



NHDES Alteration of Terrain Program

Seacoast Stormwater Coalition

~~January 17, 2018~~

January 31, 2018

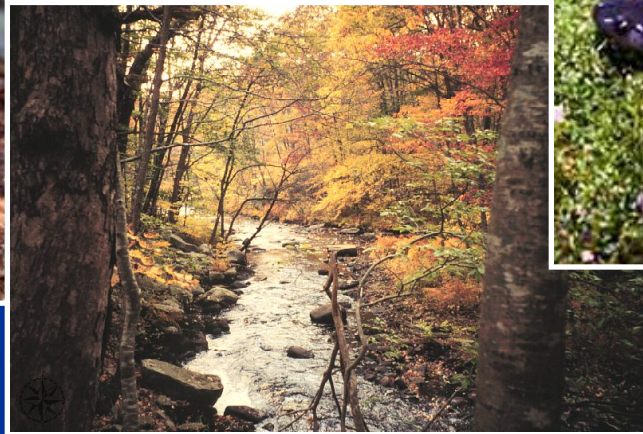
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The Purpose of Alteration of Terrain

To protect **surface waters**,
drinking water supplies, and **groundwater**
from construction activities
and development



AoT Jurisdiction

- 100K sq. ft. of disturbance
- 50K in Protected Shoreland
- MS4s – 43.56K



Alteration of Terrain Permit Requirements

Temporary erosion &
sediment control

Permanent treatment
(sediment, nitrogen,
phosphorous, metals, etc.)



Quality

Address Flooding
Stream bank erosion

Three Major Review Components

- Hydrologic Analysis
- Sediment & Erosion Control Plans
- Stormwater Control & Treatment

Sediment & Erosion Control Plans

- Sequencing, minimize open area
- Perimeter controls
- Construction entrances
- Inlet/outlet protection
- Runoff directed to temporary practices
- Slope protection/vegetation requirements
- Inspection requirements

Stormwater Treatment Systems

- Stormwater ponds, no micro-pools (note error in rules text)
- Stormwater wetlands
- Gravel wetlands
- Infiltration practices
- Filtering practices
- Treatment Swales
 - 10 minute residence time, 4-inch depth
- Vegetated Buffers

Some of the More Significant Rule Revisions

Discharges to Impaired Waters (40 CFR 130.7 or 130.8)

Chloride

Nitrogen and Phosphorous

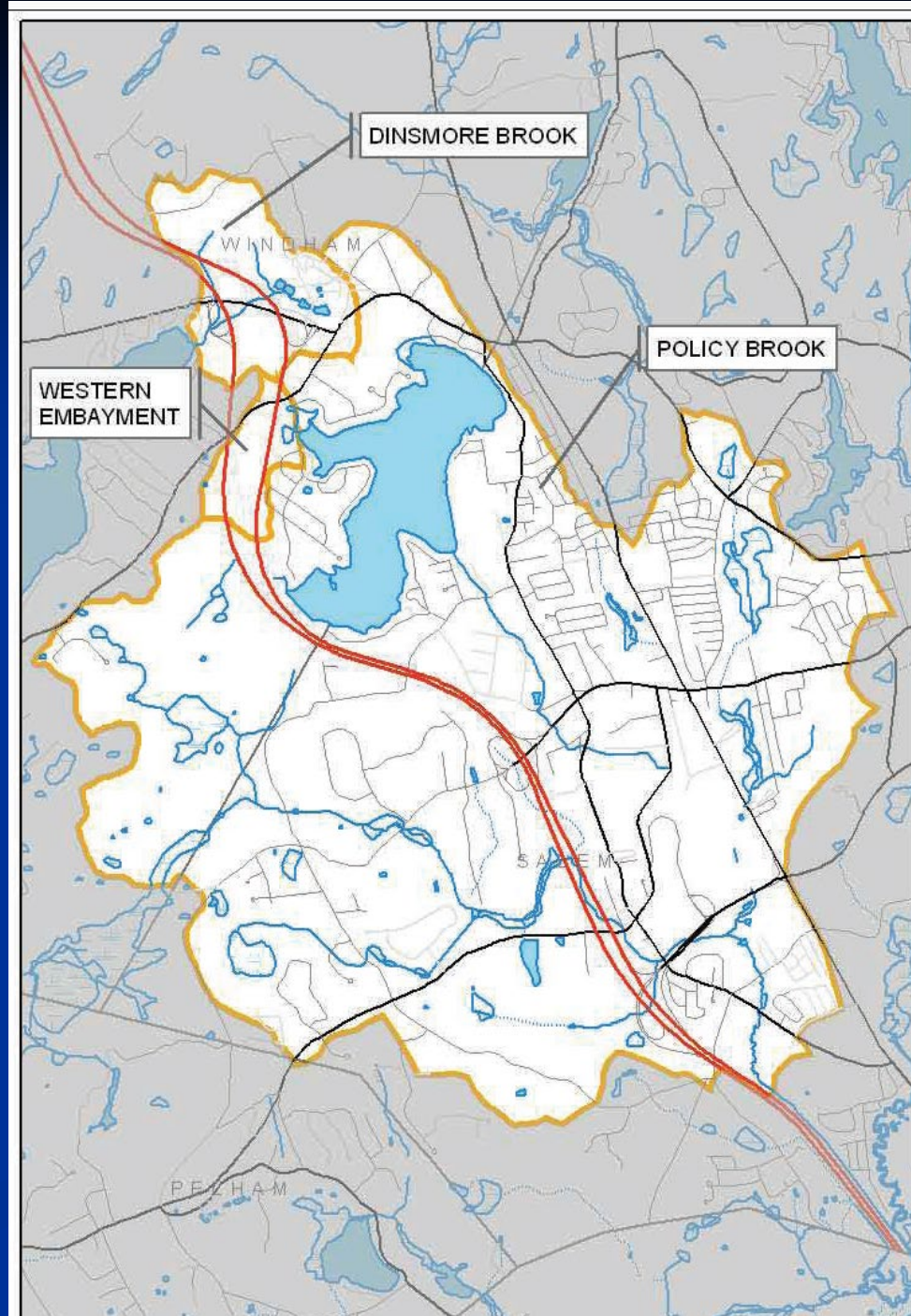
Address 2014 Science & Technical Advisory Panel Report, Sea-level Rise, Storm Surges, and Extreme Precipitation

Blasting Considerations

Detention Ponds – lined or accept treated water only

Chloride Impaired

- 48+/- Watersheds
- Develop CMP
- DES Guidance:
 - Green SnowPro
 - Equip Calibration
 - Weather Monitoring
 - Salt Usage Eval. & Monitoring



Nitrogen/Phosphorus Impairment

- Demonstrate the project will not cause a net increase to:
 - Impaired waters, Class A waters or ORWs
 - Lakes and Ponds - phosphorus
- Use infiltration/filtration
- Elevated groundwater, use gravel wetland





Basic Navigation Save and Share

Welcome Bookmarks Open Save Pan Zoom In Zoom Out Initial View Full Extent Previous Extent Next Extent Print Map Save Image Share Download Data Upload Data

Layers

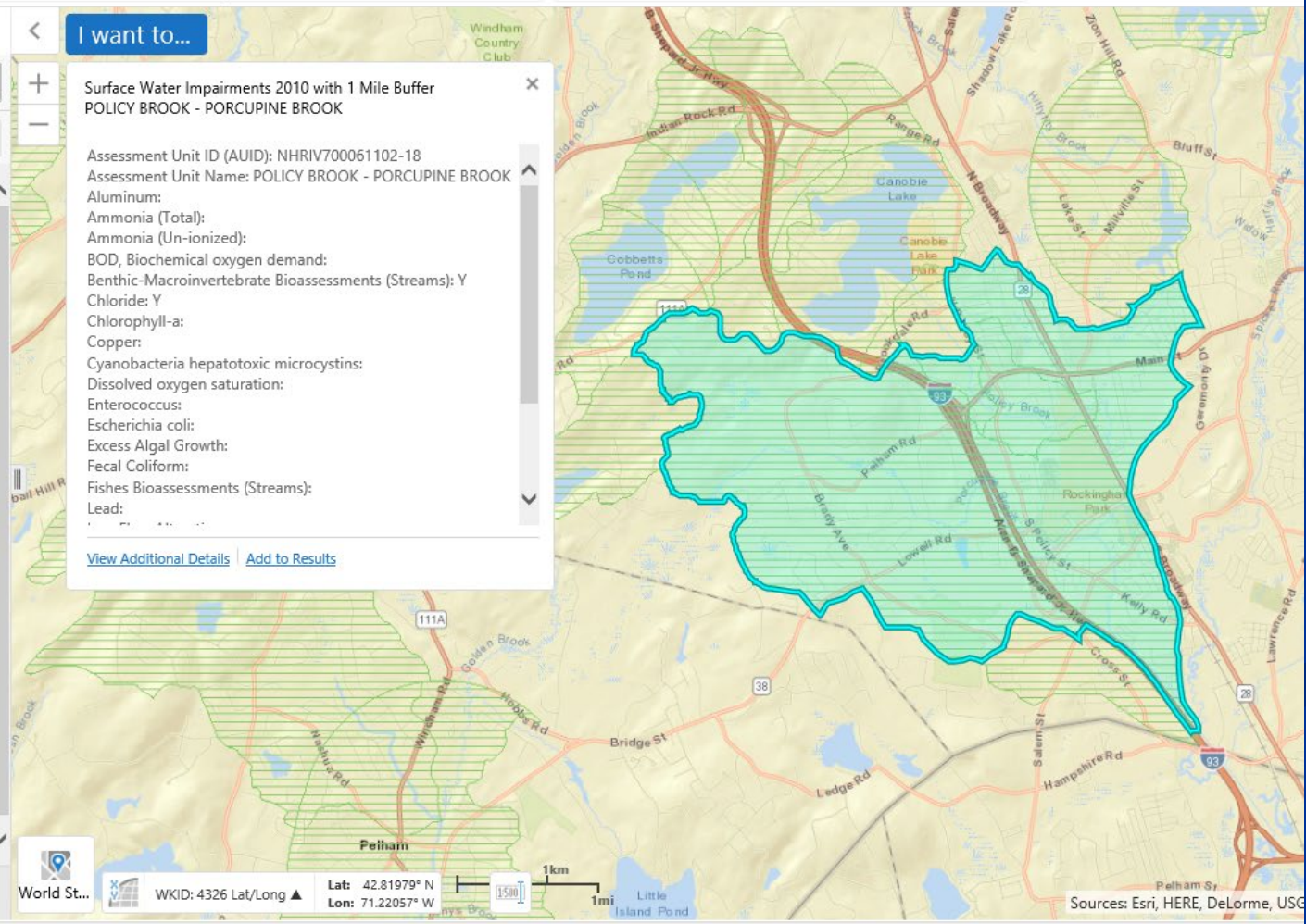
Alteration Of Terrain Permit

Filter Layers...

Screening Layers

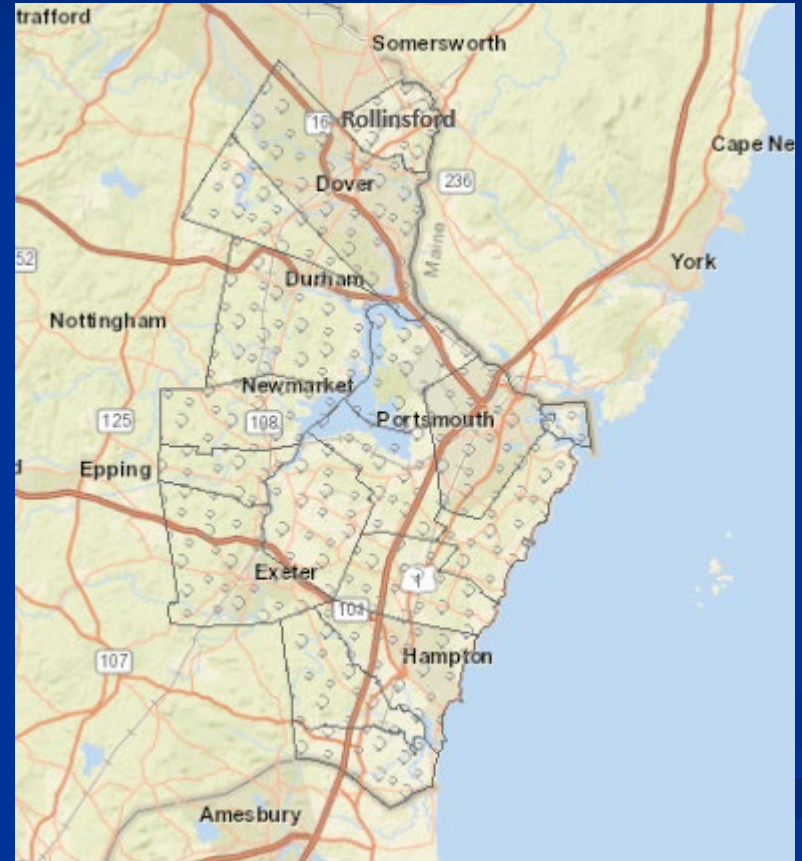
- ☐ Class A Surface Waters
- ☐ Coastal and Great Bay Region
- ☐ Groundwater Classification
- ☐ Groundwater Classification
- ☐ Outstanding Resource Water
- ☐ Public Water Supply Wells
- ☒ Surface Water Impairments
- ☐ Water Supply Intake
- ☐ Wellhead Protection Areas

Base Layers



Address 2014 STAP Report

- Assume 15% in precipitation depths
- Address sea-level rise and storm surge
- Update every 5 years




Blasting Considerations

- All projects with blasting – include BMPs
- Groundwater monitoring plan required if:
 - $> 5,000$ cy
 - Public or private wells within 2,000 feet



Additional Rules

- Temporary stormwater diversion/storage
- No >50% extended detention
- Certification of completion of work by owner and engineer
- Responsibilities for I&M activities
 - Document in writing transfer to political subdivision
 - No I&M manual required but document activities
 - For homeowners associations, responsible party as specified in association documentation
 - IF HOA dissolves/discontinued, individual homeowners shall have joint and several liability



NH Small MS4 GP Part 2.3.5 Construction Site Stormwater Runoff Control

- ▶ Applies to sites ≥ 1 acre
- ▶ Ordinance to require sediment and erosion control measures at construction sites
- ▶ Written procedures for site inspections for sites that discharge to the MS4
- ▶ Require construction operators to implement sediment and erosion control measures and control other wastes associated with construction projects
- ▶ Written procedures for site plan review of construction BMPs

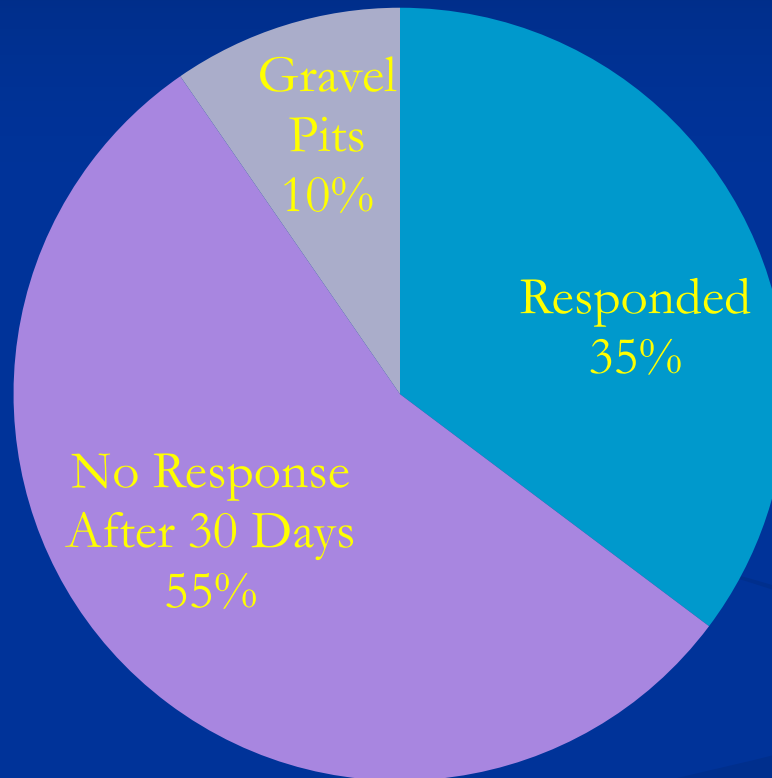
NH Small MS4 GP Part 2.3.6

Stormwater Management in New Development and Redevelopment

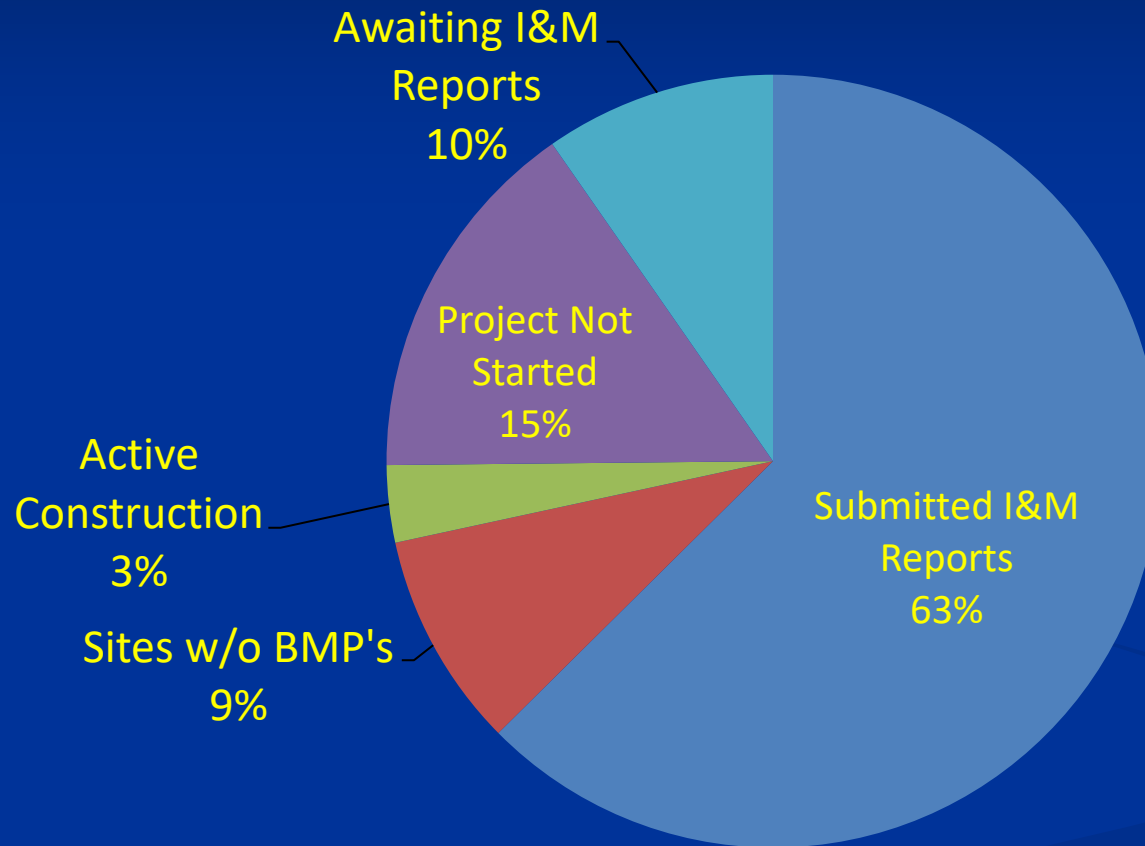
- ▶ Applies to sites ≥ 1 acre
- ▶ Ordinance to address discharges from development to the MS4
 - ▶ Design of BMPs shall follow NH Stormwater Manual
 - ▶ BMPs must be designed to
 - ▶ Retain the WQV (runoff from 1 in of precipitation) in accordance with NH AOT OR
 - ▶ Remove 90% avg annual TSS load, 60% avg annual TP load generated from the site's impervious area
 - ▶ More flexibility allowed for redevelopment projects: offsite mitigation within the same watershed allowed, must remove 80% avg annual TSS load, 50% avg annual TP load
- ▶ OR the ordinance must be consistent with Sec. 4 Elements C and D of the SE Watershed Alliance Model Stormwater Standards for Coastal Communities
- ▶ Require the submission of as-built drawings for these projects for operator review, as well as plans for O&M of new BMPs

Inspection & Maintenance Document Request

800 Permits



Inspection & Maintenance Document Request



I&M Issues

- 75% of respondents not aware of responsibilities
- Not in possession of I&M Manual
- Lack of transfer of responsibility
- Commercial properties generally more aware than residential



Thank You!