
City of Mobile

205 Government Street
Mobile, Alabama 36602

Maintain Mobile

Clean Water, Clean Choices



Municipal Separate Storm Sewer System (MS4) 2022 Annual Report

NPDES Permit No. ALS000007

January 2023

Prepared By:



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SECTION 1

General Information



1. General Information

1.1. Signatory Requirements

I certify under 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 person or 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.

Nick Amberger, P.E.
Name

City Engineer
Title


Signature

1/24/2023
Date

Address: P.O. Box 1827
Mobile, Alabama 36633-1827
Phone: (251) 208-7426

A letter from Honorable William S. Stimpson delegating authority to Nick Amberger, P.E. is provided in Appendix B of the Storm Water Management Program (SWMP) Plan.

1.2. Overview and Summary

The City of Mobile's SWMP is a MS4 specific comprehensive program developed to accomplish the following objectives:

- Reduce discharge of pollutants from MS4 to the Maximum Extent Practicable (MEP);
- Monitor storm water structural controls;
- Identify and eliminate illicit discharges and improper disposal into the MS4;
- Develop, implement, and enforce controls to minimize pollutants from construction activities;
- Develop and implement pollution prevention / good housekeeping practices for municipal operations;
- Develop and implement storm water management practices for qualifying new developments and redevelopments;
- Reduce discharges of pollutants from the application of pesticides, herbicides, and fertilizers;
- Prevent, contain, and respond to spills that may discharge into the MS4;
- Monitor and control pollutants in storm water discharges from industrial facilities (such as municipal landfills, hazardous waste treatment, sewage treatment, storage, disposal, and recovery facilities subject to Emergency Planning and Community Right to Know Act (EPCRA) Title III, Section 313); and,
- Implement public education activities regarding the storm water management program, recycling programs, household hazardous waste, and proper disposal, etc.

The 2022 MS4 Annual Report demonstrates the City's efforts to maintain and comply with the NPDES permit requirements to the MEP.

1.3. List of Contacts

Part IV.4.a. of National Pollutant Discharge Elimination Systems (NPDES) Permit Number ALS000007 requires the Permittee to provide a list of contacts and responsible parties (e.g. agency, name, phone number) that had input to and are responsible for the preparation of the annual report. City Staff from Administration, Engineering, Public Works, Planning and Development, Parks and Recreation,

Public Safety, and Information Technology contributed materials and data for incorporation into this annual report. Personnel directly responsible for the preparation of this annual report include the following.

Table 1.1 Contact List

| | |
|---|--|
| Nick Amberger, P.E. City Engineer City of Mobile 205 Government Street Mobile, AL 36633 (251) 208-7426 | Rosemary Ginn, P.E., CFM, CPMSM Assistant City Engineer City of Mobile 205 Government Street Mobile, AL 36633 (251) 208-6072 |
| Ryne Smith Project Manager City of Mobile 205 Government Street Mobile, AL 36633 (251) 208-7529 | Dewayne Smith, P.E., CPESC, CPSWQ, CPMSM Vice President Hydro Engineering Solutions 2124 Moore's Mill Road Suite 120 Auburn, AL 36830 (334) 740-6000 |

Any questions concerning Mobile's Municipal Separate Storm Sewer System (MS4) 2022 Annual Report shall be directed to Ms. Rosemary Ginn, P.E.

1.4. Introduction

In 1990, the U.S. Environmental Protection Agency (EPA) promulgated regulations establishing Phase I of the NPDES storm water program. The Phase I program for municipal separate storm sewer systems (MS4s) requires operators of "medium" and "large" MS4s that generally serve populations of 100,000 or greater to implement a storm water management program as a means to control the MEP polluted discharges from certain municipal, industrial, and construction activities into the MS4. These "Phase I" storm water regulations were incorporated into Section 402(p) of the Clean Water Act as part of the existing NPDES permit rules that address point source discharges. As a result, urban nonpoint source runoff became regulated as a point source.

The Alabama Department of Environmental Management (ADEM) presently has primary jurisdiction over permitting and enforcement of the Storm Water Program for Alabama. On 7 July 2021, ADEM issued NPDES Permit Number ALS000007 to the City of Mobile, became effective on 7 July 2021 and will expire on 6 July 2026.

The City of Mobile's SWMP has been developed to include the storm water pollution prevention and management programs described in the NPDES Permit. Part II.B of the NPDES Permit describes ten program elements that are required to be incorporated in the City's SWMP:

1. Storm Water Collection System Operations;
2. Public Education and Public Involvement on Storm Water Impacts;
3. Illicit Discharges Detection and Elimination (IDDE);
4. Construction Site Storm Water Runoff Control;
5. Post-Construction Storm Water Management in New Development and Re-Development;
6. Spill Prevention and Response;
7. Pollution Prevention / Good Housekeeping for Municipal Operations;
8. Application of Pesticide, Herbicide, and Fertilizer (PHFs);
9. Oil, Toxics, and Household Hazardous Waste Control; and,
10. Industrial Storm Water Runoff.

This annual report summarizes the City's efforts for the reporting period from 1 October 2021 through 30 September 2022 to comply with the NPDES Permit and the above listed ten program elements to the MEP.



SECTION 2

Program Evaluation

2. Program Evaluation

2.1. MS4 Characterization

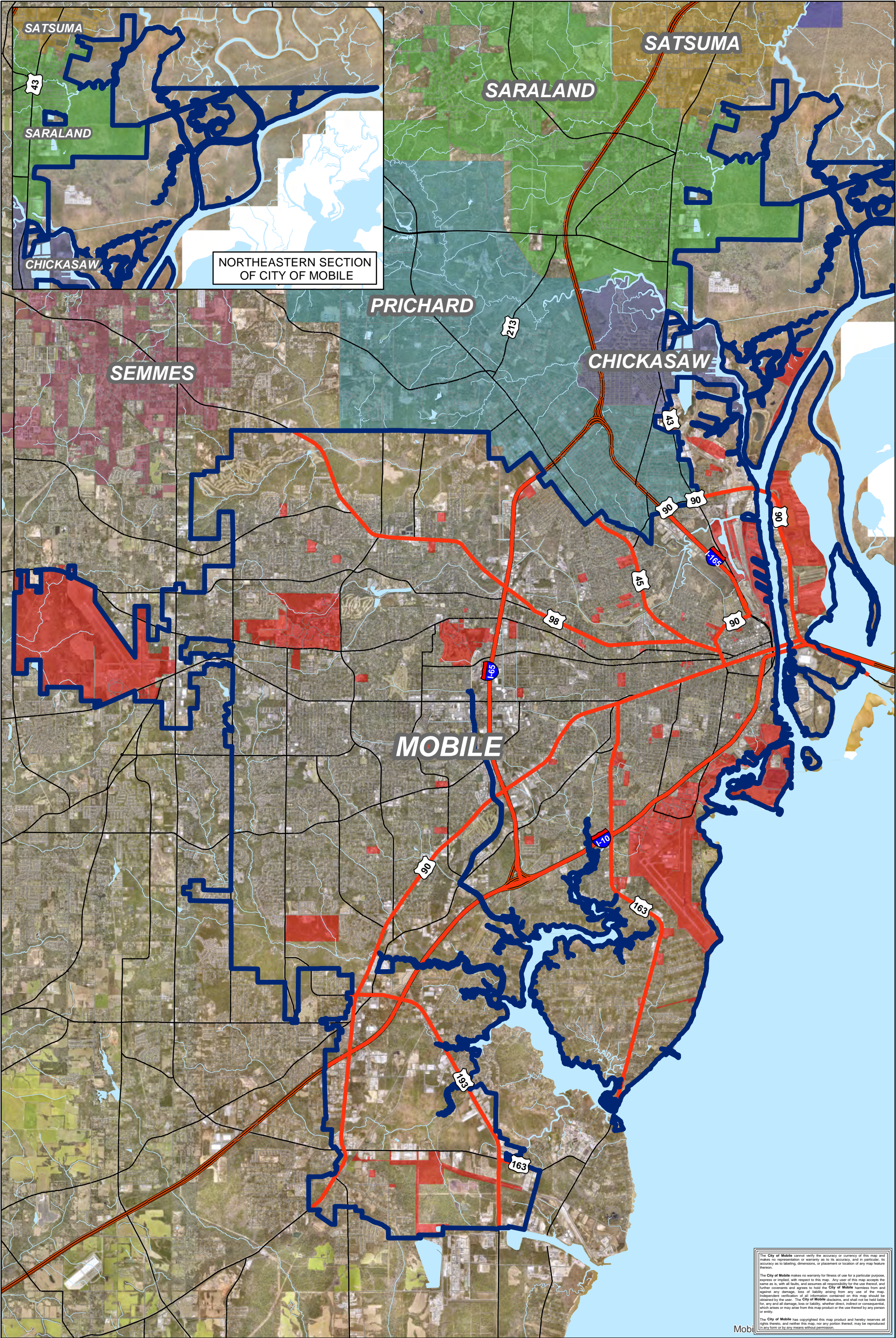
The City of Mobile is located adjacent to Mobile Bay in the southernmost part of Alabama. The City occupies approximately 178.78 square miles, with approximately 141.36 square miles of it being land and 37.42 square miles being covered by water. Municipalities that share boundaries with the City of Mobile include Prichard, Saraland, Chickasaw, Satsuma, Theodore, Tillman's Corner, and Mobile County.

There are several federal facilities, state facilities, military bases, universities, and state roads located within the City that are exempted from the City's regulations and enforcement authority. The City has initiated an effort to identify and inventory areas of the City that are not part of the MS4. The current inventory is summarized in Table 2.1.

Table 2.1 Non-Regulated Areas

| Non-Regulated Area | NPDES Permit No. | |
|---------------------------------------|------------------------|------------------------|
| Federal Facilities | | |
| US Coast Guard Complex | | |
| State Facilities | | |
| Alabama Department of Transportation | ALS000006 | |
| Alabama State Port Authority | ALG140910 AL0047651 | AL0002976 AL0042374 |
| Alabama National Guard (Fort Whiting) | | |
| Educational Facilities | | |
| Bishop State | | |
| University of South Alabama | ALR040060 | |
| Other | | |
| Mobile Airport Authority | ALG140261 | ALG140262 |

The City of Mobile's corporate limits, Mobile County boundary, major roads, major streams, and surrounding communities are presented in Figure 2.1.



CITY OF MOBILE
MS4 PROGRAM



MS4 BOUNDARY

- MS4 Boundary
- ALDOT MS4
- State / Federal Hwy
- Interstate
- Roads
- Tunnel
- Stream
- Water
- Non Permitted MS4s
- East Half Tiles



FIGURE 2-1

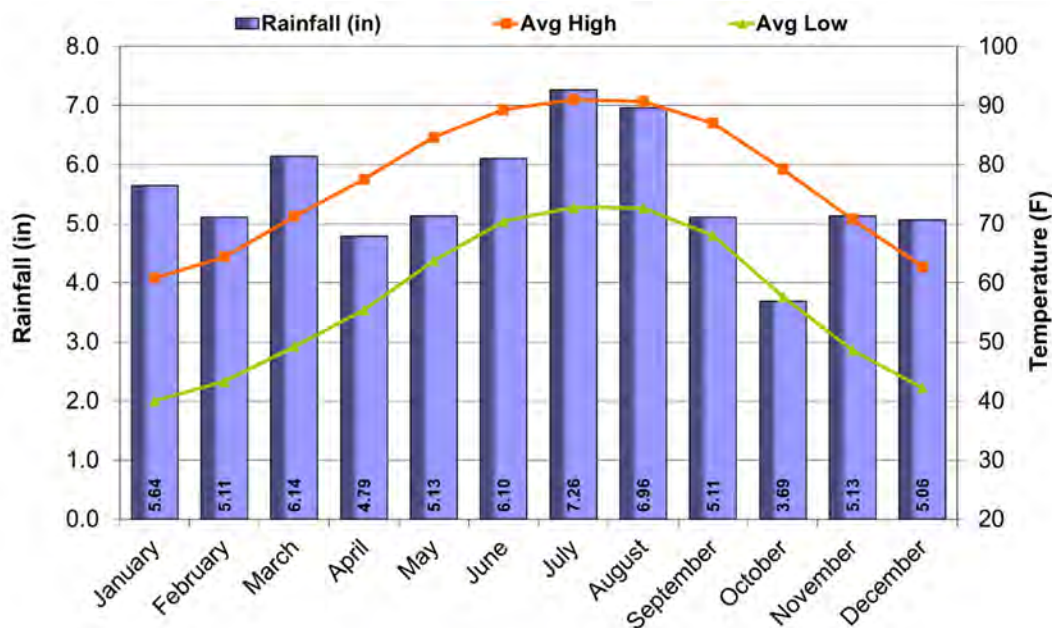
1 0.5 0 1
Miles

PRINT DATE: 12/12/2022

2.1.1. Climate

Mobile's geographical location on the Gulf of Mexico provides a mild sub-tropical climate, with hot, humid summers and mild, rainy winters. Average high and low temperatures in January are 60.8°F and 40.0°F, respectively. Summer temperatures average 91.0°F in July with highs exceeding 90°F for more than 75 consecutive days per year. The Mobile area receives approximately 66 inches of rainfall annually. Rainfall studies have determined that Mobile is one of the wettest cities in the contiguous 48 states. Rainfall tends to be consistent throughout the year with wetter periods occurring during the summer and early fall months. Mobile is occasionally affected by major tropical storms and hurricanes which can produce copious amounts of rainfall in a very short period. Significant snow fall events are rare in Mobile. Average monthly rainfall and temperatures are summarized in Figure 2.2.

Figure 2.2 Average Monthly Rainfall and Temperatures

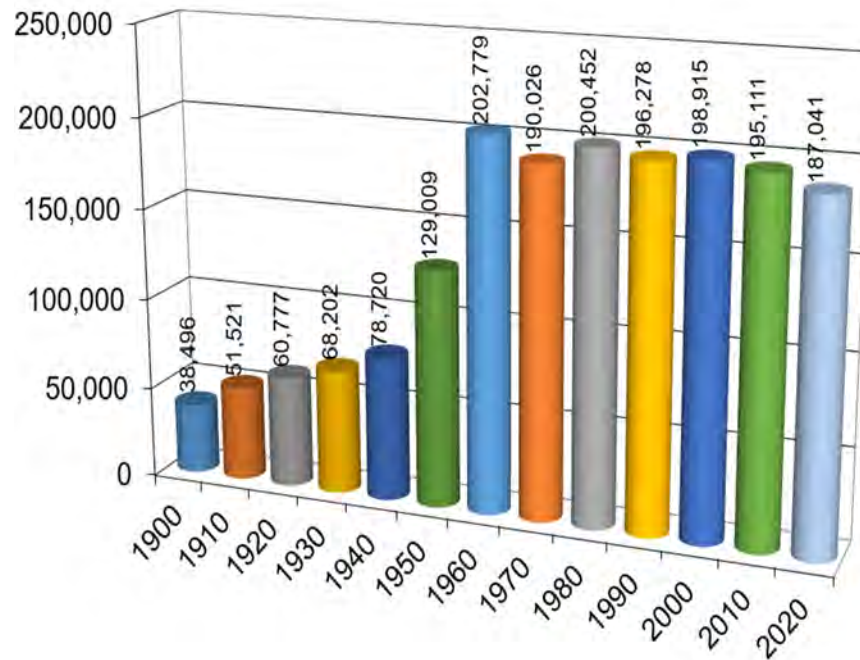


2.1.2. Population

Between its incorporation in 1814 through 1960, the City of Mobile experienced a steady increase in population. Over the past 50 years, the population has remained steady. Figure 2.3 provides a graph showing the historical population of the City since 1900.

The 2020 Census estimated the total population of the City of Mobile to be 187,041. As compared to the population in 2010 of 195,111, the City has experienced a population decrease of 8,070 (approximately 4.1%) over the past 10 years. Since 1960, the population growth in the City has been relatively flat.

Figure 2.3 Historic Population



2.1.3. Watersheds

To develop, implement, and maintain an effective SWMP that minimizes pollutant discharges in storm water runoff, it is important for the City to be knowledgeable of the following:

- Major drainage basins within the City;
- Water quality concerns of each drainage basin; and,
- Potential sources of pollutants by land use.

The City of Mobile is located within 15 drainage basins that have a 12-digit Hydraulic Unit Classification (HUC-12). The area of the City located within each HUC-12 drainage basin is summarized in Table 2.2 and shown in Figure 2.4.

Table 2.2 HUC-12 Drainage Basins

| HUC 12 Basin | City of Mobile | |
|--------------------------------|-------------------------|------------------|
| | Area (mi ²) | Area (% of City) |
| Upper Dog River | 32.92 | 23.3 |
| Three Mile Creek | 26.78 | 18.9 |
| Halls Mill Creek | 18.15 | 12.8 |
| Lower Dog River | 13.99 | 9.9 |
| Eight Mile Creek | 8.77 | 6.2 |
| Deer River | 8.76 | 6.2 |
| Tensaw River – Apalachee River | 6.98 | 4.9 |
| Lower Chasaw Creek | 6.67 | 4.7 |
| Grand Bay | 6.02 | 4.3 |
| Bayou Sara | 5.50 | 3.9 |
| Pierce Creek – Big Creek | 4.03 | 2.9 |
| Fowl River | 1.37 | 1.0 |
| Miller Creek | 1.06 | 0.8 |
| Gunnison Creek | 0.19 | 0.1 |
| Bon Secour Bay | 0.17 | 0.1 |
| Total | 141.36 | 100.0 |

2.1.4. Land Use

The City maintains a GIS layer to track zoning and land use throughout the City. Each major district is further subdivided into more detailed subcategories that characterize specific land use or land cover. A summary of the approximate land use within the City is summarized in Table 2.3 and shown in Figure 2.5. This area does not include City rights-of-way.

Overlapping the land use with watershed boundaries provides the City with information needed to identify and implement Best Management Practices (BMPs) that are targeted to help improve water quality.

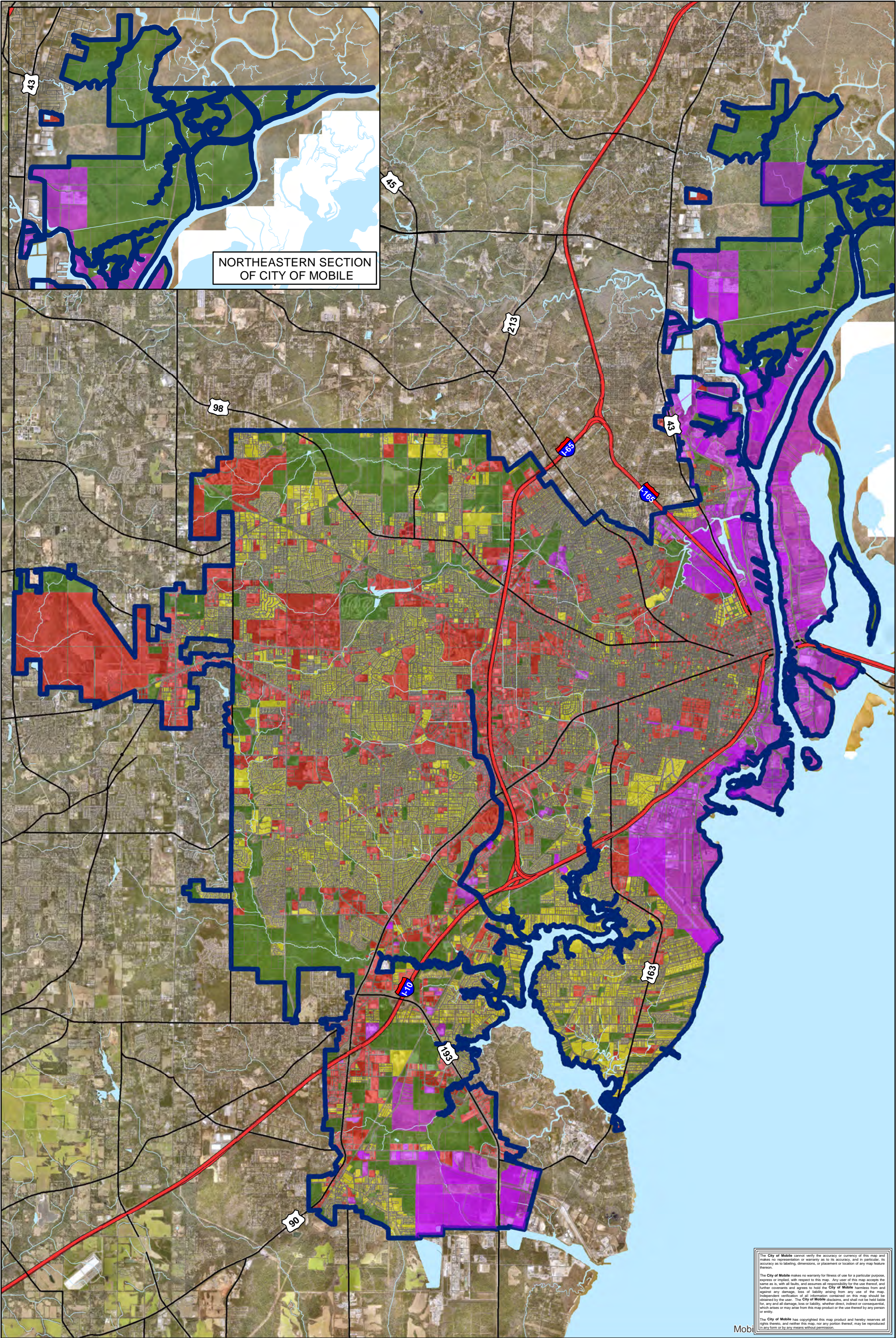


Table 2.3 Land Use Summary

| Land Use | Area (mi ²) | Area (%) |
|-------------|-------------------------|----------|
| Residential | 43.57 | 34.6 |
| Commercial | 28.78 | 22.9 |
| Industrial | 18.82 | 15.0 |
| Undeveloped | 34.65 | 27.5 |
| Total | 125.82 | 100.0 |

2.2. Program Objectives

The primary objective of the SWMP is to effectively prohibit the discharge of non-storm water discharges into the MS4 and reduce the discharge of pollutants from the MS4 to the MEP. The City of Mobile has implemented, maintained, and revised the SWMP as necessary to comply with the requirements of the NPDES permit.

2.3. Major Findings

Section 303(d) of the Clean Water Act (CWA) establishes that states are to identify and list waters (rivers, streams, etc.) for which technology-based limits alone do not ensure attainment of applicable water quality standards. The 303(d) list of impaired waters will include a priority ranking for establishment of Total Maximum Daily Loads (TMDLs) for these waters. The state will establish a TMDL that will meet water quality standards for impaired streams, considering seasonal variations and a margin of safety that accounts for uncertainty. TMDLs establish the maximum amount of a pollutant that a water body can assimilate without exceeding water quality standards. Once a TMDL is developed for a water, that water will be removed from the 303(d) list.

2.3.1. 303(d) Listed Streams

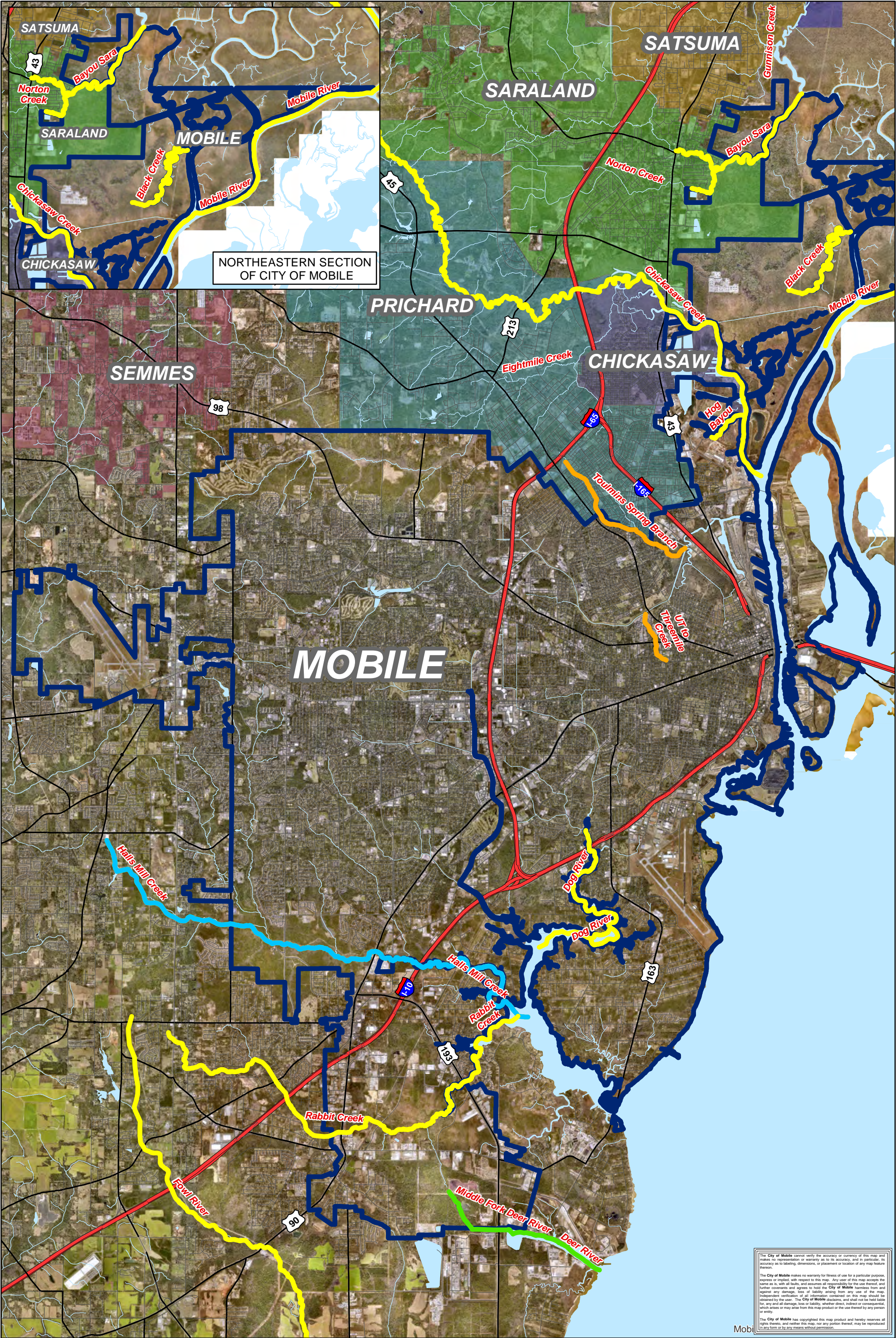
According to ADEM's 2022 303(d) list, there are four (4) streams within the City that have been designated as impaired. ADEM's 303(d) listed streams located within the City are summarized in Table 2.4 and shown in Figure 2.6.

Table 2.4 2022 303(d) Listed Streams

| Waterbody | | Designated Use | Pollutant of Concern | Sources |
|------------------------|---------------------|-------------------|-----------------------------------|---|
| Name | ID | | | |
| Toulmins Spring Branch | AL03160204-0504-300 | Fish and Wildlife | Nutrients | Urban Runoff Storm Sewers |
| UT to Three Mile Creek | AL03160204-0504-500 | Fish and Wildlife | Nutrients | Urban Runoff Storm Sewers |
| Halls Mill Creek | AL03160205-0102-110 | Fish and Wildlife | Siltation (Habitat Alteration) | Land Development |
| Middle Fork Deer River | AL03160205-0105-300 | Fish and Wildlife | Organic Enrichment | Collection System Failure Urban Runoff Storm Sewers |

2.3.2. Approved TMDLs

EPA has approved ADEM's TMDLs for selected stream segments on several streams located within the City. Pollutants of concern for each stream segment are summarized in Table 2.5. The location of streams where a TMDL has been developed is shown in Figure 2.7.



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CITY OF MOBILE
MS4 PROGRAM



2022 303(d) STREAMS

Metals (Mercury)
Nutrients

Organic Enrichment (BOD)
Siltation

MS4 Boundary
Roads
State/Federal Hwy

Interstate
Tunnel
Stream
Water



FIGURE 2-6



PRINT DATE: 12/13/2022

Table 2.5 Approved TMDLs

| Waterbody | | Pollutant of Concern | Date of Approval |
|---------------------------|---|---|------------------|
| Name | Assessment ID | | |
| Bayou Sara / Norton Creek | AL03160204-0402-102 AL03160204-0402-501 | Organic Enrichment Low Dissolved Oxygen | August 1997 |
| Eight Mile Creek | AL03160204-0304-103 | Pathogens | October 2004 |
| Rabbit Creek | AL03160205-0103-401 | Pathogens Organic Enrichment Low Dissolved Oxygen | April 2005 |
| Dog River | AL03160205-0102-101 AL03160205-0101-101 | Pathogens Organic Enrichment Low Dissolved Oxygen | April 2005 |
| Three Mile Creek | AL03160204-0504-101 AL03160204-0504-102 AL03160204-0504-103 | Organic Enrichment Low Dissolved Oxygen | January 2007 |
| Toulmins Spring Branch | AL03160204-0504-300 | Pathogens | September 2009 |
| UT to Three Mile Creek | AL03160204-0504-500 | Pathogens | September 2009 |
| Bolton Branch (East) | AL03160205-0101-400 | Pathogens | September 2009 |
| Bolton Branch (West) | AL03160205-0101-600 | Pathogens | September 2009 |
| Eslava Creek | AL03160205-0101-500 | Pathogens | September 2009 |
| Three Mile Creek | AL03160204-0504-101 AL03160204-0504-102 AL03160204-0504-103 | Pathogens Organic Enrichment Low Dissolved Oxygen | November 2013 |

Review of the TMDLs revealed that the primary source of pollution contributing to the impairment is attributed to municipal collection system failure or on-site wastewater treatment systems. Sanitary sewer overflows (SSOs) reported by the Mobile Area Water and Sewer System (MAWSS) revealed a significant number of SSOs discharging a significant volume of wastewater into local streams. A graph showing the number of MAWSS reported SSOs and volume of wastewater discharged is provided in Figure 2.31.

2.4. Major Accomplishments

The City of Mobile has made significant progress over the past year in implementing its SWMP to the MEP. Major accomplishments are summarized below.

2.4.1. ADEM Audit

ADEM conducted an audit of the City's MS4 program on 28 to 30 March 2022. ADEM audit findings confirmed the City has developed and implemented a satisfactory SWMP and is compliant with the NPDES permit. The ADEM Audit Report and other supporting documents are provided in Appendix A.

2.4.2. Structural Controls

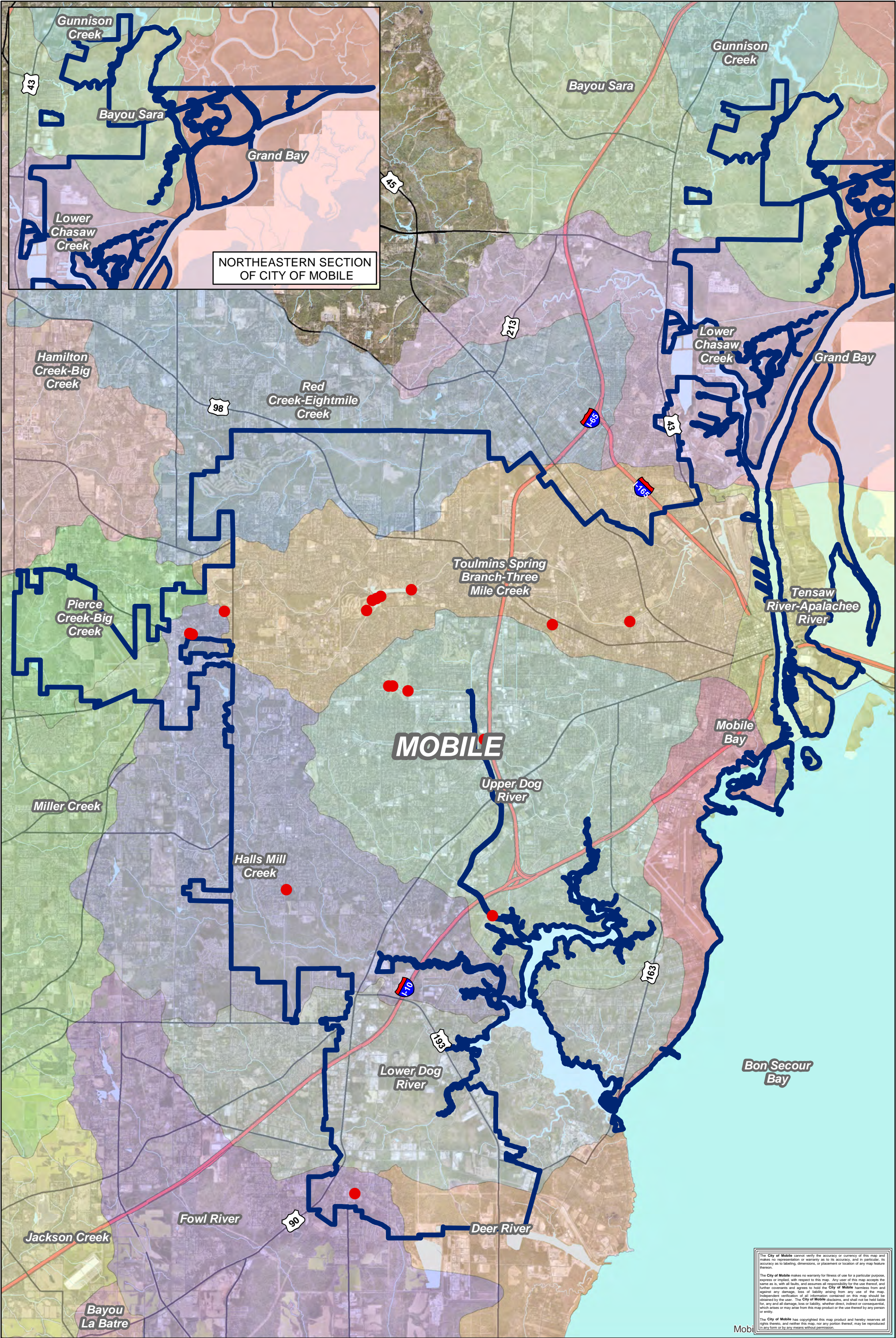
Due to the topography of the MS4 Area, storm water runoff is conveyed through a series of either closed conduit storm sewer systems and/or open drainage ditches. Structural controls owned, operated, or maintained by the City primarily consist of storm water retention ponds located at various City facilities.

2.4.2.1. Inventory

The City maintains 17 structural controls at various City facilities. The current inventory of structural controls is shown in Figure 2.9 and summarized in a Structural Control Inventory Table provided in Appendix C of the SWMP Plan. A picture of the structural control located in the Halls Mill Creek watershed is provided in Figure 2.8.

Figure 2.8 Structural Control HMC-SC-01





CITY OF MOBILE
MS4 PROGRAM



MS4 STRUCTURAL CONTROLS

- Public Structural Controls
- MS4 Boundary
- Roads
- State/Federal Hwy
- Interstate
- Tunnel
- Stream
- Water



FIGURE 2-9



PRINT DATE: 1/23/2023

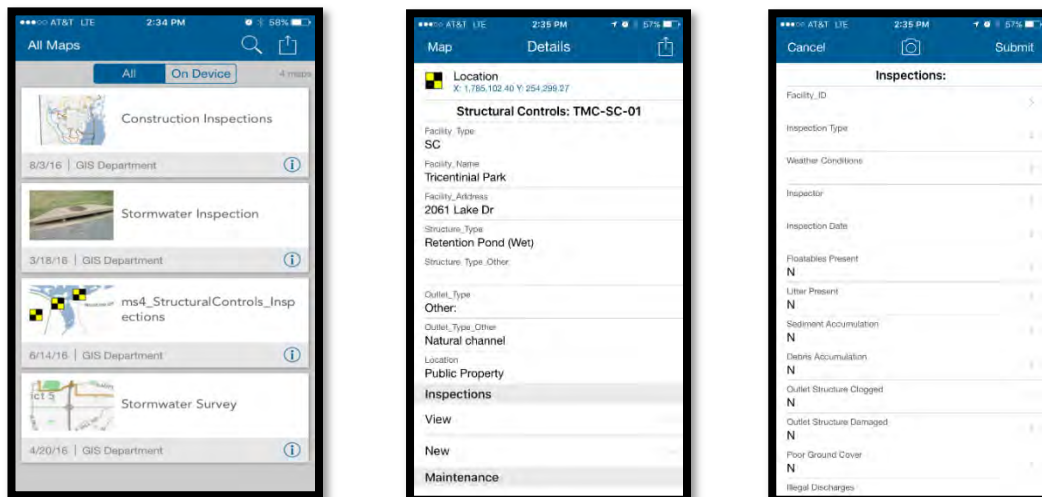
2.4.2.2. Inspections

The City conducts an inspection of each structural control on a semi-annual basis. To maximize the use of technology and resources for structural control inspections, the Structural Controls Inspection Form may be converted into an electronic format that can provide inspectors with enhanced capabilities that may include:

- GPS mapping to facilitate structural control location;
- Standardized work flow;
- Electronic data collection;
- Minimize the types of equipment needed for the inspection;
- Ability to report a problem immediately when it is discovered;
- Ability to create an inspection report; and,
- Data collected is automatically synchronized with the City's GIS database.

Screenshots of the Collector App are provided in Figure 2.10. Copies of the semi-annual inspection reports are provided in Appendix B.

Figure 2.10 Collector App – Structural Controls



2.4.2.3. Maintenance

During the semi-annual inspection, the City's inspectors evaluate the presence of floatables, litter, sediment, debris, and other maintenance needs. If excessive amounts of floatables, litter, sediment, and/or debris are identified during the inspection, the inspector completes a Structural Controls Maintenance Request Form describing the maintenance required and assigns a priority on how quickly the maintenance should be performed. The inspector will assign one of the following priorities:

High – The structural control is not operating as designed and/or components of the structural control require immediate attention to prevent a structure failure;

Medium – The structural control is operating as designed and components of the structural control only requires routine maintenance; or,

Low – The structural control is operating as designed and only requires routine cleaning to remove sediment, debris, and/or litter.

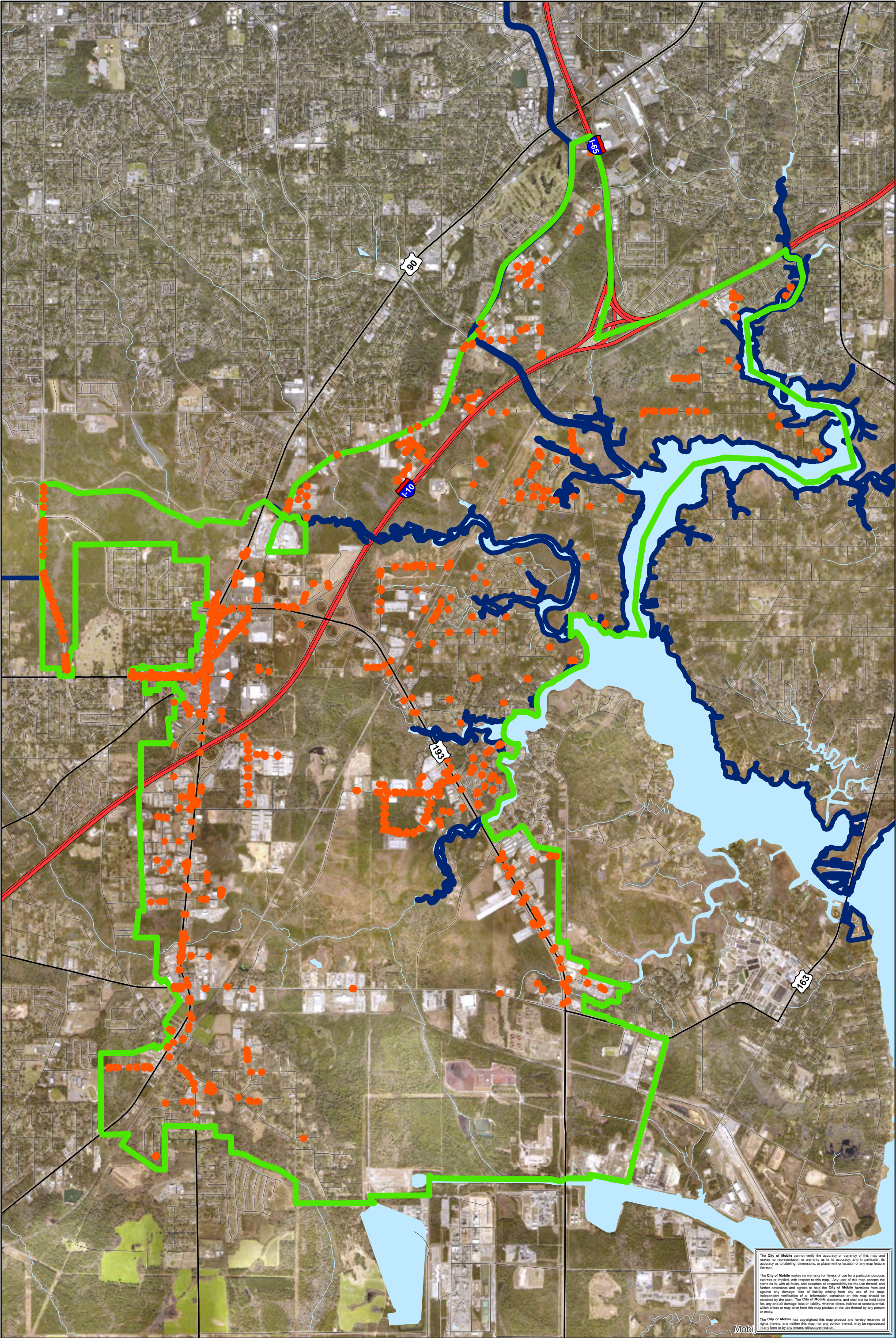
Inspections during this permit year identified four (4) structural controls that required low-priority maintenance. Inspections and maintenance activities are summarized on the Structural Controls Inspections and Maintenance Summary Form and provided in Appendix B. Copies of the inspection reports and Structural Controls Maintenance Request Forms are provided in Appendix B.

2.4.3. Catch Basins

Engineering, Public Works, and GIS collaboratively worked together and launched an ESRI web mapper system for catch basin inspections and maintenance. Using the daily inspection reports, a Public Works supervisor will input the catch basins that have been inspected and/or cleaned that day. In some cases, the Engineering Department representative may perform an inspection at each location listed on the Public Works crew's daily worksheet(s). After each inspection completed by the Engineering Department representative, the ESRI web mapper application transfers the data into the City GIS geodatabase and is immediately available to City staff.

Information available to the Engineering Department representative during the inspection and cleaning operations includes a detailed map of the current location that shows parcels, addresses, and catch basin numbers. If a previously unmapped catch basin is identified, the Engineering Department representative can add the catch basin to the existing inventory in the field. Screen shots of the ESRI web mapper system are provided in Figure 2.12.

For the routine inspections, the City has developed a schedule to inspect all inventoried catch basins located within the City over a 20-year period. Currently the City is engaged in an effort to map its storm sewer system. Therefore, the number of catch basins inspected by the City during the 2022 permit year has greatly exceeded the annual goal. This inspection pace will likely slow down when mapping is complete. The scheduled zone inspected for FY22 is shown on Figure 2.11.



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MS4 PROGRAM**



CATCH BASINS 2022 ROUTINE INSPECTIONS

- | | | | | |
|---------------|---------------------|--------|------------|--------|
| ● Catch Basin | Inlet Clean Zone 17 | Roads | Interstate | Stream |
| MS4 Boundary | State/Federal Hwy | Tunnel | Water | |



FIGURE 2-11

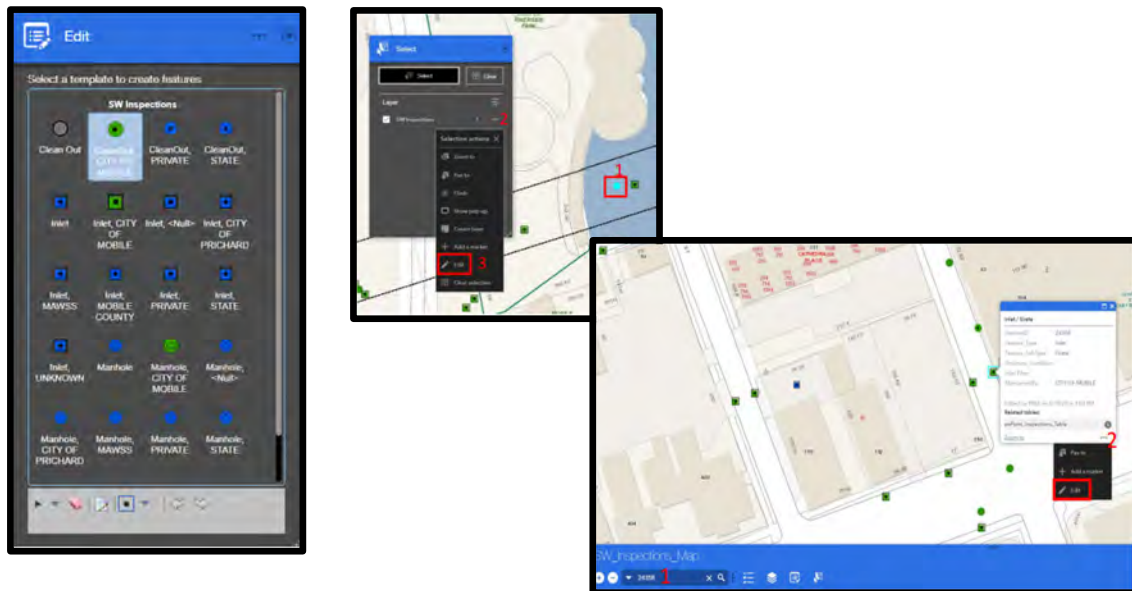
0.3 0.15 0 0.3
Miles

PRINT DATE: 12/12/2022

2.4.3.1. Inventory

As of 30 September 2022, the City maintains 32,497 catch basins within its corporate limits. A map showing the existing catch basin inventory is provided in Figure 2.13.

Figure 2.12 ESRI Web Mapper – Catch Basins

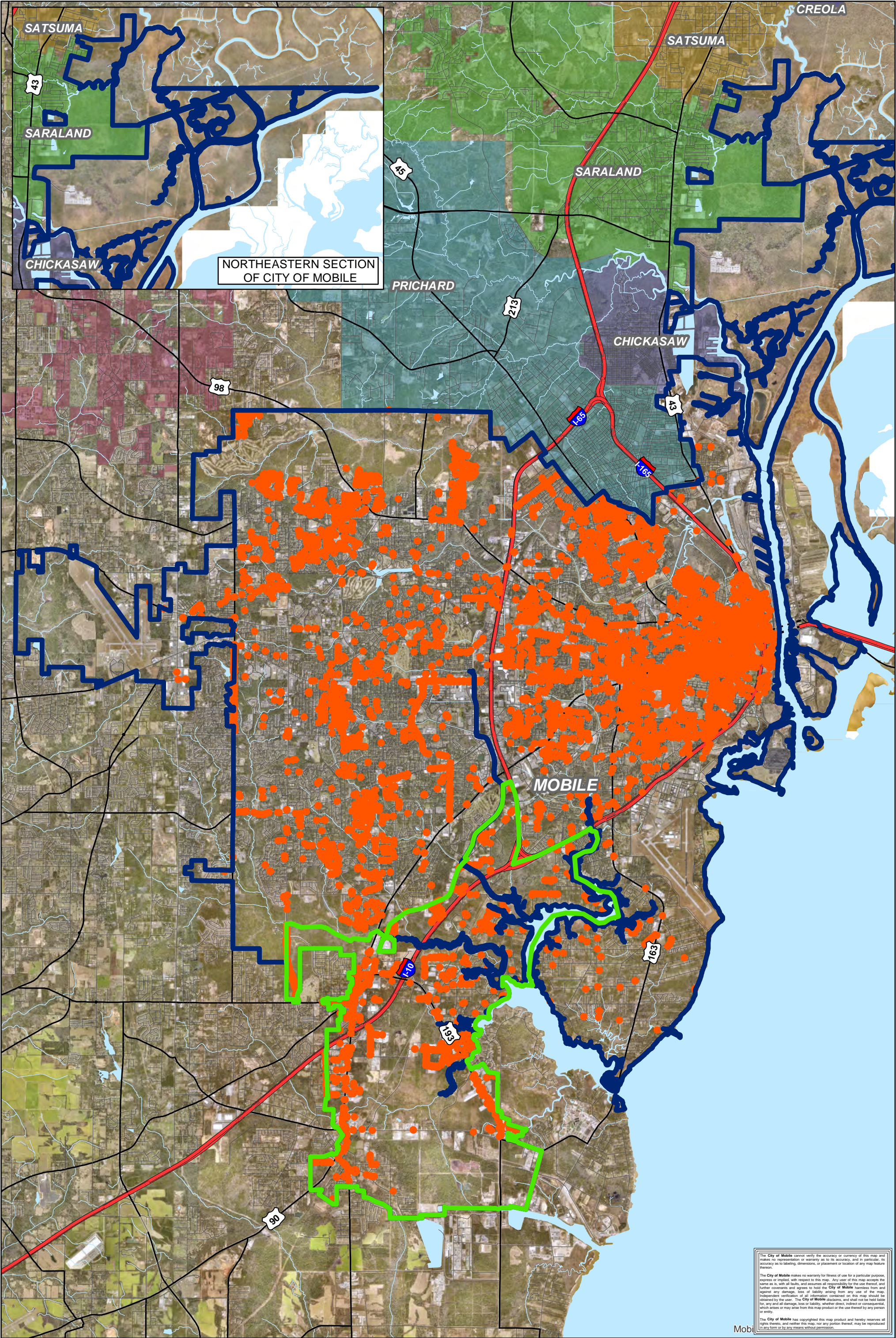


2.4.3.2. Inspection

A catch basin inspection will be triggered in one of two ways: 1) As part of the routine inspection program; or, 2) As a result of a citizen concern. Both types of inspections utilize the ESRI web mapper system and the same documentation.

The City has developed a schedule to inspect a minimum of 5% of all inventoried catch basins (approximately 1,700 / year) located within the City each year. This permit year, the City inspected a total of 7,598 catch basins. A map showing the area of the City and the catch basins inspected is provided in Figure 2.11. A graph showing the yearly and cumulative number of catch basins routinely inspected over the past seven (7) years is provided in Figure 2.14.

For a citizen's concern, the citizen typically contacts the City through the 311 system to identify the concern and initiate a Service Request Order (SRO). The City has recently enhanced the SRO procedure for catch basin cleaning by including a general map that shows the approximate location, street address, catch basin locations, and catch basin identification numbers. During this permit year, the City inspected a total of 168 catch basins in response to an SRO.



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CITY OF MOBILE
MS4 PROGRAM



MS4 CATCH BASIN INSPECTIONS

Inlet Clean Zone
FY2022



MS4 Boundary



Catch Basin

Roads

Interstate

State/Federal Hwy

Tunnel

Stream

Water



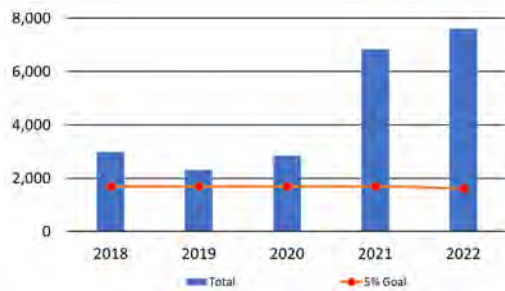
FIGURE 2-12

0.75 0.375 0 0.75
Miles

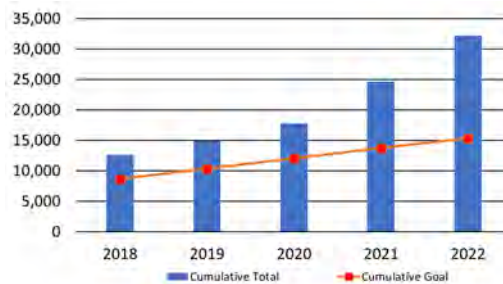
PRINT DATE: 12/12/2022

Figure 2.14 Routine Catch Basin Inspections

Yearly Totals



Cumulative Totals



Inspection information is summarized on the Catch Basin Inspection and Cleaning Summary included in Appendix B.

2.4.3.3. Cleaning

During a routine inspection or an SRO inspection, City personnel determine if maintenance of the catch basin is needed and establish a priority on how quickly maintenance should be performed. If the catch basin only requires cleaning, it is cleaned at the time of inspection. If additional maintenance is needed, the Public Works catch basin crew will note the needed maintenance on their inspection form. A supervisor will then generate an SRO through the 311 system and the Engineering Department representative inspecting the catch basins will also note the maintenance requirement in the ESRI web mapper. The condition of the catch basin is noted as Good, Minor Repair, or Major Repair. The Public Works Department schedules the required maintenance based on the maintenance priority and availability of resources.

To assist with routine, catch basin cleaning, the City operates (4) four vacuum trucks and one (1) flatbed truck. A photograph of a crew cleaning an existing catch basin is provided in Figure 2.15. If a catch basin is cleaned during the inspection, the Public Works crew documents the cleaning activities on a Storm Drain and Catch Basin Cleaning Equipment Daily Report Sheet and the Public Works Supervisor records it in the ESRI web mapper. The volume of material removed is tracked by vehicle number.

Figure 2.15 Cleaning Operations

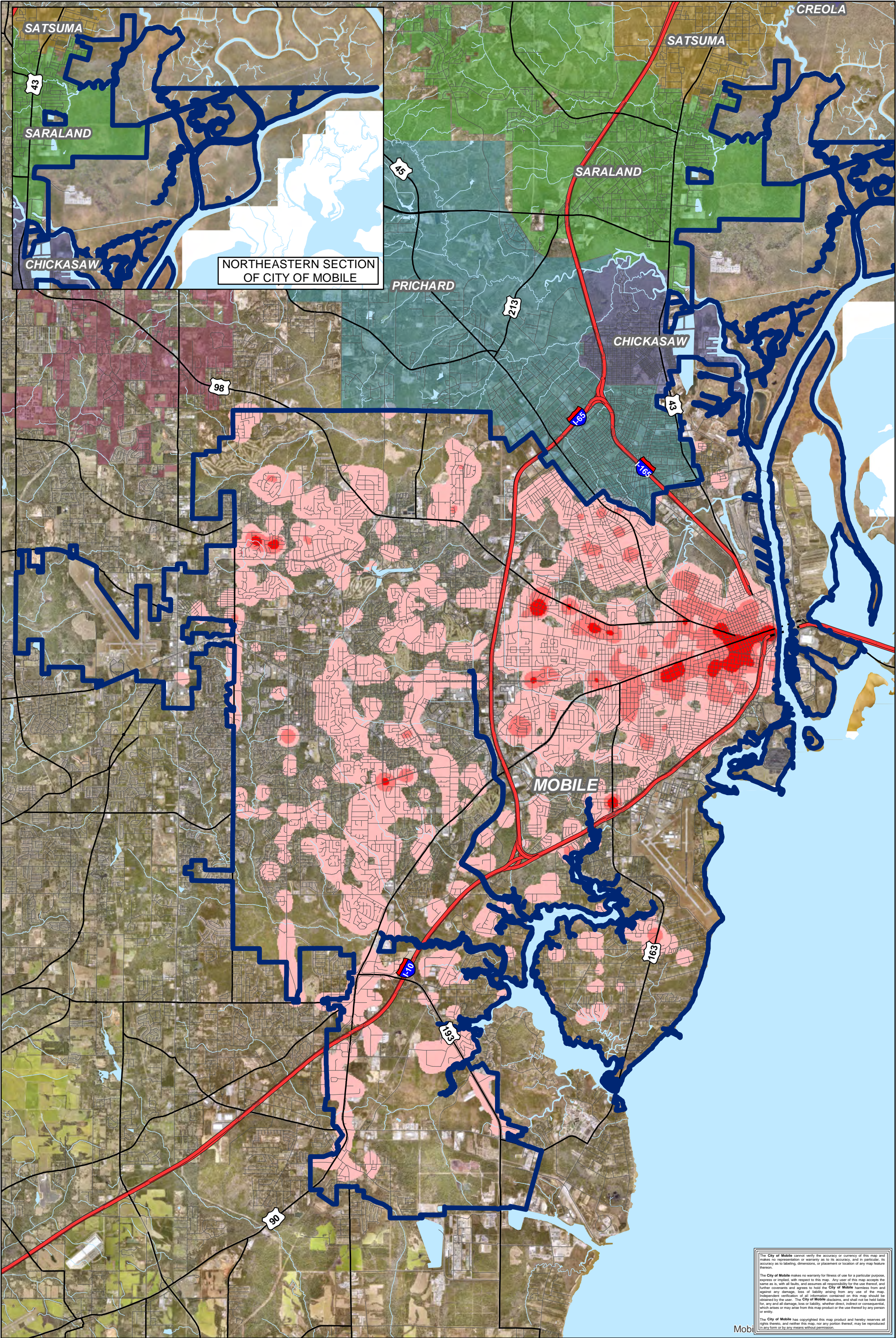


Examples of the Storm Drain Catch Basin Cleaning Equipment Daily Report and the Catch Basin Inspection and Cleaning Summary are provided in Appendix B.

The City has developed a hot spot map showing SROs submitted for catch basin cleaning. This hot spot map is provided as Figure 2.16 and indicates that a significant number of the SROs are in the downtown area. These hot spots are most likely attributed to the high volume of traffic and residents passing through these areas. Hot spot areas are also located in parts of the City with the oldest infrastructure.

2.4.4. Litter Trap

The City currently operates a Bandalong litter trap in Eslava Creek, a tributary of Dog River, just off of McVay Drive North. At this location, the litter trap receives storm water runoff from approximately 8.7 square miles of the City. A map showing drainage basin, land use, and photographs of the litter trap is provided in Figure 2.17.



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**CITY OF MOBILE
MS4 PROGRAM**



MS4 CATCH BASIN HOTSPOT

- | | | | |
|-------------------|------------|--------|-------------------------------------|
| MS4 Boundary | Interstate | Stream | Low Occurance of Catch Basin SRO |
| Roads | Tunnel | Water | Medium Occurance of Catch Basin SRO |
| State/Federal Hwy | | | High Occurance of Catch Basin SRO |

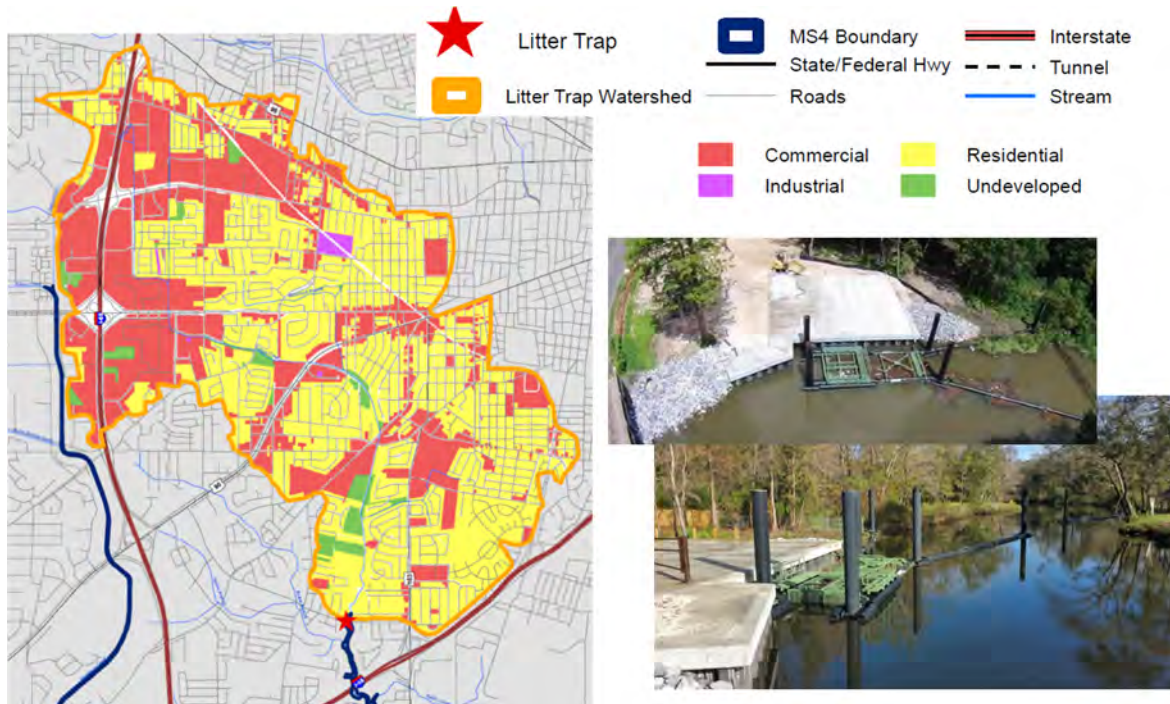


FIGURE 2-16

0.75 0.375 0 0.75
Miles

PRINT DATE: 12/29/2022

Figure 2.17 Eslava Creek Litter Trap



2.4.4.1. Inspections

The City inspected the litter trap weekly, as well as after significant rainfall events. If maintenance or cleaning was needed, the City would perform a follow-up inspection within three days to confirm the work was completed. A significant rainfall event is considered a 2-year, 24-hour storm event that produces approximately 5.67 inches of rainfall (according to NOAA Atlas 14, Volume 9). If a significant rain event occurs on a weekend or holiday, an inspection is performed on the next workday. During this permit year, the City conducted 55 routine inspections of the litter trap.

Litter trap inspections are documented on the Litter Trap Inspection Checklist and summarized on the Eslava Creek Litter Trap Inspection Summary Form. An example of a completed Department 177 Flood Control Daily Report and the Eslava Creek Litter Trap Inspection Form Example are provided in Appendix B.

2.4.4.2. Cleaning

The litter trap is cleaned when it accumulates one-quarter cubic yard of floatable materials excluding any vegetation. Vegetation is removed from the trap, along with the floatables, and disposed of appropriately. Litter trap cleaning activities are documented on the Litter Clean-Up Form summarized on the Eslava Creek Litter Trap Inspection and Cleaning Summary Form. During this permit year, Osprey Initiative LLC, a contractor used by the City, cleaned the litter trap 19 times and removed approximately 28.3 cubic yards of material. Pictures of previous cleaning activities are provided in Figure 2.18.

An example of a completed Litter Clean-Up Form and the completed Eslava Creek Litter Trap Cleaning Summary Form are provided in Appendix B.

Figure 2.18 Litter Trap Cleaning



2.4.5. Litter Enforcement

The Municipal Enforcement Division oversees the litter enforcement team as well as the activities of the property maintenance group. The Municipal Enforcement division has field inspectors tasked to perform the following activities:

- Conduct investigations and initiate compliance measures with property owners, when warranted, for various city codes relating to litter, blight, and illegal dump sites;
- Routinely patrol commercial corridors for litter concerns or issues;
- Enforce the requirement for all dumpsters to be labeled and identify the responsible party;
- Investigate SROs; and,
- Issue tickets as warranted.

During this permit year, Municipal Enforcement issued 3,039 Notice of Violations and 983 Municipal Offense Tickets. Additionally, the City's Police Department also issues tickets for litter offenses. A copy of the Litter and Property Enforcement Summary Form is provided in Appendix B.

2.4.6. Litter Patrol

The City operates a litter patrol to remove litter directly from rights-of-way in the MS4. To supplement the City's rights-of-way litter patrol, the City utilizes a contractor that focuses on removing litter from Dog River and Three Mile Creek.

2.4.6.1. Rights-of-Way Litter Patrol

The City has devoted resources to acquire specially designed ATVs with vacuums which pull the litter into attached garbage cans. Additionally, four trucks are devoted to patrolling and removing litter along City rights-of-way. Pictures of the litter truck and the specially designed ATVs are provided in Figure 2.19. During this permit year, the City's Litter Patrol removed approximately 2,831 bags (approximately 53,789 pounds) of litter from the rights-of-way.

Figure 2.19 Litter Truck and ATV



The amount of litter removed from the rights-of-way is documented in the Public Works Litter Collection Summary Form. A copy of the Public Works Litter Collection Summary Form is provided in Appendix B.

2.4.6.2. Stream Litter Patrol

The City has contracted with Osprey to collect litter, floatables, and debris from Dog River and Three Mile Creek. By using grabbers, plastic tubes, and pool nets while positioned on a john boat with a surface drive motor (gator tail) allows Osprey to remove litter from previously hard to reach areas. During the 2022 permit year, Osprey has collected approximately 9.2 tons of litter from Dog River and Three Mile Creek combined. Pictures of Osprey collection efforts are shown in Figure 2.20.

The amount of litter collected is documented in the Dog River and Three Mile Creek Litter Patrol Summary Forms and are included in Appendix B.

Figure 2.20 Osprey Litter Patrol



2.4.7. Special Events Collection

The City hosts several special events throughout the year that bring numerous residents and visitors to the downtown area. Notable special events include Mardi Gras and New Year's Eve celebrations. To help manage trash, debris, and potential pollutants from entering the storm sewer system, the City has implemented several structural and non-structural BMPs.

2.4.7.1. Catch Basin Screens

The City has installed catch basin screens that consist of metal grate covers over catch basin openings. Catch basin screens prevent trash from entering the storm sewer system and have been installed along the Mardi Gras parade Route A. The City installed five (5) new screens in 2022 using funds from the (NOAA) Reduce the Use Grant. The City has installed catch basin screens at 144 locations (155 storm sewer inlets). An example of a catch basin screen is shown in Figure 2.21. A catch basin inventory is provided in Figure 2.23.

Figure 2.21 Catch Basin Screen Example



The City has implemented a pilot program to test the effectiveness of Litter Interceptors (LI), formerly known as Marine Debris Interceptors™ (MDI™). An LI™ consist of a screen that is installed within a catch basin designed to collect litter. The City had previously installed 109 of the LI™ devices at various locations within the City. During fiscal year 2022, 3 additional LI™ devices were installed using the Reduce the Use Grant. Pictures of LI™ devices installed are provided in Figure 2.22.

Figure 2.22 Litter Interceptor Examples



The City is in the process of mapping the new devices but an inventory of existing catch basins screens including LI™ devices is shown in Figure 2.23.



CITY OF MOBILE
MS4 PROGRAM



MS4 CATCH BASINS WITH SCREENS

- | | | | | | | |
|---------------|----------------|----------------|----------------|--------|-------------------|--------|
| Litter Basket | Parade Route | Parade Route C | Parade Route E | Stream | State/Federal Hwy | Tunnel |
| Screen | Parade Route B | Parade Route D | Parade Route F | Roads | Interstate | Water |



FIGURE 2-23

0.05 0.025 0 0.05
Miles

PRINT DATE: 12/27/2022

2.4.7.2. Trash Pick Up

At the conclusion of each special event day's activities, the City has a crew that consists of a variety of personnel, equipment, and street sweepers who clean the streets and surrounding area. Typically, this cleaning crew is deployed within 30 minutes after the special event has ended. These crews also pick-up garbage from the food vendors. During the Christmas parade at Tillman's Corner the City collected 0.54 tons of trash and during Mardi Gras, the City collected approximately 185.23 tons of trash.

The amount of trash collected is documented on the Special Events Sanitation Collection Summary Form. The Special Events Sanitation Collection Summary Form is provided in Appendix B.

2.4.7.3. Cooking Oil Recycling

There are many food vendors that participate in special events. When these vendors apply for a City permit, they receive a letter explaining the garbage and grease pick-up service. At the conclusion of each day's activities, the vendors will place used cooking oil in a container and place the container in front of their booth. The Public Services Spill Crew picks up the cooking oil and sends the containers to an oil-recycling facility. This information is documented on a Spill Prevention and Response Summary Form. During Mardi Gras, the City collected approximately 285 gallons of cooking oil.

2.4.8. Special Projects

In late FY19, Dog River Clearwater Revival (DRCR) in partnership with Osprey and the City of Mobile were awarded funding from the EPA TFW Grant for the deployment of six (6) litter gitters in the Dog River watershed. The City assisted Osprey and DRCR with site selection. TFW funding for litter gitters located within the Dog River watershed expired in FY20 and now maintenance costs are covered under the general Engineering budget.

Osprey is a specialty environmental contractor and litter consultant that not only maintains the litter gitters but also characterizes the trash collected via the ETAP methodology. Additionally, material that can be recycled is removed from the waste stream and recycled accordingly. All other trash is disposed of as solid waste. An example of deployed litter gitter is provided in Figure 2.24.

In late FY20, the City of Mobile was awarded funding for the EPA Gulf of Mexico TFW Grant. The City in partnership with Osprey, Alabama Pipe & Supply, and Mobile Baykeeper is seeking to address litter in the Three Mile Creek watershed.

The City has worked with Osprey to deploy litter gitters at six (6) locations in the TMC watershed. Approximately 2,608 cubic feet of litter has been collected from all locations combined with approximately 999 cubic feet of the litter collected being recycled. The City is also working with Mobile Baykeeper on the development of a Litter Outreach Campaign geared towards Trash Free Waters. This project is set to last until FY23.

A summary of the trash collected, recycled, and disposed of and a Litter Gitter Data Collection Form Example are provided in Appendix B.

Figure 2.24 Example Litter Gitter



2.4.9. Public Education

The City has utilized several methods to inform its citizens about activities occurring throughout the City as well as provide information to help educate the local community on how to protect water resources. Some of the mechanisms utilized by the City are summarized in the following sections.

2.4.9.1. Local Partnerships

The City of Mobile has formed partnerships with local and statewide organizations to improve the City's MS4 program and educate citizens. During this permit year the City, along with multiple partners, launched "OneMobile Litter-Free" as an organized approach to address litter within the City. This initiative seeks to correct litter issues through education, prevention, collection, and enforcement. Websites of partner organizations that provide beneficial activities to the City's storm water

program as well as some of the involvement by the City are summarized below:

Alabama Coastal Foundation (ACF) www.joinacf.org

- Sponsored and participated in the MLK Day of Service – litter clean-up.
- Sponsored and participated in “OneMobile Litter-Free” educational program.

Keep Mobile Beautiful www.keepmobilebeautiful.org

- Sponsored and participated in “OneMobile Litter-Free” educational program.

Mobile Bay National Estuary Program (MBNEP) www.mobilebaynep.com

- Participated in anti-litter public education video production;
- Sponsored and participated in “OneMobile Litter-Free” educational program.

Mobile Baykeeper www.mobilebaykeeper.org

- Sponsored and participated in the MLK Day of Service – litter clean-up;
- Participated on an EPA TFW Grant with the City;
- Sponsored and participated in “OneMobile Litter-Free” educational program.

Mobile United www.mobileunited.org

- Sponsored and participated in the MLK Day of Service – litter clean-up.

Clean Water Future (CWF) www.cleanwaterfuture.com

- The City’s website provides a link to the CWF website; and,
- Contributed brochure files for use on the CWF website.

Dog River Clearwater Revival (DRCR) www.dogriver.org

- Sponsored and participated in the MLK Day of Service litter clean-up event;
- Participated on an EPA TFW Grant with the City;
- Sponsored and participated in “OneMobile Litter-Free” educational program.

The City's contribution to the above referenced organizations may include, but is not limited to staff participation, financial contributions, and/or technical assistance. A detailed breakdown of all activities accomplished can be found in the summary tables. Additional educational activities are performed by each entity and further documented on their websites. Links to each organization are provided on the City's storm water website (www.stormwatermobile.org). Supporting information for the City's participation is provided in Appendix C.

2.4.9.2. News Media

The City's Stormwater program received exposure through various media outlets highlighting different accomplishments and initiatives throughout the permit year. Items receiving attention are listed below and supporting information can be found in Appendix C.

- 2021 December 29, "Trash Blows: Stow it!- Pickup Truck anti-litter campaign," NBC15 News story; and,
- 2022 January 3, "City of Mobile Household Hazardous Waste Collection Day," WKRG News 5 story; and,
- 2022 January 28, "City of Mobile Ready to Talk Some Trash," Lagniappe news article; and,
- 2022 February 28, "We All Know Better- MAWSS Illegal Tire Dumping," Fox10 News story; and,
- 2022 April 4, "City distributes Environmental Education Program Guide to schools throughout Mobile," NBC15 News story; and,
- 2022 June 21,23, "Mobile to begin pilot program employing homeless people to pick up litter," AL.com news article, Fox10 News story; and,
- 2022 September 29, "Clear Water Alabama Conference Studying Erosion Problem in Baldwin County", WKRG5 News Story.

2.4.9.3. Social Media

The City is active on several social media platforms. This allows the City the opportunity to send direct messages in a timely manner to residents, businesses, property owners, and others actively following the City on these platforms. This offers a cost effective, environmentally friendly mechanism to potentially inform the public regarding stormwater related issues. The City currently maintains the following social media platforms:

Facebook: <https://www.facebook.com/CityofMobile/>

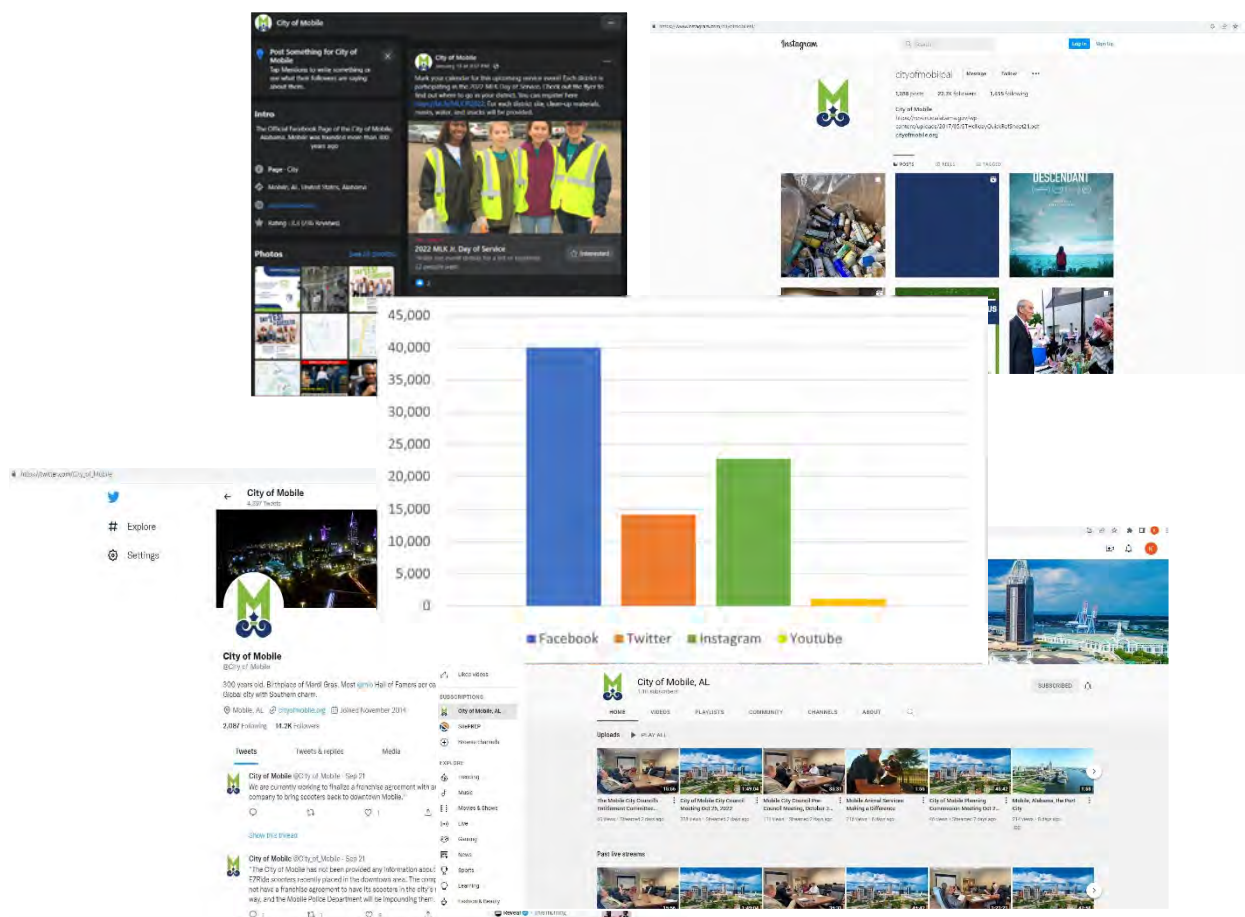
Instagram: <https://www.instagram.com/cityofmobileal>

Twitter: https://twitter.com/City_of_Mobile

YouTube: <https://www.youtube.com/channel/UCdLrEwf3ewSNmCNm21fvfNg>

Selected screenshots of the City's social media sites and the number of followers for each are provided in Figure 2.25.

Figure 2.25 Social Media



2.4.9.4. Website

The City maintains two (2) separate websites that provide information about the City. The City's main website (www.cityofmobile.org) provides general information about the City regarding online services, Mobile government, newsroom, visiting Mobile, working in Mobile, and living in Mobile. The City has also developed a website dedicated to storm water-related issues (www.stormwatermobile.org). The storm water website provides some general information, what the public can do to help minimize pollution, and how to protect the quality of storm water runoff. A summary of web pages and the information available on the website includes the following:

- Home;
- Litter;
- Outreach and Education;
- Links & Resources;
- Reports & Docs;
- News and Events; and,
- Contact Us.

The City's main website (www.cityofmobile.org) provides links to the City's regulations, ordinances, and permitting requirements. Both websites are maintained and updated on an as-needed basis.

Part II.B.2.d of the NPDES permit states. "The current SWMPP and latest annual report should be posted on the Permittee's website." Both documents are posted on the City's storm water website.

2.4.9.5. Brochures

The City has developed several brochures to provide general information about storm water-related issues. Brochures are made available through the Engineering Department, storm water website and during various City sponsored events. Some brochures are developed to address either a specific storm water-related issue or to a particular audience. These brochures are typically provided to the audience of interest. The City and Mobile County collaborated on many of the brochures to be used in both MS4 programs. Most of the brochures are available on the City's storm water website. Brochures distributed by an inspector are summarized in Table 2-6.

Table 2.6 Brochures

| Description | No. Brochures |
|--------------------------------------|---------------|
| Grass Clipping and Lawn Waste | 2 |
| Illicit Discharges | 4 |
| Proper Paint Disposal Methods | 1 |
| Food Service Establishment | 2 |
| Guidance for Draining Pools and Spas | 1 |
| Total | 10 |

The City has enhanced its brochure development and distribution procedure to implement more cost-effective solutions. The City's websites and newsletter publications are effective in reaching a larger audience. This provides the City with more flexibility and creativity while reaching a wide public audience. There are many advantages to this strategy, including the following:

- Environmental impact of reduced brochure printing;
- Reduced cost of printing;
- Distribution to a wide-reaching audience independent of visiting a physical location;
- Reduction in potential litter;
- Ability to reach an audience full time through the website; and,
- Increased communication with City employees, residents, community groups, and neighborhood leaders.

Brochures distributed are tracked on the Brochure Distribution Summary Form provided in Appendix C. Copies of the brochures are provided in Appendix D of the SWMP Plan.

2.4.9.6. Presentations

The City has presented at various technical conferences. A summary of presentations during this permit year is summarized below.

- 13 July 2022, "LID Manual for the City of Mobile" Presentation, ASCE-APWA Conference, Orange Beach, Alabama; and,
- 21-22 September 2022, "LID Manual for the City of Mobile" Presentation, Clear Water Alabama Conference, Daphne, Alabama.

The conferences and meeting summarized above were well attended. Copies of the presentations are provided in Appendix C.

2.4.9.7. MS4 Meetings

The City has participated in meetings with other entities to discuss common issues and opportunities for working together. Meetings attended this permit year include:

- 1 October 2021, Southeast Stormwater Association Association (SESWA) Board of Directors Meeting, Virtual Attendee;
- 2 December 2021, ASA Meeting – “MS4 Permit Requirements, Old and New,” Virtual Attendee;
- 20 January 2022, Clear Water Alabama 2022 Planning Meeting, Virtual Attendee;
- 5 April 2022, Clear Water Alabama 2022 Planning Meeting, Virtual Attendee;
- 21 April 2022, Southeast Stormwater Association (SESWA) Board of Directors Meeting, Westin Atlanta Perimeter North, In-person Attendee; and,
- 9 June 2022, Clear Water Alabama 2022 Planning Meeting, Virtual Attendee.

Copies of the agenda are provided in Appendix C.

2.4.9.8. Public Service Announcements

In the waiting area at the City’s Permitting Office at Government Plaza, there are two (2) televisions which run a continuous video that provides information on storm water. Information shown includes a public service announcement (PSA) created by the Grassroots, Inc., a community organization, as well as an informational PowerPoint presentation used for public outreach by the City.

Clean Water Future has created several PSAs to help educate citizens on reoccurring problems with pollution that impacts a MS4. The City’s storm water website has incorporated the “Understanding the MS4 Process” PSA and has a link to MBNEP’s “Low Impact Development” PSA. The website also has a link to the Clean Water Future website where additional PSAs are provided. Available PSAs include:

- Cup;
- Bag;
- Understanding Your Storm Water Management Plan;
- Low Impact Development (LID) Stormwater doesn't have to be a Headache;
- Stormwater & Pollution – Creating a Clean Water Future;
- A RedFish Tale;
- A RedFish Tale 2: FishSlap;
- Why Is There a Pond in My Backyard – Maintenance Requirements for Detention and Retention Basins; and,
- Protecting Alabama's Waters – Partnering with EPA's 319 Program.

The City has produced a Litter PSA featuring Mayor Sandy Stimpson that encourages citizens to actively clean up litter in the City and dispose of litter properly prior to it reaching roadways, property, and waterways. The PSA is located on the "Litter" page of the City's storm water website.

PSAs are available on the City's and/or Clean Water Future websites.

At various locations throughout the MS4, the City coordinated and displayed billboards to encourage proper disposal of trash. This project was supported by funding from the U.S. EPA Trash Free Waters Grant awarded to the City. A graphic of the billboard displayed can be found in Appendix C.

2.4.10. Public Involvement

The City has utilized a variety of techniques to implement its public involvement and outreach program. Mechanisms and activities that have been implemented this permit year are summarized in the following sections.

2.4.10.1. SWMP Plan Update

In accordance with Part II.D. of the MS4 NPDES permit, the City has reviewed the SWMP Plan and made some administrative changes. Since the changes were administrative and no BMPs were added, changed, or deleted, seeking public input was not necessary. A copy of the updated SWMP Plan has been posted on the City's website.

2.4.10.2. Mobile 311

The City has implemented a hotline for the public to provide suggestions and/or to report incidents that may potentially impact the City's MS4. A citizen can report any issue of concern by calling 311, (251) 208-5311, or online via the City's website.

The City uses custom software as the backbone of the City's Mobile 311 call center. This system provides the City with the effective tools to work with citizens and resolve their issues. The Mobile 311 was established to:

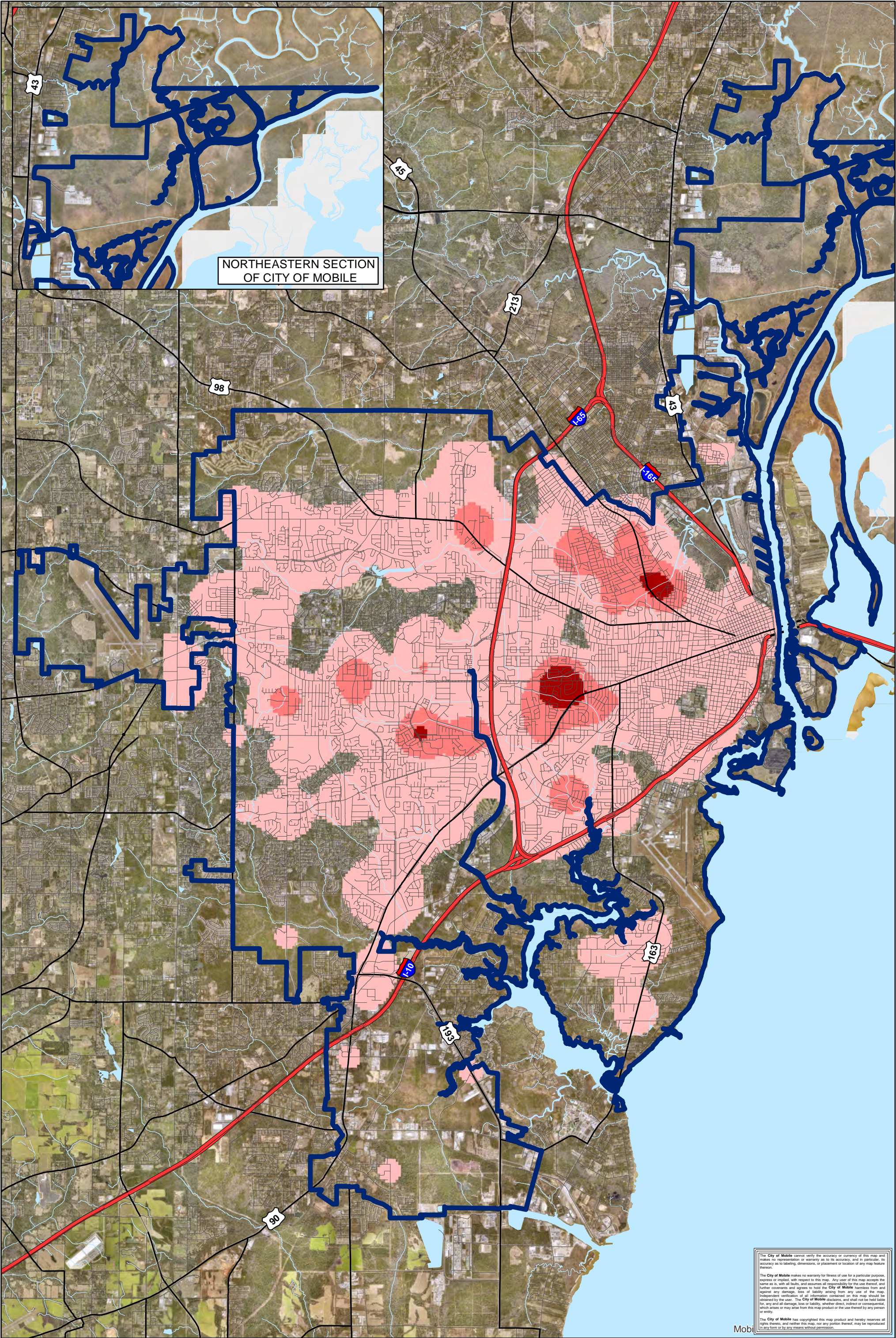
- Electronically route service requests to appropriate departments;
- Provide a neutral forum for citizens to make suggestions about City services and/or departments;
- Provide a way to track the progress of Service Request Orders (SRO);
- Answer questions citizens have concerning City organizations and services; and,
- Assist citizens in obtaining City services in a fair and efficient manner.

The City's Mobile 311 call center is operated by city personnel and staffed Monday through Friday from 7:00 am to 6:00 pm.

2.4.10.3. Litterbug Hotline

The City has a Litterbug Hotline for a citizen to report instances of another citizen throwing litter from their vehicle. For a citizen to report a litter issue, the citizen can call (251) 208-6025 or 311 and provide the vehicle tag number, driver or passenger, what they tossed, and the location. With this information, the Police Department will send a letter to the owner of the vehicle warning them that they have violated the Litter Ordinance. During this permit year, the Litterbug Hotline received 71 complaints.

Information collected from the Litter Bug Hotline is used to identify areas of the City that receive numerous complaints. Evaluation of the data is accomplished by converting it into a geospatial format and mapping the complaints received. Litter complaints received this year are shown on a hot spot map provided as Figure 2.26. The City can use this information to focus the efforts of enforcement, educational awareness, and/or clean-ups.



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Mob

**CITY OF MOBILE
MS4 PROGRAM**



MS4 LITTER HOT SPOTS

- | | | | |
|-------------------|------------|-------|---------------------------------|
| MS4 Boundary | Interstate | Water | Low Occurrence of Litter SRO |
| Roads | Tunnel | | Medium Occurrence of Litter SRO |
| State/Federal Hwy | Stream | | High Occurrence of Litter SRO |



FIGURE 2-26

0.75 0.375 0 0.75
Miles

PRINT DATE: 12/29/2022

2.4.10.4. Recycling

The City of Mobile strives to educate and motivate citizens to act for a cleaner environment and a more attractive City. As part of this process, the City promotes recycling utilizing a single-stream recycling program. The single-stream recycling program replaced the Metro Recycling Drop-off Center that was located at 1451 Government Street. The City has selected two drop off locations: 1) Pinehill Drive near Public Safety Memorial Park and 2) Museum Drive across the street from Langan Park. Pictures of the single-stream collection bins are provided in Figure 2.27. Materials accepted at the recycling center are listed in Table 2.7.

Figure 2.27 Single Stream Recycling Containers



Table 2.7 Recycling Materials

- | | | |
|------------------------|--------------|------------|
| • Mixed paper products | • Cardboard; | • Plastic |
| • Glass | • Steel | • Aluminum |

Recycling activity is being measured by counting the number of vehicles that participate in single stream recycling. The City tracks recycling activities on the Recycling Activity Report and Single-Stream Recyclables. A detailed breakdown of amounts recycled can be found in the summary tables. Summary forms for the recycling activities are provided in Appendix C.

2.4.10.5. Clean-Up Events

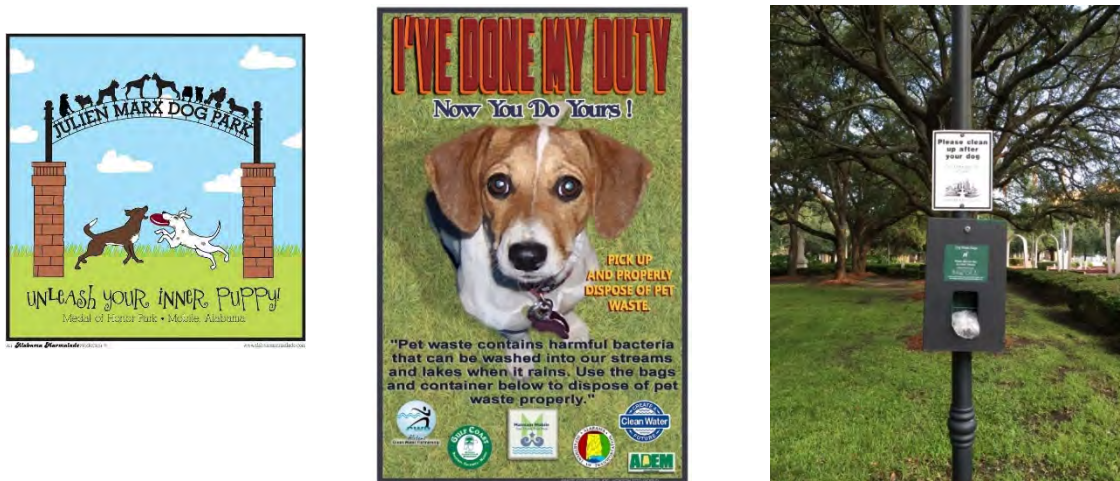
The City has previously been proactive in hosting and assisting with numerous clean-up events focused on the removal of litter, floatables, and debris. Typically, clean-up events are coordinated through the Engineering or Public Works Department. The City works with schools, civic groups, community groups, environmental partners, private companies, and residents to coordinate and implement a clean-up event. The size of a clean-up event can range from only a few volunteers to hundreds of volunteers.

To support the MLK Day clean-up, scrap tire clean-up, and other clean-up events, the City provides cleanup materials (i.e. trash grabbers, gloves, safety vests and trash bags) to volunteers. Additionally, the City Public Works Department provides trash disposal and scrap tire removal. To encourage both individual and organized clean-ups around the community throughout the year, the City will provide litter grabbers along with safety vests and gloves to interested citizens.

2.4.10.6. Pet Waste Stations

The City has continued to maintain 27 pet waste stations located at various parks. A photograph of the pet waste disposal system installed at one of the parks is provided in Figure 2.28.

Figure 2.28 Pet Waste Disposal Station



2.4.11. Illicit Discharge and Improper Disposal

The City has developed and implemented an Illicit Discharge Detection and Elimination (IDDE) Program in accordance with the SWMP Plan. Boundaries of each major watershed are shown in Figure 2.4.

2.4.11.1. Illicit Discharge Detection and Elimination Ordinance

On 8 July 2014, the City of Mobile adopted revisions to the Storm Water Management and Flood Control Ordinance (Ordinance No. 17-025-2014) to incorporate requirements of the City's new MS4 NPDES Permit. The ordinance establishes the guidelines for prohibiting, monitoring, and enforcing illicit discharges within the City's MS4.

The latest version of the Storm Water Management and Flood Control Ordinance is available on the City's website at:

https://www2.municode.com/library/al/mobile/codes/code_of_ordinances?nodeId=CICO_CH64ZO&showChanges=true

The ordinance has not been revised or modified this permit year.

2.4.11.2. Standard Operating Procedures

Standard Operating Procedures (SOPs) developed for the Illicit Discharge Detection and Elimination Program include the following:

- SOP ENG-0117 – Illicit Discharge Detection and Elimination; and
- SOP ME-0216 – Illegal Dumping and Illicit Discharges.

Copies of the SOPs are provided in Appendix E of the SWMP Plan.

2.4.11.3. Outfall Screening

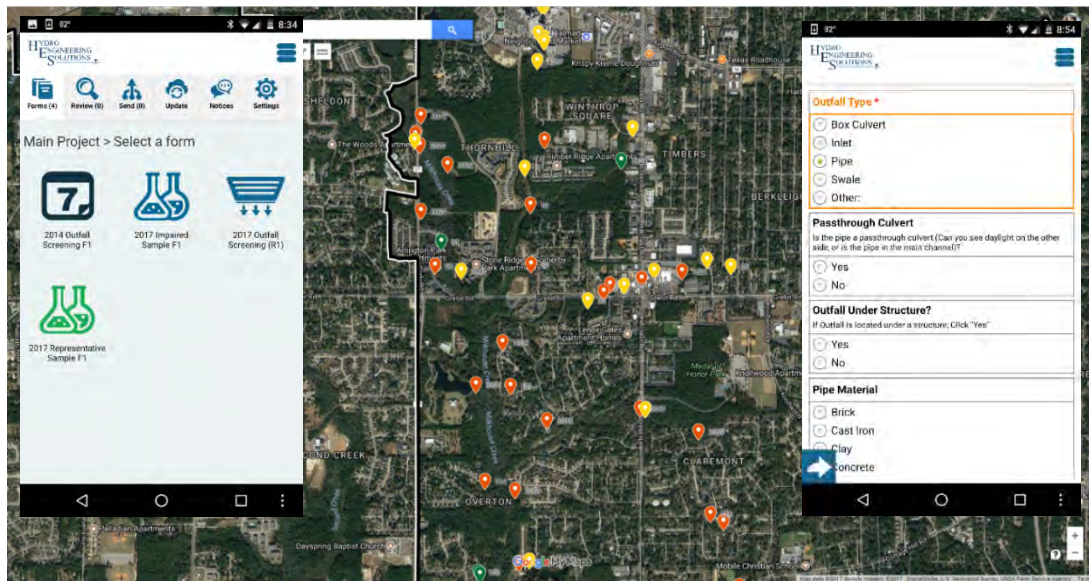
The City's IDDE Program describes the approach and use of best available technology for completing an ORI to screen outfalls. A mobile application was used to convert the ORI form into an electronic format. This mobile application provides field crews with the following enhanced capabilities:

- GPS mapping to facilitate outfall location;
- Uniform workflow for data collection;
- Minimize the types of equipment needed for field work;
- Ability to report a problem immediately when it is discovered;
- Ability to automatically create an outfall screening report; and,
- Data collected is easily converted to a format for ArcGIS.

Data collected during the ORI is maintained in the City's GIS dataset for illicit discharges. Screen shots of the mobile application are provided in Figure 2.29. A summary of the outfalls screened from 1 October 2021 through 30 September 2022 is shown in Figure 2.30.

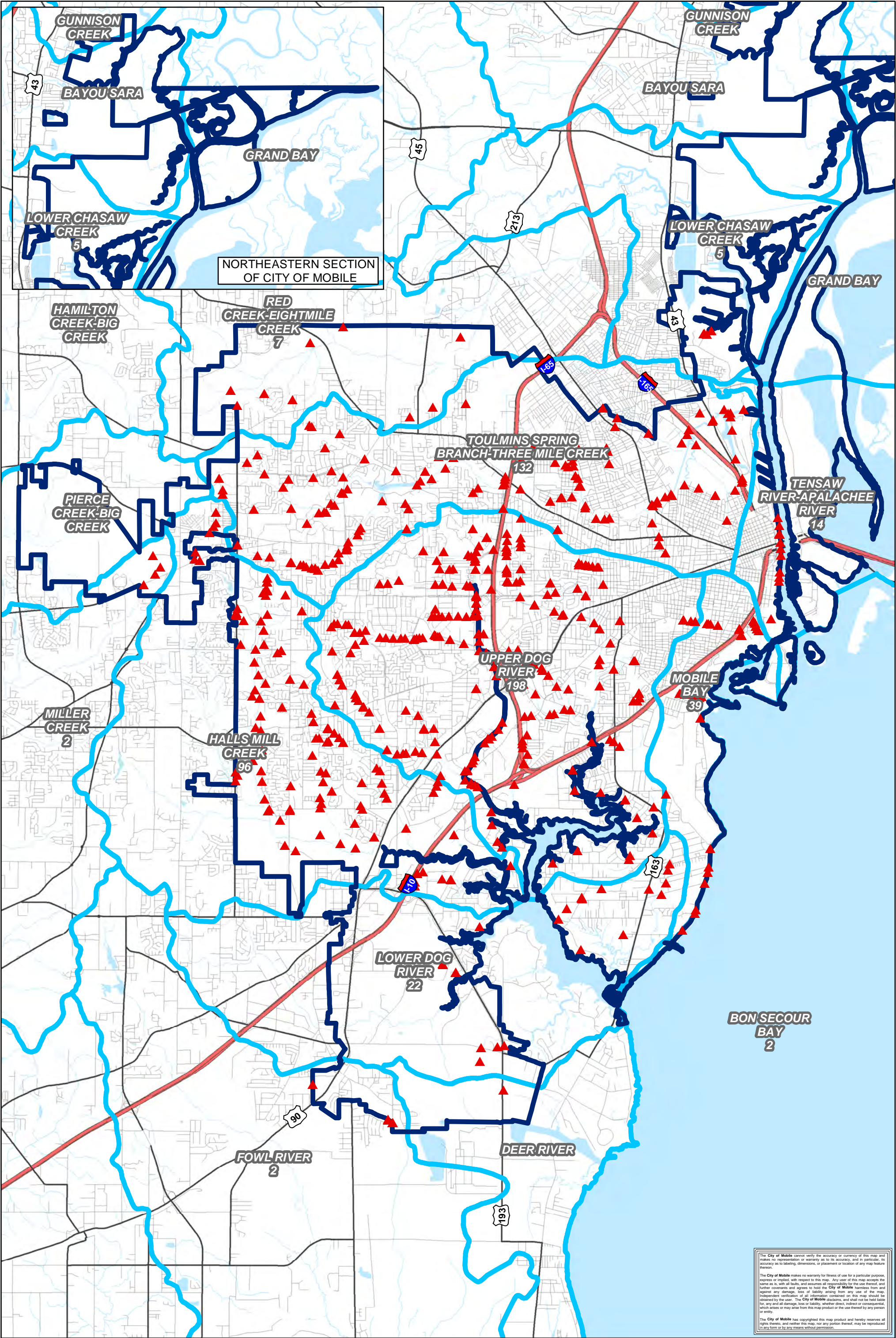
The City has continued with its efforts to screen major storm water outfalls within the City. In accordance with the outfall screening schedule presented in the SWMP Plan, 105 outfalls were evaluated during the permit year to determine if the outfall is a "Major Outfall" as defined by the City's MS4 NPDES Permit. A desktop review and field observation of the 105 outfalls was performed to determine if the outfall met one or more of the following criteria:

Figure 2.29 ORI Mobile App



- The outfall was located in an adjacent MS4;
- The outfall was a NPDES permitted facility outfall;
- The outfall was reclassified as a minor outfall;
- The outfall was considered Water of the State or conveyance of Water of the State such as a pass-through culvert; or,
- The outfall was under the city's minimum pipe size of 18-inches diameter for areas zoned industrial and would be associated with facility drainage.

Based on the desktop review and field observation, 9 outfalls were removed from the City's outfall inventory and will not require any follow up inspection under the City's MS4 NPDES Permit. None of the outfalls inspected indicated the presence of potential non-storm water discharges. An updated inventory of major outfalls is provided in Figure 2.30. A copy of the 2022 Outfall Screening Report is provided in Appendix D.



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**CITY OF MOBILE
MS4 PROGRAM**



MS4 MAJOR OUTFALLS

- Major Outfall
- MS4 Boundary
- Watershed
- Stream
- Water



FIGURE 2-30

0.75 0.375 0 0.75
Miles

PRINT DATE: 12/13/2022

2.4.11.4. Complaint Tracking System

The City has implemented the Mobile 311 hotline for the public to report suspect illicit discharges and/or to report incidents that may potentially impact the City's MS4. A citizen can report any issue of concern by calling 311 or (251) 208-5311 or by going online to:

<http://311.cityofmobile.org/311react/mainwelcome.aspx>

The City has received 137 complaints (115 citizen and 22 internal) through the 311 system regarding potential illicit discharges. For each complaint received through 311, a Service Request Order (SRO) is generated to track the complaint and actions taken. Information including SRO number, source of complaint, location, cause, incident date, date closed, corrective action, enforcement, and inspector for each complaint is summarized on the Illicit Discharge Detection and Elimination Enforcement Summary Form. Illicit discharge investigations are also tracked in the City's GIS system. Staff can look at the location of the illicit discharge and information regarding the source and any corrective actions. A copy of the Illicit Discharge Detection and Elimination Enforcement Summary Form is provided in Appendix D.

2.4.11.5. Illicit Discharge Investigations

If a suspect illicit discharge is identified by the City or a direct call is received from the public, staff may create an SRO to track the complaint and actions taken. Information including SRO number, source of complaint, location, cause, incident date, date closed, corrective action, enforcement, and inspector for each complaint is summarized on the Illicit Discharge Detection and Elimination Enforcement Summary Form. A copy of the Illicit Discharge Detection and Elimination Enforcement Summary Form is provided in Appendix D.

2.4.11.6. Enforcement

The City's IDDE Program uses an escalating scale of enforcement action to abate illicit discharges. On rare instances, however, some illicit discharge investigations will warrant stronger enforcement actions. Action steps are provided in Section 17-14 of the Storm Water Management and Flood Control Ordinance and include the following:

- Verbal Warning;
- Notice of Violation (NOV);
- Stop-Work Order; and,
- Municipal Offense Ticket (MOT).

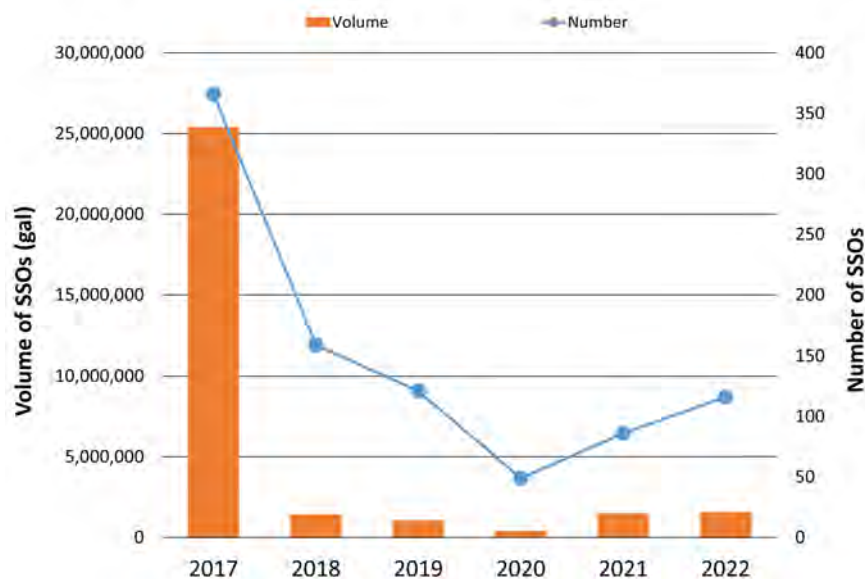
During this permit year, the City's enforcement actions consisted of 50 verbal warnings, four (4) notices of violation, six (6) municipal offense tickets and one (1) stop-work order. A summary of enforcement actions is provided on the Illicit Discharge Detection and Elimination Enforcement Summary Form provided in Appendix D.

2.4.11.7. Sanitary Sewer Overflows

The Mobile Area Water and Sewer System (MAWSS) is responsible for maintaining the sanitary sewer collection and treatment system. MAWSS has implemented a variety of programs to help minimize the potential of illicit discharges from the sanitary sewer system. To help minimize the discharge of grease into the sanitary sewer system, MAWSS has created a grease recycling program titled, "It's Easy to be Ungreasy." A citizen can pick up a leak-proof container and drop off used cooking grease at one of 22 recycling locations. Information about MAWSS grease recycling program can be located on their website at: <http://www.itseasytobeungreasy.com/home.html>.

During this permit year, MAWSS has experienced 116 sanitary sewer overflows (SSOs) that occurred at 104 separate locations. Review of the SSO data revealed that multiple SSOs occurred at 9 of the locations and accounted for 20 of the SSOs (approximately 17%). Figure 2.31 provides a five-year comparison of the number of SSOs and volume of wastewater discharged.

Figure 2.31 Historic Sanitary Sewer Overflows (SSOs)



2.4.12. Construction Site Runoff

Major accomplishments in the Construction Site Runoff Program are summarized below.

2.4.12.1. Erosion and Sediment Control Ordinance

On 8 July 2014, the City of Mobile adopted revisions to the Storm Water Management and Flood Control Ordinance (Ordinance No. 17-025-2014) to incorporate requirements of the City's new MS4 NPDES Permit. This ordinance establishes requirements for permitting, Best Management Practices (BMPs), and enforcement options for qualifying construction sites. The latest version of the Storm Water Management and Flood Control Ordinance is available on the City's website.

This ordinance has not been revised or modified this permit year.

2.4.12.2. Complaint Tracking System

The City has implemented the Mobile 311 hotline for citizens to report suspect issues with construction sites and/or to report incidents that may potentially impact the City's MS4. A citizen can report any issue of concern by calling 311 or 208-5311.

The City has received seven (7) complaints through the 311 system regarding potential issues with construction sites. For each complaint received through 311, a Service Request Order (SRO) is generated to track the complaint and actions taken. Information including date, address, permittee, nature of violation, type of enforcement, status of compliance, and inspector for each complaint is summarized on the Construction Site Violation Summary Form. A copy of the Construction Site Enforcement Action Summary Form is provided in Appendix E.

2.4.12.3. Permitting and Plan Review

Before the commencement of any land-disturbing activity that is not exempt from obtaining a permit, the owner and/or operator of the construction site is required to submit a permit application and obtain a land disturbance permit. The City has developed a permit checklist, permit application review checklist, and permit certification for each the following types of construction activities:

- Tier 1 Qualifying Construction Site – Land disturbance activity equal to or greater than one acre or land disturbance involving less than one acre that is part of a larger common plan of development; and,

- Tier 2 Construction Site – All other land disturbance activities that are not exempt from obtaining a grading permit.

Additionally, the City has developed a checklist and affidavit for land disturbance activities associated with the construction of a single-family residential structure located in a special flood hazard area.

The City has implemented a new permitting system. As various components of the permit application are reviewed, the reviewer will document their review comments in the electronic permitting system. Once all comments have been adequately addressed from all disciplines who review the plans, a land disturbance permit is issued. Applicants are notified via email when there are comments as well as when their permit is ready to be issued.

Part of the Tier 1 Land Disturbance Permit Checklist includes a section to check if a Tier 1 Land Disturbance project has an ADEM permit for construction activities. The project Owner and/or Developer must provide proof of coverage under ADEM's permit for construction activities before the City will issue a Land Disturbance Permit.

The permit checklist, permit application review checklist, permit certification, and affidavit have not been revised this permit year and are provided in Appendix F of the SWMP Plan.

2.4.12.4. Construction Site Inventory

During this permit year, the City had 87 Tier 1 construction sites, 53 of which were still active at the end of the permit year. There are 34 non-active stable construction sites. A non-active stable construction site is a site where construction activities have been dormant for an extended period and all disturbances associated with the construction activity have been stabilized. Non-active stable construction sites are only being inspected when a re-inspection request is initiated by the permittee. The non-active stable construction sites are generally in this category due to one of two situations:

- The site has only received a Temporary Certificate of Occupancy (TCO); therefore, they cannot be moved to the As-Built Received list. The remaining deficiency(ies) is (are) minor or the TCO is due to a lack of final documentation, but the land disturbing activities are complete; or,

- The engineer's as-built certification for the site has not been received and therefore the site cannot be issued a Final Certificate of Occupancy (FCO). Upon issuance of a FCO, the site is moved to the As-Built Received list.

A map showing the location of the 87 Tier 1 construction sites is provided in Figure 2.33. A summary of the active construction sites is provided on the Tier I Construction Site List provided in Appendix E.

On 6 March 2017, the City implemented a new permitting software that provides the ability to track both Tier 1 and Tier 2 construction sites. During the FY22 permit year, 91 Tier 2 construction sites were permitted using the new permitting software. Since Tier 2 construction sites have less than one acre of disturbance and are not part of a larger development, Tier 2 construction sites are inspected on a complaint driven basis by the City.

2.4.12.5. Inspections

Inspections are to be performed for construction sites that discharge into the City's MS4. A construction site that discharges directly to waters of the United States is not covered by the City's MS4 Permit. Inspections for Tier 1 Priority Construction Sites and construction sites the City has identified as a significant threat to water quality occur monthly. Inspections for all other Tier 1 construction sites may occur every two months. To maximize the use of technology and resources for construction site inspections, the City has developed an inspection form using Tyler EnerGov. Screen shots of the software system are provided in Figure 2.32. An example inspection report is provided in Appendix E.

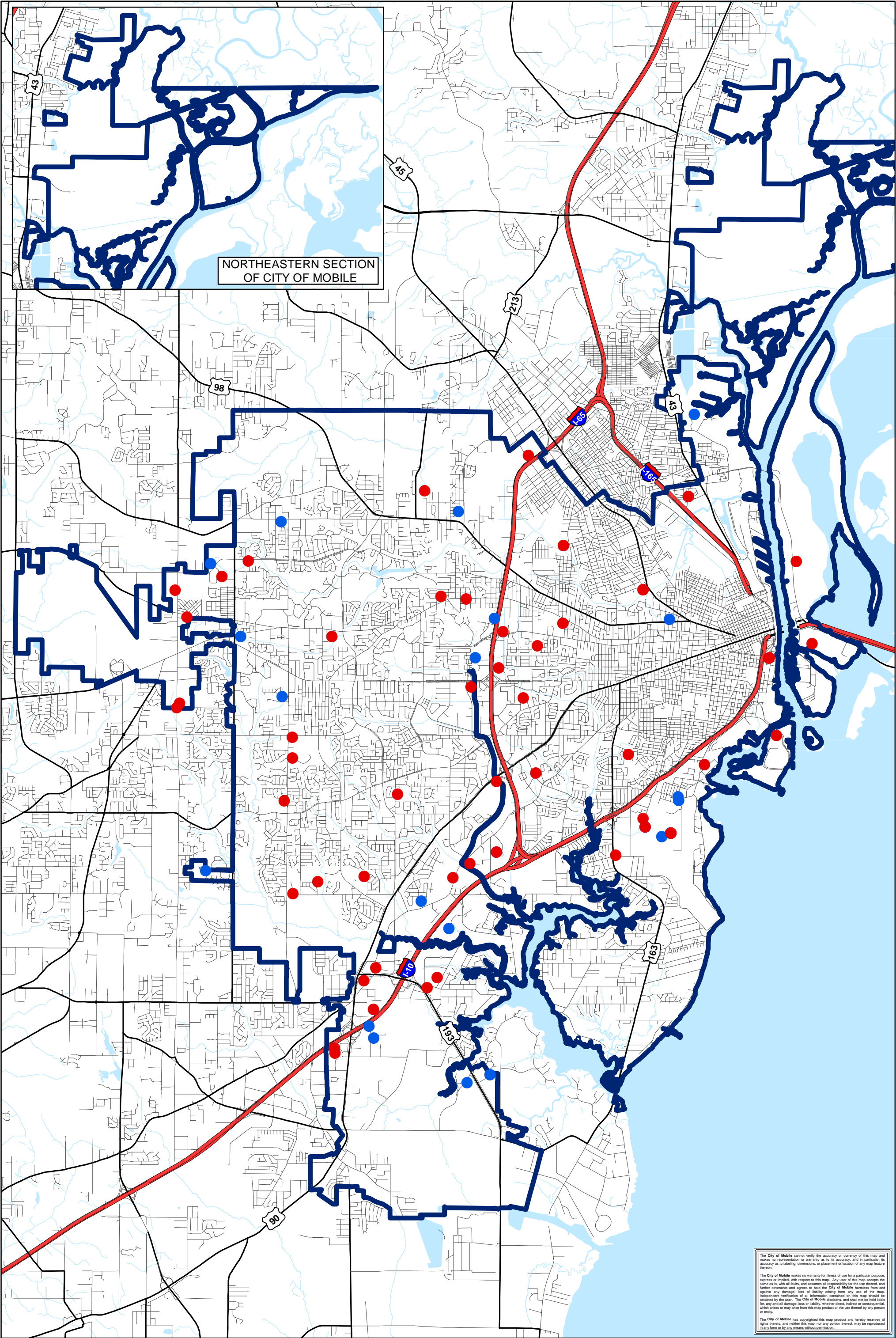
Figure 2.32 Tyler EnerGov Screen Shot

The screenshot shows the 'Work Item Details' window in the 'Manage Permit' application. The window is titled 'Work Item Details' and has a 'Menu' button on the left. The left sidebar contains a list of inspection types, including 'BNS Construction Scheduled Inspection v.1'. The main area displays details for a specific inspection. The 'Checklist' tab is active, showing a list of items to be checked. The bottom status bar indicates the last changed date and time.

| Field | Value |
|----------------------|--|
| Inspection Number | [Data] |
| Inspection Type | BNS Tier 1 Construction Scheduled Inspection |
| Status | Request |
| Date Entered | 12/2/2009 |
| Comments | |
| Request Date | 1/29/2010 |
| Schedules Start Date | Enter value |
| Schedules End Date | Enter value |
| Actual Start Date | Enter value |
| Actual End Date | Enter value |

Checklist Item 1
Checklist Item 2

Last Changed By: David, on Thursday, December 24, 2009 10:52



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**CITY OF MOBILE
MS4 PROGRAM**



MS4 TIER 1 CONSTRUCTION SITES

- Active Construction Site
- Non-Active Construction Site
- MS4 Boundary
- Roads
- State/Federal Hwy
- Interstate
- Tunnel
- Stream
- Water



FIGURE 2-33

0.75 0.375 0 0.75
Miles

PRINT DATE: 1/2/2023

2.4.12.6. Enforcement

The City's Construction Site Storm Water Runoff Control Program uses an escalating scale of enforcement action to abate illicit discharges and other construction issues. There were 15 total enforcement actions related to construction violations. Of those, seven (7) complaints were submitted through Mobile 311 and Service Request Orders (SROs) were generated. The SROs were investigated and warranted some type of enforcement action. Potential Enforcement Actions are provided in Section 17-14 of the Storm Water Management and Flood Control Ordinance and include the following:

- Verbal Warning;
- Notice of Violation;
- Municipal Offense Ticket; and,
- Stop Work Order.

A summary of enforcement actions is provided on the Construction Site Enforcement Actions Summary Form provided in Appendix E.

2.4.12.7. Training and Certification

For the 2022 permit year and in coordination with Thompson Engineering, the City of Mobile certified 12 City staff in the initial Qualified Credentialed Inspector (QCI) training course and staff previously certified went through a four-hour refresher training course all of which were online. The City has 82 staff from various departments that are QCI certified. A list of City staff that are certified as a QCI through Thompson Engineering's training program is included in Appendix E.

2.4.12.8. Education and Training Materials

The City has provided links on its stormwater website for education, training materials, and resources for construction site operators.

2.4.13. Post Construction Storm Water Management

The City has developed a city-wide concept that provides a systematic basis for thinking about the City's future. The future development pattern of the City has been organized with appropriate recognition given to the City's green infrastructure, its street and utility infrastructure, and major existing uses of land.

2.4.13.1. Legal Authority

The City of Mobile has adopted ordinances, regulations, codes, and manuals for new development and re-development within the City which consider post construction storm water management. These planning regulations include the following:

- Storm Water Management and Flood Control Ordinance;
- Zoning Ordinance; and,
- Subdivision Regulations.

The City updated its Zoning Ordinance on 12 July, 2022 to adopt a Unified Development Code (UDC), which will be effective in 2023 following the adoption of revised Subdivision Regulations. A more detailed description of the City's legal authority is provided in the SWMP Plan. The latest versions of the above-listed documents are available on the City's website.

2.4.13.2. Water Quality Requirements

Post-construction storm water runoff quality is an important component of the City's SWMP. For all qualifying new development or redevelopment, post-construction storm water management shall include water quality BMPs to detain and treat the first 1.14 inches of rainfall that occurs on the project site.

2.4.13.3. Low Impact Development

The City encourages landowners and developers to incorporate the use of low impact development (LID) into development plans. The City has reviewed and adopted the latest version of the *Low Impact Development (LID) Handbook for the State of Alabama*.

In 2020, the City of Mobile received a RESTORE act grant to, in part, develop a stormwater Low Impact Development (LID) Manual. The objectives of the project were three-fold: 1) support a future update to the City's 1984 Floodplain Management Plan, which guides stormwater management policy on public and private land in the City; 2) develop policies for best management practices (BMPs) that can be located in Special Flood Hazard Areas; and 3) comply with the City's 2021 NPDES-MS4 permit, which emphasizes the encouragement of LID-BMPs. The publication of the Manual is anticipated by spring 2023.

The City also participated in the development of the MBNEP video on LID. A link to this video along with other reference material is located on the City's website (<http://www.stormwatermobile.org>) under the LID and Green Infrastructure section of the Links & Resources page.

2.4.13.4. Planning Documents

The City has prepared numerous planning documents to help the City develop in a sustainable manner. Planning documents include, but are not limited to, the following:

- Map for Mobile, Framework for Growth;
- Comprehensive Plan;
- Downtown Development District Code;
- New Plan for Mobile;
- Comprehensive Plan – Major Street Plan Map;
- Green Space Plan – Map;
- Smart Growth for Mobile Implementation Initiatives; and,
- Smart Growth for Mobile Policy.

Copies of these documents are available on the Planning and Development website at <http://urban.cityofmobile.org/>.

2.4.13.5. Urban Canopy

The City has been proactive in expanding the tree canopy not only in the urban areas of the City, but throughout the City. Benefits of a tree canopy include but are not limited to the following:

- Reduce the heat island effect;
- Reduce flooding;
- Improve storm water quality;
- Improve air quality; and,
- Provide an aesthetical streetscape.

Preserving natural resources is a high priority for the City. The Mobile Tree Commission was established in 1961 to oversee the protection of trees located in the City rights-of-way. In 1992, the Zoning Ordinance was amended to include landscaping, tree planting, and protection requirements. Tree planting and protection requirements in the City rights-of-way are administered and enforced by the Urban Forestry Department that is part of the Public Works Department; on private property, these requirements are administered and enforced by the Planning and Zoning Department.

2.4.13.6. Post Construction BMP Plan Review

The City already has a permitting and plan review process that is shown in the SWMP Plan. During the development of the Post-Construction Storm Water Management Program, the City has incorporated the post-construction BMP plan review into the existing process.

2.4.13.7. As-built Certification

As a part of the NPDES permit, the City must ensure the BMPs that have been designed and approved are constructed and operated in accordance with their original design and intent. To confirm that constructed BMPs meet the designer's intent, two as-built certification forms have been developed. It is the Owner's responsibility to have as-built information such as pond volume, embankment size and elevations, invert size and elevations, and spillway elevations field surveyed by a Professional Land Surveyor. It is the Engineer-of-Record's responsibility to utilize the field surveyed information to fill out the as-built certification form. The City has developed the following as-built certification forms:

- Engineer's As-Built Certification for ROW Work and Subdivisions Form
- Engineer's As-Built Certification for Commercial and Residential Site Work Form.

The As-built Certification is submitted prior to the final inspection and the issuance of the Certificate of Occupancy. During this permit year, the City has received 21 As-built Certifications. An inventory of As-built Certifications received during the permit year is summarized on the Tier I Construction Sites As-built Summary Form included in Appendix F. An inventory of post-construction BMPs is shown in Figure 2.34. An example of an As-built Certification form is provided in Appendix F.

2.4.13.8. Annual Inspection

For post-construction BMPs to continue to function in accordance with their original design and installation, annual inspections are required by the City's NPDES permit. The City's Storm Water Management and Flood Control Ordinance requires a property owner or responsible party of post-construction BMP(s) to perform an annual inspection of the BMP(s) and provide copies of the inspections to the City by 1 January or such other date designated by the City Engineer. Inspections are to be performed by a QCI or QCP. In the event the property owner or responsible party fails to provide annual inspection records, the City may conduct an inspection of the BMPs and recoup the cost of the inspection from the property owner or responsible party.

Since the City has implemented the Post-Construction Program, 115 projects have been required to complete and submit an annual inspection report to the City. An inventory of sites required to perform an annual inspection is provided in Figure 2.34. An example inspection report is provided in Appendix F.

Due to the nature of how property owners do business, the City has changed its deadline for annual inspections to align with the end of the calendar year. The new deadline for annual inspection reports is 31 December and considered past due is submitted after 31 January. As of this report, the City has received annual inspection reports from 81 developments.

2.4.13.9. Operation and Maintenance

In accordance with the Storm Water Management and Flood Control Ordinance, the Owner and/or responsible party of post-construction BMPs is required to create a formal maintenance covenant that must be approved by the City and recorded in the records of the Probate Judge, prior to final plan approval.

It is the responsibility of the Owner and/or responsible party to operate and maintain the storm water management facility and/or BMPs in accordance with the original design intent and approval. If the original Owner or Developer has sold the project or passed ownership on to a Homeowner's Association (HOA), then it is the new Owner or HOA's responsibility to maintain the facility and provide any required inspection and maintenance.

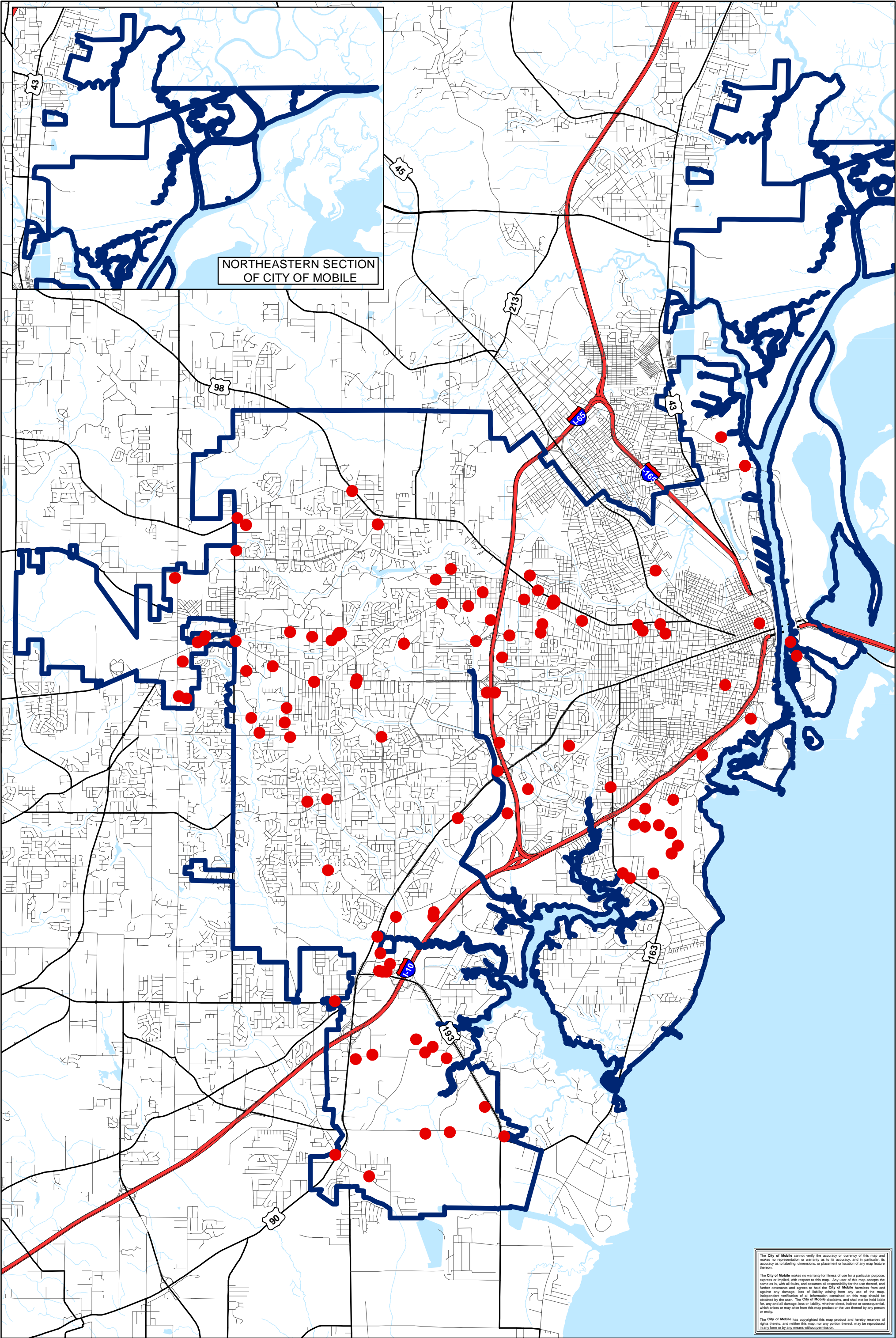
Should maintenance be needed at a facility as a result of the annual inspection, the Owner is required to provide the City with documentation describing the maintenance required and a schedule for completing all maintenance activities. Once all maintenance activities are completed, the Owner is required to provide documentation to the City of the maintenance performed and that the BMP operates as it was designed.

2.4.14. Spill Prevention and Response

The City of Mobile has developed and is currently implementing an effective program to prevent, contain, and respond to hazardous and non-hazardous spills.

2.4.14.1. Facility Inventory

To provide the most efficient services to the residents, the City has strategically located support facilities throughout the City. Some of the support facilities include fueling stations and/or the storage of petroleum products. If a facility has an aggregate storage capacity greater than 1,320 gallons of petroleum products



**CITY OF MOBILE
MS4 PROGRAM**



MS4 POST CONSTRUCTION BMP INVENTORY

FY2022 Post Construction BMP Inventory

FIGURE 2-34

0.75 0.375 0 0.75
Miles

PRINT DATE: 12/15/2022

aboveground or 42,000 gallons underground, the facility is required to develop and implement a Spill Prevention Control and Countermeasures (SPCC) Plan. An inventory of support facilities that handle petroleum products is provided in Table 2.8.

Table 2.8 Petroleum Storage Facilities

| Facility | SPCC Plan Required | SPCC Plan Developed |
|--|--------------------|---------------------|
| Azalea City Golf Course | No | No |
| Fire Station No. 7 | Yes | Yes |
| Hurtel Sanitation Facility | Yes | Yes |
| Langan Park Refueling Station | Yes | Yes |
| Motor Pool | No | No |
| Police Department 3 rd Precinct | Yes | Yes |
| Public Safety Complex/4 th Precinct | Yes | Yes |
| Public Works/Garage Facility | Yes | Yes |

The facilities that do not have SPCC Plans have petroleum product quantities that are less than the limit required to implement a program. Fuel storage facilities are inspected, at a minimum, annually, even if a SPCC Plan is not in place. The SPCC Plans for each facility are included in Appendix H of the SWMP Plan.

2.4.14.2. Spill Response – Fire and Rescue Department

The City has developed and is currently implementing an effective program to contain and respond to hazardous and non-hazardous spills. Currently, the City maintains hazardous response personnel and equipment at 5525 Commerce Boulevard East. If a spill occurs, the Fire and Rescue Department is responsible for responding to and controlling the spill. Depending upon the magnitude of the spill, the Fire and Rescue Department may utilize resources of the City and/or private contractors to respond, contain, and clean up the spill.

The Fire and Rescue Department has developed Hazardous Materials Operation Guidance (HazMat OG) documents that describes various activities associated with spill response that includes:

- HazMat OG 6200 – Hazardous Materials on Scene Operations; and,
- HazMat OG 6300 – Hazardous Materials Notification, Dispatch, Response.

Copies of the operation guidance are provided in Appendix H of the SWMP Plan.

Currently, the Fire Department maintains a Class 1 ISO rating, based partly upon an average response time of under six minutes. Spills that occurred during this permit year are shown in Figure 2.35 and summarized in Table 2.9.

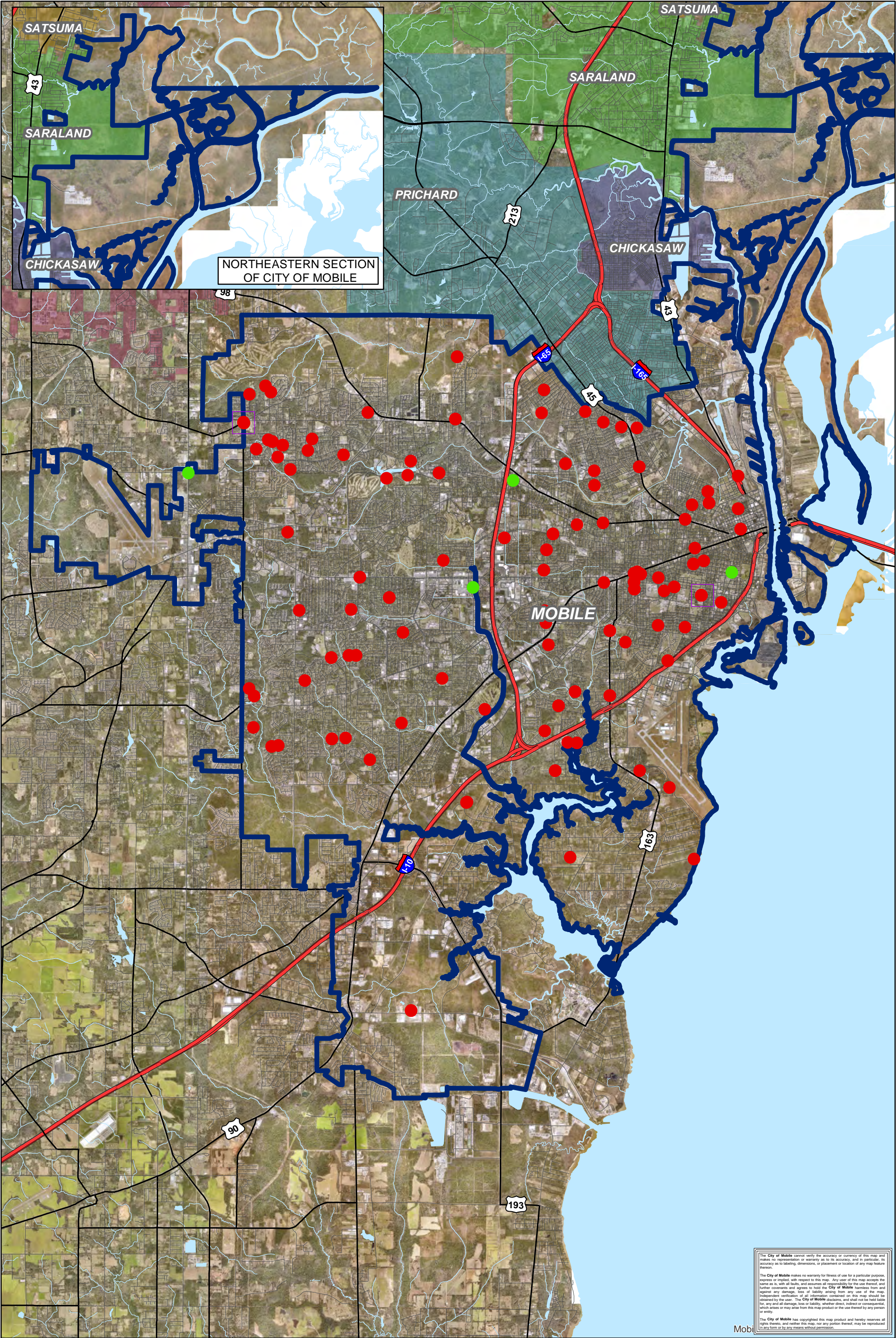
If the spill entered the City's MS4, the Engineering Department conducted a follow-up inspection to ensure that there were no adverse impacts to the MS4 and to ensure adequate spill response. The Engineering Department performed a follow-up inspection for three (3) spills this permit year. HazMat incidents during the permit year which may impact the MS4 system shall be tracked on the Environmental Incident Investigation Form. A summary of the inspection reports is provided on the Post Spill Inspection Summary Form – Fire and Rescue Department included in Appendix G. Inspection reports prepared by the Engineering Department are also provided in Appendix G.

2.4.14.3. Spill Response – Municipal

Any spills associated with City equipment and/or facilities are handled by the City's Spill Crew. The Spill Crew takes any appropriate corrective measures to abate the spill. If a spill occurs that exceeds the response capabilities of the Spill Crew, additional assistance may be provided by an environmental contractor.

The City has developed a SOP for reporting spills from City equipment (SOP SR-0116). The SOP describes procedures the vehicle/equipment operator should perform and contact information for City spill clean-up crews. Reportable spills that occur from City equipment and/or facilities shall be documented on an Environmental Incident Investigation Form and tracked on the Spill Prevention and Response Summary Form.

Spills that occurred during this permit year are shown in Figure 2.35 and summarized in Table 2.9. A copy of the Spill Reporting SOP is provided in Appendix H of the SWMP Plan. The Spill Prevention Response Summary form and the Spill Prevention and Response Tracking Sheet are provided in Appendix G.



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**CITY OF MOBILE
MS4 PROGRAM**



MS4 SPILL PREVENTION AND RESPONSE

- Fire Dept Hazardous Spill Response Location
- Municipal Spill Location
- Locations with Repeat Hazardous Spill Incidents (>3)
- MS4 Boundary
- Roads
- Interstate
- State/Federal Hwy
- Tunnel
- Stream
- Water



FIGURE: 2-36

0.75 0.375 0 0.75
Miles

PRINT DATE: 12/29/2022

Table 2.9 Spill Response Summary

| Description | No. Spills |
|-------------------------------------|------------|
| Fire Department | |
| Spills | 6 |
| Spills entering MS4 | 3 |
| Municipal | |
| Spills | 114 |
| Spills entering MS4 | 5 |
| Spills entering waters of the state | 0 |

Occasionally, the Engineering Department conducted a follow-up inspection to ensure that there were no adverse impacts to the MS4. Information regarding each spill is provided on the Spill Prevention and Response Tracking Summary Form provided in Appendix G.

2.4.14.4. Staff Training

The Fire and Rescue Department has continued to implement a progressive training and response program. Training is provided for a variety of topics to applicable personnel. Approximately 65 new fire fighters participated in a 40-hour HazMat Awareness and Operations training course during the permit year to bring the total to 213 fire fighters that are certified. A total of 244 fire fighters are trained as Hazmat Technicians which is over half of the fire fighters in the Department.

Two members of the Engineering Department MS4 team maintain the 8-hour HAZWOPER Emergency Response Training certification.

Staff from various municipal departments receive internal annual training regarding spill response. Specific information regarding this training is provided in the Pollution Prevention and Good Housekeeping section of the annual report. Supporting information is provided in Appendix H.

2.4.15. Pollution Prevention and Good Housekeeping

Major accomplishments in the Pollution Prevention and Good Housekeeping are summarized below.

2.4.15.1. Standard Operating Procedures

The City has developed Standard Operating Procedures (SOPs) for the various activities required for implementing the Pollution Prevention and Good Housekeeping Program. SOPs include but are not limited to the following:

- SOP ES-0115 Fleet and Vehicle Maintenance;
- SOP ES-2717 Storage and Disposal of Chemical Waste;
- SOP PR-7514 Mowing and Park Maintenance;
- SOP PR-11714 Trash Receptacles;
- SOP PR-12014 Daily Activities;
- SOP PR-12214 Pet Waste;
- SOP PW-0114 Vehicle and Equipment Washing;
- SOP PW-0214 Material Storage Areas;
- SOP PW-0414 Asphalt Street Repair;
- SOP PW-0514 Concrete and Side Walk Repair;
- SOP PW-0614 Dirt and Gravel Roads and Easement Maintenance;
- SOP PW-2217 Street Sweeper;
- SOP PW-0417 Mowing ROW Maintenance;
- SOP RE-0114 External Building Maintenance; and,
- SOP PW-6818 Special Events.

Copies of SOPs are provided in Appendix I of the SWMP Plan.

2.4.15.2. Municipal Facility Inventory

Since an inventory of the City's facilities is provided as part of the Pesticides, Herbicides, and Fertilizers Program and the Industrial Storm Water Runoff Program, a facility inventory will not be duplicated in this section. The locations of City Parks are shown in Figure 2.39. Facility operations where maintenance activities are performed and/or chemicals are stored are summarized in Table 2.14 and shown in Figure 2.42.

2.4.15.3. Municipal Facility Inspections

Most municipal properties consist of parks and athletic fields which are actively utilized by the public throughout the year. Maintenance and upkeep of these facilities are performed on a routine basis. Additional inspections of parks and athletic fields are not performed.

The City has identified four (4) facilities where operational activities occur to support City services. Good housekeeping inspections are performed once every two (2) weeks for the support facilities listed in Table 2.10. Examples of completed Good Housekeeping Checklist for each facility are provided in Appendix H.

Table 2.10 Municipal Support Facilities

| Facility Name | Department |
|---------------------|---------------------------------|
| Body Shop | Equipment Services |
| Garage/Public Works | Equipment Services/Public Works |
| Hurtel Street | Equipment Services |
| Motor Pool | Equipment Services |

As part of the City's Industrial Storm Water Runoff Program, the City has identified municipal facilities that are used for small equipment maintenance and chemical storage. Municipal facilities listed in Table 2.14 are inspected on an annual basis.

2.4.15.4. Street Sweeping

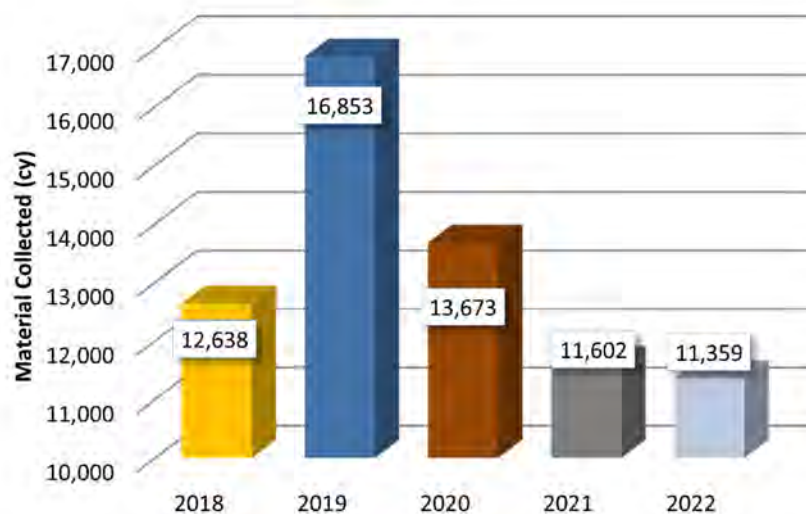
The Public Works Department has eight (8) street sweeper operators dedicated to street sweeping. Sweepers are parked around the City for use in various areas. The City's goal is to sweep public paved streets once every two (2) years. Streets scheduled for resurfacing are swept and cleaned prior to resurfacing. Routine sweeping schedules have been developed to maximize the use of street sweepers. Downtown streets are typically swept weekly (see Figure 2.36) while those in the Oakleigh District are normally cleaned bi-weekly.

During this permit year, approximately 11,359 cubic yards of material was collected by street sweeping. A graph showing the annual amount of material collected over the past four years is provided in Figure 2.37. Street sweeping activities are summarized in Monthly Street Sweeping Summary Forms included in Appendix H.

2.4.15.5. Litter Control

The Public Works Department utilizes an adaptive management approach for placing trash receptacles. Consideration is given to park amenities, events, athletic seasons, and previous patterns of litter collection.

Figure 2.37 Street Sweeping Material Collected



The Public Works Department has two (2) divisions (ROW Mowing and Litter & Recycling) that routinely maintains City ROW by cutting grass and picking up litter. Litter collection is either performed by staff or by personnel needing community service hours.

The Parks and Recreation Department has two (2) divisions (Eastern Maintenance and Western Maintenance) that routinely maintain the City's parks by picking up litter and cutting grass.

This permit year, Community Service personnel provided litter collection for the Public Works Department. Approximately 4,088 community service hours were spent. The Community Service Hours Litter Collection Summary Form is included in Appendix H.

Various City departments collect trash at City facilities. During this permit year, the City collected 175,984 cubic yards of trash. Details of trash collection and disposal are provided on the Trash Disposal Tracking Summary forms provided in Appendix H.

Right-of-way mowing is either performed by City mowers or contract mowers. Litter is collected prior to mowing activities. City mowers are used along roads with less than 20,000 vehicles per day. Typically, these roads include small ditches and rights-of-way and are cut on a 56-day cutting cycle. Contract mowers are used along roads with more than 20,000 vehicles per day. Mowing contracts were overseen by the Public Works Department. These contractors collected

approximately 38 tons of litter from the rights-of-way during the mowing season. The Public Works Litter Collection Mowing Contractor summary form is included in Appendix H.

Typically, these areas consist of main thoroughfares and are on a 7 to 14 day cutting cycle. Areas covered by the contract mowers are inspected by City personnel to ensure the work has been completed in accordance with the contract. After mowing is complete, contractors are required to blow grass clippings back into the grass area and away from storm drains. Mowing areas maintained by the City are shown in Figure 2.38.

2.4.15.6. Staff Training

The City has developed training programs specifically tailored to its facilities and operations. Training is performed annually and includes the topics listed in Table 2.11.

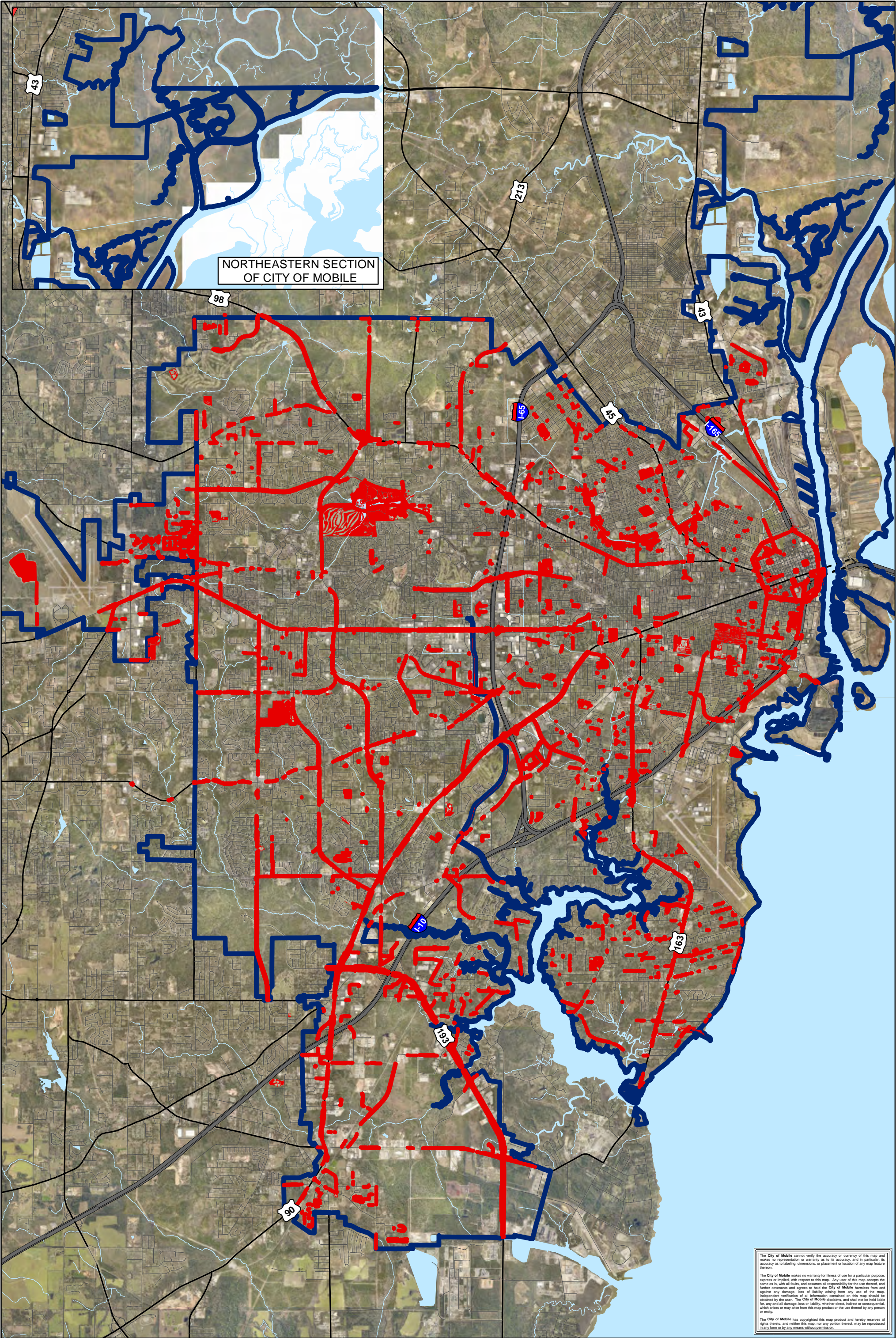
Table 2.11 Training Topics

- | | |
|-------------------------------------|--|
| • SPCC Plans | • Illicit Discharges |
| • Spill Control and Response | • Vehicle Fueling |
| • Vehicle and Equipment Maintenance | • Vehicle and Equipment Washing |
| • Materials and Waste Management | • Good Housekeeping and Spill Prevention |
| • Municipal Facility Maintenance | |

During this permit year, 421 City personnel attended an internal training course. Training activities are summarized on the MS4 Training Summary form provided in Appendix H. Copies of the training presentations and sign-in sheets are provided in Appendix H.

2.4.15.7. Deicing Activities

Based upon the City's location, winter weather is infrequent. The City spreads sand on roads with snow or ice cover. After winter weather has subsided, the City removes the sand using a small front-end loader and a street sweeper. Salt is not used for any deicing activities. Once the icing event is over, City street sweepers remove the sand that was used to mitigate the hazardous road conditions. The City did not have any deicing events during the permit year.



**CITY OF MOBILE
MS4 PROGRAM**



MS4 CITY MAINTAINED MOWING AREAS

- | | | | |
|--------------|-------------------|------------|--------|
| Mowing Areas | Roads | Interstate | Stream |
| MS4 Boundary | State/Federal Hwy | Tunnel | Water |



FIGURE: 2-38

0.65 0.325 0 0.65
Miles

PRINT DATE: 12/12/2022

2.4.15.8. Flood Control Structures

The MS4 NPDES permit requires the City to evaluate flood management projects for incorporation of additional water quality protection devices and practices to help improve water quality. During this permit year, there were no flood management projects proposed within the City. Currently, the City does not have any flood control structures located within the City.

2.4.16. Pesticide, Herbicide, and Fertilizer

The City is continuously implementing an effective pesticide, herbicide, and fertilizer (PHF) program to prevent potential pollutants from entering the storm sewer system.

2.4.16.1. PHF General NPDES Permit

The City has reviewed ADEM's General NPDES Permit for discharges associated with the application of pesticides and has determined that the City does not meet the requirements to obtain coverage under this permit.

2.4.16.2. PHF Standard Operating Procedures

Application, storage, and disposal of pesticides, herbicides, and fertilizers are performed in accordance with Federal and State regulations and in accordance with the manufacturer's recommendations. The City has developed the following Standard Operating Procedure (SOP) for mixing, application, clean up, storage, training, and record keeping:

- SOP PR-9014 PHF Storage, Application, and Spill Procedures

A copy of the SOP is provided in Appendix J of the SWMP Plan.

2.4.16.3. Facility Inventory

The City has evaluated land under the control of the City to determine where PHFs are being used. Areas of interest within the MS4 Area may include, but are not limited to, the following:

- Public parks;
- Sports complexes;
- Green space around City facilities; and,
- City rights-of-way.

The City is continuously implementing an effective PHF program to prevent potential pollutants from entering the storm sewer system. The City maintains approximately 167 facilities that consist of parks, ball fields, and building grounds and occupies approximately 2,670 acres (4.17 square miles). The locations of City Parks are shown in Figure 2.39.

2.4.16.4. Certification and Licensing

Commercial and non-commercial application of pesticides is regulated in the State of Alabama by the Department of Agriculture and Industries (DAI). To maintain a pest control license, applicators are required to obtain routine training that covers the following topics:

- Pests;
- Pests control and pesticides;
- Labels and labeling;
- The environment;
- Applicator safety;
- Laws and regulations;
- Pesticide storage and disposal;
- Record keeping;
- Application equipment and calibration; and,
- Weed control.

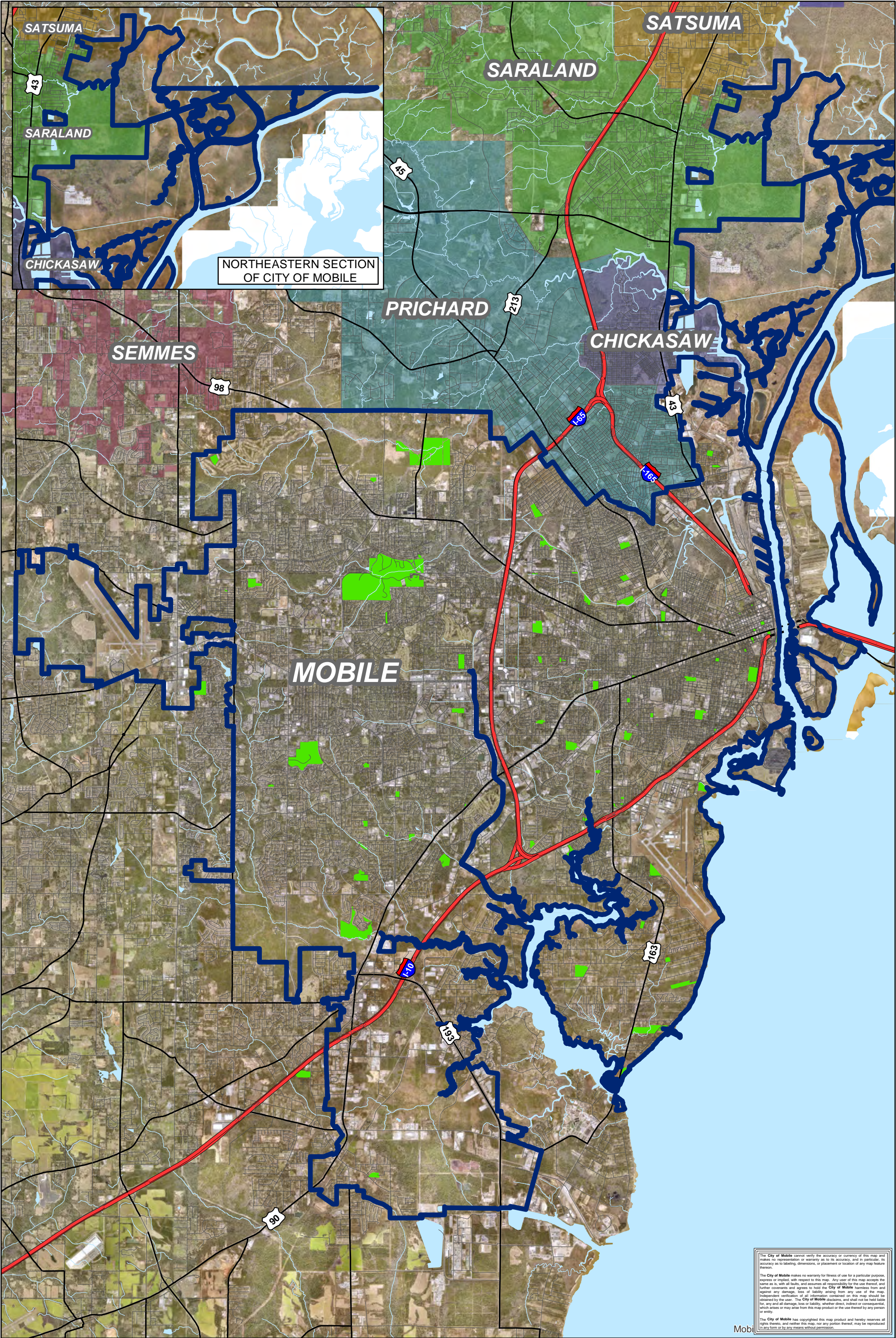
City staff and contractors involved with the application, storage, and/or disposal of PHFs on City areas shall maintain current certification and training as required by DAI. The City currently has seven (7) employees that maintain an applicator's certification. Their applicator's certification documentation is provided in Appendix I.

2.4.16.5. PHF Training

State licensed applicators at the City attended various training sessions related to PHF usage.

2.4.16.6. PHF Storage Facilities

The City tries to optimize the use of pesticides, herbicides, and fertilizers as well as minimize the quantity of chemicals stored. Chemical storage facilities are summarized in Table 2.12 and shown in Figure 2.39.



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**CITY OF MOBILE
MS4 PROGRAM**



MS4 Boundary

Parks

MS4 CITY PARKS

Roads

Interstate

Tunnel

State/Federal Hwy

Stream

Water



FIGURE 2-39

0.75 0.375 0 0.75
Miles

PRINT DATE: 12/13/2022

Table 2.12 PHF Storage Facilities

| Facility | Address |
|-------------------------------|------------------------|
| Parks Administration Facility | 48 N Sage Avenue |
| Langan Park Fueling Station | 4901 Museum Drive |
| Azalea City Golf Course | 1000 Joe Barbato Drive |

Each PHF storage facility is inspected by the City annually using the PHF Storage Inspection Form. Inspections performed this permit year are summarized on the PHF Storage Inspection Summary form included in Appendix I. PHF storage inspections are provided in Appendix I.

2.4.16.7. Chemical Inventory

The City may use a variety of PHF chemicals on road rights-of-way and City areas. An inventory of PHFs stored at each City facility are maintained on a PHF Inventory Summary Form. Copies of the PHF Inventory Summary Forms for the Azalea City Golf Course and Parks are provided in Appendix I.

Safety Data Sheets (SDS) for PHFs used by City staff are maintained at each individual storage location. The SDS will provide information about the chemical to include but not limited to the following:

- Chemical constituents;
- Product use;
- Dilution requirements;
- Mixing requirements;
- Storage instructions; and,
- Health and safety precautions.

2.4.16.8. PHF Application

The City may collect soil samples to determine the optimum fertilizer and application rate for a particular facility. If results of the soil sample indicate that phosphorus is not needed, the City will use a non-phosphorous fertilizer.

The City routinely uses non-phosphorous fertilizers. During this permit year, the Azalea City Golf Course and the Parks and Recreation Department used approximately 1,240 lbs and 12,327 lbs, respectively, of non-phosphorous fertilizers.

PHF applied by the Azalea City Golf Course and the Parks and Recreation Department are summarized on the Daily PHF Application Summary forms or the Contractor PHF Application Summary forms provided in Appendix I.

The City has defined High Application Areas:

1. Areas where application rates significantly exceed the manufacturer's written recommendations; or,
2. Areas where application of PHF results in an adverse condition(s) in receiving streams adjacent to application areas.

Currently, the City has not identified any high application areas.

2.4.16.9. PHF Disposal

Typically, the City purchases chemicals as needed per application. This minimizes and/or eliminates the need for chemical disposal. During this permit year, the City did not dispose of any large quantities of PHF.

2.4.17. Oils, Toxics, and Household Hazardous Waste

Major accomplishments in the Oils, Toxics, and Household Hazardous Waste are summarized below.

2.4.17.1. Public Education

To help minimize used motor vehicle fluids and household hazardous waste from being discharged into the MS4, the City provides materials and information to help educate the public on the proper methods of disposal. The City's website is the primary mechanism to distribute materials and information to the public. This allows the City to reach a larger audience more cost effectively. Information that may be provided on the website includes but is not limited to the following:

- Brochures describing the impacts of these types of discharges; and,
- If these types of discharges are observed, how to report it to the City.

2.4.17.2. Mobile 311

The City has implemented a hotline for the public to report incidents that may potentially impact the City's MS4 as well as obtain information about the City by calling 311 or 208-5311.

2.4.17.3. City Facilities

As part of the Spill Prevention and Response Program, the City maintains an inventory of City facilities that require a SPCC Plan. Facility operations and maintenance are performed in accordance with the SPCC plans. Currently, the City has six (6) facilities that require a SPCC plan. City facilities with petroleum storage are listed in Table 2.8.

City facilities and vehicles generate used oil and oil filters. These items are routinely picked up and disposed of by a local used oil disposal company.

2.4.17.4. Training

City staff associated with vehicle and equipment maintenance receive annual training on the proper management and disposal of used motor vehicle fluids. Training activities are described in the Pollution Prevention and Good Housekeeping section of this report.

City staff involved with the operation, maintenance and spill prevention associated with Underground Storage Tanks (USTs) on City property maintains current certification and training as required by ADEM. The City currently has six (6) employees that maintain Class A/B/C Operator's certification. Their operator's certification documentation is provided in Appendix J.

2.4.18. Industrial Storm Water Runoff

The City has continuously implemented an Industrial Storm Water Runoff Program. Major accomplishments in the Industrial Storm Water Runoff Program are summarized below.

2.4.18.1. NPDES Facilities

The City has developed an inventory of industrial facilities that have either obtained a General or Individual NPDES permit for industrial activities. As of 30 September 2022, the City has 142 facilities with active or administratively extended NPDES permits. The types and number of NPDES permitted facilities are shown in Figure 2.40 and summarized in Table 2.13. A detailed list of NPDES permitted facilities is provided in Appendix K.

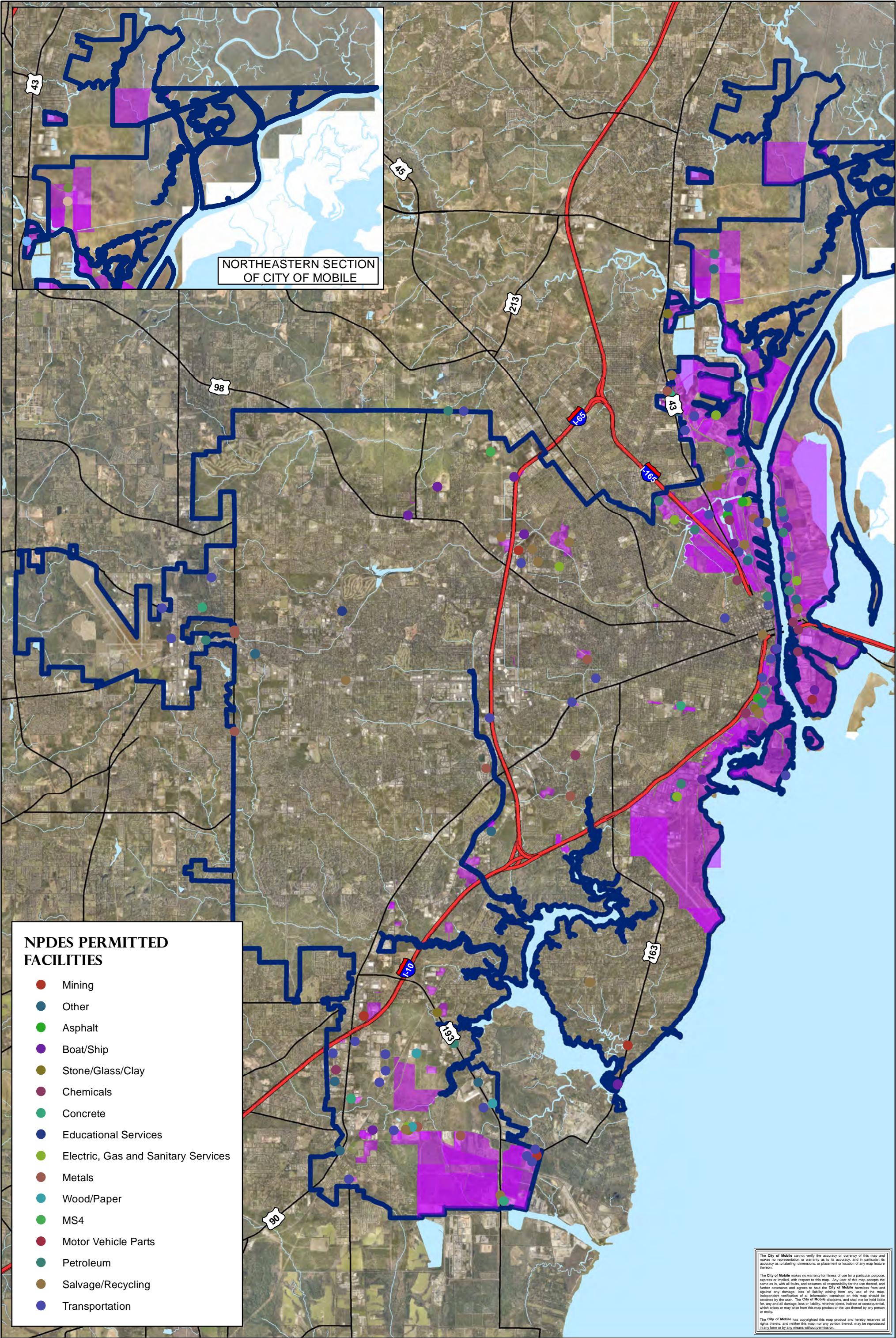


Table 2.13 NPDES Permitted Facilities

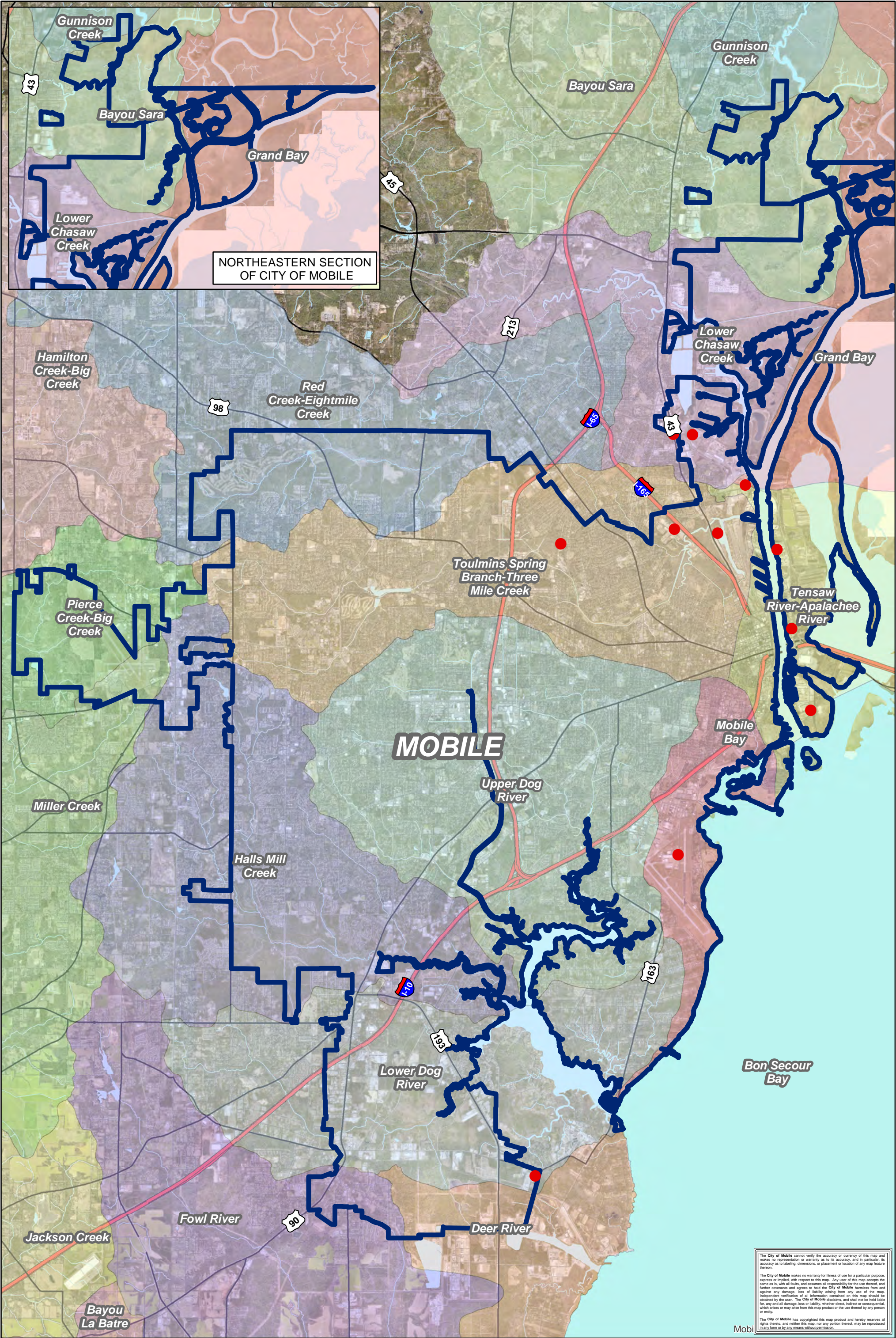
| Facility Type | No. | Facility Type | No. |
|---------------------------|-----|-------------------------|-----|
| Small Mining | 1 | Waste Management | 1 |
| Asphalt | 4 | Non-classifiable | 5 |
| Boat/Ship | 15 | Paint | 1 |
| Chemicals | 7 | Paper & Allied Products | 2 |
| Concrete | 4 | Pesticides | 1 |
| Electric, Gas, Sewer | 5 | Petroleum | 13 |
| Food | 2 | Primary Metals | 1 |
| Fabricated Metal Products | 1 | Salvage / Recycling | 16 |
| Lumber & Wood | 3 | Stone / Glass / Clay | 3 |
| Metals | 9 | Transportation | 38 |
| Mining and Quarrying | 4 | Wholesale Trade | 2 |
| Educational Services | 1 | MS4 | 1 |
| Brick / Stone / Related | 1 | POTW | 1 |

2.4.18.2. Toxic Release Inventory Facilities

Facilities regulated under the Emergency Planning and Community Right to Know Act (EPCRA) Title III, Section 313 (Toxic Release Inventory Facilities) that manufacture, process, or otherwise use listed chemicals above specific thresholds are required to submit detailed inventory reports by 1 July for each preceding year.

These facilities must report both routine and accidental chemical releases, off-site transfers, and other waste management activities to both the EPA and the Alabama Emergency Response Commission (AERC).

Currently, the City has 11 TRI Facilities that provide this information. All TRI Facilities have an NPDES permit. An updated inventory of TRI Facilities is shown in Figure 2.41 and a detailed list of the facilities are provided in Appendix K.



**CITY OF MOBILE
MS4 PROGRAM**



MS4 TRI FACILITY INVENTORY

- TRI Facility
- MS4 Boundary
- Roads
- State/Federal Hwy
- Interstate
- Tunnel
- Stream
- Water

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2.4.18.3. Municipal Facilities

The City provides a wide range of services to its citizens by various City Departments and facilities located throughout the City. The City has developed an inventory of facilities used for PHF storage, municipal shops, and equipment yards where operations may have a potential to contribute pollutants to storm water runoff. The municipal high-risk facility inventory is summarized in Table 2.14 and shown in Figure 2.42.

Depending upon the operations at each facility, the facility is either inspected on a bi-weekly or annual basis. The bi-weekly inspections are conducted by Public Services. The annual inspections are conducted by the Engineering Department. Examples of Good Housekeeping Inspection Checklists are provided in Appendix H. A summary of the annual inspections is provided on the Municipal Facility Annual Inspections Summary form included in Appendix K.

Table 2.14 Municipal Facilities

| Facility Name | Department | Inspection Frequency |
|---|----------------------------------|------------------------|
| Parks Administration Facility | Parks and Recreation | Annually |
| Parks Mowing Division | Parks and Recreation | Annually |
| Langan Park Fueling Station | Equipment Services | Annually |
| Public Safety Complex/Police 4 th Precinct | Mobile Fire & Police Departments | Annually |
| Police 3 rd Precinct | Mobile Police Department | Annually |
| Fire Station No. 7 | Mobile Fire Department | Annually |
| Motor Pool | Equipment Services | Bi-weekly and Annually |
| Public Works/Garage Facility | Public Works/Equipment Services | Bi-weekly and Annually |
| Azalea City Golf Course | Parks and Recreation | Annually |
| Paint and Body Shop | Equipment Services | Bi-Weekly and Annually |
| Hurtel Sanitation Facility | Public Works | Bi-Weekly and Annually |
| Myland Avenue | Public Works | Annually |

2.4.18.4. Commercial Facilities

Due to the variety of commercial facilities located throughout the City, inspections of commercial facilities are complaint driven. When the City receives a complaint that a non-storm water discharge is occurring from a commercial facility, the City conducts an inspection to investigate the non-stormwater discharge.

During this permit year, the City received ten (10) complaints regarding potential non-stormwater discharges. Based on the City's investigation, the City issued four (4) verbal warnings, one (1) municipal offense ticket and it was determined that the remaining five (5) facilities did not have an illicit discharge. Results of the City's investigations are summarized on the High-Risk Commercial Inspection Summary Form included in Appendix K.

2.4.18.5. Employee Training

City staff have extensive professional experience in working with industrial facilities. Based on this professional experience, employee training is not needed. City staff performing the inspections are working under the direction of a Professional Engineer with extensive professional experience.

2.5. Monitoring Activities

The City has developed its monitoring program to evaluate the watersheds that have 303(d) or TMDL listed streams. The City has focused its monitoring efforts on smaller watersheds. If the BMPs implemented within the smaller watersheds show improvement in water quality, implementing similar BMPs throughout the City should produce similar results and improve water quality.

2.5.1. Rainfall Data

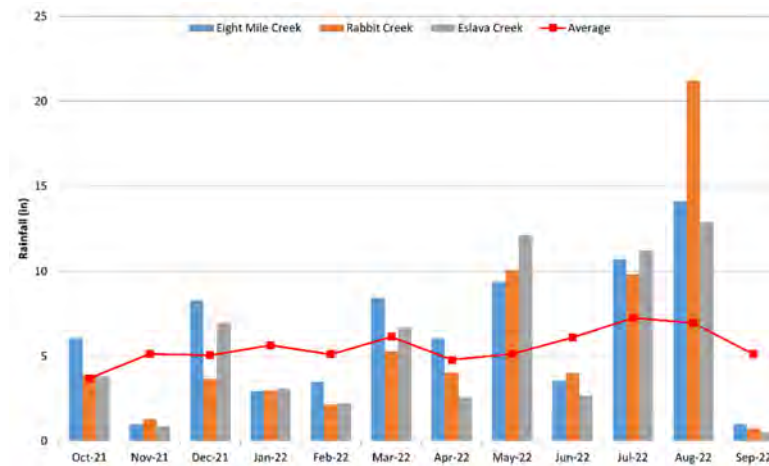
For this permit year, the City has used Weather Underground stations to acquire rainfall data for the representative monitoring locations. The nearest available stations were selected based on sampling locations. Total monthly rainfall amounts for each representative monitoring location are presented in Figure 2.43.

Due to the size of the City and the spatial variation of rainfall, the monthly rainfall totals may have a significant variation. Total yearly rainfall in the City was approximately 69.94 inches. This is approximately 3.8 inches of rainfall above the average annual rainfall amount.

2.5.2. Representative Monitoring

Representative monitoring provides water quality data collected during a storm event that is used to evaluate the storm water quality from various land use categories that are representative of the municipality. As noted in Section 2 of the SWMP Plan, the primary land use categories within the City are residential, commercial, and industrial.

Figure 2.43 Monthly Rainfall Totals



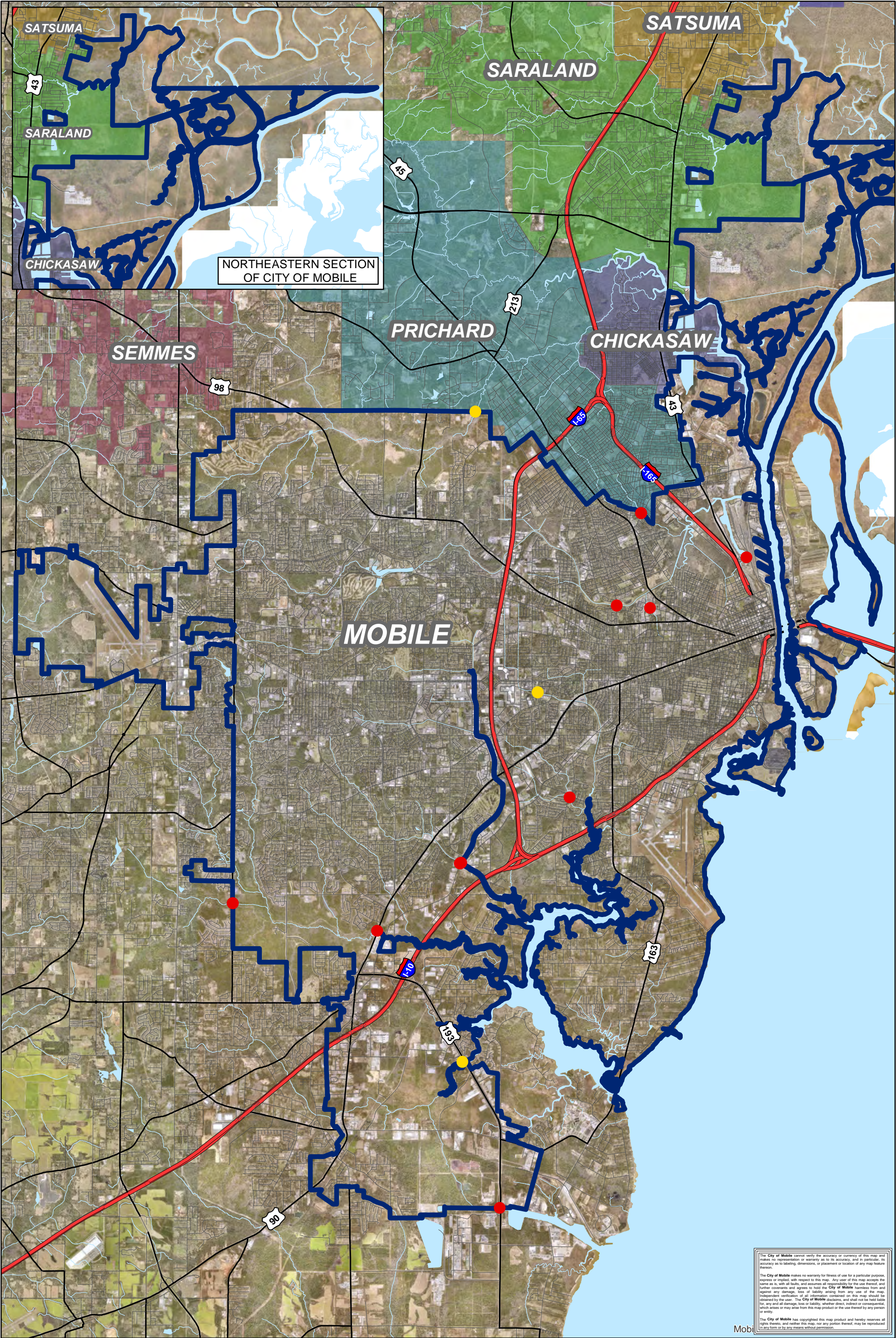
In accordance with Part III.A of the NPDES Permit and the SWMP Plan, the City has performed representative monitoring at one monitoring location in each of the watersheds listed in Table 2.15. Representative monitoring locations are shown in Figure 2.44.

Table 2.15 Representative Monitoring Locations

| Waterbody | Representative Watershed | Land Use | Latitude | Longitude |
|---------------------|--------------------------|-------------|----------|-----------|
| Rabbit Creek | Dog River | Industrial | 30.5735 | -88.1352 |
| Eslava Creek (East) | Dog River | Commercial | 30.6731 | -88.1122 |
| Eight Mile Creek | Chickasaw | Residential | 30.7489 | -88.1326 |

Representative sampling consisted of collecting grab samples of the discharge resulting from a storm event that is greater than 0.1 inch in magnitude. In accordance with Part III.B. of the NPDES Permit, the City has collected a grab sample at each monitoring location. Analysis and sample collection were performed in accordance with the methods specified at 40 CFR Part 136. Results of the grab samples collected are summarized in Table 2.16. Copies of the analytical reports are provided in Appendix L.

Rabbit Creek, Eslava Creek, and Eight Mile Creek all have a water use classification of Fish and Wildlife. Eight Mile Creek also has a Public Water Supply water use classification. Specific water quality criteria associated with the Fish and Wildlife water use classification as defined in ADEM Rule 335-6-10-.09(5) is summarized below.



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**CITY OF MOBILE
MS4 PROGRAM**



MS4 MONITORING LOCATIONS

- | | | | | |
|--------------|-------------------|--------|--------|------------------------|
| MS4 Boundary | State/Federal Hwy | Tunnel | Stream | Impaired Stream Sample |
| Roads | Interstate | | Water | Representative Sample |



FIGURE 2-44



PRINT DATE: 12/14/2022

Table 2.16 Grab Sample Results

| Parameter | Rabbit Creek | | Eslava Creek | | Eight Mile Creek | |
|--------------------------------------|--------------|----------|--------------|----------|------------------|----------|
| | 3/11/22 | 11/15/22 | 3/11/22 | 11/15/22 | 3/11/22 | 11/15/22 |
| Ammonia as N (mg/L) | 0.068 | 0.13 | 0.11 | <0.024 | 0.058 | <0.024 |
| Biochemical Oxygen Demand (mg/L) | 2.0 | 2.0 | <2.0 | 2.0 | <2.0 | 2.0 |
| Cadmium (ug/l) | <0.28 | <0.28 | <0.28 | <0.28 | <0.28 | <0.28 |
| Chemical Oxygen Demand (mg/L) | 8.2 | 19 | 10 | 11 | <6.4 | 17 |
| Conductivity (µS/cm) | 820 | 5 | 125 | 82 | 67 | 93 |
| Copper (ug/L) | <1.0 | 1.2 | 1.8 | 1.8 | <1.0 | 1.1 |
| Dissolved Oxygen (mg/L) | 7.61 | 6.2 | 4.41 | 7.5 | 8.6 | 6.4 |
| E. Coli (MPN/100mL) | 160 | 520 | 490 | 2,400 | 310 | 2,400 |
| Fecal Coliform (CFU/100mL) | 300 | 530 | 1,600 | 4,100 | 480 | 1,500 |
| Hardness as CaCO ₃ (mg/l) | 89 | 2,300 | >2,400 | 110 | 17 | 100 |
| Lead (ug/l) | <0.29 | <0.29 | 0.52 | 0.62 | 1.4 | 0.98 |
| Nitrate plus Nitrite Nitrogen (mg/l) | 0.22 | 0.22 | 0.13 | 0.18 | 0.31 | 0.24 |
| Oil & Grease (mg/L) | <1.5 | <1.3 | 17.7 | <1.4 | 2.5 | <1.6 |
| pH | 6.73 | 7.03 | 6.69 | 7.51 | 6.59 | 6.93 |
| Temperature (°C) | 19.2 | 16.2 | 19.3 | 15.8 | 16.7 | 14.9 |
| Total Dissolved Solids (mg/L) | 410 | 2,600 | 120 | 28 | 62 | 52 |
| Total Kjeldahl Nitrogen (mg/L) | <0.26 | 0.38 | <0.26 | <0.26 | <0.26 | <0.26 |
| Total Nitrogen (mg/L) | <0.26 | 0.60 | <0.26 | <0.26 | 0.31 | <0.26 |
| Total Phosphorous (mg/L) | <0.076 | <0.049 | <0.076 | 0.053 | <0.76 | 0.058 |
| Total Suspended Solids (mg/L) | 36 | <5.0 | 53 | <5.0 | 36 | 16 |
| Turbidity (NTU) | 3 | 3 | 7 | 9 | 11 | 19 |
| Zinc (ug/l) | <8.8 | <8.8 | 9.2 | <8.8 | <8.8 | <8.8 |

- pH – Not less than 6.0 or greater than 8.5;
- Temperature – Not greater than 90°F (32.2°C);
- Dissolved Oxygen (DO) – Not be less than 5 mg/l at all times; except under extreme conditions due to natural causes, it may range between 5 mg/l and 4 mg/l;
- Bacteria – In non-coastal waters, bacteria of E. coli group shall not exceed a geometric mean of 548 colonies/100 ml; nor exceed a maximum of 2,507 colonies/100 ml in any sample;
- Bacteria – Incidental water contact and recreation during May through October, bacteria of E. coli group shall not exceed a geometric mean of 126 colonies/100 ml; nor exceed a maximum of 298 colonies/100 ml in any sample; and,
- Turbidity – Will not cause a substantial visible contrast with the natural appearance of waters or exceed 50 Nephelometric units.

Due to the high number and frequency of SSOs within the City's MS4, the high E. Coli and Fecal Coliform results at monitoring locations in Rabbit Creek, Eslava Creek, and Eight Mile Creek indicate the presence of a sanitary sewer discharge. Results of the other parameters are consistent with storm water runoff from the land uses located within the representative watersheds.

2.5.3. Impaired Stream Monitoring

In addition to representative monitoring, the City has conducted monitoring on waterbodies within the City's MS4 that ADEM and EPA have identified as impaired. A detailed summary of impaired waterbodies located within the City's MS4 are described in Section 2.2 of the SWMP Plan. In general, an impaired waterbody is a waterbody listed on the latest final 303(d) list, designated impaired by ADEM, or has an approved EPA TMDL.

Due to the number and frequency of SSOs, the City cannot confidently determine if it is a contributor to impaired waterbodies. Therefore, the City has developed an impaired waterbody monitoring strategy to validate its observations over previous permit years.

Based on the review of 303(d) and TMDL waterbodies, the City has identified monitoring locations where samples have been previously collected to evaluate an impaired waterbody. Impaired stream monitoring locations are shown in Figure 2.44.

Monitoring parameters have been selected based on the pollutants of concern for which a waterbody is listed as impaired, and which contributes to the listed impairment. Monitoring parameters for each impaired waterbody are presented in Table 2.17.

Since the primary source of pollution contributing to impaired waterbodies is attributed to municipal collection system failure or on-site wastewater treatment systems, pathogens, and/or organic enrichment are the pollutants of concern. Water quality criteria for these pollutants are more restrictive from June through September. Criteria established for sampling impaired waterbodies was based on the following:

- Collect grab samples;
- Conduct sampling during the months of June through September; and,
- Collect no less than five (5) grab samples over a 30-day period at intervals greater than 24 hours.

Table 2.17 Impaired Stream Monitoring Parameters

| Waterbody | Pollutants of Concern | Parameter |
|--|---|---|
| Three Mile Creek | Pathogens Organic Enrichment Low Dissolved Oxygen | Enterococci CBOD NBOD |
| Toulmins Spring Branch | Nutrients Pathogens | Total Phosphorus E. Coli Fecal Coliform |
| UT to Three Mile Creek | Nutrients Pathogens | Total Phosphorus E. Coli Fecal Coliform |
| Bolton Branch (East) | Pathogens | E. Coli Fecal Coliform |
| Bolton Branch (West) | Pathogens | E. Coli Fecal Coliform |
| Moore Creek | Pathogens | E. Coli Fecal Coliform |
| Halls Mill Creek #1 Halls Mill Creek #2 | Siltation Pathogens | Total Suspended Solids E. Coli Fecal Coliform |

This sampling protocol provides data to evaluate single sample and geometric mean water quality criteria. Since sampling occurred within a 30-day period, varying types of weather conditions were encountered. Sample events occurred during dry periods and storm events. A graph showing the sampling dates and daily rainfall totals for selected Weather Underground stations is provided in Figure 2.45.

As shown in Table 2.17, all streams identified for sampling have a pathogen impairment. Due to the significant number of reoccurring SSOs encountered within and outside of the City's MS4, it is highly likely that the source of the pathogen impairment on these streams is directly attributed to the sanitary sewer system. Analytical results for E. Coli and Fecal Coliforms are summarized in Table 2.18 and Table 2.19, respectively. Graphs of analytical results for E. Coli and Fecal Coliforms are shown in Figure 2.46 and Figure 2.47, respectively.

Figure 2.45 Impaired Stream Sampling Dates

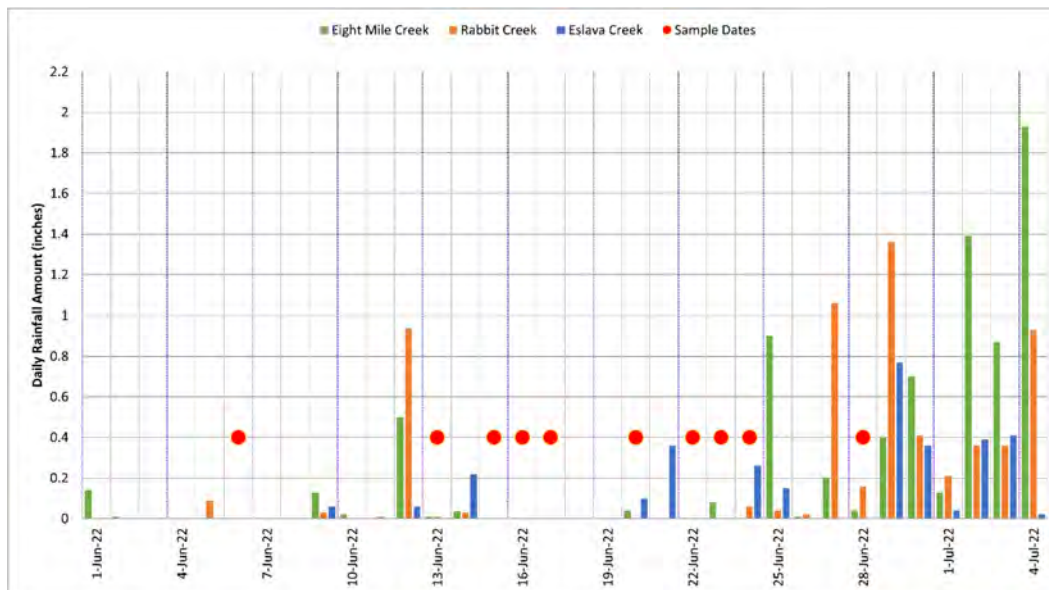


Table 2.18 E-Coli. Sample Results

| Date | BBE | TSB | UTMC | BBW | HMC1 | HMC2 | MC |
|------------------------------|-------|-------|---------|-------|-------|-------|-------|
| 6-Jun-22 | 88 | 230 | >2,400 | | | | |
| 13-Jun-22 | | | | 230 | 120 | 180 | 54 |
| 15-Jun-22 | 89 | 110 | >2,400 | | | | |
| 16-Jun-22 | | | | 73 | 69 | 290 | 76 |
| 17-Jun-22 | 84 | 86 | 330 | | | | |
| 20-Jun-22 | | | | 59 | 91 | 370 | 150 |
| 22-Jun-22 | 770 | 690 | >2,400 | | | | |
| 23-Jun-22 | | | | 45 | 130 | 150 | 180 |
| 24-Jun-22 | 150 | 49 | >2,400 | | | | |
| 28-Jun-22 | | | | 290 | 180 | 610 | 220 |
| Geometric Mean | 150.0 | 149.1 | 1,614.4 | 105.3 | 112.0 | 281.5 | 119.5 |
| Results in colonies / 100 ml | | | | | | | |

BBW Bolton Branch West
HMC1 Halls Mill Creek 1
MC Moore Creek
UTMC Unnamed Tributary Three Mile Creek
BBE Bolton Branch East
HMC2 Halls Mill Creek 2
TSB Toulmins Spring Branch

Figure 2.46 E. Coli Sample Results

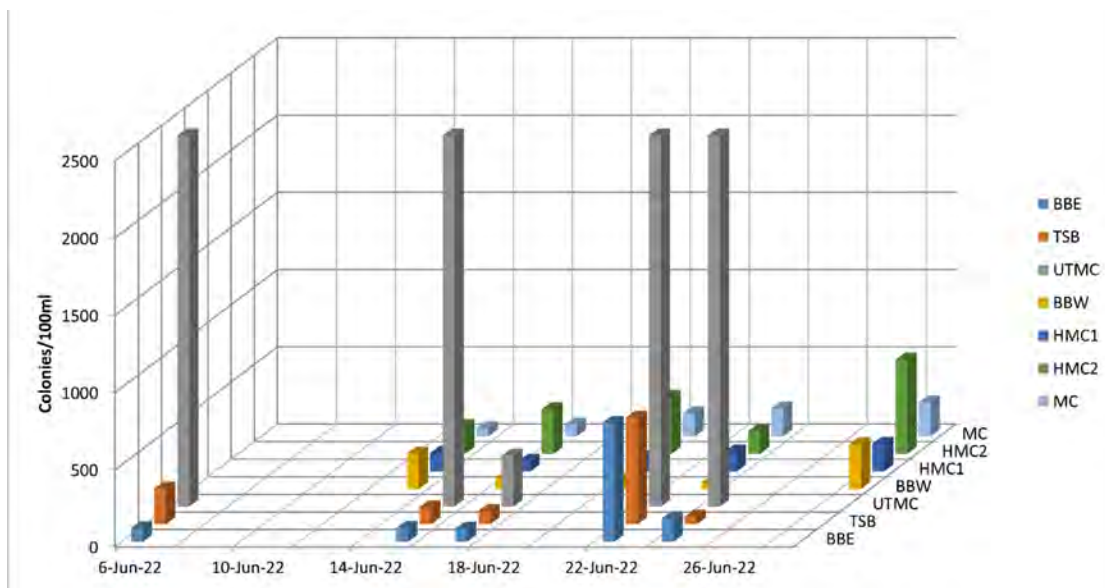


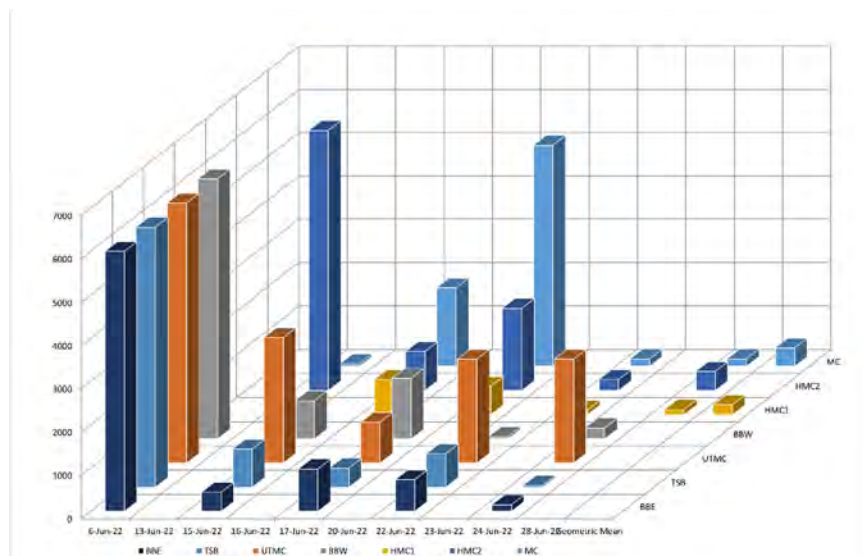
Table 2.19 Fecal Coliform Sample Results

| Date | BBE | TSB | UTMC | BBW | HMC1 | HMC2 | MC |
|------------------------------|------|------|--|------|------|------|------|
| 6-Jun-22 | TNTC | TNTC | TNTC | TNTC | | | |
| 13-Jun-22 | | | | | 92 | TNTC | 54 |
| 15-Jun-22 | 440 | 880 | 2900 | 880 | | | |
| 16-Jun-22 | | | | | 810 | 900 | 1800 |
| 17-Jun-22 | 980 | 440 | 940 | 1400 | | | |
| 20-Jun-22 | | | | | 650 | 1900 | 5100 |
| 22-Jun-22 | 730 | 770 | 2401 | 48 | | | |
| 23-Jun-22 | | | | | 100 | 250 | 170 |
| 24-Jun-22 | 150 | 40 | 2401 | 250 | | | |
| 28-Jun-22 | | | | | 120 | 440 | 170 |
| Geometric Mean | * | * | * | * | 225 | * | 428 |
| Results in colonies / 100 ml | | | *Geometric Mean not calculated for stations with TNTC results. | | | | |

TNTC = Too Numerous To Count

BBW Bolton Branch West
HMC1 Halls Mill Creek 1
MC Moore Creek
UTMC Unnamed Tributary Three Mile Creek
BBE Bolton Branch East
HMC2 Halls Mill Creek 2
TSB Toulmins Spring Branch

Figure 2.47 Fecal Coliform Sample Results



Three Mile Creek is also listed as impaired for Organic Enrichment and Low Dissolved Oxygen. Three Mile Creek has a use classification of Agricultural and Industrial Water Supply. In accordance with ADEM water quality standards, the minimum dissolved oxygen (DO) concentration allowed in a stream classified as Agricultural and Industrial Water Supply is 3.0 mg/L. As part of the impaired stream monitoring on Three Mile Creek, DO was measured in the field and samples were collected for analysis of Nitrogenous Biochemical Oxygen Demand (NBOD_u) and Carbonaceous Biochemical Oxygen Demand (CBOD_u). Figure 2.48 shows the dissolved oxygen concentrations measured during the monitoring period. Analytical results are summarized in Table 2.20.

Figure 2.48 Three Mile Creek Dissolved Oxygen

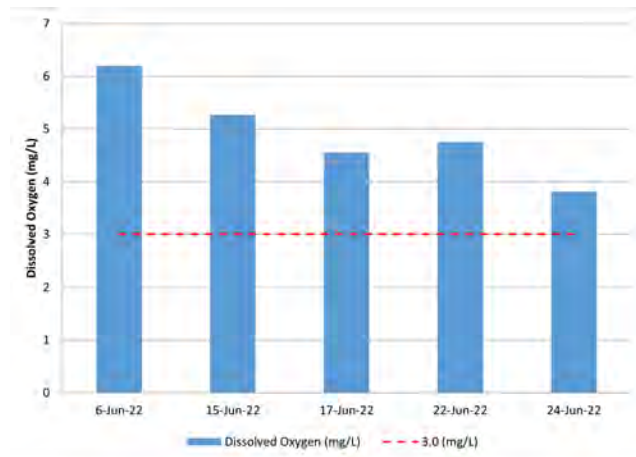


Table 2.20 Three Mile Creek Sample Results

| Date | NBOD (mg/L) | CBOD (mg/L) | DO (mg/L) |
|-----------|-------------|-------------|-----------|
| 6-Jun-22 | <2.0 | <2.0 | 6.2 |
| 15-Jun-22 | <2.0 | <2.0 | 5.27 |
| 17-Jun-22 | 9.1 | <2.0 | 4.55 |
| 22-Jun-22 | <2.0 | <2.0 | 4.75 |
| 24-Jun-22 | <2.0 | <2.0 | 3.81 |

The Organic Enrichment / Dissolved Oxygen TMDL for Three Mile Creek identifies two (2) NPDES permitted wastewater treatment plants (WWTP) within the Three Mile Creek watershed as major contributors to the impairment of Three Mile Creek. The sanitary sewer collection systems associated with both WWTPs have experienced frequent and reoccurring SSOs. As a result, it is highly likely that the

source of the impairment on these streams are directly attributed to the sanitary sewer system.

Toulmins Spring Branch and the Unnamed Tributary (UT) to Three Mile Creek have been identified as an impaired stream for nutrients on ADEM's 303(d) list. Total Phosphorus (TP) was selected as the parameter to evaluate nutrients of both streams. Analytical results are summarized in Table 2.21.

**Table 2.21 Toulmins Spring Branch and
UT to Three Mile Creek Sample Results**

| Date | Toulmins Spring Branch Total Phosphorous (mg/L) | UT to Three Mile Creek Total Phosphorous (mg/L) |
|-----------|--|--|
| 13-Jun-22 | <2.5 | <2.5 |
| 16-Jun-22 | <2.5 | 2.5 |
| 20-Jun-22 | <2.5 | 3 |
| 23-Jun-22 | <5.0 | <5.0 |
| 28-Jun-22 | <5.0 | 5 |

Using average pollutant loading values from the Nationwide Urban Runoff Program (NURP) data, TP concentrations from urban areas can range from 0.11 mg/L to 0.52 mg/L. According to NURP data, average TP concentrations for forest / rural open areas are 0.11 mg/L. Sampling events on Toulmin's Spring Branch and the Unnamed Tributary to Three Mile Creek indicated TP concentrations were within or below TP concentrations for forest / rural open areas.

Halls Mill Creek has been identified as an impaired stream for siltation on ADEM's 303(d) list. Total Suspended Solids (TSS) was selected as the parameter to evaluate siltation. Two sampling locations were selected on Halls Mill Creek to evaluate siltation entering and leaving the City's MS4. Monitoring location HMC1 is located where Halls Mill Creek enters the City's MS4 and monitoring location HMC2 is located where Halls Mill Creek leaves the City's MS4.

TSS results for both sampling locations are summarized in Table 2.22. The results indicate that there is not a significant siltation contribution from the City's MS4. ADEM has finalized siltation TMDLs for portions of the Cahaba River and Shades Creek that established a numeric effluent limitation for TSS of a not to exceed 45 mg/L as a monthly average. Based on the sampling data, the average TSS concentrations were below detection limits and 3.5 mg/L at sampling locations HMC1 and HMC2, respectively. This is well below the limits established in the Cahaba River and Shades Creek TMDLs.

Table 2.22 Halls Mill Creek Sample Results

| Date | HMC1 (Upstream) TSS (mg/L) | HMC2 (Downstream) TSS (mg/L) |
|-------------|-------------------------------|---------------------------------|
| 2-Jul-2021 | 2.0 | 5.0 |
| 7-Jul-2021 | 3.2 | 7.2 |
| 15-Jul-2021 | 7.0 | 3.5 |
| 22-Jul-2021 | 4.0 | <5.0 |
| 27-Jul-2021 | 7.0 | 4.4 |

2.6. SWMP Program Evaluation

The City has developed realistic, achievable, measurable goals, and performance milestones to measure the progress in implementing its SWMP. The most basic measure to evaluate the program effectiveness is to evaluate whether the program goals are being met. During this permit year, the City has met its measurable goals and performance milestones as defined in the SWMP Plan.

2.6.1. Overall Strengths

The biggest program strength is that the City has moved forward with developing, managing, and implementing their SWMP. City staff are actively involved in the development, management, and daily implementation of BMPs that will protect and help improve storm water quality. This also allows the City's SWMP to be a dynamic program with the ability to evolve as necessary to meet the specific needs of the City.

Advantages of the City's SWMP include but are not limited to the following:

- City leadership actively supports the storm water program;
- City leadership can develop policy and initiatives that are in the best interest of the City, its citizens and the environment;
- The City has a vested interest in the success of their SWMP;
- The Engineering Department has been tasked with the responsibility to coordinate with other City departments to develop, manage, and implement the SWMP;
- City staff have a better understanding and knowledge base of the facilities, infrastructure, and activities that are occurring within the City. This allows City staff to proactively address potential problems before they arise;

- City Staff are involved daily with the implementation of the SWMP; and,
- The City has existing programs that are used to minimize and/or eliminate the potential for discharging pollutants in storm water runoff. Some of these programs have been operating for many years.

The City is continuously making improvements to its MS4 Program to identify potential pollutant sources and improve the quality of its water resources. Multiple tools and technologies are being used to assist the City in understanding the concerns with storm water runoff and developing cost effective solutions.

2.6.2. Weaknesses

While the City has made significant improvements in the storm water management program, weakness in the storm water management program continue to surface.

- Enforcement – New rules, regulations, and ordinances are being developed in support of the SWMP. Informing the community of new rules, regulations, and ordinance changes will be an ongoing process. Although gradual improvement in compliance will occur over time, there still will be compliance and enforcement issues.
- Public Expectations – The public is very aware of environmental-related issues and proactively involved in community affairs. Sometimes public expectations exceed the resources and capabilities of the City.
- Increased Regulation – ADEM incorporated new requirements in the City's MS4 NPDES Permit that will put an additional burden on the City's staff and resources. As new permit requirements are added, the City may need additional staff and resources in order to maintain permit compliance.
- Funding – There are several stream segments within the corporate limits that are either listed on the 303(d) list or have a TMDL that has been developed. Most of these stream segments have listed urban runoff as a source of the impairment. On stream segments where a TMDL has been established, the TMDL requires certain load reductions from each source that has been identified. To adequately address the source of the impairments and restore the stream segments, structural BMPs may be required at a significant cost. Currently, there are limited funds available for these types of projects.

2.6.3. Effectiveness

The City has developed and is implementing a very effective SWMP to protect the natural resources within the City. Some examples that demonstrate the effectiveness of the City's SWMP are summarized below:

- **Structural Controls** – Routine maintenance of structural controls reduces the potential of pollutants from being discharged from City facilities. Due to the nominal amount of litter, sediment, and/or debris removed from structural controls, shows that the City is effectively implementing BMPs to reduce pollutant sources to the MEP.
- **Public Education** – The City has tracked growth in public awareness through public participation in social media platforms. Residents have consistently utilized the City's website and social media to stay informed of the City's SWMP and any new developments as the program has developed;
- **Public Involvement** – The City has received complaints and reports through various conduits including phone calls to City Departments, 311 requests, calls to the Mayor, and City employee reports. This shows the effectiveness of the City's public education program;
- **IDDE** – The City has implemented an effective outfall mapping and screening program. During the mapping and screening of major outfalls the City has only identified a few non-storm water discharges. The City has also received notifications from citizens of suspect non-storm water discharges. This implies that citizens are aware of storm water related issues and are protecting the City's natural resources;
- **Construction Site Runoff** – The City has implemented an effective construction site runoff program to help educate and hold the development community accountable for their construction activities. Enforcement actions taken by the City have helped the development community to improve its erosion and sediment control practices to reduce the loss of sediment from construction sites;
- **Post-Construction Storm Water Management** – The City has developed and implemented a post construction storm water management program that provides water quality benefits and storm water management to minimize the impact of development. The program provides for review of post-construction storm water management practices in the design phase,

construction phase, and operation phase. As new developments occur, the potential storm water impact of the development will be reduced;

- Pollution Prevention and Good Housekeeping – The City has implemented municipal facility inspections, street sweeping, litter patrols, PHF BMPs, and other BMPs to minimize the potential of pollutants from being discharged in storm water runoff. Street sweeping and litter patrols remove a significant amount of potential pollutants from being discharged in storm water runoff.



SECTION 3

Summary Tables



3. Summary Tables

The purpose of the table is to document in a concise form the program activities and permittee's compliance status with quantifiable permit requirements. The following tables in this section provide a summary of the City of Mobile's MS4 program activities.

3.1. Storm Water Collection System Operations

| Program Component | SWMP Activity Schedule | | |
|---------------------|---|----------|---|
| | Required | Complied | Accomplished |
| Structural Controls | Inventory Annually | Yes | 17 Structural Controls |
| | SOPs Update as needed | Yes | No update or revision required |
| | Collector App Update as needed | Yes | No update or revision required |
| | Inspections Semi-Annual | Yes | 17 Structural Controls 34 Inspections |
| | Maintenance Request Form Update as needed | Yes | No update or revision required |
| | Maintenance Track | Yes | 4 Structural Controls 8 Low Priority |
| | Estimate of Material Removed Track | Yes | 1 Structural Control 6 cy of Sediment |
| Catch Basins | Inventory Annual | Yes | 32,497 Catch Basins |
| | Inspection Schedule Annual | Yes | No update or revision required |
| | Inspection and Cleaning 5% / Year | Yes | 7,598 Catch Basins 63,673 ft of pipe cleaned |
| Litter Trap | Inspection Form Update as needed | Yes | No update or revision required |
| | Inspections Weekly | Yes | 55 Inspections |
| | Cleaning Track | Yes | 19 Cleaning events 28.3 cy material removed |

| Program Component | SWMP Activity Schedule | | |
|--------------------|---|----------|--|
| | Required | Complied | Accomplished |
| Litter Enforcement | Business Services Track | Yes | 3,039 Notice of Violations 983 Municipal Offense Tickets |
| Litter Patrol | Rights-of- Way Litter Patrol Track | Yes | 2,831 bags of litter 53,789 lbs of litter |
| | Stream Litter Patrol Track | Yes | 9.4 tons |
| Special Events | Catch Basin Screens Inventory Track | Yes | 145 Catch basin screens |
| | MDI Devices Track | Yes | 112 MDI devices |
| | Trash Pick Up Christmas Parade Mardi Gras Track | Yes | 5 days 0.54 tons (Christmas Parade) 185.23 tons (Mardi Gras) |
| | Cooking Oil Recycling Track | Yes | 285.0 gallons |
| Special Projects | Litter Gitter Inventory Track | Yes | 12 Locations |
| | Litter Gitter Material Recycled Track | Yes | 1,106.8 lbs. all locations combine |
| | Litter Gitter Material Disposed Track | Yes | 6,265.7 lbs. all locations combined |

Comments:

1. Supporting documentation and information of the activities described above are included in Appendix B.

3.2. Public Education and Involvement

| Program Component | SWMP Activity Schedule | | |
|--|--|----------|---|
| | Required | Complied | Accomplished |
| Public Education (Minimum of 2 activities / year) | Local Partnerships On-going | Yes | 7 Active partnerships |
| | Website Update as needed | Yes | Website current |
| | Social Media Track | Yes | Number of Followers 40,000 Facebook 22,727 Instagram 14,213 Twitter 1,100 YouTube |
| | Brochures Track | Yes | 14 Total Brochures 10 Brochures Handed out |
| | Presentations Track | Yes | 2 Presentations |
| | MS4 Meetings Track | Yes | 1 Meetings |
| | Public Service Announcements As needed | Yes | 9 Public Service Announcements available online |
| Public Involvement (Minimum of 2 activities / year) | Mobile 311 Track | Yes | 136,259 Communication occurrences 79,053 SROs |
| | Litter Bug Hotline Track | Yes | 71 Complaints |
| | Clean-up Events Track | Yes | 2 Clean-up Events |
| | Recycling (Single Stream) Track | Yes | 532.81 tons Police Headquarters 377.98 tons Western Admin. Complex |
| | Pet Waste Disposal Stations | Yes | 27 Stations |

Comments:

1. Supporting documentation and information of the activities described above are included in Appendix C.

3.3. Illicit Discharges and Improper Disposal

| Program Component | SWMP Activity Schedule | | |
|--------------------|---|----------|--|
| | Required | Complied | Accomplished |
| Legal Authority | Storm Water Management and Flood Control Ordinance Update as needed | Yes | No update or revision required |
| Outfall Screening | Schedule Update as needed | Yes | No update or revision required |
| | Outfall Evaluation Inspection Form Update as needed | Yes | No update or revision required |
| | Outfall Map Annually | Yes | Map has been updated |
| | Outfall Screening 1 / 5 yr. | Yes | 96 Major Outfalls 9 Outfalls Removed |
| | Suspect Non Storm Water Discharges Track | Yes | None |
| Illicit Discharges | SOPs Update as needed | Yes | No update or revision required |
| | Complaint Tracking System Mobile 311 Track | Yes | 137 SROs 115 Citizen complaints 22 Internal reports |
| | Illicit Discharge Investigations and Enforcement Actions Track | Yes | 137 Investigations 50 Verbal Warnings 4 Notice of Violations 6 Municipal Offense Tickets 1 Stop Work Order |
| | Sanitary Sewer Overflows (SSOs) Track | Yes | 116 SSOs 1,603,538 gallons discharged |

Comments:

1. Supporting documentation and information of the activities described above are included in Appendix D.
2. Information for SSOs was obtained from MAWSS.

3.4. Construction Site Runoff

| Program Component | SWMP Activity Schedule | | |
|----------------------------|---|----------|--------------------------------|
| | Required | Complied | Accomplished |
| Legal Authority | Storm Water Management and Flood Control Ordinance Update as needed | Yes | No update or revision required |
| Permitting and Plan Review | Land Disturbance (LD) Permit Application Update as needed | Yes | No update or revision required |
| | Tier 1 LD Checklist Update as needed | Yes | No update or revision required |
| | Tier 1 LD Permit Application Review Checklist Update as needed | Yes | No update or revision required |
| | Tier 1 LD Permit Certification Update as needed | Yes | No update or revision required |
| | Tier 1 LD Performance Bond Letter Update as needed | Yes | No update or revision required |
| | Tier 1 LD Performance Bond Update as needed | Yes | No update or revision required |
| | Tier 2 LD Permit Checklist Update as needed | Yes | No update or revision required |
| | Tier 2 LD Permit Application Review Checklist Update as needed | Yes | No update or revision required |
| | Permits Issued Track | Yes | No update or revision required |
| Complaint Tracking System | Mobile 311 Continuous | Yes | 7 Complaint |

| Program Component | SWMP Activity Schedule | | |
|---------------------|--|----------|--|
| | Required | Complied | Accomplished |
| Inventory | Construction Site Inventory Update as needed | Yes | 87 Tier I Construction Sites 53 Active sites 34 Non-Active Stable sites 21 As-built sites 91 Tier 2 Construction Sites |
| Inspections | EnerGov Update as needed | Yes | No updates or revisions required |
| | Inspections Track | Yes | 249 Tier I Construction Sites |
| Enforcement Actions | Tier I Construction Sites Track | Yes | 14 Verbal Warnings 0 Written Warnings 0 Municipal Offense Tickets 0 Notices of Violation 1 Stop-Work Orders |
| Training | QCI Certification Annually | Yes | 82 Staff Certified |

Comments:

1. Supporting documentation and information of the activities described above are included in Appendix E.

3.5. Post-Construction Storm Water Management

| Program Component | SWMP Activity Schedule | | |
|--|---|----------|---|
| | Required | Complied | Accomplished |
| Legal Authority | Storm Water Management and Flood Control Ordinance Update as needed | Yes | No update or revision required |
| | Zoning Ordinance Update as needed | Yes | No update or revision required |
| | Subdivision Regulations Update as needed | Yes | No update or revision required |
| Post-Construction Storm Water Management | Low Impact Development Encouraged | Yes | Low Impact Development is encouraged |
| | Post-Construction Storm Water Management Req. Update as needed | Yes | No update or revision required |
| | Plan Review Procedures and Checklist Update as needed | Yes | No update or revision required |
| | Inventory of Post Construction BMPs Track | Yes | 115 Projects / Development |
| As-Built Certifications | As-Built Certification Form Update as needed | Yes | No update or revision required |
| | As Built Certifications Track | Yes | 21 Projects / Developments |
| Annual Inspections | Annual Inspections Track | Yes | 115 Projects / Development |
| Maintenance | Maintenance Activities Track | Yes | 2 Projects / Developments requiring maintenance |

Comments:

1. Supporting documentation and information of the activities described above are included in Appendix F.

3.6. Spill Prevention and Response

| Program Component | SWMP Activity Schedule | | |
|-------------------|--|----------|---|
| | Required | Complied | Accomplished |
| Spill Prevention | Inventory of City Facilities Update as needed | Yes | 8 Facilities |
| | Facility Inspections Annually | Yes | 8 Facility Inspections |
| | SPCC Plans Update as needed | Yes | 6 SPCC Plans No update or revision required |
| | Fire and Rescue Department Training Track | Yes | 213 HazMat Awareness and Operations 244 HazMat Technician |
| | Municipal Staff Training Annually | Yes | 421 personnel |
| Spill Response | Fire and Rescue Department No. Spills / yr | Yes | 6 Spills 3 Spills entering MS4 |
| | Municipal No. Spills / yr | Yes | 114 Spills 5 Spills entering MS4 |
| | Fire and Rescue Department Training Track | Yes | 213 HazMat Awareness and Operations 244 HazMat Technician |
| | Municipal Staff Training Annually | Yes | 421 personnel |

Comments

1. Supporting documentation and information of the activities described above are included in Appendix G.
2. Detailed records and information regarding each response are maintained with the Mobile Fire and Rescue Department.

3.7. Pollution Prevention and Good Housekeeping

| Program Component | SWMP Activity Schedule | | |
|--------------------------|---|----------|---|
| | Required | Complied | Accomplished |
| SOPs | SOPs Update as needed | Yes | 15 existing SOPs |
| Municipal Facilities | Facility Inventory Update as needed | Yes | 4 Facilities |
| | Inspections Bi-Weekly | Yes | 4 Facilities 92 Inspections |
| | Inspections Annually | Yes | 15 Facilities 15 Inspections |
| Roads | Street Sweeping Track | Yes | 11,359 cy Material removed |
| | Litter Control Track | Yes | 90 Trash receptacles 4,088 Community service hours 175,984 cy Trash collected |
| | Deicing Events Events / yr | Yes | 0 events |
| Litter Collection | Public Works Track | Yes | 18.9 tons of litter |
| | Mowing Contractor Litter Collection Track | Yes | 38 tons of litter |
| Training | Training Modules Update as needed | Yes | 9 Training modules No update or revision required |
| | Training Annually | Yes | 14 Departments / Divisions trained 421 City staff trained |
| Flood Control Structures | Evaluate to include water quality As needed | Yes | No new proposed flood control structures |

Comments:

1. Supporting documentation and information of the activities described above are included in Appendix H.

3.8. Pesticide, Herbicide, and Fertilizer Application

| Program Component | SWMP Activity Schedule | | |
|-----------------------------|--|----------|---|
| | Required | Complied | Accomplished |
| SOPs | SOPs Update as needed | Yes | No update or revision required |
| Facility Inventory | No. Facilities Update as needed | Yes | 167 Facilities |
| | Facility Map Update as needed | Yes | No update or revision required |
| PHF Storage Facilities | Inventory Annually | Yes | 3 Facilities |
| | Inspections Annually | Yes | 3 Inspections |
| Certification and Licensing | Pesticide Applicator Permit 1 / 3 Years | Yes | 7 City personnel |
| Chemical Inventory | PHF Inventory at each location Update as needed | Yes | Inventory is current |
| | SDS at each location Update as needed | Yes | SDS are current |
| Chemical Use | Summary by Chemical Annually | Yes | Non-phosphorus fertilizers 1,240 lbs. ACGC 12,327 lbs. Parks and Recreation |
| | Disposal As needed | Yes | No disposal required |
| Soil Testing | Golf Course As needed | Yes | No soil samples collected |

Comments:

1. Supporting documentation and information of the activities described above are included in Appendix I.
2. The PHF Application Summary Form summarizes the daily application of PHF and is included in Appendix I.

3.9. Oils, Toxics, and Household Hazardous Waste

| Program Component | SWMP Activity Schedule | | |
|----------------------------------|---|----------|--|
| | Required | Complied | Accomplished |
| Public Education and Involvement | Website Update as needed | Yes | Locations linked to website |
| | Educational Materials Track | Yes | 5 Brochures |
| City Facilities | Inventory of City Facilities Update as needed | Yes | 6 Facilities |
| | SPCC Plans Update as needed | Yes | No updates or revisions required |
| Training | Training Modules Update as needed | Yes | 9 Training modules No update or revision required |
| | Training Annually | Yes | 14 Departments / Divisions trained 421 City staff trained |

Comments

1. Supporting documentation and information of the activities described above are included in Appendices C, G, and H.

3.10. Industrial Storm Water Runoff

| Program Component | SWMP Activity Schedule | | |
|----------------------|---|----------|--|
| | Required | Complied | Accomplished |
| Legal Authority | Storm Water Management and Flood Control Ordinance Update as needed | Yes | No update or revision required |
| Facility Inventory | NPDES Permitted Facilities Annually | Yes | 34 Individual Permitted Facilities 108 General Permitted Facilities |
| | TRI Facilities Annually | Yes | 11 Facilities |
| | Municipal Facilities Annually | Yes | 15 Facilities |
| Facility Inspections | NPDES Facilities Track | Yes | 0 Facilities |
| | TRI Facilities Annually | Yes | 0 Facilities |
| | Municipal Facilities Annually | Yes | 15 Facilities |
| | Commercial Facilities By Complaint | Yes | 10 Facilities |
| Enforcement Actions | NPDES Facilities Track | Yes | 0 Verbal Warnings |
| | Commercial Facilities Track | Yes | 4 Verbal Warning 0 Notices of Violation 1 Municipal Offense Ticket |
| Training | Training Program | Yes | Based on professional engineering / environmental experience of staff, training is not needed. |

Comments

1. Supporting documentation and information of the activities described above are included in Appendix K.

3.11. Monitoring

| Program Component | SWMP Activity Schedule | | |
|----------------------------|--|----------|--|
| | Required | Complied | Accomplished |
| Representative Monitoring | Rabbit Creek Grab Sample Bi-annual | Yes | 2 Sampling events 22 Parameters |
| | Eslava Creek Grab Sample Bi-annual | Yes | 2 Sampling events 22 Parameters |
| | Eight Mile Creek Grab Sample Bi-annual | Yes | 2 Sampling events 22 Parameters |
| Impaired Stream Monitoring | Three Mile Creek Annual | Yes | 1 Location 3 Parameters 5 Grab Samples |
| | Toulmins Spring Branch Annual | Yes | 1 Location 3 Parameters 5 Grab Samples |
| | UT to Three Mile Creek Annual | Yes | 1 Location 3 Parameters 5 Grab Samples |
| | Bolton Branch (East) Annual | Yes | 1 Location 2 Parameters 5 Grab Samples |
| | Bolton Branch (West) Annual | Yes | 1 Location 2 Parameters 5 Grab Samples |
| | Moore Creek Annual | Yes | 1 Location 2 Parameters 5 Grab Samples |
| | Halls Mill Creek Annual | Yes | 2 Locations 3 Parameters 5 Grab Samples at each location |

Comments

1. Supporting information and data for monitoring activities is provided in Appendix L.



SECTION 4

Summary of Proposed
Program Changes



4. Summary of Proposed Program Changes

4.1. SWMP Review and Update

In accordance with Part II.D. of the MS4 NPDES permit, the City has reviewed the SWMP Plan and made some administrative changes. Since the changes were administrative and no BMPs were added, changed, or deleted, seeking public input was not necessary. A copy of the updated SWMP Plan has been submitted to ADEM and posted on the City's website.

4.2. Coordination with Surrounding Municipalities

If the City relies upon another entity to perform activities described in the City's SWMP Plan, ADEM has requested that inter-jurisdictional agreements between such entities are a necessary component of this program. The City does not rely on any other entity to perform any components of the City's SWMP Plan. Therefore, the City does not need or require inter-jurisdictional agreements with any other entities to be compliant with the NPDES Permit.



SECTION 5

Fiscal Analysis

5. Fiscal Analysis

Permit Year 2022 is from 1 October 2021 through 30 September 2022. Many City Departments contribute to the City's SWMP. Since the City's budgeting process does not provide a detailed analysis of the City's effort regarding the storm water program, the gross annual cumulative budget for departments that contribute to the storm water program is summarized in Table 5.1.

Table 5.1 Fiscal Analysis

| Department | 2022 | 2023 |
|-----------------------|--------------|--------------|
| 311 | \$ 413,679 | \$426,411 |
| GIS | \$ 823,703 | \$855,358 |
| Municipal Enforcement | \$ 1,471,349 | \$1,619,287 |
| Engineering | \$ 6,951,072 | \$8,490,323 |
| Parks and Recreation | \$12,744,353 | \$13,547,514 |
| Public Services | \$26,664,061 | \$31,445,735 |
| Fire and Rescue | \$39,452,195 | \$41,713,950 |
| Total | \$88,520,412 | \$98,098,578 |

For the 2022 permit year, the City is projected to collect \$2,900,000 in storm water fees. As required by State Act 2014-439, the City is required to send the State 5% of the storm water fees collected. For the 2022 permit year, the City is projected to send \$145,000 to the state.

Comments:

1. Cost associated with some existing City programs, salaries, and/or activities that are independent of the storm water program but may provide benefit(s) to the storm water program are not included in the storm water program budget. These items and/or activities are incorporated into the individual departments' budgets.
2. FY2022 budget and FY2023 proposed annual budget are provided in Appendix M.
3. A summary of the storm water fees collected is provided in Appendix M.

