

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Page 1 of 18

Part I: General Conditions

General Information

Name of Municipality or Organization: State:

EPA NPDES Permit Number (if applicable):

Primary MS4 Program Manager Contact Information

Name: Title:

Street Address Line 1:

Street Address Line 2:

City: State: Zip Code:

Email: Phone Number:

Fax Number:

Other Information

Stormwater Management Program (SWMP) Location (web address or physical location, if already completed):

Eligibility Determination

Endangered Species Act (ESA) Determination Complete?

Eligibility Criteria (check all that apply): ☐ A ☐ B ☒ C

National Historic Preservation Act (NHPA) Determination Complete?

Eligibility Criteria (check all that apply): ☒ A ☐ B ☐ C

☒ Check the box if your municipality or organization was covered under the 2003 MS4 General Permit

MS4 Infrastructure (if covered under the 2003 permit)

Estimated Percent of Outfall Map Complete? If 100% of 2003 requirements not met, enter an estimated date of completion (MM/DD/YY):

Web address where MS4 map is published:
If outfall map is unavailable on the internet an electronic or paper copy of the outfall map must be included with NOI submission (see section V for submission options)

Regulatory Authorities (if covered under the 2003 permit)

Illicit Discharge Detection and Elimination (IDDE) Authority Adopted? Effective Date or Estimated Date of Adoption (MM/DD/YY):

Construction/Erosion and Sediment Control (ESC) Authority Adopted? Effective Date or Estimated Date of Adoption (MM/DD/YY):

Post- Construction Stormwater Management Adopted? Effective Date or Estimated Date of Adoption (MM/DD/YY):

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Part II: Summary of Receiving Waters

Please list the waterbodies to which your MS4 discharges. For each waterbody, please report the number of outfalls discharging into it and, if applicable, the segment ID and any impairments.

Massachusetts list of impaired waters: *Massachusetts 2014 List of Impaired Waters*- <http://www.mass.gov/eea/docs/dep/water/resources/07v5/14list2.pdf>

Waterbody that receives flow from the MS4 and segment ID if applicable	Number of outfalls into receiving water segment	Chloride	Chlorophyll-a	Dissolved Oxygen/ DO Saturation	Nitrogen	Oil & Grease/ PAH	Phosphorus	Solids/ TSS/ Turbidity	E. coli	Enterococcus	Other pollutant(s) causing impairments
North Watuppa Pond MA 61004	6	☐	☐	☐	☐	☐	☐	☐	☐	☐	
South Watuppa Pond MA 61006	6	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Sawdy Pond MA 61005	5	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Bread & Cheese Brook MA 95-58	139	☐	☐	☐	☐	☐	☐	☐	☒	☐	
East Branch Westport River MA 95-40	31	☐	☐	☐	☐	☐	☐	☐	☒	☐	
East Branch Westport River MA 95-41	67	☐	☐	☐	☐	☐	☐	☐	☐	☐	Fecal Coliform
Snell Creek MA 95-44	3	☐	☐	☐	☐	☐	☐	☐	☒	☐	
Snell Creek MA 95-45	2	☐	☐	☐	☐	☐	☐	☐	☒	☐	
		☐	☐	☐	☐	☐	☐	☐	☐	☐	
		☐	☐	☐	☐	☐	☐	☐	☐	☐	
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Part III: Stormwater Management Program Summary

Identify the Best Management Practices (BMPs) that will be employed to address each of the six Minimum Control Measures (MCMs). For municipalities/organizations whose MS4 discharges into a receiving water with an approved Total Maximum Daily Load (TMDL) and an applicable waste load allocation (WLA), identify any additional BMPs employed to specifically support the achievement of the WLA in the TMDL section at the end of part III.

For each MCM, list each existing or proposed BMP by category and provide a brief description, responsible parties/departments, measurable goals, and the year the BMP will be employed (public education and outreach BMPs also requires a target audience). **Use the drop-down menus in each table or enter your own text to override the drop down menu.**

MCM 1: Public Education and Outreach

BMP Media/Category (enter your own text to override the drop down menu)	BMP Description	Targeted Audience	Responsible Department/Parties (enter your own text to override the drop down menu)	Measurable Goal	Beginning Year of BMP Implementation
Brochures/Pamphlets	Pet waste, stormwater, Lawn & Garden and Autocare Fyer	Residents	Buzzards Bay Action Committee / Board of Health	Reduce Pollution	2017
Brochures/Pamphlets	Know Your Nitrogen	Businesses, Institutions and Commercial Facilities	Westport River Watershed Alliance/ Board of Health	Reduce Nitrogen	2017
Meeting	Site Plan Review	Developers (construction)	Planning Board	Mitigate Runoff and Reduce Pollution	2018
	No Industrial In Town	Industrial Facilities			
Brochures/Pamphlets	Stop before you apply Lawn Products	Residents	Westport River Watershed Alliance, Westport Conservation Commiss	Reduce Nitrogen and Pollution	2017
Brochures/Pamphlets	Stormwater Management for Small Businesses	Businesses, Institutions and Commercial Facilities	Planning Board	Reduce Illicit Discharges	2018
Brochures/Pamphlets	Stormwater - What you can do as a Developer	Developers (construction)	Planning Board/ Conservation Commission - Web Site	Public Safety Reduce Pollution and Sediments	2018
	No Industrial In Town	Industrial Facilities			
Brochures/Pamphlets	Westport Water Resources	General Public	Town of Westport	Reduce Pollution	2017

[illegible]

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Part III: Stormwater Management Program Summary (continued)

MCM 2: Public Involvement and Participation

BMP Categorization	Brief BMP Description (enter your own text to override the drop down menu)	Responsible Department/Parties (enter your own text to override the drop down menu)	Additional Description/ Measurable Goal	Beginning Year of BMP Imple- mentation
Public Review	SWMP	Highway Department	Allow annual review of stormwater management plan and posting of stormwater management plan on website	2019
Public Participation	SWMP Review	Highway Department/Town	Allow public to comment on stormwater management plan annually	2019
Public Participation	Public Meeting - Stormwater	Planning Board TIWRMP	Public Education/ Participation	2019
Public Review	Partnership - Advocacy Groups	Town Administrator/Buzzards Bay Action Committee	Stormwater Sampling	2019
Public Participation	Cleanups - Shoreline/Waterbody	Highway Department/Beach Committee	Trash Removal	2019
Public Participation	Household haz. waste/used oil collection	Westport River Watershed Alliance/Town yearly collection	Proper Disposal Hazardous Waste	2017
Public Review	Catch Basin Stenciling/Markers	Highway Department	Public Education	2017
Public Participation	Cleanups - Roadside/General	Highway Department	Trash Removal	2017
Public Review	Stormwater Committee/Task Force	Planning Board	Stormwater Management Plan	2019

[illegible]

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Part III: Stormwater Management Program Summary *(continued)*

MCM 3: Illicit Discharge Detection and Elimination (IDDE)

BMP Categorization (enter your own text to override the drop down menu)	BMP Description	Responsible Department/Parties (enter your own text to override the drop down menu)	Measurable Goal (all text can be overwritten)	Beginning Year of BMP Implementation
SSO inventory	Develop SSO inventory in accordance of permit conditions	Highway Department/Board of Health	Complete within 1 year of effective date of permit	2019
Storm sewer system map	Create map and update during IDDE program completion	Highway Department	Update map within 2 years of effective date of permit and complete full system map 10 years after effective date of permit	2020
Written IDDE program	Create written IDDE program	Highway Department	Complete within 1 year of the effective date of permit and update as required	2019
Implement IDDE program	Implement catchment investigations according to program and permit conditions	Highway Department	Complete 10 years after effective date of permit	2023
Employee training	Train employees on IDDE implementation	Highway Department	Train annually	2018
Conduct dry weather screening	Conduct in accordance with outfall screening procedure and permit conditions	Highway Department	Complete 3 years after effective date of permit	2021
Conduct wet weather screening	Conduct in accordance with outfall screening procedure	Highway Department	Complete 10 years after effective date of permit	2023
Ongoing screening	Conduct dry weather and wet weather screening (as necessary)	Highway Department	Complete ongoing outfall screening upon completion of IDDE program	2020

[illegible]

Part III: Stormwater Management Program Summary (continued)

MCM 4: Construction Site Stormwater Runoff Control

BMP Categorization (enter your own text to override the drop down menu or entered text)	BMP Description	Responsible Department/Parties (enter your own text to override the drop down menu)	Measurable Goal (all text can be overwritten)	Beginning Year of BMP Implementation
Site inspection and enforcement of Erosion and Sediment Control (ESC) measures	Complete written procedures of site inspections and enforcement procedures	Planning Board/Conservation Commission/Board of Health	Complete within 1 year of the effective date of permit	2017
Site plan review	Complete written procedures of site plan review and begin implementation	Planning Board	Complete within 1 year of the effective date of permit	2017
Erosion and Sediment Control	Adoption of requirements for construction operators to implement a sediment and erosion control program	Planning Board/Conservation Commission/Board of Health	Complete within 1 year of the effective date of permit	2019
Waste Control	Adoption of requirements to control wastes, including but not limited to, discarded building materials, concrete truck wash out, chemicals, litter, and sanitary wastes	Board of Health/Building Department	Complete within 1 year of the effective date of permit	2019

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Part III: Stormwater Management Program Summary (continued)

MCM 5: Post-Construction Stormwater Management in New Development and Redevelopment

BMP Categorization (enter your own text to override the drop down menu or entered text)	BMP Description	Responsible Department/Parties (enter your own text to override the drop down menu)	Measurable Goal (all text can be overwritten)	Beginning Year of BMP Implementation
As-built plans for on-site stormwater control	The procedures to require submission of as-built drawings and ensure long term operation and maintenance will be a part of the SWMP	Planning Board/Board of Health/Building Department	Require submission of as-built plans for completed projects	2017
Target properties to reduce impervious areas	Identify at least 5 permittee-owned properties that could be modified or retrofitted with BMPs to reduce impervious areas and update annually	Board of Selectmen/ School Department	Complete 4 years after effective date of permit and report annually on retrofitted properties	2021
Allow green infrastructure	Develop a report assessing existing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist	Conservation Commission	Complete 4 years after effective date of permit and implement recommendations of report	2022
Street design and parking lot guidelines	Develop a report assessing requirements that affect the creation of impervious cover. The assessment will help determine if changes to design standards for streets and parking lots can be modified to support low impact design options.	Planning Board/Site Plan Review/Low Impact Development	Complete 4 years after effective date of permit and implement recommendations of report	2017

[illegible]

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Part III: Stormwater Management Program Summary (continued)

MCM 6: Municipal Good Housekeeping and Pollution Prevention

BMP Categorization (enter your own text to override the drop down menu or entered text)	BMP Description	Responsible Department/Parties (enter your own text to override the drop down menu)	Measurable Goal (all text can be overwritten)	Beginning Year of BMP Implementation
O&M procedures	Create written O&M procedures including all requirements contained in 2.3.7.a.ii for parks and open spaces, buildings and facilities, and vehicles and equipment	Recreation Department/School Department/Highway Department	Complete and implement 2 years after effective date of permit	2020
Inventory all permittee-owned parks and open spaces, buildings and facilities, and vehicles and equipment	Create inventory	Conservation Commission/Open Space Plan	Complete 2 years after effective date of permit and implement annually	2017
Infrastructure O&M	Establish and implement program for repair and rehabilitation of MS4 infrastructure	Highway Department	Complete 2 years after effective date of permit	2020
Stormwater Pollution Prevention Plan (SWPPP)	Create SWPPPs for maintenance garages, transfer stations, and other waste-handling facilities	Not Applicable - no facilities within MS4 designated areas	Complete and implement 2 years after effective date of permit	
Catch basin cleaning	Establish schedule for catch basin cleaning such that each catch basin is no more than 50% full and clean catch basins on that schedule	Highway Department	Clean catch basins on established schedule and report number of catch basins cleaned and volume of material moved annually	2019
Street sweeping program	Sweep all streets and permittee-owned parking lots in accordance with permit conditions	Highway Department	Sweep all streets and permittee-owned parking lots once per year in the spring	2020
Road salt use optimization program	Establish and implement a program to minimize the use of road salt	Highway Department	Implement salt use optimization during deicing season	2017

[illegible]

Part III: Stormwater Management Program Summary (continued)

Use the drop-down menus to select the applicable TMDL, action description to meet the TMDL requirements, and the responsible department/parties. If no options are applicable, or more than one, **enter your own text to override drop-down menus.**

[illegible]

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Part III: Stormwater Management Program Summary (continued)

Actions for Meeting Requirements Related to Water Quality Limited Waters

Use the drop-down menus to select the pollutant causing the water quality limitation and enter the waterbody ID(s) experiencing excursions above water quality standards for that pollutant. In addition, if you are subject to additional requirements due to a downstream nutrient impairment (see Part 2.2.2 of the permit) select the pollutant of concern and indicate applicable waterbody IDs or write "all waterbodies" if applicable. Choose the action description from the dropdown menu and indicate the responsible party. If no options are applicable, or more than one, **enter your own text to override drop-down menus.**

[illegible]

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Part IV: Notes and additional information

Use the space below to indicate the part(s) of 2.2.1 and 2.2.2 that you have identified as not applicable to your MS4 because you do not discharge to the impaired water body or a tributary to an impaired water body due to nitrogen or phosphorus. Provide all supporting documentation below or attach additional documents if necessary. Also, provide any additional information about your MS4 program below.

Click to add text

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Part V: 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 gather and evaluate 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, I certify that 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.

Name:

Timothy King

Title:

Town Administrator

Signature:

Timothy J. King

Digitally signed by Timothy J. King
Date: 2018.09.17 15:53:26 -04'00'

Date:

[To be signed according to Appendix B, Subparagraph B.11, Standard Conditions]

Note: When prompted during signing, save the document under a new file name

Westport Small MS4 General Permit

Appendix

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United States Department of the Interior

FISH AND WILDLIFE SERVICE

New England Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5087
<http://www.fws.gov/newengland>



January 20, 2017

To Whom It May Concern:

This project was reviewed for the presence of federally listed or proposed, threatened or endangered species or critical habitat per instructions provided on the U.S. Fish and Wildlife Service's New England Field Office website:

<http://www.fws.gov/newengland/EndangeredSpec-Consultation.htm> (accessed January 2017)

Based on information currently available to us, no federally listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area(s). Preparation of a Biological Assessment or further consultation with us under section 7 of the Endangered Species Act is not required. No further Endangered Species Act coordination is necessary for a period of one year from the date of this letter, unless additional information on listed or proposed species becomes available.

Thank you for your cooperation. Please contact Maria Tur of this office at 603-223-2541 if we can be of further assistance.

Sincerely yours,

Thomas R. Chapman
Supervisor
New England Field Office

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Massachusetts and Rhode Island



Local office

New England Ecological Services Field Office

☎ (603) 223-2541

📠 (603) 223-0104

70 Commercial Street, Suite 300
Concord, NH 03301-5094

<http://www.fws.gov/newengland>

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ are managed by the [Endangered Species Program](#) of the U.S. Fish and Wildlife Service.

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information.

The following species are potentially affected by activities in this location:

Birds

NAME

STATUS

1 Knot *Calidris canutus rufa*

Threatened

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/1864>

Mammals

NAME

STATUS

Northern Long-eared Bat *Myotis septentrionalis*
 No critical habitat has been designated for this species.
<https://ecos.fws.gov/ecp/species/9045>

Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any activity that results in the take (to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service³. There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Conservation measures for birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Year-round bird occurrence data <http://www.birdscanada.org/birdmon/default/datasummaries.jsp>

The migratory birds species listed below are species of particular conservation concern (e.g. [Birds of Conservation Concern](#)) that may be potentially affected by activities in this location. It is not a list of every bird species you may find in this location, nor a guarantee that all of the bird species on this list will be found on or near this location. Although it is important to try to avoid and minimize impacts to all birds, special attention should be made to avoid and minimize impacts to birds of priority concern. To view available data on other bird species that may occur in your project area, please visit the [AKN Histogram Tools](#) and [Other Bird Data Resources](#). To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

NAME	SEASON(S)
American Bittern <i>Botaurus lentiginosus</i> https://ecos.fws.gov/ecp/species/6582	On Land: Breeding
American Oystercatcher <i>Haematopus palliatus</i> https://ecos.fws.gov/ecp/species/8935	On Land: Breeding
Bald Eagle <i>Haliaeetus leucocephalus</i> https://ecos.fws.gov/ecp/species/1626	On Land: Year-round
Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i> https://ecos.fws.gov/ecp/species/9399	On Land: Breeding
Blue-winged Warbler <i>Vermivora pinus</i>	On Land: Breeding
Canada Warbler <i>Wilsonia canadensis</i>	On Land: Breeding
Fox Sparrow <i>Passerella iliaca</i>	On Land: Wintering
Hudsonian Godwit <i>Limosa haemastica</i>	At Sea: Migrating
Least Bittern <i>Ixobrychus exilis</i> https://ecos.fws.gov/ecp/species/6175	On Land: Breeding
Least Tern <i>Sterna antillarum</i>	On Land: Breeding
Peregrine Falcon <i>Falco peregrinus</i> https://ecos.fws.gov/ecp/species/8831	On Land: Wintering
Pied-billed Grebe <i>Podilymbus podiceps</i>	On Land: Year-round
Prairie Warbler <i>Dendroica discolor</i>	On Land: Breeding
Purple Sandpiper <i>Calidris maritima</i>	On Land: Wintering
Rusty Blackbird <i>Euphagus carolinus</i>	On Land: Wintering

Saltmarsh Sparrow <i>Ammodramus caudacutus</i>	On Land: Breeding
Seaside Sparrow <i>Ammodramus maritimus</i>	On Land: Breeding
Short-eared Owl <i>Asio flammeus</i> https://ecos.fws.gov/ecp/species/9295	On Land: Wintering
Snowy Egret <i>Egretta thula</i>	On Land: Breeding
Upland Sandpiper <i>Bartramia longicauda</i> https://ecos.fws.gov/ecp/species/9294	On Land: Breeding
Willow Flycatcher <i>Empidonax traillii</i> https://ecos.fws.gov/ecp/species/3482	On Land: Breeding
Wood Thrush <i>Hylocichla mustelina</i>	On Land: Breeding
Worm Eating Warbler <i>Helmitheros vermivorum</i>	On Land: Breeding

What does IPaC use to generate the list of migratory bird species potentially occurring in my specified location?

Landbirds:

Migratory birds that are displayed on the IPaC species list are based on ranges in the latest edition of the National Geographic Guide, Birds of North America (6th Edition, 2011 by Jon L. Dunn, and Jonathan Alderfer). Although these ranges are coarse in nature, a number of U.S. Fish and Wildlife Service migratory bird biologists agree that these maps are some of the best range maps to date. These ranges were clipped to a specific Bird Conservation Region (BCR) or USFWS Region/Regions, if it was indicated in the 2008 list of Birds of Conservation Concern (BCC) that a species was a BCC species only in a particular Region/Regions. Additional modifications have been made to some ranges based on more local or refined range information and/or information provided by U.S. Fish and Wildlife Service biologists with species expertise. All migratory birds that show in areas on land in IPaC are those that appear in the 2008 Birds of Conservation Concern report.

Atlantic Seabirds:

Ranges in IPaC for birds off the Atlantic coast are derived from species distribution models developed by the National Oceanic and Atmospheric Association (NOAA) National Centers for Coastal Ocean Science (NCCOS) using the best available seabird survey data for the offshore Atlantic Coastal region to date. NOAA/NCCOS assisted USFWS in developing seasonal species ranges from their models for specific use in IPaC. Some of these birds are not BCC species but were of interest for inclusion because they may occur in high abundance off the coast at different times throughout the year, which potentially makes them more susceptible to certain types of development and activities taking place in that area. For more refined details about the abundance and richness of bird species within your project area off the Atlantic Coast, see the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other types of taxa that may be helpful in your project review.

About the NOAA/NCCOS models: the models were developed as part of the NOAA/NCCOS project: [Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#). The models resulting from this project are being used in a number of decision-support/mapping products in order to help guide decision-making on activities off the Atlantic Coast with the goal of reducing impacts to migratory birds. One such product is the [Northeast Ocean Data Portal](#), which can be used to explore details about the relative occurrence and abundance of bird species in a particular area off the Atlantic Coast.

Migratory bird range maps within IPaC are continuously being updated as new and better information becomes available.

Can I get additional information about the levels of occurrence in my project area of specific birds or groups of birds listed in IPaC?

Landbirds:

The [Avian Knowledge Network \(AKN\)](#) provides a tool currently called the "Histogram Tool", which draws from the data within the AKN (latest survey, point count, citizen science datasets) to create a view of relative abundance of species within a particular location over the course of the year. The results of the tool depict the frequency of detection of a species in survey events, averaged between multiple datasets within AKN in a particular week of the year. You may access the histogram tools through the [Migratory Bird Programs AKN Histogram Tools](#) webpage.

The tool is currently available for 4 regions (California, Northeast U.S., Southeast U.S. and Midwest), which encompasses the following 32 states: Alabama, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia, and Wisconsin.

In the near future, there are plans to expand this tool nationwide within the AKN, and allow the graphs produced to appear with the list of trust resources generated by IPaC, providing you with an additional level of detail about the level of occurrence of the species of particular concern potentially occurring in your project area throughout the course of the year.

Atlantic Seabirds:

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA/NCCOS [Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project](#) webpage.

Facilities

Wildlife refuges

Any activity proposed on [National Wildlife Refuge](#) lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGES AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

5

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

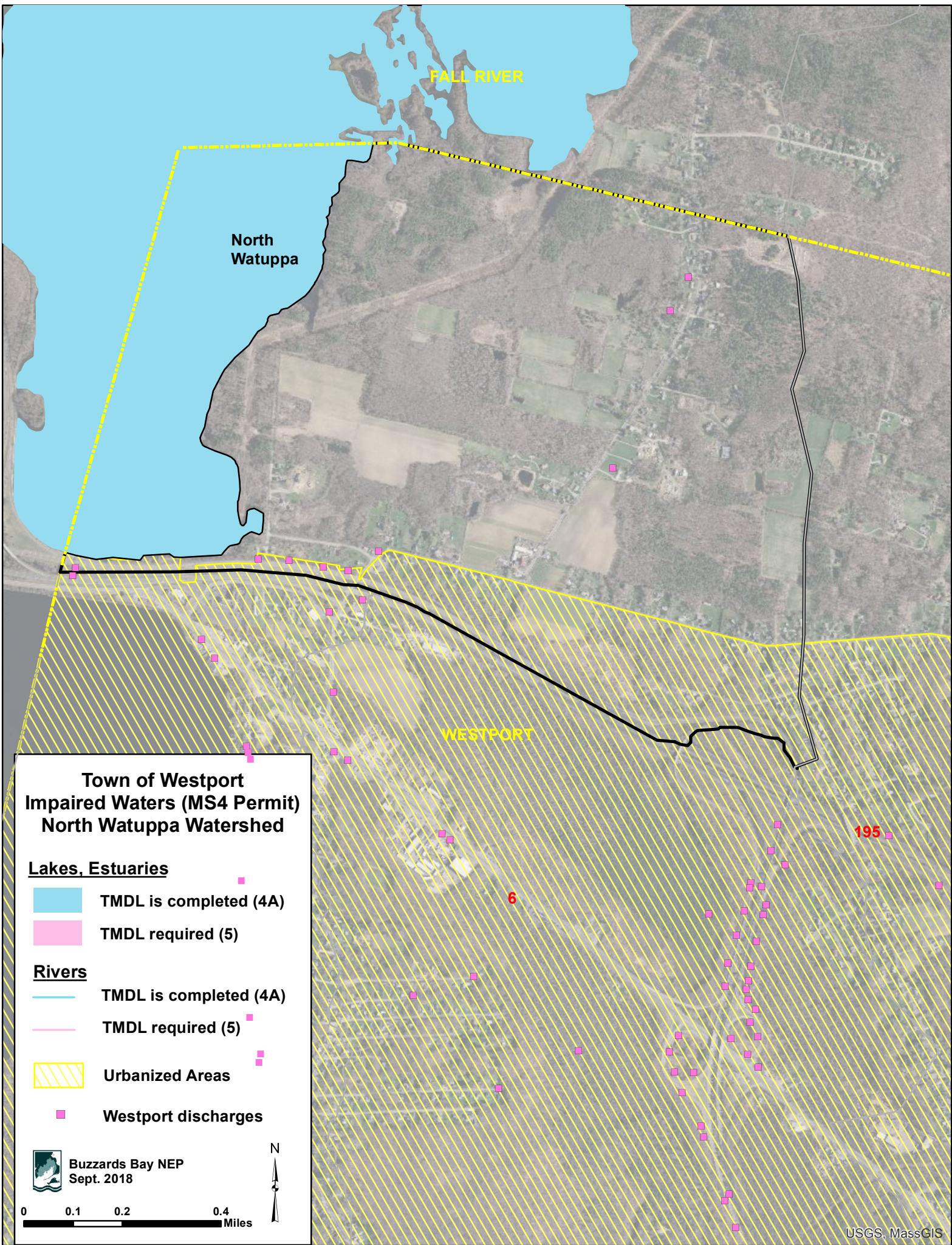
Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

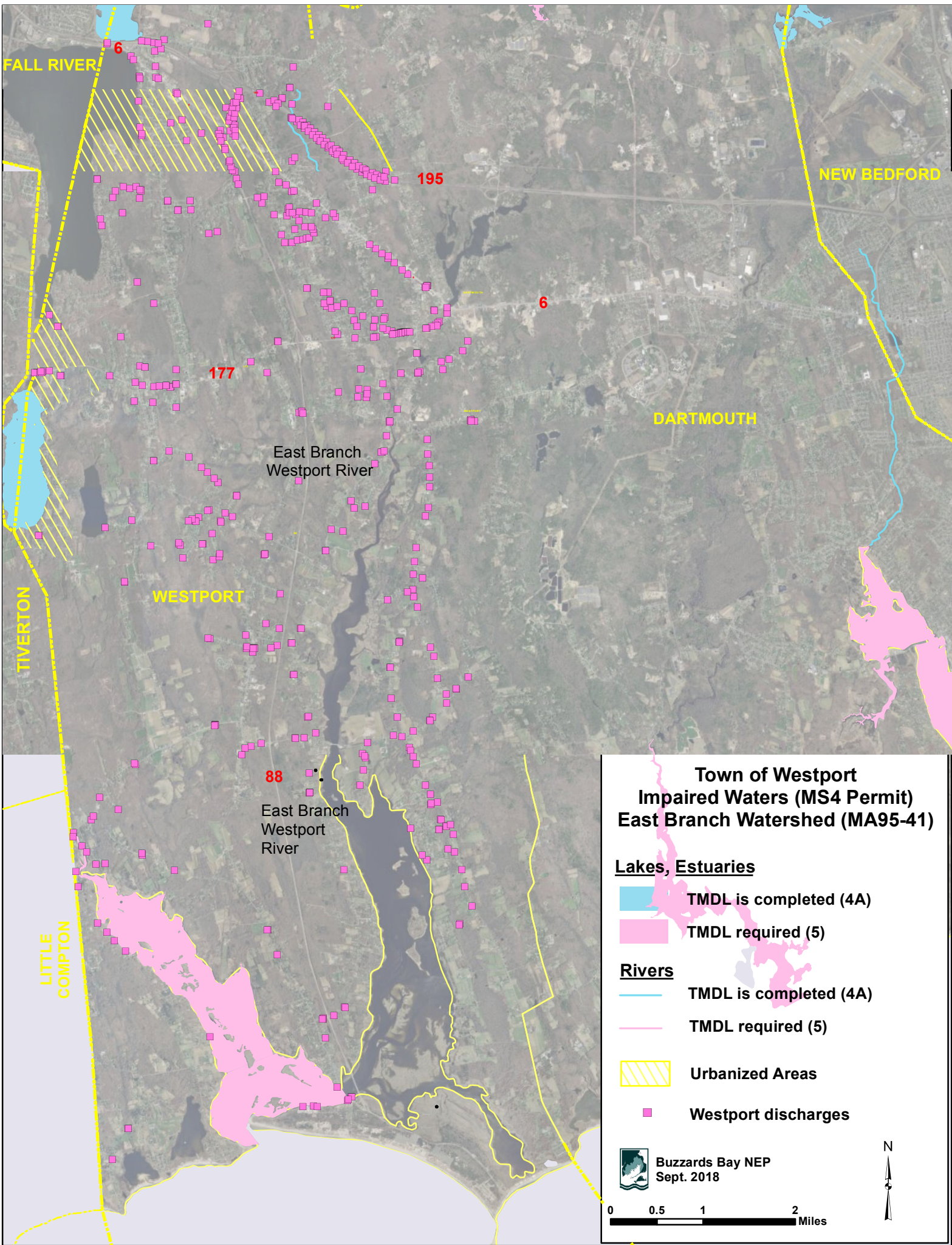
Data exclusions

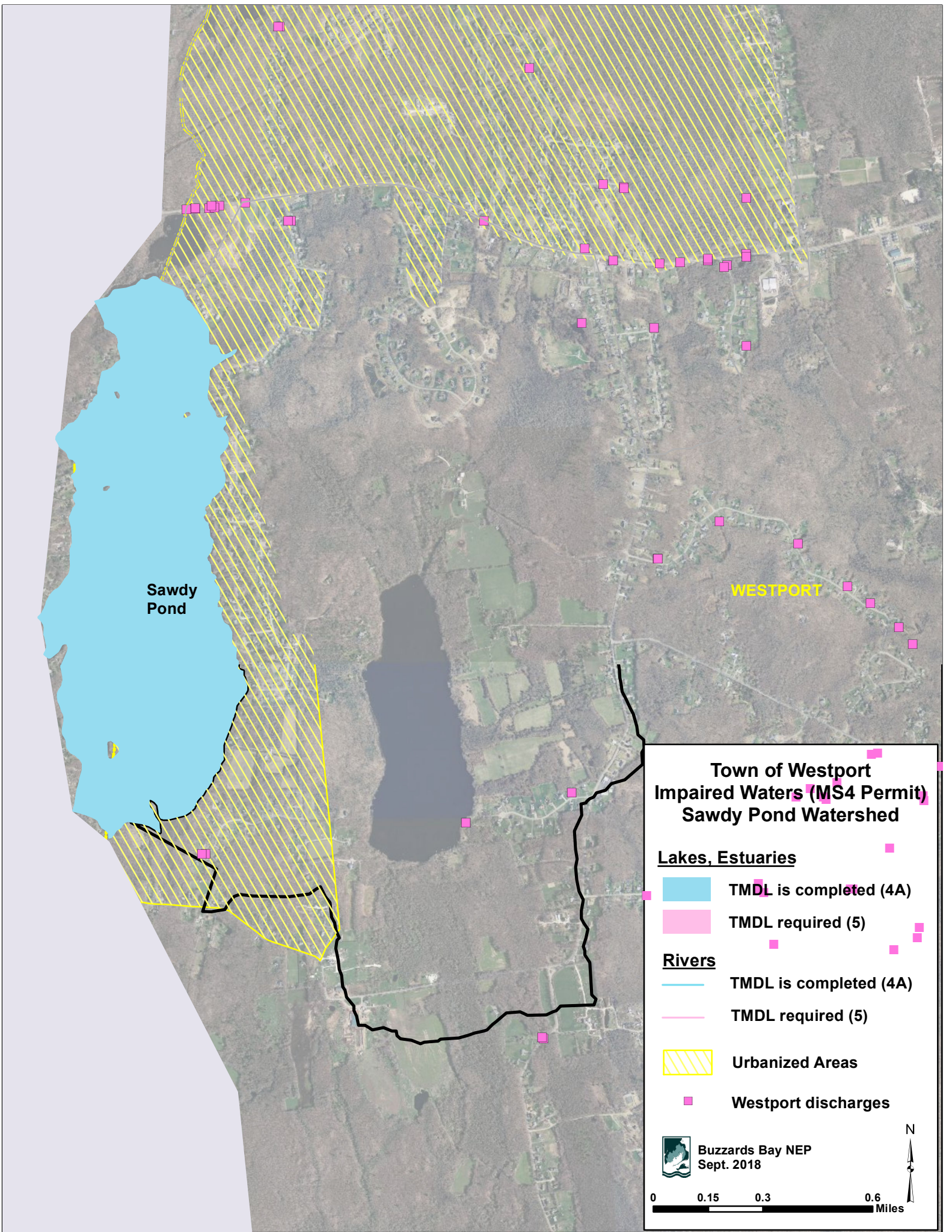
Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.







Sawdy Pond

WESTPORT

**Town of Westport
Impaired Waters (MS4 Permit)
Sawdy Pond Watershed**

Lakes, Estuaries

-  TMDL is completed (4A)
-  TMDL required (5)

Rivers

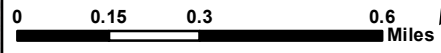
-  TMDL is completed (4A)
-  TMDL required (5)

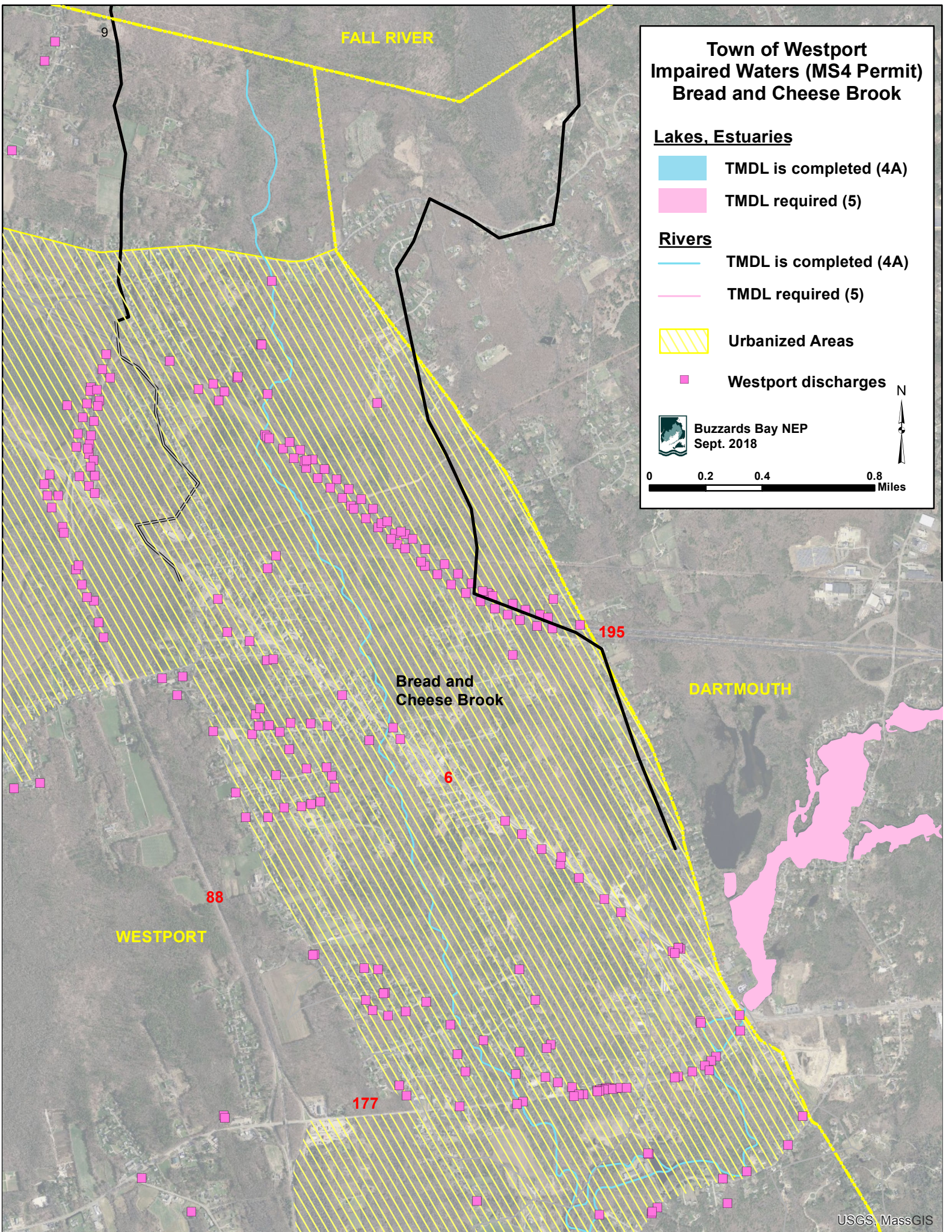
-  Urbanized Areas

-  Westport discharges



Buzzards Bay NEP
Sept. 2018





**Town of Westport
Impaired Waters (MS4 Permit)
Bread and Cheese Brook**

Lakes, Estuaries

- TMDL is completed (4A)
- TMDL required (5)

Rivers

- TMDL is completed (4A)
- TMDL required (5)

- Urbanized Areas

- Westport discharges



Buzzards Bay NEP
Sept. 2018

0 0.2 0.4 0.8 Miles



10
**Town of Westport
Impaired Waters (MS4 Permit)
East Branch Watershed (MA95-40)**

Lakes, Estuaries

-  TMDL is completed (4A)
-  TMDL required (5)

Rivers

-  TMDL is completed (4A)
-  TMDL required (5)

-  Urbanized Areas

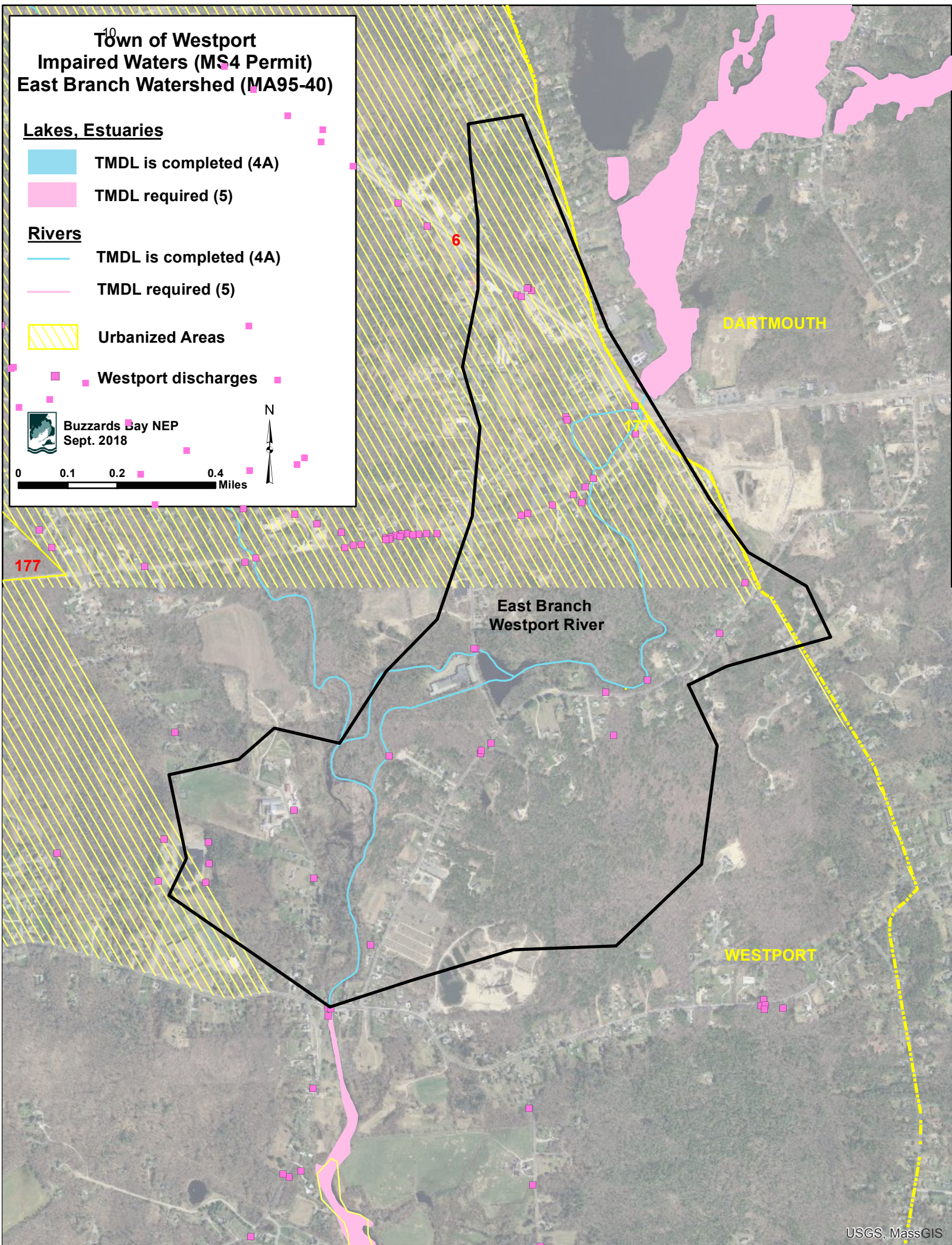
 Westport discharges



Buzzards Bay NEP
Sept. 2018



0 0.1 0.2 0.4 Miles



**Town of Westport
Impaired Waters (MS4 Permit)
Snell Creek (MA95-44 & MA95-45)**

Lakes, Estuaries

-  TMDL is completed (4A)
-  TMDL required (5)

Rivers

-  TMDL is completed (4A)
-  TMDL required (5)

 Urbanized Areas

 Westport discharges



Buzzards Bay NEP
Sept. 2018



0 0.1 0.2 0.4
Miles

Snell Creek
MA95-44

Snell Creek
MA95-45

88

ILLICIT DISCHARGE

6601. PURPOSE

Increased and contaminated stormwater runoff is a major cause of impairment of water quality and flow in lakes, ponds, streams, rivers, wetlands and groundwater; contamination of drinking water supplies; alteration or destruction of aquatic and wildlife habitat; and flooding. Regulation of illicit connections and discharges to the Town of Westport municipal storm drain system is necessary for the protection of the town's water bodies and groundwater and to safeguard the public health, safety, welfare and the environment.

6601.1 The objectives of this By-Law are:

- a. To prevent pollutants from entering Westport's municipal separate storm water /sewer system (MS4);
- b. To prohibit illicit connections and discharges to the MS4;
- c. To require the removal of all such illicit connections;
- d. To comply with state and federal statutes and regulations relating to stormwater discharges; and
- e. To establish the legal authority to ensure compliance with the provisions of this By-Law through inspection, monitoring, and enforcement.

6602. DEFINITIONS

For the purposes of this By-Law, the following shall mean:

Agent - Employee, Board or Committee of the Town appointed by the Board of Selectmen to assist in enforcing and/or administering this By-Law.

Authorized Enforcement Agency/Applicable Authority - The Board of Selectmen or other employees or agents designated by the Board of Selectmen.

Best Management Practice (BMP) - An activity, procedure, restraint, or structural improvement that helps to reduce the quantity or improve the quality of stormwater runoff.

Clean Water Act - The Federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.) as hereafter amended.

Discharge of Pollutants - The addition from any source of any pollutant or combination of pollutants into the municipal storm drain system or into the waters of the United States or Commonwealth from any source.

Groundwater - Water beneath the surface of the ground and not confined in a conduit or container.

Illicit Connection - A surface or subsurface drain or conveyance, which allows an illicit discharge into the municipal storm drain system, including without limitation sewage, process wastewater, or wash water and any connections from indoor drains, sinks, or toilets, regardless of whether said connection was previously allowed, permitted, or approved before the effective date of this By-Law.

Illicit Discharge - Direct or indirect discharge to the municipal storm drain system that is not composed entirely of stormwater, except as exempted herein

Municipal Separate Storm Sewer System (MS4) or Municipal Storm Drain System

- The system of conveyances designed or used for collecting or conveying stormwater, including any road with a drainage system, street, gutter, curb, inlet, piped storm drain, pumping facility, retention or detention basin, natural or man-made or altered drainage channel, reservoir, and other drainage structure that together comprise the storm drainage system owned or operated by the Town of Westport.

National Pollutant Discharge Elimination System (NPDES) General Permit For Storm Water Discharges

- A permit issued by United States Environmental Protection Agency or jointly with the State that authorizes the discharge of stormwater to waters of the United States.

Non-Stormwater Discharge - Discharge to the municipal storm drain system not composed entirely of stormwater.

Person - Any individual, group of individuals, association, partnership, corporation, company, business organization, trust, estate, the Commonwealth or political subdivision thereof to the extent subject to Town By-Laws, administrative agency, public or quasi-public corporation or body, the Town of Westport, and any other legal entity, its legal representatives, agents, or assigns.

Pollutant - Any element or property of sewage, agricultural, industrial or commercial waste, runoff, leachate, heated effluent, or other matter whether originating at a point or nonpoint source, that is or may be introduced into any storm water system, sewage treatment works or waters of the Commonwealth. Pollutants shall include, but not be limited to, the following:

- a. Paints, varnishes, and solvents;
- b. Oil and other automotive fluids;
- c. Non-hazardous liquid and solid wastes and yard wastes;
- d. Refuse, rubbish, garbage, litter, or other discarded or abandoned objects, ordnances, accumulations and floatables;
- e. Pesticides, herbicides, and fertilizers;
- f. Hazardous materials and wastes; sewage, fecal coliform and pathogens;
- g. Dissolved and particulate metals;
- h. Animal wastes;

- i. Rock, sand, salt, soils;
- j. Construction wastes and residues; and
- k. Noxious or offensive matter of any kind.

Process Wastewater - Water, which during manufacturing or processing, comes into direct contact with or results from the production or use of any material, intermediate product, finished product, or waste product. Process wastewater includes water, which has increased in temperature as a result of manufacturing or other processes.

Recharge - The process by which groundwater is replenished by precipitation through the percolation of runoff and surface water through the soil, or by injection of collected precipitation, run off or adequately treated wastewater.

Stormwater/Runoff - Rainwater, snowmelt and/or other water that flows off impervious surfaces and across or over the ground surface rather than being absorbed into the soil.

Surface Water Discharge Permit - A permit issued by the Department of Environmental Protection (DEP) pursuant to 314 CMR 3.00 that authorizes the discharge of pollutants to waters of the Commonwealth of Massachusetts.

Toxic or Hazardous Material or Waste - Any material, which because of its quantity, concentration, chemical, corrosive, flammable, reactive, toxic, infectious or radioactive characteristics, either separately or in combination with any substance or substances, constitutes a present or potential threat to human health, safety, welfare, or to the environment. Toxic or hazardous materials include any synthetic organic chemical, petroleum product, heavy metal, radioactive or infectious waste, acid and alkali, and any substance defined as Toxic or Hazardous under G.L. Ch.21C and Ch.21E, and the regulations at 310 CMR 30.000 and 310 CMR 40.0000.

Watercourse - A natural or man-made channel through which water flows or a stream of water, including a river, brook or underground stream.

Wastewater - Any sanitary waste, sludge, or septic tank or cesspool contents or discharge, and/or process wastewater.

Waters of the Commonwealth - All waters within the jurisdiction of the Commonwealth of Massachusetts, including, without limitation, rivers, streams, lakes, ponds, springs, impoundments, estuaries, wetlands, coastal waters, and groundwater.

6603. APPLICABILITY

This By-Law shall apply to flows entering the municipally owned storm drainage system.

6604. AUTHORITY

This By-Law is adopted under the authority granted by the Home Rule Amendment of the Massachusetts Constitution and the Home Rule Procedures Act, and pursuant to the regulations of the federal Clean Water Act found at 40 CFR 122.34.

6605. ADMINISTRATION

The Board of Selectmen is delegated hereby the responsibility and authority to administer, implement and enforce this By-Law. The Board of Selectmen may appoint a Town employee, department, board or commission to aid the Board of Selectmen in the enforcement and/or administration of this By-Law.

6605.1 Entry to Perform Duties Under this By-Law. To the extent permitted by state law, or if authorized by the owner or other party in control of the property, the Agent, and other employees designated by the Board of Selectmen may enter upon privately owned property for the purpose of performing their duties under this By-Law and regulations and may make or cause to be made such examinations, surveys or sampling as the Agent deems reasonably necessary.

6606. REGULATIONS

The Board of Selectmen shall promulgate rules and regulations to effectuate the purposes of this By-Law. Failure to promulgate such rules and regulations shall not have the effect of suspending or invalidating this By-Law.

6607. PROHIBITED ACTIVITIES

6607.1 Illicit Discharges - No person shall dump, discharge, cause or allow to be discharged any pollutant or non-stormwater discharge into the municipal separate storm sewer system (MS4).

6607.2 Illicit Connections - No person shall construct, use, allow, maintain or continue any illicit connection to the municipal storm drain system, regardless of whether the connection was permissible under applicable law, regulation or custom at the time of connection.

6607.3 Obstruction of Municipal Storm Drain System - No person shall obstruct or interfere with the normal flow of stormwater into or out of the municipal storm drain system without prior written approval from the Applicable Authority.

6607.4 Other Prohibited Activities - No person shall discharge, or cause to be discharged, water or any other liquid, on to the streets, sidewalks or ways of the Town in such a manner as to cause an obstruction of traffic or to endanger travel by freezing or otherwise.

- a. Drains – No one shall tie any pump, cellar, yard, roof or area drain directly into the storm water drainage system without approval from the Applicable Authority.
- b. Catch Basins – No Person shall directly or indirectly dump, discharge or cause or allow to be discharged into any catch basin, any solid waste, construction debris, paint or paint product, antifreeze, hazardous waste, oil, gasoline, grease and all other automotive and petroleum products, solvents and degreasers, drain cleaners, commercial or household cleaners, soap, detergent, ammonia, food and food waste, grease or yard waste, animal feces, dirt, sand gravel or other pollutant. Any person determined by the applicable authority to be responsible for the discharge of any of the above substances to a catch basin may be held responsible for cleaning the catch basin and any other portions of the storm water system impacted according to Town standards and requirements or paying the cost for such cleaning. In addition, the Person shall be responsible for paying any penalties assessed by the Town.
- c. Septage – No person shall discharge or cause or allow to be discharged any septage, or septage tank or cesspool overflow into the Town's storm water drainage system.
- d. Storage & Disposal of Hazardous Material – No one shall dispose of anything other than clear water into the Town's storm drainage system. The disposal of waste, gasoline or any other hazardous material into the storm drainage system is strictly prohibited and is in violation of state and federal pollution laws.
- e. Private drainage systems – It is prohibited for anyone with a private drainage system from tying into the public storm water disposal system without written approval from the Applicable Authority. The maintenance of any and all private drainage systems shall be the responsibility of the owners.

6608. EXEMPTIONS

Discharge or flow resulting from fire fighting activities are exempt from the prohibition of non-stormwater discharges.

The following non-stormwater discharges or flows are also exempt from the prohibition of non-stormwaters provided that the source is not a significant contributor of a pollutant to the municipal storm drain system, and will not damage or threaten public health and the environment:

- a. Waterline flushing and flow from potable water sources;

- b. Springs, natural flow from riparian habitats and wetlands, diverted stream flow and rising groundwater;
- c. Uncontaminated groundwater infiltration as defined in 40 CFR 35.2005(20), or uncontaminated pumped groundwater;
- d. Water from exterior foundation drains, footing drains (not including active groundwater dewatering systems), crawl space pumps, sump pumps or air conditioning condensation;
- e. Discharge from landscape irrigation or lawn watering;
- f. Water from individual residential car washing;
- g. Discharge from dechlorinated swimming pool or hot tub water (less than one ppm chlorine) provided the pool or hot tub is drained in such a way as not to cause a nuisance;
- h. Discharge from street sweeping, discharge of sand and deicers used for public safety purposes;
- i. Emergency repairs to the municipal storm drain system, and any stormwater management structure or practice that poses a threat to public health or safety, or as deemed necessary by the Highway Surveyor;
- j. Dye testing, provided verbal notification is given to the Applicable Authority prior to the time of the test;
- k. Non-stormwater discharge permitted under an NPDES permit or a Surface Water Discharge Permit, waiver, or waste discharge order administered under the authority of the United States Environmental Protection Agency or the Department of Environmental Protection, provided that the discharge is in full compliance with the requirements of the permit, waiver, or order and applicable laws and regulations; and
- l. Discharge for which advanced written approval is received from the Applicable Authority as necessary to protect public health, safety, welfare or the environment.

6609. EMERGENCY SUSPENSION OF STORM DRAINAGE SYSTEM ACCESS

The Applicable Authority or Highway Surveyor may suspend municipal storm drain system access to any person or property without prior written notice when such suspension is necessary to stop an actual or threatened discharge of pollutants that presents imminent risk of harm to the public health, safety, welfare or the environment. In the event any person fails to comply with an emergency suspension order, the Board

of Selectmen or their Agent may take all reasonable steps to prevent or minimize harm to the public health, safety, welfare or the environment.

6610. INDUSTRIAL OR CONSTRUCTION ACTIVITY DISCHARGES

Any person subject to an industrial or construction activity NPDES storm water discharge permit shall comply with all provisions of such permit. Proof of compliance with said permit may be required in a form acceptable to the Applicable Authority prior to the allowing of discharges to the MS4.

6611. MONITORING DISCHARGES

Upon notice of an alleged illicit discharge or connection, the Applicable Authority shall have the right to investigate any facility that has storm water discharges associated with industrial activity, including construction activity. The exercise of this right does not constitute a replacement or substitution for enforcement by federal or state agencies for facilities that are adequately owned structures within or adjacent to a watercourse so that such structures will not become a hazard to the use, function, or physical integrity of the watercourse.

6612. NOTIFICATION OF SPILLS

Notwithstanding other requirements of local, state or federal law, as soon as a person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of or suspects a release of materials at that facility or operation resulting in or which may result in discharge of pollutants into the municipal drainage system, a wetland resource area or the waters of the Commonwealth, the person shall take all necessary steps to ensure containment, and cleanup of the release. In the event of a release of oil or hazardous materials, the person shall immediately notify the Applicable Authority and the Highway Surveyor. In the event of a release of non-hazardous material, the reporting person shall notify the Applicable Authority and the Highway Surveyor no later than the next business day. The reporting person shall provide to the Applicable Authority and the Highway Surveyor written confirmation of all telephone, facsimile or in-person notifications within three business days thereafter. If the discharge of prohibited materials is from a commercial or industrial facility, the facility owner or operator of the facility shall retain on-site a written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least three years.

6613. ENFORCEMENT

6613.1 The Board of Selectmen, or other authorized agent of the Board of Selectmen shall enforce this By-Law and any regulations, and may pursue all civil and criminal remedies for violations.

6613.2 Civil Relief - If a person violates the provisions of this By-Law or regulations, or of any permit, notice or order issued thereunder, the Board of Selectmen may seek injunctive relief in a court of competent

jurisdiction to restrain the person from activities that would create further violations or to compel the person to perform abatement or remediation of the violation.

6613.3 Orders - The authorized agent of the Board of Selectmen may issue a written order to enforce the provisions of this By-Law or the regulations thereunder, which may include:

- a. Elimination of illicit connections or discharges to the MS4;
- b. Performance of monitoring, analysis, and reporting;
- c. That unlawful discharges, practices, or operations shall cease and desist; and
- d. Remediation of contamination in connection therewith.

6613.3.1 If the enforcing person determines that abatement or remediation of contamination is required, the order shall set forth a deadline by which such abatement or remediation must be completed. Said order shall further advise that, should the violator or property owner fail to abate or perform remediation within the specified deadline, the town may, at its option, undertake such work, and expenses thereof shall be charged to the violator.

6613.3.2 Within thirty (30) days after completing all measures necessary to abate the violation or to perform remediation, the violator and the property owner will be notified of the costs incurred by the Town including administrative costs.

6613.3.3 The violator or property owner may file a written protest objecting to the amount or basis of costs with the Board of Selectmen within thirty (30) days of receipt of the notification of the costs incurred.

6613.3.4 If the amount due is not received by the expiration of the time in which to file a protest or within thirty (30) days following a decision of the Authorized Agent affirming or reducing the costs, or from a final decision of a court of competent jurisdiction, the costs shall become a special assessment against the property owner and shall constitute a lien on the owner's property for the amount of said costs. Interest shall begin to accrue on any unpaid costs at the statutory rate provided in G.L. Ch. 59, 57 after the thirty-first day at which the costs first become due.

6613.4 Criminal Penalties

Any person who violates any provision of this By-Law, regulation, order or permit issued hereunder, shall be punished by a fine of not more than \$300. Each day a violation exists shall constitute a separate violation.

6613.5 Non-Criminal Disposition

As an alternative to criminal prosecution or civil action, the town may utilize the non-criminal disposition procedure set forth in M.G.L. Ch. 40, §21D and Article V of the Town By-Laws, in which case any police officer of the Town of Westport, or other persons as are authorized by the Board of Selectmen shall be the enforcing person. If non-criminal disposition is used, any person who violates any provision of this by-law, regulation, order or permit issued thereunder, shall be punished as follows:

First violation: Warning

Second violation: \$100

Third violation: \$200

Fourth and subsequent violations: \$300

Each day a violation exists shall constitute a separate violation.

6614. APPEALS

The decisions or orders shall be final. Further relief shall be to a court of competent jurisdiction.

6614.1 Remedies Not Exclusive - The remedies listed in this By-Law are not exclusive of any other remedies available under any applicable federal, state or local law.

6615. SEVERABILITY

The provisions of this By-Law are hereby declared to be severable. If any provision, paragraph, sentence, or clause, of this By-Law or the application thereof to any person, establishment, or circumstances shall be held invalid, such invalidity shall not affect the other provisions or application of this By-Law.

6616. TRANSITIONAL PROVISIONS

Residential property owners shall have 180 days from the effective date of the By-Law to comply with its provisions provided good cause is shown for the failure to comply with the by-law during that period.

ZONING BY-LAWS



WESTPORT, MASSACHUSETTS

Revised September 6, 2017

ARTICLE 15

SITE PLAN APPROVAL

15.0 PURPOSE

The purpose of Site Plan Approval is to protect the health, safety, convenience, property values, and general welfare of the inhabitants of the Town of Westport by providing for review of plans for uses and structures which may have significant impacts on traffic; municipal and public services and utilities; environmental and design quality; and community character.

15.1 POWERS AND ADMINISTRATIVE PROCEDURE

All applications for Site Plan Approval shall be submitted to the Planning Board prior to the issuance of a building permit. In exercising its jurisdiction under this section, the Planning Board shall, unless otherwise provided, follow the procedural requirements for special permits as set forth in Section 9 of M.G.L. Chapter 40A; however, a motion to approve, approve with conditions, or disapprove a Site Plan shall require only a majority vote of the members present. The Board shall adopt Rules and Regulations relative to Site Plan Approval, a copy of which shall be filed with the Town Clerk. After notice and public hearing and after due consideration of the reports and recommendations of outside consultants and other town boards, commissions and/or departments, the Planning Board may approve a Site Plan. The Planning Board may impose, in addition to any applicable conditions specified in this section, such conditions as reasonably appropriate to improve the site design and/or mitigate the impacts of the proposed development. Such conditions shall be imposed in writing; the applicant may be required to post a bond or other surety for compliance with said conditions in an amount satisfactory to the Planning Board.

15.2 APPLICABILITY

For specific uses requiring Site Plan Approval, see the Table of Use Regulations. The following types of activities and uses require Site Plan Approval by the Planning Board:

1. Construction with a gross floor area (GFA) of over 1,000 square feet of a municipal, institutional, commercial, or industrial building, or a multi-family building with three or more dwelling units;
2. Exterior expansion by more than 1,000 square feet GFA of a municipal, institutional, commercial, or industrial building, or a multi-family building with three or more dwelling units;
3. Change of use within a municipal, institutional, commercial, or industrial building, or a multi-family building with three or more dwelling units, that requires either:
 - More than 5 additional parking spaces; or

- Increased impervious surfaces other than building footprint (for example, additional loading areas, access driveways, paved parking spaces, sidewalks) totaling more than 1000 square feet;
4. Construction or expansion of a parking lot proposing more than 5 new parking spaces for a municipal, institutional, commercial, or industrial building, or a multi-family building with three or more dwelling units.

For the purposes of computing the total gross floor area and total external changes and increases in parking spaces of a site plan, the Planning Board shall aggregate all such applications for building/special permits and/or site plan approval made within the five (5) previous calendar years.

Where provisions for site plan approval of specific uses and buildings exist elsewhere in the Westport Zoning By-Laws, the provisions of the pertinent section shall supersede the provisions of this section.

Site Plan Approval shall not be construed to supersede the exemptions granted by Section 3 of Mass. Gen. Laws Ch. 40A.

15.3 WAIVER OF TECHNICAL COMPLIANCE

The Planning Board may, upon written request of the applicant, waive any of the technical requirements of Westport's Site Plan Approval Rules and Regulations and the procedures of this By-Law provided that the Board determines that such waiver is not inconsistent with the provisions of the Zoning By-Law, or with the intent of Site Plan Approval.

(2007 ATM, Article 19)

15.4 PERFORMANCE STANDARDS

All Site Plans presented for approval shall be prepared in compliance with applicable Westport Zoning Bylaws; the Rules and Regulations Governing the Subdivision of Land, to the extent applicable; and the explicit standards of the Rules and Regulations for Site Plan Approval. In evaluating and rendering a decision on a Site Plan Approval application the Planning Board shall consider whether the proposal will achieve the objectives listed below and may require conditions and safeguards deemed necessary to realize, within reason, these performance standards:

1. Provide convenience and safety of vehicular and pedestrian movement within the site, and in relation to adjacent streets, properties, buildings, structures, and other improvements.
2. Buffer and protect adjoining premises against detrimental or offensive uses.

3. Provide adequate and functional off-street loading and unloading of vehicles, goods, products, materials and equipment incidental to the normal operation of the establishment.
4. Provide adequate access to each structure for fire and service equipment and adequate provision for utilities and stormwater drainage consistent with the functional requirements of the Planning Board's Subdivision Rules and Regulations to the extent applicable, and all applicable local, state and federal codes, statutes, By-Laws, policies, standards and regulations.
5. Minimize negative impacts to the environment by limiting or eliminating: volumes of cut and fill; removal of trees 6" caliper or larger and other vegetation; removal of stone walls; impact on wetland resources, wildlife habitat and other areas of environmental sensitivity; flooding and other impacts of stormwater flow both on- and off-site; soil erosion; and air, water, noise and light pollution.
6. Prevent contamination of groundwater and surface water from onsite wastewater disposal systems or operations on the premises involving the use, storage, handling, or containment of hazardous substances by utilizing Best Management Practices in accordance with all statutes, By-Laws, regulations and policies governing these activities;
7. Promote compatibility among uses by controlling the visibility of parking, storage, or other outdoor service areas viewed from public ways or from premises residentially used or zoned;
8. Divide large expanses of parking with landscaping and shade trees and minimize lighting intrusion and the glare from headlights.
9. Screen service facilities located near the perimeter of the site, including but not limited to: garbage collection, recycling containers, refrigeration units, and utility areas.
10. Relate buildings and structures to the natural and built environment by attention to appropriate scale, massing, height and other factors necessary to achieve harmony with the surrounding natural environment, neighborhood, and Town as a whole.
11. Minimize obstruction of scenic views from publicly accessible locations.
12. Ensure compliance with the provisions of the Board of Health Regulations for Stormwater Quality and Quantity Control Regulations and this Zoning Ordinance including but limited to, Low Impact Development Regulations, stormwater management, parking, loading and signage.

(2011 ATM, Article 40)

15.5 ADMINISTRATION

1. The Planning Board may adopt reasonable fees for administration, technical review, and construction inspection for site plan approval proposals. All expenses for use of outside consultants, ancillary reports or reviews, supplemental studies, advertising, publication of notices, postage and mailings and all other expenses in connection with the site plan including without limitation, sampling and/or testing, shall be borne by the applicant.
2. The Planning Board shall adopt reasonable Rules and Regulations governing Site Plan Approval including administrative procedures and requirements, and design and construction standards.

(2010 ATM, Article 38)

3. The Planning Board may distribute plans to other Boards, Commissions, departments, and outside technical and legal consultants and agencies for their review and comments.
4. The Planning Board may require narrative assessments and/or quantitative studies of the on-site and off-site impacts of the proposed project, including: traffic, drainage, noise, lighting and other environmental factors.

15.6 ENFORCEMENT

The Building Inspector shall have enforcement powers over any Site Plan Approval. The Building Inspector shall inspect and enforce any and all stipulations and/or conditions placed upon the approval of any Site Plan. Failure to satisfy the conditions of any Site Plan Approval will result in the withholding of the Certificate of Occupancy.

15.7 REVIEW AND DECISION

The Planning Board shall ensure the use of the site consistent with the uses permitted in the district in which the site is located and shall give due consideration to the reports received. Prior to the approval of any Site Plan, the Planning Board shall find that the site plan:

1. Protects adjoining premises by avoiding adverse effects on the natural environment and abutters.
2. Provides for convenient and safe vehicular and pedestrian movement and that the locations of driveway openings are convenient and safe in relation to vehicular and pedestrian traffic circulation, including emergency vehicles, on or adjoining the site;

3. Provides an adequate arrangement of parking and loading spaces in relation to proposed uses of the premises;
4. Provides adequate methods of disposal of refuse or other wastes resulting from the uses permitted on the site;
5. Complies with all applicable requirements of this By-Law, the Rules and Regulations of Site Plan Approval, and the Rules and Regulations Governing the Subdivision of Land (to the extent applicable), unless explicitly waived by the Planning Board.

15.8 APPEAL

The appeal of any decision of the Planning Board hereunder shall be made in accordance with the provisions of Mass. Gen. L. Ch. 40A, §17 or other such provision of the General Laws pertaining to site plan review/approval as they may be amended from time to time. Appeal of a decision on a Site Plan for a by-right use shall be by appeal (to the Zoning Board of Appeals) of the action of the Building Inspector in granting or denying a building permit.

15.9 RELATIONSHIP TO SUBDIVISION PLAN AND OTHER PERMITS

The Planning Board approval of a Site Plan shall neither oblige the Planning Board to approve any related preliminary or definitive plan for subdivision nor substitute for such approval. However, the Planning Board may allow an applicant to combine a submission for Site Plan Approval with a submission for a preliminary or definitive subdivision if such submission conforms to all requirements for both Site Plan Approval and subdivision application. In such case, the Planning Board may conduct a combined public hearing for both Site Plan Approval and subdivision application.

Where the Planning Board serves as the Special Permit Granting Authority for a proposed use, it shall, when possible, consolidate the Site Plan Approval and the Special Permit processes.

An application to the Zoning Board of Appeals for either a Special Permit or a variance requiring Site Plan Approval under this By-Law, shall be accompanied by a site plan approved by the Planning Board; in the alternative, any special permit or variance granted for work set forth in 15.2 shall contain the following condition: "The work described herein requires the approval of a site plan by the Planning Board pursuant to Article 15 of the Westport Zoning By-Law. Any conditions imposed in such a site plan approval shall also be conditions of this special permit/variance."

Where the Planning Board approves a site plan "with conditions", and said site plan accompanies a special permit or variance application to the Board of Appeals, the conditions imposed by the Planning Board shall be incorporated into the issuance, if any, of a special permit or variance by the Board of Appeals.

No deviation from an approved site plan shall be permitted without the approval of the Planning Board.

15.10 EXPIRATION

Approval of a Site Plan shall lapse after two (2) years from the date of approval, or the date of resolution of any appeal of the decision, if substantial use thereof or construction has not begun, except for good cause. Such approval may, for good cause, be extended in writing by the Planning Board upon the written request of the applicant.

15.11 SEVERABILITY

If a court of competent jurisdiction holds any provision of this bylaw invalid, the remainder of the bylaw shall not be affected thereby. The invalidity of any section or sections or parts of any section or sections of this bylaw shall not affect the validity of the remainder of the Westport Zoning Bylaw.

(2006 ATM, Article 4; 2007 ATM, Article 19 Amended Sec. 15.2 & Sec. 15.3; 2010 ATM, Article 38 amended Sec. 15.5)

ARTICLE 20

LOW IMPACT DEVELOPMENT (LID) SITE PLAN APPROVAL

20.1 PURPOSE

The purpose of this bylaw is to establish minimum requirements and controls to protect and safeguard the environment, natural resources, general health, safety, and welfare of the public residing in watersheds within the Town's jurisdiction from the adverse impacts of soil erosion, sedimentation, and stormwater runoff. This section seeks to meet that purpose through the following objectives:

- 20.1.1** To eliminate or reduce the adverse effects of soil erosion and sedimentation;
- 20.1.2** To minimize stormwater runoff from any development;
- 20.1.3** To minimize nonpoint source pollution caused by stormwater runoff from development;
- 20.1.4** To provide for groundwater recharge where appropriate; and
- 20.1.5** To ensure controls are in place to respond to objectives in Subsections 20.1.1 and 20.1.2 and that these controls are properly operated and maintained.

20.2 APPLICABILITY

This bylaw shall apply to all activities that result in a land disturbance activity of 40,000 sq. ft. of land, or that will disturb less than 40,000 sq. ft. of land but is part of a larger common plan of development or sale that will ultimately disturb equal to or greater than 40,000 sq. ft. of land. No person shall perform any activity that results in a land disturbance activity of 40,000 sq. ft. or more of land without site plan approval by the Planning Board, by majority vote, following review at a duly posted meeting, but without a formal public hearing, of soil erosion and sediment control plan and a stormwater management plan. Normal maintenance and/or improvement of land in agricultural or aquaculture use, as defined by the Wetland Protection Act Regulation 310 CMR 10.4, shall be exempt from this by-law. In addition, as authorized in the Phase II Small MS4 General Permit for Massachusetts, stormwater discharges resulting from the above activities that are subject to jurisdiction under the Wetland Protection Act and demonstrate compliance with the Massachusetts Stormwater Management Policy as reflected in an Order of Conditions or Request for Determination of Applicability (RDA) issued by the Town of Westport Conservation Commission shall be deemed to be in compliance with this bylaw.

20.3 AUTHORITY

This stormwater site plan review bylaw is adopted under the authority granted by the Home Rule Amendment of the Massachusetts Constitution, G.L. c.40 and G.L. c.40A, and the Federal Clean Water Act and applicable regulations, including 40 CFR 122.34.

20.4 RESPONSIBILITY

The Planning Board shall administer, implement and enforce this bylaw. The Planning Board may distribute plans to other boards, commissions, departments, and outside technical and legal consultants and agencies for their review and recommendations.

20.5 DESIGN STANDARDS

The applicant shall submit a plan to the Planning Board that illustrates how the following LID site design standards were utilized to the maximum extent feasible and explains any site and financial constraints which limited application of items 1 through 10 below and how items 11 and 12 were considered for implementation:

- 20.5.1** Preservation of the site's natural features and environmentally sensitive areas such as wetlands, existing vegetation, slopes, drainage ways, permeable soils, flood plains, woodlands and soils to the greatest extent possible;
- 20.5.2** Minimization of grading and clearing;
- 20.5.3** Clustering of buildings and a reduction in size of building footprints;
- 20.5.4** Use of stormwater management components that provide filtration, treatment and infiltration such as vegetated areas that slow down runoff; maximizing infiltration and reducing contact with paved surfaces;
- 20.5.5** Creation of subwatersheds to treat and micromanage runoff in smaller, decentralized, innovative stormwater management techniques to treat and recharge stormwater close to the source;
- 20.5.6** Lengthen flow paths and maximize sheet flow;
- 20.5.7** Emphasis on simple, nonstructural, innovative, low-cost methods including open drainage systems, recharging of roof runoff, parking areas and/or roadways, to recharge on site as close to the source as possible.
- 20.5.8** A maintenance program including information on regular street and parking lot sweeping shall be provided to the Planning Board for approval;
- 20.5.9** Reduction of impervious surfaces wherever possible through alternative street design, such as omission of curbs and use of narrower streets, the use of porous pavement or permeable pavers, shared driveways and

through the use of shared parking areas;

20.5.10 Reduction of the heat island effect;

20.5.11 Use of vegetation in buffer strips and in rain filter runoff);

20.5.12. Techniques integrated into every part of site design to create a hydrologically functional lot or development site, including but not limited to the following:

- A.** Grass swales along roads;
- B.** Rain gardens;
- C.** Buffer areas;
- D.** Use of roof gardens where practicable;
- E.** Use of amended soils that will store, filter and infiltrate runoff;
- F.** Bioretention areas;
- G.** Use of rain barrels and other cisterns to provide additional stormwater storage;
- H.** Use of permeable pavement and/or pavers in driveways, overflow parking, outside sales areas, etc.
- I.** Use of native plants and grasses

20.6 LID PLAN CONTENTS

The LID Management Plan shall contain sufficient information for the Planning Board to evaluate the environmental impact, effectiveness, and acceptability of the site planning process and the measures proposed by the applicant for reducing adverse impacts from stormwater runoff. This plan shall be in accordance with the criteria established in these Bylaws and must be submitted with the stamp and signature of a Professional Engineer (PE) licensed in the Commonwealth of Massachusetts. The LID Management Plan shall fully describe the project in drawings, narrative, and calculations. It shall include:

20.6.1 Contact Information. The name, address, and telephone number of all persons having a legal interest in the property and the tax reference number and parcel number of the property or properties affected;

20.6.2 A locus map;

20.6.3 Existing site plan (for comparison to 20.6.15 below);

- 20.6.4** The existing zoning, and land use at the site;
- 20.6.5** The proposed land use;
- 20.6.6** The location(s) of existing and proposed easements;
- 20.6.7** The location of existing and proposed utilities;
- 20.6.8** The site's existing & proposed topography with contours at 2-foot intervals,
- 20.6.9** The existing site hydrology (both groundwater recharge and surface runoff);
- 20.6.10** A description and delineation of existing stormwater conveyances, impoundments, wetlands, drinking water resource areas, shellfishing areas, swimming beaches or other critical environmental resource areas, on or adjacent to the site or into which stormwater flows;
- 20.6.11** A delineation of 100-year flood plains, if applicable;
- 20.6.12** Estimated seasonal high groundwater elevation in areas to be used for stormwater retention, detention, or infiltration;
- 20.6.13** The existing and proposed vegetation and ground surfaces with runoff coefficients for each;
- 20.6.14** A drainage area map showing pre and post construction watershed boundaries, drainage area and stormwater flow paths, including municipal drainage system flows;
- 20.6.15** A recharge area analysis that calculates pre-and post-project annual groundwater recharge rates on the parcel;
- 20.6.16** A description and drawings of all components of the proposed LID Management system including:
 - A.** Locations, cross sections, and profiles of all brooks, streams, drainage swales and their method of stabilization;
 - B.** All measures for the detention, retention or infiltration of water;
 - C.** Description of non-structural BMPs;
 - D.** All measures for the protection of water quality;
 - E.** The structural details for all components of the proposed drainage systems and LID Management facilities;

- F.** Notes on drawings specifying materials to be used, construction specifications, and expected hydrology with supporting calculations;
- G.** Proposed site plan including location of buildings or other structures, impervious surfaces, and drainage facilities, if applicable;
- H.** Any other information requested by the Planning Board.

20.6.17 Hydrologic and hydraulic design calculations for the pre-development and post-development conditions for the design storms specified in this Bylaw. Such calculations shall include:

- A.** Description of the design storm frequency, intensity and duration;
- B.** Time of concentration;
- C.** Soil Runoff Curve Number (RCN) based on land use and soil hydrologic group;
- D.** Peak runoff rates and total runoff volumes for each watershed area;
- E.** Information on construction measures used to maintain the infiltration capacity of the soil where any kind of infiltration is proposed;
- F.** Infiltration rates, where applicable;
- G.** Culvert capacities;
- H.** Flow velocities;
- I.** Data on the increase in rate and volume of runoff for the specified design storms; and
- J.** Documentation of sources for all computation methods and field test results.

20.6.18 Post-Development downstream analysis if deemed necessary by the Planning Board;

20.6.19 Soils Information from test pits performed at the location of proposed LID Management facilities, including but not limited to soil descriptions, depth to seasonal high groundwater, depth to bedrock, and percolation rates. Soils information will be based on site test pits logged by a Massachusetts Registered Soil Evaluator, or a Massachusetts Registered

Professional Engineer;

- 20.6.20** Landscaping plan describing the woody and herbaceous vegetative stabilization and management techniques to be used within and adjacent to the stormwater practice.

20.7 OWNERS ASSOCIATION

As a condition of approval of a LID Management Plan the Applicant shall create and properly fund an Owners Association and all purchasers of land within the project shall be required to belong to the Owners Association. The Owners Association shall be responsible for the perpetual operations and maintenance of the components of the approved LID management Plan. The Owners Association shall maintain permanent ownership of any drainage basins or ponds in the subdivision, including all pipes and other appurtenant devices, and shall have the permanent responsibility of maintaining, repairing and replacing said drainage systems, as necessary. The Owners Association documents shall be reviewed and approved by the Planning Board, in consultation with Town Counsel, and the Owners Association shall have an initial fund that is deemed satisfactory to the Planning Board, in consultation with the Planning Board's technical consultant. The Owners Association shall send correspondence to all members of the Association twice a year, once during March and once during September, to advise each member of the Association's duties and responsibilities to: (1) operate and maintain the components of the approved LID management Plan; and (2) maintain, repair and replace the drainage systems. At the same time, the Owners Association shall provide a written reminder to each individual member to maintain any portion of the systems on each member's property, including the mowing and clearing of drainage swales and berms.

20.8 CONNECTIONS TO MUNICIPAL SYSTEMS

There shall be no connections to the Town of Westport Municipal Storm Drain Systems (MS4)

20.9 PROMULGATION OF RULES AND REGULATIONS

The Planning Board may promulgate rules and regulations to effectuate the purpose of this bylaw. Failure by the Planning Board to promulgate such rules and regulations shall not have the effect of suspending or invalidating this bylaw.

20.10 INSPECTIONS, SUBMISSION OF FINAL PLANS, MAINTENANCE

- 20.10.1** The Planning Board, or designated agent, shall make inspections as hereinafter required and either shall approve that portion of the work completed in accordance with the approved plans or shall notify the owner or person responsible for the implementation of the plans wherein the work fails to comply with the approved soil erosion and sediment control plan, or the approved stormwater management plan as described in Planning Board's Rules and Regulations. Plans for grading, removal,

stripping, excavating, and filling work approved by the Planning Board and shall be stored on site during the progress of the work. To obtain inspections, the permittee shall notify the Planning Board agent at least two working days before each of the following:

- A.** Installation of sediment and erosion control measures.
- B.** Start of construction.
- C.** Completion of site clearing.
- D.** Completion of rough grading.
- E.** Installation of stormwater controls.
- F.** Close of the construction season.
- G.** Completion of final landscaping.

20.10.2 The person responsible for the implementation of the approved plans shall make regular inspections of all control measures in accordance with the inspection schedule outlined on the approved soil erosion and sediment control plan(s). The purpose of such inspections will be to determine the overall effectiveness of the control plan and the need for additional control measures. All inspections shall be documented in written form and submitted to the Planning Board Agent at the time interval specified in the approved permit.

20.10.3 The Planning Board, or designated agent, shall enter the property of the applicant as deemed necessary to make regular inspections to ensure the validity of the reports filed as noted above.

20.10.4 The applicant shall submit an "as-built" plan for the stormwater controls after the final construction is completed. The plan must show the final design and specifications of all stormwater management systems and must be prepared by a professional land surveyor.

20.10.5 An Operation and Maintenance plan (O&M Plan) is required at the time of application for all projects. The maintenance plan shall be designed to ensure compliance with the Permit and this Bylaw during all seasons and throughout the life of the system. The Operation and Maintenance Plan shall remain on file with the Planning Board and shall be an ongoing and enforceable requirement. The O&M Plan shall include:

- A.** The name(s) of the owner(s) for all components of the system;
- B.** A map showing the location of the systems and facilities including catch basins, manholes/access lids, main, and

stormwater devices;

C. Maintenance agreements that specify:

- a.** The names and addresses of the person(s) responsible for operation and maintenance;
- b.** The person(s) responsible for financing maintenance and emergency repairs;
- c.** An Inspection and Maintenance Schedule for all LID Management facilities including routine and non-routine maintenance tasks to be performed;
- d.** A list of easements with the purpose and location of each;
- e.** The signature(s) of the owner(s).

D. LID Management Easement(s)

- a.** LID Management easements shall be provided by the property owner(s) as necessary for:
 - 1.** Access for facility inspections and maintenance;
 - 2.** Preservation of stormwater runoff conveyance, infiltration, and detention areas and facilities, including flood routes for the 100-year storm event;
 - 3.** Direct maintenance access by heavy equipment to structures requiring regular maintenance.
- b.** The purpose of each easement shall be specified in the maintenance agreement signed by the property owner.
- c.** Stormwater Management easements are required for all areas used for off-site stormwater control, unless a waiver is granted by the Planning Board.
- d.** Easements shall be recorded with the County Registry of Deeds prior to issuance of a Certificate of Completion by the Planning Board.

E. Changes to Operation and Maintenance Plans

- a.** The owner(s) of the LID Management system shall notify the Planning Board of changes in ownership or assignment of financial responsibility.

- b. The maintenance schedule in the Maintenance Agreement may be amended to achieve the purposes of this Bylaw by mutual agreement of the Planning Board and the Responsible Parties. Amendments shall be in writing and signed by all Responsible Parties. Responsible Parties shall include owner(s), persons with financial responsibility, and persons with operational responsibility.

20.11 PROJECT CHANGE

The permittee, or his or her agent, shall notify the Planning Board in writing of any change or alteration of a land-disturbing activity authorized in either the soil erosion and sediment control plan or the stormwater management plan before any change or alteration occurs. If the Planning Board determines that the change or alteration is significant, based on the design requirements listed in this bylaw and accepted construction practices, the Planning Board may require that an amended soil erosion and sediment control plan and/or stormwater management plan application be filed. If any change or deviation from these plans occurs during a project, the Planning Board may require the installation of interim measures before approving the change.

20.12 FEES

The appropriate application fee as established by the Planning Board shall accompany each application. Applicants shall pay review fees, as determined by the Planning Board, sufficient to cover any expenses connected with any public hearing, review of the soil erosion and sediment control plan, and site inspection.

20.13 APPEAL

The appeal of any decision of the Planning Board hereunder shall be made in accordance with the provisions of Mass. General Law Ch. 40A or other such provision of the General Laws.

(2011 ATM, Article 36)

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TOWN OF WESTPORT
WESTPORT, MASSACHUSETTS 02790

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OFFICE OF BOARD OF HEALTH
 856 MAIN ROAD

Stormwater Quality and Quantity Control Regulation

1. Authority:

The Westport Board of Health ("the Board") adopts the following regulation in accordance with the provision of Massachusetts General Laws, Chapter 111, section 31. They are enacted under the authority which includes but is not limited to one or more of the following: M. G. L., c. 111, sections 31, 122, 122A, 127, 143, 187, Sections 310 CMR 11.02; Board of Health regulations are an exercise of the power under which various levels of government are responsible for protection of the public, health, safety welfare, and the environment.

2. Purpose:

The purpose of this Regulation is to protect, maintain and enhance the public health, safety, environment and general welfare by establishing minimum requirements and procedures to control the adverse effects of increased post-development stormwater runoff and non-point source pollution associated with new development and re-development. It has been determined that proper management of post-development stormwater runoff will minimize damage to public and private property and infrastructure, safeguard the public health, safety, environment and general welfare of the public, protect water and aquatic resources, and promote groundwater recharge to protect surface and groundwater drinking supplies.

3. Regulation:

Except as permitted by these regulations, no person shall alter land within the town without having obtained a Stormwater Drainage Permit ("the Permit") for the property with the following exceptions:

- 3.1. Any activity that will alter an area less than 5,000 square feet or less than 25% of a contiguous property, whichever is less. This exception may not be applied for contiguous properties held in common ownership at the time of adoption of this Regulation that may have been previously subdivided and/or are attributed to multiple separate owners;
- 3.2. Normal maintenance and improvement of land in agricultural use as defined by the Wetlands Protection Act Regulation 310 CMR 10.04 and M.G.L., Chapter 40A § 3.
- 3.3. Maintenance of existing landscaping, gardens or lawn areas associated with a single family dwelling;
- 3.4. Repair or replacement of an existing roof of a single-family dwelling;

- 3.5. Repair or replacement of an existing septic system to comply with Title V Regulations
- 3.6. The construction of any fence that will not alter existing terrain or drainage patterns;
- 3.7. Construction of utilities (gas, water, electric, telephone, etc.) other than drainage, which will not alter terrain, ground cover, or drainage patterns;
- 3.8. Emergency repairs to any Stormwater Management System ("SMS") or Stormwater Management Practice ("SMP") that poses a threat to public health or safety, or as deemed necessary by the Board; the Building Inspector, and/or Highway Department.
- 3.9. Re-development projects are presumed to meet the specified stormwater management requirements described in these regulations if the total impervious cover is reduced by 40% from existing conditions.
- 3.10. Notwithstanding section 3, 1-12, any alteration, re-development, or conversion of land use to a hotspot such as, without limitation: auto salvage yards, auto fueling facilities, fleet storage yards, commercial parking lots with high intensity use, road salt storage areas, commercial nurseries and landscaping, outdoor storage and loading areas of hazardous substances, or marinas, shall require a Stormwater Management Plan ("the Plan").
- 3.11. Notwithstanding section 3, 1-12, where a lot is within a subdivision that has been subject to review pursuant to this regulation, that lot may receive appropriate credit towards meeting the provisions of this regulation based on the design of the subdivision stormwater controls and design assumptions thereto.
- 3.12. Work or projects for which all necessary approvals and permits have been issued as of the effective date of this regulation including:
 - 3.12a. Projects for which a Board of Health septic system installation permit has been issued or for which a permit application has been submitted as of August 01, 2009,
 - 3.12b. Projects that have received an Order of Conditions pursuant to the Wetlands Protection Act, Chapter 131, section 40 or for which a Notice of Intent has been filed as of August 01, 2009, and
 - 3.12c. Projects that have received a building permit as of August 01, 2009.

4. Permits Required:

Any activity that will alter an area no less than 5,000 square feet and no more than 20,000 square feet may be allowed an expedited permit provided the amount of impervious surfaces does not exceed 7% of the property and the on-site impervious surfaces must be disconnected from any other impervious surface or drainage system. Stormwater runoff generated from the on-site impervious surface must be directed to an on-site storage area that provides a minimum of 800 cubic feet of storage.

It shall be the responsibility of the applicant to obtain the Permit from the Board prior to any alteration of land unless otherwise specified in **Section 3**. Obtaining the Permit from the Board does not relieve the applicant from obtaining all other relevant permits and/or approvals from other

State and Federal agencies and local town boards (such as, but not limited to the Planning Board, Conservation Commission, Building Department, and Highway Department).

5. General Requirements:

Control of stormwater runoff shall meet the design criteria as stated in the most recent Department of Environmental Protection's (DEP) Massachusetts Stormwater Handbook ("DEP Handbook") <http://www.mass.gov/dep/water/wastewater/stormwat.htm> (regardless of the presence or absence of jurisdiction under any other General Laws of the Commonwealth), unless otherwise stated in this Regulation. The design, construction, and maintenance of SMS shall be consistent with the following:

- 5.1 Discharging untreated runoff directly into rivers, streams, watercourses, or wetlands, is prohibited;
- 5.2 Natural watercourses shall not be dredged, cleared of vegetation, deepened, widened, straightened, stabilized, or otherwise altered unless all necessary permits (local, state and/or federal) are obtained.
- 5.3 Neighboring properties shall not be used in the Plan unless a recordable easement has been granted for such use, and a copy of the easement has been submitted to the Board as part of the Plan;
- 5.4 The site shall be graded so that surface water shall be directed into the SMS;
- 5.5 Intermittent watercourses such as swales shall be vegetated;
- 5.6 Prior to discharging any stormwater runoff into a SMS the following conditions must also be met:
 - 5.6a the SMS shall be installed according to applicable standards and specifications,
 - 5.6b all components of the SMS shall be stabilized; and
 - 5.6c all upland areas contributing stormwater runoff to the SMS shall be stabilized (non-erosive);
- 5.7 Where stormwater basins are designed with a permanent pool depth, a suitable fence shall be used when the basin is in close proximity to residential units.
- 5.8 The discharge of sump pump water onto town-owned roads or SMS is not permitted.
- 5.9 Operational failure of the infiltrative capacity of the system must be manifested by indicators that are readily visible.

6. Submittal Requirements:

The application for the Permit shall consist of submittal of the Plan and applicable fees to the Board. The Plan shall contain sufficient information for the Board to evaluate the environmental impact,

and the effectiveness and acceptability of those measures proposed by the applicant for reducing

adverse impacts from stormwater. The Plan shall contain all information listed as well as any other information requested by the Board to evaluate the Plan.

7. Design Requirements

The control of stormwater runoff shall meet the design requirements for both flood (volume and peak discharge) control and non-point source pollution as indicated the Plan and in Volume 3 of the Massachusetts Stormwater Design Requirements of the Handbook with the following exceptions and additions:

- 7.1. **Standard 4 – Water Quality:** Water Quality Depth (D_{wq}) as described in Volume 3, Chapter 1, page 32, shall be 1.25 inches for all projects. Prior to discharge into all treatment SMSs, the removal of a minimum of 44% TSS is required.
- 7.2. **Standard 11 – Volume Control:** The volume of stormwater discharged (V_{10}) for the ten (10) year, twenty-four (24) hour design storm shall not increase as from pre-development conditions. If the stormwater discharge is into the ocean or estuary, the control of the discharge volume (V_2) may be limited to the pre-development conditions of the two (2) year, twenty-four (24) hour design storm. When using infiltration to control V_{10} or V_2 , basin sizing shall be determined utilizing the static method as described in Volume 3, Chapter 1, and page 17. For the purposes of volume control, basin design does not require a drawdown time of 72 hours, and basins shall not be located on Hydrologic Group D soils.
- 7.3. **Design Point:** In addition, the design points shall be at the edge of wetlands, the property line and/or the existing storm drain system, whichever is first intercepted by the flow path. For each pre-development design point there shall be a corresponding post-development design point.
- 7.4. **Low Impact Development (LID) Credits:** LID credits as stipulated in the Handbook are not recognized by this Regulation. The Board encourages reduction of impervious areas and the disconnecting of impervious surfaces, both of which are recognized in TR-55 and TR-20 modeling. For some LID practices, research is ongoing and use of Runoff Curve Numbers (“RCN”) not listed below should be reviewed by the Buzzards Bay National Estuary Program (“BBNEP”) (i.e. practices such as block pavers). The review of the proposed RCN by the BBNEP should be submitted with the Plan. For the LID land uses listed below, use the RCN provided:

New Runoff Curve Numbers (not currently found in TR-55 or TR-20)

- | | |
|---|--|
| • Greenroofs - 88 ¹ | • Bioretention facility - 80 ² |
| • Paved areas w/tree canopy - 92 ³ | • Bioretention w/tree canopy - 74 |
| • Gravel road or parking lot - 95 | • Lawn, no soil amendment – 80 |
| • Gravel road or parking lot w/tree canopy - 89 | • Lawn w/ 4" Compost Soil Amendment ⁴ |
| • Subdivisions by special permit, user defined ⁵ | HSG A - 36 |
| • Water - 100 | HSG B - 58 |
| • Bioretention facility - 80 ⁶ | HSG C - 72 |
| • Pervious pavers - 75 ⁷ | HSG D - 77 |

7.5. Design Storms: Use the storm events as required by the Massachusetts Stormwater Regulation and the U.S. Environmental Protection Agency National Pollutant Discharge Elimination System (US-EPA, NPDES) Permit.

7.6. Impervious Cover: Impervious cover is measured from the site plan and includes all impermeable surfaces and any other surfaces that are not vegetated (such as a gravel surface). Pervious pavers utilized for driveways, sidewalks, patios, etc can be considered pervious.

7.7. Treatment Train Calculations: To achieve the water quality discharge limits, treatment trains are permitted. Calculations as to the additive nature of specific BMP strategies must be documented using the Handbook, but street sweeping shall receive no credit.

7.8. Prohibited Practices: The following practices are prohibited

- Pervious pavements for road surfaces.
- Below grade infiltration structures in residential settings for the treatment and/or control of road runoff.

8. Inspection and Maintenance

8.1 All SMS shall be inspected and maintained by the owner(s) in accordance with these regulations and the Handbook. The applicant shall post acceptable surety to cover the cost of maintenance of the selected SMS. The cost shall cover anticipated maintenance costs (including full or partial replacement, if necessary) and will be determined by the Board. The surety mechanism shall be structured to allow the Town to draw funds as necessary to conduct maintenance activities.

8.2 After the SMS has been constructed and before the Performance Guarantee for the development has been released, the applicant shall submit an "as-built" plan detailing the actual SMS as installed. The consulting engineer for the Board shall inspect the SMS to confirm its as-built features. This engineer shall also evaluate the effectiveness of the SMS in an actual storm. If the system is found to be inadequate by virtue of physical evidence of operational failure, even though it was built as called for in the Plan, it shall be corrected before the performance guarantee is released. Cases of inadequacy shall be limited to: errors in the infiltrative capability, errors in the maximum ground water elevation, failure to properly define or construct flow paths, or erosive discharges from basins.

8.3 All SMS must undergo inspections to document maintenance and repair needs and ensure compliance with the requirements of this regulation and accomplishment of its purposes as specified in the O&M Plan. A maintenance agreement between the owner and the Board shall be executed for privately-owned SMS that specifies the responsible party for conducting long term inspections. At a minimum, inspections shall occur during the first year of operation and at least once every three (3) years thereafter.

8.4 Inspection reports shall be submitted to and maintained by the Board for all SMS. Inspection reports for SMS shall include the name of the inspector, the date of inspection; and the condition of the following:

- Pretreatment devices

- Vegetation or filter media
- Fences or other safety devices
- Spillways, valves, or other control structures
- Embankments, slopes, and safety benches
- Reservoir or treatment areas
- Inlet and outlet channels and structures
- Underground drainage
- Sediment and debris accumulation in storage and fore bay areas (including catch basins)
- Any nonstructural practices
- Any other item that could affect the proper function of the SMS

8.5 Parties responsible for the operation and maintenance of a SMS shall provide records of all maintenance and repairs to the Board upon request. Parties responsible for the operation and maintenance of a SMS shall make records of the installation and of all maintenance and repairs, and shall retain the records for at least five (5) years. These records shall be made available to the Board during inspection of the facility and at other reasonable times upon request.

8.6 If a responsible person fails or refuses to meet the requirements of the inspection and maintenance agreement, the Board, after thirty (30) days written notice (except, that in the event the violation constitutes an immediate danger to public health or public safety, twenty-four (24) hours notice shall be sufficient), may correct a violation of the design standards or maintenance requirements by performing the necessary work to place the facility or practice in proper working condition. The Board may assess the owner(s) of the facility for the cost of repair work, which shall be a lien on the property.

8.7 After notification is provided to the person responsible for carrying out the maintenance plan of any deficiencies discovered from an inspection of a SMS, the person responsible for carrying out the maintenance plan shall have 30 days or other time frame mutually agreed to between the Board and the person responsible for carrying out the maintenance plan to correct the deficiencies. The Board shall then conduct a subsequent inspection to ensure completion of repairs.

9. Definitions

Except for the following definitions, terms are defined in the 1996/1997 Stormwater Management Policy & Handbook, Volume 2, Appendix A. www.mass.gov/dep/water/laws/swmpolv2.pdf

Alter: Activities such as demolition, construction, clearing, excavation, grading, filling, and reconstruction that result in a change in the natural cover or topography.

Biofiltration, Bioretention and/or Rain Garden: A stormwater treatment practice that uses soils, plants, and microbes to treat stormwater before it is infiltrated and/or discharged. Bioretention cells are shallow depressions filled with sandy soil topped with a thick layer of mulch and planted with dense native vegetation.

Disconnected Impervious: Impervious surfaces that are separated from drainage collection systems by pervious surface or infiltrating Stormwater Management Practices.

First Flush: Pollutant concentrations, including suspended sediments, carried by stormwater in the beginning of a storm. These concentrations are typically higher than at the middle or end of the storm. To determine “first flush”, see Water Quality Volume (1.25 inches) definition.

Green Roof: The roof of a building that is partially or completely covered with vegetation and soil, or a growing medium, planted over a waterproofing membrane. A green roof is used to mitigate the effects of urbanization on water quality by filtering, absorbing or detaining rainfall.

Impervious Area: Any manmade cover that is not vegetated. In residential areas, the % impervious is obtained from the TR-55 table "Runoff Curve Numbers for Urban Areas, Residential District by Average Lot Size."

Land Uses With Higher Potential Pollutant Loads (“LUHPPL”): Defined in 310 CMR 10.04 and 314 CMR 9.02 to include the following: Land uses identified in 310 CMR 22.20B(2), 310 CMR 22.20C(2)(a-k) and (m), 310 CMR 22.21(2)(a)(1-8) and 310 CMR 22.21(2)(b)(1-6), areas within a site that are the location of activities that are subject to an individual National Pollutant Discharge Elimination System (“NPDES”) permit or the NPDES Multi-Sector General Permit⁸; auto fueling facilities (gas stations); exterior fleet storage areas; exterior vehicle service and equipment cleaning areas; marinas and boatyards; parking lots with high-intensity-use; confined disposal facilities and disposal sites.

Low Impact Development (“LID”): A comprehensive land planning and engineering design strategy that emphasizes conservation and use of existing natural site features integrated with distributed small-scale stormwater controls to closely mimic natural hydrological patterns.

Permeable, Pervious or Porous Pavement: is a paved surface with a higher than normal percentage of air voids to allow water to pass through it and infiltrate into the subsoil. Permeable paving techniques include porous asphalt, pervious concrete, paving stones, and manufactured “grass pavers” made of concrete or plastic.

Storm drain System: The conveyance system, including catchbasins, manholes, pipes and drainage ditches to transport stormwater runoff [usually to a stormwater management practice(s)].

Stormwater Management Practice(s) [“SMP”]: Techniques used to control the impacts (flooding, increased volume, and pollution) of stormwater runoff.

Stormwater Management System [“SMS”]: All components associated with the management of stormwater runoff including the Stormdrain System and the Stormwater Management Practice(s)

Soil Mottling: Redoximorphic features.

Stormwater Pollution Prevention Plan [SWPPP]: A plan required under the Environmental Protection Agency’s (EPA) NPDES Construction General Permit for projects that that disturb one acre or more of land (See DEP Handbook Chapter 1, Volume 1).

Water Quality Volume: the volume generated by the first 1.25 inches of stormwater runoff. This first inch of runoff carries the majority of accumulated pollutants from impervious surfaces. The first flush volume in cubic feet (V_{WQ}) is determined by the following formula:

$V_{WQ} = (1.25/12 \text{ inches}) (R_{WQV}) (\text{Site Area in square feet});$

Where: $R_{WQV} = 0.05 + 0.009(I);$

I = the % impervious area.

10. Fees

The fees for any permit, approval or review by the Stormwater Review Board shall be determined by said Board.

11. Effective Date

The effective date of this regulation is 9/11/2012.

12. Enforcement

The Board or its authorized Agent shall enforce these Stormwater Regulations, orders, violation notices and/or enforcement orders issues there under, and may pursue all civil and criminal remedies for such violations. Any person who violates any provision of this Regulation or any order or permit issued there under may be punished by a fine of not more than three hundred (\$300). Each day during which a violation exists shall constitute a separate offense. As an alternative to criminal prosecution in a specific case, the Board may issue citations pursuant to the non-criminal disposition procedure set forth in Massachusetts General Law, Chapter 40: Section 21D set forth in the By-Laws of the Town of Westport. For purposes of Non-Criminal Disposition, the penalty for a first offense shall be \$100, for a second offense \$200, and for a third and subsequent offenses \$300.

13. Severability

The invalidity of any section, provision, paragraph, sentence or clause of this Stormwater Regulation shall not invalidate any other section, provision, paragraph, sentence, or clause thereof, nor shall it invalidate any permit or determination that previously has been issued.

John J. Colletti
John J. Colletti, Chairman

9/10/12
Date

Sean M. Leach
Sean M. Leach, Vice-Chair

Donna Lambert
Donna Lambert, Member



Want clean swimming beaches?
 Want shellfish safe to eat?
 Want to save your city or town money?

When it rains, water entering storm drains carries trash, pet waste, and other pollutants to our ponds, rivers, and the bay. Remember:

Only Rain Down the Storm Drain!

Learn how **YOU** can help protect Buzzards Bay at:
buzzardsbayaction.org/stormwater



A message from the
 Buzzards Bay Action Committee



Pets

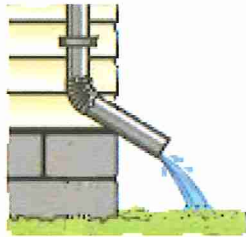
Pet waste contains harmful bacteria that can pollute wetlands and the bay.



★ Whether in your yard or on a walk, always pick up after your pet and put it in the trash.

Your Stormwater

Excessive stormwater flow moves pollutants and harmful sediments to the bay.



★ Redirect stormwater to lawns, gardens, and vegetated areas.
 ★ Install a rain barrel to catch and reuse rainwater.

Lawn and Garden

Fertilizer and pesticides run off your lawn into the storm drain and then into the bay.



★ Use pesticides and fertilizers sparingly.
 ★ Don't overwater and don't fertilize before it rains.

Auto Care

Car washing at home can release detergents and petroleum products to the bay.



★ Use a commercial carwash or wash your car on the lawn.
 ★ Pour soapy water down the sink.



KNOW YOUR NITROGEN

NITROGEN

It makes up 80% of the air we breathe. Without it, plants couldn't grow. It's an element so common to living things that it's hard to call it dangerous. But nitrogen in our water—in the form of nitrate nitrogen—can be lethal to life in our waterways. Unnaturally high doses of nitrogen in our streams, rivers and bays can trigger an imbalance in the ecosystem with drastic consequences.

Most of the nitrogen overloads come from large sources, namely agriculture, sewage treatment plants, and electric power plants. But it also comes from the average home, from inside your bathroom to the cars parked in your driveway, and fertilizers put on your lawn.

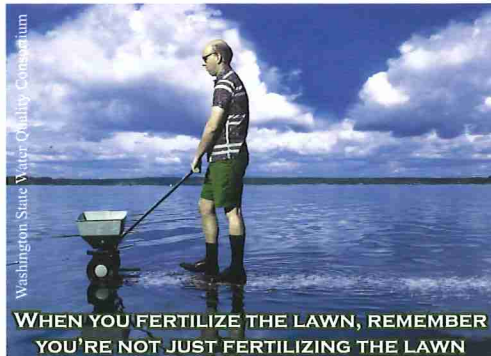
This fact sheet describes the harmful effects of nitrogen, its sources, and solutions. It also includes a worksheet on page 2 to help calculate your yearly nitrogen output. We can all do our part to help solve a big problem.

THE TROUBLE WITH NITROGEN

Whatever its source around the home, nitrogen in the water soluble form (nitrate nitrogen) can be washed into a nearby stream, river or lake through stormwater runoff. When water flows into the salty Westport River via the streams and creeks, nitrogen feeds algae like a fertilizer feeds a corn crop. When high amounts of these nutrients are present, algae rapidly multiplies into huge masses called blooms. These floating algae blooms fill the water, blocking sunlight needed by underwater plants which provide food and habitat for many species. As the algae die, they sink and bacteria decomposes the algae in a process that removes oxygen from the water. Without enough oxygen, some species must leave the area. Those that can't leave die.

WHERE IS THE EXTRA NITROGEN COMING FROM?

WESTPORT IS WORKING WITH THE MASSACHUSETTS ESTUARIES PROJECT TO SOLVE NITROGEN POLLUTION PROBLEMS IN THE RIVER.



WHEN YOU FERTILIZE THE LAWN, REMEMBER YOU'RE NOT JUST FERTILIZING THE LAWN

FERTILIZERS

Complete fertilizers contain nitrogen, phosphorus and potassium, represented in that order by the three digit code on every bag, such as 10-10-10 or 16-4-8. All fertilizers vary in their nutrient analysis, so test your soil conditions before reaching for the nearest bag of weed 'n feed. Consider what your lawn needs. If you must fertilize, GO ORGANIC. You can get products at Westport's Grain and Feed on State Road.

DON'T HAVE BAD TIMING

Apply fertilizer at the right time of

the year. Spring applications to common cool-season grasses, such as Kentucky blue-grass and fine fescue, can actually harm lawns by promoting more leaf growth than root growth. Fall application is best.

TARGETED SPREADING

Careless applying of fertilizer near streets or other paved surfaces allows rain to wash the nutrients into storm drains, which eventually empty into nearby streams and the river.

FEEDING PLANTS NOW...NOT LATER

Water-soluble ammonium nitrate is one of the cheaper sources of nitrogen in bulk-blend garden and lawn fertilizers. It gives an immediate green-up in both tomatoes and turf. But watch out if your soils are sandy. Using a form of nitrogen that is water-soluble and thus immediately available to the plant can be a poor choice if the soil drains easily, allowing nitrogen to leach into the ground water and nearby waterbodies.

SEWAGE TREATMENT

In Westport, homes and businesses use septic systems to treat their waste water. Waste water is piped to an underground septic tank which traps the solids and disperses the liquids throughout an absorption (leach) field. Here, the soil neutralizes the waste. Once in the soil, nitrogen is removed primarily through denitrification (conversion to nitrogen gas). Rates of denitrification vary widely, depending on the type of soil and amount of water added to the ground.

The problem is that even properly working septic systems that do a good job removing bacteria, do little to remove nitrogen. Most of the nitrogen leaves the sewage disposal system absorption area, potentially to enter ground and surface water.

CALCULATE YOUR NITROGEN FOOTPRINT WORKSHEET

This worksheet examines activities around your home which generate nitrogen. It focuses on those activities or facilities over which you have at least some control—areas in which choices can be made to reduce nitrogen outputs. It does not reflect how much nitrogen becomes pollution since some nitrogen is consumed by plants for growth or remains bound in the soil.

DO YOU PUT FERTILIZERS ON YOUR YARD?

STEP 1: On the back of the fertilizer bag, note the parts of nitrogen, phosphorus, and potassium per bag. Nitrogen is the first number in the 3-digit formula. A 12-4-8 fertilizer, for instance, would contain 12 percent nitrogen on a weight basis.

STEP 2: Determine the size of your lawn in square feet. (40 ft wide by 100 ft long = 4000 square feet). Commercial fertilizers give recommendations for pounds of fertilizer per 1000 square feet. Divide the size of your lawn (in square feet) by 1000 square feet. SIZE _____ / 1000 = _____

STEP 3: Determine how many pounds of fertilizer is recommended per 1000 square feet. (A typical recommendation would be 1.5 lbs. per 1000 sq. ft.) Multiply this number by the factor arrived at in step 2. POUNDS _____ X _____ = _____

STEP 4: Take Step 1's nitrogen figure (the first number in the N-PK formula) and multiply by the total pounds of fertilizer arrived at in step 3. This is the total pounds of nitrogen you're applying in one application. No. 1 _____ X _____ = _____

STEP 5: Multiply the total pounds of nitrogen arrived at in step 4 by the number of times a year you fertilize you lawn with this formula. _____ X _____ per year = _____

Total pounds of nitrogen: _____

DO YOU HAVE A SEPTIC SYSTEM?

The average amount of nitrogen produced by a person in septic system effluent over one year is estimated to be 9.9 pounds.

STEP 1: If you have a septic system, total the number of people living in your household, Number of people = _____

STEP 2: Multiply the number of people in your household by 9.9 pounds for a total annual amount. _____ X 9.9 = _____

Total pounds of nitrogen: _____

DO YOU USE CLEANING SOLUTIONS AT HOME?

STEP 1: Check which cleaners you routinely use that contain ammonia. Six ounces is average use for the typical household.

STEP 2: Multiply six ounces by the number of times you use each of these cleaners in one year. 6 X _____ times = _____

STEP 3: Divide the total by 16 to calculate the number of pounds of each cleaner used in one year. _____ / 16 = _____

STEP 4: Sum the total pounds of ammonia-containing cleaners routinely used over one year. _____ cleaners X _____ = _____

Total pounds of nitrogen-containing cleaners: _____

DO YOU DRIVE A GAS POWERED CAR?

STEP 1: Estimate the total miles driven per week for each of your family's cars. _____ miles

STEP 2: Multiply this mileage by .004 (approximate average of the pounds of nitrogen oxides emitted by cars over one mile).

_____ X .004 = _____

STEP 3: Multiply this number (lbs. N emitted/one week) by 52 weeks/year for an annual amount. _____ X 52 = _____

Total pounds of nitrogen oxides: _____

DO YOU USE GAS POWERED LAWN TOOLS?

Nitrogen Oxide Emission Rates:

Lawn mowers - .0053 lb/hour

Riding mowers - .0163 lb/hour

Lawn/garden tractor - .026 lb/hour

Leaf blower/vacuum - .0022 lb/hour

Snow blower - .0066 lb/hour

weeks/ year	hours/ week	hours/ year	lb/ year
x	=	x rate	=
x	=	x rate	=
x	=	x rate	=
x	=	x rate	=
x	=	x rate	=

STEP 1: For each type of equipment noted above, determine how many weeks a year you typically use the equipment.

STEP 2: For each season, determine how many hours a week each tool is typically used (yellow boxes).

STEP 3: For each equipment piece, multiply number of hours/week by the total weeks used in one year (red boxes).

STEP 4: Multiply the emission rate by the red boxes. Sum the totals for each small gas-powered engine. Total (green boxes)

Total pounds of nitrogen oxides: _____

DO YOU HAVE AN ELECTRIC BILL?

Power plants fueled by coal (a fossil fuel) emit .0024 pounds of nitrogen oxides per kilowatt hour of electricity produced.

STEP 1: Over the course of a year, record the kilowatt hours of electricity used by your household, which is noted on your monthly electric bill. _____ kilowatt hours/year

STEP 2: Total the year's kilowatt hours and multiply by .0025 for an annual amount of nitrogen oxide emissions contributable to your household. _____ X .0025 = _____

Total pounds of nitrogen oxides: _____

ADD ALL OF THE ABOVE FIGURES: _____

This number is an estimate of how many pounds of nitrogen-containing compounds your household generates on a yearly basis.

Read on and you can learn how to reduce that number by some simple changes in your lifestyle. And here's an extra challenge. After reading the "What You Can Really Do" section, decide how your family can help reduce the nitrogen pollution problem. For one year, try out some new conservation practices and then re-work the calculations to see what kind of difference you have made.

WHAT YOU REALLY CAN DO

“GREEN” UP YOUR YARD

The key is to know your soil and know your fertilizer. Some simple landscaping techniques can produce a healthy, green lawn and garden without polluting ground water or the river.

Did you know...

- ✧ A lawn fertilization program should begin in early October, not early May.
- ✧ By leaving grass clippings on the lawn, nitrogen applications can be reduced 30-40%
- ✧ Healthy trees and shrubs do not require annual fertilizer applications.
- ✧ Chemical fertilizers can add salt to the soil and can harm soil structure. If you need to fertilize use organic products.
- ✧ Grass clippings and compost are better answers, returning needed bacteria and enzymes to the soil along with nutrients.
- ✧ Reduce impervious surfaces at home and increase the vegetated land cover of your property. Impervious surfaces include your roof, driveway, patios and lawn. Reduce rooftop runoff by directing your downspouts to vegetated areas, and not to the storm drain on your street. For driveways and patios, consider putting in permeable paving or patterns of cement and brick that allow water to filter through.

MAINTAIN YOUR SEPTIC SYSTEM

Pump your septic tank regularly. The build-up of solids will inhibit the ability of a septic system to do its job. Pump your tank every three years for a four-person household and a 2500 gallon tank. This is preventive maintenance—if septic systems are left unmanaged, malfunctioning systems may force the homeowner to do costly repairs.

PICK IT UP...IT'S YOUR “DOODIE”

When walking a dog, remember to carry a plastic bag and take the waste back home for proper disposal. At home, there are a few options for disposal:

- ✧ Flush wastes down the toilet (septic systems can remove some of the nitrogen and removes dangerous pathogens, bacteria and viruses).
- ✧ Be careful not to flush stones, sticks or cat litter (the cat feces may be scooped from the litter and flushed).
- ✧ Install an underground pet waste digester. It works like a small septic tank and can be purchased at pet stores or online at composters.com. If you live near a stream, wetland or the river check with the Board of Health or Conservation Commission which may restrict their use, design or location.

REDUCE YOUR AIRBORNE NITROGEN

- ✧ Conserve electricity. Most electric power comes from coal burning power plants. If we use less energy, the power plants will burn less coal. And that, in turn, will help reduce nitrogen oxides in the atmosphere.
- ✧ Put the kids on the school bus. It goes by the house anyway.
- ✧ Use public transportation or car pool to get to work. The reduced mileage cuts down emissions and the wear and tear on your vehicle.
- ✧ Keep your car tuned up. Regular tune-ups reduce the amount of hydrocarbons, nitrous oxides and other pollutants coming from the exhaust pipe.
- ✧ Drive less and walk more. For short distances, riding a bike or walking is a smart option that will help keep you fit.

FOR MORE INFORMATION

<http://www.epa.gov/waterscience/criteria/nutrient/>
<http://www.savebuzzardsbay.org/ourwork/research/nutrients.htm>
<http://www.buzzardsbay.org/nitrogen-pollution.htm>
http://environmentaldefenseblogs.org/climate411/2007/08/17/nitrogen_pollution/

Use a push mower

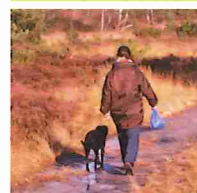


Living Roofs

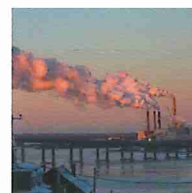
Pump it out



Try natural cleaners



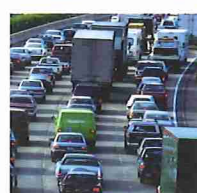
Pet waste digester



Turn it off



Drive Less



HOUSEHOLD CLEANERS

Household cleaners for glass, ovens, and vinyl siding often contain ammonia, a form of nitrogen. Some containers use spray or pump nozzles that unavoidably send nitrogen particles into the air never reaching their target. Simply rinsing buckets, rags and old containers can send nitrogen laden residue down the drain to into the ground water through the septic system, or to a local stream or the river via stormwater pipes. If household cleaners are harmful to humans, imagine what such products can do to the tiniest of aquatic life.

**AIRBORNE NITROGEN**

Both cars and fossil fuel-burning power plants emit nitrogen oxides. Some of the nitrogen oxides are transformed into nitric acid in the atmosphere. This acid then falls to the earth in the form of acid rain, proven to reduce crop and forest yields, kill fish and other aquatic life, and to accelerate the decay of limestone statues, paint and metal finishes. If strong enough, acid rain can burn human skin, damage lungs, and irritate eyes and breathing functions. Everyone who drives a car or uses electricity generated by fossil fuels is partly responsible for this part of the nitrogen pollution problem.

Today's passenger cars emit about 70% less nitrogen oxides over their lifetimes than their uncontrolled counterparts of the 1960's. The number of cars and miles driven, however, has nearly doubled over the past 20 years. The net result is only a modest reduction in each automotive pollutant, except for lead which has dropped by more than 95%.



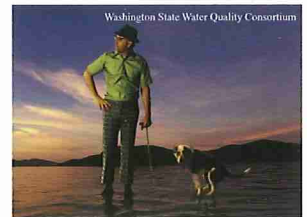
Westport River Watershed Alliance
1151 Main Road
P.O. Box 3427
Westport, MA 02790-0703

Even your lowly lawn mower and other small gas powered engines (chain saws, leaf blowers, weed whackers) emit nitrogen oxides and other smog-producing gases. According to the EPA, about 5% of air pollution comes from the nation's 89 million lawn mowers, garden tractors, and other gas-powered garden equipment. (For a leaf blower, one hour is the equivalent of 34 hours of driving.) Only recently has the EPA begun to regulate this type of equipment, setting exhaust emission standards for all new small spark-emission engines.

PET WASTE

Dumping pet waste in the street, storm sewer or leaving it to decay in your yard adds to water pollution when the next rain or melting snowfall washes it into storm sewers that drain directly into our streams, and the river.

When pet waste is washed into the water, the waste decays, using up oxygen and sometimes releasing ammonia. Low oxygen levels and ammonia combined with warm temperatures can kill fish. Pet waste also contains nutrients that encourage weed and algae growth. Perhaps most importantly, pet waste carries disease which make water unsafe for swimming or drinking.



The Westport River Watershed Alliance (WRWA) is a nonprofit, citizens group formed in 1976 to protect and conserve the natural resources of the Westport River and its 100-square mile watershed located in Southeastern Massachusetts. The Westport River watershed encompasses the Massachusetts communities of Westport, Dartmouth, Fall River, and Freetown as well as Tiverton and Little Compton in Rhode Island. This informational mailer was funded by the generosity of the **RATHMANN FAMILY FOUNDATION.**

Non-Profit
U.S. Postage
Paid
Permit No. 38

POSTAL CUSTOMER

FACT:⁵¹ **The poisons you put on your lawn can get into the water we drink.** Pesticides and herbicides travel from your lawns and gardens and contaminate our water with chemicals that are toxic to both humans and animals. These chemicals can travel into water sources as surface runoff or by leaching into the groundwater.



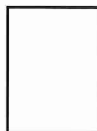
FACT: **You can minimize the damage from fertilizers, pesticides and herbicides.** How we care for our lawns will affect the quality of water for many people. We need to act in a way that will preserve water quality for those around us now and in future generations.

**Look inside for
15 easy ways that
you can help
protect our water.**

Communities united to protect and preserve Buzzards Bay

**Inside:
15 easy ways
to keep our
water healthy...**

Buzzards Bay Action Committee
P.O. Box 9399
Dartmouth, MA 02747



STOP!

Before you apply
those lawn
products, know
these important
facts

.... what you do to
your lawn affects
our bays, rivers,
streams and
drinking water

FACT: Lawn fertilizers do not stay on your lawn. The nitrogen and phosphorus in fertilizers travel great distances and end up in the groundwater we drink and in water bodies like Buzzards Bay. Nitrogen and phosphorus are very harmful to our water.



FACT: Fertilizers that reach the water can kill fish, shellfish and aquatic vegetation. Once the nutrients from fertilizer enter a water body, they dramatically increase the growth of algae. Algae blocks sunlight from entering the water and leads to the death of other important aquatic vegetation. Decaying algae decreases the oxygen available to fish. Eventually the fish die. Decaying algae also kills shellfish and other bottom dwelling species because it settles on the bottom and suffocates whatever lives there.

1. Test your soil

- A soil test identifies the nutrients already present in your soil, so you only apply the right amounts of what your soil needs. This will prevent excess nutrients from entering the environment and save you time, energy and money.
- For details contact the UMASS Soil Testing Lab at (413) 545-2311 or visit their website at www.umass.edu/plsoils/soiltest

2. Follow directions

- Fertilizers are sold using a formula of three numbers (for example: 10-20-10 or 5-10-5). The first number is nitrogen, the second number is phosphorus and the third is potassium.
- The results of your soil test, as well as what type of plants you are fertilizing, should determine what fertilizer you choose.
- Always use the lowest possible amounts of fertilizer, pesticides and herbicides. Over application impairs plant growth, weakens a plants ability to resist pests and disease, and damages the environment.

3. Time applications carefully

- Never apply fertilizers before heavy rain or when cold weather is expected. Heavy rain increases runoff and leaching into ground-water.
- In cold weather, plants can't absorb nutrients. That means the fertilizer stays on the ground where it is more susceptible to runoff.



4. Maintain a strip of natural vegetation between lawns and wetlands

- This vegetated buffer zone will help filter and trap nutrients before they are able to reach the water and help prevent erosion.

5. Handle lawn chemicals carefully

- Never spill fertilizers, pesticides or herbicides on concrete surfaces where they can easily runoff into water.
- Do not mix, apply or dispose of pesticides or herbicides with 100 ft. of your well, storm drains or any surface water. Always dispose of containers properly.

6. Water your lawn after fertilizing

- Proper irrigation will help the fertilizer be absorbed, making it less likely to runoff.
- Water lawns in the morning.
- Use only enough water to saturate the root zone.
- Do not water again until you see signs of wilt or footprinting.
- Do not overwater lawns and never water before heavy traffic is expected. Both of these practices increase nutrient runoff and weaken the turf.



7. Use organic materials

- Recycle grass clippings by leaving them on the lawn. As they decompose, clippings will provide the soil with nutrients, reducing chemical fertilizer needs by up to 25%.
- You can also create a compost pile and use the compost as a slow-release fertilizer.

8. Plant native grasses

- Native grasses require less water, fertilizers and pesticides than non-native species.
- In sandy soil areas around Buzzards Bay, plant a mix of fine leafed fescues and perennial rye grasses.
- White clover added to your lawn mix provides a natural nitrogen source.

9. Mow your lawn correctly

- Mow your lawn to 2 during the first cut of the season and 3 during each subsequent mowing.
- You should never cut off more than 1/3 of the grass blade at a time.
- This will give you healthier, well-rooted grass that is better able to resist pests and needs less fertilizer.
- Use compostor blades on your mower and always make sure your blades are sharp. Mulching mowers do not contribute to thatching problems.

10. Add organic material, or loam, to sandy soil

- If you have sandy soil, add a layer of at least 6 of loam.
- This will increase the water holding capacity of your soil.

11. Aerate compacted soil

- This reduces runoff by helping fertilizer get into the soil.

12. Use natural enhancers on your lawn

- To balance acidic soil, use lime. For greener grass, use an iron supplement. This will help decrease the amount of harmful nutrients entering our aquatic environment.

13. Focus on specific problem areas

- Spot apply fertilizers and pesticides whenever possible instead of treating your whole lawn. This decreases the amount of chemicals entering the environment.

14. Use slow-release fertilizers

- Fertilizers are usually divided into two groups, water soluble nitrogen (fast-release fertilizers) and water insoluble nitrogen (slow-release fertilizers).
- Slow-release fertilizers provide a more controlled release of nitrogen than other products. Instead of containing nitrogen that dissolves in just water, slow-release fertilizers rely on chemical or microbial activity in order to release their nutrients, making it less likely that they will reach the water.



15. Increase natural landscaping

- Minimize your lawn size.
- Healthy grasses can tolerate some competition from weeds and other pests without requiring the use of herbicides.
- Ground cover plants can be mixed with grass, lowering your fertilizer needs. A healthy, well-maintained lawn requires little or no fertilizer.
- Remember, a perfect lawn is not necessary, especially when it carries such high environmental costs.

For more information:

The University of Massachusetts Cooperative Extension Office website
<http://www.umassurf.org>

The University of Rhode Island Cooperative Extensions Gardening and Food Safety Hotline
(401) 874-2900

Storm Drain Stenciling Program

Maintenance and cleaning of catch basins not located on a public street are the responsibility of the property owner. No material should ever be dumped into a catch basin.

To help to educate employees and discourage illegal dumping, property owners may wish to stencil their catch basins with a “Don’t Dump” message. BWSC will loan “Don’t Dump” stencils to interested business owners.

For owners planning new or resurfacing of existing parking lots, permanent “Don’t Dump” castings are available for purchase. For further information, contact the Commission’s Communications Department at 617-989-7000.

**When It Rains, It Drains.
Protect Our Local Waterways.**



Report Illegal Dumping

The dumping of any material into a catch basin is illegal in Boston. If you observe someone dumping, immediately report it to Boston Water and Sewer Commission at **617-989-7000**.



**Boston Water and
Sewer Commission**

Community Services Department
617-989-7000

980 Harrison Avenue
Boston, MA 02119-2540
www.bwsc.org

Martin J. Walsh
Mayor, City of Boston

Henry F. Vitale
*Executive Director/CFO
and Treasurer*

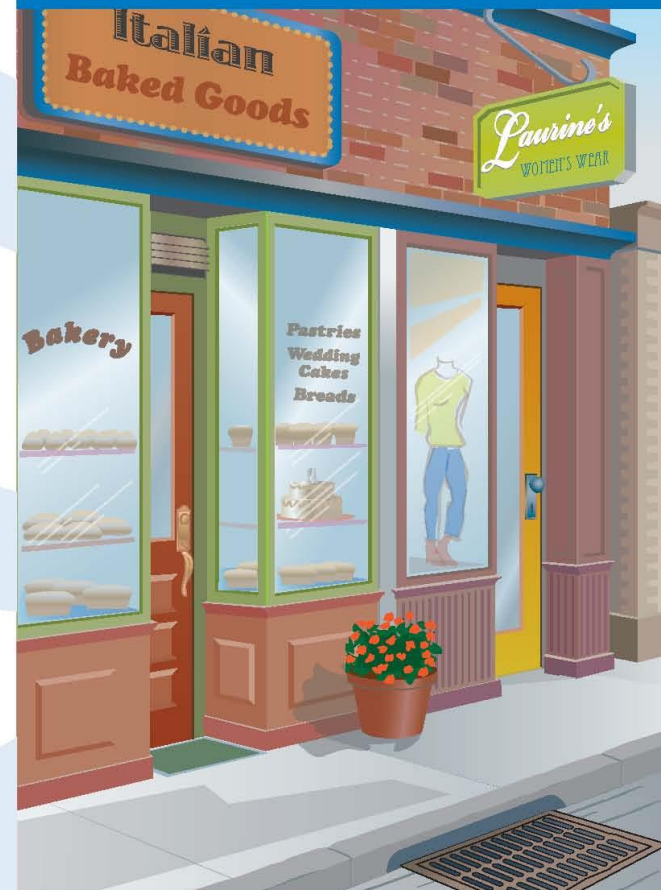


2014



Boston Water and Sewer Commission

Stormwater Management for Small Businesses

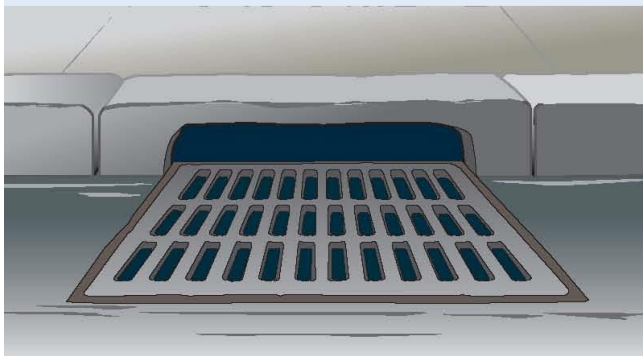


What Is Stormwater Pollution?

Stormwater is rain or snowmelt that flows over the ground. As stormwater runs over impervious surfaces, like driveways, roofs, sidewalks, and streets, it can pick up pollutants that have collected on these surfaces—such as motor oil, fertilizers, pesticides, and trash—and deposit them into catch basins.

Stormwater flows into the storm drain system and is discharged, without treatment, into nearby waterways, including the Charles, Neponset, and Mystic rivers, and Boston Harbor.

Property owners are responsible for all pollutants leaving their property, including pollutants in stormwater. Here are some things you and your employees can do to prevent stormwater pollution.



Property Maintenance Tips

- ▶ Sweep outdoor areas daily for trash and litter control. Do **not** dispose of trash in catch basins.
- ▶ Provide trash receptacles in highly visible locations and outdoor receptacles for cigarette butts, particularly in employee break areas.
- ▶ Keep the area surrounding your dumpster clean and the lid closed. Make sure the clean-out plug is properly secured to prevent leaking.
- ▶ If you must hose down an area, don't use detergents or chemical cleaners to wash sidewalks or driveways.
- ▶ Dispose of all waste wash water in a janitorial sink or a floor drain that is properly connected to the sewer system. Never pour wash water onto a parking lot, alleyway, sidewalk, or street, as these areas ultimately drain to local waterways.



How to Dispose of Hazardous Waste

Never dump hazardous waste—including chemicals, automotive fluids, paint, and commercial waste—**into catch basins**. Dispose of hazardous waste properly.

If you are unsure as to how to dispose of a certain material, consult the manufacturer of the product or call the Massachusetts Hazardous Waste Hotline for Businesses at 617-292-5898.

Reminders for Restaurants and Food Establishments

- ▶ Properly maintain any grease traps in your establishment, in accordance with Boston Water and Sewer Commission (BWSC) regulations.
- ▶ Dispose of cooking oil and grease properly either in a receptacle designed to contain grease or by hiring a waste hauler.
- ▶ Do not pour oil and grease into sinks, floor drains, catch basins, or onto the ground.
- ▶ Wash garbage cans, floor mats, and kitchen equipment in designated wash areas that drain to the sewer system.

Help Prevent Stormwater Pollution

- ▶ Don't dump into catch basins.
- ▶ Keep property clear of trash and debris.
- ▶ Keep dumpster area clean.
- ▶ Provide trash receptacles for customers.
- ▶ Dispose of wash water properly.
- ▶ Stencil storm drains on your property.

Don't Dump!



Protect Local Waterways.



STORMWATER

What you can do as a Developer

U.S. EPA | STORMWATER OUTREACH AT EPA NEW ENGLAND



Credit: South Burlington Stormwater Utility

STORMWATER is a leading cause of poor water quality. Rain or melted snow runs down driveways, sidewalks and streets carrying oil, dirt and other pollutants into nearby waterways. Polluted runoff, which can cause erosion and flooding, runs into waterways and degrades plants, fish, shellfish and other wildlife. In water used for recreation, the runoff can lead to illness, and people who eat contaminated fish can also become sick. Untreated stormwater can also contaminate drinking water sources.

INTRO:

Development has sprawled across New England over the past few decades, consuming farms and forests two times as fast as the population is growing. Past development practices have created more roads, driveways and roofs so that water that used to seep into the ground now runs across pavement, picking up chemicals and pollutants. This stormwater then flows into nearby waterways, both polluting them and scouring their banks. Local zoning often unintentionally encourages sprawl, but this is beginning to change. Some developers are leading the way with better – and often cheaper – ways to develop. Here are some of their practices:

USE INNOVATIVE

DEVELOPMENT PRACTICES:

Select your site wisely — Developing in an already-developed area can lower infrastructure costs because sewer, water, utilities and roads may be available.

Choose the areas of your site to develop carefully — You can avoid putting the development where it will have an effect on important natural resources. In addition, you can cluster buildings and leave at least half of the property undeveloped so that it can handle rainwater through natural resources. This will reduce costs and add to open space.

Use Low Impact Development (LID) practices — Roads, parking lots and other non-porous areas are the largest contributors to stormwater runoff. Generally the less porous the area, the worse the condition of nearby waterways. Low Impact Development allows developed land to handle rain more like how it was handled before the site was developed. The goal is to mimic a site's predevelopment hydrology by infiltrating, filtering, storing, evaporating and detaining stormwater runoff.

Address barriers early — Developers interested in LID are often concerned about cost, cold weather, drinking water and public safety. Many of these concerns need not represent barriers:

- **Costs** — An EPA study found grading, landscaping, paving and infrastructure costs were lower for LID than conventional development. These low-impact development techniques can also eliminate or reduce the size of stormwater systems, leaving more open space for buildable lots.

- **Cold weather** — Most LID stormwater approaches monitored by the University of New Hampshire Stormwater Center worked well year-round. Porous pavement in particular was found to be especially effective in winter.

- **Drinking water** — The UNH Stormwater Center found that filtering stormwater through infiltration practices removes pollution, and on occasion, can reduce contaminant levels beyond requirements. Furthermore, infiltration replenishes groundwater for future use. In certain areas, including those where groundwater is a source of drinking water or those identified as sensitive groundwater areas, infiltration without treating the water first may not be appropriate. In some cases, stormwater infiltration may be regulated as well under the Safe Drinking Water Act. Developers should contact state or regional authorities before they use infiltration practices.

- **Public safety** — Studies have shown narrower streets can provide ample access, parking and circulation for residents and emergency vehicles. Some studies have shown that narrower streets are associated with less traffic, slower speeds and fewer accidents.

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MYRA SCHWARTZ

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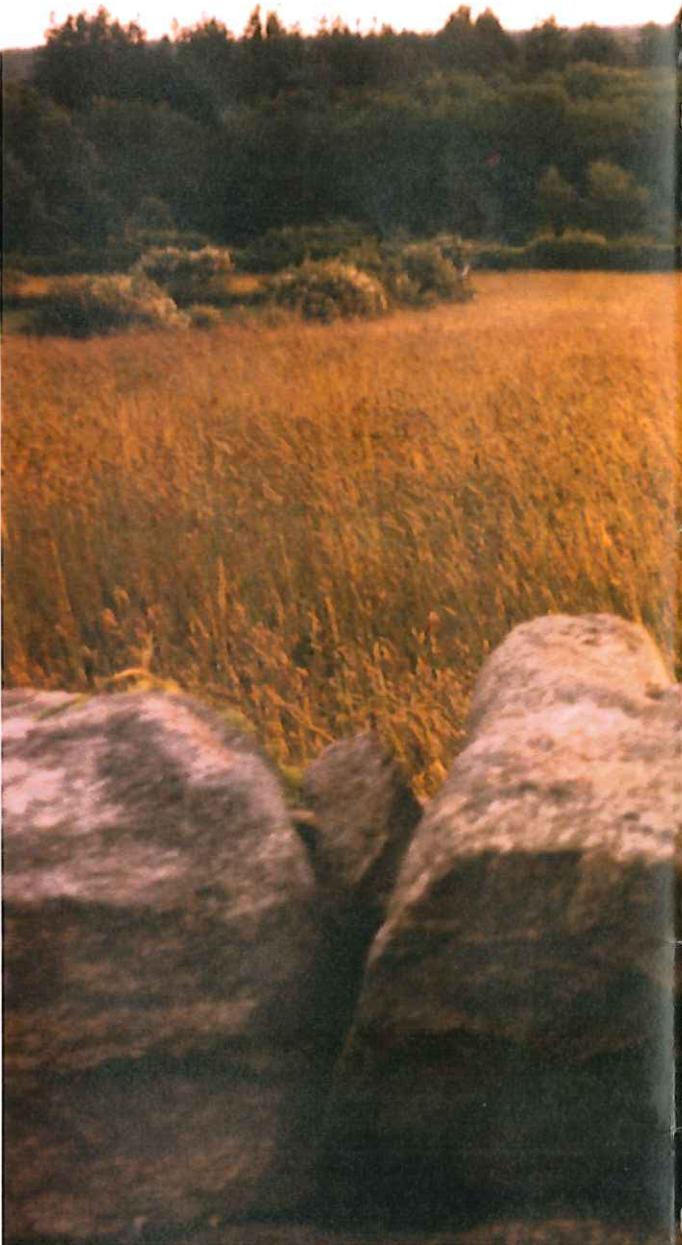
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(617) 918-1111
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topics/water/stormwater.html

GROUNDWATER RESOURCES

how to preserve and protect them

WESTPORT RIVER WATERSHED ALLIANCE
1151 Main Road, P.O. Box 3427, Westport, MA 02790



WESTPORT'S WATER RESOURCES



WESTPORT RIVER WATERSHED ALLIANCE



INTRODUCTION

98% of Westporters drink water from private wells on their property. The Westport River Watershed Alliance produced this brochure and resource map to inform residents about our groundwater resources and ways to conserve them now and for the future.

The source of water for these wells is groundwater. Contamination of drinking water supplies from bacteria and viruses, petroleum products, nutrients, pesticides, road salt and other contaminants can cause health problems. To protect drinking water, you need to understand what groundwater is, where it comes from, and how it can get become contaminated.

When rain falls, surface water flows downhill as runoff. Some rainfall evaporates; some is taken up by plants. The rest of the rainwater trickles down through soil and rock eventually reaching the water table. The water contained in the saturated zone below the water table is called groundwater. Groundwater moves from upland to lowland areas, eventually discharging in low places such as streams, lakes, and wetlands.



WESTPORT RIVER WATERSHED ALLIANCE

1151 Main Road, P.O. Box 3427

Westport, MA 02790

508-636-3016 - tel, 508-636-8884 - fax



WESTPORT RIVER WATERSHED

The Westport River watershed is approximately 50,000 acres in size and encompasses parts of Westport, Dartmouth, Fall River, Freetown, Tiverton, and Little Compton. Eighty five percent of the watershed's land-mass drains into two river branches, the East and West Branches of the Westport River. The East Branch has a watershed land area of 37,467 acres, a surface water area of 1,972 acres, and 783 acres of saltmarsh. The West Branch has 10,865 acres of watershed land area, 1,310 acres of surface water, and 258 acres of saltmarsh.

East Branch Headwaters:

Copicut Reservoir
Shingle Island River
Bread and Cheese Brook

East Branch Tributaries:

Lyons Brook	Allens Creek
Francis Brook	Tripp Brook
Beulah Brook	Sam Tripp Brook
Glen Brook	Wings Brook
Woodland Brook	Bowers Brook
Kirby Brook	Pierce Brook
Bloody Brook	Ashley Brook
Coleman Hill Creek	Boiling Spring Brook
Snell Creek	

West Branch Headwaters:

Tiverton Great Swamp

West Branch Tributaries:

Adamsville Brook
Grays Mill Pond
Mosher Brook
Angeline Brook
Dunhams Brook



WESTPORT HYDROGEOLOGY

Drinking water in Westport starts out as rainfall which then percolates through the ground. The underground area where water moves and is pumped out for drinking water is called an aquifer. The rate of groundwater flow depends on the area's geology and topography. In the Westport River watershed there are three types of geologic material in local aquifers:

- **Bedrock**, both granite and schist, is the predominant geologic material found in the watershed. The granite bedrock has low permeability, meaning water can not penetrate easily. However, cracks or fractures in the rock provide for water to move more freely.
- **Sand and gravel deposits** left by the last glaciation have much higher permeability than the local bedrock. Groundwater flows through these deposits more easily and rainfall penetrates rapidly, decreasing surface runoff.
- **Glacial till** is a mixture of fine silt and clay with sand, gravel and boulders, which has low permeability. Sub-glacial till comprises much of the subsoil in the watershed, and due to this till's compacted character, groundwater moves slowly through it.

PROTECTION REGULATIONS

Planning and regulating land use is an important tool for protecting water resources. Activities on the land can affect the quality and quantity of the groundwater below. The federal government, the Commonwealth of Massachusetts, and the Town of Westport all have laws to protect water resources. The land that is regulated falls into four categories:

- Coastal resource areas: beaches, dunes, salt marshes
- Inland resource areas: ponds, lakes, banks of rivers, perennial streams, and floodplains
- Riverfront and wetland resource areas
- Buffer Zones: 100 feet from the boundary of a resource area

Massachusetts Wetlands Protection Act (WPA)

In 1972 the State enacted the WPA with the following goals:

- Protection of groundwater supplies
- Protection of public and private drinking water supplies
- Prevention of pollution
- Flood control
- Storm damage prevention
- Protection of fisheries and shellfish
- Protection of wildlife habitats

The WPA regulates activities such as removing material, filling, dredging, or altering land. The local Conservation Commission must grant permission for altering land in natural resource areas even when privately owned. See wetland areas on inside map.

RECOMMENDATIONS

Preserve Riparian Zones (areas of vegetation along stream and river banks).

- Do not remove native vegetation from riparian zones.
- Retain deeply rooted trees and shrubs in the buffer area 15 feet away from banks.
- Allow tree canopies to shade the shorelines.
- Limit construction of impervious surfaces.

Care for Your Property Responsibly

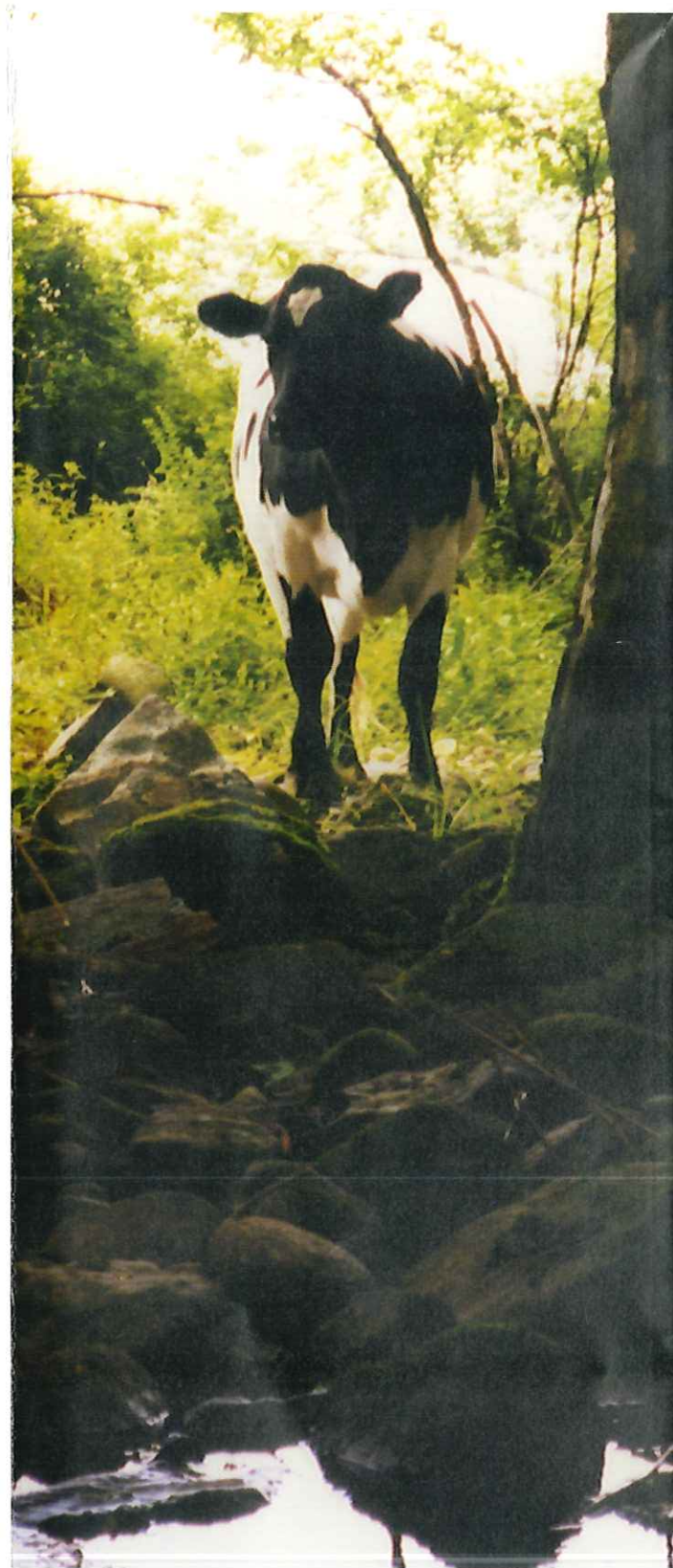
- Limit the size of your lawn. Plant native species.
- Limit the use of fertilizers.
- Practice lawn and garden care that saves water.
- Limit the use of pesticides and herbicides.
- Use gardens to control runoff.
- Create low impact access to water bodies.
- Store mulch and compost away from water resources to limit additional runoff of nutrients and bacteria.

Maintain Your Septic System

- Follow an inspection schedule.
- Make sure your septic system is adequate for your needs.
- Pump out your system every 2 to 3 years.
- Prevent system failure with proper maintenance.
- Do not use chemical cleaners in your septic systems.
- When replacing systems to meet current Title V requirements, consider choosing a system that helps to remove nitrogen from the leaching field.

Protect the Public's Interest

- Support initiation of private well monitoring programs to track well water quality, so that problems can be foreseen and addressed as they develop.
- Support protection of open space around wetlands, aquifer recharge areas, and wellheads.



FREQUENTLY ASKED QUESTIONS

What activities are prohibited in wetlands, riverfronts, and other resource areas?

Removing, filling, dredging, or altering any wetland, floodplain, bank, land under a water body, land within 100 feet of a wetland, or land within 200 feet of a perennial stream or river without a permit from the Conservation Commission.

Why do we have these rules?

For many reasons: flood control, prevention of storm damage, pollution prevention, protection of fisheries, shellfish, groundwater, public and private drinking water supplies, and wildlife habitats.

How can I find out if my property lies in or near a resource area?

Contact the Westport Conservation Commission for information on wetlands in your area or on your property. Also see map (inside) for resource areas.

Why are paved surfaces a bad thing?

Water that falls on impervious surfaces (roads, roofs, driveways) picks up contaminants on the land and washes them directly to the river. This is called the "first flush" and carries with it substantial pollution. Impervious areas can increase storm runoff and stream velocities, contributing to soil erosion.

What is wrong with a big green lawn?

The grasses used for lawns require lots of water. A naturalized landscape conserves water. Grasses are also less efficient at taking up excess nutrients than native plant species. Watering and applying fertilizers to lawns unnecessarily consumes water resources and can pollute the river with nutrients, which have negative effects on water quality. These effects are referred to as eutrophication and are manifested as poor water clarity, loss of habitat, and low oxygen levels.

GLOSSARY

Watershed: A geographic area of land in which surface and groundwater flows downhill to a common point, such as a river, stream, pond, lake, wetland, or estuary.

Water Cycle: In a watershed, precipitation has several routes to its ultimate destination.

- **Runoff:** The surface runoff is a function of ground cover (i.e. type and extent of vegetation or impervious surface) soil type, climate, and rainfall quantity and intensity.
- **Recharge:** Water penetrating into the ground. Recharge amount is a function of local geologic and man made conditions.
- **Interflow:** Water moves in a shallow underground layer in a temporary state above normal groundwater levels, usually in wetlands near stream banks.
- **Evapotranspiration:** Plants draw water from the soil and release it as vapor to the atmosphere. Evaporation from all ground and water surfaces returns water to the atmosphere.

Groundwater: Water that fills the cracks and porous spaces in rocks and sediments.

Aquifer: A region of groundwater saturation that can be pumped for use as a public or private water source.

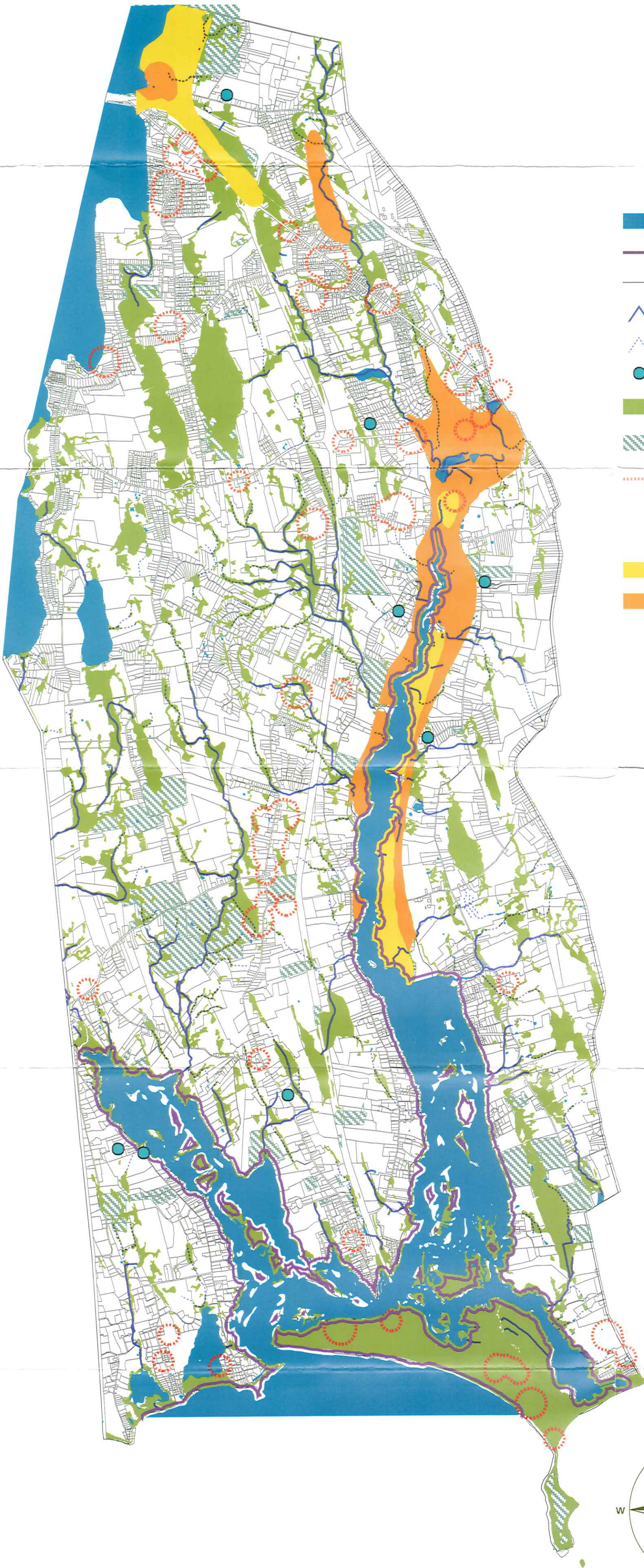
Wetland: Massachusetts defines wetlands by unique hydric soils, presence of water and of special plants.

Fecal Bacteria: A type of bacteria that is found in the digestive tract of mammals and birds. In a water supply source, the presence of fecal bacteria above certain levels indicates a health hazard.

Nutrients: Chemicals, nitrogen and phosphorus, that are necessary for biological growth. An excess of nutrients in surface waters can be detrimental to habitat, water quality, and human health.

Vernal Pool: Shallow, intermittently flooded wet area. Usually wet only during the late winter and spring.

WESTPORT'S GROUNDWATER RESOURCES



LEGEND

- Westport River and Ponds
- River Buffer Zone
- Land Parcels
- Perennial Stream
- Intermittent Stream
- Vernal Pools
- Wetlands
- Permanently Protected Open Space
- Zone II Wellhead Protection

AQUIFER

- High Yield
- Medium Yield

INTERIM WELLHEAD PROTECTION AREAS

Small public water systems (schools, libraries, restaurants) are required to take steps to protect their water sources from contamination. Well water protection begins with the owner and operator of a well. In Westport, the wellhead protection zone is determined by the radial distance from the well location. See well-head areas on map.

WHY IS THE AQUIFER PROTECTION DISTRICT BY-LAW IMPORTANT?

The Aquifer Protection District By-law was set up to:

- Protect, preserve, and maintain the groundwater supply and the major groundwater recharge areas within the Town.
- To preserve and protect the sources of water supply for public health and safety.
- To conserve the natural resources of the Town.

The high yield aquifer district (see map) is the area where groundwater flow rates are 1400 gallons per minute or higher. The land use practices in this area affect the groundwater quality below. This groundwater recharges some wells outside the high yield aquifer district.

For more information regarding the Aquifer Protection District rules see Article 8 of the Town of Westport Zoning By-Laws.

WESTPORT AQUIFER PROTECTION DISTRICT

In 1998 citizens passed the Aquifer Protection District Zoning By-law to help protect drinking water sources in the Town's highest aquifer recharge area (see map). There are rules on activities for residents in this area. These include use regulations, prohibited activities, and activities by special permit.

Regulated Uses:

- Pesticide and fertilizer storage.
- Storage capacity for heating fuel.

Prohibited:

- Manufacture, use, storage, or disposal of toxic materials or hazardous waste.
- Carwashes, laundromats, landfills, auto service and repair shops, junk yards.
- Storage of uncovered or uncontained animal manure.
- Storage of commercial fertilizers.
- Storage of road salt or de-icing chemicals, stockpiling of snow or ice.
- Removal of soil within four feet of historical high groundwater tables.
- Construction of impervious surfaces (paved lots, buildings, and gravel areas) that exceed 15% of land area or 2500 square feet which ever is greatest, without a system for artificial recharge in place.
- Storage of liquid hazardous materials.
- Disposal of solid waste, except stumps or brush.

Special Permit:

- Commercial and industrial activities.
- Replacement, rehabilitation and modification of pre-existing, non-conforming uses.

DIRECTORY

Town of Westport Offices

- Westport Board of Health (508)-636-1015
- Westport Conservation Commission (508)-636-1019
- Westport Harbormaster (508)-636-1105
- Westport Shellfish Hotline (508)-636-1104
- Westport Board of Selectmen (508)-636-1003
- Westport Planning Board (508)-636-1037
- Westport Town Clerk (508)-636-1000

Local Water Resource Information:

Westport River Watershed Alliance (WRWA)
508-636-3016
www.wrwa.com

Commonwealth of Massachusetts
www.mass.gov

This project was funded by the Massachusetts Environmental Trust



Stormwater Pollution Prevention Guide

FOR HOMEOWNERS

The U.S. Environmental Protection Agency estimates that contaminants in stormwater runoff cause over half of the pollution in our nation's waterways.

Stormwater pollution begins when rain or snowmelt washes over pavement and other impervious surfaces, picks up contaminants, and flows down stormdrains to the waterways we rely on for drinking and recreation.

Common pollutants include antifreeze, detergents, fertilizers, gasoline, household chemicals, motor oil, paints, pesticides, pet waste, road salt, solvents, and yard waste

HELP KEEP OUR WATERWAYS CLEAN!

Please check the back of this page for tips on preventing stormwater pollution.
It's easier than you think!



Stormwater pollution is the toxic mix of bacteria, chemicals, metals, nutrients and other contaminants that washes over pavement and other impervious surfaces and flows down stormdrains to the waterways we rely on for drinking and recreation.

Let's work together to keep our waterways clean.

Learn more at www.neponsetstormwater.org





PICK-UP AFTER YOUR DOG

*Dog waste carries high levels of harmful **E. coli bacteria** and other pathogens, and is a major contributor to local water pollution.*

- Pick up the poop! Always carry a **plastic bag** when you walk your dog, and dispose of pet waste in a **trash can**.

LAWN & GARDEN

- Choose **organic lawn chemicals** whenever possible.

Use lawn chemicals sparingly and never use more than the directions call for.

- Sweep up **dry chemical spills** and dispose in trash.
- Don't pile **yard waste** near streams, wetlands, or stormdrains.
- Start a **compost pile**.
- Don't allow irrigation to **spray onto pavement**. Water that ends up on the pavement contributes to polluted runoff, and is wasted.
- Make sure that your **landscaper / irrigation contractor** follows rules for preventing stormwater runoff.
- Redirect **downspouts** toward grassy areas, trees and shrubs, so that runoff from your roof can soak into the ground.
- Use **pervious materials** in landscape designs. Bricks, pavers and stones allow water to slowly filter into the ground.
- Set a **rain barrel** under your downspout to capture water for another use.
- Plant **rain gardens** to help filter and soak up water before it runs onto the street.

HOMES / BUSINESSES

- Use the **least toxic** products available for cleaning, etc.
 - Avoid **liquid chemical spills** such as oil, gasoline, antifreeze, paint, etc. on paved areas.
- If a liquid chemical spill occurs, clean with rags or absorbent material such as **sand or kitty litter**. Sweep up absorbents and dispose of in the trash.*
- Never use a **hose** to wash down the driveway or sidewalk. This washes pollutants into storm drains, and is a waste of water.
 - Dispose of household hazardous waste through your local DPW / **Household Hazardous Waste Program**.
 - Never pour **washwater or chemicals** down stormdrains.

- Store chemicals in **leak proof containers** inside a building or shed, or under cover, away from rainwater.
- Avoid oversalting** walkways and driveways in the winter, and use non-toxic products whenever possible.
- Sweep up all **construction areas** on a regular basis and dispose of debris in the trash.

WASHING CARS AND BOATS

- Park your vehicle in a spot where the soap will run off onto **grass**, rather than into the street and down the stormdrain. If practical, park your vehicle on your lawn when washing it.
- Use **organic or mild soaps** and detergents.
- Never clean or pressure wash the **undercarriage of a car** at home. The oil, grease and other pollutants from this activity can contaminate shallow groundwater.
- Always use a **hose nozzle with a trigger**, and shut it off when you're not using it to conserve water.
- Skip the home treatment and **wash your car professionally**, but use a car wash that recycles its water!

AUTOMOTIVE REPAIR

- Store automotive parts, such as batteries, engines, transmissions, and parts that may have oily or greasy residue on them, under cover and off the ground, to **minimize rainwater contact**. Rainwater can wash pollutants off these parts and into stormdrains.
- Collect all used oil, antifreeze, and other vehicle fluids in containers with tight fitting lids and **recycle at a local service station**.

SWIMMING POOLS AND HOT TUBS

- Never **discharge pool water** directly into a storm drain.
- Dechlorinate pool, hot tub or spa water with **neutralizing chemicals**, if water is to be discharged into the ground. If water cannot be dechlorinated, it must be collected by a pool maintenance company.

For more information on hazardous waste disposal, call your local Department of Public Works.

For more information on reducing stormwater pollution, visit www.neponsetstormwater.org





What you can do as a Citizen

U.S. EPA | STORMWATER OUTREACH AT EPA NEW ENGLAND



STORMWATER is a leading cause of poor water quality. Rain or melted snow runs down driveways, sidewalks and streets carrying oil, dirt and other pollutants into nearby waterways. Polluted runoff, which can cause erosion and flooding, runs into waterways and degrades plants, fish, shellfish and other wildlife. In water used for recreation, the runoff can lead to illness, and people who eat contaminated fish can also become sick. Untreated stormwater can also contaminate drinking water sources.

INTRO:

Whether you live in a rural farmhouse or a 21-story apartment building, you have a role to play in reducing the amount of pollution from stormwater that runs into our rivers, lakes, streams and groundwater. The way you manage your property, your pet's waste, your garbage, or even your municipal taxes will affect the pollution from stormwater runoff. Below are some suggestions for how you, as an individual, can reduce your impact on stormwater and the environment.

TO DO YOUR PART:

Take steps in your home landscaping:

- **Rain barrels** — Rainwater can be collected from rooftops and used later on gardens. Rain barrels conserve water and reduce the amount of water that runs off your land.

- **Rain gardens** — Rain gardens planted with native plants can naturally offset the effects of stormwater runoff. Rainwater diverted to these areas from rooftops or paved areas will either be used by plants or will soak into the ground thereby recharging aquifers. Plants along roads or streams can trap stormwater pollution.

- **Lawn care** — Fertilizers and pesticides wash off gardens and pollute streams. Yard waste, such as leaves and grass clippings, can wash into storm drains, adding nutrients to streams. Avoid overwatering your lawn and use pesticides and fertilizers sparingly and organic mulch when possible. Compost or mulch yard waste so it doesn't go into storm drains or streams. Cover piles of dirt or mulch.

- **Paving surfaces** — Reduce the amount of pavement where you live. Brick walks, gravel driveways and porous concrete allow rainwater to run back into the ground to be filtered. Porous surfaces also replenish aquifers. Traditional concrete and asphalt rely on drains, pipes and other infrastructure to divert and control stormwater. The amount of non-porous surfaces is directly related to the health of rivers and lakes.

Maintain septic systems — Leaking septic systems release nutrients, bacteria and viruses into stormwater. Inspect your

system every three years and pump your tank as necessary (every three to five years). Don't dispose of household hazardous waste in sinks or toilets.

Use care with your car — If you wash your car at home, avoid using excess detergents or chemicals. Wash the car in your yard so wash water containing detergents seeps into the ground rather than into storm sewers or septic systems or use commercial car washes because they treat or recycle wastewater. Also, don't clean auto parts at home. Dumping car fluids into storm drains or on a street is like dumping them into a pond or river.

Manage pet waste — Clean up after your dog in cities and make sure waste is left far from water sources in rural areas. Flushing pet waste down the toilet is the best method. Leaving pet waste on the ground or throwing it into the storm drain increases public health risks because pet waste bacteria drains into nearby waterways.

Support your municipal program — Support local efforts to manage stormwater. Support repairs or improvements to your town or city's infrastructure. Allowing your town or city's infrastructure to erode will cost more money in the long run and create more pollution. Watch for notices about street sweeping programs.

Handle household waste carefully — Recycle or properly dispose of toxic products, including pesticides, paint, solvents and used oil. Don't pour them onto the ground or into storm drains. Use green cleaning products.

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LEARN MORE AT:

www.epa.gov/region1/
topics/water/stormwater.html

Pollution Prevention for Businesses



How Businesses Can Use Pollution Prevention for a Cleaner Westport

What is Pollution Prevention?

Pollution prevention (P2) is a combination of activities that reduce or eliminate the amount of possible chemical contaminants at the business or prevent these chemicals from entering the environment or waste stream.

A successful Pollution Prevention program will consider how to use raw materials, water energy, and other resources more efficiently, how to substitute less harmful substances for more hazardous ones, and examine whether toxic substances can be eliminated from the business.

*P2 can best be accomplished using
these three methods:*

- *source reduction*
- *reuse/recycling*
- *energy recovery.*

Source reduction is the preferred method of P2 and allows for the most significant improvements in environmental protection by avoiding the generation of waste in the first place. Reuse/ recycling and energy recovery are also good tools to reduce potential environmental problems, and also can be used to lower the cost of business.

Why Is Pollution Prevention Important?

Any chemicals or wastes at your business that are exposed to rainwater will run off into the soil or into our town's storm drains, then into nearby lakes and streams.

Our municipal stormwater system was originally designed to carry runoff efficiently away from roads and buildings, then to deliver that runoff to ponds, lakes and streams. Since our storm drain system does not have any built-in treatment, whatever gets into our storm drains gets into our environment, with the potential to damage our local ponds and streams.

That's why P2 is so important: it reduces the amount of pollution going to our local waterways.

What Are the Business Benefits of Using Pollution Prevention?

P2's economic benefits include greater business efficiency, increased competitiveness, and reduced costs for regulatory monitoring and compliance. By preventing the generation of waste, P2 can also reduce or eliminate long term liabilities, clean-up, storage, and disposal costs.

And by preventing pollution there is a greater likelihood that your company will be in compliance with local, state, and federal statutes.

How Can A Business Start Using Pollution Prevention?

P2 for your business can be accomplished through methods such as source reduction, reuse/recycling, and energy recovery. While each business is different, each of these methods can be implemented anywhere.

Source Reduction

- Incorporating environmental considerations into the designing of products, buildings, and manufacturing systems enables them to be more resource-efficient.
- Rethinking daily operations and maintenance activities can help industries eliminate wasteful management practices that increase costs and cause pollution.
- Controlling the amount of water used in cleaning or manufacturing can produce less wastewater.
- Re-engineering and redesigning a facility or certain operation can take advantage of newer, cleaner and more efficient process equipment.
- Buying the correct amount of raw material will decrease the amount of excess materials that are discarded (for example, paints that have a specified shelf life).

Reuse/Recycling

- Using alternative materials for cleaning, coating, lubrication, and other production processes can provide equivalent results while preventing costly hazardous waste generation, air emissions, and worker health risks.
- Using “green” products decreases the use of harmful or toxic chemicals (and are more energy efficient than other products).
- One company’s waste may be another company’s raw materials. Finding markets for waste can reduce solid waste, lessen consumption of virgin resources, increase income for sellers, and provide an economical resource supply for the buyers.

Energy Recovery

- Using energy, water, and other production inputs more efficiently keeps air and water clean, reduces emissions of greenhouse gases, cuts operating costs, and improves productivity.

What Are the Environmental Benefits of Using Pollution Prevention?

Using P2 can benefit your community both environmentally and economically. P2's health and environmental benefits include cleaner air and water, fewer greenhouse gas emissions, less toxic waste to manage, less solid waste going to landfills, greater workplace safety, and better stewardship of natural resources.

This can also lead to a reduction in workplace exposures to hazardous materials, which can positively affect your workers' health and productivity.

Planning Board
856 Main Road
Westport, MA 02790
www.westport-ma.gov



Tel. (508) 636-1037
Fax (508) 636-1031
Planning@westport-ma.gov

Date: September 18, 2018

Marlene M. Sampson
Town Clerk
816 Main Road
Westport, MA 02790

RE: Dog License Pamphlet
MS4 Permit

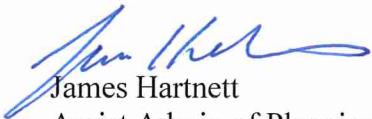
Dear Marlene:

Bacteria and Pathogens have been found in portions of the Westport River and Snell Creek. As part of the State and Federally mandated Small MS4 General Stormwater Permit, the Town is required to provide educational materials to residential property owners, businesses and developers.

As a condition of the permit, the Town must supplement its residential educational material with an annual message encouraging the proper management of pet waste. The permit requires the Town to disseminate educational materials to dog owners at the time of issuance or renewal of a dog license.

Attached is a card prepared by the BBAC that should meet the requirements of the permit, could you please distribute a card with each dog license.

Sincerely,


James Hartnett
Assist Admin of Planning



Want clean swimming beaches?
 Want shellfish safe to eat?
 Want to save your city or town money?

When it rains, water entering storm drains carries trash, pet waste, and other pollutants to our ponds, rivers, and the bay. Remember:

Only Rain Down the Storm Drain!

Learn how **YOU** can help protect Buzzards Bay at:
buzzardsbayaction.org/stormwater



A message from the
 Buzzards Bay Action Committee



Pets

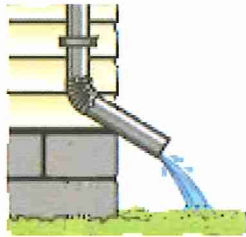
Pet waste contains harmful bacteria that can pollute wetlands and the bay.



★ Whether in your yard or on a walk, always pick up after your pet and put it in the trash.

Your Stormwater

Excessive stormwater flow moves pollutants and harmful sediments to the bay.



★ Redirect stormwater to lawns, gardens, and vegetated areas.
 ★ Install a rain barrel to catch and reuse rainwater.

Lawn and Garden

Fertilizer and pesticides run off your lawn into the storm drain and then into the bay.



★ Use pesticides and fertilizers sparingly.
 ★ Don't overwater and don't fertilize before it rains.

Auto Care

Car washing at home can release detergents and petroleum products to the bay.



★ Use a commercial carwash or wash your car on the lawn.
 ★ Pour soapy water down the sink.



TOWN OF WESTPORT

816 Main Road

Westport, MA 02790

The Coastal Agricultural Resource of New England
Office of the Board of Selectmen

Tel. (508) 636-1003
Fax. (508) 636-1147

Town Administrator
(508) 636 1160

September 28, 2018

Michelle Kozminski
Stormwater & Construction Permits Section
U.S. EPA Region 1
5 Post Office Square-0EP06-4
Boston, MA 02109-3912
617-918-1222

NPDES ID: MAR041174

Dear Ms. Kozminski:

In response to your information request dated September 27, 2018, the Town of Westport has made the following changes to the Small MS4 NOI:

Receiving Waters: Please ensure you list all impairments for each waterbody listed on the NOI, including those pollutants that do not have a check box. *For the East Branch of the Westport River "Estuarine Bioassessment" has been added under "Other Pollutant(s) Causing Impairments."*

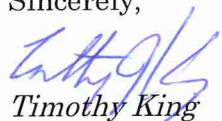
Public Education MCM: Please provide more details on how "Meeting-Site Plan Review" is an educational message for developers. The BMP Media/Category has been changed from "Meeting" to "Web Page" *The Site Plan regulations and process describes how sites should be developed using best management practices. We believe this is not only regulatory but educational as well. This is one of the first documents that developers and engineers review when looking to develop a site.*

IDDE MCM: Please indicate a Beginning Year of Implementation that matches requirements for the BMP "Implement IDDE Program". *The beginning year for IDDE BMP implementation has been changed to 2019 to conform with the permit requirements.*

Good Housekeeping MCM: Please respond with a statement indicating that the street sweeping program inspections and maintenance of stormwater treatment structures will begin implementation by at least year 2019. *The beginning year for the street sweeping program "Sweep all streets and permittee-owned parking lots once per year in the spring" has been changed to begin in 2019.*

If you have any questions, or need additional information, please contact Jim Hartnett at (508) 636-1037, or email Hartnettj@Westport-ma.gov

Sincerely,



Timothy King
Town Administrator