

**NPDES Storm Water Phase II
Small MS4 Storm Water
Management Program
for
Town of New Castle
New Castle, New Hampshire**

March 2003

Prepared for:
Town of New Castle
49 Main Street
New Castle, NH 03854

Prepared by:
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Civil and Environmental Engineers
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1.01 BACKGROUND

1.1 Responsible Party

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Town of New Castle
49 Main Street
New Castle, New Hampshire 03854
(603) 431-6710

Mr. Meade acts on behalf of the Board of Selectmen for the Town of New Castle, NH.

1.2 Name of Municipality

Town of New Castle
Rockingham County
New Castle, New Hampshire

1.3 Program Requirements

This document is part of the Town of New Castle's permit application seeking coverage under the US Environmental Protection Agency (EPA) NPDES MS4 (Municipal Separate Storm Sewer System) permit. The permit requires the development of this storm water management program, which includes implementation of best management practices (BMPs) for each of six minimum control measures, evaluation/assessment and reporting efforts, and record keeping. The storm water management program, described herein, is intended to reduce the discharge of pollutants to the maximum extent practicable (MEP), protect water quality, and satisfy the appropriate water quality requirements of the Clean Water Act.

1.4 General Information

New Castle is comprised of one large island and several smaller islands and covers about 65 acres near the mouth of the Piscataqua River on the seacoast of New Hampshire. Almost all of the larger island is considered an urbanized area and is regulated under the NPDES Phase II MS4 Final Rule. Small areas around the edge of the island are not regulated.

Two other communities border New Castle, Portsmouth to the north and west and Rye to the south. Both were designated as MS4 areas under the Phase II Rule. The majority of New Castle is surrounded by water, the lower section of Portsmouth Harbor to the east and Little Harbor to the south.

1.5 Water Bodies Likely to Receive Discharge

Portsmouth Harbor and Little Harbor receive storm water discharge from New Castle. Because of the configuration of the storm water drains and the natural drainage of the island, only a small fraction of storm water discharge enters Portsmouth Harbor and Little Harbor. The rest of the storm water discharges to the ground surface and infiltrates.

1.6 Number of Outfalls

There are 49 storm drains in New Castle. The majority (41) of the drains discharge to surface locations with the discharge infiltrating into the groundwater. Seven drains discharge directly to the lower section of Portsmouth Harbor and one discharges to Little Harbor.

1.7 Endangered Species

The Bald Eagle (*Haliaeetus Leuccephalus*) and the Small Whorled Pogonia (*Isotria Medeoloides*) are listed as endangered species in Rockingham County, New Hampshire.

To the best of our knowledge, storm water discharge from the Town of New Castle's MS4 does not impact the activities of either of the listed species or any critical habitat associated with either of the species. However, we have drafted a letter to New Hampshire Natural Heritage Division requesting whether any of the Town's MS4 discharges impact any "listed" species or the habitats of "listed" species.

1.8 Historic Places

According to the National Register of Historic Places (www.cr.nps.gov/NR/), Fort Constitution on Walbach Street is the only site listed as a Historic Place in New Castle. Fort Constitution is not impacted by storm water discharge from MS4s on the island. However, we have drafted a letter to the New Hampshire Division of Historic Resources requesting whether any of the Town's MS4 discharges impact any historic places in New Castle.

1.9 Other Potential MS4s

There are likely several other MS4 areas located within New Castle. A US Coast Guard Station (Portsmouth Harbor) is maintained on the island at the mouth of the Piscataqua River. Fort Constitution and Fort Stark, which are historic sites maintained by NH Department of Resources and Economic Development, are also located near the mouth of the Piscataqua. The Historic Wentworth By-The-Sea Hotel located in the south west corner of the island may also be regulated. Finally, a privately owned residential development, owned by Ocean Properties and having loose ties with the Wentworth Hotel, may be a regulated MS4.

2.01 MINIMUM CONTROL MEASURES

2.1 Minimum Control Measure #1: Public Education and Outreach on Storm Water Impacts

The Town of New Castle has several BMPs in place for a public education and outreach program informing the public of impacts on the environment due to storm water.

BMP #NC1-001 Quarterly Newsletter

The Town of New Castle prints a quarterly newsletter that is mailed to all Town residents. The newsletter contains information relevant to residents of New Castle and would be useful in disseminating information on storm water management.

Measurable Goal: Make sure that at least one article in each newsletter is dedicated to storm water management (document how many newsletters are mailed).

BMP #NC1-002 Household Hazardous Waste Collection and Disposal

The Town of New Castle is a partner with the Town of Hampton in collecting household hazardous wastes (HHzW) once a year. Town residents are encouraged to dispose of their HHzW at the designated collection location rather than illicitly disposing the chemicals into storm drains or surface waters.

Measurable Goal: Increase the number of participants that properly dispose of HHzW.

BMP #NC1-003 Pet Waste Management

The Town of New Castle actively participates in managing pet waste in public areas. There is a public ordinance requiring pet owners to pick up and properly dispose of pet waste. There are signs located throughout the community, particularly in common areas, stating that pet waste must be picked up and disposed of properly.

Measurable Goal: Stronger enforcement of pet waste ordinances. Maintain "clean up after your pet" signs.

2.2 Control Measure #2: Public Participation and Involvement

The Town already has several BMPs in place for achieving control measure #2.

BMP #NC2-001 Conservation Commission

The local volunteer Conservation Commission has been working on restoring the Bull Toad Pond located near the Town Common using grant money from the NH Estuaries Project.

Measurable Goal: Search for more funding opportunities. Once those grants are obtained, continue to evaluate and possibly restore other ponds or salt marshes in New Castle.

BMP #NC2-002 Storm Drain Stenciling

The Town of New Castle is in the process of stenciling all storm drains, which ask people not to dump wastes in storm drains.

Measurable Goal: Stencil all drains by the end of 2003.

BMP #NC2-003 Adopt a Highway Program (State Route 1B)

Mr. Lenny Seagrin, a resident of New Castle, has organized a group of volunteers to pick up litter along the New Castle section of State Highway Route 1B. This "adopt a highway" program is done annually.

Measurable Goal: Continue program and investigate possibility of expanding program to include streets adjacent to Route 1B or pick up litter on 1B twice a year.

BMP #NC2-004 Beach Cleaning Program

The Town inspects the Town Beach daily for trash and pet waste. The Town could solicit assistance from local volunteer groups to assist with clean up and maintenance of beach area.

Measurable Goal: Look for groups interested in participating in a beach clean up program in year 1. In year 2, turn inspection and clean up responsibilities over to volunteer group.

2.3 Control Measure #3: Illicit Discharge Detection and Elimination

The Town of Newcastle has no commercial or industrial development and, therefore, the potential for illicit discharges from commercial sources is very low. Portions of the Town are connected to a public sewer, which is pumped to the Portsmouth, NH water pollution control facility (WPCF). Other portions of the Town use septic systems to dispose of wastewater. A comprehensive storm sewer drain map for the Town has been completed. The map includes all storm drains and the direction of flow from the drains.

BMP #NC3-001 Educate the local police on illicit dumping of pollutants into storm water drains.

Measurable Goal: Educate all police officers by end of year two.

BMP #NC3-002 Educate residents on indicators of failing septic systems

Measurable Goal: Educate 50% of residents using septic systems in year 1. Educate remaining 50% in year 2.

2.4 Control Measure #4: Construction Site Storm Water Runoff Control

The Town of New Castle is in the process of completing several construction projects. When these projects are complete, Town Officials believe the amount of new construction will decline dramatically because nearly all of the island will be "built out." The Town also enforces State site specific requirements, which include the placement of hay bales and silt fence as part of a sediment and erosion control plan.

BMP #NC4-001 Planning Board Site Plan Review

As mentioned above, the Town already participates in the State site specific program for controlling erosion and sediment runoff from construction sites.

Measurable Goal: Review current building ordinances regarding storm water runoff and control in community in year 1; revise ordinances as necessary in year 2.

BMP #NC4-002 Increase frequency of inspections at building sites

Measurable Goal: Monitor number of structural BMPs requiring repair during extended period.

BMP #NC4-003 Increase use of hay bales and silt fence at construction sites

Measurable Goal: Document number of construction sites using hay bales and silt fence.

2.5 Control Measure #5: Post-construction Storm Water Management in New Development/Redevelopment

BMP#NC5-001 Inspect vegetative drainage areas receiving storm water discharge

Most storm drains discharge to land and not directly to either Portsmouth Harbor or Little Harbor. The areas where the storm water is discharged are typically grassy and will be inspected for vitality and potential for future erosion.

Measurable Goal: Inspect all vegetative drainage areas in year 1. Repair any erosion or storm water runoff damage in year 2.

2.6 Control Measure #6: Pollution Prevention/Good Housekeeping for Municipal Operations

BMP #NC6-001 Purchase new snowplow

The Town is currently in the process of purchasing a new snowplow to replace their old one, which had a history of leaking pollutants (i.e., oils) onto the ground, which then potentially were discharged to storm water drains.

Measurable Goal: Maintain new snowplow in good working order (beginning in spring 2003) throughout its useful life (i.e., repair broken hydraulic hoses).

BMP #NC6-002 Town Common and New Castle Beach Inspections

Town employees inspect the Town Common and New Castle Beach every morning. As part of their inspection, they pick up any trash or pet waste. There are currently signs at each of these locations asking users to carry out what they carry in.

Measurable Goal: Continue to inspect and pick up trash in Town Common and Beach.

BMP #NC6-003 Street Cleaning

The Town privately contracts to have all streets swept once a year in April.

Measurable Goal: Find sufficient funds in the Town budget to allow streets to be swept twice a year (once in the spring and once in the fall).

BMP #NC6-004 Lawn Care

The Town uses a mulching lawn mower for mowing Town-owned grass areas. No Fertilizer or pesticides are currently in use.

Measurable Goal: In the event that fertilizers or pesticides are deemed necessary, evaluate soil conditions to determine appropriate application rates.

2.7 BMPs for Meeting Requirements of Part I.C (Discharges to Water Quality Impaired Waters) and Part I.D (Total Maximum Daily Load Allocations)

Storm water discharges from New Castle's MS4 system enter Little Harbor and the lower section of Portsmouth Harbor. Water quality in each of these water bodies is considered impaired because of contamination due to Polychlorinated biphenyls (PCBs) and Dioxins. The sources of the PCBs and dioxins are unknown. TMDLs have not been approved for these contaminants in either water body. Assessments are scheduled for 2017.

Fecal Coliform potentially impacts water quality in Little Harbor. The source of Fecal Coliform contamination is likely due to wet weather discharges (Stormwater, Combined Sewer Overflows or Storm Sewer Overflows). TMDLs for Fecal Coliforms have not been approved for Little Harbor but the priority is high for assessment and is scheduled for 2005. At this time, no further action BMP is required for determining any TMDL allocations.

3.01 RECORD KEEPING/MONITORING

The NPDES Phase II Rule requires an annual report to be submitted on the effective date of the permit. The initial report is due one year from the effective date of the permit and annually thereafter. The report should contain information regarding activities of the previous calendar year (see list below).

The annual report must contain the following:

- A self assessment review of compliance with the permit conditions.
- An assessment of the appropriateness of the selected BMPs.
- An assessment of the progress towards achieving the measurable goals.

- A summary of results of any information that has been collected and analyzed. This includes any type of data.
- A discussion of the activities for the next reporting cycle.
- A discussion of any changes in identified BMPs or measurable goals.
- Reference any reliance on another entity for achieving any measurable goal.

Reports are to be submitted to:

United States Environmental Protection Agency
Water Technical Unit
P.O. Box 8127
Boston, MA 02114

A copy also needs to be submitted to the NHDES:

New Hampshire Department of Environmental Services
Water Division
Wastewater Engineering Bureau
P.O. Box 95
Concord, NH 03302-0095

4.01 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.

Original Signature

Date