



# **Illicit Discharge Detection & Elimination PROGRAM MANUAL**

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## 1. INTRODUCTION

The Environmental Protection Agency (EPA) regulates the discharge of stormwater runoff into local water bodies through Municipal Separate Storm Sewer Systems (MS4s) that are located in Urbanized Areas (also known as “regulated areas”). The State of Maine has delegated authority for the administration of this program, and the City of Auburn is required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for stormwater discharges in the Urbanized Area from the Maine Department of Environmental Protection (MaineDEP). Under the NPDES General Permit for Storm Water Discharges from Small MS4s, also known as the Small MS4 General Permit, the City is authorized to discharge stormwater per their Stormwater Management Program (SWMP), which is developed to reduce the contamination of stormwater runoff and eliminate illicit discharges. In accordance with the Small MS4 General Permit, the SWMP consists of six components called *minimum control measures* which, when implemented, should result in a reduction in pollutants discharging into receiving waters. The minimum control measures are:

1. Public Education and Outreach;
2. Public Involvement and Participation;
3. Illicit Discharge Detection and Elimination;
4. Construction Site Stormwater Runoff Control;
5. Post-Construction Stormwater Management; and
6. Good Housekeeping and Pollution Prevention.

The Illicit Discharge Detection and Elimination (IDDE) Plan described herein will satisfy the requirements of the third minimum control measure.

### 1.1 PLAN APPLICABILITY

This IDDE Plan should be implemented in the City’s Urbanized Area. Urbanized Areas are defined by the latest United States decennial census as the land area that has a residential population of at least 50,000 and an overall population density of at least 1,000 people per square mile. **Appendix A** includes a map showing Auburn’s Urbanized Area. While the IDDE Plan is focused on the whole Urbanized Area, targeted and systematic investigations will be conducted in prioritized areas, as further described in Section 4.1.2.

### 1.2 WHAT IS AN ILLICIT DISCHARGE?

The EPA defines an illicit discharge as “any discharge to an MS4 that is not composed entirely of stormwater”; exceptions are discharges regulated by a separate NPDES permit and non-stormwater discharges considered allowable by the Small MS4 General Permit. Examples of allowable non-stormwater discharges include water line flushing, uncontaminated pumped groundwater, and footing drains.

Illicit discharges can enter the drainage system via direct connections or indirect discharges, which are defined as follows:

- A *direct* connection is any non-stormwater pipe connected to the storm drain system, such as pipe from a washing machine or floor drain, or a sewer service connection from a house. Often, these types of discharges are continuous; and



- An *indirect* discharge may come from a wide variety of sources, such as sanitary sewer overflows, infiltration into the drainage system from failed septic systems, or hazardous waste spills into an MS4. Grass clippings, leaf litter, and other solid material dumped or otherwise deposited in the storm drain system are also considered indirect illicit discharges. These are commonly intermittent or transitory discharges.

### 1.3 WHY DOES AN ILLICIT DISCHARGE MATTER?

Illicit discharges are not permitted under the MS4 permit and/or local regulations and can result in violations and fines for MS4 operators. Additionally, illicit discharges contribute elevated levels of pollutants to surface water bodies and can also contaminate groundwater. When these pollutants enter water bodies, they hinder recreational activities and harm wildlife habitats.

### 1.4 WHAT DOES THE EPA AND MAINEDEP REQUIRE MUNICIPALITIES TO DO TO DETECT AND ELIMINATE ILLICIT DISCHARGES?

In accordance with the Small MS4 General Permit, the City must develop, implement, and enforce a program to detect and eliminate illicit discharges. Under previous General Permits, the City developed an illicit discharge program, which consisted of:

- a storm sewer system map showing outfalls and receiving water bodies (Refer to Section 2 and **Appendix B**);
- the prohibition of non-stormwater discharges into the system via a regulatory mechanism (Refer to Section 3 and **Appendix D**);
- dry weather outfall inspections focused on the Logan Brook Watershed and conducting opportunistic inspections during catch basin or pipe cleaning activities to detect and address non-stormwater discharges into the system (Refer to Section 4.1.3 and **Appendix E**);
- a strategy to detect illicit discharges to the open ditch system within the Logan Brook Watershed (Refer to Section 5); and
- and an evaluation of non-stormwater discharges that are not considered significant contributors of pollutants (Refer to Section 6).

The General Permit expires on June 30<sup>th</sup> every five years. The 2013 Small MS4 General Permit was issued on July 1, 2013, and is the start of the next five year General Permit cycle. The sections of this permit that are relevant to the IDDE Program have been included in **Appendix C** for reference. Under the new General Permit, the City is required to:

- continue to enforce its non-stormwater discharge ordinance;
- refine its infrastructure data and revise the stormwater drainage map accordingly;
- revise the dry weather outfall inspection plan; and
- develop a list of septic systems in the highest priority watershed that are 20 years old or greater and which may discharge to the MS4 if the system fails, implement a drive-by evaluation and documentation program of these septic systems, and address any discharges to the MS4 from malfunctioning septic systems.

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## **1.5 PURPOSE OF THIS PLAN**

The purpose of this IDDE Plan is to establish a proactive, strategic, written program to address illicit discharges to the MS4 or to waters of the state within the City of Auburn Urbanized Area in accordance with the requirements of the 2013 Small MS4 General Permit.

The IDDE Plan contained herein builds upon the City's IDDE activities conducted under the 2008 Small MS4 General Permit and incorporates an approach to address the 2013 permit requirements. The Proposed Plan will have a five year implementation period, to begin in conjunction with the 2013 Small MS4 General Permit. This Plan is intended to assist the City of Auburn in implementing the IDDE Program in a prioritized and strategic way to find and eliminate illicit discharges. The Plan establishes documentation of possible illicit discharge detection through work orders and provides a basis for labor and capital improvement budgeting each year; it is to be used as a guide for IDDE activities and can also be used as a training tool for staff. Additionally, the Plan has considered and includes coordination with the Auburn Water and Sewerage District related to sanitary sewer surveys and prioritized sanitary sewer pipe renewal or replacement.

## 2. STORM SEWER SYSTEM MAP

The City has completed preliminary mapping of outfalls and drainage structures (catch basins, manholes, culverts, etc.) in the Urbanized Area. Over the past several years, the City of Auburn has continued to refine the storm sewer system map to include the location of all stormwater catch basins and connecting surface and subsurface infrastructure. The map has been updated regularly to reflect the results of condition evaluations and to include infrastructure attribute information (e.g. pipe size, pipe type, etc) and, where possible, depicts the direction of in-flow and out-flow pipes and the locations of all MS4 outfalls discharging to receiving waters or to an interconnected MS4 within the Urbanized Area, as stipulated in the General Permit; this map is contained in **Appendix B**. The storm sewer system map shown in **Appendix B** also includes the City “grids” used for targeted assessments, plow routes used for opportunistic inspections, and other pertinent information.

### **PROPOSED PLAN: System Mapping**

#### **1. Update map (as needed)**

**Throughout General Permit term**, the City will continue to update and improve the map as necessary to reflect attribute information, corrections or modifications, and progress made.

### 3. REGULATORY MECHANISM

The City of Auburn has developed a Non-Storm Water Discharge Ordinance. The Ordinance was on the agenda for the City Council Workshop prior to the Council Meeting on February 22, 2005. The first reading of the ordinance was on March 7, 2005, and the second reading was on March 21, 2005, at the City Council Meeting. The Ordinance was approved and went into effect on March 21, 2005. This ordinance is located in Chapter 18, Article IV – Restrictions on Discharges to the City’s Stormwater Drainage System. Additionally, the City maintains compliance with the State Plumbing Code MRSA Title 32 Section 3403-B regarding plumbing connections, the State of Maine Subsurface Wastewater Disposal Rules and citizens are required to meet Auburn Sewerage District Rules and Regulations (as amended) for sanitary sewer connections.

Auburn’s Ordinance includes language expressly prohibiting illicit discharges to the City’s stormwater drainage system. The City’s Code Enforcement Officer is designated to administer, implement, and enforce this Ordinance. **Appendix D** includes a copy of the City’s Non-Storm Water Discharge Ordinance.

## **4. ILLICIT DISCHARGE DETECTION AND ELIMINATION PLAN**

The following Plan has been based on over ten years of IDDE efforts in Auburn and incorporates the new requirements of the 2013 General Permit. The Plan is focused on the elimination of direct illicit discharges into the Auburn MS4, and therefore the waters of the state, but will continue to address indirect illicit discharges as they are detected. This Plan also emphasizes the importance of adequate employee training.

### **4.1 ILLICIT DISCHARGE DETECTION**

In previous permit cycles, the City's primary method of detecting illicit discharges has been to conduct dry weather outfall inspections in a priority watershed and opportunistic inspections of catch basins during cleaning City-wide. This Plan outlines formalized procedures for these activities and specifies grid-based follow-up assessments to confirm removal and document "clean zones" in order to avoid redundant field efforts as the program progresses and expands the IDDE program to all MS4 discharge areas within the City.

The IDDE Plan will utilize the following strategy:

1. Utilize City "plow routes" for catch basin and manhole cleaning and pipe connectivity mapping investigations. Each year one-half of the plow routes are completed for system cleaning and over the summers of 2012, 2013, and 2014 extensive pipe connectivity mapping, including dye testing has been used to refine map features. During cleaning and investigation, opportunistic inspections for illicit discharges are conducted by following the protocol outlined in Section 4.1.1.
2. Prioritize areas for targeted outfall inspections by following protocol outlined in Section 4.1.2.
3. Outfall screening and sampling assessments described in Section 4.1.3 will be utilized to conduct wet-weather and/or dry-weather sampling screening and/or to verify that illicit discharges identified during opportunistic inspections have been eliminated.
4. After 5 years, a review of investigations and abatement activities will be evaluated to identify appropriate next steps and updates to this strategy manual.

#### **4.1.1 SOP for Opportunistic Inspections**

The City will build upon its existing catch basin and manhole cleaning activities and mapping efforts. Under previous General Permits, the City utilized the Standard Operating Procedure (SOP) outlined in Volume 2 of the *GUIDELINES AND STANDARD OPERATING PROCEDURES For Stormwater Phase II Communities in Maine*.

## PROPOSED PLAN: Utilize SOP for Opportunistic Inspections

### 1. Detect Illicit Discharges

Opportunistic inspections will continue to be conducted along plow routes and during stormwater drainage system cleaning to detect illicit discharges. **Appendix E** includes a copy of the City's SOP for the Illicit Discharge Opportunistic Inspection Program. City staff who operate stormwater drainage system cleaning activities are trained in olfactory and visual detection of illicit discharges in accordance with Volume 2 of the *GUIDELINES AND STANDARD OPERATING PROCEDURES For Stormwater Phase II Communities in Maine*. See **Appendix H** for Training Materials.

Sewer or septic malfunctions, which are reported to and investigated by the City, may also lead to the discovery of illicit discharges. Illicit discharges will continue to be investigated and documented as part of the sewer or septic malfunction reporting process.

### 2. Record Keeping

If a potential illicit discharge is identified, City staff will complete a work order using City Computerized Maintenance Management System (CMMS) software and alert supervisors for further investigation and confirmation. This work order will be traceable by calendar year.

### 3. Identify Additional Problem Areas

Problem Areas for indirect illicit discharges or dumping will be identified during catch basin cleaning activities. Problem areas will be noted using catch basin cleaning forms or CMMS work order and will be targeted for further investigation, landowner notification, potential enforcement activities, and catch basin stenciling in subsequent years.

## 4.1.2 Prioritize Areas for Outfall Inspections

Under previous General Permits, the City of Auburn selected Logan Brook as the highest priority watershed, which was the area of focus for dry weather outfall inspections. In 2014, drainage areas discharging to primary MS4 outfalls were delineated as the basis for prioritization under the IDDE program. These drainage areas have a unique ID consistent with the MS4 discharge ID. These drainage areas have been evaluated using the following available data to identify potential drain system vulnerability to cross contamination of illicit connections:

- Drainage Area Land Use
- Parcel Density
- Development Age
- Sanitary Sewer System Density
- Sanitary Sewer Crossings of Drain
- Drainage Area Size

Each of the factors above was utilized for planning-level prioritization of the 152 primary MS4 discharges within the Urbanized Area and prioritization matrix is shown in **Appendix G**. Beginning in 2015, outfall screening will be conducted for High Priority drainage areas as shown in **Appendix G**. Outfall screening will provide the basis for to for further investigation or to quantify the completeness of illicit discharge abatement effectiveness.

#### **PROPOSED PLAN: Prioritize Areas for Outfall Inspections**

**1. Identify targeted investigation areas.**

Drainage areas have been evaluated for the potential for illicit discharges based on several vulnerability factors. These areas have been prioritized and will be further investigated utilizing outfall screening. Toward the end of the 2013-2018 permit cycle, drainage areas will be re-evaluated for priority based on findings from wet and dry weather screening.

#### **4.1.3 Conduct Outfall Screening**

Priority outfall (and interconnection) inspections consist of screening and sampling. The City will conduct screening at highest priority outfalls beginning in 2015. Each year 20-40 outfalls or interconnections will be screened.

Screening includes a rapid visual and olfactory inspection consistent with Chapter 11 of the Center for Watershed Protection's Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments (2004). Inspections are documented on an Outfall Inspection Form; see example form in **Appendix F**.

Both dry-weather and wet-weather screening are necessary to effectively monitor outfalls and interconnections for illicit discharges. For the purposes of this Plan, dry-weather conditions consist of no more than 0.1 inches of rainfall in the previous 48-hour period and no significant snowmelt. Wet-weather conditions should consist of at least 0.25 inches of rainfall within the preceding 24-hour period; however, precipitation events sufficient to produce any flow in outfalls to be sampled will also be acceptable for this Plan.

Base flow in storm drain systems is common and can be present at any time of year due to shallow groundwater infiltration. Therefore, it is essential to conduct outfall and interconnection dry-weather screening investigations during periods when groundwater infiltration will be minimized. Coordination with the Auburn Water District will be necessary to confirm that flows present are not the result of hydrant flushing or water line bleeders.

If flow is observed during screening, samples will be collected from the outfall (or if the outfall is inaccessible, the nearest accessible upstream drainage structure). Samples are analyzed in the field for ammonia, chlorine, and surfactants. Benchmark concentrations and instrumentation used for stormwater sampling are included in *Table 4-1 – Sampling Guidelines for Water Quality Indicator Parameters*. If flow is not observed during screening, the non-flowing condition is noted on the Outfall Inspection Form and no sample is collected. If benchmark concentrations are exceeded further investigation is initiated as described in Section 4.2.

**Table 4-1 Sampling Guidelines for Water Quality Indicator Parameters<sup>1</sup>**

Indicator Parameter	Benchmark Concentration	Instrumentation
Surfactants (as MBAS)	≥ 0.25 mg/L	CHEMetrics K-9400 Field Kit
Ammonia (NH <sub>3</sub> )	≥ 0.5 mg/L	CHEMetrics K-1510 Field Kit
Total Chlorine	> Reporting Limit	Hach Chlorine Pocket Colorimeter

**PROPOSED PLAN: Conduct Outfall Screening**

- 1. Conduct Outfall Screening**

Outfall inspections and screening will be conducted by City staff with the assistance of a third party contractor. A sample copy of the City's Outfall Inspection Form has been included in **Appendix F**. Implementation of these inspections will begin in highest priority catchments as defined in Section 4.1.2. Inspections will take place when possible but preferably when snow and vegetation do not impede access/visibility. Attempts will be made to conduct screening in dry weather but wet-weather screening will also be conducted in potential problem catchments.
- 2. Record Keeping**

If an illicit discharge is identified by the third-party contractor, the contractor will directly alert Public Works operations managers via email, who will produce a work order using city CMMS software, alerting supervisors of the need for further investigation. This email and work order will be traceable by calendar year.
- 3. Identify Additional Problem Areas**

Problem Areas for indirect illicit discharges or dumping will be identified during outfall inspection activities. Problem areas will be noted using outfall forms or CMMS work order and will be targeted for catch basin stenciling, neighborhood mailings, further investigation, or enforcement.

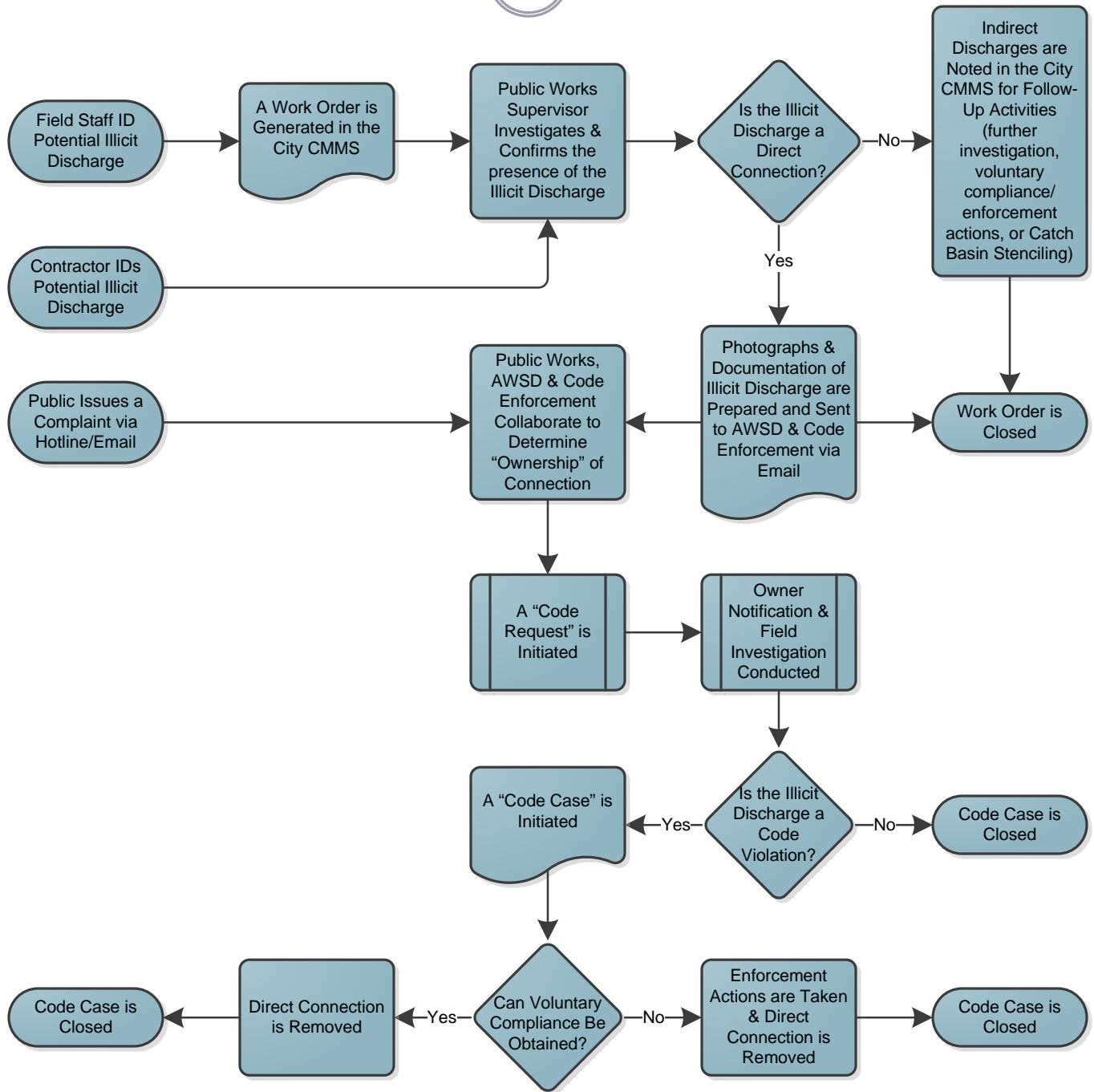
## 4.2 ILLICIT DISCHARGE ELIMINATION

When potential illicit discharges are identified via outfall screening or opportunistic inspections, the following workflow process will be enacted:

<sup>1</sup> Adapted from EPA's [Draft Bacterial Source Tracking Protocol](#) (2012)



# Illicit Discharge Elimination – Workflow Process



Legend	
Work Order Process	
Symbol	Description
	Start/End
	Process
	Decision
	Data
	Document

Once an illicit discharge has been identified by field staff or a contractor, documented by Public Works supervisors and a work order has been generated in the City CMMS, the investigator provides email documentation of direct connections to the Auburn Sewerage District and Code Enforcement with photos. Once a work order has been initiated in the City CMMS, it will not be removed until the work is complete. The investigation of an illicit discharge can also be initiated by a public complaint received via the City's hotline or email which is sent directly to the City's Code Enforcement.

Code Enforcement will collaborate with Auburn Sewerage District to determine "ownership" of the identified direct connection and initiate a "Code Request". Once a "Code Request" has been initiated, a field investigation can be conducted, which may consist of private property site entry procedures (if needed), notifying the property owner or operator of the problem, and providing the appropriate educational materials and/or a copy of the IDDE ordinance. Once a "Code Case" is initiated, a violation determination is made and Code Enforcement can then begin pursuing voluntary compliance or take enforcement actions, as discussed in greater detail in the following sections; if no Code violations are identified, then the "Code Case" is closed.

#### **PROPOSED PLAN: Illicit Discharge Elimination**

- |   |   |
|---|---|
| <b>1. Pursue Voluntary Compliance (See Section 4.2.1)</b> | City staff will respond to illicit discharges, illicit connections, or illegal dumping activities using progressive enforcement actions, focusing first on education to promote voluntary compliance. |
| <b>2. Take Enforcement Actions (See Section 4.2.2)</b>    | If voluntary compliance is not obtained, City staff will respond with increasingly severe enforcement actions.  |

The following facilities are regulated for stormwater discharges under other permits; the specified enforcement authority will be responsible for any corrective actions taken:

**Table 4-2: Exempt Facilities**

<b>Exempt Facility</b>	<b>Alternate Regulation They Are Subject To</b>	<b>Enforcement Authority</b>
<b>Maine Turnpike Authority and Maine DOT (in urbanized areas)</b>	Maine General Permit for the Discharge of Stormwater from MDOT and MTA MS4s	MaineDEP
<b>Industrial Facilities</b>	Multi-Sector General Permit for Industrial Activities	MaineDEP

#### **4.2.1 Voluntary Compliance**

The preferred approach to address illicit discharges is to pursue voluntary compliance from the property owner or responsible party using education. Often, business operators and property owners are not aware of the existence of illicit connections or activities on their properties that may constitute an illicit discharge. In these cases, providing the responsible party with information about the connection or operation, the environmental consequences, and suggestions on how to remedy the problem may be enough to secure voluntary compliance.

Education begins during the site investigation when the operation or connection is first confirmed. Property owners and operators should be notified that the problem(s) must be corrected in a timely manner and that the City will be conducting a follow-up site visit to verify compliance.

#### 4.2.1.1 Operational Problems

Property owners are responsible for correcting operational problems that are resulting in illicit discharges to the storm drainage system. This could include moving washing activities indoor or undercover, covering material storage areas, locating an appropriate discharge location for liquid wastes, or other operational modifications. Through site visits and education, the City can provide technical assistance to aid property owners in identifying and addressing the operational problems.

#### 4.2.1.2 Structural Problems

Most illicit connection problems will require a structural modification to correct the problem. Structural repairs can be used to redirect discharges such as sewage, industrial, and commercial cross-connections. Such cross-connections must be re-routed to an approved sanitary sewer system. Correcting structural problems is the responsibility of the property owner, though the City may provide technical assistance throughout the process.

#### 4.2.2 Enforcement Actions

When voluntary compliance cannot be obtained or does not produce the desired result, the City is required to pursue follow-up enforcement action. All enforcement actions will be the responsibility of the City's Planning & Permitting Department. The table below outlines detailed enforcement steps. More serious violations or continued non-compliance may warrant a more aggressive enforcement approach, such as suspending access to the storm drain, if an "imminent and substantial danger" exists.

**Table 4-3: Illicit Discharge Elimination Steps**

<b>Illicit Discharge Elimination Step</b>	<b>Details</b>
<b>Step 1 – Initial Actions</b>	<ul style="list-style-type: none"> <li>• <b>Provide landowner education</b></li> <li>• <b>Encourage voluntary compliance</b></li> <li>• <b>Provide additional staff support or technical assistance</b></li> <li>• <b>Request evidence of corrected problem (if applicable)</b></li> <li>• <b>Conduct site visit to verify compliance and completion of work</b></li> </ul>
<b>Step 2 – Follow-up Actions</b>	<ul style="list-style-type: none"> <li>• <b>Set compliance date (determined on individual incident basis)</b></li> <li>• <b>Conduct site visit to verify compliance and completion of work</b></li> </ul>
<b>Step 3 – Final Actions</b>	<ul style="list-style-type: none"> <li>• <b>Send "notice of violation" letter*, as specified in the Ordinance, indicating that unresolved issues &amp; levy fines will be referred to prosecutor</b></li> </ul>

\*Document copies of all letters

#### 4.2.2.1 Enforcement Timeline

The timeline of corrective action procedures is highly dependent on the nature of the violation and the responsiveness and cooperation from the person(s) responsible. The urgency of addressing identified

problems will be based on the nature of the pollutant in question and potential impacts to downstream waters. Compliance dates should be included in all violation notices.

If property owners are not addressing problems in a timely manner, the City may step in and perform the repairs necessary to remove an illicit connection, eliminate an illicit discharge, and/or clean-up a dumping incident. Property owners will also be responsible for reimbursing the City for any costs incurred in correcting IDDE problems.

#### **4.2.2.2 Record Keeping**

Effective enforcement procedures require comprehensive record keeping and documentation to demonstrate that all necessary steps have been followed. Throughout the investigation and corrective action activities, all information related to the incident or property in question should be well documented utilizing a CMMS work order, Code Enforcement case log, or project file.

### **4.3 EMPLOYEE TRAINING**

Employee training is an important component of Auburn's IDDE Program. City staff have been trained in various stormwater management issues throughout the General Permit term. It is important that the City staff involved with the IDDE Program be able to recognize and identify illicit discharges.

#### **PROPOSED PLAN: Annual Employee Training**

**1. Include IDDE Topics in Annual Training**

City staff responsible for implementing the IDDE Plan, in addition to those that spend time doing site visits and inspections, will be trained to identify illicit discharges. See Training Materials in **Appendix H**.

## 5. IDDE IN THE OPEN DITCH SYSTEM

### 5.1 PRIORITIZE AREAS FOR OPEN DITCH INSPECTIONS

In accordance with the 2013-2018 MS4 General Permit, the City will develop a strategy for assessing the potential impact of septic systems on the MS4 in Permit Year 3 (2016-2017). Per the prioritization methods described in Section 4.1.2, and incorporating areas not served by sanitary sewer service, the City will target priority areas for drive-by evaluation or other illicit discharge investigation. The City will identify, inspect, and map the open conveyance discharges within these priority areas and within the Urbanized Area.

### 5.2 OPEN DITCH INSPECTION RESPONSIBILITIES

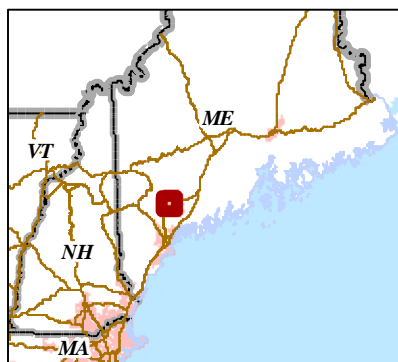
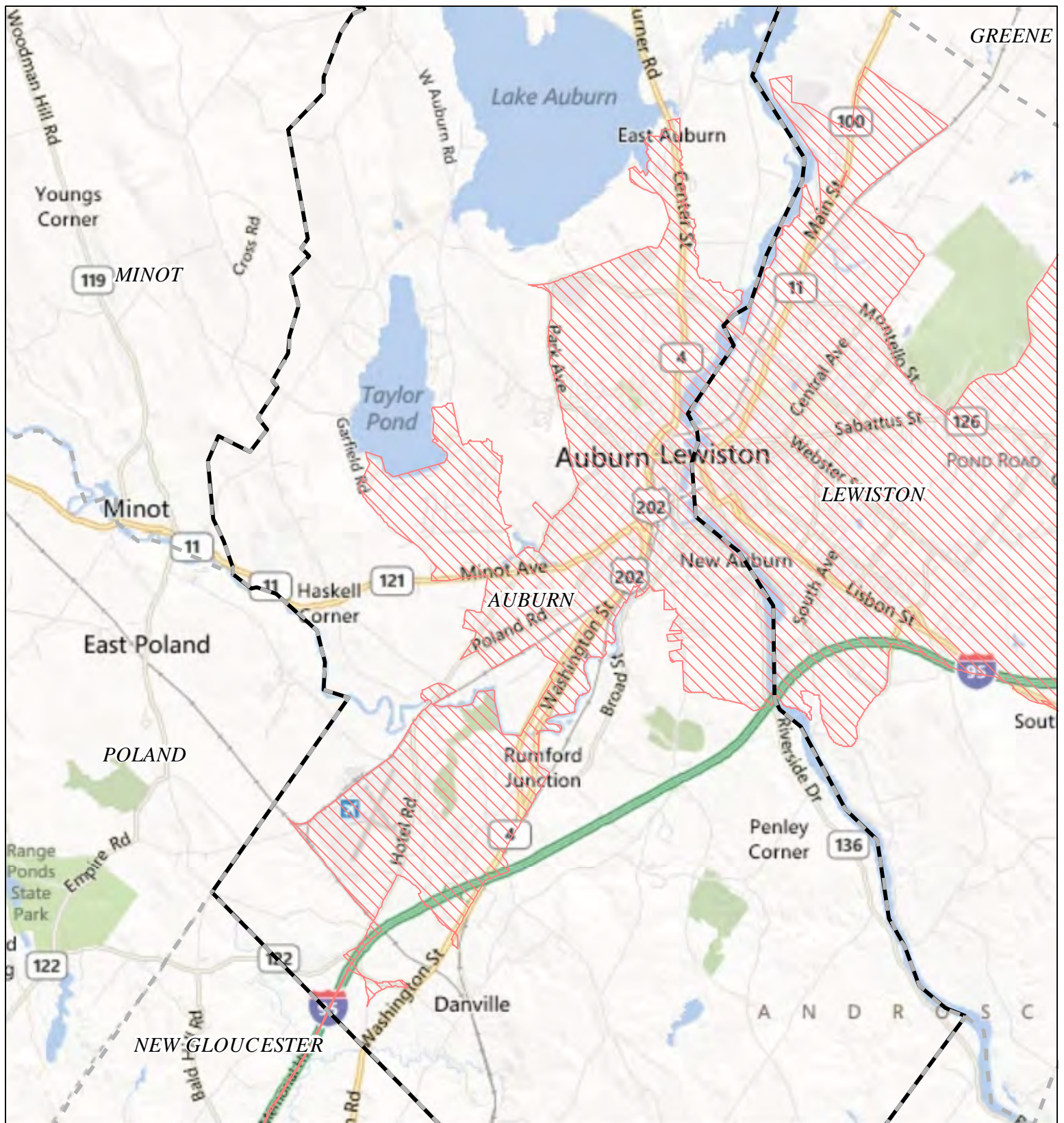
<b>PROPOSED PLAN: Open Ditch Inspection Responsibilities</b>		
<b>1.</b>	<b>Conduct Targeted Open Ditch Inspections</b>	Dry weather open ditch inspections will be conducted by City staff with the assistance of a third party contractor. Implementation of these inspections will begin in grid-based priority areas identified following the protocol in Section 4.1.2 and documented in <b>Appendix G</b> in Permit Year 3. Inspections will take place in the late fall/early winter or in the early summer of each permit year, when snow and vegetation do not impede access/visibility.
<b>2.</b>	<b>Conduct Opportunistic Open Ditch Inspections</b>	City staff will continue to inspect for illicit discharges in the open ditch system as part of the general maintenance of municipal infrastructure. The City will follow the same SOP for opportunistic IDDE inspection activities outlined in Section 4.1.1 while conducting mapping activities and maintenance on the open ditch system. Septic system failures are included in the City's sewer malfunction reports and will be investigated for illicit discharges to the open ditch system.
<b>3.</b>	<b>Employee Training (see Section 4.3)</b>	Train responsible City staff on the open ditch inspection protocol as part of the Annual Employee Trainings.

## 6. PERMITTED NON-STORMWATER DISCHARGES

The Small MS4 General Permit authorizes the following non-stormwater discharges, provided they do not contribute to a violation of water quality standards as determined by the Department:


1. Landscape irrigation;
2. Diverted stream flows;
3. Rising ground waters;
4. Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20));
5. Uncontaminated pumped ground water;
6. Uncontaminated flows from foundation drains;
7. Air conditioning and compressor condensate;
8. Irrigation water;
9. Flows from uncontaminated springs;
10. Uncontaminated water from crawl space pumps;
11. Uncontaminated flows from footing drains;
12. Lawn watering runoff;
13. Flows from riparian habitats and wetlands;
14. Residual street wash water;
15. Hydrant flushing and firefighting activity runoff;
16. Water line flushing and discharges from potable water sources;
17. Individual residential car washing; and
18. De-chlorinated swimming pool discharges.

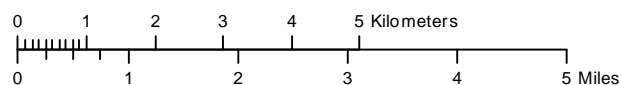
## **APPENDIX A: MAP OF URBANIZED (REGULATED) MS4 AREA**



## NPDES Phase II Stormwater Program Automatically Designated MS4 Areas

### **Auburn ME**

 Regulated Area (2000 + 2010 Urbanized Area)



Town Population: 23055  
Regulated Population: 18074  
(Populations estimated from 2010 Census)



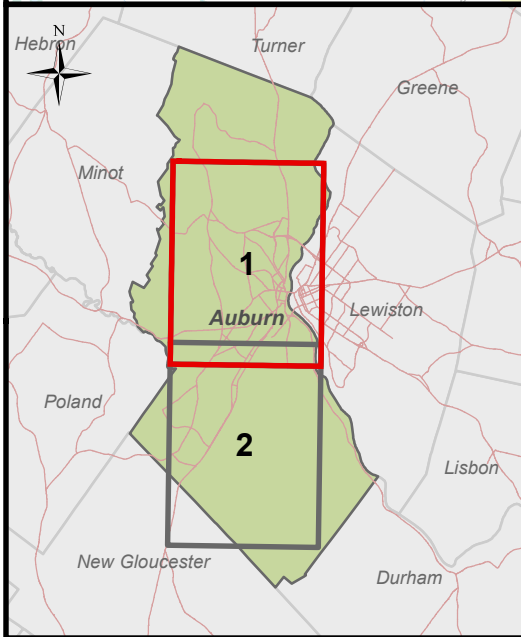
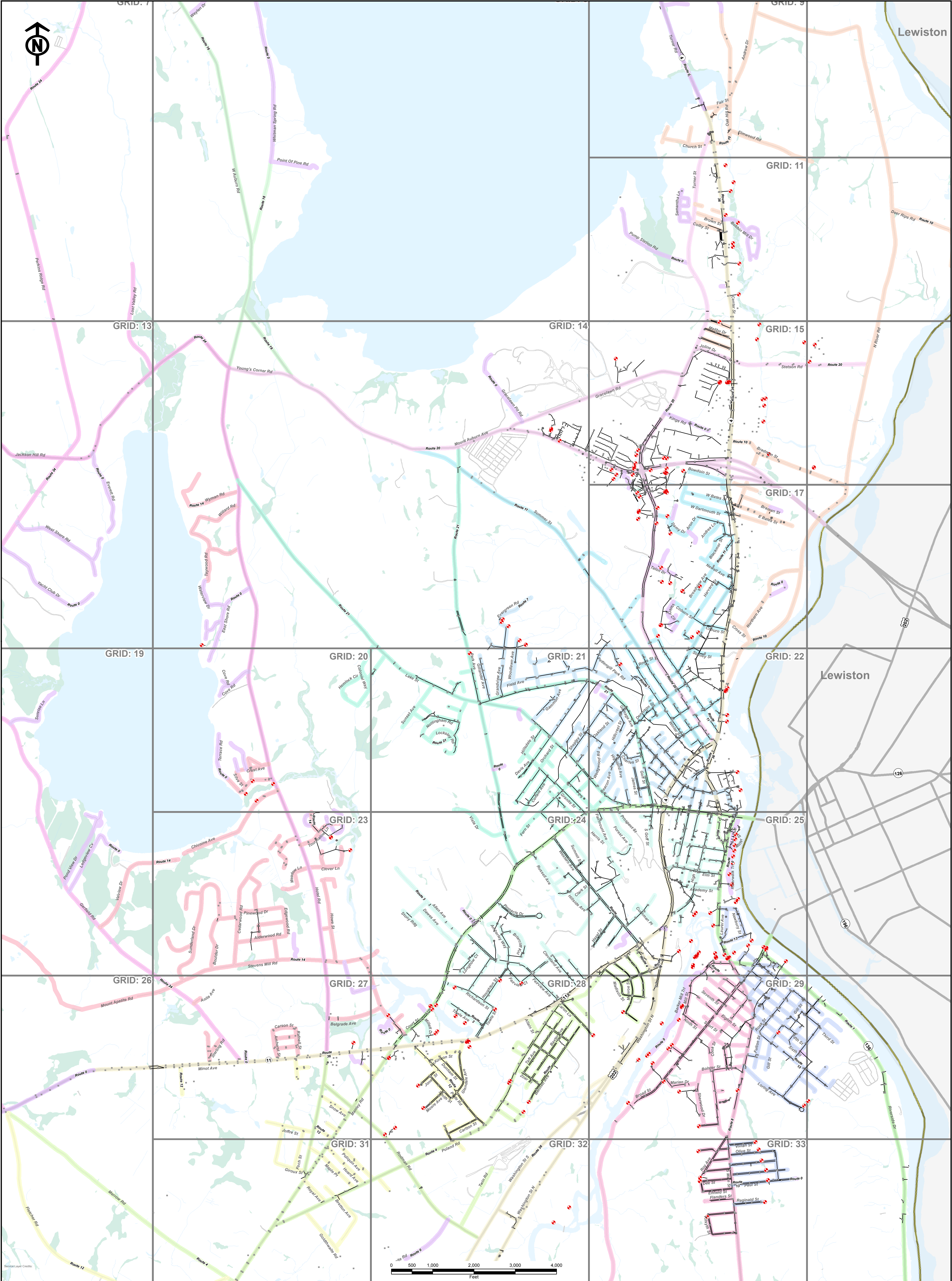
Urbanized Areas, Town Boundaries:  
US Census (2000, 2010)  
Base map © 2010 Microsoft Corporation  
and its data suppliers

US EPA Region 1 GIS Center Map #8824, 11/19/2012



## **APPENDIX B: MS4 STORM SEWER SYSTEM MAP**





**LEGEND**

Map Grid	Catchbasin	Outfall	City Boundary	Roads	Lake or Pond
	Drainage Manhole	Drainage Pipe	ME DOT ROADS	Hydrography	River
					Swamp or Wetland

**PLOW ROUTES**

Route 0	Route 1	Route 3	Route 4	Route 6	Route 7	Route 8	Route 10	Route 11	Route 12	Route 13	Route 14	Route 16	Route 20	Route 21	Route 24	Route 25	Route 28	Route 35	Route 36
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**Auburn Drainage System**

**IDDE Assessment Areas**

**Figure 1 of 2**

DRAWN BY: JS

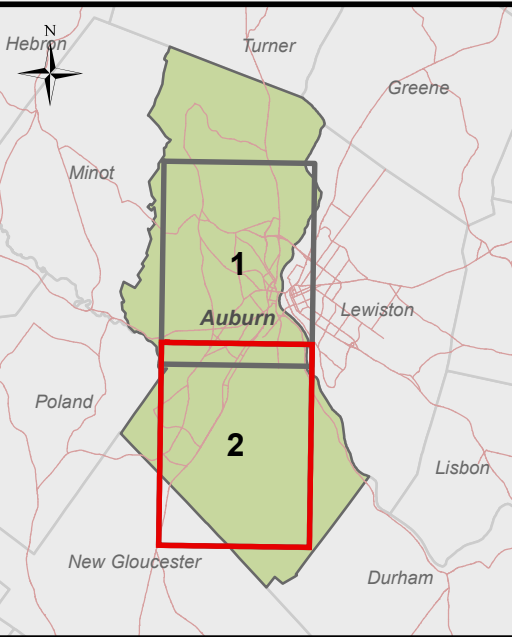
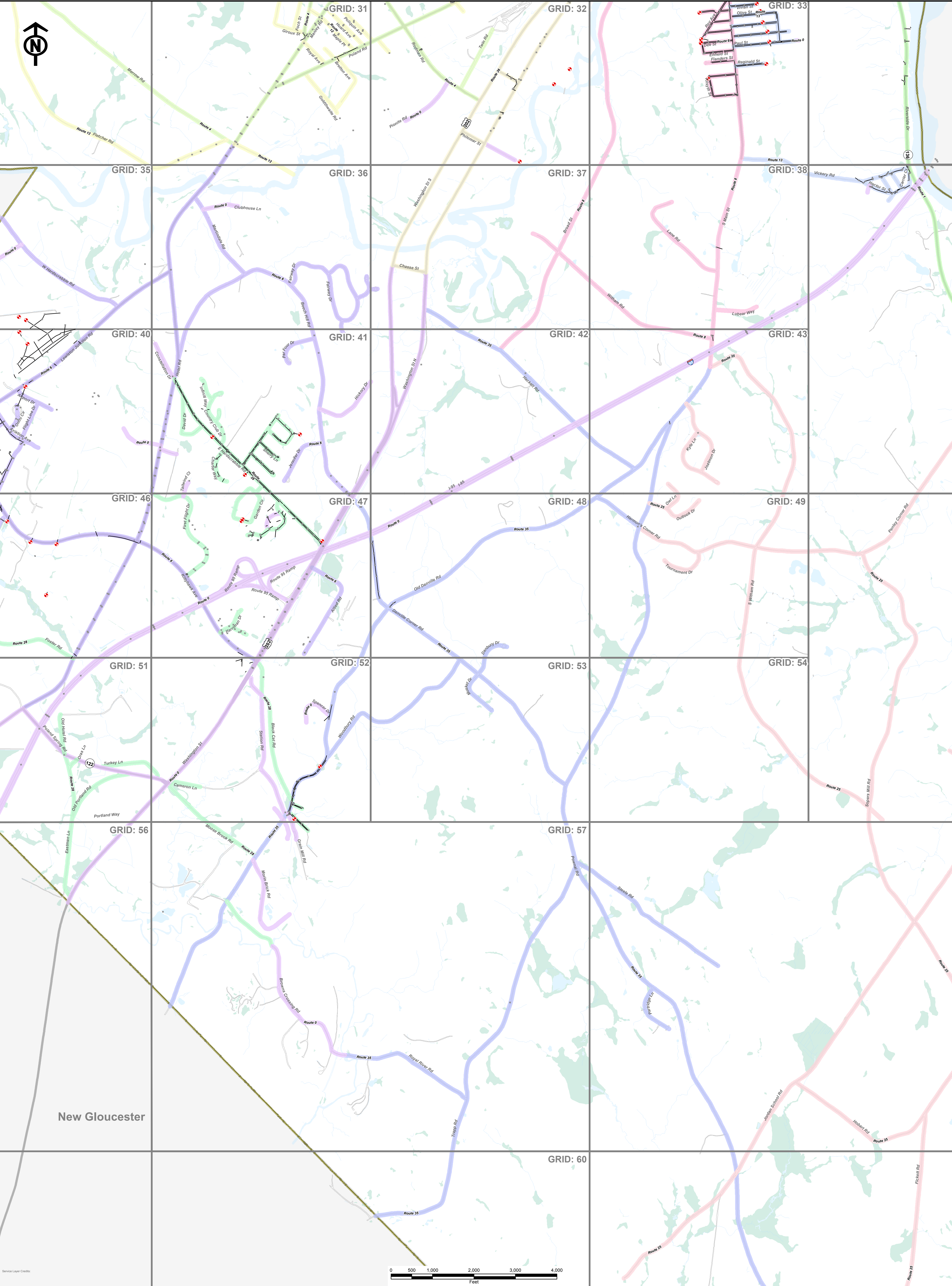
DATE: February, 2014

41 Hutchins Drive  
Portland, Maine 04102  
207.774-2112 | www.woodardcurran.com  
COMMITMENT & INTEGRITY DRIVE RESULTS

SCALE: 1" = 1,000'

DOC: IDDE\_AssessmentAreas.mxd





**LEGEND**

Map Grid	Catchbasin	Outfall	City Boundary	Roads	Lake or Pond
Drainage Manhole	Drainage Pipe	ME DOT ROADS	Hydrography	River	Swamp or Wetland

**PLOW ROUTES**

Route 0	Route 1	Route 3	Route 4	Route 6	Route 7	Route 8	Route 10	Route 11	Route 12	Route 13	Route 14	Route 16	Route 20	Route 21	Route 24	Route 25	Route 28	Route 35	Route 36
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**Auburn Drainage System**

**IDDE Assessment Areas**

Figure 2 of 2

DRAWN BY: JS

DATE: February, 2014

41 Hutchins Drive  
Portland, Maine 04102  
207.774-2112 | www.woodardcurran.com  
COMMITMENT & INTEGRITY DRIVE RESULTS

**WOODARD  
CURRAN**

SCALE: 1" = 1,000'

DOC: IDDE\_AssessmentAreas.mxd



## **APPENDIX C: APPLICABLE SECTIONS FROM GENERAL PERMIT FOR THE DISCHARGE OF STORMWATER FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS**

### 3. Illicit Discharge Detection and Elimination.

- a. **Required Strategies.** Each permittee shall develop, implement and enforce a program to detect and eliminate illicit discharges and non-stormwater discharges, as defined in 06-096 CMR 521(9)(b)(2), except as provided in Part IV(H)(3)(c) of this permit.
- i. By June 30, 2018, Permittees not subject to the 2008 MS4 General Permit shall develop a watershed based storm sewer system infrastructure map or series of maps for its regulated area. The map(s) must show the location of all stormwater catch basins, connecting surface and subsurface infrastructure and depict the direction of in-flow and out-flow pipes, and the locations of all discharges from all stormwater outfalls operated by the regulated small MS4 to receiving waters or to an interconnected MS4. Each catch basin must be uniquely identified to facilitate control of potential illicit discharges, and to ensure proper operation and maintenance of these structures. For each outfall, the following information must be included: type (e.g. culvert or ditch), material, size of conveyance, the name and location of the nearest named waterbody to which the outfall eventually discharges. Permittees subject to the 2008 MS4 General Permit shall continue to keep their map(s) current and ensure that maps are reviewed for any updates at least annually.
- ii. Permittees not subject to the 2008 MS4 General Permit shall develop and implement a non-stormwater discharge ordinance which effectively prohibits non-stormwater discharges and stipulates the implementation of appropriate enforcement procedures and actions by no later than January 10, 2015. Permittees subject to the 2008 MS4 General Permit shall to the extent allowable under State or local law, continue to implement, and provide annual reporting of the permittee's non-stormwater discharge ordinance that effectively prohibits, unauthorized non-stormwater discharges into the permittee's storm sewer system.
- iii. Permittees not subject to the 2008 MS4 General Permit shall develop a prioritized dry weather outfall inspection plan by no later than June 30, 2014. This dry weather outfall inspection plan must pertain to a watershed or sub-watershed that the permittee has identified as having the greatest potential threat to the receiving water. (See *Guidelines and Standard Operating Procedures For Stormwater Phase II Communities in Maine* volumes 1 and 2) The SOP can be obtained from the following web site <http://www.thinkbluemaine.org/docs/index.htm> under the illicit discharge detection and elimination section. Permittees subject to the 2008 MS4 General Permit shall continue to implement its prioritized dry weather outfall inspection plan based on drainage areas such as an urban impaired stream watershed, or based on a watershed or sub-watershed that the permittee has identified as having the greatest potential threat to the receiving water. (See *Guidelines and Standard Operating Procedures For Stormwater Phase II Communities in Maine* volumes 1 and 2) The SOP can be obtained from the following web site. <http://www.thinkbluemaine.org/docs/index.htm> under the illicit discharge detection and elimination section.

Maine Department of Environmental Protection – 07/01/ 2013  
General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

Permittees not subject to the 2008 MS4 General Permit shall conduct a dry weather inspection of MS4 outfalls that discharge to the two highest priority sub-watersheds, as approved by the Department. In subsequent permit years, dry weather inspections must be expanded to other sub-watersheds within the permittee's two highest priority watersheds as approved by the Department. The municipality must have a defined procedure/policy or protocol in place that details the steps that must be taken when an illicit discharge is identified during these inspections to locate the source of the illicit discharge and eliminate it. Permittees subject to the 2008 MS4 General Permit shall revise their outfall inspection plan and continue conducting dry weather inspections in different watersheds or sub-watersheds as approved by the Department and evaluate discharges for illicit connections.

- iv Permittees not subject to the 2008 MS4 General Permit shall, by no later than June 30, 2018, develop and implement a strategy to detect any illicit discharges to their open ditch system within their highest priority watershed, to the extent allowable under State or local law. Permittees subject to the 2008 MS4 General Permit shall continue to implement an illicit discharge/illicit connection detection program based upon a schedule approved by the Department.
- v By June 30, 2016, each permittee shall develop a list of septic systems in its highest priority watershed that are 20 years old or greater and which may discharge to the MS4 if the system fails. By June 30, 2017, each permittee shall implement a drive-by evaluation and documentation program of septic systems in its highest priority watershed that are 20 years old or greater and which have the potential to discharge into the MS4. This septic system inspection and documentation program must include a mechanism for addressing any discharges to the MS4 from malfunctioning septic systems.
- b. **Suggested:** Each permittee may develop and implement an annual municipal household hazardous waste collection, or participate in an annual regional household hazardous waste collection program, or provide some other mechanism for residents to dispose of household hazardous waste.
- c. **Non-stormwater discharges.** This permit authorizes the following non-stormwater discharges provided they do not contribute to a violation of water quality standards as determined by the Department. These discharges must be addressed in the Plan if they are identified by the permittee as significant contributors of pollutants to the regulated small MS4.
  - landscape irrigation
  - diverted stream flows
  - rising ground waters
  - uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20))
  - uncontaminated pumped ground water
  - uncontaminated flows from foundation drains
  - air conditioning and compressor condensate
  - irrigation water
  - flows from uncontaminated springs
  - uncontaminated water from crawl space pumps
  - uncontaminated flows from footing drains
  - lawn watering runoff
  - flows from riparian habitats and wetlands
  - residual street wash water (where spills/leaks of toxic or hazardous materials have not occurred, unless all spilled material has been removed and detergents are not used), and

Maine Department of Environmental Protection – 07/01/ 2013  
General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems

- hydrant flushing and firefighting activity runoff
  - water line flushing and discharges from potable water sources
- individual residential car washing
- dechlorinated swimming pool discharges

## **APPENDIX D: NON-STORM WATER DISCHARGE ORDINANCE**



AUBURN SEWERAGE DISTRICT  
Auburn, Maine  
RULES AND REGULATIONS

---

ADOPTED BY THE  
TRUSTEES OF THE AUBURN SEWERAGE DISTRICT  
ON MAY 10, 1976

AMMENDED BY THE  
TRUSTEES OF THE AUBURN SEWERAGE DISTRICT  
ON FEBRUAR 16, 2010

S:\DISTRICT POLICIES\ASD Rules& Regulations.doc

# **AUBURN SEWERAGE DISTRICT**

## **Rules and Regulations** **Covering Discharge of Wastewater, Drainage, Substances or** **Wastes**

### **ARTICLE I**

#### Definitions:

1. "Applicant" and/or "Owner" shall mean any person requesting approval to discharge domestic or industrial wastewater into the facilities of the District.
2. "Authority" shall mean Lewiston-Auburn Water Pollution Control Authority or its duly authorized representative.
3. "BOD" (denoting Biochemical Oxygen Demand) shall mean the quantity of oxygen utilized in the biochemical oxidation of the wastewater under standard laboratory procedure in five (5) days at 20 C, expressed in milligrams per liter (mg/l).
4. "Board" of "Trustees" shall mean the Board of Trustees of the Auburn Sewerage District or its duly authorized representative.
5. "Combined Sewer" shall mean a sewer receiving both wastewater and storm or surface water.
6. "Domestic Wastewater" shall mean the liquid wastes and liquid borne wastes discharged from the sanitary conveniences such as toilets, washrooms, urinals, sinks, showers, drinking fountains, laundry rooms, kitchens, cafeterias and floor drains essentially free of industrial wastes or toxic materials.
7. "E.P.A." shall mean the Environmental Protection Agency of the U. S. Government.
8. "Excessive" shall mean amounts of concentrations of a constituent of a wastewater which in the judgment of the Authority will cause damage to any sewerage facility, which will be harmful to a wastewater treatment process, which cannot be removed in the wastewater treatment works to the degree required to meet the limiting stream classification standards of the Androscoggin River or the discharge requirements of EPA which can otherwise endanger life, limb, or public property, and/or which can constitute a nuisance.

9. "Facilities" shall include structures and conduits for the purpose of treatment, neutralizing, stabilizing, or disposal of domestic wastewater and/or industrial or other wastewaters as-are disposed of by means of such structures and conduits including treatment and disposal works, necessary intercepting, outfall, and outlet sewers, and pumping stations integral to such facilities with sewers, equipment, furnishings thereof and other appurtenances connected therewith.
10. "Garbage" shall mean the animal and vegetable wastes resulting from the handling, preparation, cooking, and serving of food. It is composed largely of biodegradable organic matter and its natural moisture content.
11. "Properly Shredded Garbage" shall mean garbage that has been shredded to such a degree that all particles will be carried freely under the flow conditions normally prevailing in public sewers, with no particle greater than one-half (1/2) inch (1.27 centimeters) in any dimension.
12. "Industrial Wastewater" shall mean water in which the wastes from industrial manufacturing processes, laboratory, trade or business predominates as distinct from domestic wastewater.
13. "Industry" shall mean an establishment with facilities for testing, trade, or manufacturing purposes.
14. "Person" shall mean any individual, firm, company, association, society, corporation, group, trust, or governmental authority.
15. "pH" shall mean the reciprocal of the logarithm (to the base ten) of the hydrogen ion concentration in grams per liter of solution.
16. "Receiving Waters" shall mean any watercourse, river, pond, ditch, lake, aquifer, or other body of surface or groundwater receiving discharge of wastewaters.
17. "Public Sewer" shall mean a sewer in which all owners of abutting properties have equal rights, and is controlled by public authority.
18. "Domestic Sewer" shall mean a sewer which carries domestic wastewater and to which storm, surface and groundwater are not intentionally admitted.
19. "Sewer" shall mean a pipe or conduit for carrying wastewater.
20. "Shall" is mandatory; "May" is permissive.
21. "Slug" shall mean any discharge of water or wastewater which in concentration of any given constituent or in quantity of flow exceeds for any period of duration longer than

fifteen (15) minutes, more than five (5) times the average twenty-four (24) hour concentration, or flow, during normal operation.

22. "Spill" shall mean the release, accidents or otherwise of any material not normally released to the facilities, which by virtue of its volume, concentration or physical or chemical characteristics creates a hazard to the facilities, their operation or their personnel. Such characteristics shall include, but are not limited to volatile, explosive, toxic or otherwise unacceptable materials.
23. "Storm Drain" shall mean a pipe or conduit for conveying rainwater, groundwater, subsurface water, condensate, cooling water, or other similar discharge to a storm drain or combined sewer.
24. "Superintendent" shall mean the Superintendent of the Auburn Sewerage District or his authorized agent or representative.
25. "Suspended Solids" shall mean solids that either float on the surface of, or are in suspension in water, wastewater, or other liquids, and which are removable by laboratory filtering, and are referred to as nonfilterable residue in the laboratory test prescribed in "Standard Methods for the Examination of Water and Wastewater".
26. "Wastes" shall mean substances in liquid, solid or gaseous form that can be carried in water.
27. "Wastewater" shall mean the spent water of a community and may be a combination of the liquid and water-carried wastes from residences, commercial buildings, industrial plants, and institutions, together with any groundwater, surface water, and stormwater that may be present.
28. "Wastewater Treatment Works" shall mean any arrangement of devices and structures used for treating wastewater.
29. "Wastewater Works" shall mean all structures, equipment, and processes for collecting, pumping, treating, and disposing of wastewater.

## **ARTICLE II**

### **Building Sewers and Connections:**

1. No unauthorized person shall uncover, make any connection with or opening into, use, alter, or disturb any public sewer or appurtenance thereof, without first obtaining a permit from the Superintendent.
2. Application for Permits to connect or disconnect with any public sewer or drain must be made to the Superintendent on a form supplied by him. It must be accompanied by a copy of the applicant's plumbing permit. The application must be signed by the owner of the premises to be connected, or his attorney. All applications must be made prior to the

commencement of any work and be accompanied by a five dollar (\$5.00) connection fee.

3. Each application shall include an agreement by the owner to abide by all rules and regulations of the Auburn Sewerage District.
4. All applicants for permits for sewer connections involving industrial wastewater, in addition to compliance with these rules and regulations, shall also file application for permit to discharge wastes to the facilities of the Lewiston-Auburn Water Pollution Control Authority. Such application shall be made directly to the Authority, a minimum of 45 days prior to such discharge, on forms provided by the Authority with a copy to the Auburn Sewerage District.
5. The applicant for the building sewer permit shall notify the Superintendent of the Auburn Sewerage District when the building sewer is ready for inspection and connection to the public sewer. The connection shall be made under the supervision of the Superintendent of the Auburn Sewerage District or his representative.
6. All costs and expenses incident to the installation and connection of the building sewer shall be borne by the owner. The owner shall indemnify the Auburn Sewerage District from any loss or damage that may directly or indirectly be occasioned by the installation of the building sewer.
7. A separate and independent building sewer shall be provided for every building; except where one building stands at the rear of another on an interior lot and no private sewer is available or can be constructed to the rear building through an adjoining alley, court yard, or driveway; the building sewer from the front building may be extended to the rear building and the whole considered as one building sewer.
8. All excavations for building sewer installations shall conform to the City of Auburn's Street Opening Ordinance and requirements.
9. The connection of the building sewer into the public sewer shall conform to the requirements of the building code and plumbing code of the City of Auburn and the State of Maine, and these rules and regulations. All connections shall be watertight and gastight. Individual homeowners are responsible for the maintenance and repair of their house connections, which include the lines that run from the building to the District's line that is normally located in the street.
10. No person shall dismantle or move any building in the City having a service entrance into a public sewer without first having sealed the area of the entrance of the service into such building with a masonry plug. If, upon examination by the Superintendent of the Auburn Sewerage District the sewer service is found to be unserviceable, the owner shall remove such service and seal the opening at the main.

11. Old building sewers may be used in connection with new buildings only when they can be shown by the applicant to meet all requirements of this ordinance.
12. Permits to connect with a sewer may at any time be revoked and annulled by the Superintendent for any violation of these rules and regulations. All parties in interest shall be held to have waived the right to claim damages on account of such revocation provided that such revocation shall be annulled on compliance with these rules and regulations.

### **ARTICLE III**

#### **Use of Public Sewers:**

1. No person shall discharge or cause to be discharged any storm water, surface water, groundwater, roof runoff, subsurface drainage, cooling water, or unpolluted industrial process water, to any domestic sewer. Existing plumbing systems not meeting this requirement will be allowed until such time as repairs or renovations of the existing plumbing system make separation feasible.

Storm water and all other unpolluted drainage shall be discharged to storm drains or to a natural outlet approved by the Superintendent. Industrial cooling water or unpolluted process water may be discharged upon approval of the Superintendent to storm drains or natural outlets.

In areas where the sewer system consists of combined sewers or where connections of downspouts, surface drains, and other connections of unpolluted water to the wastewater system have been allowed the Auburn Sewerage District:

- (a) shall permit no new construction of combined wastewater and stormwater drainage systems on real properties after these rules and regulations have been adopted. New wastewater and storm water drainage service connections shall be kept separated;
- (b) wherever feasible, shall reduce or eliminate storm drain connections that permit the discharge into existing wastewater works of waters not containing domestic or industrial wastewaters;
- (c) shall require the joints and openings of all domestic wastewater systems constructed after official adoption of these rules and regulations shall be made watertight to prevent excess infiltration or exfiltration;
- (d) where circumstances make compliance with (1) above impractical according to the judgment of the Board of Trustees of the Auburn Sewerage District, then the Board may approve a plan for discharge of said waters listed in (1) above, in an alternate manner, taking into consideration the existing sewer system, the affect of

the plan on the environment of the area and on the sewer system of the Auburn Sewerage District

2. No person shall discharge or cause or allow to be discharged into any facility under the control of the Auburn Sewerage District or the Authority, the following described substances, materials, waters, or wastes if in the opinion of the District, or the Authority or its Superintendent, such substances, materials, waters, or wastes are in excessive amounts or concentrations.

Unless allowed under Art. III 3 of these rules and regulations wastewaters and wastes considered to contain excessive constituents or characteristics as determined by the Authority and the Auburn Sewerage District and therefore are prohibited, include:

- (a) Any wastewaters containing toxic or poisonous liquids gases, or solids in excessive quantity, either singly or by interaction with other wastes.
- (b) Any wastewater, liquid, or vapor having a temperature higher than one hundred fifty (150°F).
- (c) Any wastewaters containing caustic alkalinity, calculated as  $\text{CaCO}_3$  (calcium carbonate), in excess of 100 milligrams per liter or in volumes which may be excessive.
- (d) Any wastewaters having a pH lower than 5.5 or higher than 9.5 or having any other corrosive property capable of causing damage or hazard to structures, equipment, process or personnel at the wastewater works.
- (e) Any wastewaters containing fats, waxes, grease, or oils whether emulsified or not, in excess of one hundred (100) mg/l or containing substances which may solidify or become viscous at temperatures between thirty-two (32°F) and one hundred fifty (150°F).
- (f) Any gasoline, benzene, naptha, fuel oil, or other flammable or explosive liquid, solid, or gas.
- (g) Any solid or viscous substances in such quantities or of such size to be capable of causing obstruction to the flow in sewers, or other interference with the proper operation of the wastewater works, such as, but not limited to, ashes, cinders, etc.
- (h) Any garbage that has not been "properly shredded" (see Article I, Section j)
- (i) Any wastewaters containing excessive amounts of iron, chromium, copper, zinc, mercury, mineral acid, and similar objectionable or toxic substances.

- (j) Any wastewaters containing phenols or other taste or odor producing substances in excessive amounts.
  - (k) Any radioactive wastes or isotopes in excessive amounts of such half-life or concentration as may exceed limits established in applicable State or Federal regulations.
- (1) Any wastewaters containing:
- (1) An average concentration of suspended solids in excess of four hundred (400) milligrams per liter (mg/l) or an average concentration of excessive dissolved solids (such as, but not limited to, sodium chloride and sodium sulfate) of six hundred (600) milligrams per liter (mg/l).
  - (2) Materials which cause excessive discoloration (such as, but not limited to, dye wastes and vegetable tanning solutions).
  - (3) An average concentration of BOD in excess of five hundred (500) milligrams per liter (mg/l) or material which cause unusual chemical oxygen demand, or chlorine requirements.
  - (4) Materials in such concentration as to constitute "slugs" as defined under Article I.
  - (5) Materials which are not amenable to treatment or reduction by the wastewater treatment processes employed, or are amenable to treatment only to such a limited degree that the wastewater treatment plant effluent cannot meet the requirements of other agencies having jurisdiction over discharge to the receiving waters.
3. If any wastewaters or wastes are discharged, or are proposed to be discharged to the public sewers, containing excessive substances or possess excessive characteristics the District may:
- (a) Reject the wastewaters or the wastes.
  - (b) Require that pretreatment of wastewaters or wastes be provided to modify them to an acceptable condition for discharge to the public sewers, and/or
  - (c) Require control over the quantities and rates of discharge of the wastewaters or the wastes.
  - (d) Require a payment to cover the added costs (surcharge) of handling and treating the wastes not covered by the regular Sewer Service Charge established by the Trustees of the Auburn Sewerage District.
4. Grease, oil and sand interceptors shall be provided when, in the opinion of the Board of



Trustees of the Auburn Sewerage District or the Authority they are necessary for the proper handling of liquid wastes containing grease in excessive amounts, or any flammable wastes, sand, or other harmful ingredients. All interceptors shall be of a type and capacity approved by the Board of Trustees of the Auburn Sewerage District and the Authority, and shall be located as to be readily and easily accessible for cleaning and inspection.

When preliminary treatment or flow-equalizing facilities are provided for any waters or wastes, they shall be maintained continuously in satisfactory and effective operation by the owner at his expense.

5. When required by the Board of Trustees of the Auburn Sewerage District or the Authority, the owner of any property served by a public sewer carrying industrial wastes shall install a suitable control structure and wastewater flow measuring and monitoring device in the building sewer to facilitate observation, sampling and measurement of the wastes. Such structure and measuring devices, when required, shall be accessible and safely located and shall be constructed in accordance with the plans approved by the Board of Trustees of the Auburn Sewerage District and the Authority. The structure and flow measuring device shall be installed by the owner at his own expense and shall be maintained by him so as to meet the standards set by the Board of Trustees of the Auburn Sewerage District and the Authority at all times.
6. The applicant shall provide such works for the preliminary treatment of the wastewater, drainage, substances or wastes as may be required to carry out the purpose of these rules and regulations by the Auburn Sewerage District and the Authority, and that the applicant will permit duly authorized representatives of the Auburn Sewerage District or the Authority to enter the premises of the industry to sample and measure wastewaters, as needed to check characteristics of the wastewaters, when so directed by the Authority. Applications for pre-treatment facilities are to be accompanied by plans, specifications and other pertinent information relating to these facilities; along with data showing essential characteristics of all wastewater outlets, analyses of existing wastewater, and statements as to existing and expected average and maximum wastewater flows. All of this must be submitted to and approved by the Auburn Sewerage District and the Authority prior to initiating discharge into facilities of the Authority or the Auburn Sewerage District. Where preliminary treatment facilities are provided for any waters or wastes, they shall be maintained continuously in satisfactory and efficient operation by the owner at his expense.
7. All measurements, tests and analyses of the characteristics of the waters and wastes to which reference is made in Sec. 12 shall be determined in accordance with the "Standard Methods for the Examination of Water and Sewage" and shall be determined at the control structure provided for in Sec. 5, or upon suitable samples taken at the control structure. In the event that no special structure has been required, a control structure shall be considered to be the nearest downstream manhole to the public sewer from the point at which the building sewer is connected.

8. Any person found to be violating or in violation of any provision of this article shall be served by the Auburn Sewerage District, with a written notice stating the nature of the violation and providing a reasonable time limit, as determined by the Auburn Sewerage District for the satisfactory correction thereof. The offender shall, within the period of time stated in the notice, permanently cease all such violations.
9. Any person violating any of the provisions of this article shall become liable to the Auburn Sewerage District for any expense, loss or damage occasioned by the Auburn Sewerage District by reason of such violation.
10. If deemed necessary by the Auburn Sewerage District or the Authority, each applicant shall submit an annual report on the first of July each year, or such time as designated by the Authority, to the Authority, with a copy to the Auburn Sewerage District, containing information as to the minimum, average and peak flows of industrial wastewater discharges during the previous year and at time or times designated by the Authority; accompanied by designated analyses of wastewater samplings taken in an acceptable manner at approved times during the flow measuring periods.

Each applicant will be responsible, at his own expense, to collect and analyze wastewater from his property in a manner prescribed by the Auburn Sewerage District.

11. No statement contained in this article shall be construed as preventing any special agreement or arrangement between the Auburn Sewerage District and any industrial concern whereby an industrial waste of unusual strength or character may be accepted by the Auburn Sewerage District for treatment, subject to payment therefor by the industrial concern.
12. Measurement and analyses of industrial wastes are to include but not necessarily be limited to items from the following list where applicable. The analyses are to be conducted in accordance with the methods prescribed in the latest edition of "Standard Methods for the Examination of Water and Wastewater". If any item is not applicable, it shall be so stated on the report of the measurements and the reason for deletion stated.

#### Physical Parameters

Flow  
pH  
Temperature  
Color  
Specific conductance

#### Chemical Parameters

Total solids  
Total volatile solids  
Total suspended solids  
Total Dissolved solids  
Acidity

Alkalinity  
 5-day BOD  
 COD  
 Oil and Grease  
 Chloride  
 Sulfate  
 Sulfide  
 Phenols  
 NH<sub>3</sub> (as N)  
 NO<sub>3</sub> (as N)  
 NO<sub>2</sub> (as N)  
 Kjeldahl Organic Nitrogen (as N)  
 Ortho-phosphorous (as P)  
 Total phosphorous  
 Cr, Cu, Fe, Cd, Pb, Mn, Zn, F, As, Hg

#### ARTICLE IV

##### Sewerage System User Charge

1. Each person, firm, or corporation discharging wastewater to a public sewer shall be subject to a sewer service charge. The sewer service charge shall be based on the quantity, strength and characteristics of the wastewater discharge to the public sewer.

All rates shall be established as set forth in Section 8 of the Private & Special Laws of 1917 as amended, an Act to create the Auburn Sewerage District.

2. Where the strength or characteristics of wastewater accepted into the public sewers exceeds the standards set forth below, and subject to the condition set forth in Sec. 2, a surcharge shall be added to the normal sewerage use charge. For the purpose of fixing surcharge rates, the characteristics indicating surchargeable wastewater strength are:

Suspended Solids	in excess of 300 mg/l
Biochemical Oxygen Demand	in. excess of 250 mg/l

The Auburn Sewerage District may adjust these surchargeable characteristics and the surcharge levels whenever necessary.

This section does not interfere with the right of an industry to make a special agreement or arrangement with the Auburn Sewerage District.

END OF SECTION

## **APPENDIX E: OPPORTUNISTIC INSPECTION SOP**



## Standard Operating Procedure for Illicit Discharge Opportunistic Inspection Program

**Purpose:** The purpose of this Standard Operating Procedure (SOP) is to provide guidance for identification and elimination of illicit discharges to Auburn's storm drain system and ultimately the receiving waters in the City as required by the City's MS4 General Permit and Stormwater Program Management Plan.

**Scope:** This SOP applies in the performance of Opportunistic IDDE inspections as required by Minimum Control Measure 3 Illicit Discharge Detection and Elimination, Best Management Practice (BMP) of the Stormwater Program Management Plan.

**References:** Guidelines and Standard Operating Procedures for Stormwater Phase II Communities in Maine, Volume 1: Information for Program Managers; and Guidelines and Standard Operating Procedures for Stormwater Phase II Communities in Maine Volume 2: Standard Operating Procedures and Forms.

### **Responsible Parties:**

- Overall Program Management: Public Services Deputy Director
- Field Inspections: Public Services Operations Manager
- Tracking and Record Keeping: Public Services Information Assistant
- Review and follow up: Public Works Operations Manager
- Corrective action: Public Services and/or Sanitation/CEO
- Enforcement: Sanitation/CEO

### **Inspection Procedure:**

- Inspections will be conducted in a safe manner and all required Personal Protective Equipment (PPE) will be used;
- Abnormal conditions, structure damage, suspected illicit discharges via visual or olfactory indications will be noted in the standard Catch Basin Cleaning Form and will be reported via WORK ORDER to the Public Services Supervisor for further investigation;
- If the illicit discharge is a transitory discharge (i.e. oil/grease or other material, etc.), the location should be noted on the CB Cleaning Form for appropriate action; attempts to remove material using oil absorbent pads and disposed according to state laws should be considered if the material is known, otherwise removal of contaminated sediments via vac truck or mechanical removal should not be undertaken without further discussion with Public Works Deputy Director;
- Digital photographs shall be recorded and attached to each CB Cleaning Form and should include photos of adjacent land areas for reference;
- In the case where an illicit discharge is noted or suspected, an attempt will be made to locate the source of the illicit discharge and will be documented in the CB Cleaning Form or WORK ORDER for future action;



- Completed CB Cleaning Form will be compiled on an annual basis and utilized by Operations Manager or Supervisor to identify locations for CB Stenciling or other voluntary compliance education options.

**Corrective Action:** When a suspected illicit discharge is noted, the Public Services staff will take corrective action that may include, but not be limited to, the following.

- The Public Services Supervisor will notify the Auburn Water and Sewerage District and the Sanitation/CEO via email with description of issue and photographs of the potential illicit discharge. WORK ORDER can be closed at this time.

**Record Keeping and Program Evaluation:** All inspection forms and WORK ORDERS should be available in paper or digital copy by the Public Services Operations Manager. This system will include the following steps:

- Inspections that indicated an indirect illicit discharge will be flagged and forwarded to the Operations Manager for appropriate action;
- On at least an annual basis the inspection forms and WORK ORDERS will be reviewed by the Deputy Director for accuracy and conformance to the SOP and the Stormwater Program Management Plan;
- On an annual basis the inspections and WORK ORDERS shall be tabulated by DEPUTY DIRECTOR and staff and will be included in the Town's Annual Report to the Maine DEP.

## **APPENDIX F: DRY WEATHER OUTFALL INSPECTION FORM**

## OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

### Section 1: Background Data

Subwatershed:		Outfall ID:	
Today's date:		Time (Military):	
Investigators:		Form completed by:	
Temperature (°F):	Rainfall (in.):    Last 24 hours:                      Last 48 hours:		
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply): <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Industrial  <input type="checkbox"/> Ultra-Urban Residential  <input type="checkbox"/> Suburban Residential  <input type="checkbox"/> Commercial         </div> <div style="width: 48%;"> <input type="checkbox"/> Open Space  <input type="checkbox"/> Institutional            Other: _____            _____            Known Industries: _____            _____         </div> </div>			
Is the outfall submerged? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Partially    If partially, approximately how much (%) _____ Where was the sample taken (e.g., at outfall, upstream manhole or other drainage structure)? _____ Notes (e.g., origin of outfall, if known): _____			

### Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ _____	In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
	<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____		
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No		<i>If No, Skip to Section 5</i>	
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial		Flow Depth (in.)	Flow Width (ft., in)

### Section 3: Quantitative Characterization

FIELD-COLLECTED WATER QUALITY DATA			
PARAMETER	RESULT	UNIT	EQUIPMENT
Chlorine		mg/L	Hach pocket colorimeter
Surfactants		mg/L	CHEMetrics K-9400 Field Kit
Ammonia		mg/L	CHEMetrics K-1510 Field Kit



## ATTACHMENT A. Cont. Outfall Reconnaissance Inventory Field Sheet

### Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 – Faint	<input type="checkbox"/> 2 – Easily detected	<input type="checkbox"/> 3 – Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 – Faint colors in sample bottle	<input type="checkbox"/> 2 – Clearly visible in sample bottle	<input type="checkbox"/> 3 – Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 – Slight cloudiness	<input type="checkbox"/> 2 – Cloudy	<input type="checkbox"/> 3 – Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 – Few/slight; origin not obvious	<input type="checkbox"/> 2 – Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 – Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

### Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

### Section 6: Overall Outfall Characterization

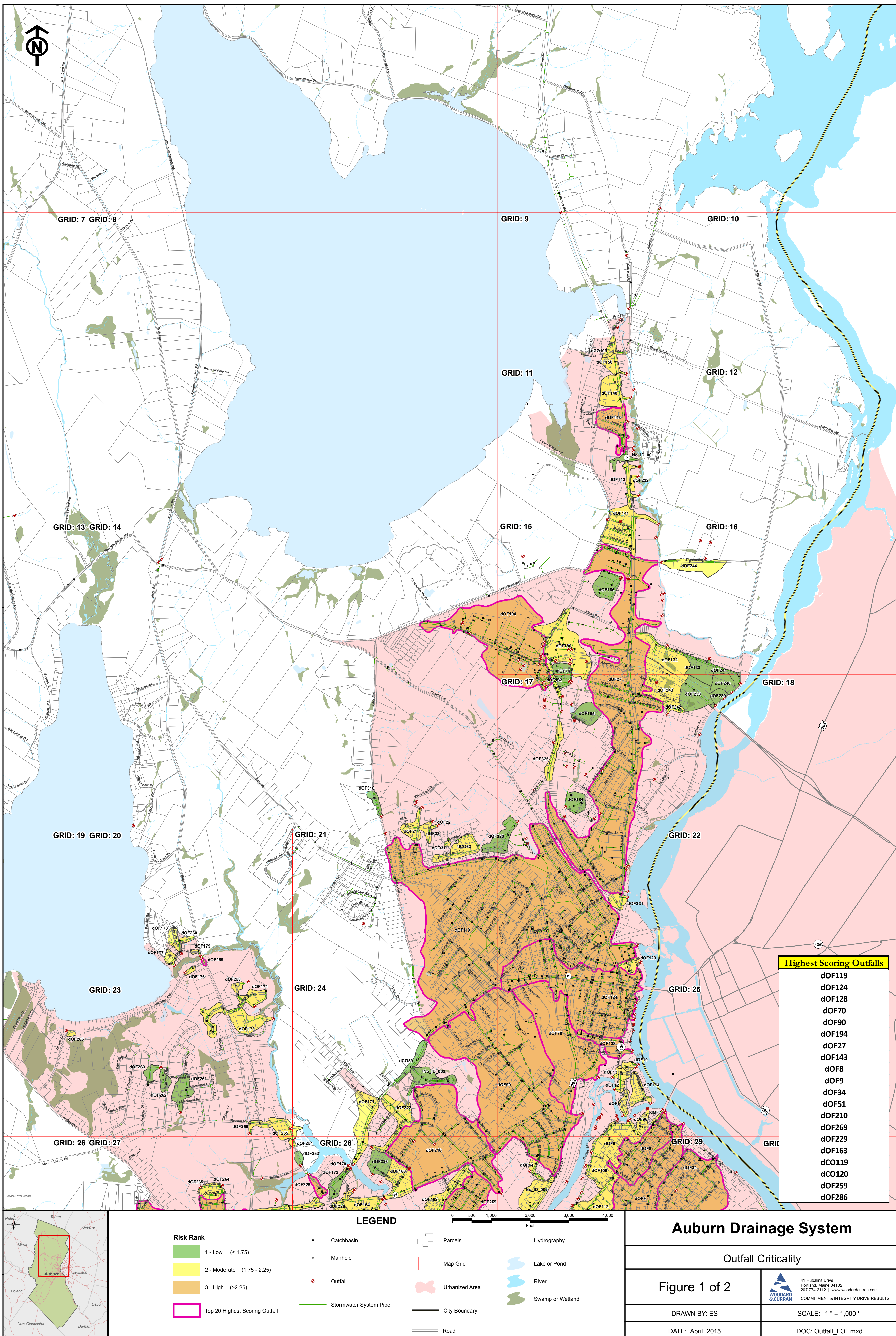
<input type="checkbox"/> Unlikely <input type="checkbox"/> Potential (presence of two or more indicators) <input type="checkbox"/> Suspect (one or more indicators with a severity of 3) <input type="checkbox"/> Obvious
---

### Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

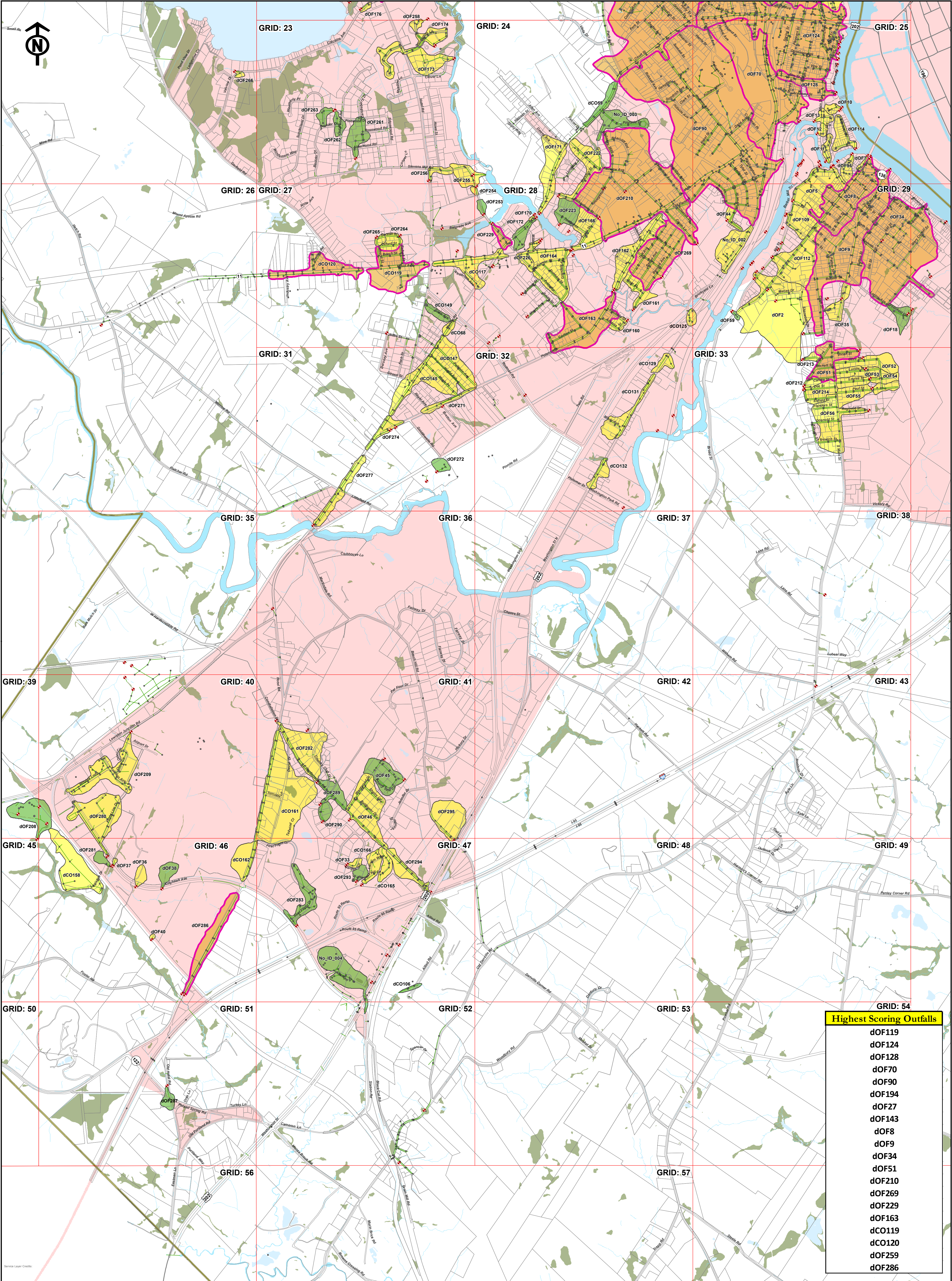
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## **APPENDIX G: PRIORITIZATION OF CATCHMENTS**

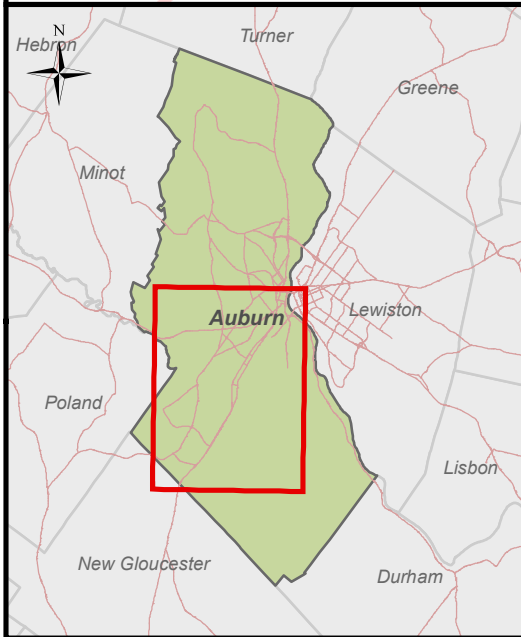








- Highest Scoring Outfalls**
- dOF119
  - dOF124
  - dOF128
  - dOF70
  - dOF90
  - dOF194
  - dOF27
  - dOF143
  - dOF8
  - dOF9
  - dOF34
  - dOF51
  - dOF210
  - dOF269
  - dOF229
  - dOF163
  - dCO119
  - dCO120
  - dOF259
  - dOF286



**Risk Rank**

- 1 - Low (< 1.75)
- 2 - Moderate (1.75 - 2.25)
- 3 - High (> 2.25)
- Top 20 Highest Scoring Outfall

**LEGEND**

- Catchbasin
- Manhole
- Outfall
- Stormwater System Pipe
- Parcels
- Map Grid
- Urbanized Area
- City Boundary
- Road
- Hydrography
- Lake or Pond
- River
- Swamp or Wetland

0 500 1,000 2,000 3,000 4,000

Feet

**Auburn Drainage System**

Outfall Criticality

Figure 2 of 2

DRAWN BY: ES

DATE: April, 2015

41 Hutchins Drive  
Portland, Maine 04102  
207.774-2112 | www.woodardcurran.com

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COMMITMENT & INTEGRITY DRIVE RESULTS

SCALE: 1" = 1,000'

DOC: Outfall\_LOF.mxd