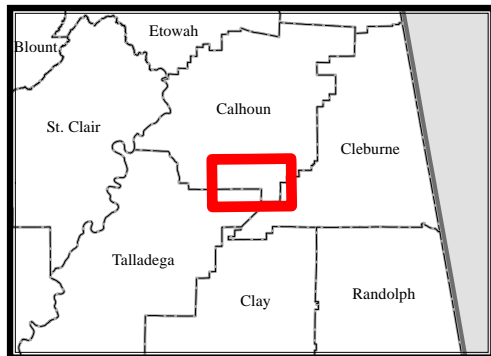
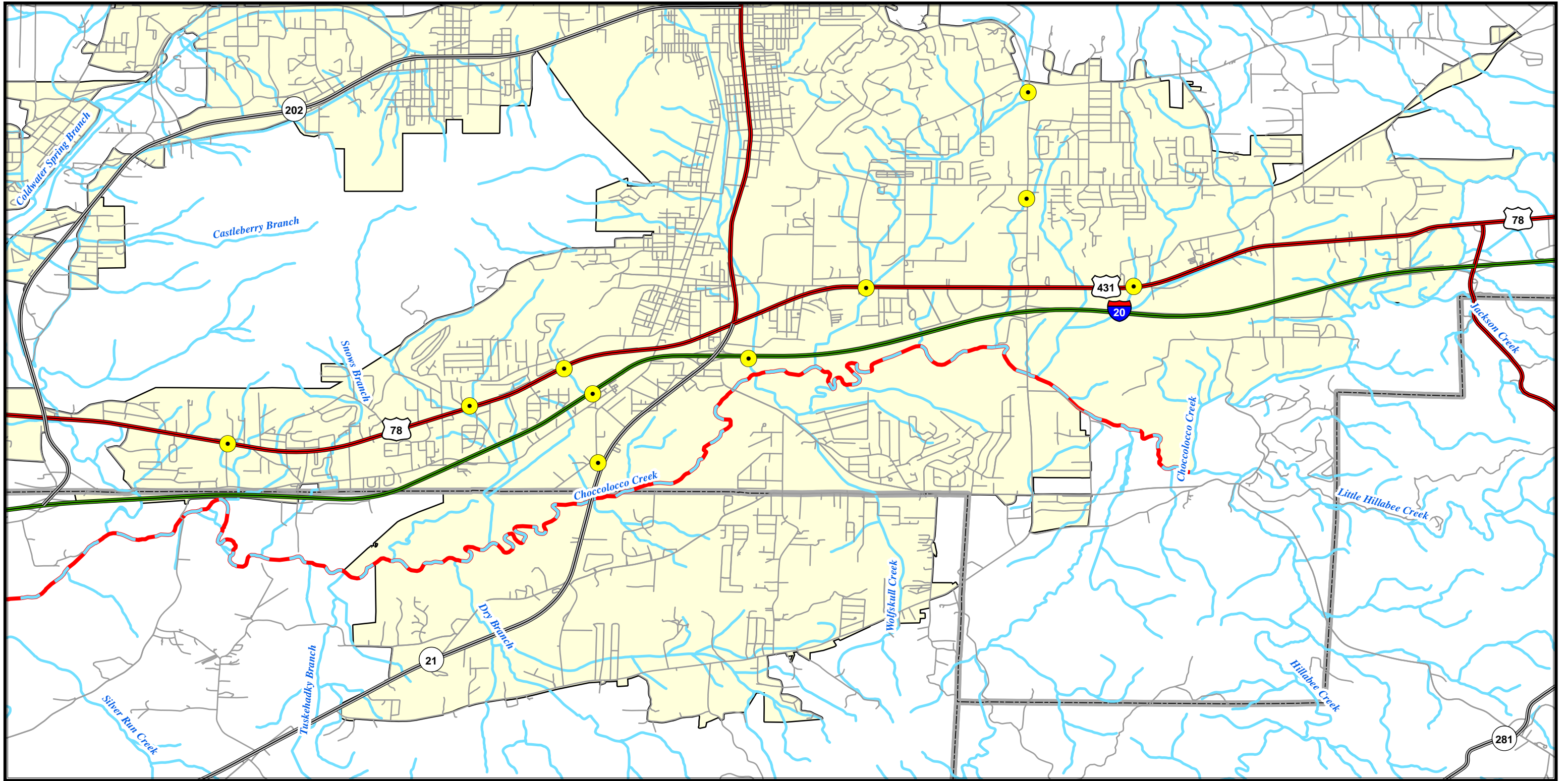
-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs





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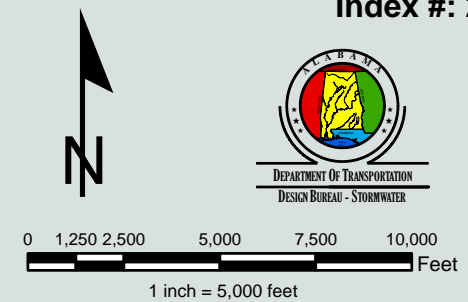




# ALDOT MS4 Areas Anniston Map: 4

-  MS4 Area
-  MS4 Monitoring Location
-  Major Outfall on Inventory
-  ALDOT Support Facility

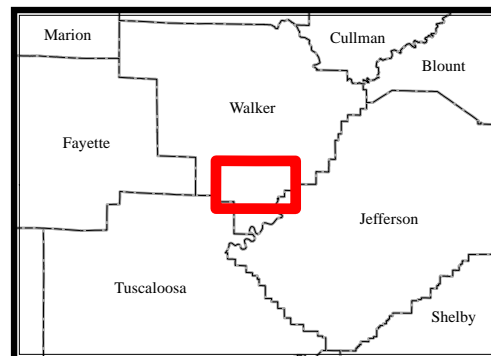
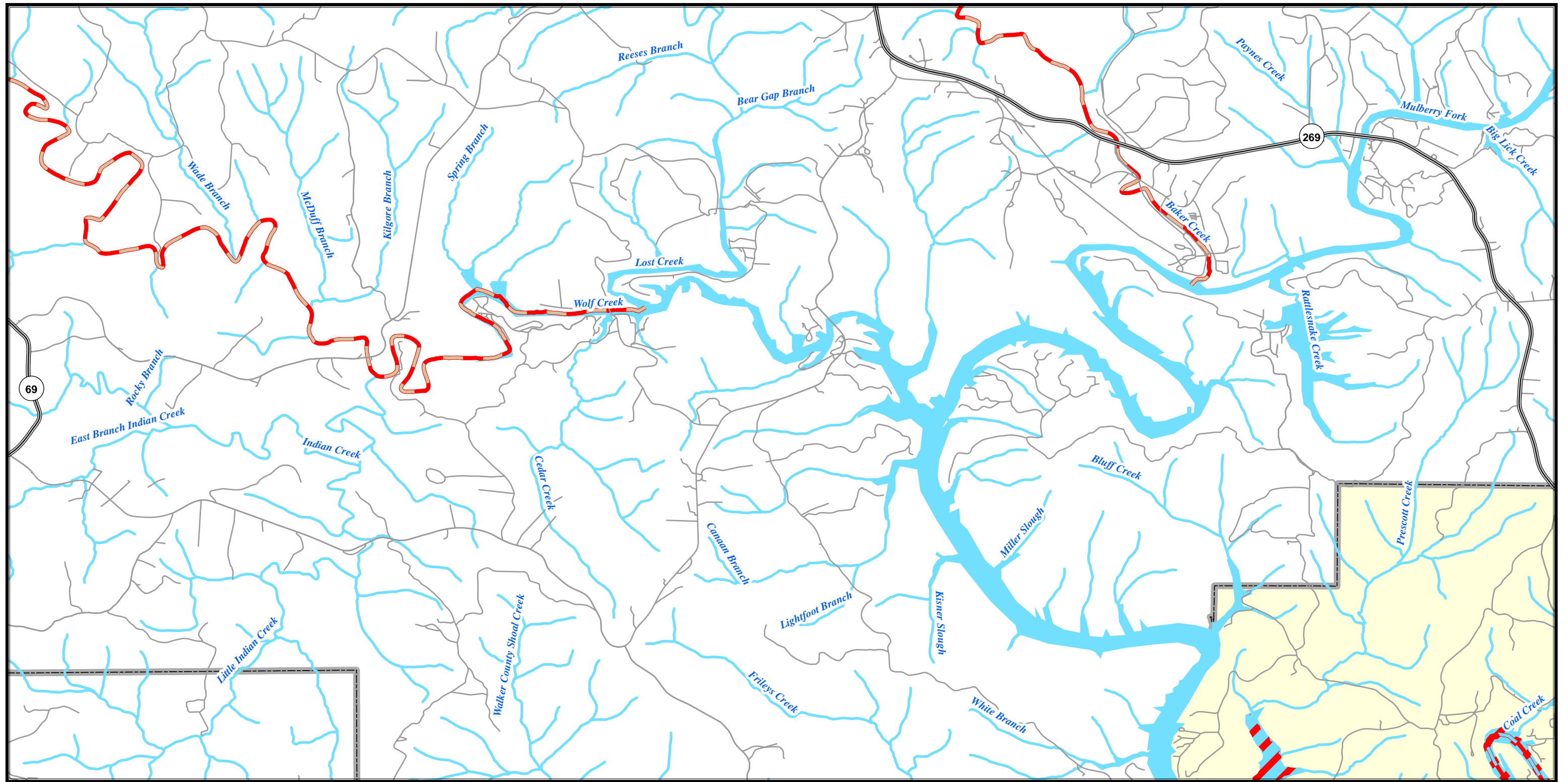
- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs



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**ALDOT MS4 Areas Jefferson/Shelby County Map: 1**

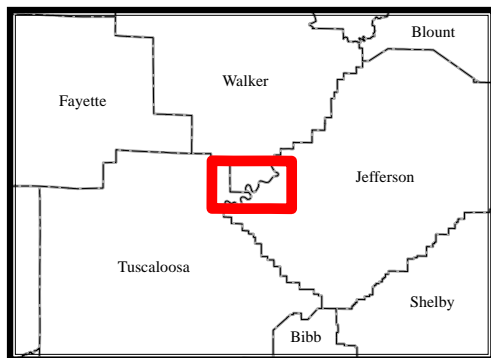
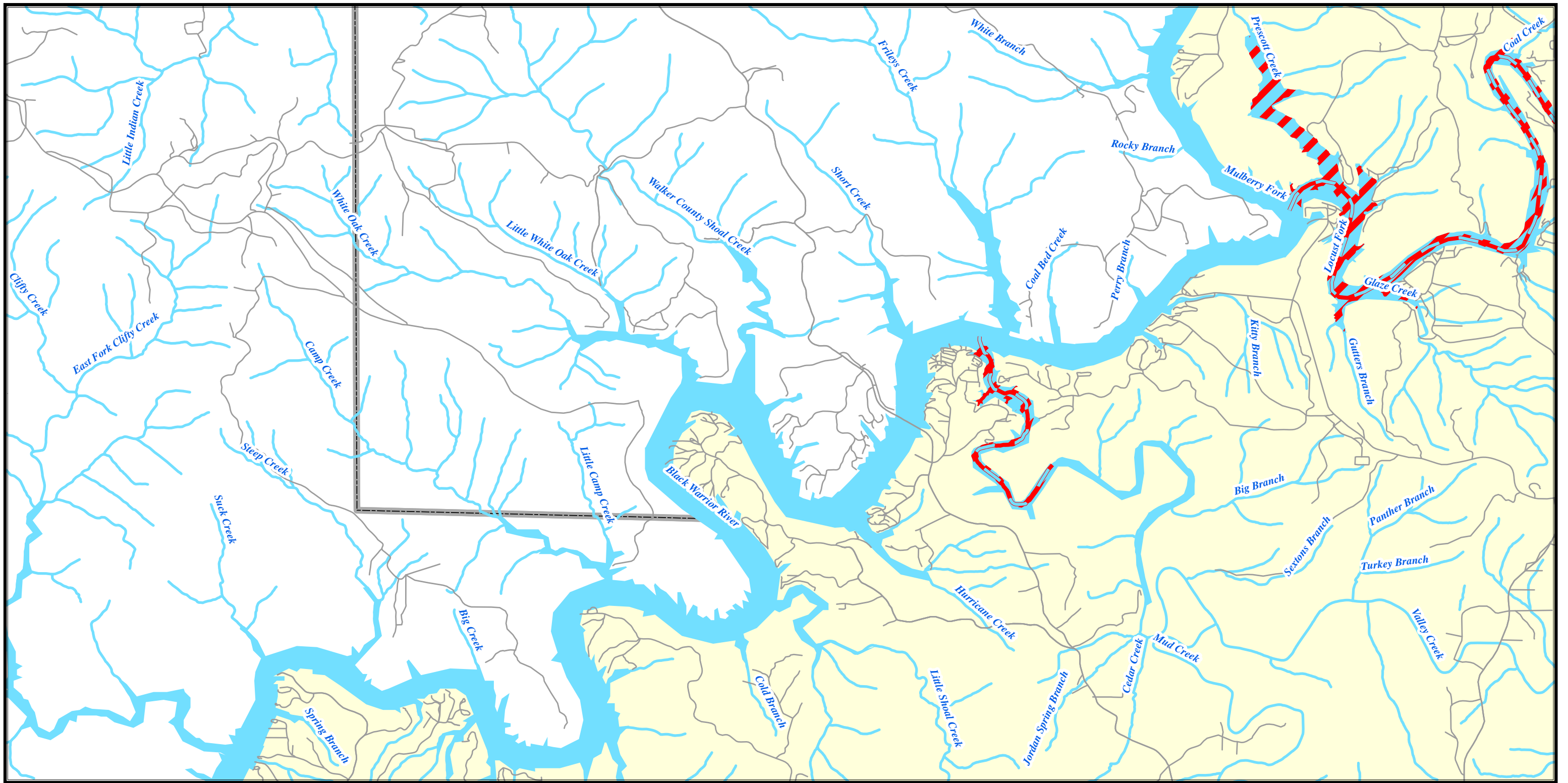
Index #: 28

 MS4 Area	 MS4 Monitoring Location	303(d) / TMDL Listed Waters
 ALDOT Support Facility	 Major Outfall on Inventory	 Sediment POC
		 Other POCs







  
 1 inch = 5,000 feet


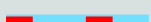

  
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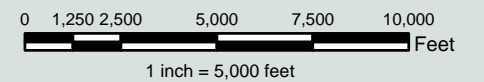


# ALDOT MS4 Areas Jefferson/Shelby County Map: 2

-  MS4 Area
-  ALDOT Support Facility

-  MS4 Monitoring Location
-  Major Outfall on Inventory

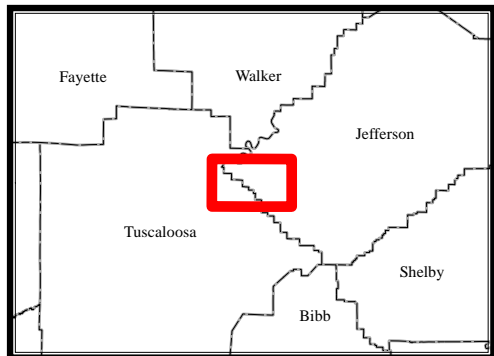
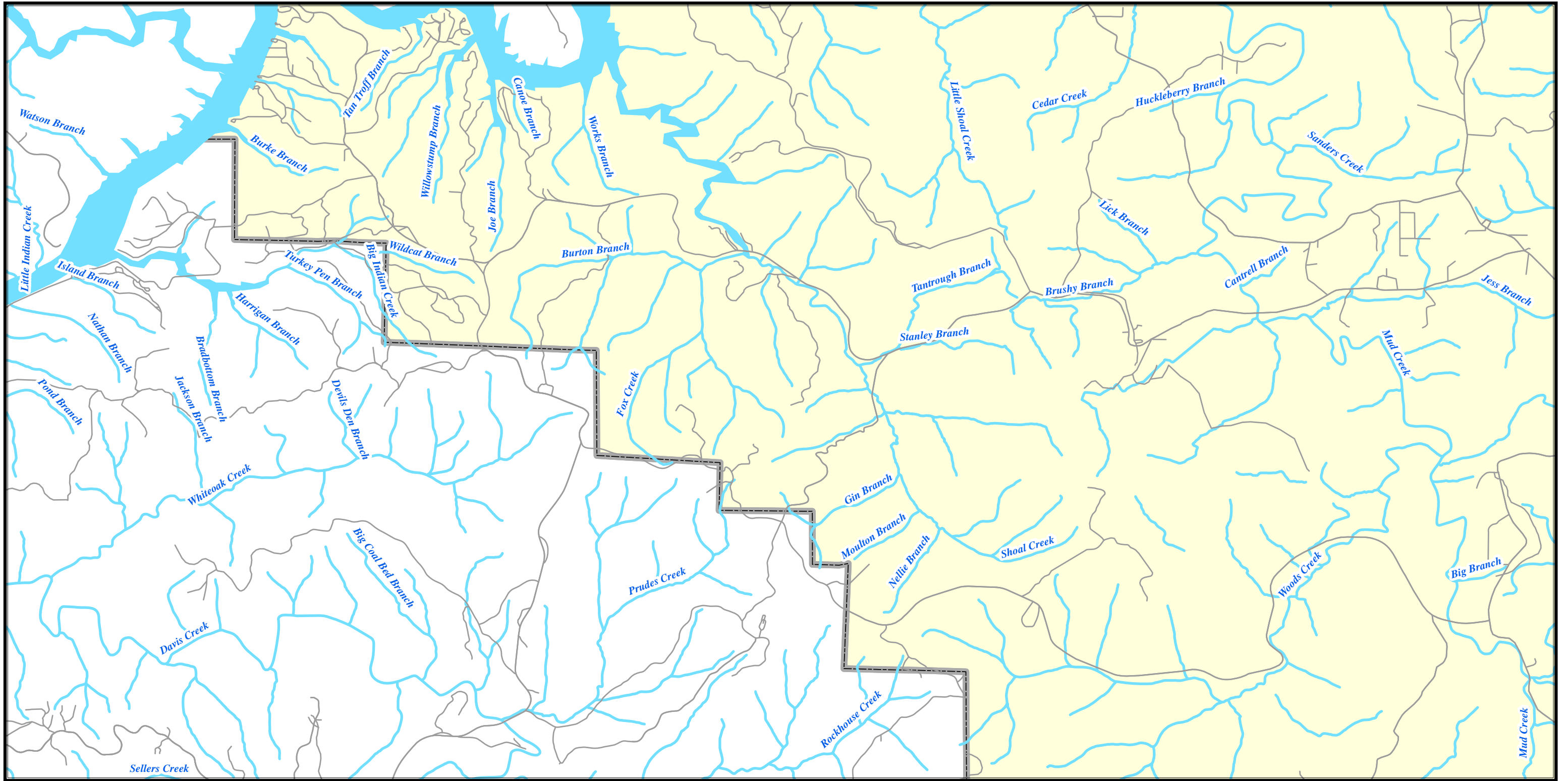
- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs










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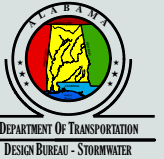




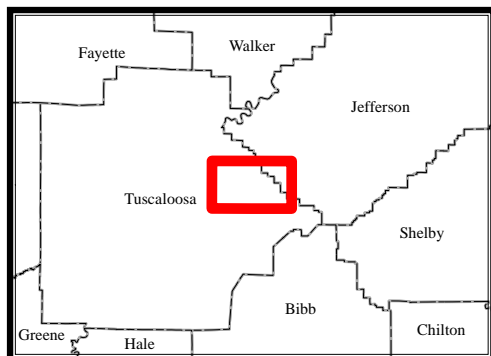
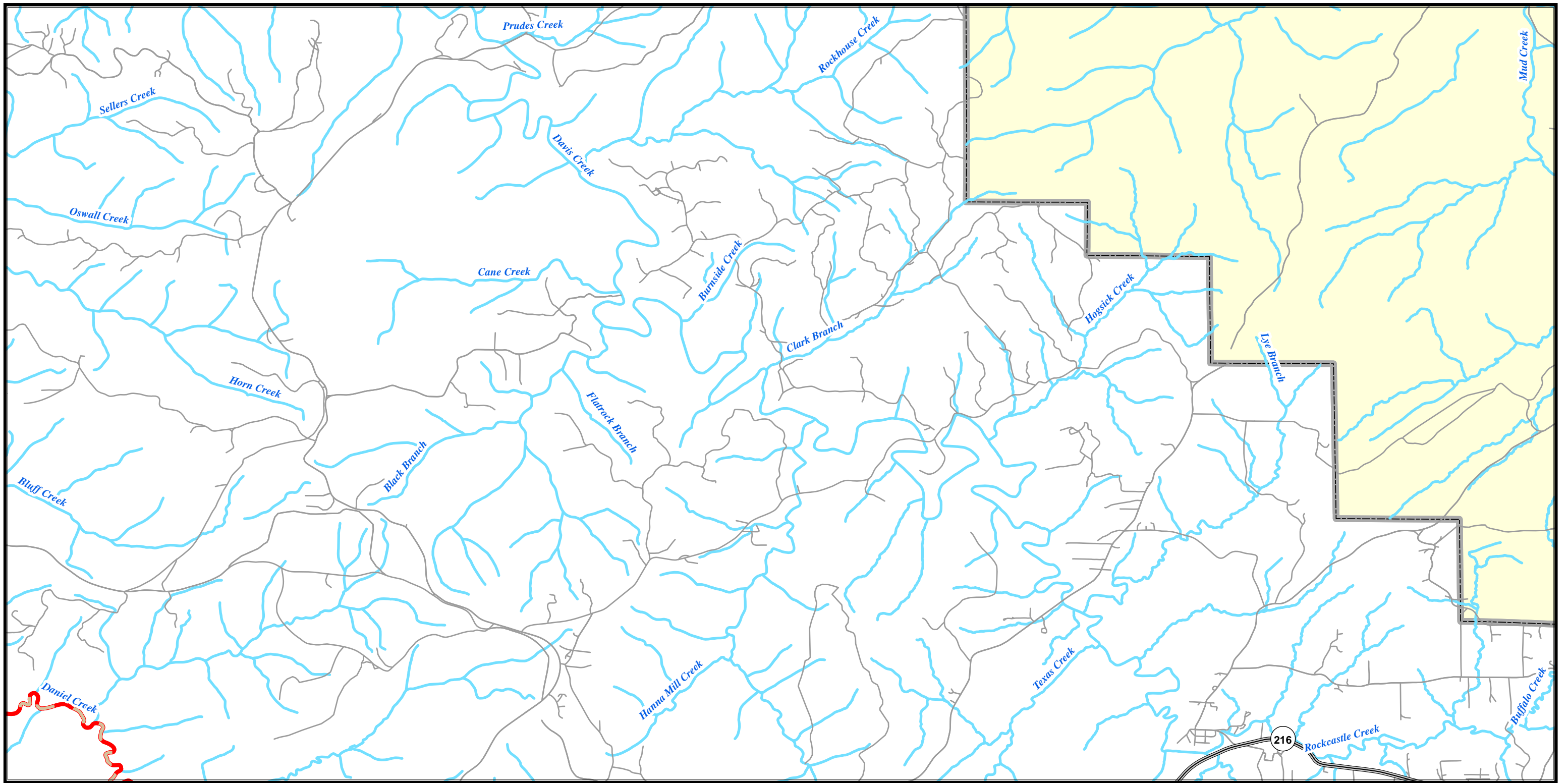
**ALDOT MS4 Areas Jefferson/Shelby County Map: 3** Index #: 30

 MS4 Area	 MS4 Monitoring Location	 303(d) / TMDL Listed Waters
 ALDOT Support Facility	 Major Outfall on Inventory	 Sediment POC
		 Other POCs





  
 1 inch = 5,000 feet







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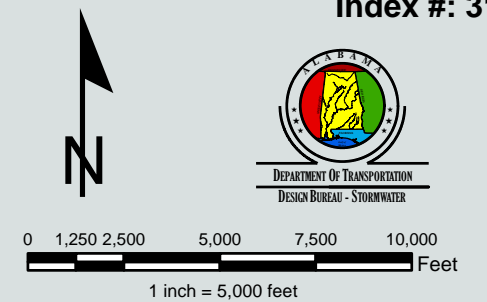


# ALDOT MS4 Areas Jefferson/Shelby County Map: 4

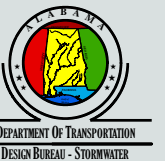
-  MS4 Area
-  ALDOT Support Facility

-  MS4 Monitoring Location
-  Major Outfall on Inventory

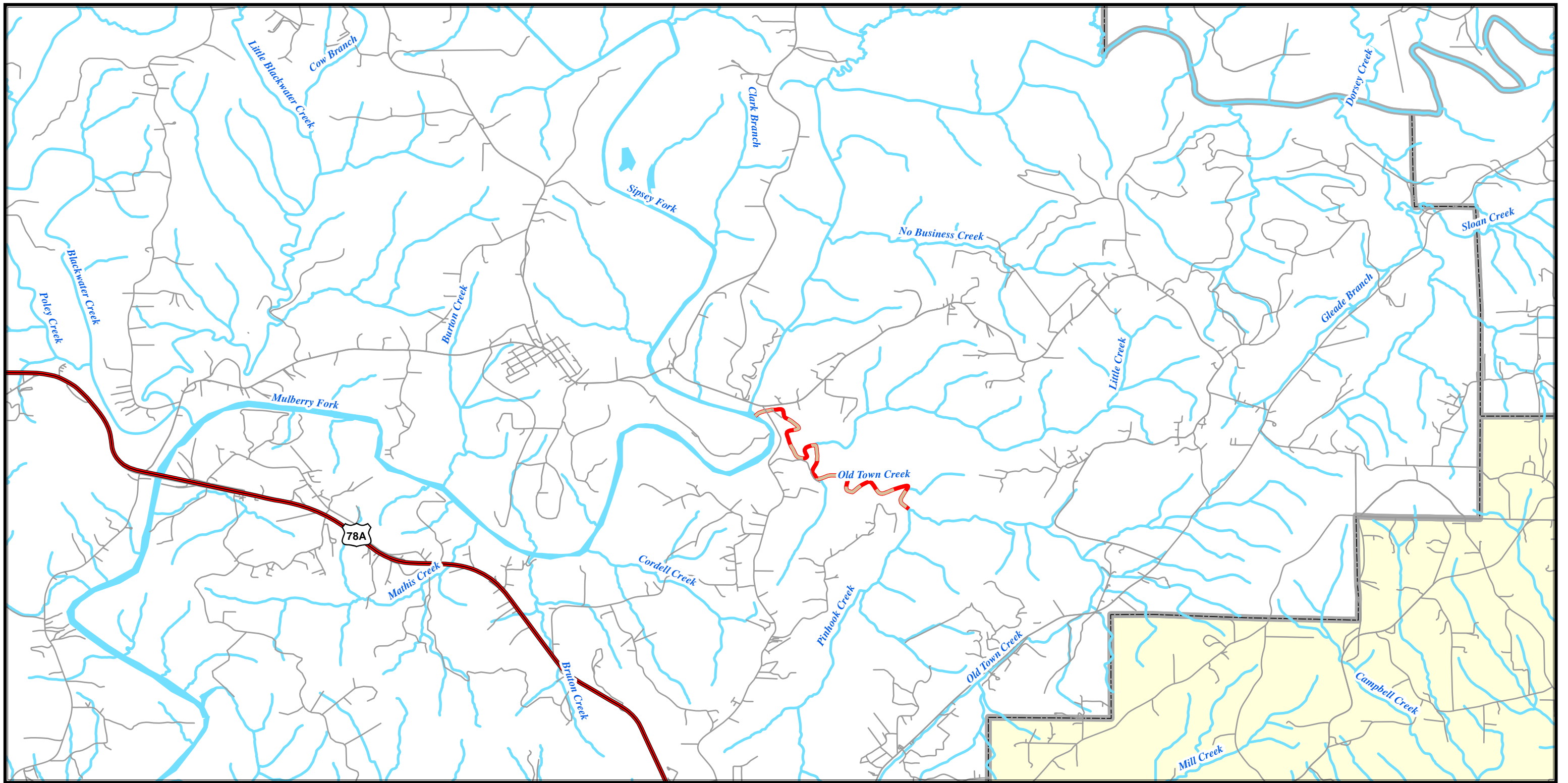
- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs





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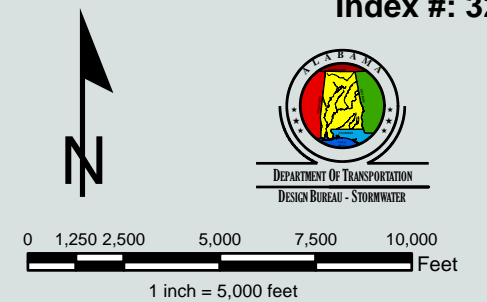


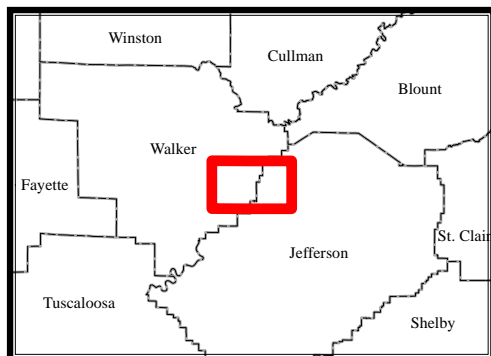
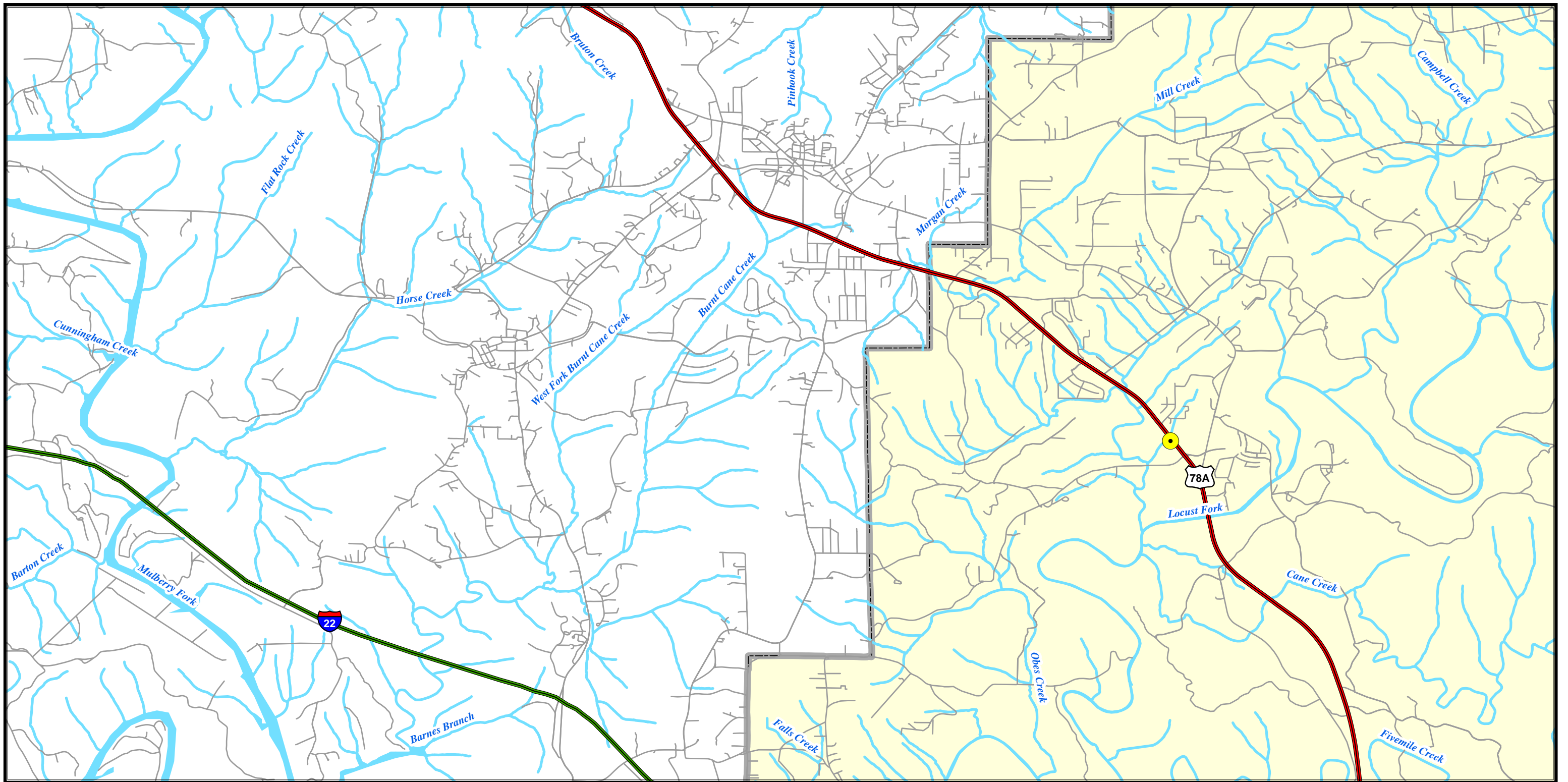
**ALDOT MS4 Areas Jefferson/Shelby County Map: 5**

-  MS4 Area
-  ALDOT Support Facility



-  MS4 Monitoring Location
-  Major Outfall on Inventory



- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs



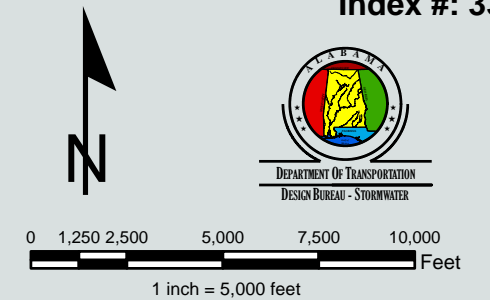


# ALDOT MS4 Areas Jefferson/Shelby County Map: 6

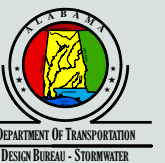
-  MS4 Area
-  ALDOT Support Facility

-  MS4 Monitoring Location
-  Major Outfall on Inventory

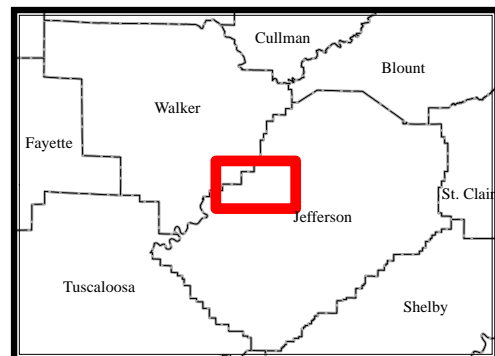
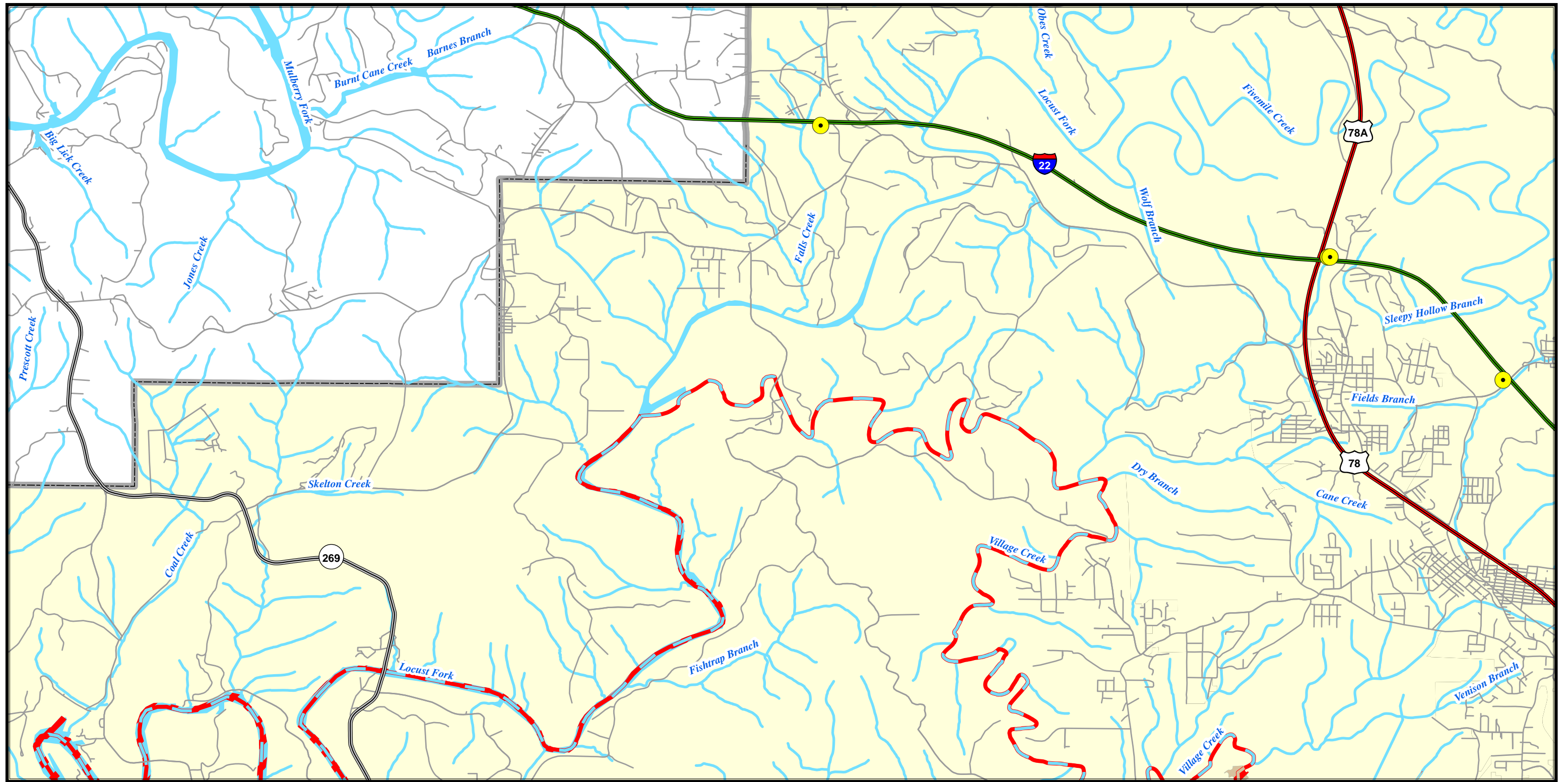
-  303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs





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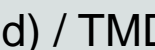


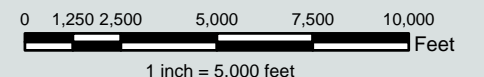


# ALDOT MS4 Areas Jefferson/Shelby County Map: 7

-  MS4 Area
-  ALDOT Support Facility

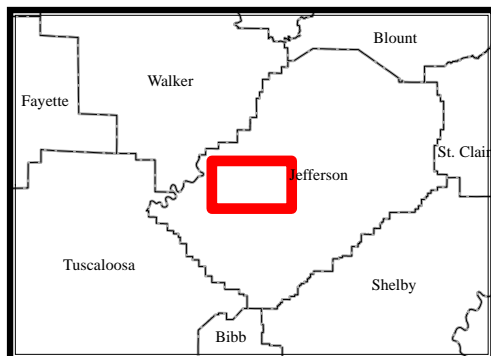
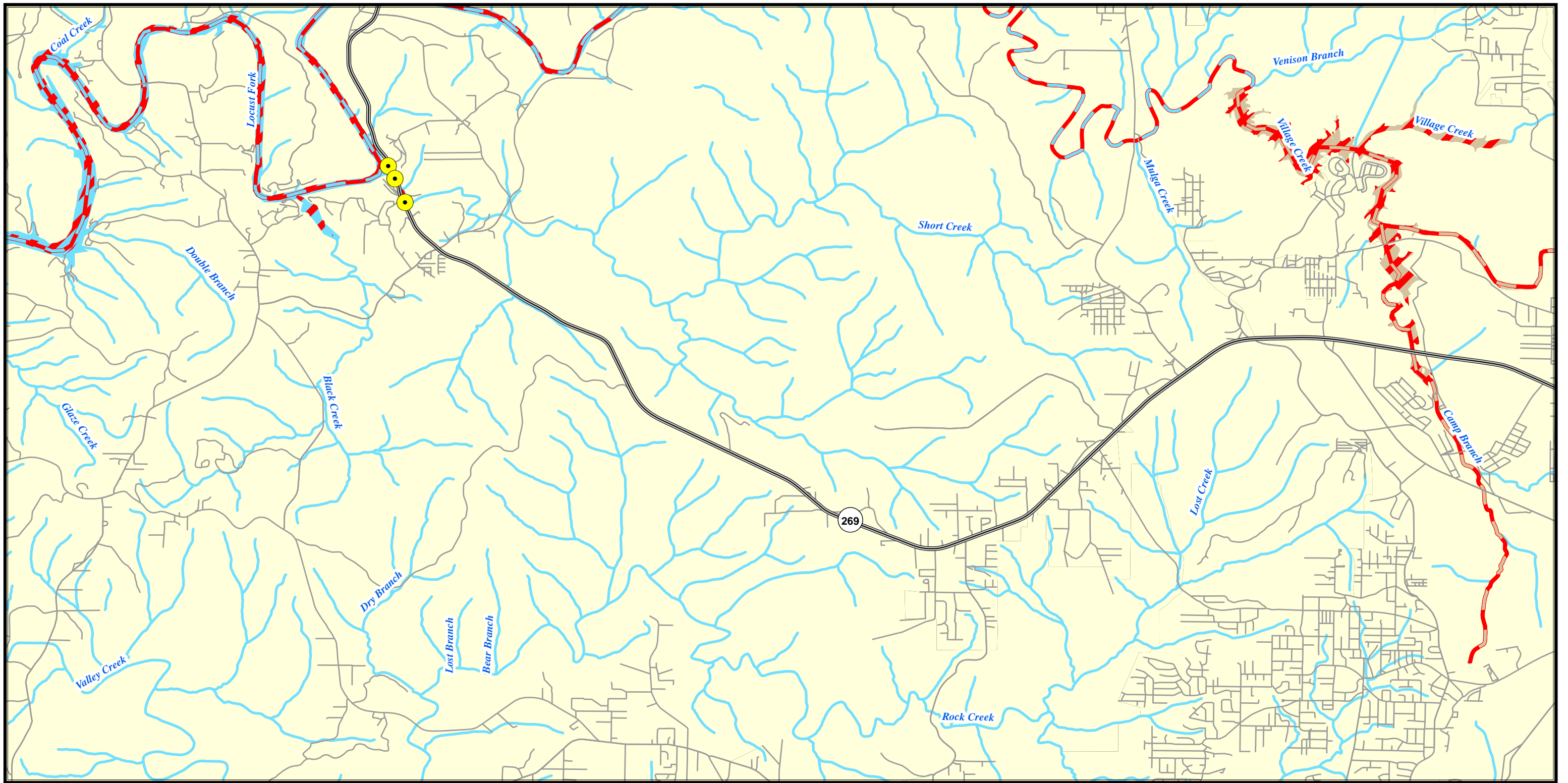
-  MS4 Monitoring Location
-  Major Outfall on Inventory

-  303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs







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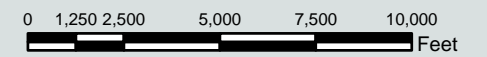


# ALDOT MS4 Areas Jefferson/Shelby County Map: 8

-  MS4 Area
-  ALDOT Support Facility

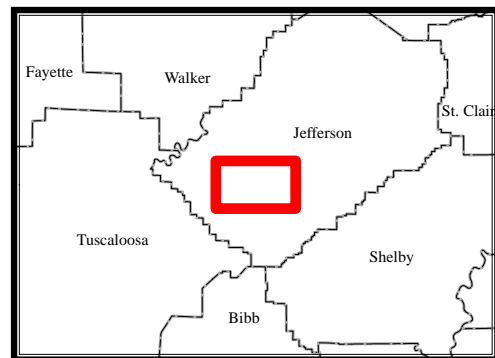
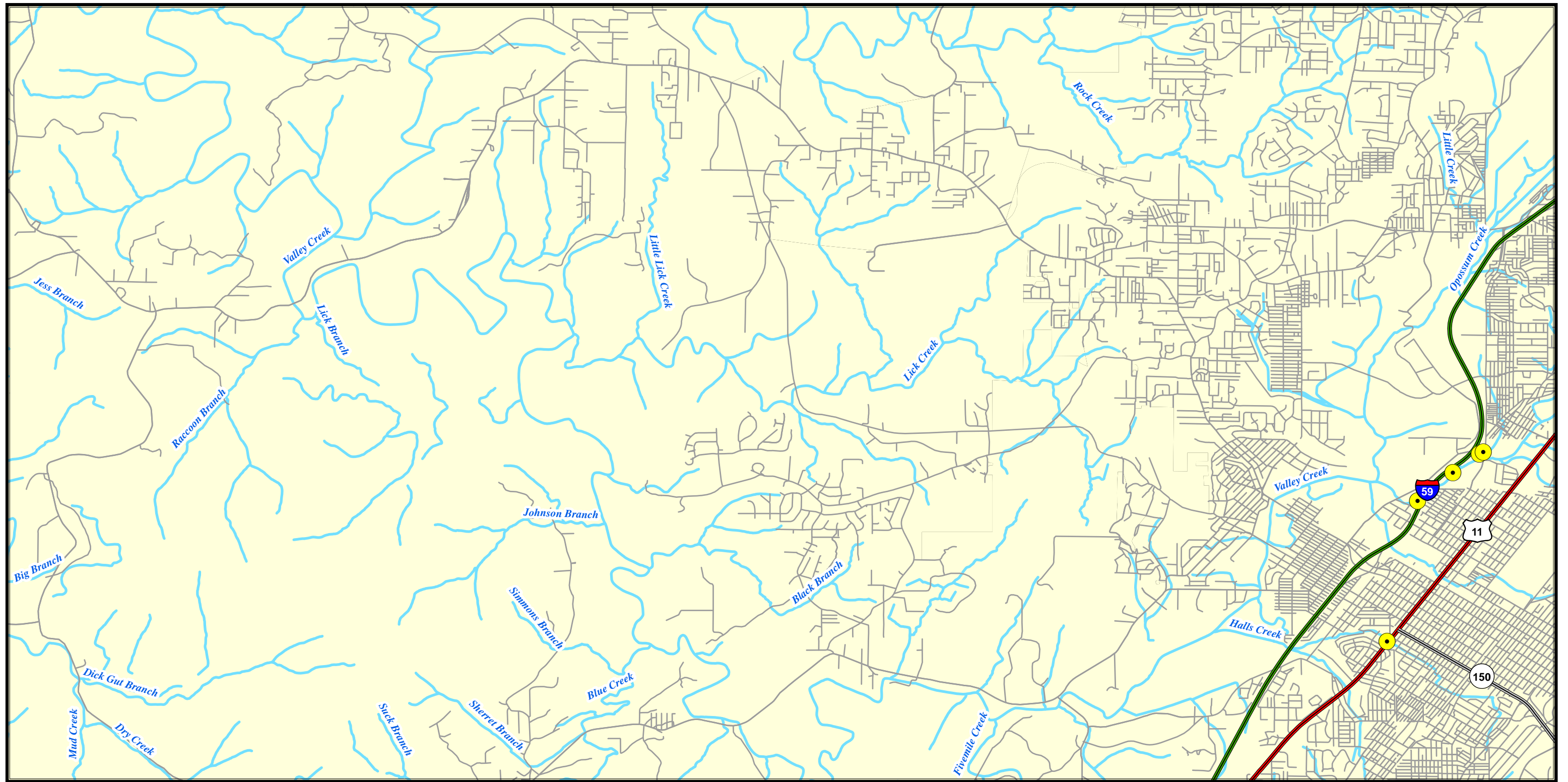
-  MS4 Monitoring Location
-  Major Outfall on Inventory

- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs



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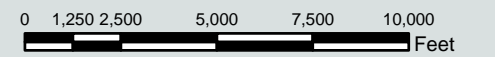




# ALDOT MS4 Areas Jefferson/Shelby County Map: 9

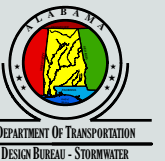
-  MS4 Area
-  MS4 Monitoring Location
-  Major Outfall on Inventory
-  ALDOT Support Facility

- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs

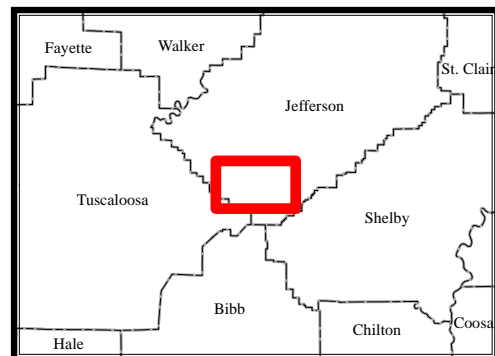
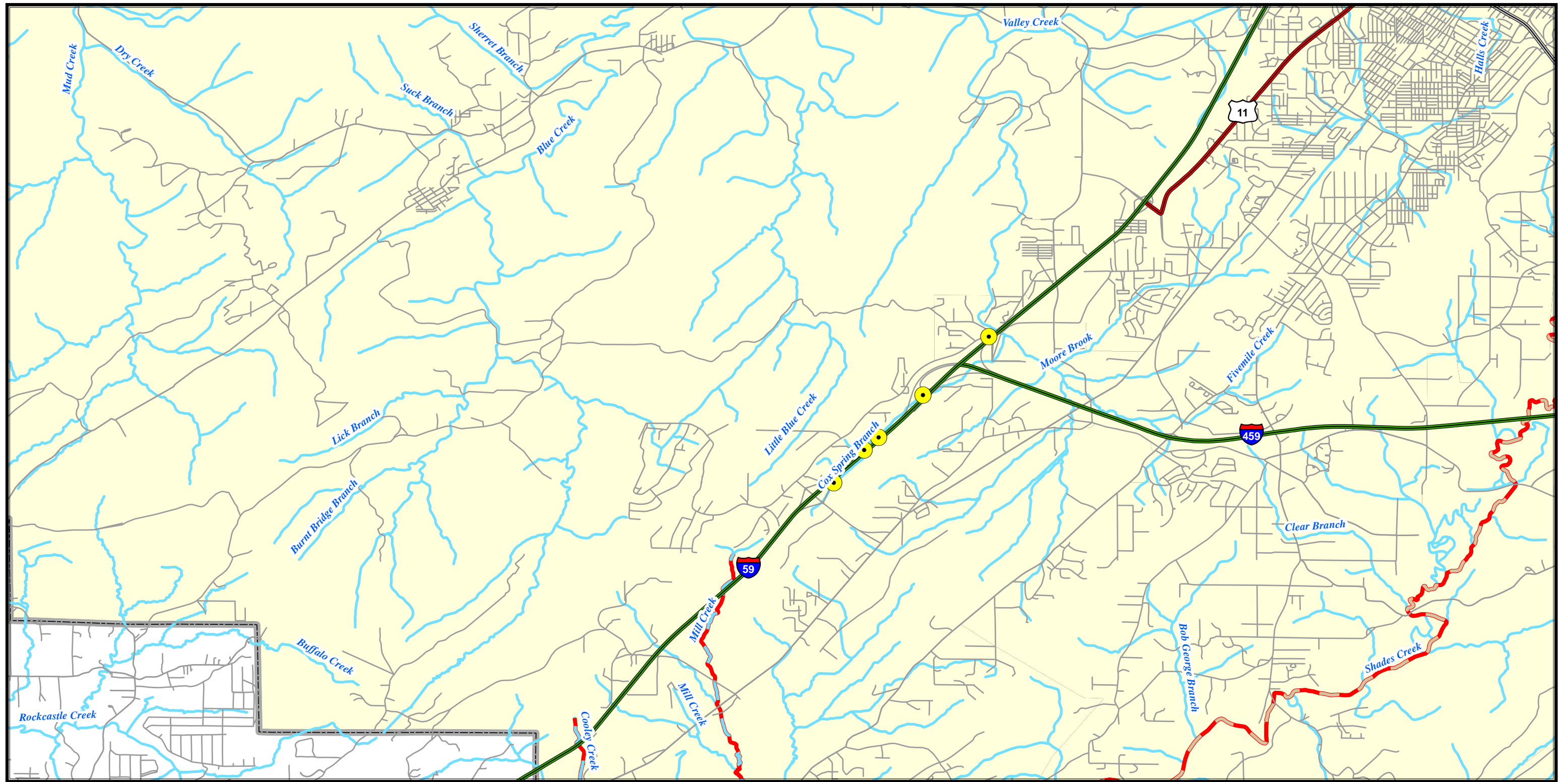


1 inch = 5,000 feet



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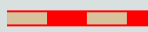

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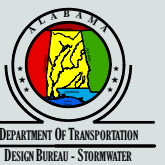
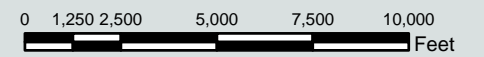


# ALDOT MS4 Areas Jefferson/Shelby County Map: 10

-  MS4 Area
-  ALDOT Support Facility

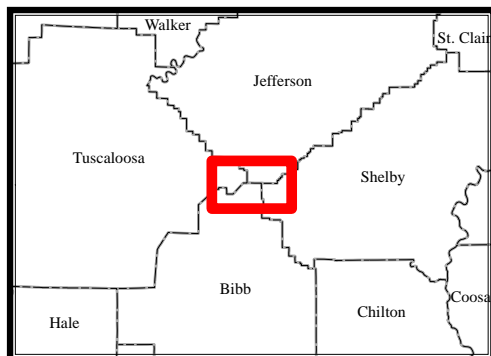
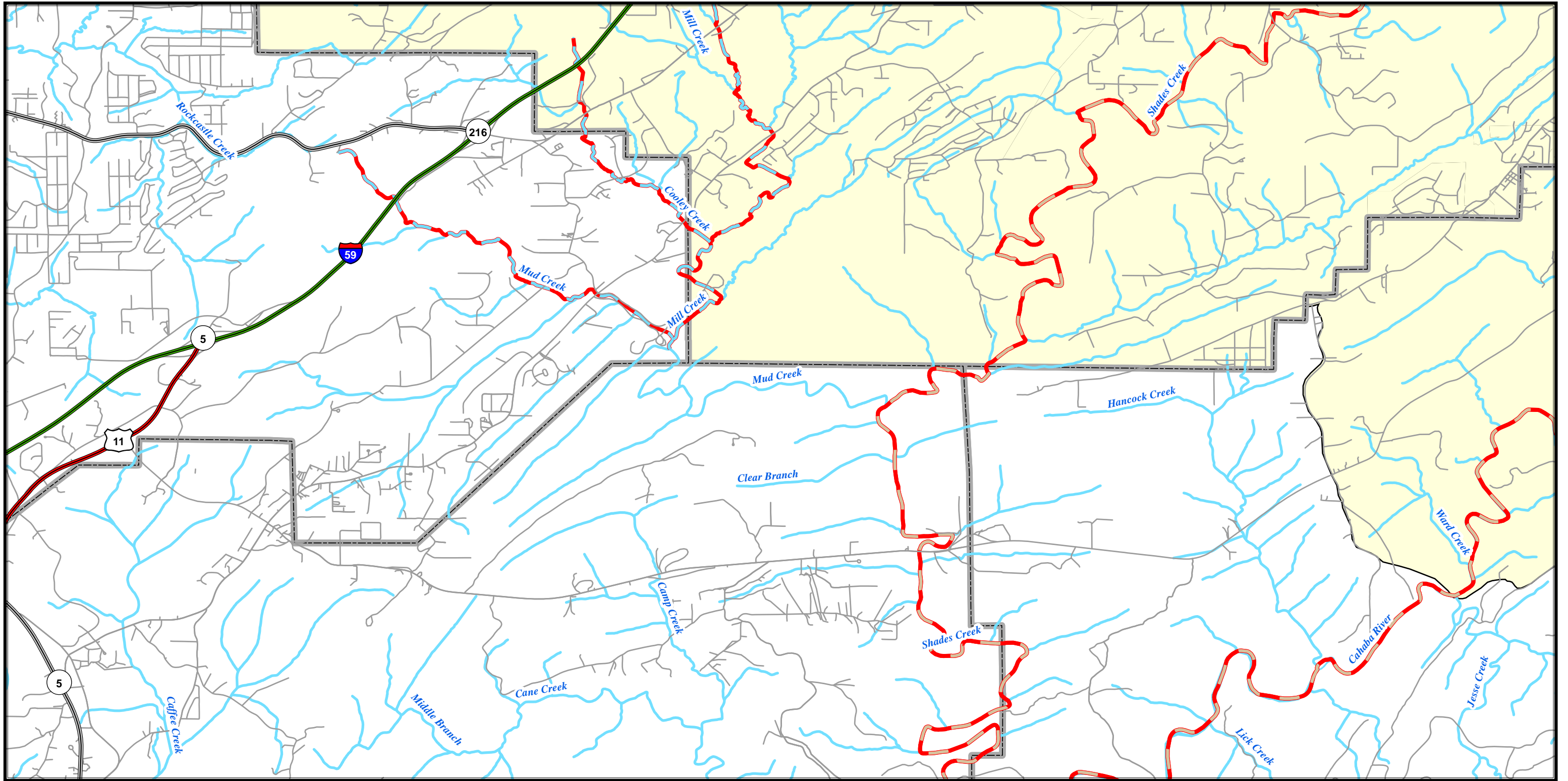
-  MS4 Monitoring Location
-  Major Outfall on Inventory

- 303(d) / TMDL Listed Waters
-  Sediment POC
  -  Other POCs







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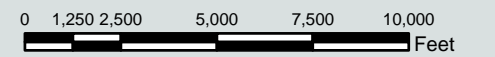


# ALDOT MS4 Areas Jefferson/Shelby County Map: 11

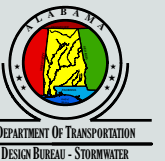
-  MS4 Area
-  ALDOT Support Facility

-  MS4 Monitoring Location
-  Major Outfall on Inventory

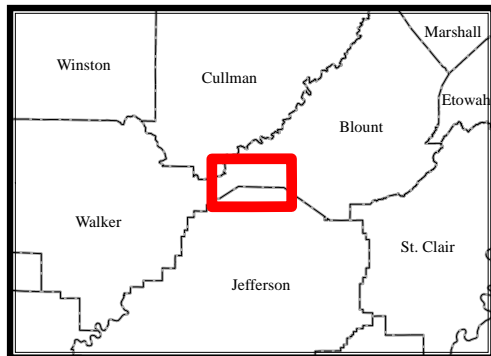
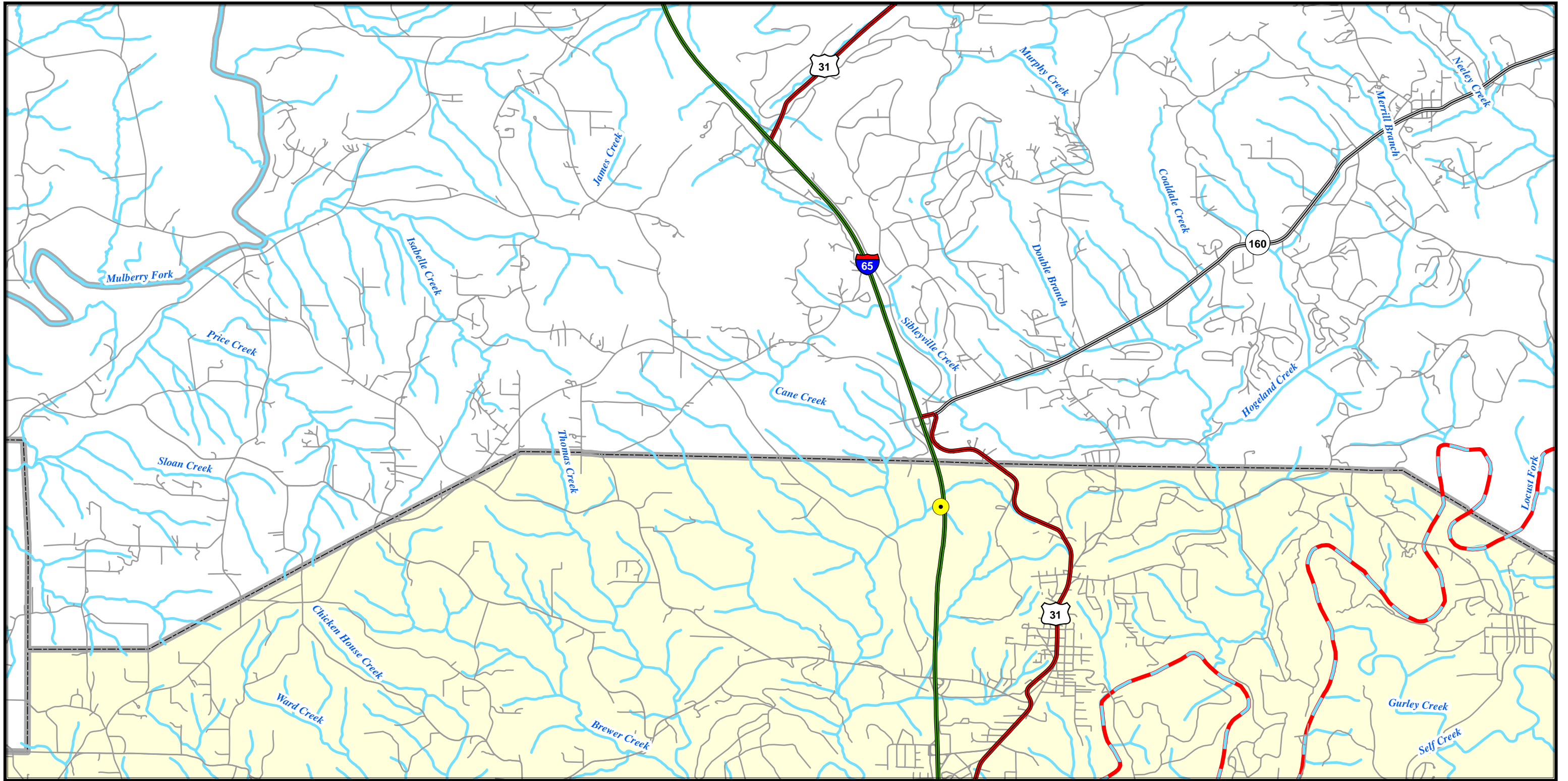
- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs









1 inch = 5,000 feet




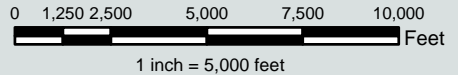
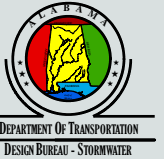
Index #: 38



**ALDOT MS4 Areas Jefferson/Shelby County Map: 12**

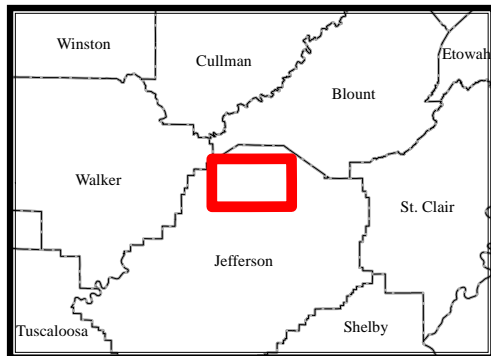
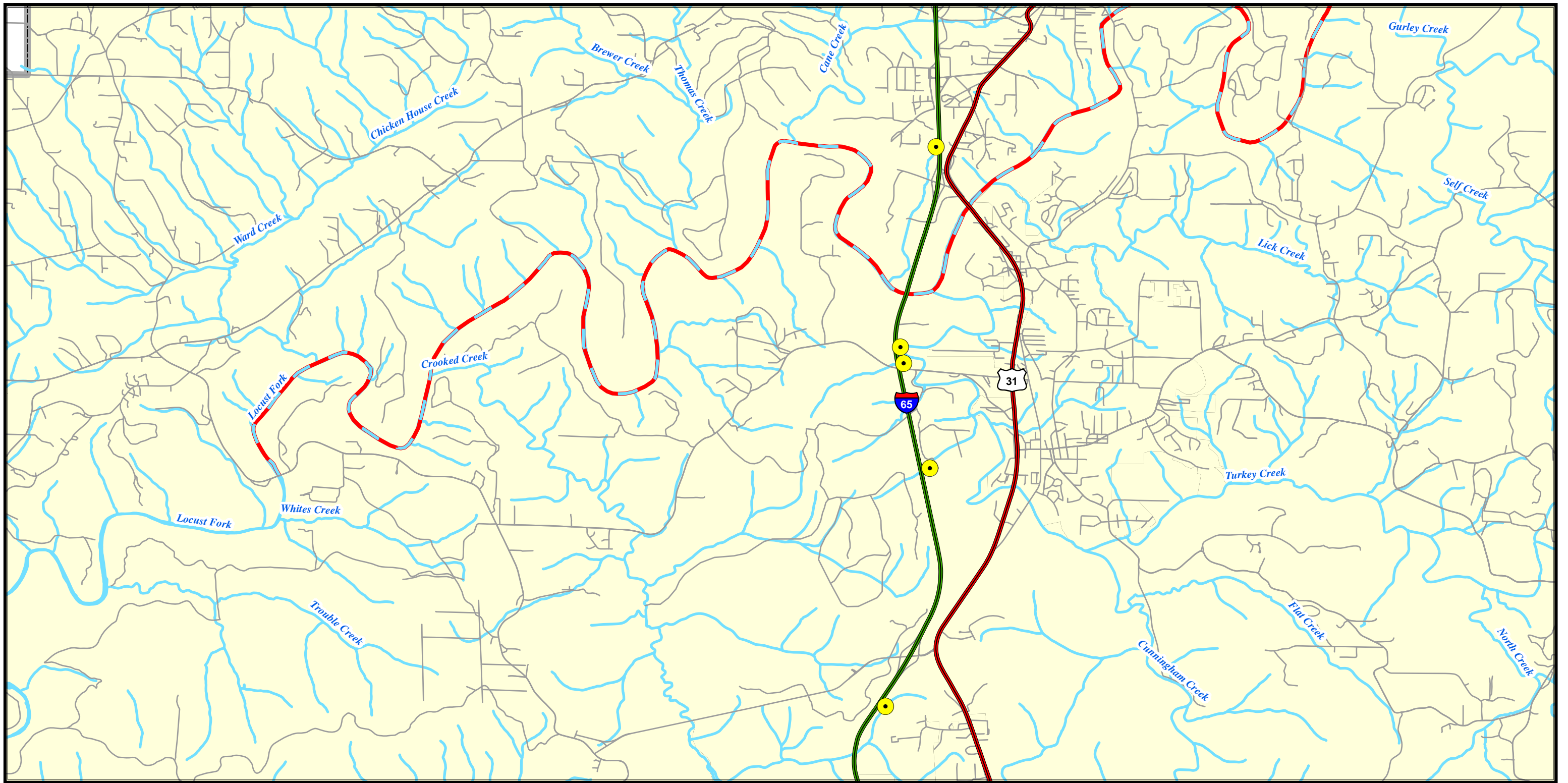
 MS4 Area	 MS4 Monitoring Location	 303(d) / TMDL Listed Waters
 ALDOT Support Facility	 Major Outfall on Inventory	 Other POCs

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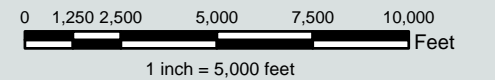


# ALDOT MS4 Areas Jefferson/Shelby County Map: 13

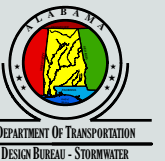
-  MS4 Area
-  ALDOT Support Facility

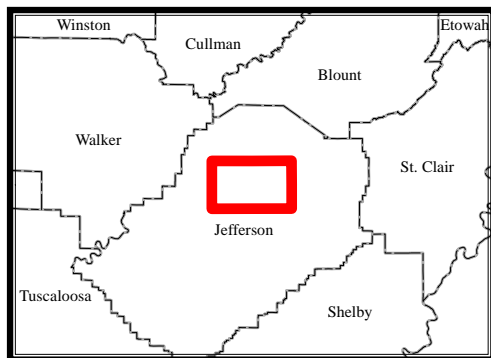
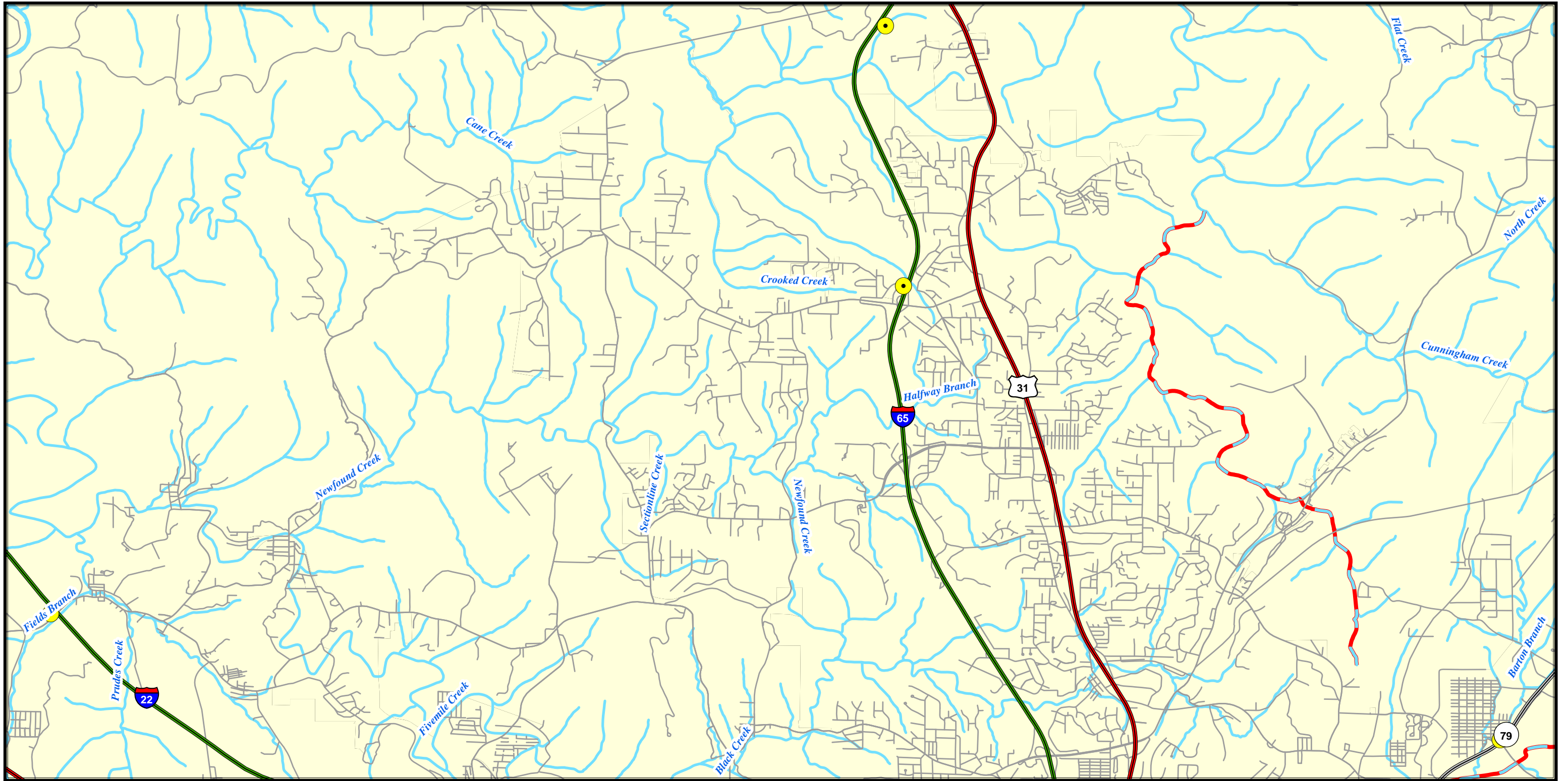
-  MS4 Monitoring Location
-  Major Outfall on Inventory

- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs







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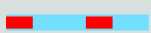


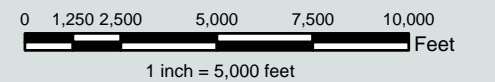


# ALDOT MS4 Areas Jefferson/Shelby County Map: 14

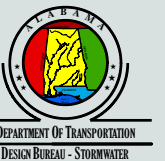
-  MS4 Area
-  ALDOT Support Facility

-  MS4 Monitoring Location
-  Major Outfall on Inventory

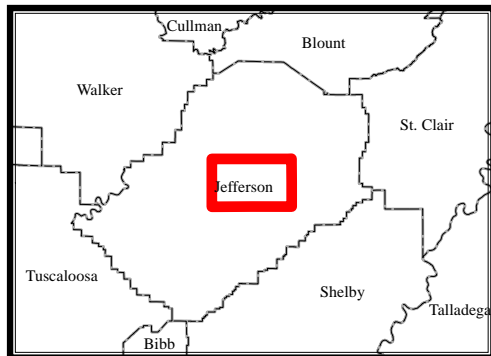
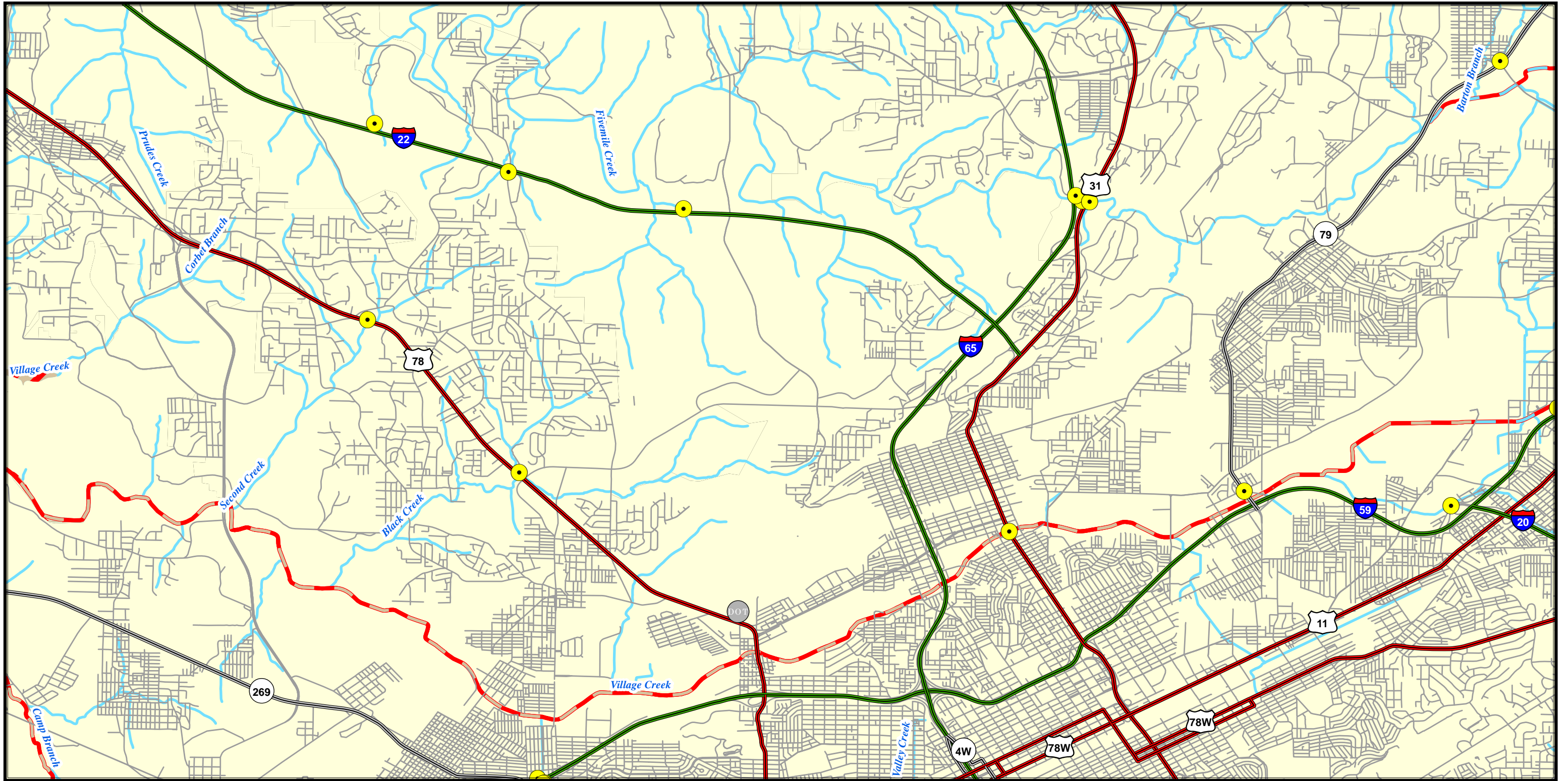
- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs










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# ALDOT MS4 Areas Jefferson/Shelby County Map: 15

-  MS4 Area
-  MS4 Monitoring Location
-  303(d) / TMDL Listed Waters
-  ALDOT Support Facility
-  Major Outfall on Inventory
-  Sediment POC
-  Other POCs

Index #: 42

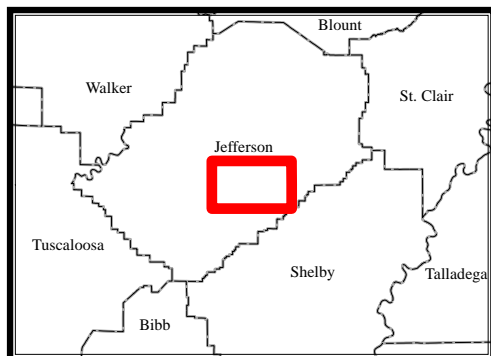
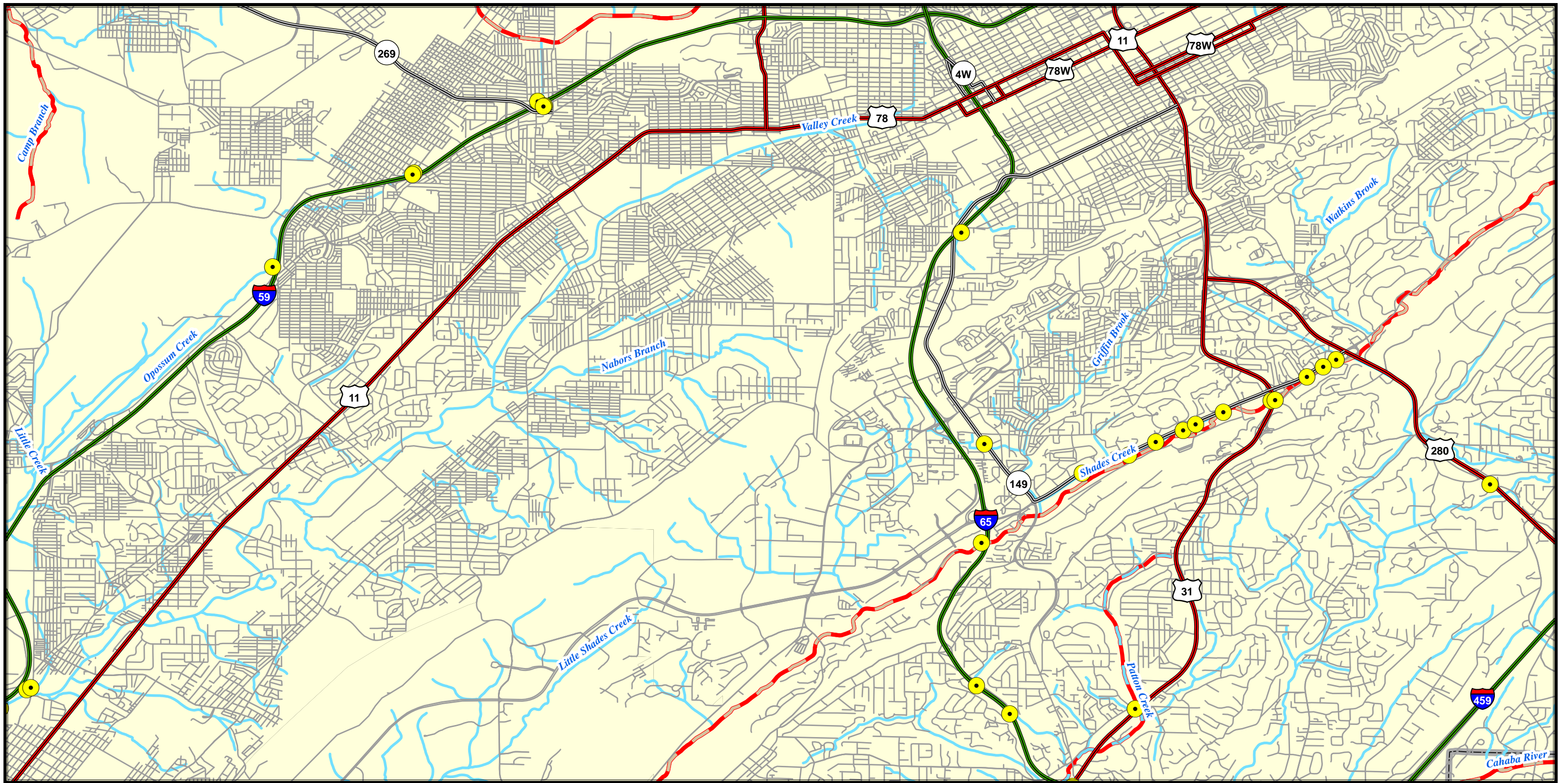



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1 inch = 5,000 feet




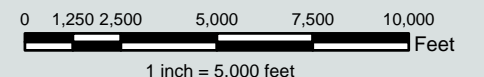


# ALDOT MS4 Areas Jefferson/Shelby County Map: 16

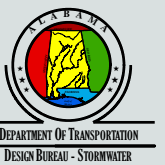
-  MS4 Area
-  ALDOT Support Facility

-  MS4 Monitoring Location
-  Major Outfall on Inventory

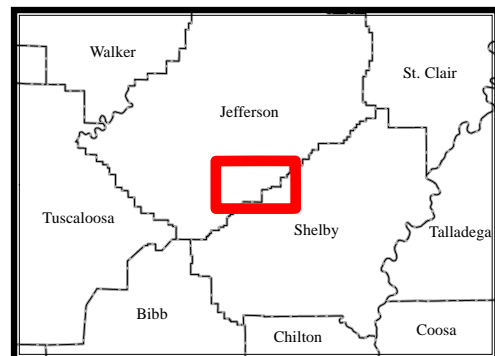
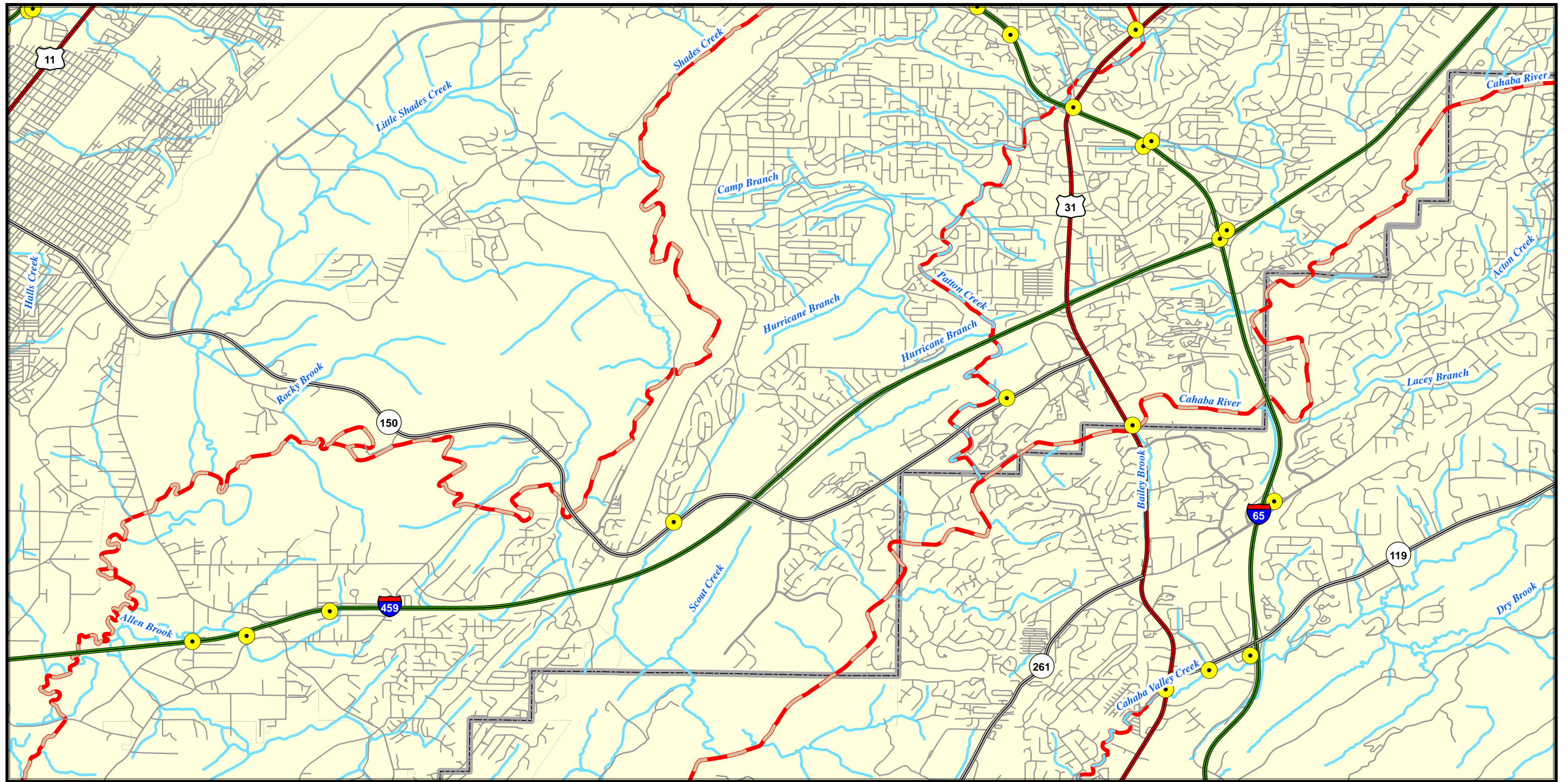
- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs



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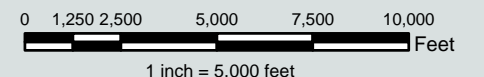




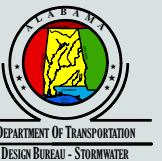
# ALDOT MS4 Areas Jefferson/Shelby County Map: 17

-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

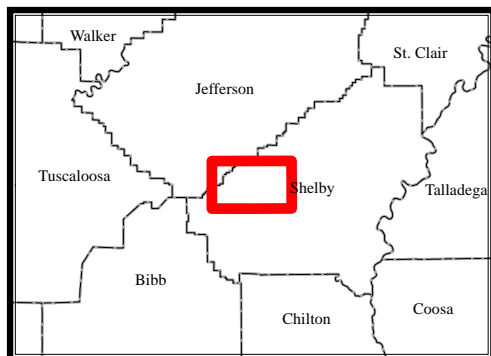
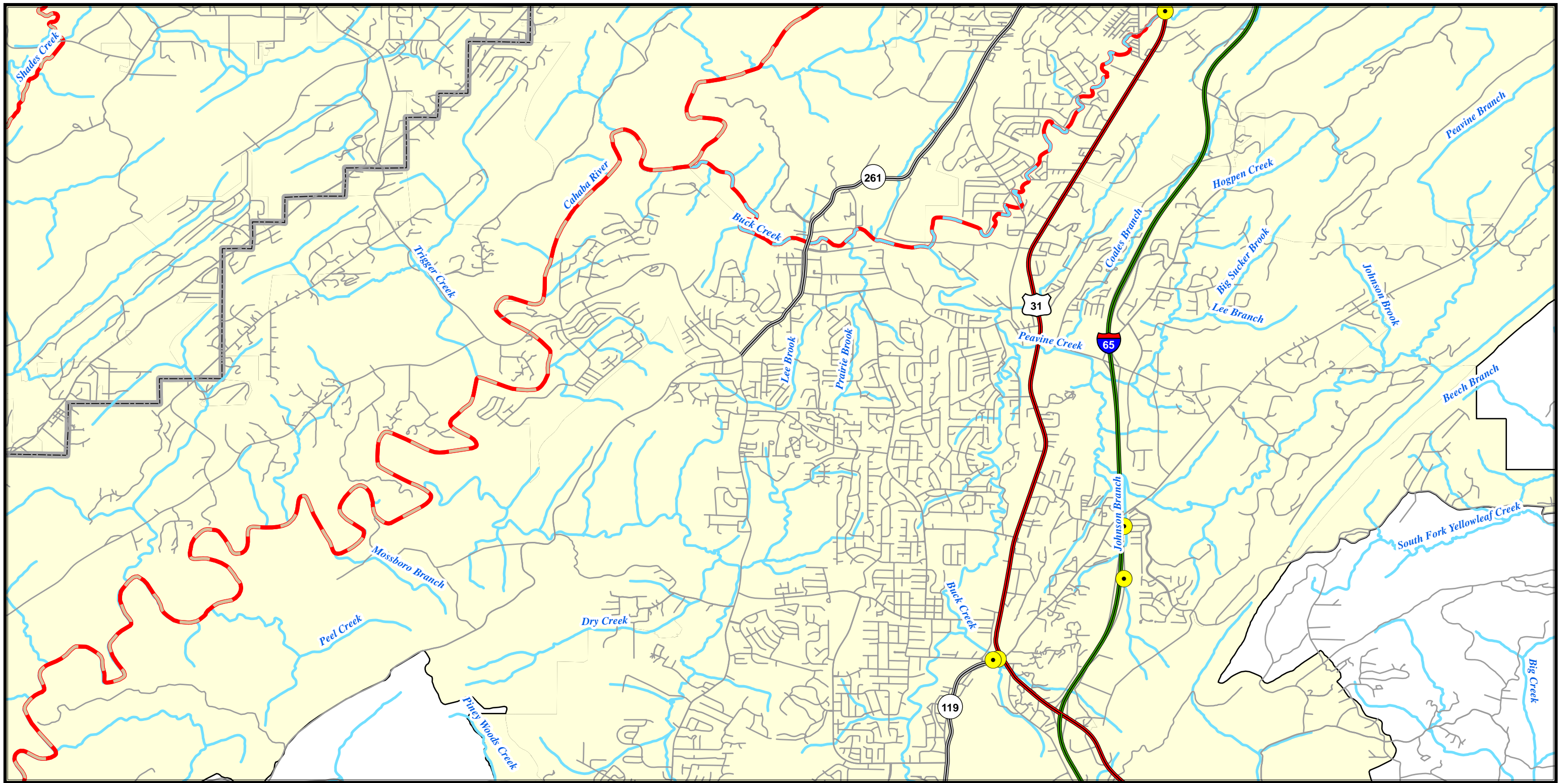
- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs





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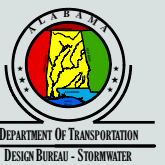
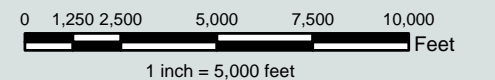


# ALDOT MS4 Areas Jefferson/Shelby County Map: 18

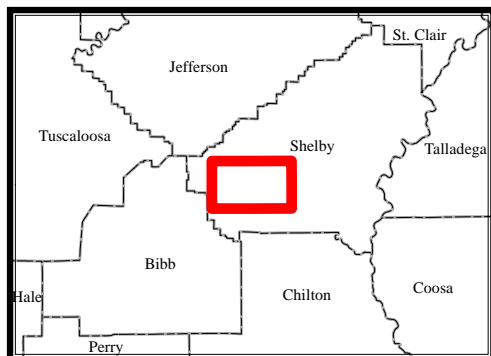
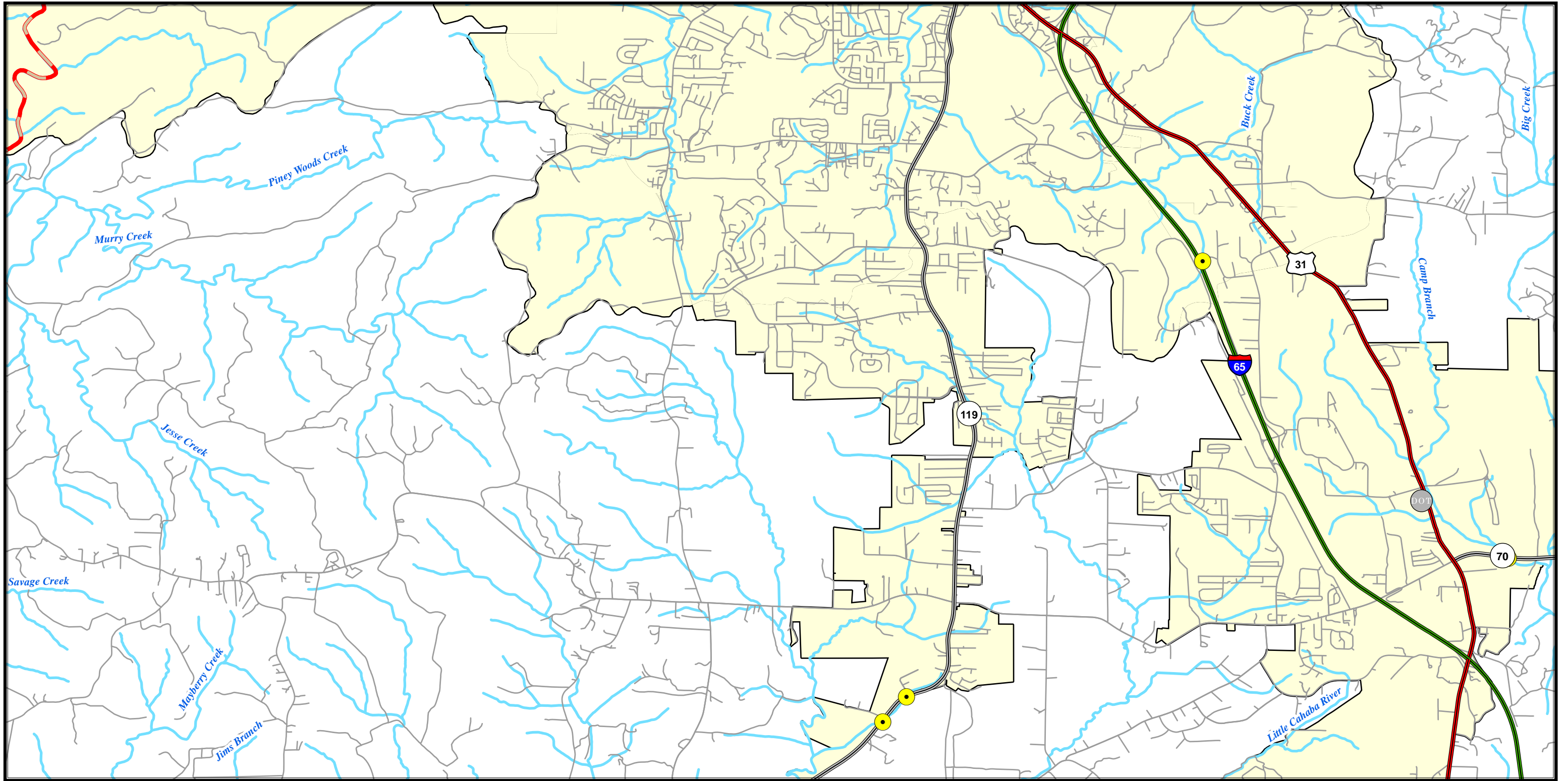
-  MS4 Area
-  ALDOT Support Facility

-  MS4 Monitoring Location
-  Major Outfall on Inventory



- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs





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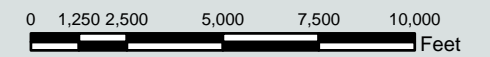


# ALDOT MS4 Areas Jefferson/Shelby County Map: 19

-  MS4 Area
-  ALDOT Support Facility

-  MS4 Monitoring Location
-  Major Outfall on Inventory

- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs

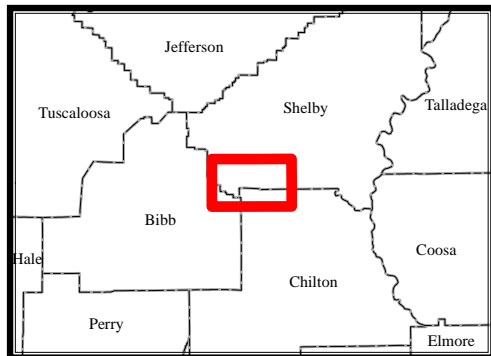
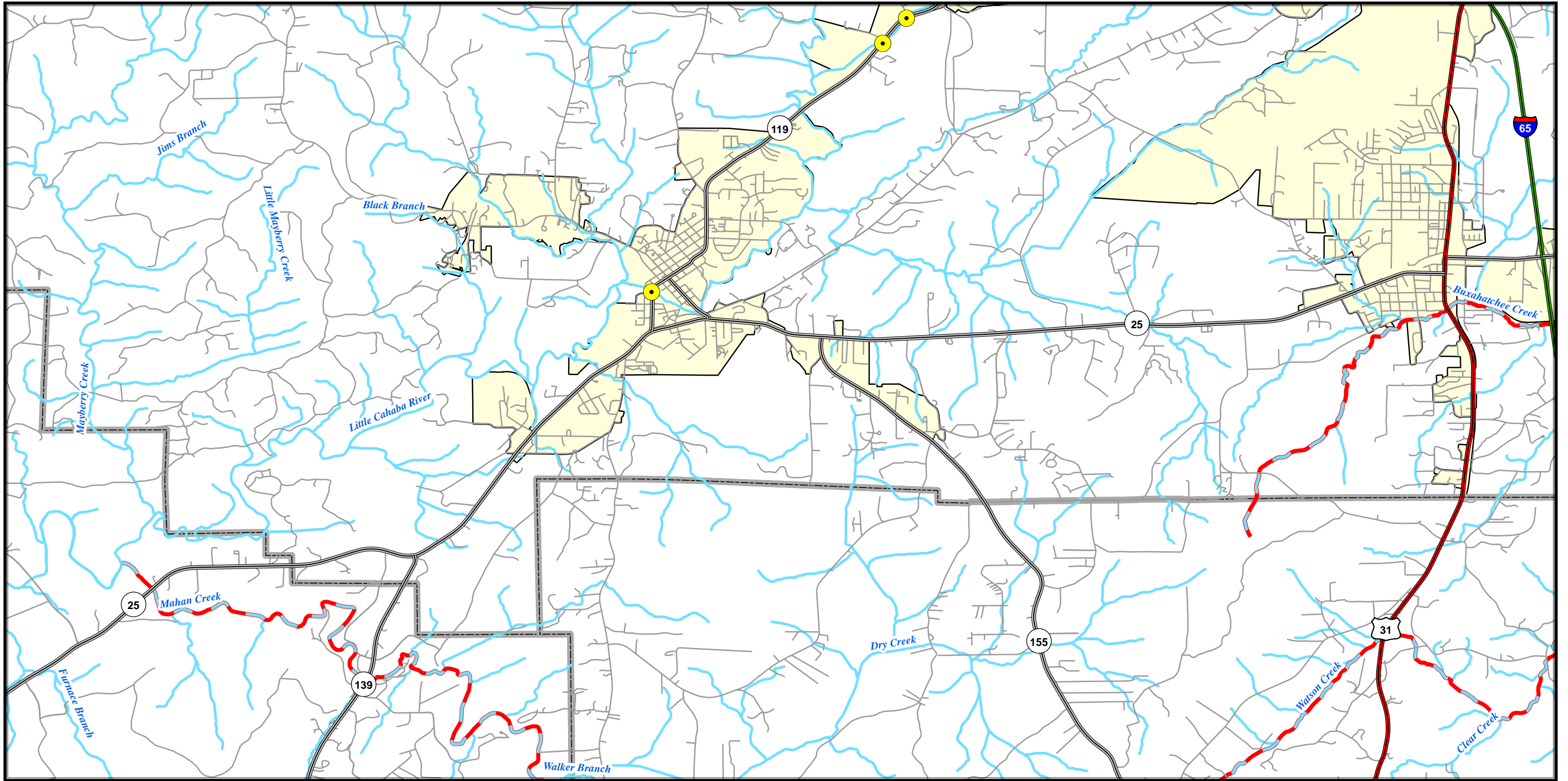


1 inch = 5,000 feet







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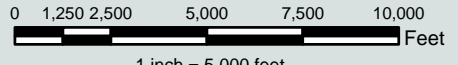
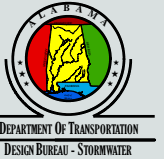






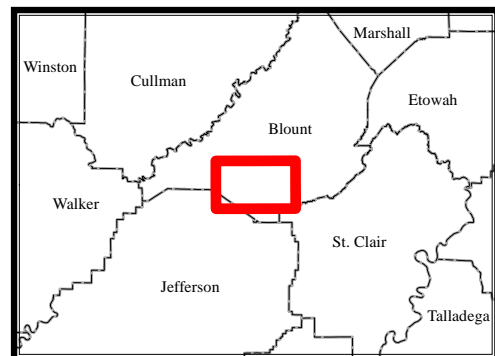
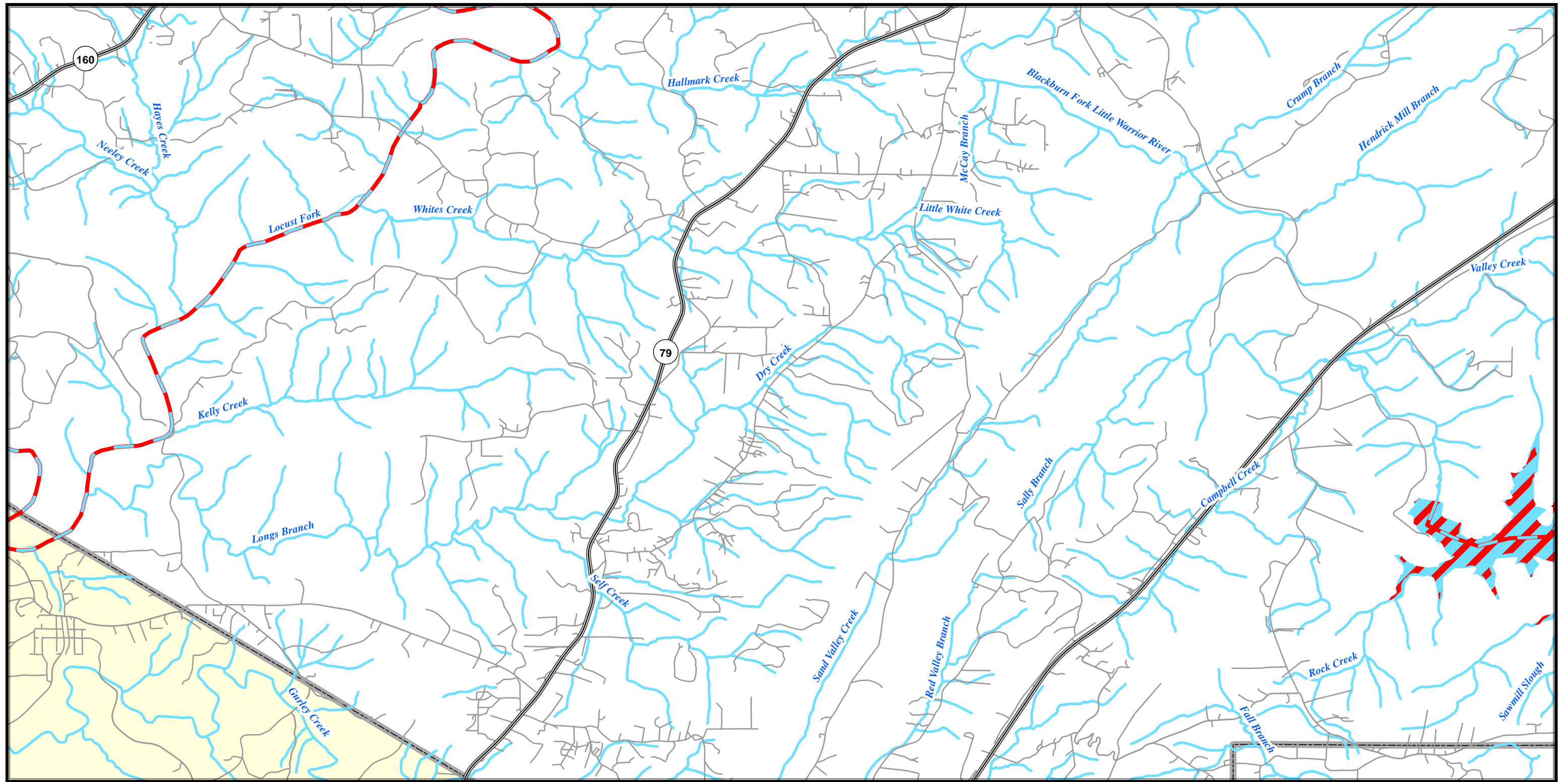
**ALDOT MS4 Areas Jefferson/Shelby County Map: 20** Index #: 47

 MS4 Area	 MS4 Monitoring Location	303(d) / TMDL Listed Waters
 ALDOT Support Facility	 Major Outfall on Inventory	 Sediment POC
		 Other POCs



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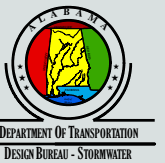
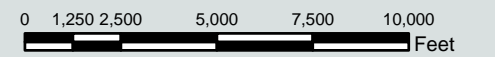
# ALDOT MS4 Areas Jefferson/Shelby County Map: 21

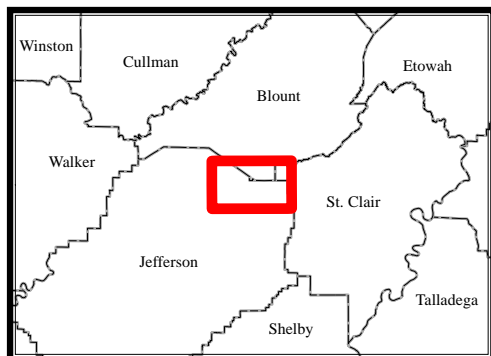
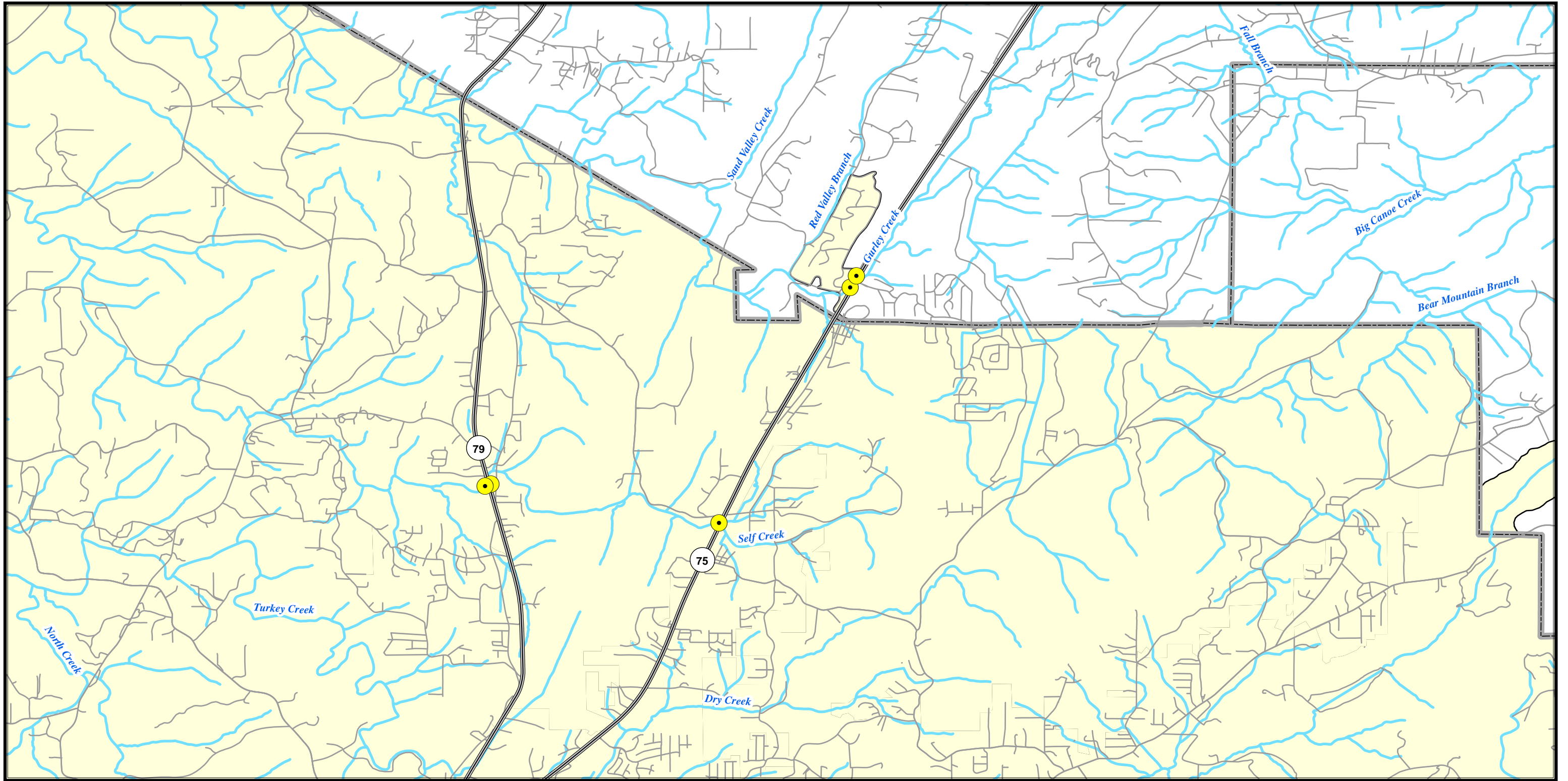
Index #: 48

-  MS4 Area
-  ALDOT Support Facility

-  MS4 Monitoring Location
-  Major Outfall on Inventory

-  303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs

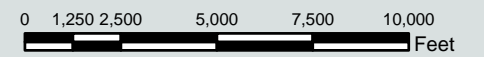




# ALDOT MS4 Areas Jefferson/Shelby County Map: 22

-  MS4 Area
-  MS4 Monitoring Location
-  Major Outfall on Inventory
-  ALDOT Support Facility

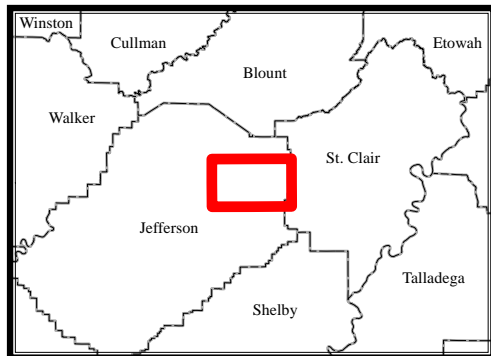
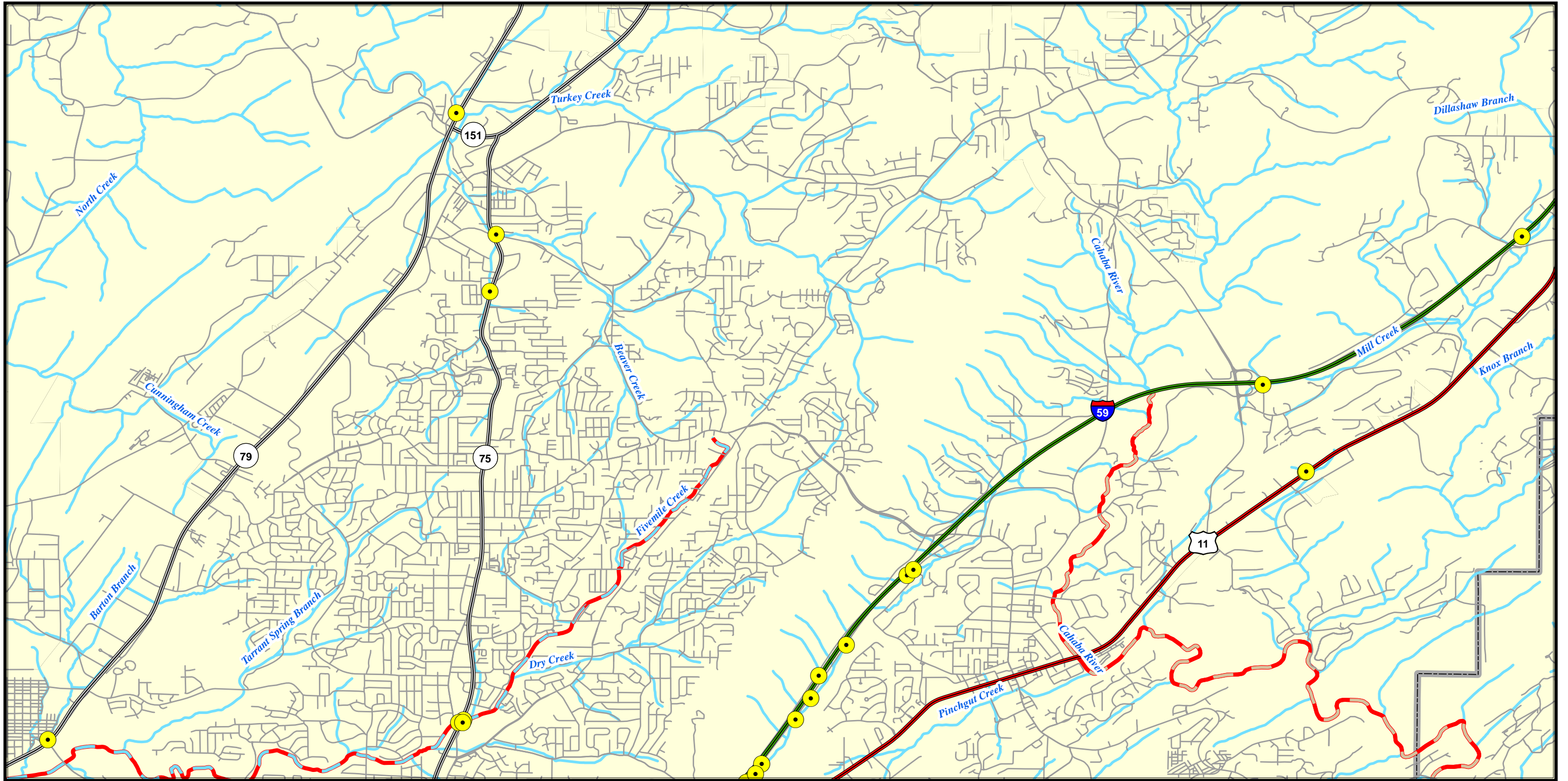
- 303(d) / TMDL Listed Waters
-  Sediment POC
  -  Other POCs





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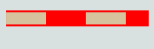



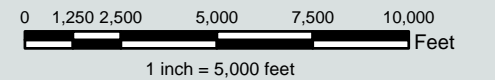


# ALDOT MS4 Areas Jefferson/Shelby County Map: 23

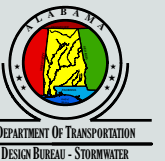
-  MS4 Area
-  ALDOT Support Facility

-  MS4 Monitoring Location
-  Major Outfall on Inventory

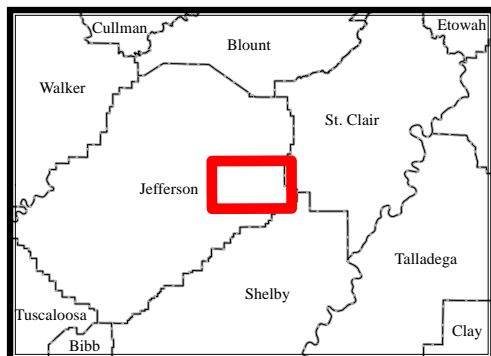
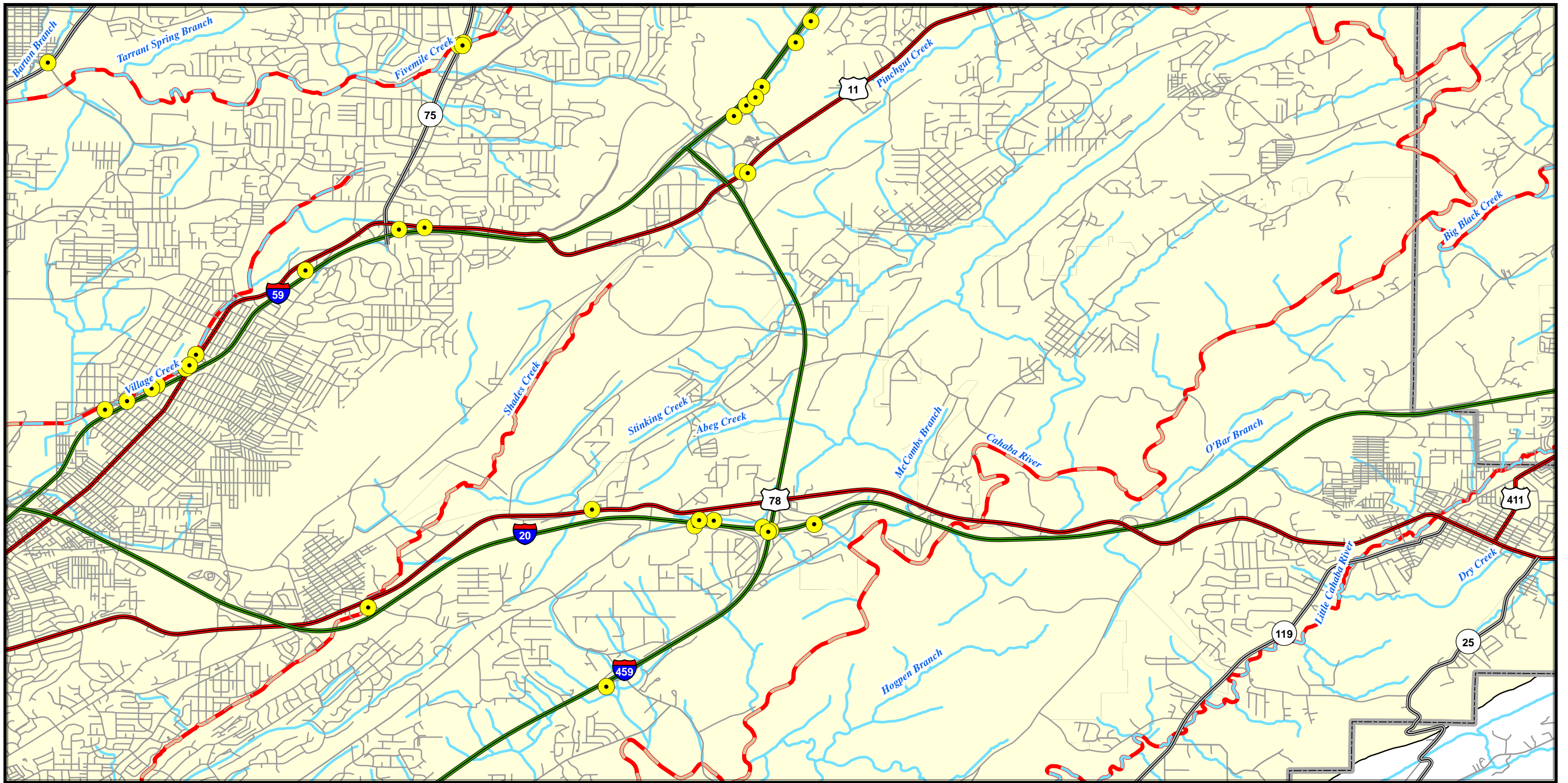
-  303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs



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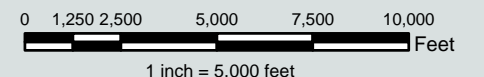




# ALDOT MS4 Areas Jefferson/Shelby County Map: 24

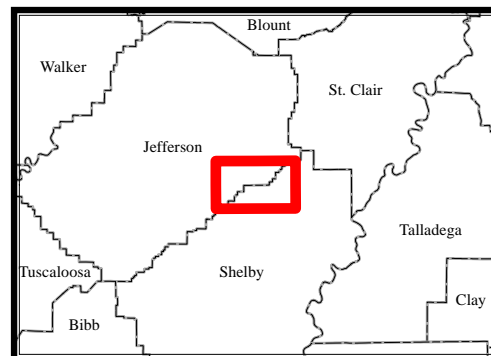
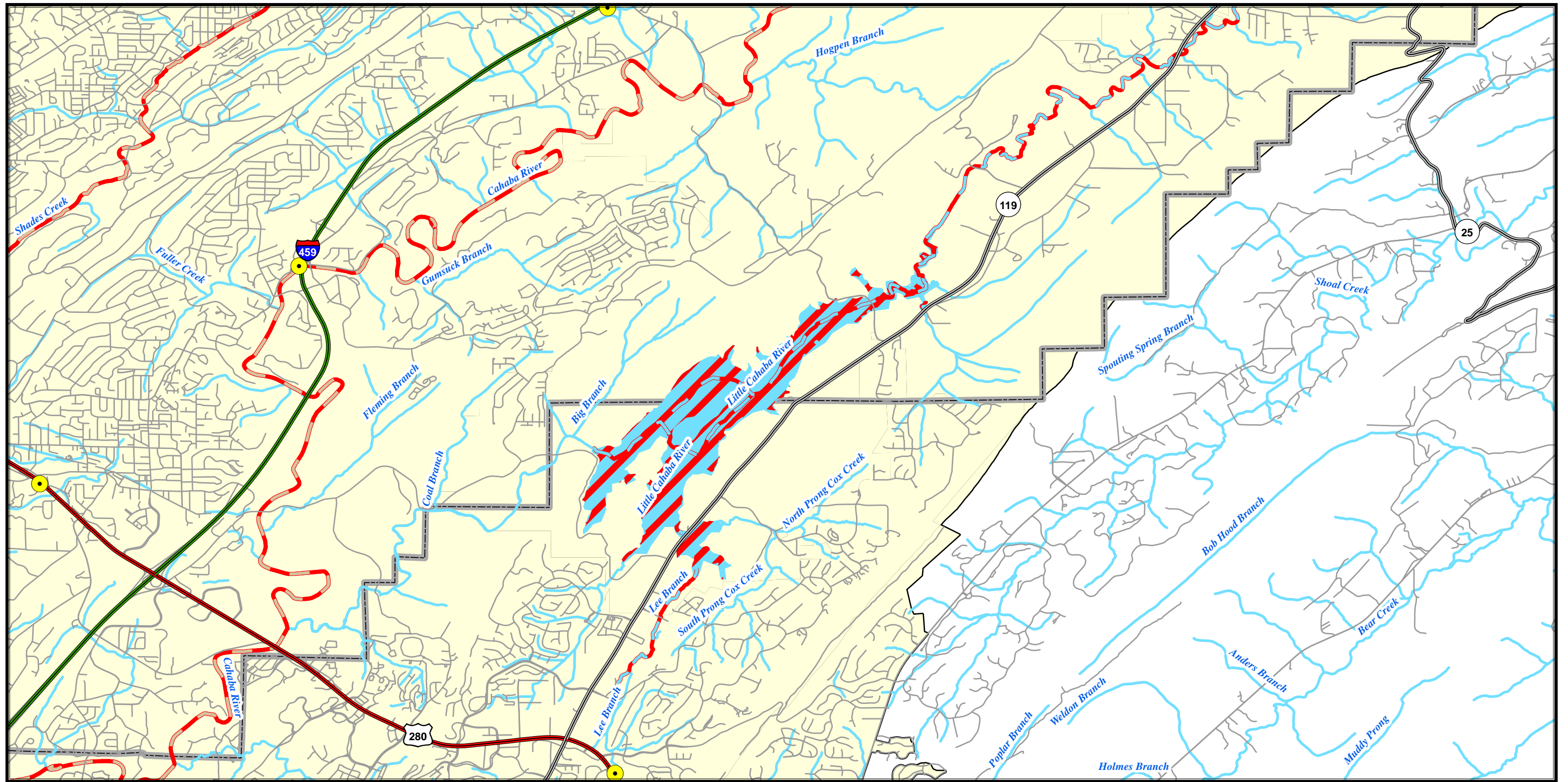
-  MS4 Area
-  ALDOT Support Facility
-  MS4 Monitoring Location
-  Major Outfall on Inventory

- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs










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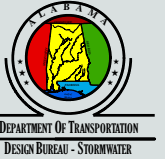
# ALDOT MS4 Areas Jefferson/Shelby County Map: 25

 MS4 Area	 MS4 Monitoring Location	 303(d) / TMDL Listed Waters
 ALDOT Support Facility	 Major Outfall on Inventory	 Sediment POC
		 Other POCs

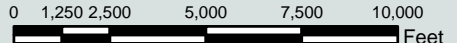
Index #: 52



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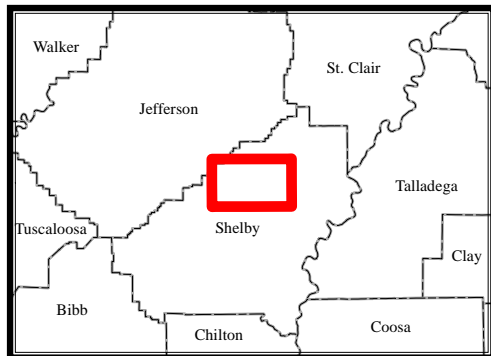
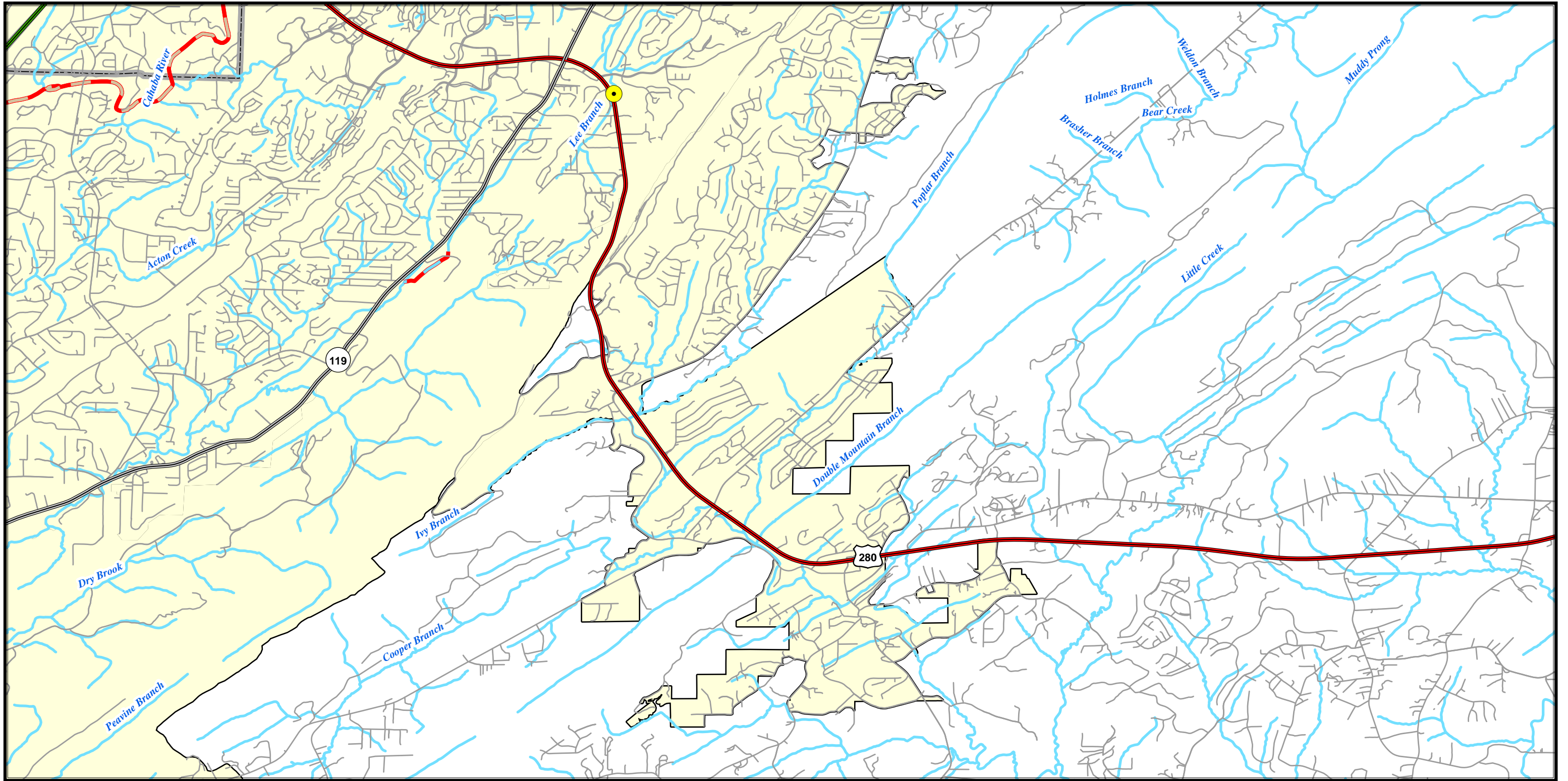


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1 inch = 5,000 feet

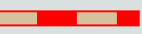




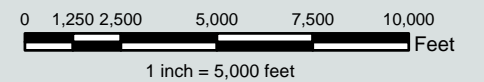


# ALDOT MS4 Areas Jefferson/Shelby County Map: 26

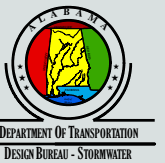
-  MS4 Area
-  ALDOT Support Facility

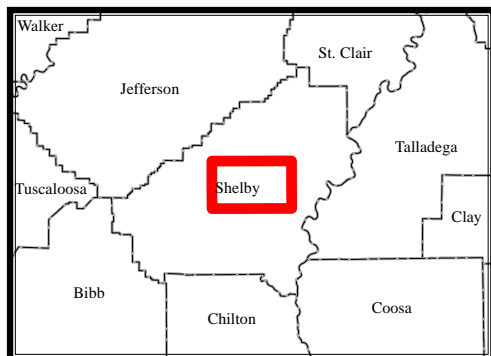
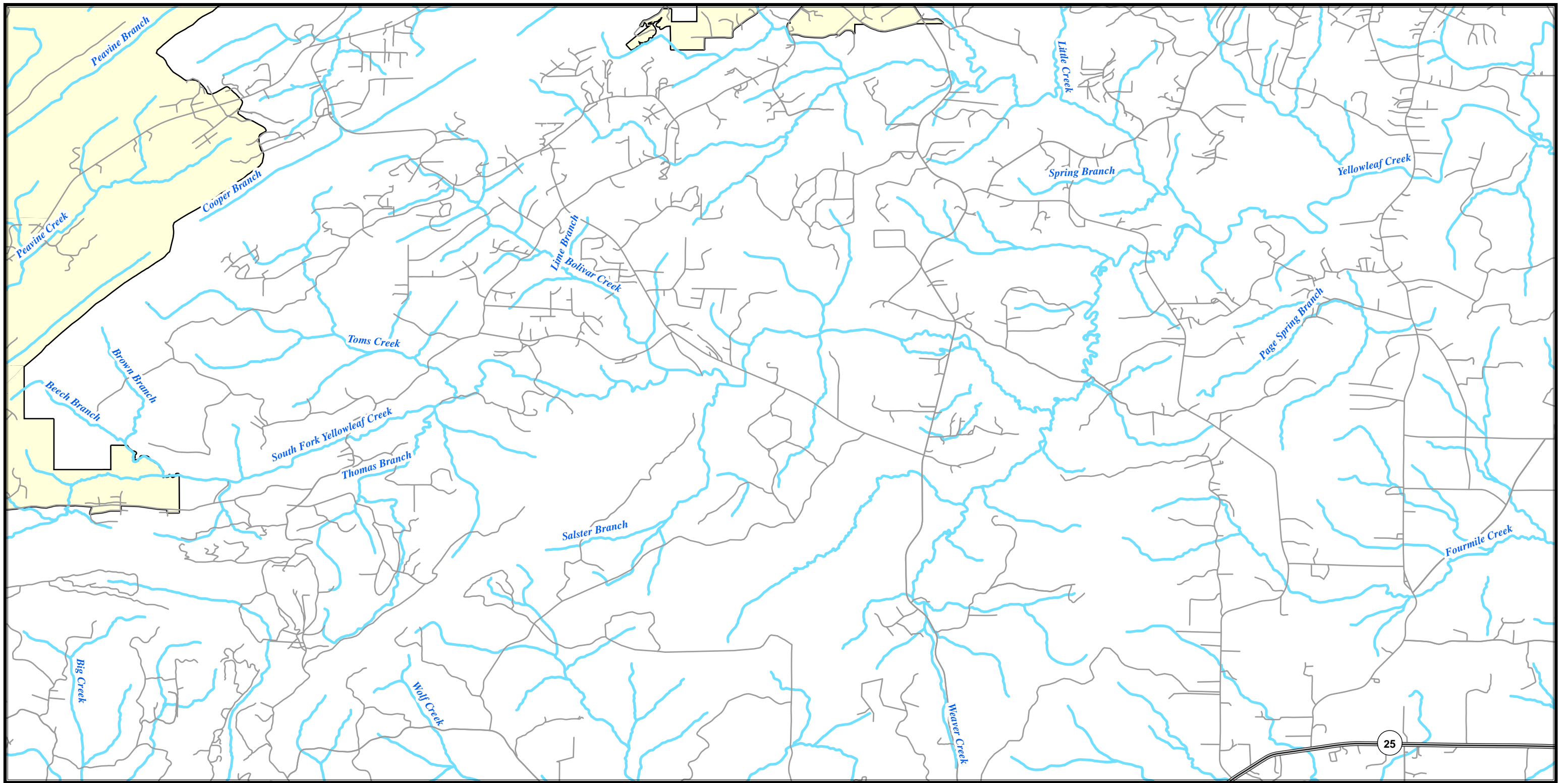
-  MS4 Monitoring Location
-  Major Outfall on Inventory

-  303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs







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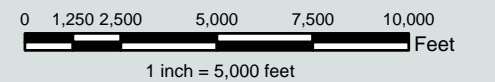


# ALDOT MS4 Areas Jefferson/Shelby County Map: 27

-  MS4 Area
-  ALDOT Support Facility

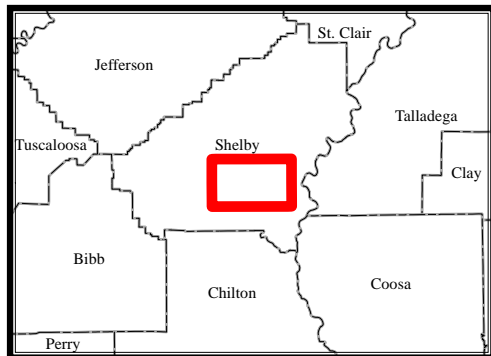
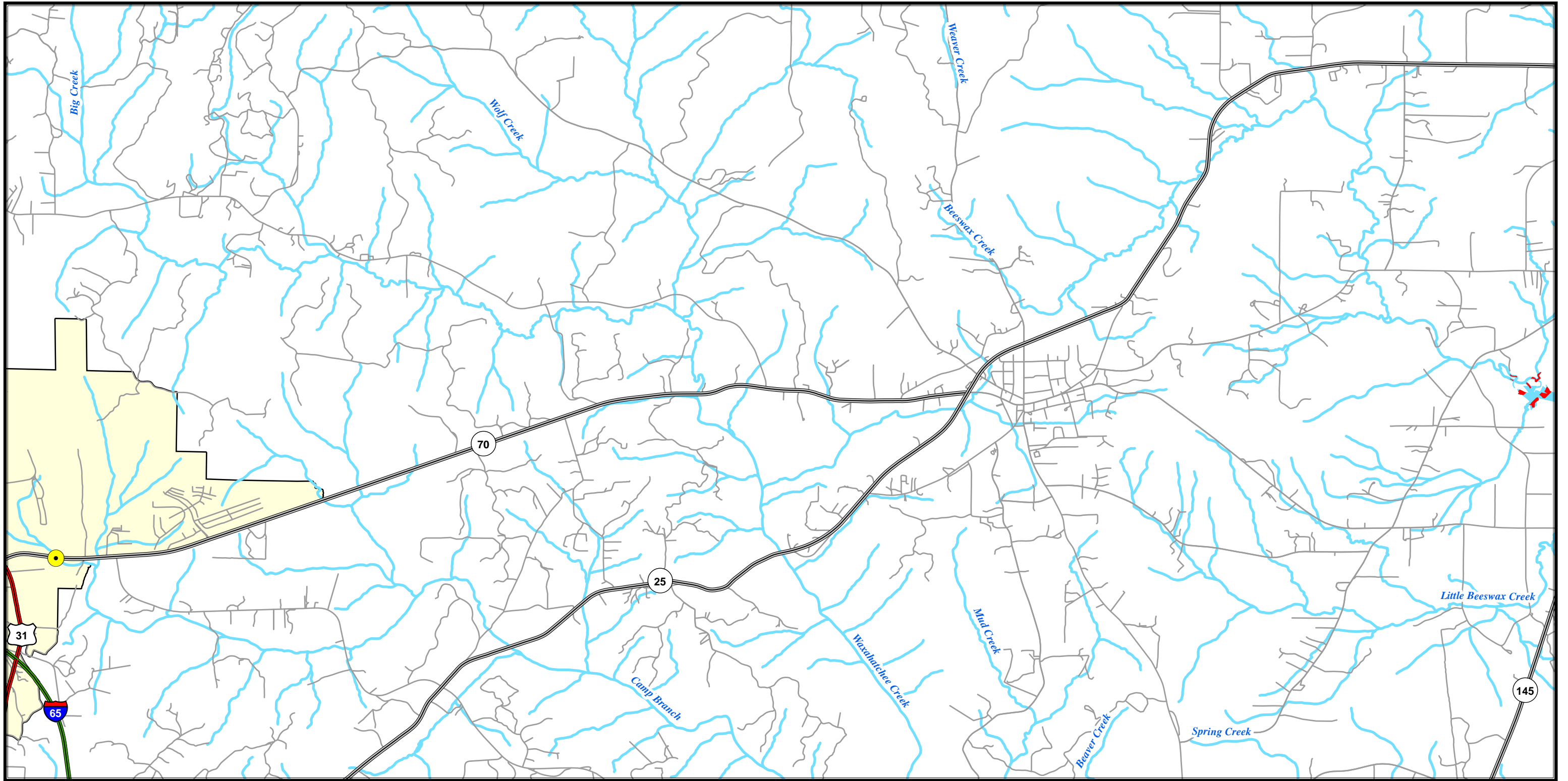
-  MS4 Monitoring Location
-  Major Outfall on Inventory

- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs




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# ALDOT MS4 Areas Jefferson/Shelby County Map: 28


-  MS4 Area
-  MS4 Monitoring Location
-  Major Outfall on Inventory
-  ALDOT Support Facility

- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs

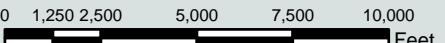
Index #: 55



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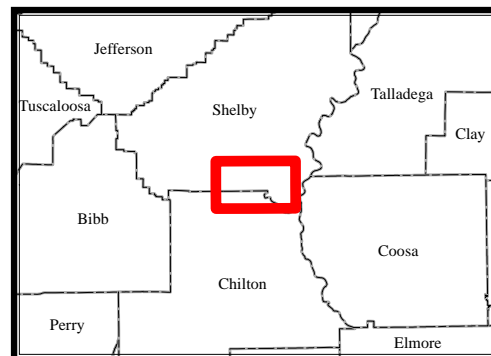
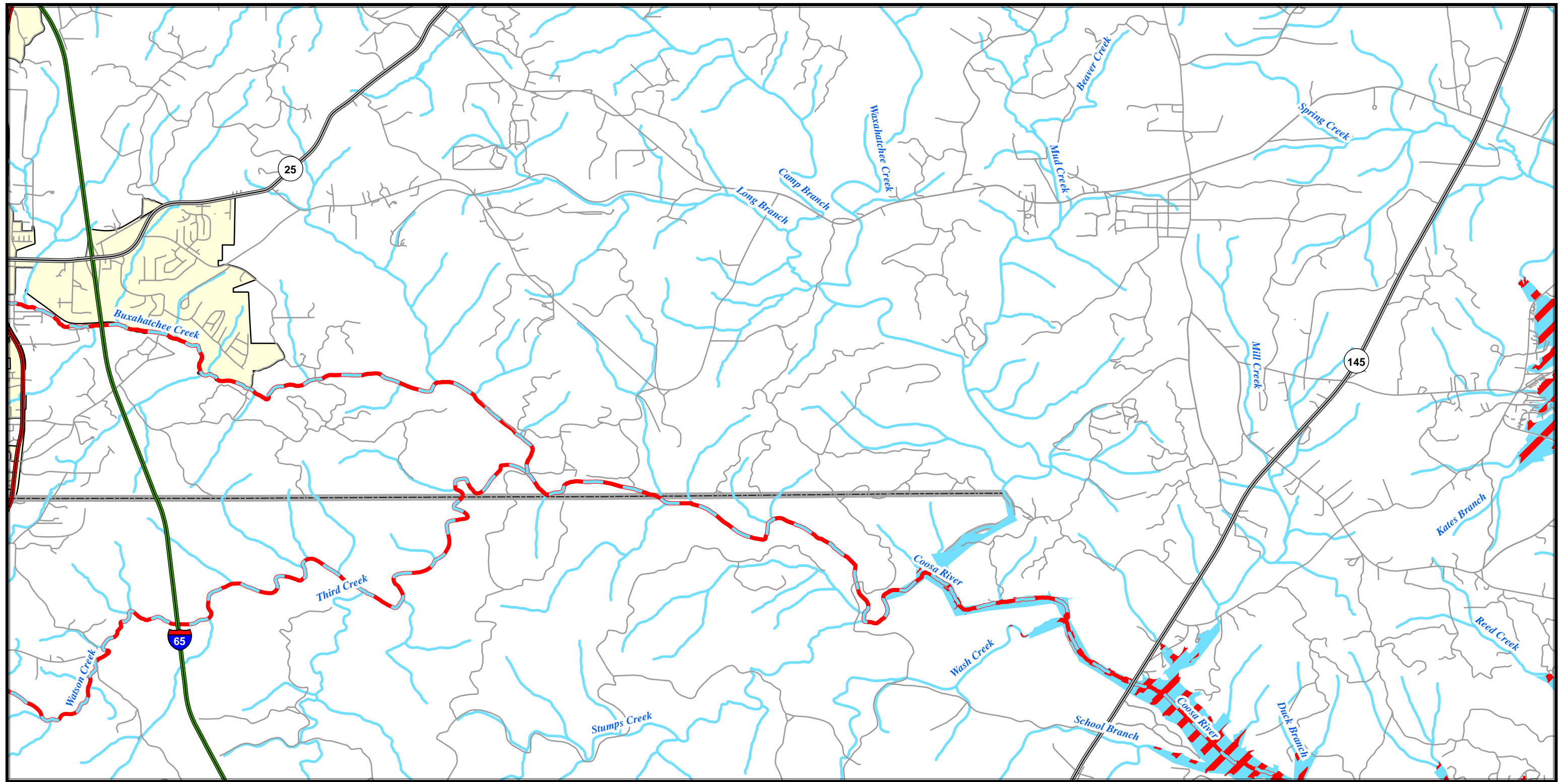


DEPARTMENT OF TRANSPORTATION  
DESIGN BUREAU - STORMWATER







1 inch = 5,000 feet





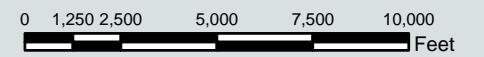


# ALDOT MS4 Areas Jefferson/Shelby County Map: 29

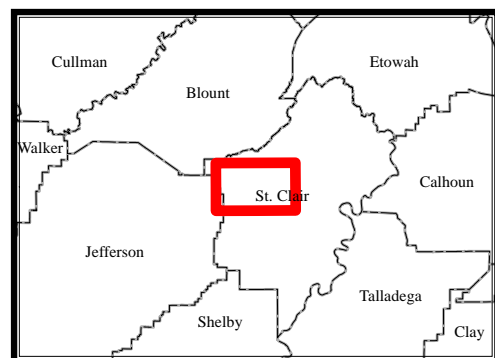
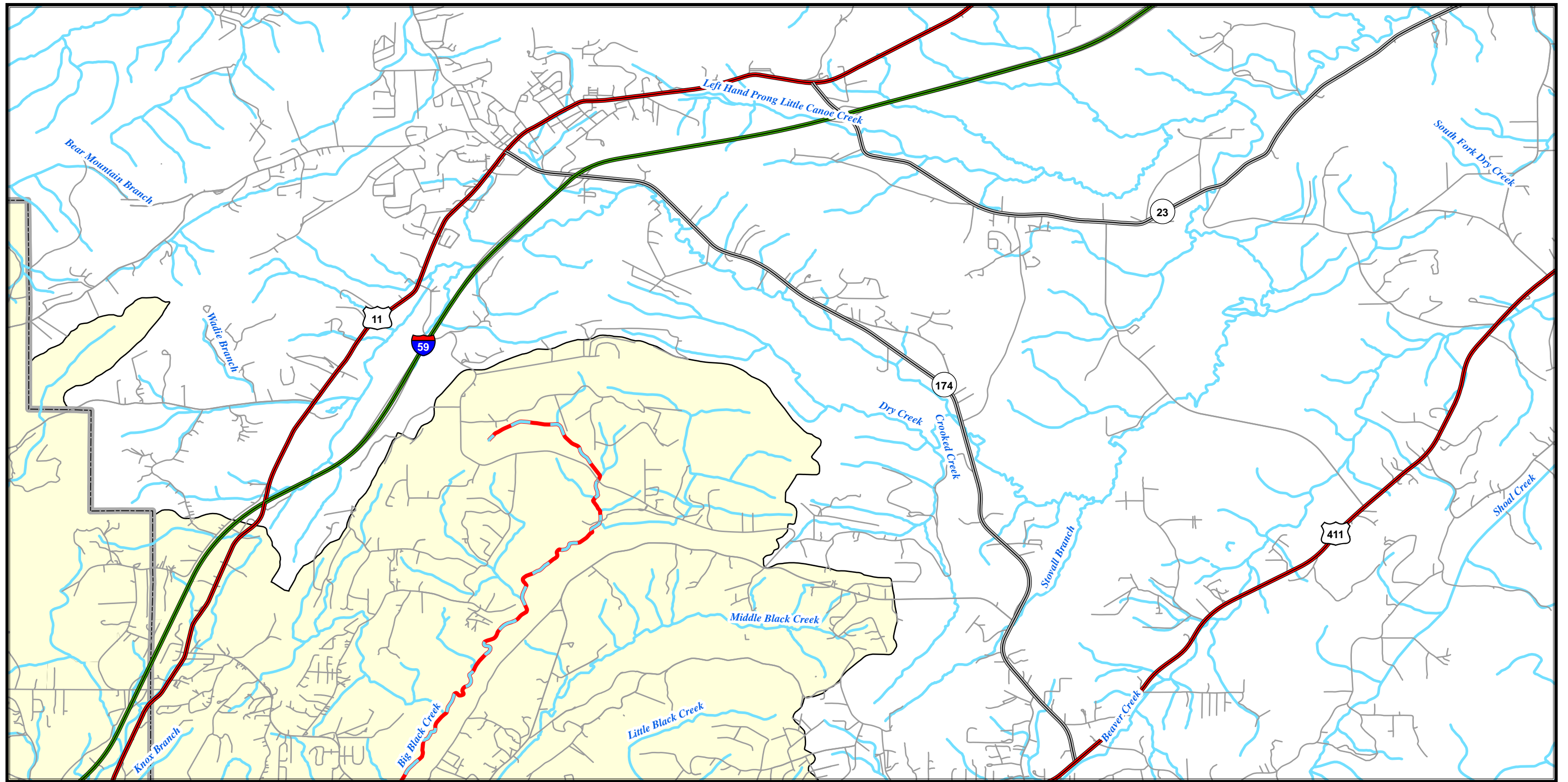
-  MS4 Area
-  ALDOT Support Facility

-  MS4 Monitoring Location
-  Major Outfall on Inventory

- 303(d) / TMDL Listed Waters
-  Sediment POC
  -  Other POCs




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**ALDOT MS4 Areas Jefferson/Shelby County Map: 30**

 MS4 Area	 MS4 Monitoring Location	303(d) / TMDL Listed Waters
 ALDOT Support Facility	 Major Outfall on Inventory	 Sediment POC
		 Other POCs

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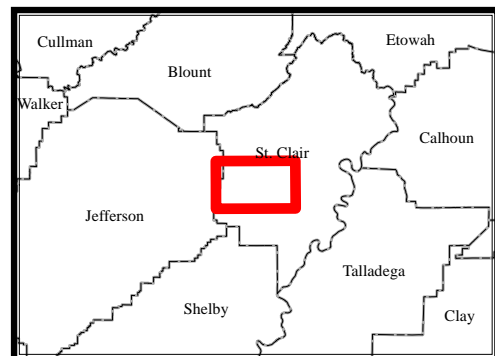
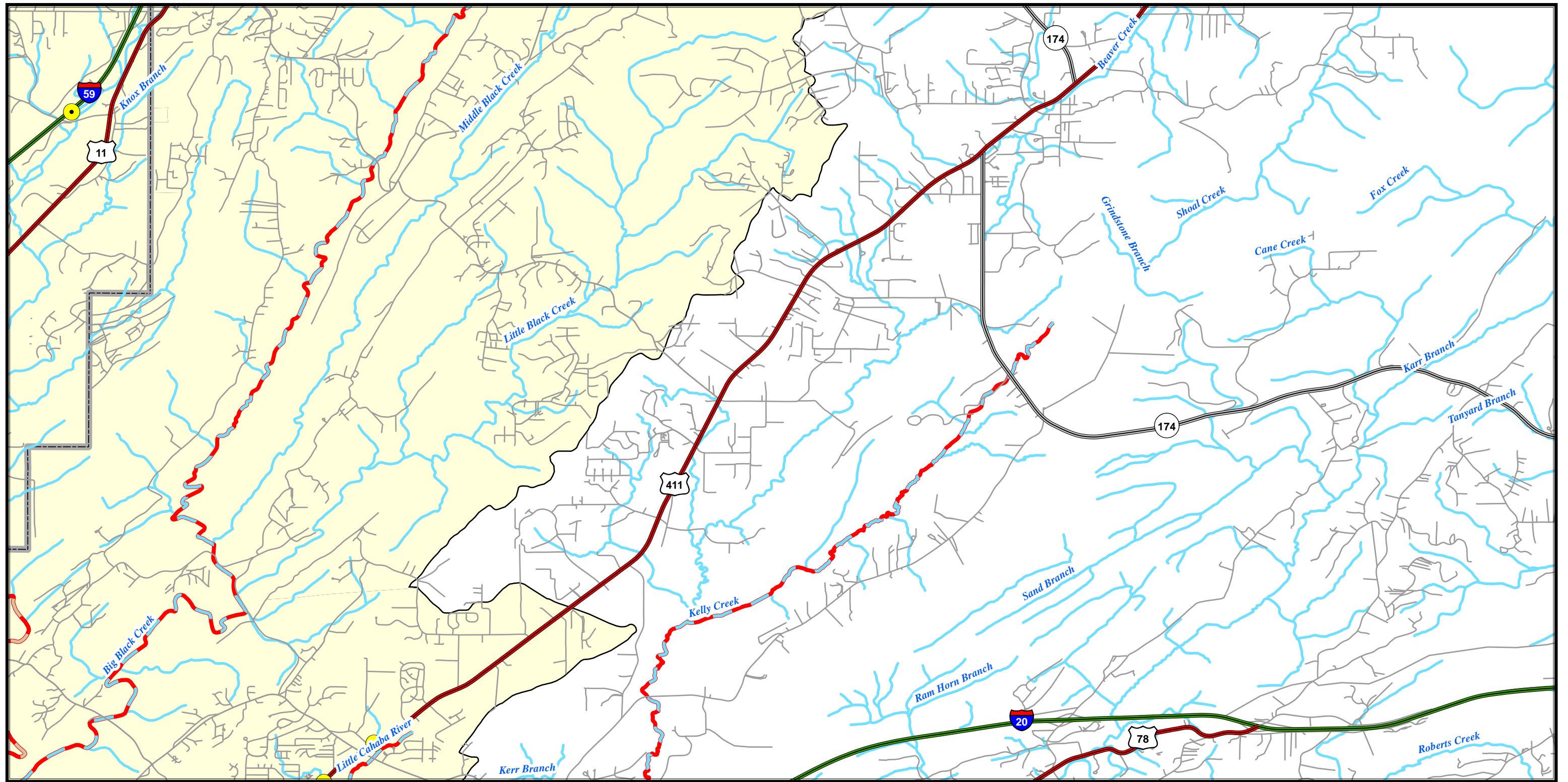



DEPARTMENT OF TRANSPORTATION  
DESIGN BUREAU - STORMWATER







1 inch = 5,000 feet




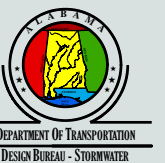
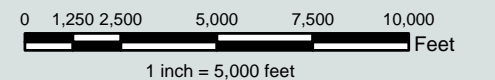


# ALDOT MS4 Areas Jefferson/Shelby County Map: 31

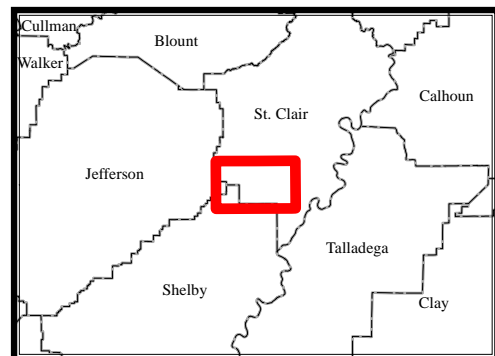
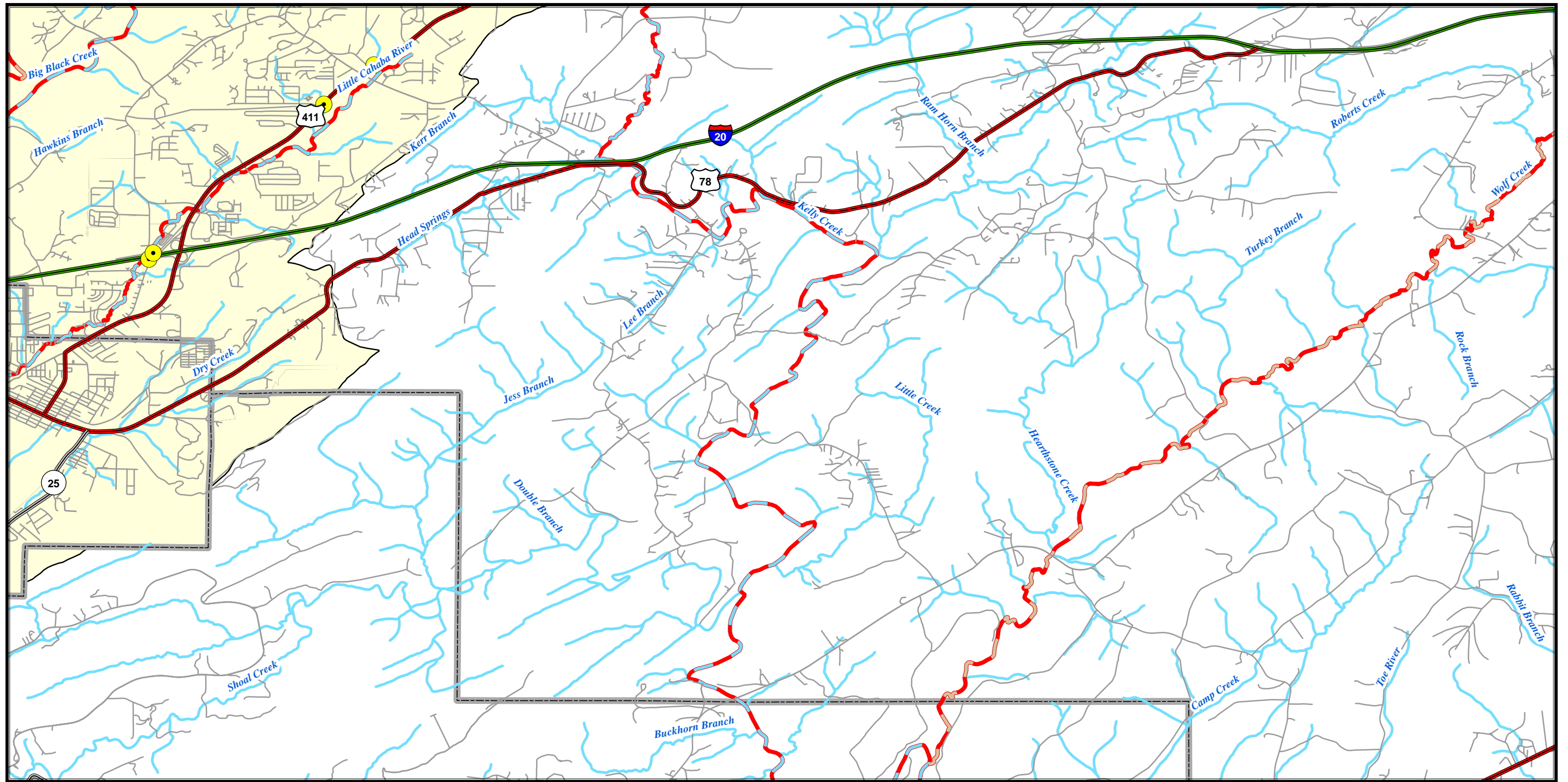
-  MS4 Area
-  ALDOT Support Facility

-  MS4 Monitoring Location
-  Major Outfall on Inventory



- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs







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# ALDOT MS4 Areas Jefferson/Shelby County Map: 32

-  MS4 Area
-  ALDOT Support Facility


-  MS4 Monitoring Location
-  Major Outfall on Inventory

-  303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs

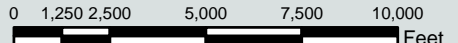
Index #: 59



N



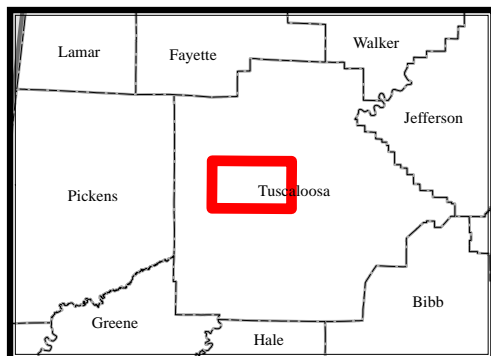
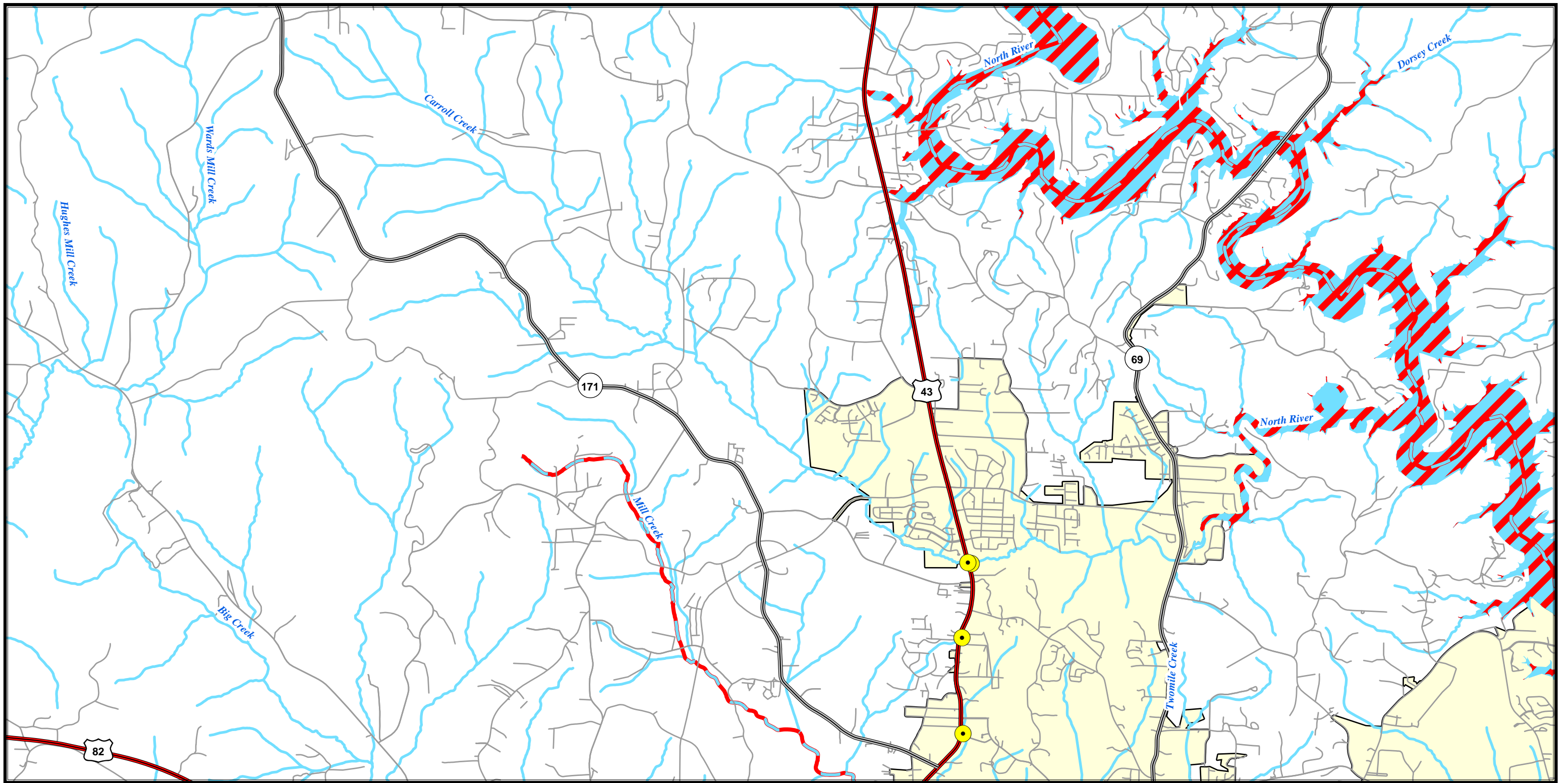
DEPARTMENT OF TRANSPORTATION  
DESIGN BUREAU - STORMWATER



0 1,250 2,500 5,000 7,500 10,000 Feet

1 inch = 5,000 feet






# ALDOT MS4 Areas Tuscaloosa Map: 1


-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs

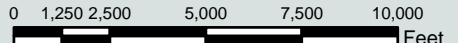
Index #: 60



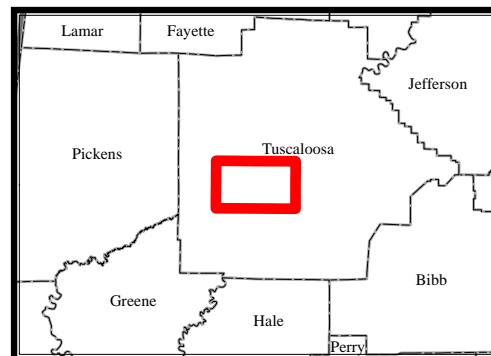
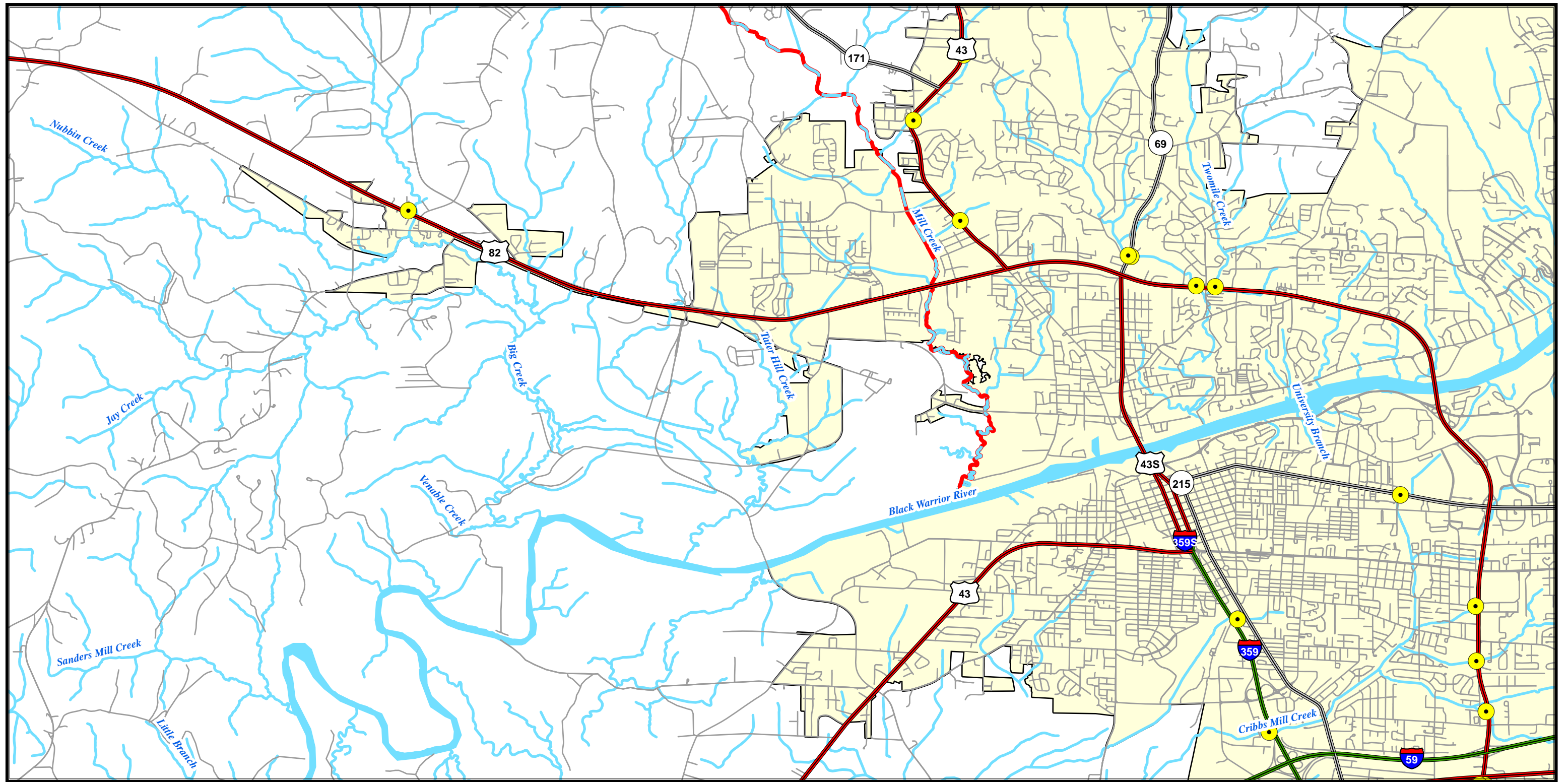
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DESIGN BUREAU - STORMWATER





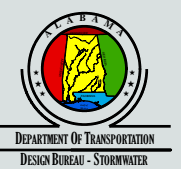
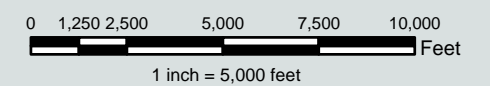
1 inch = 5,000 feet



## ALDOT MS4 Areas Tuscaloosa Map: 2

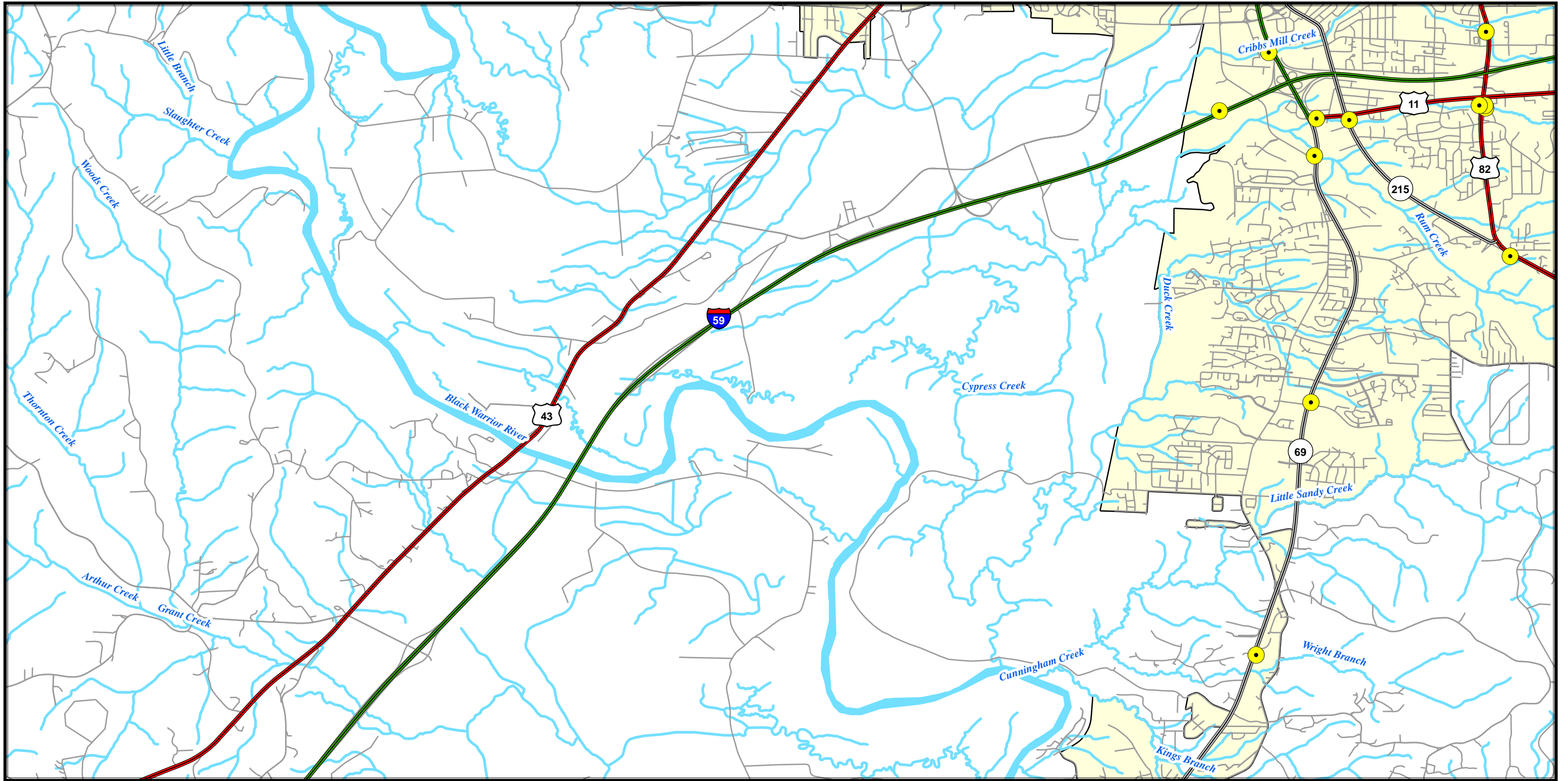
-  MS4 Area
-  MS4 Monitoring Location
-  Major Outfall on Inventory
-  ALDOT Support Facility

- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs



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## ALDOT MS4 Areas Tuscaloosa Map: 3

-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

303(d) / TMDL Listed Waters

 Sediment POC

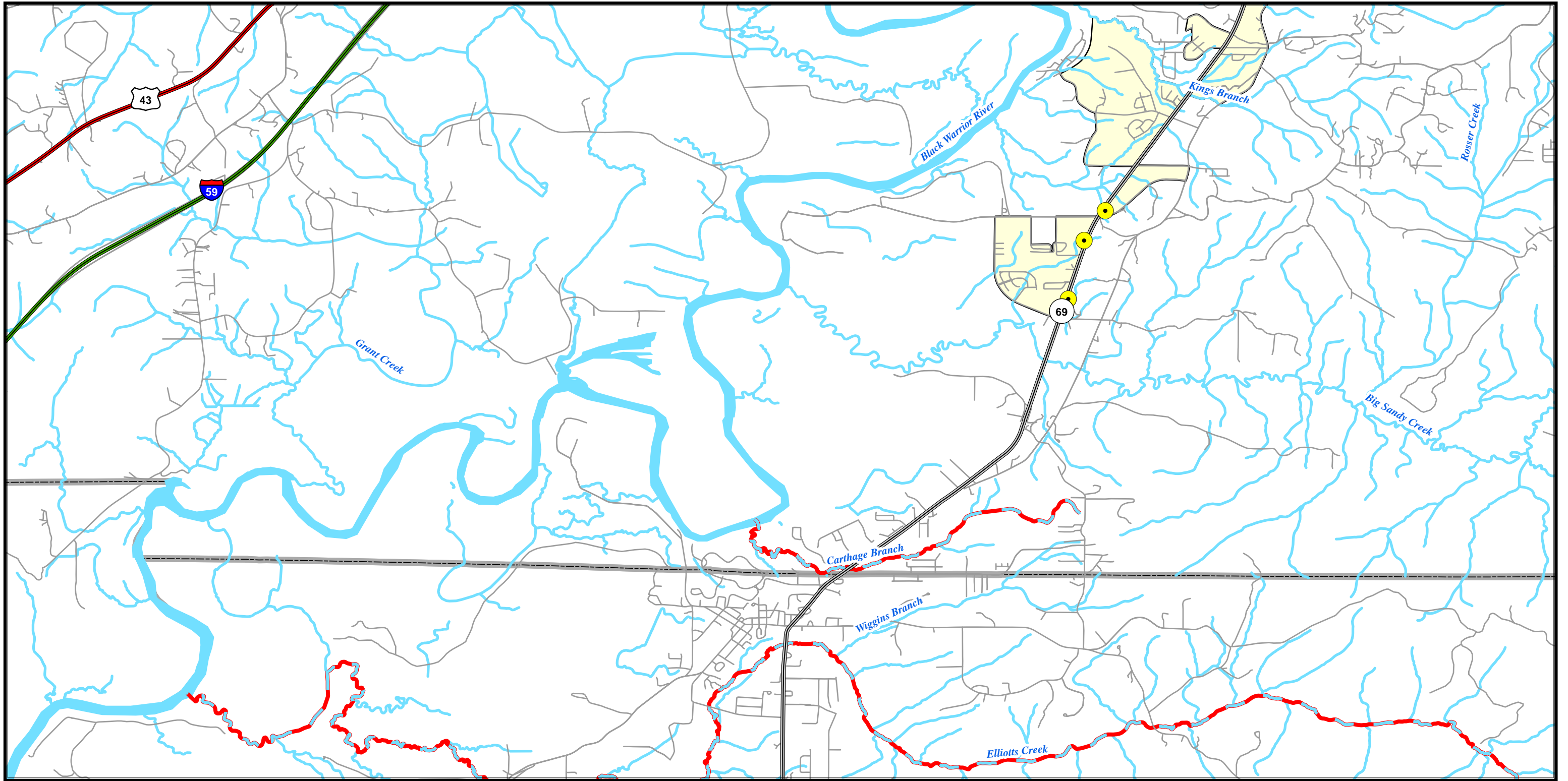
 Other POCs



1 inch = 5,000 feet

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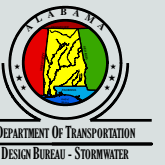
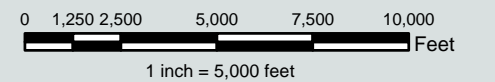




# ALDOT MS4 Areas Tuscaloosa Map: 4

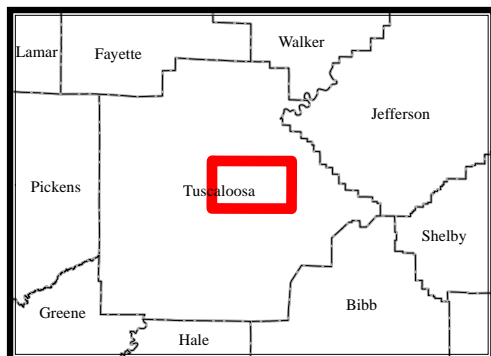
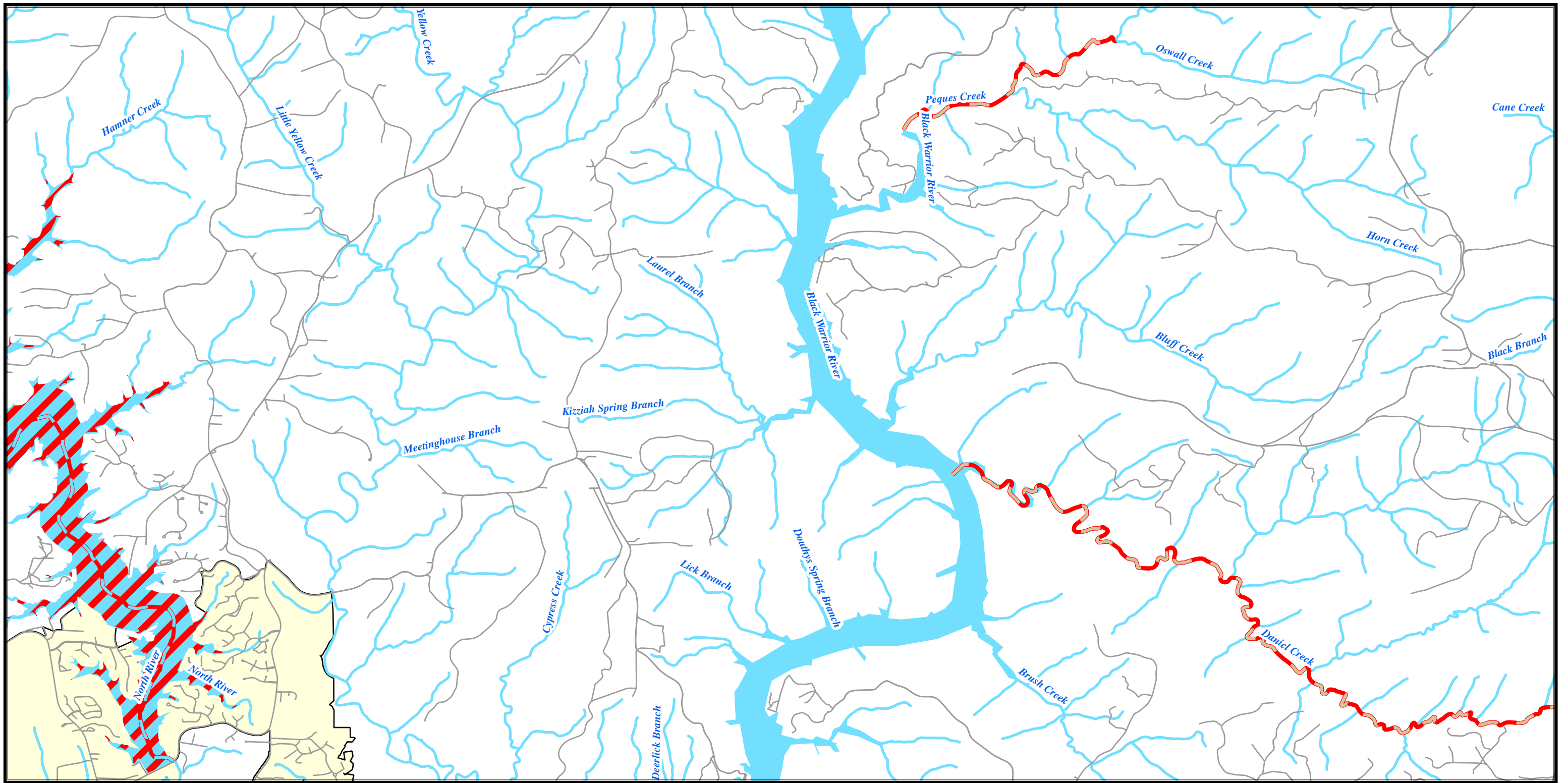
-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

- 303(d) / TMDL Listed Waters
-  Sediment POC
  -  Other POCs



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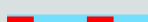


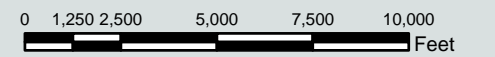


## ALDOT MS4 Areas Tuscaloosa Map: 5

-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

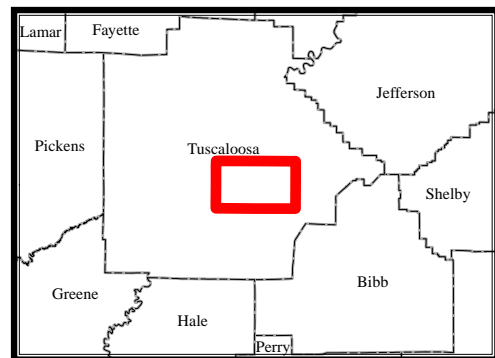
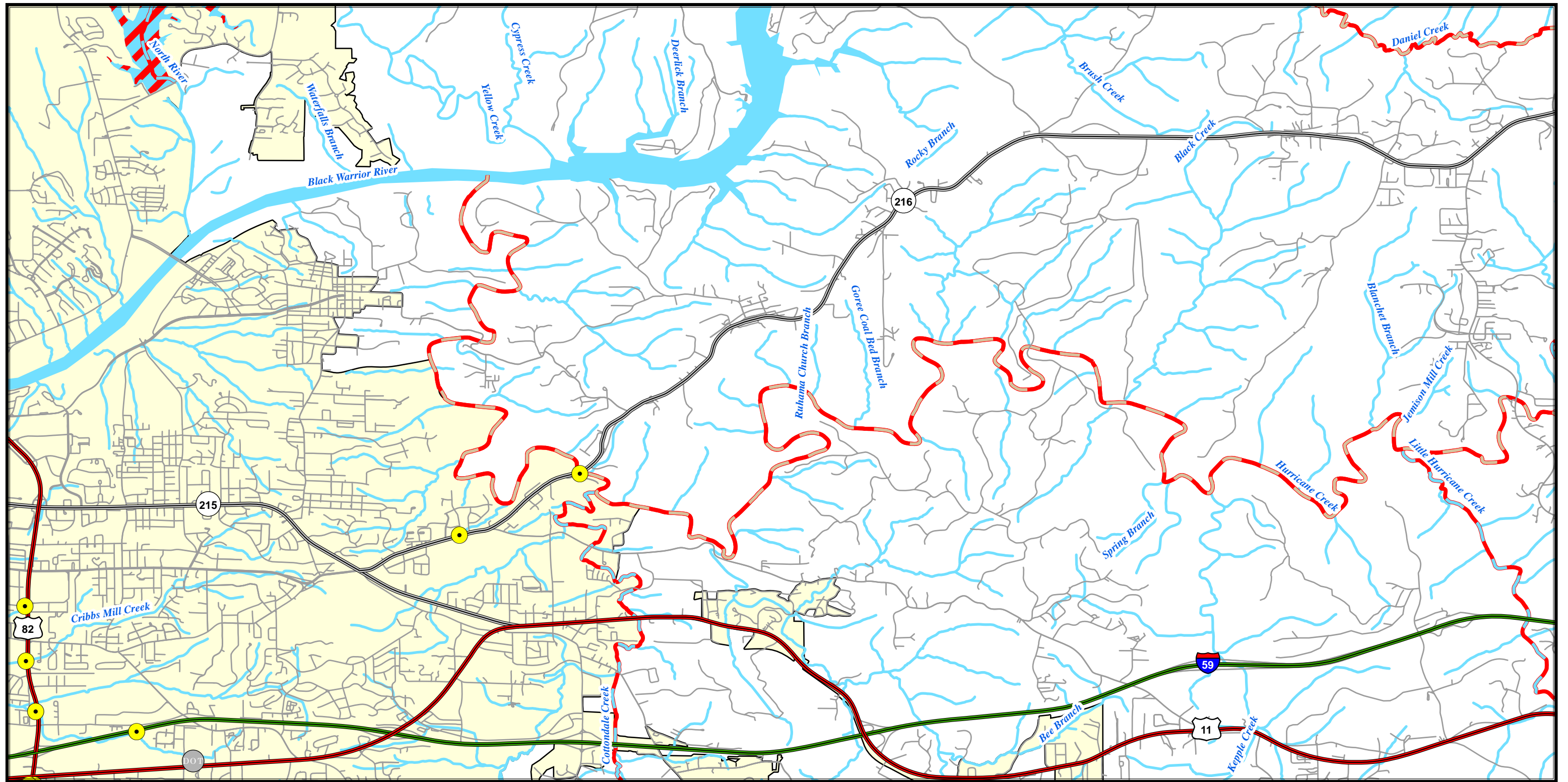
303(d) / TMDL Listed Waters

-  Sediment POC
-  Other POCs



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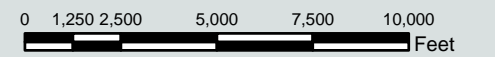




## ALDOT MS4 Areas Tuscaloosa Map: 6

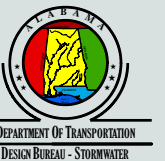
-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

- 303(d) / TMDL Listed Waters
-  Sediment POC
  -  Other POCs



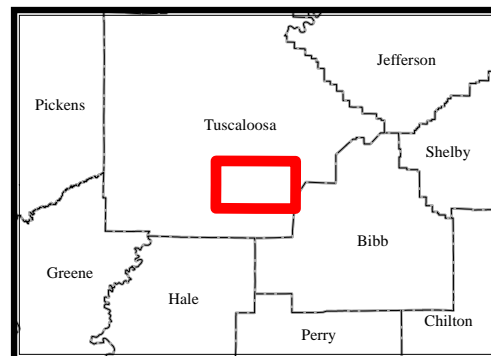
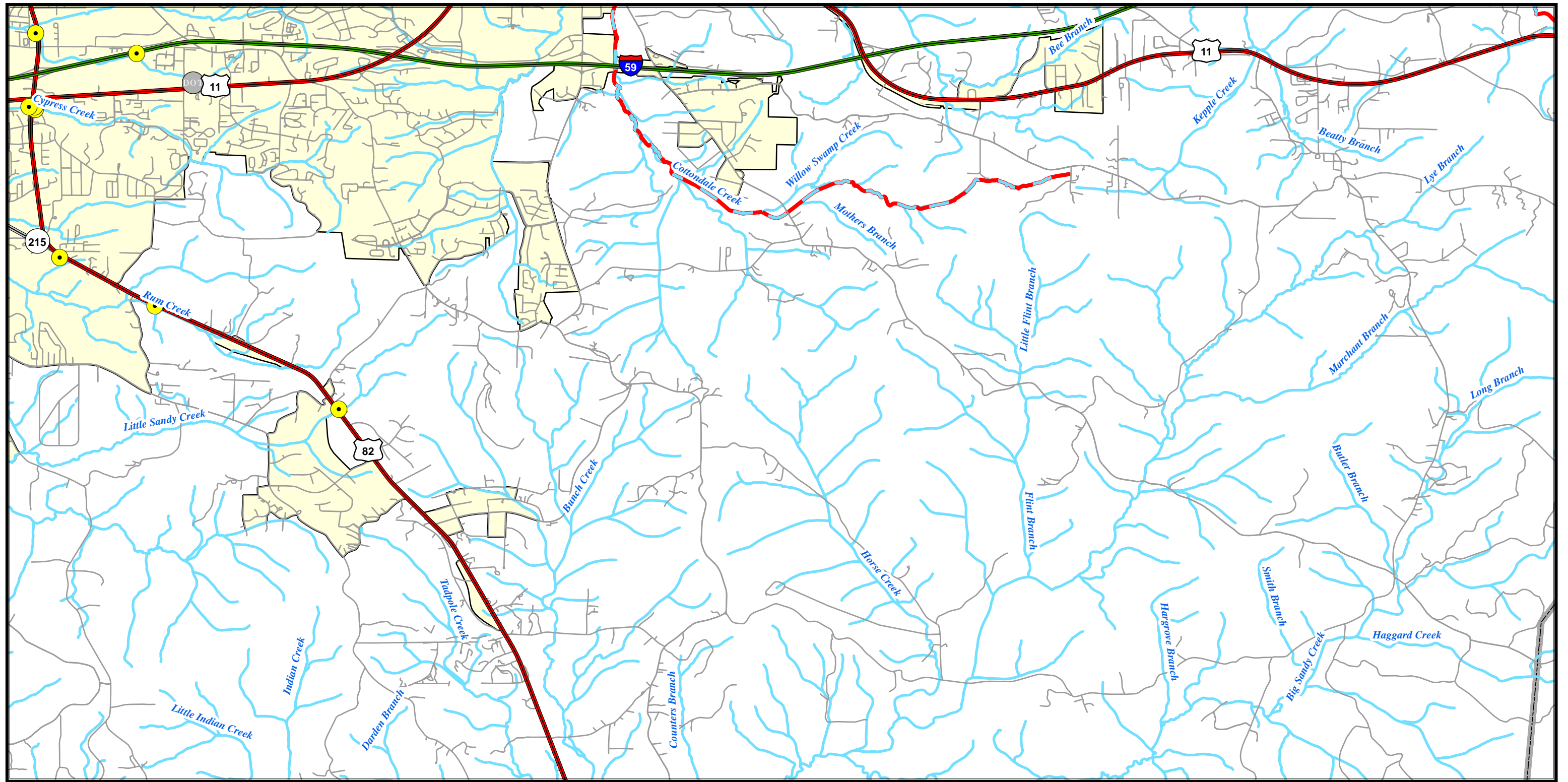
1 inch = 5,000 feet

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DEPARTMENT OF TRANSPORTATION  
DESIGN BUREAU - STORMWATER

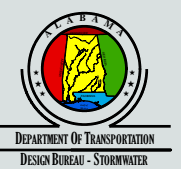
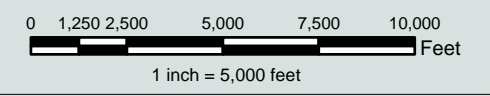




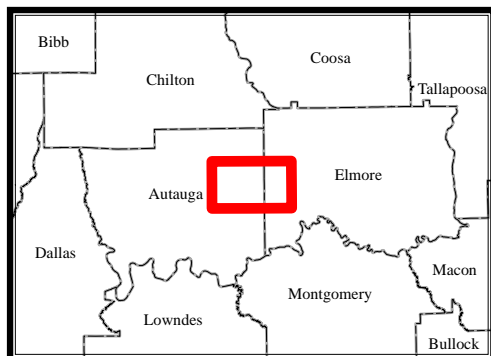
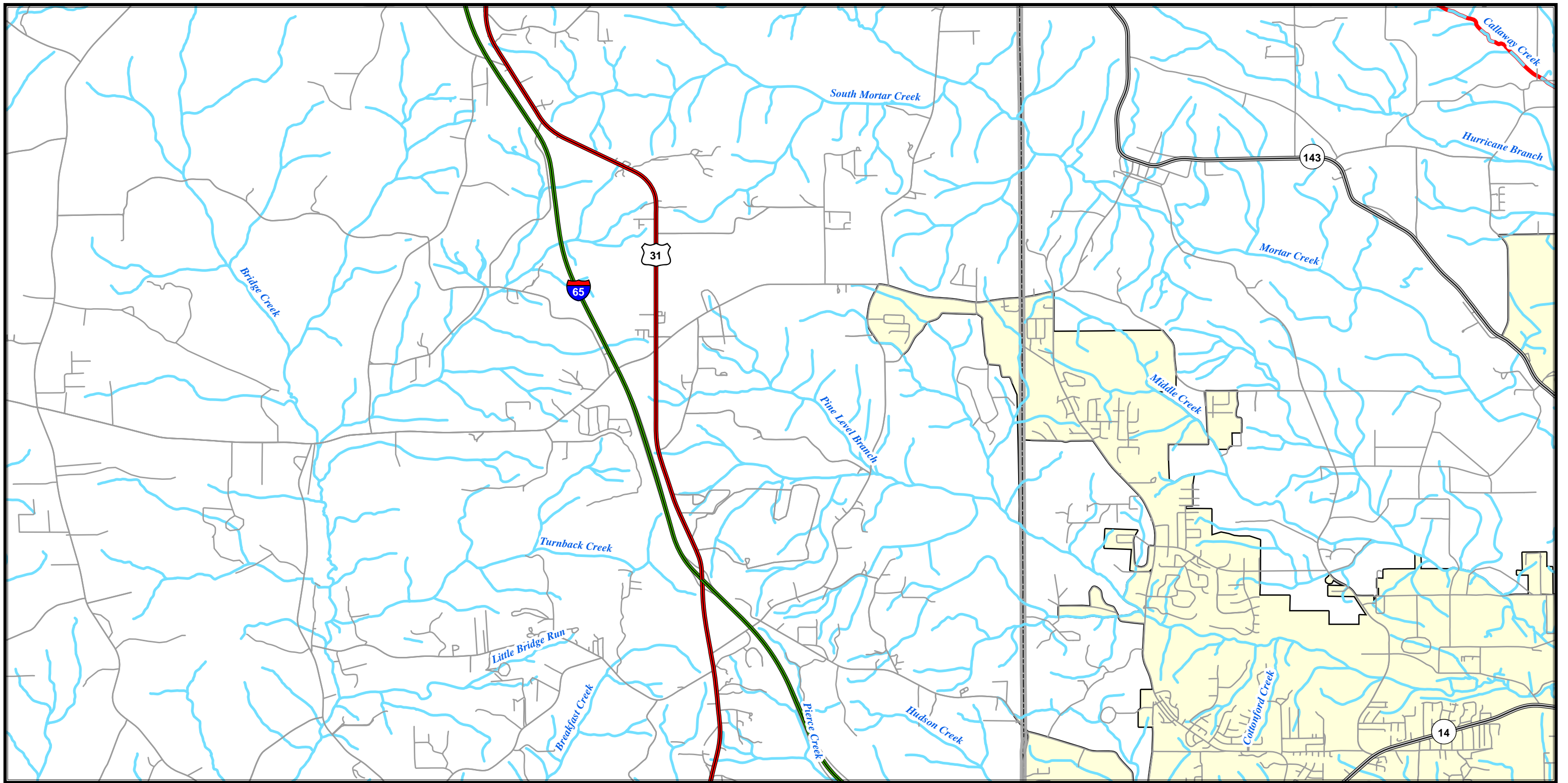
# ALDOT MS4 Areas Tuscaloosa Map: 7

-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

-  303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs



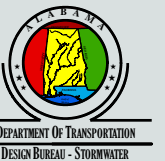
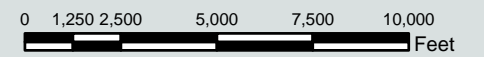
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# ALDOT MS4 Areas Montgomery Map: 1

-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

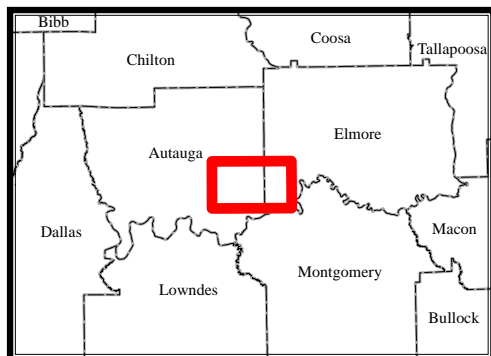
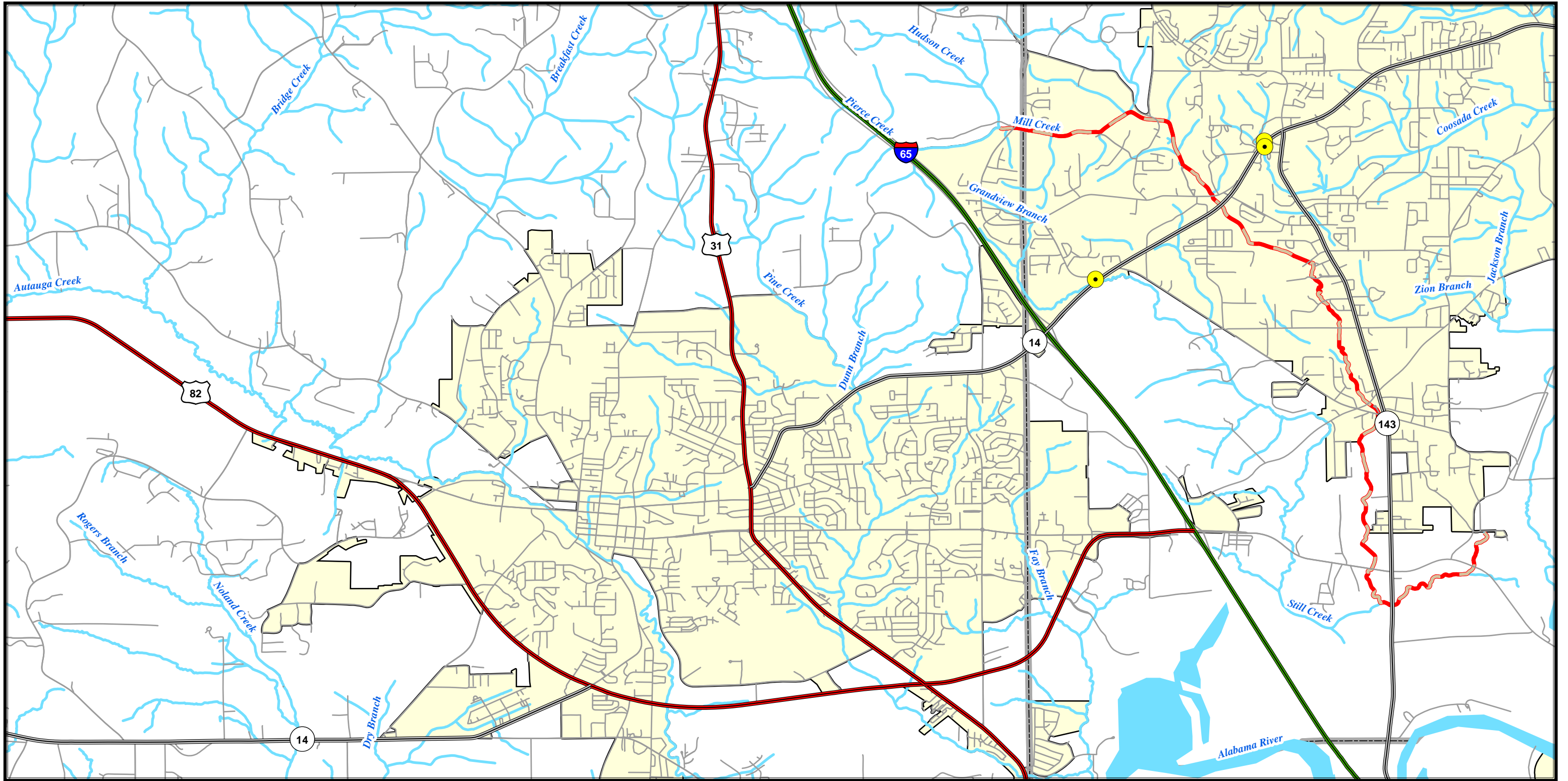
- 303(d) / TMDL Listed Waters
-  Sediment POC
  -  Other POCs



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DESIGN BUREAU - STORMWATER

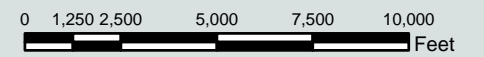




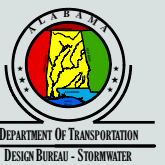
# ALDOT MS4 Areas Montgomery Map: 2

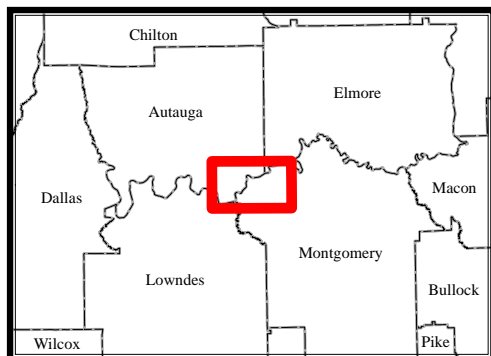
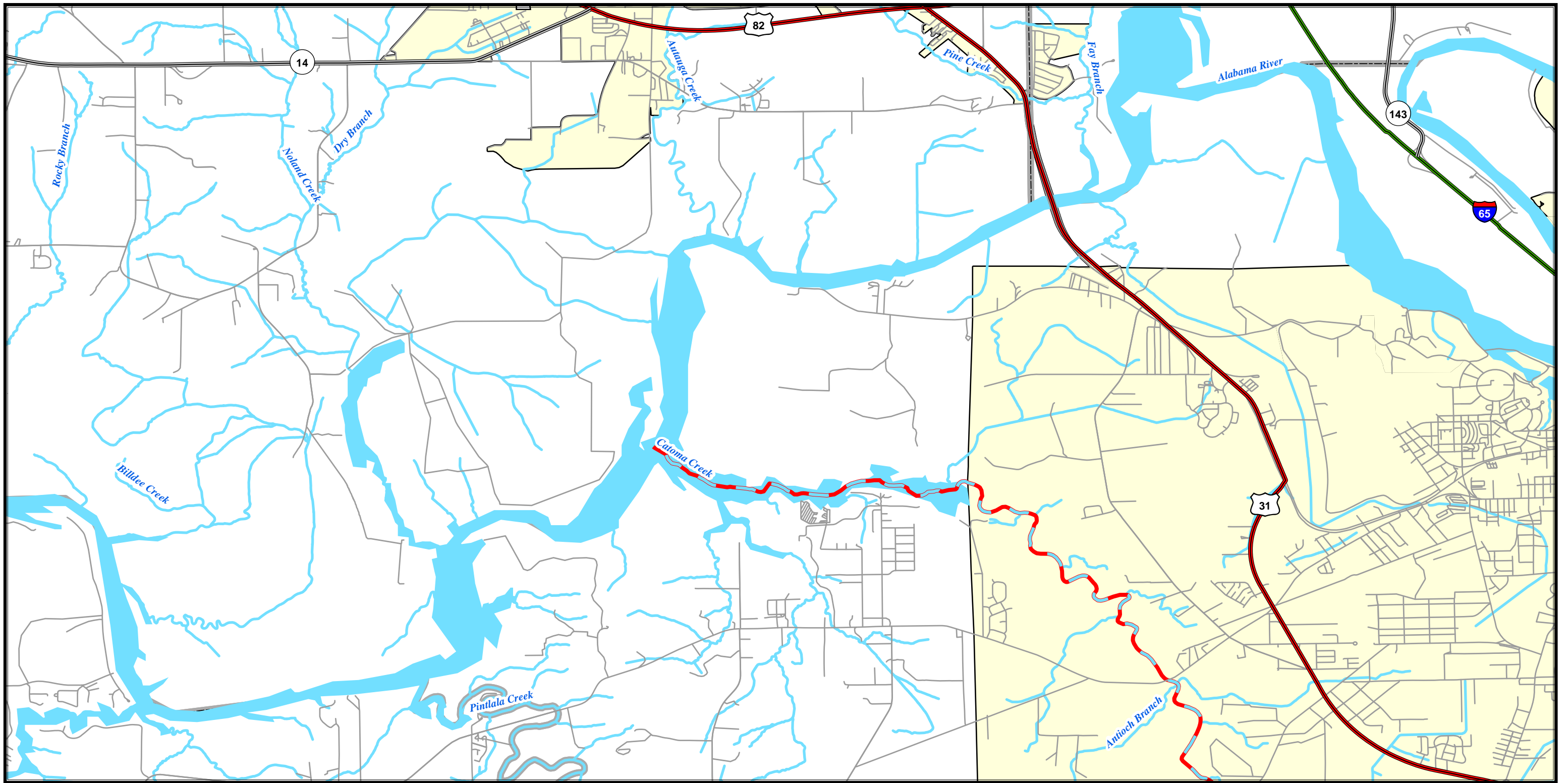
-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs



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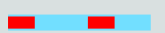


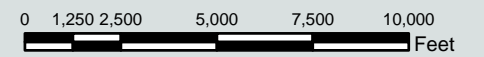


## ALDOT MS4 Areas Montgomery Map: 3

-  MS4 Area
-  ALDOT Support Facility
-  MS4 Monitoring Location
-  Major Outfall on Inventory

303(d) / TMDL Listed Waters

-  Sediment POC
-  Other POCs

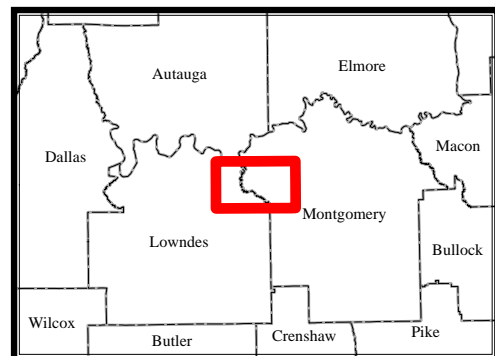
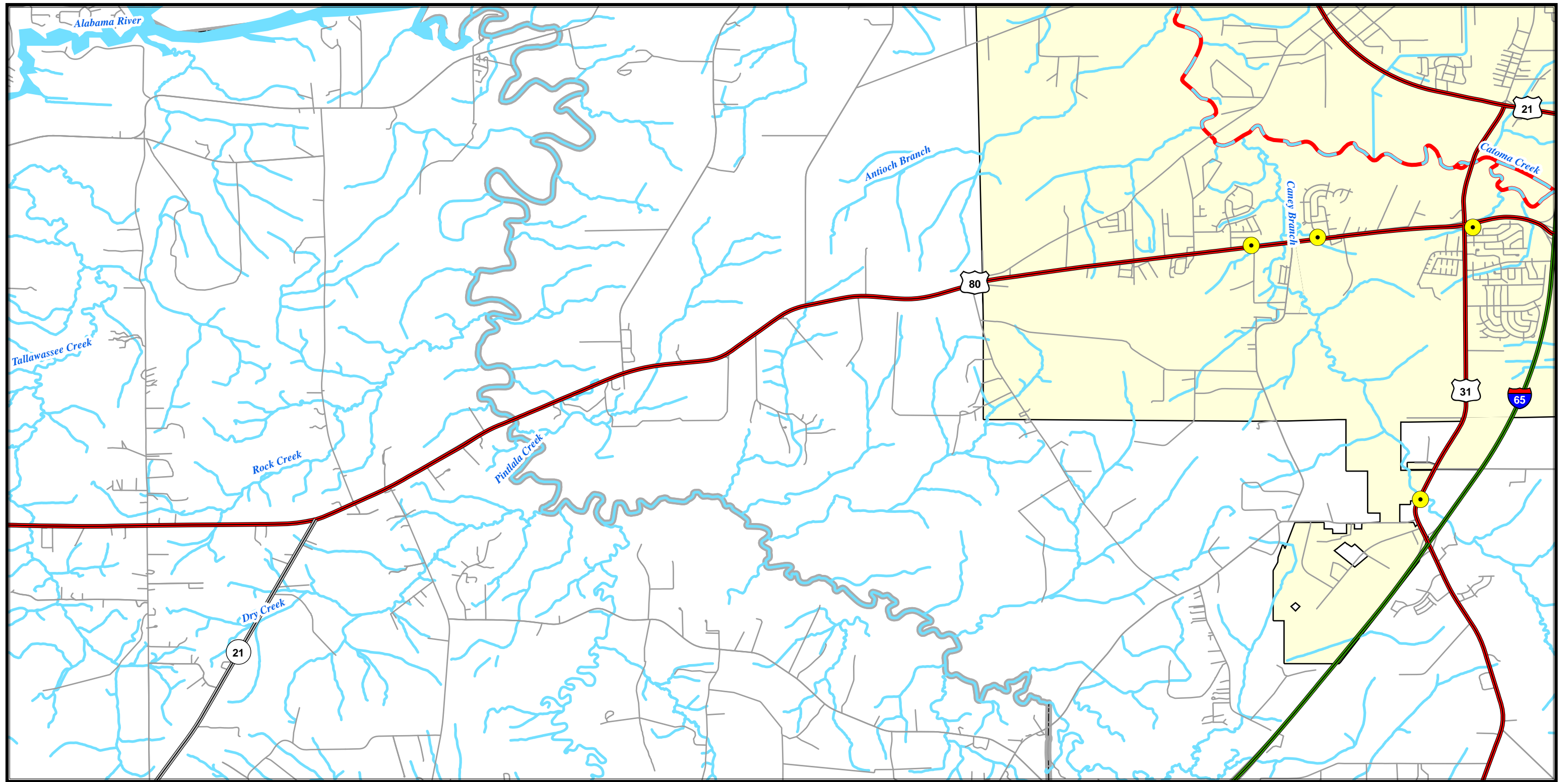


1 inch = 5,000 feet

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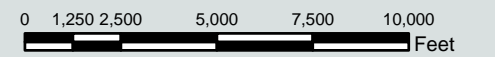
## ALDOT MS4 Areas Montgomery Map: 4

-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

303(d) / TMDL Listed Waters

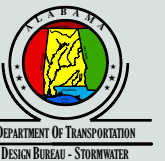
 Sediment POC

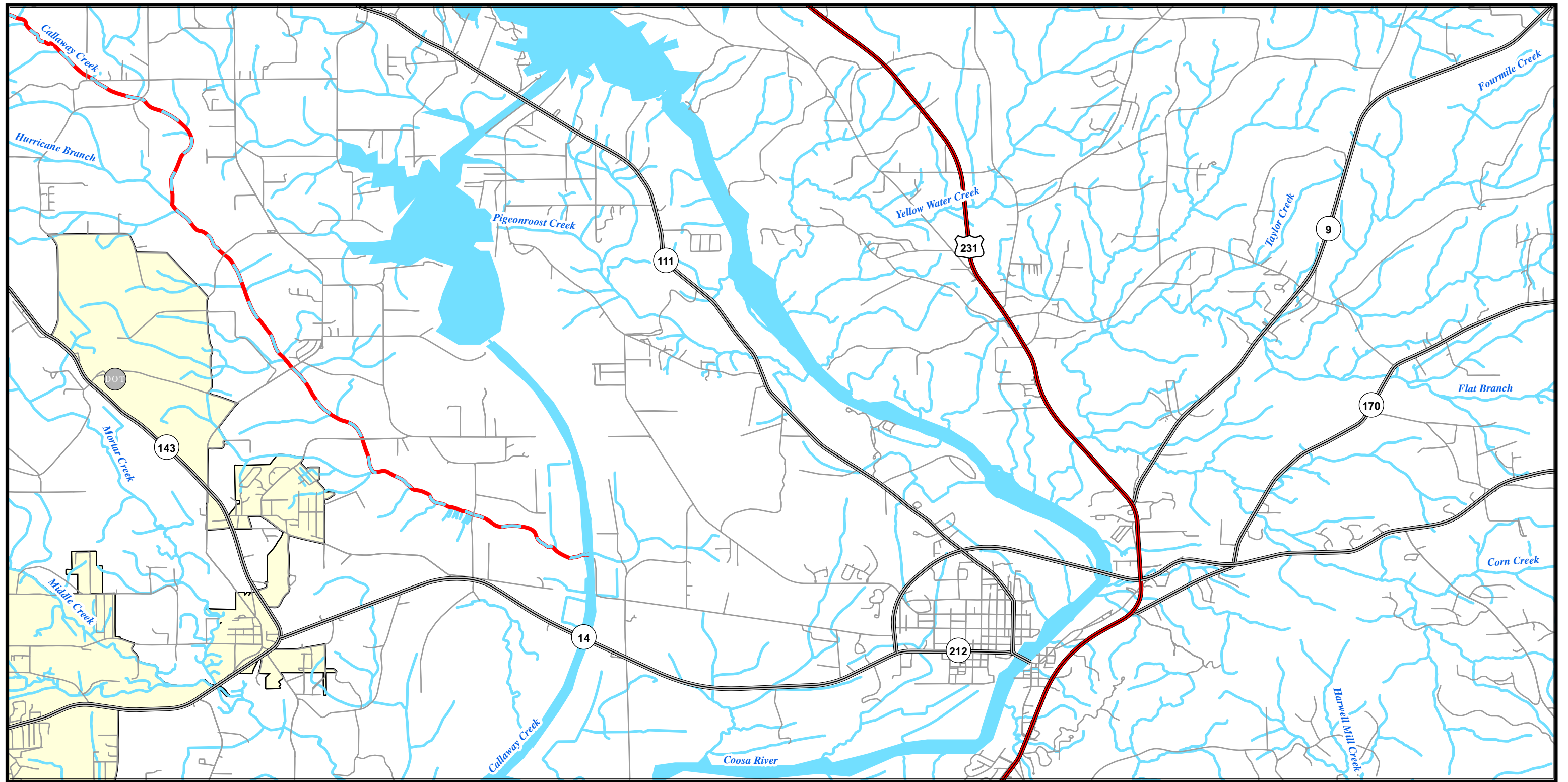
 Other POCs





1 inch = 5,000 feet



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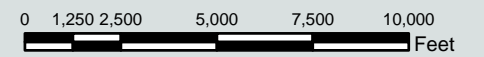


## ALDOT MS4 Areas Montgomery Map: 5

-  MS4 Area
-  ALDOT Support Facility

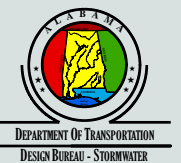
-  MS4 Monitoring Location
-  Major Outfall on Inventory

- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs

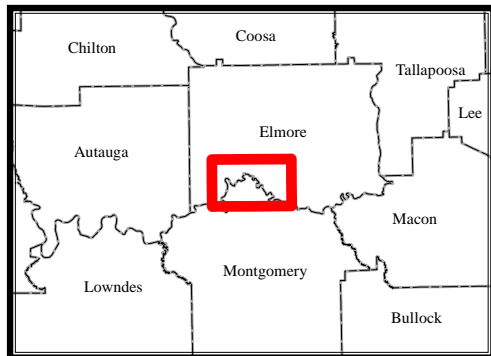
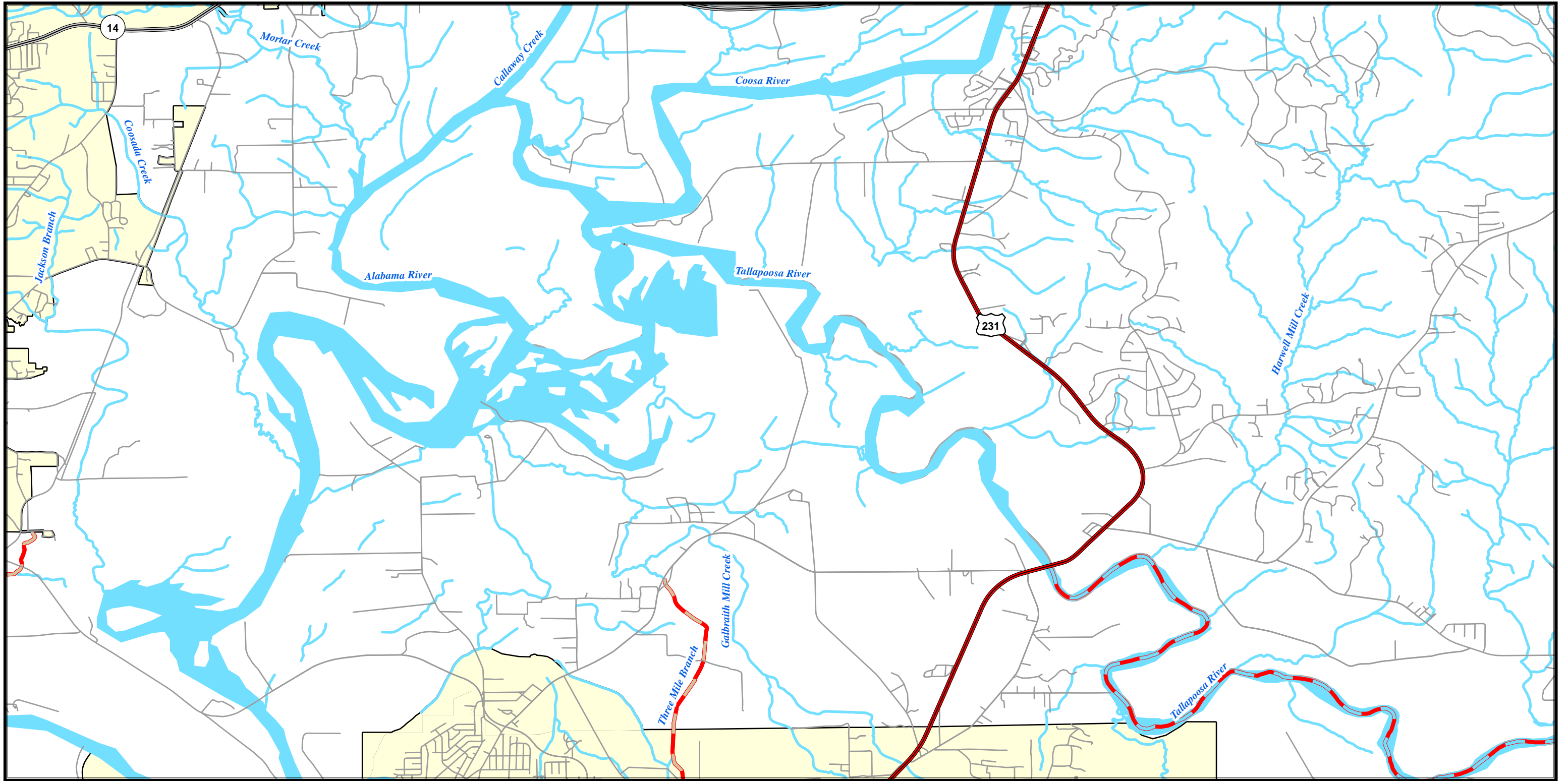


1 inch = 5,000 feet

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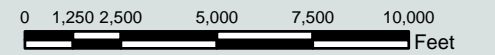


## ALDOT MS4 Areas Montgomery Map: 6

-  MS4 Area
-  MS4 Monitoring Location
-  Major Outfall on Inventory
-  ALDOT Support Facility

303(d) / TMDL Listed Waters

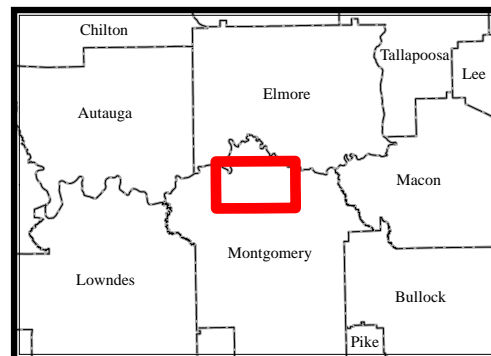
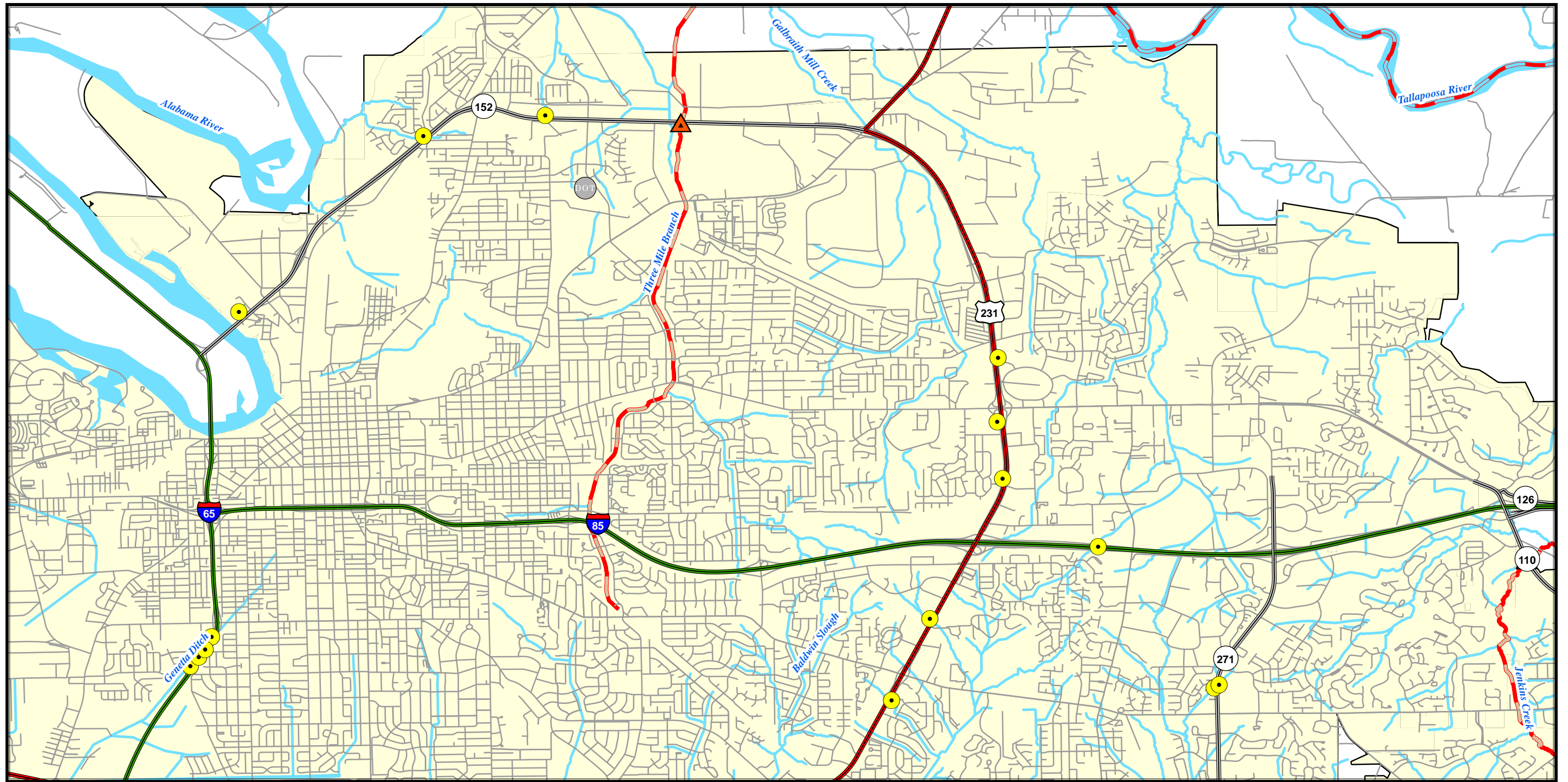
-  Sediment POC
-  Other POCs



1 inch = 5,000 feet



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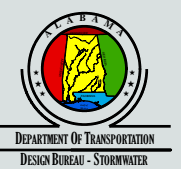
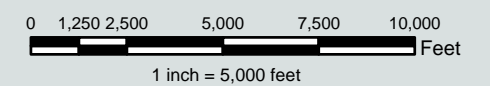




## ALDOT MS4 Areas Montgomery Map: 7

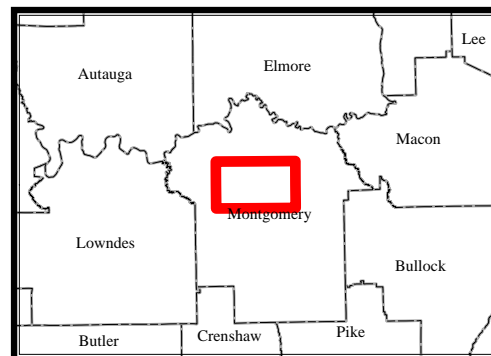
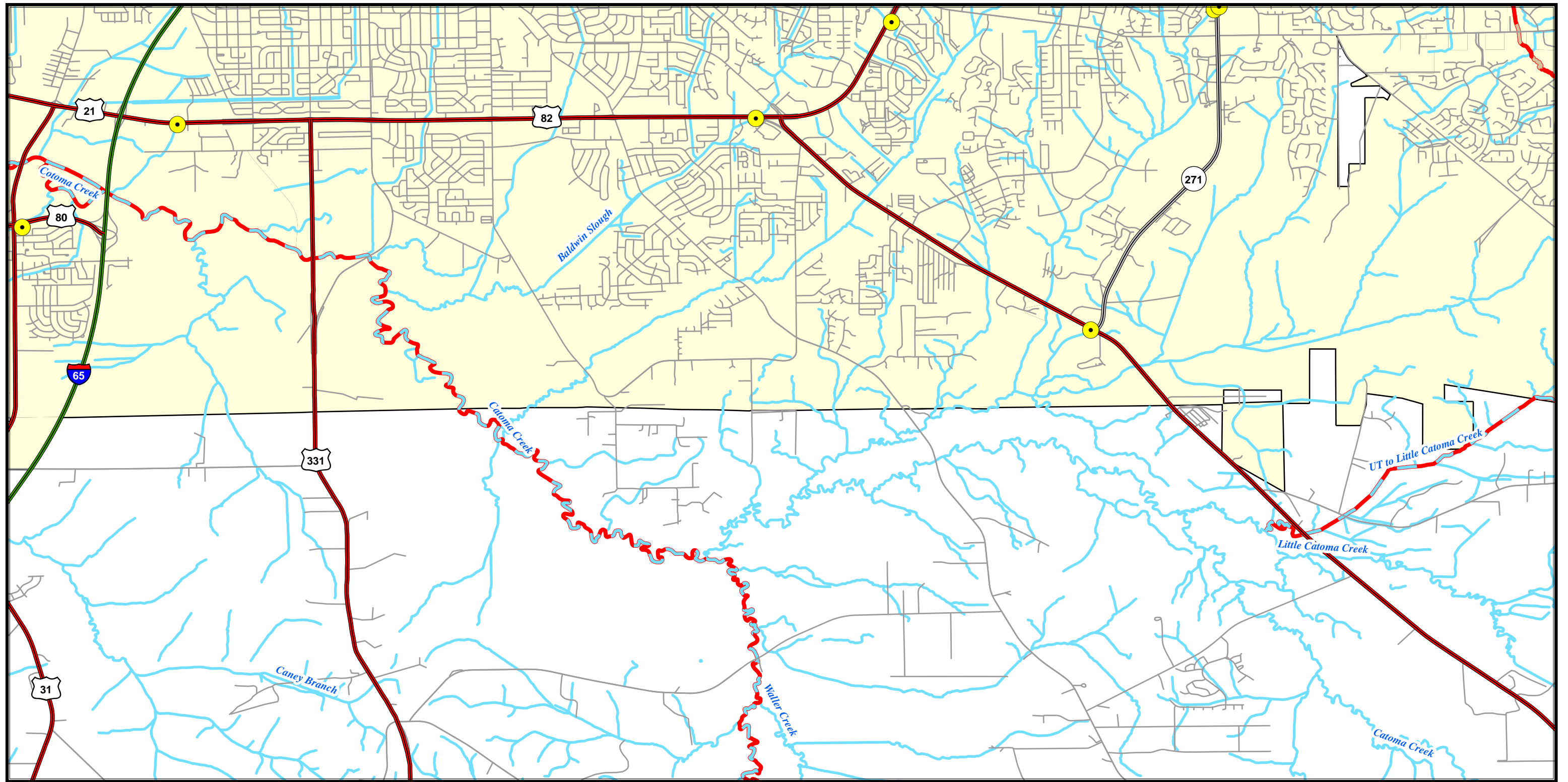
-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs



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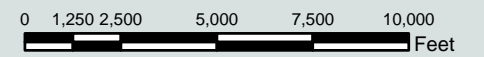
## ALDOT MS4 Areas Montgomery Map: 8

-  MS4 Area
-  MS4 Monitoring Location
-  Major Outfall on Inventory
-  ALDOT Support Facility

303(d) / TMDL Listed Waters

 Sediment POC

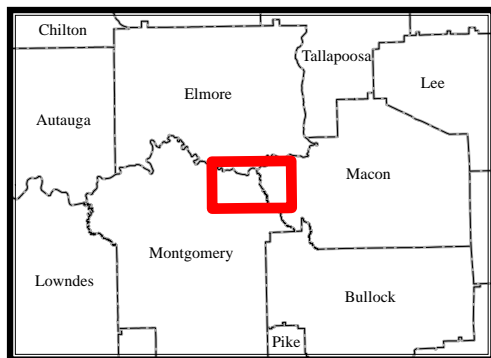
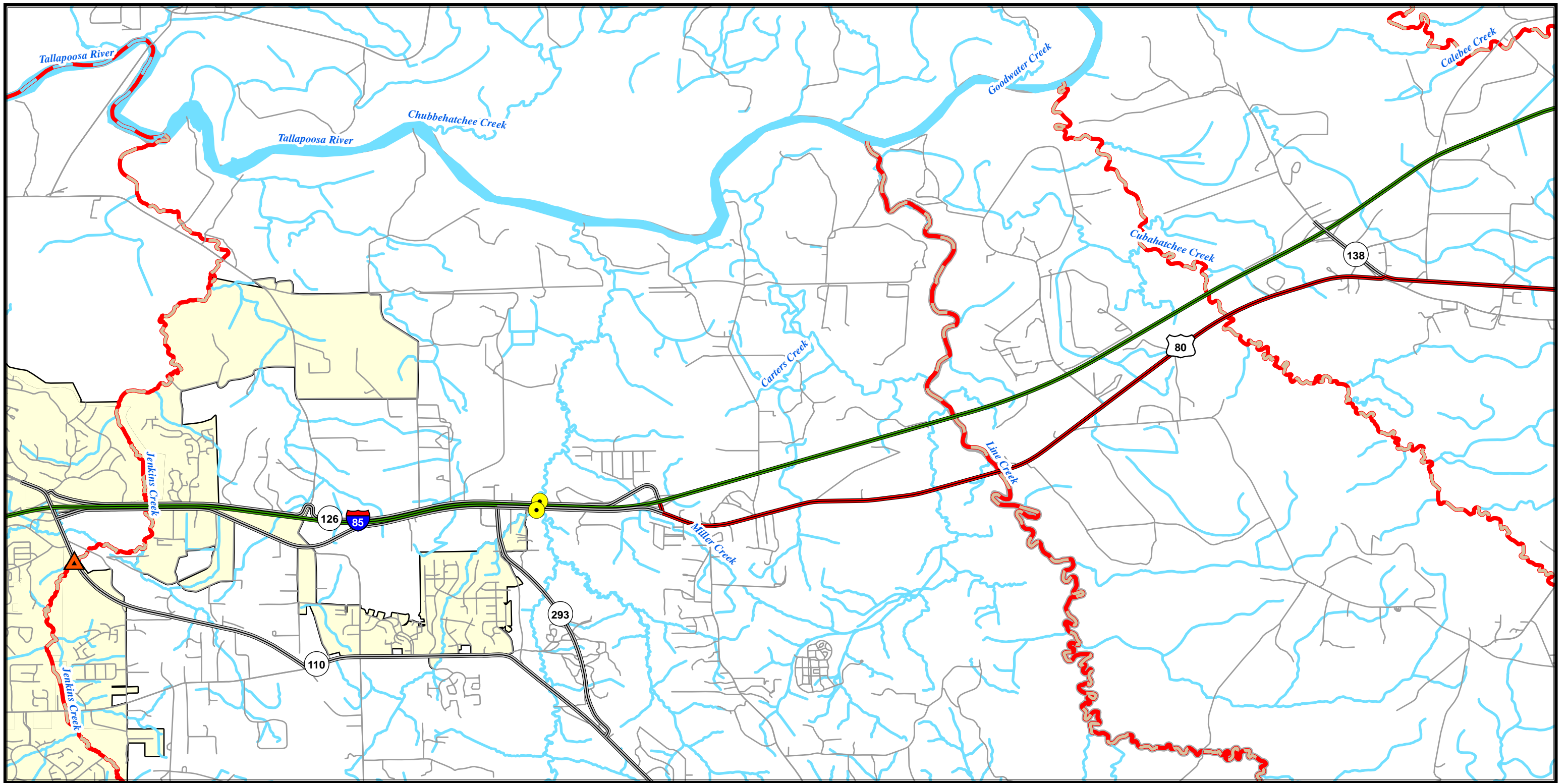
 Other POCs



1 inch = 5,000 feet

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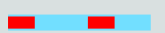


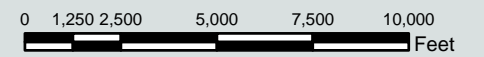


# ALDOT MS4 Areas Montgomery Map: 9

-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

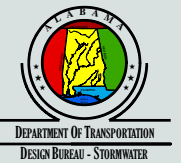
303(d) / TMDL Listed Waters

-  Sediment POC
-  Other POCs

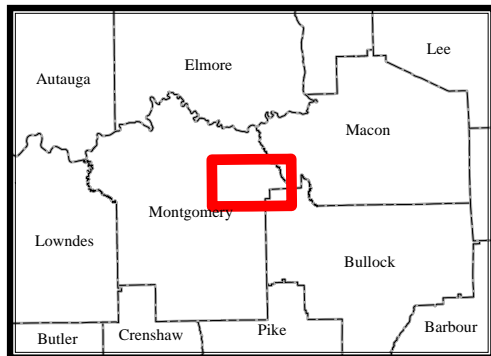
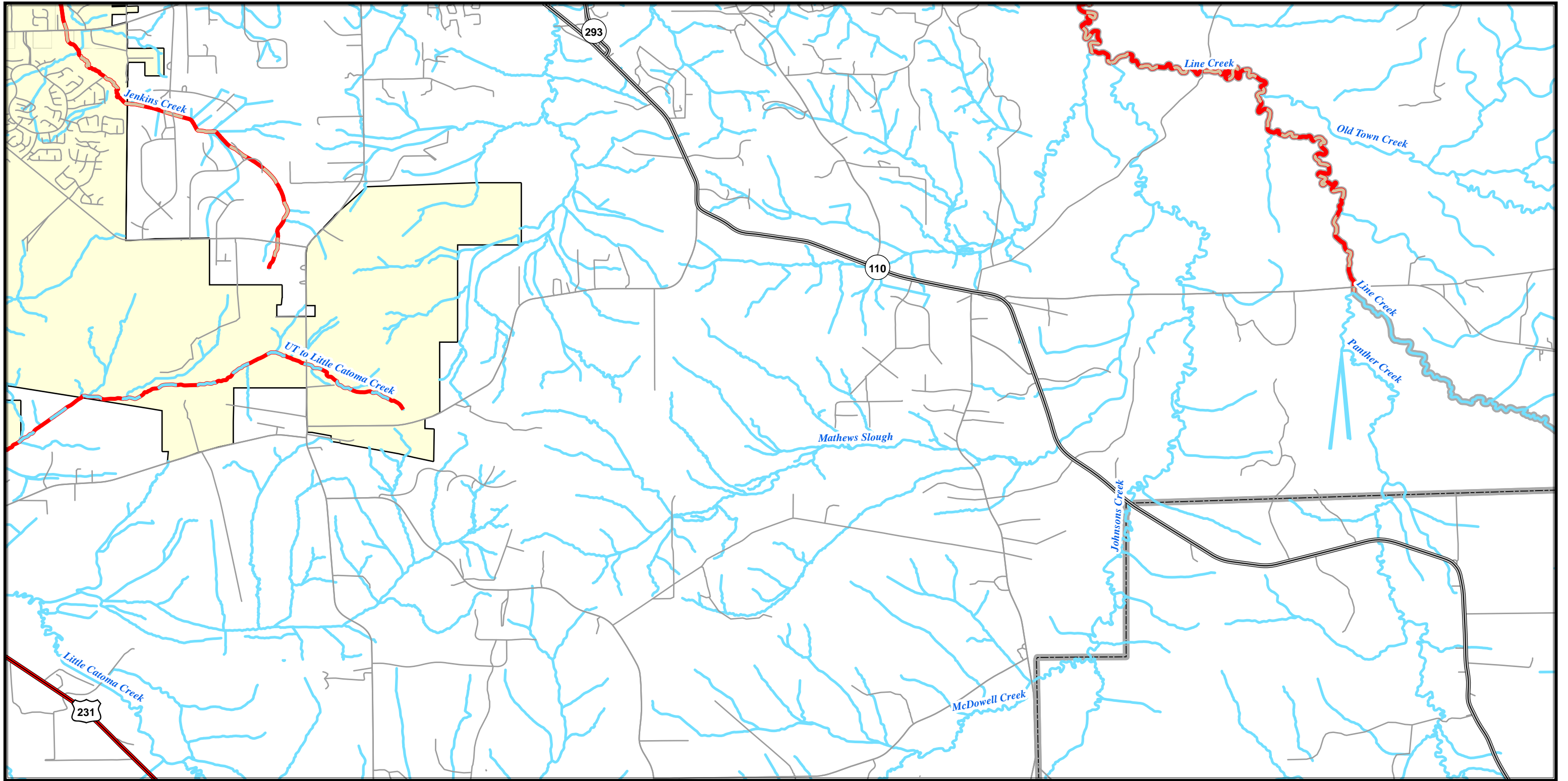


1 inch = 5,000 feet



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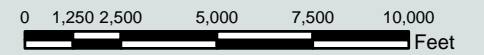


# ALDOT MS4 Areas Montgomery Map: 10

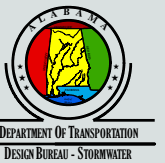
-  MS4 Area
-  ALDOT Support Facility

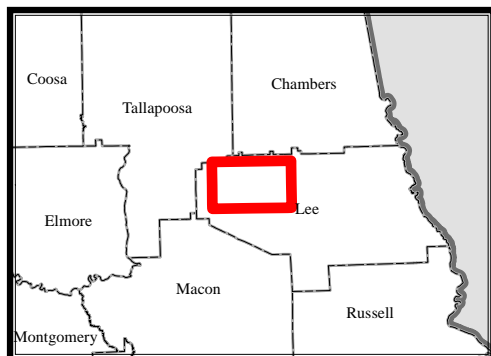
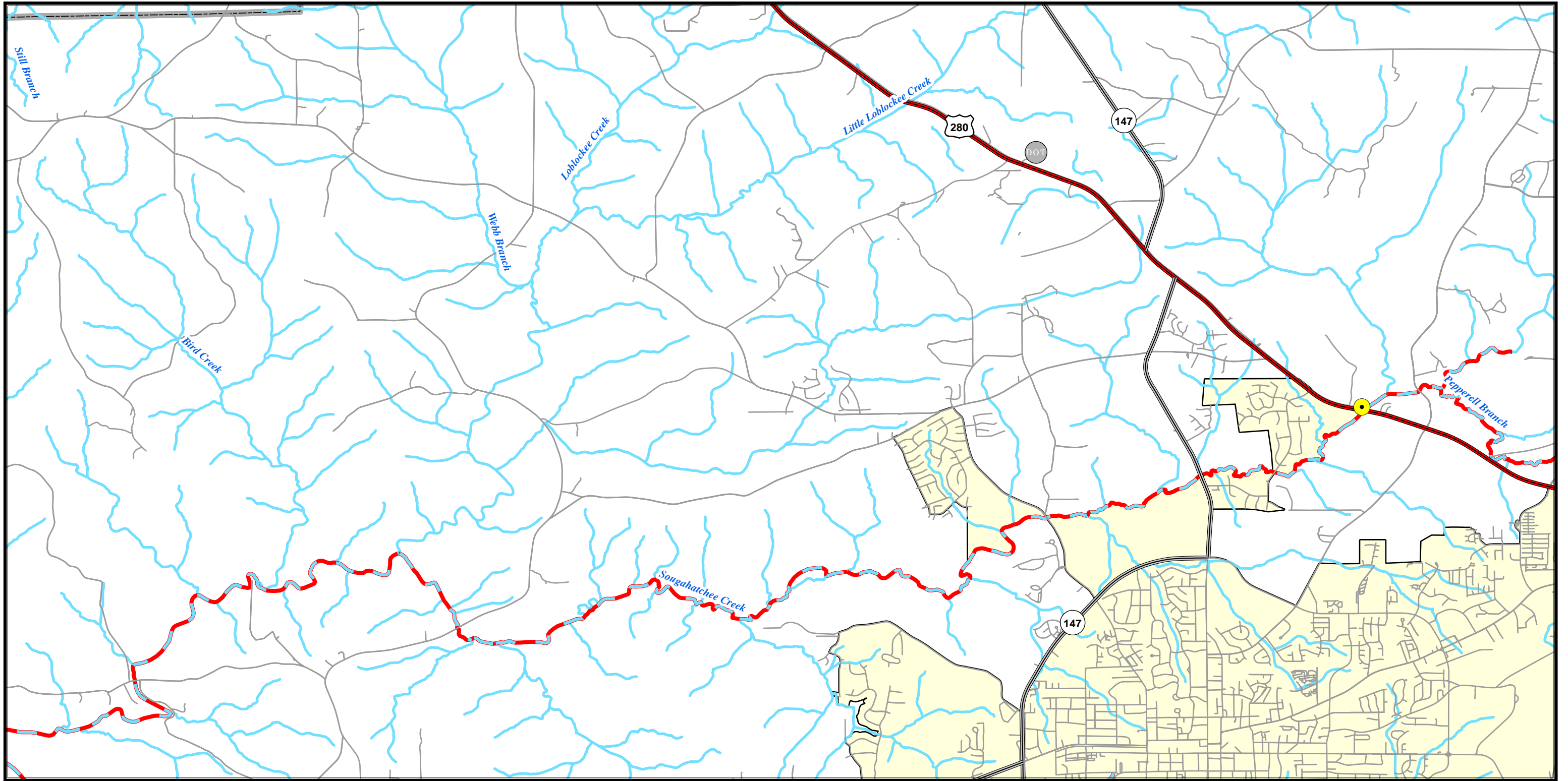
-  MS4 Monitoring Location
-  Major Outfall on Inventory

-  303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs







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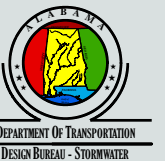


## ALDOT MS4 Areas Auburn/Opelika Map: 1

-  MS4 Area
-  ALDOT Support Facility

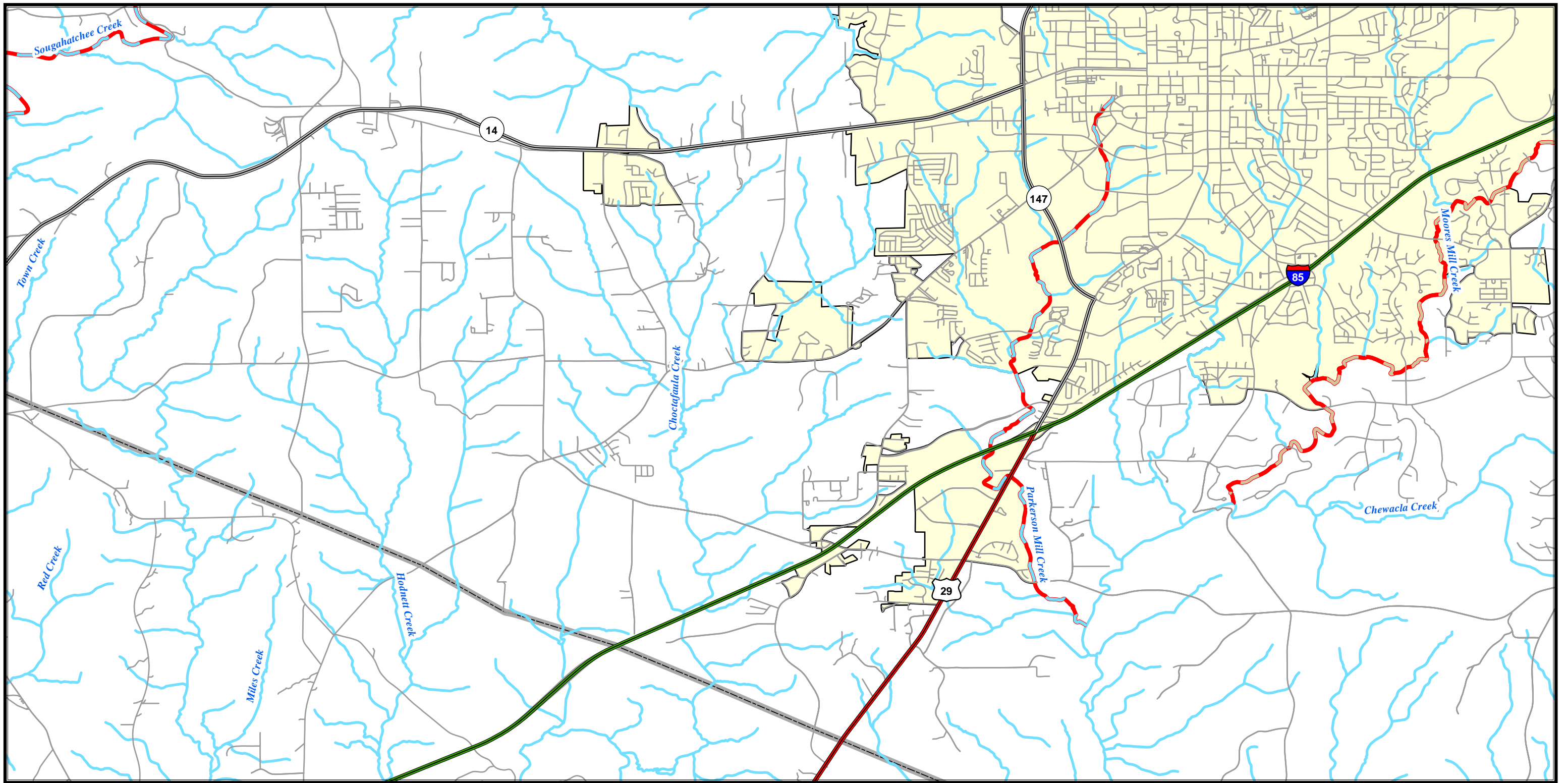
-  MS4 Monitoring Location
-  Major Outfall on Inventory

- 303(d) / TMDL Listed Waters
-  Sediment POC
  -  Other POCs







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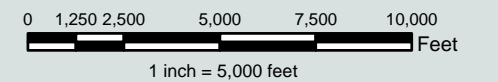


## ALDOT MS4 Areas Auburn/Opelika Map: 2

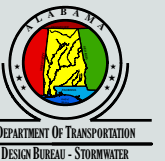
-  MS4 Area
-  ALDOT Support Facility

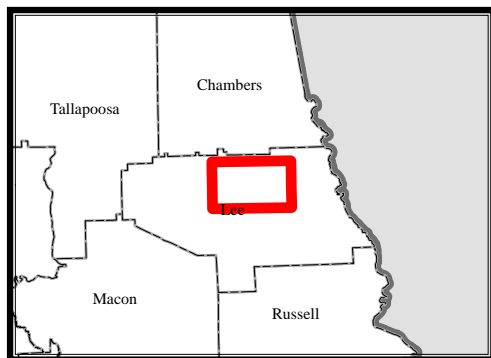
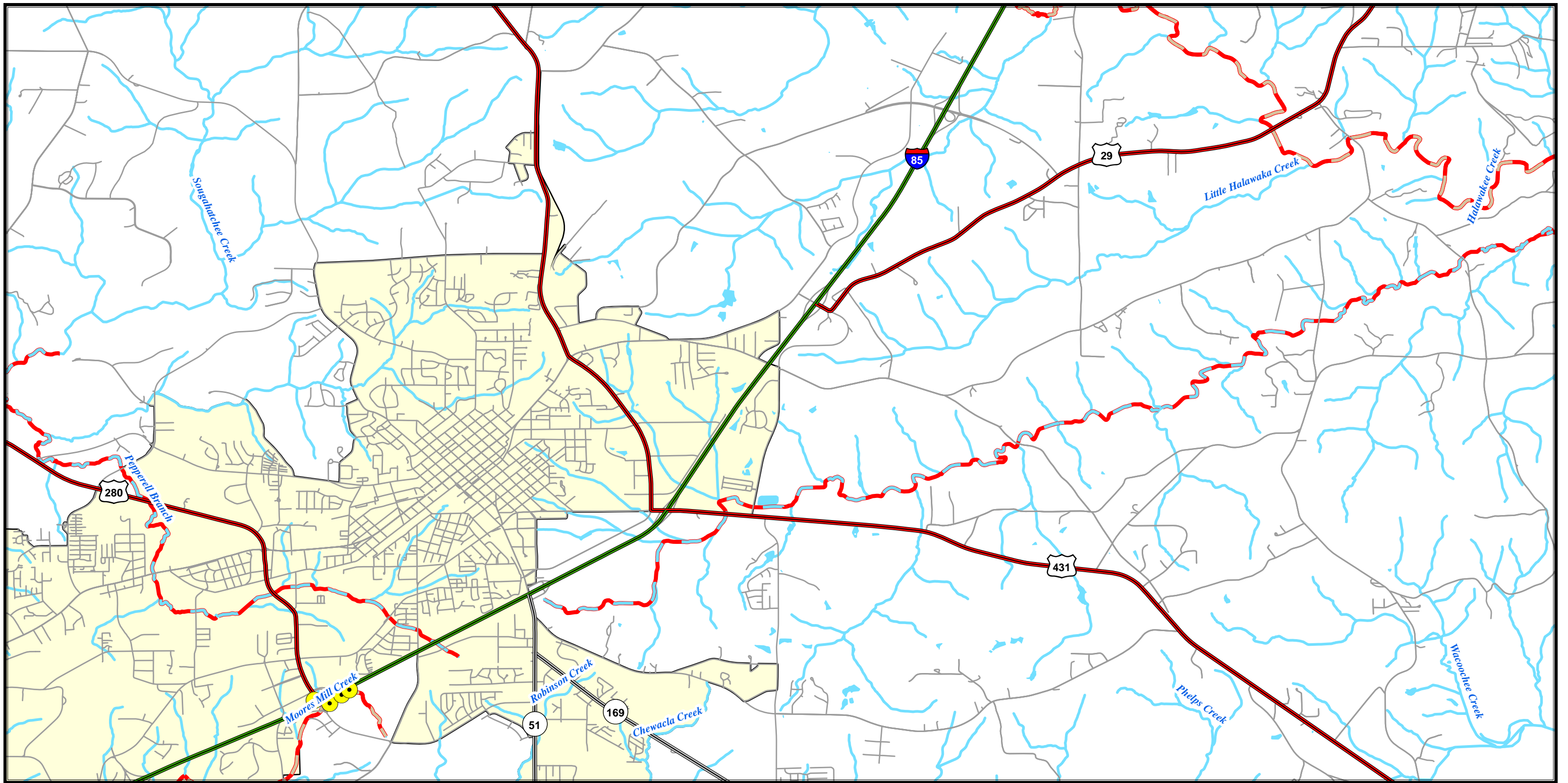
-  MS4 Monitoring Location
-  Major Outfall on Inventory

- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs




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## ALDOT MS4 Areas Auburn/Opelika Map: 3

 MS4 Area

 ALDOT Support Facility

 MS4 Monitoring Location

 Major Outfall on Inventory

303(d) / TMDL Listed Waters

 Sediment POC

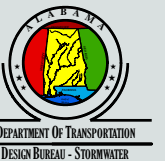
 Other POCs



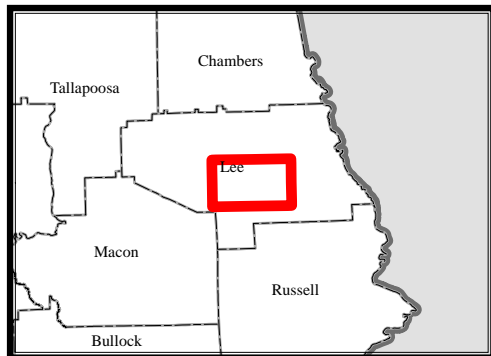
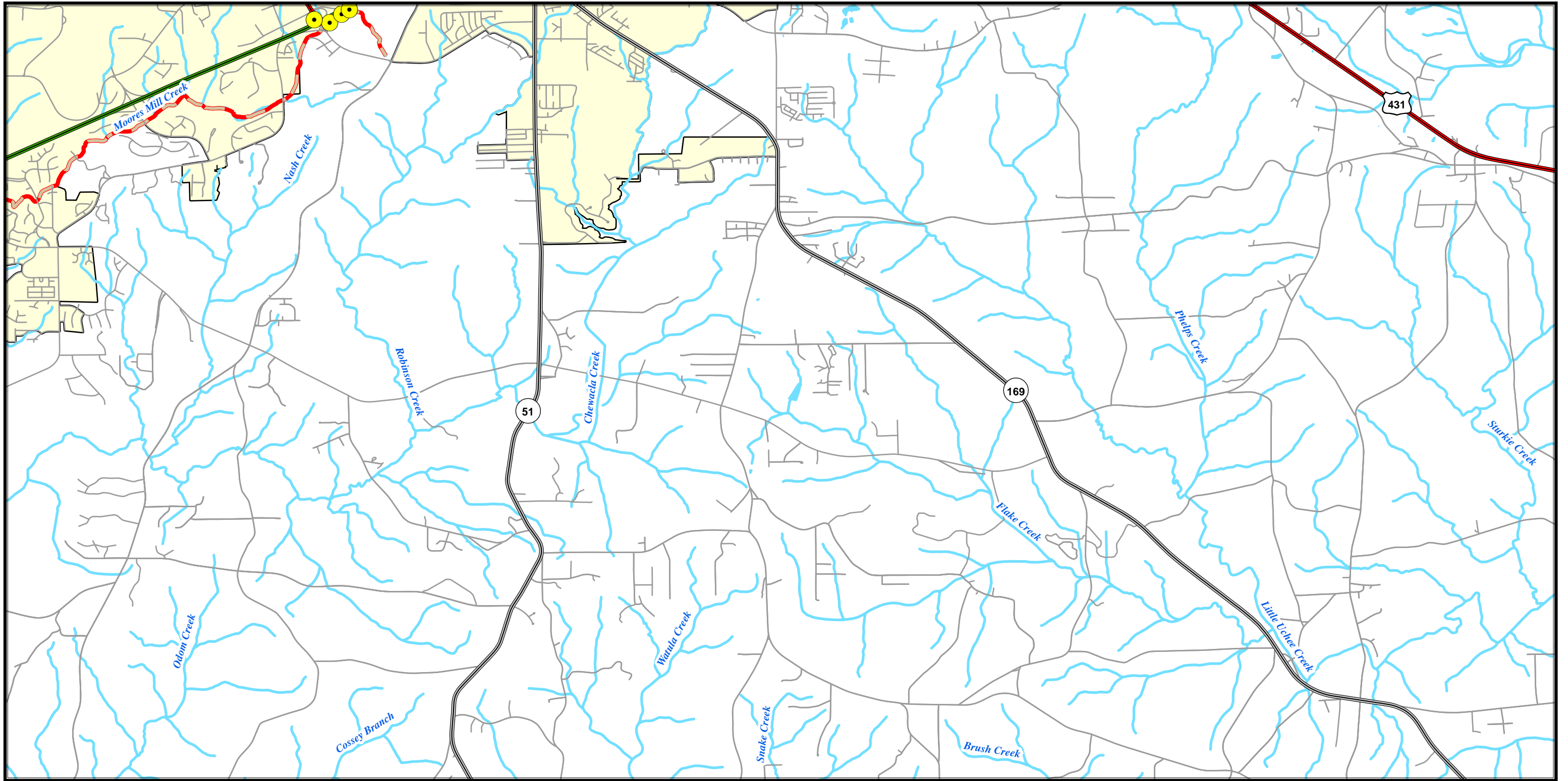
0 1,250 2,500 5,000 7,500 10,000  
Feet

1 inch = 5,000 feet



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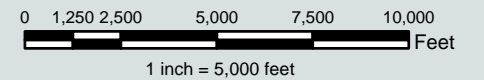


# ALDOT MS4 Areas Auburn/Opelika Map: 4

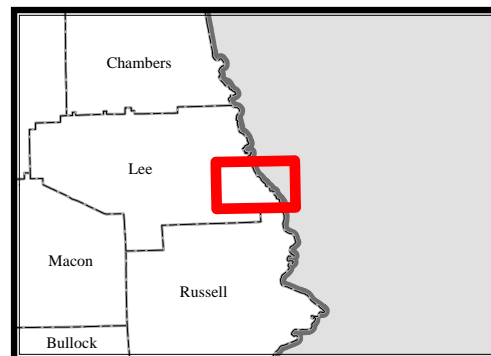
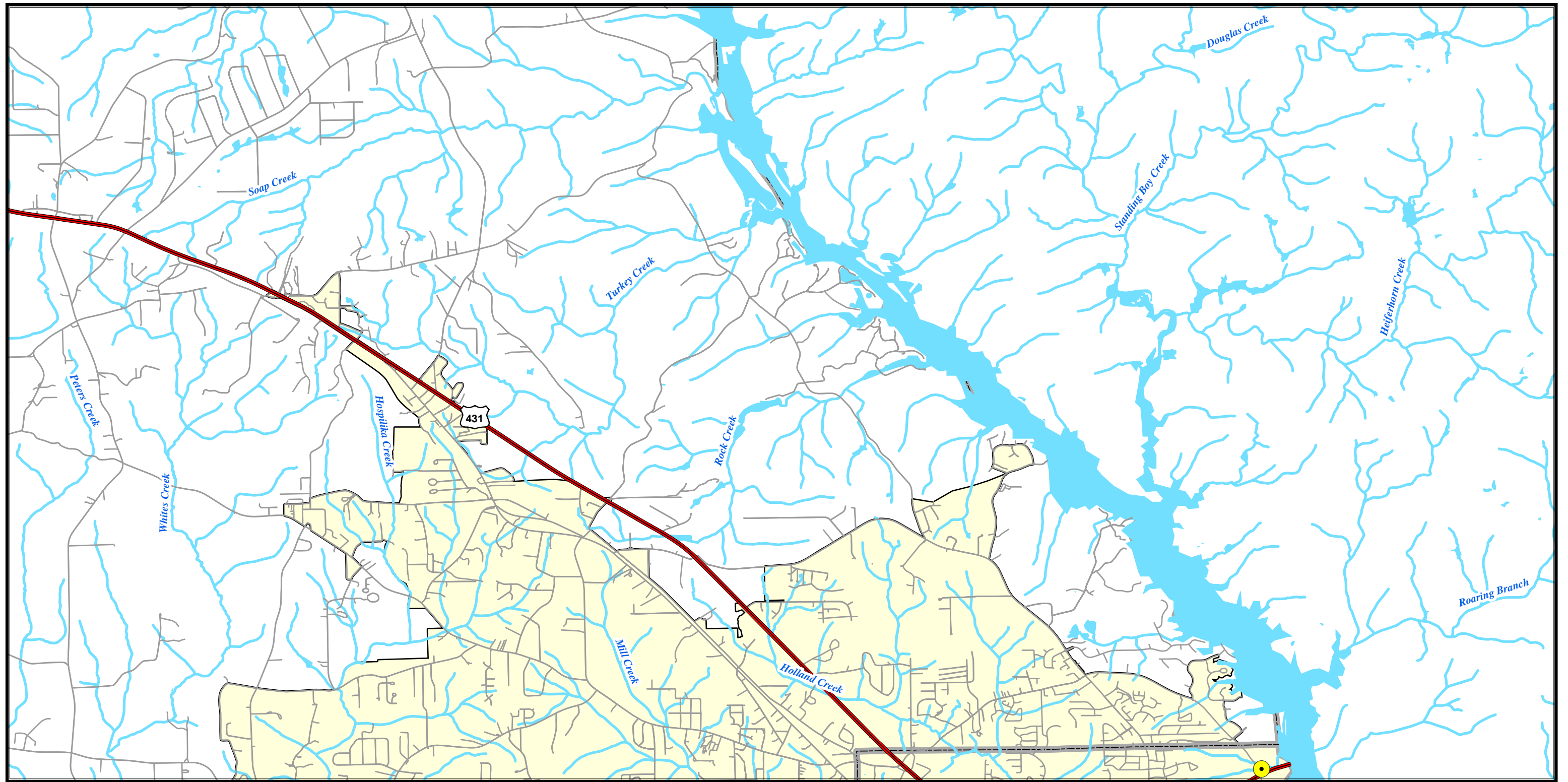
-  MS4 Area
-  ALDOT Support Facility

-  MS4 Monitoring Location
-  Major Outfall on Inventory

- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs





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# ALDOT MS4 Areas Phenix City Map: 1


 MS4 Area

 ALDOT Support Facility

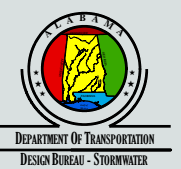
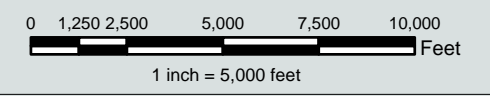
 MS4 Monitoring Location

 Major Outfall on Inventory

303(d) / TMDL Listed Waters

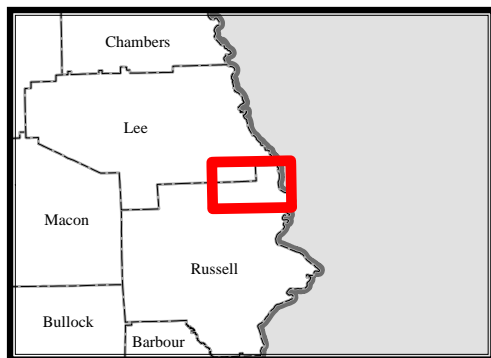
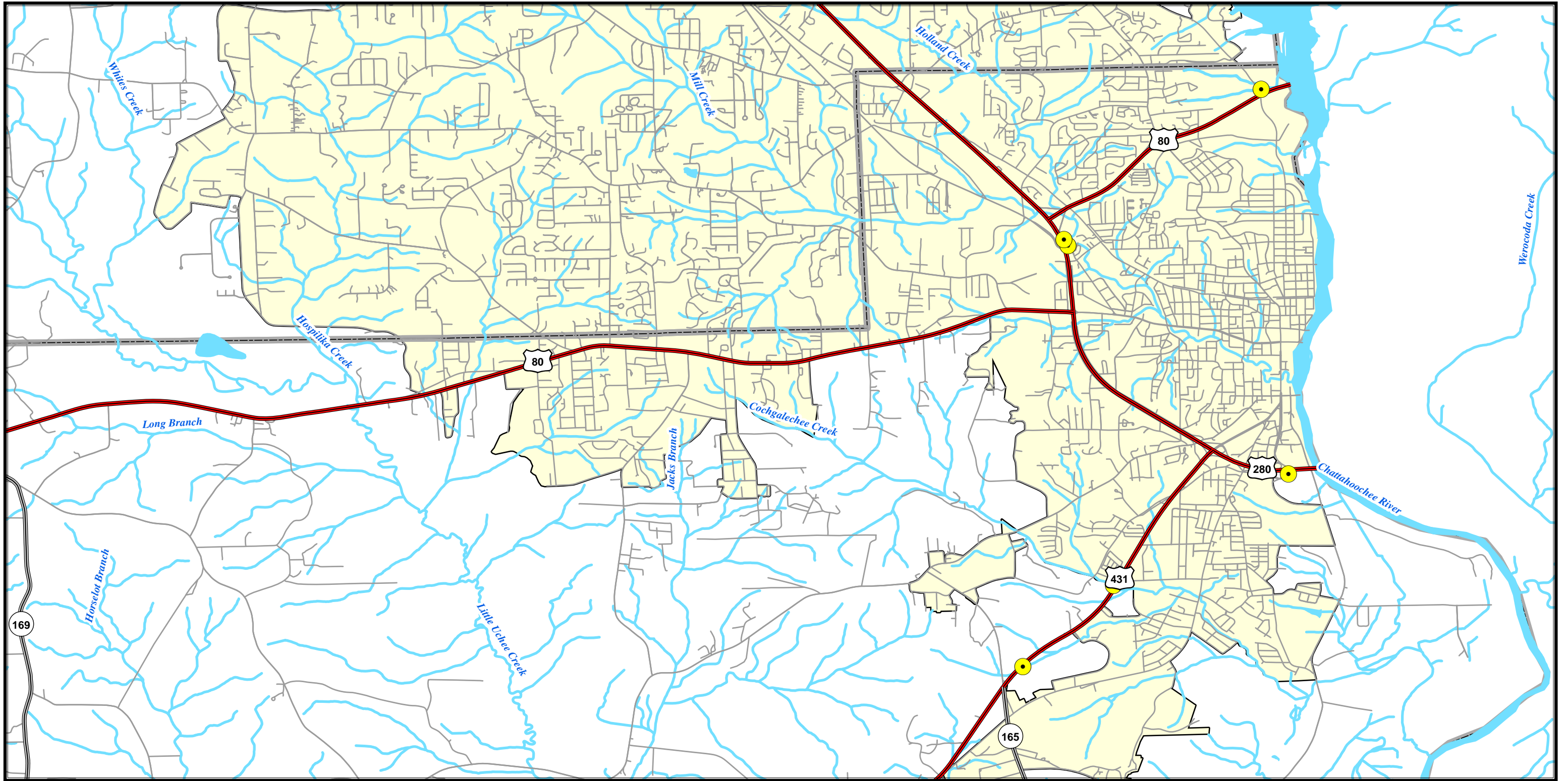
 Sediment POC

 Other POCs




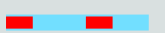
Index #: 81

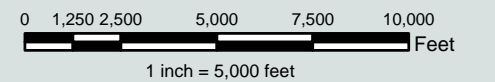




## ALDOT MS4 Areas Phenix City Map: 2

-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

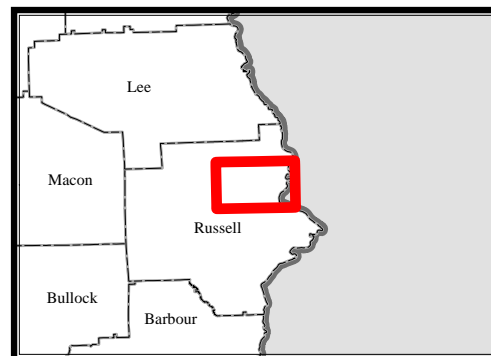
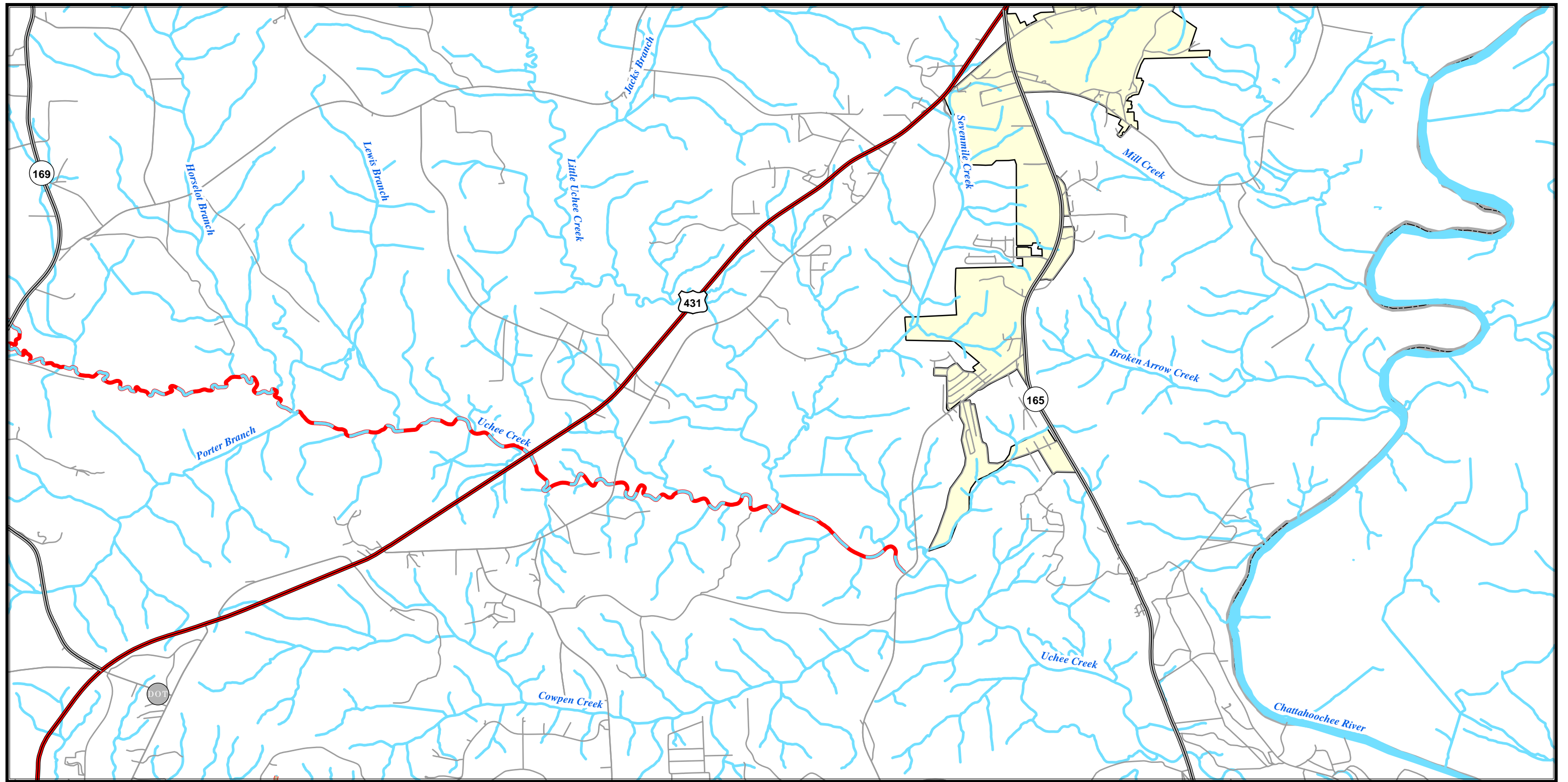
- 303(d) / TMDL Listed Waters
-  Sediment POC
  -  Other POCs



Index #: 82




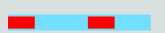


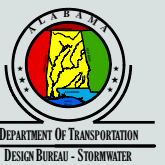
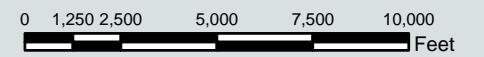


## ALDOT MS4 Areas Phenix City Map: 3

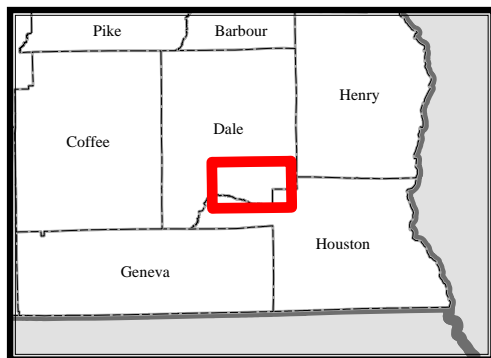
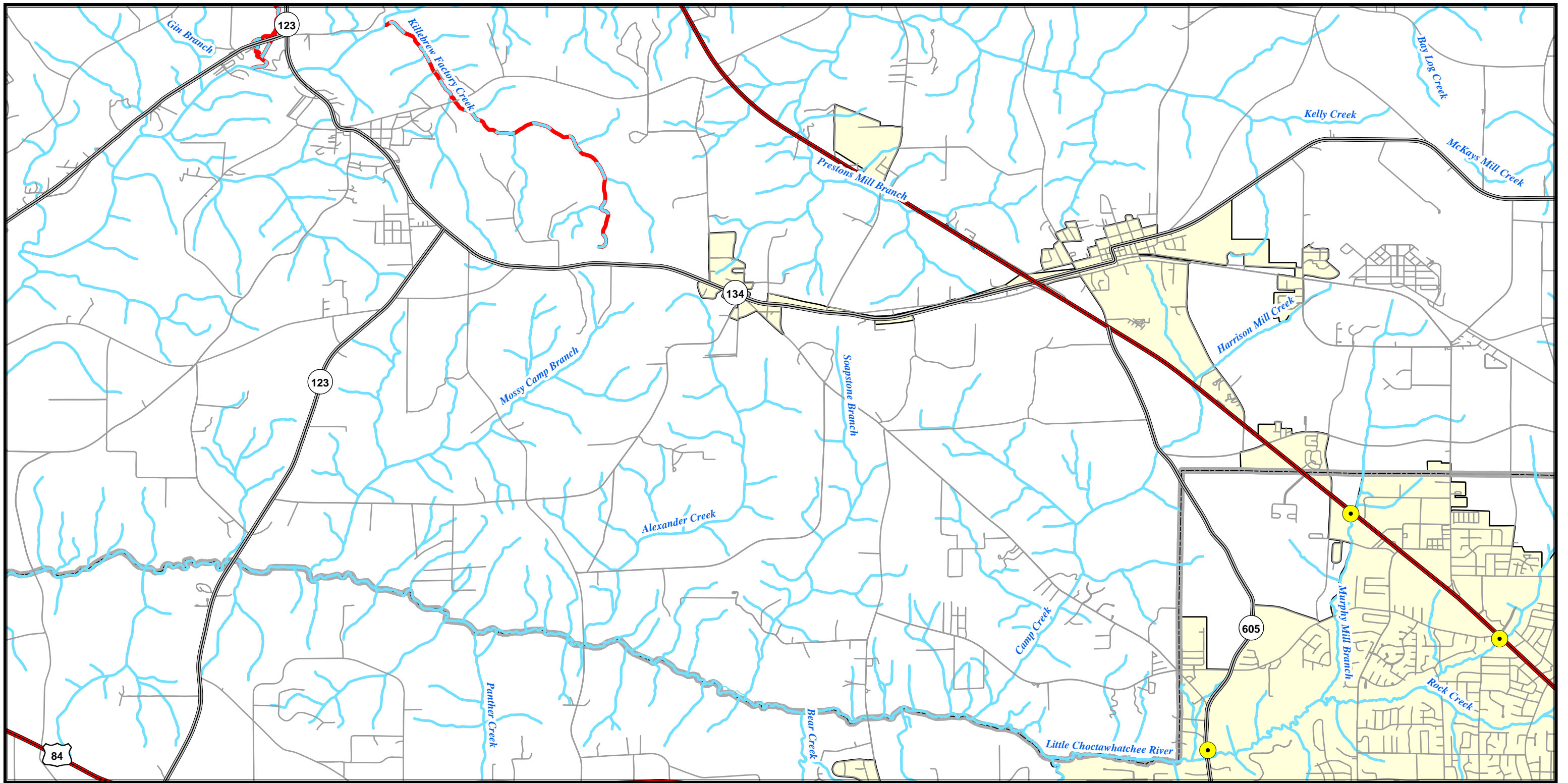
-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

303(d) / TMDL Listed Waters

-  Sediment POC
-  Other POCs




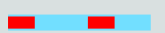
Index #: 83

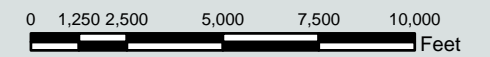


## ALDOT MS4 Areas Dothan Map: 1

-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

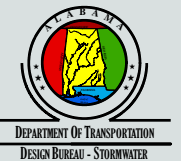
303(d) / TMDL Listed Waters

-  Sediment POC
-  Other POCs

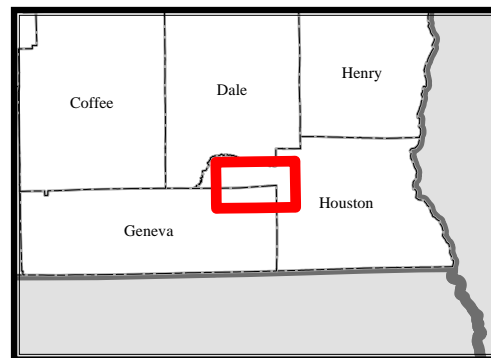
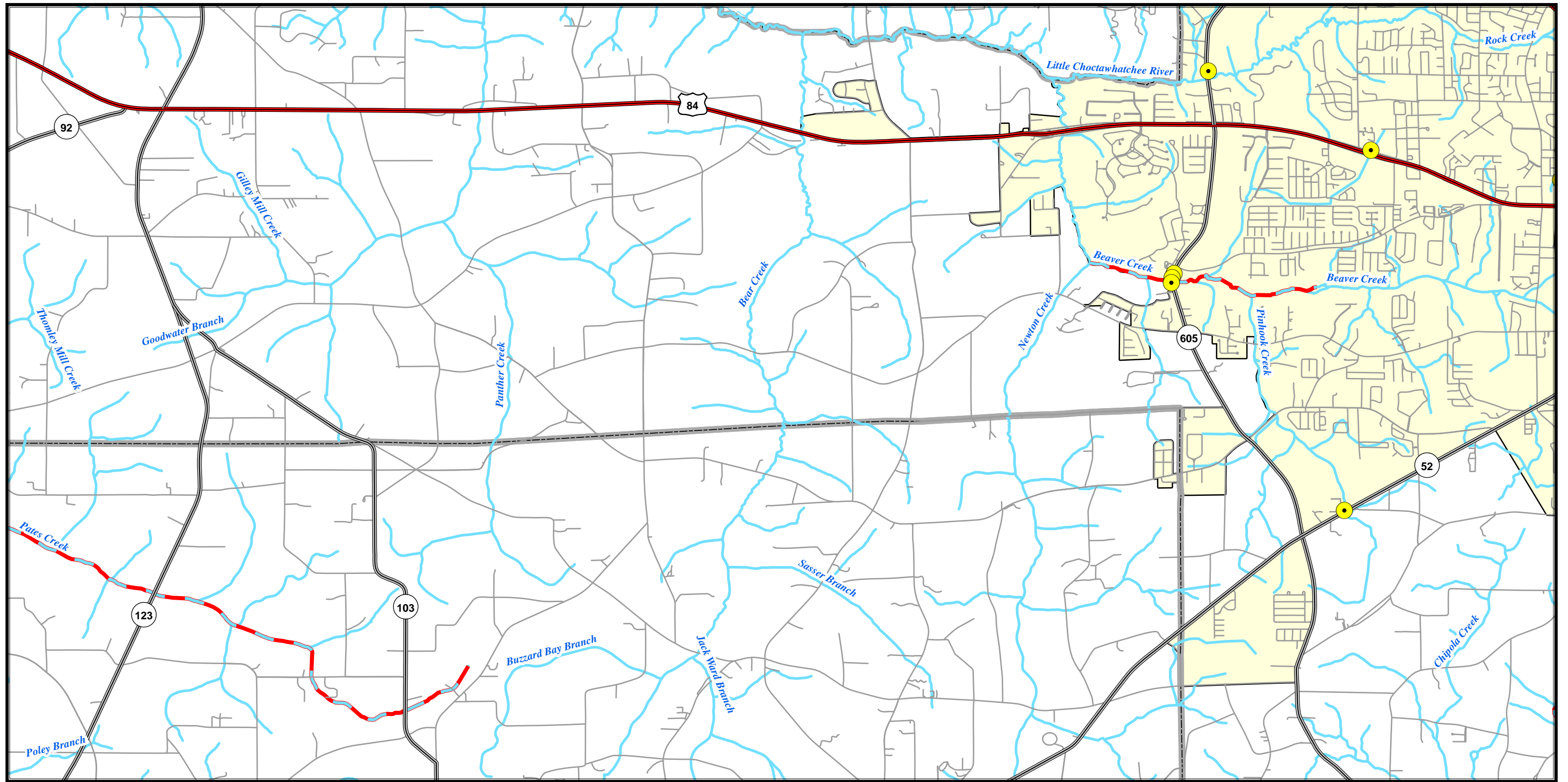


1 inch = 5,000 feet

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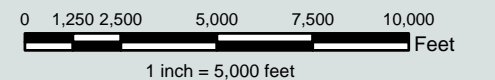




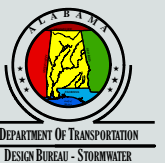
## ALDOT MS4 Areas Dothan Map: 2

-  MS4 Area
-  MS4 Monitoring Location
-  Major Outfall on Inventory
-  ALDOT Support Facility

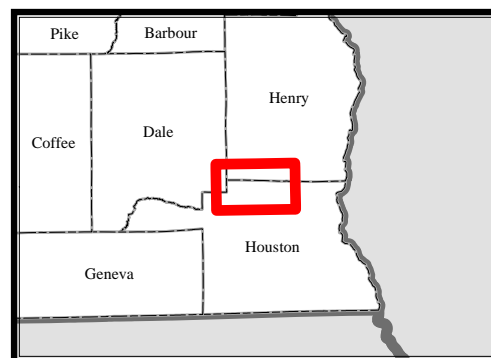
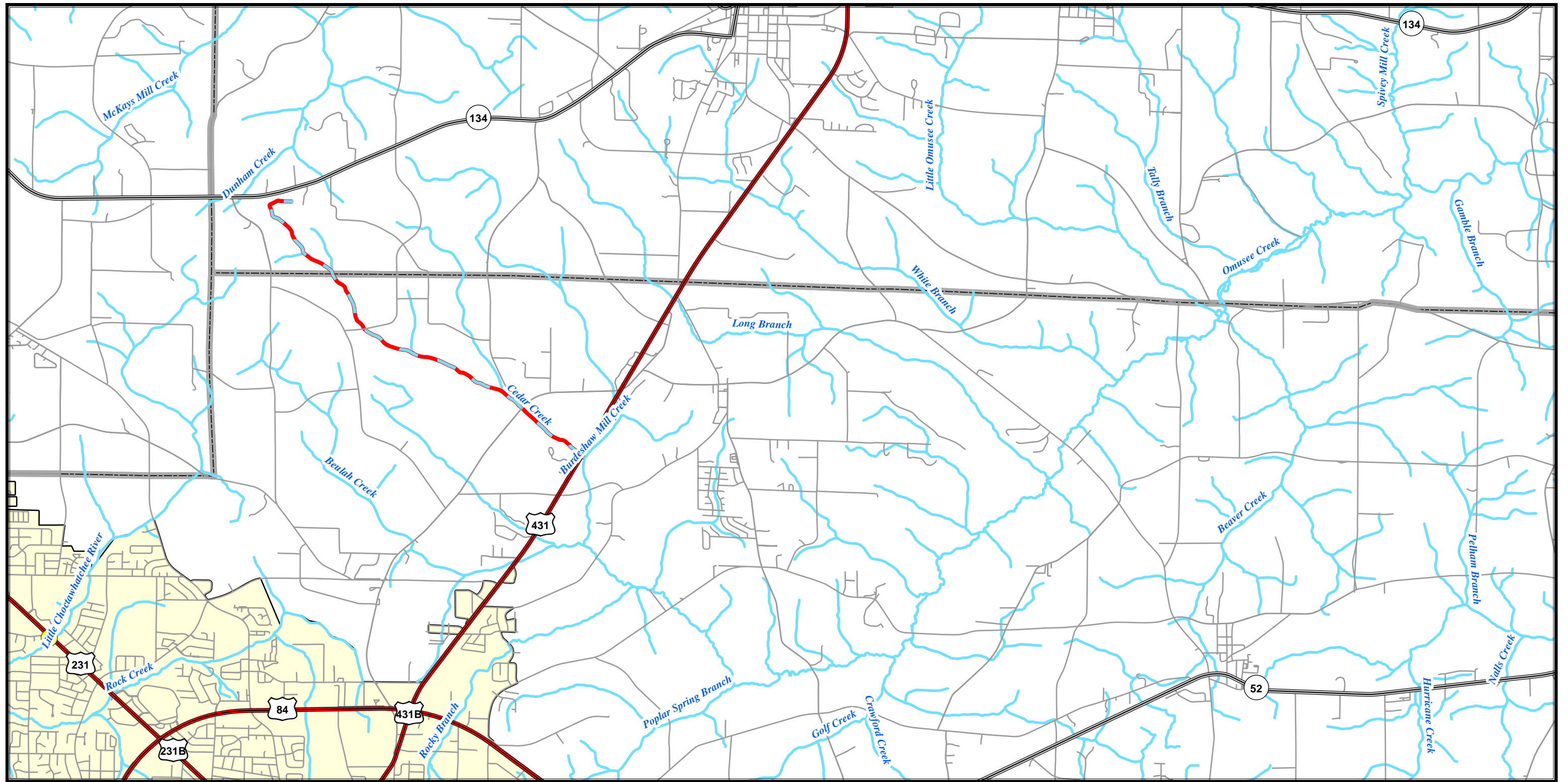
- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs



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## ALDOT MS4 Areas Dothan Map: 3


 MS4 Area

 ALDOT Support Facility

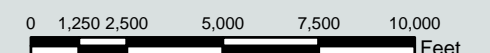
 MS4 Monitoring Location

 Major Outfall on Inventory

303(d) / TMDL Listed Waters

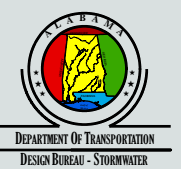
 Sediment POC

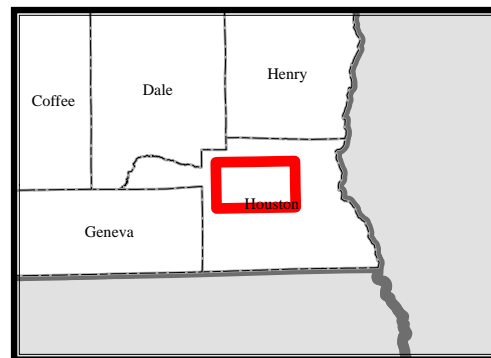
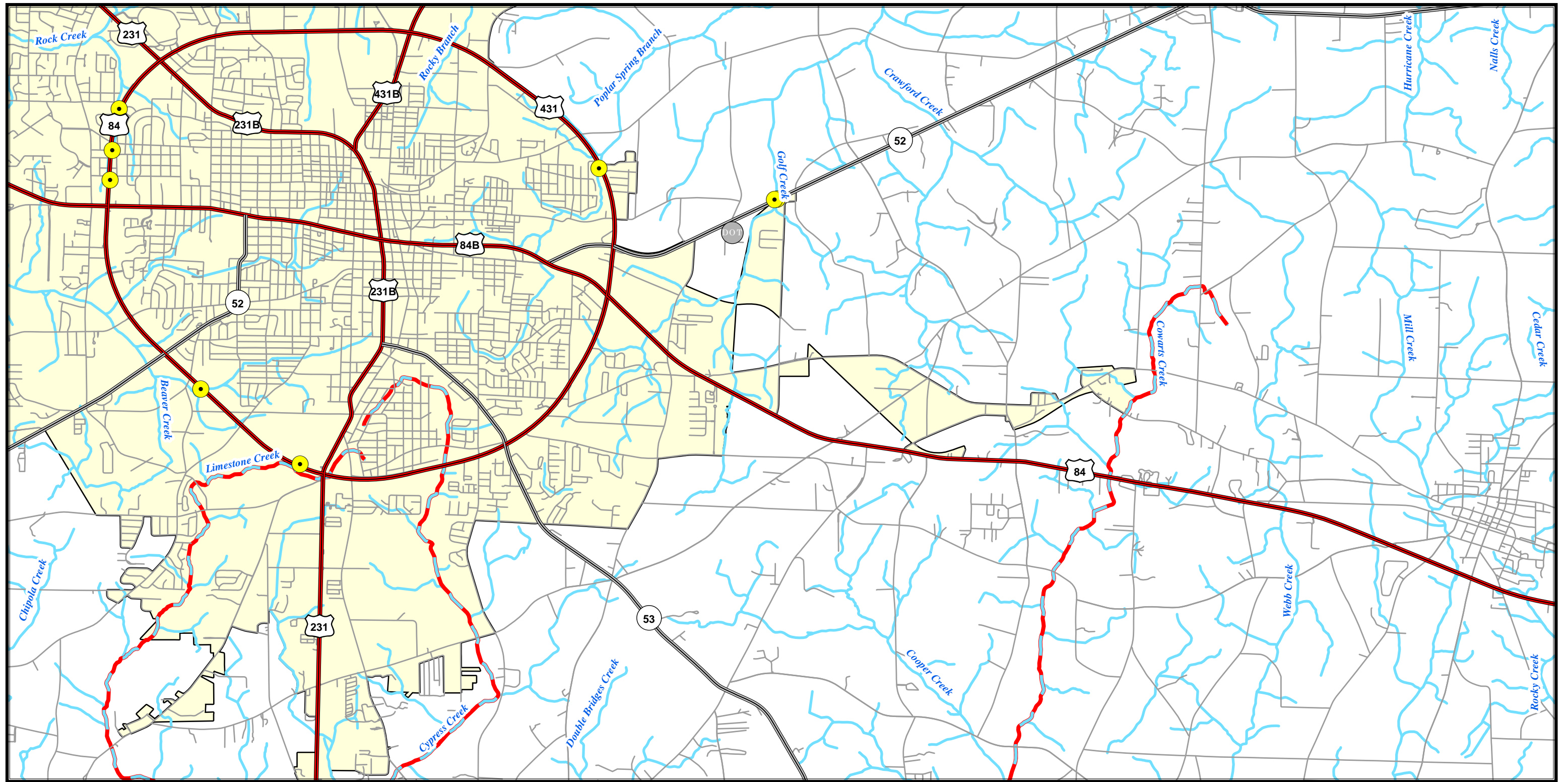
 Other POCs



1 inch = 5,000 feet


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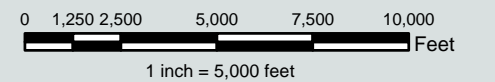




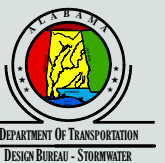
## ALDOT MS4 Areas Dothan Map: 4

-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

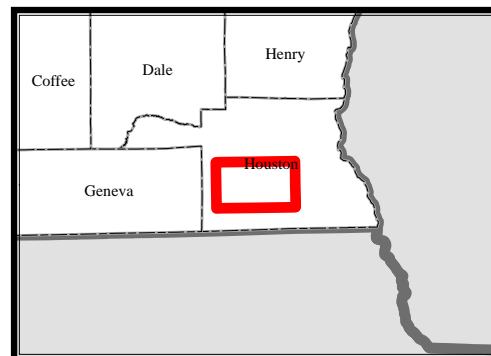
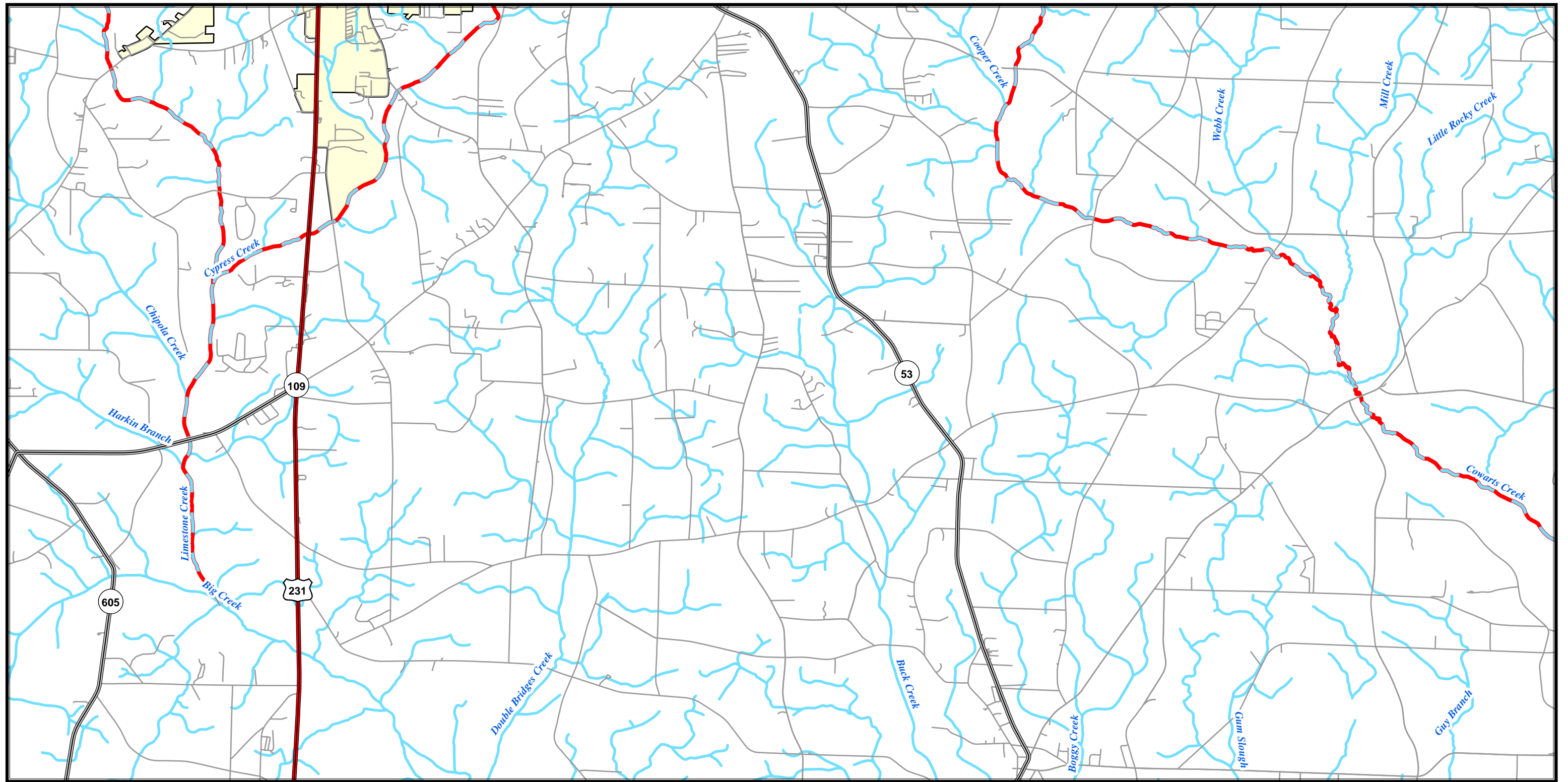
- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs



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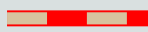


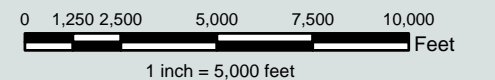




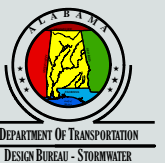
## ALDOT MS4 Areas Dothan Map: 5

-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

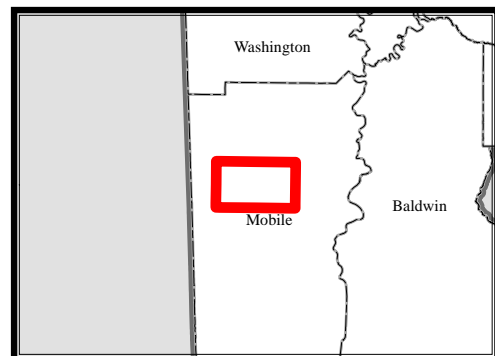
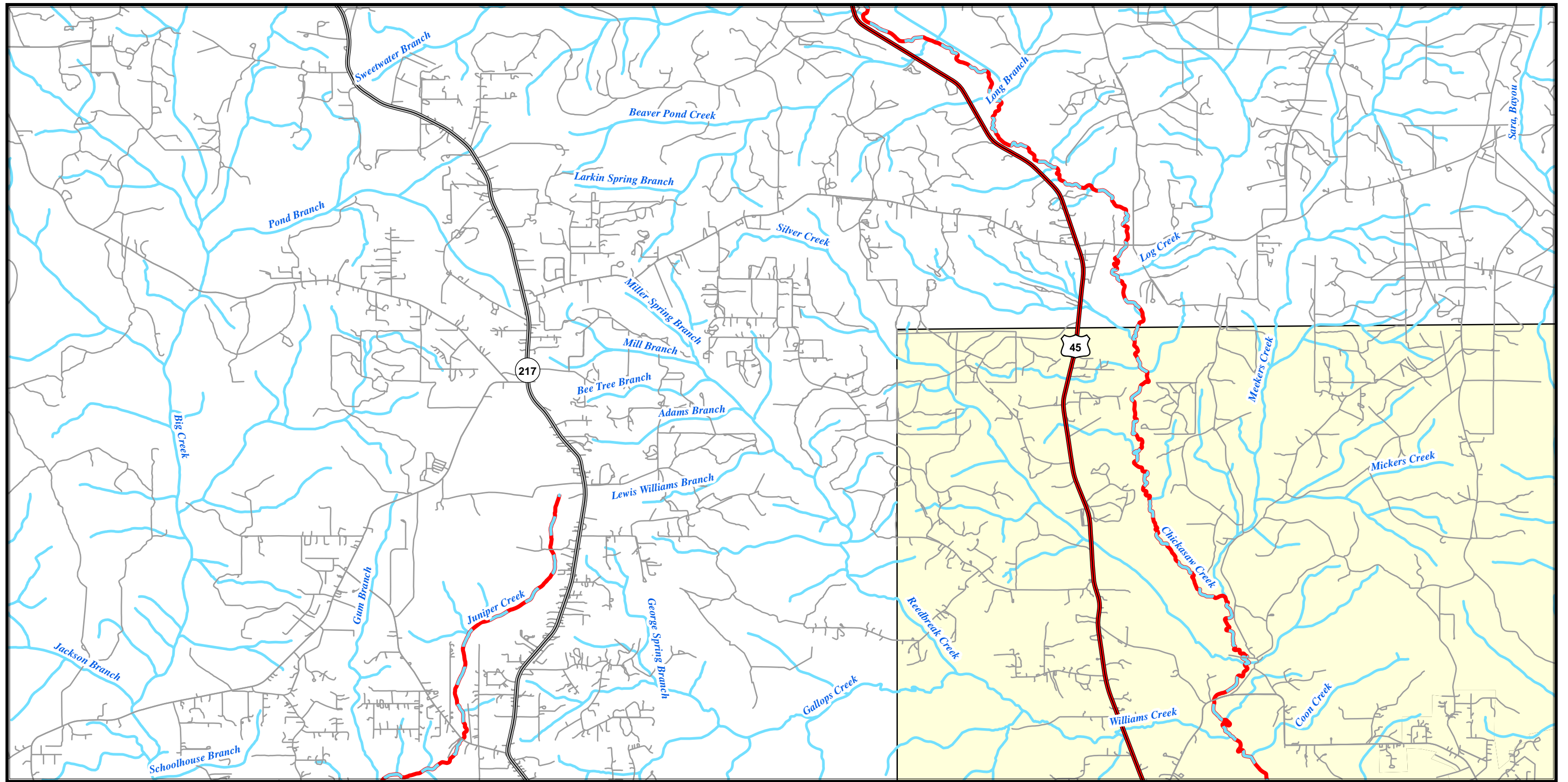
- 303(d) / TMDL Listed Waters
-  Sediment POC
  -  Other POCs





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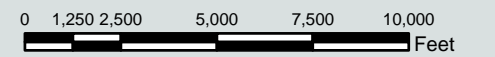


# ALDOT MS4 Areas Mobile Map: 1

-  MS4 Area
-  ALDOT Support Facility

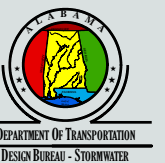
-  MS4 Monitoring Location
-  Major Outfall on Inventory

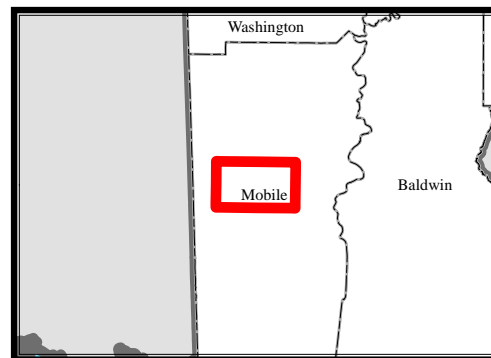
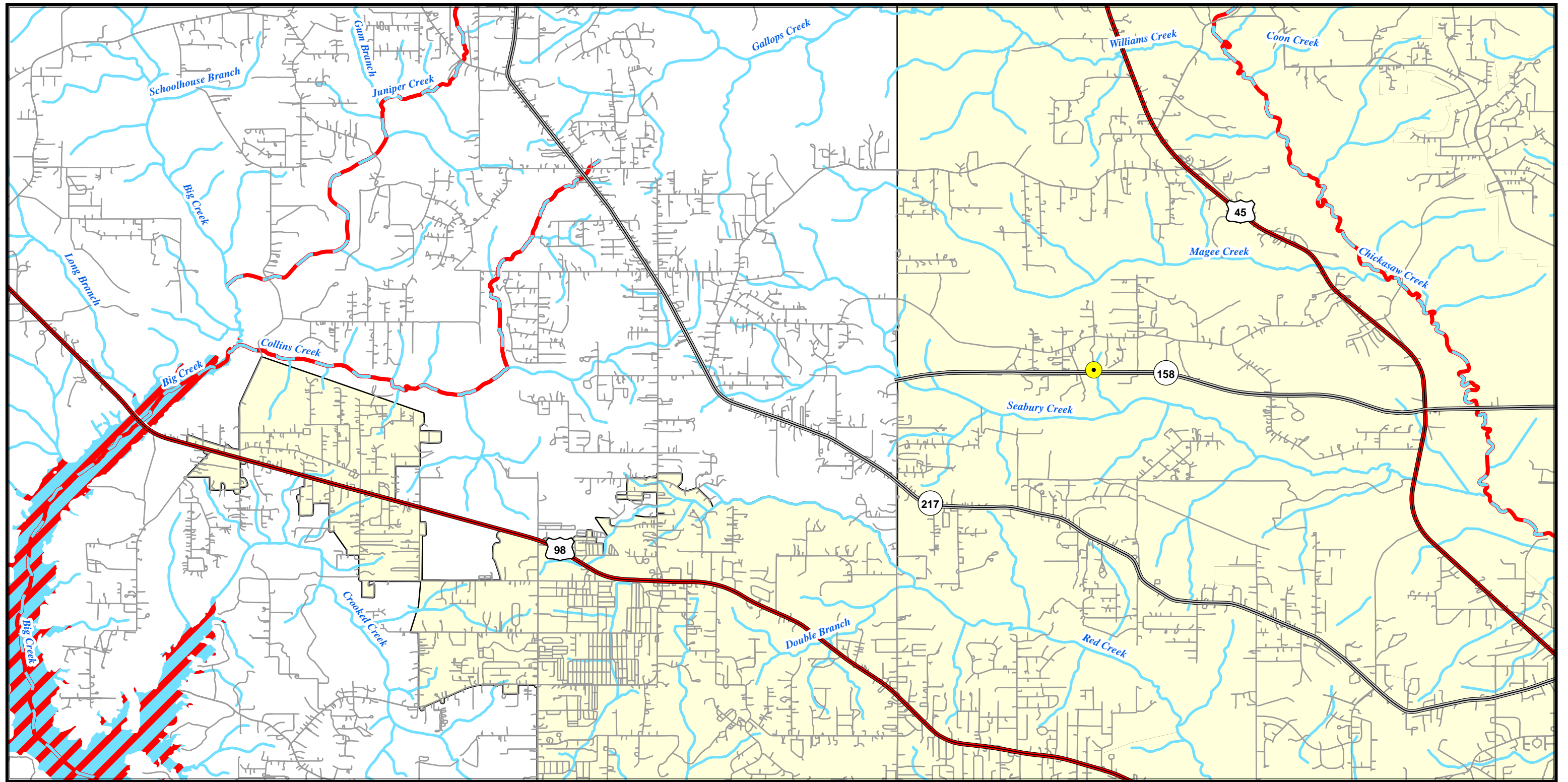
- 303(d) / TMDL Listed Waters
-  Sediment POC
  -  Other POCs



1 inch = 5,000 feet

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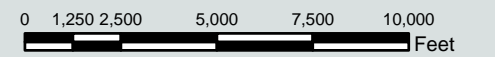




## ALDOT MS4 Areas Mobile Map: 2

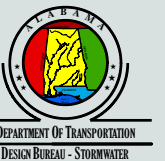
-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs



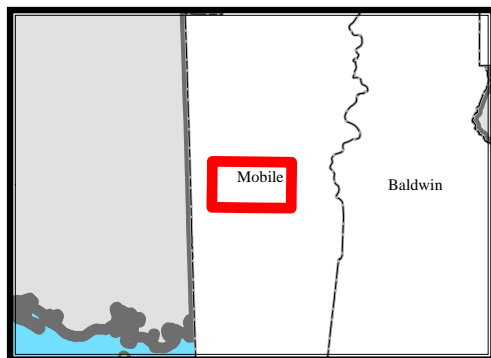
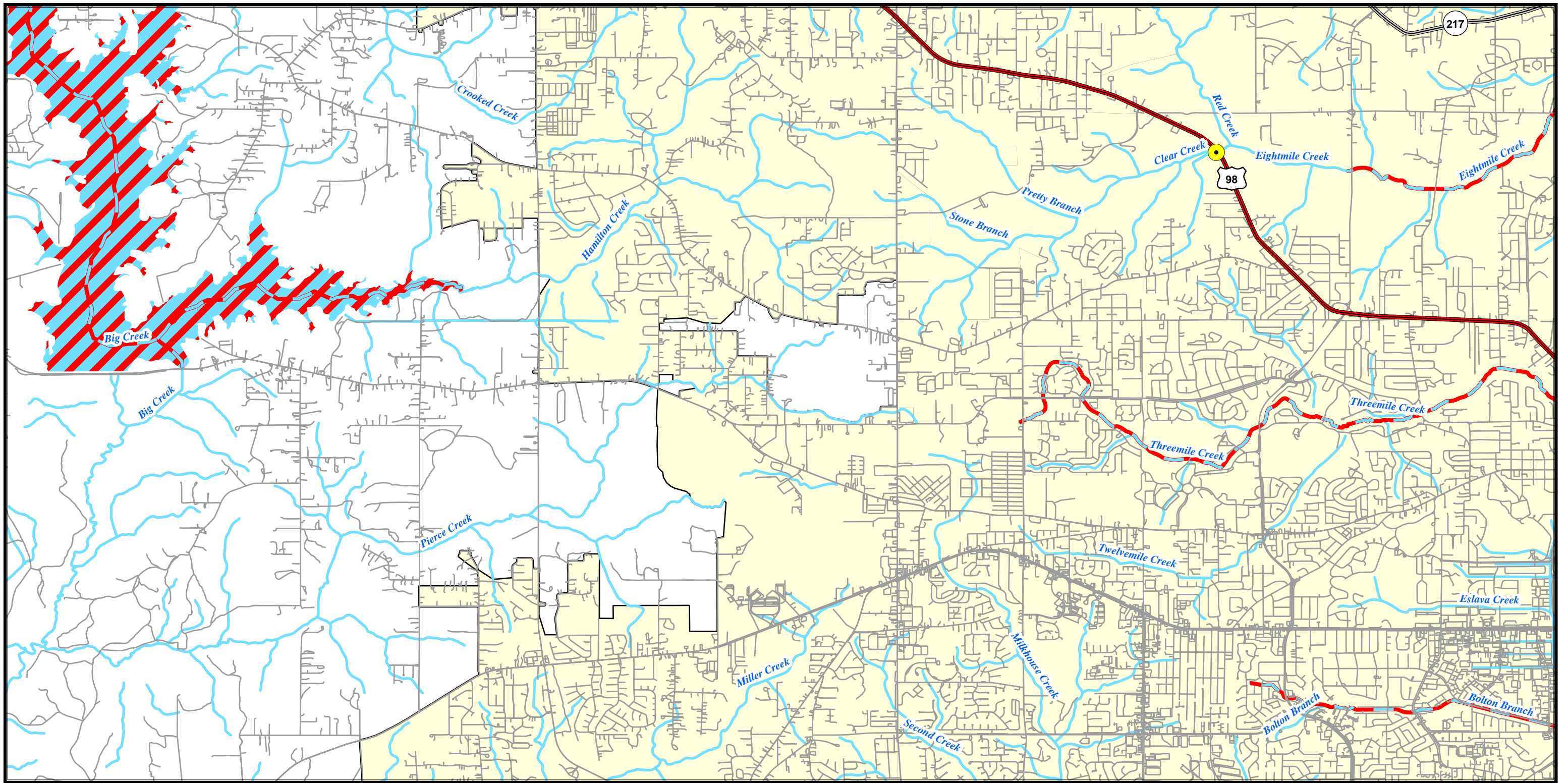
1 inch = 5,000 feet

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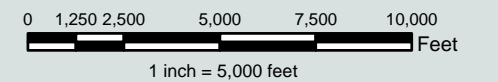


## ALDOT MS4 Areas Mobile Map: 3

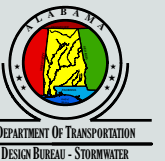
-  MS4 Area
-  ALDOT Support Facility

-  MS4 Monitoring Location
-  Major Outfall on Inventory

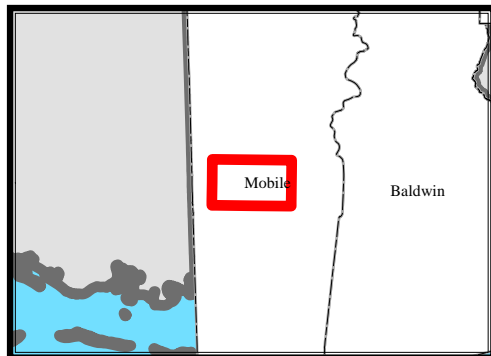
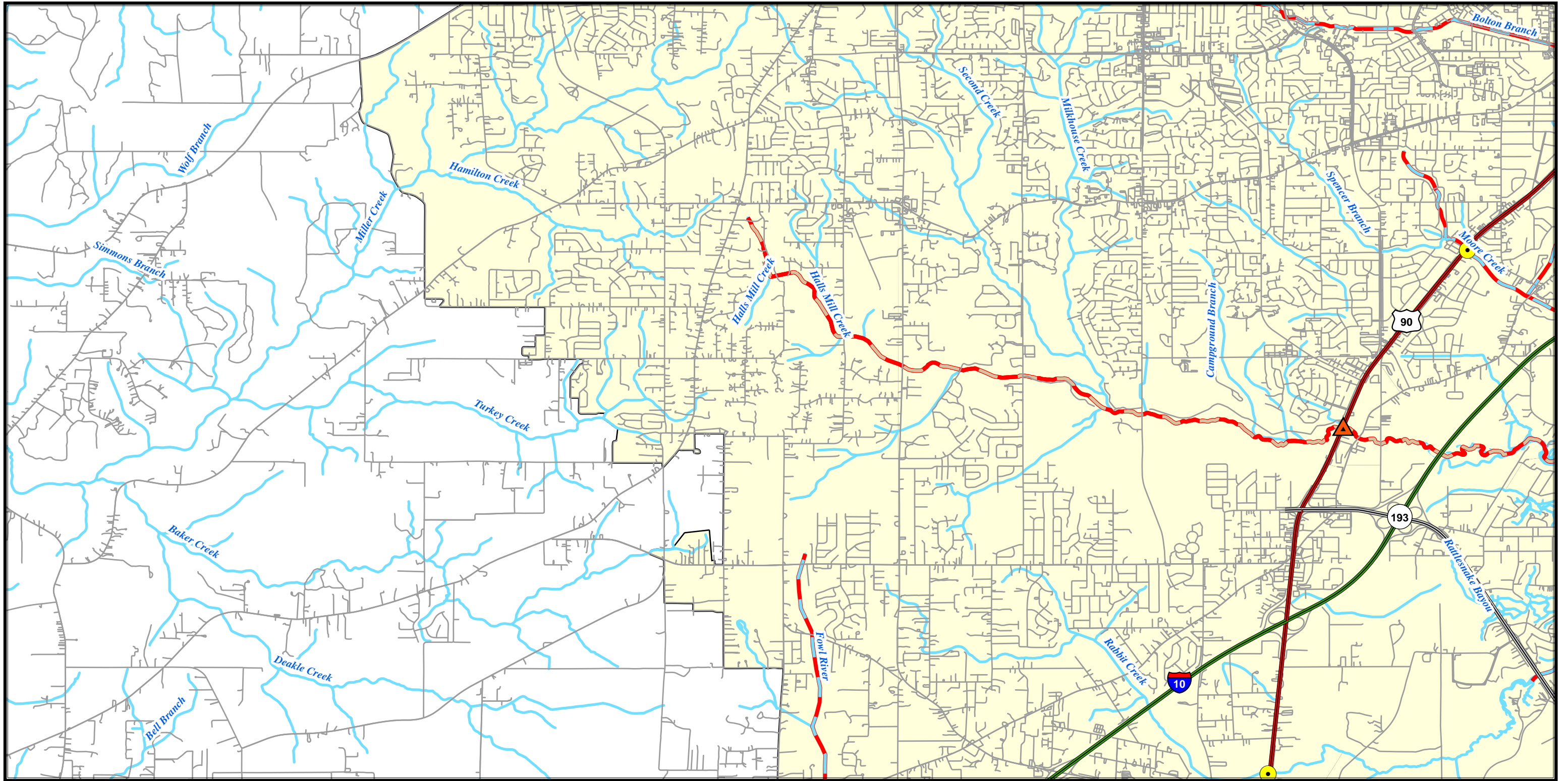
- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs





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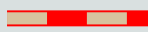



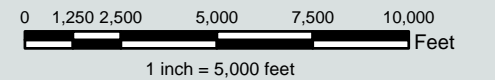


# ALDOT MS4 Areas Mobile Map: 4

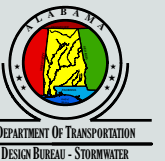
-  MS4 Area
-  ALDOT Support Facility

-  MS4 Monitoring Location
-  Major Outfall on Inventory

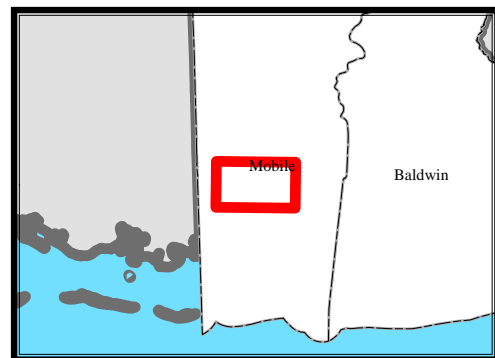
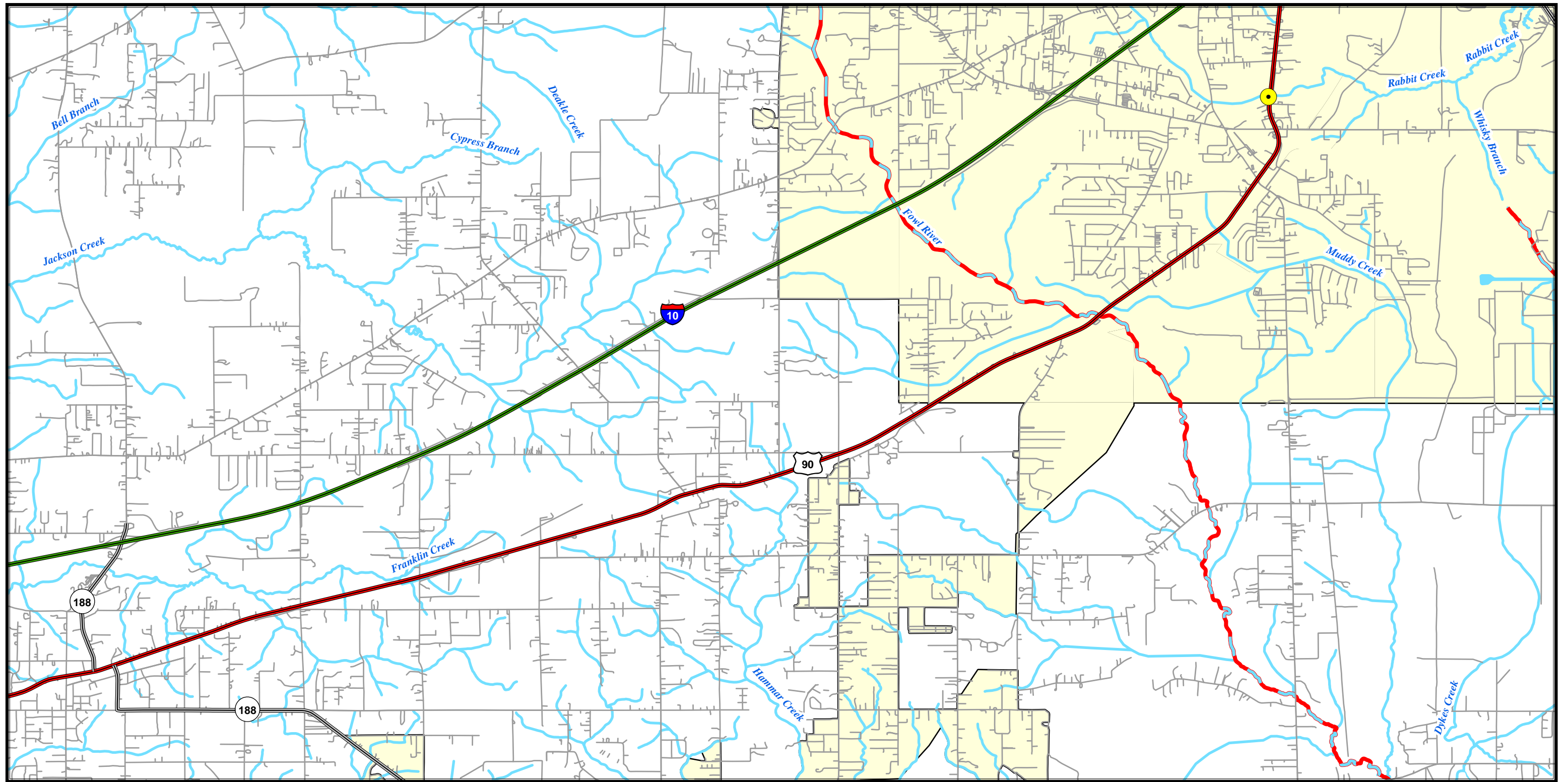
- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs





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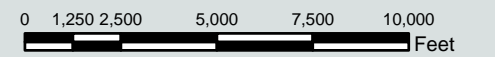


## ALDOT MS4 Areas Mobile Map: 5

-  MS4 Area
-  ALDOT Support Facility

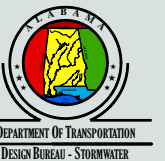
-  MS4 Monitoring Location
-  Major Outfall on Inventory

- 303(d) / TMDL Listed Waters
-  Sediment POC
  -  Other POCs

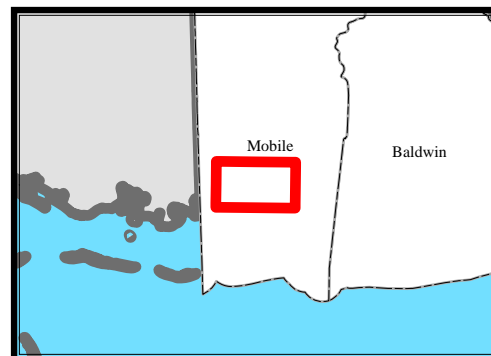
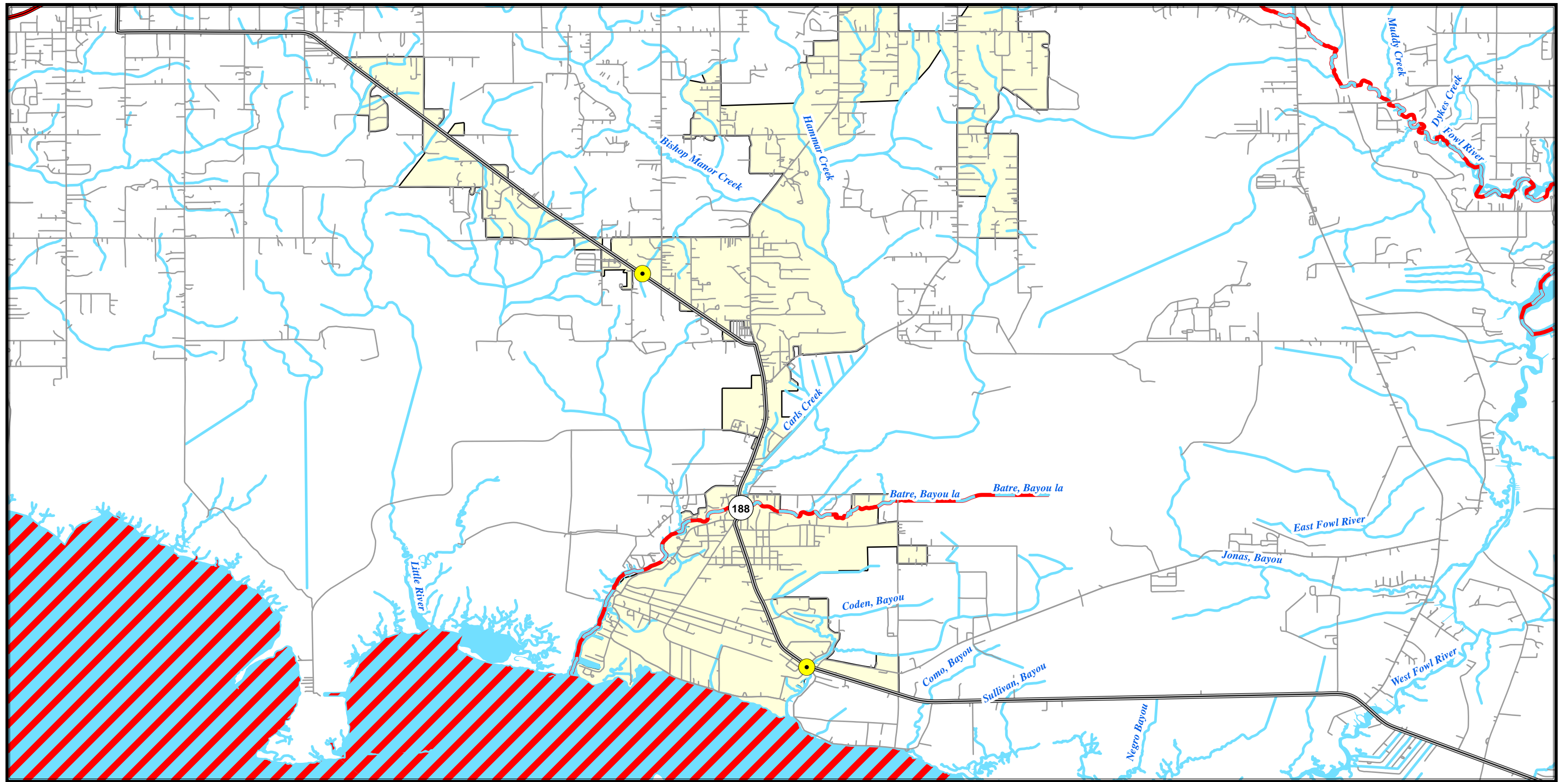


1 inch = 5,000 feet

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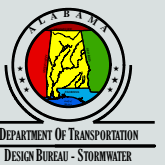
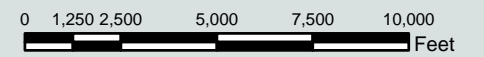




## ALDOT MS4 Areas Mobile Map: 6

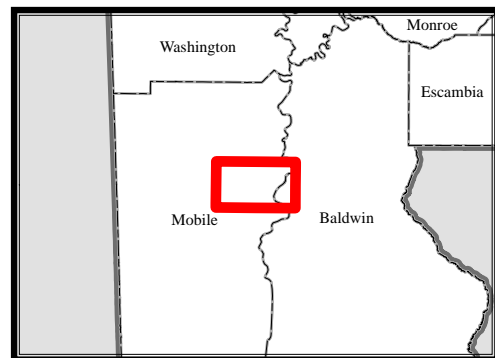
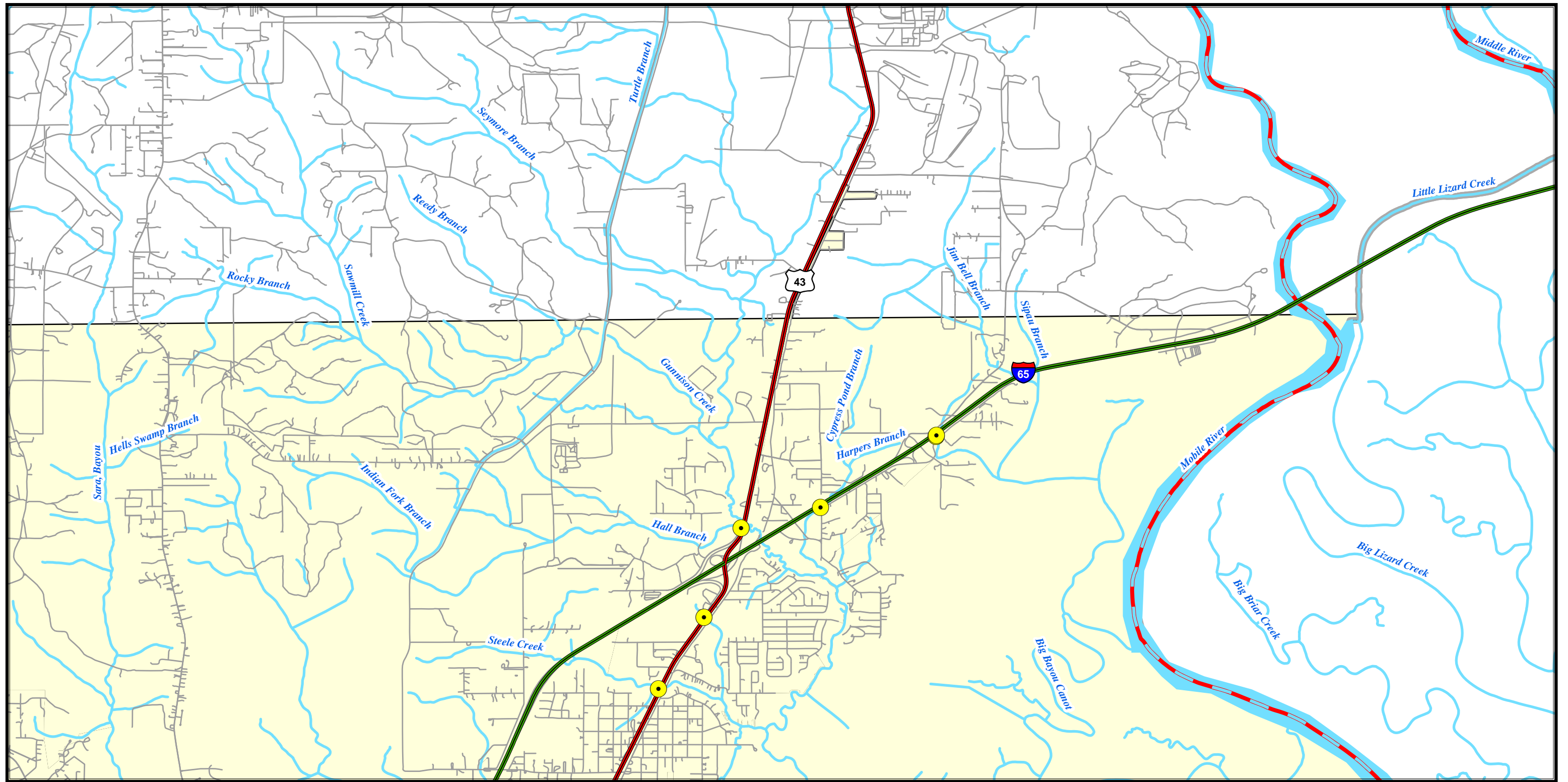
-  MS4 Area
-  MS4 Monitoring Location
-  Major Outfall on Inventory
-  ALDOT Support Facility

- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs



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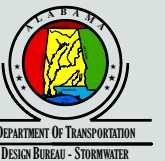
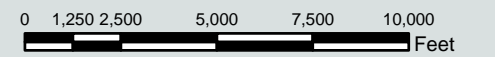




## ALDOT MS4 Areas Mobile Map: 7

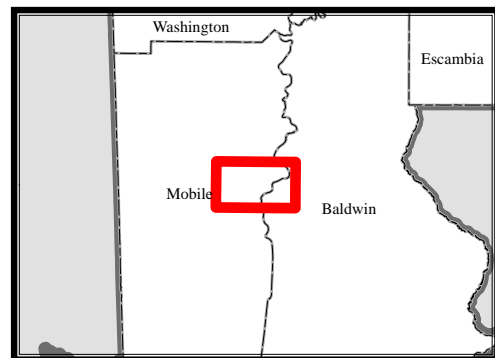
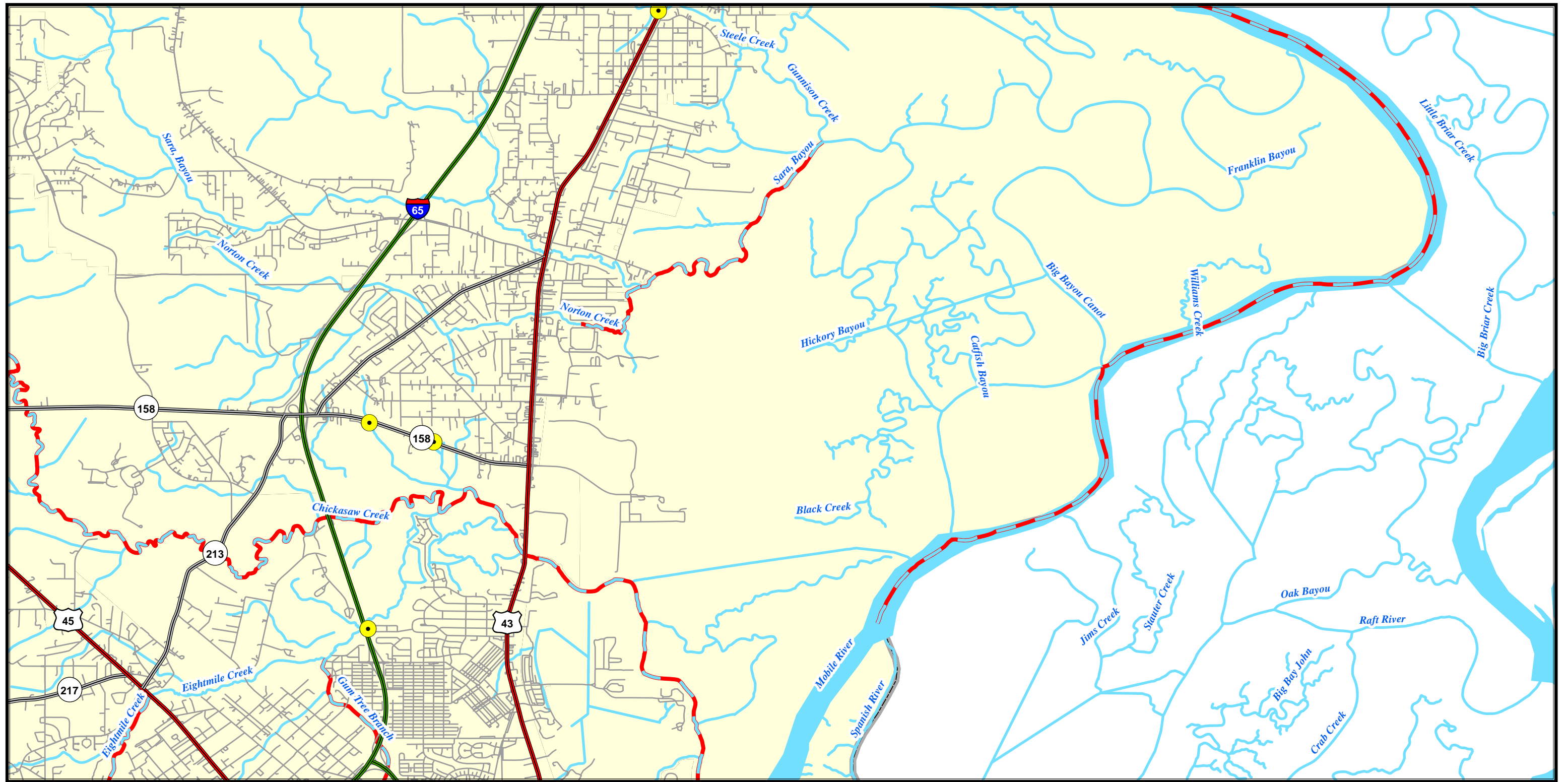
-  MS4 Area
-  MS4 Monitoring Location
-  Major Outfall on Inventory
-  ALDOT Support Facility

- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs



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## ALDOT MS4 Areas Mobile Map: 8

-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

303(d) / TMDL Listed Waters

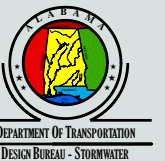
 Sediment POC

 Other POCs



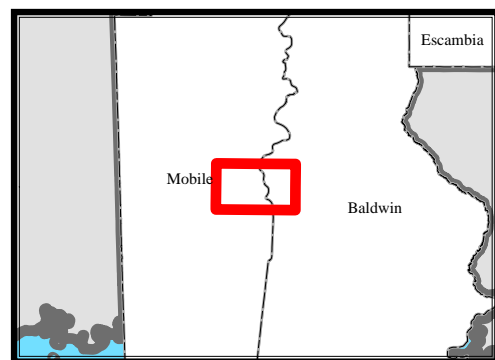
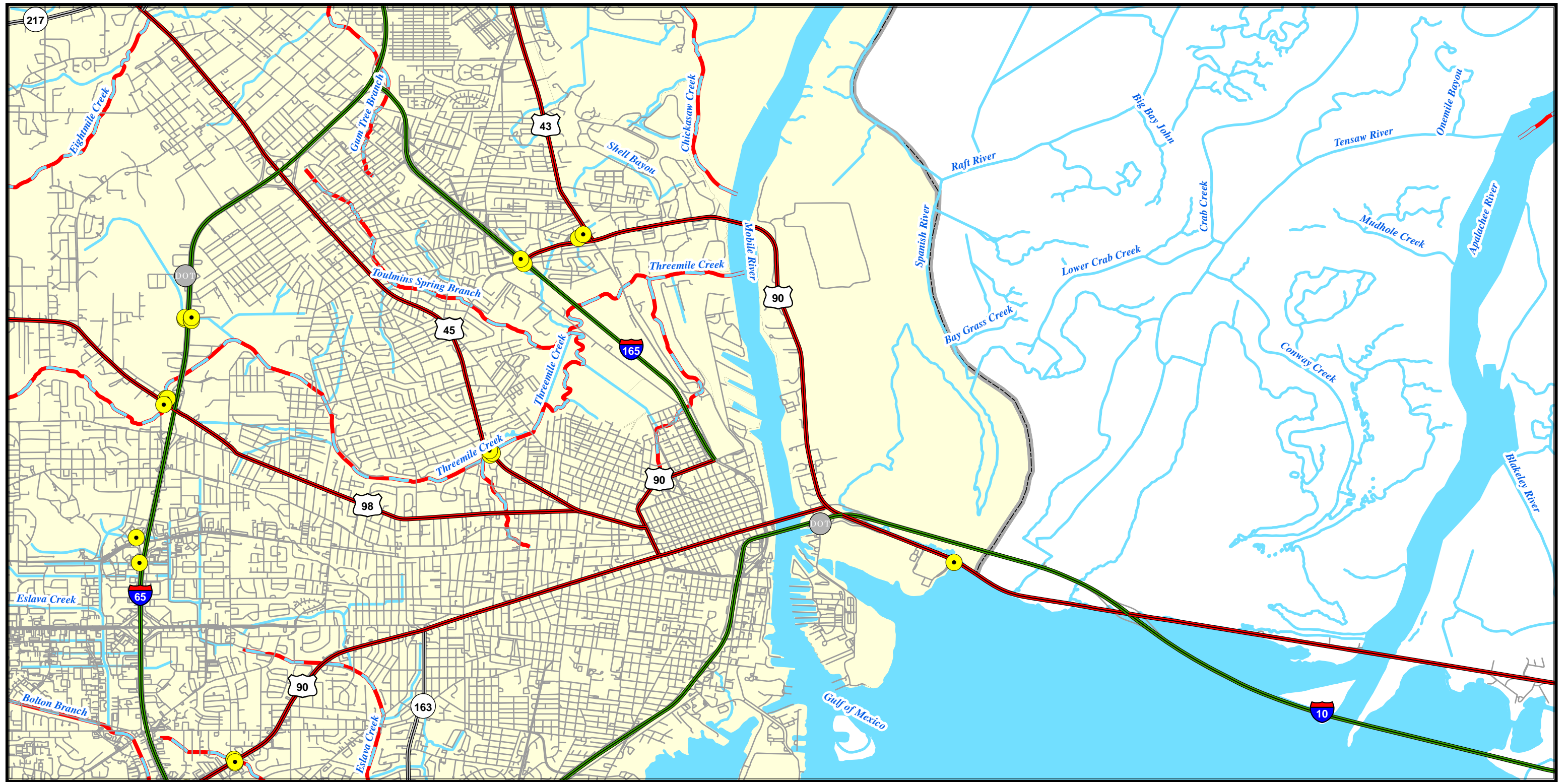
1 inch = 5,000 feet

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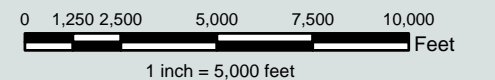




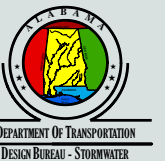
## ALDOT MS4 Areas Mobile Map: 9

-  MS4 Area
-  MS4 Monitoring Location
-  ALDOT Support Facility
-  Major Outfall on Inventory

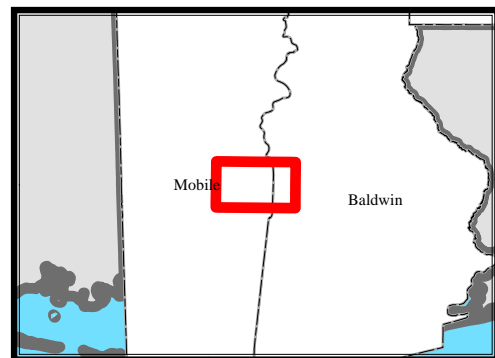
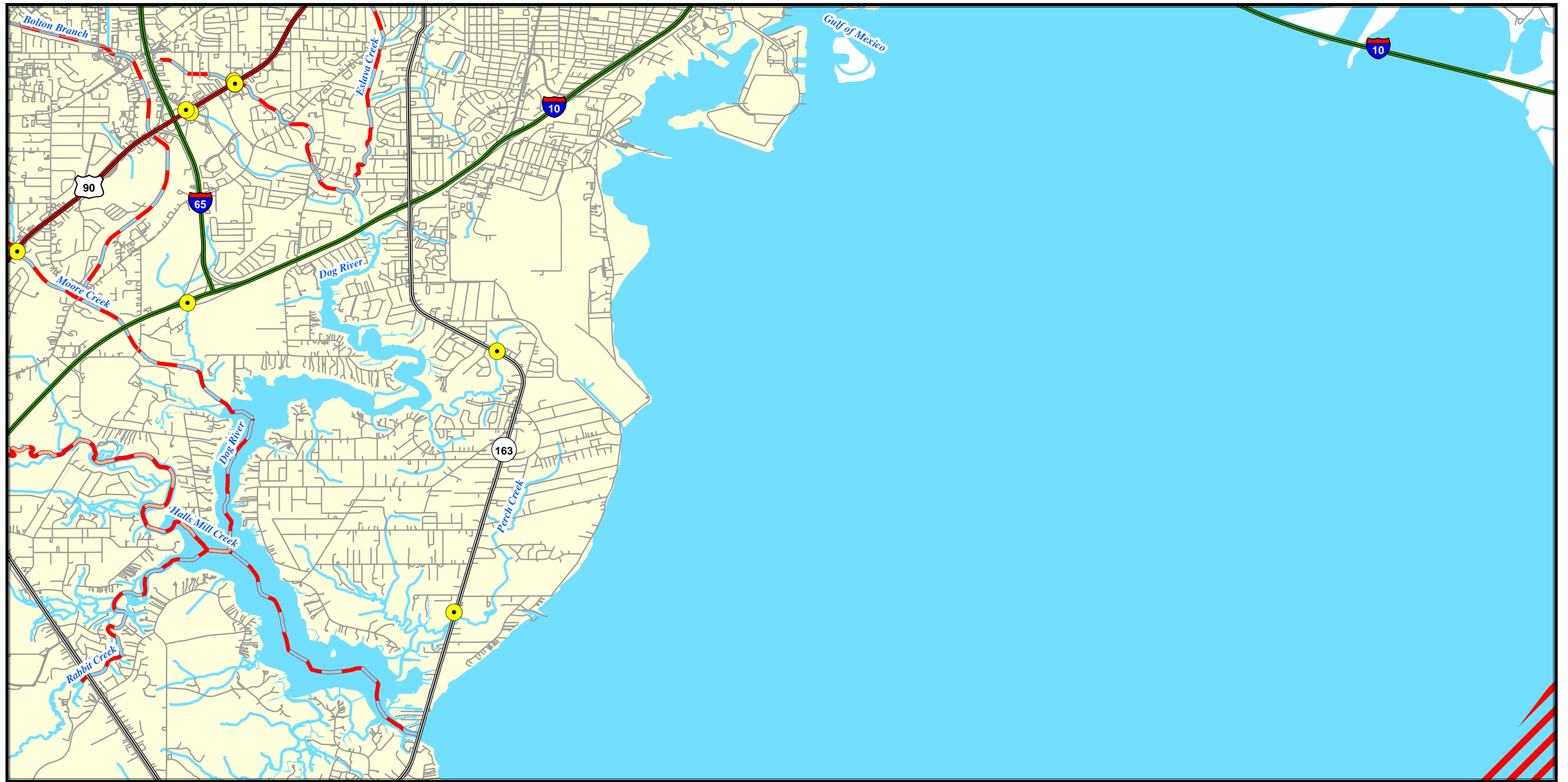
- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs



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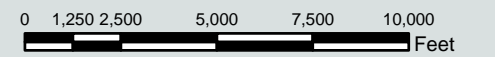




## ALDOT MS4 Areas Mobile Map: 10

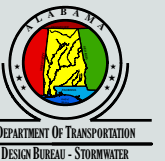
-  MS4 Area
-  MS4 Monitoring Location
-  Major Outfall on Inventory
-  ALDOT Support Facility

- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs

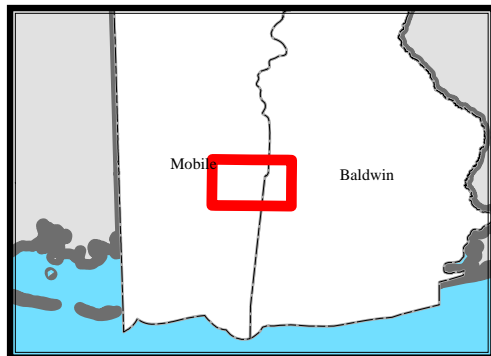
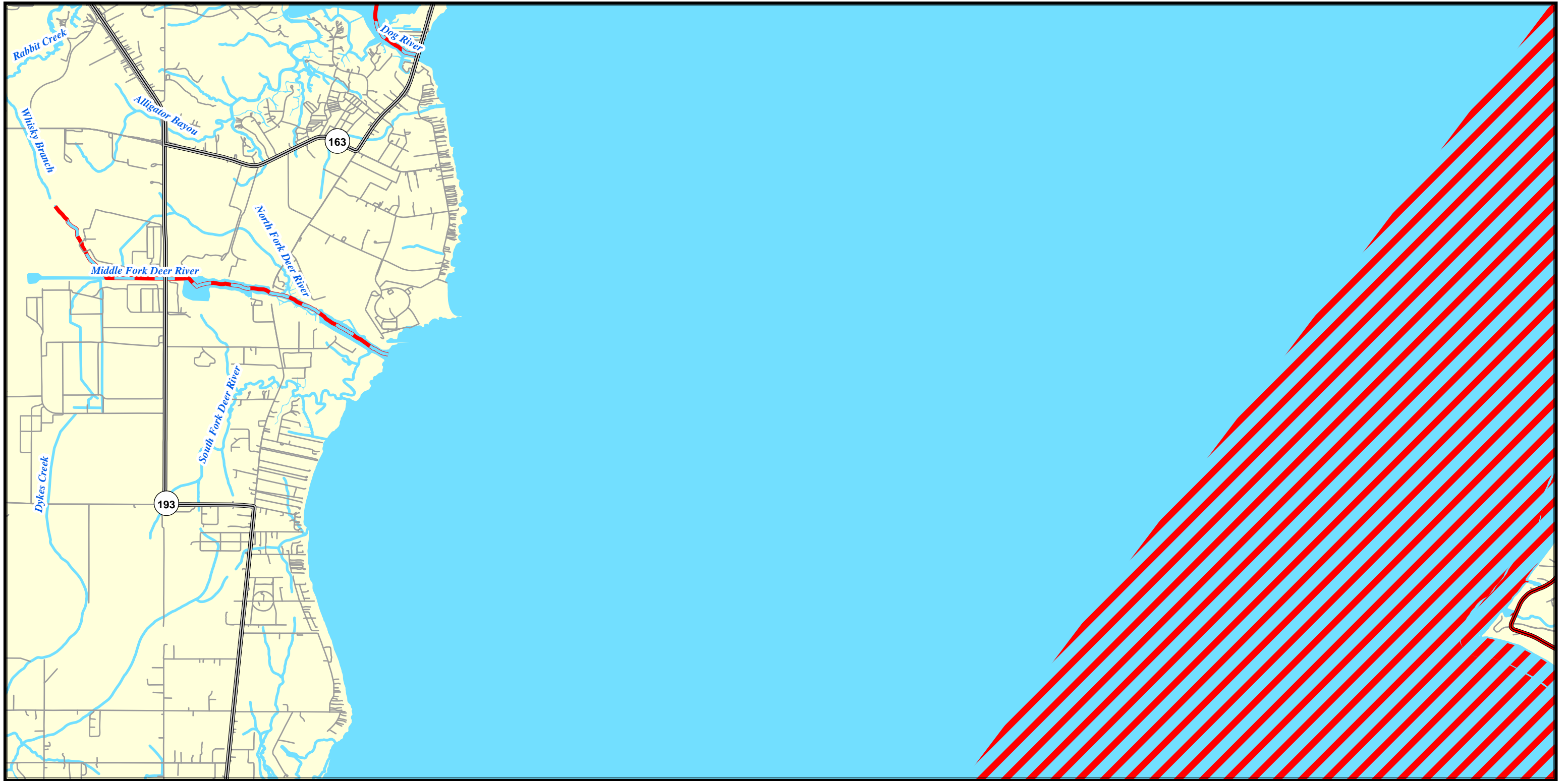


1 inch = 5,000 feet



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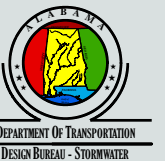
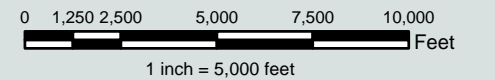


# ALDOT MS4 Areas Mobile Map: 11

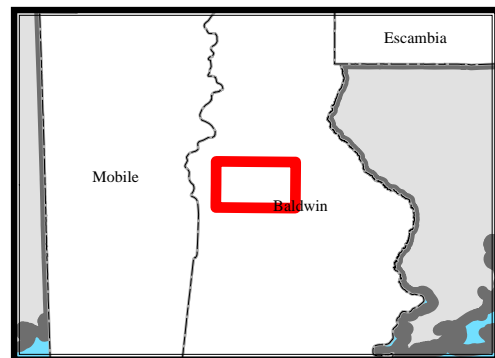
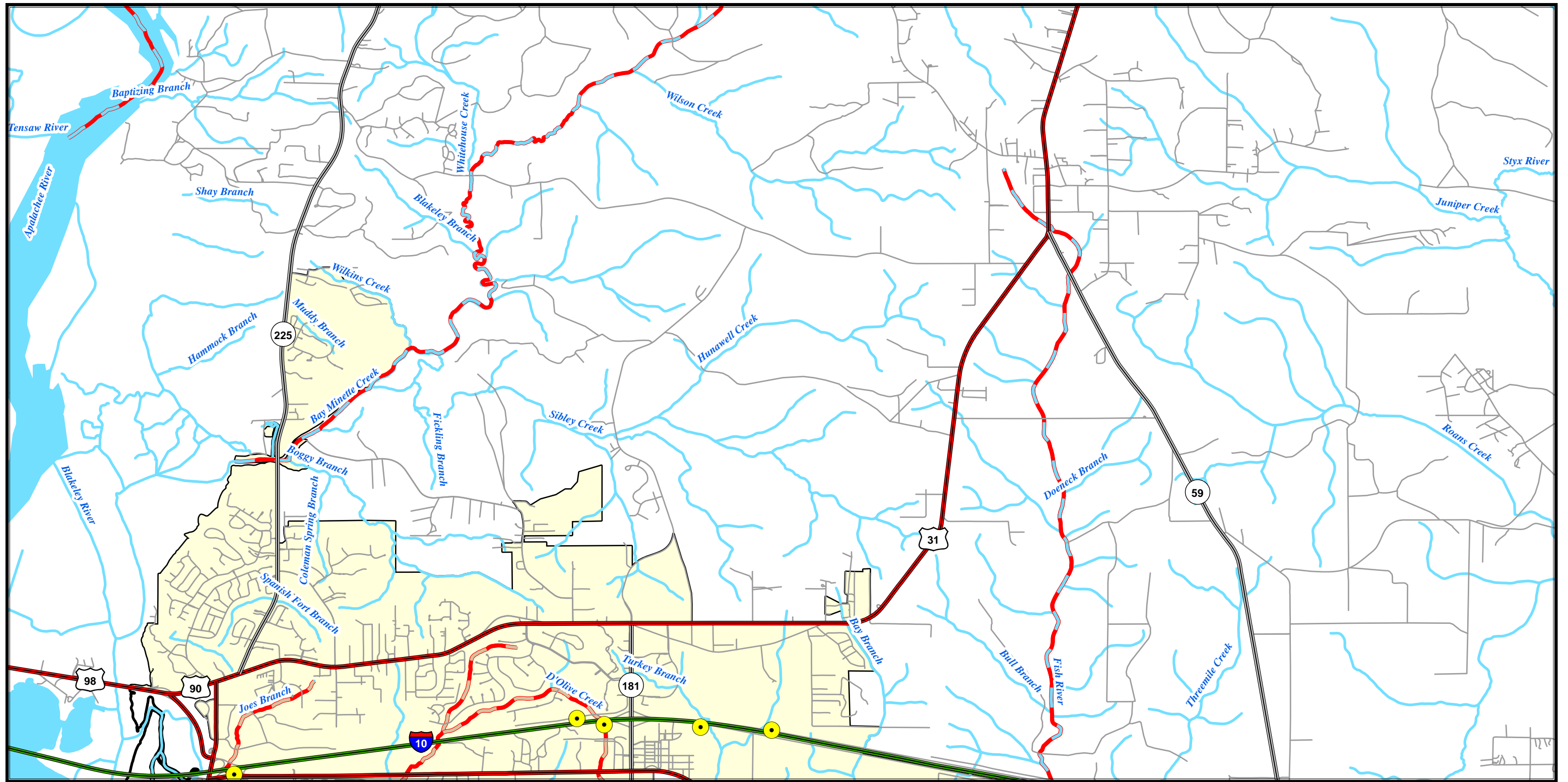
-  MS4 Area
-  ALDOT Support Facility

-  MS4 Monitoring Location
-  Major Outfall on Inventory

- 303(d) / TMDL Listed Waters
-  Sediment POC
  -  Other POCs




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# ALDOT MS4 Areas Baldwin County Map: 1

 MS4 Area

 ALDOT Support Facility

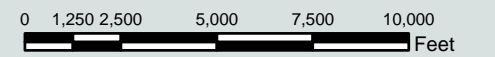
 MS4 Monitoring Location

 Major Outfall on Inventory

303(d) / TMDL Listed Waters

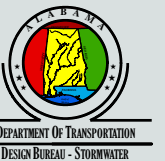
 Sediment POC

 Other POCs

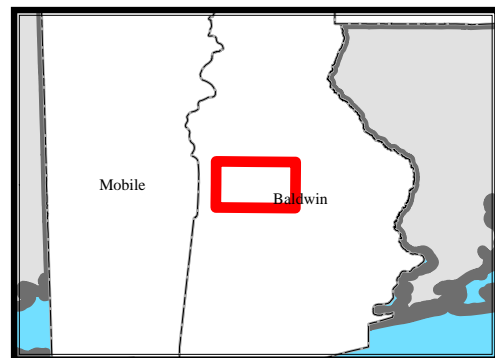
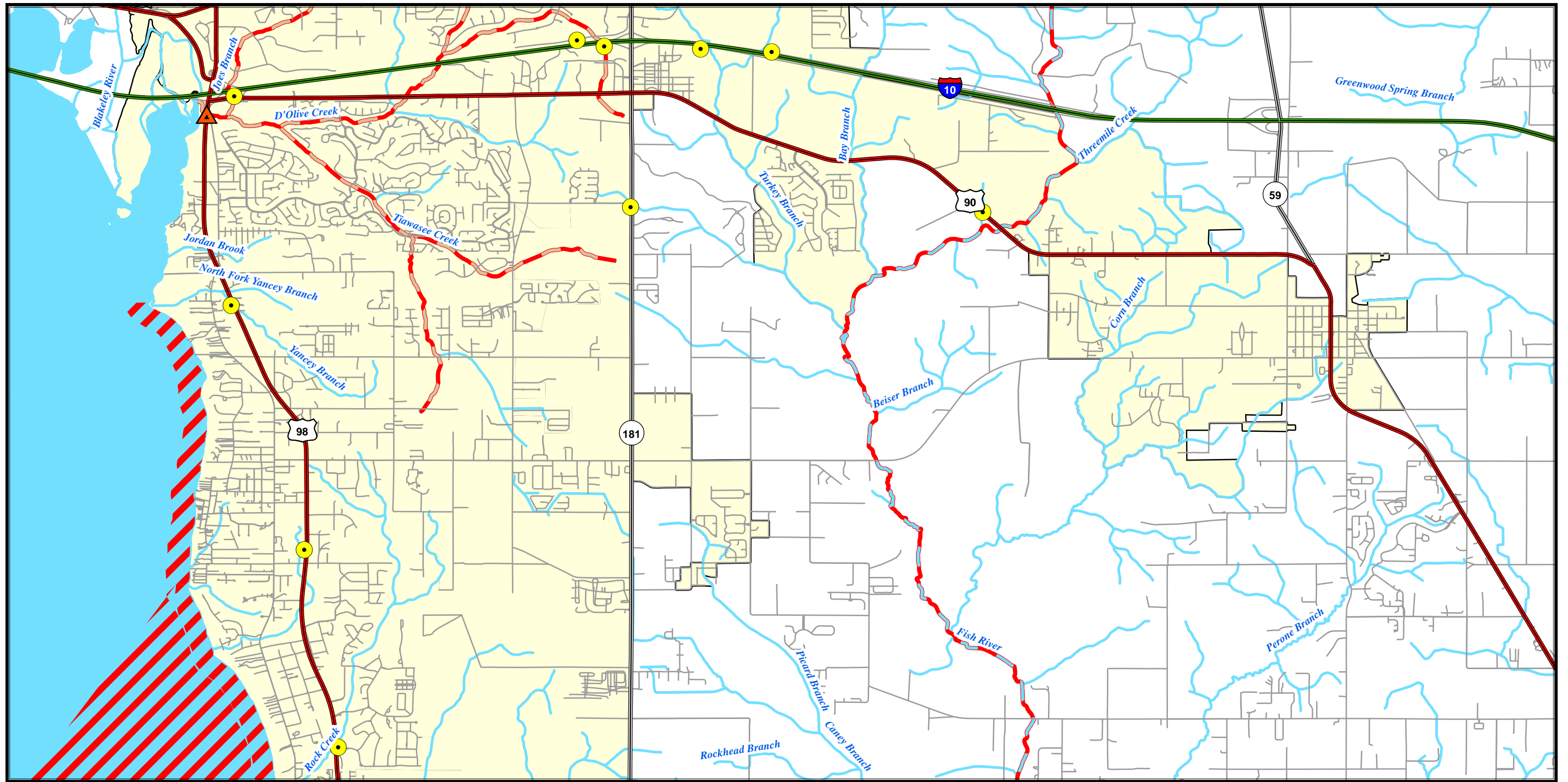


1 inch = 5,000 feet



Index #: 100







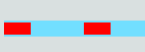


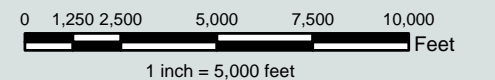


## ALDOT MS4 Areas Baldwin County Map: 2

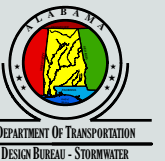
-  MS4 Area
-  ALDOT Support Facility

-  MS4 Monitoring Location
-  Major Outfall on Inventory

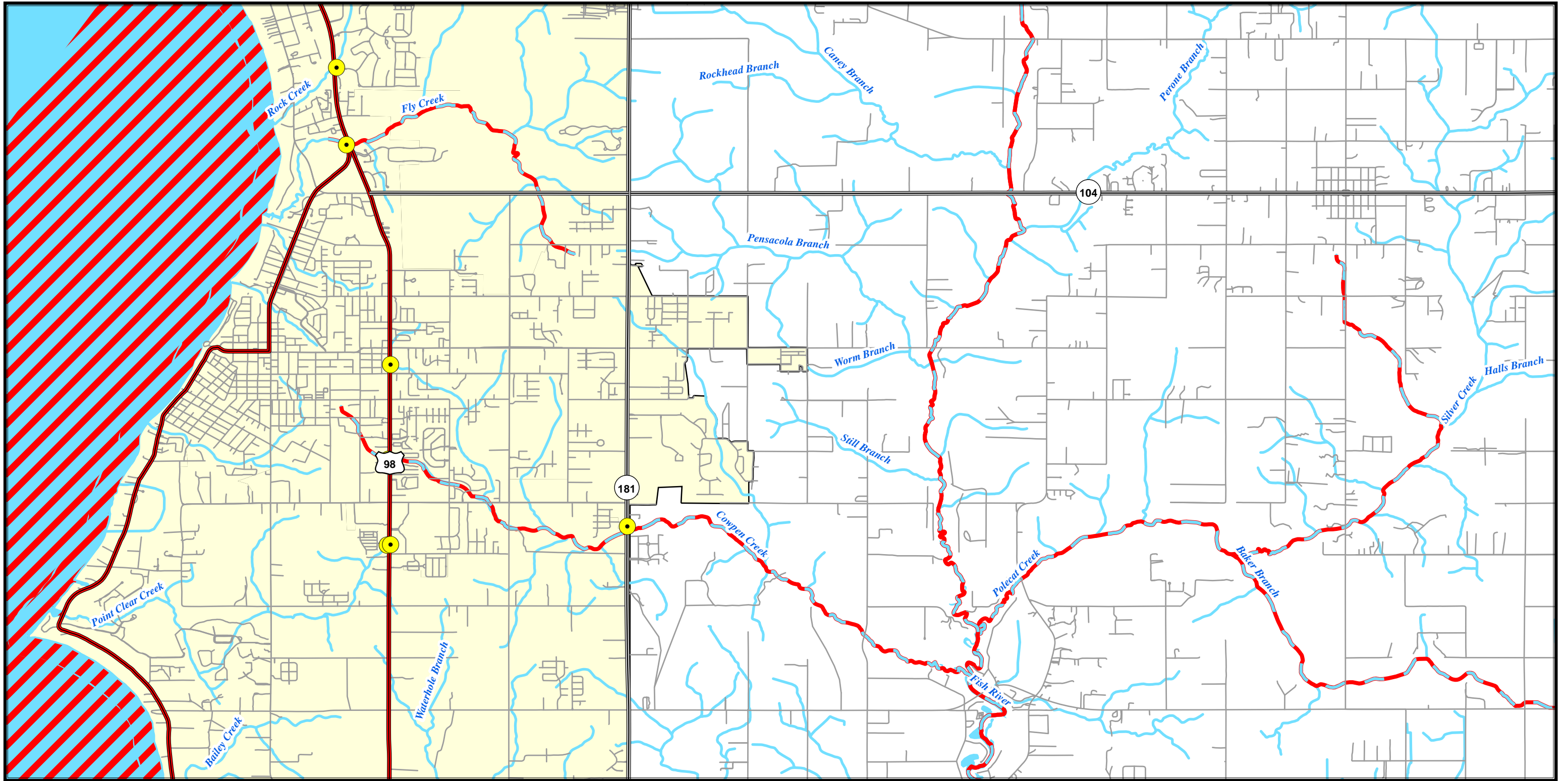
-  303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs



Index #: 101





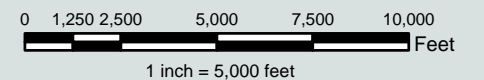
DEPARTMENT OF TRANSPORTATION  
DESIGN BUREAU - STORMWATER



# ALDOT MS4 Areas Baldwin County Map: 3

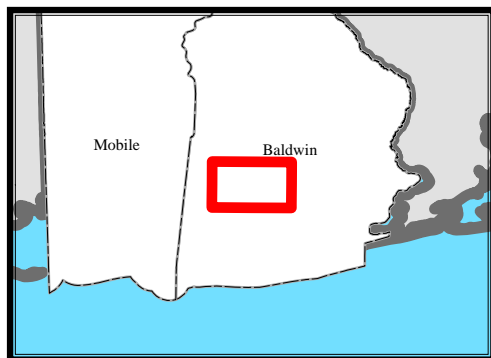
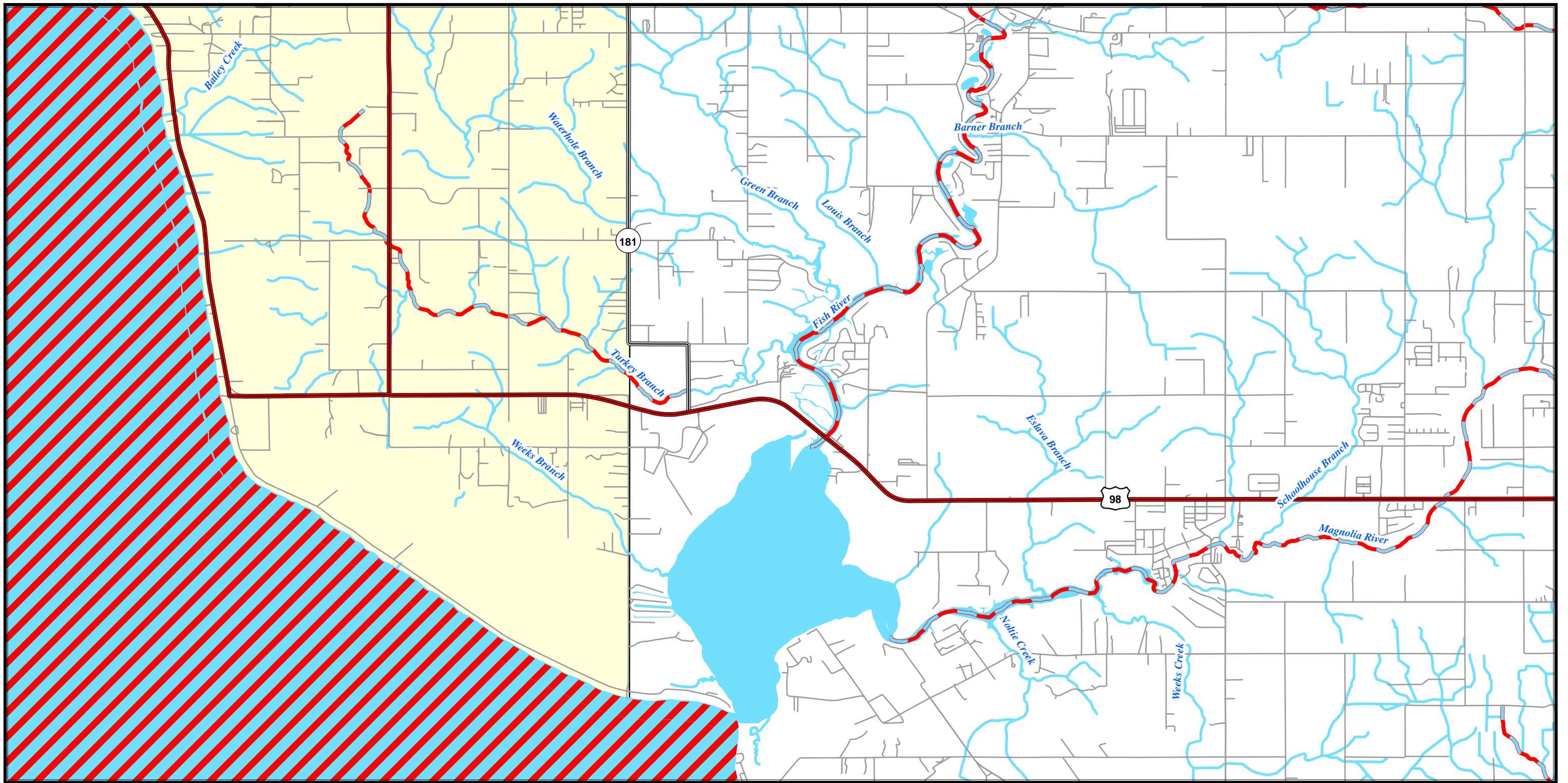
-  MS4 Area
-  MS4 Monitoring Location
-  Major Outfall on Inventory
-  ALDOT Support Facility

- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs







Index #: 102





## ALDOT MS4 Areas Baldwin County Map: 4

-  MS4 Area
-  ALDOT Support Facility

-  MS4 Monitoring Location
-  Major Outfall on Inventory

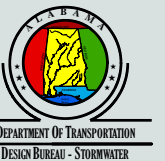
- 303(d) / TMDL Listed Waters
-  Sediment POC
-  Other POCs



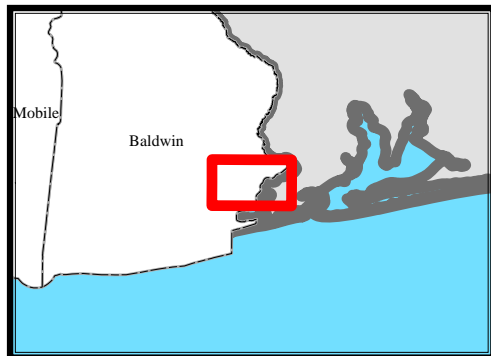
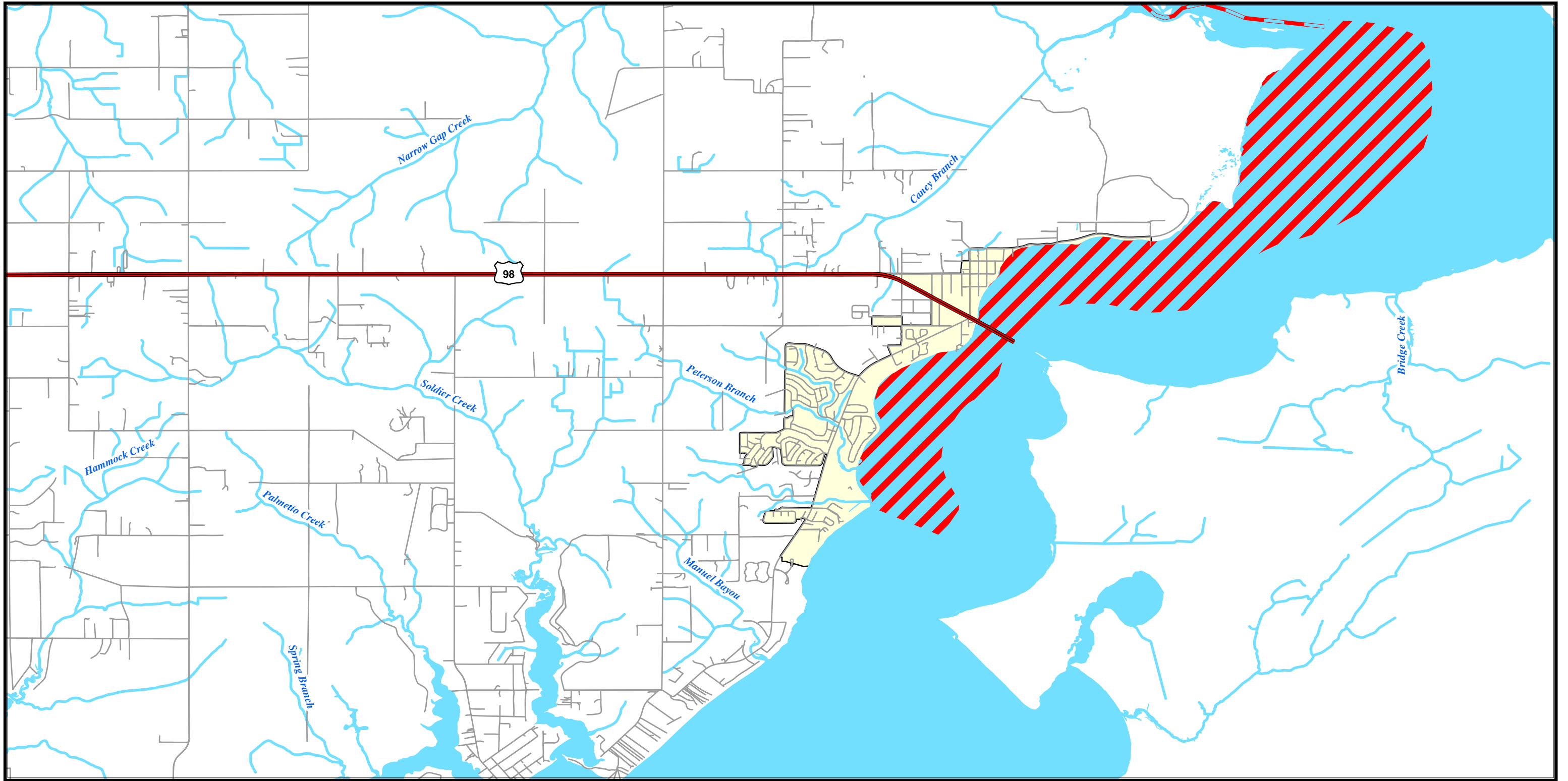
0 1,250 2,500 5,000 7,500 10,000  
Feet

1 inch = 5,000 feet

Index #: 103








## ALDOT MS4 Areas Baldwin County Map: 5

 MS4 Area

 ALDOT Support Facility

 MS4 Monitoring Location

 Major Outfall on Inventory

303(d) / TMDL Listed Waters

 Sediment POC

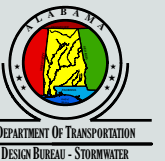
 Other POCs

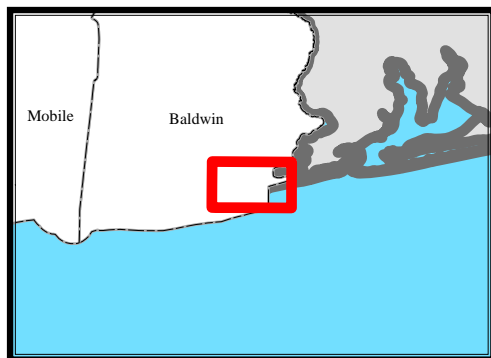
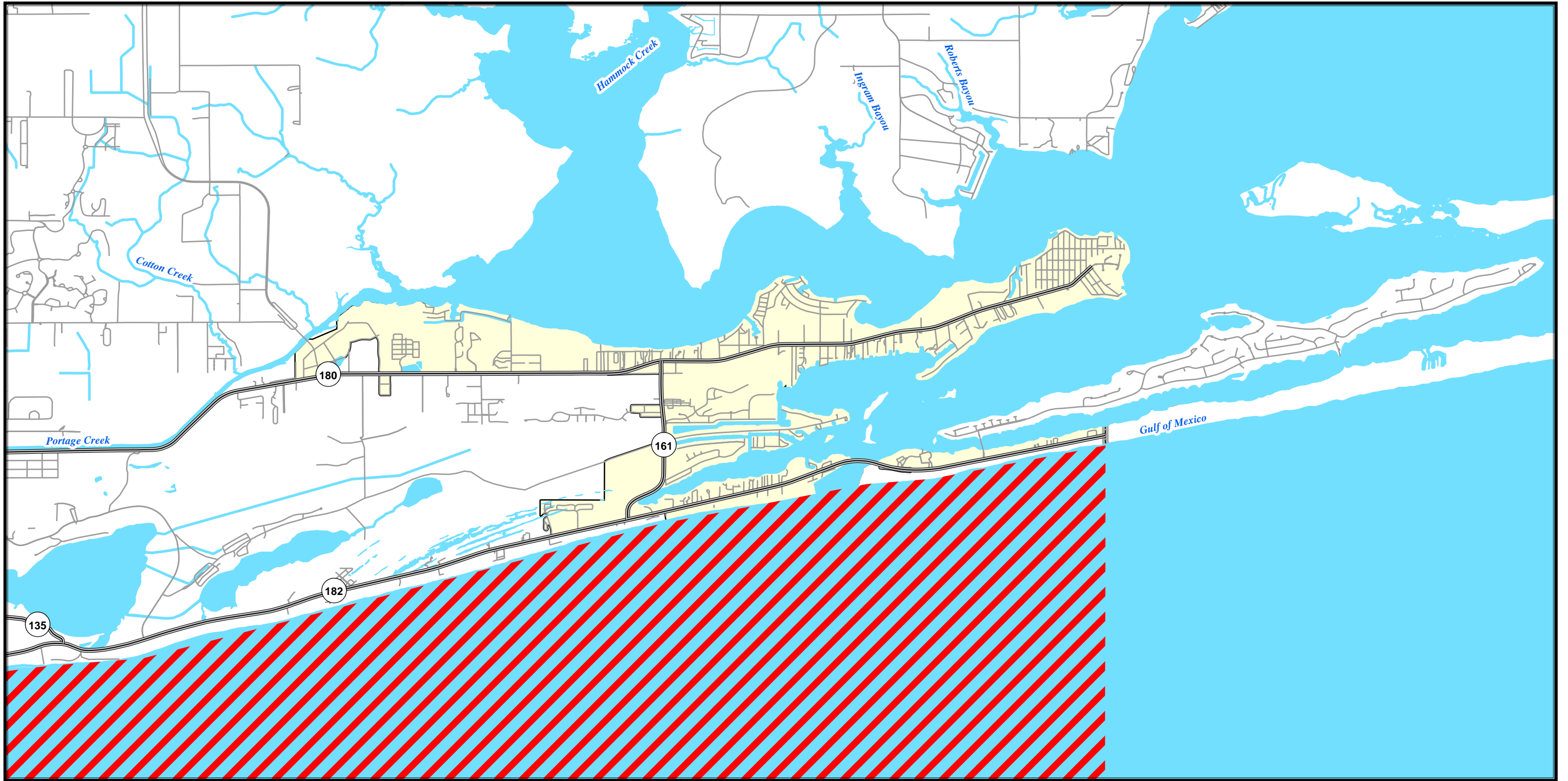


0 1,250 2,500 5,000 7,500 10,000  
Feet

1 inch = 5,000 feet


Index #: 104





## ALDOT MS4 Areas Baldwin County Map: 6

 MS4 Area

 ALDOT Support Facility

 MS4 Monitoring Location

 Major Outfall on Inventory

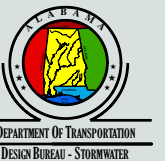
303(d) / TMDL Listed Waters

 Sediment POC

 Other POCs



Index #: 105



0 1,250 2,500 5,000 7,500 10,000 Feet

1 inch = 5,000 feet





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



**Outfalls**

- Regulated
- Non-regulated



**ALABAMA DEPARTMENT OF TRANSPORTATION**

Montgomery Support Facility - Outfalls

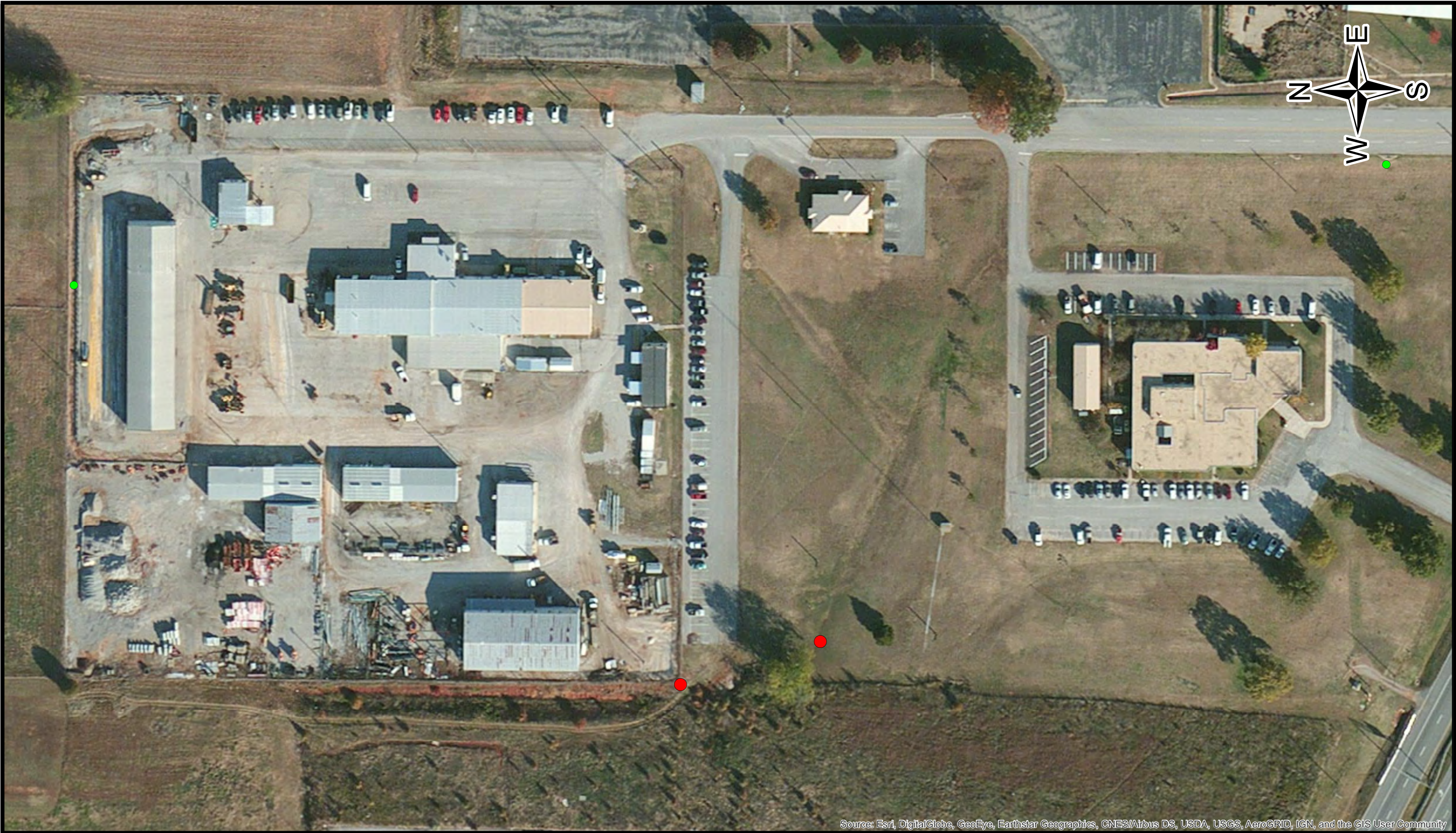
(Central Office Complex / Montgomery Area Office /

Montgomery District Office)

**Figure 1**

November 2016





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



**Outfalls**

- Regulated
- Non-regulated



**ALABAMA DEPARTMENT OF TRANSPORTATION**

Florence Support Facility - Outfalls  
 (Tuscumbia Area Office / Tuscumbia District Office)

**Figure 1**

November 2016





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Approximate Facility Boundary



Major Outfall



Minor Outfall



**ALABAMA DEPARTMENT OF TRANSPORTATION**

Hyntsville District Office - Support Facility Outfalls

**Figure 1**

September 2018









Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



- Approximate Facility Boundary
- Major Outfall
- Minor Outfall



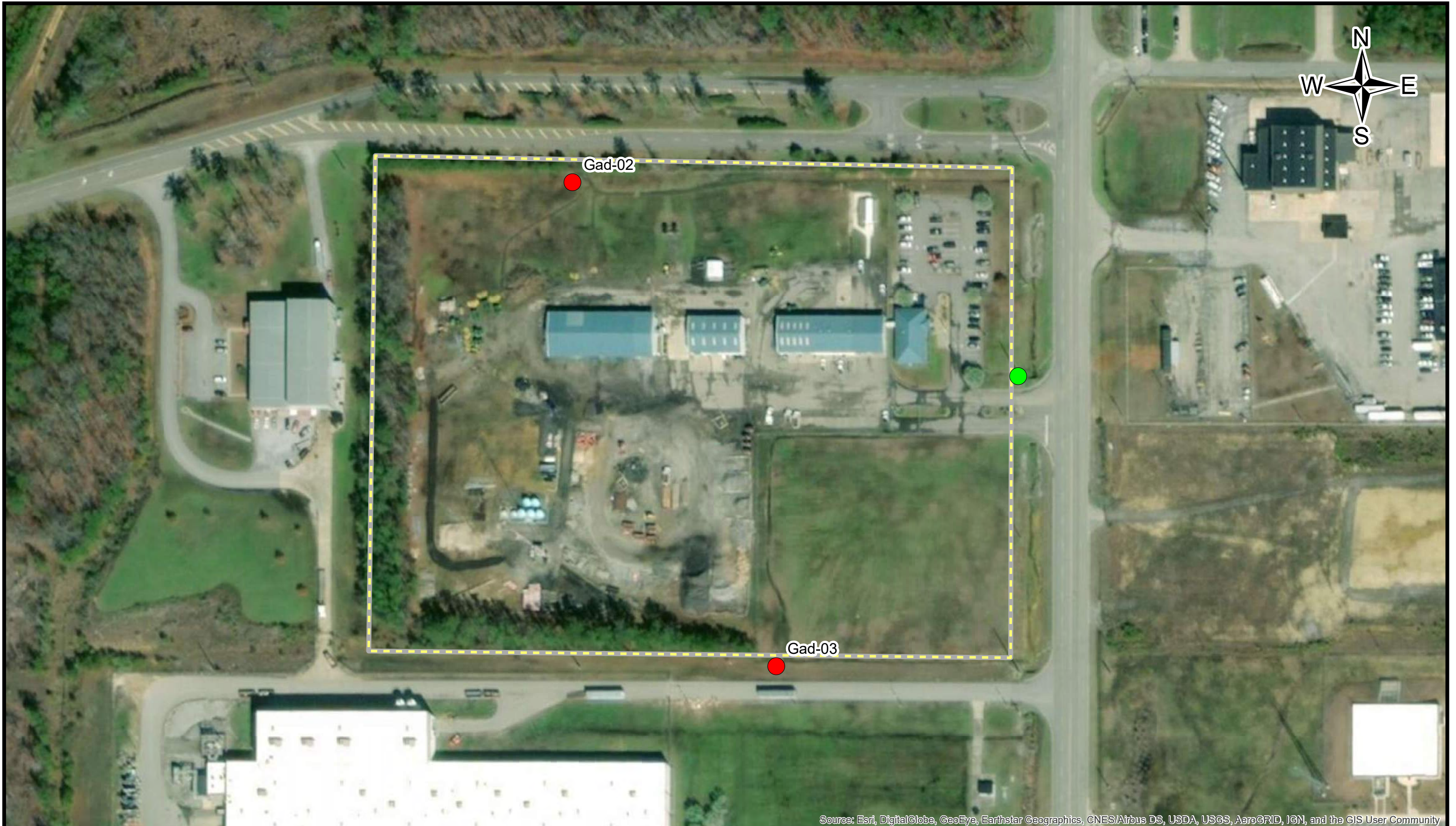
**ALABAMA DEPARTMENT OF TRANSPORTATION**

Calera District Office - Support Facility Outfalls

**Figure 1**


September 2018







Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



 Approximate Facility Boundary

-  Major Outfall
-  Minor Outfall



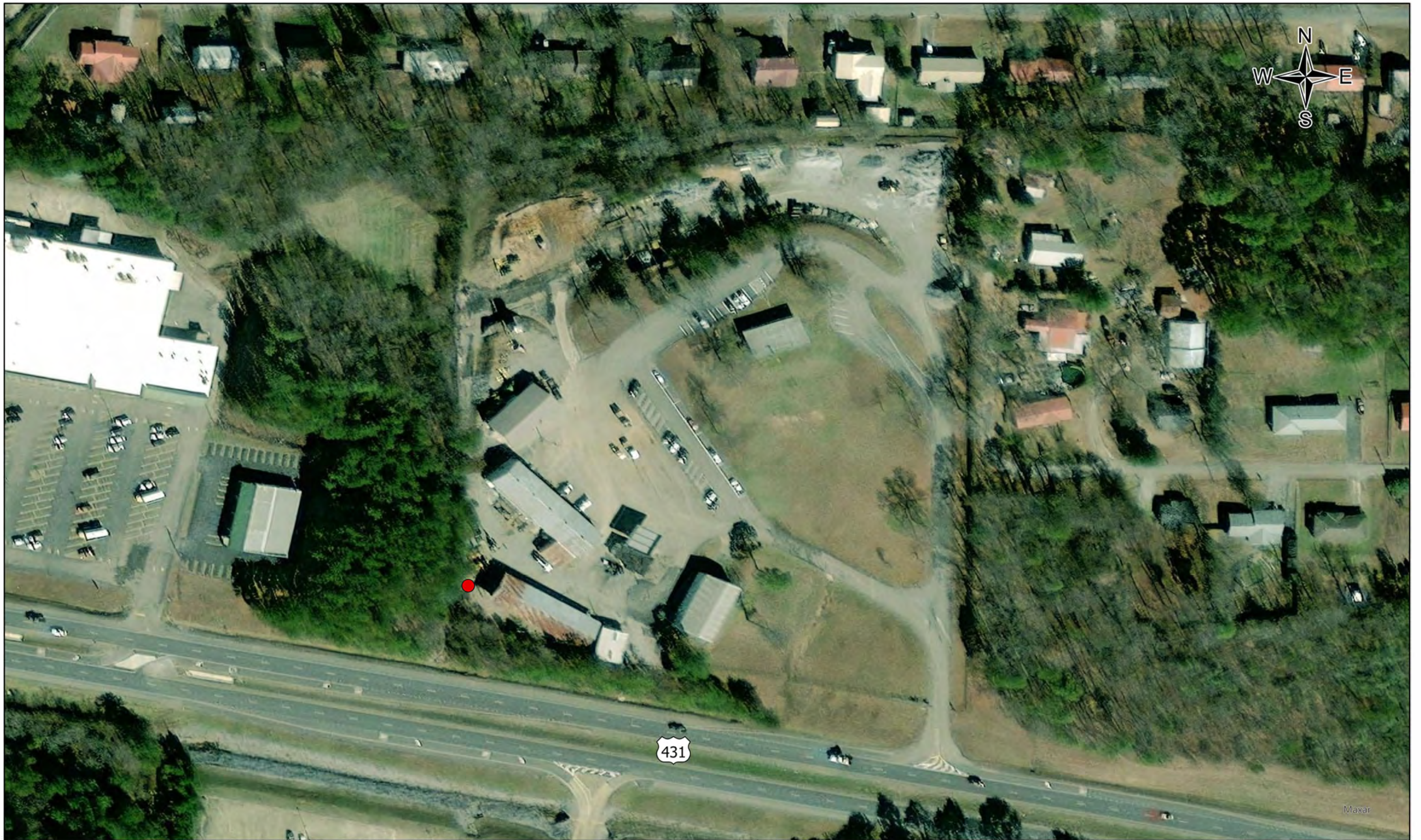
**ALABAMA DEPARTMENT OF TRANSPORTATION**

Gadsden District Office - Support Facility Outfalls

**Figure 1**

September 2018









Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



**Outfalls**

- Regulated
- Non-regulated



**ALABAMA DEPARTMENT OF TRANSPORTATION**

Tuscaloosa Support Facility - Outfalls  
 (Tuscaloosa Area Office / Tuscaloosa District Office)

**Figure 1**

November 2016





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Outfalls

- Regulated
- Non-regulated



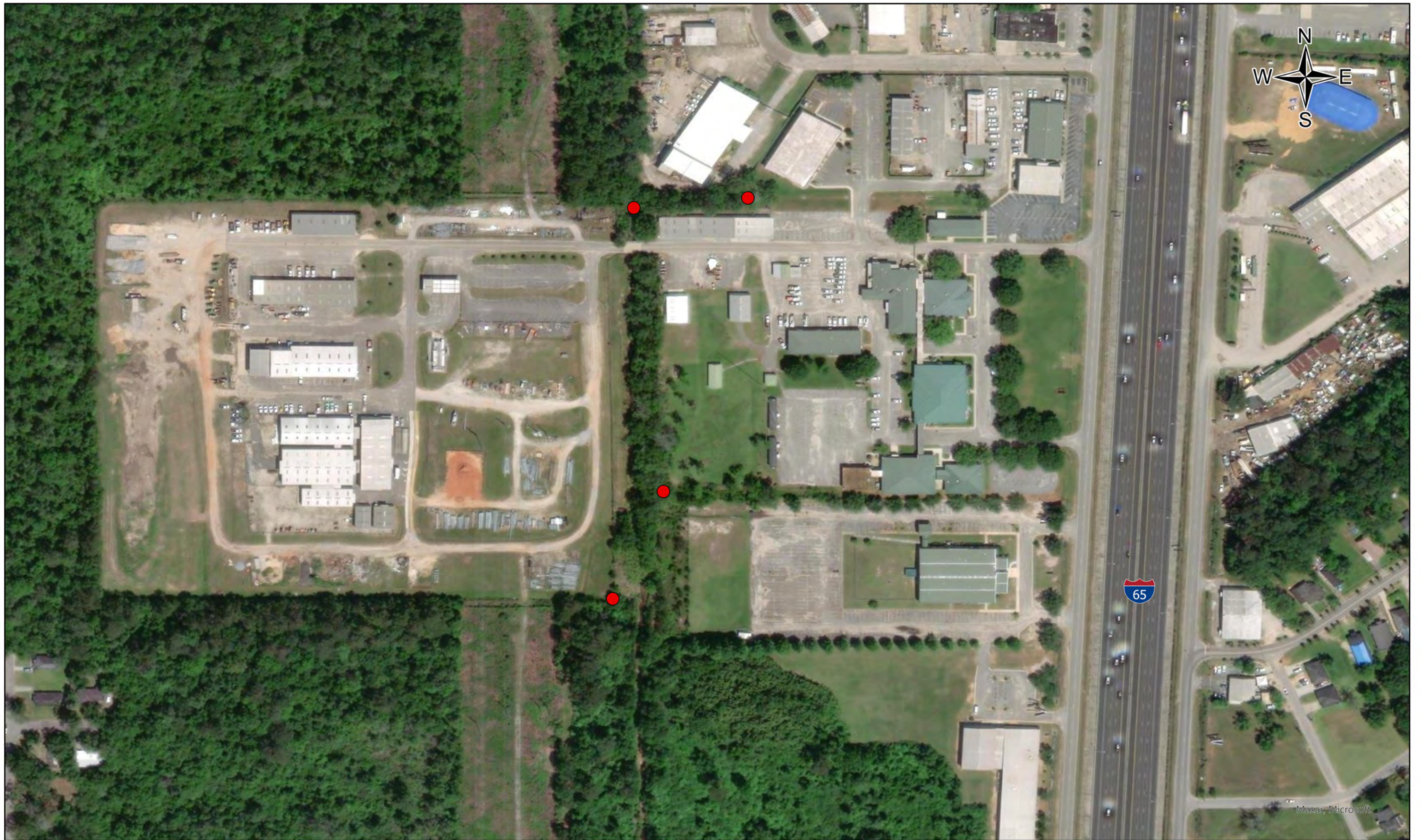
**ALABAMA DEPARTMENT OF TRANSPORTATION**

Dothan Support Facility - Outfalls  
(Dothan District Office)

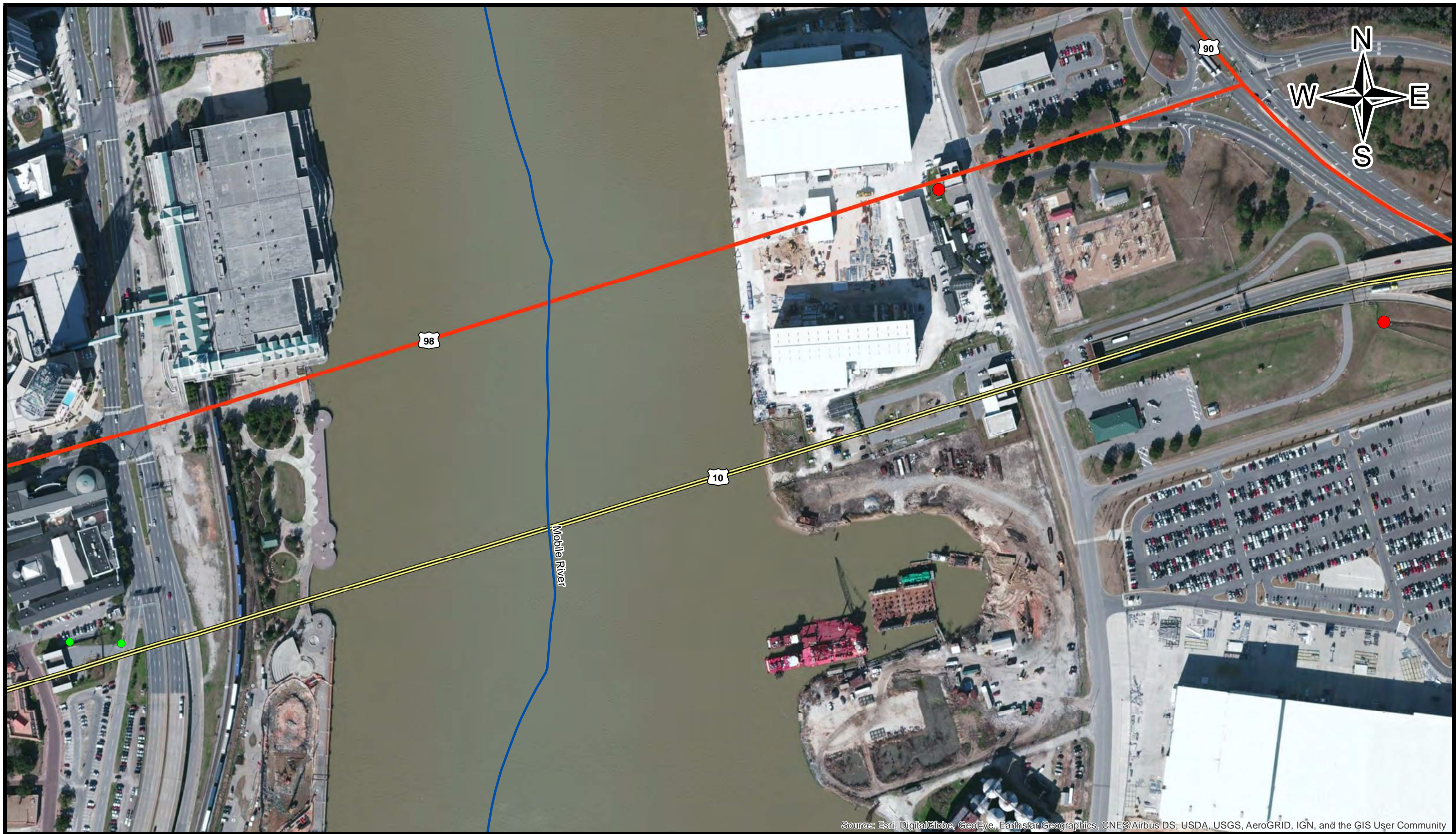
**Figure 1**

November 2016









Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



**Outfalls**

- Regulated
- Non-regulated



**ALABAMA DEPARTMENT OF TRANSPORTATION**

Mobile Support Facility - Outfalls  
(Tunnel Office)

**Figure 1**

November 2016





Regulated Outfall MS4- - - -

General Information

Field Inspector: Temporary Outfall ID:  
Date: Time:

Location Data

Receiving Water: County:  
ALDOT Region: ALDOT Road Information:  
Region: Highway Class:  
District: Highway ID Number:  
Work Order ID: Mile Marker:  
Land Use: Side of Road:  
Physical Barrier: Visible from Road:  
Specify: Distance from Road (ft):

Location: (Latitude:Longitude)

Describe outfall location relative to surrounding landmarks:

Outfall Device Characteristics

Outfall Type: Number of Barrels: Material:  
Pipe Diameter (in): Headwall: Shape:  
Pipe Width (in): Pipe Height (in): Swale Depth (ft):  
Box Width (ft): Box Height (ft): Swale Top Width (ft):  
Inlet Type: Outlet Pipe Dia (in): Swale Bottom Width (ft):  
Side Drain Present?: Side Drain Dia (in):



Regulated Outfall      MS4- - - -

#### Outfall Evaluation

Regulated Outfall:	Outfall Evaluation:	Suspect Illicit Discharge:
Flow Present:	Submerged in Water:	Outfall Damage:
Flow Description:	Submerged in Sediment:	Outfall Damage Severity:

#### Comments

#### Photographs





Regulated Outfall      MS4- - - -

**General Information**

Field Inspector:

Temporary Outfall ID:

Date:

Time:

**Location Data**

Receiving Water:

County:

ALDOT Region:

ALDOT Road Information:

Region:

Highway Class:

District:

Highway ID Number:

Work Order ID:

Mile Marker:

Land Use:

Side of Road:

Physical Barrier:

Visible from Road:

Specify:

Distance from Road (ft):

Location: (Latitude:Longitude)

Describe outfall location relative to surrounding landmarks:

**Outfall Device Characteristics**

Outfall Type:

Number of Barrels:

Material:

Pipe Diameter (in):

Headwall:

Shape:

Pipe Width (in):

Pipe Height (in):

Swale Depth (ft):

Box Width (ft):

Box Height (ft):

Swale Top Width (ft):

Inlet Type:

Outlet Pipe Dia (in):

Swale Bottom Width (ft):

Side Drain Present?:

Side Drain Dia (in):



Regulated Outfall      MS4- ----

**Outfall Evaluation**

Regulated Outfall:	Outfall Evaluation:	Suspect Illicit Discharge:
Flow Present:	Submerged in Water:	Outfall Damage:
Flow Description:	Submerged in Sediment:	Outfall Damage Severity:

**Comments**

**Photographs**



**General Information**

Outfall ID:	Field Inspector:
Date:	Time:
Rainfall in previous 72 hours:	Latitude:
Air Temperature:	Longitude:

**Illicit Discharge Indicators**

Water depth:	Suds:
Amount of water flowing:	Algae:
Water Cloudiness:	Sewage:
Water Odor:	Petroleum:
Severity:	Paint:
Water Color:	Other Contaminants:
Severity:	Specify:
Comments:	

**Field Sampling and Testing**

Outfall Discharge Temperature (°F):	Chlorine (mg/L or ppm):
pH:	Copper (mg/L or ppm):
Specific Conductance (µS/cm):	Nitrate (mg/L or ppm):
Total Dissolved Solids (mg/L or ppm):	Nitrite (mg/L or ppm):
Potassium (mg/L or ppm):	Phosphate (mg/L or ppm):
Ammonia (mg/L or ppm):	Detergents (mg/L or ppm):







**Photographs**

**Illicit Discharge Source Tracing**

Source of illicit discharge identified:                      Source location:

Sample collected for lab analysis?                      Other:

Comments

**Screening Data Urgency Assessment**

Are any illicit Discharge indicators substantial?

Any present indicators of sewage discharges?

Notification sent to ALDOT Illicit Discharge Management Coordinator?



# ILLICIT DISCHARGE INCIDENT TRACKING FORM

General Information	
Call taken by:	Call date:
Call time:	Precipitation in past 72 hrs:          inches
Reporter Information	
Incident time:	Incident date:
Caller contact information ( <i>optional</i> ):	
Name:	Phone No.:
Address:	

Incident Location	
Latitude:	Longitude:
Stream address or outfall #:	
Closest street address:	
Nearby landmark:	
Primary Location Description	Secondary Location Description:
<input type="checkbox"/> Stream corridor ( <i>In or adjacent to stream</i> )	<input type="checkbox"/> Outfall <input type="checkbox"/> In-stream flow <input type="checkbox"/> Along banks
<input type="checkbox"/> Upland area ( <i>Land not adjacent to stream</i> )	<input type="checkbox"/> Near storm drain <input type="checkbox"/> Near other water source (storm water pond, wetland, etc.):
Narrative description of location:	

Upland Problem Indicator Description		
<input type="checkbox"/> Dumping	<input type="checkbox"/> Oil/solvents/chemicals	<input type="checkbox"/> Sewage
<input type="checkbox"/> Wash water, suds, etc.	<input type="checkbox"/> Other:	

Stream Corridor Problem Indicator Description				
Odor	<input type="checkbox"/> None	<input type="checkbox"/> Sewage	<input type="checkbox"/> Rancid/Sour	<input type="checkbox"/> Petroleum (gas)
	<input type="checkbox"/> Sulfide (rotten eggs); natural gas	<input type="checkbox"/> Other:		
Appearance	<input type="checkbox"/> "Normal"	<input type="checkbox"/> Oil sheen	<input type="checkbox"/> Cloudy	<input type="checkbox"/> Suds
	<input type="checkbox"/> Other:			
Floatables	<input type="checkbox"/> None:	<input type="checkbox"/> Sewage (toilet paper, etc)	<input type="checkbox"/> Algae	<input type="checkbox"/> Dead fish
	<input type="checkbox"/> Other:			

Narrative description of problem indicators:
--



# ILLICIT DISCHARGE INCIDENT TRACKING FORM

## Suspected Violator

Name:

Company:

Person or vehicle Description:

License Plate No.:

Other:

## Investigation Notes

Initial investigation date:

Investigators:

No investigation made

Reason:

Referred to different department/agency:

Department/Agency:

Investigated: No action necessary

Investigated: Requires action

Description of actions:

Hours between call and investigation:

Hours to close incident:

Date case closed:

Notes:





# Non-Storm Water Discharge Investigation Form

**Purpose:** The purpose of this form is to document the observations made during an investigation of a potential non-storm water discharge into ALDOT's MS4.

## Inspection Information

Inspection Type:  Initial  Scheduled  Follow-up  Response to Complaint  
Inspector Name: \_\_\_\_\_ Date: \_\_\_\_\_  
Organization: \_\_\_\_\_ Time: \_\_\_\_\_  
Phone: \_\_\_\_\_ E-mail: \_\_\_\_\_  
Signature: \_\_\_\_\_

Name(s) of others accompanying inspector (if any):  
Name: \_\_\_\_\_ Title: \_\_\_\_\_  
Name: \_\_\_\_\_ Title: \_\_\_\_\_  
Name: \_\_\_\_\_ Title: \_\_\_\_\_

Weather Conditions:  Clear  Cloudy  Rain  
Previous Rainfall: \_\_\_\_\_ inches on \_\_\_\_\_ Source: \_\_\_\_\_

## Incident Location

Stream: \_\_\_\_\_ Latitude: \_\_\_\_\_° \_\_\_\_\_' \_\_\_\_\_"  
Address: \_\_\_\_\_ Longitude: \_\_\_\_\_° \_\_\_\_\_' \_\_\_\_\_"  
Nearby Landmark: \_\_\_\_\_  
Property Type:  Municipal  Commercial  Industrial  Residential  
 Other: \_\_\_\_\_  
Primary Location:  Stream  Upland Area  
Secondary Location:  Outfall  In-Stream Flow  Near Storm Drain  
 Along Bank  Other: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_

## Observations

### 1. Upland Problem Indicators

None  Dumping  Oil / Chemical  Sewage  
 Wash Water  Suds  Other: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_

### 2. Stream Corridor Problem Indicators

Odor  None  Sewage  Oil / Chemical  Sour  
 Sulfide  Other: \_\_\_\_\_  
Appearance  Normal  Cloudy  Oil / Chemical  Suds  
 Turbid  Other: \_\_\_\_\_  
Floatables  None  Sewage  Dead Fish  Algae  
 Other: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_



# Non-Storm Water Discharge Investigation Form

### 3. Field Screening Data

Sample Location: \_\_\_\_\_

Parameters		Results	Comments
1. Temperature	°C	_____	_____
2. pH	s.u.	_____	_____
3. Conductivity	µS/cm	_____	_____
4. Total Dissolved Solids	mg/L	_____	_____
5. Potassium	mg/L	_____	_____
6. Ammonia	mg/L	_____	_____
7. Chlorine	mg/L	_____	_____
8. Copper	mg/L	_____	_____
9. Nitrite	mg/L	_____	_____
10. Nitrate	mg/L	_____	_____
11. Phosphate	mg/L	_____	_____
12. Detergents	mg/L	_____	_____

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### 4. Potential Source of Non Storm Water Discharge

- Sanitary Sewer       Septic System       Oil / Chemical Spill       Vehicle Washing
- Construction Activity       Industrial Activity       Building Maintenance       Drain Pipe
- Natural Source       Other: \_\_\_\_\_

### Suspect Violator

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Property Type:       Municipal       Commercial       Industrial       Residential  
 Other: \_\_\_\_\_

### Follow-up Actions

- No follow-up actions are required.
- Notify Facility of Non-Storm Water Discharge       Yes       No      Date: \_\_\_\_\_
- Conduct Follow-up Investigation       Yes       No      Date: \_\_\_\_\_
- Refer to adjacent MS4       Yes       No      Date: \_\_\_\_\_
- Non-Storm Water Discharge Eliminated       Yes       No      Date: \_\_\_\_\_
- Notify ADEM       Yes       No      Date: \_\_\_\_\_
- Other

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



ALDOT Employee IDDE Orientation:  
2021 Maintenance Management Meeting

### MS4 – Illicit Discharges

- ❖ Any discharge to a municipal separate storm sewer that is not composed entirely of stormwater except discharges pursuant to a NPDES permit.
- ❖ These discharges contribute pollutants, including heavy metals, toxics, oil and grease, solvents, nutrients, viruses, and bacteria to receiving waterbodies.
- ❖ The pollutants can degrade water quality and threaten aquatic, wildlife, and human health.

### MS4 – Illicit Discharges

- ❖ Sources
  - ❖ Sanitary wastewater
  - ❖ Car wash wastewaters
  - ❖ Improper oil disposals
  - ❖ Spills from roadway accidents
  - ❖ Illegal dumping
  - ❖ Etc.

### MS4 – Illicit Discharges



Construction Runoff

### MS4 – Illicit Discharges



Horizontal Directional Drilling Slurry Runoff



## MS4 – Illicit Discharges



Construction Yard Runoff

## MS4 – Illicit Discharges



Sanitary Sewer / Grease

## MS4 – Illicit Discharges



Sanitary Sewer

## MS4 – Illicit Discharges



Sanitary Sewer



## MS4 – Illicit Discharges



Restaurant Waste Runoff

## MS4 – Illicit Discharges



Granite Wash Water

## MS4 – Illicit Discharges



Wash Water

## MS4 – Illicit Discharges



Green Algae Wash Water

## MS4 – Illicit Discharges



Orange Algae / Bacteriological Sheen – Non-Illicit Discharge

**ILICIT DISCHARGE INCIDENT TRACKING FORM**

**General Information**

Call date by: \_\_\_\_\_ Call date: \_\_\_\_\_  
 Call time: \_\_\_\_\_ Precipitation in past 72 hrs: \_\_\_\_\_ inches

**Reporter Information**

Incident date: \_\_\_\_\_ Incident date: \_\_\_\_\_  
 Call center information (optional): \_\_\_\_\_  
 Name: \_\_\_\_\_ Phone No.: \_\_\_\_\_  
 Address: \_\_\_\_\_

**Incident Location**

Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_  
 Street address or water ID: \_\_\_\_\_  
 County street address: \_\_\_\_\_  
 Agency location: \_\_\_\_\_

**Primary Location Description** **Secondary Location Description**

Stream corridor  Outfall  In-stream flow  Slag Bank  
 Wetland area  Near storm drain  Near other water source (storm water pond, system, etc.)  
 Narrative description of location: \_\_\_\_\_

**Upstream Problem Indicator Description**

Flooding  Odors/smells/chemicals  Sewage  
 White water, boils, etc.  Other: \_\_\_\_\_

**Downstream Problem Indicator Description**

None  Sheen  Animal/flow  Reservoir/Span  
 Other:  Diffuse (stream bank),  Other: \_\_\_\_\_  
 Appearance:  Normal  Oil sheen  Sludgy  Boils  
 Turbidity  None  Sewage (color, smell, etc.)  Algae  Dead fish  
 Flotation:  None  Other: \_\_\_\_\_  
 Narrative description of problem indicators: \_\_\_\_\_

MS4-001-001 Page 3 of 3

**ILICIT DISCHARGE INCIDENT TRACKING FORM**

**Suspected Violator**

Name: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Permit to install/construct: \_\_\_\_\_  
 License (State No.): \_\_\_\_\_  
 Other: \_\_\_\_\_

**Investigation Notes**

Was investigation done? \_\_\_\_\_ Investigator: \_\_\_\_\_  
 No investigation made  Follow-up: \_\_\_\_\_  
 Reported to different department/agency? \_\_\_\_\_ Department/Agency: \_\_\_\_\_  
 Investigated: No action necessary \_\_\_\_\_  
 Investigated: Requires action \_\_\_\_\_ Department/Agency: \_\_\_\_\_  
 Field Supervisor Call and Investigator: \_\_\_\_\_ Hours in field position: \_\_\_\_\_  
 Date completed: \_\_\_\_\_  
 Notes: \_\_\_\_\_

MS4-001-001 Page 2 of 3

## MS4 – Illicit Discharges

- ❖ Documentation
- ❖ Each Area must report illicit discharges to the Bridge Scour and Environmental Section each fiscal year.
- ❖ Training required annually
  - ❖ Maintenance Management, safety meetings, vegetation management meetings, environmental compliance meetings, etc.
- ❖ Public interface
  - ❖ Design Bureau – Environmental Coordination Section Webpage



## **Appendix E:**

### **Supplemental Material for Chapter 5**

Key GDCP Steps & Participating ALDOT Parties

ALDOT Guide for Developing Construction Plans

Standard & Special Highway Drawing Example

Transportation Facility Construction & the ALDOT Organization

ALDOT Construction Manual, Section 2.5

ALDOT Standard Specifications for Highway Construction

## Key GDCP Steps & Participating ALDOT Parties

- 0.0 – Final Design Authorization
- 5.02 – Project Coordination *(with stormwater/environmental personnel)*
- 11.0 – Project Scope Development
- 13.0 – Initial Hydraulic Investigation
- 15.04 – Preliminary Drainage Design
- 22.0 – Setting of Preliminary ROW Limits
- 30.0 – 30% Inspection (Geometric Design Review)**
- 35.0 – Environmental Permit Coordination
- 46.0 – Public Involvement/Design Hearing Process
- 61.03 – Completion of Hydraulic Design for Post-Construction Stormwater Management
- 61.07 – Phased Erosion & Sediment Control Plan Development
- 62.05 – Beginning of CBMPP & NOI Preparation
- 65.0 – Plan-in-Hand Inspection**
- 71.0 – Approval for ROW/Easements, Cleared Environmental Limits, & Environmental Compliance
- 72.0 – ROW Authorization Process
- 85.0 – PS&E Inspection**
- 90.0 – Final Backcheck**
- 91.09 – Stormwater Permit
- 95.0 – Construction Review Submittal**
- 99.0 – Final Plans to Office Engineer**
- 99.05 – Project Letting

Stormwater/Environmental Step

**Major Review Step**

GDCP Review Step	Participating ALDOT Offices
<b>30.0 – 30% Inspection</b>	Region, Design Bureau (Environmental Technical), Construction Bureau, Maintenance Bureau, M&T Bureau, Right-of-Way Bureau, Bridge Bureau, Quality Control Bureau
<b>65.0 – Plan-in-Hand Inspection</b>	Region, Design Bureau (Stormwater, Environmental Technical), Construction Bureau, Maintenance Bureau, M&T Bureau, Right-of-Way Bureau, Bridge Bureau, Quality Control Bureau
<b>85.0 – PS&amp;E Inspection</b>	Region, Design Bureau (Stormwater, Environmental Technical), Construction Bureau, Maintenance Bureau, M&T Bureau, Right-of-Way Bureau, Bridge Bureau, Quality Control Bureau
<b>90.0 – Final Backcheck</b>	Design Bureau (Stormwater), Maintenance Bureau, Bridge Bureau, Quality Control Bureau
<b>95.0 – Construction Review Submittal</b>	Region, Construction Bureau, Design Bureau, Maintenance Bureau
<b>99.0 – Final Plans to Office Engineer</b>	Office Engineer Bureau, Region

**ALDOT**  
**GUIDE FOR DEVELOPING**  
**CONSTRUCTION PLANS**  
**2018**



**DEPARTMENT OF TRANSPORTATION**



# Alabama Department of Transportation Guide for Developing Construction Plans

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***Milestones*** –noted by italics and bold print

# ALABAMA DEPARTMENT OF TRANSPORTATION GUIDE FOR DEVELOPING CONSTRUCTION PLANS

- 0.0 **MILESTONE: FINAL DESIGN PE AUTHORIZATION AND BEGINNING OF THE FINAL SURVEY**
  
- 1.0 **MILESTONE: LOCATION SECTION/REGION SHALL TRANSMIT SURVEY INFORMATION AND LOCATION MEMORANDUM TO PROJECT LEAD**
  
- 2.0 **Organization of Project Data**
  - 2.01 Designer shall organize survey information in accordance with ALDOT CAD Standards.
  - 2.02 Review Location Memorandum, Department commitments, and environmental document (if complete). Check for special problems, commitments, and major utility problems that may influence design. Special attention should be given to avoiding costly structures such as water tanks, cellular telephone towers, electric transmission facilities, other types of towers, etc.
  - 2.03 Design Lead contacts Region ROW personnel to begin Right-of-Entry (ROE) process using unified ROE access form.
  
- 3.0 **Initial Requests**
  - 3.01 **INITIAL SUBMITTAL TO REGION / AREA MATERIALS ENGINEER FOR INITIAL ESTIMATED BUILDUP WHEN PERTINENT INFORMATION IS AVAILABLE (very preliminary)**

**NOTE:** This step in the GDCP process should be made as early as possible and is applicable for those projects in which the project lead has been provided a preliminary mainline horizontal alignment, mainline profile, Location Memorandum, and/or other pertinent information that would make this submittal useful. In some cases, the project lead may have an understanding of the main elements of the project and be able to make a relevant submittal without the mainline horizontal alignment, mainline profile, and the Location Memorandum, i.e., widening, bridge replacement, resurfacing, etc. When the project lead

4.02 Retrieve electronic FEMA Flood Insurance Rate Map (FIRM) for the project location from the internet.

## 5.0 **Project Coordination**

5.01 Determine if project has to go through the Value Engineering Process. Allow 8 weeks to Value Engineer project.

5.02 Coordinate with the Environmental Technical Section to determine if a Public Involvement meeting/ Design Hearing will be required and adjust schedule accordingly.

5.03 Contact the local floodplain administrator to determine if the proposed highway action is consistent with existing watershed and floodplain management programs and to obtain current information on development and proposed actions in the affected watershed(s) (refer to GFO 3-60).

5.04 Coordinate with the Design Bureau and Region Stormwater personnel to determine any stormwater/water quality requirements that must be adhered to and if coordination is required with other agencies, municipalities, county governments, etc. Requirements may deal with impaired streams, turbidity, TMDL's, priority construction sites, etc.

5.05 If there are bridge structures within the project limits, coordinate with the Bridge Bureau and determine if bridge structures will be replaced, rehabilitated, widened, and/or no work required.

## 6.0 **CPMS Coordination**

6.01 The design section supervisor shall review CPMS and determine if all relevant projects have been created in CPMS, i.e. preliminary engineering, right-of-way, construction, utility, etc. If required project(s) are not set up in CPMS, the design section supervisor should coordinate with the relevant party to establish an estimated dollar amount to initiate the project in CPMS. If the relevant party is unable to make an educated approximation, the Location Section's preliminary estimate cost form can be used to establish the preliminary estimate. It is the responsibility of the project lead to coordinate with the appropriate persons to create projects in CPMS that have not already been set up during the preliminary design phase of the project.

6.02 The design section supervisor shall determine if project has adequate PE funding remaining. If not, take steps to request additional PE project funding. The project lead shall consult with other entities that also charge to the PE budget and request they provide an estimated cost for completing their work, i.e. Location Section, ETS, Materials and Tests Bureau, Bridge Bureau, etc. Design section supervisor shall periodically review the balance of PE project funds and request additional funding if necessary.



supervisor shall take the necessary steps to acquire this information. It may be helpful to gather information from the Location Section and/or examine any design files provided as part of the survey submittal package. ROW Limits provided by the Location Section are equivalent to the environmentally cleared limits. Any changes to these should be brought to the attention of ETS.

- 11.03 Submit final project scope document to the State Design Engineer, Region, and FHWA (if full federal oversight is required) and ask them to acknowledge their approval by signing the document and returning it. A copy of the scope shall be sent to the Traffic Design Section of the Design Bureau.
- 11.04 Projects with railroad involvement shall be coordinated through the Rail Group. If there is railroad involvement, all projects involving at-grade crossings will require a **Warning Device Checklist** to be submitted to the Rail Group. The Rail Group will determine if a diagnostic review is needed. If determined a diagnostic review is needed, the Rail Group will schedule and coordinate a review with the Project Lead, Region Rail Coordinator, Railroad Company, and if applicable local road authority. The diagnostic review will determine if any potential upgrades are required for the facilities for which the railroad has maintenance and operational responsibilities in accordance to the latest standards and MUTCD. Refer to Attachment #9.
- 12.0 **Off-site Detours (refer to GFO 3-43)** – Design section supervisor shall determine if an off-site detour is required. If an off-site detour is needed and it has not already been approved by the Chief Engineer during the corridor study/preliminary design phase of a project, the proposed detour shall be coordinated with the Region and submitted to the State Design Engineer/Region Engineer for their approval; along with a signature sheet. After concurrence is given, the proposed detour shall then be submitted to the Assistant Chief Engineer of Pre-Construction for concurrence, and then to the Chief Engineer for final approval. Coordinate with the Location Section and Region for further submittal details.
- 13.0 **Initial Hydraulic Investigation** - The design section supervisor and lead designer shall make a site inspection of project site to verify, determine, and complete the following:
- Fill out HYD 100 and HYD 101 forms (see *ALDOT Hydraulics Manual*, page **3-12**) to meet hydraulic design and review requirements.
  - Make photographs of all existing drainage structures.
  - Verify the relative accuracy of quad maps and/or existing surface models.
  - Check topography for accuracy. If additional survey information is needed, provide electronic file(s) and (1) roll plot of the affected area to the Location Section and clearly state reasons for the request. Roll plot shall show where additional survey is requested by outlining the area(s) in red, any horizontal and vertical control information needed, and relationship of the construction alignment to the survey alignment.
- NOTE:** If possible, do this during the initial site visit. (See GDCP Step **8.0**)
- 13.01 The designer should create a **project hydraulics notebook** for organizing and keeping hardcopies of hydraulic design final output. Create a PDF of the project hydraulics notebook after hydraulics design is complete and before the project is

- 15.03 Begin creating Paving Layout plan sheets. These sheets are needed for the 30% Inspection so that reviewers will understand the intent of the project and what the project is planned to look like after construction.
- 15.04 **Preliminary Drainage Design** - Place horizontal alignment on a topographic map and begin looking at major stream crossings and drainage areas. Determine preliminary drainage areas and place drainage structures on plan sheets that are anticipated to have an equivalent conveyance opening of 48" diameter and larger. Identify impaired waters and other special water resources to begin preparation of the phased Erosion and Sediment Control Plan and stormwater permit. If the project is an ADEM Priority Construction Site, notify the Design Bureau Stormwater Engineer as soon as possible so that it can be determined what countermeasures should be taken to reduce potential impacts to the impaired water resource. Coordinate with the Stormwater Section of the Design Bureau to acquire the latest data for water resources.
- 15.05 Begin preliminary drainage design to insure workability of design(s) and to arrive at approximate cost estimates and preliminary right-of-way requirements.
- 15.06 For new locations and added roadways, make a preliminary profile grade and cut preliminary cross sections. Coordinate the proposed profile grade with the preliminary cross sections to make sure the profile does not undercut any cross drains that show up at any point on the cross-sections and will have adequate cover over the preliminary cross drain structures. Make sure all median drains can drain to the outside ditches.
- 15.07 Determine preliminary right-of-way requirements with respect to erosion and sediment control features and post-construction BMPs required by GFO 3-73, i.e., LID features, detention ponds, retention ponds, sedimentation basins, and energy dissipation drainage structures. The designer shall coordinate with the Stormwater Section of the Design Bureau to determine stormwater requirements that may affect the hydraulic design.
- 16.0 **Initial Railroad Coordination**
- 16.01 A **Certification of Railroad Involvement** (Form RR1) is required on all construction projects prior to FHWA authorization, refer to Attachment # 9. **This includes projects that have no railroad conflict.** The project lead shall coordinate with the Region and/or local road authority to obtain all proper information and signatures for the Railroad Certificate. This form is to be provide to Office Engineer. Refer to GDCP 11.04 determine railroad involvement.

right-of-way. Preliminary limits should be based on preliminary construction limits, accepted buffers, and experience. Generally, preliminary buffers (area between the construction limit and required right-of-way) are set at 20' for local roads, 30' - 40' for arterials and collectors, and 40' - 50' for limited access facilities beyond cut/fill limits. The designer should use larger buffer distances when necessary to account for design elements not yet completed such as drainage design, bridge construction, erosion/sediment control design, absence of slope study, etc. Refer to ALDOT Right-of-Way Bureau website – “Right-of-Way Mapping Manual” and “Right-of-Way Design Rules of Thumb” for the guidance.

- 20.09 Show preliminary right-of-way limits on cross-sections and in appropriate files.
- 20.10 Check cross-sections to make sure proposed ground and design elements are not beyond preliminary right-of-way limits.
- 20.11 Recalculate earthwork quantities when necessary and revise preliminary right-of-way.
- 21.0 **Clear Zone Review**  
Determine clear zone distance per the Roadside Design Guide, and review preliminary right-of-way limits to determine if limits should be revised. Provide barrier protection where warranted. Make revisions to cross-sections and appropriate files when shoulders widths have to be increased for placement of barrier protection and/or right-of-way limits are adjusted.
- 22.0 **MILESTONE: PRELIMINARY RIGHT-OF-WAY LIMITS SET**
- 23.0 The designer should submit *Microstation* CAD files to the Design Bureau Environmental Technical Section (ETS) for their use.

The following *Microstation* CAD files should be submitted:

- Topographic file (TOP), right-of-way file (ROW), horizontal alignment file (HAL), drainage file (DRN), and required file (REQ), Property line file (PRP)

The ROW files submitted to ETS at this point will become the new cleared environmental limits once the environmental document is approved. The project note indicating that the ROW/ TCE Limits are equivalent to the Environmentally Cleared Limits should be used in most cases. It is strongly recommended in setting the ROW Limits provided to ETS that an additional buffer be added beyond the typical ROW Rule of Thumb based on this. If the environmental document is already approved, then ROW/TCE limits should be within those Environmentally Cleared Limits.

If the environmental document is being done by consultant, the consultant must contact ETS to set the environmental limits prior to any studies.



27.01 Enter the Preliminary Construction Estimate amount in CPMS.

28.0 The design section supervisor and the responsible design engineer superior shall determine if a 30% Inspection is necessary. If a 30% Inspection is necessary, the designer shall use the 30% Checklist (see **Attachment #6**) to develop and check plans.

28.01 If applicable, the design section supervisor shall conduct an in-house review of plans to be submitted for 30% Inspection.

28.02 If applicable, submit (1) half-size sets of 30% plans and (1) preliminary construction estimates to the responsible design engineer superior. This information should be submitted at least **3** weeks prior to the 30% Inspection submittal deadline. Any necessary plan revisions will be communicated to the design section supervisor. The design section supervisor must get the responsible design engineer superior's approval before making the 30% Inspection submittal.

## **29.0 30% INSPECTION SUBMITTAL**

If an inspection is necessary, the plan set submittal shall include all plan assembly sheets created to date and (1) preliminary construction cost estimate for each plan set submitted. If an off-site detour and/or on-site diversion is required, the designer shall show the detour in the plan assembly and/or provide a roll plot of the detour for review. The design section supervisor will be responsible for scheduling and conducting the 30% Inspection. For projects that require a 30% Inspection, transmit the required number of plan sets at least **2** weeks prior to the Inspection. Submit plans to the following entities or individuals:

- Region – 8 sets
- Coordinate with Region about other parties that should be aware of 30% Inspection and receive plans; i.e. Corps of Engineers, National Parks Service, Fish and Wildlife Service, railroad(s), power company(s), etc.
- Right-of-Way Bureau – 1 plan set; CAD files or electronic link to CAD files, PDF's (Adobe Acrobat file) or paper copies of the source deeds
- Right-of-Way Bureau Utilities Section– 1 plan set; CAD files or electronic link to CAD files
- Bureau of Materials and Tests – 1 set
- Bridge Engineer (if bridge work is a part of project) – 1 set
- Design Bureau Environmental Technical Section – 1 plan set and CD of CAD files or electronic link to pdf's and CAD files
- FHWA (for projects that require full federal oversight) – 1 set for projects that do not have bridge work within project limits and 2 sets if the project does have bridge work within limits.
- Maintenance Bureau - submit 1 set for interstate projects, 1 set for Welcome Center and Rest Area projects, 1 set for projects involving

landscaping. Otherwise, the Maintenance Bureau does not want a set of plans unless communicated otherwise.

- Quality Control Bureau – (2) plan sets, (1) PDF, design criteria and other supporting documentation
- Construction Bureau (coordinate with Construction Bureau to determine if they want plans) – the number of plan sets submitted should be coordinated with the Construction Bureau
- ITS (if ITS involved; existing or required) – 1 plan set and copy of Project Scope to Traffic Design ITS Group and FHWA ITS Engineer
- Design Bureau – Traffic & Safety Operations Section
  - 1 plan set if the project utilizes any amount of HSIP funds

#### **PROJECTS DESIGNED BY A CONSULTANT**

- Design Bureau Design Services Section – For projects designed by a consultant, the consultant to submit the following:
  - 2 plan sets
  - 1 CD containing CAD files and PDF of the plans

#### **30.0 MILESTONE: 30% INSPECTION (Geometric design review)**

The design section supervisor will be responsible for scheduling and conducting the inspection (if the inspection is required), documenting comments, and submitting comments to relevant parties. Give consideration to utility conflict avoidance. Potential design exceptions and staged construction should be specifically discussed at the 30% Inspection and evaluated by the Inspection team. This inspection does not have to be a formal meeting if approved by the responsible design engineer superior. Comments will be written by the design supervisor and transmitted to the responsible design engineer superior for his approval.

#### **31.0 Post 30% Project Coordination**

31.01 The State Right-of-Way Bureau Chief should assign right-of-way map preparation responsibilities and coordinate with appropriate parties.

31.02 The design section supervisor shall provide a summary of 30% Inspection comments to entities that received 30% Inspection plans. If bridge construction is a part of the project, the Inspection comments shall address the necessity of staged bridge construction. Specifically state, “staged bridge construction will be required,” “staged bridge construction may be needed,” or “the necessity for stage bridge construction is not known at this time.” It is imperative that the Bridge Bureau get 30% comments when there is bridge construction. **Note:** Staged bridge demolition may also need to be addressed.

31.03 **Hazardous Materials Coordination** -- Designer shall send (2) sets of plans to the Materials and Tests Engineer to the attention of the Hazardous Materials

**NOTE:** The design exception letter should document the factors that justify the exception(s) (see **attachment #5**).

**34.0 Hydraulic Design Continuation** - Continue hydraulic design by creating preliminary drainage sections for existing bridge culverts, anticipated required bridge culverts, box culverts with fill heights over 35', roadway pipes with fill heights over 60', and pipes anticipated to have a conveyance opening of 36" and larger.

**35.0 ENVIRONMENTAL PERMIT COORDINATION**

After 30% Plans are revised, send (1) plan set and CD of CAD files or electronic link to pdf's and CAD files to the Design Bureau Environmental Technical Section (ETS) and (1) set to the Region Environmental Section, so that appropriate environmental documentation and permit applications can begin and/or be reviewed for conformance with approved environmental document/permit; (if permits have already been obtained). All future plan changes dealing with environmental issues shall be forwarded to the Design Bureau Environmental Technical Section and Region Environmental Section to insure accuracy of environmental write up. Designer should make a preliminary check to see if tail ditching or channel changes may be needed. Transmittal shall clearly state that tail ditches and/or channel changes are required, not anticipated, or not known at this time.

**36.0 MILESTONE: MATERIALS AND TESTS SUBMITTAL FOR SOIL SURVEY, SOILS PROFILE, SLOPE STUDY INFORMATION, AND/OR MATERIALS BUILDUP**

*This submittal must be made as soon as possible since there is usually a considerable amount of work that has to be done from the time this submittal is made until the project lead receives the requested information back.*

Transmit the latest design information and plan sheets to the Bureau of Materials and Tests. Submit (5) half-size sets of 30% plans, (1) CD, (1) Location Memorandum, and (1) copy of the project scope to the Bureau of Materials and Tests. Submit (2) half-size sets of 30% plans, (1) CD, (1) Location Memorandum, and (1) copy of project scope to the Region / Area Materials Engineer.

1. Information that should be included within the partial plan set:
  - a. Title sheet, Primary Survey Control Layout and Geometric Layout, Typical Section Sheet(s) with only backbone templates provided, Plan/Profile Sheets, Drainage Section Sheets for structure types listed below within 2b.ii – 2b.v, Cross-Section Sheets, and any other relevant sheets.
2. Information required on each CD:



46.03 Transmit preliminary Public Involvement Meeting and/or Public Hearing Map to the Region / Area Environmental Section and possibly FHWA (if full federal oversight is required). Request the Region and FHWA to review the map and provide written review comments.

46.04 Complete the Public Involvement Meeting and/or Design Hearing Map.

46.05 Transmit (2) roll plot maps for Public Involvement Meeting and/or Design Hearing to the Region and request coordination/notification of the meeting. Region is responsible for conducting, scheduling and delivering roll plots, plans, documents, etc., to the location of the Public Involvement Meeting and/or Design Hearing.

**46.06 MILESTONE: PUBLIC INVOLVEMENT / DESIGN HEARING**

If required, the designer shall bring (3) roll maps and (1) set of plans for possible use at the hearing. The design supervisor and designer will be responsible for answering design related questions during the meeting.

46.07 The Region / Area Environmental Section shall review Public Involvement Meeting / Design Hearing comments and summarize the responses from the meeting. The original comment forms with the summary shall be sent to the Design Bureau Environmental Technical Section. The Region shall keep a copy on file and send (1) copy with summary to FHWA. The Design Bureau Environmental Technical Section shall coordinate with the project lead to address the comments and any design changes to be considered.

46.08 If required, the Region / Area Environmental Section shall submit to the Design Bureau Environmental Technical Section the required documents for review and preparation of the environmental document.

46.09 Design section supervisor shall address Public Involvement Meeting / Design Hearing comments and make approved design changes where necessary.

46.10 The Designer needs to begin the Public Information component of GFO 3-61 (Work Zone Safety and Mobility) if required for the project.

**47.0 DESIGN APPROVAL**

Submit plans to Chief Engineer and FHWA (if full federal oversight is required) for Design Approval.

48.0 Omitted

49.0 **County / City Municipal Agreements** - If any section of the in-place roadway is on the State Highway System is being bypassed by the project, transmit to the Region (2) plan sets per county or municipality involved for agreement process

NHS routes for the State of Alabama at the following web address:  
<http://www.fhwa.dot.gov/planning/nhs/maps/al/index.htm>

**61.0 Pre-Plan-In-Hand Plan Development**

- 61.01 Plot special ditches on profile views and cross-sections.
- 61.02 If applicable, complete HYD 102 and HYD 103 forms.
- 61.03 Complete hydraulic design and Hydraulic Data Sheets to include a Pre/Post design requirements of GFO 3-73. The hydraulic design and Data Sheets shall be completed and incorporated into the plans before the Plan-In-Hand Inspection submittal.
- 61.04 Check all design elements for conformance with design standards, i.e. design criteria, *AASHTO Geometric Design Guide*, *Roadside Design Guide*, *Hydraulics Manual*, *ALDOT Guidelines for Operation*, etc.
- 61.05 Create Drainage Section Sheets.
- 61.06 Index drainage structures.
- 61.07 **Phased Erosion and Sediment Control Plan Development** – The designer shall develop the phased Erosion and Sediment Control Plan. Coordinate with the Stormwater Section of the Design Bureau to determine the latest requirements.
- 61.08 Develop preliminary sequence of construction and include in plan assembly for review at the Plan-In-Hand Inspection. Construction sequence should not unnecessarily restrict and/or limit contractor work and/or sequence. Consider utility conflicts, clearing acreage limitations, and other potential conflicts during the development of the preliminary sequence of construction.
- 61.09 **Traffic Control Plan Development** – The designer shall further refine the sequence of construction and Traffic Control Plan.
- 61.10 Complete preliminary earthwork calculations.
- 61.11 Create Earthwork Summary Sheets using preliminary earthwork quantities.
- 61.12 Designer to complete design of roadway signs and pavement markings.
- 61.13 The designer shall firm up all preliminary easements and right-of-way limits.
- 61.14 The designer shall verify that all project limits are within the environmental cleared limits and items discussed in the environmental document, i.e. potential impacts, known commitments, etc. have been satisfactorily addressed. ETS will

verify that the plans meet environmental requirements when Plan-In-Hand plans are submitted to them.

**NOTE: A partial plan submittal (Title, Project Notes, and Plan/Profile sheets) along with updated CAD files must be made to ETS any time revisions are made to the required right-of-way, required easements, or project limits so that ETS can verify that they are within the environmental cleared limits, determine if further study is needed, and if the environmental document needs be reevaluated. These changes should be circled in red on the pdf's and an explanation provided as to why the design was changed (slope changes from 3:1 to 4:1, adding sediment basins, detention basins, driveway improvements, required property negotiations, etc.**

61.15 Complete the Index to Special and Standard Drawings Sheet and list all required special and standard drawings relevant to the project.

#### 62.0 **Pre-Plan-In-Hand Project Coordination**

62.01 Submit Primary Survey Control and Geometric Layout Sheet(s) to the Design Bureau Location Section for their review.

62.02 The designer shall transmit to the Region / Area Utilities Engineer (2) plan sets for review. Copy the Right-of-Way Bureau Utilities Engineer on transmittal letter. If there are any changes effecting utilities since the last submittal, the changes shall be noted and circled in red on the plan sheets.

62.03 The Utilities Engineer shall notify the design section supervisor if there are any utility conflicts that might influence the design. The Utilities Engineer shall respond in writing of any or no concerns anticipated.

62.04 If plans were initially sent to the Traffic Design Engineer for design of lighting, signs, marking and striping, traffic signals, and/or ITS and the project design has changed, resubmit the electronic files and plan sheets that reflect the design change.

62.05 The designer should begin preparing the Construction Best Management Practices Plan (CBMPP) and the Notice of Intent (NOI) for NPDES permit coverage. The final CBMPP and NOI should be submitted to the Stormwater Engineer for processing a minimum 12 weeks prior to the letting date. Coordinate with the Stormwater Section of the Design Bureau to determine the latest requirements.

62.06 The designer should submit project CAD files and (1) plan set to the Region and request the project centerline be staked out prior to the Plan-In-Hand Inspection. Coordinate with the Region to determine when they will need design information in order to have adequate time to stake out the centerline.



63.0 The design section supervisor shall conduct an in-house review of the Plan-In-Hand plan assembly. Unless communicated differently by the design section supervisor, the designer shall submit (1) half-size set of plans ready for a Plan-In-Hand, (1) disposition of 30% Inspection comments, (1) preliminary construction estimate, (1) Environmental Certification documentation, (1) materials report with all addendums, (1) Hydraulics Notebook, and (1) Plan-In-Hand Inspection Checklist (see **Attachment #7**) to the design section supervisor for review.

63.01 Submit (2) half-size set of Plan-In-Hand plans, (2) disposition of 30% Inspection comments, (2) preliminary construction estimates, (2) Environmental Certification documentation, (2) materials reports with any addendums, Hydraulics Notebook, and (2) Plan-In-Hand Inspection Checklist (see **attachment #7**) to the responsible design engineer superior. This information should be submitted at least **3** weeks prior to the Plan-In-Hand submittal deadline. Any necessary plan revisions will be communicated to the design section supervisor. The design section supervisor must get the responsible design engineer superior's approval before making the Plan-In-Hand submittal.

#### **64.0 PLAN-IN-HAND SUBMITTAL**

This submittal should be made at least **2** weeks prior to the Inspection. Plan set should be complete except for the calculation of quantities. See below to determine required submittal items for each entity:

- Region – (8) plan sets, (1) preliminary construction estimate, and (2) copies of draft design exception letter, if applicable
- Coordinate with Region and ETS about other parties that should be aware of the Plan-In-Hand Inspection and receive plans; i.e. Corps of Engineers, National Parks Service, Fish and Wildlife Service, railroad(s), power company(s), cities, counties, etc.
- Right-of-Way Bureau (Right-of-Way Section) – Only submit CAD files or electronic link to CAD files.
- Right-of-Way Bureau (Utilities Section) – 1 plan set and CAD files or electronic link to CAD files.
- Materials and Tests Bureau – 1 plan set and 1 PDF copy
- Design Bureau Traffic Design Section
  - Lighting – 1 plan set
  - ITS – 1 plan set
  - Traffic signals – 1 plan set
  - Traffic Control – 1 plan set
  - Signs/Overhead Structures/Striping and Markings – 1 plan set
- Bridge Bureau (if bridge work is a part of project) – 1 partial set (Title sheet, typical sections, and plan/profile sheets)
- Design Bureau Environmental Technical Section – 1 partial set (Title sheet, Project Note sheet, and Plan/Profile sheets) and CAD files if changes to ROW or TCE's. An electronic link for the pdf and CAD files can be provided instead.

- Design Bureau Stormwater Section – 1 CD containing CAD files and PDF of the plans
- FHWA (for projects that require full federal oversight) – 1 plan set for projects that do not have bridge work within project limits and 2 sets if the project does have bridge work within limits. Send 1 additional set to FHWA ITS Engineer if ITS work is involved. Also, submit (1) preliminary construction cost estimate. If applicable, submit (1) copy of the draft design exception letter.
- Quality Control Bureau – (3) plan sets, (1) PDF copy, (1) preliminary construction cost estimate, (1) disposition of 30% comments, (1) Plan-In-Hand Checklist, and draft design exception letter, if applicable.
- Construction Bureau – 1 plan set
- Maintenance Bureau – submit (1) plan set for interstate projects, (1) plan set for Welcome Center and Rest Area projects, (1) plan set for projects involving landscaping. Otherwise, the Maintenance Bureau does not want a set of plans unless communicated differently.
- Design Bureau Traffic & Safety Operations Section (normally, a submittal is only needed when loop detectors are installed within a project and/or if project involves a railroad) – 1 or 2 plan sets
  - 1 plan set if the project utilizes any amount of HSIP funds
- Adjacent Project Coordination – 1 plan set

**PROJECTS DESIGNED BY A CONSULTANT**

- Design Bureau Design Services Section – For projects designed by a consultant, the consultant to submit the following:
  - 2 plan sets
  - 1 CD containing CAD files and PDF of the plans

The Quality Control Bureau will be responsible for coordinating and notifying relevant parties of the time of the inspection, conducting the inspection, documenting and submitting inspection comments to relevant parties

**65.0 MILESTONE: PLAN-IN-HAND INSPECTION**

Designer shall check topographic and survey information during the field review for accuracy and update as necessary. Review hydraulic design in field. Review and concur that the details shown in the plans adequately depict the geotechnical recommendations. If additional survey information is needed, provide electronic file with shapes designating additional survey limits and (1) hard copy with additional areas red-lined, any horizontal and vertical control information needed, and relationship of construction alignment to survey alignment.

- 65.01 All plan reviewers with written comments shall formally disseminate their comments by providing a summary of final Plan-In-Hand Inspection comments to the Quality Control Bureau, project lead, Region Engineer and their design assistant, etc. Also, FHWA should transmit any written comments to the Quality

## 70.0 INTELLIGENT TRANSPORTATION SYSTEMS (ITS) – SYSTEMS ENGINEERING ANALYSIS

Systems Engineering Analysis (SEA) for ITS (per 23 CFR 940.11) – The designer shall hold an ITS Stakeholders Meeting and start preparing the SEA report. ITS Designer is to coordinate with the project lead for scheduling this meeting. (Notify Traffic Design ITS Group with meeting schedule details.)

71.0 **Request ETS Approval for Right-of-Way/Easements, Cleared Environmental Limits, and Environmental Compliance** – The Environmental Document must be approved prior to this submittal to ETS. Using the standard ALDOT submittal letter (see [Attachment #10](#)), the project lead shall provide an electronic link to submittal files (see below), with a copy of the letter to ETS for their review of cleared environmental limits, right-of-way/easements, and environmental commitments for environmental compliance. This submittal must be made at least **8 ½** weeks prior to the Right-of-Way Authorization date. If there have been revisions to the plans that ETS has not already been made aware of, has not approved, and/or will affect the validity of environmental permits/documents, make this submittal as soon as possible in hopes of resolving issues prior to Right-of-Way Authorization. Provide an explanation and a detailed description of revisions along with circling in red the areas that have changed on the plans. Examples would include adjustments to the right-of-way, addition/revision of easements, proposed modifications to environmental cleared limits, increased/decreased impact to wetlands, change in people being displaced, change in structure takings, etc.

The designer must make ETS aware of all changes as soon as they are known. Changes presented at the **8 ½** week deadline affecting ETS approval will most likely not allow enough time for ETS to perform additional environmental work; therefore, the Right-of-Authorization date may be jeopardized. ETS is required to provide a response (see [Attachment #11](#) and [#12](#)) within **2** calendar weeks after receiving this submittal, whichever is sooner. If approval is denied, ETS shall communicate the estimated amount of time required to complete additional work. Project lead to determine if the Right-of-Way Authorization date should be moved.

- *Microstation* files showing existing and proposed right-of-way, construction limits, horizontal alignment, edge of pavements, existing and required drainage, easements, and any other pertinent environmental files
- PDF of plan assembly

71.01 Once ETS is in agreement with the GDCP **71.0** submittal, a concurrence will be provided to the design lead (see [Attachment #11](#)).



**Note:** The project lead must make the Right-of-Way Authorization submittal **6** weeks prior to the authorization date.

72.0 **MILESTONE: FINAL SUBMISSION FOR RIGHT-OF-WAY AUTHORIZATION**

A submittal to the Right-of-Way Bureau Chief for acquisition of property should be made as soon after Plan-In-Hand comments affecting right-of-way are resolved and ETS written approval is obtained (see GDCP **71.01**). ETS approval letter shall be attached to the transmittal letter. **This submittal shall be made at least 6 weeks prior to the Right-of-Way Authorization date.** Transmittal letter shall indicate the electronic link to relevant files.

**NOTE:** Any revisions that were previously submitted to the Right-of-Way Bureau as final shall be coordinated with the Right-of-Way Bureau and ETS and a revised submittal made to both offices as soon as possible. Provide an explanation and a detailed description of revisions along with circling in red the areas that have changed on the plans. ETS shall review the revisions to determine if the project remains in compliance with environmental documents/permits. This submittal shall be done by formal letter and the electronic link to required submittal files specified. Letter shall indicate what revisions have been made, if the revisions are within the environmental cleared limits, and the reason for the revision. All revisions shall be circled in red. The design section supervisor, Right-of-Way Bureau, and ETS shall collectively discuss the impact of these revisions and any alternatives that can be considered, if necessary. Approval documentation shall be submitted to the project lead by ETS after confirming that all environmental requirements have been met. Designer shall attach ETS approval letter to Right-of-Way Bureau submittal letter.

72.01 The Right-of-Way Bureau will overlay the CAD files provided in Steps 71.0 and 72.0 to confirm there are no issues with the ROW map and the tract by tract estimate is complete. They will transmit the ROW Authorization package to OE for funding approval. For Design Bureau lead projects, right-of-way changes after this point will be at the discretion of the State Design Engineer. For Region lead projects, right-of-way changes after this point will be at the discretion of the Region Engineer. Special consideration should be given for right-of-way activities already in progress.

**NOTE: Request for right-of-way changes will require a written letter of justification by the parties requesting the change. Letter will be submitted to Design Bureau for review and recommendation to Chief Engineer.**

73.0 **Alabama Power Impoundment** - If any part of the project is within the backwater of an Alabama Power Company impoundment, the designer shall

changes to ROW/TCE's (a link for pdf and CAD files could be provided instead).

- Design Bureau Stormwater Section – 1 CD containing CAD files and PDF of the plans and disposition of Plan-In-Hand comments.
- FHWA (for projects that require full federal oversight) – 1 plan set for projects that do not have bridge work within project limits and 2 sets if the project does have bridge work within limits. If ITS is involved, submit 1 additional plan set and SEA Final Report for FHWA ITS Engineer. Also, submit (1) construction cost estimate, disposition of Plan-In-Hand comments, and approved design exception letter, if applicable.
- Quality Control Bureau – (3) plan sets, 1 PDF copy, (1) construction cost estimate, (4) disposition of Plan-In-Hand comments, and approved design exception letter, if applicable. If the materials report or any addendums were approved prior to April 1, 2012, that information should also be submitted.
- Construction Bureau – 1 plan set
- Maintenance Bureau – submit (1) plan set for interstate projects, (1) plan set for Welcome Center and Rest Area projects, (1) plan set for projects involving landscaping. Otherwise, the Maintenance Bureau does not want a set of plans unless communicated differently.
- Design Bureau Traffic & Safety Operations Section (normally, a submittal is only needed when loop detectors are installed within a project and/or if project involves a railroad) – 1 or 2 plan sets
  - 1 plan set if the project utilizes any amount of HSIP funds
- Adjacent Project Coordination – 1 plan set

#### **PROJECTS DESIGNED BY A CONSULTANT**

- Design Bureau Design Services Section – For projects designed by a consultant, the consultant to submit the following:
  - 2 plan sets
  - 1 CD containing CAD files and PDF of the plans

#### **NOTE:**

The Quality Control Bureau will be responsible for coordinating and notifying relevant parties of the time of the inspection, conducting the inspection, documenting and submitting inspection comments to relevant parties.

### **85.0 MILESTONE - PS&E INSPECTION**

**NOTE: All major design and / or right-of-way changes to high priority projects after the PS&E will require a written letter of justification to the State Design Engineer originating from the parties requesting the changes. The State Design Engineer must concur with these changes before any changes and revised submittals are made.**

85.01 Designer to begin making changes by reviewing notes taken at the Inspection.

87.03 Incorporate all sheets into the plan assembly, with one exception. Complete bridge plans are not required to be in the plan assembly until after the Final Back Check Review. The only bridge drawings(s) required to be in the plan assembly for the Final Back Check Review is the **Bridge General Plan and Elevation drawing(s)**. **Bridge drawings/bridge information does not have to be signed or stamped at this time.**

88.0 The design section supervisor shall conduct an in-house review of Final Back Check Plans. Unless communicated differently by the design section supervisor, the designer shall submit (1) half-size set of plans ready for Final Back Check, (1) disposition of PS&E Inspection comments, (1) construction cost estimate, (1) Environmental Certification documentation, (1) materials report with all addendums, (1) Hydraulics Notebook, and (1) Final Back Check Checklist (see **attachment #14**) to the design section supervisor for review.

89.0 Submit (2) half-size set of Final Back Check Plans, (2) disposition of PS&E comments, (1) construction estimate, (2) Environmental Certification documentation, (2) materials reports with ~~any~~ all addendums and (2) Final Back Check Checklists (see **attachment #14**) to the responsible engineer superior. This information should be submitted at least **3** weeks before the Final Back Check submittal deadline. Any necessary plan revisions will be communicated to the design section manager. The design section supervisor must get the responsible design engineer superior's approval before making Final Back Check submittal.

**90.0 MILESTONE - FINAL BACK CHECK**

The designer shall transmit plan sets and other items as noted below. This plan submittal shall be made no later than **16** weeks prior to the letting date or earlier if special circumstances exist (refer to the GDCP Miscellaneous Notes page). If bridge work is a part of the project, **only the Bridge General Plan and Elevation drawings are required to be in the plan assembly for the Final Back Check submittal. Bridge drawings/bridge information does not have to be signed or stamped at this time.** Therefore, **complete bridge plans are not required for the Final Back Check submittal.** All other plan assembly sheets are required to be in the plan assembly to constitute a complete Final Back Check plan submittal, i.e., signing design, lighting design, ITS design, utility sheets, drainage sheets, all soil borings, cross sections, etc. Incomplete Final Back Check plan submittals may be returned unless accompanied by written approval from the Quality Control Bureau Chief, Assistant Chief Engineer-Preconstruction, or Chief Engineer for the incomplete submittal.

- Quality Control Bureau – (3) plan sets, (1) PDF copy, (1) disposition of PS&E comments and (1) construction estimate If the materials report or any addendums were approved prior to April 1, 2012, that information should also be submitted.



- Bridge Bureau (If required) - 1 plan set
- FHWA (If required) – (1) plan set, (1) additional plan set if ITS involved, (1) construction estimate, and (1) disposition of PS&E comments
- Maintenance Bureau (if required) – (1) plan set
- Design Bureau Traffic Design Section
  - Signals (if required) – (1) plan set and (1) disposition of PS&E comments
  - Lighting (if required) – (1) plan set and (1) disposition of PS&E comments
  - ITS (if required) – (1) plan set and (1) disposition of PS&E comments
  - Signs and striping and markings – (1) plan set and (1) disposition of PS&E comments
- Design Bureau Stormwater Section – 1 CD containing CAD files and PDF of the plans and disposition of PS&E comments.

**PROJECTS DESIGNED BY A CONSULTANT**

- Design Bureau Design Services Section – For projects designed by a consultant, the consultant to submit the following:
  - 2 plan sets
  - 1 CD containing CAD files and PDF of the plans

**IMPORTANT:** The Quality Control Bureau should make their best effort to review the plans and return Final Back Check review comments within **2** weeks of receiving plans. The project schedule could be jeopardized if review comments are not sent to the project lead within this timeframe because plans for the Construction Review must be submitted by the project lead **4** weeks from the time Final Back Check plans are submitted, which is normally **12** weeks prior to letting (refer to the GDCP Miscellaneous Notes page for times when plans must be submitted sooner).

**91.0 Post FBC Coordination**

**91.01 Traffic Signal, ITS, and Street Lighting Maintenance Agreements -** If required, the Region shall provide completed Traffic Signal, ITS, and Street Lighting Maintenance Agreements to the Maintenance Bureau and provide a copy to the Design Bureau Traffic Design Section.

**91.02** For those projects requiring railroad coordination, the designer shall request a copy of the Railroad Agreement(s) from the Rail Group. This agreement must be obtained before plans can be submitted for Construction Bureau review.

**91.03** The Rail Group shall transmit an electronic copy of the fully executed Railroad Agreement to the project lead, Construction Bureau and Right-of-Way Bureau; and to Office Engineer two (2) original Railroad Agreements and five (5) copies for those projects requiring railroad coordination.

- 91.04 Submit Title Sheet, Primary Survey Control and Geometric Layout Sheets, and Plan/Profile Sheets to the Location Section for their review of control points and other survey information.
- 91.05 The designer shall submit revised plans to other parties that need to make revisions. Request revisions be made and returned within **1** week from the time the submittal is made.
- 91.06 Revised plans sent to other parties at GDCP 91.06 shall submit updated plan sheets to the project lead within **1** week of receiving revised plans from the project lead.
- 91.07 Prior to the Construction Review submittal, the designer shall submit (1) partial set of plans (Title, Typicals, Project Notes and Plan/Profile sheets) to ETS so that they can review/verify Environmental Cleared Limits are accurately displayed, project limits are within the cleared limits, and items discussed in the environmental document, i.e. potential impacts, known commitments, etc. have been satisfactorily addressed. The plan submittal shall include a list of understood environmental commitments and a statement clearly indicating the environmental commitments that have been addressed and the ones that have not. An explanation must be given for any environmental commitments not addressed.

**NOTE: If the proposed right-of-way limits or temporary construction limits have changed since the last submittal to ETS are outside the environmental cleared limits, these areas shall be circled in red, CAD files provided, and an explanation given as to why. It is critical that a reasonable effort be made to stay within the environmental cleared limits. At a minimum, the areas beyond the cleared limits must be studied again and the environmental document may have to be reevaluated.**

- 91.08 The project lead to request bridge plans ready for Construction Review at least 13 ½ weeks prior to the letting date or earlier if special circumstances exist (refer to the GDCP Miscellaneous Notes page).
- 91.09 **Stormwater Permit** - The designer shall enter NPDES Permit data in the Stormwater Permit Tracking System of CPMS and submit for verification.
- 91.10 Upon verification of data in the Stormwater Tracking Permit System, transmit (2) color stormwater quad maps showing project limits and all stormwater points, (1) CD containing – CAD files, (1) PDF file that includes all sheets of the plan assembly, and (1) PDF file containing the completed CBMPP, Draft Notice of Intent (NOI), and any other required information to the Stormwater Engineer for preparation of the Stormwater Permit. Complete permit submittal shall be made

when plans are complete and must be submitted no later than **12** weeks prior to the letting date.

91.11 The Design Bureau Stormwater Section shall coordinate any required changes to the project lead and communicate approval of the CBMPP when the document has been completed to their satisfaction. Upon Approval, a draft NOI will be supplied to the project lead to accompany the CBMPP for signatures.

## 92.0 **FBC Comments**

92.01 FHWA should transmit any review comments to the Quality Control Bureau within **1** week of receiving plans, so their comments can be included into Quality Control's final report and the project remain on schedule.

92.02 Bureaus that have Final Back Check review comments are responsible for submitting them to the project lead, Quality Control Bureau, Region Engineer, Region / Area Preconstruction Engineer, and other relevant parties no later than **1** week after the Inspection. Bureau comments shall be emailed to the project lead and the Quality Control Bureau so that the compiled Final Back Check Report can be electronically distributed and the disposition of comments can be prepared by the project lead.

92.03 The Quality Control Bureau shall mail the compiled Final Back Check Report to the project lead, Region Engineer, Region Pre-construction Engineer, and other relevant parties no later than **2** weeks after the Inspection. The compiled Final Back Check Report shall be emailed to the project lead so that the disposition of comments can be prepared.

## 93.0 **Post FBC Plan Tasks**

93.01 The designer shall make corrections to the plans resulting from review comments received from the Quality Control-Bureau and others.

93.02 Incorporate all sheets into the plan assembly.

93.03 Update construction estimate, including bridge costs, CE&I, and indirect additives using Web Trns\*port. Revise "Summary of Quantities" sheets. Update construction estimate in CPMS.

93.04 Designer to check plans using checklist (see **Attachment #14**).

93.05 The design section supervisor shall conduct an in-house review of plans to be submitted for Construction Bureau review.

93.06 Submit (2) half-size set of plans, (2) disposition of Quality Control Bureau Final Back Check comments, (2) construction estimates (2) documentation for



environmental cleared limits approval, (2) materials reports with all addendums and (2) checklists (see **Attachment #14**) to the responsible design engineer superior 2 weeks prior to submitting plans for Construction Review. Any necessary plan revisions will be communicated to the design section supervisor. The design section supervisor must get the responsible design engineer superior's approval before making submittal to the Construction Bureau.

#### 94.0 **Post FBC Approvals**

94.01 **Environmental Approval** - The Environmental Technical Section should provide approval documentation (see **Attachment #11**) verifying the Environmental Cleared Limits are accurately displayed, project limits are within the cleared limits, and items discussed in the environmental document, i.e. potential impacts, known commitments, etc. have been satisfactorily addressed. Or, if approval cannot be given, the Environmental Technical Section will coordinate with the project lead to resolve any issues preventing approval.

94.02 If applicable, the Bridge Bureau to submit complete bridge plans ready for Construction Review to the project lead **13** weeks prior to the letting date or earlier if special circumstances exist (refer to the GDCP Miscellaneous Notes page). Bridge plans will not be signed; however, plans will be stamped "For Construction Review."

94.03 The project lead shall submit the approved NOI and CBMPP to the Region for required signatures.

94.04 The Region shall return the approved NOI and CBMPP with required signatures to the project lead.

#### 95.0 **MILESTONE - CONSTRUCTION REVIEW SUBMITTAL**

Construction Review submittal must be made at least **13** weeks prior to the letting date or sooner if special circumstances exist (refer to the GDCP Miscellaneous Notes page).

Project lead shall make the following submittals as noted below. Plans must be complete unless otherwise noted.

- *Construction Bureau*
  - a) (1) plan set, (1) construction estimate, and (1) Disposition of Final Back Check comments
  - b) For federally funded projects submit (1) partial plan set containing only the Title sheet and main Summary of Quantities sheet(s) for DBE participation

engineer superior and the design section supervisor is not the same person) at least **2** days prior to submitting final plans to the Office Engineer. The responsible design engineer superior shall make a final review of the plan sheets. Plan sheets shall be dated and signed by the responsible design engineer superior, verifying the plan sheets have been personally reviewed and plans are ready to be submitted to the Office Engineer for letting. A signature stamp may be used.

#### **99.0 MILESTONE - FINAL PLANS TO OFFICE ENGINEER**

Transmit (1) full-size plan set with required signatures, (1) disposition of Construction Bureau Review comments, (1) CD containing a PDF file of the CBMPP, and (1) hard copy of the Web Trns\*port estimate to the Office Engineer for preparation of contract proposal and securing FHWA construction authorization. All plans shall be submitted to the Office Engineer no later than **9** weeks prior to the letting date or earlier if special circumstances exist (refer to the GDCP Miscellaneous Notes page). If the project is scheduled to be let in January, transmittal shall be made **10** weeks prior to the letting date. If the project has **1** million or more cubic yards of earthwork (borrow + unclassified excavation), transmittal shall be made **12** weeks prior to the letting date. The designer shall transfer control of the Web Trns\*port estimate to the Office Engineer. The designer shall also provide electronic design data for grading projects in accordance with current policies regarding dissemination to contractors. A copy of the OGFC approval, if applicable, and the Railroad Certification is required. Also, if bridge work is included in the project, copy the Assistant Maintenance Engineer-Bridges on the transmittal letter to Office Engineer.

#### **NOTES:**

- a. Projects having more than **1** million cubic yards of earthwork (borrow + unclassified) must be advertised for two months.
- b. Provide (1) CD containing a cross-section text file (.txt) for projects where earthwork (borrow + unclassified) is equal to or greater than **200,000** cubic yards or longer than **2** miles that will require moving earthwork over the length of the project.

99.01 The project lead shall submit (1) electronic copy and (1) hard copy of the CBMPP with all required signatures to the Region / Area Stormwater Coordinator. The Region Engineer and Region / Area Construction Engineer shall be copied on the submittal.

99.02 The Region / Area Stormwater Coordinator shall transmit approved CBMPP according to policy.

99.03 If corrections are required to final plans, Office Engineer will coordinate with the project lead. Any required plan revisions will be submitted in writing (marked up plan sheet and/or email is acceptable) by the Office Engineer.

**NOTE: for railroad involved projects** – The project lead shall provide any plan revisions affecting the railroad to the Rail Group for coordination with the railroad. **Any delay in providing revisions and obtaining the railroad’s approval after the project is let to contract can adversely affect the project completion including the contractor gaining access to begin work within or near the railroad’s right-of-way.**

99.04 The designer shall coordinate with the appropriate parties to resolve Office Engineer Bureau comments.

**NOTE:** See Guidelines for Operations **3-5** and **3-5.1** for handling of revisions made to plan assembly following step 99.0.

**99.05 MILESTONE – PROJECT LETTING**

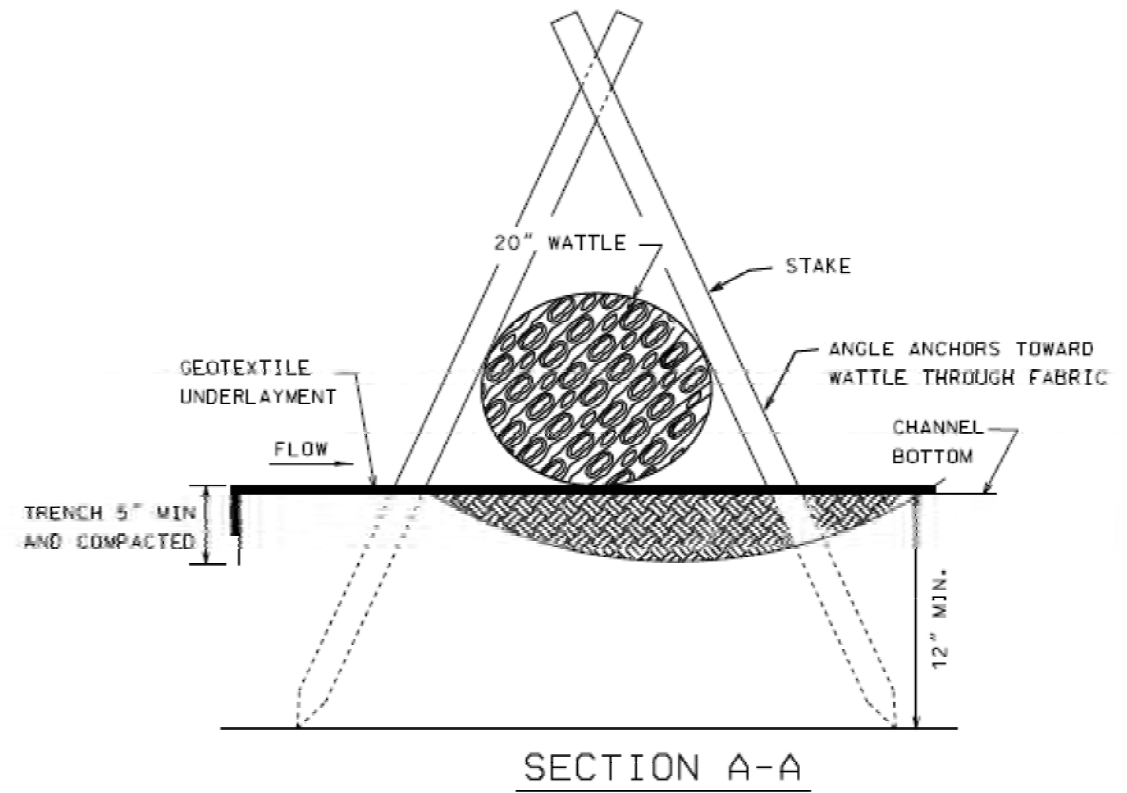
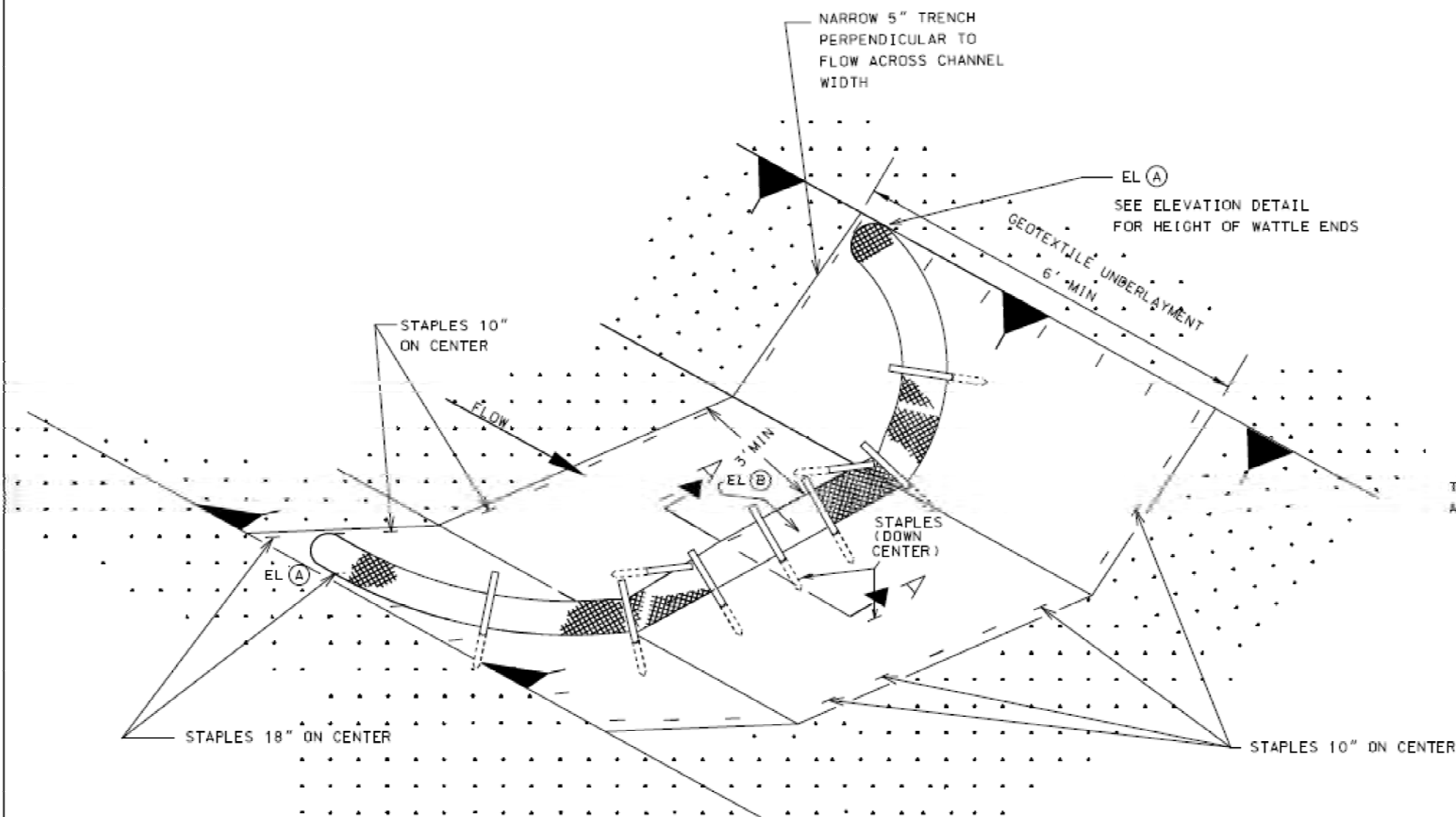
99.06 If needed, the project lead should request hard copies and a PDF of the as-let plan assembly.

99.07 If the project lead submits a request for a PDF and/or hard copy(s) of the as-let plan assembly, the Office Engineer Bureau shall transmit this information as requested.

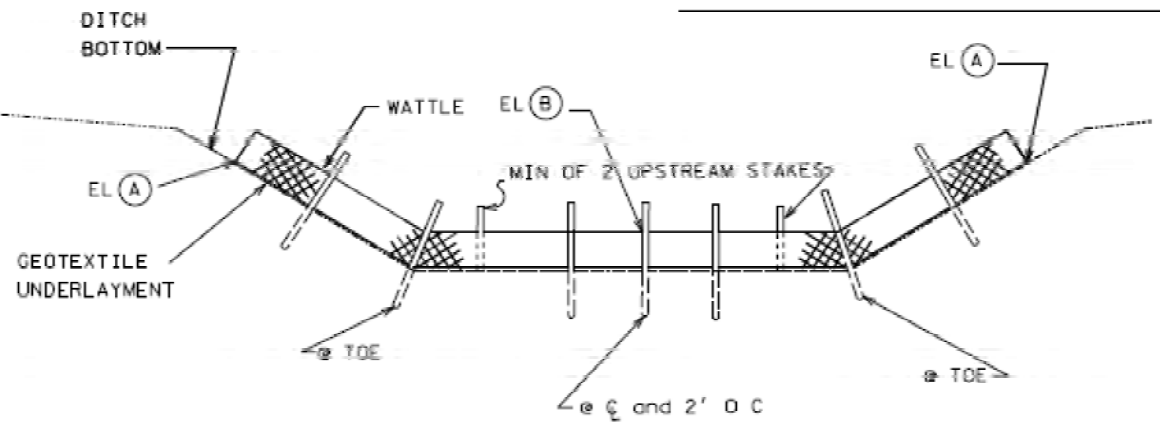
100.0 The designer shall archive the project after the project has been awarded for construction in accordance with project lead guidelines. This shall include the complete project folder, hydraulics notebook, any other project information, and a PDF file of the as-let plan set.



REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO



DETAIL (DITCH CHECK)



ELEVATION DETAIL

NOTE: END POINTS (A) MUST BE HIGHER THAN FLOWLINE POINT (B)

NOTES:

1. MINIMUM RECOMMENDED PLACEMENT INTERVAL BETWEEN WATTLE DITCH CHECK IS 100 FEET UNLESS SHOWN OTHERWISE ON THE PLANS OR APPROVED BY THE ENGINEER. SEE SPACING GUIDANCE ON ESC-300-1.
2. ANCHORING STAKES SHALL BE SIZED, SPACED, DRIVEN, AND BE OF A MATERIAL THAT EFFECTIVELY SECURES THE CHECK. STAKE SPACING SHALL BE A MAXIMUM OF TWO FEET.
3. WATTLES SHOULD NOT BE USED IN HARD BOTTOM CHANNELS.
4. STAPLES SPACED 18 INCHES APART, ALONG THE CHANNEL EDGES AND DOWN THE CENTER OF THE CHANNEL. STAPLES SPACED 10 INCHES APART, ACROSS THE UPSTREAM AND DOWNSTREAM EDGES.

WATTLE DITCH CHECK SELECTION GUIDELINES

WATTLE DITCH CHECKS ARE APPROPRIATE FOR VELOCITY REDUCTION AND CONTROL OF SEDIMENT TRANSPORT UNDER LOW TO MEDIUM FLOW CONDITIONS NOT EXCEEDING 1.0 CU FT/SEC.

--SPECIFICATIONS--  
CURRENT ALABAMA DEPARTMENT OF TRANSPORTATION

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**REVISIONS**

1. Added to SECTION A-A REMOVED DIMENSIONS and deleted note 5. Deleted "REVISION 2 OF 05-20-04" NOTE 51-04-04-20-11 by J.F.T.
2. Revised and updated "DITCH CHECK" and "ELEVATION DETAIL" Revised text on "WATTLE DITCH CHECK SELECTION GUIDELINES" and adjusted and revised SECTION A-A on 05-20-04 by J.F.T.
3. Revised notes 1 and 4 on 10-20-15 by J.F.T.
4. Replaced Special Drawing No. ESC-300-1 (SHEET 2 OF 2) ESC-300-1 on 10-20-15 by J.F.T. & G.W.K.

**ALABAMA DEPARTMENT OF TRANSPORTATION**  
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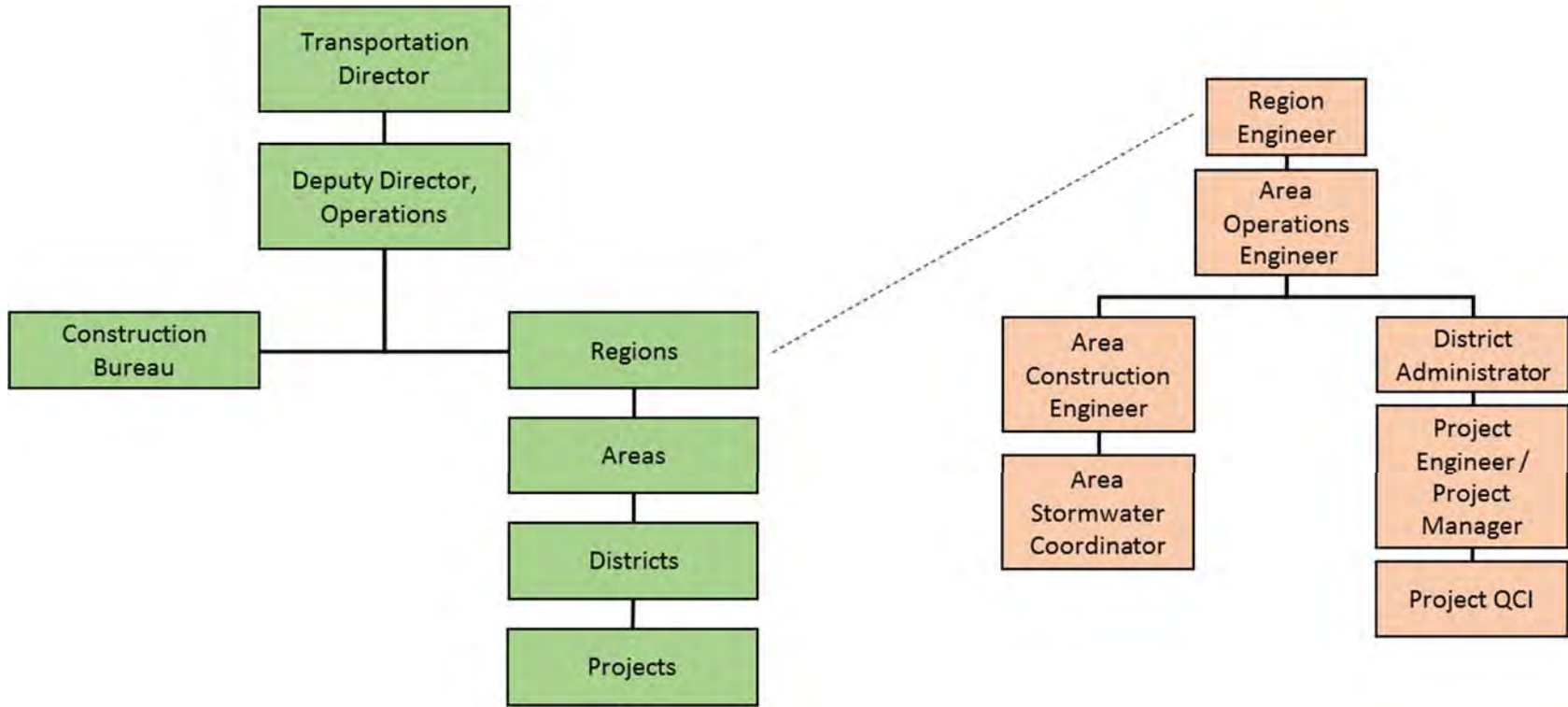
DESIGN BUREAU SPECIAL DRAWING

DETAILS OF EROSION CONTROL  
WATTLE DITCH CHECK

Bureau Std Engr. _____	SPECIAL DRAWING NO ESC-300-4	DWG NO 1162-C
DRAWN BY: _____ DATE DRAWN: 2006		

NOT TO SCALE

# Transportation Facility Construction & the ALDOT Organization



## 2.5 Construction Stormwater

### CONSTRUCTION BEST MANAGEMENT PRACTICES PLAN (CBMPP)

#### General

The [ALDOT CBMPP](#) is a document created and maintained for every ALDOT construction project that requires construction stormwater permit coverage under the Alabama Department of Environmental Management (ADEM) National Pollutant Discharge Elimination System (NPDES) Construction General Permit. The CBMPP is also a means to gather and communicate other environmental concerns, commitments, and contract requirements to ALDOT design and construction personnel as well as the Contractor. The CBMPP is a place to document environmental compliance including site inspections, rainfall amounts, and erosion and sediment control plan modifications. For Priority Construction Sites, the CBMPP will also contain the sampling data collected during turbidity monitoring.

*For projects permitted by the Contractor, the CBMPP shall be prepared by the Contractor Qualified Credentialed Professional (QCP) using an ADEM approved format. The Contractor's CBMPP shall include the same concerns, commitments, and contract requirements made as part of the preliminary CBMPP provided by ALDOT and satisfy all of the requirements of the ADEM regulations.*

A Priority Construction Site is a construction project that discharges to a waterbody which is listed on the most recently EPA approved 303(d) list of impaired waters for turbidity, siltation, or sedimentation, any waterbody for which a TMDL has been finalized or approved by EPA for turbidity, siltation, or sedimentation, any waterbody assigned the Outstanding Alabama Water, Outstanding National Resource Water, or Treasured Alabama Lakes use classification in accordance with ADEM Administrative Code, or any waterbody assigned another special designation in accordance with ADEM Administrative Code. If a project is a Priority Construction Site it will be noted in the CBMPP by the designer.

#### Design Component

The design component of the ALDOT CBMPP is created and updated during the planning and design phase by ALDOT, and/or consultant design personnel. The Design QCP certifies the design component of the CBMPP as having addressed all known environmental concerns, and that these concerns have been addressed in the project design.

The design component consists of three main sections: Project Information, Environmental Concerns and Commitments, and Environmental Best Management Practices (BMPs). The Project Information section compiles the ADEM Notice of Intent (NOI) and project quadrangle map, properties of the soil expected to be encountered, and hydraulic information including the anticipated rainfall conditions and the minimum design storm for temporary BMPs. The Environmental Concerns and Commitments section compiles information regarding construction stormwater along with other environmental issues such as wetlands, priority waters, threatened and endangered species, historical and archaeological sites, and hazardous materials. The Environmental BMPs section compiles standard information from the ALDOT Construction Manual, ALDOT Specifications, ALDOT Standard and Special Drawings, and project specific information.

ALDOT construction staff, including proposed construction project staff, should become involved in the design process as early and as often as possible to provide input relevant to BMPs. This should include onsite walk through meetings and preliminary design review meetings. Existing conditions and potential environmental concerns should be documented in writing, with photographs and/or video, and included with the project files. The Construction Bureau Environmental Construction Section will review the plans for projects that are Priority Construction Sites and those projects with 20 acres or more of disturbance for the limits of exposed erodible material. During the Prebid



Meeting (if one is held) and the Onsite Stormwater Meeting, the Region/Area Stormwater Coordinator is responsible for discussing the design component of the CBMPP and requirements of the contract related to environmental protection and communicating all known environmental concerns related to the project.

### **Operational Component**

The operational component of the CBMPP is created and updated during the construction phase by ALDOT project personnel and contractor personnel. The Operational QCP (also known as the Project QCP), which is typically the Region/Area Stormwater Coordinator, certifies that the design component will be adhered to as closely as possible, and that the operational component will be created, updated, and adhered to during construction of the project.

The operational component consists of five sections: Contractor Submitted Components, ALDOT Inspection Reports, Rainfall Journal, Regulatory Actions Log, and CBMPP Modifications Log. The contractor submitted components are the Contractor's Stormwater Management Plan and any other environmental correspondence between ALDOT and the Contractor. The ALDOT Inspection Reports section has an ALDOT QCP CBMPP Evaluation Log and the completed stormwater inspection reports including any required turbidity sampling data. The Rainfall Journal section includes a chart of the locations of all rain gauges and any RainWave precipitation monitoring points and a monthly printout of the rainfall journal from the [CPMS StormWater Tracking System \(SWTS\)](#) database. The Regulatory Actions Log includes a chart of all actions by environmental regulatory agencies and all corresponding documentation. The CBMPP Modifications Log includes a chart of all CBMPP modifications and corresponding documentation.

During the Onsite Stormwater Meeting, the Region/Area Stormwater Coordinator is responsible for communicating the requirements of the operational component of the CBMPP to Region/Area Construction staff, ALDOT project staff, Contractor representatives, and any Subcontractors responsible for clearing, earthwork, vegetation establishment, or erosion and sediment control. Others at the meeting may include environmental stakeholders including representatives of ADEM, U. S. Army Corps of Engineers, U. S. Fish and Wildlife, and others if deemed necessary or if required by an environmental commitment. The discussion should cover scheduling and implementation of BMPs and other measures that will be taken to ensure and document environmental compliance with the ADEM Construction General Permit and all other environmental commitments. All of the Stormwater Discharge Points should be visited and discussed. For Priority Construction Sites, turbidity monitoring and construction stormwater sampling shall also be discussed.

### **ALDOT CONTRACTOR'S STORMWATER MANAGEMENT PLAN (SWMP)**

A completed SWMP is required for all projects regardless of the type of work, funding, or regulatory permitting. *For Contractor permitted projects, the SWMP is not required if all of the information is included as part of the Contractor's CBMPP.* The Contractor is required to use the current version of the [SWMP template](#) without any modifications to the format of the document in order to be considered complete. The Contractor's SWMP should be submitted to the Region/Area Stormwater Coordinator, or to the County Engineer for County projects, prior to the Preconstruction Conference and Onsite Stormwater Meeting. The information contained within the SWMP shall be project specific, address all known environmental concerns and commitments, and explain how requirements of the contract documents regarding water quality protection will be met by the Contractor. The Construction Bureau will review the SWMP prior to approval if requested by the Region/Area. The SWMP must be sent for Construction Bureau review if the project includes Roadway Pipe Rehabilitation or Bridge Cleaning, or if the Contractor requests

a stream or waterbody encroachment or onsite storage of fuels/chemicals. Once the SWMP is accepted it will be added to the CBMPP and work may commence.

## CONSTRUCTION STORMWATER INSPECTIONS

### Construction Stormwater Inspection Forms

Detailed field conditions, observations, and other information regarding the QCI site inspections are documented in the [SWTS](#) on [Form C-34, the Stormwater Inspection Report and BMP Certification](#). Sediment Loss and Turbid Discharge field conditions require that additional information about the noncompliance be documented in the [SWTS](#) on [Form C-37, the Stormwater Noncompliance Notification Report](#). Form C-34a is a listing of the Stormwater Discharge and Background Points printed from the [SWTS](#). Any errors found on the C-34a will be reported to the Region/Area Stormwater Coordinator immediately so that a request for corrections can be sent to the Stormwater Permit Coordinator. Turbidity monitoring results from construction stormwater sampling shall be documented in the [SWTS](#) on [Form C-38, the Stormwater Turbidity Sampling Report](#).

### Stormwater Discharge and Background Points

The location of the Stormwater discharge and background points are selected by the Designer and entered into the Project Data Form in CPMS. For Priority Construction Sites, these points are potential locations for construction stormwater turbidity sampling. These points will be located and identified on the Erosion and Sediment Control sheets of the plans as follows. [Graphical examples](#) of point identification are located in the appendix of this manual. Additional stormwater points may be added by the Region/Area Stormwater Coordinator as needed or as requested by ADEM.

Primary Stormwater Discharge Points shall be identified by an integer that represents the contributing drainage area followed by a zero in the decimal place (example 25.0). These points are locations at which channelized construction stormwater discharge or a water of the state leaves the ALDOT ROW. These points shall be identified in the field by a wooden stake notating the identification number.

Secondary Stormwater Discharge Points shall be identified by an integer, which is the same as the associated Primary Stormwater Discharge Point, followed by a letter in the decimal place (example 25.A). These points are locations within the ALDOT ROW where channelized construction stormwater discharge enters into a water of the State.

Background Points shall be identified by an integer, which is the same as the associated Primary Stormwater Discharge Point, followed by a non-zero number in the decimal place (example 25.1). These points are locations at which channelized stormwater flow or a water of the state enters the ALDOT ROW.

### Field Conditions

Site observations, inspections, and evaluations are conducted on a periodic basis to assess the field conditions of each individual drainage area. This begins prior to beginning work on the project and continues until the project is accepted for maintenance. The findings will fall into one of the four following categories:

Satisfactory – The condition of the drainage area does not need any repairs or improvements. There is no substantial visible contrast observed at any stormwater discharge point. There is no visible evidence of substantial erosion or sediment loss. All BMPs applicable to the current phase of construction have been

properly installed or applied, have been maintained and repaired as needed, and are effectively functioning as intended. Sediment may have accumulated immediately upstream of one or more BMPs but it has not exceeded 1/3 the height or capacity of the BMPs. Any previously reported sediment deposits off site or in a water of the state have been remediated.

Needs Improvement – The condition of the drainage area needs minor repair or improvement. There is no substantial visible contrast observed at any stormwater discharge point. There is no visible evidence of off-site sediment loss. Minor erosion and on-site sediment loss may be observed. BMPs applicable to the current phase of construction may have not all been installed or applied or this may have been done improperly. BMPs may need repair or replacement. BMPs that have been properly installed or applied may not be effectively functioning as intended and need modification. Sediment may have accumulated immediately upstream of one or more BMPs and it may have exceeded 1/3 the height or capacity of the BMPs. Any previously reported sediment deposits off site or in a water of the state have not been remediated.

Turbid Discharge – The condition of the drainage area needs repair or improvement. Turbid discharge occurs when turbid construction stormwater leaves the ALDOT ROW and may be observed as a substantial visible contrast at one or more stormwater discharge points. Turbid discharge also occurs when turbid construction stormwater causes an increase of more than 50 NTU in the turbidity level of a water of the state.

Sediment Loss – The condition of the drainage area needs major repair or improvement. Sediment loss occurs when sediment or soil is transported from the project and is deposited in a location off the ALDOT ROW or within a water of the state.

### **QCI Daily Observations**

The ALDOT Project Qualified Credentialed Inspector (QCI) and the Contractor's QCI shall perform individual daily observations of each drainage area and its Stormwater Discharge Points and BMPs where the ground is disturbed. They shall also record rainfall measurements and weather information. Documentation of observations will be noted in the Daily Work Report. If a previously undocumented Needs Improvement, Turbid Discharge, or Sediment Loss condition is observed, then a formal site inspection and report is required.

### **QCI Site Inspections**

Site inspections will not be conducted outside of normal operating hours or during unsafe weather conditions. The ALDOT Project QCI together with the Contractor's QCI will perform a formal site inspection for the entire project after the accumulation of 3/4 inch of rainfall that occurs within 24 hours and at least once per week. Inspections triggered by a rain event shall be initiated as soon as possible and within 24 hours of resuming work on the project. The inspection will include an observation of each drainage area and its Stormwater Discharge Points and BMPs. All areas of the project not undergoing active construction will be evaluated for temporary stabilization requirements.

During the inspections that follow a 3/4 inch or more rain event, turbidity monitoring will be conducted on Priority Construction Sites disturbing 10 acres or more of erodible material. The turbidity monitoring portion of the inspection will be conducted as soon as possible. During regular weekly inspections, turbidity monitoring will be conducted if a substantial visible contrast is observed at one or more Stormwater Discharge Points.

Documentation on the [C-34](#) should include field conditions and corrective actions required or completed. [Stormwater Inspection Report and BMP Certifications](#) and any [Stormwater Noncompliance Notification Reports](#) will



be entered into the [SWTS](#). Photographic documentation of inspections is required. At least one photograph per inspection will be uploaded to the [SWTS](#) with a clear description of the location. Reports will be closed within 48 hours of the qualifying rain event. Once a report is closed, the Project QCP will receive an email letting them know it is ready for their review and approval. The reports will be reviewed and approved no later than 5 days after the qualifying rain event. Once a report is approved, the Project QCP prints a copy, signs it, and obtains the second approval signature from the Responsible Official, typically the Area Operations Engineer. Signed inspection reports will be included in the CBMPP at the project office and a copy will be delivered to the Contractor QCI within 15 days of the qualifying rain event. An automatic notification is sent by the [SWTS](#) to ADEM, the Construction Bureau, the Office of Environmental Compliance, and the Area Operations Engineer for all approved inspection reports that have cited field conditions other than Satisfactory.

*For projects with permits held by the Contractor or an LPA, the reports shall be written using ADEM's Form 23 11/11 or Form 25 11/11 (if applicable) by the Permittee's QCI. Formal inspections shall be reported to ADEM by the Permittee in accordance with permit requirements. Copies of all draft reports shall be provided to the Engineer no later than 24 hours after the inspection, and copies of signed reports shall be submitted to the Engineer no later than 5 days after the inspection.*

If a Needs Improvement field condition is observed, then this information will be immediately communicated to the ALDOT Project Manager and Contractor. The Project Manager shall work with the Contractor to create a plan for immediate corrective actions, which shall be completed prior to the next storm event but no later than 5 days after the inspection unless prevented by unsafe weather conditions. This corrective action may require a suspension of all other operations. Additional inspections will be performed as needed until the observed deficiency can be documented as corrected, satisfactory, and in compliance with the ADEM permit.

If a Turbid Discharge or Sediment Loss field condition is observed, then this information shall be immediately communicated to the Project QCP, the ALDOT Project Manager, and the Contractor. A Turbid Discharge or Sediment Loss condition requires a verbal notification by the Project QCP to the [ADEM Field Office](#) within 24 hours of the event and the submission of a written [Stormwater Noncompliance Notification Report](#) within 5 days of the event. The verbal notification requirement for Turbid Discharge conditions may be waived if written approval is given by the ADEM Field Office. The 24-hour notification will include the permit number, county, emergency contact information, and the period of the Turbid Discharge or Sediment Loss condition. The Project QCP will confirm the duration and frequency of any rain event of 2-year intensity or greater associated with a Turbid Discharge or Sediment Loss condition. The rain event information (for example a 2-year 24-hour rain event) will also be included in the noncompliance notification. The ALDOT Project Manager will work directly with the Project QCI and the Contractor to gather additional data. The Project Manager will inform the Project QCP of the details regarding the noncompliance. The Project QCP shall be the point of contact for any discussions with the Responsible Official, Region/Area Stormwater Coordinator, property owners, environmental groups, or regulatory agencies. The Region/Area Stormwater Coordinator will determine if additional consultation should be sought from the Construction Bureau. The Construction Bureau will determine if consultation should be sought from other bureaus within ALDOT or an independent QCP. The Project Manager and the Project QCP will work with the Contractor to create a plan and implement immediate corrective actions which shall be completed prior to the next storm event but no later than 5 days after the inspection unless prevented by unsafe weather conditions. This corrective action may require a suspension of all other operations. If permanent corrective measures cannot be implemented within the 5 day timeframe, then written notification and detailed explanation will be given to ADEM. Additional

inspections will be performed as needed until the observed deficiency can be documented as corrected, satisfactory, and in compliance with the ADEM permit.

#### **QCP Site Evaluations**

The Operational/Project QCP, will conduct a project inspection and CBMPP review a minimum of every six months. These evaluations will be documented on the ALDOT QCP CBMPP Evaluation Log. A copy of the inspection report and any associated correspondence will be added to the CBMPP.

#### **ALDOT Central Office Reviews**

Additional project inspections and CBMPP reviews will be conducted by the ALDOT Construction Bureau as needed. These reviews are intended to aide construction personnel in maintaining compliance with the ADEM permit.

#### **TURBIDITY MONITORING**

Turbidity monitoring is required on all Priority Construction Sites that disturb 10 or more acres of erodible material. The Environmental Concerns and Commitments section of the CBMPP will indicate if the project is a Priority Construction Site. A Project Note will be included in the plans indicating that turbidity monitoring is required and the applicable drainage areas if it is not required for the entire project.

Primary and Secondary Stormwater Discharge and Background Points are all potential locations for turbidity monitoring. Current regulations require that our construction stormwater discharges not increase the turbidity of the receiving water by more than 50 Nephelometric Turbidity Units (NTUs) or cause a substantial visible contrast. In order to document compliance with these requirements, the Permittee will conduct turbidity monitoring by sampling channelized construction stormwater discharges and measuring the NTUs with a portable turbidimeter.

The Permittee will conduct representative turbidity monitoring in each individual drainage area. Representative turbidity monitoring will be defined as sampling at the Primary Stormwater Discharge Point and every Background Point of a drainage area. The data from these points will allow the Permittee to determine whether the drainage area is in compliance with the 50 NTU above background limit. If a substantial visible contrast is observed at a Secondary Stormwater Discharge Point, an additional sample will be taken at that location. All results from turbidity monitoring will be recorded on the [Stormwater Turbidity Sampling Report](#) in the [SWTS](#).

There are some instances when stormwater sample collection will be waived in a drainage area. When a required sample is not collected, it must be due to one of the following acceptable reasons and this will be recorded on the [Stormwater Turbidity Sampling Report](#) in the [SWTS](#). In all cases photographic documentation is required.

Prior to Construction – Turbidity monitoring in a drainage area is encouraged but not required to commence until work has begun in that drainage area. This reason is also acceptable in cases where there is not channelized flow because the pipe or ditch at that sampling location has not been constructed.

Insufficient Flow – There must be sufficient channelized flow in order to collect a stormwater sample. In some cases there may not be sufficient flow until there is a considerable amount of precipitation. Sufficient channelized flow shall be defined as the ability to collect a sample of construction stormwater without the sample collection container touching the bottom of the conveyance (ex. ditch bottom, stream bed, pipe, etc.).

Hazardous Condition – There may be times when it is not possible to take a stormwater sample at a turbidity monitoring point due to a life-threatening hazardous condition. The details of the hazardous condition will be documented on the report.

Monitoring Suspended – Turbidity monitoring will continue in a drainage area until the final required stabilization is installed or applied, erosion is controlled to the maximum extent practicable, and stormwater sampling results have shown the drainage area to be in compliance for the last two months. If all of these requirements have been met, then turbidity monitoring may be suspended in a drainage area. However, if the project has not been accepted for maintenance, turbidity monitoring will resume if the drainage area is subsequently disturbed, there is evidence of substantial erosion, or a substantial visual contrast is observed at a primary or secondary discharge point.

### **SAMPLING PROCEDURE**

Sampling of construction stormwater will be conducted for channelized flow at the nearest accessible location to the sampling point identified in the plans. Construction stormwater samples will be collected and analyzed by the Permittee using a portable turbidimeter provided by the Contractor. Prior to sampling, the QCI will read the turbidimeter user manual and be familiar with proper equipment operation and handling procedures. Results will be recorded on the [Stormwater Turbidity Sampling Report](#) in the [SWTS](#).

#### **Contractor Furnished Sample Analysis Equipment**

Contractor retained turbidimeters will be used for analyzing construction stormwater samples. Approved turbidimeters are included on [List II-24 “Temporary Erosion and Sediment Control Products”](#). The Contractor shall provide documentation of professional equipment calibrations. The Contractor shall also provide a calibration kit (calibration standards, soft lint-free cloth, and silicone oil) and sample tubes from the turbidimeter manufacturer. The Permittee’s QCI will ensure that the calibration standards are not expired. The Permittee’s QCI will verify calibration and, if needed, calibrate the turbidimeters each day prior to sampling analysis.

#### **Permittee Furnished Sample Collection Equipment**

1. Sample Collection Containers – one pint minimum volume, polyethylene or glass, wide-mouth container, preferably with a lip designed for pouring
2. Sample Storage Containers – one pint minimum volume, polyethylene or glass, wide-mouth container, with a secure lid
3. Cleaning Brush(es)
4. Phosphate-Free Detergent
5. Distilled or Deionized Water – gallon jugs for use in the project office
6. Squirt Bottle – fill with distilled or deionized water for use in the field
7. Waterproof Labels – for labeling sample storage containers
8. Waterproof Ink Pens – for labeling sample storage containers



**Equipment Cleaning**

For accurate readings, sample tubes will be kept completely clean both inside and out. Sample tubes will be handled by the lid and will not be touched on the glass as much as possible. Scratched or etched sample tubes will be discarded and replaced. Do not reuse sample storage containers or sample tubes without proper cleaning. Sample collection containers, sample storage containers, and sample tubes will be washed after each day of use as follows:

1. Wash with a brush and phosphate-free detergent.
2. Rinse three times with cold tap water.
3. Rinse three times with distilled or deionized water.

Additionally for samples tubes, wipe the exterior with a soft, lint-free cloth. If there are minor imperfections in the glass, a light coating of silicone oil should be applied to the exterior surface and wiped with the cloth to create a thin, even film over the entire surface.

**Sample Collection**

Construction stormwater samples will be collected by grab samples from flowing channelized discharge. The sample will be collected from the center of the main flow of the discharge or stream or, if too deep or unsafe, as near to that location as possible. If you must stand in the water to take the sample, collect the sample upstream of you and any area that you disturb. Collect downstream samples in the drainage area first beginning with the Primary Stormwater Discharge Point, any required Secondary Stormwater Discharge Points, and ending with any Background Points.

Rinse the inside of the sample collection container in the water to be sampled prior to each sample collection. To collect a sample, hold the sample collection container near the base and turn it with the opening downward towards the water surface. Being sure not to touch the bottom of the conveyance, plunge the container into the water 8-12 inches beneath the surface or halfway down for shallower flows. Turn the container opening away from you and in an upstream direction to collect the sample.

**Sample Analysis**

The sample analysis will be conducted in the field immediately after sample collection. Place the turbidimeter on a level surface; do not hold it in your hand. Fill the sample tube by pouring from the collection container. Securely cap the sample tube and follow the turbidimeter manufacturer's operation instructions to determine the turbidity of the construction stormwater sample. Results will be recorded as follows:

<u>NTU Range</u>	<u>Number of Decimal Places</u>
0.0 to < 1.0	2
1 to < 10	1
≥ 10	0

Sample tubes may be reused in the field if they are rinsed with distilled water immediately after each analysis.

**Samples Exceeding 1000 NTU**

Construction stormwater samples that have readings exceeding 1000 NTU will be further analyzed in the project office. Each sample storage container will have a waterproof label with a record in waterproof ink of the project number, sampling point identification number, sample date, sample time, and the name of the QCI who collected the sample. Fill the sample storage container by pouring from the collection container. Transport the sample to the project office immediately for analysis. If analysis cannot be conducted within 15 minutes of the sample collection time, the sample must be cooled to 4°C [39.2°F] and can be held for up to 48 hours only.

Agitate the stormwater sample by repeatedly inverting the container to re-suspend any potentially settled particles. Using turbidity-free distilled water, dilute the sample until the reading is below 1000 NTU. Compute the turbidity of the original sample by multiplying the turbidity of the diluted sample by the dilution factor. For example, if 5 units of volume of dilution are added to 1 unit of volume of the sample, and the turbidity of the diluted sample is 500 NTU, then multiply 500 NTU reading by the total 6 units of volume to equal a 3000 NTU turbidity measurement for the original sample.

## **RAINFALL JOURNAL**

### **Rain Gauges**

Rain gauges will be utilized on all ALDOT construction sites. Rain gauges will be identified by the letter 'G' followed by an integer, which is the same as the associated Primary Stormwater Discharge Point of the drainage area in which it is located. Rain gauges will be located in an open area such that the measurement will not be influenced by outside factors such as overhangs, gutters, and trees. Rain gauges will be spaced approximately 3 miles apart. Daily rainfall amounts are rounded and reported to the nearest five hundredths (0.05") of an inch in the Rainfall Journal of the [SWTS](#) for each rain gauge. This is in addition to the weather and rainfall entry reported in SiteManager or CAMMS. The Rainfall Journal will be printed and added to the CBMPP at the end of each month.

### **RainWave Precipitation Monitoring**

At least one RainWave Precipitation Monitoring point will be utilized for all projects designated as a Priority Construction Site or that have 20 or more acres of disturbance. The location of the RainWave points will be selected by the Construction Bureau. The Project QCP may request additional RainWave points. RainWave Precipitation Monitoring points will be identified by the letter 'R' followed by an integer, which is the same as the associated Primary Stormwater Discharge Point of the drainage area in which it is located. RainWave points will be located within the project limits and ALDOT ROW at a culvert site, bridge site, or other Primary Stormwater Discharge Point with potential environmental impact to a water of the state.

After the project has been let, the Construction Bureau will forward the RainWave Information Form to the Region/Area Stormwater Coordinator. After the project has been awarded, Region/Area Construction personnel will enter a Precipitation Monitoring Service type Request for Consultant (RFC) in CPMS for the RainWave service if one does not already exist. The RFC will be reviewed for approval by the Area Operations Engineer the Region Engineer, and the Chief Engineer, if applicable.

Upon final approval of the RFC, Region/Area Construction personnel will enter a Consultant Purchase Order (CPO) in CPMS. After the CPO is approved, the Region/Area will send a Notice to Proceed to the Consultant. This notification will include a copy of the CPO and the RainWave Information Form.

Automatic email notifications of daily precipitation totals and monthly precipitation summaries will be sent to the Project QCP, the Project Manager, and the Project QCI for entry into the Rainfall Journal of the [SWTS](#). The names and email addresses of these individuals will be added to the RainWave Information Form by the Region/Area Stormwater Coordinator. The charge code for billing purposes and the monitoring end date will also be added. The estimated cost for the work should take into account the initial setup fee and the monthly fee for the proposed project time which can be automatically calculated by the previously utilized ALDOT Funds Transfer Request. One

month prior to the end of the precipitation monitoring contract each project, the Region/Area Stormwater Coordinator will receive an email with the option to extend the duration of the service.

### **STABILIZATION REQUIREMENTS**

Temporary stabilization is necessary to minimize erosion of soils and transport of sediment. Temporary BMPs such as Stabilized Construction Entrances, Perimeter Sediment Barriers, and Sedimentation Basins shall be installed as soon as possible during the clearing and prior to beginning grading operations in the contributing drainage area. Additional Temporary BMPs shall be installed during grading to protect waters of the state, construction stormwater discharge points, construction stormwater inlets, and to divert stormwater flows around exposed work areas.

All exposed areas that are not undergoing active construction for a period of 7 days or more require temporary stabilization. Temporary Mulch shall be applied if the exposed area will remain inactive for less than 60 days. Temporary Seed and Temporary Mulch shall be applied if the exposed area will remain inactive for 60 days or more. Rolled and Hydraulic Erosion Control Products should not be used for temporary stabilization. Temporary erosion and sediment control BMPs should be removed, unless otherwise directed by the plans, as the final required stabilization is installed or applied in the drainage area and they are no longer serving their intended purpose.

Final or permanent stabilization is necessary to prevent erosion of soils and transport of sediment. Final stabilization should be continuously pursued by transitioning from temporary BMPs to permanent BMPs as grading advances while maintaining continuous erosion and sediment control. Final slope stabilization will be installed or applied in vertical increments that should not exceed 20 feet as grading progresses. Forms of final required stabilization includes, but is not limited to, permanent seed and mulch, permanent seed and an erosion control product, sod, aggregate surfacing, riprap plating, concrete, and asphalt.

Once the final required stabilization is installed or applied to an area the Contractor is allowed to expose an equivalent amount of acreage in another location. Additionally, any stormwater sampling locations in a drainage area which has final stabilization are eligible for evaluation for turbidity monitoring suspension. Once final required stabilization is in place on the entire project, vegetation is fully established, and the project is accepted for maintenance, the Permittee's QCP will request the coverage under the ADEM Construction General Permit be terminated. The Contractor is responsible for all erosion and sediment control until coverage under the ADEM Construction General Permit is terminated or 30 calendar days after submission of the termination request to ADEM, whichever occurs first. Required construction stormwater inspections by ALDOT personnel will cease according to the same terms.

### **QUALIFIED CREDENTIALLED INSPECTOR TRAINING**

All personnel responsible for construction stormwater inspections must be certified through an ADEM-approved initial 8-hour QCI training course. This applies to ALDOT, Contractor, Subcontractor, County, City, and ALDOT Consultant personnel. Additionally, all QCIs must participate annually in an ADEM-approved, 4-hour QCI refresher training course. The ALDOT Construction Bureau conducts an ADEM-approved QCI annual refresher training course available to ALDOT, County, City, and ALDOT Consultant personnel for recertification.



ALABAMA  
DEPARTMENT OF TRANSPORTATION



STANDARD SPECIFICATIONS  
FOR HIGHWAY CONSTRUCTION

2018 EDITION

## FOREWORD

This book has been prepared to provide a compilation of Standard Specifications for insertion by reference into Alabama Department of Transportation construction contracts.

U.S. Customary and Metric (SI) units of measurement are shown in this 2018 edition. Metric units of measurement are shown by the corresponding U.S. Customary units and are enclosed in braces { }. The units of measurement, either U.S. Customary or Metric, that are applicable to a construction project shall be those that are shown on the plans or in other contract documents.

The requirements given in these Specifications may be revised or amended by Supplemental Specifications and Special Provisions that are applicable to a specific contract.

Copies of this Standard Specifications book may be purchased from:

Alabama Department of Transportation  
Office Engineer Assistant Bureau Chief, Plans and Proposals  
1409 Coliseum Boulevard  
Montgomery, Alabama 36130-3050

Book Number \_\_\_\_\_

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(c) Cooperation with Fire Department.

The Contractor shall arrange his work so that there will be no undue or prolonged blocking of business establishments. Fire hydrants shall be kept accessible at all times. In the absence of local ordinances, no obstruction shall be placed within 15 feet {5 m} of a fire hydrant. The Contractor shall notify the Chief of the Fire Department in writing 24 hours before it becomes necessary to block a cross street.

(d) Compensation.

The Contractor shall comply with all the requirements for public safety and convenience listed in this Article without extra compensation, except for the items of temporary surface material, Section 430, which shall be paid for at the contract unit price, or as extra work if the contract does not contain unit prices for these items.

107.08 Railway-Highway Provisions.

(a) Notification.

No work of any character shall be commenced on the railroad right of way until the railroad company has been duly notified by the Contractor in writing (with a copy forwarded to the Engineer) of the date he proposes to begin work and until an authorized representative of the railroad company is present, unless the railroad company waives such requirement.

(b) Inspection By Railroad Company.

All changes in approved plans and all work performed by the Contractor involving railroad crossings shall be subject to the inspection and approval of the chief engineer of the railroad company, or his authorized representative. Any precautions considered necessary by said chief engineer to safeguard the interests of the railroad company shall be taken by the Contractor without extra compensation. The State shall not be held responsible for delay to the Contractor's work due to any delay in securing such approval of construction features or changes therefrom; and any additional cost incurred by the Contractor due to such delay shall be considered as completely covered by the contract unit prices for the various items of work involved in the contract. For such delays, working days will not be charged on working day contracts, and appropriate time extensions will be granted for contracts on a calendar day or date basis.

If work remains to be completed after the expiration of contract time the Contractor shall reimburse the Department for all of the costs charged by the railroad company for the inspection and monitoring of the remaining work.

(c) Temporary Grade Crossing.

The Contractor shall make all arrangements with Railway Companies for the establishment of any temporary crossing to be used by the Contractor for transporting materials and equipment across their tracks. Permission for such a crossing must be obtained from the Railway Engineer prior to establishment of the crossing. All costs for installation, maintenance, any necessary watching and flagging thereof, and the removal shall be borne by the Contractor. The Contractor shall so plan his work so as not to delay Railroad Company operations.

107.09 Construction Over or Adjacent to Waters of the United States.

(a) General.

Section 404 of the Federal Water Pollution Control Act of 1972 sets forth certain restrictions and requirements for materials placed in waters of the United States that are applicable to construction over or adjacent to waters of the United States. The Department will obtain any special permits necessary for the construction of the project within the scope of the design details of the contract plans and the specifications for the project. Generally, compliance with the above law can be accomplished by following the plan details along with adhering to the Specification requirements of Articles 107.13, 107.20, 107.21, 107.22, 107.23, and Section 665, utilizing the methods outlined in Section 665.

The Contractor will be required to operate within the limits of any special permit issued for the construction work on a project.

Attention is directed to the fact that construction methods or work in the flood plain area varying from plan details, specifications and permit proposed strictly for the convenience of the Contractor will require additional permit clearance. Any additional clearance, permit, etc. necessary to comply with the above noted laws shall be the sole responsibility of the Contractor

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and clearance for such work must be in the Engineer's hands before he will allow such work to proceed.

#### (b) Work Over Navigable Waters.

In addition to the provisions of Subarticle (a) above, all work over or on navigable waters shall be so conducted that free navigation of waterways will not be interfered with and that the existing navigable depths will not be impaired except as allowed by permit issued by the U.S. Coast Guard and/or U.S. Army Corps of Engineers, as applicable. The Department will obtain the necessary permit for the construction of the project within the scope of the design details shown by the plans, any special conditions will be noted on the plans or included in the contract documents. Should the Contractor, for his convenience, wish to use construction methods or perform work outside of the scope of the permit obtained by the Department, he shall be solely responsible for obtaining any additional work permit from the appropriate authority.

#### (c) Special Conditions

**Should the required work be permitted under a US Army Corps of Engineers "Nationwide Permit" or "Individual Permit", the Contractor shall abide by all the applicable requirements for each type of permit. Both types of permits are subject to the general requirements given in 33 CFR Part 330 "Nationwide Permit Program".**

A copy of the permit and its requirements will be included in the Construction Best Management Practices Plan (CBMPP) and made available for review during the project advertising period. A copy may be obtained from the ALDOT Office Engineer, and the successful bidder will be given a copy.

### 107.10 Barricades and Warning Signs.

The Contractor shall provide, erect and maintain all necessary barricades, suitable and sufficient lights, danger signals, signs, and other traffic control devices; shall provide qualified flagmen where necessary to direct traffic; and shall take all necessary precautions for the protection of the work and safety of the public. Highways or parts of the work closed to traffic shall be protected by effective barricades; obstructions shall be delineated; suitable warning signs shall be provided to properly control and direct traffic. All signs, barricades, etc. shall be reflectorized in an approved manner and if directed by the Engineer, supplemented with warning lights or illumination to increase their effectiveness.

The Contractor shall erect warning signs in advance of any place on the project where operations may interfere with the use of the road by traffic, and at all intermediate points where the new work crosses or coincides with an existing road. Such warning signs shall be placed and maintained in accordance with the plans furnished. No signs, barricades, lights or other protective devices shall be dismantled or removed without permission of the Engineer.

All barricades, warning signs, lights, temporary signs, and other protective devices shall conform with the MUTCD.

### 107.11 Use of Explosives.

#### (a) General.

It is the intent of this Article to provide general guides for the handling and use of explosives. The Contractor shall use all precaution, control, and safety features outlined by this Article as well as any additional requirements felt necessary to insure the safety of life or property in the area of operations.

#### (b) Control.

When the use of explosives is necessary for the prosecution of the work, the Contractor shall use the utmost care not to endanger life or property. Blasting operations shall be performed under the most skilled supervision. Where necessary and at any point of special danger, the Contractor shall use suitable mats or other approved methods to smother his blast. No loaded hole shall be left unattended.

Where blasting is to be done in streams, the Contractor shall notify the Conservation Department sufficiently in advance to permit on-the-site observation by Conservation Department personnel at the time of the blast.

Where blasting is performed in urban areas or areas that are heavily populated, extreme care shall be taken to minimize the amount and degree of ground vibration, noise, overpressure, and flying debris.



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character brought due to injuries or damages resulting from performance of the work under this contract. If required by the Director, he shall furnish a certificate of his public liability and property damage insurance to each utility company or individual owning or operating any of the properties affected in the guarantee of this responsibility.

2. The Contractor shall cooperate with the owners of any utilities in their removal and rearrangement operations so that the utility companies may conduct their operations in a reasonable manner with a minimum of duplication of the work and interruption of services. The Contractor will be furnished by the Department information that is reasonably available in regard to existing or proposed new utilities, but the accuracy of such information is not guaranteed by the Department. It shall be the Contractor's responsibility to secure information necessary for proper handling and coordination of utility work. He shall give at least 48 hours written notice to owners or operators of all properties that may be affected by his operations before beginning such operations. He shall not hinder or interfere with utilities in protection or operations of the properties. When such properties are endangered, the Contractor at his own expense shall maintain flagmen or watchmen and other necessary precautions to avoid interruption of service or danger to life or property. He shall promptly replace, restore, or make good in an acceptable manner any injury or damage caused by his operations.

3. In event of interruption to water or utility services as a result of the Contractor's operations, he shall notify promptly the proper authority and cooperate with the said authority in restoration of service as promptly as possible.

#### 107.13 Woodland Protection, Conservation, Abatement of Water Pollution and Quarantine Regulations.

The Contractor shall comply with all regulations of the State Fire Marshal, Conservation Department, Forestry Department, or regulatory body governing the protection of forests and other conservation areas, and the carrying out of work within such areas, and shall observe all laws and regulations with respect to the performance of work in such areas. He shall keep the areas in an orderly condition, dispose of all refuse, obtain permits for the construction and maintenance of all construction camps, stores, warehouses, residences, sanitary facilities, and other structures in accordance with the requirements of the Forest or Conservation supervisor.

It shall be the Contractor's responsibility to contact the local representatives of the Alabama Department of Agriculture and Industries, and the U.S. Department of Agriculture in order to advise himself, his agents, and his employees regarding quarantined areas and quarantine restrictions affecting his organization while operating within, from or through such areas. Special attention is directed to soil and/or machinery treatment which may be required when operating in, from or through quarantined areas. A list of agents of these two Departments will be furnished the Contractor upon request prior to beginning of his construction or maintenance operations. The State will not be liable for any additional compensation for extra costs arising from quarantine restrictions or penalties.

The Contractor's attention is directed to the requirements for stormwater management as noted in Article 107.21 along with the taking of all reasonable precautions to prevent and suppress fires and other detrimental items which may be caused by construction operations. This includes protecting streams, lakes and reservoirs from contamination by siltation or other harmful materials, and the use of conservation practices of the Conservation Services by the Contractor, his employees and subcontractors during the work, which will include but are not limited to the following:

(a) Diligently undertake precautions for the prevention of and for suppressive action in the event of fire resulting from highway construction. This will require the Contractor to -

1. Comply with all State laws, rules and regulations for prevention and suppressive action for forest fires.
2. Prepare and submit to the Department a fire prevention and control plan. The fire prevention and control plan must be on file and in effect before work on the item of Clearing and Grubbing will be permitted.
3. Comply with the fire plan noted in Item 2 above. When a burn permit is required, the permit number shall be provided to the Engineer prior to performing the burning operation.

(b) Unmerchantable material including tops, branches, etc., may be disposed of by piling and burning as directed. Alternate methods of disposal, including any of the following methods or

combinations of methods (lop and scatter, chip, broadcast, burn, remove, pile only) must be approved in advance by the Engineer.

(c) Protect and preserve the soil and vegetative cover and scenic and aesthetic values on the right of way and on adjacent lands so far as practical and consistent with the construction, operation and maintenance of the highway. An allowable disturbance of soil and vegetation cover outside the construction limits may be shown on the plans. The Contractor's proposed disturbance of soil and vegetation cover outside of the construction limits will only be allowed upon written approval of the Engineer.

(d) The Contractor shall be responsible for the prevention and control of soil erosion and gullying within the right of way covered by the project and the lands immediately adjacent thereto as a result of the road construction, and shall revegetate with grass, or other herbaceous plants, ground where the soil has been exposed. Slopes in channel changes on all branches and creeks shall be seeded and fertilized above the water line and in no case will the toe of fill slopes be allowed to fall within stream or creek channels unless adequate slope protection is placed in accordance with plan details or as directed by the Engineer. All soil left within the right of way shall be leveled off and/or dressed out and seeded or sprigged in a manner that will permit healing of ground surface and present a pleasant appearance.

(e) Construction operations shall be planned and conducted in such a manner so as to prevent when necessary and otherwise minimize pollution of streams, lakes and reservoirs with sediment or other harmful material used in the construction of the project.

(f) Waste, loose soil or other materials removed from the roadway or channel changes shall not be deposited in live streams. Depositing material into the streams or stream channel where it would be washed away by high stream flows will not be permitted. Surplus material may be deposited only in disposal areas approved by the Engineer. Disposal areas outside of the project right of way must be operated so as to blend into the surrounding area utilizing an erosion control plan, etc. as prescribed for the use of offsite areas in Article 106.01 with any cost thereof considered incidental to the use of the disposal area. Disposal areas within the project right of way shall be dressed and treated as directed using erosion control items provided in the contract for payment of directed work.

(g) The hauling of materials, including logs, brush, and debris by fording live streams will not be permitted. Temporary bridges or other structures must be provided for this purpose.

(h) Operations of mechanized equipment in live streams or stream channels will not be permitted except in areas where channel changes, retaining walls, temporary or permanent bridges or other such work is required by the plans, or directed.

(i) Fuels, oils, bitumen or other greasy or chemical substances originating from construction operations shall not be allowed to enter or be placed where they may enter a live stream.

(j) The outlet ends of all channel changes shall be so laid out and aligned as to provide direct flow into old stream beds without an abrupt direction change.

(k) The operations for any material pit located within sight of the project right of way or any other State or Federal highway shall be conducted in accordance with the requirements given in Article 106.01, allowing adequate space for conservation of existing natural screenings or permit the installation of screen planting between the road surface and the disturbed area. Pit sites shall be dressed to obliterate any unsightly appearance and treated in such a manner that erosion of the pit will not occur and result in the pollution of the water shed area.

#### 107.14 Responsibility for Damage Claims.

##### (a) General.

The Contractor shall indemnify and save harmless the State, the Department, the County, the Municipality, the officers and employees from all suits, actions, or claims of any character brought because of any injuries or damages received or sustained by any person, persons, or property due to the operations of the Contractor; or because of or in consequence of any neglect in safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any act or omission, neglect, or misconduct of the Contractor; or because of any claims or amounts arising or recovered under the "Workmen's Compensation Act" or any other law, ordinance, order, or decree; and so much of the money due the Contractor under and by virtue of his contract as may be considered necessary by the Department for such purpose, may be retained for the use of the State; or, in case no money is due, his surety will be held liable until such suit or suits, action or actions, claim or claims for injuries or damages as aforesaid shall have been

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portable impact attenuators shall be repaired by the Contractor as necessary. If the damage to these items was not caused by the fault or negligence of the Contractor, then the Contractor will be compensated for the repair work either at the contract unit bid price(s) of the original item(s) of work or as extra work, as determined by the Engineer.

In case of suspension of work, the Contractor shall be responsible for the project, provide for normal drainage and shall erect any necessary temporary structures, signs, or other facilities at his expense. During such period of suspension of work, the Contractor shall properly and continuously maintain in an acceptable growing condition all living material in newly established plantings, seedings, and soddings furnished under his contract, and shall take adequate precautions to protect new tree growth and other important vegetative growth against injury.

#### 107.18 Furnishing Right-Of-Way.

The Department will be responsible for the securing of all necessary rights-of-way in advance of construction. Any exceptions will be indicated in the contract.

#### 107.19 Personal Liability of Public Officials.

In carrying out any of the provisions of these specifications, or in exercising any power or authority granted to them by or within the scope of the contract, there shall be no liability upon the Director, Engineer, or their authorized representatives, either personally or as officials of the State, it being understood that in all such matters they act solely as agents and representatives of the State.

#### 107.20 No Waiver of Legal Rights.

Upon completion of the work, the Department will expeditiously make final inspection and notify the Contractor of acceptance. Such final acceptance and processing of the final estimate, however, shall not preclude or estop the Department from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall the Department be precluded or estopped from recovering from the Contractor or his surety, or both, such overpayments as it may sustain, or by failure on the part of the Contractor to fulfill his obligations under the contract. A waiver on the part of the Department of any breach of any part of the contract shall not be held to be a waiver of any other or subsequent breach.

The Contractor, without prejudice to the terms of the contract, shall be liable to the Department for latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the Department's rights under any warranty or guaranty.

#### 107.21 Stormwater Management.

##### (a) Protection of Project Site and Adjacent Property.

The Contractor shall perform the work while protecting the project site and adjacent property from contaminated and turbid stormwater runoff. The requirements in Section 665 shall apply to all work regardless of whether or not any of the pay items of Section 665 are included in the contract. When a pay item is not in the contract for an item of temporary erosion control, and the work is deemed necessary by the Engineer to restore or maintain compliance with the ADEM NPDES General Permit or the contract, the work will be paid for as Extra Work. The Contractor shall minimize the introduction of and remove sediment, nutrients, and other pollutants in stormwater runoff originating within the ALDOT right of way. The quality of water originating off of the right of way and entering the project site shall not be diminished as it flows through the site.

##### (b) Best Management Practices.

The Contractor shall implement and maintain appropriate structural and nonstructural Best Management Practices (BMPs) for the prevention and control of nonpoint sources of pollutants, e.g., sediment, oil and grease, chemicals, etc., during project construction. The Contractor shall abide by the regulations of the Alabama Department of Environmental Management (ADEM) applicable to construction stormwater and the National Pollutant Discharge Elimination System (NPDES) General Permit.

##### (c) NPDES Permit Coverage for Construction Stormwater Discharge.

A Project Note will be shown on the plans indicating the status of NPDES permit coverage for construction stormwater discharge and the availability of a preliminary ALDOT Construction Best Management Practices Plan (CBMPP) for the project. When NPDES permit coverage is required and retained by ALDOT, the Alabama Department of Transportation is considered to be the Permittee



and the Engineer is considered to be the Responsible Official. When NPDES permit coverage is required and retained by the Local Public Agency (LPA), the LPA is considered to be the Permittee and the LPA will designate their Responsible Official. The Permittee is responsible for all required NPDES Permit maintenance, renewal, modification, and termination.

The Contractor shall be responsible for obtaining applicable NPDES permit coverage through ADEM for all material pits, waste areas, plant sites, haul roads and other off-site areas selected by the Contractor to construct the project. Copies of the written acknowledgement from ADEM verifying that permit coverage has been obtained shall be forwarded to the Engineer with or as **part of the Contractor's Stormwater Management Plan (SWMP)** before ground is disturbed in these areas.

(d) Weather Preparedness and Recovery.

The Contractor shall prepare a project specific weather preparedness and recovery plan as **part of the Contractor's SWMP. At a minimum, the plan shall include details to implement the** following four components to the maximum extent practicable:

1. Unexpected Weather Preparations.

- Cover unstabilized ditches with polyethylene, or other material, securely anchored to prevent erosion of the channel. Where feasible, the required permanent stabilization should be installed instead of temporary measures.

- Cover unstabilized slopes with Temporary Mulching, polyethylene, or other material, securely anchored to prevent erosion of the slope. Where feasible, the required permanent stabilization should be installed instead of temporary measures.

2. Forecasted Weather Preparations.

- Plan work to minimize additional soil disturbance in the days preceding an event.

- Ensure all BMPs are properly installed and maintained to prevent erosion, capture sediment, and reduce turbidity.

- Cover unstabilized ditches with polyethylene, or other material, securely anchored to prevent erosion of the channel. Where feasible, the required permanent stabilization should be installed instead of temporary measures.

- Cover unstabilized slopes with Temporary Mulching, polyethylene, or other material, securely anchored to prevent erosion of the slope. Where feasible, the required permanent stabilization should be installed instead of temporary measures.

3. Severe Weather Preparations.

- Dewater basins and close basin outlet pipe valves to maximize the capture and treatment of turbid stormwater.

- Install temporary diversions to route stormwater away from critical areas.

- Remove sediment from existing BMPs to maximize the capture of new sediment.

- Review and improve or upgrade BMPs which have performed poorly during previous precipitation events.

- Plan work to minimize additional soil disturbance in the days preceding an event.

- Ensure all BMPs are properly installed and maintained to prevent erosion, capture sediment, and reduce turbidity.

- Cover unstabilized ditches with polyethylene, or other material, securely anchored to prevent erosion of the channel. Where feasible, the required permanent stabilization should be installed instead of temporary measures.

- Cover unstabilized slopes with Temporary Mulching, polyethylene, or other material, securely anchored to prevent erosion of the slope. Where feasible, the required permanent stabilization should be installed instead of temporary measures.

4. Weather Recovery.

- Immediately repair any breach in basin dams.

- Remedy hazardous conditions.

- Conduct a Site Inspection of the entire project site in accordance with Item 107.21(e)2.

- Create a schedule of needed Corrective Actions in accordance with Item 107.21(e)4., which will be included in the Noncompliance Notification Report submitted to ADEM; set repair priorities starting at the discharge point in each drainage area when possible and evaluate environmental impacts, offsite impacts, timeliness of accessibility for repairs, and public perception.

## (e) Inspections and Corrective Actions

## 1. Daily Observations.

**The Contractor's Qualified Credentialed Inspector (QCI) and the Department's Project QCI** shall perform daily observations of discharge points and areas of the project where the ground is disturbed and record rainfall measurements and weather information. If any previously undocumented BMP deficiencies or other regulatory violations are observed, the **Project QCI will notify the Department's Project** Qualified Credentialed Professional (QCP), the Contractor QCI shall notify the Contractor QCP and/or Superintendent, and a formal Site Inspection will be performed.

## 2. Site Inspections.

When the project is covered by the NPDES General Permit, formal inspections shall be made by the Contractor QCI and the Project QCI together, under the supervision of the Contractor QCP and/or Superintendent and the Project QCP, respectively. Project site inspections of the construction best management practices shall be made by the QCIs per the requirements of the NPDES permit and no less frequently than once per week and after the accumulation of 3/4 inch {75 mm} of rainfall within 24 hours. The project site inspections shall be initiated as soon as possible and within 24 hours of resuming work on the project and shall be completed no later than 5 days after a qualifying rain event. Inspection Certification Reports and Noncompliance Notification Reports (if warranted) will be entered into the Department's Stormwater Tracking System (SWTS) by the Project QCI. Required verbal notifications of noncompliance to ADEM are the responsibility of the Permittee.

Construction stormwater sampling and turbidity monitoring shall be performed by the Permittee when directed by the Project QCP or as required by the NPDES General Permit. The Contractor QCI and the Project QCI shall both be present during stormwater sampling. **Stormwater Turbidity Sampling Reports (if required) will be entered into the Department's SWTS by the Project QCI.**

If the NPDES permit is held by the LPA, the reports shall be written using **ADEM's Form 23 11/11** or Form 25 11/11 (if applicable) by the LPA QCI. Formal inspections shall be reported to ADEM by the Permittee in accordance with NPDES permit requirements. Copies of all draft reports shall be provided to the Engineer no later than 24 hours after the inspection. Copies of signed reports shall be submitted to the Engineer no later than 5 days after the inspection.

## 3. QCP Site Evaluations.

The **Permittee's** Qualified Credential Professional (QCP) shall personally perform site evaluations in accordance with the NPDES General Permit at least once per every six months. These evaluations shall consist of an onsite inspection of all erosion, sediment, and turbidity control best management practices being implemented to determine adequacy and consistency with site conditions and shall include a review of the CBMPP to ensure proper maintenance. **The resulting inspection reports shall be submitted to ADEM by the Permittee's QCP.** For ALDOT held NPDES permits, the resulting inspection reports will be entered into the **Department's SWTS by the Project QCP.**

## 4. Corrective Actions.

If an inspection report reveals anything outside of regulatory compliance, the NPDES General Permit requires immediate corrective action shall be taken by the Contractor and completed prior to the next storm event but no later than 5 days after the inspection unless prevented by unsafe weather conditions. Additional inspections shall be performed until the observed deficiency is corrected and in compliance with the NPDES General Permit. Should discharges from construction activity cause or contribute to instream turbidity exceeding background turbidity by more than 50 nephelometric turbidity units (NTUs), or cause substantial visible contrast with background turbidity, the Contractor shall suspend construction activity in the drainage area discharging to the affected Stormwater Discharge Point until effective corrective actions are implemented and instream turbidity decreased to acceptable levels. The suspension of construction activities includes all operations that are not directed toward correction of erosion, sediment, and turbidity control best management practices, permanent stabilization, or returning the project to regulatory compliance. ALDOT has the right to require the suspension of similar construction activities throughout the project should conditions and actions by the Contractor be deemed unacceptable by the Engineer.

Any damage to properties adjacent to the project site due to the Contractor's acts, omissions, misconduct, intentional or negligent conduct regarding stormwater management shall be restored in accordance with the requirements of Article 107.12. Any regulatory fines, costs, damages, or expenses incurred by ALDOT due to the Contractor's acts, omissions, misconduct, intentional or negligent conduct shall be reimbursed to ALDOT or otherwise compensated by the Contractor. Any regulatory fines, costs, damages, or expenses incurred by the Contractor for off-site areas are and shall be the sole and exclusive responsibility of the Contractor.

(f) NPDES Permit Termination.

The Contractor shall be responsible for stormwater runoff control on the project until the NPDES General Permit for coverage of construction stormwater is terminated. Termination of NPDES Permit coverage can only be requested after Acceptance for Maintenance and approval by the Engineer. Termination shall be requested no later than 10 days after Acceptance for Maintenance.

### 107.22 Environmental Protection and Spill Prevention.

The Contractor shall comply with all Federal, State and local laws and regulations controlling pollution of the environment. The Contractor shall also take all reasonable precautions to prevent pollution of streams, lakes, ponds, reservoirs and other waters of the State with fuels, oils, bitumens, chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.

The Contractor shall comply with all ADEM and local air pollution control programs within the State, and their rules and regulations regarding air pollution matters, especially "open burning", "fugitive dust", and "asphalt batching plant" restrictions. A valid permit for "open burning" or operation of an "asphalt batching plant" will be required from the air pollution control agency within whose jurisdiction the work is to be performed before such operations will be allowed.

Construction and worker debris shall not be exposed to precipitation or stormwater. All construction and worker debris (trash, garbage, discarded construction materials, etc.) shall be immediately removed and disposed of in an approved manner.

The Contractor shall minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, concrete washout, and other wash waters. Prior to discharge, all wash waters and dewatering discharges shall be captured and treated. Concrete and other material washout pits shall be lined with geotextile filter fabric and have a perimeter barrier to prevent material transport by stormwater.

When the Contractor's operations encounter or expose any abnormal, or potentially abnormal, condition which may indicate the presence of a hazardous and/or toxic waste, such operations shall be discontinued in the vicinity of the abnormal condition and the Engineer shall be notified immediately. The presence of barrels, discolored earth, metal, wood, visible fumes, abnormal odors, excessively hot earth, smoke or anything else which appears abnormal may be indicators of hazardous and/or toxic wastes and shall be treated with extraordinary caution.

The Contractor shall not resume operations in the vicinity of the abnormal condition until so directed by the Engineer. Disposition of the hazardous and/or toxic waste shall be made in accordance with the requirements and regulations of the Alabama Department of Environmental Management, these specifications, and as directed by the Engineer.

Where the Contractor performs work necessary to dispose of hazardous and/or toxic waste, payment will be made at the unit prices for pay items included in the contract which are applicable to such work. When the contract does not include such pay items, payment will be made as provided in Article 109.04 for extra work.

The Contractor shall submit to the Engineer and implement a Spill Prevention Control and Counter Measures (SPCC) Plan for all fuel or chemical storage tanks or facilities located on ALDOT right of way. The SPCC shall be submitted in accordance with the regulations given in the ADEM Administrative Code and the NPDES General Permit. The Contractor shall maintain on-site, or have readily available, sufficient oil and grease absorbing material and flotation booms to contain and clean up fuel or chemical spills and leaks. Soil contaminated by paint or chemical spills, oil spills, etc., shall be immediately cleaned up or be removed and disposed of in an approved manner.



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107.23 Temporary Construction Encroachment into Streams, Water Bodies and Wetlands.

Temporary encroachment into streams, water bodies and wetlands may be shown as a part of the contract requirements if the encroachment is necessary for the completion of the work. A Contractor shall submit a request for all other temporary encroachments into streams, water bodies and wetlands if the encroachment is not prohibited by requirements given in the contract. Requests shall be submitted for proposed temporary stream crossings, temporary water diversions, and temporary work bridges and platforms.

A request for **a temporary encroachment shall be submitted as an attachment to the Contractor's** Stormwater Management Plan and forwarded to the State Construction Engineer for review and acceptance. The submittal of the request shall contain the following:

1. A description of how water quality will be protected during the encroachment.
2. A drawing of the proposed encroachment including a dimensioned plan view and elevation view depicting the location and distances from the water body, existing ground elevation, and proposed and existing structures.
3. The drawing shall also include details and dimensions of the pipes, bridges, or other facilities allowing the passage of water. It shall be the responsibility of the Contractor to ensure the opening under or through the drainage facilities is adequately sized to allow for normal seasonal flows.
4. A description of the sequence of placement and eventual removal of any temporary fill.
5. The type and estimated volume in cubic yards {cubic meters} and tons {metric tons} of any fill material proposed to be placed.
6. Provisions required to prevent fill from being eroded and measures for recovering and removing any fill material that is eroded.

US Army Corps of Engineers or other regulatory approval and notice may be required for the encroachment into streams, water bodies and wetlands. Corps of Engineers approval that is not given to the ALDOT or to the County holding the Nationwide Permit for the project will not be accepted as being adequate regulatory authorization for the encroachment.

All encroachments into streams, water bodies and wetlands shall be done in accordance with the requirements of regulatory permitting, approvals and conditions. Encroachments shall be done in a manner that will minimize the adverse affect on the quality of the water. Maintenance shall be performed as necessary to ensure water passage and to ensure that neither fill nor water is contaminated by equipment fluids or by loose materials falling from equipment.

The methods and materials proposed for temporary encroachments into streams, water bodies and wetlands and the protection of water quality during an encroachment shall be done by the Contractor with no direct payment unless shown otherwise on the plans.

107.24 Permits for Pesticide Application.

All pesticide (including herbicide) applications shall be done under the on-site, direct supervision of a person possessing a Commercial Pesticide Application Permit and a Professional Services Permit (turf and ornamentals category) or a Commercial Applicator Permit and a Custom Applicator Permit (right-of-way pest control category) issued through the Alabama Department of Agriculture and Industries. Proof of the possession of these permits shall be furnished to the Engineer prior to the commencement of work. Any work performed without the on-site, direct supervision of these permitted individuals will be subject to rejection by the Engineer.

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108.01 Subletting and Assignment.

(a) Subletting.

1. Limitations of the Extent of Subletting.

### 108.03 Progress Schedule of Operations.

Prior to the Preconstruction Conference, the Contractor shall submit a satisfactory, comprehensive bar graph schedule of operations to the Area Construction Engineer on all projects which have a contract time in excess of 90 working days or 180 calendar days. This schedule shall be on Form C-10 furnished by the Department at the time of contract award. Said schedule of operation shall provide a bar for each major phase of construction such as, but not limited to, clearing and grubbing, grading, drainage structures, bridges, base, shoulders, paving, etc. with an estimated start and completion date for each bar and an overall project completion date, all within the specified contract time. In lieu of the Form C-10, the Contractor will be allowed to submit their Critical Path Method schedule of operations as a pdf file if the above information is included. The Engineer may order the submittal of a bar graph schedule of operation on any project which has a contract time less than that specified above should he deem such necessary for project control.

A revised bar graph schedule and completion update may be required within ten days of the occurrence of any one of the following conditions: (1) at each major change from the original submitted, (2) when a time extension is granted, and (3) when a revised bar graph schedule is requested by the Engineer.

When an electronic Critical Path schedule is required in the proposal, this schedule will be used in lieu of the bar graph schedule of operation in evaluating work progress. In such case, the same time frame noted in this Article for the original submittal along with the update requirements will apply.

The Engineer's approval of the aforementioned Schedule of Operations does not waive any contract requirements.

### 108.04 Prosecution of Work.

#### (a) Preconstruction Conference.

The Contractor and Subcontractors shall attend a preconstruction conference scheduled by the Engineer and shall describe how the work will be prosecuted.

The preconstruction conference will be held after the award of the contract and prior to the commencement of any work.

#### (b) Soil Erosion and Stormwater Management.

##### 1. Compliance and Progress.

If the Contractor fails to comply with the requirements of the National Pollutant Discharge Elimination System (NPDES) General Permit, the Erosion and Sediment Control Plan (ESCP), the Construction Best Management Practices Plan (CBMPP), the accepted Stormwater Management Plan (SWMP), other contract documents, or the directions of the Engineer, the Engineer may order the Contractor to discontinue all operations except work in managing erosion, sediment transport, turbidity, and construction stormwater discharge until the requirements are met. Temporary cessation of operations for environmental compliance does not and shall not constitute a delay or qualify for consideration of an extension of contract time. Failure of ALDOT to observe the work of the Contractor does not relieve the Contractor of its contractual responsibility for the prevention of soil erosion and the control of sediment.

**The Permittee's QCP is responsible for mitigation of damage to public or private property.**

The Contractor shall not commence any activities within a drainage area that disturb the soil or expose it to erosive forces until fully prepared to continuously pursue work until permanent soil stabilization is achieved. The installation of temporary soil erosion and sediment control Best Management Practices (BMPs) shall be performed in coordination with the installation of the permanent erosion control features to assure effective continuous erosion control throughout the life of the project. The Contractor will be required to construct, install and maintain all permanent erosion control features as grading advances.

##### 2. Manufacturer Recommendations for Manufactured Products and Devices.

The Contractor shall furnish the manufacturer's recommendations for material selection, installation and maintenance of any manufactured BMP or manufactured component of a BMP to the Engineer prior to installation.

##### 3. Contractor's Stormwater Management Plan.

The Contractor shall prepare a Stormwater Management Plan (SWMP) for all projects. The SWMP is required regardless of the type of work, funding or regulatory permitting. The SWMP is required regardless **of whether or not an "Erosion and Sediment Control Plan" is shown in the plans. The most recent version of ALDOT's electronic SWMP template shall be**

**used to create the Contractor's SWMP. The Contractor and the erosion and sediment control** Subcontractor, if applicable, shall sign and certify the SWMP. Submitted SWMPs will not be considered complete if the provided template has been modified. Three copies of the SWMP shall be submitted to the Area Construction Engineer at least 7 days prior to the preconstruction conference.

The SWMP shall provide sequences and details of all erosion and sediment control work, clearing and grubbing operations, grading operations and operations establishing permanent erosion control features. The SWMP shall include operational details and identification of personnel and equipment that will be dedicated to implementing the plan at all phases of the work. The SWMP shall include a project specific weather preparedness and recovery plan based on the requirements of Subarticle 107.21(d). Work shall not begin until the SWMP has been accepted as complete by the Engineer.

Written acknowledgement of NPDES permit coverage from ADEM and other required clearances and acknowledgements required by Subarticle 106.01(b) for any offsite waste areas or pits shall be submitted with or included in the SWMP. The details for proposed temporary encroachments into streams, water bodies and wetlands required by Article 107.23 shall be submitted with or included in the SWMP. Requests to store fuel tanks or other chemicals on ALDOT right of way and applicable spill prevention plans required by Article 107.22 shall also be submitted with or included in the SWMP.

#### 4. Fuel Tanks.

Any requests to store a fuel tank on the project right of way shall be accompanied by a Spill Prevention Control and Countermeasures (SPCC) Plan and both shall be submitted with or included in the SWMP as required in Article 107.22. The use of onsite fuel storage tanks will not be allowed if this is shown to be prohibited on the plans.

#### 5. Erosion and Sediment Control Plan.

**When an "Erosion and Sediment Control Plan" (ESCP) is included in the plans, it is** considered to be a part of the ALDOT CBMPP. The Contractor shall comply with the requirements of the design details as shown therein. The Contractor may submit requested modifications to the ESCP as part of the SWMP for acceptance or rejection by the Engineer. The ESCP may also be modified by the Engineer as field conditions warrant. The Contractor shall install BMPs in an effective manner and at all locations directed or permitted by the Engineer, regardless of the BMP quantities and locations depicted on the ESCP. All modifications made to the ESCP will be documented in the CBMPP by the **Permittee's QCI** and certified by the **Permittee's QCP**.

#### 6. Qualified Credentialed Professionals.

The Department may assign a full-time Qualified Credentialed Professional (Project QCP) to the project. Otherwise another ALDOT QCP, typically the Area Stormwater Coordinator, will perform most of the Project QCP duties. The Project QCP will report to the Project Manager and will be guided by the Area Stormwater Coordinator. The Project QCP will oversee Contractor compliance with the NPDES General Permit, the CBMPP, the Erosion and Sediment Control Plan, and the Contractor's SWMP. **To accomplish this, the Project QCP** duties include:

- **Reviewing and approving the Contractor's SWMP;**
- Signing as the Operational QCP of the ALDOT CBMPP and maintaining and updating the ALDOT CBMPP Operational Component;
- Possessing knowledge of the location and condition of all discharge points within the project limits;
- Communicating to the Project Manager and the Area Stormwater Coordinator any issues of regulatory noncompliance or any potential violations in the area of environmental protection and construction stormwater;
- Supervising and directing the Project QCIs;
- Providing oversight of the Erosion and Sediment Control Crew (if applicable) and the installation, maintenance, repair, correction and removal of BMPs;
- Providing **oversight of the Contractor's forces during clearing, grading, and** construction of stormwater conveyances in order to minimize the potential for negative environmental impact;



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- Communicating with the Project Manager and Contractor QCP (or superintendent) a minimum of once per month and attending project meetings;
- Reviewing and approving Inspection Certification Reports and coordinating with ALDOT and Contractor personnel to ensure that any stormwater related issues are addressed in a timely manner;
- Conducting semi-annual formal stormwater Site Evaluations described in Item 107.21(e)3. and entering the corresponding Inspection Certification Reports into the Stormwater Tracking System;
- Accompanying ADEM personnel on all regulatory inspections of the project and communicating the proceedings and outcomes to the Project Manager and the Area Stormwater Coordinator;
- Representing the Department before regulatory agencies as its Qualified Credentialed Professional and directing any mitigation efforts on behalf of the Department.

7. Qualified Credentialed Inspectors.

**a. Contractor's Qualified Credentialed Inspectors**

The Contractor shall assign to each project a full-time primary and a backup Qualified Credentialed Inspector (Contractor QCI) certified by ADEM and verified by ALDOT. The Contractor QCI shall be an employee of the Contractor. The name, contact information, and credentials of the Contractor QCIs shall be included in the SWMP and the Engineer shall be notified whenever a substitute Contractor QCI is assigned by the Contractor. There will be no direct compensation for the Contractor QCIs.

The Contractor QCI shall work under the direct supervision of the Contractor QCP and/or superintendent. The Contractor QCI shall be in charge and direction of the **Contractor's work** regarding the implementation of the CBMPP, the ESCP, and the SWMP, and shall have the authority from the Contractor to mobilize crews to make immediate repairs to BMPs during working and non-working hours. To accomplish this, the Contractor QCI duties include:

- **Possessing knowledge of the Contractor's SWMP**, the ESCP, the CBMPP, and the NPDES General Permit requirements;
- Maintaining QCI certification by attending required refresher training;
- Possessing knowledge of the location and condition of all discharge points within the project limits;
- Communicating to the Contractor QCP and/or superintendent any issues of regulatory noncompliance or any potential violations in the area of environmental protection and construction stormwater;
- Guiding the Erosion and Sediment Control Crew (if applicable) and the **Contractor's forces as directed by or in the absence of the Contractor QCP** and/or superintendent, during the installation, maintenance, repair, correction and removal of all BMPs in order to minimize the potential for negative environmental impact;
- Reporting to the Contractor QCP and/or superintendent a minimum of once per week and attending project meetings in the absence of the Contractor QCP and/or superintendent;
- Inspecting BMPs on a daily basis to ensure that all controls are in place at all times and ensuring conformance with the contract documents;
- Conducting all required formal stormwater inspections, turbidity monitoring and construction stormwater sampling described in Item 107.21(e)2. with ALDOT personnel;
- Coordinating with Contractor and ALDOT personnel to ensure that any stormwater related issues are addressed in a timely manner.

**b. Department's Qualified Credentialed Inspectors**

The Department will assign to each project at least one full-time Qualified Credentialed Inspector (Project QCI), certified by ADEM. The Project QCI will work under the direct supervision of the Project QCP and/or Project Manager. The Project QCI will assist the Project QCP and/or Project Manager with overseeing Contractor adherence to the requirements of the NPDES General Permit, the CBMPP, the Erosion and Sediment

**Control Plan, and the Contractor's SWMP. To accomplish this, the Project QCI duties include:**

- Possessing knowledge of the Contractor's SWMP, the ESCP, the CBMPP, and the NPDES General Permit requirements;
- Maintaining QCI certification by attending required refresher training;
- Possessing knowledge of the location and condition of all discharge points within the project limits;
- Communicating to the Project QCP and/or Project Manager any issues of regulatory noncompliance or any potential violations in the area of environmental protection and construction stormwater;
- Assisting the Project QCP and/or Project Manager with oversight of the **Contractor's forces during clearing**, grading, and construction of stormwater conveyances in order to minimize the potential for negative environmental impact;
- Reporting to the Project QCP and/or Project Manager a minimum of once per week and attending project meetings in the absence of the Project QCP and/or Project Manager;
- Inspecting BMPs on a daily basis to ensure that all controls are in place at all times and ensuring conformance with the contract documents;
- Conducting all required formal stormwater inspections, turbidity monitoring and construction stormwater sampling described in Item 107.21(e)2. with the Contractor QCI and entering the corresponding Inspection Certification Reports into the Stormwater Tracking System;
- Coordinating with the Project QCP and/or the Project Manager and Contractor personnel to ensure that any stormwater related issues are addressed in a timely manner.

#### 8. Erosion and Sediment Control Crew.

When required by the plans, the Contractor shall provide a full-time, dedicated Erosion and Sediment Control Crew. The crew shall be under the supervision of the Contractor QCP or superintendent, who shall be assisted by the Contractor QCIs. There will be no direct compensation for the Erosion and Sediment Control Crew.

For all projects, the Contractor shall provide sufficient personnel and appropriate and sufficient equipment and materials on the project at all times to meet the daily erosion and sediment control plan implementation requirements. Additional personnel, equipment, and materials shall be readily available to assist with implementation of the weather preparedness and recovery plan within the timeframe allowed by the NPDES General Permit. Erosion and sediment control materials shall be stored on the project and protected from precipitation, runoff, and sunlight.

#### 9. Stormwater Meeting.

A Stormwater Meeting shall be held after the preconstruction conference and prior to the beginning of work. The meeting shall convene at the project site. ALDOT construction personnel, including the Area Stormwater Coordinator and/or the Project QCP, the Project Manager, the Project QCI, the Contractor QCP (if applicable), the Contractor QCI, the **Contractor's superintendent and any subcontractors that will be involved in clearing**, earthwork, seeding or erosion and sediment control operations shall attend. The ESCP, the CBMPP, the SWMP, clearing limits and sequence of construction shall be among the items discussed. Project discharge points, adjacent property and water bodies should be observed and discussed during the meeting. Any existing stormwater problems or issues should also be discussed and documented. The Contractor shall notify all subcontractors of the meeting and require their attendance. ALDOT will notify all applicable regulatory agencies.

#### 10. Limit Of Exposure Of Erodible Material.

No more than 17 acres {7.0 ha} of erodible material shall be exposed at any time unless otherwise indicated on the plans by a project note that has been specifically approved by the State Construction Engineer. No increase in the limit of exposure will be considered after letting. If it is noted on the plans that the area of erodible material will be allowed to be greater than 17 acres {7.0 ha}, the Contractor shall include as part of the SWMP project specific details addressing management of the increased acreage during clearing and

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grubbing, excavation and embankment, vegetation establishment, temporary erosion and sediment control, drainage and construction of stormwater operations. Any approval to increase the area of exposure, including that shown on the plans, may be rescinded if the project is found by the Engineer to be noncompliant with the NPDES General Permit or environmental related contract requirements.

All areas of exposed erodible material will be considered as contributing to the limit of exposure until final required stabilization is installed or applied and erosion is controlled to the maximum extent practicable. The Contractor may submit a request for review and approval by the State Construction Engineer to exclude areas of exposure which are outside of the control of the Contractor and have been temporarily stabilized.

Requests for approval for unnecessary clearing may be considered only if provisions for erosion and sediment control are proposed to be implemented at the Contractor's expense.

(c) Notice of Intention to Start Work.

The Contractor shall provide the Engineer written notice of his intention to start work at least 72 hours in advance of beginning work and at least 24 hours in advance of beginning particular features of construction, such as driving piles, placing concrete, et cetera. Should prosecution of the work be discontinued by the Contractor with the consent of the Engineer, the Contractor shall give the Engineer at least 48 hours notice in writing before resuming operations.

(d) Continuous Prosecution of the Work.

The Contractor shall prosecute the work continuously and diligently in the order and manner set out in his schedule or prescribed by the Engineer. He shall provide sufficient satisfactory materials, labor, and equipment to guarantee the completion of the project in accordance with the plans and specifications within the time specified in the contract.

Should the Contractor fail to maintain a satisfactory rate of progress, the Engineer will require that additional forces and equipment be placed on the work to bring the project up to schedule and maintain it at that level. Failure to maintain the quality and progress of the work shall be cause for the Engineer to withhold all estimates which are or may become due, until satisfactory quality and progress are maintained; or the contract may be defaulted as provided in Article 108.12.

(e) Unsatisfactory Progress.

Should the Contractor fail to maintain a satisfactory rate of progress in performance of the work, prior to expiration of the contract, the following regulation shall apply:

After preparation of the Contractor's monthly estimate, the Department will review the progress of the work. The dollar amount of the work performed will be the total dollar amount that has been paid minus the dollar amount of partial payments for stored materials. The percentage of work performed will be based on the dollar amount of work performed and the total contract amount. This will be compared to the percentage of contract time elapsed. If the percentage of the work performed, as compared to the percent of contract time elapsed, is behind by more than 25 percentage points, a warning notice of possible disqualification will be sent to the Contractor by certified mail, return receipt requested (appropriate credit will be allowed for any extension previously approved in conformity with Article 108.09). The warning notice will describe the unsatisfactory progress revealed by the computation and that ten days will be allowed from the date of receipt of the warning in which to bring his progress within the allowed 25 percent, complete the project, or furnish acceptable reasons why the Contractor should not be given a final notice of disqualification. At the end of the 10-day period, if the Contractor's progress is not within the allowed percentage, nor has acceptable reason been furnished to waive final disqualification, the Department will issue a final notice of disqualification.

108.05 Limitation of Operation.

The Contractor shall conduct the work at all times in such a manner and in such sequence as will insure the least interference with traffic. He shall have due regard to the location of detours and to the provisions for handling traffic. The Engineer may require the Contractor to finish a section on which work is in progress before work is started on any additional section if the opening of such section is essential to public convenience.



#### 108.06 Character of Workmen, Methods, and Equipment.

The Contractor shall at all times employ sufficient labor and equipment for prosecuting the several classes of work to full completion in the manner and time required by these specifications.

All workmen shall have sufficient skill and experience to perform properly the work assigned to them. Workmen engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform all work properly and satisfactorily.

Any person employed by the Contractor or by any Subcontractor who, in the opinion of the Engineer, does not perform his work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the Engineer, be removed forthwith by the Contractor or Subcontractor employing such person, and shall not again be employed in any portion of the work without the approval of the Engineer.

Should the Contractor fail to remove such person or persons as required above, or fail to furnish suitable and sufficient personnel for the proper prosecution of the work, the Engineer may suspend the work by written notice until compliance with such orders.

All equipment which is proposed to be used on the work shall be of sufficient size and in such mechanical condition as to meet requirements of the work and to produce a satisfactory quality of work. Equipment used on any portion of the project shall be such that no injury to the roadway, adjacent property, or other highways will result from its use.

When the methods and equipment to be used by the Contractor in accomplishing the construction are not prescribed in the contract, the Contractor is free to use any methods or equipment that he demonstrates to the satisfaction of the Engineer will accomplish the contract work in conformity with the requirements of the contract.

When the contract specifies the use of certain methods and equipment, such methods and equipment shall be used unless others are authorized by the Engineer. If the Contractor desires to use a method or type of equipment other than those specified in the contract, he may request authority from the Engineer to do so. The request shall be in writing and shall include a full description of the methods and equipment proposed and the reasons for desiring to make the change. If approval is given, it will be on the condition that the Contractor will be fully responsible for producing work in conformity with contract requirements. If, after trial use of the substituted methods of equipment, the Engineer determines that the work produced does not meet contract requirements, the Contractor shall discontinue the use of the substitute method or equipment and shall complete the remaining construction with the specified methods and equipment. The Contractor shall remove the deficient work and replace it with work of specified quality, or take such other corrective action as the Engineer may direct. No change will be made in basis of payment for the construction items involved nor in contract time as result of authorizing a change in methods or equipment under these provisions.

#### 108.07 Temporary Suspension of Work.

##### (a) Authority to Suspend.

The Engineer shall have the authority to suspend the work wholly or in part by written order to the Contractor for such period or periods as he may deem necessary due to either of the following reasons:

1. Failure on the part of the Contractor to carry out orders given or to perform any provision of the contract in which case time will be charged and no time extension will be granted, or
2. Unsuitable weather or other essential conditions of a highly unusual or unpredictable nature which he considers unfavorable for the suitable prosecution of the work in which case either time charges will be suspended or a time extension will be granted.

Upon suspension, the work shall be put in proper and satisfactory condition, carefully covered and properly protected, as directed by the Engineer. Reference is made to Article 105.13.

##### (b) Legal Stoppage or Termination.

Should the progress of the work be stopped by a temporary injunction, court restraining order, process of judgment of any kind directed to either of the parties hereto, then such period of delay will not be charged against the contract time. The State shall not be liable to the Contractor for the said legal delays of 120 calendar days or less, or for termination of the contract because of a legal order except as provided in Subarticle 108.14(b). Consideration will be given to properly documented added costs for a legal delay in excess of 120 calendar days, if submitted in accordance with Section 110, Claims. If a herein noted delay is of such duration as not to be in the

## **Appendix F:**

### **Supplemental Material for Chapter 6**

ALDOT GFO 3-73:

Post-Development Stormwater Runoff Management

Determining Runoff for Small Storm Events

Pre- vs. Post-Development Spreadsheet

Post-Development Stormwater Risk Assessment

ALDOT Post-Construction BMP Inventory Form

ALDOT Post-Construction BMP Inspection Form

# ALABAMA

## DEPARTMENT OF TRANSPORTATION

### GUIDELINES FOR OPERATION

#### **SUBJECT: POST-DEVELOPMENT STORMWATER RUNOFF MANAGEMENT**

The following guidelines should be followed during drainage design on all ALDOT projects requiring new development and re-development let to contract after April 1, 2015.

Designers must provide features and practices that cause post-development hydrology to mimic pre-development hydrology of the site to the maximum extent practicable, working within the constraints of the project, at all locations of discharge. The basis for design to meet this requirement shall be small, frequent rain events up to and including the 95<sup>th</sup> percentile rain event for the site.

While working toward this design goal, initial consideration should be the use of decentralized practices and features near the source of the runoff. Design elements that utilize natural materials and processes will be considered whenever possible.

- Small, frequent rain events are those storm events with rainfall depths up to and including the 95<sup>th</sup> percentile event for a specific county.
- Pre-development and Post-development hydrology include both peak discharge and runoff volume.
- Pre-development hydrology is the existing hydrological condition of the site just prior to construction of the planned development or re-development.
- New Development describes the creation of a new transportation facility or a new support facility that causes a ground disturbance of greater than one acre.
- Re-Development with respect to transportation facilities describes non-maintenance work performed to or on an existing transportation facility that provides for an increased number of thru lanes of travel, and causes a ground disturbance of greater than one acre. Work on an existing road that does not result in an additional thru lane does not constitute re-development.
- Re-Development with respect to support facilities describes non-maintenance work performed to or on an existing support facility that causes a ground disturbance of more than one acre.

The Chief Engineer may approve exceptions to this policy so long as downstream property will not be significantly impacted, and the bed and bank structure of receiving stream channels will not be significantly degraded by the increased stormwater discharge. Justification for an exception will be described and quantified in a written request to the Chief Engineer, including a description of the analysis and conclusions regarding downstream impacts.



RECOMMENDED FOR APPROVAL: William J. Glauz  
STATE DESIGN ENGINEER

APPROVAL: Ronald G. Baldwin  
CHIEF ENGINEER

APPROVAL: John R. Cooper      11/24/14  
TRANSPORTATION DIRECTOR      DATE

# **DETERMINING RUNOFF FOR SMALL STORM EVENTS**

## **1. Introduction**

The following calculation guidance should be used during drainage design on all ALDOT projects requiring new development and re-development, as defined in the Guideline for Operation (GFO 3-73) (ALDOT 2014).

As stated in the GFO 3-73, designers should attempt to provide features and practices that cause post-development hydrology to mimic pre-development hydrology of the site to the maximum extent practicable for all small, frequent rain events, working within the constraints of the project, at all locations of discharge. While working toward this goal, consideration should first be given to the use of decentralized practices and features near the source of the runoff. Design elements that utilize natural materials and processes will be considered whenever possible (ALDOT 2014).

The purpose of this document is to provide calculation guidance for drainage design using small frequently occurring storms. The 95<sup>th</sup> percentile rainfall event will be used for calculating runoff volume and peak discharge. Runoff volume (in inches) is calculated using the 95<sup>th</sup> percentile rainfall event and a volumetric runoff coefficient. Peak discharge is calculated using the rainfall, basin area, modified curve number, and time of concentration. The modified curve number is determined using the rainfall and runoff volume. Peak discharge can be calculated by hand or through the use of various computer programs. Sample calculations for determining runoff and peak discharge have been included.

## **2. Design Storm**

### **2.1. Design Storm**

Small, frequently occurring storms account for a large proportion of the annual precipitation volume, and runoff from those storm events also significantly alter the discharge frequency, rate and temperature of the runoff (USEPA 2009). As indicated in the GFO 3-73, ALDOT will consider storm events with rainfall depths up to and including the 95<sup>th</sup> percentile rainfall event, as defined by USEPA (2009), for a specific location as being such small storm events. In turn, for stormwater runoff calculation, the design storm to be used in the analysis will be the 95<sup>th</sup> percentile rainfall event.

### **2.2. 95<sup>th</sup> Percentile Rainfall Depths in Alabama**

Estimation of the 95<sup>th</sup> percentile rainfall depths for all locations throughout the State was performed by the ALDOT Design Bureau according to the approach detailed in the MS4 Stormwater Management Program Plan. Figure 1 is the isohyetal map for the 95<sup>th</sup> percentile rainfall depths in Alabama generated using that approach.

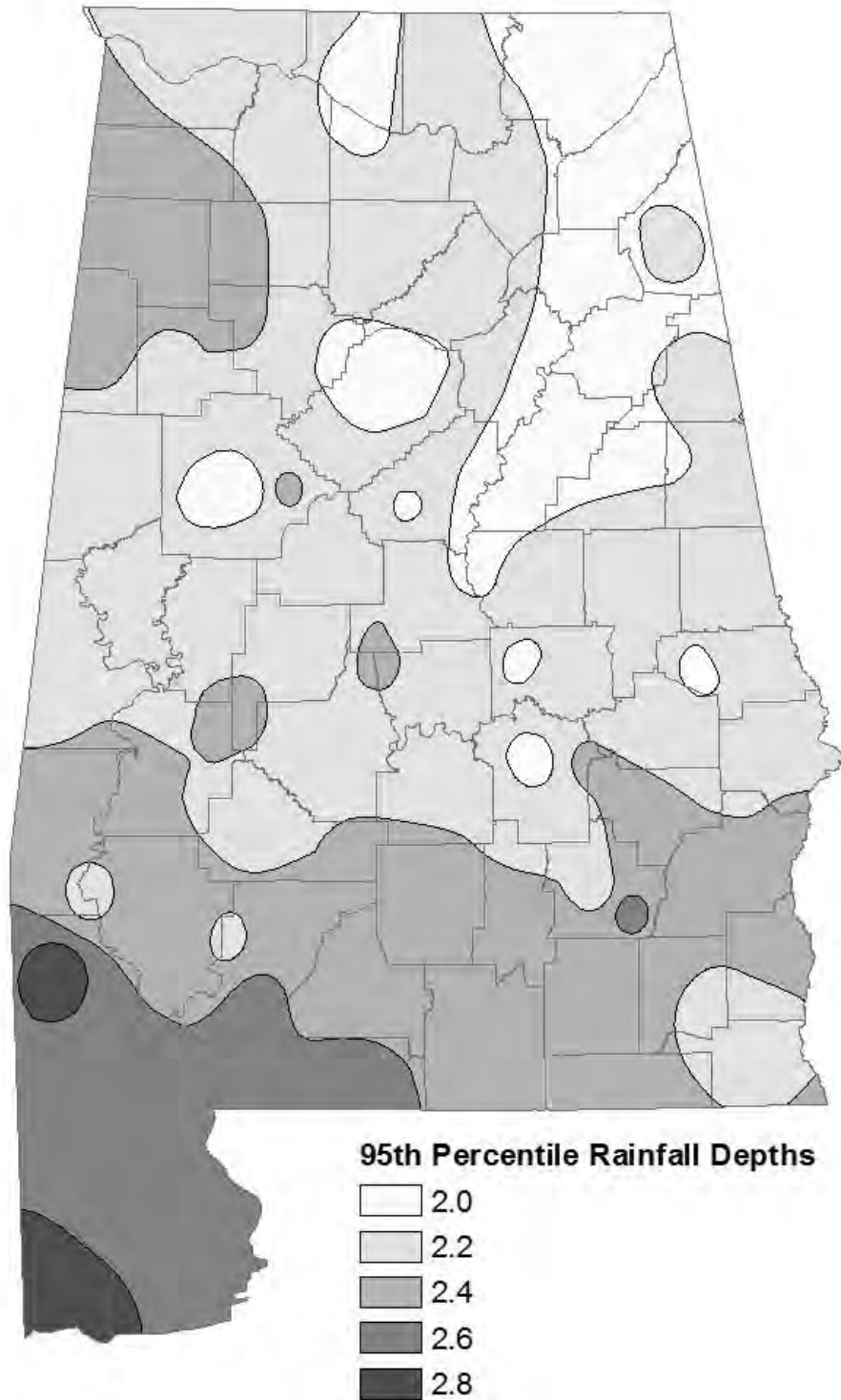


Figure 1 Isohyetal map for the 95<sup>th</sup> percentile rainfall depths in Alabama



### 3. Stormwater Runoff Volume and Peak Discharge Calculation

#### 3.1. NRCS Curve Number Method

The curve number (CN) method is a commonly used tool for estimating runoff from rainfall excess. The method was developed by the USDA Natural Resources Conservation Service (NRCS, formerly SCS) and described in detail in Chapter 10 of the National Engineering Handbook, Part 630 - Hydrology (NEH 630) (USDA 2004). In this method, runoff is calculated based on precipitation, initial abstraction, and watershed storage. The curve number runoff equation is:

$$Q = \frac{(P - I_a)^2}{(P - I_a) + S} \quad P > I_a \quad (1)$$

$$Q = 0 \quad P \leq I_a \quad (2)$$

where, Q is runoff (in.), P is design storm (in.),  $I_a$  is initial abstraction (in.), and S is potential maximum retention (in.). Initial abstraction ( $I_a$ ) consists mainly of interception, infiltration, and depression storage.  $I_a$  can be highly variable but NRCS (USDA 2004) found that it can be approximated in many cases by using the following formula:

$$I_a = 0.2 S \quad (3)$$

Therefore, the runoff equation becomes:

$$Q = \frac{(P - 0.2 S)^2}{(P + 0.8 S)} \quad P > I_a \quad (4)$$

where, S is a function of CN:

$$S = \frac{1000}{CN} - 10 \quad (5)$$

Therefore, runoff can be calculated using only the curve number and rainfall. Curve numbers are determined by land cover type, hydrologic condition, antecedent moisture condition (AMC), and hydrologic soil group (HSG). Curve numbers for various land covers based on an average AMC for annual floods and  $I_a = 0.2 S$  can be found in NEH 630 (USDA 2004). For watersheds having multiple land cover types and HSGs, CN is weighted to get watershed CN, and the runoff is estimated using that weighted CN.

Despite its widespread use, the weighted CN method may not be appropriate for estimating runoff from smaller storm events because it can imply a significant initial loss that may not take place, as noted by Pitt (1999). Since all estimated 95<sup>th</sup> percentile storm events in Alabama are less than 3.0 inches (ranges from 2.0 to 2.8 inches), the design storm will be treated as a small storm. Therefore, the weighted CN will not be used to perform runoff volume and peak discharge calculations for the design storm. Instead, the CN will be modified using the methodology discussed in the following section.

### 3.2. Small Storm Hydrology Method

The Small Storm Hydrology Method (Pitt 1987) was developed to estimate the runoff volume from urban and suburban land uses for relatively small storm events. In this method, runoff is calculated using volumetric runoff coefficients. Pitt (2013) lists the runoff coefficients that are based on extensive field research conducted in the Midwestern U.S., the Southeastern U.S., and Ontario, Canada, over a wide range of land uses and storm events. Runoff coefficients for individual source areas generally vary with the rainfall amount. Larger storms have higher coefficients. The runoff coefficients for various source areas (Table 1) are derived using the original table from Pitt (2013).

Runoff is simply calculated by multiplying the rainfall amount by the appropriate runoff coefficient. Because the runoff relationship is linear for a given storm, a composite runoff coefficient (weighted average) can be computed for an area consisting of multiple land uses. Therefore, runoff is given by:

$$Q = P * R_{vc} \quad (6)$$

where, Q is runoff (in.), P is the 95<sup>th</sup> percentile rainfall (in.), and  $R_{vc}$  is the composite runoff coefficient.

The following equation is used to determine the stormwater runoff volume (V) in cubic feet:

$$V = \frac{P}{12} * R_{vc} * A * 43560 \quad (7)$$

where, V is runoff volume (ft<sup>3</sup>) and A is drainage area (acres). Using the rainfall amount and runoff, a corresponding modified CN can be computed utilizing the following equation:

$$CN = \frac{1000}{10 + 5P + 10Q - 10\sqrt{Q^2 + 1.25 Q P}} \quad (8)$$

Once the modified CN is computed, the time of concentration ( $t_c$ ) can be computed based on methods identified in Chapter 15 of NEH 630 (USDA 2010) and peak discharge ( $Q_p$ ) for the design storm can be computed. Procedures and sample calculations for stormwater runoff volume and peak discharge estimation are provided in the next subsection.

Table 1. Source areas and corresponding  $R_v$  values for different rainfall amounts

Source Areas	Rainfall (inches)				
	2.0	2.2	2.4	2.6	2.8
<b>Roof Areas</b>					
Flat, Connected	0.90	0.91	0.91	0.92	0.93
Pitched, Connected	0.99	0.99	0.99	0.99	0.99
Flat or Pitched, Unconnected, A Soil	0.07	0.09	0.10	0.12	0.13
Flat or Pitched, Unconnected, B Soil	0.16	0.18	0.19	0.21	0.22
Flat or Pitched, Unconnected, C or D Soil	0.26	0.28	0.29	0.31	0.32
<b>Parking and Storage Areas</b>					
Paved, Connected	0.99	0.99	0.99	0.99	0.99
Unpaved, Connected	0.89	0.90	0.91	0.92	0.92
Paved or Unpaved, Unconnected, A Soil	0.07	0.09	0.10	0.12	0.13
Paved or Unpaved, Unconnected, B Soil	0.16	0.18	0.19	0.21	0.22
Paved or Unpaved, Unconnected, C or D Soil	0.26	0.28	0.29	0.31	0.32
<b>Driveways or Sidewalks</b>					
Connected	0.99	0.99	0.99	0.99	0.99
Unconnected, A Soil	0.07	0.09	0.10	0.12	0.13
Unconnected, B Soil	0.16	0.18	0.19	0.21	0.22
Unconnected, C or D Soil	0.26	0.28	0.29	0.31	0.32
<b>Streets or Alley Areas</b>					
Smooth textured	0.88	0.89	0.90	0.91	0.91
Intermediate or Rough Textured	0.84	0.85	0.86	0.87	0.88
<b>Highway Areas</b>					
Paved Lane and Shoulder	0.88	0.89	0.90	0.91	0.91
<b>Undeveloped or Pervious Areas</b>					
Undeveloped or Pervious Areas, A Soil	0.07	0.09	0.10	0.12	0.13
Undeveloped or Pervious Areas, B Soil	0.16	0.18	0.19	0.21	0.22
Undeveloped or Pervious Areas, C or D Soil	0.26	0.28	0.29	0.31	0.32
<b>Residential Areas*</b>					
Low Density, < 2 units / acre	0.26	0.28	0.29	0.31	0.32
Medium Density, between 2 and 6 units / acre	0.55	0.58	0.60	0.61	0.62
High Density, > 6 units / acre	0.99	0.99	0.99	0.99	0.99
<b>Other Areas</b>					
Commercial / Industrial	0.99	0.99	0.99	0.99	0.99
High Traffic Urban Paved Areas	0.98	0.98	0.98	0.99	0.99
High Traffic Urban Pervious Areas	0.55	0.58	0.60	0.61	0.62
Excavation or Embankment Construction	0.26	0.28	0.29	0.31	0.32

**Connected** - flows directly into the drainage system, or occurs as concentrated shallow flow that runs over a pervious area and then into a drainage system.

**Unconnected** - drains over a pervious area as sheet flow, provided the impervious area is less than one-half the pervious area and the flow path through the pervious area is at least twice the impervious surface flow path. For unconnected flow use the  $R_v$  values associated with the appropriate soil type for pervious areas.

\*Residential areas include buildings, driveways, yard and streets.



### 3.3. Calculation Procedures

Stormwater runoff volume and peak discharge can be estimated using the following procedure:

1. Determine the 95<sup>th</sup> percentile rainfall depth for the project location using the isohyetal map (Figure 1).
2. Delineate watershed boundaries and divide watershed into source areas based on its land use and soil type characteristics.
3. Assign runoff coefficients to source areas using Table 1 and compute the composite runoff coefficient ( $R_{vc}$ ) by calculating a weighted average.
4. Compute runoff volume using Equations (6) and (7).
5. Compute modified CN using Equation (8).
6. Compute travel times and time of concentration using Velocity Method as described in Chapter 15 of NEH 630 (USDA 2010)
7. Calculate  $I_a/P$  using Equations (3) and (5).
8. Compute unit peak discharge ( $q_u$ ) using Figure A.2 or A.3.
9. Calculate peak discharge using Graphical Peak Discharge Method as described in TR-55 (USDA 1986)

Land use and soil data can be obtained from various online sources. A few example websites are provided below:

#### **Land Use Data:**

[National Land Cover Database 2011 \(NLCD 2011\)](http://www.mrlc.gov/nlcd2011.php) (<http://www.mrlc.gov/nlcd2011.php>): NLCD 2011 is the most recent national land cover product created by the Multi-Resolution Land Characteristics (MRLC) Consortium that has been applied consistently across the United States at a spatial resolution of 30 meters. Due to the coarser resolution of land use data for the purpose of this study, it is recommended that designers use recent aerial imagery to delineate land use for given location manually and/or using GIS tools.

#### **Aerial Imagery:**

Aerial imagery is available online in ArcGIS or it can be downloaded from different sources:

[USGS EarthExplorer](http://earthexplorer.usgs.gov) (<http://earthexplorer.usgs.gov>): Aerial imagery of different types (high resolution orthoimagery, NAIP JPG2000, etc.) are available to download depending on selected location.

[USGS National Map Viewer](http://viewer.nationalmap.gov/viewer) (<http://viewer.nationalmap.gov/viewer>): 1-meter orthoimagery and other data can be downloaded from USGS National Map Viewer.

#### **Soil Data:**

The Soil Survey Geographic Database (SSURGO), operated by the USDA-NRCS, provides soil data and information produced by the National Cooperative Soil Survey. The information can be displayed in tables or as maps and is available for most areas in Alabama and other states. SSURGO map data can be viewed in the [Web Soil Survey](#)

(<http://websoilsurvey.nrcs.usda.gov>) or downloaded in ESRI Shapefile format. The coordinate systems are Geographic. Attribute data can be downloaded in text format that can be imported into a Microsoft Access database.

### 3.4. Sample Calculation (Example 1)

Using steps outlined in Section 3.3, the calculation of pre-development and post-development runoff volumes and peak discharges for the 95<sup>th</sup> percentile rainfall event in a watershed near Birmingham, Alabama is carried out below:

#### Pre-development Conditions

1. Determine the 95<sup>th</sup> percentile rainfall depth for the project location using the isohyetal map (Figure 1).

95<sup>th</sup> percentile rainfall (P) = 2.0 in.

2. Delineate watershed boundaries and divide watershed into source areas based on its land use and soil type characteristics.

Manual delineation or automatic delineation using GIS tools can delineate watershed boundaries for a given outlet and can divide a watershed into grouped areas based on its land use and soil type characteristics.

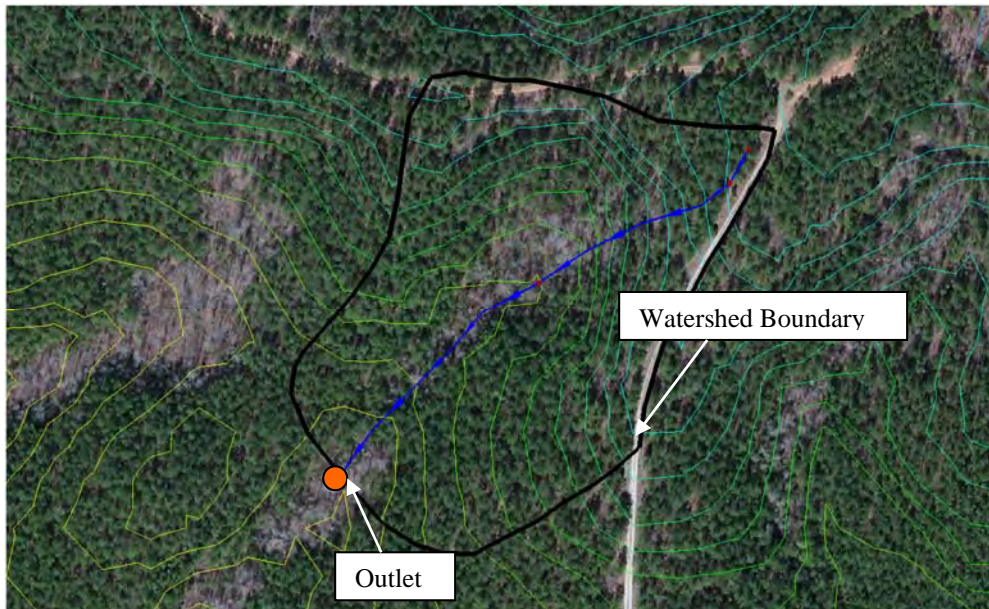


Figure 2. Aerial photograph indicating an outlet and drainage boundary

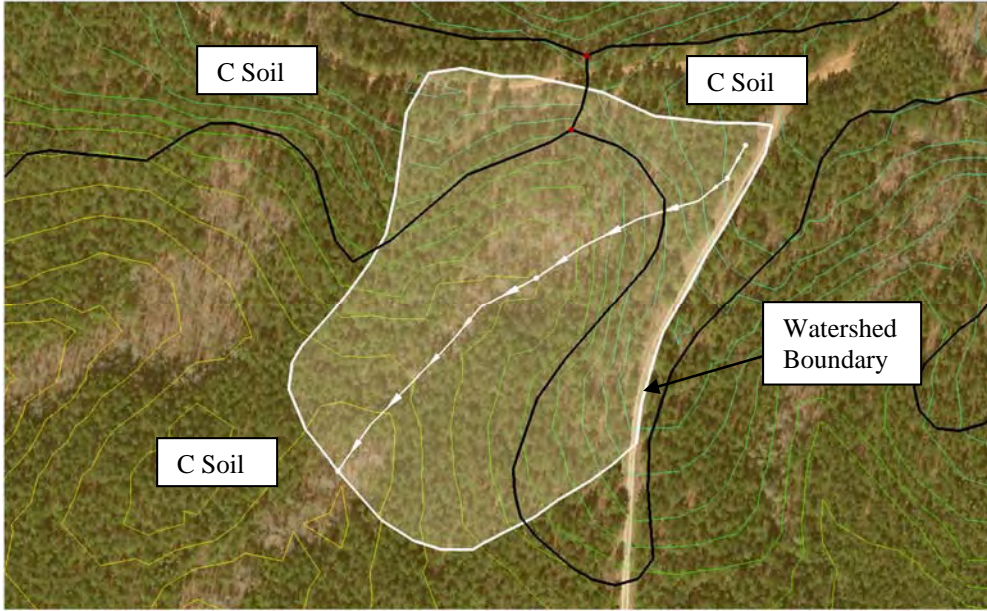


Figure 3. Aerial photograph indicating drainage boundary and soil types

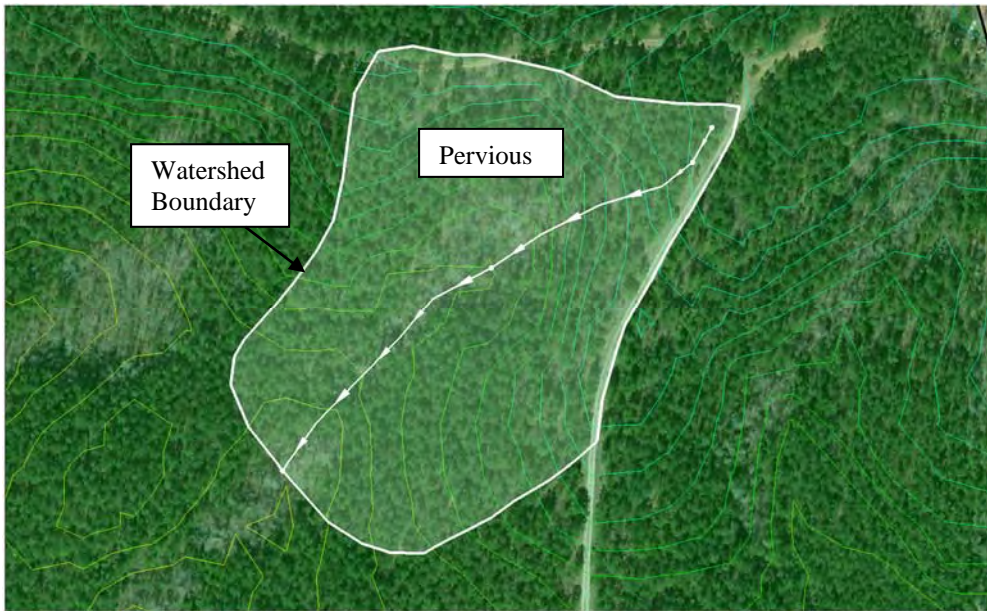


Figure 4. Aerial photograph indicating drainage boundary and pre-development source areas



Table 2. Land use and soil type distribution of sample watershed in Birmingham, Alabama

	Land Use	Soil Type	Area in acres
1	Woods- Good	Type C	5.9

3. Assign runoff coefficient to source areas using Table 1 and compute the composite runoff coefficient ( $R_{vc}$ ) by calculating a weighted average.

Table 3. Source areas and corresponding  $R_v$

Source areas	Area (acres)	$R_v$ (2 in)	Area * $R_v$
Woods (Pervious areas – clayey soils, HSG - C)	5.9	0.26	1.534
$\sum A =$	5.9	$\sum (A * R_v) =$	1.534

Composite runoff coefficient

$$R_{vc} = \frac{\sum A * R_v}{\sum A} = \frac{1.534}{5.9} = \mathbf{0.26}$$

4. Compute runoff volume using Equations (6) and (7).

$$Q = P * R_{vc} = 2 * 0.26 = \mathbf{0.52 \text{ in.}}$$

$$V = \frac{P}{12} * R_{vc} * A * 43560 = \frac{2}{12} * 0.26 * 5.9 * 43560 = \mathbf{11137 \text{ ft}^3}$$

5. Compute modified CN using Equation (8)

$$CN = \frac{1000}{10 + 5P + 10Q - 10\sqrt{Q^2 + 1.25 Q P}}$$

$$CN = \frac{1000}{10 + 5 * 2 + 10 * 0.52 - 10\sqrt{0.52^2 + 1.25 * 0.52 * 2}} = \mathbf{79}$$

6. Compute travel time and time of concentration ( $t_c$ ) using Velocity Method

Segment 1 – Sheet Flow

Travel time for sheet flow

$$T_t = \frac{0.007(nL)^{0.8}}{(P_2)^{0.5}S^{0.4}} = \frac{0.007(0.4 * 50)^{0.8}}{(4.1)^{0.5}(0.029)^{0.4}} = 0.157 \text{ hr} = 9.4 \text{ min}$$

where, overland roughness coefficient ( $n$ ) = 0.4 (Light Woods) (Appendix Table A.1),  
 flow length ( $L$ ) = 50 ft,  
 2-year 24-hour rainfall ( $P_2$ ) = 4.1 in., and  
 slope ( $S$ ) = 0.029 ft/ft

Segment 2 – Shallow Concentrated Flow

From Figure A.1 (in Appendix) based on ground cover (Forest) and slope (0.204), average flow velocity (v)

$$v = 2.516(S)^{0.5} = 2.516 * 0.204^{0.5} = 1.14 \text{ ft/s}$$

Travel time for shallow concentrated flow

$$T_t = \frac{L}{60 v} = \frac{300}{60 * 1.14} = 4.4 \text{ min}$$

Segment 3 – Open Channel Flow

For trapezoidal channel of width = 4 feet, flow depth = 0.4 feet (Grassed waterways, shallow concentrated flow, Figure A.1), and side slope (H:V)=3:1,

$$\text{Area, } A = \frac{1}{2} * 0.4 * (6.4 + 4) = 2.08 \text{ ft}^2$$

$$\text{Wetted Perimeter, } P = 1.265 * 2 + 4 = 6.53 \text{ ft}$$

$$\text{Hydraulic Radius, } R = A/P = 2.08/6.53 = 0.319$$

For open channel flow, velocity is estimated using Manning's equation:

$$v = \frac{1.49(R)^{\frac{2}{3}}(S)^{\frac{1}{2}}}{n} = \frac{1.49(0.319)^{\frac{2}{3}}(0.051)^{\frac{1}{2}}}{0.06} = 2.62 \frac{\text{ft}}{\text{s}}$$

where, channel roughness (n) = 0.06 and slope (S) = 0.051 ft/ft

Travel time for open channel flow

$$T_t = \frac{L}{60 v} = \frac{380}{60 * 2.62} = 2.4 \text{ min}$$

Time of Concentration

Table 4. Time of concentration calculation

Segment	Type of Flow	Length (ft)	Slope (ft/ft)	T <sub>t</sub> (min)
1	Sheet	50	0.029	9.4
2	Shallow concentrated	300	0.204	4.4
3	Open channel	380	0.051	2.4

$$t_c = 9.4 + 4.4 + 2.4 = 16.2 \text{ min} = \mathbf{0.27 \text{ hr}}$$

7. Calculate  $I_a/P$  using Equations (3) and (5).

$$I_a = 0.2 S = 0.2 * (1000/CN - 10) = 0.2 * (1000/79 - 10) = 0.532$$

$$\frac{I_a}{P} = \frac{0.532}{2} = \mathbf{0.27}$$

8. Compute unit peak discharge ( $q_u$ ) using Figure A.2 or A.3.

$$q_u = 450 \text{ csm/in (From Appendix Figure A.3 for } t_c = 0.27 \text{ hr and } I_a/P = 0.27)$$

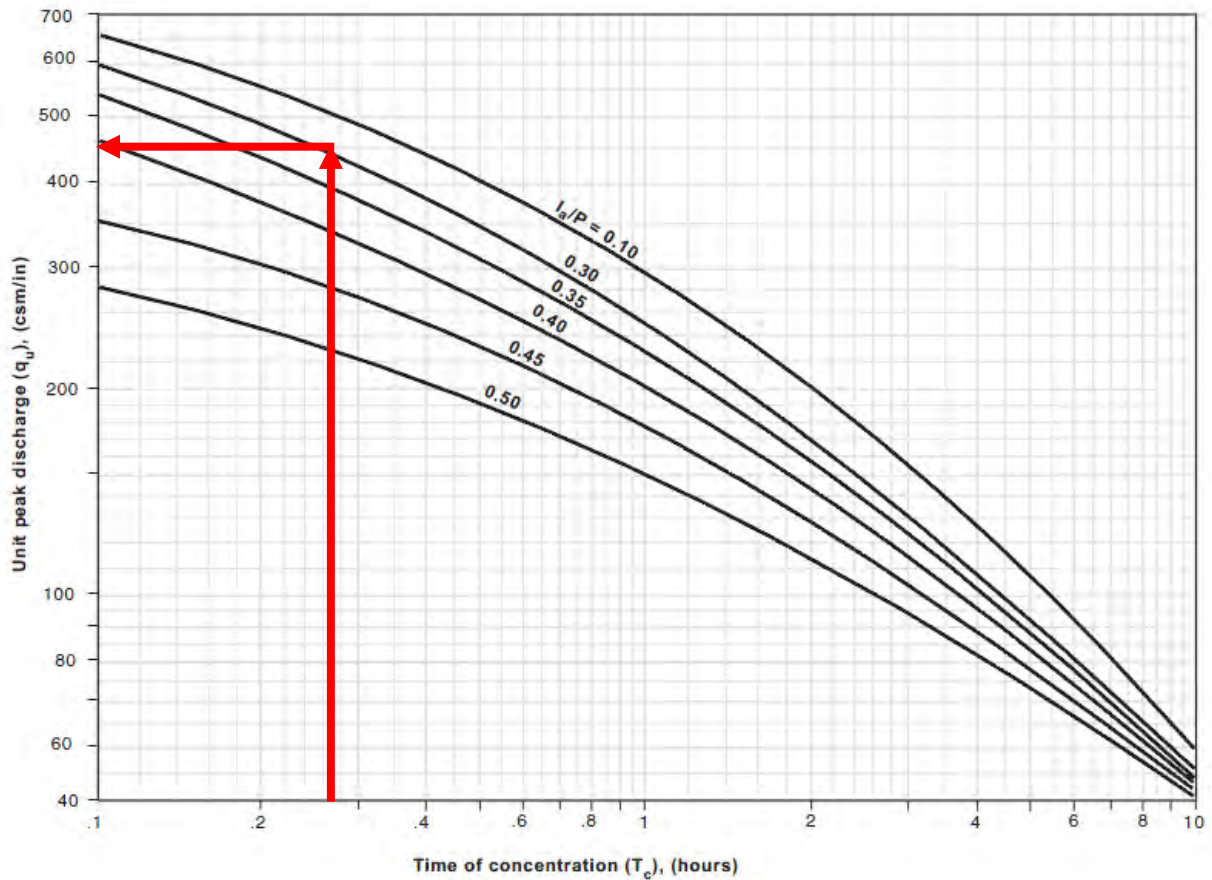
9. Calculate peak discharge ( $Q_p$ ) using Graphical Peak Discharge Method for pre-development conditions

$$Q_p = q_u A Q F_p = 450 * 0.0092 * 0.52 * 1 = \mathbf{2.2 \text{ cfs}}$$

where, drainage area (A) = 0.0092 mi<sup>2</sup>,

runoff volume (Q) = 0.52 in., and

$F_p = 1$  (From Appendix Table A.2, no pond and swamp areas)



Estimating unit peak discharge for type III rainfall distribution using Figure A.3



**Post-development Conditions**

1. Determine the 95<sup>th</sup> percentile rainfall depth for the project location using the isohyetal map (Figure 1).

95<sup>th</sup> percentile rainfall (P) = 2.0 in.

2. Delineate watershed boundaries and divide watershed into source areas based on its land use and soil type characteristics.

Manual delineation or automatic delineation using GIS tools can delineate watershed boundaries for a given outlet and can divide a watershed into grouped areas based on its land use and soil type characteristics.

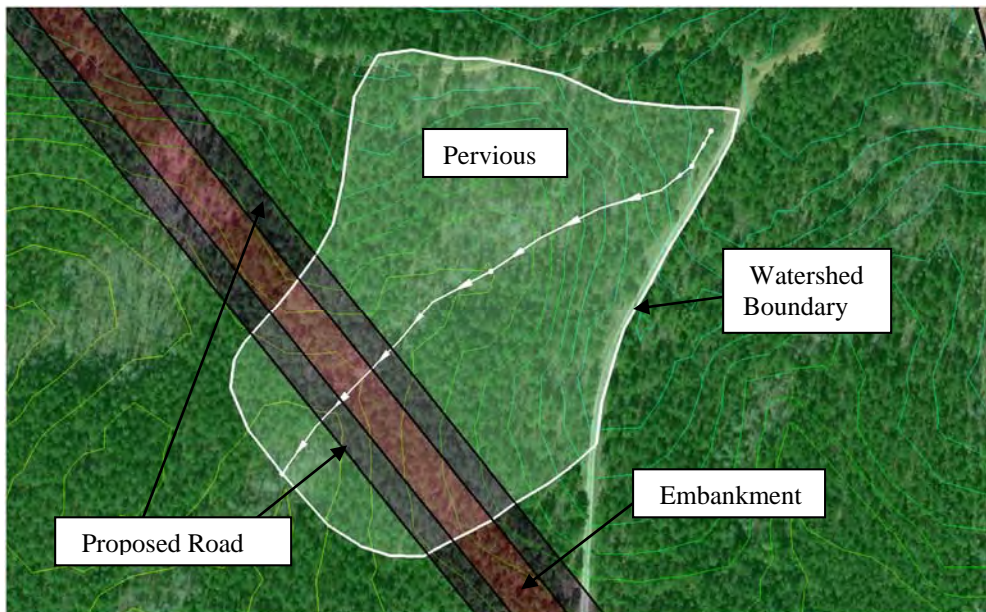


Figure 5. Aerial photograph indicating drainage boundary and post-development source areas

Table 5. Land use and soil type distribution of sample watershed in Birmingham, Alabama

	Land Use	Soil Type	Area in acres	
			Pre	Post
1	Woods- Good	Type C	5.9	4.8
2	Compacted Embankment	Type C		0.5
3	Road/Highway	Type C	-	0.6

3. Assign runoff coefficient to source areas using Table 1 and compute the composite runoff coefficient ( $R_{vc}$ ) by calculating a weighted average.

Table 6. Source areas and corresponding  $R_v$

Source areas	Area (acres)	$R_v$ (2 in)	Area * $R_v$
Woods (Pervious areas – clayey soils, HSG - C)	4.8	0.26	1.248
Compacted Embankment (Pervious, HSG - D)	0.5	0.26	0.130
Road (Paved freeway & shoulder, smooth)	0.6	0.88	0.528
$\Sigma A =$	5.9	$\Sigma (A * R_v) =$	1.906

Composite runoff coefficient

$$R_{vc} = \frac{\Sigma(A * R_v)}{\Sigma A} = \frac{1.906}{5.9} = \mathbf{0.32}$$

4. Compute runoff volume using Equations (6) and (7).

$$Q = P * R_{vc} = 2 * 0.32 = \mathbf{0.64 \text{ in.}}$$

$$V = \frac{P}{12} * R_{vc} * A * 43560 = \frac{2}{12} * 0.33 * 5.9 * 43560 = \mathbf{13707 \text{ ft}^3}$$

5. Compute modified CN using Equation (8).

$$CN = \frac{1000}{10 + 5P + 10Q - 10\sqrt{Q^2 + 1.25 Q P}}$$

$$CN = \frac{1000}{10 + 5 * 2 + 10 * 0.64 - 10\sqrt{0.64^2 + 1.25 * 0.64 * 2}} = \mathbf{82}$$

6. Compute travel time and time of concentration ( $t_c$ ) using Velocity Method

Segment 1 – Sheet Flow

Travel time for sheet flow

$$T_t = \frac{0.007(nL)^{0.8}}{(P_2)^{0.5}S^{0.4}} = \frac{0.007(0.4 * 50)^{0.8}}{(4.1)^{0.5}(0.029)^{0.4}} = 0.157 \text{ hr} = 9.4 \text{ min}$$

where, overland roughness coefficient ( $n$ ) = 0.4 (Light Woods) (Appendix Table A.1),  
 flow length ( $L$ ) = 50 ft,  
 2-year 24-hour rainfall ( $P_2$ ) = 4.1 in., and  
 slope ( $S$ ) = 0.029

Segment 2 – Shallow Concentrated Flow

From Appendix Figure A.1 based on ground cover (Forest) and slope (0.204), average flow velocity ( $v$ )

$$v = 2.516(S)^{0.5} = 2.516 * 0.204^{0.5} = 1.14 \text{ ft/s}$$

Travel time for shallow concentrated flow

$$T_t = \frac{L}{60 v} = \frac{300}{60 * 1.14} = 4.4 \text{ min}$$

Segment 3 – Open Channel Flow

For trapezoidal channel of width = 4 feet, flow depth = 0.4 feet (Grassed waterways, shallow concentrated flow, Figure A.1), and side slope(H:V)=3:1,

$$\text{Area, } A = \frac{1}{2} * 0.4 * (6.4 + 4) = 2.08 \text{ ft}^2$$

$$\text{Wetted Perimeter, } P = 1.265 * 2 + 4 = 6.53 \text{ ft}$$

$$\text{Hydraulic Radius, } R = A/P = 2.08/6.53 = 0.319$$

For open channel flow, velocity is estimated using Manning's equation:

$$v = \frac{1.49(R)^{\frac{2}{3}}(S)^{\frac{1}{2}}}{n} = \frac{1.49(0.319)^{\frac{2}{3}}(0.051)^{\frac{1}{2}}}{0.06} = 2.62 \frac{\text{ft}}{\text{s}}$$

where, channel roughness (n) = 0.06 and slope (S) = 0.051 ft/ft

Travel time for open channel flow

$$T_t = \frac{L}{60 v} = \frac{380}{60 * 2.62} = 2.4 \text{ min}$$

Time of concentration

Table 7. Time of concentration calculation

Segment	Type of Flow	Length (ft)	Slope (ft/ft)	T <sub>t</sub> (min)
1	Sheet	50	0.029	9.4
2	Shallow concentrated	300	0.204	4.4
3	Open channel	380	0.051	2.4

$$t_c = 9.4 + 4.4 + 2.4 = 16.2 \text{ min} = \mathbf{0.27 \text{ hr}}$$

7. Calculate I<sub>a</sub>/P using Equations (3) and (5).

$$I_a = 0.2 S = 0.2 * (1000/CN - 10) = 0.2 * (1000/82 - 10) = 0.439$$

$$\frac{I_a}{P} = \frac{0.439}{2} = \mathbf{0.22}$$

8. Compute unit peak discharge (q<sub>u</sub>) using Figure A.2 or A.3.

$$q_u = 475 \text{ csm/in (From Appendix Figure A.3 for } t_c = 0.27 \text{ hr and } I_a/P = 0.22)$$



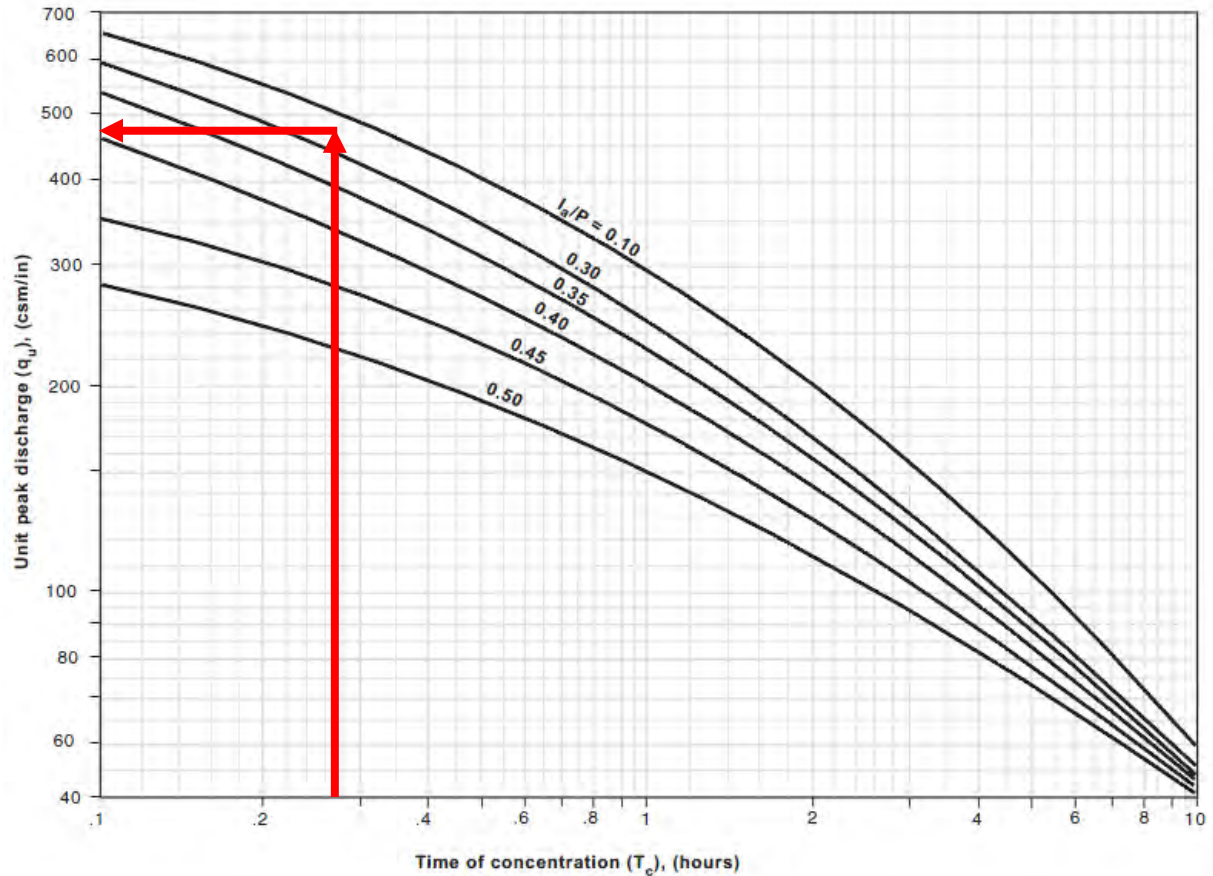
9. Calculate peak discharge ( $Q_p$ ) using Graphical Peak Discharge Method for post-development conditions

$$Q_p = q_u A Q F_p = 475 * 0.0092 * 0.64 * 1 = \mathbf{2.8\ cfs}$$

where, drainage area ( $A$ ) = 0.0092 mi<sup>2</sup>,

runoff volume ( $Q$ ) = 0.66 in., and

$F_p = 1$  (From Appendix Table A.2, no pond and swamp areas)



Estimating unit peak discharge for type III rainfall distribution using Figure A.3

## Summary of Results

Table 8. Comparison of pre-development and post-development runoff volumes and peak discharges

	<b>Pre</b>	<b>Post</b>
Runoff volume, $Q$ (in.)	0.52	0.64
Runoff volume, $V$ (ft <sup>3</sup> )	11137	13707
Peak discharge, $Q_p$ (cfs)	2.2	2.8

Post-development runoff volume has increased by 2570 ft<sup>3</sup> or 23% compared to pre-development runoff volume. Peak discharge has increased by 0.6 cfs or 27%. Since there is significant increase in runoff volume and peak discharge, runoff management practices will be required to maintain pre-development hydrology in accordance with GFO 3-73 (ALDOT 2014).

### 3.5. Sample Calculation (Example 2)

Using steps outlined in Section 3.3, the calculation of pre-development and post-development runoff volumes and peak discharges for the 95<sup>th</sup> percentile rainfall event for a watershed in Birmingham, Alabama is carried out below:

#### Pre-development Conditions

1. Determine the 95<sup>th</sup> percentile rainfall for project location using the isohyetal map.  
95<sup>th</sup> percentile rainfall (P) = 2.0 in.
2. Delineate watershed boundaries and divide watershed into source areas based on its land use and soil type character. Manual delineation or automatic delineation using GIS tools can delineate watershed boundaries for a given outlet and can divide a watershed into grouped areas based on its land use and soil type characteristics.

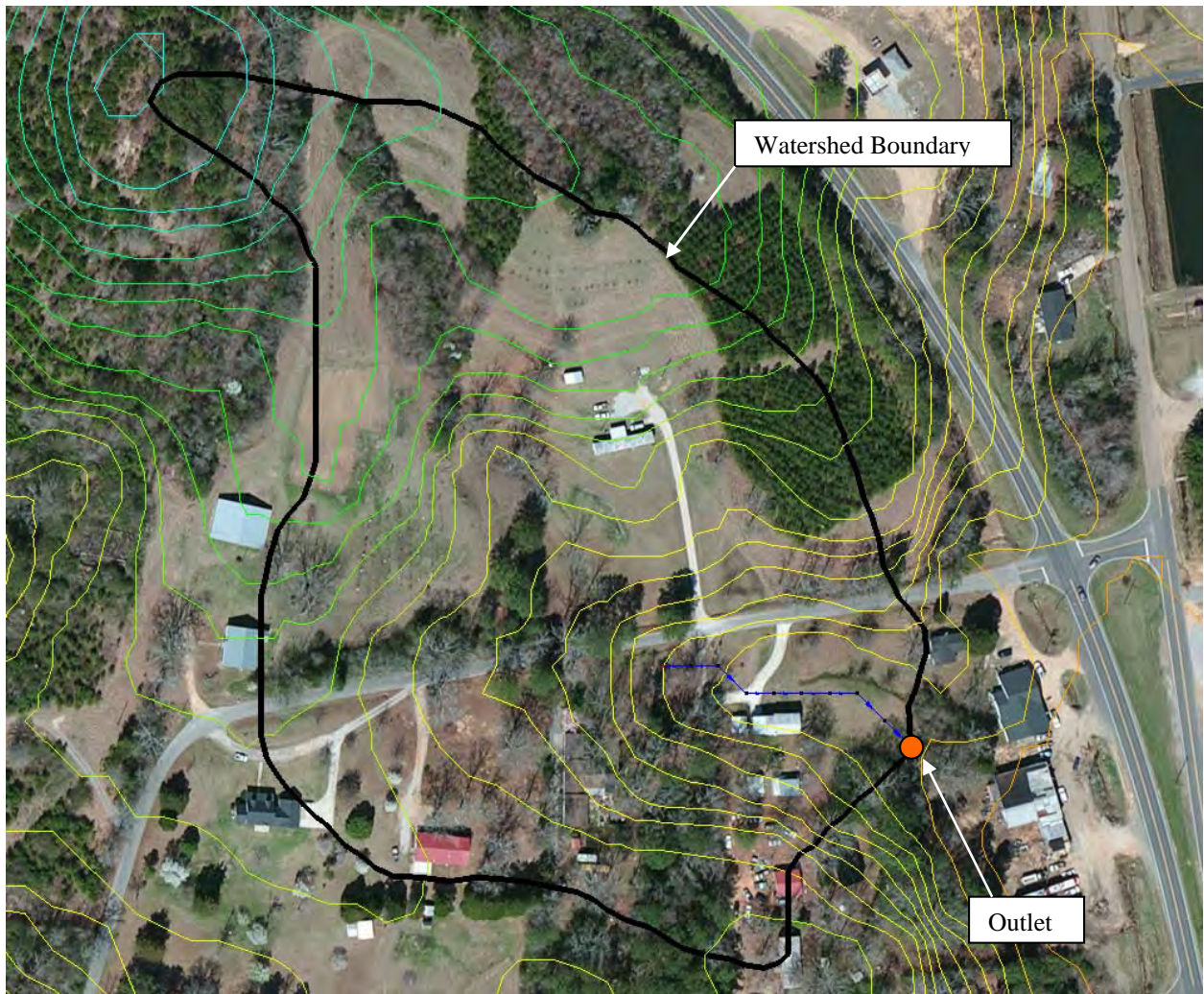


Figure 6. Aerial photograph indicating an outlet and drainage boundary



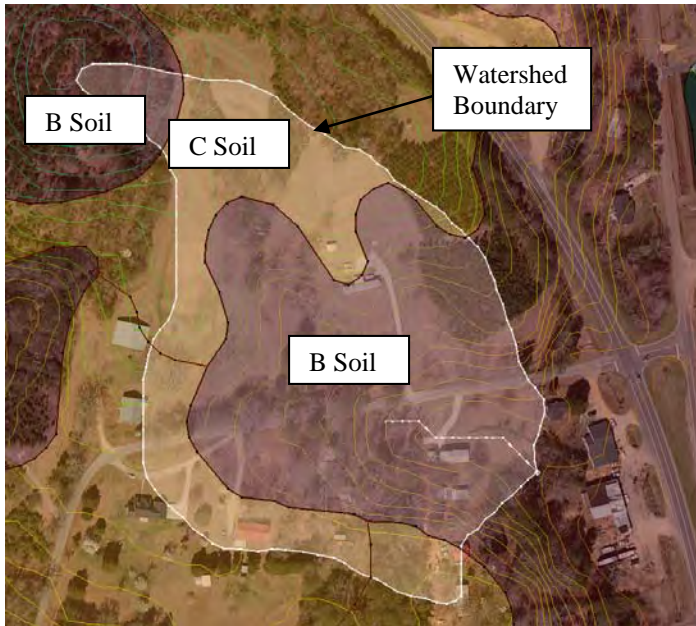


Figure 7. Aerial photograph indicating drainage boundary and soil types

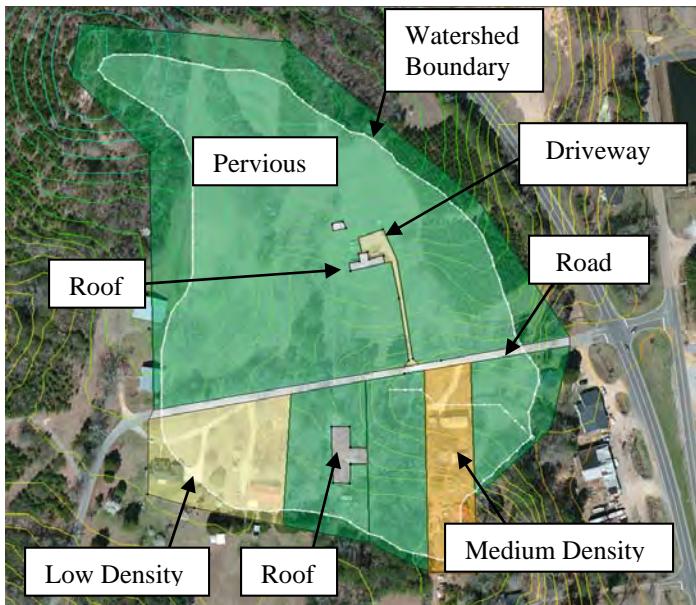


Figure 8. Aerial photograph indicating drainage boundary and pre-development source areas

3. Assign runoff coefficient to source areas using Table 1 and compute the composite runoff coefficient ( $R_{vc}$ ) by calculating a weighted average.

Table 9. Source areas and corresponding  $R_v$

Source areas	Area (acres)	$R_v$ (2 in)	Area * $R_v$
Undeveloped or Pervious Areas, B Soil	7.13	0.16	1.141
Undeveloped or Pervious Areas, C or D Soil	4.00	0.26	1.040
Streets, Intermediate or Rough Textured	0.32	0.84	0.269
Low Density, < 2 units / acre	1.12	0.26	0.291
Roof, Flat or Pitched, Unconnected, B Soil	0.15	0.16	0.024
Roof, Flat or Pitched, Unconnected, C or D Soil	0.03	0.26	0.008
Driveway or Sidewalk, Unconnected, B Soil	0.13	0.16	0.021
Driveway or Sidewalk, Unconnected, C or D Soil	0.02	0.26	0.005
Medium Density, between 2 and 6 units / acre	0.87	0.55	0.479
$\sum A =$	13.77	$\sum (A * R_v) =$	3.277

Composite runoff coefficient

$$R_{vc} = \frac{\sum A * R_v}{\sum A} = \frac{3.277}{13.77} = \mathbf{0.24}$$

4. Compute runoff volume using Equations (6) and (7).

$$Q = P * R_{vc} = 2 * 0.24 = \mathbf{0.48 \text{ in.}}$$

$$V = \frac{P}{12} * R_{vc} * A * 43560 = \frac{2}{12} * 0.24 * 13.77 * 43560 = \mathbf{23,993 \text{ ft}^3}$$

5. Compute modified CN using Equation (8)

$$CN = \frac{1000}{10 + 5P + 10Q - 10\sqrt{Q^2 + 1.25 Q P}}$$

$$CN = \frac{1000}{10 + 5 * 2 + 10 * 0.48 - 10\sqrt{0.48^2 + 1.25 * 0.48 * 2}} = \mathbf{78}$$

6. Compute travel time and time of concentration ( $t_c$ )

Segment 1 – Sheet Flow

Travel time for sheet flow

$$T_t = \frac{0.007(nL)^{0.8}}{(P_2)^{0.5}S^{0.4}} = \frac{0.007(0.4 * 43)^{0.8}}{(4.1)^{0.5}(0.026)^{0.4}} = 0.146 \text{ hr} = 8.8 \text{ min}$$

where, overland roughness coefficient ( $n$ ) = 0.4 (Light Woods) (Appendix Table A.1),

flow length (L) = 43 ft,  
 2-year 24-hour rainfall (P<sub>2</sub>) = 4.1 in., and  
 slope (S) = 0.026 ft/ft

Segment 2 – Shallow Concentrated Flow

From Figure A.1 based on ground cover (Forest) and slope (0.072), average flow velocity (v)

$$v = 2.516(S)^{0.5} = 2.516 * 0.072^{0.5} = 0.68 \text{ ft/s}$$

Travel time for shallow concentrated flow

$$T_t = \frac{L}{60 v} = \frac{328}{60 * 0.68} = 8.0 \text{ min}$$

Segment 3 – Open Channel Flow

For trapezoidal channel of width = 5 feet, flow depth = 0.4 feet (Grassed waterways, shallow concentrated flow, Figure A.1), and side slope (H:V)=1:1,

$$\text{Area, } A = \frac{1}{2} * 0.4 * (5.8 + 5) = 2.16 \text{ ft}^2$$

$$\text{Wetted Perimeter, } P = 0.57 * 2 + 5 = 6.13 \text{ ft}$$

$$\text{Hydraulic Radius, } R = A/P = 2.16/6.13 = 0.352$$

For open channel flow, velocity is estimated using Manning's equation:

$$v = \frac{1.49(R)^{\frac{2}{3}}(S)^{\frac{1}{2}}}{n} = \frac{1.49(0.352)^{\frac{2}{3}}(0.056)^{\frac{1}{2}}}{0.05} = 3.52 \frac{\text{ft}}{\text{s}}$$

where, channel roughness (n) = 0.05 and  
 slope (S) = 0.056 ft/ft

Travel time for open channel flow

$$T_t = \frac{L}{60 v} = \frac{971}{60 * 3.52} = 4.6 \text{ min}$$

Time of Concentration

Table 10. Time of concentration calculation

Segment	Type of Flow	Length (ft)	Slope (ft/ft)	T <sub>t</sub> (min)
1	Sheet	43	0.026	8.8
2	Shallow concentrated	328	0.072	8.0
3	Open channel	971	0.056	4.6

$$t_c = 8.8 + 8.0 + 4.6 = 21.4 \text{ min} = \mathbf{0.36 \text{ hr}}$$

7. Calculate I<sub>a</sub>/P using Equations (3) and (5).

$$I_a = 0.2 S = 0.2 * \left( \frac{1000}{CN} - 10 \right) = 0.2 * \left( \frac{1000}{78} - 10 \right) = 0.564$$



$$\frac{I_a}{P} = \frac{0.564}{2} = \mathbf{0.28}$$

8. Compute unit peak discharge ( $q_u$ ) using Figure A.2 or A.3.

$q_u = 405$  csm/in (From Figure A.3 for  $t_c = 0.36$  hr and  $I_a/P = 0.28$ )

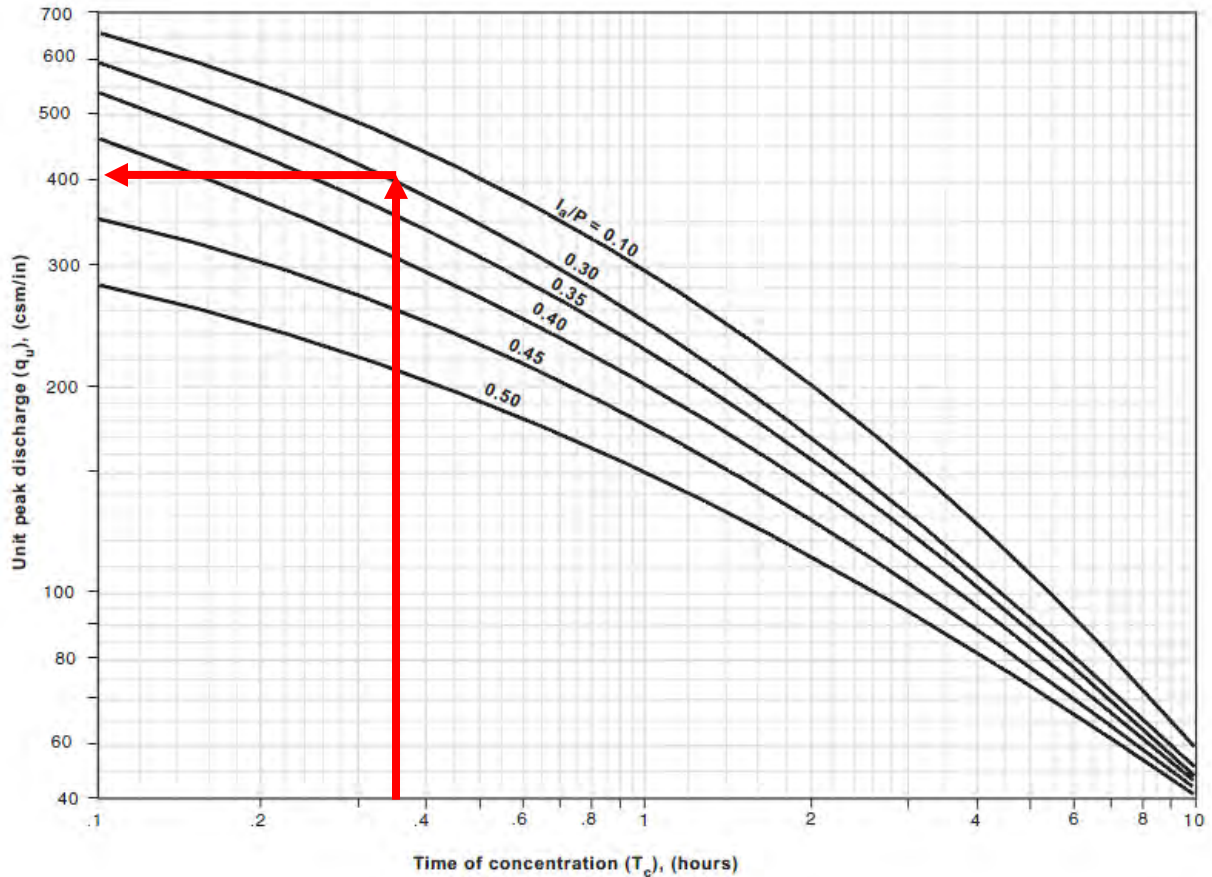
9. Calculate peak discharge ( $Q_p$ ) using Graphical Peak Discharge Method for pre-development conditions

$$Q_p = q_u A Q F_p = 405 * 0.0215 * 0.48 * 1 = \mathbf{4.2 cfs}$$

where, drainage area ( $A$ ) = 0.0215 mi<sup>2</sup>,

runoff volume ( $Q$ ) = 0.48 in., and

$F_p = 1$  (From Table A.2, no pond and swamp areas)



Estimating unit peak discharge for type III rainfall distribution using Figure A.3

### Post-development Conditions

1. Determine the 95<sup>th</sup> percentile rainfall for project location using the computer program described in Section 2.

95<sup>th</sup> percentile rainfall (P) = 2.0 in.

2. Delineate watershed boundaries and divide watershed into source areas based on its land use and soil type characteristics.

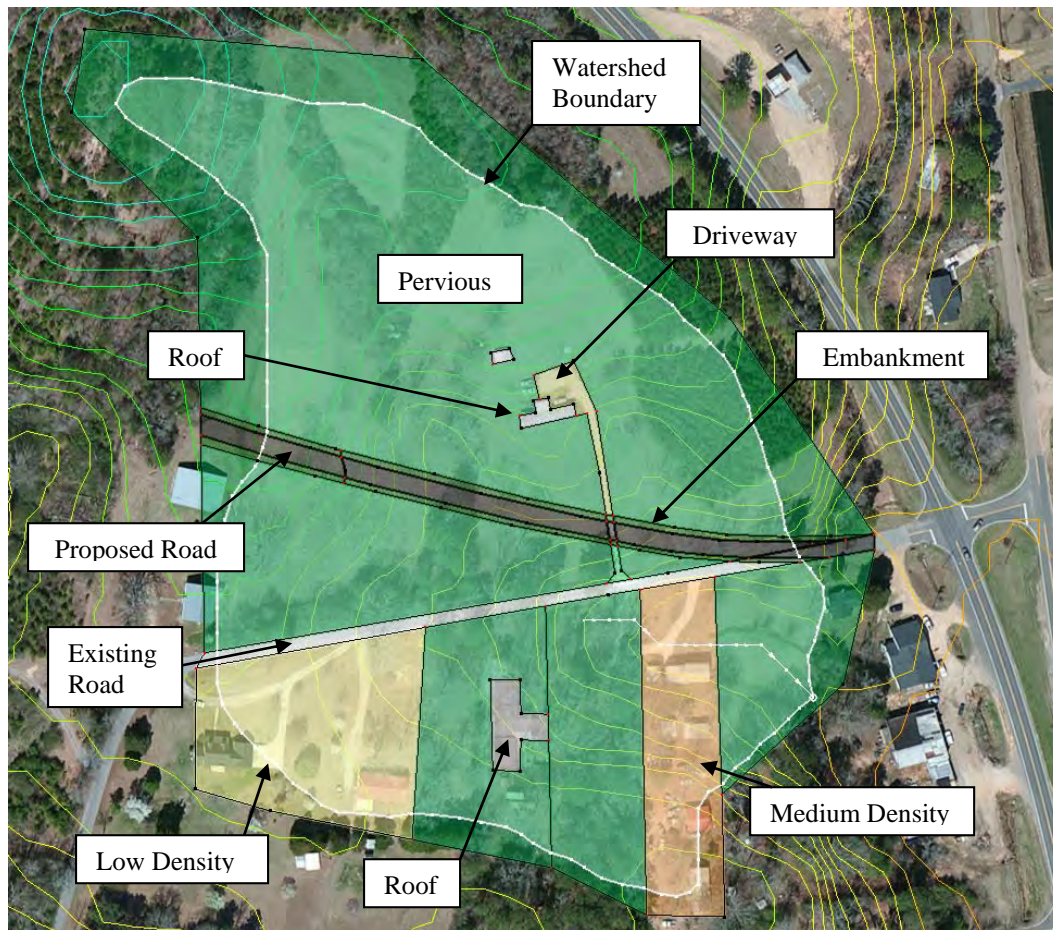


Figure 9. Aerial photograph indicating drainage boundary and post-development source areas

3. Assign runoff coefficient to source areas using Table 1 and compute the composite runoff coefficient ( $R_{vc}$ ) by calculating a weighted average.

Table 11. Source areas and corresponding  $R_v$

Source areas	Area (acres)	$R_v$ (2 in)	Area * $R_v$
Undeveloped or Pervious Areas, B Soil	6.58	0.16	1.053
Undeveloped or Pervious Areas, C or D Soil	3.81	0.26	0.991
Streets, Intermediate or Rough Textured	0.26	0.84	0.218
Low Density, < 2 units / acre	1.12	0.26	0.291
Roof, Flat or Pitched, Unconnected, B Soil	0.15	0.16	0.024
Roof, Flat or Pitched, Unconnected, C or D Soil	0.03	0.26	0.008
Driveway or Sidewalk, Unconnected, B Soil	0.12	0.16	0.019
Driveway or Sidewalk, Unconnected, C or D Soil	0.02	0.26	0.005
Medium Density, between 2 and 6 units / acre	0.87	0.55	0.479
Paved Lane and Shoulder	0.50	0.88	0.440
Excavation or Embankment Construction	0.31	0.26	0.081
$\Sigma A =$	13.77	$\Sigma (A * R_v) =$	3.608

Composite runoff coefficient

$$R_{vc} = \frac{\Sigma(A * R_v)}{\Sigma A} = \frac{3.608}{13.77} = \mathbf{0.26}$$

4. Compute runoff volume using Equations (6) and (7).

$$Q = P * R_{vc} = 2 * 0.26 = \mathbf{0.52 \text{ in.}}$$

$$V = \frac{P}{12} * R_{vc} * A * 43560 = \frac{2}{12} * 0.26 * 13.77 * 43560 = \mathbf{25,992 \text{ ft}^3}$$

5. Compute modified CN using Equation (8).

$$CN = \frac{1000}{10 + 5P + 10Q - 10\sqrt{Q^2 + 1.25 Q P}}$$

$$CN = \frac{1000}{10 + 5 * 2 + 10 * 0.52 - 10\sqrt{0.52^2 + 1.25 * 0.52 * 2}} = \mathbf{79}$$

6. Compute travel time and time of concentration ( $t_c$ )

Segment 1 – Sheet Flow

Travel time for sheet flow



$$T_t = \frac{0.007(nL)^{0.8}}{(P_2)^{0.5}S^{0.4}} = \frac{0.007(0.4 * 43)^{0.8}}{(4.1)^{0.5}(0.026)^{0.4}} = 0.146 \text{ hr} = 8.8 \text{ min}$$

where, overland roughness coefficient (n) = 0.4 (Light Woods) (Appendix Table A.1),  
 flow length (L) = 43 ft,  
 2-year 24-hour rainfall (P<sub>2</sub>) = 4.1 in., and  
 slope (S) = 0.026

Segment 2 – Shallow Concentrated Flow

From Figure A.1 based on ground cover (Forest) and slope (0.204), average flow velocity (v)

$$v = 2.516(S)^{0.5} = 2.516 * 0.072^{0.5} = 0.68 \text{ ft/s}$$

Travel time for shallow concentrated flow

$$T_t = \frac{L}{60 v} = \frac{328}{60 * 0.68} = 8.0 \text{ min}$$

Segment 3 – Open Channel Flow

For trapezoidal channel of width = 5 feet, flow depth = 0.4 feet (Grassed waterways, shallow concentrated flow, Figure A.1), and side slope (H:V)=1:1,

$$\text{Area, } A = \frac{1}{2} * 0.4 * (5.8 + 5) = 2.16 \text{ ft}^2$$

$$\text{Wetted Perimeter, } P = 0.57 * 2 + 5 = 6.13 \text{ ft}$$

$$\text{Hydraulic Radius, } R = A/P = 2.16/6.13 = 0.352$$

For open channel flow, velocity is estimated using Manning's equation:

$$v = \frac{1.49(R)^{\frac{2}{3}}(S)^{\frac{1}{2}}}{n} = \frac{1.49(0.352)^{\frac{2}{3}}(0.056)^{\frac{1}{2}}}{0.05} = 3.52 \frac{\text{ft}}{\text{s}}$$

where, channel roughness (n) = 0.05 and  
 slope (S) = 0.056 ft/ft

Travel time for open channel flow

$$T_t = \frac{L}{60 v} = \frac{971}{60 * 3.52} = 4.6 \text{ min}$$

Time of concentration

Table 12. Time of concentration calculation

Segment	Type of Flow	Length (ft)	Slope (ft/ft)	T <sub>t</sub> (min)
1	Sheet	43	0.026	8.8
2	Shallow concentrated	328	0.072	8.0
3	Open channel	971	0.056	4.6

$$t_c = 8.8 + 8.0 + 4.6 = 21.4 \text{ min} = \mathbf{0.36 \text{ hr}}$$

7. Calculate  $I_a/P$  using Equations (3) and (5).

$$I_a = 0.2 S = 0.2 * (1000/CN - 10) = 0.2 * (1000/79 - 10) = 0.532$$

$$\frac{I_a}{P} = \frac{0.532}{2} = \mathbf{0.27}$$

8. Compute unit peak discharge ( $q_u$ ) using Figure A.2 or A.3.

$$q_u = 407 \text{ csm/in (From Figure A.3 for } t_c = 0.36 \text{ hr and } I_a/P = 0.27)$$

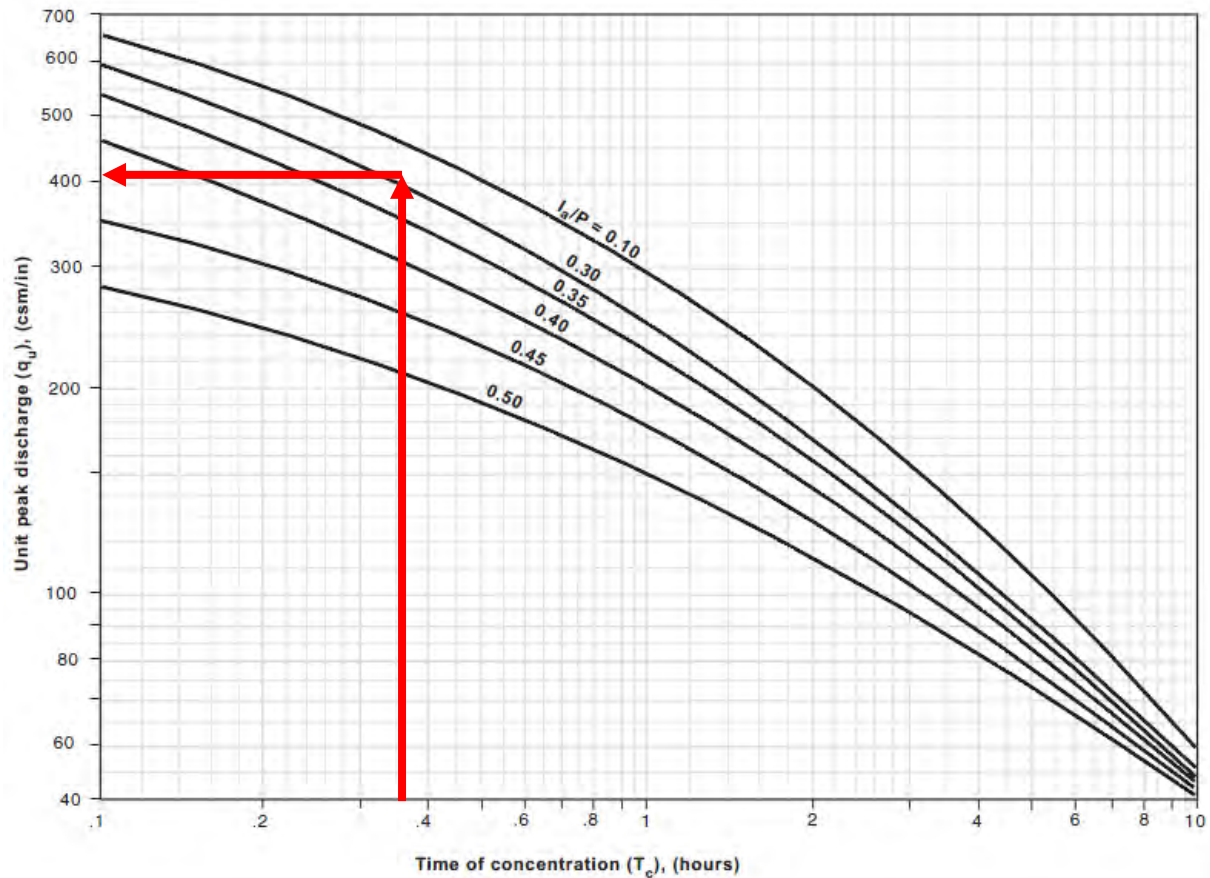
9. Calculate peak discharge ( $Q_p$ ) using Graphical Peak Discharge Method for post-development conditions

$$Q_p = q_u A Q F_p = 407 * 0.0215 * 0.52 * 1 = \mathbf{4.6 \text{ cfs}}$$

where, drainage area ( $A$ ) = 0.0215 mi<sup>2</sup>,

runoff volume ( $Q$ ) = 0.52 in., and

$F_p = 1$  (From Table A.2, no pond and swamp areas)



Estimating unit peak discharge for type III rainfall distribution using Figure A.3

### Summary of Results

Table 13. Comparison of pre-development and post-development runoff volumes and peak discharges

	<b>Pre</b>	<b>Post</b>
Runoff volume, Q (in.)	0.24	0.26
Runoff volume, V (ft <sup>3</sup> )	23,993	25,992
Peak discharge, Q <sub>p</sub> (cfs)	4.2	4.6

Post-development runoff volume has increased by 1,999 ft<sup>3</sup> or 8.3% compared to pre-development runoff volume. Peak discharge has increased by 0.4 cfs or 9.5%. Since there is significant increase in runoff volume and peak discharge, runoff management practices will be required to maintain pre-development hydrology in accordance with GFO 3-72 (ALDOT 2014).

## 4. Acceptable Computer Models

There is a wide variety of both public and private domain computer models available for performing stormwater calculations. The computer models use one or more calculation methodologies to estimate runoff characteristics. Below is a list of few widely used public domain models that use NRCS CN method (Table 14). Once a modified curve number is calculated from R<sub>v</sub> coefficients, it can be used in one of the listed models to generate peak discharge.

Table 14. List of acceptable public domain computer models

<b>Program</b>	<b>Developer</b>
HEC-1	U.S. Army Corps of Engineers
HEC-HMS	U.S. Army Corps of Engineers
SWMM	U.S. Environmental Protection Agency
WinTR-20	U.S. Department of Agriculture Natural Resources Conservation Service
WinTR-55	U.S. Department of Agriculture Natural Resources Conservation Service



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## APPENDIX

### 1. Computation of Travel Time and Time of Concentration

Travel time ( $T_t$ ) is the time it takes water to travel from one location to another in a watershed.  $T_t$  is a component of time of concentration ( $T_c$ ), which is the time for runoff to travel from the hydraulically most distant point of the watershed to a given outlet point.  $T_c$  is sum of  $T_t$  values for the various consecutive flow segments. These segments can be sheet flow, shallow concentrated flow, open channel flow, or a combination of these.

#### Sheet Flow

Sheet flow is flow over plane surfaces. It usually occurs in the headwater of streams. Manning's kinematic solution can be used to compute  $T_t$ :

$$T_t = \frac{0.007(nL)^{0.8}}{(P_2)^{0.5}S^{0.4}}$$

where,  $T_t$  is travel time (hr),  
 $n$  is Manning's roughness coefficient (Table A.1),  
 $L$  is flow length (ft),  
 $P_2$  is 2 year, 24-hour rainfall (in), and  
 $S$  is slope

Table A.1 Manning's  $n$  for sheet flow (USDA 2010)

Surface description	$n^1$
Smooth surfaces (concrete, asphalt, gravel, or bare soil)	0.011
Fallow (no residue)	0.05
Cultivated soils:	
Residue cover $\leq 20\%$	0.06
Residue cover $> 20\%$	0.17
Grass:	
Short grass prairie	0.15
Dense grasses <sup>2</sup>	0.24
Bermuda grass	0.41
Range (natural)	0.13
Woods: <sup>3</sup>	
Light underbrush	0.40
Dense underbrush	0.80

<sup>1</sup>The  $n$  values are a composite of information compiled by Engman (1986).

<sup>2</sup> Includes species such as weeping lovegrass, bluegrass, buffalo grass, blue grama grass, and native grass mixtures.

<sup>3</sup> When selecting  $n$ , consider cover to a height of about 0.1 ft. This is the only part of the plant cover that will obstruct sheet flow.



### Shallow concentrated flow

Sheet flow becomes shallow concentrated flow after approximately 100 feet. The average velocity is function of watercourse slope and type of channel and can be determined from Figure A.1. After determining the velocity, travel time for the shallow concentrated flow can be estimated as follows:

$$T_t = \frac{L}{60 v}$$

where,  $T_t$  is travel time (min),  
 $L$  is flow length (ft), and  
 $v$  is average velocity (ft/s).

### Open channel flow

Shallow concentrated flow occurs at shallow depths of 0.1 to 0.5 feet. Beyond that channel flow is assumed to occur. Manning's equation can be used to estimate average flow velocity for open channel flow:

$$v = \frac{1.49(R)^{\frac{2}{3}}(S)^{\frac{1}{2}}}{n}$$

where,  $v$  is average velocity (ft/s),  
 $R$  is hydraulic radius (ft),  
 $S$  is channel slope, and  
 $n$  is Manning's  $n$  value for open channel flow

Manning's  $n$  value can be obtained from Chow (1959) and other references.

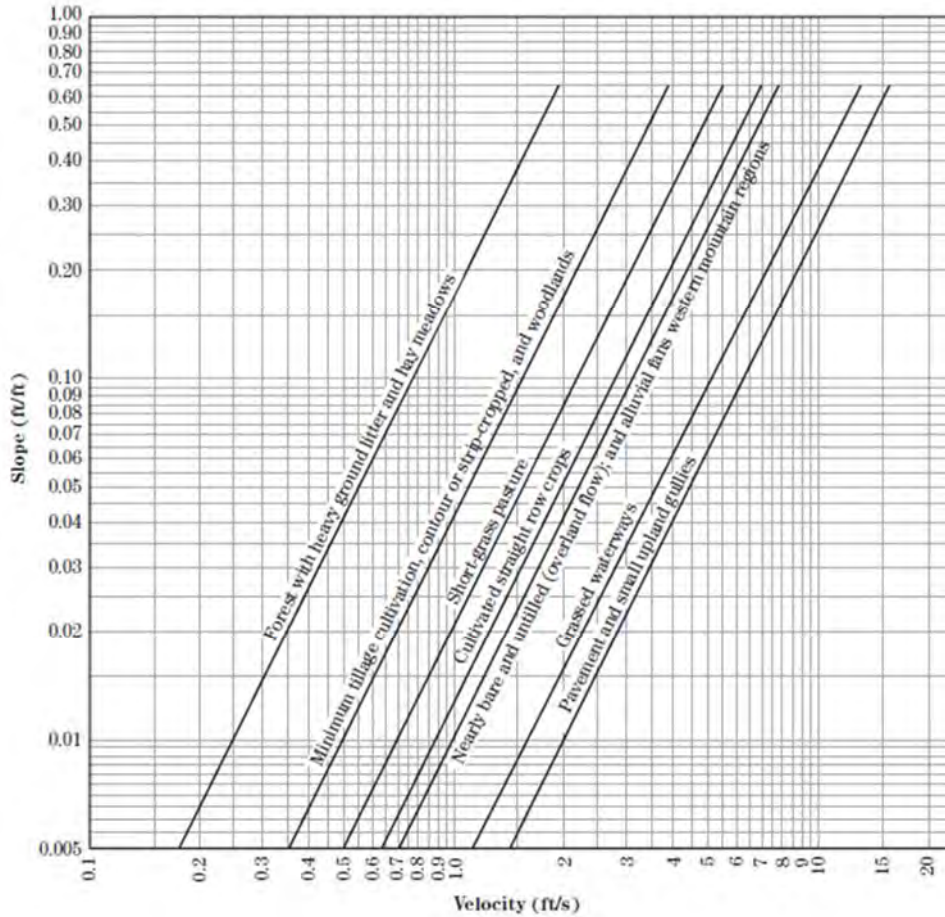
## 2. Graphical Peak Discharge Method

This method was developed from hydrograph analyses using TR-20, "Computer Program for Project Formulation - Hydrology" (SCS 1983). The peak discharge equation used is:

$$Q_p = q_u A Q F_p$$

where,  $Q_p$  is peak discharge ( $\text{ft}^3/\text{s}$ ),  
 $q_u$  is unit peak discharge (csm/in),  
 $A$  is drainage area ( $\text{mi}^2$ ),  
 $Q$  is runoff volume (in), and  
 $F_p$  is pond and swamp factor (Table A.2)

After modified CN and  $T_c$  is computed, peak discharge per square mile per inch of runoff ( $q_u$ ) is obtained from Figure A.2 or A.3 by using rainfall distribution type and  $I_a/P$  ratio.



Flow type	Depth (ft)	Manning's <i>n</i>	Velocity equation (ft/s)
Pavement and small upland gullies	0.2	0.025	$V = 20.328(s)^{0.5}$
Grassed waterways	0.4	0.050	$V = 16.135(s)^{0.5}$
Nearly bare and untilled (overland flow); and alluvial fans in western mountain regions	0.2	0.051	$V = 9.965(s)^{0.5}$
Cultivated straight row crops	0.2	0.058	$V = 8.762(s)^{0.5}$
Short-grass pasture	0.2	0.073	$V = 6.962(s)^{0.5}$
Minimum tillage cultivation, contour or strip-cropped, and woodlands	0.2	0.101	$V = 5.032(s)^{0.5}$
Forest with heavy ground litter and hay meadows	0.2	0.202	$V = 2.516(s)^{0.5}$

Figure A.1 Average velocities for estimating travel time for shallow concentrated flow (USDA 2010)

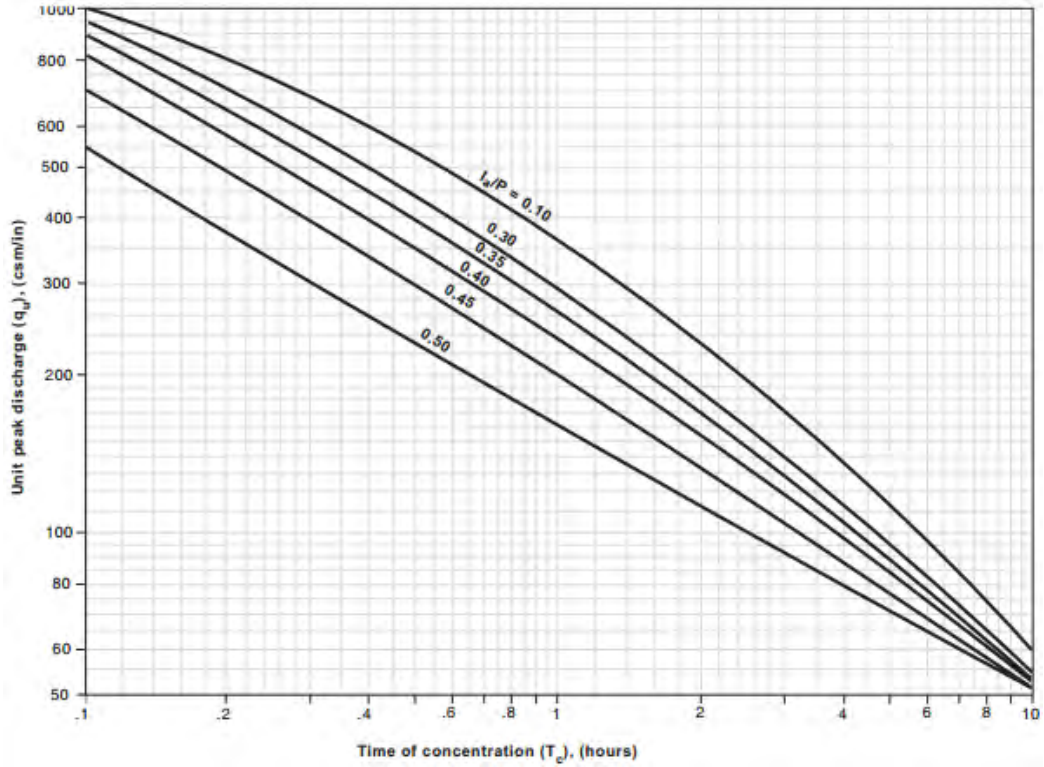


Figure A.2 Unit peak discharge ( $q_u$ ) for Type II rainfall distribution (USDA 1986)

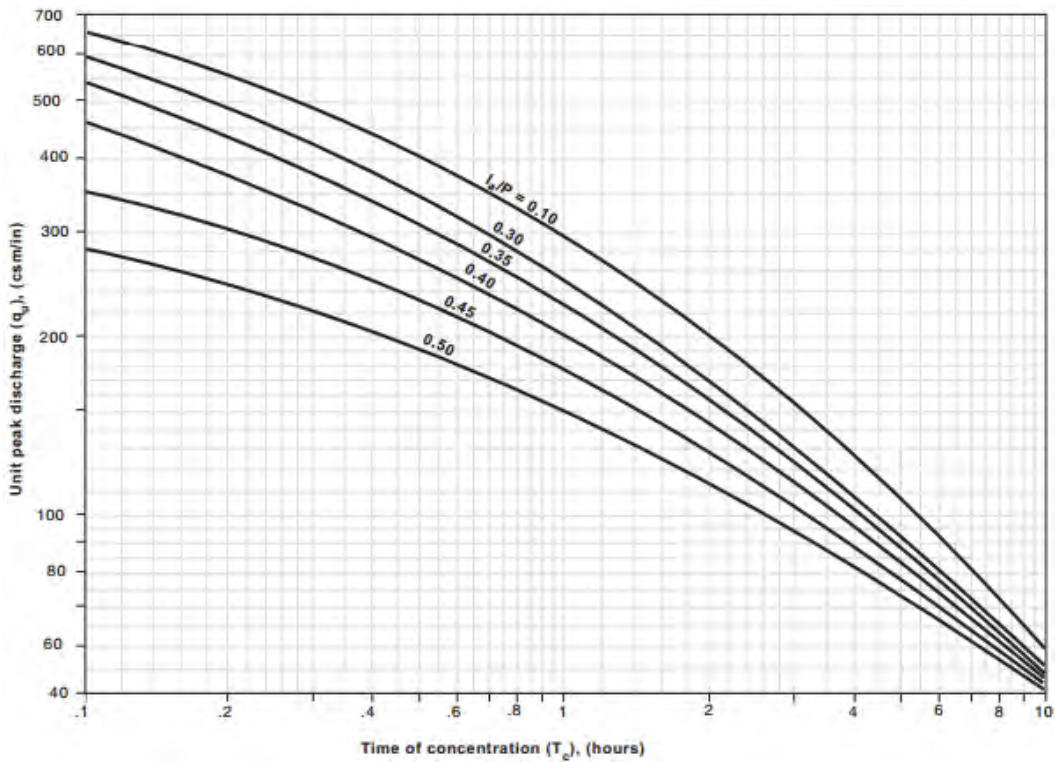


Figure A.3 Unit peak discharge ( $q_u$ ) for Type III rainfall distribution (USDA 1986)



Table A.2 Factor for Pond and Swamp Areas (USDA, 1986)

<b>Pond and Swamp Areas (%<sup>1</sup>)</b>	<b>F<sub>p</sub></b>
0	1.00
0.2	0.97
1	0.87
3	0.75
5 or greater	0.72

<sup>1</sup> Percent of entire drainage basin

PRE- VS. POST-DEVELOPMENT FLOW RATES

Project #: RECAF-0101(527)  
 CPMS#: 100032476  
 Description: US-82 from  
 Date: 1/1/2015  
 Location: STA 392+00  
 Designer: HHH

Discharge Point: 1.0  
 P= 2 Found From Figure 1

Summary							
Velocity (ft/s)				Volume (ft <sup>3</sup> )			
Existing	Post	Δ	%	Existing	Post	Δ	%
4.15	4.59	0.44	10.6%	23,792	26,196	2,405	10.1%

Pre-Construction Calculations				
Modified Curve Number				
Area	Land Use	Area in Acres	R <sub>v</sub> (From Table 1)	Area*Rv
1	Undeveloped or Pervious Areas, B Soil	7.13	0.16	1.1408
2	Undeveloped or Pervious Areas, C or D Soil	4	0.26	1.04
3	Streets, Intermediate or Rough Textured	0.32	0.84	0.2688
4	Low Density, < 2 units / acre	1.12	0.26	0.2912
5	Roof, Flat or Pitched, Unconnected, B Soil	0.15	0.16	0.024
6	Roof, Flat or Pitched, Unconnected, C or D Soil	0.03	0.26	0.0078
7	Driveway or Sidewalk, Unconnected, B Soil	0.13	0.16	0.0208
8	Driveway or Sidewalk, Unconnected, C or D Soil	0.02	0.26	0.0052
9	Medium Density, between 2 and 6 units / acre	0.87	0.55	0.4785
10				0
11				0
Total Acres		13.77	Q=	0.476 in
Composite Rv		0.24	V=	23,792 ft <sup>3</sup>
			Modified CN=	77.8
Time of Concentration				
Segment	Type of Flow	Length (ft)	Slope (ft/ft)	T <sub>c</sub> (min)
1	Sheet (<100')	43	0.026	8.7
2	Shallow Concentration	328	0.072	8.1
3	Open Channel	971	0.056	4.6
Sheet and Shallow Flow Characteristics				
n=	0.4	Roughness Coeff Table A.1		
P2 (in)=	4.1	P2 (2Year 24Hour Rainfall)		
Ground Cover Constant=	2.516	Table 15-3 in Figure A.1		
v (ft/s)=	0.68			
Open Channel Dimensions				
Width (ft)=	5			
Flow Depth (ft)=	0.4			
Side Slope 1 (H:V)=	1			
Side Slope 2 (H:V)=	1			
n=	0.05			
s (ft/ft)=	0.056			
A (ft <sup>2</sup> , Assumed Trapezoidal)=	2.16			
P (ft, Assumed Trapezoidal)=	6.13			
R=	0.352			
v=	3.52			
Velocity Calculations				
T <sub>c</sub> (min)=	21.4			
T <sub>c</sub> (hr)=	0.36			
I <sub>a</sub> =	0.571			
I <sub>a</sub> /P=	0.29			
q <sub>u</sub> =	405	Use Figure A.2 or A.3		
Fp=	1	Figure A.4		
Q <sub>p (cfs)</sub> =	4.15			

Post-Construction Calculations				
Modified Curve Number				
Area	Land Use	Area in Acres	R <sub>v</sub> (From Table 1)	Area*Rv
1	Undeveloped or Pervious Areas, B Soil	6.58	0.16	1.0528
2	Undeveloped or Pervious Areas, C or D Soil	3.81	0.26	0.9906
3	Streets, Intermediate or Rough Textured	0.26	0.84	0.2184
4	Low Density, < 2 units / acre	1.12	0.26	0.2912
5	Roof, Flat or Pitched, Unconnected, B Soil	0.15	0.16	0.024
6	Roof, Flat or Pitched, Unconnected, C or D Soil	0.03	0.26	0.0078
7	Driveway or Sidewalk, Unconnected, B Soil	0.12	0.16	0.0192
8	Driveway or Sidewalk, Unconnected, C or D Soil	0.02	0.26	0.0052
9	Medium Density, between 2 and 6 units / acre	0.87	0.55	0.4785
10	Paved Lane and Shoulder	0.5	0.88	0.44
11	Excavation or Embankment Construction	0.31	0.26	0.0806
Total Acres		13.77	Q=	0.5241 in
Composite Rv		0.26	V=	26,196 ft <sup>3</sup>
			Modified CN=	79.0
Time of Concentration				
Segment	Type of Flow	Length (ft)	Slope (ft/ft)	T <sub>c</sub> (min)
1	Sheet (<100')	43	0.026	8.7
2	Shallow Concentration	328	0.072	8.1
3	Open Channel	971	0.056	4.6
Sheet and Shallow Flow Characteristics				
n=	0.4	Roughness Coeff Table A.1		
P2 (in)=	4.1	P2 (2Year 24Hour Rainfall)		
Ground Cover Constant=	2.516	Table 15-3 in Figure A.1		
v (ft/s)=	0.68			
Open Channel Dimensions				
Width (ft)=	5			
Flow Depth (ft)=	0.4			
Side Slope 1 (H:V)=	1			
Side Slope 2 (H:V)=	1			
n=	0.05			
s (ft/ft)=	0.056			
A (ft <sup>2</sup> , Assumed Trapezoidal)=	2.16			
P (ft, Assumed Trapezoidal)=	6.13			
R=	0.352			
v=	3.52			
Velocity Calculations				
T <sub>c</sub> (min)=	21.4			
T <sub>c</sub> (hr)=	0.36			
I <sub>a</sub> =	0.532			
I <sub>a</sub> /P=	0.27			
q <sub>u</sub> =	407	Use Figure A.2 or A.3		
Fp=	1	Figure A.4		
Q <sub>p (cfs)</sub> =	4.59			

# POST-DEVELOPMENT STORMWATER RISK ASSESSMENT

This document provides the rationale and sequential procedures for assessing risk of impacts from post-development stormwater discharge.

Pursuant to the GFO 3-73, and working within the constraints of the project, designers must provide features and practices that cause post-development hydrology to mimic pre-development baseline hydrology of the site to the maximum extent practicable for small, frequent rain events up to and including a 95<sup>th</sup> percentile rain event at all locations of discharge. The risk assessment for post-development changes in stormwater discharges will focus on two categories of possible impacts: impacts to structures near or downstream from the site, and impacts to any streams, ponds or lakes that may receive the stormwater discharges. Although the risk assessment analysis is focused on impacts from the small, frequent rainfall events up to and including a 95<sup>th</sup> percentile rainfall, these small storm events can predict possible impacts of larger storm events from a 2-year storm up to a 100-year storm. Stormwater discharges may affect downstream structures such as a building, culvert, bridge, levee, dam, etc. by flooding. Such damage could occur as a result of the direct flow of stormwater or by increasing the flow of downstream receiving waters. Evidence of pre-development flood damage and/or evidence of potential post-development damage after small rain events will provide guidance for selection and installation of appropriate stormwater controls that can reduce risk of more significant damage from larger storm events.

Post-development increase in stormwater discharge may also affect the stability and function of existing streams that receive the stormwater discharge. Increased stream flow above baseline caused by stormwater discharge could incise the streambed and/or banks of receiving waters, resulting in post-development changes such as widening or deepening of the streambed, downstream deposition of sediment, impacts to aquatic biological organisms, or other problems. Thus, the potential damage or impairment of the streambeds of receiving waters from increased stormwater discharges should be assessed.

The following procedure serves as guidance for assessing post-development impacts, including scour and erosion, associated with site topographic modification, installation of facilities and related infrastructure, including increased impervious areas, which could result in increased volume and force of stormwater discharges and potential flooding. A flow chart illustrating the procedure is included as Table 1.

## **Perform Hydrologic Analysis for the 95<sup>th</sup> Percentile Event**

- Run hydrologic models for all discharge points leaving the right-of-way to determine if there will be increases in discharge for the 95<sup>th</sup> percentile storm event. If increased discharges are predicted, provide BMPs to mimic pre-condition hydrology to the maximum extent practicable and perform hydrologic analysis for larger storm events.



### **Perform Hydrologic Analysis for Larger Storm Events**

- Run hydrologic models for all discharge points leaving the right-of-way to determine if larger events will increase discharge. If a possible increase in discharge is indicated, perform storage routing using the proposed culvert. If increased discharge will be present after storage routing, begin risk assessment.

### **Perform Risk Assessment**

#### *Desktop Review*

- Complete Section A of Form HYD-100
  - Determine drainage area to outlet location
  - Review current aerials with drainage areas located
  - Note if there are buildings, ponds, or other structures downstream within the drainage area
  - If ponds exist, determine date of construction if possible.
- Complete Section B of Form HYD-100
  - Review current flood studies
  - View floodplain and/or floodway boundary on the most current aerials
  - Identify other structures downstream that may be located in or near the floodplain or floodway.
  - Identify and interview National Floodplain Insurance Program (NFIP) coordinator regarding community policies
  - Consult city engineer, county engineer, NFIP coordinator, or other public or knowledgeable private personnel regarding information including previous studies, surveys, or other available materials that may identify sensitive features or areas that would require additional attention to avoid or minimize future claims and impacts.
- Complete Section C of Form HYD-100
  - Determine environmental impacts that could affect hydraulic design
  - Determine if the receiving waters are ephemeral, intermittent, or perennial
  - Using soil survey or core borings, identify the types of soil and/or other geological features in or near the site (sand, silt, or clay)
- Complete Section D of Form HYD-100
  - Determine average daily traffic for present year and design year
  - Determine what routes may be affected (school, mail, emergency etc.)

- Determine if detours are available if route is closed
- Determine if the available detour route(s) is an interstate, freeway, arterial, collector, or local
- Describe the existing roadway including the pavement type, shoulder type, number of lanes, median type, and width of each (N/A for new alignment)

Site Visit

- Complete Section A of Form HYD-101
  - Determine the stream slope and if there are any drops greater than 2 feet
  - Determine the material in the stream bottom
  - Determine the material in the stream banks
  - Determine if the stream material is cohesive or non-cohesive
  - Determine if the stream shows evidence of degradation such as bank scour
  - Determine the material in the floodplain
  - Determine the kind and amount of vegetation in and along the channel
  - Determine the kind and amount of vegetation in the floodplain
  - Estimate Manning's n-values for the stream channel and floodplain
  - Determine other features that might affect water surface elevations
- Complete Section B of Form HYD-101
  - Note if scour is present around or near the structure
  - Describe the alignment and size of structure
  - Provide elevations for elements of structure such as low bridge superstructure, pipe or culvert inverts, low point of road, etc.
  - Provide road width, either shoulder-shoulder or curb-curb
  - Describe the condition of the existing structure
- Complete Section C of Form HYD-101
  - Estimate the flood damage potential
  - Note any buildings in and around the floodplain
  - Determine finished floor elevations of buildings
  - Describe the land use upstream and downstream
- Complete Section D of Form HYD-101
  - Determine if there is any historical highwater information
  - List the source and the location of the information
  - If information exists, note the date and elevation of the highwater

- Estimate allowable highwater
- Note any informal or available record(s) of damage from previous floods
- Complete Section E of Form HYD-101
  - Photograph pertinent features such as existing drainage structures, stream channel, floodplain, and any other key features
  - Provide an identification number or description for recording photos
- Complete Section F of Form HYD-101
  - Collect cross-section information and stream slope at any proposed crossing if it cannot be effectively obtained from a digital terrain model (dtm)



Risk Factor Assessment Form

Complete the Risk Factor Assessment form to identify any high risk factors are present. If any questions are answered “Yes,” further hydrologic and/or hydraulic analysis should be performed to determine the extent of the possible impact.

Structures / Property

- During the desktop review, identify and note buildings or structures of any kind, including ponds, dams, levees, etc., within the boundaries of the FEMA mapped floodplain or special flood hazard area.
- During the site visit, identify and note houses or structures of any kind, including ponds, dams, levees, etc., built near a stream that does not have a FEMA mapped floodplain.
- Determine if there is personal property, including but not limited to vehicles or other movable property that could be impacted by flooding.
- Determine from the property owner, city engineer, floodplain manager, etc. if there have been previous issues with flooding.

Streams

- Determine if the streambed and stream banks consist mostly of a non-cohesive sand or silt. This can be determined during the site inspection or from soil borings.
- Determine if there is pre-development evidence of scouring or incision of the streambed and/or stream banks, and/or if there is little to no stream bank vegetation.
- Determine if the flood flow would likely break over the stream banks into the floodplain during a 2-year flood event.
- Determine if any endangered or threatened species are present within the stream.
- Determine if there will be outlets without energy dissipation that could accelerate channel degradation.

## RISK FACTOR ASSESSMENT FORM

Project Name/No: \_\_\_\_\_ Date: \_\_\_\_\_

County: \_\_\_\_\_ Site No: \_\_\_\_\_

Stream: \_\_\_\_\_ By: \_\_\_\_\_

### High Risk Factors - Structures and Property

		Yes*	No
1	Is there a structure in the mapped FEMA Special Flood Hazard Area?		
2	Is there a structure built near the stream in an unmapped floodplain area?		
3	Is there a threat of property damage (other than a structure)?		
4	Is there history of previous flooding?		
5	Is there a privately owned pond, levee, etc. that will be impacted?		
6	Other? Describe if Yes.		

\* If any of these items were answered Yes, then perform a hydrologic and hydraulic analysis for the 2-year 24-hour event through the 100-year 24-hour storm event

### High Risk Factors - Streams

		Yes*	No
1	Does the stream mainly consist of a non-cohesive silt or sand?		
2	Is the stream already degrading and have little to no bank vegetation?		
3	Is the stream unable to utilize the floodplain on a 2-year event?		
4	Are there endangered species that are impacted?		
5	Will proposed outlet flow be concentrated without energy dissipation?		
6	Other? Describe if Yes.		

\* If any of these items were answered Yes, then perform a hydrologic and hydraulic analysis for the 2-year 24-hour storm event

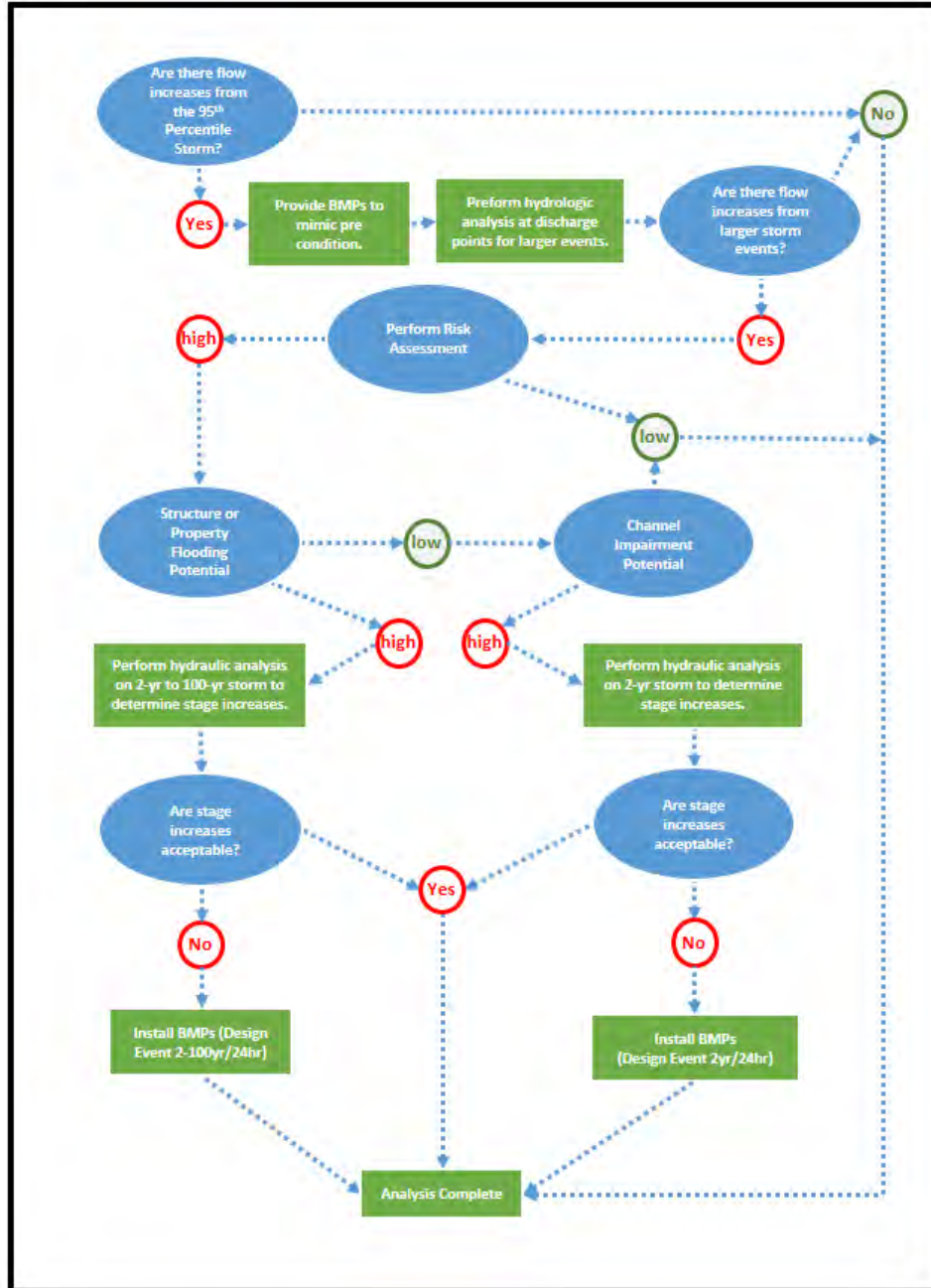
Criteria of recurrence intervals for hydrologic and hydraulic analysis

- If any items on the Risk Factor Assessment Form were answered “Yes,” further hydrologic and hydraulic analysis shall be performed
- If any items on the ‘Structures and Property’ Form were answered “Yes,” analyze the 2-year 24-hour storm and all other events up to and including the 100-year 24-hour storm event
- If any items on the ‘Stream’ Form were answered “Yes,” analyze the 2-year 24-hour storm only
- Interchanges, support facilities, rest areas shall meet the local stormwater ordinance criteria.

In some instances there may be specific sites that require greater management of stormwater due to the conditions of the location. In these cases, a context sensitive design approach will be used.



**Table 1: Risk Assessment Flowchart**



Alabama Department of Transportation  
Design Bureau  
Location Information – Office

Project No: \_\_\_\_\_ Date: \_\_\_\_\_  
Division: \_\_\_\_\_ County: \_\_\_\_\_ Prepared By: \_\_\_\_\_  
Section: \_\_\_\_\_ Township: \_\_\_\_\_ Range: \_\_\_\_\_  
Over (River, Creek, Branch, Ditch): \_\_\_\_\_  
Highway or Road No. \_\_\_\_\_ Station No. \_\_\_\_\_

A. Flood Studies

1. Any flood zoning (FIS, etc.)? Yes \_\_\_\_\_ No \_\_\_\_\_
2. Type of Study: \_\_\_\_\_  
\_\_\_\_\_
3. Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
4. Governing community has policy or guideline: Yes \_\_\_\_\_ No \_\_\_\_\_  
Comments: \_\_\_\_\_  
\_\_\_\_\_

B. Environmental Considerations

1. List commitments in environmental documents which affect hydraulic design. None \_\_\_\_\_, or  
Comments: \_\_\_\_\_  
\_\_\_\_\_

C. Traffic Related Evaluations

1. Present Year: \_\_\_\_\_ Traffic Count: \_\_\_\_\_ A.D.T. % Trucks \_\_\_\_\_
2. Design Year: \_\_\_\_\_ Traffic Count: \_\_\_\_\_ A.D.T. % Trucks \_\_\_\_\_
3. Emergency Route: \_\_\_\_\_ School Bus Route: \_\_\_\_\_ Mail Route: \_\_\_\_\_
4. Detour Available: Yes \_\_\_\_\_ No \_\_\_\_\_ Length of Detour: \_\_\_\_\_
5. Design Speed: \_\_\_\_\_ 6. Can Route be Closed? Yes \_\_\_\_\_ No \_\_\_\_\_
6. Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
7. Interstate, Freeway, Arterial, Collector, Local, Other. (Please Circle One)  
Comments: \_\_\_\_\_  
\_\_\_\_\_
8. Existing Roadway:  
(a) Pavement Type & Width: \_\_\_\_\_ (b) Shoulder Type & Width: \_\_\_\_\_  
(c) Curb & Gutter: Yes \_\_\_\_\_ No \_\_\_\_\_ (d) No. Lanes: \_\_\_\_\_

(e) Median: Yes \_\_\_\_\_ No \_\_\_\_\_ Type & Width of Median: \_\_\_\_\_

(f) Description of Existing:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(g) Total Roadway Width: \_\_\_\_\_ Ft.

9. Other Remarks:

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Alabama Department of Transportation  
Section I.  
Location Information – Field Party

Project No: \_\_\_\_\_ Date: \_\_\_\_\_

Division: \_\_\_\_\_ Prepared By: \_\_\_\_\_

CPMS No: \_\_\_\_\_ Chief of Survey Party

County: \_\_\_\_\_ Section: \_\_\_\_\_ Township: \_\_\_\_\_ Range: \_\_\_\_\_

State Highway, or County Road No: \_\_\_\_\_ Station: \_\_\_\_\_

Over: ( River , Creek , Branch , or Drainage Ditch  )

(If a named River, Stream, or Tributary, indicate Name):

\_\_\_\_\_

A. Description of Stream Channel

1. Natural Stream Bottom Slope: \_\_\_\_\_ ft/ft.

2. Material in Stream Bottom: (Check All that Apply)

Mud  Silt  Clay  Sand  Gravel  Cobbles

Boulders  Soft Solid Rock  Stratified Rock  Hard Rock

Silt Sedimentation  Deposition of Large Stones

3. Material in Stream Banks: (Check All that Apply)

Mud  Silt  Clay  Sand  Gravel  Cobbles

Boulders  Soft Solid Rock  Stratified Rock  Hard Rock

Silt Sedimentation  Deposition of Large Stones

4. Are Fish or Aquatic Organisms visible? Yes  No

5. Are Banks Scouring? Yes  No

In Which Direction?    Upstream            Downstream   

6.    Material in Flood Plain: (Check All that Apply)

Mud            Silt            Clay            Sand            Gravel            Cobbles   

Boulders            Soft Solid Rock            Stratified Rock            Hard Rock   

Silt Sedimentation            Deposition of Large Stones   

7.    Is Bottom Aggrading (filling)?            Degrading (Deepening)?   

8.    Vegetation in and Along Channel:

---

9.    Vegetation in Flood Plain:

---

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10.    Presence of Features that Might Affect Discharge, Flood, Tailwater, or Headwater Elevations:

a.    Levees:

---

b.    Upstream Diversions (e.g. Sinkhole, millrace, irrigation channel):

---

c.    Backwater from Another Source: (Check One)

Stream                    Pipe or Culvert   

Bridge                    Dam                           

Other                      None                           

(If Other, List):

---

List Backwater Elevation: \_\_\_\_\_ Date Measured: \_\_\_\_\_

d.    Other Observed Features:

---

e.    Does stream carry a large amount or accumulation of sand, or debris (fragments of rock, driftwood, etc.)?

---

f. Downstream drainage structures which can affect Tailwater: (List All)

(If descriptions of additional structures are required, attach copies of this section.)

- 1) Type of Structure: \_\_\_\_\_ 2) Distance Downstream: \_\_\_\_\_  
3) Condition of Structure: Good  Fair  Poor   
4) Size: \_\_\_\_\_ 5) Material: \_\_\_\_\_  
6) Inlet Flowline: \_\_\_\_\_ 7) Outlet Flowline: \_\_\_\_\_

g. Other Influences:

---

### B. Existing Structures

1. Is Scour indicated near structure? Yes  No

2. Alignment and General Description of Structure:

a. Skew Angle: \_\_\_\_\_ Lt.  (or) Rt. ; Ahead , (or) Back

b. Shape: Circular pipe  Arch pipe  Other  Box Culvert  Bridge

(If Other, Describe): \_\_\_\_\_

c. Material: Concrete  Steel/Aluminum  Brick & Mortar

Stone  Plastic

If Steel/Aluminum, or Plastic: Smooth  Corrugated

d. Size or Waterway Opening of Structure:

Span: \_\_\_\_\_ Rise: \_\_\_\_\_

e. Condition of Structure: Good  Fair  Poor

3. Elevation of:

a. Low Superstructure (Bridge): \_\_\_\_\_



- b. Crown of Pipe: \_\_\_\_\_
- c. Inside Top of Culvert: \_\_\_\_\_
- d. Flowlines of:
  - i) Pipe:  
Inlet: \_\_\_\_\_ Outlet: \_\_\_\_\_
  - ii) (Bridge or Culvert):

Indicate material: Natural Channel Bottom  (or) Structure

Inlet: \_\_\_\_\_ Outlet: \_\_\_\_\_

4. Is a Dissipater Present? Yes  No

If yes, Indicate Type: Riprap  Concrete  Other

If Other, Describe: \_\_\_\_\_

5. Overtopping Location and Elevation: (Choose Only One)

Roadway  Ditch Berm  Watershed Divide  Emergency Relief Structure

Station \_\_\_\_\_ Elevation: \_\_\_\_\_

6. Roadway Width:

Shoulder-Shoulder  (or) Curb-Curb  : \_\_\_\_\_ Ft.

7. Are any parts of the Existing Roadway Fill sections acting as a dam for standing water?

Yes  No

8. Centerline Elevation of Structure at Centerline of Stream: \_\_\_\_\_

### C. Property Susceptible to Flooding

*(If descriptions of additional structures are required, attach copies of this section.)*

1. Location of Structure:

a. Station: \_\_\_\_\_

b. Type of Structure: \_\_\_\_\_

c. Description:

\_\_\_\_\_

2. Floor Elevation: \_\_\_\_\_

- 3. Upstream Land Use:  
\_\_\_\_\_
- 4. Downstream Land Use:  
\_\_\_\_\_
- 5. Probable (Anticipated) Changes:  
\_\_\_\_\_


**D. Historical Highwater (H.W.) or Flood Information**

*(Please record more than one source if information can be obtained.)*



- 1. Source of Information:  
\_\_\_\_\_  
\_\_\_\_\_
- 2. Elevation of H.W.  
Indicate: Field Measurement  (or) Flood Information : Elev. \_\_\_\_\_  
Source: \_\_\_\_\_
- 3. Date of H.W., Flood, or Floods (if it can be determined): \_\_\_\_\_
- 4. Estimated Allowable H.W.: \_\_\_\_\_
- 5. Damage from Previous Floods (if available):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Closing Remarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## ALDOT Post-Construction BMP Inventory Form

<b>Location:</b> 📍 32°25'N 86°16'W ± 50 m <span style="float: right;">✕</span> 	
<b>BMP ID #:</b> <input type="text"/>	
<b>Is the BMP structural or nonstructural?</b> <input type="radio"/> Structural <input type="radio"/> NonStructural	
<b>▼ BMP Location:</b>	
<b>Area: *</b> <input type="radio"/> Alex City <input type="radio"/> Fayette <input type="radio"/> Guntersville <input type="radio"/> Montgomery <input type="radio"/> Tuscaloosa <input type="radio"/> Birmingham <input type="radio"/> Grove Hill <input type="radio"/> Mobile <input type="radio"/> Troy <input type="radio"/> Tuscumbia	<b>District: *</b> <b>County: *</b> <input type="text"/>
<b>ALDOT facility and address where BMP is located (if applicable):</b> <input type="text"/>	
<b>Latitude</b> <input type="text" value="86°16'1.643 N"/> <span style="float: right;">✕</span>	<b>Longitude</b> <input type="text" value="32°24'37.415 E"/> <span style="float: right;">✕</span>
<b>Inventory or Non Inventory?</b> <input type="radio"/> Inventory <input type="radio"/> Non Inventory	
<b><u>Milepost(s)</u></b>	
<b>Begin Milepost: (BMP)</b> <input type="text"/>	<b>End Milepost: (EMP)</b> <input type="text"/>

## ALDOT Post-Construction BMP Inspection Form

<b>▼ BMP Condition:</b>	
<b>Does the BMP appear to be functioning as intended?</b> <input type="radio"/> Yes <input type="radio"/> No	<b>Does the BMP appear to be damaged?</b> <input type="radio"/> Yes <input type="radio"/> No
<b>Approximately how of the BMP is filled with sediment and/or debris?</b> <input type="radio"/> 0 <input type="radio"/> 1-25% <input type="radio"/> 26-50% <input type="radio"/> 51-75% <input type="radio"/> 76-100%	
<b>Does the vegetation within and/or around BMP appear undesirable or have issues?</b> <input type="radio"/> Yes <input type="radio"/> No	<b>Is erosion present within and/or around the BMP?</b> <input type="radio"/> Yes <input type="radio"/> No
<b>Any maintenance recommendations?</b> <input type="radio"/> Yes <input type="radio"/> No	<b>Any additional comments?</b> <input type="radio"/> Yes <input type="radio"/> No
<b>Inspected by (print name):</b> <input type="text"/>	
<b>Inseption Date:</b>	
<input type="text" value="Date"/>	<input type="text" value="Time"/>
<b>▼ Photo(s)</b>	
Image(s) <div style="text-align: center;"> </div>	



**Appendix G:**  
**Supplemental Material for Chapter 7**

ALDOT MS4 Support Facilities

Support Facility Good Housekeeping Manual

Support Facility Good Housekeeping Example Practices

ALDOT Pesticide Discharge Management Plan

SPCC Plan, ALDOT Combined Facility

Environmental Self-Audit Checklists

ALDOT Maintenance Performance Guidelines

Herbicide Work Report

Transportation Facility Maintenance: The RoadMAP Process

Transportation Facility Maintenance: Budget Allocation

Transportation Facility Maintenance: Workflow

## ALDOT MS4 Support Facilities\*

*Last Updated: January 12, 2017*

ALDOT Region	Facility Name	County	Address	MS4 Area
N/A	Central Office Complex**	Montgomery	1409 Coliseum Blvd, Montgomery, AL 36110	Montgomery
North	Huntsville District Office	Madison	4711 Governor's House Dr, Huntsville, AL 35805	Huntsville
North	Gadsden District Office	Etowah	4509 Airport Rd, Gadsden, AL 35904	Gadsden
North	Tuscumbia Area Office	Colbert	295 Hwy 20 E, Tuscumbia, AL 35674	Florence
North	Tuscumbia District Office	Colbert	295 Hwy 20 E, Tuscumbia, AL 35674	Florence
East Central	Birmingham Area Office	Jefferson	1020 Bankhead Hwy W, Birmingham, AL 35202	Jefferson/Shelby County
East Central	Birmingham District Office	Jefferson	1020 Bankhead Hwy W, Birmingham, AL 35202	Jefferson/Shelby County
East Central	Calera District Office	Shelby	3805 Hwy 31, Calera, AL 35040	Jefferson/Shelby County
East Central	Anniston District Office	Calhoun	1545 Hwy 431 N, Anniston, AL 35160	Anniston
West Central	Tuscaloosa Area Office	Tuscaloosa	2715 Skyland Blvd, Tuscaloosa, AL 35407	Tuscaloosa
West Central	Tuscaloosa District Office	Tuscaloosa	2715 Skyland Blvd, Tuscaloosa, AL 35407	Tuscaloosa
Southeast	Speigner District Office***	Elmore	3298 Hwy 143, Elmore, AL 36025	Montgomery
Southeast	Montgomery Area Office	Montgomery	1525 Coliseum Blvd, Montgomery, AL 36110	Montgomery
Southeast	Montgomery District Office	Montgomery	608 Chisholm St, Montgomery, AL 36110	Montgomery
Southeast	Dothan District Office	Houston	171 Sam Houston Blvd, Dothan, AL 36302	Dothan
Southwest	Mobile Area Office	Mobile	1701 N Beltline Hwy, Mobile, AL 36618	Mobile
Southwest	Mobile District Office	Mobile	1701 N Beltline Hwy, Mobile, AL 36618	Mobile
Southwest	Tunnel Office	Mobile	150 Dunlap Dr, Mobile, AL 36602	Mobile

\* All facilities listed are (i) located in an MS4 regulation-eligible area and (ii) considered to have stormwater runoff pollution potential if mismanaged.

\*\* The State Motor Pool facility at 386 S Ripley St, Montgomery, AL 36130 is considered an annex of the Central Office Complex. Facility acquired by ALDOT during FY 2015.

\*\*\* Office located in an MS4 regulation-eligible area, but area not under regulation yet.



# Transportation Support Facility Environmental Procedures Manual

June 2018





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**Appendix C: Supplemental Material for Chapter 2**

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**Appendix E: Supplemental Material for Chapter 4**

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ADEM/ALDOT Scrap Tire Variance  
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ADEM Guidance: Operating and Maintaining UST Systems  
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(Reserved)

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(Reserved)





# I. INTRODUCTION

## *1.1 Support Facility Compliance History*

The Alabama Department of Transportation (ALDOT) support facility compliance program has been in existence since 2003, and was initiated due to non-compliance findings by Alabama Department of Environmental Management (ADEM) inspections at the Central Office Sign Shop and Troy Area (former 7<sup>th</sup> Division Office) drum storage area. As a result of these non-compliance issues ALDOT submitted a Supplemental Environmental Project (SEP) Proposal on November 18, 2003 which was followed by a Consent Order (04-052-CHW), signed by both ALDOT and ADEM, on March 23, 2004.

The purpose of the SEP was a voluntary method for ALDOT to mitigate some of the proposed requirements and penalties of the Consent Order. A number of commitments were made within the SEP which led to the creation of the Support Facility Environmental Compliance Program. The following are the main goals of the SEP:

- Promote a comprehensive approach to environmental management between the Bureaus at the Central Office Complex in Montgomery, the 9 Divisions (now 5 Regions), and the associated District Offices located statewide.
- Emphasize that every DOT employee understands the importance of pollution prevention/reduction.
- Enhance communication between different operating units within the DOT's organization regarding waste management.
- Measure and track environmental performance/compliance to document continual improvement in environmental compliance.
- Increase protection of public health and the environment by reducing the volume and toxicity of waste generated in accordance with the Pollution Prevention Act.

Although the requirements set forth due to the 2004 Consent Order have been met and ALDOT has transformed its facility environmental compliance program due to those requirements, there is a renewed emphasis for Pollution Prevention and Good Housekeeping as outlined in ALDOT's current MS4 Stormwater Management Program Plan (NPDES AL000006). Therefore, this manual



was developed to ensure that the past achievements in facility compliance continue to evolve as regulations change, and that all ALDOT facilities have a standard procedure which to operate by.

## **I.II ALDOT Organization & Facilities**

This document’s main focus is to provide a standard approach to environmental compliance at ALDOT’s support facilities, where departmental operations are based out of, not necessarily roadways and bridges. Therefore organization structure will refer to only those physical support sites. The overall structure consists of the Central Office which consists of twenty-three (23) bureaus. Outside of the Central office the state is divided up into five (5) “Regions” with each Region divided into two (2) “Areas”. Furthermore each of these individual Areas are then further divided into “Districts”. Below see a map showing this organizational structure:



The facilitation of the Support Facility Environmental Compliance Program is achieved through a two (2) tiered approach. Tier I is overall program administration and quality control, and is the responsibility of the Bureau of Materials and Tests located within the Central Office. The Bureau of Materials and Tests provides each Region with the tools to facilitate facility compliance such as manuals, training material, regulatory assistance, and annual compliance audits of all ALDOT



support facilities. Tier II is local administration, and is the responsibility of each Region/Area. Each Area has an “Environmental Compliance Manager” who is responsible for utilizing Tier I resources and applying them to each facility to maintain compliance. These two (2) tiers work in conjunction to ensure that the Support Facility Environmental Compliance Program operates in accordance with the ALDOT’s environmental policy statement which is as follows.

*“While providing a safe, efficient, environmentally sound, and economically sound transportation system, it is the policy of the Alabama Department of Transportation to promote the preservation and enhancement of the natural and cultural resources of the State of Alabama through:*

- *Internal and external communications, coordination, and cooperation, and by*
- *Integrating the principles of environmental stewardship, innovation, and compliance into the planning, design, construction, operation and maintenance of Alabama’s transportation facilities.”*



# 1.0 USED OIL MANAGEMENT

Any used oil accumulated during ALDOT maintenance operations should be carefully managed to ensure proper handling, safe storage, subsequent recycling, and associated documentation. Recycling efforts for used oil and used oil filters aid in protecting the environment while extending the useful life of valuable resources. Only used oil that is intended to be recycled is regulated under the used oil management standards of ADEM. Used oil that is designated for disposal rather than recycling is considered a solid waste that must first undergo a solid/hazardous waste determination.



## 1.1 What is used oil?

Three primary criteria used by ADEM:

- **Origin** – refined from crude oil or made from synthetic materials. Animal and vegetable oils are excluded from the definition of used oil.
- **Use** – has been used as a lubricant, hydraulic fluid, heat transfer fluid (excluding antifreeze) or other similar purpose.
- **Contaminants** – as a result of being used for their intended purpose, used oils are often contaminated with physical impurities (metal particles from engine wear, dust, etc.) or chemical impurities (fuel combustion products, solvents, etc.).

Some examples of used oil include:

<i>Engine oil</i>	<i>Bearing oil</i>	<i>Gear oil</i>	<i>Hydraulic oil</i>
<i>Electrical oil</i>	<i>Brake fluid</i>	<i>Compressor oil</i>	<i>Power steering fluid</i>
<i>Rolling oil</i>	<i>Cutting oil</i>	<i>Grease</i>	<i>Transmission fluid</i>

Virgin fuel oils that have never been used but have become wastes are defined as waste oils and are excluded from ADEM’s definition of used oil. Waste oils should remain separate from used oil accumulation and managed accordingly. Examples of waste oils include tank bottom clean outs or cleanup of virgin oil spills. Other products used as cleaning agents or solely for their solvent properties and certain petroleum derived products (antifreeze and kerosene) are also excluded and should not be mixed with used oil.





## 1.2 Storage

All used oil must be properly stored in competent containers that are located in a designated secure area(s) at each facility. Only used oil that meets the specific criteria described on the prior page is to be placed in the storage container(s).



- Properly label all storage containers as **USED OIL** with a label that is legible from at least 25 feet.
- All fill pipes to ASTs where there is a wall or barrier between the fill port and AST or fill pipes to USTs should be labeled as **USED OIL**.
- All storage containers must be in good condition, structurally sound (no rust, no cracks, no leaks) and visually inspected on a routine basis.
- Containers should be located in a secure area that is away from normal vehicle traffic, away from ignition sources, and under cover (where possible).
- Upon collection, promptly transfer all used oil to the designated container.
- Use appropriate controls and standard practices to prevent spills and overfills including visual observations prior to the addition of used oil to verify adequate storage volume.
- Keep all used oil containers **closed and secure when not in use**.

### Other considerations

- Any spill or leak must be addressed immediately. Efforts should be taken to promptly stop the release and remove any impacted materials (soil, gravel, etc.) as needed. Impacted materials must be disposed of in accordance with ADEM requirements.
- Notify your Environmental Coordinator if more than 25 gallons of used oil are released at your facility during any calendar year.
- Secondary containment must be provided or a spill kit must be maintained in close proximity of storage containers with capacities of 55 gallons or greater.
- Empty drums and other empty used oil containers should be stored in the same designated area in close proximity to a spill kit.
- For storage containers 55 gallons and greater, the used oil container(s) must be included in the facility Spill Prevention Control and Countermeasure (SPCC) plan (if applicable) and managed accordingly.



### 1.3 Used Oil Filters



Non-terne plated used oil filters (mixture of tin and lead) that are not mixed with a listed waste and are destined to be recycled are exempt from hazardous waste regulations if these oil filters have been gravity hot-drained (near engine operating temperature and above room temperature).

Hot-drain methods include:

1. Puncture the filter anti-drain back valve or the filter dome end and hot-drain.
2. Hot drain and crush to press out residual oil.
3. Dismantle and hot drain.
4. Any other equivalent hot-drain method that will remove free-flowing used oil as approved by ADEM.

Filters that immediately drip oil when picked up have not been properly drained. All drained filters should be promptly placed in the appropriate scrap metal bin for recycling. If recycling is not available, the drained filters should be bagged and discarded per ADEM solid waste regulations (if non-hazardous).

### NEVER

- Mix used oil with other wastes (gasoline, antifreeze, pesticides, solvents, paints, debris, etc.)
- Allow used oil to mix with any surface water or ground water
- Apply used oil for dust suppression
- Allow used oil to accumulate outside of containment vessels.
- Dispose of used oil by burning
- Dispose of used oil or undrained oil filters in dumpsters or other common waste receptacles
- Leave used oil containers open



## **1.4 Transport and Recycling**

At minimum, containment vessels should be emptied on an as needed basis and prior to reaching 85% capacity. Removal efforts should be conducted by an ADEM permitted used oil transporter. Designated facility personnel should be present during the removal process to ensure the container(s) has been sufficiently emptied and no spill or leak occurs.

The transporter must provide documentation of the used-oil pickup. Facilities should keep this documentation on file for at least 3 years. The documentation should identify the name and EPA ID number for the transporter, the date of the shipment, the quantity of the shipment, and the final destination.

## **1.5 Notification Requirements**

Facilities that generate, on average, more than 25 gallons of used oil per month in a calendar year must have an EPA identification number prior to generating the used oil. Furthermore, ADEM Form 8700-12 must be submitted on an annual basis to document used oil activities. The submittal dates are specified by month based on your County. Please refer to the Environmental Compliance Calendar (Appendix A) for more details.

## **1.6 Regulatory References**

ADEM used oil management standards are provided in Chapter 335-14-17.

<http://www.adem.state.al.us/alEnviroRegLaws/files/Division14.pdf>

ADEM Notification of Regulated Waste Activity (Form 8700-12)

<http://adem.alabama.gov/deptforms/form8700-12.pdf>



## 2.0 HAZARDOUS WASTE MANAGEMENT – UNIVERSAL WASTE

Universal waste is one of the four categories of hazardous waste established by the Environmental Protection Agency (EPA). The universal waste category is associated with specific widely-generated hazardous wastes identified under the Code of Federal Regulations (CFR) Title 40, Chapter 1, Subchapter I, Part 261 and Part 273.

These wastes are exempt from some requirements of the hazardous waste regulations which results in less stringent management efforts. Universal wastes include the following.

### Light Bulbs (Lamps)

Compact fluorescent lamps (CFL), fluorescent lamps, and high intensity discharge lamps contain small amounts of mercury and lead but may be managed as a universal waste as long as the lamp remains intact. Lamps that are broken, crushed, or otherwise no longer intact are not to be handled as a universal waste and are subject to a solid/hazardous waste determination.



A used mercury-containing lamp becomes a waste on the date it is permanently removed from its fixture. An unused mercury-containing lamp becomes a waste on the date the handler decides to discard it.

### Batteries

Common types of batteries that can be considered universal waste include nickel cadmium (Ni-Cad), lithium ion (Li-ion), lead acid, and caustic mercury. Batteries that do not exhibit hazardous waste characteristics (alkaline batteries) are not considered universal waste. However, recycling is recommended for non-hazardous waste batteries

A used battery becomes a waste on the date it is discarded. An unused battery becomes a waste on the date the handler decides to discard it.

### Pesticides

Only pesticides that have been recalled or banned from use or unused pesticides collected as part of a waste pesticide collection program (recognized by ADEM) can be managed as a universal waste.





A recalled pesticide becomes a waste on the first date that the generator agrees to participate in the recall **and** the party conducting the recall decides to discard it. An unused pesticide destined for a collection program becomes a waste on the date the generator decides to discard it.

### **Mercury-Containing Equipment**



Mercury-containing equipment (excluding batteries and lamps) refers to a device or part of a device that contains a small amount of mercury integral to its function. This generally covers thermostats, switches, barometers, manometers, thermometers, and other similar equipment.

Used mercury-containing equipment becomes a waste on the date it is discarded. Unused mercury-containing equipment becomes a waste on the date the handler decides to discard it.

## **2.1 Types of Generators**

There are two types of universal waste generators (referred to as handlers) based on the quantity of universal waste that is generated at any time.

- Small Quantity Handler of Universal Waste (SQHUW)
  - Accumulates up to 5,000 kilograms (kgs) – approximately 11,000 pounds
- Large Quantity Handler of Universal Waste (LQHUW)
  - Accumulates 5,000 kgs or more

ALDOT facilities that generate universal waste are considered a SQHUW. An EPA Identification Number is not required for universal waste generated at a SQHUW facility.

You may accumulate universal waste at your facility for no longer than one year from the date the waste is first generated or received. An exception to this one-year period is allowable only if it is necessary to collect a sufficient quantity for recycling. However, you must be able to prove the extended time period is necessary for the accumulation.

## **2.2 Management of Hazardous Waste**

Hazardous waste generators must implement measures to ensure that hazardous wastes are properly identified and safely handled to protect human health and the environment. All



personnel involved with the generation and management of hazardous waste should have a thorough understanding of the requirements and procedures needed to ensure proper management.

Basic training is required for applicable personnel, including emergency response procedures specific to the wastes handled at your facility. Training efforts should be documented. It is good practice to periodically conduct refresher training for all personnel involved with hazardous wastes.

**2.2.1 Container Labeling**

All containers used to store universal waste must be clearly labeled as “Universal Waste – Bulbs”, “Universal Waste - Batteries”, etc. and note the date of initial accumulation. Containers must be arranged so that identification labels are easily visible.



**2.2.2 Containers**

Storage containers for hazardous wastes will range in type and capacity. For example, bulbs may be returned to the original container as long as the container is in good condition and will prevent breakage. Do not place broken or damaged bulbs in the primary container.

Any battery that shows evidence of a leak or damage that could cause a leak must be placed in a container that is structurally sound, capable of containing the leakage, and compatible with the liquid. The container must be periodically inspected to ensure there are no leaks.

Pesticides and mercury-containing equipment should also be placed in individual containers.

Select the smallest container available that will adequately hold the expected quantity of waste. All hazardous wastes are to be stored in compatible containers that are located in designated, secure areas at each facility. Never store incompatible materials in the same container or in close proximity of other incompatible waste containers.

Each container must be kept closed at all times except when adding or removing waste. A container holding hazardous waste must not be opened, handled, or stored in a manner which may result in a rupture or leak.



### **2.2.3 Accumulation Areas**

Hazardous waste accumulation areas will be kept clean and free of debris at all times. Containers should be stored under cover where possible to prevent contact with precipitation. There should be sufficient aisle space in the accumulation area to allow unobstructed movement of personnel and/or equipment in case of emergency.

Designated personnel should routinely inspect storage containers to verify no leaks have occurred or are imminent. Any container that exhibits signs of damage, bulging, stress, rust, or is in otherwise poor condition will be promptly removed from service. If a container is leaking or damaged, safely transfer the waste to a compatible container in good condition.

Any spill, leak or other residues must be contained immediately. Impacted material (soil, gravel, debris, etc.) should be removed. You must determine if any material resulting from the release is hazardous waste and manage accordingly in accordance with applicable EPA and ADEM requirements.

### **2.2.4 Waste Documentation**



The quantity of universal waste generated at your facility should be documented and remain current at all times. You must maintain a written record of the first date of accumulation, including the amount, type and number of each waste you generate. This documentation should be reviewed periodically to ensure accumulation limits are not exceeded.

SQHJW facilities are not required to utilize a manifest for disposal efforts or required to keep records related to shipments of universal wastes. However, ALDOT requires that you maintain some form of documentation for each shipment in the facility file.

### **2.2.5 Transport and Recycling/Treatment/Disposal**

A SQHJW facility is prohibited from disposing of universal waste at their facility. Furthermore, you cannot dilute or treat universal waste unless such occurs during response to a spill. Universal wastes must be delivered to another universal waste handler, recycler, treatment facility, or disposal facility.



## HAZARDOUS WASTE MANAGEMENT – UNIVERSAL WASTE

The waste should be prepared for shipment including proper packaging, labeling, marking, and appropriate placarding to meet DOT regulations, as applicable. This can be performed by facility personnel or the transporter.



A universal waste transporter is not required to have an EPA Identification Number. However, they must meet the ADEM requirements for a universal waste transporter. You may self-transport universal waste but are also subject to the requirements of a universal waste transporter including:

- Prohibited from disposal of universal waste
- Prohibited from diluting or treating universal waste (except by responding to releases)
- Required to contain all releases and residues of universal waste
- May only store universal waste for 10 days or less
- Must immediately respond and contain all releases of universal waste
- May only transport the universal waste to another universal waste handler, a recycler, a treatment facility, or a disposal facility

### 2.3 Regulatory References

Code of Federal Regulations (CFR) Title 40, Chapter 1, Subchapter I, Part 261

<https://www.gpo.gov/fdsys/pkg/CFR-2012-title40-vol27/xml/CFR-2012-title40-vol27-part261.xml>

CFR Title 40, Chapter 1, Subchapter I, Part 273

<https://www.gpo.gov/fdsys/pkg/CFR-2012-title40-vol28/xml/CFR-2012-title40-vol28-part273.xml>

EPA Universal Wastes

<http://www3.epa.gov/epawaste/hazard/wastetypes/universal/index.htm>

ADEM hazardous waste requirements are provided in Division 335-14

<http://www.adem.state.al.us/alEnviroRegLaws/files/Division14.pdf>





## 3.0 HAZARDOUS WASTE MANAGEMENT - VSQG

A hazardous waste generator is any facility that produces hazardous waste as listed or characterized under the Code of Federal Regulations (CFR) Title 40, Chapter 1, Subchapter I, Part 261. Common types of hazardous wastes that may be present at some ALDOT facilities include: oil-based paints, fluorescent light bulbs, degreasing solvents, chlorinated solvents, lead-acid batteries, pesticides, cleaning products, vehicle fluids, electronic wastes, metal waste, etc.



The Environmental Protection Agency (EPA) has established four categories of hazardous wastes: listed wastes; characteristic wastes; universal wastes; and mixed wastes. For more specific information regarding these waste categories, please refer to the Hazardous Waste Identification section of this Environmental Compliance Manual.

Facilities that generate and temporarily store hazardous wastes must take necessary precautions to properly manage the material at all times in a manner that does not threaten human health or the environment.

### 3.1 Types of Generators

There are three categories of hazardous waste generators, each based on the quantity of hazardous waste that is generated within a specific time period.

- Very Small Quantity Generators (VSQGs)
- Small Quantity Generators (SQGs)
- Large Quantity Generators (LQGs)

This section focuses solely on VSQG facilities. For more specific information regarding SQGs or universal waste requirements, please refer to the applicable sections of this Environmental Compliance Manual. Currently, no ALDOT facility meets the requirements of a LQG.

### 3.2 What is a Very Small Quantity Generator?

To qualify as a VSQG, a facility must generate no more than the following amounts of hazardous wastes in any calendar month during a 12-month period:



- 100 kilograms (kgs) – approximately 220 pounds (lbs) of hazardous waste
- 1 kg (2.2 lbs) of acutely hazardous waste
- 100 kgs (220 lbs) of any residue or contaminated soil, waste, or other debris resulting from the clean-up of a spill of any acutely hazardous waste



You may accumulate less than 1,000 kgs of hazardous waste or 1 kg of acutely hazardous waste at your facility. There is no accumulation time limit for a VSQG facility. However, it is good practice to remove hazardous wastes on a regular basis and well in advance of the accumulation limits described below.

A VSQG facility cannot generate more than 100 kgs of hazardous waste in any month or accumulate 1,000 kgs or more of hazardous waste at any given time. If either of these conditions occurs, the facility is subject to the more stringent requirements of a SQG. In addition, if you accumulate more than 1 kg of acutely hazardous waste or more than 100 kgs from the cleanup of an acutely hazardous waste spill, the facility is subject to the LQG requirements.

It is noted that universal waste managed in accordance with applicable requirements are not counted toward the total quantity of hazardous waste generated at a facility.

### **3.3 Management of Hazardous Waste**

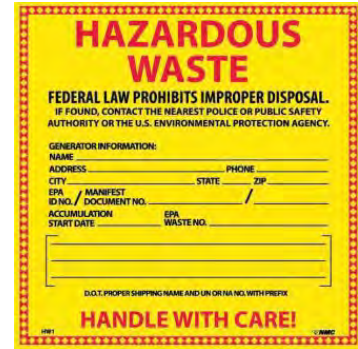
Hazardous waste generators must implement measures to ensure that hazardous wastes are properly identified and safely handled to protect human health and the environment. All personnel involved with the generation and management of hazardous waste should have a thorough understanding of the requirements and procedures needed to ensure proper management.

Although specific training for VSQG personnel is not required by EPA or ADEM, it is good practice to periodically conduct refresher training (management and emergency response) for all personnel involved with hazardous wastes at your facility.



### 3.3.1 Container Labeling

All containers used to store hazardous waste must be clearly labeled as “Hazardous Waste”, identify the contents, and note the date of initial accumulation. Containers must be arranged so that identification labels are easily visible.



### 3.3.2 Containers

Storage containers for hazardous wastes will range in type and capacity. Select the smallest container available that will adequately hold the expected quantity of waste. All hazardous wastes are to be stored in compatible containers that are located in designated, secure areas at each facility. Never store incompatible materials in the same container or in close proximity of other incompatible waste containers.

Each container must be kept closed at all times except when adding or removing waste. A container holding hazardous waste must not be opened, handled, or stored in a manner which may result in a rupture or leak.

### 3.3.3 Accumulation Areas

Hazardous waste accumulation areas will be kept clean and free of debris at all times. Containers should be stored under cover where possible to prevent contact with precipitation.

There should be sufficient aisle space in the accumulation area to allow unobstructed movement of personnel and/or equipment in case of emergency. Maintain and operate these areas to minimize the possibility of fire, explosion, or a hazardous waste spill. Fire extinguishers and spill control equipment should be readily available and personnel should know who to immediately contact in case of a spill.

Designated personnel should routinely inspect storage containers to verify no leaks have occurred or are imminent. Any container that exhibits signs of bulging, stress, rust, or is in otherwise poor condition will be promptly removed from service. If a container is leaking or damaged, safely transfer the waste to a compatible container in good condition.

Any spill or leak should be addressed immediately. Impacted material (soil, gravel, debris, etc.) should be removed and disposed of in accordance with applicable EPA and ADEM requirements.



Although not required for VSQG facilities, it is good practice to store containers of liquid hazardous wastes within a secondary containment system in the event the original container should leak or rupture. Incompatible materials must not be stored in the same secondary containment structure.

### **3.3.4 Waste Documentation**



The quantity of all hazardous waste generated at your facility should be carefully documented and remain current at all times. You must maintain a written record of the first date of accumulation, including the amount, type and number of each hazardous waste you generate. This documentation should be reviewed frequently to ensure accumulation limits are not exceeded.

VSQG facilities are not required to utilize a manifest for disposal efforts. However, hazardous waste transporters and disposal facilities will generally require a hazardous waste manifest. Regardless, you must maintain some form of disposal documentation for each shipment. This documentation should remain on file for a minimum of three years from the date the shipment occurred.

### **3.3.5 Transport and Disposal**

Prior to disposal, the hazardous waste should be prepared for shipment including proper packaging, labeling, marking, and appropriate placarding to meet DOT regulations, where applicable. This can be performed by facility personnel or the transporter. All transporters of hazardous waste must have an EPA Identification Number and valid permit issued by ADEM for transportation of hazardous wastes.

Hazardous wastes generated by a VSQG must be delivered to a treatment, storage, or disposal facility that meets ADEM requirements. Examples include:

- A facility permitted to manage hazardous wastes in the State it is located
- A facility that has qualified for interim status to manage hazardous in the State it is located
- A facility that is permitted, licensed, or registered by a State to manage municipal solid waste
- A facility that is permitted, licensed, or registered by a State to manage non-municipal non-hazardous waste
- A facility that beneficially uses or reuses, or legitimately recycles or reclaims waste





### **3.4 Notification Requirements**

An EPA Identification Number is not required for a VSQG facility. However, if a VSQG has an existing and active EPA Identification Number, you must submit ADEM Form 8700-12 annually or deactivate your number by providing a formal request to ADEM.

The submittal dates are specified by month based on your County. Please refer to the Environmental Compliance Calendar (Appendix A) for more details.

### **3.5 Episodic Generation**

A VSQG facility that experiences an episodic generation of hazardous waste, that would subject that facility to more stringent requirements, is allowed relief once per calendar year. The VSQG facility must notify ADEM at least 30 calendar days prior a planned episodic event by submitting an ADEM Form 8700-12 or within 72 hours of an unplanned episodic event by phone, email or fax in addition to an ADEM Form 8700-12. Notification must include the start and stop date of the event, the reason(s) for the event and the type and quantity of the waste to be generated by the event. Please refer to the Alternative Standards for Episodic Generation of Hazardous Waste (Appendix D) for more details.

### **3.6 Regulatory References**

Code of Federal Regulations (CFR) Title 40, Chapter 1, Subchapter I, Part 261

<https://www.gpo.gov/fdsys/pkg/CFR-2012-title40-vol27/xml/CFR-2012-title40-vol27-part261.xml>

EPA Hazardous Waste Generators

<http://www.epa.gov/hwgenerators>

ADEM hazardous waste requirements are provided in Division 335-14

<http://www.adem.state.al.us/alEnviroRegLaws/files/Division14.pdf>

ADEM Notification of Regulated Waste Activity (Form 8700-12)

<http://adem.alabama.gov/deptforms/form8700-12.pdf>



# APPENDIX A

## ALDOT Facility Compliance Calendar



# ENVIRONMENTAL COMPLIANCE CALENDAR FOR ALDOT FACILITIES

Report / Requirement	Frequency	Description
<b>Hazardous Waste / Used Oil / Scrap Tire</b>		
<b>Small Quantity Generator and Conditionally Exempt Small Quantity Generator</b>	Annually	Annual report required for hazardous wastes generated during the past 12 months for small quantity generators. Reporting required for conditionally exempt small quantity generators <i>only if the facility has an EPA Identification Number</i> . Report (Form 8700-12) due to ADEM by the 15th of the specified month for your county. Refer to Small Quantity Generator or Conditionally Exempt Small Quantity Generator sections for the ADEM specified reporting schedule.
<b>Small Quantity Generator - Inspections</b>	Weekly	Personnel must routinely inspect hazardous waste storage areas, containers, and containment systems a minimum of once per week to verify no leaks have occurred or are imminent. Any container or containment system that is in poor condition must be promptly removed from service. Retain inspection records in the facility file.
<b>Used Oil Generation</b>	Annually	Annual report required for quantity of used oil generated during the past 12 months. Report (Form 8700-12) due to ADEM by the 15th of the specified month for your county. Refer to Used Oil section for the ADEM specified reporting schedule.
<b>Scrap Tire Reporting</b>	Quarterly	Quarterly reports required for facilities that generate 10 or more scrap tires per year. Report (Form 539) due to ADEM by the 28th day following the end of the respective quarterly period.
<b>Hazardous Chemical Storage</b>		
<b>EPCRA Tier II</b>	Annually (by March 1)	Report hazardous materials for the previous calendar year for any chemical that was present at the facility at any time in quantities greater than 10,000 pounds (500 pounds for extremely hazardous substances). The reporting threshold for gasoline and diesel in USTs is 75,000 gallons and 100,000 gallons, respectively. Submit to AERC via ADEM, local Fire Department and local EMA.
<b>Storm Water</b>		
<b>NPDES Sampling</b>	Permit Specific	Storm water sampling and analysis required per facility specific permit. Frequency may be twice-monthly, monthly, quarterly, semi-annually, or annually.
<b>NPDES Reporting</b>	Permit Specific	Discharge monitoring reports (DMRs) for all but annual sampling requirements are due to ADEM no later than July 28 and January 28 each year for the prior 6 month period. DMRs for annual sampling requirements are due by January 28 for the prior year. Annual certifications may also be required and if so, are due by January 28 for the prior year.
<b>NPDES Inspections</b>	Permit Specific	Best Management Practices (BMP) Plan to be implemented based on facility specific permit. Typically requires twice-weekly inspections of any structures that are used to prevent storm water pollution. In addition, most NPDES permits require visual observation/documentation of storm water discharge, including precipitation drained/discharged from secondary containment structures for petroleum storage. Retain observations/inspections in the facility file.
<b>Petroleum - ASTs and Other Containers</b>		
<b>SPCC Plan</b>	Initial Preparation and Periodic Review	SPCC plan required for facilities that store more than 1,320 gallons of petroleum. If facility conditions change relative to petroleum storage/handling and responsible personnel, the plan should be updated within 180 days. At a minimum, the SPCC Plan should be updated every 5 years.
<b>AST System and Container Inspections</b>	Per Facility SPCC Plan	Daily informal inspections. Monthly and annual formal inspections. Retain monthly and annual inspection records in the facility file.
<b>AST Integrity Testing</b>	Per Facility SPCC Plan	Refer to your facility specific SPCC Plan for the integrity testing schedule. Retain records in the facility file for the life of the tank plus 3 years after it is removed from service.
<b>SPCC Plan Training</b>	Annually	Annual refresher training for all petroleum handling personnel in accordance with the SPCC Plan. Retain records in the facility file.
<b>Petroleum - UST Systems</b>		
<b>Steel Tanks and Piping - Corrosion Protection</b>		
<b>Cathodic Protection Systems</b>	Every 3 Years*	Test (by certified tester) within 1 month of CP system installation or system repair and every 3 years thereafter. Test within 1 month of any construction activities near the UST system. Submit results to ADEM (Form 545 - galvanic or Form 322 - impressed current) within 30 days of the testing. Retain testing records in the facility file for at least the last two tests (recommended to keep all results).
<b>Rectifier for Impressed Current Systems</b>	Every 60 Days	Inspect impressed current rectifier at least once every 60 days to verify proper operation. Retain records (Form 400) of the last 3 inspections in the facility file (recommended to keep the last 3 years of inspection results).

# ENVIRONMENTAL COMPLIANCE CALENDAR FOR ALDOT FACILITIES

Report / Requirement	Frequency	Description
<b>Petroleum - UST Systems (continued)</b>		
<i>Leak Detection for Tanks Installed on or after August 6, 2007</i>		
<b>Interstitial Monitoring</b>	Monthly	All USTs must be double wall with an interstitial space for leak detection monitoring. Monitor interstitial space and record results at least once every 30 days. Retain results for at least 1 year (3 years recommended). You may use additional leak detection methods but interstitial monitoring is required.
<i>Leak Detection for Tanks Installed before August 6, 2007</i>		
<b>Interstitial Monitoring</b>	Monthly	Monitor interstitial space and record results at least once every 30 days. Retain results in the facility file for at least 1 year (3 years recommended).
<b>Inventory Control (Automatic Tank Gauge)</b>	Daily	ATG and liquid level probe used to monitor product level and perform inventory control. Record water reading at least once per month. Monthly static test (0.2 gal/hr leak rate). Retain monthly print outs and leak test reports in the facility file for at least 1 year (3 years recommended).
<b>ATG - CSLD</b>	Continuous	ATG and liquid level probe used to monitor product level and perform inventory control for statistical analysis. Record water reading at least once per month. Monthly static test (0.2 gal/hr leak rate). Retain monthly print outs and leak test reports in the facility file for at least 1 year (3 years recommended).
<b>Statistical Inventory Reconciliation (SIR)</b>	Daily	Provide daily inventory data to SIR vendor at least once every 30 days. Submit 12-month summary to ADEM (Form 326) annually by January 31st. Retain results in the facility file for at least 1 year (3 years recommended).
<b>Vapor Monitoring</b>	Monthly	Monitor subsurface soil around the UST system for the presence of petroleum hydrocarbon vapors at least once every 30 days. Retain results in the facility file for at least 1 year (3 years recommended).
<b>Groundwater Monitoring</b>	Monthly	Monitor the groundwater table near the UST system for the presence of product floating on the water at least once every 30 days. Retain results in the facility file for at least 1 year (3 years recommended).
<b>Manual Tank Gauging (only tanks 1,000 gallons or less)</b>	Weekly	Manually gauge the product level in the tank at least once per week. Reconcile inventory weekly and at the end of every 4 weeks. Retain results in the facility file for at least 1 year (3 years recommended).
<i>Leak Detection for Pressurized Piping Installed on or after August 6, 2007</i>		
<b>Interstitial Monitoring</b>	Monthly	All product piping must be double wall with an interstitial space for leak detection monitoring. Monitor interstitial space and record results at least once every 30 days. Retain results in the facility file for at least 1 year (3 years recommended). You may use additional leak detection methods but interstitial monitoring is required.
<i>Leak Detection for Pressurized Piping Installed before August 6, 2007</i>		
<b>Tightness Test</b>	Annually	Line tightness test by certified tester every year. Submit test results to ADEM (Form 477) within 30 days of the test. Retain results in the facility file for at least 1 year (3 years recommended). <i><u>Instead of annual line tightness testing by a certified tester, you can use one of the other methods listed below....</u></i>
<b>Interstitial Monitoring</b>	Monthly	Monitor interstitial space and record results at least once every 30 days. Retain results in the facility file for at least 1 year (3 years recommended).
<b>Electronic Line Leak Detector (2 choices)</b>	Monthly	ELLD to perform monthly 0.2 gal/hr leak test. Retain results in the facility file for at least 1 year (3 years recommended). This test is recommended over the annual ELLD test below.
	Annually	ELLD to perform annual 0.1 gal/hr leak test. Retain results in the facility file for at least 1 year (3 years recommended).
<b>Statistical Inventory Reconciliation (SIR)</b>	Daily	Provide daily inventory data to SIR vendor at least once every 30 days. Submit 12-month summary to ADEM (Form 326) annually by January 31st. Retain results in the facility file for at least 1 year (3 years recommended).
<b>Vapor Monitoring</b>	Monthly	Monitor subsurface soil around the UST system for the presence of petroleum hydrocarbon vapors at least once every 30 days. Retain results in the facility file for at least 1 year (3 years recommended).
<b>Groundwater Monitoring</b>	Monthly	Monitor the groundwater table near the UST system for the presence of product floating on the water at least once every 30 days. Retain results in the facility file for at least 1 year (3 years recommended).



## ENVIRONMENTAL COMPLIANCE CALENDAR FOR ALDOT FACILITIES

Report / Requirement	Frequency	Description
<b>Petroleum - UST Systems (continued)</b>		
<i>Other</i>		
<b>Mechanical Line Leak Detector</b>	Annually	Certified tester to test each MLLD on an annual basis. Submit MLLD test results to ADEM (Form 551) within 30 days of the test. Retain results in the facility file for at least 1 year or until the next test is conducted (3 years is recommended).
<b>Spill Bucket Testing</b>	Every 3 Years	Hydrostatic or vacuum testing once every 3 years. Submit test result to ADEM (Form 20) within 30 days of the test.
	30 days	Hydrostatic or vacuum testing upon repair or replacement of any spill bucket. Submit test result to ADEM (Form 20) within 30 days of the test.
<b>Sumps and Under Dispenser Containment Inspections</b>	Annually	Formal inspection on an annual basis for STP sumps, UDC, and any other containment sumps. Must check sump sensors and penetration boots if the sump is used to meet leak detection requirements. Retain results in the facility file for at least 1 year (3 years recommended).
<i>UST Operator Training</i>		
<b>Class A &amp; Class B Operators</b>	Within 30 Days	Class A and Class B Operators must be trained within 30 days after assuming operation and maintenance responsibilities for the UST system. Training must be conducted by an ADEM approved trainer. Personnel must successfully pass an examination for their classification level. Retain results in the facility file for entire employment. Re-training not required unless UST violation is issued by ADEM.
<b>Class C Operators</b>	Immediately	Train Class C Operators before assuming responsibility for UST system emergencies. Class C Operators may be trained by ALDOT Class A and Class B Operators. Retain results in the facility file for entire employment.

# ALDOT Support Facility

## Good Housekeeping Practices



Petroleum Product Management



**Herbicide Storage**



**Paint Control**



**Temporary Used Battery Holding**



**Hazardous Material Isolation**



**Wash Water Control**



**PESTICIDE DISCHARGE MANAGEMENT PLAN**  
**FOR**  
**THE ALABAMA DEPARTMENT OF TRANSPORTATION**  
(March, 2016 revision)

The following is the Alabama Department of Transportation (ALDOT) Pesticide Discharge Management Plan (PDMP) developed as required by the National Pollutant Discharge Elimination System (NPDES) – General Permit # ALG870000. A copy of the PDMP will be retained, along with all supporting maps and documents, at the address provided on the NOI and made readily available to ADEM upon request.

**Pesticide Discharge Management Plan (PDMP)**

- I. Pesticide Discharge Management Team:
  - A. Person responsible for managing pests within the pest management area: State Maintenance Engineer Stacey N. Glass.
  - B. Persons responsible for developing and revising the PDMP: State Maintenance Engineer Stacey N. Glass; ALDOT Agronomists—Howard Peavey and Jacob Hodnett
  - C. Persons responsible for developing, revising, and implementing corrective actions and other effluent limitation requirements: State Maintenance Engineer Stacey N. Glass; ALDOT Agronomists—Howard Peavey and Jacob Hodnett
  - D. Persons responsible for pesticide applications: Various ALDOT employees in possession of current Commercial Applicator Permits issued by the Alabama Department of Agriculture & Industries
  
- II. Problem Identification
  - A. Pest problem description: Any vegetation located within ALDOT Rights-of-Way (ROW) that interferes with, or otherwise has, or could have, a negative impact upon the safety of travelers or roadside workers, travel way facilities or appurtenances, maintenance activities, and the environment itself. Pests will include, but not be limited to, ryegrass, fescue, bahiagrass, and other tall growing grasses or forbs that may obscure lines of sight, signage, or safety devices with the ROW, any vegetation that may block, dam, or other impede the flow of drainage, brush and trees that may create safety and/or fire hazards by encroachment onto or over the ROW and travel way facilities, invasive plants such as kudzu, Johnsongrass, Cogongrass or other non-native vegetation that threaten to displace desirable roadside vegetation, or other vegetation that may, in any way, threaten the safety or maintenance efforts along the ROW.

- B. Action threshold: When conditions exist that will promote vegetation that can reach a height that will block a line of sight, or, as determined by the Operator, create a safety hazard or interfere with needed maintenance activities the action threshold will be triggered. Vegetation that reaches a height that blocks line of sight, or, as determined by the Operator, creates a safety hazard or interferes with needed maintenance activities will trigger the action threshold. Invasive vegetation will be considered to have triggered the action threshold upon the confirmation of its presence within the ROW.
  - C. General location map: (See attachment C)
  - D. Water quality standards: ALDOT does not use any pesticides that are listed as impairments for waters of the State.
- III. Control Measure Description: Control measures will be those found in the current edition of ALDOT Publication *Chapter IV: ALDOT Herbicide Treatment Recommendations* (See attachment I). The recommendations found in *Chapter IV* are made on the basis of research conducted by ALDOT and/or additional research conducted in conjunction with Auburn University, experience of use, safety (both to applicators and the environment), and effectiveness.
- IV. Schedules and Procedures:
- A. Pertaining to control measured used to comply with the effluent limitations.
    - 1. Application rate and frequency: Application rates and frequencies will be as determined by the local District Office; the application resource shall be the current edition of ALDOT publication *Chapter IV: ALDOT Herbicide Treatment Recommendations* (see attachment I). Rates will adhere to manufacturer label rates and industry practices and will in no instance exceed labeled rates.
    - 2. Spill prevention: ALDOT applicators will receive annual training covering spill prevention. Where possible herbicide mixing and loading will be conducted within the confines of a dedicated herbicide building with containment.
    - 3. Pesticide application equipment: Before each application the equipment will be inspected for leaks and improper function. Repairs will be made prior to leaving the facility. If a leak occurs in the field, the application will be terminated and the equipment returned to the facility for repair. Equipment calibration will be conducted at least twice per week during regular use, every time a product change is made and prior to the first use after extended equipment shut down.
    - 4. Pest surveillance: As action thresholds are met, but not more than 21 days prior to each application, an inspection of the area will be conducted by ALDOT employees. The predominant target vegetation will be noted as well as the location of nearby bodies of water. The inspection will be documented on the ALDOT Scouting Report.
    - 5. Assessing environmental conditions: For each application, beginning and ending weather and soil conditions will be monitored and documented on the ALDOT Herbicide Treatment Report.

- B. Pertaining to other actions necessary to minimize discharges.
1. Spill response procedures:
    - a. Applicators will receive annual training covering spill response and procedures. Each herbicide vehicle will carry a shovel and absorbent booms or pillow so that if a spill occurs it can be contained and prevented from entering a drain or body of water.
    - b. If a spill occurs, the applicator will make every reasonable effort to contain the spill and then notify his/her immediate supervisor who will report the spill to the appropriate ALDOT Environmental Compliance Coordinator (EOC). The EOC will then report the incident to the ALDOT Hazardous Material Coordinator who will act to resolve the issue and, if necessary, contact emergency response and regulatory agencies.
  2. Adverse incident response procedures:
    - a. Contact information for ADEM, the nearest medical facility, and the nearest hazardous chemical responder will be readily accessible and available at each District Office.
    - b. If the Operator observes or is made aware of an adverse incident resulting from an ALDOT discharge of a pesticide he/she will notify the EOC and ALDOT Agronomists.
    - c. The EOC will report site inspection findings to the Operator who will then, within the initial 24 hours after observance or notification of the adverse incident, contact by telephone or email Dale Mapp, ADEM Chief of Special Services Section, at 334-394-4399 or [dpm@adem.state.al.us](mailto:dpm@adem.state.al.us). The report will include the following information:
      - The caller's name and phone contact
      - The Operator's name and mailing address
      - The NPDES Permit number
      - The name and phone number of a contact person, if different from the person providing the 24 hour notice
      - How and when the Operator became aware of the incident
      - A description of the location of the incident
      - A description of the adverse incident and the pesticide name for each product applied in the area of the incident
      - A description of corrective actions, repair and clean up actions, or other actions taken to address the incident.

**If the Operator is unable to contact ADEM within 24 hours, then the contact will be made as soon as possible and will include the reason the Operator was unable to make the notification within the initial 24 hours.**

- d. Within 30 days of the occurrence of a reportable adverse incident the Operator will provide a written report to ADEM. The report will include the following:
- The information required under Pesticide Discharge Management Plan part IV, B, 2, b of this PDMP.
  - The date and time the Operator contacted ADEM with notification, the name of the ADEM contact, and any instructions received from ADEM
  - The location of the incident including the names of any waters affected and the appearance of those waters (sheen, color, clarity)
  - A description of the circumstances of the adverse incident including the species affected and an estimated number and size of the individual dead or distressed organisms
  - The magnitude and scope of the affected area (aquatic acres or total stream distance)
  - The pesticide application rate(s), intended use site (bank, above the water, directly to the water), the method of application, and the name of the pesticide(s)
  - A description of the habitat and the circumstances under which the adverse incident occurred including any ambient water data for the pesticide(s) used
  - A listing of which, if any, laboratory tests were conducted, when they were conducted; A summation of the test results will be provided within 5 days of when the results are made available
  - A description of corrective actions taken to prevent the re-occurrence of the adverse incident
  - The Operator signature and date

**The Operator will report adverse incidents even for those instances where the pesticide label states that adverse effects may occur.**

- e. Adverse incident reports are not required in the following situations:
- When the Operator is aware of facts that clearly establish that the adverse incident was not related to the pesticide application
  - When the Operator has been notified in writing, by ADEM, that the reporting requirement has been waived
  - When the Operator receives information of an adverse incident but that information is clearly erroneous
  - An adverse incident occurs to pests that are similar in kind to the pests identified on the FIFRA label.
- f. Notwithstanding any of the above reporting requirements, if the Operator becomes aware of an adverse incident involving a federally listed threatened



or endangered species or critical habitat that may have resulted from a discharge of a pesticide application, the Operator will, in the case of an anadromous or marine species, immediately notify the National Marine Fisheries Service (NMFS), or the U.S. Fish and Wildlife Service (FWS) in the case of a terrestrial or freshwater specie.

3. Pesticide monitoring schedules and procedures:
  - a. Each location (District Office) will select and review a minimum of 1 of the applications made each month. A priority will be placed on those site locations such as bridge abutments or other locations abutting bodies of water, including streams. Application sites will be visibly monitored to look for observable adverse incidents, including the unwanted death or distress of non-target organisms and the disruption of wildlife habitat, resulting from pesticide applications. Product use and rates will also be reviewed at this time to ensure that they are in keeping with section IV, A, 1 of this PDMP.
  - b. Surveillance monitoring will take place between 10 and 21 days after the initial application. The Operator or his/her designee will conduct the site inspection. The total number of Surveillances conducted will be dictated as follows by the total number of applications made each month.
    - 1 to 12 applications will require a minimum of 1 surveillance spot check
    - 13 to 24 applications will require a minimum of 2 surveillance spot checks
    - 25 or more applications will require a minimum of 3 surveillance spot checks
  - c. This site inspection will be documented on the Herbicide Surveillance Report and will include the following information:
    - The name of the site inspector
    - The date of the site inspection
    - The date of the application
    - The name and rate of the pesticide(s) applied
    - A description of any adverse incidents observed and, if necessary
      - Any corrective actions to be taken
      - Any planned follow up

#### **Pesticide Discharge Management Plan Modifications**

- I. The PDMP will be reviewed, at a minimum, annually or whenever necessary to address conditions that require corrective actions or when significant changes are made in the type or quantity of pesticides discharged. Changes to the PDMP, if practicable, will be made before the next pesticide application that results in a discharge, or if not, no later than 90 days after a change is made. Reasons for review and plan modification include:
  - A. The occurrence of an unauthorized (by this or any other Permit) discharge associated with a pesticide application

- B. The Operator becomes aware or ADEM concludes that the pest management measures are not adequate for the discharge to meet applicable water quality standards or the requirements of this Permit
  - C. Any monitoring activities indicate the Operator failed to meet applicable Permit limitations
  - D. An ADEM inspection reveals that modifications to the pest management measures are necessary to meet the Permit requirements
  - E. The Operator observes, or is made aware of, an adverse incident
- II. Where situations other than adverse incidents or reportable spills and leaks trigger corrective action, the Operator will, within 30 days of becoming aware of the situation, document the situation and the planned corrective action. A copy of the documentation will be retained and will include:
- A. Identification of the condition triggering the need for corrective action review including any ambient water quality standards
  - B. A brief description of the situation
  - C. The date the problem was identified
  - D. A brief description of how the problem was identified and how the Operator learned of the situation and the date the Operator learned of the situation
  - E. A summary of corrective action(s) taken including the date initiated and completed or expected completion date
  - F. Any measures taken to prevent the recurrence of such an incident including notice of whether or not PDMP modifications are required as a result of the incident.

#### **Pesticide Discharge Management Plan Availability**

- I. The PDMP will be retained, along with all support documentation, at the address provided in the Notice of Intent and will be made available to ADEM upon request.

#### **Reportable Spills and Leaks**

- I. Where a spill, or other release containing a hazardous substance or oil in the amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302 occurs in any 24 hour period, the Operator will notify the National Response Center (NRC) immediately at 800-424-8802 and the Local Emergency Management Agency as soon as the Operator has knowledge of the release.
- II. Within 30 days of becoming aware of a spill, leak, or other unpermitted discharge triggering the above notification, the Operator will document and retain the following information:
  - A. The information required in Item 1 under Reportable Spills and Leaks
  - B. A summary of the corrective action taken or to be taken including initiation date and completion date, or expected completion date
  - C. Any measures taken to prevent the recurrence of such an incident including notice of whether or not PDMP modifications are required as a result of the incident.

## Recordkeeping

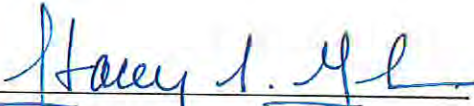
- I. All records will be documented no later than 14 days following completion of an activity. Any record(s) required under this permit will be maintained for at least 3 years from the date the record was created and all records will be made available to ADEM upon request. All Operators will keep the following records:
  - A. A copy of any adverse incident reports (see Pesticide Discharge Management Plan part IV, B, 2, c)
  - B. The rationale for any determination that reporting of an identified adverse incident is not required consistent with section (see Pesticide Discharge Management Plan part IV, B, 2, d)
  - C. A copy of any corrective action taken (see Pesticide Discharge Management Plan Modifications part II)
  - D. A copy of any spill and leak or any other un-permitted discharge document (see Reportable Spills and Leak part II)
  - E. An Annual Report which will be completed by February 15 of the following calendar year. The report will include:
    1. The Operator's name, email address, and phone number
    2. The NPDES Permit Number
    3. A description of each pest treatment area including:
      - a. Identification of any waters or other treatment area, including size, either by name or by location, to which any pesticide(s) were discharged, pesticide use pattern and target pest
      - b. Pesticide use pattern(s) and specific target pests
      - c. Name and contact information of each pesticide applicator
      - d. Quantity of each pesticide applied (in gallons or pounds) and specify if quantities are for the pesticide product as packaged or as formulated and applied and by application method (aerially, ground broadcast or spot treatment)
      - e. If applicable, any adverse incidents involving non-target organisms resulting from these applications
      - f. A description of any corrective action(s), including spill responses, resulting from pesticide application activities and the rationale for such action(s)
      - g. The surveillance method(s) used, date(s) of surveillance activities, and surveillance findings
      - h. Action threshold used during the past year
      - i. Specific pesticide application dates
      - j. Name of each pesticide used
      - k. Concentration (%) of active ingredient in formulation
      - l. For pesticide applications made directly to waters, the effective concentration of active ingredient required for control
      - m. Documentation of any equipment calibration

- n. A copy of the PDMP, including any modifications made to the PDMP during the term of this permit, as well as whether this pest control activity was addressed in the PDMP prior to the pesticide application
- o. Summary of all adverse incidents that occurred during the previous calendar year.

#### Noncompliance Notification

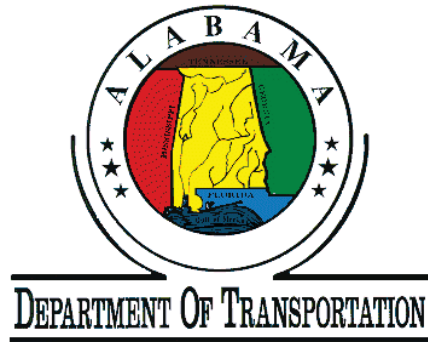
- I. For any discharge that does not comply with any condition of this PDMP the Operator will verbally notify ADEM within 24 hours of the non-compliant event and follow up within 5 days with a written report.
- II. The written report will include:
  - A. A description of the non-compliant event, its cause if known, and location
  - B. The expected period of non-compliance, including dates and times
  - C. A description of corrective measures to be taken and any associated effects to the environment.

I certify that I am in compliance with all conditions of the PDMP and that the plan is in accordance with the National Pollutant Discharge Elimination System Permit General Permit Number ALG870000.

  
\_\_\_\_\_  
Stacey N. Glass, P.E., State Maintenance Engineer

Date: 2-7-2020





**SPILL PREVENTION CONTROL AND  
COUNTERMEASURE PLAN  
AND  
STORMWATER POLLUTION PREVENTION PLAN**

**ALABAMA DEPARTMENT OF TRANSPORTATION  
COMBINED FACILITY  
MONTGOMERY, ALABAMA**

**Prepared for:**

**ALABAMA DEPARTMENT OF TRANSPORTATION  
1409 COLISEUM BOULEVARD  
MONTGOMERY, ALABAMA**

**Prepared by:**

**MACTEC ENGINEERING AND CONSULTING, INC.  
2100 RIVERCHASE CENTER, SUITE 450  
BIRMINGHAM, ALABAMA 35244**

**MACTEC PROJECT NUMBER: 6189-05-0007.06**

**March 2010**

SPCC Plan updated March 2015 (updates are highlighted)



engineering and constructing a better tomorrow

March 16, 2010

Mr. Larry Lockett, PE  
Materials and Tests Engineer  
**Attention: Adam Anderson**  
Hazardous Materials Coordinator  
Alabama Department of Transportation  
1409 Coliseum Boulevard  
Montgomery, Alabama 36103-3050

Telephone No.: (334) 206-2284  
Facsimile No.: (334) 264-6263

**Subject: SPCC and SWPP Plan**  
**Alabama Department of Transportation**  
**Combined Facility**  
**Montgomery, Alabama**  
**MACTEC Project No. 6189-05-0007**

Dear Mr. Anderson:

MACTEC Engineering and Consulting, Inc. (MACTEC) is pleased to submit this revised Plan which includes the Spill Prevention Control and Countermeasure (SPCC) Plan and Stormwater Pollution Prevention (SWPP) Plan for the above-referenced site. Our services were performed in general accordance with the terms and conditions of our Statewide Hazardous Materials Site Assessment Agreement No. 726, dated September 3, 2004 and supplemental agreement #1, dated September 15, 2006.

Please do not hesitate to contact us should you have any questions or comments regarding this Plan.

Sincerely,  
**MACTEC ENGINEERING AND CONSULTING, INC.**

A handwritten signature in blue ink that reads "Julia M. Bower".

Julia M. Bower, EI  
Project Engineer

A handwritten signature in blue ink that reads "James M. DeLano".

James M. DeLano, PE  
Principal Engineer

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## APPENDIXES

- Appendix A: Professional Engineer Certificate
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## 1.0 INTRODUCTION

This Spill Prevention, Control, and Countermeasures (SPCC) Plan and Stormwater Pollution Prevention (SWPP) Plan has been prepared for the Alabama Department of Transportation (ALDOT) Combined Facility in Montgomery, Alabama (**Figure 1**), hereinafter referred to as facility and/or site. The Combined Facility (**Figure 2**) is comprised of the Central Administrative Complex (**Figure 3**), Southeast Region-Montgomery Area Offices and Yards (**Figure 4**), the 3<sup>rd</sup> District of the Southeast Region-Montgomery Area Offices and Yards (**Figure 5**), and the Materials and Tests Bureau (**Figure 6**). The street addresses of the component organizations of the Combined Facility are as follows:

- Alabama Department of Transportation  
Central Administrative Complex  
1409 Coliseum Boulevard  
Montgomery, Alabama 36110
- Alabama Department of Transportation  
Southeast Region-Montgomery Area  
1525 Coliseum Boulevard  
Montgomery, Alabama 36110
- Alabama Department of Transportation  
Third District of Southeast Region-Montgomery Area (3<sup>rd</sup> District)  
608 Chisholm Street  
Montgomery, Alabama 36110
- Alabama Department of Transportation  
Materials and Tests Bureau  
3700 Fairground Road  
Montgomery, Alabama 36110

### 1.1 LOCATION OF PLAN

In accordance with 40 CFR 112.3(e), a complete copy of the SPCC Plan must be maintained at the facility in a known designated location if the facility is manned 4 hours or more per day. Therefore, this SPCC Plan is located at the Bureau of Materials and Tests building at the facility.

## 1.2 REGULATORY REQUIREMENTS

The objective of the SPCC plan is to help the facility to prevent discharges of petroleum materials to navigable waters and adjoining shorelines through prevention and preparedness measures and response training. The SPCC plan has been prepared in accordance with 40 CFR 112. The SPCC plan is applicable to this facility because it has an aggregate aboveground storage of bulk petroleum materials products that exceeds the 1,320 gallon threshold. If the general guidelines of the SPCC plan are not presented in the same manner as outlined in 40 CFR 112, then a table must be included in the plan cross-referencing the requirements of the regulation. This plan includes the SWPP plan; therefore, a table is included following this section outlining the requirements of 40 CFR 112 and where the requirement is addressed in this plan.

The SWPPP was prepared as part of compliance with the Stormwater National Pollutant Discharge Elimination System (NPDES) Phase II Regulations and the requirements of 40 Code of Federal Regulations (CFR) 112. The objectives of the SWPPP is to identify and describe potential pollutant sources at the facility and implement best management practices (BMPs) for activities for which potential pollutant sources could contaminate stormwater.

## 1.3 REFERENCES

The following references were reviewed in order to develop this plan:

- Alabama Department of Environmental Management, Land Division, Hazardous Waste Program. Chapter 335-14-5-.04, Contingency Plans and Emergency Procedures, November 1980.
- Central Complex, Southeast Region-Montgomery Area, and District 3, Montgomery, Alabama. Environmental Compliance Audit. MACTEC, Inc. November 17, 2006.
- Federal Register 40 CFR Part 112, Petroleum materials Pollution and Response: Non-Transportation Related Onshore and Offshore Facilities, Final Rule. July 17, 2002. Amended December 26, 2006.
- Guidance Manual for Conditional Exclusion from Stormwater Permitting Based on “No Exposure” of Industrial Activities to Stormwater. United States Environmental Protection Agency, June 2000 (EPA 833-B-00-001).
- Integrated Contingency Plan (Stormwater Pollution Prevention Plan; Spill Prevention, Control and Countermeasures Plan; and Hazardous Waste Contingency Plan). TTL, May 11, 2005.
- SPCC Guidance for Regional Inspectors. Version 1.0. United States Environmental Protection Agency, November 28, 2005 (EPA 550-B-05-001).

- Stormwater Management for Industrial Activities, Developing Pollution Prevention Plans and Best Management Practices. United States Environmental Protection Agency, September 1992 (EPA 832-R-92-006).
- Urban Hydrology for Small Watersheds. United States Department of Agriculture, Soil Conservation Service, Engineering Division, Technical Release 55, June 1986.

**Table 1.1**

**ALDOT Combined Facility Montgomery, Alabama  
 Code of Federal Regulations Cross-Reference Table**

Regulatory Section	Section Title	Applicable Report Section
40 CFR 112.1	General Applicability	Section 1.1, 2.3, 4.1
40 CFR 112.2	Definitions	Not applicable
40 CFR 112.3	Professional Engineer Certification	Appendix A
40 CFR 112.4	Amendment of Plan by Regional Administrator	Section 4.1
40 CFR 112.5	5 year Summary Plan Review and Log	Section 4.1 and Appendix B
40 CFR 112.7	SPCC Management Approval	Appendix C
40 CFR 112.7 (a)(1) and (a)(2)	Conformance and Past Discharge History	Appendix D
40 CFR 112.7 (a)(3)	General Description of Facility	Section 2.2, Figure 2
40 CFR 112.7 (a)(3)(iv) and (v)	Countermeasures for Discharge Discovery, Response, and Pick-up	Section 4.2
40 CFR 112.7 (a)(3)(vi)	Contact List and Emergency Phone Numbers	Section 4.3
40 CFR 112.7 (a)(4) and (5)	Reporting procedures in lieu of a Facility Response Plan	Section 4.3
40 CFR 112.7 (b)	Potential Discharge Volumes and Rates	Section 3.3.4
40 CFR 112.7 (c)	Secondary Containment and Diversionary Structures	Section 3.3.5
40 CFR 112.7 (d)	Demonstration of Practicability	Section 3.3.5
40 CFR 112.7 (e)	Inspections, Tests, and Records	Sections 5.0 and 9.0, Appendix G
40 CFR 112.7 (f)	Personnel Training and Discharge Prevention Procedures	Section 8.0, Appendix I
40 CFR 112.7 (g)	Security	Section 6.0
40 CFR 112.7 (h)	Tank Truck Loading/Unloading Dock	Section 3.3.3 (not applicable)
40 CFR 112.7 (i)	Brittle Fracture Evaluation	Section 5.2 (not applicable)
40 CFR 112.7 (j)	Conformance to Applicable Guidelines	Section 1.1, 4.1
40 CFR 112.8 (b)	Facility Drainage	Section 3.1, 7.3.3, Appendix H
40 CFR 112.8 (c)(1-2)	Bulk Storage Containers, content compatibility and secondary containment	Section 3.3.1

Regulatory Section	Section Title	Applicable Report Section
40 CFR 112.8 (c)(3)	Bulk Storage Containers, facility drainage	Section 7.3.3, Appendix H
40 CFR 112.8 (c)(4)	Bulk Storage Containers, UST corrosion protection	USTs Not addressed except on Facility Figure; USTs meet 40 CFR 281
40 CFR 112.8 (c)(5)	Bulk Storage Containers, partially buried tanks	Not Applicable
40 CFR 112.8 (c)(6)	Bulk Storage Containers, AST integrity testing	Section 5.1, 5.2
40 CFR 112.8 (c)(7)	Bulk Storage Containers, leakage of defective heating coils	Not Applicable
40 CFR 112.8 (c)(8)	Bulk Storage Containers, update with good engineering practices	Section 3.3.1 and 7.3.3
40 CFR 112.8 (c)(9)	Effluent Treatment Facilities	Not Applicable
40 CFR 112.8 (c)(10)	Correct Discharges from Bulk Storage Containers	Section 7.3.3
40 CFR 112.8 (c)(11)	Mobile Storage Containers	Section 3.3.1
40 CFR 112.8 (d)	Transfer Operations, Pumping, and In-Plant Processes	Section 3.3.2, (not applicable)
40 CFR 112.9	SPCCP Requirements for Onshore Petroleum materials Production Facilities	Not applicable
40 CFR 112.10	SPCCP Requirements for Onshore Petroleum materials Drilling and Workover Facilities	Not applicable
40 CFR 112.11	SPCCP Requirements for Offshore Petroleum materials Drilling and Workover Facilities	Not applicable
40 CFR 112, SUBPART C	Requirements for Animal Fats and Oils and Greases, and Fish and Marine Mammal Oil, and for Vegetable oil	Not applicable
40 CFR 112.20 (e)	Certification of Substantial Harm Determination to Determine Applicability of Facility Response Plan	Appendix E
40 CFR 112.21	Personnel Training and Discharge Prevention Procedures	Section 8.0
40 CFR 112.7(q)	Facility Security	Section 6.0



## 2.0 GENERAL FACILITY INFORMATION

### 2.1 FACILITY LOCATION

The Combined Facility in Montgomery, Alabama is comprised of various organizational components of the Alabama Department of Transportation. Included in the Combined Facility are the Central Administrative Complex, the Southeast Region-Montgomery Area Offices and Yards, the 3<sup>rd</sup> District Offices and Yards, and various Bureaus including the Materials and Tests Bureau. The main office of the Central Administrative Complex is located at 1409 Coliseum Boulevard in the City of Montgomery, Montgomery County, Alabama. **Figure 1** is a topographic map which shows the location of the property (North Montgomery, Alabama Topographic Quadrangle Map).

### 2.2 DESCRIPTION OF FACILITY

The Combined Facility is responsible for the construction of roadway signs, design of roadways, testing of materials used on roadways, maintaining and repairing state roads, and other functions as related to the roadways in the state of Alabama. Machinery, equipment, and vehicles are stored, maintained, and repaired onsite. Activities include the storage and handling of road construction materials, motor fuels, petroleum materials and lubricants, paint related products, and herbicides.

The facility is comprised of numerous contiguous properties bounded by Chisholm Street on the north, Coliseum Boulevard on the east, Traffic and Operations Drive on the south, and Fairground Road on the west. Numerous buildings are located within the facility including office buildings, equipment and storage warehouses, equipment and storage sheds, laboratories, automotive and heavy equipment shops, sign and signal shops, and miscellaneous storage buildings. A site layout is presented in **Figure 2**. The diagram shows the site layout with the location of stormwater drain inlets, storage tank and drum locations, and the hazardous waste accumulation storage area.

The site topography generally slopes to the north toward Three Mile Branch, a tributary of the Alabama River. Potable water and sewer services are provided by the Montgomery Water Works and Sanitary Sewer Board.

## 2.3 GENERAL FACILITY INFORMATION

- Facility Name:  
ALDOT Combined Facility Montgomery, Alabama
  
- Facility Diagram:        See Attached Figures  
  
Figure 1: Topographic Location Map  
Figure 2: Site Layout  
Figure 3: Central Administrative Complex  
Figure 4: Southeast Region-Montgomery Area Offices and Yards  
Figure 5: 3<sup>rd</sup> District Southeast Region-Montgomery Area Offices and Yards  
Figure 6: Materials and Tests
  
- Business Address:  
  
ALDOT Central Administrative Complex  
1409 Coliseum Boulevard  
Montgomery, Alabama 36110
  
- Facility Location:
  - Alabama Department of Transportation  
Central Administrative Complex  
1409 Coliseum Boulevard  
Montgomery, Alabama 36110
  
  - Alabama Department of Transportation  
Southeast Region-Montgomery Area Offices  
1525 Coliseum Boulevard  
Montgomery, Alabama 36110
  
  - Alabama Department of Transportation  
Third District Southeast Region-Montgomery Area (3<sup>rd</sup> District)  
608 Chisholm Street  
Montgomery, Alabama 36110
  
  - Alabama Department of Transportation  
Materials and Tests Bureau  
3700 Fairground Road  
Montgomery, Alabama 36110

- Owner: State of Alabama
- Responsible Person: Hazardous Material Coordinator for the ALDOT Organizational Component (Appendix J)
- Contact: Hazardous Material Coordinator for the ALDOT Organizational Component (Appendix J)
- Alternate Contact: Southeast Region-Montgomery Area Environmental Coordinator (Appendix J)
- Facility Description: Motor vehicle maintenance, roadway maintenance, transportation-related activities
- Fixed Storage: Yes
- Above Ground Storage Tanks (AST):

➤ **Central Administrative Complex Area of Responsibility (AOR)**

One 900-gallon diesel AST on a generator

One 250-gallon diesel tank on a generator (removed in 2007)

One 550-gallon diesel AST (added in Dec. 2009)

➤ **Southeast Region-Montgomery Area AOR**

Two 1,000-gallon used oil AST (Shop Bldg 1413 and Shop Bldg L)

One 1,000-gallon diesel AST on a generator

Two 250-gallon new oil tanks (Equipment Shop and Shop Bldg L)

Ten 55-gallon petroleum materials drums (quantity varies) (Equipment Shop)

➤ **3<sup>rd</sup> District AOR**

One 12,000-gallon E85 AST

One 12,000-gallon diesel AST

One 12,000-gallon gasoline AST

One 12,000-gallon liquid asphalt AST (out-of-service)

One 130-gallon diesel AST on a generator

One 50-gallon diesel AST on a generator

Ten 55-gallon petroleum materials drums (quantity varies) (Gas House)

➤ **Materials and Tests Bureau AOR**

None

- Underground Storage Tanks (UST):
  - **Central Administrative Complex AOR**

One 500-gallon diesel UST

➤ **Southeast Region-Montgomery Area AOR**

One 8,000-gallon diesel UST

One 1,000-gallon diesel UST

➤ **3<sup>rd</sup> District AOR**

One 12,000-gallon unleaded gasoline UST

One 12,000-gallon diesel UST

➤ **Materials and Tests Bureau AOR**

One 1,000-gallon diesel UST

- Portable Storage: Yes

➤ **Central Administrative Complex AOR**

None

➤ **Southeast Region-Montgomery Area AOR**

One 700-gallon mobile diesel tank

One 100-gallon mobile diesel tank

One 100-gallon mobile gasoline tank

➤ **3<sup>rd</sup> District AOR**

None

➤ **Materials and Tests Bureau AOR**

None

- Total Storage Capacity:

+/- 80,000 gallons

- Treatment Facilities:

None



### 3.0 DESCRIPTION OF POLLUTANT SOURCES

MACTEC accompanied by ALDOT personnel, performed a visual assessment and environmental audit of the entire site on November 15, 2006. The following areas of stormwater management were reviewed during the site inspection:

- Site drainage/stormwater flow
- Material storage and handling practices:
  - commonly used chemicals and handling products
  - material storage and stockpiles
  - areas of stained soils or evidence of chemical releases
  - recyclable materials/solid waste disposal
- Fueling Areas and bulk storage of petroleum products (ASTs and USTs)
- Wastewater management/non-stormwater discharges

#### 3.1 SURFACE DRAINAGE / STORMWATER FLOW

Stormwater typically flows to on-site drainage ditches and underground storm sewers. Stormwater in the western, north central and northeastern areas of the site ultimately discharges at an outfall on the northern property boundary. This outfall forms the headwaters of the west branch of Kilby Ditch. Stormwater in the south-central and southeastern areas of the site flows into underground storm sewers which ultimately exit the site and flow into the main branch of Kilby Ditch located along the east side of Coliseum Boulevard. A site plan depicting the general stormwater flow patterns and the outfalls for the Combined Facility is presented in **Figure 2**. **Figures 3 through 6** show the individual areas of responsibility (AOR) for the ALDOT organizational components that comprise the Combined Facility.

The following describes petroleum and hazardous waste storage areas at the site and where stored material would likely flow if a spill were to occur.

- Petroleum transfer activities take place within areas protected by secondary containment. If there is a leak or release from the secondary containment surrounding one of the ASTs, the material would exit the site towards the main branch of Kilby Ditch then towards Three Mile Branch which is a tributary to the Alabama River. If there is a leak or release from petroleum

transfer activities to the USTs, the material would exit the site towards West Kilby Ditch then towards Three Mile Branch which is a tributary to the Alabama River.

- A leak or release from the out-of-service liquid asphalt tank could potentially result in material leaving the site. The asphalt could flow into the nearby stormwater drain which flows into the on-site drainage ditch that exits to the north of the site. However, it is believed the asphalt would solidify before exiting the site.
- The hazardous waste storage room is located within the Materials and Tests Bureau in the Shed on the southern boundary of the area. If storage containers fail during storage, secondary containment in the locked storage room will prevent flow from exiting the storage area. Additionally, a hazardous waste storage bin is located in this room. The storage bin can be locked and has secondary containment as well.

Additionally, drainage from the Combined Facility can be manipulated by the use of storm drain covers, temporary dikes, culverts, dams, and other engineered controls. Such controls may be used as active forms of secondary containment in the event a spill event or other emergency occurs that requires retaining drainage from the facility until the spill is cleaned up to prevent discharge of petroleum materials or hazardous products offsite and/or to navigable waters.

## **3.2 SITE SPECIFIC ACTIVITIES POSSIBLY CONTRIBUTING TO STORMWATER POLLUTION**

### **3.2.1 Commonly Used Chemicals and Petroleum Products**

The most commonly used chemicals and petroleum products are herbicides for use on highway right-of-way; petroleum products used for vehicle maintenance, fueling operations, and roadwork patching; and paint-related materials which are used in the sign shop.

Herbicides are stored in the Warehouse to the south of the Permit Office in the 3<sup>rd</sup> District AOR. The two buildings are both metal-roofed warehouses with concrete block foundations. These warehouses do not allow stormwater to come into contact with the herbicides or other material stored therein. Herbicides are added to application truck tanks directly outside of the Warehouse. The truck tanks are then filled with water. The empty herbicide containers are triple rinsed and transported to the landfill. Rinsate from the cleaning of the herbicide containers is used as make-up water the following day. Extreme caution is taken when transferring the herbicides and the rinsate into the tanks. If any herbicides are spilled on the ground surface, the material will be cleaned immediately so that it will not come into contact with the stormwater. Granular herbicides are swept up and reused.

Concentrated liquid herbicides are wiped up and properly disposed. Filling activities will not be conducted during a rain event.

Several types of petroleum materials are stored on-site for vehicle maintenance. Fifty-five gallon drums of petroleum products are stored in the Shop Building L, Southeast Region-Montgomery Area Building 1413, and the District 3 Gas House. The Auto Shop (Shop Building 1413) and Heavy Equipment Shop (which is located in Building L) contain typical maintenance petroleum products such as transmission fluid, hydraulic petroleum materials, gear petroleum materials, motor petroleum materials, grease, and degreasing compounds. The Auto Shop and the Heavy Equipment Shop also contain a parts washer, petroleum materials drain station, and absorbent material. A floor drain spans the length of the Auto Shop and discharges to an petroleum materials collection pit.

### **3.2.2 Outside Material Storage and Stockpiles**

Materials routinely stored outside are primarily located on the 3<sup>rd</sup> District Yard. Materials include rip-rap, gravel, sand, crushed rock, metal signs, concrete culverts, and pipes. These materials have the potential to contribute suspended solids to the stormwater which exits the site. Therefore, the materials are stored in such a way as to minimize contact with stormwater. This is accomplished by natural topography, construction of an earthen dike or berms to divert stormwater flow, storing the material inside of bins, or providing some form of covering for the materials.

The Southeast Region-Montgomery Area Diver's Warehouse is an L-shaped building with the eastern end enclosed and the western end covered with an open equipment warehouse. The building is situated on a concrete slab foundation. The warehouse is used to store ALDOT diver's equipment and materials. The warehouse is only open on one side; therefore, stored materials are protected from stormwater.

### **3.2.3 Recyclable Materials/Solid Waste Handling and Disposal**

Recyclable materials handled by the facility include scrap metal, used tires, used batteries, used petroleum materials, and used antifreeze.

Scrap metal is stored in roll-off boxes located throughout the Combined Facility prior to removal to a recycling facility. Scrap tires removed from ALDOT vehicles are stored on the north side (behind) the Shop Building 1413 in the Southeast Region-Montgomery Area AOR (**Figure 4**) until collected by an appropriate permitted disposal/recycling company. Used automotive batteries are stored on secondary containment pallets in a small building on the north side (behind) of the Shop Building 1413 (**Figure 4**). ALDOT routinely has an appropriately licensed outside contractor transport the batteries from the facility to a recycling facility. Manifests for the transport and disposal of the tires and batteries are maintained by the Southeast Region-Montgomery Area.

Hazardous waste material generated on-site is taken to the waste storage bin in the Materials and Tests Bureau AOR (**Figure No. 6**). The waste is categorized and labeled. Once hazardous waste is labeled and dated the accumulation period begins. A permitted hazardous waste transporter transports the hazardous wastes to a permitted Treatment and Disposal Facility within the required regulatory timeline.

### **3.3 FUELING AREAS AND BULK STORAGE OF PETROLEUM PRODUCTS**

#### **3.3.1 Bulk Storage Containers**

The following is a summary of the aboveground bulk storage containers and a statement of the compatibility of the materials of construction and the contents.

- The 3 double-walled 12,000 gallon ASTs located in the 3<sup>rd</sup> District AOR, store gasoline, E-85 and diesel fuel. These ASTs are constructed of steel and are compatible with the contents and the conditions of storage.
- The 1,000-gallon used petroleum materials and 250-gallon fresh petroleum materials ASTs located at Shop Building L in the Southeast Region-Montgomery Area AOR are constructed of steel and are compatible with the contents and the conditions of storage.
- The 1,000-gallon used petroleum materials and 250-gallon fresh petroleum materials ASTs located at Shop Building 1413 in the Southeast Region-Montgomery Area AOR are constructed of steel and are compatible with the petroleum materials which they contain, as well as the conditions of storage.
- The 12,000-gallon out-of-service liquid asphalt tank located in the 3<sup>rd</sup> District AOR is constructed of steel and is compatible with the asphalt it contains and the conditions of storage.



- There are four operating generators (*does not include mobile generators that might be used by road crews*) equipped with ASTs which contain more than 55-gallons of diesel in the on-board tank or stationary service tank. There is a 1,000-gallon AST in the Southeast Region-Montgomery Area AOR, a 900-gallon AST and a 250-gallon AST in the Central Administrative Complex AOR (removed); and 130-gallon on-board AST in the 3<sup>rd</sup> District AOR. In addition, there is one operating generator in the 3<sup>rd</sup> District AOR with a 50-gallon on-board diesel tank. These ASTs (both service tanks and on-board tanks) are constructed of steel and are compatible with the contents and conditions of storage.

Except for liquid asphalt tank, all petroleum materials-containing aboveground containers with a capacity of 55-gallons meet secondary containment requirements. The asphalt tank can meet secondary containment requirements by implementing the actions described in Section 3.3.6 of this plan. Aboveground containers will be visually inspected on a monthly basis as defined in Section 5.0 of this plan.

As described in Section 7.0, Best Management Practices (BMPs), loading/unloading operations will be manned at all times by two people, one to operate the pump, and one to observe the level of petroleum in the tank. If the level in the tank or in the truck begins to approach maximum capacity, the observer shall instruct the pump operator, via direct audible signal communication (see 40 CFR 112 (8)(c)(iii)), to cease pump operation. The three 12,000 gallon ASTs have liquid level gauges and high liquid level alarms. Petroleum materials leaks that result in a loss of petroleum materials from container seams, gaskets, rivets, and bolts will be promptly corrected, and petroleum materials accumulations in the secondary containment areas will be removed promptly.

Mobile petroleum storage containers when in use will be used in conjunction with active secondary containment measures (i.e. sorbent mats and pads, stormwater drain covers, etc.) which will be on the mobile vehicle and used as needed. The storage location of mobile containers when not in use is in Southeast Region-Montgomery Area AOR in the Design Bureau on Traffic Operations Road and shown on **Figure 4**.

### **3.3.2 Transfer Operations, Pumping, and in-Plant Processes**

There are no transfer operations or in-plant processes at this facility. Loading and unloading operations are performed, however, SPCC regulations treat this as a separate issue from transfer operations. Transfer operations include connected tank and pipe systems which transfer material throughout the pipes into new tanks. Loading/unloading operations include the use of hoses and tanker

trucks to remove material from tanks and also place material inside of a tank if necessary. Specifically, truck loading/unloading rack is addressed in 40 CFR 112.7(h) and transfer operations are addressed in 40 CFR 112.9(d) and 40 CFR 112.13(d).

### 3.3.3 Tank Truck Loading/Unloading Rack

There is no tank truck loading/unloading rack located at this facility. Loading and unloading operations from truck to ASTs and ASTs to trucks is addressed in Sections 3.3.6 and Section 7.3.3.

### 3.3.4 Potential Discharge Volumes and Rates

Used petroleum materials is routinely pumped from the used petroleum materials 1,000 gallon ASTs and removed from the site. Clean petroleum materials products are pumped into the 250-gallon fresh petroleum materials tanks via delivery trucks. The petroleum materials are then transported from the 250-gallon petroleum materials tanks and into containers or vehicles via air powered, metered guns.

Diesel for the Southeast Region-Montgomery Area generator, located near the metal storage bins, is pumped into the tank via a service truck from the District yard. The Central Complex generators are filled with diesel by filling portable diesel tanks (approximately 100 gallons in capacity) from the on-site service station, lifting the tanks with a forklift, and gravity draining the diesel from the portable tank into the generator tanks.

The 12,000-gallon liquid asphalt tank at this facility is currently not in use; therefore, there are no loading/unloading activities concerning the asphalt tank.

Clean petroleum materials products are routinely pumped into the 12,000 gallon diesel AST, 12,000 gallon E85 AST, and 12,000 gallon gasoline AST via delivery trucks. The fuel is then transported to vehicles and maintenance equipment via fuel dispensers.

**Table 3-1 Potential Discharge Volume and Direction of Flow**

Potential Event	Discharge Direction	Potential Release Volume	Discharge Rate
Complete failure of	West to on-site drainage	12,000 gallons	instantaneous

Potential Event	Discharge Direction	Potential Release Volume	Discharge Rate
largest full tank and containment	ditch which flows into Kilby Ditch, a tributary of Three Mile Branch		
Partial Failure of largest full tank	West to on-site drainage ditch which flows into Kilby Ditch, a tributary of Three Mile Branch	1 to 12,000 gallons	Gradual to instantaneous
Tank overfill (Used Petroleum materials AST)	South to on-site drainage ditch which flows into Kilby Ditch, a tributary of Three Mile Branch	1 to 5 gallons	N/A
Tank Truck Leak or failure	South to on-site drainage ditch which flows into Kilby Ditch, a tributary of Three Mile Branch	1 to 1,000 gallons	Gradual to instantaneous
Pump failure	South to on-site drainage ditch which flows into Kilby Ditch, a tributary of Three Mile Branch	1 to several gallons	Up to 50 gallons per minute

### 3.3.5 Demonstration of Practicability

Secondary containment is practicable for this facility. Secondary containment and diversionary structures identified in this plan or other equipment used to prevent discharged petroleum materials from reaching navigable water must be in place to be in compliance with this plan.

### 3.3.6 Secondary Containment and Diversionary Structures

Appropriate containment for ASTs is required to prevent possible discharges from petroleum materials-filled equipment. Appropriate containment is defined as dikes, berms, retaining walls, curbing, culverts, weirs, booms, spill diversion ponds, retention ponds, sorbent materials, and/or double-wall construction.

There is no secondary containment around the asphalt tank located in the 3<sup>rd</sup> District AOR (**Figure 5**). An earthen berm would be sufficient containment for the tank because the soil is sufficiently impervious to liquid asphalt, and liquid asphalt hardens quickly at normal ambient temperatures. In addition, a storm drain cover, spill mats, and sorbent material are located nearby at the Gas House (F-2300) to be used in the event of a spill. Facility personnel are trained in the use of these containment materials and are knowledgeable as to the location of the supplies.

The 12,000-gallon diesel AST located west of the Project/Permit Office in the 3<sup>rd</sup> District AOR (**Figure 5**) is a double-wall steel tank. It has secondary containment sufficient to hold approximately 120 % of the contents of the tank, but not enough to hold freeboard for a 24 hour, 25-year rain event in addition to the volume of the tank. However, because of the double-wall construction of the tank, the secondary containment is adequate (see Appendix F) to meet the requirements of 40 CFR Part 112.

The 12,000-gallon gasoline AST located west of the Permit/Project Office in the 3<sup>rd</sup> District AOR (**Figure 5**) is a double-wall steel tank. It has secondary containment to sufficient to hold approximately 120 % of the contents of the tank, but not enough to hold freeboard for a 24 hour, 25-year rain event in addition to the tank volume. However, because of the double-wall construction of the tank, the secondary containment is adequate (**see Appendix F**) to meet the requirements of 40 CFR Part 112.

The 12,000-gallon E85 AST located west of the Permit/Project Office in the 3<sup>rd</sup> District AOR (**Figure 5**) is a double-wall steel tank. It has secondary containment to sufficient to hold approximately 120 % of the contents of the tank, but not enough to hold freeboard for a 24 hour, 25-year rain event in addition to the tank volume. However, because of the double-wall construction of the tank, the secondary containment is adequate (**Appendix F**) to meet the requirements of 40 CFR Part 112.

The 1,000-gallon used petroleum materials AST located at Shop Building 1413 in the Southeast Region-Montgomery Area AOR (Figure 4) currently has secondary containment sufficient to hold approximately 120 % of the contents of the tank, but not enough to hold freeboard for a 24-hour, 25-year rain event. However, based upon calculations, the secondary containment is adequate (**Appendix F**).

The 1,000-gallon used petroleum materials AST located at L Building currently has secondary containment to sufficiently hold approximately 120 % of the contents of the tank, but not enough to hold freeboard for a 24-hour, 25-year rain event. However, based upon calculations, the secondary containment is adequate (**Appendix F**).



The two 250-gallon new petroleum materials tanks are double-walled tanks which is a form of secondary containment. The tanks are stored inside the Shop Building 1413 and Shop Building L in the Southeast Region-Montgomery Area AOR and are protected from contact with stormwater.

The generators which contain greater than 55-gallons of diesel, with the exception of the 900 gallon tank doubled-walled generator, are not within permanent (passive) secondary containment. However, spill mats and storm drain covers are available at nearby locations for each generator. These active secondary containment measures/countermeasures can be implemented in time to prevent any spilled fuel from reaching navigable waters and adjoining shorelines. Thus, these countermeasures would meet the requirements for secondary containment as defined in 40 CFR Part 112.

There is secondary containment for the 55-gallon drums of petroleum products stored in the 3<sup>rd</sup> District AOR (**Figure 5**) and the Southeast Region-Montgomery Area AOR (**Figure 4**). These drums are stored on spill containment pallets so that the contents of the drums cannot exit their respective buildings.

Absorbent material is available on-site as needed. Several containers of opened and unopened petroleum materials dry are located inside of the Auto Shop and the District 3 Gas House in close proximity to where most of petroleum materials handling procedures occur. Booms and other absorbent barriers will be purchased to aid in the event of a major leak of petroleum materials products.

Table 3-2 is a list of petroleum materials containers located on site. It summarizes the location of the containers, type of construction of the containers, each container's content and capacity, and the secondary containment used for each container.

**Table 3-2 List of Petroleum Material Containers**

ID No.	Location	AOR	Type of Construction	Capacity (gallons)	Content	Discharge Prevention & Containment
1	Project/Permit Office	3 <sup>rd</sup> District AOR	AST-Steel	12,000	Diesel	Concrete Structure, double-walled tank
2	Project/Permit Office	3 <sup>rd</sup> District AOR	AST-Steel	12,000	E-85	Concrete Structure, double-walled tank
3	Project/Permit Office	3 <sup>rd</sup> District AOR	AST-Steel	12,000	Gasoline	Concrete Structure, double-walled tank
4	Lower Equipment Yard	3 <sup>rd</sup> District AOR	AST-Steel	12,000	Asphalt	Spill mats and storm drain cover
5	Shop Building 1413	Southeast Region-Montgomery Area AOR	AST-Steel	1,000	Used petroleum materials	Double-walled tank, liquid level gauge and interstitial monitoring
6	Shop Building L	Southeast Region-Montgomery Area AOR	AST- Steel	1,000	Used petroleum materials	Double-walled tank, liquid level gauge and interstitial monitoring
7	Metal Storage Building	Southeast Region-Montgomery Area AOR	Generator-steel	1,000	Diesel	Spill mats, booms, and sorbent materials
8	Office Complex Building	Central Administrative Complex AOR	Generator-steel	900	Diesel	Spill mats, booms, and sorbent materials; double-walled tank
9	Building 1409	Central Administrative Complex AOR	Generator-steel	550	Diesel	Spill mats, booms, and sorbent materials
10	Equipment Maintenance Office	3 <sup>rd</sup> District AOR	Generator - steel	130	Diesel	Spill mats, booms, and sorbent materials
11	Shop Building 1413	Southeast Region-Montgomery Area AOR	AST-Steel	250	Petroleum materials	Spill mats, booms, and sorbent materials
12	Shop Building L	Southeast Region-Montgomery Area AOR	AST-Steel	250	Petroleum materials	Spill mats, booms, and sorbent materials
13	Inside Shop Building (F-2400)	Southeast Region-Montgomery Area AOR	Steel drums	55-gallon	Petroleum materials	Secondary containment pallet and sorbent materials
14	Varies-portable		AST-mobile	700	Diesel	Spill mats and rags, sorbent material
15	Varies-portable		AST-mobile	100	Diesel	Spill mats and rags, sorbent material
16	Varies-portable		AST-mobile	100	Diesel	Spill mats and rags, sorbent material
17	Gas House (F-2300)	3 <sup>rd</sup> District AOR	UST	12,000	Unleaded gasoline	Spill mats and rags, sorbent material
18	Gas House (F-2300)	3 <sup>rd</sup> District AOR	UST	12,000	Diesel	Spill mats and rags, sorbent material
19	Shop Building 1413	Southeast Region-Montgomery Area AOR	UST	8,000	Diesel	Spill mats and rags, sorbent material
21	Traffic Signal Shop	Southeast Region-Montgomery Area AOR	UST	1,000	Diesel	Spill mats and rags, sorbent material

22	Materials and Testing Lab	Materials and Tests Bureau AOR	UST	1,000	Diesel	Spill mats and rags, sorbent material
23	Shop Building L	Southeast Region-Montgomery Area AOR	UST	500	Diesel	Spill mats and rags, sorbent material
24	Equipment Yard	Central Administrative Complex AOR	AST-steel	550	Diesel	Double-walled tank

Notes:

1. Tank No. 20 was removed from service when the Southeast Region-Montgomery Area Offices were renovated.
2. AOR – Area of Responsibility.
3. Tank No. 9 was removed in 2007.
4. Tank No. 24 was added in December 2009.

### 3.4 WASTEWATER MANAGEMENT/NON-STORMWATER DISCHARGES

The Motor Pool Building in the Central Administrative Complex AOR (**Figure 4**) is used for washing ALDOT fleet vehicles. One floor drain is located within the Motor Pool building. Facility personnel report that the floor drain is connected to a sand trap which filters the sediments from the wash water prior to it being discharged to the sanitary sewer.

A recessed, concrete wash basin is located outside of the west end of the Shop Building L. The basin is connected to the City of Montgomery storm sewer system and currently receives water from the occasional wash out of sweepers. The sweepers are only washed with water from a pressure washer. District 3 also reports that the basin on occasion will receive water from washing trucks.

Vehicle washing is also conducted inside the Shop Building 1413 (in a bay on the north side of the building) in the Southeast Region-Montgomery Area AOR adjacent to the main entrance. Most of the runoff from the washing operations flows into a floor drain inside of the building and to the sanitary sewer. A grated drain is located under shelter of the south side of the Shop. According to facility design drawings, this drain is connected to the petroleum materials collection pit mentioned in Section 3.2.1 of this plan.

Drainage of containment areas is performed under direct supervision of facility personnel trained in petroleum materials handling procedures and stormwater protection. The accumulated water is observed for signs of petroleum materials prior to draining. The valves are maintained in a normally closed position and locked except when draining the secondary containment structures. Drainage

events are performed after precipitation has occurred, and each drainage event is recorded on the form provided in Appendix H. Records are maintained at the facility for at least three years.

### **3.5 RISK IDENTIFICATION AND SUMMARY OF POTENTIAL POLLUTANT SOURCES**

Potential pollutant sources have been identified in the following areas or operations:

- Potential pollutants include petroleum products and herbicides from leaking vehicles and equipment and small releases from routine equipment maintenance operations.
- Potential pollutants include petroleum products and sediments from stormwater contact at the open storage sheds containing miscellaneous material, equipment, and petroleum products.
- The asphalt tank is currently not located within containment. This creates a potential for asphalt to pollute the ground surface at the site.
- Stormwater contact with open stockpiles of materials creates the potential for suspended solids and sediment pollution in stormwater runoff.



## **4.0 SPILL PREVENTION AND RESPONSE PROCEDURES**

The following spill prevention and response procedures involve appropriate management and/or site control measures aimed at preventing hazardous waste and petroleum materials spills from occurring, and limiting the impact of a spill to the environment should one occur. Spill prevention relies in large part on baseline BMPs such as good housekeeping, preventive maintenance, and inspections as stated in Section 7.0 of this plan along with control measures as may be selected on a site-specific basis (secondary containment, leak detection devices, double-wall tank construction, etc.).

### **4.1 FACILITY REQUIREMENTS AND APPLICABILITY**

SPCC Plans for facilities are prepared and implemented as required by the U.S. EPA regulations contained in 40 CFR 112. The SPCC plan must be signed by a professional registered engineer (Appendix A). A non-transportation related facility is subject to SPCC regulations for the following: 1) due to its location, the facility could reasonably be expected to discharge petroleum materials into or upon the navigable waters of the United States; 2) the total aboveground storage capacity exceeds 1,320 gallons (calculated total of containers with a capacity of 55-gallons or more); or 3) the completely buried storage capacity exceeds 42,000 gallons. (Completely buried tanks subject to all of the technical requirements of 40 CFR Parts 280 and 281 do not count in the calculation of the 42,000-gallon threshold.)

The SPCC plan is not required to be filed with U.S. EPA or with the ADEM, but a copy must be available for onsite review by the Regional Administrator or an ADEM representative during normal working hours if the subject facility is attended at least 4 hours a day. The Regional Administrator has the authority to require amendments to a plan if a discharge occurs as defined below. The SPCC plan must be submitted to the U.S. EPA Region IV Regional Administrator and the state agency in charge of petroleum materials pollution control, along with the other information specified in 40 CFR 112.4, if either of the following occurs:

- The facility discharges more than 1,000 gallons of petroleum materials into or upon a navigable water of the United States or adjoining shorelines in a single event; or
- The facility discharges more than 42 gallons of petroleum materials in each of two discharge events within any 12-month period.

Discharge information must be reported to the U.S. EPA Region IV and the ADEM within 60 days if either of the above thresholds is reached. The report is to contain the following information:

1. Name of facility;
2. Name(s) of the owner or operator of the facility;
3. Location of the facility;
4. Maximum storage or handling capacity of the facility and normal daily throughput;
5. Corrective actions and/or countermeasures taken, including a description of equipment repairs and/or replacements;
6. An adequate description of the facility, including maps, flow diagrams, topographical maps as necessary, and diagrams which show the location of all tank including exempted tanks;
7. The cause of the discharge, including a failure analysis of the system or subsystem that failed;
8. Additional preventative measures taken or contemplated to minimize the possibility of recurrence; and
9. Such other information the Regional Administrator may require pertinent to the Plan or discharge.

This SPCC plan was prepared based on the provisions of the Petroleum materials Pollution Prevention Regulations found in 40 CFR 112. The SPCC plan must be amended within 6 months whenever there is a change in facility design, construction, operation, or maintenance that materially affects the facility's spill potential. Additionally, the SPCC plan must be reviewed at least once every 5 years and amended to include more effective prevention and control technology if such technology is available, will significantly reduce the likelihood of a spill event, and has been proven in the field. All such amendments must be re-certified by a registered professional engineer (PE). The owners and operators of a facility that are required to prepare an SPCC plan are also required to complete and sign the Certification of Substantial Harm Determination Form provided in Appendix E (referenced in Appendix C of 40 CFR 112). If the facility answers 'no' to each question provided in this form, the facility is not required to submit a Facility Response Plan.

#### **4.2 COUNTERMEASURES FOR DISCHARGE DISCOVERY, RESPONSE AND CLEANUP**

Spills/releases of petroleum products and hazardous materials/wastes that occur at the facility will be cleaned up immediately upon discovery by qualified, properly trained, and properly equipped

personnel. In the event of a release, the Responsible Person listed in this plan will be notified immediately, and the following steps will be taken:

- Attempt to determine the source, volume, and extent of the release;
- Determine the safest and quickest way to stop the release (i.e., provide appropriate containment, pump product out of leaking tank into a structurally sound tank, etc.);
- Contain the release as close to the source as possible. This can be done by using an earthen berm, a ditch, a boom, or other means to restrict the flow of the fluid;
- After the flow of the product has been restricted, remove the product;
- If a small volume of product is spilled inside of the secondary containment areas, absorbent booms, absorbent pads, petroleum materials dry or other suitable material will be used to absorb the product. For larger volumes of product, a pump, bucket, or other similar equipment will be used to transfer the product into a structurally sound container, and from there it can be properly disposed;
- In the event of a release of product that reaches the soils outside of the secondary containment areas, absorbent booms or a portable skimmer will be used to remove the product. Used absorbent materials and contaminated soils will be properly disposed of in accordance with the Alabama Department of Environmental Management (ADEM) regulations. Recovered petroleum products will be used, if possible, or transported to a permitted recycling or disposal facility. If possible, spill residue will be placed in a DOT approved 55-gallon drum for transportation; and
- Extreme care should be taken when dealing with a spill of hazardous waste. The Emergency Contact and MSDS sheet should be consulted for proper handling procedures and for proper personal protective equipment (PPE) to be used in managing the hazardous material.

#### **4.3 REPORTING PROCEDURES**

Reportable spills, releases, or discharges of petroleum materials require the notification of certain regulatory agencies. These agencies and their telephone numbers are provided in the table in section 4.3.1 of this document.

The Responsible Person, or his designee, will complete a notification of the release or discharge to the authorities immediately upon his knowledge of the release, but in no case shall notification occur more than 24 hours following the release. The information required to be reported is provided in this section.

If spilled petroleum based material escapes secondary containment and results in a sheen on the nearest stream, creek or river, then notification by telephone must be made to the U.S. National Response Center (NRC), and the ADEM. If the release is due to an accident during transport, the Department of Public Safety must also be notified.

If the spilled petroleum based material escapes secondary containment, and a rain event occurs then a release to the nearest stream, creek or river is likely, and the NRC and ADEM will be notified.

If greater than 42 gallons of spilled petroleum based material escapes secondary containment and is on the soils outside of the secondary containment and no rain event is imminent, but the petroleum materials on the soil has the potential to seep down to and contaminate groundwater, then the ADEM will be notified.

In the event of a fire, explosion, or spill of hazardous waste that could threaten human health at the facility or enter nearby surface water, the National Response Center (NRC) must be notified immediately. The NRC must also be contacted if there is a spill of the screen wash from the Sign Shop greater than 270 gallons. If one or more of the above-mentioned scenarios occurs, a report with the following information must be submitted to the NRC:

1. The name, address, and US EPA Identification Number of the generator;
2. Date, time, and type of incident (i.e. spill, fire, etc.);
3. Extent of injuries, if any;
4. Estimated quantity and disposition of recovered materials, if any; and
5. The possible hazard to human health and the environment outside of the facility.

#### **4.3.1 Emergency Telephone Numbers**

The following tables contain the emergency contact information. Appendix J contains the emergency contact information for ALDOT personnel. Table 4.1 contains the emergency contact information for local authorities, state and federal agencies, and the local hospital.



**TABLE 4.1 EMERGENCY CONTACT INFORMATION**

AGENCY	TOLL FREE OR EMERGENCY NUMBER	REGULAR NUMBER
US National Response Center 2100 2 <sup>nd</sup> Street, SW Washington, DC 20593-0001	(800) 424-8802	(202) 267-2675
Alabama Emergency Management Agency	(800) 843-0699	(205)280-2200
Alabama Department of Public Safety		(334) 242-4378
Alabama Department of Environmental Management	(800) 843-0699 (24 hr)	(334)271-7700
Montgomery Fire Department	911	(334) 241-2400
Jackson Hospital	911	(334) 293-8000
Fire, Police, Medical Emergency	911	911

In the event of a reportable release, the following information will be reported to the Environmental Point of Contact of the AOR in which the spill occurred. The Environmental Point of Contact will coordinate with the Hazardous Material Coordinator of the Materials and Tests Bureau which will subsequently contact the ADEM and the NRC.

1. Name of the person reporting the spill
2. Company: ALDOT Combined Facility Montgomery (or the specific Organizational Component making the report)
3. Mailing Address: 3700 Fairgrounds Road, Montgomery, AL 36110
4. Telephone Number: (334) 206-2287
5. Exact Description and location of the spill
6. Description of the material(s) spilled
7. Estimated quantity of material(s) spilled
8. Source of spill (e.g., tank)
9. Cause of spill ((e.g., tank rupture, tank overflow)

10. Nearest receiving stream: On-site ditch ultimately enters into Three Mile Branch which is a tributary to the Alabama River

**4.3.2 In the Event the Spill is too Large for Facility Personnel to Handle**

In the event of a reportable release that exceeds the ability of ALDOT personnel to handle, one of the following emergency contractors will be called to help remediate the effects of the release. Reasonable efforts to prevent the material from exiting the site or seeping into the ground will be made until the sub-contracted clean-up company arrives on-site. The following table provides a list of companies that provide emergency response services:

**TABLE 4.2 EMERGENCY RESPONSE CONTRACTORS**

COMPANY	TELEPHONE NUMBER
Safety-Kleen Systems, Inc. 1002 Hoke Avenue Hueytown, AL 35061	(800) 468-1760 24 hr. (205) 337-2556
Heritage Environmental Services, Inc 3801 Messer Airport Highway Birmingham, AL 35222.	(205) 591-0177 24 hr.
SWS First Response 2630 Queenstown Road Birmingham, AL 35210	(205) 833-3407 (800) 852-8878
Clean Harbors Environmental Services 2815 Old Greenbrier Pike Greenbrier, TN 37073-4514	(800) PETROLEUM MATERIALS TANK 24 hr. (800-645-8265) 251-533-6722
Greenleaf Environmental Services4335 South Lee Street, Ste D Buford, GA 30518	678-714-8420
Complete Environmental and Remediation Services 48340 State Hwy 59 Bay Minette, AL 36507	(251) 580-9400

## 5.0 INSPECTIONS AND TESTING

### 5.1 VISUAL INSPECTIONS

Visual inspections consist of a complete walkthrough of the facility property to check for tank damage or leakage, stained or discolored soils, excessive accumulation of water in diked areas, and effluent discharged from secondary containment areas. This inspection also ensures the dike drain valves are securely closed and locked. Inspections will be conducted monthly and whenever a tank's contents have been loaded or unloaded. In addition to these formal monthly inspections, weekly visual inspections while conducting routine site maintenance can be used to notify the Responsible Person of problems with the tanks or the on-site equipment. The checklist provided in **Appendix G** is used during these inspections. The checklists are signed by the inspector and maintained with this plan for three (3) years.

The containers for hazardous waste which is accumulating and/or stored on-site will be inspected weekly for signs of leaks or deterioration from corrosion. The inspections are documented and maintained with this plan for three (3) years.

BMP inspections should be conducted along with the above-mentioned inspections. BMP inspections include inspections of vehicles or equipment for leaks which could cause surface staining, inspections of stormwater management devices, visual inspections of the aboveground storage tanks, and routine visual inspection of the facility. The checklist provided in **Appendix G** is used during these inspections. The checklists are signed by the inspector and maintained with this plan for three (3) years.

### 5.2 BRITTLE FRACTION EVALUATION

There are no field-constructed tanks at this facility, and the shell thickness of the tanks is less than one-half inch. As discussed in the American Petroleum Institute (API) 653 *Tank Inspection, Repair, and Reconstruction* (API-653), brittle fraction is not a concern for tanks that have a shell thickness of less than one-half inch. Thus, no tanks on site require this test.

### **5.3 CONFORMANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REQUIREMENTS**

All ASTs and USTs with the exception of the 12,000 gallon asphalt tank meet applicable federal, state, and local regulations regarding secondary containment. It should be noted this plan does not address the compliance requirements for regulated UST systems for which ALDOT is subject under EPA and ADEM regulations. Regulated UST systems must comply with ADEM Administrative Code R.335-6-15 which is administered by ADEM's Land Division Groundwater Branch UST Compliance Unit which is a state approved program under Federal Regulations 40 CFR 280 and 40 CFR 281. ALDOT should maintain a separate program and records to demonstrate UST compliance. Some activities demonstrating UST compliance would include a leak detection, inventory control and monitoring, and cathodic protection systems that are maintained and tested as defined by ADEM's Administrative Code R. 335-6-15.



## 6.0 FACILITY SECURITY

In accordance with 40 CFR 112.7(g), the facility is required to have fencing around the petroleum storage areas. The facility is also required to have sufficient lighting to protect from vandalism, and to be able to detect a spill at night. Drain valves from secondary containment structures must be closed when not being drained of accumulated stormwater.

The facility is surrounded by chain-link fence and the entrance gates are locked when the facility is unattended. The hazardous waste storage area must remain locked at all times so that unauthorized personnel cannot access the storage bin. Sufficient lighting will be put in to place around the 12,000-gallon asphalt tank, the 12,000 gallon gasoline tank, the 12,000 gallon E-85 tank, and the 12,000 gallon diesel tank to deter possible acts of vandalism or to detect any spills that may occur during the night.

Drain valves on the secondary containment structures which surround the ASTs will remain normally closed during times of non-operation.

## **7.0 BEST MANAGEMENT PRACTICES**

Best management practices (BMPs) are measures used to prevent or reduce the amount of pollution entering surface water. A BMP may be a process, activity or physical structure. Three categories of BMPs are applied in this plan: Baseline BMPs, Site-Specific BMPs and Activity-Specific BMPs.

Baseline BMPs are practices that are generic and applicable to a wide range of activities and are detailed in Section 7.1. Section 7.2 describes Site-Specific BMPs which are defined based on observations of the facility and may have some overlap with Activity-Specific BMPs. Site Specific BMPs include recommendations for structural and non-structural improvements. Activity-Specific BMPs are established practices for common activities which are performed at the facility and that have the potential to pollute stormwater. Section 7.3 includes general Activity-Specific BMPs for vehicle fueling, vehicle and equipment maintenance areas, storage of liquids in aboveground tanks, and outside storage of raw materials.

### **7.1 BASELINE BMPS**

#### **7.1.1 Good Housekeeping**

Good housekeeping involves operations and maintenance activities, material storage practices, material inventory procedures and employee participation. Good housekeeping BMPs include the following:

- Maintain outside grounds and storage areas in a neat and orderly condition.
- Regularly pick up garbage and waste material and dispose of properly.
- Close covers over outside garbage barrels, trash dumpsters, and/or other waste receptacles so that stormwater does not contact waste material.
- Inspect for signs of leaks or spills underneath and beside vehicles.
- Make sure that drums and other storage containers are sealed when not in use.
- Drums and other storage containers will be stored away from traffic routes to prevent accidental spillage.
- Metal drums and other metal containers will be stored on pallets or other material to help prevent corrosion of the container from direct contact with ground moisture.

- Maintain an updated inventory list of all chemicals present at the facility and obtain MSDS sheets for each.
- Read MSDS sheets for safety instructions, recommended storage conditions and first aid information to facilitate spill prevention and safety objectives.
- Ensure all 55-gallon drums and other storage containers are properly labeled.
- It is recommended that all 55-gallon drums containing petroleum products are stored on containment pallets so that no leak or release from these drums would exit the containment structure.

### **7.1.2 Preventive Maintenance**

Preventive maintenance involves inspection and testing of facility equipment to evaluate conditions which could cause a malfunction or breakdown resulting in a discharge of pollutants to surface water.

Preventive Maintenance BMPs include the following:

- Inspect for leaks and spills as well as deteriorating conditions of equipment that might lead to leaks or spills around outdoor product transfer hoses, pumps, piping, valves and ASTs.
- Develop a schedule for routine preventive maintenance identifying the equipment/device to be maintained and personnel responsible for the same.
- Develop and maintain preventive maintenance records to include equipment or system inspected, date inspected, personnel involved, test results, follow-up or corrective actions that were performed, etc.
- Promptly repair or replace defective pumps, valves, seals and other equipment components found to be defective.

## **7.2 SITE SPECIFIC BMPS**

- Inspect areas where vehicles and equipment are parked and fueled for signs of leaks on a weekly basis. Clean small petroleum materials spills from vehicle maintenance activities by using absorbent materials and disposing as a solid waste. Monitor areas where asphalt paving is in place for signs of deterioration. Replace asphalt with concrete when possible since asphalt soaks up fuel and can be degraded by engine fluids, becoming a source for stormwater contamination.
- After herbicide containers have been triple-rinsed, dispose of the containers immediately. This will help to prevent the containers from contacting stormwater.
- Eliminate stormwater flow into storage sheds by grading or by construction of concrete berms, curbs, or stormwater conveyances around the sheds. Chemicals stored in these sheds will be

moved to a building or structure which would not be affected by stormwater, placed in portable containment basins to contain spills and leaks, and/or placed on top of pallets inside of the storage sheds so that these chemicals will not come into contact with stormwater.

- Repair areas of erosion by establishing a vegetative cover or by other means (mulching or using straw bale barriers) to slow the run-off and hold petroleum materials in-place.

### **7.3 ACTIVITY-SPECIFIC BMPS**

#### **7.3.1 BMPs for Vehicle Fueling Areas**

- Discourage topping off of fuel tanks which can result in overfilling the tank and spilling of fuel. Post warning signs at fuel dispensers to remind employees that this practice is discouraged.
- Install and clearly label emergency fuel shutoff switches for the fuel dispenser pumps.
- Prevent stormwater contact from other areas of the facility. This can be accomplished by grading, berming, curbing, gutters, and relocation of roof downspouts.
- Install and routinely inspect, clean, and maintain petroleum materials/water separators (if present) in storm drains from the fueling area.
- Avoid hosing down or washing the fueling area. Use damp cloths, damp mops, and absorbents instead.
- Immediately contain any spills with absorbent material. Do not wash spills into the storm drain, sanitary sewer or other conveyances (gutters, ditches, etc.). Absorbent materials shall be properly discarded after a spill has been contained.
- Discuss fueling procedures, emergency shut off switches, and spill control procedures with employees as part of employee training. Encourage employee involvement and suggestions for preventing stormwater pollution.

#### **7.3.2 BMPs for Vehicle and Equipment Maintenance Areas**

- Consider the use of nontoxic or less toxic cleaners and solvents. Avoid use of chlorinated solvents whenever possible.
- Collect leaking or dripping fluids in drip pans or containers. Keep different liquids in separate drip pans or containers to make recycling efforts easier. Do not mix used petroleum materials and solvents, and do not mix chlorinated solvents with non-chlorinated solvents.



- Empty drip pans of used fluids into proper waste or recycling drums. Do not leave full drip pans or other containers open where the contents can easily be spilled or overfilled with rain water.
- Locate waste drums, recycling drums and other waste petroleum materials containers in controlled areas with a concrete slab and/or secondary containment. Label drums with the name of the waste product (i.e. used petroleum materials, used transmission fluid, used petroleum materials filters, etc.).
- Clean spills and leaks with rags, damp mops, and absorbent material. Avoid hosing down the work areas.
- Do not pour liquids or waste products into floor drains, sinks, storm drain inlets, or sanitary sewer connections. Dispose of these materials properly and look for opportunities to recycle or reuse these materials.
- Drain petroleum materials filters completely before disposal in trash cans or dumpsters. Recycle petroleum materials filters in addition to used petroleum materials when possible.
- If possible, park vehicles indoors or under a carport so that stormwater does not contact the area. Place pans or containers under vehicles to contain drips or leaks from vehicles awaiting repair.
- Drain all fluids from wrecked vehicles or unused vehicles that will be parked outside for long periods of time.
- Store used batteries in and/or on a leak-proof secondary containment. Avoid placing batteries on the ground.
- Neutralize spilled acid from batteries with baking soda. Handle the spilled residue with care and dispose of accordingly because the residue may contain lead or other contaminants.

### 7.3.3 BMPs for Liquids Stored in Aboveground Storage Tanks

- Ensure that the tanks meet federal requirements for SPCC plans which includes secondary containment, integrity testing, and leak detection (see Sections 4.0 and 5.0).
- Protect the ASTs and aboveground piping from vehicle damage by installing protective guards, gating or posts.
- Label and tag valves to reduce human error.
- Perform visual inspections of tanks, piping, valves, fittings, support structures, etc. for evidence of corrosion, leaks, scratches, etc. Inspection forms are provided in **Appendix G**.
- Install secondary containment around the tanks to contain leaks or spills. Methods of secondary containment include berms, dikes, liners, vaults and double-walled tanks.

- Drain accumulated rainwater from secondary containment areas after inspecting the water for evidence of petroleum materials sheens or spills. Each time rainwater is drained from the secondary containment, it will be documented on the Record of Dike Drainage Sheet provided in **Appendix J**. Specifically, drain secondary containment dikes and document drainage events within 24 hours of a 25 year storm or larger (7.75 inches in 24 hours) since the containment dikes are not large enough to hold the entire contents of the tank and freeboard from storm events 7.75 inches or larger.
- Ensure that drain valves from the secondary containment and product valves remain locked when they are not in use. It is important that these valves remain locked and not just closed because it is much easier for a valve to be bumped and, therefore, opening the valve if it is just shut-off.
- Discuss valve locations, fueling procedures and visual inspections with employees as part of employee training.
- Loading/unloading operations will be manned at all times by two people, one to operate the pump, and one to observe the level of petroleum materials in the tank. If the level in the tank or in the truck begins to approach maximum capacity, the observer shall instruct the pump operator, via direct audible signal communication (see 40 CFR 112 (8) (c) (iii)), to cease pump operation.
- Routinely measure and record the used petroleum materials level in the 1,000 gallon used petroleum materials tanks to prevent overfilling.
- Promptly correct visible discharges of petroleum materials from the bulk storage containers. Such discharges could originate at seams, gaskets, pumps, valves, rivets, or bolts. To correct the discharge, temporarily tanking the tank out of service may be required. Additionally, clean up any accumulations of petroleum materials in the secondary containment area to prevent mixing with stormwater and potential discharge during a storm event.

#### **7.3.4 BMPs for Outside Storage of Raw Materials**

- Consider storage of the raw material indoors if possible.
- Prevent stormwater contact from other areas of the facility. This can be accomplished by grading, berming, curbing, etc.

#### **7.3.5 Sediment and Erosion Control**

Sediment and erosion control measures are used to protect surface waters from suspended material which can affect water quality.

- Identify areas which may be susceptible to erosion as a result of topography or other activities.

- Plant vegetation and/or place other protective ground cover to control erosion and create a natural barrier against sediment.
- Construct structural control features such as dikes, drains, barriers, traps, swales, etc., to limit erosion.
- Take reasonable care to ensure that stormwater will not come into contact with the stockpiled aggregates.

### **7.3.6 Management of Runoff**

Traditional stormwater management practices used to divert, infiltrate, reuse, or otherwise manage stormwater runoff as a means to reduce pollutants in stormwater discharges have been considered. Such traditional runoff management controls typically involve vegetative swales, reuse of collected stormwater, inlet controls such as petroleum materials/water separators, detention and retention devices, and similar measures.

The need for possible supplemental runoff management BMPs will continue to be evaluated in connection with periodic SWPPP review and revision. Measures determined to be reasonable and appropriate will be implemented and maintained.

## **8.0 PERSONNEL TRAINING AND DISCHARGE PREVENTION PROCEDURES**

Facility personnel who handle petroleum materials will be instructed by management in the operation and maintenance of pollution prevention equipment and pollution control laws and regulations. Annual discharge prevention training sessions will be provided by management for personnel who operate or handle petroleum materials to ensure adequate understanding of the SPCC Plan. These briefings will highlight any past discharge events or failures and recently developed precautionary measures. Training will be held detailing facility operations, petroleum materials discharge prevention, containment, and retrieval methods. Facility personnel who handle hazardous waste must also receive waste management training before they can work in an unsupervised position. Waste management training must be completed within six months of new employment, and all employees must receive an annual review of this training. The training program must be designed to ensure that facility personnel can respond effectively in the case of an emergency. Facility personnel must familiarize themselves with hazardous waste management, contingency plan implementation, emergency procedures, emergency equipment, and emergency systems.

In addition to training for spill prevention and hazardous waste management, employees who handle these materials will also be trained on the BMPs for the Combined Facility. This training will be held so that all employees are familiar with the requirements as stated in Section 6.0 and 7.0.

Records of discharge prevention training are kept on the form shown in **Appendix I**.



## 9.0 RECORDKEEPING AND INTERNAL REPORTING

Recordkeeping and internal reporting procedures are necessary to document spills, discharges, routine inspections, preventive maintenance activities, and employee training. Recordkeeping and internal reporting will include at a minimum:

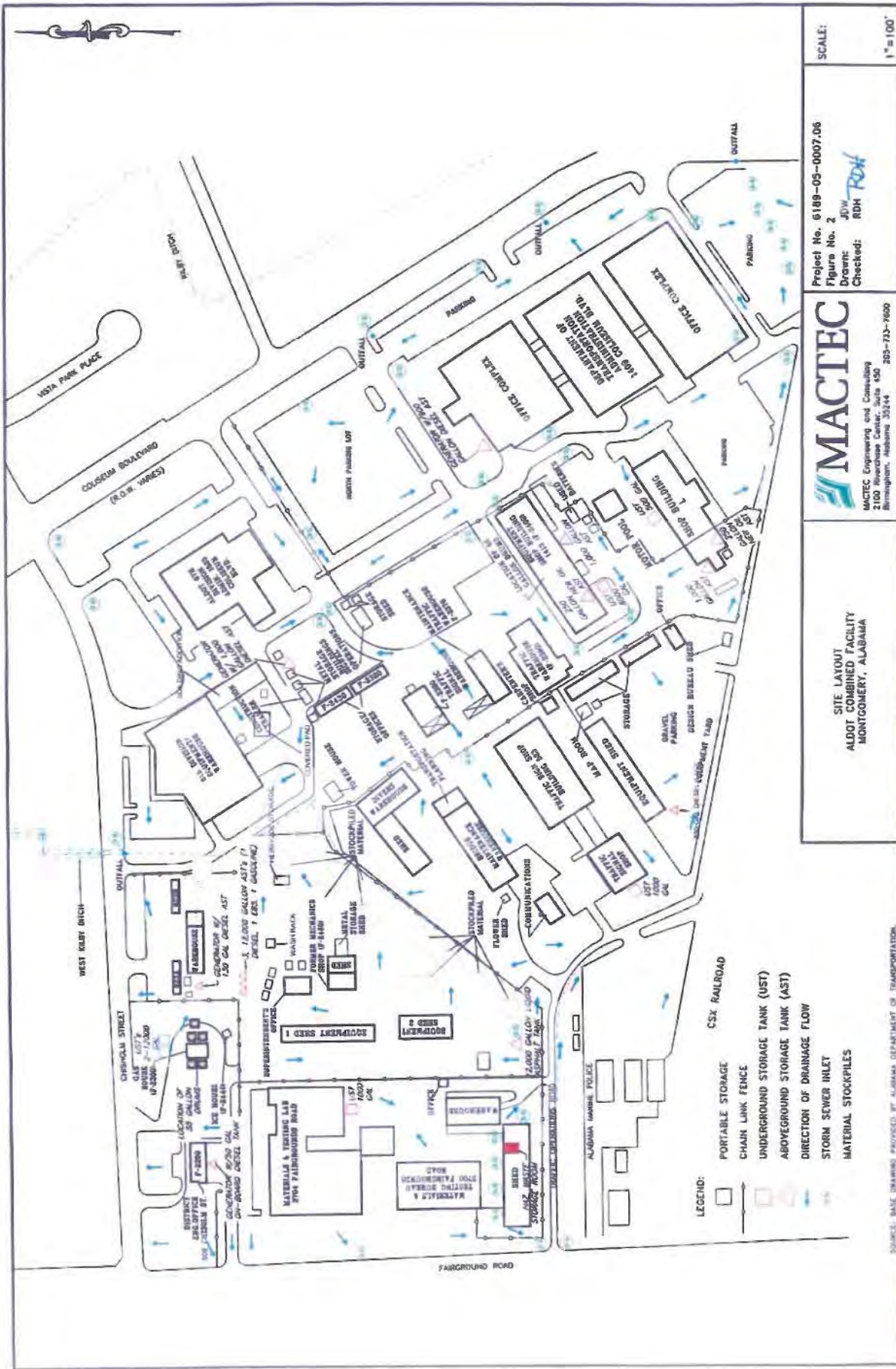
- Spills, leaks, or other discharges: The date, time, weather conditions, duration, cause, response procedures, parties notified, environmental problems, and changes in operating procedures necessary to prevent recurrence.
- Routine Inspections: Field notebooks, photographs and drawings can be used to document routine inspections. A review of records will be performed as part of the Internal Environmental Audits Program.
- The Table 9.1 provides a list of the forms and record sheets with this document to assist ALDOT personnel with record keeping and internal reporting.

**TABLE 9.1 SPCC PLAN FORMS**

FORM	PURPOSE	TIME REQUIRED TO KEEP RECORDS
Five Year Plan Summary Page Form	Evaluate the SPCCP for amendments	5 years
Past Discharge History Form	Record spill events	3 years
Monthly Facility Inspection Checklist	Inspect facility, ASTs, hazardous waste storage areas, vehicle maintenance facilities, etc for housekeeping and BMP implementation	3 years
Hazardous Waste Storage Area Inspection Form	Evaluate conditions of hazardous waste storage	3 years
Record of Dike Drainage	Record drainage events of secondary containment dikes	3 years
Record of personnel Training	Record personnel training related to discharge prevention of petroleum materials handling personnel	3 years

**FIGURE 2**  
**SITE LAYOUT**  
**ALDOT COMBINED FACILITY**  
**MONTGOMERY, ALABAMA**





Project No. 6189-05-0007.06  
 Figure No. 2  
 Drawn: JDM  
 Checked: RDH

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**SPCC Plan updated as of March 2015:  
 550-gallon tank added in equipment yard in Dec. 2009.  
 250-gallon diesel tank on generator removed from office complex in 2007.**



**APPENDIX D**  
**PAST DISCHARGE HISTORY**  
**[140 CFR Section 112.7(a)]**

**SPILL PREVENTION CONTROL, AND COUNTERMEASURES PLAN**

**ALDOT Central Complex and 6th Division, District 3  
1409 Coliseum Boulevard, Montgomery, AL 36110**

**PAST DISCHARGE HISTORY - 40 CFR Section 112.7(a)**

There have been no reportable spills at the ALDOT Central Complex and 6th Division, District 3 facility in the last three years. Upon complete implementation of this plan, the facility will be in conformance with the SPCC regulations.

This page will be updated when a reportable discharge occurs.

<b>Description of Spill</b>	<b>Corrective Actions Taken</b>	<b>Plan for Preventing Recurrence</b>

**APPENDIX G**  
**FACILITY INSPECTION CHECKLIST**  
**[40 CFR Section 112.7(e)]**

**SPILL PREVENTION CONTROL, AND COUNTERMEASURES PLAN**

**ALDOT Combined Facility  
Montgomery, AL 36110**

**FACILITY INSPECTION CHECKLIST**

Instructions: This inspection record will be completed every month. Place an X in the appropriate box for each item. If a response requires elaboration, do so in the Descriptions and Comments space provided. Further descriptions or comments will be attached on a separate piece of paper if necessary. Responses recorded in a shaded box will require a corrective action.

	Yes	No	Description or Comments
Tank surfaces show signs of leakage			
Tanks are damaged or deteriorated			
Bolts, rivets, or seams on tanks are damaged			
Tank supports are deteriorated			
Tanks foundations have eroded or settled			
Tank level gauges or alarms are operative			
Tank vents are functioning properly			
Tank valve seals or gaskets are leaking			
Loading/unloading area is damaged or deteriorated			
Secondary containment is damaged or stained			
Fencing, gates, and lighting are functioning properly			
Vehicles/equipment are leaking			
Surficial staining is noted around the facility			
Stormwater management devices are working properly			
Waste storage and accumulation areas are leaking or showing signs of deterioration from corrosion			

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Print Name: \_\_\_\_\_





**APPENDIX H**

**RECORD OF DIKE DRAINAGE**  
**[40 CFR Section 112.8(c)]**



**APPENDIX I**  
**RECORD OF PERSONNEL TRAINING**  
**[40 CFR Section 11 2.7(f)]**





**Facility Information:** ALDOT Southeast Region - Montgomery, District 3 Complex

**Complex Name:** Montgomery Division and District

**Address:** 1525 Coliseum Blvd. and 608 Chilson Street

**City, State, ZIP:** Montgomery, AL 36110

**Telephone No.:** \_\_\_\_\_

**Fax No.:** \_\_\_\_\_

**Date of Audit:** January 1, 2020

**Lead Auditor:** \_\_\_\_\_

**Audit Team Member(s):** \_\_\_\_\_

**Materials and Tests Representative(s):** \_\_\_\_\_

**Division Environmental Point of Contact:** \_\_\_\_\_

**Person(s) Interviewed:** \_\_\_\_\_

**Facility Operations Inspected:**

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> RCRA Hazardous Waste Generation     | <input checked="" type="checkbox"/> Universal Waste Generation  |
| <input checked="" type="checkbox"/> Used Oil Generation                 | <input checked="" type="checkbox"/> Vehicle & Equipment Washing |
| <input checked="" type="checkbox"/> Aboveground/Petroleum Storage Tanks | <input checked="" type="checkbox"/> Scrap Tires                 |
| <input checked="" type="checkbox"/> Vehicle/Equipment Maintenance       | <input type="checkbox"/> Other                                  |
| <input checked="" type="checkbox"/> Underground Storage Tanks           |   |
| <input checked="" type="checkbox"/> General Issues                      |   |
| <input checked="" type="checkbox"/> Product Purchasing                  |   |

**Inaccessible Areas:** \_\_\_\_\_

\_\_\_\_\_

**General Comments:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\*MP - Management Practice

# USED OIL MANAGEMENT: Manual Section 1.0

**DATE:** January 1, 2020

		Yes	No	N/A
1	Does facility generate used oil? If "No", skip this section.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Is used oil recycled according to Manual 1.4?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Is anything other than used oil placed in the used oil tank? If so, describe below and indicate if anything is a potentially hazardous waste.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Do personnel check available volume of container prior to adding used oil? Manual 1.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Is used oil used for dust suppression, burning, etc.? Manual 1.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Has facility notified ADEM of used oil generation by filing Form 8700-12 annually in accordance with Manual 1.5. If yes, provide a copy of Form 8700-12.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Are all containers of used oil kept closed in accordance with Manual 1.2?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Are containers in acceptable condition according to Manual 1.2?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Are containers marked as "Used Oil", and are labels visible and clearly legible according to Manual 1.2?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Are fill pipes to above ground storage tanks (ASTs), where there is a wall or barrier between the fill pipe and AST, labeled as "Used Oil?" Manual 1.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	Is the used oil aboveground storage tank maintained in accordance with the Spill Prevention Control and Countermeasures (SPCC) requirements? Manual 1.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	Are there any signs of corrosion visible on the AST(s)? If so, specify which tank(s) below. Manual 1.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	Has a used oil release occurred since the last audit? If No, proceed to line 16.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	Was the release stopped and the oil contained?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	Was contaminated material disposed of according to Manual 1.2?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	Review used oil transporter tickets. Is transporter permitted by ADEM to transport used oil? Manual 1.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	Are records of used oil pickups maintained by facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	Are oil filters properly drained prior to disposal? Manual 1.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Describe all non-compliance issues (any response located in a shaded box):

**UNIVERSAL WASTE MANAGEMENT: Manual Section 2.0**

**DATE:**

January 1, 2020

		Yes	No	N/A
1	Are used batteries showing signs of leakage, spillage, or damage? If no, proceed to question 4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Are leaking or damaged used batteries stored in appropriate secondary containment? Manual 2.2.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	If used batteries are stored in containers, is the container closed, structurally sound, compatible with the contents, and has no evidence of leakage, spillage, or damage? Manual 2.2.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Are batteries or containers marked clearly with "Used Batteries" or "Waste Batteries" or "Universal Waste - Batteries". Manual 2.2.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Are universal waste (UW) bulbs in containers that are closed, structurally sound, and which are compatible with the contents? Manual 2.2.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Do UW bulb containers have evidence of leakage, spillage, or damage? Manual 2.2.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Are used bulb containers marked with "Used Lamps" or "Waste Lamps" or "Universal Waste - Lamps", and are the labels readily visible? Manual 2.2.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Is the accumulation time for all UW (calculated collectively) less than one year? Manual 2.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Can facility provide documentation of accumulation time for universal waste? Manual 2.2.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Have employees been informed of proper universal waste handling and emergency procedures? If so, provide documentation. Manual 2.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	Has a universal waste release occurred since the last Audit? If No, Proceed to Line 14.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	Have releases of universal waste been contained? Manual 2.2.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	Was solid waste generated from the universal waste release characterized for hazardous constituents? Manual 2.2.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	Are all universal wastes shipped to another ALDOT office or a recycling facility? Manual 2.2.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	If ALDOT personnel transports universal waste from this facility, does ALDOT follow the universal waste transporter requirements? (Note: Transporter requirements include: comply with 49 CFR 171-180; prohibited from disposal, dilution or treatment of universal waste; contain all releases and residues from universal waste; only transport to another universal waste handler.) Manual 2.2.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Describe all non-compliance issues (any response located in a shaded box):



# HAZARDOUS WASTE MANAGEMENT - VERY SMALL QUANTITY GENERATOR: Manual Section 3.0

Very Small Quantity Generators generate less than 100 kg (220 lbs) of hazardous waste in a calendar month.

Provide facility EPA ID No. \_\_\_\_\_, if applicable.

**DATE:**

January 1, 2020

		Yes	No	N/A
1	Is the total quantity of hazardous waste generated within a calendar month equal to or less than 100 kg (220.46 lbs). Manual 3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Does the facility generate one kg (2.21 lbs) or more of acute hazardous waste? If so, the facility is subject to full regulation as a generator - complete the large quantity generator checklist. Manual 3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Does the facility generate more than 100 kg (220.46 lbs) of any residue or contaminated soil, waste or other debris, resulting from the cleanup of a spill of acute hazardous waste? If so, the facility is subject to full regulation as a generator - complete the large quantity generator checklist. Manual 3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Is the total quantity of hazardous waste generated more than 1,000 kg (2,204.62 lbs.) at any one time? If so, the facility is subject to full regulation as a generator - complete the small quantity generator checklist. Manual 3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Are waste(s) characterized using one of the following methods to determine if it is a hazardous waste? Characterization methods include: (a) Knowledge of all constituents (SDSs); (b) Listed in 40 CFR 261; (c) laboratory analysis; (d) Knowledge of materials and processes used. Manual 9.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Are containers of hazardous waste emptied in accordance with the regulations (i.e., less than 1" of residue)? Manual 2.2.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Does the hazardous waste transporter have an EPA identification number and permit issued by ADEM to transport hazardous waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Describe all non-compliance issues (any response located in a shaded box):

## HAZARDOUS WASTE MANAGEMENT - SMALL QUANTITY GENERATOR: Manual Section 4.0

Small Quantity Generators generate between 100 kg (220 lbs) and 1,000 kg (2,204.62 lbs) of hazardous waste in a

Provide facility EPA ID No. \_\_\_\_\_ **DATE:** January 1, 2020

		Yes	No	N/A
1	Is the total quantity of hazardous waste generated within a calendar month less than 1,000 kg (2,204.62 lbs)? Manual 4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Does the facility generate greater than 1 kg (2.21 lbs) of acute hazardous waste in a calendar month? If so, the facility is subject to full regulation (i.e. LQG). Manual 4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Does the facility generate more than 100 kg (220.46 lbs) of any residue or contaminated soil, waste or other debris, resulting from the cleanup of a spill of acute hazardous waste? If so, the facility is subject to full regulation as a generator (i.e. LQG). Manual 4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Is total quantity of hazardous waste stored at the facility less than 6,000 kg (13,227.73 lbs)? Manual 4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Does on-site accumulation time exceed 180 days? Manual 4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Are there more than 55 gallons of hazardous waste or one quart of acutely hazardous waste in satellite accumulation? Manual 4.3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Is the satellite accumulation point at or near the point of generation and under the control of the operator of the process generating the waste? Manual 4.3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Are containers in satellite accumulation marked with the words HAZARDOUS WASTE or other identifying words? Manual 4.3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Are containers NOT in satellite accumulation clearly marked with the date that accumulation began and the words HAZARDOUS WASTE? Manual 4.3.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Are hazardous waste containers in good condition (not leaking, bulging, damaged, or dented)? Manual 4.3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	Are containers of hazardous waste kept in designated storage areas? <i>MP</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	Are hazardous waste containers closed during storage, except when it is necessary to add or remove waste? Manual 4.3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	Are any containers having a capacity greater than 30 gallons stacked over two containers high? Manual 4.3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	Is there adequate aisle space between rows of containers (suggested minimum 3 feet)? Manual 4.3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	Are hazardous waste container inspections (looking for leaks and for deterioration caused by corrosion or other factors) conducted at least weekly? Manual 4.3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	Does this facility have an emergency coordinator on call or on-site at all times? Manual 4.3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	Is the name and telephone number of the emergency coordinator posted next to the facility telephone? Manual 4.3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	Are the locations of fire extinguishers, spill control equipment, and fire alarm (if present) posted next to the telephone? Manual 4.3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19	Is the telephone number of the fire department, unless there is a direct alarm, posted next to the facility telephone? Manual 4.3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20	Is there an internal communications or alarm system for providing immediate emergency instructions available? Manual 4.3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21	Is there a telephone or hand-held two way radio for contacting local and emergency responders? Manual 4.3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22	Are fire extinguishers, spill control and decontamination equipment present in the storage area? Manual 4.3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

# HAZARDOUS WASTE MANAGEMENT - SMALL QUANTITY GENERATOR: Manual Section 4.0

Small Quantity Generators generate between 100 kg (220 lbs) and 1,000 kg (2,204.62 lbs) of hazardous waste in a

Provide facility EPA ID No. \_\_\_\_\_ DATE: January 1, 2020

		Yes	No	N/A
23	Are fire extinguishers and spill control equipment tested and maintained to assure proper operation in the event of an emergency? Manual 4.3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24	Is there a fire hydrant or other water source available to provide sufficient volume and pressure to supply hoses, sprinklers, etc.? Manual 4.3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25	Are local hospitals, police, fire departments, and emergency response teams familiar with the type of injuries, facility layout, and type of waste being handled? Manual 4.3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26	If applicable, has the facility documented the refusal of any local agencies to enter into arrangements to familiarize themselves with the facility and the type of waste being handled? Manual 4.3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27	Are personnel thoroughly familiar with proper waste handling and emergency procedures? Manual 4.3.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28	Is a written description of the required training maintained on-site? Manual 4.3.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29	Are employee hazardous waste training records kept and are they up-to-date? Manual 4.3.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30	Is there less than 1 inch of residue remaining in empty containers? Manual 4.3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31	Are the hazardous waste containers made of or lined with materials which are compatible with the hazardous waste being stored? Manual 4.3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32	Have incompatible wastes or incompatible wastes and materials been placed in the same containers? Manual 4.3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33	Are waste(s) characterized using one of the following methods to determine if it is a hazardous waste? Characterization methods include: (a) Knowledge of all constituents (SDSs); (b) Listed in 40 CFR 261; (c) laboratory analysis; (d) Knowledge of materials and processes used. Manual 9.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34	Do the hazardous waste transporter and Treatment, Storage or Disposal Facility (TSDF) have EPA identification numbers and are they properly permitted by ADEM? Manual 4.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35	Are signed copies of returned manifests and/or exception reports, waste analyses, tests, and waste determinations kept for at least 3 years from the date the waste was sent off-site and/or received by the designated facility? Manual 4.3.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36	Has the facility received all copies of manifests, with handwritten signatures, within 60 days of the date the waste was accepted by the transporter? Manual 4.3.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37	If necessary, has an exception report been submitted to the ADEM for manifests not received within the 60-day time limit? Manual 4.3.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38	Has the facility determined if hazardous waste must be treated before being land disposed? Manual 9.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39	Has a one-time written notice been sent to each TSDF with the initial shipment if the waste does not meet treatment standards? Manual 9.2.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40	Has the facility kept notices, certifications and waste analysis data, etc. related to land disposal restrictions for at least three years? Manual 9.2.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Describe all non-compliance issues (any response located in a shaded box):

<b>REGION SCRAP TIRE MANAGEMENT: Manual Section 5.0</b>				
				<b>DATE:</b> January 1, 2020
		<b>Yes</b>	<b>No</b>	<b>N/A</b>
1	Does facility amass 10 or more scrap tires per year? If no, this checklist does not apply.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Has the facility registered as a Class 2 Receiver with the ADEM (ADEM Form 537)? Manual 5.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Are there less than 300 tires on-site? Manual 5.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Is a permitted transporter being used to transport tires for disposal? Manual 5.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Are tires going to a permitted processor for disposal?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Does the Division use manifests for each disposal shipment of scrap tires (exp. ADEM form 536 or equivalent)? Manual 5.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Has the summary of previous quarter's activities (ADEM Form 539) been submitted to the ADEM quarterly? Manual 5.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>TIRES STORED INDOORS</b>				
8	Are the tires stored indoors? If no, then proceed to line 11.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	If necessary, is there a vector control plan for tires stored indoors? Manual 5.1 (Note: vector control plan required if stored indoors if tires can hold water)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Has the inside storage of scrap tires exceeded 90 days? (ADEM's August 25, 2005, approval of Request for Variance from 30-day Storage Requirements) Manual 5.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>TIRES STORED OUTDOORS</b>				
11	Are the tires stored outdoors? If No, then proceed to line 28.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	Are tires stored outside less than 30 days? Manual 5.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	Is the outside accumulation area within a 100-year flood plain, in coastal beach, or within 200 feet of a "Waters of the State"? Manual 5.1 (Note: 'waters of the state' defined as all waters of any river, stream, watercourse, pond, lake, coastal, ground or surface water, wholly or partially within the State, natural or artificial. Does not include waters which are entirely confined and retained completely upon the property of a single individual, partnership, or corporation, unless such waters are used in interstate commerce.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	Do the tire pile dimensions exceed 50 feet wide, 200 feet long, 15 feet high, or 10,000 square feet in area? Manual 5.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	Is there a vector control plan for piles of tire materials stored outdoors that are capable of holding water? Manual 5.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	Has the facility arranged for fire protection? If Yes, please describe type of fire protection. Manual 5.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	Has the facility provided a copy of a letter to ADEM from the local fire authority stating they approve the fire protection plan? Manual 5.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	Does the facility have an Emergency Response Plan? Manual 5.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19	Does the Emergency Response Plan have names and telephone numbers of persons to be contacted in case of an emergency? Manual 5.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20	Does the Emergency Response Plan have a list of the emergency response equipment, its location, and how it should be utilized? Manual 5.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21	Does the Emergency Response Plan outline the procedures to contain and dispose of tire fire residue? Manual 5.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22	Does the Emergency Response Plan list any other materials stored on-site that may accelerate or expand a fire? Manual 5.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



23	Does a 100-foot fire lane exist around the perimeter of the tire pile and are all fire accesses unobstructed? Manual 5.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24	Is there a berm or other feature located around the tire pile to contain liquid runoff? Manual 5.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25	Are any activities or operations with an open flame allowed within 25 feet of the tire pile? Manual 5.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26	Is there adequate access control to minimize entrance to the tire pile by unauthorized persons? Manual 5.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27	Is an attendant or operator present when the facility is operating? Manual 5.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>OPERATING RECORD REQUIREMENTS</b>				
28	Is the operating record being maintained at the facility or at an ADEM approved location? Manual 5.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29	Does the operating record have a listing of all District facilities transporting scrap tires to the Division facility, the location of each District facility, and a contact person for each facility? Manual 5.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30	Does the operating record have a copy of the facility's ADEM registration approval? Manual 5.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31	Does the operating record have a copy of the facility's registration application? Manual 5.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32	Does the operating record have a copy of the facility's manifests of shipped tire material? Manual 5.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33	Does the operating record have a copy of the facility's Quarterly Reports utilizing ADEM Form 539? Manual 5.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34	Does the facility's operating record have a copy of the facility's arrangements for fire protection, if applicable? Manual 5.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35	Does the operating record have a copy of any other report or document generated by the facility and submitted to ADEM? Manual 5.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36	Are the operating records being maintained for the minimum 3 years required by the ADEM? Manual 5.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Describe all non-compliance issues (any response located in a shaded box):				

# DISTRICT SCRAP TIRE MANAGEMENT: Manual Section 5.0

DATE: January 1, 2020

		Yes	No	N/A
1	Does facility amass 10 or more scrap tires per year? If no, this checklist does not apply.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Are there less than 300 tires on-site? Manual 5.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Is the facility self-transporting tires to the Division? If Yes, proceed to line 6. (Note: District facilities are exempt from manifesting requirements when self-transporting scrap tires generated from ALDOT vehicles and equipment to Region facilities or reporting requirements per ADEM's April 28, 2005, approval of Request for Variance from Registration, Manifesting, Quarterly Reports and Operating Record for ALDOT District Facilities)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	If the District does not self-transport scrap tires to a Division facility, is a permitted transporter being used to transport scrap tires for disposal? Manual 5.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Are tires going to a permitted processor for disposal?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>TIRES STORED INDOORS</b>				
6	Are the tires stored indoors? If No, then proceed to line 9.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Are tires stored indoors on-site for less than 90 days? Manual 5.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	If necessary, is there a vector control plan for tires stored indoors? Manual 5.1 (Note: vector control plan required if stored indoors if tires can hold water)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>TIRES STORED OUTDOORS</b>				
9	Are the tires stored outdoors? If No, this page is complete.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Are tires stored on-site less than 7 days? If Yes, this page is complete.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	Are tires stored outside less than 30 days? Manual 5.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	Is the outside accumulation area within a 100-year flood plain, in coastal beach, or within 200 feet of a "Waters of the State"? (Note: 'waters of the state' defined as all waters of any river, stream, watercourse, pond, lake, coastal, ground or surface water, wholly or partially within the State, natural or artificial. Does not include waters which are entirely confined and retained completely upon the property of a single individual, partnership, or corporation, unless such waters are used in interstate commerce). Manual 5.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	Do the tire pile dimensions exceed 50 feet wide, 200 feet long, 15 feet high, or 10,000 square feet in area? Manual 5.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	Is there a vector control plan for piles of tire materials stored outdoors that are capable of holding water? Manual 5.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	Has the facility provided for fire protection? If Yes, please describe type of fire protection in box below. Manual 5.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	Has the facility provided a copy of a letter to ADEM from the local fire authority stating they approve the fire protection plan? Manual 5.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	Does the facility have an Emergency Response Plan? Manual 5.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	Does the Emergency Response Plan have names and telephone numbers of persons to be contacted in an emergency? Manual 5.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19	Does the Emergency Response Plan have a list of the emergency response equipment, its location, and how it should be utilized? Manual 5.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

20	Does the Emergency Response Plan outline the procedures to contain and dispose of tire fire residue? Manual 5.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21	Does the Emergency Response Plan list any other materials stored on-site that may accelerate or expand a fire? Manual 5.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22	Does a 100-foot fire lane exist around the perimeter of the tire pile and are all fire accesses unobstructed? Manual 5.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23	Is there a berm or other feature located around the tire pile to contain liquid runoff? Manual 5.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24	Are any activities or operations with an open flame allowed within 25 feet of the tire pile? Manual 5.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25	Is there adequate access control to minimize entrance to the tire pile by unauthorized persons? Manual 5.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26	Is an attendant or operator present when the facility is operating? Manual 5.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Describe all non-compliance issues (any response located in a shaded box):

# ABOVEGROUND STORAGE TANK/PETROLEUM STORAGE MANAGEMENT

**DATE:** January 1, 2020

		Yes	No	N/A
1	Does facility maintain aboveground storage of petroleum products/waste in storage containers whose volume is 55 gallons or greater that have a combined storage capacity of 1,320 gallons or more? If no, this checklist does not apply.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Does the facility have an SPCC (Spill Prevention Control and Countermeasures) Plan? Manual 6.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Has the SPCC Plan been updated within the past 5 years? Manual 6.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Is the SPCC Plan certified by a Licensed Professional Engineer? Manual 6.3 (Note: Facilities with 10,000 gallons or less total storage capacity may self-certify SPCC plans.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Has the SPCC Plan been amended if there has been a change in facility operations, number/size of tanks, etc.? Manual 6.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Is secondary containment provided for each bulk storage container of petroleum product/waste of 55 gallons or more? If not, specify below which tank(s) do not have secondary containment. Manual 6.3.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Are drain plugs/valves in containment units in place/closed at all times unless discharging accumulated water? If not, specify which tank(s) below. Manual 6.3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Has water accumulated within any of the containment units since the last Audit? If so, specify which tank(s) below.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Is discharge of collected rainwater observed and documented on a log for each AST containment structure? Manual 6.3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Is containment(s) unit free of debris and oil residue? If not, specify which tank(s) below.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	Have ASTs been inspected in accordance with the SPCC Plan? If not, specify which tank(s) below. Manual 6.3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	Has training been provided to employees in accordance with the SPCC Plan? Manual 6.3.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	Has the structural integrity of the ASTs been evaluated in accordance with the SPCC Plan? If not, specify which tank(s) below. Manual 6.3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	Has a reportable release of petroleum occurred since last audit? If no, proceed to question 17.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	Was release reported in accordance with the SPCC Plan? Manual 6.3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	Was released material properly removed and disposed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	Is there evidence of stained soil around the AST? If so, specify which tank(s) below.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	Is adequate security provided in accordance with the SPCC Plan? 40 CFR 112.7(g). (Security measures include fully fenced and locked entrance when facility is unattended; ensure valves that can allow direct outward flow of contents to remain closed when not operating; lock starter control on each oil pump in "off" position when not operating; adequate facility lighting; cap or blank-flange loading/unloading connections on piping when not in service.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Describe all non-compliance issues (any response located in a shaded box):



# UNDERGROUND STORAGE TANK MANAGEMENT: Manual Section 7.0

ADEM Facility ID No. \_\_\_\_\_ DATE: January 1, 2020

		Yes	No	N/A
1	Is facility registration certificate current, on-file and posted? Manual 7.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Review throughput of gasoline UST during months of June, July, and August. If throughput exceeds 4,000 gallons, proceed to question 3, otherwise skip to question 4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Does facility have a valid air permit from the ADEM? Manual 7.5 (Note: air permits issued for life of facility unless something changes [such as upgrade tanks, install new tanks, etc.] which requires a permit modification)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Were any of the USTs in the system installed after August 7, 2007? If so, is interstitial monitoring being performed monthly? Manual 7.1.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	For tanks utilizing automatic product level monitoring for release detection, does the automatic product monitor test detect 0.2 gal/hr leak rate from the tank, and is inventory control conducted on a monthly basis? Manual 7.3.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Does USTs have spill and overfill protection (ball float valve, audible alarm and/or emergency light, or flapper valve) Manual 7.1.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Have results of all tightness, cathodic protection, spill catchment basin, leak detector, release detection, probe and sensor, and overfill prevention equipment testing of the UST system been submitted to ADEM? Manual 7.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Has an annual summary of test results of any approved method of leak detection been submitted to ADEM no later than January 31st of each year? Manual 7.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### SUMPS and SPILL CATCHMENT BASINS

9	Have spill catchment basins been tested for leaks annually and records of tests been maintained? Manual 7.4.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Have dispenser and/or submersible pump containment sumps been inspected annually and a log of results maintained? Manual 7.4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	Are under dispenser and/or submersible pump containment sumps free of water, regulated substance, and debris? Manual 7.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	Are the operation of dispenser and/or submersible pump containment sumps checked annually to ensure they are working properly? Manual 7.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	Are monthly walkthrough inspections of spill prevention equipment being completed and a log of results been maintained?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	Are fill ports properly colored? MP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### USTs and/or PIPING CONSTRUCTED OF STEEL

15	Is the corrosion protection system operated and maintained to provide continuous corrosion protection? Manual 7.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	Are cathodically protected steel tanks inspected for proper operation by a qualified cathodic protection tester at least every 3 years? Manual 7.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	If applicable, are impressed current cathodic protection systems inspected every 60 days to ensure the equipment is operating properly? Manual 7.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	Does the facility maintain a record of the last two cathodic protection system tests and the last 3 inspections of the impressed current cathodic protection system? Manual 7.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### USTs with PRESSURIZED PIPING

19	Is pressurized piping equipped with an automatic or mechanical line leak detector and is it tested annually per manufacturer's recommendations? Manual 7.3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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20	If mechanical line leak detectors are installed, is tank monitoring equipment checking for a 3 gal/hr leak rate on the lines. If so, does the system pass this check. Manual 7.3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21	Is one of the following methods used to check for leak on lines: annual line tightness test, leak detection printouts for lines (0.2 gallon/hour monthly or 0.1 gallon/hr annually), or monthly inspections utilizing ADEM's Manual Interstitial Monitoring Form? Manual 7.3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>USTs with SUCTION PIPING</b>				
22	Does the facility perform a line tightness test every three years, conduct monthly inspections utilizing ADEM's Manual Interstitial Monitoring Form, or have "Safe Suction piping" <sup>1</sup> . If "Safe Suction piping" is at facility, then no form of leak detection is required on the lines. Manual 7.3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>SPILLS and INVESTIGATION</b>				
23	Is there evidence of a release of petroleum product due to defective or leaking UST components or equipment? Manual 7.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24	Has a spill or overfill occurred since the last audit which resulted in the release of 25 gallons or more of petroleum, or that caused a sheen on nearby surface water? Manual 7.6.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25	If a spill or overfill has occurred, was spill immediately contained and cleaned up and the ADEM notified? Manual 7.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26	Was petroleum-contaminated material from cleanup efforts disposed of properly? (Note: greater than 5 cubic yards or 25 gallons of petroleum requires ADEM Solid Waste Determination Form) Manual 7.6.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>OPERATOR TRAINING</b>				
27	Have the owners and operators of the UST's designated Class A, Class B, and Class C operators for the system? Manual 7.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28	Are Class A and Class B operator training records maintained either at the UST facility or at an alternative site? Manual 7.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29	Are Class C operator training records maintained at the UST facility? Manual 7.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30	Have Class A and Class B operators been trained within 30 days after assuming operation and maintenance responsibilities for the underground storage tank system? Manual 7.7.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31	Have Class C operators been trained before assuming responsibility for emergencies? Manual 7.7.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32	Is there a Class C operator on site during normal operating hours? MP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Describe all non-compliance issues (any response located in a shaded box):				

# Vehicle Maintenance/Shop Operations: Manual Section 7.0

DATE: January 1, 2020

		Yes	No	N/A
1	Are waste solvents, coolant, oil, spray cans, gasoline, and absorbent rags, paper, and other materials collected and stored on site? If no, proceed to question 17.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Are each of the waste material containers labeled "Used or Waste (Name Material)"? <i>MP</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Are each of the waste materials stored in appropriate containers? <i>MP</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Are all containers kept closed except to add or remove contents? <i>MP</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Is there adequate space around the waste containers to allow for inspection or emergency response? <i>MP</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Are drums of petroleum products stored in a designated area? <i>MP</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Do petroleum drums (55-gallons) have secondary containment or other spill containment method? (Note: empty petroleum drums must have secondary containment or other spill containment method.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Are spill response materials present in storage area(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Has a release of petroleum or other waste material occurred in the last month? If No, proceed to line 14.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	If applicable, was the ADEM and emergency release authority notified of released waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	Has the release of waste or petroleum product been contained?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	If the release has not been contained, explain why below.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	Has the release been cleaned-up? If No, explain why below.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	Are used oil filters and absorbent materials stored separately for proper disposal? <i>MP</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	Is a parts washer used in the facility? If so, provide the type of solvent used and date of last service below. If No, proceed to question 17.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	Was waste solvent characterized to determine if it was hazardous? (see Hazardous Waste Generator checklists for additional requirements if waste was hazardous)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	Are floor drains present in the shop facility(ies)? If Yes, indicate below whether floor drains discharge to storm or sanitary sewer, or septic tank. Note: Floor drain discharges to septic tank are prohibited by ADEM regulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	Are hydraulic lifts in good condition with no evidence of leakage?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19	Is proper housekeeping being maintained?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Describe any response located in a shaded box:

<b>Vehicle and Equipment Washing</b>				
			<b>DATE:</b> January 1, 2020	
			<b>Yes</b> <b>No</b> <b>N/A</b>	
1	Does facility wash vehicles or equipment on-site? If not, skip this checklist.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Are vehicles washed near uncovered repair areas or chemical storage facilities? If the answer is no, then skip to line 4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Does the wash water drain away from the repair area or chemical storage facility?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Does the changing of motor oil occur in the wash area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Are detergents and soaps used in washing activities phosphate-free and possess the ability to rapidly biodegrade?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>SEPTIC TANK DISCHARGE</b>				
6	Does facility discharge wash water into a septic tank? If not, proceed to line 11.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Does facility have a valid Underground Injection Control (UIC) permit issued by the ADEM? Manual 8.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Review permit. Are appropriate samples collected as required by the permit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Are Discharge Monitoring Reports (DMRs) submitted as required by the permit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Are copies of reports and laboratory data maintained for at least 3 years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>SANITARY SEWER DISCHARGE</b>				
11	Does facility discharge wash water to the sanitary sewer? If not, proceed to line 14.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	Does the facility have permission from the local municipality to discharge wash water into the sanitary sewer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	Review requirements from municipal sewer service. Is any required equipment (i.e. sediment trap, oil/water separator) installed and functioning properly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>ON-SITE DITCH DISCHARGE</b>				
14	Does facility discharge wash water to a storm sewer or on-site ditch? If No, this page is complete.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	Does the facility have an ADEM NPDES Permit for the discharge of wash water? Manual 8.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	Review permit. Are appropriate samples collected as required by the permit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	Are copies of reports and laboratory data maintained for at least 3 years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	Is the facility maintaining copies of the DMRs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Describe or explain all non-compliance issues (any response located in a shaded box):				



General Issues				
			<b>DATE:</b> January 1, 2020	
		Yes	No	N/A
1	Are chemicals or petroleum products stored outdoors? If not, proceed to question 3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Can chemicals or petroleum products be exposed to storm water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Are containers closed and labeled? MP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Are chemicals and other products stored in appropriate containers? (Note: used/empty product containers (e.g. antifreeze and herbicide containers) should not be used to store other products.) MP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Is there evidence of chemical or petroleum staining, and/or paint spillage, on ground surface? If No, proceed to line 7.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Has source(s) of staining/spillage been eliminated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Are waste materials stored outside of proper waste receptacles (i.e. piled on the ground)? If so, describe contents of waste below. If No, proceed to line 9.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Do waste piles contain potentially hazardous wastes? If so, describe below.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Is open burning of wastes generated off-site conducted on-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Is landfilling of wastes taking place on-site? MP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	Are dumpster plugs and lids closed and in place? MP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	Are all landfills receiving the facility's wastes properly permitted by ADEM? Indicate names and permit numbers of each landfill to which wastes are taken.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	Is the facility generally orderly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	Has the facility submitted Tier I/II Reports to the ADEM, local Fire Department and local Emergency Management Agency by March 1 for the previous calendar year for any chemical that was present at the facility at any one time in the previous calendar year in quantities greater than 10,000 pounds (500 pounds for extremely hazardous substances)? 40 CFR 370.20(b) and 40 CFR 370.25	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	Are empty herbicide container(s) triple-rinsed? MP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	Is oil/water separator or oil pit installed? If No, sheet is complete.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	When oil/water separator or oil pit is cleaned, is sludge characterized to determine if it is hazardous?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	Is a permitted transporter used to remove and haul sludge from the oil/water separator?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19	Is sludge disposed of at a permitted facility? (Either appropriate solid waste or hazardous waste facility)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Describe all non-compliance issues (any response located in a shaded box):				

**Product Purchasing**

**DATE:** January 1, 2020

		Yes	No	N/A
1	Has Hazard Communication training been provided to employees in accordance with the Globally Harmonized System? 29 CFR 1910.1200	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Randomly 'spot' check materials present on-site that fall within "possibly hazardous" Object Codes against the Log. Document products reviewed and findings below.			

Describe all non-compliance issues (any response located in a shaded box):

**Date:** January 1, 2020

Location	Reasons of Concern	Manual Reference	Recommendation	Item Corrected During Audit		Repeat Finding	
				Yes	No	Yes	No
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Date:** January 1, 2020

Location	Reasons of Concern	Manual Reference	Recommendation	Item Corrected During Audit		Repeat Finding	
				Yes	No	Yes	No
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>





## ALABAMA DEPARTMENT OF TRANSPORTATION MAINTENANCE PERFORMANCE GUIDELINE

<b>Activity:</b>	<b>Condition Assessments</b>	<b>Activity Code:</b>	<b>6000</b>
		<b>Effective Date:</b>	<b>October 1, 2014</b>

### DESCRIPTION AND PURPOSE

Collection and data entry of feature inventory and condition rating data for selected asset features and conditions at randomly selected 0.1-mile highway segments.

### AUTHORIZATION AND SCHEDULING

The Maintenance Bureau will annually authorize and specify the schedule for this work.

CREW SIZE		2 employees
No.	Class	Description
1	CEG or TT	Crew Leader and one of the following:
1	TMT III	Data Collector
1	TMT I/II	Data Collector
1	EAS	Data Collector
1	EA	Data Collector

EQUIPMENT		
No.	Code	Description
1	4	Pickup 1/2 T Flex Fuel Measuring Wheel

MATERIALS	
Code	Description
	Spray Paint

### WORK METHODS AND NOTES

1. Select required number of 0.1-mile sample sites according to procedures specified in the latest edition of the ALDOT Level of Service Condition Assessment Data Collection Manual.
2. Plan field trips to maximize productivity and minimize back-tracking from site to site.
3. Locate sample site by noting mile-post location or logging mileage from beginning of route.
4. Utilize appropriate traffic control devices.
5. Use measuring wheel to establish 528-foot section and mark beginning and end of site with spray paint.
6. Inspect and count or measure each asset feature and count or measure each deficiency, according to procedures specified in the Data Collection Manual.
7. Record the data on the ALDOT Maintenance Feature Inventory and Condition Rating Form.
8. Terminate traffic control.
9. Continue the data collection process until all samples have been completed.
10. Enter all data into the computer specified by Maintenance Bureau.

### AVERAGE DAILY PRODUCTION

16 sample sites



## ALABAMA DEPARTMENT OF TRANSPORTATION MAINTENANCE PERFORMANCE GUIDELINE

**Activity:**      **Cleaning Minor Drainage Structures**

**Activity Code:**      **6170**

**Effective Date:**      **October 1, 2014**

### DESCRIPTION AND PURPOSE

Periodic inspection, cleaning, and removal of debris as required from culverts, catch basins, and inlets to maintain adequate drainage.

### AUTHORIZATION AND SCHEDULING

Schedule the routine inspection and cleaning, if necessary, of all minor drainage structures at least once a year to insure proper drainage. Normally, this should be performed in the spring and fall, but certain structures may need attention after periods of heavy rainfall.

CREW SIZE			3 employees
No.	Class	Description	
1	TMT III	Crew Leader	
1	TMT I/II	Truck Driver	
1	TMT I/II	Laborer	

EQUIPMENT		
No.	Code	Description
1	17	Dump Truck
1	121	Backhoe

MATERIALS	
Code	Description

### WORK METHODS AND NOTES

1. Utilize appropriate traffic control devices.
2. Remove debris and undesirable vegetation from inlet and outlet channels.
3. Clean out silted material from culvert or pipe.
4. Check for damage to structure.
5. Correct any eroded area around inlet or outlet.
6. Terminate traffic control.

### AVERAGE DAILY PRODUCTION

10 structures cleaned/inspected



## ALABAMA DEPARTMENT OF TRANSPORTATION MAINTENANCE PERFORMANCE GUIDELINE

<b>Activity:</b>	<b>Repairing Minor Drainage Structures</b>	<b>Activity Code:</b>	<b>6180</b>
		<b>Effective Date:</b>	<b>October 1, 2014</b>

### DESCRIPTION AND PURPOSE

Repair of box culverts and repair or replacement of pipe culverts, catch basins, inlets, flumes, curb and gutter, and other minor drainage structures due to damage or deterioration. This Activity does not include installations at new locations or enlargements of existing facility.

### AUTHORIZATION AND SCHEDULING

Schedule this work throughout the year as required, with emphasis during slack periods in the year.

CREW SIZE			4 employees
No.	Class	Description	
1	TMT III	Crew Leader	
3	TMT I/II	Laborers	

EQUIPMENT		
No.	Code	Description
1	12	Flat Bed Dump
1	17	Dump Truck
1	41	Air Compressor (as required)
1	97	Concrete Mixer (as required)
1	130000	Concrete Vibrator
1	121	Excavator and Trailer

MATERIALS	
Code	Description
361	Cement
362	Sand and Gravel
367	Pipe Sections
399	Ready Mix Concrete (Others as required)

### WORK METHODS AND NOTES

1. Utilize appropriate traffic control devices.
2. Repair damage to minor drainage structures as required.
3. Terminate traffic control.

### AVERAGE DAILY PRODUCTION

32 employee hours



## ALABAMA DEPARTMENT OF TRANSPORTATION MAINTENANCE PERFORMANCE GUIDELINE

**Activity:**        **Herbicide Treatment**

**Activity Code:**        **6260**

**Effective Date:**    **October 1, 2014**

### DESCRIPTION AND PURPOSE

Broadcast spraying of roadside vegetation within the designated mowing limits of the right-of-way using tractor or truck sprayers.

### AUTHORIZATION AND SCHEDULING

Schedule this work as required to control growth in selected areas.

CREW SIZE			2 employees
No.	Class	Description	
1	TMT III	Sprayer Operator	
1	TMT I/II	Laborer	

EQUIPMENT		
No.	Code	Description
1	25	Spray Truck - High Volume Or
1	1017	Water Truck
1	1129	Spray Tractor - Low Volume

MATERIALS	
Code	Description
390	Herbicide Concentrate (Dry)
391	Herbicide Concentrate (Liquid)
392	Surfactant
393	Drift Control
4399	Water

### WORK METHODS AND NOTES

1. Spray only on days when atmospheric conditions are suitable.
2. Supervisor and operators shall scout ahead of spraying operations.
3. Spray designated areas in accordance with current Roadside Vegetation Management Manual.
4. Utilize appropriate traffic control devices.
5. Fill tanks with water and proper amount of chemicals.
6. Spraying is to proceed with the operator applying the mixture with sprayer in accordance with current Roadside Vegetation Management Manual.
7. Terminate traffic control.
8. Schedule Activity 6262-Herbicide Treatment Surveillance for no less than 10 days after treatment.

**\*\*Scouting activity done separate from treatment shall be recorded as Activity 6340 – Other Roadside Maintenance**

### AVERAGE DAILY PRODUCTION

80 acres





## ALABAMA DEPARTMENT OF TRANSPORTATION MAINTENANCE PERFORMANCE GUIDELINE

<b>Activity:</b>	<b>Herbicide Treatment Surveillance</b>	<b>Activity Code:</b>	<b>6262</b>
		<b>Effective Date:</b>	<b>October 31, 2016</b>

### DESCRIPTION AND PURPOSE

Surveillance of vegetated areas previously treated with herbicide in compliance with the current ALDOT Pesticide Discharge Management Plan (PDMP).

### AUTHORIZATION AND SCHEDULING

Herbicide Treatment Surveillance will take place between 10 and 21 days after the initial application.

CREW SIZE		
		1 employees
No.	Class	Description
1	TMT III	Surveyor

EQUIPMENT		
No.	Code	Description
1	4	Pickup

MATERIALS	
Code	Description

### WORK METHODS AND NOTES

1. Visually inspect each treated area and record findings on appropriate documents.
2. Report findings in accordance with current PDMP.
3. Store surveillance documents in accordance with current PDMP.
4. The purpose of this activity is to identify and document, if any Adverse Incidents are found. Specifically, we should be looking for toxic or adverse effects on non-target plants, fish, or wildlife that occur within Waters of the State as a result of exposure to a pesticide residue.

### AVERAGE DAILY PRODUCTION

8 employee hours



## ALABAMA DEPARTMENT OF TRANSPORTATION MAINTENANCE PERFORMANCE GUIDELINE

**Activity:**      **Erosion Control**

**Activity Code:**      **6280**

**Effective Date:**      **October 1, 2014**

### DESCRIPTION AND PURPOSE

Seeding, reseeding, sodding, fertilizing, and mulching of shoulders, back slopes, medians, and other areas to restore vegetation for erosion control and beautification. Includes installation and maintenance of silt fence, hay bales, rip rap, check dams and other erosion control devices.

### AUTHORIZATION AND SCHEDULING

Schedule this work and designate the specific area where the work is to be done. Schedule this work year-round as required.

CREW SIZE			5 employees
No.	Class	Description	
1	TMT III	Crew Leader	
1	TMT III	Equipment Operator	
1	TMT I/II	Truck Drivers	
2	TMT I/II	Laborers	

EQUIPMENT		
No.	Code	Description
1	12	Flat Bed Dump
1	17	Dump Truck
1	73	Disc Harrow
1	86/77	Loader
1	129	Tractor
1	1017	Water Truck
1	190000	Fertilizer Spreader
1	400000	Pump

MATERIALS	
Code	Description
1391	Seed
2391	Mulch Material
3391	Fertilizer
4391	Lime
364	Rip Rap
	Silt Fencing
	Hay Bales / Wattles
	Stakes

### WORK METHODS AND NOTES

1. Utilize appropriate traffic control devices.
2. Prepare area to be treated.
3. Apply fertilizer and seed.
4. Place mulch cover on treated areas.
5. Terminate traffic control.

### AVERAGE DAILY PRODUCTION

40 employee hours



## ALABAMA DEPARTMENT OF TRANSPORTATION MAINTENANCE PERFORMANCE GUIDELINE

**Activity:** Litter Pickup (Full Width)

**Activity Code:** 6300

**Effective Date:** October 1, 2015

### DESCRIPTION AND PURPOSE

Full width cleaning of continuous sections of the right-of-way area including pickup, loading, hauling, and disposing of accumulated litter to remove unsightly objects and obstruction to drainage.

### AUTHORIZATION AND SCHEDULING

Schedule this work prior to the start of the mowing season and after the mowing season. Certain areas, specifically urban sections, may require more frequent attention.

CREW SIZE		
		3 employees
No.	Class	Description
1	TMT I/II	Truck Driver
2	TMT I/II	Laborers

EQUIPMENT		
No.	Code	Description
1	17	Dump Truck

MATERIALS	
Code	Description

### WORK METHODS AND NOTES

1. Utilize appropriate traffic control devices.
2. Pick up large items and place directly on truck.
3. Collect small litter in litter bags or buckets.
4. Place filled litter bags or buckets along the shoulder.
5. Truck driver empties litter onto truck.
6. Insure that litter in truck does not scatter when driving. Cover truck box with tarpaulin.
7. Dispose of litter at designated dumping areas,
8. Terminate traffic control.

**Note:** If there is a median (regardless of width) there will be two separate shoulders.

### AVERAGE DAILY PRODUCTION

4 shoulder miles



## ALABAMA DEPARTMENT OF TRANSPORTATION MAINTENANCE PERFORMANCE GUIDELINE

**Activity:** Litter Pickup (Spot)

**Activity Code:** 6301

**Effective Date:** October 1, 2014

### DESCRIPTION AND PURPOSE

Spot cleaning of unconnected sections of the right-of-way area including pickup, loading, hauling, and disposing of accumulated litter to remove unsightly objects and obstruction to roadway traffic and drainage.

### AUTHORIZATION AND SCHEDULING

Schedule this work prior to the start of the mowing season and after the mowing season. Certain areas, specifically urban sections, may require more frequent attention.

CREW SIZE			2 employees
No.	Class	Description	
1	TMT I/II	Truck Driver	
1	TMT I/II	Laborers	

EQUIPMENT		
No.	Code	Description
1	17	Dump Truck

MATERIALS	
Code	Description

### WORK METHODS AND NOTES

1. Utilize appropriate traffic control devices.
2. Pick up large items and place directly on truck.
3. Collect small litter in litter bags or buckets.
4. Place filled litter bags or buckets along the shoulder.
5. Truck driver empties litter onto truck.
6. Insure that litter in truck does not scatter when driving. Cover truck box with tarpaulin.
7. Dispose of litter at designated dumping areas,
8. Terminate traffic control.

### AVERAGE DAILY PRODUCTION

16 employee hours





## ALABAMA DEPARTMENT OF TRANSPORTATION MAINTENANCE PERFORMANCE GUIDELINE

<b>Activity:</b>	<b>Spot Herbicide Treatment</b>	<b>Activity Code:</b>	<b>6310</b>
		<b>Effective Date:</b>	<b>October 1, 2015</b>

### DESCRIPTION AND PURPOSE

Application of herbicide around guardrail, sign posts, delineators, mailboxes, bridge ends, etc. for vegetation control and application of herbicides for brush and weed control in ditches, under bridge ends, and on cut and fill slopes.

### AUTHORIZATION AND SCHEDULING

Schedule this work in the spring when temperatures are warm enough to insure effectiveness. Reschedule as required to control growth in selected areas.

CREW SIZE			2 employees
No.	Class	Description	
1	TMT III	Operator	
1	TMT I/II	Laborer	

EQUIPMENT		
No.	Code	Description
1	25	Spray Truck - High Volume or
1	1017	Water Truck
1	1129	Spray Tractor - Low Volume

MATERIALS	
Code	Description
390	Herbicide Concentrate (Dry)
391	Herbicide Concentrate (Liquid)
392	Surfactant
393	Drift Control
4399	Water

### WORK METHODS AND NOTES

1. Spray only on days when winds are calm, temperatures are not excessively high and other atmospheric conditions are suitable.
2. Supervisor and operators shall scout ahead of spraying operations.
3. Spray designated area in accordance with current Roadside Vegetation Management Manual.
4. Adjust pressure to the minimum to reduce drift.
5. Utilize appropriate traffic control devices.
6. Fill tank with water and proper amount of chemicals.
7. Spraying is to proceed with the operator applying mixture with sprayer in accordance with current Roadside Vegetation Management Manual.
8. Terminate traffic control.
9. Schedule Activity 6262-Herbicide Treatment Surveillance for no less than 10 days after treatment.

**\*\*Scouting activity done separate from treatment shall be recorded as Activity 6340 – Other Roadside Maintenance**

### AVERAGE DAILY PRODUCTION

300 gallons



## ALABAMA DEPARTMENT OF TRANSPORTATION MAINTENANCE PERFORMANCE GUIDELINE

<b>Activity:</b> <b>Snow and Ice Control</b>	<b>Activity Code:</b> <b>6650</b>
	<b>Effective Date:</b> <b>October 1, 2014</b>

### DESCRIPTION AND PURPOSE

Plowing of snow and ice from roadway, application of sand and chemicals, ice control on structures, and other snow and ice control activities to improve driving conditions.

### AUTHORIZATION AND SCHEDULING

Schedule this work during the winter months as needed.

CREW SIZE			5 employees
No.	Class	Description	
2	TMT III	Truck Drivers	
3	TMT I/II	Laborers	

EQUIPMENT		
No.	Code	Description
1	4	Pickup
2	17	Dump Truck, as required
3	99	Motor Patrol Tailgate Spreader Snow Plow Attachment Truck-Mounted Attenuator

MATERIALS	
Code	Description
362	Sand
3378	De-Icing Agents

### WORK METHODS AND NOTES

1. Includes such work as:
  - Plowing snow, ice, or slush from the roadway, shoulders and ramps with trucks and plows or motor patrols.
  - Application of chemicals or abrasives or both to structure surfaces to reduce slipperiness and speed melting.
  - Pickup and removal of snow accumulations on bridge decks.
  - Removal of chemical and abrasive accumulations on bridge decks.

NOTE - Chemicals may be used on structures to assist in the removal of snow and ice accumulations only after approval is given by both the Division Engineer and the State Maintenance Engineer.

### AVERAGE DAILY PRODUCTION

40 employee hours

# HERBICIDE WORK REPORT

Revised March 2020

Date Work Performed:

Program:  INT  NHS  OSH

SWA / Proj #

Location Information:

Route Type:  INT  AL

City:

County:

Route Number:

Beginning Milepost:

Ending Milepost:

Management Unit:

Applicator(s):

Work Report Number:

Out-of-District Applicator Name:

Work Type (select one):  Routine  Accident  Emergency  SWA  Special Project

Activity Information:

RoadMap Activity (check only one):  6260: broadcast (acres)  6310: spot treat (gallons)

Accomplishment Quantities:

Area Treated (check all that apply):  
 Median  Front Slope  Backslope  Signage  Guardrail  Structure  Rip Rap  Shoulders  Paved Shoulder

Area Description (if needed):

Target Vegetation:

Beginning Conditions	
Time: <input type="text"/>	<input type="radio"/> AM <input type="radio"/> PM
Wind Direction: <input type="text"/>	
Wind Speed: <input type="radio"/> < 3 mph <input type="radio"/> 3 - 10 mph <input type="radio"/> > 10 mph	
No Observable Temp. Inversion: <input type="checkbox"/>	
Temp: (F <sup>0</sup> ) <input type="radio"/> < 60° <input type="radio"/> 60° - 75° <input type="radio"/> 75° - 90° <input type="radio"/> > 90°	
Sky: <input type="radio"/> Sunny <input type="radio"/> Cloudy	
Soil Moisture: <input type="radio"/> Dry <input type="radio"/> Moist <input type="radio"/> Saturated	

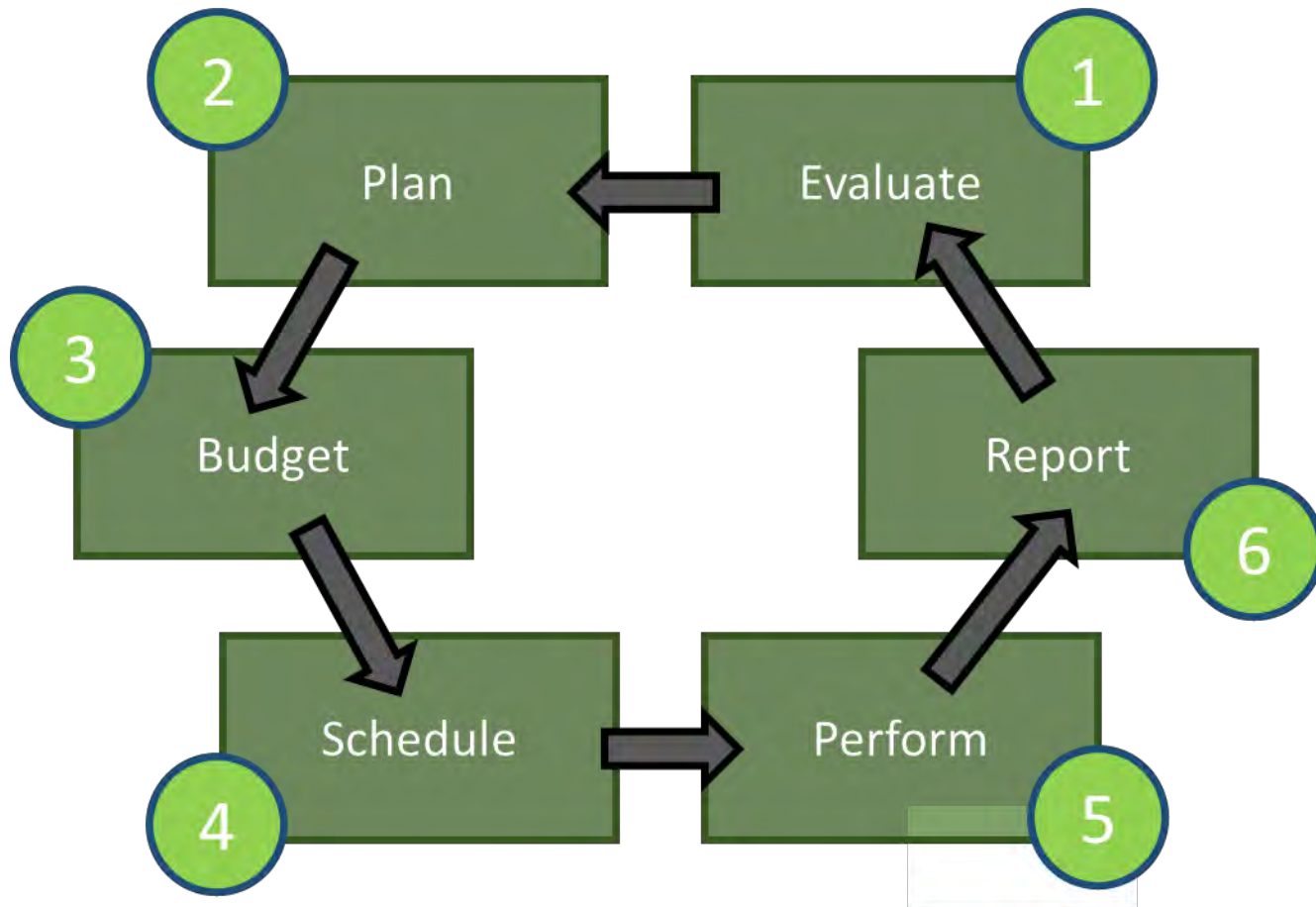
Ending Conditions	
Time: <input type="text"/>	<input type="radio"/> AM <input type="radio"/> PM
Wind Direction: <input type="text"/>	
Wind Speed: <input type="radio"/> < 3 mph <input type="radio"/> 3 - 10 mph <input type="radio"/> > 10 mph	
No Observable Temp. Inversion: <input type="checkbox"/>	
Temp: (F <sup>0</sup> ) <input type="radio"/> < 60° <input type="radio"/> 60° - 75° <input type="radio"/> 75° - 90° <input type="radio"/> > 90°	
Sky: <input type="radio"/> Sunny <input type="radio"/> Cloudy	
Soil Moisture: <input type="radio"/> Dry <input type="radio"/> Moist <input type="radio"/> Saturated	

Spray System Maintenance	Equipment Used
Last date calibrated: <input type="text"/>	<input type="checkbox"/> Truck
	<input type="checkbox"/> Handgun
Leaks Detected: <input type="radio"/> Yes <input type="radio"/> No	<input type="checkbox"/> Tractor
	<input type="checkbox"/> Gator
Leaks Repaired: <input type="radio"/> Yes <input type="radio"/> N/A	<input type="checkbox"/> Backpack
	<input type="checkbox"/> Other

Herbicides & Adjuvants									
Type	Product Name	EPA Registration Number	Total Product Usage (Quantity)		Total Mix Quantity (Gallons)	Product Rate / Acre OR Product Rate / 100 gallons		Application	
								Vol /Acre	
Broadcast									
Broadcast									
Broadcast									
Broadcast (Manual)									
Spot Treat									
Spot Treat									
Spot Treat									
Surfactant		<del>X</del>							
Drift Retardant		<del>X</del>							
Defoamer		<del>X</del>							

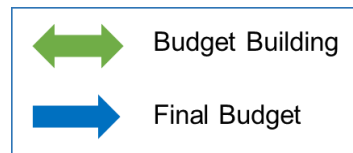
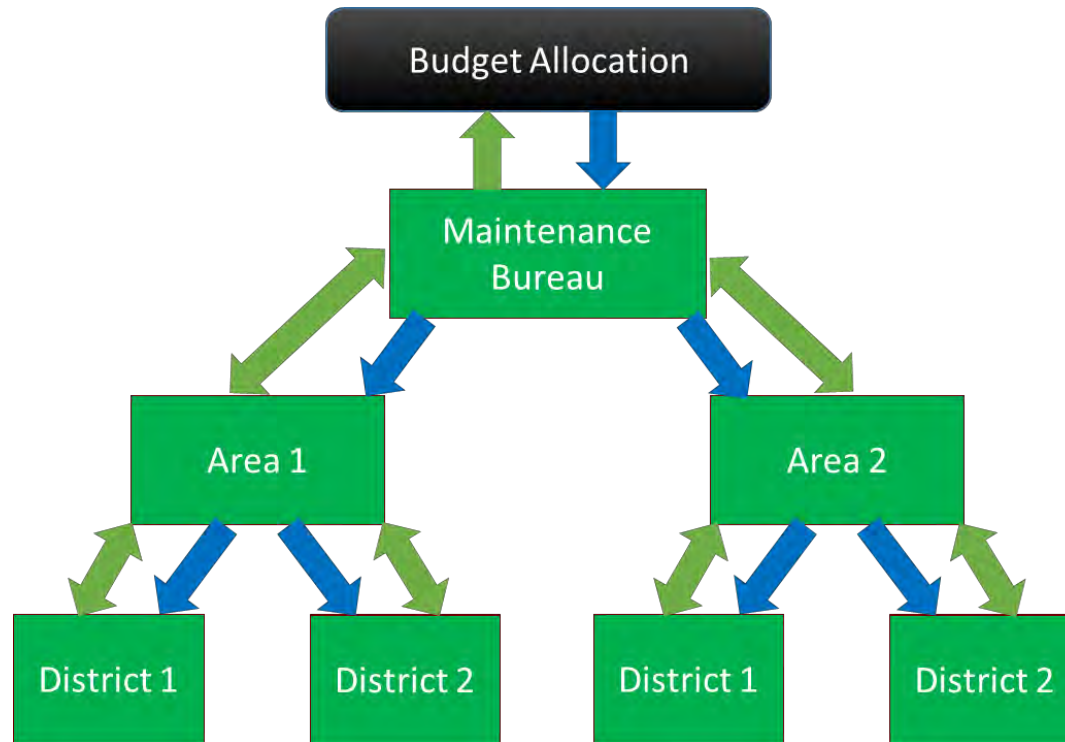
Other Comments:

**Transportation Facilities Maintenance:  
The RoadMAP Process**

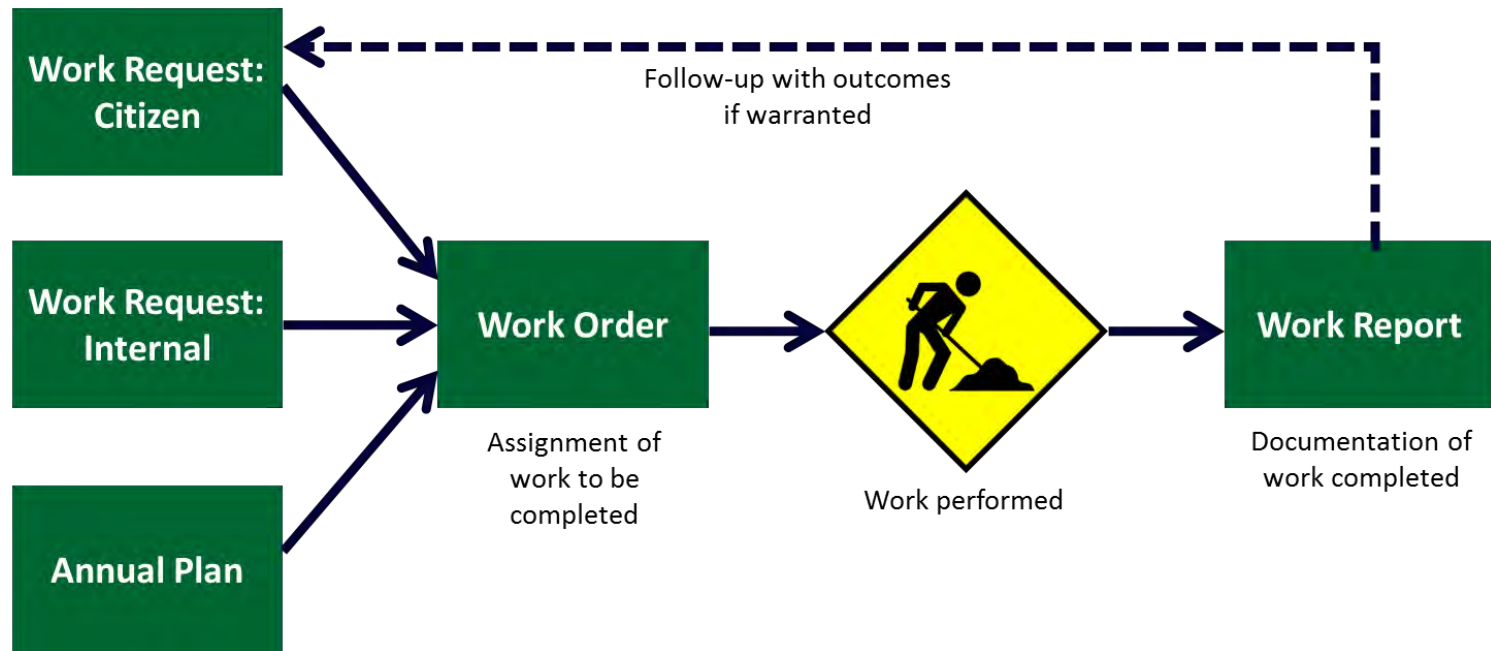




**Transportation Facilities Maintenance:  
Budget Allocation**



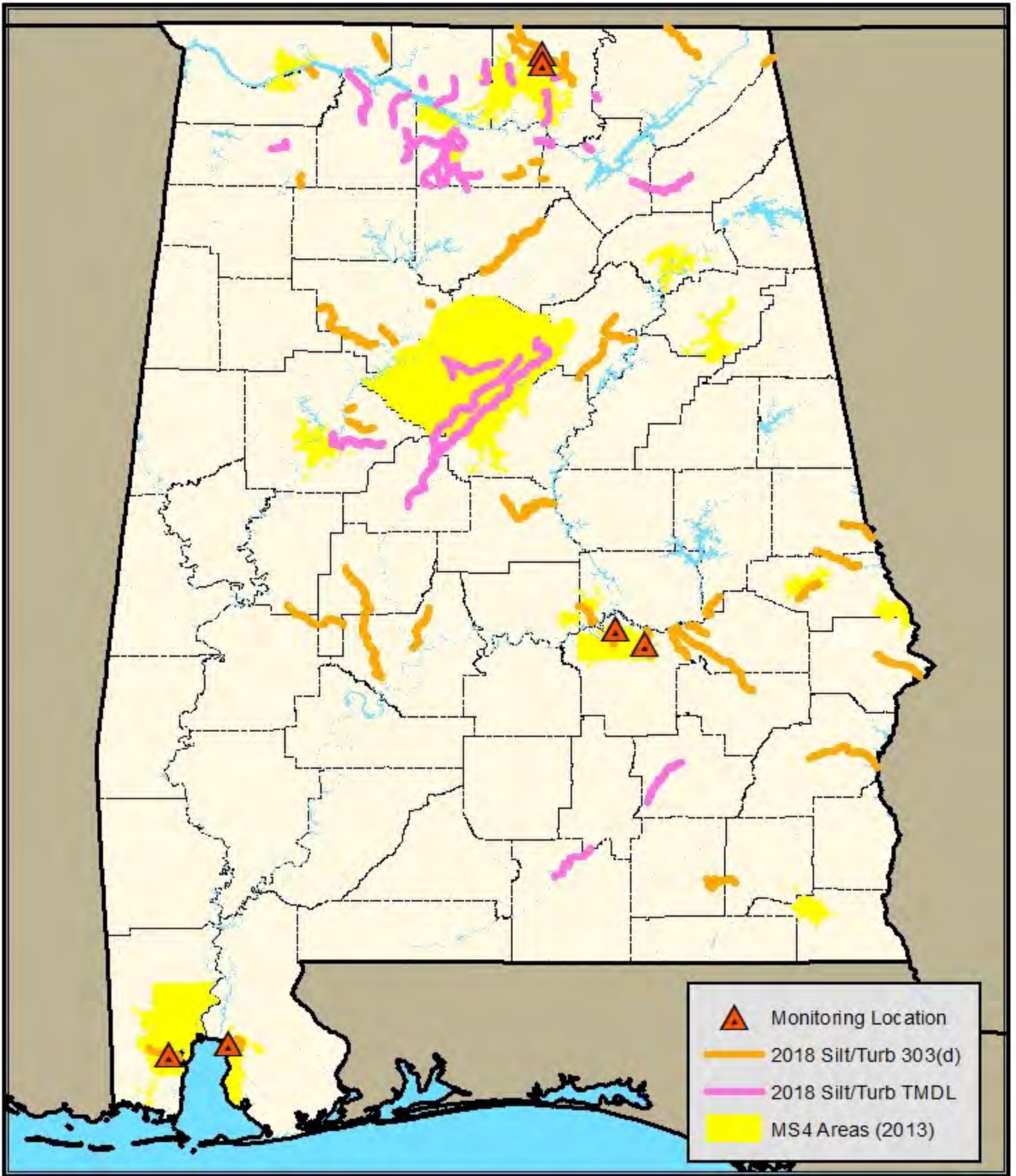
# Transportation Facilities Maintenance: Maintenance Workflow



**Appendix H:**  
**Supplemental Material for Chapter 8**

ALDOT MS4 Monitoring Locations Map

ALDOT MS4 Visual Monitoring Form



ALABAMA DEPARTMENT OF TRANSPORTATION  
DESIGN-BUILD - SOURCE WATER

## MS4 Monitoring Locations & Sediment POC Waters (Last Updated 09/30/2020)






# ALDOT MS4 Visual Monitoring Form

Location: ✕

📍 32°25'N 86°16'W ± 160 m



## GENERAL INFORMATION

<b>Area: *</b>			<b>District: *</b>		<b>County: *</b>	
<input type="checkbox"/> Alex City	<input type="checkbox"/> Birmingham	<input type="checkbox"/> Fayette	<b>Route Type: *</b>			
<input type="checkbox"/> Grove Hill	<input type="checkbox"/> Guntersville	<input type="checkbox"/> Mobile	<b>Route Number: <span style="color: red;">LOWEST</span> State Route Number *</b>		<b>Milepost:</b>	
<input type="checkbox"/> Montgomery	<input type="checkbox"/> Troy	<input type="checkbox"/> Tuscaloosa				
<input type="checkbox"/> Tusculmbia						

**Monitoring Location**

ALDOT facility and address where monitoring (if applicable):	Reason on 303d list (if applicable):	Stream Name:

**LocationCondition:**

Is this location being observed during dry weather (<0.1" rain during previous 72 hours):

Yes  No

**AT THE STRUCTURE WITHIN ALDOT ROW**

Are there any exposed areas of soil located within the limits of the structure?	Approximately how much of the area within the limits of the structure is exposed?	Are any erosion control measures present?	Are there any drainage structures within the limits of the structure?
Yes <input type="checkbox"/> No <input type="checkbox"/>	0 <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Has sediment been deposited within the limits of the structure?		Are there potential sediment sources within the limits of the structure?	
Yes <input type="checkbox"/> No <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/>	

**OUTSIDE LIMITS OF THE STRUCTURE ON ALDOT ROW (within 100 yards of the structure)**

Are there any exposed areas of soil located outside the limits of the structure?	Approximately how much of the area outside the limits of the structure is exposed?	Are any erosion control measures present?	Are there any drainage structures outside the limits of the structure?
Yes <input type="checkbox"/> No <input type="checkbox"/>	0 <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Are there any drainage structures outside the limits of the structure?		Are there potential sediment sources outside the limits of the structure?	
Yes <input type="checkbox"/> No <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/>	

**OUTSIDE LIMITS OF THE STRUCTURE OFF ALDOT ROW (within 100 yards of the structure)**

Does it appear there are exposed areas of soil located outside the limits of the structure?	Approximately how much of the area outside the limits of the structure is exposed?	Are any erosion control measures present?	Are there potential sediment sources outside the limits of the structure?
Yes <input type="checkbox"/> No <input type="checkbox"/>	0 <input type="checkbox"/> 1-25% <input type="checkbox"/> 26-50% <input type="checkbox"/> 51-75% <input type="checkbox"/> 76-100% <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Does it appear there any drainage structures outside the limits of the structure?		Are there potential sediment sources outside the limits of the structure?	
Yes <input type="checkbox"/> No <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/>	

**Recommendations**

Any maintenance recommendations?	Any additional comments?
Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>

**Inspected By:**

**Inspection Date/Time**

📅 Date:  🕒 Time:

**Photo(s)**

Image(s)

