



TOWN OF ORLEANS



STORMWATER MANAGEMENT PLAN UPDATE JUNE 2022





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1. INTRODUCTION

WHY IS THIS IMPORTANT?

Stormwater runoff frequently transports pollutants through municipal separate storm sewer systems (MS4s), where it is discharged, often untreated, into local waterbodies. To the public, the MS4 is more commonly known as a stormwater drainage system or simply as the “drain.” These stormwater drains have been constructed in developed areas to reduce the risk of flooding and damage to our infrastructure. Unfortunately, stormwater drainage systems carry pollution during rain events and snow melt – this can include oil, trash, nutrients, and any other materials found on lawns, streets, and parking lots.

In the Town of Orleans, Massachusetts (Town) stormwater runoff discharges that are conveyed by the MS4 to the environment are regulated under the Clean Water Act and require a Permit. Orleans is one of thousands of communities and institutions across the country that must comply with these regulations. The stormwater drainage system discharge Permit is known as the “MS4 General Permit” and is issued and managed jointly by the U.S. Environmental Protection Agency (EPA) and the State of Massachusetts Department of Environmental Protection (MassDEP).

WHAT DOES ORLEANS HAVE TO DO?

The Town has had MS4 Permit coverage since 2003 and obtained permit coverage under the MS4 Permit that was reissued on April 4, 2016 and became effective July 1, 2018 (Permit No. MAR041146). As part of the permitting requirements, Orleans was required to develop a written Stormwater Management Plan (SWMP). This SWMP (or Plan) is a reference document that guides the Town’s implementation of requirements within the Permit. The Town is required to keep records of, and report on, the activities and measures that are implemented and consistent with this Plan. MS4 General Permit requirements are summarized (and simplified) as follows:



Implement public education programs to help Town residents, business owners, and developers understand their role in keeping stormwater clean.



Engage the public in decision-making throughout the program.



Find and address failed septic systems or leaky or unauthorized sanitary sewer lines that might be discharging into the drainage system. Orleans is constructing a sewer collection system in the downtown area.



Ensure that construction projects do not pollute runoff with sediments and debris.



Ensure that new development and redevelopment control and treat runoff before it leaves the property.



Engage in pollution prevention actions like road and parking area best practices (cleaning drainage systems and sweeping pavements), and ensure that municipal activities like vehicle washing, lawn maintenance, and materials storage do not contribute to stormwater pollution.



The Permit Year (PY) reference within this document corresponds to each regulatory year starting on July 1, 2018. Updates to the original version of this SWMP, dated June 24, 2019, and prepared by Wood, of Chelmsford, Massachusetts, have been incorporated into this document to reflect the Town's stormwater management program updates and achievements through PY4 (ending June 30, 2022). Additional information related to the progress of the stormwater management program is provided in the MS4 Annual Report that is submitted to the EPA and MassDEP by the end of September each year. A revision log tracking these updates is located in **Appendix B**.

A copy of the original 2016 MS4 General Permit was included in **Appendix A** of the original version of this SWMP. On December 7, 2020, changes to the Permit were issued; these changes became effective on January 6, 2021. The modified 2016 MS4 General Permit and its appendices can be accessed on the EPA's website, at <https://www.epa.gov/npdes-permits/massachusetts-small-ms4-general-permit>.

Appendix C has remained unchanged since the original version of this SWMP was published; refer to the original SWMP document to view this appendix.

1.1 REGULATORY BACKGROUND AND REQUIREMENTS

No updates.

1.2 ELIGIBILITY DETERMINATION

No updates.

1.3 SPECIAL ELIGIBILITY DETERMINATION

No updates.

1.4 PERMIT YEAR DEFINITIONS

No updates.



2. TOWN OF ORLEANS

2.1 IMPAIRED WATERBODIES

The waterbody impairments listed in **Table 1: Listed Waterbodies** and **Figure 2: Category 4A and 5 Waterbodies** from the original June 2019 SWMP and the Town’s MS4 General Permit Notice of Intent (NOI) submission to the EPA are both based on the Final Massachusetts Year 2014 Integrated List of Waters. The “Final Massachusetts Integrated List of Waters for the Clean Water Act 2018/2020 Reporting Cycle” (2018/2020 Integrated List) was released in November 2021. **Table 1** and **Figure 2** have been updated to reflect the 2018/2020 Integrated List. The updated **Table 1** is provided below, and the updated **Figure 2** is located in **Appendix F**. Future reissuance and/or approval of the Massachusetts Integrated List of Waters may necessitate additional modifications to this Plan to maintain compliance with applicable requirements.

Table 1: Listed Waterbodies

Waterbody	MassDEP Segment ID	TMDL	Category	Impairment Cause	Impairment Source	Monitoring Requirements
Cedar Pond	MA96-88	No	5	Fish Passage Barrier	Habitat Modification	NMR
				Chlorophyll-a	Unknown	Total Phosphorus
				Dissolved Oxygen Saturation	Unknown	Dissolved Oxygen Temperature BOD ₅
				Dissolved Oxygen	Unknown	Total Phosphorus
Crystal Lake	MA96050	No	5	Dissolved Oxygen	Internal Nutrient Recycling	Dissolved Oxygen Temperature BOD ₅ Total Phosphorus
Town Cove	MA96-68	No	5	Estuarine Bioassessments	Unknown	Contact MassDEP*
Uncle Harvey Pond	MA96319	No	5	Harmful Algal Blooms	Unknown	Total Phosphorus
Rock Harbor Creek	MA96-16	Yes	4A	Fish Passage Barrier	Habitat Modification	NMR
				Fecal Coliform	Waste from Pets Waterfowl Discharges from MS4 Municipal Point Source Discharges On-site Treatment Systems	Enterococci



Waterbody	MassDEP Segment ID	TMDL	Category	Impairment Cause	Impairment Source	Monitoring Requirements
Little Namskaket Creek	MA96-26	Yes	4A	Fecal Coliform	Waterfowl Municipal Point Source Discharges	Enterococci
Namskaket Creek	MA96-27	Yes	4A	Fecal Coliform	Unknown	Enterococci
Baker Pond	MA96008	Yes	4A	Mercury in Fish Tissue	Unknown Atmospheric Deposition - Toxics	NMR**
Areys Pond	MA96-70	Yes	4A	Nutrient/Eutrophication Biological Indicators	Agriculture Discharges from MS4 On-site Treatment Systems Yard Maintenance Unrestricted Cattle Access	Total Nitrogen
				Total Nitrogen	Agriculture Discharges from MS4 On-site Treatment Systems Yard Maintenance Unrestricted Cattle Access	Total Nitrogen
Paw Wah Pond	MA96-72	Yes	4A	Fecal Coliform	Unspecified Urban Stormwater Waste from Pets Waterfowl	Enterococci
				Estuarine Bioassessments	On-site Treatment Systems Unspecified Urban Stormwater Yard Maintenance	Contact MassDEP*
				Total Nitrogen	On-site Treatment Systems Yard Maintenance Unspecified Urban Stormwater Unknown	Total Nitrogen
Quanset Pond	MA96-74	Yes	4A	Total Nitrogen	Unspecified Urban Stormwater Yard Maintenance Discharges from MS4 On-site Treatment Systems	Total Nitrogen



Waterbody	MassDEP Segment ID	TMDL	Category	Impairment Cause	Impairment Source	Monitoring Requirements
Pleasant Bay	MA96-77_2018	Yes	5	Estuarine Bioassessments	Agriculture	Contact MassDEP*
			5	Total Nitrogen	Discharges from MS4 Agriculture Golf Courses Unspecified Urban Stormwater Yard Maintenance	Total Nitrogen
Little Pleasant Bay	MA96-78_2018	Yes	4A	Total Nitrogen	Unspecified Urban Stormwater Yard Maintenance Discharges from MS4 On-site Treatment Systems	Total Nitrogen
Namequoit River	MA96-71	Yes	4A	Estuarine Bioassessments	Agriculture On-site Treatment Systems Unspecified Urban Stormwater Yard Maintenance	Contact MassDEP*
				Total Nitrogen	Agriculture On-site Treatment Systems Unspecified Urban Stormwater Yard Maintenance	Total Nitrogen
Pochet Neck	MA96-73	Yes	4A	Fecal Coliform	Unspecified Urban Stormwater Waterfowl Yard Maintenance	Enterococci
				Estuarine Bioassessments	Discharge from Biosolids (Sludge) Storage On-site Treatment Systems Unspecified Urban Stormwater Yard Maintenance	Contact MassDEP*
				Total Nitrogen	On-site Treatment Systems Unspecified Urban Stormwater Yard Maintenance Discharge from Biosolids (Sludge) Storage	Total Nitrogen



Waterbody	MassDEP Segment ID	TMDL	Category	Impairment Cause	Impairment Source	Monitoring Requirements
The River	MA96-76_2018	Yes	4A	Fecal Coliform	Discharges from MS4 Marina/boating Pumpout Releases Waterfowl	Enterococci
				Total Nitrogen	Yard Maintenance Onsite Treatment Systems Unspecified Urban Stormwater	Total Nitrogen

1. *MassDEP has indicated no monitoring is required for this parameter.
2. **NMR = No monitoring required.
3. Enterococci is sampled instead of fecal coliform because it is more representative of potential human health risks in salt/brackish waterbodies.

2.2 RECEIVING WATERBODIES

Per the requirements of Part 1.10.2 of the MS4 General Permit, a list of all Integrated List waterbody segments that receive discharge from the Town’s MS4 is provided in **Table 1**, above. The Town’s MS4 General Permit Notice of Intent submission to the EPA, dated September 26, 2018, included the estimated number of outfalls that discharge directly to each Integrated List waterbody segment. A copy of the original NOI can be accessed on the EPA’s website. Any updates to the numbers reported in the NOI will be included in future revisions of this document, if necessary.

2.3 INTERCONNECTED SEPARATE STORM SEWER SYSTEMS

Per the requirements of Part 1.10.2 of the MS4 General Permit, all known interconnected MS4s and other separate storm sewer systems receiving a discharge from the Town’s MS4, as well as the waterbody segment(s) that ultimately receive the discharge, are shown on the updated Separate Storm Sewer System Map in **Appendix E** and the Water Resources Map in **Appendix F**.

2.4 SURFACE PUBLIC DRINKING WATER SUPPLIES

The Town has no surface public drinking water supply sources or surface water supply watersheds within its Town boundary. A list of all known waterbody segments that receive discharge from Orleans MS4 is included in the Town’s MS4 General Permit NOI submission to the EPA, dated September 26, 2018, which can be accessed on the EPA’s website at <https://www.epa.gov/npdes-permits/regulated-ms4-massachusetts-communities>. As detailed in the NOI, there are no known direct discharges to public surface drinking water supplies. Any updates to the waterbody segments receiving discharges from Orleans’s MS4 will be included in future revisions of this document, if necessary.



2.5 INCREASED DISCHARGES

The Town shall comply with the provisions of 314 CMR 4.04 Massachusetts Surface Water Quality Standards, including information submittal requirements and obtaining authorization for increased discharges where appropriate. Any authorization of an increased discharge by MassDEP shall be incorporated within this SWMP.

There shall be no increased discharges, including increased pollutant loading(s) from the MS4 to impaired waters listed in categories 4A or 5 on the most recent Massachusetts Integrated Report of waters listed pursuant to Clean Water Act Section 303(d) and 305(b) unless the discharger demonstrates that there is no net increase in loading from the MS4 to the impaired water of the pollutant(s) for which the waterbody is impaired.

Unless otherwise determined by the EPA or by MassDEP, compliance with the Part 2.2.2 and 2.3.6 requirements of the MS4 General Permit, including all reporting and documentation requirements, are considered as demonstrating no net increase or increased discharge. Part 2.2.2 and 2.3.6 requirements were included in the Best Management Practices (BMPs) outlined in the June 2019 SWMP and any updates are provided in Section 3 of this SWMP Update.

If necessary, the Town will demonstrate compliance with this provision by either:

- Documenting that the pollutant(s) for which the waterbody is impaired is not present in the MS4's discharge and retaining documentation of this finding with the SWMP documents; or
- Documenting that the total load of the pollutant(s) of concern from the MS4 to any impaired portion of the receiving water will not increase as a result of the activity and retaining documentation of this finding in the SWMP documents.



3. BEST MANAGEMENT PRACTICES FOR MINIMUM CONTROL MEASURES

3.1 ENHANCED BMPS FOR IMPAIRED WATERBODIES

No updates.

3.2 MCM 1: PUBLIC EDUCATION AND OUTREACH

No updates.

3.3 MCM 2: PUBLIC INVOLVEMENT AND PARTICIPATION

No updates.

3.4 MCM 3: ILLICIT DISCHARGE AND DETECTION ELIMINATION

3.4.1 BMPs

The following subsection has been updated to reflect the current status of the Town's MS4 General Permit IDDE program. Subsections not listed remain unchanged from the Permit Year 3 update.

3.4.1.2 BMP 3C Written IDDE Program

The Town completed an IDDE Program Manual amendment to document updates to the outfall inventory and rankings based on an evaluation of the completed dry weather screening results. The addendum includes updates to catchment investigation prioritizations based on the outfall/interconnection screening results and an evaluation of excluded catchments based on the presence of characteristics listed in Permit Part 2.3.4.7.a.ii.

This BMP has been updated to incorporate the most recent water quality monitoring results obtained during the implementation of dry weather screening activities and an evaluation of whether any of the Town's outfalls can be excluded from the IDDE Program. A copy of the IDDE Program Manual Addendum is available at the Department of Public Works.

3.5 MCM 4: CONSTRUCTION SITE RUNOFF CONTROL

No updates.



3.6 MCM 5: POST-CONSTRUCTION STORMWATER MANAGEMENT

3.6.1 BMPs

The following subsections have been updated to reflect the current status of the Town's MS4 General Permit Post-Construction Stormwater Management program. Subsections not listed remain unchanged from the Permit Year 3 update.

3.6.1.2 BMP 5B Target Properties to Reduce Impervious Areas

The Town proactively maintains a list of municipally owned properties that are targeted for modification or retrofits to reduce the frequency, volume, and pollutant loads of stormwater discharges to and from its MS4 through the reduction of impervious area. The most recent identified projects are presented in the Town's Capital Improvement Plan for Fiscal Year 2021 to 2025, located at the following municipal website:

<https://www.town.orleans.ma.us/DocumentCenter/View/2813/Capital-Improvement-Plan-for-Fiscal-Year-2023-to-2027-PDF>.

This BMP has been updated to reflect the location of identified BMP retrofit/modification projects to reduce impervious area.

3.6.1.3 BMP 5C Allow Green Infrastructure

The Town is in the process of drafting a report assessing the Town's existing regulations related to the feasibility of making green infrastructure practices available.

This BMP is currently in progress. The SWMP will be modified to reflect the location where the report can be reviewed upon completion.

3.6.1.4 BMP 5D Street Design and Parking Lot Guidelines

The Town is in the process of drafting a report assessing the Town's existing regulations related to the effect of street and parking lot guidelines on the creation of impervious cover.

This BMP is currently in progress. The SWMP will be modified to reflect the location where the report can be reviewed upon completion.

3.7 MCM 6: POLLUTION PREVENTION AND GOOD HOUSEKEEPING

3.7.1 BMPs

3.7.1.1 BMP 6A O&M Procedures

The Town developed a written Clean Water Best Practices (CWBP) Manual consistent with the requirements of Part 2.3.7.a of the MS4 General Permit.



The Town's Operation & Maintenance (O&M) procedures for parks and open spaces, vehicles and equipment, buildings, and facilities, and MS4 infrastructure is included in the CWBP Manual, which can be accessed at the Department of Public Works and Natural Resources.

3.7.1.2 BMP 6B Inventory Town Facilities

The Town has developed a Municipal Facility Inventory consistent with the requirements of Part 2.3.7.a.ii of the MS4 General Permit.

The complete Facility Inventory is located in **Appendix A** of the CWBP Manual, which can be accessed at the Department of Public Works and Natural Resources.

3.7.1.3 BMP 6C Infrastructure O&M

The Town has developed written O&M Standard Operating Procedures (SOPs) consistent with the requirements of Part 2.3.7.a of the MS4 General Permit.

The O&M SOPs are located in **Appendix B** of the CWBP Manual, which can be accessed at the Department of Public Works and Natural Resources.

3.7.1.4 BMP 6D SWPPP

The Town reviewed the need to develop and implement Stormwater Pollution Prevention Plans (SWPPPs) at Town owned or operated facilities in accordance with Part 2.3.7.b of the MS4 General Permit. These facilities include the Department of Public Works and Natural Resources Facility and Transfer Station/Landfill sites. The Town determined that SWPPPs are not needed for these facilities since they do not discharge to the MS4 or a surface water. The facilities have storm drain infrastructure that discharge to subsurface infiltration systems with no off-site discharges for all applicable storm event design criteria.

3.7.1.5 BMP 6E Catch Basin Cleaning

Catch basin cleaning procedures are located in Appendix B of the CWBP Manual, which can be accessed at the Department of Public Works and Natural Resources. The Town is in the process of developing an inspection form that will be used in Utility Cloud (asset management software) to document inspection and cleaning activities, as well as identify maintenance needs.

This BMP has been updated to reflect the status of the development of a catch basin cleaning inspection form in Utility Cloud.

3.7.1.6 BMP 6F Street Sweeping Program

Street sweeping procedures are located in Appendix B of the CWBP Manual, which can be accessed at the Department of Public Works and Natural Resources. The Town is in the process of developing an inspection form that will be used in Utility Cloud (asset management software) to document sweeping activities.



This BMP has been updated to reflect the status of the development of a street sweeping inspection form in Utility Cloud.

3.7.1.7 BMP 6G Road Salt Optimization Program

Winter road maintenance and road salt optimization procedures are located in Appendix B of the CWBP Manual, which can be accessed at the Department of Public Works and Natural Resources.

3.7.1.8 BMP 6H Stormwater Treatment Structures Inspections

Stormwater treatment structure inspection procedures are located in Appendix B of the CWBP Manual, which can be accessed at the Department of Public Works and Natural Resources. The Town is in the process of developing an inspection form that will be used in Utility Cloud to document inspections and track maintenance needs.

This BMP has been updated to reflect the status of the development of a stormwater treatment structure inspection form in Utility Cloud.

3.7.1.9 BMP 6I Nitrogen Loading Reductions

The nitrogen loading reduction procedures implemented by the Town are incorporated in the CWBP Manual, which can be accessed at the Department of Public Works and Natural Resources.



4. PROGRAM MANAGEMENT, EVALUATION, RECORD KEEPING, AND REPORTING

4.1 PROGRAM MANAGEMENT

No updates.

4.2 PROGRAM EVALUATION

The Town conducts annual evaluations of its program compliance, the appropriateness of its identified BMPs, whether it's meeting new Permit requirements, and progress towards achieving its identified measurable goals, which include reducing the discharge of pollutants to the maximum extent practicable ("MEP"). The Town documents the findings of these annual evaluations in their MS4 Program annual report, submitted to the EPA and MassDEP by the end of September.

Changes to the Town's stormwater permit compliance program do not need to be updated in their NOI, however, this information will be included in the Town's annual reports and SWMP updates.

4.3 RECORD KEEPING

The Town will keep records required by the MS4 General Permit for at least five years after they are generated. Records include but are not limited to: information used in the development of any written (hardcopy or electronic) program required by this permit, any monitoring results, copies of reports, records of screening, follow-up, and elimination of illicit discharges; maintenance records; inspection records; and data used in the development of the NOI, SWMP, SWPPP, and annual reports. Records will be available for public observation as requested. Records will be submitted to the EPA or MassDEP as requested.

4.4 ANNUAL REPORTS

Annual reports are due to the EPA and MassDEP each year within 90 days of the close of the permit year on June 30th. The MS4 Annual Report shall include the following content:

- Self-assessment review of compliance with permit conditions;
- An assessment/evaluation of:
 - The appropriateness of the identified BMPs
 - Progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP
 - The identified measurable goals for each of the CMs



-
- All outfall screening and sampling results;
 - Summary of stormwater activities planned to be undertaken during the next reporting cycle;
 - Any change in identified BMPs or measurable goals and justification for those changes; and
 - The information specified under the reporting requirements for each CM.

Changes to the Town's stormwater permit compliance program do not need to be updated in their NOI, however, this information will be included in the Town's annual reports and SWMP updates. Annual reports are also made available for public access on the EPA's website at [Regulated MS4 in Massachusetts Communities | US EPA \(https://www.epa.gov/npdes-permits/regulated-ms4-massachusetts-communities\)](https://www.epa.gov/npdes-permits/regulated-ms4-massachusetts-communities).



5. CERTIFICATION

"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 gathered and evaluated 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 submitted 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."

Signature

JRF Kelly

Name

Date

9/23/22



Appendices



APPENDIX A: 2016 GENERAL PERMIT WITH APPENDICES



A copy of the original 2016 MS4 General Permit was included in Appendix A of the original version of this SWMP. On December 7, 2020, changes to the Permit were issued; these changes became effective on January 6, 2021. The modified 2016 MS4 General Permit and its appendices can be accessed on the EPA's website, at <https://www.epa.gov/npdes-permits/massachusetts-small-ms4-general-permit>.



APPENDIX B: STORMWATER MANAGEMENT PLAN REVISION TRACKING FORM



Revision No.	Revision Date	Section of SWMP	Revision(s) Made/Reasoning
00	6/24/2019	--	--
01	6/19/2020	1.	Introduction to the Town's stormwater program and adding reference to the original SWMP prepared by Wood.
		2.1	Note added to address how the approved 2016 Massachusetts List of Integrated Waters will be incorporated into this SWMP
		2.2	NEW SECTION: Added language to reflect that receiving waterbodies are listed in the Town's MS4 General Permit NOI submission to the EPA
		2.3	NEW SECTION: Added language to reflect that interconnections are shown on the updated Separate Storm Sewer System Map in Appendix E
		2.4	NEW SECTION: Added language to reflect that the Town has no surface public drinking water supply sources
		2.5	NEW SECTION: Added language to reflect that the Town will comply with proper provisions to authorize any future increased discharges
		3.2	Added language to reflect that education and outreach materials shall note any existing Town regulations where appropriate.
		3.3.1.2	Added an update on the Town's catch basin stenciling program and drainage manhole cover design
		3.4.1.2	Revised language to reflect that a copy of the Separate Storm Sewer System Map will be updated annually and included in Appendix E
		3.4.1.6	Added an update on the Town's IDDE program
		3.6.1.5	Added language to reflect that the deadline to assess and update Town regulations has been extended by one year
		3.7.1.1 – 3.7.1.3 and 3.7.1.5 – 3.7.1.9	Revised language to reflect that a Clean Water Best Practices Manual has been prepared for the Town and contains all required inventories and procedures to complete BMPs 6A – 6C and 6E – 6I;
		3.7.1.4	Revised language to reflect that the Town does not need to prepare SWPPPs for its Department of Public Works and Natural Resources Facility and Transfer Station/Landfill sites
		4.2	Revised language to reflect that the Town's annual program evaluations can be found in their MS4 annual reports
4.4	Added a link to access the Town's annual reports on the EPA website		
Appendix E	NEW SECTION: Added Separate Storm Sewer System Map		
02	6/22/2021	2.1	Updated Table 1: Listed Waterbodies to reflect approved 2016 Massachusetts Integrated List of



Revision No.	Revision Date	Section of SWMP	Revision(s) Made/Reasoning
			Waters
		2.2	Revised language to reflect that Figure 2 was updated in PY3; added reference to the addition of Uncle Harvey Pond to the Integrated List and the number of outfalls discharging to the waterbody
		3.2.1	Updated Table 2: MCM1 BMPs and Implementation Actions to reflect the development of new educational messages and changes to the Town’s anticipated distribution schedule of each educational message
		3.2.1.1 and 3.2.1.3 – 3.2.1.5	Revised language to reflect the topics of educational messages and changes to the Town’s message distribution schedule
		3.2.1.9	Revised language to reflect that the Town’s Effectiveness Assessment Surveys have been discontinued
		3.4.1.6	Added an update on the Town’s IDDE program
		Appendix E	Revised Separate Storm Sewer System Map
		Appendix F	NEW SECTION: Added Impaired Waters Map to replace Figure 2: Impaired Waterbodies in the original SWMP
03	6/29/2022	2.1	Updated Table 1: Listed Waterbodies
		3.4.1.3	Updated language to reflect issuance of the IDDE Program Manual Addendum.
		3.6.1.2	Updated language to reflect identification of impervious area reduction projects on municipally owned properties in the FY23-FY27 Capital Improvement Plan
		3.6.1.3	Updated language to reflect the status of the Green Infrastructure assessment.
		3.6.1.4	Updated language to reflect the status of the Street Design and Parking Lot Guidelines assessment.
		3.7.1.5	Updated language to reflect the status of the Utility Cloud module development.
		3.7.1.6	Updated language to reflect the status of the Utility Cloud module development.
		3.7.1.8	Updated language to reflect the status of the Utility Cloud module development.
		4.3	Updated language to reflect how the Town keeps their MS4 records for at least 5 years
4.4	Updated language to summarize the annual reporting process		



APPENDIX C: ENDANGERED SPECIES ACT AND NATIONAL HISTORIC PRESERVATION ACT REVIEW



No updates.



APPENDIX D: MS4 PERMIT-RELATED STANDARD OPERATING PROCEDURES



Finalized MS4 permit-related standard operating procedures (SOPs) are located in Appendix B of the Town's Clean Water Best Practice Manual, which can be found at the Department of Public Works and Natural Resources. These include the following:

- Winter Road Maintenance
- Catch Basin Inspection and Cleaning
- Street Sweeping
- Stormwater Treatment Structure Inspections



APPENDIX E: SEPARATE STORM SEWER SYSTEM MAP

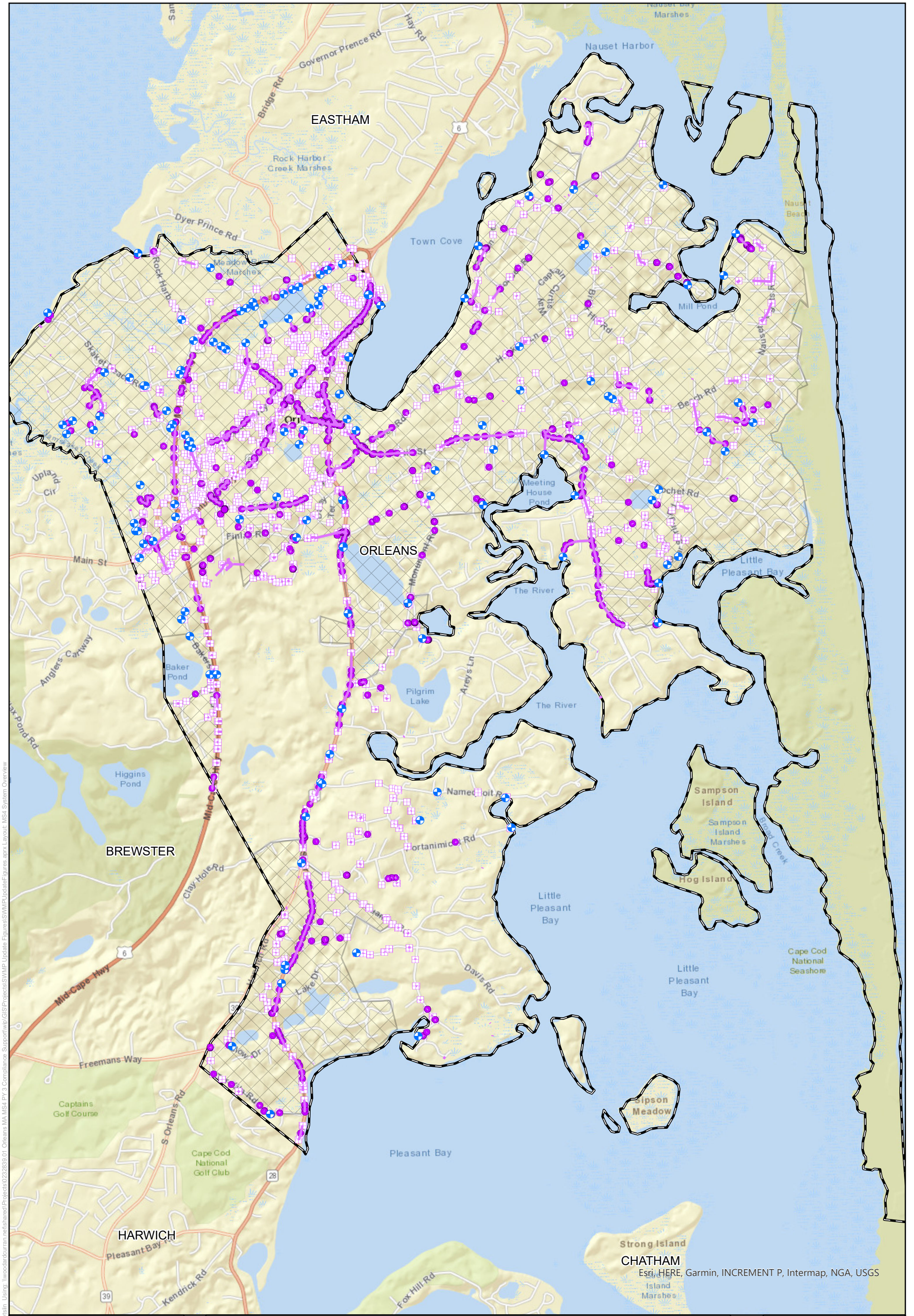


Figure Exported: 3/19/2021 8:31:19 AM. Using: \\woodardcurran.net\shared\Projects\2022\2839\01_Orleans_MA_MS4_PY3_Compliance_Support\GIS\Projects\SMP_Update_Figures\SMP_Update_Figures.aprx Layout: MS4_System_Overview

Stormwater Collection System Overview

Town of Orleans, MA

Legend	Outfalls	Drain Pipe
	Drain Manhole	Orleans Boundary
	Drain Catch Basin	Urbanized Area

Project #: 0232839.01
Map Created: March 2021

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. **Data Sources:**



APPENDIX F: IMPAIRED WATERS AND SPECIAL RESOURCE WATERS

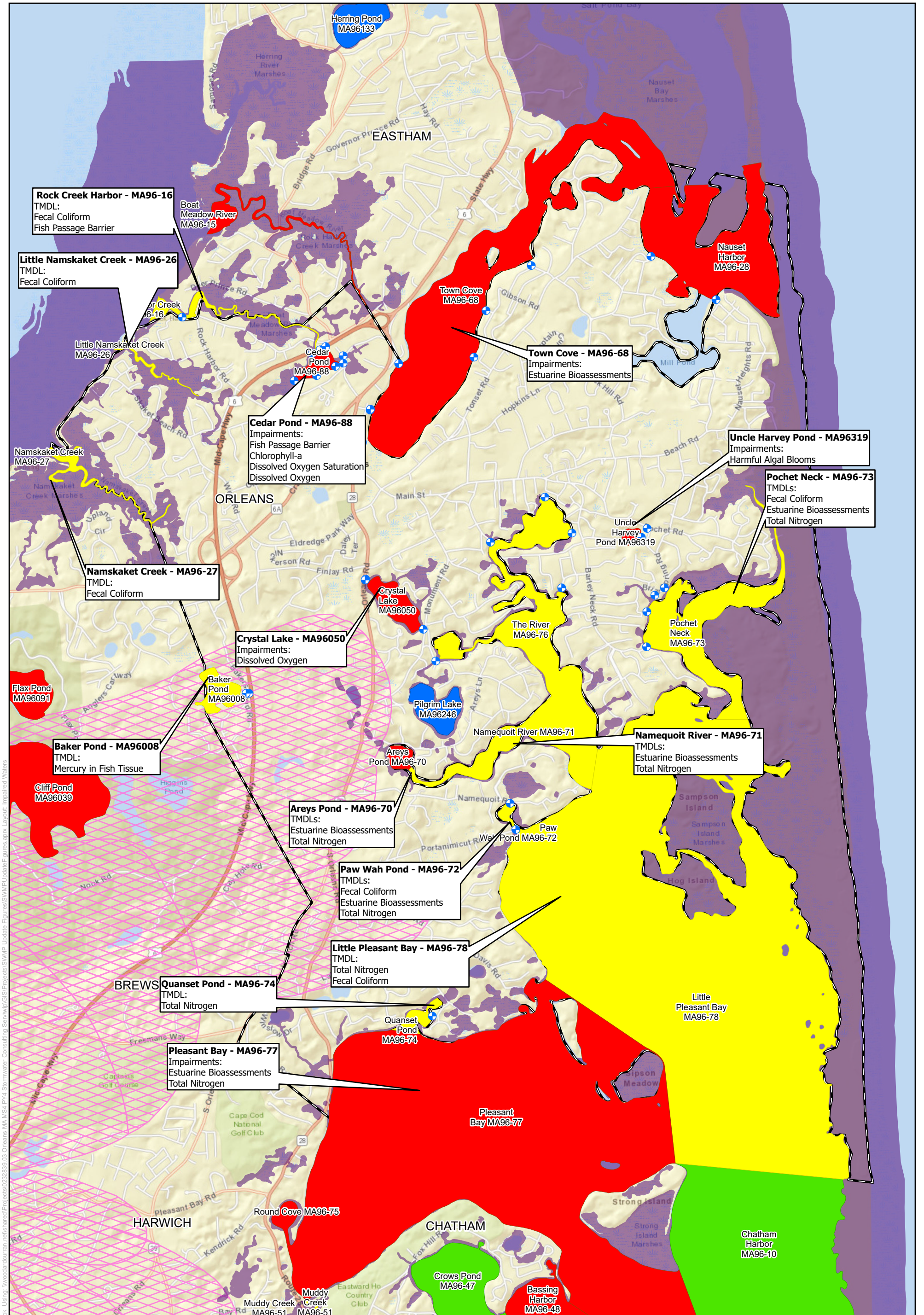


Figure Exported: 6/24/2022, By: eastabrook, Using: \\woodardcurran.net\shared\Projects\022839\03_Orleans_MA_MS4_P44_Stormwater_Consulting_Serv\GIS\Projects\SWMP_Update_Figures\SWMP_Update_Figures\SWMP_Update_Figures.aprx, Layout: Impaired Waters

Town of Orleans Water Resources

Town of Orleans, MA

Legend

- Outfalls with Direct Discharge to Impaired Waters
- Outstanding Resource Waters
- MassDEP Approved Zone IIs
- Surface Water Protection Area - Zone A
- Orleans Boundary

2018/2020 Integrated List Data - 305(b)/303(d) Category

- 2 - Attaining some uses; other uses not assessed
- 3 - No uses assessed
- 4A - Impaired - TMDL is completed
- 4C - Impairment not caused by a pollutant
- 5 - Impaired - TMDL required



Project #: 232839
Map Created: June 2022

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