

# Upcoming Ordinance Changes

(Required by the Stormwater Permit)

Focus: Erosion/Sediment Control Standards to  
be adopted by 6/30/2023

Presented to Kittery Planning Board 5/26/2022

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# Upcoming Ordinance Changes

Agenda for tonight:

1. Review requirement for ordinance changes
2. Provide some examples of the changes to be made
3. Provide summary of available resources and topics for future Planning Board discussions
4. Summary/Next Steps

# Upcoming Ordinance Changes

Ordinance changes required by:

General Permit for Stormwater Discharges  
from the Municipal Separate Storm Sewer  
System (MS4 General permit)

Town has been regulated by this since 2003.

# Upcoming Ordinance Changes

## Maine DEP MS4 Permits

2003 – 2008

2008 – 2013

2013 – 2022

New Permit Begins 7/1/2022

Stormwater Management Plan  
provides more detail.  
(Available on Public Works  
Stormwater Page)

## STORMWATER MANAGEMENT PLAN

FOR

TOWN OF KITTERY, MAINE




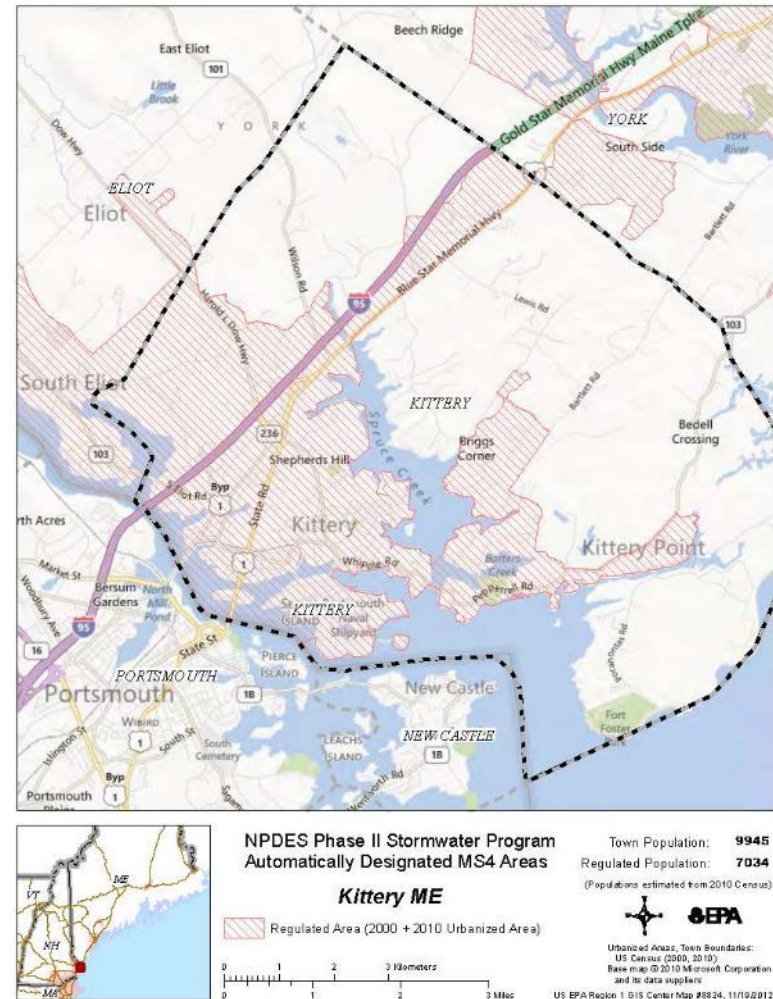
MS4 General Permit Effective July 1, 2022  
Initially Submitted to Maine DEP March 17, 2021  
Updated July 28, 2021 to address DEP comments  
Resubmitted as final September 3, 2021

# Upcoming Ordinance Changes

General Permit only required in Urbanized Area

- US census high density areas with lots of impervious surface
- Shown here in pink hashing (2000 and 2010 only, 2020 does not apply)

 Regulated Area (2000 + 2010 Urbanized Area)

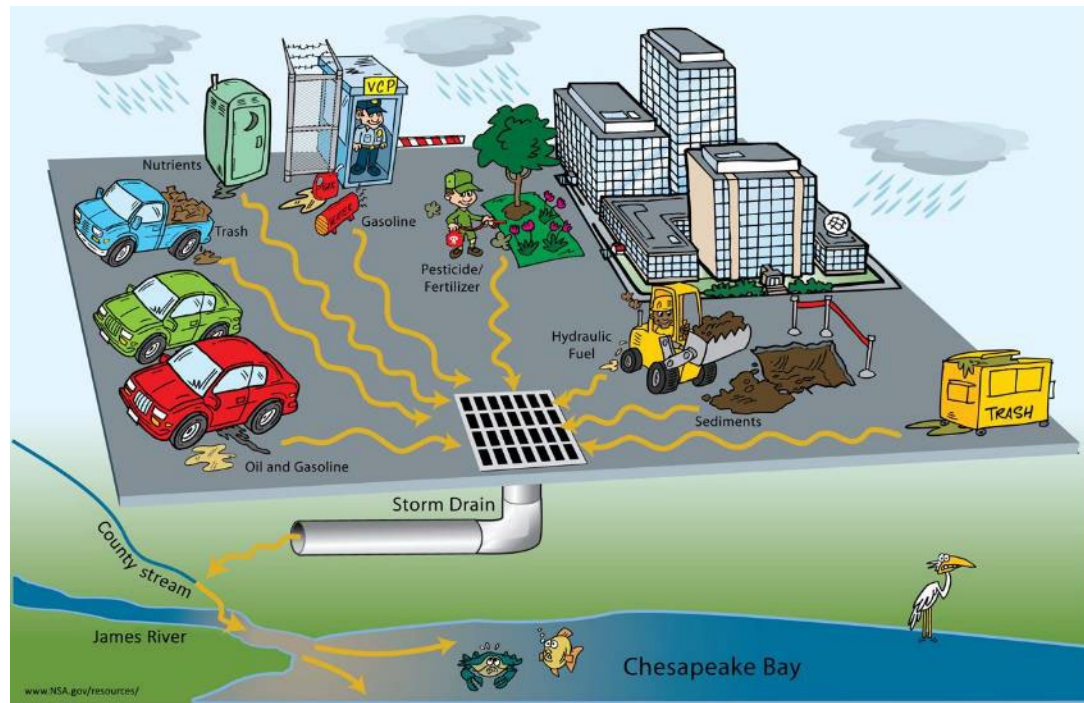


# Upcoming Ordinance Changes

High impervious cover (paved and roofed areas)

Allows pollutants to build up

Which are released to waters when it rains.



Graphic credit: [www.NSA.gov](http://www.NSA.gov)

# Upcoming Ordinance Changes

## Control Measures to Minimize Pollutants

1. Public Education/Outreach
2. Public Participation
3. Illicit Discharge Detection and Elimination
- 4. Construction Runoff Control**
5. Post Construction Runoff Control
6. Pollution Prevention/Good Housekeeping

# Erosion Sediment Control (ESC) Requirements

- “Create or Update an ordinance or other regulatory mechanism that requires the use of erosion and sediment control BMPs at construction sites consistent with the minimum standards outlined in Appendix C, *Erosion and Sedimentation Control, Inspections and Maintenance and Housekeeping* of this GP” by 6/30/2023.

(Appendix C is same as Chapter 500 State Requirements in Appendices A, B, and C), including waste control for some additional items.



# Sampling of ESC Requirements

## Erosion Sediment Control (ESC) Requirements:

- ✓ Threshold is one acre or more of disturbance, or smaller sites if they are part of a larger common plan of development or sale that would disturb one acre or more.
- ✓ ESC Measures in place before construction begins
- ✓ Remain in place throughout construction
- ✓ Adequate and timely maintenance required

# Sampling of ESC Requirements

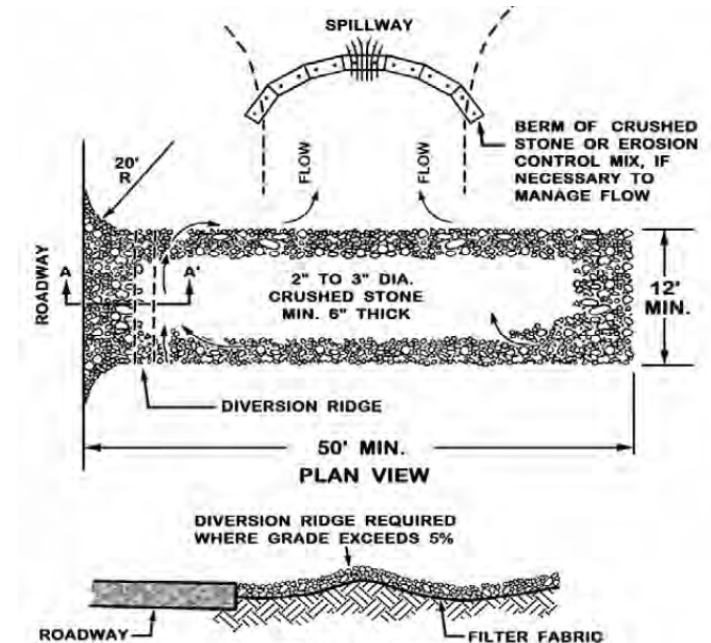
## Inspections During Construction – By Contractor/Developer

- ✓ Weekly,
- ✓ Before a rain event, and
- ✓ After a rain event (w/in 24 hours).
- ✓ Keep a log (for DEP and Town to inspect)
  
- ✓ When needed repair ESC BMPs as follows:
  - Initiate upon discovery
  - Complete before end of next workday
  - Allows completion within 7 days if longer needed, and
  - Prior to any rain event.

# Sampling of ESC Requirements

## Stabilized Construction Entrances

- ✓ Aggregate and filter fabric
- ✓ Protects public right of way
- ✓ Maintenance required until all areas are stabilized.



# Sampling of ESC Requirements

## Definitions and standards for Permanent Stabilization and Winter Construction

**6. Permanent stabilization:** If the area will not be worked for more than one year or has been brought to final grade, then permanently stabilize the area within 7 days by planting vegetation, seeding, sod, or through the use of permanent mulch, or riprap, or road sub-base. If using vegetation for stabilization, select the proper vegetation for the light, moisture, and soil conditions; amend areas of disturbed subsoils with topsoil, compost, or fertilizers; protect seeded areas with mulch or, if necessary, erosion control blankets; and schedule sodding, planting, and seeding so to avoid die-off from summer drought and fall frosts. Newly seeded or sodded areas must be protected from vehicle traffic, excessive pedestrian traffic, and concentrated runoff until the vegetation is well-established with 90% cover by healthy vegetation. If necessary, areas must be reworked and restabilized if germination is sparse, plant coverage is spotty, or topsoil erosion is evident. Permanent Stabilization Definitions are as follows:

- a. Seeded areas. For seeded areas, permanent stabilization means a 90% cover of the disturbed area with mature, healthy plants with no evidence of washing or rilling of the topsoil.
- b. Sodded areas. For sodded areas, permanent stabilization means the complete binding of the sod roots into the underlying soil with no slumping of the sod or die-off.
- c. Permanent mulch. For mulched areas, permanent mulching means total coverage of the exposed area with an approved mulch material. Erosion Control Mix may be used as mulch for permanent stabilization according to the approved application rates and limitations.
- d. Riprap. For areas stabilized with riprap, permanent stabilization means that slopes stabilized with riprap have an appropriate backing of a well-graded gravel or approved geotextile to prevent soil movement from behind the riprap. Stone must be sized appropriately. It is recommended that angular stone be used.
- e. Paved areas. For paved areas, permanent stabilization means the placement of the compacted gravel subbase is completed, provided it is free of fine materials that may runoff with a rain event
- f. Ditches, channels, and swales. For open channels, permanent stabilization means the channel is stabilized with a 90% cover of healthy vegetation, with a well-graded riprap lining, turf reinforcement mat, or with another non-erosive lining such as concrete or asphalt pavement. There must be no evidence of slumping of the channel lining, undercutting of the channel banks, or down-cutting of the channel.

**7. Winter construction:** "Winter construction" is construction activity performed during the period from November 1 through April 15. If disturbed areas are not stabilized with permanent measures by November 1 or new soil disturbance occurs after November 1, but before April 15, then these areas must be protected and runoff from them must be controlled by additional measures and restrictions.

- a. Site stabilization: For winter stabilization, hay mulch is applied at twice the standard temporary stabilization rate. At the end of each construction day, areas that have been brought to final grade must be stabilized. Mulch may not be spread on top of snow.
- b. Sediment barriers: All areas within 75 feet of a protected natural resource must be protected with a double row of sediment barriers.
- c. Ditch: All vegetated ditch lines that have not been stabilized by November 1, or will be worked during the winter construction period, must be stabilized with an appropriate stone lining backed by an appropriate gravel bed or geotextile unless specifically released from this standard by the Department.
- d. Slopes: Mulch netting must be used to anchor mulch on all slopes greater than 8% unless erosion control blankets or erosion control mix is being used on these slopes.

**8. Stormwater channels:** Each channel should be constructed in sections so that the section's grading, shaping, and installation of the permanent lining can be completed the same day. If a channel's final grading or lining installation must be delayed, then diversion berms must be used to divert stormwater away from the channel, properly-spaced check dams must be installed in the channel to slow the water velocity, and a temporary lining installed along the channel to prevent scouring.

# Sampling of ESC Requirements

These are already state requirements under Chapter 500.

There are so many, we cannot cover them all, but hopefully those few examples give you a flavor of the changes needed.

Kittery Ordinances will require review to ensure compliance.

# Kittery-Specific References to Review

## Title 16 Land Use and Development Code

- Subdivisions: Already require DEP approval first, so technically, most developers will already meet the standards.
- But need to embed performance standards so Kittery can enforce.



# Kittery-Specific References to Review

## Title 16 Land Use and Development Code

- 16.2 Definitions
- 16.7 General Development Requirements
- 16.8 Design and Performance Standards for the Built Environment (Stormwater Drainage)
- 16.9 Design and Performance Standards for the Natural Environment (Prevention of Erosion)



# Kittery-Specific References to Review

## Title 16 Land Use and Development Code

- 16.8 Design and Performance Standards for the Built Environment

- 16.8.8.1 Stormwater Drainage

D. When proposed development does not require Maine Department of Environmental (MDEP) approval under MDEP Chapters 500 and 502, the following applies:

- (a) Wherever the storm drainage system is not within the right-of-way of a public street, perpetual easements must be provided to the Town allowing maintenance and improvement to the system.
- (b) All sediment and erosion control measures must be designed in accordance with MDEP's "Maine Erosion and Sediment Control BMPs," March 2003.
- (c) Catch basins in streets and roads must be installed where necessary and located at the curblin. In parking lots and other areas, catch basins must be located where necessary to ensure proper drainage.
- (d) Where soils require a subsurface drainage system, the drains must be installed and maintained separately from the stormwater drainage system.
- (e) Where the Board has required a stormwater management and erosion control plan and MDEP approval under Chapters 500 and 502 is not required, said plan must be endorsed by the York County Soil and Water Conservation District.
- (f) Drainage easements for existing or proposed drainageways located outside a public way must be maintained and/or improved in accordance with § 16.8.8.2, Post-construction stormwater management.



# Kittery-Specific References to Review

## Title 16 Land Use and Development Code

- 16.9 Design and Performance Standards for the Natural Environment
  - 16.9.1.3 Prevention of Erosion

B. All development must generally comply with the provisions of the "Environmental Quality Handbook, Erosion and Sediment Control," published by the Maine Soil and Water Conservation Commission.

C. Where the Board has required a stormwater management and erosion control plan, said plan must be endorsed by the York County Soil and Water Conservation District or found satisfactory by the Town's Engineering Peer Reviewer.

# Resources Available

Several resources may help with ordinance update

1. Saco Language - Reference Chapter 500 directly (with any optional changes)
2. Use of a Checklist to embed technical standards in municipal ordinances
3. Use of a Model Ordinance

All three of these options will require you to review and update any references to Erosion Sediment Control in your ordinances.

There are also a few optional items you should evaluate for improved protection of water quality and to address climate change.

# Optional items

The optional items the town might consider include:

- a. Apply to sites smaller than 1 acre threshold (2,000 square feet of new impervious cover)?
- b. Require the ESC Plan by Qualified Professional?
- c. Require pre-construction meeting (Kittery may have)
- d. Requirements for control of brick/masonry cuttings, concrete or mortar mixing washout.

# Resource 1 – Reference Chpt. 500

Saco updated their ordinance within the last year and has some great model language.

Will still require review an update of all other Town Ordinances that reference ESC performance standards.

## § XII.7. General Erosion and Sediment Control Provisions

- A. The Erosion and Sedimentation Control Law (Title 38 M.R.S. Section 420-C) applies to all activities in Maine's organized territories that will cause the filling, displacement or exposure of all earthen materials. The Erosion and Sedimentation Control Law requires that appropriate measures prevent unreasonable soil erosion and sedimentation beyond the site or into a protected natural resource (such as a river, stream, brook, lake, pond, or wetland). Erosion control measures must be installed before the activity begins and must be maintained until the site is permanently stabilized.
- B. An Erosion Control Plan is required for all new development or redevelopment projects that result in one (1) or more acres of disturbed area or more than ten thousand (10,000) square feet of new or redeveloped impervious area. This provision also applies to projects disturbing less than one acre if the construction activity is part of a larger common plan or development or sale that would disturb one (1) or more acres.
- C. Erosion Control Plan. The plan shall include comprehensive erosion and sediment control provisions as summarized below:
  - 1. The plan shall show the use of erosion and sediment control best management practices (BMPs) at construction sites consistent with the minimum standards outlined in the Maine DEP Stormwater Rule Chapter 500 Appendix A – Erosion and Sediment Control, Appendix B – Inspections and Maintenance, Appendix C – Housekeeping. Erosion and Sedimentation Control BMPs shall be designed, installed and maintained in accordance with the standards contained in the latest revisions of the following Maine DEP documents:
    - a) Maine Erosion and Sediment Control Best Management Practices (BMPs) Manual for Designers and Engineers
    - b) Maine Erosion and Sediment Control Practices Field Guide for Contractors

# Resource 2. Checklist

Checklist created in 2021 by Ordinance Committee allows documentation of changes to ordinances – (final checklist may help during DEP audit), includes the optional elements to protect water quality and address climate change recommendations from Governor’s Climate Council. (Kittery may not need this).

<p>2022-27 MS4 General Permit Ordinance Change Checklist - Option 1 embed standards in your ordinance</p> <p>Purpose of Checklist: This checklist was developed by the Southern Maine Stormwater Working Group and the Interlocal Stormwater Working Group to assist Planners and Planning Boards in updating ordinances to reflect the requirements of the 2022 General Permit (GP) for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4) dated 10/15/2020, and to consider related optional recommendations from the 2020 Maine Climate Council (MCC) and the 2017 Maine Municipal Climate Adaptation Series (MCAS).</p>	<p>Date of Checklist: 5/31/2021</p>	
<p>2022-27 MS4 General Permit - MCM 4 - Construction Site Stormwater Runoff Control Requirements for "ordinance or other regulatory mechanism"</p>	<p>Existing Municipal Ordinance or Policy Requirements (provide citation either summary or quote of existing requirement)</p>	<p>Recommended Changes or additions</p>
<p>MS4 Permittee must implement: "An ordinance or other regulatory mechanism that requires the use of erosion and sediment control best management practices (BMPs) at construction sites consistent with the minimum standards outlined in Appendix C, Erosion and Sedimentation Control, Inspections and Maintenance and Housekeeping of this GP. Also see the Department’s website for a guidance document entitled Maine Erosion and Sediment Control Practices Field Guide For Contractors to assist contractors and municipalities in developing BMPs for the ordinance or other regulatory mechanism. Permittees who have an existing ordinance must evaluate the ordinance and update it as needed within one (1) year of the effective date of this GP (7/1/2023) to provide the permittee with the necessary enforcement authority. Those permittee’s without an existing ordinance must develop an ordinance within one (1) year (7/1/2023) of the effective date of this GP and have an approved ordinance in place with the necessary enforcement authority within two (2) years (7/1/2024) of the effective date of this GP."</p>		

Content – White is required, Blue indicates optional changes

Column to document what the Existing Ordinances contain – you may not need any changes to address a line item.

Column to document proposed changes to ordinance (for discussion)

# Resource 3 – Model Ordinance

Finalized 2/20/2022

Created by Ordinance Committee

Reviewed by J. Katsiaficas (Lawyer  
at Perkins Thompson)

Will still require review an update  
of all other Town Ordinances that  
reference ESC performance  
standards.

Includes same optional elements as  
checklist.

## Notes for Future Adopters

Elements required for MS4 compliance are in black text – this text should not be modified without careful consideration of 2022 MS4 General Permit.

*Optional elements incorporating Maine Climate Council Recommendations or items more stringent than Chapter 500 are shown in blue italicized text. Municipalities may or may not incorporate these elements as they wish.*

Much of the text is standard ordinance language and is shown in green. Municipalities may modify this to conform to their own ordinances and procedures.

Some sections of this model ordinance contain placeholders (underlined) for municipalities to fill in, such as municipal code references or the Enforcement Authority for the ordinance.

Comments are provided in the margins for better understanding (In the document ribbon, under the Review tab, select comments from the “Show Markup” pull-down menu).

## Maine Model Ordinance for Erosion and Sedimentation Control at Construction Sites

4/21/2022 Final



Credits: This model ordinance was prepared by SMPDC, CCSWCD, and Integrated Environmental Engineering, Inc. under award CZM NA20NOS4190064 to the Maine Coastal Program from the National Oceanic and Atmospheric Administration, U.S. Department of Commerce. The statements, findings, conclusions, and recommendations are those of the author(s) and do not necessarily reflect the views of NOAA or the Department of Commerce.

# Resource 3 – Use Model Ordinance

Model Ordinance has two appendices that could replace Kittery 16.9.1.3 Built Environment Erosion Standards :

1. Listing out all technical standards from Chapter 500 ABC (including any optional items)
2. Referencing Chapter 500 ABC, and only calling out those optional items that are more stringent.

## Alternate Appendix 1 – Erosion and Sedimentation Control Standards

The Erosion and Sedimentation Control Plan required under this Ordinance shall be developed and implemented to conform to the Maine Department of Environmental Protection's 06-096 CMR Chapter 500 Stormwater Management Rule Appendices A, B, and C as mandatory minimum standards with the following additional standards (shown as underlined text and deletions shown as strikethrough text).

Where not otherwise specified in this Appendix, the Erosion and Sedimentation Control BMPs shall be designed using Performance Standards specified in the Maine Erosion and Sediment Control BMPs Manual developed by the Maine DEP (October 2016 or most current version).

Erosion and Sedimentation Control BMPs that require design to accommodate specific storm events shall be designed using precipitation data from either the Northeast Regional Climate Center (<http://precip.eas.cornell.edu>), Extreme Precipitation Tables, or the NOAA Atlas 14 precipitation data ([https://hdsc.nws.noaa.gov/hdsc/pfds/pfds\\_map\\_cont.html](https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html)).

The Erosion and Sedimentation Control Plan shall be prepared by a Qualified Professional as defined in this Ordinance.

### Chapter 500 Appendix A. Erosion and Sedimentation Control:

~~Erosion and Sedimentation Control BMPs must be in place before Construction Activity begins.~~

- Additional Erosion and Sedimentation Control BMPs must be phased in as appropriate.
  - BMPs must remain in place and functional until the Site is permanently stabilized.
  - Adequate and timely maintenance of Erosion and Sedimentation Control BMPs must be conducted until permanent stabilization is achieved. ~~And temporary and permanent stabilization measures must be taken.~~
1. Pollution Prevention: Minimize Disturbed Areas and protect natural downgradient buffer areas, and any areas where stormwater may flow off-Site to the extent practicable. Control stormwater volume and velocity within the Site to minimize soil erosion. Minimize the disturbance of steep slopes. Control stormwater Discharges, including both peak flow rates and volume, to minimize erosion at outlets. The Discharge may not result in erosion of any open drainage channels, swales, stream channels or stream banks, upland, or coastal or freshwater wetlands off the project Site.
    - a. Whenever practicable, no disturbance activities shall take place within 50 feet of any Protected Natural Resource.
    - b. ~~If disturbance activities take place between 30 feet and 50 feet of any protected natural resource, and stormwater discharges through the disturbed areas toward the protected natural resource, perimeter erosion controls must be doubled. If disturbance activities take place less than 30 feet from any protected natural resource, and stormwater discharges through the disturbed areas toward the protected natural resource, perimeter erosion controls must be doubled and disturbed areas must be temporarily or permanently stabilized within 7 days, or before the next rain event, whichever comes sooner.~~
    - c. If it is not practicable to maintain the 50-foot buffer of no disturbance, the Erosion and Sedimentation Control Plan must include redundant (at least two) perimeter control measures that are appropriate for the soil and slope.

# Impact on Town staff/budget

Kittery Inspections include most items already

Inspections done by Code Enforcement, third-party inspectors and Public Works Inspector

Staff time impact to ensure ordinances get updated properly

Staff time impact to get staff/third party contractors up to speed for enforcement.

May be a few more sites coming through planning board (\*any site that disturbs one or more acres of land, including single and multi-family)



# Summary/Next Steps

## Summary:

Required by MS4 (Stormwater) General Permit.

Need to be implemented by 6/30/2023.

Some optional considerations (preservation of water quality and climate resiliency)

## Next Steps:

Planning Staff will review available resources and provide suggested path to compliance (Simple reference to Chapter 500, Modifications to add performance standards only, or full Model Ordinance)

Will bring back to Planning Board with additional considerations as they work through details.

Questions?