

**Kittery MS4 General Permit  
Year 1 Annual Report (7/1/2022 to 6/30/2023)**

The Municipality is in compliance with the terms and conditions of the MS4 General Permit and the permittee specific DEP Order. The components of the Municipal stormwater management program are effective, the BMPs in the Stormwater Management Plan are appropriate and Permit Year 1 Measurable Goals have been implemented to reduce the discharge of pollutants to the Maximum Extent Practicable unless otherwise specifically described in this Annual Report.

BMP/ Measurable Goal ID	Summary of Requirement for Permit Year	Kittery Status
<b>Public Education</b>		
1.1 Raise Awareness General Public age 25-34	Message	Message: "Water that lands on our roads, roofs, and other hard surfaces picks up pollutants and carries them to our local waterbodies without being treated"
	Tool 1 - 12 Social Media Posts (Facebook)	12 Posts began 1/17/2023 and Ran 2x per week on Facebook. Reach 905 people, 21 likes and reactions; 266 followers (5% women 25-34, 20% women 35-44, 20% women 45-54, 3% men 25-34, 7% men 35-44, 8% men 45-54).
	Tool 2 - 12 Social Media Posts (Instagram)	12 Posts began 1/17/2023 and Ran 2x per week on Instagram. Reach 247 people, 13 likes and reactions, no new follows, 18 total follows.
	Tool 3 - 3 content shares by Outreach Partner organizations	York County SWCD shared Kittery cleanup FB post on 5/4/2023. SMPDC shared 3/21/2023 pet waste FB post, Think Blue Maine shared 2/12 awareness FB post, Hancock County Indiana SWCD shared 1/29/2023 litter post (not a partner, but good).
	Annual Effectiveness Evaluation	Goal to reach 15% of target audience (age 25 to 34, = 600 people) not reached, but reached over 2,000 people of all ages in geographic area of interest. FB shows 266 followers, of which only 20 are within the target audience range. Age not provided for followers of Instagram until we have 100 followers. Will conduct ads next year targeted at younger audience.
1.2 Raise Awareness Municipal Staff/Boards	Message	The Staff and/or Board's Role is important in implementing the MS4 Program and protecting waters from stormwater pollution.
	Tool 1 Fact Sheet on Town web page and used in tools 1 and 2	The Fact Sheet was updated on 11/15/2022 and placed on town stormwater page.
	Tool 2 Meeting or Materials (MS4 general, specific element or invite to public participation event)	The Public Works Inspector attended and provided written materials regarding the MS4 ordinance changes during the public meetings identified in BMP 2.1.

BMP/ Measurable Goal ID	Summary of Requirement for Permit Year	Kittery Status
	Tool 3 Meeting or Materials to any new Staff (see town listing) of responsibilities.	The updated Fact Sheet was provided to the following new employees : Planning Director Planner, and CEO. Though not required, the updated fact sheet was also provided to the Town Manager and Public Works Commissioner, and a general reminder of the MS4 program was provided via email with links to additional information to the Planning and Code staff.
	Annual Effectiveness Evaluation	All Tools were implemented as planned. Engagement during public meetings showed Board Members and Staff continue to improve their understanding of the MS4 General Permit and their roles.
1.3a Reduce intentional Cig. Butt littering (all ages)	Message	Cigarette butts do not decompose and are harmful to the environment and aquatic organisms. Cigarette butts should be disposed of as regular waste.
	Tool 1 - Stencils	The Public Works Inspector, Public Works Staff and High School students applied '39 stencils applied in Admiralty Village, 1 at Town Hall.
	Tool 2 - 4 Seasonal Social Media or website Posts	Posts began the week of 3/15/23 - 4 messages were posted on Instagram and 4 were posted on Facebook. Reach was 615 FB, 39 Instagram, people with 6 Likes/reactions each site.
	Tool 3 - truck magnets or bumper stickers	Created and applied truck magnets to the following four (4) vehicles: highway truck, parks truck, Fort Foster truck and sweeper in May 2023. Three (3) additional magnets were placed in June 2023 on Code and Public Works vehicles.
1.3b Reduce Pet waste littering in public spaces (all ages)	Message	Collect your pet waste and dispose of it properly (solid waste). Pet waste does not decompose quickly, it is not a natural fertilizer, and can adversely impact water quality.
	Tool 1 - Stencils	The Public Works Inspector, Public Works Staff and High School students applied 20 stencils applied in Admiralty Village.
	Tool 2 - 4 Seasonal Social Media or website Posts	Posts began the week of 3/15/23 - 4 messages were posted on Instagram and 4 were posted on Facebook. Reach was 171 FB, 36 Instagram, with 4 FB Likes/reactions, 8 Instagram Likes/reactions.
	Tool 3 - truck magnets or post cards to be provided at dog licensing	Created and applied truck magnets to the following three vehicles in May 2023: highway truck, parks truck, Fort Foster truck. Three 3 additional magnets were placed in June 2023 on Code and Public Works vehicles.
Annual Effectiveness Evaluation	All - summary of Baseline data.	Baseline evaluation updated in the Fall of 2022 showed cigarette butts are the most littered item in all SMSWG communities and locations: over 2000 butts were picked up compared to the next highest item: plastic wrap at 240 pieces. Though only 20 deposits of pet waste were identified - individuals appear to "hide" the pet waste in bushes and non-public locations (off trail, roadsides with no residential or commercial structures visible).

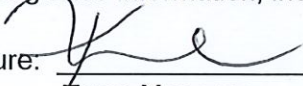
BMP/ Measurable Goal ID	Summary of Requirement for Permit Year	Kittery Status
Annual Effectiveness Evaluation	Individual outfall and catch basin counts/locations based on inspections.	No cig butts or pet waste were identified in storm drains or outfalls prior to stenciling and magnets.
Other Items completed	All - SMSWG Website Updated	<a href="#">SMSWG – Southern Maine Stormwater Working Group</a>
	Town Stormwater Page updated	<a href="#">Stormwater/MS4 Program   Kittery ME</a>
	Other	
<b>Public Involvement and Participation</b>		
2.1 Public Notice	Public Notice for SWMPs and NOIs	Stormwater Management Plans were not changed in PY 1, so no public notices were needed. The Plan continues to be available on the Town's stormwater page.
	Public Notice for Ordinances	Public Notice was provided for all public meetings and hearings related to ordinance updates. The following Committees and Boards met on the following dates to either review the ordinance changes or have public hearings. Kittery Land Issues Committee met on: 9/14/2022, 10/17/2022, and 11/28/2022. Planning Board met on 2/7/2023 and 3/21/2023. Town Council met on: 8/8/2022, 12/12/2022, 1/18/2023, 3/24/2023, and 5/8/2023.  Public Attendance is not kept for public meetings, but a quorum was present for each committee or board meeting to allow an official vote to move the ordinance changes forward.
2.2 Public Events	Host or participate in cleanup and advertise in three locations.	5/10/2023 Rogers Park Clean advertising was conducted on the Town's website, the Town's Facebook page, and the SMSWG Facebook page. No public used the Litterati Ap, but the Public Works Inspector attended and used the Litterati Ap to collect data on where and what litter was collected.
<b>Illicit Discharge Detection and Elimination</b>		
3.1 Implement Non-SW Discharge Ordinance	Track NOV's on IDDE spreadsheet	No NOV's were issued for illicit discharges. See BMP 3.5 for investigation notes.
	Update Non-SW Discharge Ordinance (definitions and 60 days to correct)	The Town's Ordinances were updated on 5/8/2023 to require elimination of an IDDE source within 60 days of identification of the source. See Public Notice BMP 2.1 for a list of meetings held.

BMP/ Measurable Goal ID	Summary of Requirement for Permit Year	Kittery Status
3.2 Maintain IDDE Plan	Annually as needed, when we update the full SWMP under 2.1	The IDDE Plan was changed in July 2023 (PY2) to better reflect the data ArcGIS inspection fields in use.
3.3 Maintain GIS Map of system	Update changes to system annually at a minimum	The GIS map of the stormwater infrastructure is updated by the Public Works Inspector and catch basin cleaning crew as changes to the infrastructure are made.
	Update for as-builts as they become available	The Public Works Inspector updates the GIS as as-builts for Town-owned infrastructure become available.
	New Outfalls	No new outfalls were mapped this year.
	Print maps when needed	Printed maps are not needed, but the Town's GIS is available to the public on the public facing website. The public facing GIS is uploaded annually to the website (but the Public Works crew has access to the most current GIS for inspections.
3.4a Infrast. Inspections	One outfall inspection per permit cycle.	84 of 114 MS4 outfalls were inspected during dry weather this year. No outfalls were inaccessible.
3.4b Monitor flowing outfalls	Monitor each flowing outfall (72 hours of dry weather) once per permit cycle	On 5/25/2023, the Town sampled 6 of 13 OFs that flowed during PY9 Inspects. Three (3) of the outfalls (OF260, 258 and 96) showed all concentrations of required parameters below thresholds. Three outfalls (310, 261 and 320) had bacteria concentrations above thresholds and were added to the list of potential illicit discharges for investigation.

BMP/ Measurable Goal ID	Summary of Requirement for Permit Year	Kittery Status
3.5 Investigate Illicit Discharges	Use IDDE Tracking Spreadsheet to summarize	<p>515 catch basins were inspected and no evidence of illicit discharge identified. Potential Illicit discharges under investigation include:</p> <p>OF 310 Rt 1 - DOT substantially reconfigured this outfall after flooding. The outfall was sampled for dry weather flow on 6/22/2023 and exceeded bacteria thresholds. Bracket sampling and review with the sewer department is planned for PY2.</p> <p>OF 136 Prince - Extensive flow tracking and bracket sampling of three main branch contributions to this outfall was completed on 6/22/2023. The potential source is likely the main intersection of Prince and Gov't Street, though historic televising did not reveal a source. Review with the Sewer Department is planned for PY2.</p> <p>OF 243 Gate 1 PNS - Low priority potential illicit discharge, human bacteroides present, but only at 40 CE/100 ml (well below threshold). Access to this outfall has been prohibited due to excessive vegetation. Vegetation removal and resampling is planned for PY2.</p> <p>OF261 Manson - Dry weather flow sampling 5/25/2023 exceeded bacteria thresholds, flow and bracket sampling planned for PY2.</p> <p>OF320 Manson - Dry weather flow sampling 5/25/2023 exceeded bacteria thresholds, flow and bracket sampling planned for PY2.</p> <p>Potential illicit discharges sampled and investigated and found to be from naturally occurring source: CB1119.</p>
3.6 Signif. Contrib. of Pollutants (Chlorinated Water)	Obtain water quality reports and BMPs from water districts/departmen s after hydrant flushing.	<p>No new significant contributors were identified this permit year.</p> <p>Kittery Water District provided a report of Hydrant Flushing activities on 4/11/2023 which indicated: KWD continues to dechlorinate hydrants during flushing to meet the Maine DEP Guidance threshold of 0.05 mg/l TRC before discharge. No hydrant discharges exceeded the 0.05 mg/l TRC Guidance threshold.</p>
<b>Construction Site Runoff Control</b>		
4.1 Update	Ordinances for ESC requirements by 6/30/2023	The Town's ordinances were amended on 5/8/2023 to include Erosion and Sedimentation Control as required by the General Permit Ordinance changes were adopted - See Public Notice BMP 2.1 for list of meetings held.
4.2 Site Plan Review Procedures	Keep implementing Town Site Plan Review procedures	The Town implements its site plan review process in accordance with its ordinances.

BMP/ Measurable Goal ID	Summary of Requirement for Permit Year	Kittery Status
4.3 Notices to contractors	Continue notifying applicants of MCGP and Chapter 500 requirements	Notices to contactors are included in all on-line permit applications, and discussed in pre-application meetings with Code and Planning.
4.4 ESC Inspections	Conduct ESC inspections and document inspections on spreadsheet (Precon, 3 insp during earth, 1 at end, plus one annually if multi-year project)	List of Sites in the MS4 disturbing one acre or more of land during this Permit Year:  76 Dennett - The Town's third-party contractor is onsite weekly, provides the Town with inspection reports and issues are resolved within 24 hours or next rainfall. No enforcement actions were taken during PY1.
<b>Post Construction</b>		
5.1a Model LID Ordinance	Submit Model LID Ordinance Strategies to DEP by 9/1/2022	The Town's LID strategies document was submitted to DEP for Public Comment on 8/23/2022. DEP provided letter of no objection on December 14, 2022. Though FOCB is appealing process, the Town plans to proceed with adoption of LID Strategies by 7/1/2024 as required by MS4 Permit Modification dated 11/23/2021.
5.1b Adopt LID	Adopt Strategies (as modified by DEP) by 6/30/2024	Town intends to adopt Model LID Ordinance strategies unless otherwise required by Maine DEP after resolution of FOCB Appeal.
5.2a Post Const. Annual Certs to Town and Tracking	Ensure Sites >1 or more acres disturbance submit annual certs/reports to Town.	Total number of MS4 Post Construction Sites = 1 Details on reports provided are as follows:  1. School Street Certification received 6/12/2023 all BMPs functioning, no maintenance or remedial action needed.
5.2b Post Const. Ordinance Update	Update Ordinance (definitions and 60 days to correct)	The Town's Ordinances were updated on 5/8/2023 to require maintenance be conducted within 60 days of identification. See Public Notice BMP 2.1 for a list of meetings held.
<b>Pollution Prevention Good Housekeeping</b>		
6.1a	Inventory of Municipal Operations	The inventory was reviewed when updating the O&M Procedures for 6.1b. No changes were needed.

BMP/ Measurable Goal ID	Summary of Requirement for Permit Year	Kittery Status
6.1b	Update Stormwater O&M Procedures, train or meet with those implementing, and ensure implementation	On 6/6/2023, the Public Works Inspector met with the Department Heads to review their respective O&M Procedures. No changes were required based on the review.
6.2	Training - all SWPPP personnel, 80% O&M personnel	100% of the Public Works and Transfer Station employees were trained on 2/3/2023 in two groups. Training topics included the Stormwater Pollution Prevention Plans and Oil Spill Prevention Control and Countermeasure Plans. Each training lasted 1 hour.
6.3	Street Sweeping (in spring as soon as possible after snow melt)	Fall sweeping began 10/17/2022 and spring sweeping began 5/23/2023. 167 loads of grit (1,336 cy) were removed for beneficial reuse.
6.4a	Catch Basin Inspection and Cleaning	Inspections and cleaning completed in PY1 were as follows: 923 MS4 cbs, 515 (56%) inspected and cleaned, 19 with excess sediment.  All with excess sediment from PY9 were inspected and cleaned again.
6.4b	Beneficial Reuse of grit if no evidence of pollution	The Town removed 84 loads (672 cubic yards) of material from the catch basins and placed it in the catch basin drying area at the municipal landfill.
6.5	Maintenance and upgrade of Stormwater conveyance and outfalls	Whipple Road sidewalk improvements were completed in PY1. The Town lined 1,115 linear feet of stormwater drainage pipes, repaired 21 basins and installed 80 feet of new drainage pipe. The Town, DOT and PNSY received a grant to review critical infrastructure related to climate change including stormwater infrastructure. The Town received a grant to replace the culvert at the Sea Point Bridge. The Town received a grant from PREPA to assess climate resiliency of select stormwater, sewer and water infrastructure.
6.6a	Stormwater Pollution Prevention Plan Updates for new permit	The SWPPPs for the Public Works Garage and Recycling Center/Transfer Station were reviewed prior to developing the training. No changes to the SWPPPs were needed.
6.6b	Implement SWPPPS	SWPPP is being implemented.

BMP/ Measurable Goal ID	Summary of Requirement for Permit Year	Kittery Status
Impaired Waters Requirements		Not required for this municipality.
Annual Report Changes		No changes were made to the Stormwater Management Plan in Permit Year 1.
<p>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.</p> <p>Signature: <u></u> Date: <u>9/13/23</u></p> <p>Town Manager</p>		
<p>Attachment: Field data sheets with analytical results for dry weather monitoring conducted. <input checked="" type="checkbox"/></p>		



## Field Data Collection Sheet

Date	06 AUG 2019	Project Name	SMPDC - Kitting
Time	11:30	Client Name	Stormwater
Sampler's Name	K. Robusca / S. Kellogg	Project Location	OF 260
Weather:	Sunny 75° Light wind		

Sample Type: Stormwater - Dry Weather Flow at outfall OF 260  
 Other: (Description) on Mill Pond Rd.  
 Sample Location/Sketch:

### Field Parameters

pH Calibration Information Temp: 21.0°C Date/Time of Calib: 8/6/2019 5:50 AM  
 Buffer Expir Dates: 7.00 5/13/2021 4.01 5/9/2021 10.01 5/1/2021  
 Post Calib. Readings 7.00 7.03 4.01 4.01 10.01 10.03

Parameter	Result (units)	Equipment Used	Comments
Temperature	17.1 C/F	Oakton Tester 35	
pH	6.66 s.u.	}	
Conductivity	796 µs		
Total Dissolved Solids	563 ppm		
Salinity	384 ppm		
Surfactants/Optical Bright	No surf	Baggie / Fl. light	No optical brighteners
Total Ammonia (NH3/NH4)	∅ mg/l	Hach Ammonia Test Strips	
Chlorine	mg/l	Hach Colorimeter II low range	Not Done

Observations (Odor, color, turb, algae, etc): No odor - was algae along discharge channel. Water was clear, no sediment or color.

### Laboratory Analyses

Laboratory Used: EMSL - New Jersey

Parameter	Method	Lab Code
Enterococci	ASTM D6503-99/Enterolert	
eColi MPN	Colilert/SM9223B	
Human Bacteriodes	qPCR	M199 (EMSL)
Nitrate/Nitrite	EPA 353.2	
Total Kjeldahl Nitrogen	EPA 351.2	
Ammonia as N	EPA 350.1	
Total Phosphorous	EPA 365.4	
TSS	SM 2540D	
TPH/Oil & Grease	EPA 1644 w/SGT	

### Comments/Field Notes


## Field Data Collection Sheet for Dry Weather Outfall Monitoring

Date	5/25/2023	Project Name	Kittery MS4
Time	11:15 AM	Sampler's Name	K. Rabasca
Weather:		Project Location	OF 250 Mill Pond Rd
Sample Type:	Dry Weather Flow Monitoring		
Sample Location/Sketch:	See GIS for location of outfall		

### Field Parameters to Monitor

Parameter	Result (units)	Equipment Used	Threshold triggering additional investigation (see QAPP)
Temperature (all flows)	54 °C	Oakton PCS 50	No threshold. FYI: Temp. is dependent on season. Groundwater is typically 40-55 F. Surface water can be hotter or colder.
Conductivity (all flows)	840 µS	Oakton PCS 50	No threshold. FYI: Groundwater is typ. Less than 1000 µS. Freshwater can be as high as 2000 µS. Saltwater can be as high as 55,000 µS.
Ammonia (potential bacteria sources)	0 mg/L	LaMotte Test Strips	≥ 0.50 mg/L
Optical Brighteners	Not Present	VWR UV lamp	Optical Brighteners ≥ 100 ug/L or if present
Chlorine (potential chlorine sources)	0 mg/l	LaMotte or Ultra Low Test Strips	≥ 0.05 mg/L (test kit limit)

Observations (unless already documented as part of outfall inspection: odor, color, turbidity, algae, etc):

### Laboratory Analyses

Parameter	Result (units)	Method/Code	Comments
E. coli - Nelson Analytical		SM 9223 B, EPA 1603, or SM 9221 B	For freshwaters - threshold is 236 CFU/100 ml (streams) or 194 CFU/100 ml (Ponds)
Enterococci <span style="font-size: small;">(Nelson Analytical)</span>	< 10 mpn/100ml	SM 9230 or EPA 1600	For marine/estuarine waters Threshold is 54 CFU/100 ml
Fecal Coliform		SM 9222 D or SM 9221 D, E	For fresh or marine/estuarine waters threshold is 61 cfu/100 ml
Human Bacteriodes		qPCR	For fresh or marine/estuarine waters, used only if others exceed thresholds
Nitrate	0 mg/l	LaMotte Strips	
Nitrite	0 mg/l	LaMotte Strips	

### Comments/Field Notes

OUTfall is unsupported at end by 4 feet +/- see photo

No further investigation needed

## Field Data Collection Sheet for Dry Weather Outfall Monitoring

Date	5/25/2023	Project Name	Kittery MS4
Time	10:27 AM		
Sampler's Name	K. Rabasca	Project Location	DF-96
Weather:	Clear, 60° Windy		
Sample Type:	Dry Weather Flow Monitoring		
Sample Location/Sketch:	See GIS for location of outfall ~ Haley Rd & Pepperell behind Citygo		

### Field Parameters to Monitor

Parameter	Result (units)	Equipment Used	Threshold triggering additional investigation (see QAPP)
Temperature (all flows)	53 C/F	Oakton PCS 50	No threshold. FYI: Temp. is dependent on season. Groundwater is typically 40-55 F. Surface water can be hotter or colder.
Conductivity (all flows)	1240 µS	Oakton PCS 50	No threshold. FYI: Groundwater is typ. Less than 1000 µS. Freshwater can be as high as 2000 µS. Saltwater can be as high as 55,000 µS.
Ammonia (potential bacteria sources)	0 mg/L	LaMotte Test Strips	≥ 0.50 mg/L
Optical Brighteners	Not Present	VWR UV lamp	Optical Brighteners ≥ 100 µg/L or if present
Chlorine (potential chlorine sources)	0.01 mg/l	LaMotte or Ultra Low Test Strips	≥ 0.05 mg/L (test kit limit)

Observations (unless already documented as part of outfall inspection: odor, color, turbidity, algae, etc):

### Laboratory Analyses

Parameter	Result (units)	Method/Code	Comments
E. coli - Nelson Analytical		SM 9223 B, EPA 1603, or SM 9221 B	For freshwaters - threshold is 236 CFU/100 ml (streams) or 194 CFU/100 ml (Ponds)
Enterococci	20 mpn/100ml	SM 9230 or EPA 1600	For marine/estuarine waters Threshold is 54 CFU/100 ml
Fecal Coliform		SM 9222 D or SM 9221 D, E	For fresh or marine/estuarine waters threshold is 61 cfu/100 ml
Human Bacteriodes		qPCR	For fresh or marine/estuarine waters, used only if others exceed thresholds
Nitrate	LaMotte strips	LaMotte Strips	
Nitrite	LaMotte strips	LaMotte Strips	

### Comments/Field Notes

No further investigation needed

## Field Data Collection Sheet for Dry Weather Outfall Monitoring

Date	6/22/2023	Project Name	Kittery MSG
Time	9:52 AM	Project Location	OF 310
Sampler's Name	KLR	Project Location	OF 310
Weather:	Sunny, 75		
Sample Type:	Dry Weather Flow		
Sample Location/Sketch:	OF 310 <del>Outlet</del> . See G.I.S. Route 1		

### Field Parameters to Monitor

Parameter	Result (units)	Equipment Used	Threshold triggering additional investigation (see QAPP)
Temperature (all flows)	59.1 C/F	OAKTOW	No threshold. FYI: Temp. is dependent on season. Groundwater is typically 40-55 F. Surface water can be hotter or colder.
Conductivity (all flows)	3790 µS	OAKTOW	No threshold. FYI: Groundwater is typ. Less than 1000 µS. Freshwater can be as high as 2000 µS. Saltwater can be as high as 55,000 µS.
Ammonia (potential bacteria sources)	0.0 mg/L	Hach Test Strips	≥ 0.50 mg/L
Optical Brighteners	Not Detected	VWR UV lamp	Optical Brighteners ≥ 100 ug/L or if present
Chlorine (potential chlorine sources)	0.0 mg/l	LaMotte or Ultra Low Test Strips	≥ 0.05 mg/L (test kit limit)

Observations (unless already documented as part of outfall inspection: odor, color, turbidity, algae, etc): Inspection done on GIS - some filamentous algae - no odor

### Laboratory Analyses (see QAPP for thresholds)

Parameter	Result (units)	Method/Code	Comments
E. coli		SM 9223 B, EPA 1603, or SM 9221 B	For freshwaters - threshold is 236 CFU/100 ml (streams) or 194 CFU/100 ml (Ponds)
Enterococci	Nelson 240 mpn/ 100ml	SM 9230 or EPA 1600	For marine/estuarine waters Threshold is 54 CFU/100 ml
Fecal Coliform		SM 9222 D or SM 9221	For fresh or marine/estuarine waters threshold is 61 cfu/100 ml
Human Bacteriodes	43,25 1 cc/100 ml.	qPCR	For fresh or marine/estuarine waters, used only if others exceed thresholds

### Comments/Field Notes

Filamentous Algae - See GIS inspection  
- Needs Riprap

## Field Data Collection Sheet for Dry Weather Outfall Monitoring

Date	5/25/2023	Project Name	Kittery MS4
Time	9:27 AM	Sampler's Name	K. Rabasca
Weather:	Sunny, Windy, ~60°F	Project Location	OF - 261 Mason Ave
Sample Type:	Dry Weather Flow Monitoring		
Sample Location/Sketch:	See GIS for location of outfall		

### Field Parameters to Monitor

Parameter	Result (units)	Equipment Used	Threshold triggering additional investigation (see QAPP)
Temperature (all flows)	53 C/E	Oakton PCS 50	No threshold. FYI: Temp. is dependent on season. Groundwater is typically 40-55 F. Surface water can be hotter or colder.
Conductivity (all flows)	1060 $\mu$ S	Oakton PCS 50	No threshold. FYI: Groundwater is typ. Less than 1000 $\mu$ S. Freshwater can be as high as 2000 $\mu$ S. Saltwater can be as high as 55,000 $\mu$ S.
Ammonia (potential bacteria sources)	0 mg/L	LaMotte Test Strips	$\geq$ 0.50 mg/L
Optical Brighteners	Not present	VWR UV lamp	Optical Brighteners $\geq$ 100 $\mu$ g/L or if present
Chlorine (potential chlorine sources)	0 mg/l	LaMotte or Ultra Low Test Strips	$\geq$ 0.05 mg/L (test kit limit)
Observations (unless already documented as part of outfall inspection): <u>odor</u> , color, turbidity, algae, etc): <u>Did GIS inspection</u>			

### Laboratory Analyses

Parameter	Result (units)	Method/Code	Comments
E. coli - Nelson Analytical		SM 9223 B, EPA 1603, or SM 9221 B	For freshwaters - threshold is 236 CFU/100 ml (streams) or 194 CFU/100 ml (Ponds)
Enterococci - Nelson Analytical	10 mpn/100ml	SM 9230 or EPA 1600	For marine/estuarine waters Threshold is 54 CFU/100 ml
Fecal Coliform		SM 9222 D or SM 9221 D, E	For fresh or marine/estuarine waters threshold is 61 cfu/100 ml
Human Bacteriodes	7,633 C/E/100ml	qPCR	For fresh or marine/estuarine waters, used only if others exceed thresholds
Nitrate	0 mg/L	LaMotte Strips	
Nitrite	0 mg/L	LaMotte Strips	

### Comments/Field Notes


## Field Data Collection Sheet for Dry Weather Outfall Monitoring

Date	5/25/2023	Project Name	Kittery MS4
Time	9:54 AM		
Sampler's Name	K. Rabasca	Project Location	DF-320 Mason Ave
Weather:			
Sample Type:	Dry Weather Flow Monitoring		
Sample Location/Sketch:	See GIS for location of outfall		

### Field Parameters to Monitor

Parameter	Result (units)	Equipment Used	Threshold triggering additional investigation (see QAPP)
Temperature (all flows)	52.8 C/F	Oakton PCS 50	No threshold. FYI: Temp. is dependent on season. Groundwater is typically 40-55 F. Surface water can be hotter or colder.
Conductivity (all flows)	550 $\mu$ S	Oakton PCS 50	No threshold. FYI: Groundwater is typ. Less than 1000 $\mu$ S. Freshwater can be as high as 2000 $\mu$ S. Saltwater can be as high as 55,000 $\mu$ S.
Ammonia (potential bacteria sources)	0 mg/L	LaMotte Test Strips	$\geq$ 0.50 mg/L
Optical Brighteners	Not Present	VWR UV lamp	Optical Brighteners $\geq$ 100 ug/L or if present
Chlorine (potential chlorine sources)	0 mg/l	LaMotte or Ultra Low Test Strips	$\geq$ 0.05 mg/L (test kit limit)

Observations (unless already documented as part of outfall inspection: odor, color, turbidity, algae, etc): Did GIS inspection

### Laboratory Analyses

Parameter	Result (units)	Method/Code	Comments
E. coli - Nelson Analytical		SM 9223 B, EPA 1603, or SM 9221 B	For freshwaters - threshold is 236 CFU/100 ml (streams) or 194 CFU/100 ml (Ponds)
<u>Nelson Analytical</u> Enterococci	606 mpn/100ml	SM 9230 or EPA 1600	For marine/estuarine waters Threshold is 54 CFU/100 ml
Fecal Coliform		SM 9222 D or SM 9221 D, E	For fresh or marine/estuarine waters threshold is 61 cfu/100 ml
<u>Human Bacteriodes</u>	Not Sampled.	qPCR	For fresh or marine/estuarine waters, used only if others exceed thresholds
Nitrate	0 mg/L	LaMotte Strips	
Nitrite	0 mg/L	LaMotte Strips	

### Comments/Field Notes

Outfall need Maintenance,  
 Badly eroded, Yard waste  
 Neighbor directly across street dumps the yard waste  
 NO 126 Manson, per 131 Manson