



July 17 2007

Linda Murphy, Director  
c/o Kathleen Woodward, Senior Enforcement Counsel  
U.S. Environmental Protection Agency, Region 1  
Office of Environmental Stewardship  
One Congress Street, Suite 1100 (SEL)  
Boston, MA 02114-2023

**Subject: NPDES General Permit for Storm Water Discharges From Small MS4s  
Permit No. MAR43001  
Response Submittal to July 17, 2006 Comment Letter**

Dear Ms. Murphy,

The Massachusetts Department of Conservation and Recreation (DCR) has revised and expanded their Notice of Intent (NOI) and Storm Water Management Plan (SWMP) to address the deficiencies outlined in your July 17, 2006 letter. The revised NOI and SWMP are enclosed with this submission.

The July 17, 2006 letter indicated four permit provisions which had not been fully satisfied by the previous submission, which were necessary for permit coverage. Below is a summary of each of the deficiencies and how they have been addressed in the revised submittal:

*Deficiency 1: The names of all known waters that received a discharge from DCR's MS4 and the number of known outfalls to each waterbody (Part 1.E.1(d)).*

The names of all known receiving waters from DCR outfalls within urbanized areas are summarized in Table A of the NOI.

*Deficiency 2: A description of how DCR has met the eligibility criteria with respect to known storm water discharges regarding Federally-listed endangered and threatened species and designated critical habitat. (Part 1.E.1(e)).*

A description of how DCR has met the eligibility criteria for Federally-listed endangered and threatened species and designated critical habitat has been added to Part B.5 of the NOI. Copies of the response letters from the agencies are included in an appendix of the NOI.

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*Deficiency 3: A description of how DCR has met the eligibility criteria with respect to known storm water discharges regarding priorities listed or eligible to be listed on the Nation Register of Historic Place (Part I.E.1(g)).*

A description of how DCR has met the eligibility criteria for historic properties has been added to Part B.6 of the NOI. A copy of the response letter from Massachusetts Historic Commission is included in an appendix of the NOI.

*Deficiency 4: Identification of best management practices to address certain elements specifically required by the Permit (Part I.E.1(g)).*

- a) *The regulatory mechanism required by Part IV.B.4.(a) is deficient in that DCR fails to address enforceability of the "Contract Bid Item and Special Provisions" BMP.*

BMP 4-8 has been added to the NOI to address enforceability of the Contract Bid Item and Special Provisions. BMP 4-9 has been added to describe how DCR addresses pollution in construction related storm water runoff from non-DCR/off-site properties entering the DCR's MS4 system.

- b) *DCR's NOI currently provides no BMPs addressing site plan review, including procedures that incorporate consideration of water quality impacts as required by Part IV.B.4.(e) of the Permit.*

DCR prepares a SWPPP and files for coverage under the Construction General Permit for sites which disturb more than once acre (BMP 4-1). Contract bid items and special provisions have been added to all contracts that will disturb more than one acre to address compliance with the Construction GP (BMP 4-2). DCR requires an entity which wishes to tie into DCR's drainage system to apply for a Utility/ Drainage Tie-in Permit (BMP 4-10). DCR Planning and Engineering Permits Section review these applications. The projects must comply with the Massachusetts Stormwater Policy in order to receive approval.

- c) *DCR's NOI currently provides no "procedures for receipt and consideration of information submitted by the public" as required by Part IV.B.4.(f) of the Permit.*

DCR's web site includes a place for the public to notify DCR of problems including those related to storm water, construction or erosion control problems (BMP 2-5). Once a comment is submitted under the "Contact Us" link to [mass.parks@state.ma.us](mailto:mass.parks@state.ma.us), the issue is reviewed by a DCR External Affairs staff member and forwarded to the appropriate division for response. External Affairs will track the response until resolved. If comments are received for parkways and/ or facilities owned or operated by other MS4s (including MassHighway or MassTurnpike), DCR External Affairs will be responsible for notifying the appropriate party at the responsible MS4. A reference to BMP 2-5 has been added to Section 4 of the NOI for cross-reference of applicable programs.

In BMP 4-5, DCR commits to maintaining the construction related web page that includes information regarding on-going DCR construction projects (<http://www.mass.gov/dcr/construction.htm>). This web page is updated each week to summarize the on-going projects. DCR will add a link to allow for the public to contact DCR staff regarding construction related questions or issues.

- d) *DCR has failed to provide the required element of a regulatory mechanism to address post-construction runoff from new and redevelopment as required by the Permit Part IV.B.5.(a).*

BMP 5-7 has been added to the NOI describing how DCR will address post-construction runoff from new and redevelopment projects. BMP 5-1 and 5-2 discuss how DCR will implement compliance with the MA Storm Water Management Policy at its own facilities.

If you have any questions or comment regarding this submission, please feel free to call Robert Lowell at 617-626-1340 or [Robert.Lowell@state.ma.us](mailto:Robert.Lowell@state.ma.us).

Sincerely yours,



Rick Sullivan  
Commissioner



**Department of Conservation and Recreation  
(DCR)**

**NPDES Storm Water Management Plan  
for**

**Coverage Under the  
National Pollutant Discharge Elimination System  
(NPDES)**

**General Permit for Storm Water Discharges from  
Small Municipal Separate Storm Sewer Systems  
(MS4s)**

**Department of Conservation and Recreation  
251 Causeway Street  
Boston, MA 02114-2104**

Initial Submittal: August 11, 2005

Revision 1: October 20, 2005

Revision 2: September 11, 2006

Revision 3: July 17, 2007



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Appendix A: DCR NOI AND SCHEDULE



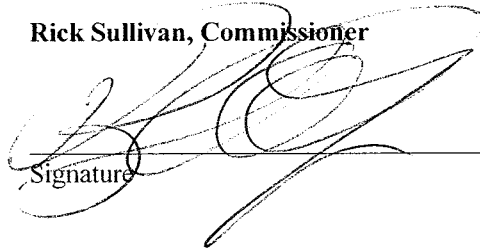
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## NPDES Storm Water Management Plan for DCR Owned and Operated Facilities

### 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.

**Rick Sullivan, Commissioner**



Signature

7/23/07

Date



## 1.0 INTRODUCTION

The Department of Conservation and Recreation (DCR) is committed to maintaining the important recreational, historical and water resources available to the people of Massachusetts at DCR parks, reservations, forests, beaches, rinks, pools and parkways. DCR understands the importance of storm water to all of these facilities and the threat of pollution from storm water and erosion. To ensure that DCR is taking all measures necessary to address these threats, they have produced the following Storm Water Management Plan (SWMP) and associated Notice of Intent (NOI) to fully comply with the National Pollutant Discharge Elimination System (NPDES) Phase II General Permit for Municipal Separate Storm Sewer Systems (MS4s). The plan outlines the many existing programs currently employed by DCR to address storm water and the additional programs that will be implemented in the next three years.

### 1.1 Department Organization

The Legislature created the Department of Conservation and Recreation (DCR) in July 2003 by merging the Metropolitan District Commission (MDC) and the Department of Environmental Management (DEM). DCR now includes four main divisions – the Division of Urban Parks and Recreation, Division of State Parks and Recreation, the Division of Water Supply and the Division of Planning and Engineering. DCR’s organizational set-up is summarized in Figure 1 DCR Organizational Chart and described below.

The **Division of State Parks and Recreation (DSPR)** maintains nearly 300,000 acres of the state’s forests, beaches, mountains, ponds, riverbanks, trails, and parks outside of the Greater Boston area. The Division protects land and resources on privately and municipally held land through technical assistance, grant and planning programs, policy development, and other services.

The **Division of Urban Parks and Recreation (DUPR)** has broad management responsibilities for the preservation, maintenance, and enhancement of the natural, scenic, historic, and aesthetic qualities of the environment within the Greater Boston area.

The **Division of Water Supply Protection (DWSP)** manages and protects the drinking water supply watersheds for Greater Boston. The Division provides technical support to other state agencies, monitors lakes and ponds, dam safety, well drillers, and rainfall throughout the state. The Division is made up of two sections - the **Office of Watershed Management** manages and protects the drinking water supply watersheds for approximately 2.2 million residents of Massachusetts, primarily in Greater Boston. The Quabbin Reservoir, Ware River, and Wachusett Reservoir watersheds are the sources of drinking water for distribution by the Massachusetts Water Resources Authority (MWRA). The Office also manages and protects the Sudbury

Reservoir system, which is the reserve drinking water supply for Greater Boston. The **Office of Water Resources** promotes water quality and conservation through several functions.

The **Division of Planning and Engineering** provides professional planning, engineering, design and construction management services in support of DCR's state parks and forests, urban parks and reservations, and water supply divisions.

The Department's facilities are comprised of urban, suburban and rural open space; forests; parks; reservations; recreational facilities; waterways; parkways; water bodies; and coastlines that are managed and maintained on behalf of the public for the purposes of natural, historic, and cultural resource protection, sustainable recreation, and education.

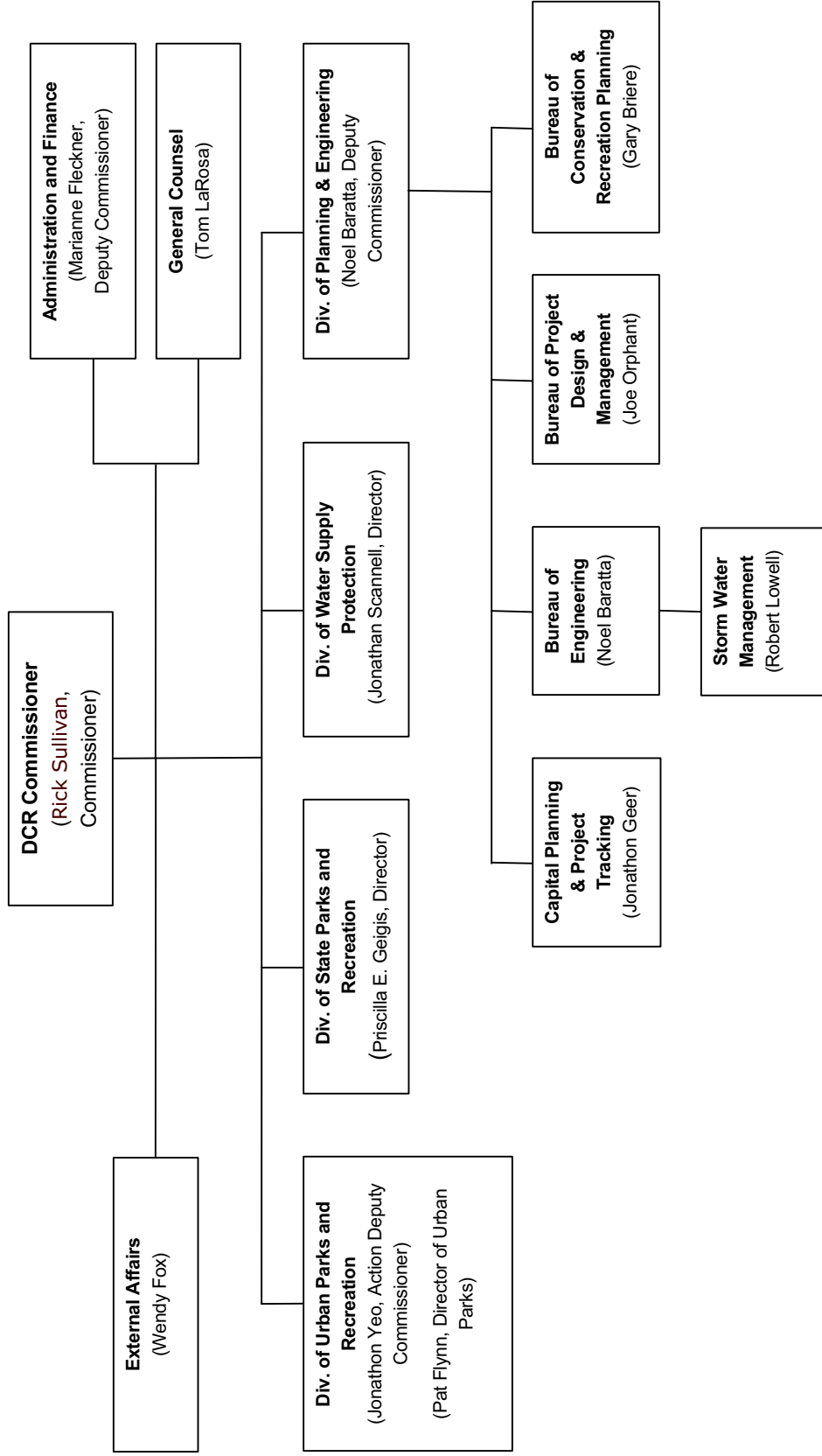
## 1.2 NPDES Phase II Storm Water Regulations

The U.S. Environmental Protection Agency (EPA) published the regulation entitled "National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule" on December 8, 1999 in the Federal Register. This program is often referred to as the National Pollutant Discharge Elimination System (NPDES) Phase II program.

Under the Phase II regulations [40 CFR Parts 9, 122, 123, and 124:], portions of the drainage systems owned and operated by DCR meet the definition of a regulated Municipal Separate Storm Sewer Systems (MS4s). According to 40 CFR 122.26(b)(8), "municipal separate storm sewer" is defined as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

- (i) "Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the Clean Water Act that discharges into waters of the United States;
- (ii) Designed or used for collecting or conveying storm water;
- (iii) Which is not a combined sewer; and
- (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2."

Figure 1 DCR Organizational Chart



Federal and State-operated small MS4s can include universities, prisons, hospitals, roads (i.e. departments of transportation), military bases (e.g. State Army National Guard), parks and office buildings/complexes.

Operators of regulated small MS4s are required to:

- Apply for National Pollutant Discharge Elimination System (NPDES) permit coverage;
- Develop a storm water management program which includes the six minimum control measures;
- Implement the storm water management program using appropriate storm water management controls, or "best management practices" (BMPs), by the end of the permit term (typically 5 years);
- Develop measurable goals for the program; and
- Periodically evaluate effectiveness of the program.

EPA Region 1 developed a "NPDES General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems". The permit was issued in the Federal Register on May 1, 2003 with a five-year permit term ending May 1, 2008. In Massachusetts, EPA and the Massachusetts Department of Environmental Protection (DEP) jointly issued the general permit. The permit is issued as a NPDES permit under the Federal Clean Water Act by EPA and as a state Section 401 Water Quality Certification for MA DEP.

In recognition of the differences between federal or state-operated MS4s versus their municipal counterparts, the general permit includes separate requirements for Massachusetts Small MS4s, New Hampshire Small MS4s (including Indian lands in MA, CT and RI), Non-Traditional MS4s (e.g., schools, prisons, hospitals) and Transportation MS4 owners. The Storm Water Management Program described in this document has been prepared to comply with the overall general permit and specifically Part IV - Non-Traditional Small MS4s and Part V - Transportation MS4 Storm Water Management Programs. MS4s within DCR parks, reservations, beaches, forests and other facilities in urbanized areas are subject to Part IV Non-Traditional Small MS4s. While MS4s within parkways and roadways in urbanized areas are covered by Part V.



In March of 2003, the Division of State Parks and Recreation (DEM at that time) submitted individual NOIs for ten state parks including:

1. Robinson State Park
2. Nickerson State Park
3. Myles Standish State Forest
4. Walden Pond State Reservation
5. Fall River Heritage State Park
6. Mt. Greylock State Reservation
7. Pilgrim Memorial State Park
8. Salisbury Beach State Reservation
9. Scusset Beach State Reservation
10. Quinsigamond State Park.

These submissions were reviewed by EPA, which authorized DCR to discharge storm water from the small MS4s serving these ten facilities in accordance with the provisions of the small MS4 General Permit. Once EPA issues authorization to discharge storm water in response to this Notice of Intent (NOI), the new authorization will supersede the individual facility authorizations.

The Division of Urban Parks and Recreation (MDC at that time) submitted a NOI regarding its facilities within urbanized areas in July of 2003. EPA, in their August 23, 2004 letter regarding the NOI submittal, requested additional information and changes to the NOI. Instead of revising the MDC NOI, DCR has developed this comprehensive SWMP/ NOI to address all facilities owned and operated by DCR, including those of the former MDC.

As requested by EPA in their May 12, 2005 letter, DCR submitted a comprehensive Notice of Intent (NOI) in order to seek coverage by the general permit for all of its regulated MS4s within urbanized areas on August 11, 2005. A revised NOI/ SWMP was submitted on October 20, 2005. DCR has received a letter from EPA dated July 17, 2006 indicating that the latest submittal is deficient in several areas including:

- the names of all known waters that receive a discharge from DCR's MS4 and the number of known outfalls to each waterbody (Part I.E.1(d));
- eligibility criteria with respect to known storm water discharges regarding Federally-listed endangered and threatened species and designated critical habitat (Part I.E.1(e));
- eligibility criteria with respect to known storm water discharges regarding properties listed or eligible to be listed on the National Register of Historic Places (Part I.E.1(f)); and
- Identification of best management practices to address certain elements specifically required by the Permit.

This SWMP addresses each of the permit provisions identified above and the updates reflect changes to the SWMP summarized in the Permit Year 3 and 4 annual reports. This SWMP outlines each of the ongoing activities and discusses future actions, which DCR will implement in the permit term to meet



the permit requirements. The program will cover all of the department's parkways and facilities within the urbanized areas.

### **1.3 Parkway and Facilities within Urbanized Areas**

The facilities covered under the General Permit are included in the NOI, which is included in Appendix A of this document.

## 2.0 MINIMUM CONTROL MEASURES

The following section describes control measures DCR will implement to satisfy conditions of the National Pollution Discharge Elimination System (NPDES) Phase II permit requirements for transportation and non-traditional MS4s. EPA requires compliance with six minimum control measures including:

- Public education and outreach;
- Public involvement/participation;
- Illicit discharge detection and elimination;
- Construction site runoff controls;
- Post-construction runoff controls; and
- Pollution prevention/good housekeeping.

The BMPs and measurable goals for each control measure are addressed in detail within this section. Appendix A includes DCR's Notice of Intent (NOI) and program schedule. The NOI summarizes the BMPs and measurable goals identified for each minimum control measure and outlines the DCR Office/ Division responsible for implementing each of the programs and meeting the measurable goals.

### 2.1 Public Education and Outreach

**EPA Minimum Control Requirement:** In accordance with the NPDES Phase II permit, the Public Education and Outreach minimum control requirement requires the operator of the small MS4 to implement a public education program to distribute educational material to the community. For the purposes of this permit, a community consists of the people who use the facility. The public education program must provide information concerning the impact of storm water discharges on water bodies. It must address steps and/or activities that the community can take to reduce the pollutants in storm water runoff.

According to the general permit, the following should be included in education and outreach efforts:

- (a) Information regarding activities that occur within the facility, including illegal dumping into storm drains.
- (b) Coordinate activities with local groups (i.e. watershed associations, or schools).
- (c) Materials for outreach/education may include, but are not limited to, pamphlets; fact sheets; brochures; public service announcements; storm drain stenciling and newspaper advertisements.

(d) Encourage cooperative efforts with neighboring municipalities, watershed associations and others.

**DCR Programs:** The DCR recognizes the role of public education in the protection of public drinking water supplies, public waterways, aquatic habitat, recreational enjoyment and associated resources. DCR already has in place an extensive, statewide education program targeting a wide range of ages and facility/ park users. DCR provides formal and informal interpretive programs for the public, school groups and special interest groups. Staff also disseminates information about access policies and recreational use on DCR lands. By raising awareness and appreciation for these precious resources, DCR is helping to protect, conserve and enhance the resources of the Commonwealth. DCR will continue on-going programs and adapt many others to include a storm water education component. DCR will provide additional impact by implementing new programs during the permit term. The programs are described below:

BMP 1-1: DCR Storm Water Web Page - DCR has developed a storm water web page on the DCR web site that has been located at <http://www.mass.gov/dcr/stewardship/stormwater/index.htm> since October 2005. The web page includes the SWMP, NOI and annual reports. The web page will also be used to post information on storm water related issues and programs developed during the SWMP implementation.

*Measurable Goal/ Schedule:* DCR developed a web page which includes the latest revision of the SWMP and NOI. DCR will post annual reports by June 1st of each year (60 days after submittal to EPA/ DEP).

BMP 1-2: Catch Basins Stenciling/ Plaques – DCR park facility managers are identifying if their facilities have catch basins. Parks with CBs will request a cleaning through the DCR's asset management system for 2006. Annual catch basin cleaning and repair contracts for these parks will include inspection of stencil/ plaque and maintenance as necessary.

*Measurable Goal/ Schedule:* Catch basin cleaning and repair contract includes inspection of stencil/ plaque on catchbasins at park facilities with catchbasins. Annual contract will include maintenance of stencil/ plaque as necessary.

BMP 1-3: Publish Water Quality Reports and Post Beaches – DCR publishes water quality reports on a daily basis during the summer swimming season for all coastal beaches (including northeast, north shore, south shore and southeast state parks, forests and reservations). The water quality reports are available at [http://mass.digitalhealthdepartment.com/public\\_21/index.cfm](http://mass.digitalhealthdepartment.com/public_21/index.cfm). DCR has worked with the Department of Health to place this important information on a visible website as a means to disseminate the information to a wider audience and provide real time data on the beach water quality information. DCR also provides a hotline with the same information at 617-626-4972.





*Measurable Goal/ Schedule:* Continue to post water quality reports for coastal beaches on web site and provide information on hotline number during summer months.

BMP 1-4: Interactions with Boat Club Programs – DCR will add a requirement to Boat Clubs along the Lower Charles River indicating that they must post “No Wake Zone” signs and enforce this limitation on their members in order to maintain their permit from DCR.

*Measurable Goal/ Schedule:* Add this requirement to permits as they come up for renewal.

BMP 1-5: Mobile Water Quality Education – DCR will provide storm water/ water quality educational events at a minimum of nine different locations. These events would be in addition to the facility/ program specific BMPs also listed in this SWMP.

*Measurable Goal/Schedule:* Provide educational events at a minimum of nine different locations during the year.

BMP 1-6: Charles River Conservancy Clean Up Program – DCR collaborates with Charles River Conservancy to provide in-kind services (e.g. trucks, staff, disposal of material) and space for Charles River Conservancy staff within DCR offices to coordinate the clean up of the Charles River. This program is on-going throughout the year.

*Measurable Goal/Schedule:* Continue to partner with Charles River Conservancy on Clean-Up Program.

BMP 1-7: Charles River Reservation School Program - The DCR Rangers stationed at the Charles River Reservation provide educational programs to schools in Eastern Massachusetts. The focus is on developing relationships with schools that have easy access to the Charles River for continued study. Current programs include the following storm water/ water quality related programs:

**Introduction to the Charles River** - How long is the Charles River? Where does it begin? How clean is the river? This program focuses on the many changes to the river, including storm water pollution, and the recent successful efforts to improve the water quality of the Charles.

**Charles River Basin Boat Tour** - Explore the Charles River Basin up close with the assistance of the Charles Riverboat Company. The tour is a follow up to the Introduction to the Charles River Boat tours.

**Branching Out** - What is a watershed? This program introduces students to the idea of watersheds and how they work by building a model watershed. We will investigate how water flows through watersheds and how pollutants can affect them.

**Sum of the Parts** - Where does water pollution come from? This program introduces the difference between point and non-point pollution. The activity helps students recognize that we all contribute to pollution and that we can all reduce pollution.

Related programs include:

**Fashion a Fish** - Why do birds have wings? Why do fish have gills? In this program the students discover how wildlife has adapted to the environment they live in. Then they use the information to design their own model fish.

**Charles River Dam Tour** - Why is this dam one of the most important structures in Boston? Students will explore the dam and learn about its main functions; flood control, navigation and fish migration. The tour also focuses on the dam's greater role in human management of the Charles River.

*Measurable Goal/ Schedule:* Provide one program related to water quality, water resources and/or storm water each year.

BMP 1-8: Camp Nihan - The Division of Urban Parks & Recreation manages Camp Nihan. The camp offers free environmental education programs for schools and nonprofit organizations. The center is located adjacent to Breakheart Reservation in Saugus. Camp Nihan is an ideal facility for nature exploration embracing sixty-five acres of woodland forest, marsh and a spring-fed pond. The Saugus River flows through the camp property providing ideal habitats for animals such as heron and mallards. A variety of mammals resides in and around the area, including fox, deer and river otter.

During the month of August, the Camp Nihan Environmental Education Center hosts "Focus on Environmental Education", a free series of workshops for educators. In this workshop series, educators learn hands-on interdisciplinary environmental education lessons for children of grades K-12. Programs offered for the summer of 2005 include ground water and water resources related seminars.

*Measurable Goal/ Schedule:* Provide one educational program related to water quality, water resources and/or storm water each year.

BMP 1-9: Quabbin Educational Programs (outside of Urbanized Area) - The Quabbin Interpretive Services program operates the Quabbin Visitor Center, Education Programs, Teacher Workshops, and provides general information about DCR resources. Educational programs are offered for school groups from the watershed area and to communities that receive water from Quabbin. The programs focus on water quality, water awareness, watersheds, natural history and Quabbin area history. Visitor Center staff offer water related programs specifically for teachers including workshops on water quality

testing, watersheds, Project WET, Project WILD, Project Learning Tree, Quabbin history, and other topics.

*Measurable Goal/ Schedule:* Continue to provide this program. Provide one educational program related to water quality, water resources and/or storm water each year to a minimum of two schools.

BMP 1-10: Wachusett Educational Programs (outside of Urbanized Area) – The Wachusett/ Sudbury Watershed Ranger Program, along with educators from DCR's Division of State Parks, offers classroom programs and field trips to schools and groups in or bordering the watershed areas, and to MWRA service communities. Topics range from water's behavior and physical properties to cultural and natural history of the watershed areas. The Wachusett Ranger staff also offers teacher workshops on watersheds, Project WET, water system history, and other topics.

In spring 2005, the Wachusett/ Sudbury Watershed Ranger Program offered a watershed education program for 4<sup>th</sup> graders in Holden and Princeton. Students experienced a series of activities focusing on watersheds, water supply, local history and forests. The participating teachers were previously trained in the curriculum and were provided with material for each lesson. The DCR staff offered four different programs to the students at each school. DCR Watershed Rangers presented a slide program on the history of the Wachusett Reservoir watershed. Next, staff from DCR State Parks provided a forest awareness session using literature and visual cues. The third activity was led by Office of Watershed Management staff and utilized maps of the watershed to focus on the flow of water from the school to the ocean. Finally, the kids were involved in a day-long field trip following the flow of water from Wachusett Mountain along the Stillwater River.

*Measurable Goal/ Schedule:* Continue to provide this program, or similar, on an annual basis to two schools in the Wachusett Reservoir watershed.

BMP 1-11: Project WET - Project WET (Water Education for Teachers) is a national nonprofit water education program for educators and young people located on the campus of Montana State University in Bozeman, Montana. The goal of Project WET is to facilitate and promote the awareness, appreciation, knowledge and stewardship of water resources through the development and dissemination of classroom ready teaching aids and through the establishment of state and internationally sponsored Project WET programs. Project WET is active in all 50 states, the District of Columbia, the U.S. islands and select provinces of Canada. In Massachusetts, the DCR's Division of Water Supply - Office of Watershed Management, sponsors Project WET.

Project WET is grounded in the belief that when informed, people are more likely to participate in the decision making process and to make a difference through their actions. The development of a water ethic should begin at an early age. Children benefit from parents, teachers and mentors who recognize not only the scientific but also the social and cultural aspects of water resource education.

Certified Project WET facilitators conduct workshops where educators, community leaders and natural resource managers receive instruction in the use of Project WET materials. Workshop participants attending the 6-hour workshop receive the highly acclaimed Project WET Curriculum and Activity Guide, a 500 page publication filled with over 90 innovative, interdisciplinary activities for grades K - 12 that are hands-on, easy to use and fun. Designed with a commitment to state and national standards, the Guide addresses the following content areas:

- Water has unique physical and chemical characteristics.
- Water is essential for all life to exist.
- Water connects all Earth systems.
- Water is a natural resource.
- Water resources are managed.
- Water resources exist within social contexts.
- Water resources exist within cultural contexts.

Workshop participants are then encouraged to integrate activities from the Guide into the existing curricula of a school, museum, university pre-service class, community organization, or other appropriate forums.

*Measurable Goal/ Schedule:* Maintain sponsorship of state water education for teachers program.

BMP 1-12: "Downstream" Newsletter – DCR's Division of Water Supply produces and disseminates a newsletter to residents of the Wachusett Reservoir/ Ware River/ Quabbin Reservoir watershed system. DCR produces the flyer twice a year and includes articles of interest to residents of the watershed system communities. The goal of the newsletter is to inform the public about watershed protection issues and activities; provide a conduit for public input; and promote environmentally responsible land management practices.

*Measurable Goal/ Schedule:* Continue to produce and disseminate newsletter twice a year.

BMP 1-13: Massachusetts Drinking Water Education Partnership (MADWEP) - DCR is a member of the Massachusetts Drinking Water Education Partnership, which provides year-round educational programs and information to increase public understanding of drinking water issues. The Partnership is dedicated to protecting drinking water supplies and public health through collaborative projects, culminating in Drinking Water Week events each May.

*Measurable Goal/ Schedule:* Maintain membership in program. Review opportunities to tie the impacts of storm water to drinking water issues.

BMP 1-14: Low Impact Development Projects – DCR will work on developing one Low Impact Development (LID) project a year. The project will include public education and outreach tasks. DCR has already begun this program through the following on-going or recently completed projects:

1. **Silver Lake Demonstration Projects – Parking Lot and Sidewalk Improvement Demonstration Project** – Project incorporated public participation related to water quality improvement projects implemented by DCR’s partnership with EPA and the Town of Wilmington. Public participation components included the following activities in Permit Year 3:
  - Letters to 20 – 25 residents of Silver Lake Avenue sent when Notice of Intent was submitted to Conservation Commission
  - Published short article in July–September issue of “Town Topics,” the town’s quarterly newsletter
  - Contacts with local stream team members
  - June 20, 2005 –Letter inviting residents of Silver Lake watershed to public meeting
  - June 27, 2005 – Presentation to Wilmington Board of Selectmen
  - July 6, 2005 –Headwaters tour of problem areas in the watershed, hosted by two local residents for DCR and Ipswich River Watershed Association
  - July 8, 2005 – Developed and printed brochure on Silver Lake project (8,000 copies). Mailed brochure in August 1<sup>st</sup> water bills (7,000 accounts). Brochure copies available at Town Hall and posted on town DPW web site.
  - July 18, 2005 – Press release
  - July 26, 2005 – Public meeting at Town Hall, with presentation by Geosyntec Consultants
  - August 3, 2005 – Public hearing, Conservation Commission
  - October 18, 2005 – Presentation on Low-Impact Development and Silver Lake project to Wilmington Planning Board (public meeting)
  
2. **Wilmington Rain Water Harvesting** – Project incorporated public participation activities related to distribution of rain water systems. Public participation components included the following activities in Permit Year 3:
  - June 15, 2005 – Press release
  - Developed outreach flyer
  - June 27, 2005 – Presentation to Wilmington Board of Selectmen

- Announcements by e-mail to solicit interest in large systems, to all planning offices in the Ipswich River watershed; nonprofit organizations active in the watershed; and LID Work Group.
- Notice in the August 31, 2005 *Environmental Monitor*.
- Telephone conversations with prospects for large systems from above outreach efforts.

*Measurable Goal/ Schedule:* Pursue the inclusion of public education component within the planning, permitting and implementation of one LID project a year.

BMP 1-15: DCR Storm Water Training Workshop – DCR provided a ½ day training program to address storm water management regulation, policies and procedures relevant to DCR staff in Permit Year 3. The training included an overview of applicable storm water regulations, descriptions of the DCR’s stormwater management strategies, its NPDES Storm Water Management Plan, discussion of DCR’s activities to manage the design, construction, and operation of its stormwater management facilities (i.e. detention ponds, catch basins, etc), and how these new regulations/ programs will impact the DCR staff.

*Measurable Goal/ Schedule:* No additional training proposed. Storm Water Handbook Training will provide training to similar group of staff members in Permit Year 5.

BMP 1-16: Ipswich River Demonstration Projects – A variety of outreach materials have been developed, or are in progress, including a project overview [fact sheet](#), brochures, signage, presentations, and a web site. An educational sign was installed at Silver Lake in July 2006 and lawn signs have been installed at each residential Rainwater Harvesting and Irrigation Controller Switch sites. The Ipswich River Restoration Conference was held in November 2005. The Ipswich River Watershed Association (IRWA) has produced a [Handbook for Municipal Managers in the Ipswich Watershed](#), which was distributed to watershed communities in the spring of 2006. IRWA is also developing a web portal for the handbook, including web-based fact sheets with active links. In cooperation with a coalition of North Shore organizations and the Massachusetts Bays Estuary Association, IRWA also launched Greenscapes North Shore, a campaign focusing on environmentally friendly landscaping.

*Measurable Goal/ Schedule:* Continue to include public education and outreach in the projects funded through the EPA Watershed Grant, as appropriate.

BMP 1-17: Partner with Center for Urban Environmental Studies – Partner with Northeastern University to assist development of new pollution control methods for storm water.

*Measurable Goal/ Schedule:* Develop formal notice of partnership. Provide press release on new control methods when identified.

## 2.2 Public Participation/Involvement

**EPA Minimum Control Requirement:** The NPDES Phase II permit requires all public involvement activities to comply with state public notice provisions including that “the permittee must provide opportunity for the public to participate in the development, implementation and review of the storm water management program. In Massachusetts, the public notice requirements are at Chapter 39, Section 23B.”

**DCR Programs:** DCR understands the importance of including the public in the storm water related activities of the department. DCR has worked hard to develop partnerships with watershed advocacy groups within the watersheds that include water supply reservoirs and the urban parks. The following is a list of the current programs that involve public participation and involvement, as well as a summary of the programs proposed to enhance DCR program to meet this minimum control measure.

BMP 2-1: Formal Partnerships with CRWA and CLF – DCR has entered into a Memorandum of Understanding (MOU) with Charles River Watershed Association (CRWA) and Conservation Law Foundation (CLF) executed August 2005 committing to certain permit related issues. In essence, the parties have agreed to forebear legal action provided that the DCR maintains a strong commitment to its stormwater management program. DCR provides CLF/ CRWA with a semi-annual report summarizing the actions taken to meet the criteria outlined in the MOU. Semi-annual meetings are held to discuss the progress.

*Measurable Goal/ Schedule:* DCR will continue to work together with CLF and CRWA to abide by the MOU and provide semi-annual reports.

BMP 2-2: Water Quality Monitoring (outside of urbanized area) – DCR currently works with University of Massachusetts’ (UMass) students to provide long-term water quality monitoring of waterbodies in the Wachusett watershed. Previous projects have included storm water related sampling as it impacts the reservoir’s water quality. UMass students monitor water quality at specific target areas and work with DCR to summarize and analyze results.

*Measurable Goal/ Schedule:* DCR will continue this program.

BMP 2-3: Public NPDES Meetings to Discuss Annual Report – Once coverage is received, DCR will hold a presentation open to the public after submittal of the annual report to EPA.

*Measurable Goal/ Schedule:* Once coverage is received, DCR will hold a presentation open to the public in June at three key locations throughout the state each year to maximize ability for public and watershed advocacy groups from across the state to attend. Track and record comments received and include in next year's annual report.

BMP 2-4: Annual Newsletter to Members in Partnership and Friends Database– DCR will send an annual newsletter to the groups/ people listed in their partnership and friends' database. This database includes all groups/ people who have expressed interest in working together with DCR on watershed/ reservoir/ park projects. The newsletter will discuss the water resource related projects, including storm water projects, undertaken by DCR in the previous year and upcoming projects.

*Measurable Goal/ Schedule:* Send annual newsletter.

BMP 2-5: Storm Water Related Concerns Reported on DCR Web Site – DCR's web site includes a place for the public to notify DCR of problems including those related to storm water, construction or erosion control problems. Once a comment is submitted under the "Contact Us" link to [mass.parks@state.ma.us](mailto:mass.parks@state.ma.us), the issue is reviewed by a DCR External Affairs staff member and forwarded to the appropriate division for response. External Affairs will track the response until resolved. If comments are received for parkways and/ or facilities owned or operated by other MS4s (including MassHighway or MassTurnpike), DCR External Affairs will be responsible for notifying the appropriate party at the responsible MS4. The Construction Activity web page described in BMP 4-5 will also include a public comment link to accept comments/ concerns from the public regarding construction related activities.

*Measurable Goal/ Schedule:* Continue to maintain staffing levels necessary to forward concerns/ feedback to appropriate department and track responses.

BMP 2-6: DCR Stewardship Council –The Department of Conservation and Recreation Stewardship Council is a thirteen-member citizen council appointed by the Governor. The Stewardship Council shall develop an oversight strategy of park management plans, capital planning and policy development. Also, the Commissioner of Conservation and Recreation shall submit management plans to the Stewardship Council for the Council's adoption with respect to all reservations, parks, and forests under the management of the Department, regardless of whether such reservations, parks, or forests lie within the urban parks district or outside the urban parks district. Said management plans shall include guidelines for the operation and land stewardship of the aforementioned reservations, parks and forests, shall provide for the protection and stewardship of natural and cultural resources and shall ensure consistency between recreation, resource protection, and sustainable forest management.

*Measurable Goal/ Schedule:* Continue to provide this forum. Look for opportunities to use this forum to provide public participation and interaction for this permit on an agency wide basis.



BMP 2-7: Massachusetts Water Resources Commission (MWRC) – The MWRC is a commission within the Executive Office of Environmental Affairs which consists of the Secretary of Environmental Affairs as chair, the Commissioner of the Department of Environmental Protection, the Commissioner of the Department of Conservation and Recreation, the Commissioner of the Department of Fish and Game, the Commissioner of the Department of Food and Agriculture, and the Director of Housing and Community Development, all of whom serve ex officio, and 5 members appointed by the Governor. The 5 appointees each represent a major type of water user, at least one area of water resource management and one member of the groundwater industry and represent state and environmental interest.

The responsibilities and duties of the commission include:

- (a) development of a water resources management policy framework within which the water resource policies, plans and management programs of the several Agencies and Departments under the Secretary shall function;
- (b) coordination of water resources planning and management functions among the several Agencies and Departments under the Secretary;
- (c) review and comment on all policies brought before the commission;
- (d) annual review and comment on all programs relating to water resource management of the several Agencies and Departments under the Secretary;
- (e) establishment of criteria and priorities for all water resource-related cooperative programs with the Federal Government, with any other State, or with any Executive Office, Department, or Division of the Commonwealth;
- (f) development and periodic updating of comprehensive water resource management plans for river basins, giving consideration to regional and statewide needs and to integration of waste-water management into water resource planning;
- (g) development of water allocation criteria which takes into account demographic, hydrologic, and environmental characteristics;
- (h) development of a management information system and data processing capability for the central collection, storage and retrieval of water resource management information. Further, the commission may be responsible for dissemination of said information to the several Agencies and Departments under the Secretary, to other State Agencies and to the public on request;
- (i) development of an education program which encourages broad public participation at both municipal and regional levels, with emphasis on encouragement of long term water resource and wastewater planning and management by municipalities and by regional planning agencies;
- (j) updating the Massachusetts water supply policy statement.

In addition the MWRC approves any increase over the present rate of interbasin transfers of the surface or groundwater of the river basins under the Interbasin Transfer Act., M.G.L. Chapter 21 § 8B-8D.

DCR's Office of Water Resources provides technical and staff support to the MWRC. The DCR staff includes scientists, hydrologists and water policy specialists who oversee the activities of the Commission.

*Measurable Goal/ Schedule:* Continue to be involved in program and provide technical and staff support to MWRC.

BMP 2-8: Lakes and Ponds Program - The DCR Lakes and Ponds Program works with local groups and municipalities to protect, manage and restore these valuable aquatic resources. The program provides technical assistance to communities and citizen groups, helps to monitor water quality at various public beaches to ensure public safety, and provides educational materials to the public about various lake issues. The program strives to ensure a safe future for Massachusetts' waterbodies through a watershed approach and citizen education and involvement.

*Measurable Goal/ Schedule:* Continue to sponsor program.

### 2.3 Illicit Discharge Detection and Elimination

**EPA Minimum Control Requirement:** The NPDES Phase II permit requires the permittee to develop, implement and enforce a program to detect and eliminate illicit discharges. An illicit discharge is any discharge to a municipal separate storm sewer system (MS4) that is not composed entirely of storm water. Exceptions are discharges that have been previously permitted under NPDES, allowable non-storm water discharges described at Part I.F (see Table 1 for examples) and discharges resulting from fire fighting activities. The minimum control measures include:

- (a) If not already existing, the permittee must develop a storm sewer system map. At a minimum, the map must show the location of all outfalls and the names of all waters that receive discharges from those outfalls.

Additional elements may be included on the map, such as, location of catch basins, location of manholes, and location of pipes within the system. Initial mapping should be based on all existing information available to the permittee including project plans, agency records, city records, and drainage maps. Field surveys may be necessary to verify existing records and locate all outfalls.

- (b) To the extent allowable under state law, the permittee must effectively prohibit, through a regulatory mechanism, non-storm water discharges into the system and implement appropriate

enforcement procedures and actions. If a regulatory mechanism does not exist, development and adoption of such a mechanism must be included as part of the storm water management program.

The permittee should evaluate existing procedures, policies and authorities pertaining to connections to its separate storm sewer system. If an illicit discharger fails to comply with procedures or policies established by the agency, the permittee may seek assistance from EPA or the state environmental agency in enforcing this provision of the permit.

- (c) The permittee must develop and implement a plan to detect and address non-storm water discharges, including illegal dumping, into the system. The illicit discharge plan must contain the following elements:
  - i. Procedures to identify priority areas. This includes areas suspected of having illicit discharges, for example: older areas of a city, areas of high public complaints, and areas of high recreational value or high environmental value such as beaches and drinking water sources.
  - ii. Procedures for locating illicit discharges (i.e. visual screening of out falls for dry weather discharges, dye or smoke testing).
  - iii. Procedures for locating the source of the discharge and procedures for the removal of the source.
  - iv. Procedures for documenting actions and evaluating the impact on the sewer system subsequent to the removal.
- (d) The permittee must inform users of the system and the general public of hazards associated with illegal discharges and improper waste disposal. The permittee must train field inspectors to recognize illicit discharges.
- (e) The non-storm water discharges listed in EPA's Part I.F. (see Table 1 for examples) must only be addressed if they are identified as significant contributors of pollutants.

**Table 1 EPA Allowable Non-Storm Water Discharges**

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■ Water line flushing;	■ Irrigation water;
■ Landscape irrigation;	■ Springs;
■ Diverted stream flows;	■ Water from crawl space pumps;
■ Rising groundwaters;	■ Footing drains;
■ Uncontaminated groundwater infiltration (e.g. highway subdrains);	■ Lawn watering;
■ Uncontaminated pumped groundwater;	■ Individual resident car washing;
■ Discharges from potable water sources;	■ Flows from riparian habitats and wetlands;
■ Foundation drains;	■ Dechlorinated swimming pool discharges;
■ Air conditioning condensation;	■ Street wash water;
■ Residential building wash waters, without detergents.	

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Discharges or flows from fire fighting activities occur during emergency situations. The permit does not require that fire fighting discharges be evaluated with regard to pollutant contributions and are authorized as non-storm water discharges by the permit unless identified by EPA as significant sources of pollutant to Waters of the United States.

**DCR Programs:** DCR has developed the following program elements to identify illegal connections and to investigate and enforce removal of identified connections.

BMP 3-1: Drainage Inventory – DCR has completed the drainage inventory of DCR facilities within urbanized areas. DCR’s consultant created this GIS map using a compilation of existing mapping based on facility information of record and field inventories. DCR will verify the locations (including re-surveying with GPS) and conditions of outfalls located from paper maps during the illicit discharge detection review task and the GIS map will be updated accordingly.

*Measurable Goal/ Schedule:* DCR has located outfalls from facilities owned and operated by DCR within urbanized areas. DCR will verify the location and condition of outfalls located from paper maps during illicit discharge detection field tasks.

BMP 3-2: Drainage Inventory Specification – In order to keep the drainage outfall inventory accurate and expand it beyond urbanized areas, DCR will develop and add a Drainage Inventory Specification to future construction and redevelopment projects statewide. The specification will require that the designer or contractor provide an electronic map of the project’s drainage system that is compatible with the DCR drainage infrastructure database, and with the asset management program discussed in Section 2.6. Redevelopment projects subject to this specification will be limited to shoulder widening

with drainage improvements, intersection redesign with drainage improvements, drainage improvements, culvert replacement, and footprint bridge projects.

*Measurable Goal/ Schedule:* Develop a Drainage Inventory Specification by the end of winter 2006. The specification will be included in contracts beginning in the fall of 2006.

BMP 3-3: Illicit Drainage Connection Policy – DCR is creating an Illicit Drainage Connection Policy prohibiting illicit discharges to the DCR storm water system. The Policy prohibits illicit discharges to its system and sets up a procedure for notifying the dischargers of the illicit connection. The Department will notify the discharger of the illicit connection and indicate a specified date for removing the illicit connection. If this deadline is not met, the DCR will work with the Massachusetts Attorney General's office to provide enforcement of the policy. DCR will also notify EPA and DEP of the violation.

*Measurable Goal/ Schedule:* Finalize and issue policy.

BMP 3-4: Drainage Infrastructure Inventory – DCR is currently expanding the drainage outfall inventory to include all drainage infrastructure (e.g. pipes, catch basins, manholes, water quality inlets, grit traps) on all DCR roadways, parkways and boulevards in urbanized areas. Developing this map will aid DCR in identifying interconnections with MS4s owned and operated by others. As DCR identifies interconnections, they will develop a Storm Water Agreement with the other MS4 as discussed in BMP 3-8. The mapping will also include identification of outfall headwalls that are in disrepair and leading to erosion. DCR will add these headwalls to future drainage repair contracts.

*Measurable Goal/ Schedule:* Complete inventory by the end of fall 2007.

BMP 3-5: Illicit Connection Sampling Program – During the catch basin cleaning effort and outfall inventory, DCR field crews inspected the drainage system (catch basins, manhole, open channels, and outfalls) for signs of illicit connections. The crew teams were asked to note any suspect flows or connections coming from off DCR property. Although this work was not necessarily performed during dry weather conditions, DCR and ENSR felt it was an opportune time to screen the systems for illicit flows. Several notes of dry weather flow and connections from off DCR property were made for future follow-up work. Illicit discharge and detection programs have been arranged for two of the primary areas of concern covering a total of 6 miles of DCR parkways.

For Permit Year 5, DCR will continue to identify and investigate priority areas for potential illicit connections. This review will include a top down approach of reviewing the entire system from the most upstream catch basin to the discharge point during dry weather conditions. DCR's review will be modeled after EPA's Charles River Illicit Discharge Detection and Elimination (IDDE) Protocol. DCR will perform the work for each drainage system reviewed in four phases as discussed below:

**Phase 1 – Review of Known Potential Illicit Connections:** DCR will review the drainage systems that were identified as potential illicit connections by the public during the SWMP public review period and by field crews performing catch basin cleaning and infrastructure inventory. DCR will begin to create an inventory of drainage systems to be reviewed in Permit Year 4 once DCR, or its consultant, completes large portions of the drainage infrastructure inventory (BMP 3-4).

**Phase 2 – Drainage Area/ Outfall Prioritization:** DCR will prioritize the systems to be reviewed based on the following criteria:

1. known illicit discharges,
2. suspected illicit connections based on discussion with DCR maintenance crews and EPA or ENSR's site visits during drainage inventory,
3. direct discharges to critical or impaired waters (e.g. water supplies, swimming beaches),
4. served by common/twin-invert manholes or underdrains,
5. significantly impacted by inflow or infiltration,
6. scheduled for near-term capital improvements or studies (e.g. infrastructure improvements, paving or I/I investigations), and
7. areas with increased potential for illicit connections including highly urbanized areas and commercial and industrial adjacent land owners.

The screening process is intended to rapidly establish an understanding of the potential extent and degree of illicit contributions throughout the system, especially identification of discharges of significant and immediate concern.

**Phase 3 – Investigation:** Once DCR creates the priority list, they will begin drainage investigations in accordance with each year's priority list. DCR will attempt to perform the investigations soon after the catchbasins are cleaned as part of annual maintenance. This will facilitate the removal of material to the extent possible prior to the investigation. DCR will perform the investigations during antecedent dry weather conditions defined as 48 hours with less than 0.1 inches of rain or snowmelt.

**Phase 4 – Action:** Once DCR identifies the source, DCR will notify the property owner of the problem and the illicit discharge will be discontinued. If the property owner fails to correct the problem in a timely fashion and effective manner, DCR will coordinate with the municipal DPW and disconnect the connection. If the source of the flow is from a DCR property, correcting the illegal connection will become a priority project for the Department.

Since verification of illicit discharge removals is required prior to progressing downstream through the sewer system, DCR will provide adequate staffing and equipment resources to initiate investigations in other sub-areas to facilitate progress while awaiting completion of corrections.

*Measurable Goal/ Schedule:* Continue to prioritize and review known potential illicit connections. Once DCR, or its consultant, completes large portions of the drainage infrastructure inventory (BMP 3-4), DCR will develop a priority area list and focus on those systems. DCR will summarize the systems reviewed, the outcome of the reviews and any proposed follow up work in each annual report. The annual report will also include the priority areas list for the next permit year.

BMP 3-6: Drainage Tie-In Standard Operating Practice - DCR will develop a Standard Operating Practice (SOP) to address drainage tie-ins from private entities to the department's MS4s. Applicants who wish to connect to DCR's drainage system are currently required to apply for a permit. The DCR's SOP will incorporate the submittal information currently required, including review of capacity within the receiving drainage system, and indicate that the discharge must meet Massachusetts Storm Water Policy guidelines.

*Measurable Goal/ Schedule:* DCR will create the Policy and issue.

BMP 3-7: Develop Storm Water Agreements with Municipal Storm Water Contributors -. When discharges from municipalities into a DCR MS4 are identified during field work or projects, DCR will work with the municipality to develop a control agreement or memo of understanding (MOU) regarding maintenance, water quality, sharing the mapping of interconnections and resolving issues (e.g. illicit connections) associated with the interconnections. DCR will develop a protocol for reviewing these interconnections.

*Measurable Goal/ Schedule:* DCR will develop the protocol for reviewing interconnections. DCR will create storm water agreements as contributors are identified during field inventories or project related work.

## 2.4 Construction Site Runoff Control

**EPA Minimum Control Requirement:** The NPDES Phase II permit requires the permittee to develop, implement, and enforce a program to reduce pollutants in any storm water runoff to the MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. The permittee must include disturbances less than one acre if part of a larger common plan.

The permittee does not need to apply its construction program provisions to projects that receive a waiver from EPA under the provisions of 40 CFR§122.26(b)(15)(i).

At a minimum, the program must include:

- (a) To the extent allowable under state law, a regulatory mechanism to require sediment and erosion control at construction sites. If such a mechanism does not exist, development and adoption of a mechanism must be part of the program. If attempts to enforce this part of their program are ineffective, the permittee may seek assistance from EPA or the state agency for enforcement of this provision.
- (b) Sanctions to ensure compliance with the program. Sanctions may include both monetary or non-monetary penalties. The permittee can consider withholding payment to contractors who fail to implement appropriate sediment and erosion control plans.
- (c) Requirements for construction site operators to implement a sediment and erosion control program that includes best management practices that are appropriate for the conditions at the construction site. The Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas may be used as a tool to implement this provision.
- (d) Require control of wastes, including but not limited to, discarded building materials, concrete truck wash out, chemicals, litter, and sanitary wastes.
- (e) Procedures for site plan review including procedures which incorporate consideration of potential water quality impacts. The site plan review should include procedures for pre-construction review.
- (f) Procedures for receipt and consideration of information submitted by the public. This may include the opportunities for public comment during the project development process.
- (g) Procedures for inspections and enforcement of control measures at construction sites.

**DCR Programs:** DCR is responsible for the construction and maintenance of DCR parkways and facilities. DCR understands the importance of managing construction projects in an environmentally sensitive manner and the potential for significant pollution to occur if proper erosion and sediment controls are not implemented and maintained during construction. DCR has many programs already in place and will add more programs to strengthen its commitment to reducing pollution from construction sites – these programs are summarized below:

**BMP 4-1: NPDES Storm Water Construction General Permit (CGP)** -- In Massachusetts, the EPA is the responsible for issuing coverage of discharges from construction sites under the NPDES Construction General Permit. This permit is required for all construction sites that disturb more than one acre during the overall development. The key condition of the CGP is the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP includes outlining the sediment and erosion control measures to be implemented on the project.



*Measurable Goal/ Schedule:* DCR reviewed all fiscal year 2006 projects and submitted NOI permit applications during the fall of 2005 for construction projects which disturbed more than one acre and were not currently covered by a the Construction General Permit. Projects beginning after this time will include the contract bid item described in the next BMP that requires filing for coverage under the CGP. DCR will summarize the number of construction sites that filed for coverage under the Construction General Permit each year. DCR commits to fully meeting the requirements of the permit at all sites that disturb more than once acre.

BMP 4-2: Contract Bid Item and Special Provisions – DCR has prepared a draft Contract Bid Item and Special Provision. The bid item and special provisions will be included in construction contracts to be advertised for bids which exceed the one-acre disturbance threshold. The Bid Item and Special Provision will address preparation of a Storm Water Pollution Prevention Plan (SWPPP) and compliance with the Construction General Permit provisions. When EPA sunsets the Construction General Permit, this bid item and special provision will continue to require the same level of erosion and sediment control at DCR sites. The specification will also reference the construction erosion and sediment control guidelines outlined in the Storm Water Handbook that will mimic those in the Construction General Permit.

*Measurable Goal/ Schedule:* DCR will finalize this bid item and special provision by the end of spring 2006. The item will be included in all new projects disturbing more than one acre bid after that time.

BMP 4-3: Construction Storm Water Pollution Prevention Plan (SWPPP) Template - DCR has begun to prepare a Storm Water Pollution Prevention Plan (SWPPP) template for use by Contractors and/or DCR on DCR construction projects. The template will be placed on the DCR website for downloading by Contractors.

*Measurable Goal/ Schedule:* Develop Construction SWPPP template during Permit Year 5 and post on website.

BMP 4-4: Construction Site Monitoring – DCR will continue to staff each construction project with either a Resident Engineer (RE) or Inspector. Their responsibilities will include completion of the weekly NPDES Construction General Permit inspections when required. DCR will actively pursue compliance with the general permit.

*Measurable Goal/ Schedule:* DCR will continue to staff each project at these levels.

BMP 4-5: On-going Construction Projects Web Page – DCR will continue to maintain the construction related web page that includes information regarding on-going DCR construction projects (<http://www.mass.gov/dcr/construction.htm>). This web page is updated each week to summarize the



on-going projects. DCR will add a link to allow for the public to contact DCR staff regarding construction related questions or issues.

*Measurable Goal/ Schedule:* Continue to maintain web site. Add link for receiving public comments by end of Permit Year 5.

BMP 4-6: Annual Erosion and Sediment Control Training – DCR will provide annual training to DCR construction management staff on erosion and sediment controls.

*Measurable Goal/ Schedule:* DCR provides annual training to all construction management staff. The annual report will include a summary of the number of attendees, topics covered and training dates.

BMP 4-7: Technical Assistance to Conservation Commissions – DCR provides technical assistance to Conservation Commissions within municipalities included in the Division of Water Supply Protection's watersheds. Conservation Commissions are encouraged to request written comments from the DCR on projects that may impact their reservoirs.

*Measurable Goal/ Schedule:* Continue to provide technical assistance and the staffing level necessary to provide timely responses.

BMP 4-8: Contract Bid Item and Special Provisions Enforceability – The DCR Project Managers Manual requires redevelopment projects and /or new design or construction projects to obtain appropriate storm water management permits from EPA for the work. The permitting flowchart and permitting checklist in the DCR Project Managers Manual indicate the need to seek an EPA permit for any work that results in land disturbance equal or greater than 1-acre total.

*Measurable Goal/ Schedule:* DCR will include this notice in all new contracts by the end of Permit Year 4.

BMP 4-9: Construction Runoff Enforcement from DCR Construction Projects and Offsite Construction - Construction site runoff which does not meet NPDES MS4 requirements and that reaches a DCR owned or operated MS4 may be considered trespassing. Once a storm water related problem is identified at a site, DCR will take measures to identify and alert the responsible party.

For DCR construction projects, the Resident Engineer (RE) will issue a Notice to Repair to the responsible party. If the issue is not resolved to the RE's satisfaction within 48 hours, the RE will issue an Enforcement Letter to the responsible party. The Enforcement Letter will outline the conditions which must be met within 7 days of receiving the letter. If appropriate controls are not installed to remedy the problem, then DCR will notify EPA and the local Conservation Commission.

For offsite construction that results in runoff to a DCR property, DCR will forward the report of trespass to DCR Office of General Counsel. DCR Office of General Counsel may report to the State Attorney General's office at the Commissioner's discretion. If the offsite project is subject to EPA's Construction General Permit, then the violation will be referred to EPA.

*Measurable Goal/ Schedule:* Refer violators to Attorney General's office as necessary. Refer to EPA as appropriate.

BMP 4-10: Utility/ Drainage Tie-In Permit – Offsite projects that request to connect to DCR's MS4 must apply for a Utility/ Drainage Tie-In Permit. DCR Planning and Engineering Permits Section review these applications. The projects must comply with the Massachusetts Stormwater Policy in order to receive approval.

*Measurable Goal/ Schedule:* Continue to require all offsite projects that need to tie into a DCR MS4 to receive a permit under this program.

BMP 5-1: Compliance with MA DEP Stormwater Management Policy and BMP 5-2: Storm Water Handbook also addresses water quality design and erosion control requirements as part of the design of internal projects that will tie-in to a DCR MS4. All internal projects which disturb more than one acre must be designed in accordance with the Handbook. The Handbook requires meeting the Massachusetts DEP Storm Water Management Policy. DCR will create and issue this Handbook by the end of October 2006.

## 2.5 Post-Construction Runoff Control

**EPA Minimum Control Requirement:** The general permit requires that the permittee must develop, implement and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than one acre and discharge into the MS4. The program must include projects less than one acre if the project is part of a larger common plan of development.

The general permit indicates that the program must include:

- (a) To the extent allowable under state law, a regulatory mechanism to address post construction runoff from new development and redevelopment. If such a mechanism does not exist, development and adoption of a mechanism must be part of the program. If attempts to enforce this provision of the program are ineffective, the permittee may seek assistance from EPA or the state agency in enforcing this provision.

- (b) Procedures to ensure adequate long term operation and maintenance of best management practices.
- (c) Procedures to ensure that any controls that are in place will prevent or minimize impacts to water quality.

**DCR Programs:** DCR designs all proposed projects within its parkways, roadways and/or facilities to meet all state and federal regulations. Most projects are subject to the Wetlands Protection Act (WPA) in Massachusetts and therefore must have their storm water treatment system designed to meet the MA Stormwater Management Policy. This policy provides criteria to reduce the pollutants discharging to the Commonwealth's waterbodies. Through development of a Storm Water Handbook, DCR plans to provide guidance on meeting the Policy guidelines at DCR facilities and extending these design guidelines to all DCR projects. The development of the Handbook in addition to the on-going programs described below will provide a strong post-construction runoff control program.

BMP 5-1: MA DEP Stormwater Management Policy - Most new construction and redevelopment activities undertaken by DCR are currently subject to the Massachusetts DEP's Stormwater Management Policy and Performance Standards through the Wetlands Protection Act (WPA). Projects within 200-feet of a perennial stream or 100 feet of a wetland resource area are subject to the WPA. The DEP Stormwater Management Policy meets the minimum requirements set forth by the EPA for construction runoff control. DCR applies the Stormwater Management Policy Performance Standards to all projects regardless if they are subject to the WPA. As standard practice, DCR employs the use of sediment and erosion control measures throughout its construction projects.

*Measurable Goal/ Schedule:* DCR applies Stormwater Management Policy Performance Standards to all development/ redevelopment projects.

BMP 5-2: DCR Storm Water Handbook – DCR is in the process of creating a Storm Water Handbook for roadway designers, public works personnel, and other people involved in the design, permitting, review, and construction of projects for DCR. The handbook will be tailored from the MassHighway Storm Water Handbook, recently approved by DEP, to address DCR parkways and expanded to address facility related projects and construction projects. The objective of this Handbook is to provide guidance in the development of cost-effective storm water management strategies for proposed highway and facility projects to comply with the DEP Stormwater Management Policy and to continue the Construction General Permit requirements during construction. Design criteria will include:

- designing groundwater recharge BMPs in high or medium stress level basins;
- minimizing the loss of annual recharge to groundwater from new development and redevelopment consistent with Performance Standard No. 3 of MA DEP's Stormwater Policy;

- require that projects with post-construction BMPs submit Operation and Maintenance plans consistent with Performance Standard No. 9 of MA DEP's Stormwater Policy;
- protocol for illicit connection identification and procedures for removing connection;
- construction erosion and sediment control practices to meet Standard 8 of the MA Storm Water Policy; and
- Low Impact Development (LID) practices.

*Measurable Goal/ Schedule:* DCR will create and issue Handbook.

BMP 5-3: Storm Water Handbook Training – Once the DCR issues the Storm Water Handbook, DCR will provide training seminars for staff members to educate them on the Handbook.

*Measurable Goal/ Schedule:* DCR will provide 2 seminars within 6 months of issuing handbook to train internal personnel and consultants. DCR will provide annual seminars thereafter. We will record the number of attendees and dates of training in the annual report.

BMP 5-4: BMP Long-Term Operation and Maintenance – DCR has committed the budget necessary to provide long-term maintenance of BMPS on the Maintenance Activity Schedule (BMP 6-18).

*Measurable Goal/ Schedule:* DCR has committed a minimum of 1.9 million dollars annually in the budget for drainage system operation and maintenance for the next three years.

BMP 5-5: Low Impact Development Projects – DCR will sponsor one Low Impact Development (LID) project each year.

*Measurable Goal/ Schedule:* DCR will actively work on the planning, permitting and implementation of one Low Impact Development (LID) project each year.

BMP 5-6: Walden Pond Storm Water Improvements (outside of urbanized area)- Walden Pond, a kettle hole and public swimming area, is bounded on the northerly side by a busy town-owned road and the state park parking lot. Storm water flows from the parking lot to the road catch basins and is then piped to the pond. The parking lot includes several separate paved areas with many wooded traffic islands having a pervious gravel subgrade. Selected unpaved areas were cleaned, regraded, swaled and excavated for retention basins to maximize infiltration. DCR designed and installed new catch basins, piping and infiltrators to replace and eliminated the old piped system to the pond.

*Measurable Goal/ Schedule:* DCR designed and installed the improvements during Permit Year 3. Bank stabilization and beach replenishment activity was completed in Permit Year 4.

BMP 5-7: Post Construction Runoff Enforcement from Offsite Pollution - Storm water runoff that results from post-construction activities at offsite developed properties, and that is reaching a DCR owned or operated MS4 and which does not meet the NPDES MS4 requirements may be considered trespassing and referred to the Attorney General's office by DCR counsel at the Commissioner's discretion.

*Measurable Goal/ Schedule:* Refer violators to Attorney General's office as necessary.

BMP 5-8: Ipswich River EPA Targeted Watershed Grant – Low Impact Development (LID) Subdivision Demonstration Project - The DCR received a \$1.04 million grant from the Environmental Protection Agency's Targeted Watershed program to demonstrate an integrated approach to addressing the problems facing the Ipswich River. This approach encompasses two strategies:

- Low-Impact Development (LID) – landscaping and design techniques that capture stormwater and recharge it to the groundwater; and
- Water Conservation – education strategies and technologies that reduce demands on water supplies, and associated groundwater pumping, especially during dry months.

DCR is implementing the following programs under this grant:

BMP 5-8a: Green Roof Demonstration Project – A green roof was included in the design for the refurbishment of ten affordable housing units in the Whipple School Annex building in Ipswich. In September of 2006, the contractor installed a green roof, including a waterproof membrane, a drainage mat, filter fabric, soil medium, and 10 species of plantings (primarily sedums). The seedlings are expected to establish 80% coverage of the roof by the end of the summer of 2007. USGS completed the monitoring design and installed equipment in November 2006 to monitor the quality and quantity of runoff from both the green roof and the conventional roof at Ipswich Town Hall, which is adjacent to the Whipple Annex. Tours to view the green roof from the roof of Town Hall are being planned for the spring of 2007.

*Measurable Goal/ Schedule:* Monitor quality and quantity of runoff from the green roof at Whipple Annex and conventional roof at Ipswich Town Hall. Summarize results and include in annual report.

BMP 5-8b: Permeable Paving Demonstration Project – Design was completed by GeoSyntec Consultants of Acton, Massachusetts and construction was completed by Cali Corporation of Natick, Massachusetts. A public ceremony was held in June 2006 to celebrate the completion of this stormwater improvement project. Following construction, infiltration tests were conducted on all permeable materials and confirmed that infiltration rates met or exceeded specifications. USGS conducted preconstruction monitoring of groundwater beginning in the summer of 2005 and resumed sampling upon the completion of project construction. Groundwater quality sampling will continue for one year, post-construction. Following installation of the LID features on

neighboring streets and at the beach parking lot, there were no summer beach closures at Silver Lake for the first time in seven years.

*Measurable Goal/ Schedule:* Continue groundwater quality sampling for one year upon completion of project construction. Summarize results in annual report.

BMP 5-8c: LID at Silver Lake – The Town of Wilmington and DCR are collaborating on a series of Silver Lake Demonstration projects that will use low-impact development techniques to improve the water's quality by reducing polluted storm water runoff that currently discharges to the lake. The first project began in January 2006 and includes:

- the addition of landscaped areas designed as filter berms which use special soils and plantings to retain and filter storm water;
  - replacing direct storm drain discharges into the lake with overland flow;
  - reconstructing the parking lot for Silver Lake using two types of porous paving materials which allow storm water to drain in to the ground instead of discharging directly to the lake;
  - elimination of a goose habitat – goose droppings on the lawn are considered a source of the natural bacteria that has polluted the lake in the past; and
- Sampling and Monitoring: USGS installed 7 observation wells in early June at parking lot site. USGS conducted preconstruction monitoring of stormwater volumes and water quality beginning in the summer of 2005 and resumed sampling upon the completion of project construction in June 2006. Sampling for changes in water quality and discharge quantity will continue for one year, post- construction.

Following installation of the LID features on neighboring streets and at the beach parking lot, there were no summer beach closures at Silver Lake for the first time in seven years.

*Measurable Goal/ Schedule:* Perform sampling of stormwater volumes and water quality for one year upon completion of project construction. Summarize results versus pre-construction in Year 5 annual report.

BMP 5-8d: Rainwater Harvesting – The DCR and the Town of Wilmington, through a grant from EPA, are offering rainwater harvesting systems consisting of tanks that collect rainwater from rooftop downspouts and then store the water for late use outdoors, such as in the lawn or garden. These systems are being offered by a random lottery of Wilmington residents but the Town hopes to place most in the Silver Lake watershed. During Permit Year 3, the project developed criteria for screening potential participants and solicited participants, geocoded addresses of interested participants and performed neighborhood survey to determine eligibility, obtained list of

high water users and cross-referenced list with list of those who expressed interest and conducted a lottery (July 22) and selected 35 recipients of small- and medium-sized systems. Staff members then conducted site visits to confirm eligibility. Installations began on October 18, 2005. A second and third lottery (Oct. 24) was conducted to select participants to replace those who dropped out. Rainwater Recovery, Inc. completed installation of 39 small- and medium-capacity tanks on residential properties in the town of Wilmington in the fall of 2005. A kick-off meeting was held in June 2006 and all participants were invited to learn more about the equipment and the study. Historic records on outdoor water use for each participating household has been compiled. Data collection began in June 2006 and will continue through the irrigation seasons of 2007 and 2008.

Rainwater Recovery also installed a 200-gallon system at an “Outdoor Classroom” at the Winthrop Elementary School in Hamilton. Parents and children learned about rainwater harvesting during a volunteer “work day” in September 2006. DCR selected a site at the Boutwell Elementary School in Wilmington for a large underground (8,000-gallon) system. Rainwater Recovery has completed design, and construction is scheduled for April 2007.

*Measurable Goal/ Schedule:* Continue data collection of outdoor water use on each participating household with rainwater harvesting systems through the irrigation seasons of 2007 and 2008. Compare use with historic records and summarize in annual report. Install large underground system.

**BMP 5-8e: LID Ball Field** – Moisture-retaining soil amendments were applied to one of the four fields at Ipswich River Park in North Reading in the spring of 2006. Water use and continuous soil moisture retention on this field will be compared to those characteristics at an adjacent field. Data collection will begin in the spring of 2007 and continue through summer 2008.

*Measurable Goal/ Schedule:* Begin data collection of water use and continuous soil moisture retention on field in 2007 and continue through summer of 2008.

**BMP 5-8f: Weather Based Irrigation** – AquaSave LLC installed 25 weather-based irrigation controllers in the summer of 2005 – 15 residential customers in the Town of Reading and 10 municipal ball fields in the towns of Reading, Middleton, Hamilton, North Reading, and the City of Peabody. All residential participants were invited to attend a season kick-off meeting in April 2006 to reflect on experiences from the previous season and to receive information on data collection and system operation for the current season. Historic records on water use at both the residential and municipal sites are being compiled. Compilation and analysis of post-installation water-use records will continue through summer 2008.

*Measurable Goal/ Schedule:* Compile and analyze post-installation water use records for the 25 weather-based irrigation controllers through summer 2008. Summarize in annual report.



BMP 4-10: Utility/ Drainage Tie-In Permit program also provides for the review of projects proposed to tie into a DCR MS4. DCR Planning and Engineering Permits Section review these applications. The projects must comply with the Massachusetts Stormwater Policy in order to receive approval.

## 2.6 Pollution Prevention/Good Housekeeping

**EPA Minimum Control Requirement:** In recognition of the benefits of pollution prevention practices, the NPDES Phase II permit requires an operator of a regulated MS4 to:

- (a) Develop and implement a program with a goal of preventing and/or reducing pollutant runoff from transportation and community/facility operations. The program must include an employee-training component.
- (b) Include, at a minimum, maintenance activities for the following facilities associated with the transportation system: rest areas along interstates; weigh stations; material storage yards; new construction and land disturbance; roadway drainage system maintenance, and storm water system maintenance and the following non-traditional systems: parks and open space; fleet maintenance, building maintenance; new construction and land disturbance; road way drainage system maintenance, and storm water system maintenance.
- (c) Develop schedules for maintenance activities described in paragraph (b) above.
- (d) Develop inspection procedures and schedules for long-term structural controls.

**DCR Programs:** DCR employs pollution prevention/ good housekeeping policies at each of its facilities. As described in the programs below, DCR will work during the permit term to formalize pollution prevention/ good housekeeping policies and make sure they are standardized for state-wide implementation. DCR will also implement regular review of facilities to identify erosion or storm water problems and rectify. The following is a summary of those programs:

**BMP 6-1: Vehicle Washing Policy** – DCR will maintain its current policy on vehicle washing which requires DCR vehicles to be washed at off-site stations. DCR formalized the policy into a written agency-wide SOP during Permit Year 3. DCR is pursuing a state-wide master service agreement to provide these services off-site. DCR is still working to identify regional commercial vehicle washing facilities

*Measurable Goal/ Schedule:* Maintain compliance with new policy. Identify commercial vehicle washing facility and implement policy.

BMP 6-2: Floor Drain Policy – DCR will maintain its current policy formalized under the Clean State Initiative on floor drain use and servicing.

*Measurable Goal/ Schedule:* Maintain current policy.

BMP 6-3: Catch Basin Cleaning Policy – DCR will develop an agency wide written plan for regular catch basin cleaning. The SOP will document cleaning of catch basins on an annual schedule and prioritize areas to be cleaned based on the sensitivity of the area and receiving waters. The plan has been drafted and circulated to CLF, CRWA and DCR staff for comments during Permit Year 3.

*Measurable Goal/ Schedule:* Finalize plan and implement during 2006.

BMP 6-4: Catch Basin Inspection/ Repair Policy – DCR will develop an agency wide written plan for inspection and repair of catch basins. The SOP will formalize a schedule for catch basin inspections and provide guidelines for prioritizing the repair of those catch basins in need of repair. DCR will maintain records that document catch basin inspection and cleaning (as well as any maintenance activities for other drainage structures), including executed contracts, certificates of completion, contractor invoices, or other types of maintenance logs. DCR has drafted a plan and circulated to DCR staff. Priority catch basins identified during 2005 are included in repair contract for 2006-2007.

*Measurable Goal/ Schedule:* Finalize plan and implement during 2006.

BMP 6-5: Street Sweeping Policy – DCR will develop an agency wide written policy regarding the frequency of street sweeping at its facilities. The SOP will include guidelines for prioritizing the sweeping of roads, parkways and facility parking lots. The 2006 Plan has been drafted and circulated to CLF, CRWA and DCR staff for comments.

*Measurable Goal/ Schedule:* Finalize plan and implement during 2006.

BMP 6-6: Integrated Pest Management Policy – DCR will continue to investigate Integrate Pest Management (IPM) as a pilot program in the Division of Water Supply Protection. As a general policy, DCR avoids the use of pesticides including fungicides, insecticides and herbicides. Water Supply Protection is evaluating IPM for vegetation aquatic control. DCR has recently hired staff to assess use of IPM for other applications

*Measurable Goal/ Schedule:* Create draft plan for internal review. Finalize by end of Permit Year 5.

BMP 6-7: VMP Training – Train staff on DCR's Vegetation Management Plan. The VMP outlines methods of minimizing the discharge of pollutants related to the storage and application of pesticides,

herbicides, and fertilizers, applied by DCR's employees or contractors on DCR facilities or parkways. The training will also include landscaping and stream buffer best management practices

*Measurable Goal/ Schedule:* Provide training for maintenance staff once every two years. Provide training if required for seasonal workers without prior experience on off years.

BMP 6-8: Chemical Applications Review Meetings – DCR meets with railroad and utility companies which have property, easements or access privileges within the Division of Water Supply Protection's (DWSP) watershed lands on a bi-annual basis. The use of chemicals for vegetation management on the easements is discussed at these meetings and DCR reviews and approves/disapproves all chemicals to be used.

*Measurable Goal/ Schedule:* Continue bi-annual meetings.

BMP 6-9: Emergency Management System (EMS) – The DCR subcontracts emergency spill response services to trained sub-contractors. DCR District personnel respond to spills, accidents and other such emergencies on DCR property or which drains to DCR water supply reservoirs through reporting and coordinating response actions. Clean Harbors responds to spills to the Charles River and other non-reservoir waterways controlled by DCR. On parkways, DCR coordinates response activities with Massachusetts State Police and with its authorized contractors.

*Measurable Goal/ Schedule:* Continue to provide personnel to respond to spills, accidents and other such emergencies on DCR property or which drains to DCR water supply reservoirs through reporting and coordinating response actions.

BMP 6-10: Proper Waste Disposal - DCR properly disposes of waste materials at all of its facilities and complies with all state regulations. Waste materials comprise of catch basin cleaning, street sweeping, pipe cleaning and sediment removal material from BMPs.

*Measurable Goal/ Schedule:* Continue to properly dispose of waste and include in budgets.

BMP 6-11: Beneficial Use Determination – DCR currently disposes of waste materials removed from drainage structures and storm water BMPs during maintenance in compliance with DEP's "Reuse and Disposal of Contaminated Soil at Massachusetts Landfills" DEP Policy #COMM-97-001. DCR is actively exploring options for the beneficial reuse of catch basin and street sweeping materials instead of disposing of them at landfills. DCR will prepare a plan for the alternate use of the materials for review by DEP.

*Measurable Goal/ Schedule:* Prepare plan for review by DEP by the end of the winter of 2008.

BMP 6-12: Maintain Spill Prevention Control and Countermeasure Plans (SPCC) – DCR has prepared site-specific SPCC plans for each of its facilities subject to the Industrial Multi-Sector General Permit. These facilities include:

1. Charles River Dam (Boston/Charlestown)
2. Amelia Earheart Dam (Everett/Somerville)
3. Stoneham North Central Garage/ Central Supply
4. Devine Rink

The plans indicate the operation and maintenance measures which should be followed at the site to maintain compliance with the permit. DCR will continue to maintain compliance with the requirements in these plans.

*Measurable Goal/ Schedule:* Maintain compliance with SPCC plans.

BMP 6-13: Roadway and Drainage Infrastructure Assessment – DCR will perform a state wide assessment of its roadway and infrastructure conditions each year. DCR will create an assessment report summarizing the drainage infrastructure and roadway in need of repair and/ or maintenance. This report will be used to set maintenance budgets for the following year. The report will also summarize the actions taken to address areas identified in the previous year's report.

*Measurable Goal/ Schedule:* Perform a pilot project in select areas during the fall of 2005. Begin agency-wide assessment of roadway and drainage infrastructure report annually during the fall of 2006.

BMP 6-14: CB Repair/ Discharge Pipe Cleaning Needs Assessment – During annual CB cleaning, DCR will perform an assessment of the condition and cleaning requirements of visible proximate DCR lateral piping and catch basin repair needs for it's state wide drainage system. Annual reports will summarize piping requiring cleaning and catch basins to be repaired. This report will be used to set repair budgets for the following year. The annual report will also report on progress from the previous year's needs assessment report.

*Measurable Goal/ Schedule:* Create an annual catch basin repair and lateral pipe cleaning assessment of DCR's drainage system.

BMP 6-15: Wet Weather Review and Repairs – DCR will perform an annual review of roads and parking lots within urbanized areas during wet weather conditions to identify areas of ponding or flooding each year. From this review, DCR will develop a priority list, budget and schedule for necessary repairs identified. This repair budget will be included in the following year's requested budget. The annual report will also report on progress from the previous year's review.

*Measurable Goal/ Schedule:* Create an annual wet weather review report.

BMP 6-16: Implement Short Term Measures Identified for Fenway, Riverway, Jamaica Way and Blue Hill Parkway – CLF and CRWA identified some areas of known problems to EPA during DCR's development of the SWMP. The actions requested included:

- Assess condition of curbing and pavement along Fenway, Riverway and Jamaica Way (especially in the Leverett Pond area) to determine whether there are measures that could be implemented in the short term to address such conditions and resultant conditions including ponding on roads resulting in repeated splashing causing erosion;
- Assess Blue Hill Parkway in the area of the Pine Tree Brook where storm water discharges through a manhole directly into the brook to determine whether there are measures that could be implemented in the short term to address such conditions; and
- GPS locate areas in need of future work based upon the above assessments.

DCR staff performed preliminary assessment of the curbing and pavement along Fenway, Riverway and Jamaica Way during June 2005. The assessment indicated a number of problematic catch basins with poorly draining lateral piping. Poor functioning of catch basins is partly related to the clogging of structures from fallen leaves from the extensive tree canopy along the parkways. Obstruction or failure of lateral piping from catch basins was identified in several areas along the Fenway and Riverway. Further consideration of issues associated with the drainage system in this area, including the roles of DCR and other stakeholders, needs to be reviewed and addressed.

*Measurable Goal/ Schedule:* DCR will continue to follow up on these concerns and summarize its progress on addressing these issues in periodic reports to CLF and CRWA until the issues are fully addressed.

BMP 6-17: Maintenance Tracking System – DCR is currently using a GIS-based infrastructure management system. DCR is developing a maintenance tracking system that will record information on DCR assets (e.g. catch basins, manholes, signs, pavement, etc.) including location, condition, maintenance schedule, maintenance performed, repairs performed, etc. The storm water infrastructure inventoried in BMP 3-4 will be added to this system. The system will include inspection and maintenance schedules and create reports of BMPs that are “scheduled” for maintenance.

*Measurable Goal/ Schedule:* The tracking system is scheduled for roll-out to DCR staff during the fall of 2005. Storm water infrastructure will be added to the system and the maintenance activity schedule integrated into the program by summer 2006.



BMP 6-18: Maintenance Activity Schedule – DCR has created the following maintenance activity schedule to formalize their inspection and maintenance schedule. This schedule will be integrated into SOPs when written and the Storm Water Handbook.

*Measurable Goal/ Schedule:* Maintain infrastructure and roadways in compliance with maintenance activity schedule.



**Table 2 DCR Maintenance Activity Schedule**

Maintenance Activity	Inspection Schedule			Cleaning Schedule				Notes	
	Weekly	Twice a Year	Annual	Monthly	Every Two Months	Annual	Every 2 years		Per Inspection Recmndn.
Street Sweeping - Parkways					X				Swept every two months from April to October
Street Sweeping - All other facilities						X			
Street Sweeping – Priority Beaches	X			X					During Summer Season
Catch Basins/ Ancillary Piping- Parkways			X			X			
Catch Basins/ Ancillary Piping - All other facilities							X		
Catch Basin Rehabilitation and Repair			X					X	
Detention Ponds			X					X	
Water Quality Swales			X					X	
Drainage Swales			X					X	
Water Quality Inlets		X						X	
Infiltration Systems		X						X	
Material Storage Yards			X						
New Construction – NPDES Compliance	X							X	
Parks – Review for Erosion/ SW Issues	X							X	
Fleet Maintenance		X						X	
Building Maintenance	X							X	
Rinks – Review for Erosion/ SW Issues	X					X		X	
Pools – Review for Erosion/SW Issues	X					X		X	



### 3.0 ADDITIONAL REQUIREMENTS

#### 3.1 General

Parts I, V and IX of the General Permit include additional requirements beyond the minimum control measures discussed in Section 3.0. The following sections describe in greater detail each of the additional requirements and how DCR will comply with the requirements during the permit term.

#### 3.2 Endangered Species Act

**General Permit Requirement:** Part I.B.2(a) of the general permit states that discharges or discharge related activities can only be covered by this permit if they meet the following requirements:

- i. Coverage under this permit is available only if the storm water discharges, allowable non-storm water discharges, and discharge related activities are not likely to jeopardize the continued existence of any species that are listed as endangered or threatened ("listed") under the ESA or result in the adverse modification or destruction of habitat that is designated as critical under the ESA ("critical habitat"). Submission of a signed NOI will be deemed to constitute certification of eligibility.
- ii. "Discharge related activities" include: activities which cause, contribute to, or result in storm water point source pollutant discharges; and measures to control storm water discharges, including the siting, construction and operation of best management practices (BMPs) to control, reduce or prevent storm water pollution.
- iii. In order to demonstrate eligibility, the permittee must use the most recent Endangered and Threatened Species County-Species List available from EPA. Eligibility must be determined prior to submission of the NOI. The most current list is available at <http://www.epa.gov/npdes/>. The permittee must meet one or more of the criteria described below for the entire term of the permit. The information used to determine eligibility must be maintained as part of the Storm Water Management Program.
  - Criteria A: No endangered or threatened species or critical habitat are in proximity to the MS4 or the point where authorized discharges reach the receiving waters; or
  - Criteria B: In the course of a separate federal action involving the MS4, formal or informal consultation with the Fish and Wildlife Service (FWS) and/or the National Marine Fisheries Service (NMFS) under Section 7 of the ESA has been concluded and that consultation:



- Addressed the effects of the MS4 storm water discharges, allowable non-storm water discharges, and discharge related activities on listed species and critical habitat; and
  - The consultation resulted in either a no jeopardy opinion or a written concurrence by FWS and/or NMFS on a finding that the storm water discharges, allowable non-storm water discharges, and discharge related activities are not likely to adversely affect listed species or critical habitat; or
  - Criteria C: The activities are authorized under Section 10 of the ESA and that authorization addresses the effects of the storm water discharges, allowable non-storm water discharges, and discharge related activities on listed species and critical habitat; or
  - Criteria D: Using best judgment and knowledge, the effects of the storm water discharges, allowable non-storm water discharges, and discharge related activities on listed species and critical habitat have been evaluated. Based on those evaluations, a determination is made by the permittee that there is no reason to believe that the storm water discharges, allowable non-storm water discharges, and discharge related activities will jeopardize the continued existence of any species or result in the adverse modification or destruction of critical habitat; or
  - Criteria E: The storm water discharges, allowable non-storm water discharges, and discharge related activities were already addressed in another operator's certification of eligibility which includes the MS4 activities. If certification is under this criterion, the permittee agrees to comply with any measures or controls upon which the other operator's certification was based.
- iv. The permitting authority may require any permittee or applicant to provide documentation of the determination of eligibility for this permit where the EPA or the FWS and/or NMFS determines that there is a potential impact on listed species or critical habitat.
- v. A discharge is not authorized if the discharge or discharge related activities cause a prohibited "take" of endangered or threatened species (as defined under Section 3 of the ESA and 50 CFR 17.3), unless such actions are authorized under sections 7 or 10 of the ESA.
- vi. Discharges are not authorized where the discharge or discharge related activity are likely to jeopardize the continued existence of any species that are listed as endangered or threatened under the ESA or result in the adverse modification or destruction of habitat that is designated as critical under the ESA.

**DEP Requirement:** According to Part IX.C.1 of the General Permit, the permittee shall comply with the Massachusetts Endangered Species Act (MESA) (MGL c, 131A and regulations at 321 CMR



10.00) and any actions undertaken to comply with this storm water permit shall not result in non-compliance with MESA.

**DCR Programs:** During the summer of 2005, our consultant, ENSR, identified storm water outfalls on DCR parkways, roads and facilities in urbanized areas. In total, ENSR identified 1,403 outfalls. DCR then compared the location of these outfalls to the watershed contributing to the potential habitat for the short nose sturgeon and the dwarf wedge mussel. These are the two federal species of concern currently identified during EPA’s consultation with US Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS).

DCR has satisfied the ESA eligibility provision under Criterion D (Small MS4 Permit, Addendum B) with regard to the dwarf wedge mussel and shortnose sturgeon in all areas tributary to its habitat in the identified reaches of the Connecticut and Merrimack Rivers (see attached consultation correspondence with U.S. Fish & Wildlife Service and National Marine Fisheries Service in Appendix B of the NOI). DCR has satisfied the eligibility provision under Criterion A with regard to these species in all areas not tributary to the identified portions of the Connecticut and Merrimack Rivers.

**Table 3 DCR Facilities with Outfalls within Endangered Species Habitat Watershed**

Endangered Species Habitat	Facility	# of Outfalls	Reviewing Agency	Date Letter Sent to Agency Requesting Review	Date Response Received
Dwarf Wedge Mussel – Connecticut River	Holyoke Heritage State Park	1	US Fish & Wildlife Service (USFWS)	8/24/06	10/25/06
Short Nose Sturgeon – Connecticut River	Holyoke Heritage State Park	1	US Fish & Wildlife Service (USFWS)	3/6/06	3/10/06
Short Nose Sturgeon – Merrimack River	Lawrence Heritage State Park	1	National Marine Fisheries Service (NMFS)	8/24/06	8/31/06

DCR will continue to review new outfalls proposed as part of construction projects through the programs described below:

**BMP 7-1: Wetland Protection Act Compliance** – Most projects undertaken by DCR are subject to the Wetland Protection Act (WPA). As required by the Wetland Protection Regulations under this Act, DCR or its consultant submits a Notice of Intent for review by the local Conservation Commission and DEP. Part of this submittal includes compliance with the Massachusetts Endangered Species Act (MESA). DCR routinely contacts Massachusetts Natural Heritage and Endangered Species Program (NHESP) and US Fish and Wildlife to review the projects if they are in the vicinity of endangered species habitat, in order to assess whether the project could

potentially impact federal or state endangered species habitat. If a potential impact is identified, DCR works with the agencies to design the project to minimize the impacts.

*Measurable Goal/ Schedule:* Continue to comply with WPA.

BMP 7-2: 401 Water Quality Certification – Certain bridge projects are exempt from the Wetlands Protection Act but are subject to the state 401 Water Quality Certification. As part of this certification application, DCR must review compliance with MESA (Massachusetts Endangered Species Act). The projects are reviewed with Massachusetts Natural Heritage and Endangered Species Act Program (NHESP) and US Fish and Wildlife if endangered species habitat is mapped in the vicinity of the project. If the agencies identify a potential impact, DCR works with the agencies to modify the project design to minimize the impacts.

*Measurable Goal/ Schedule:* Continue to comply with 401 Water Quality Certification.

### 3.3 Essential Fish Habitat

**General Permit Requirement:** According to Part I.B.2(f), discharges whose direct or indirect impacts would jeopardize any Essential Fish Habitat will not be permitted.

EPA's Response to Comments (dated 5/16/03) document determined that essential fish habitat is not jeopardized by discharges in Massachusetts. No further action is necessary by DCR to comply with this requirement.

### 3.4 National Register of Historic Places Properties

**General Permit Requirement:** Part I.B.2.(g) of the general permit states that discharges, or implementation of a storm water management program, which adversely effects properties listed or eligible to be listed on the National Register of Historic Places will not be authorized by this permit. Discharges may be eligible for coverage under this permit if the permittee is in compliance with requirements of the National Historic Preservation Act and has coordinated any necessary activities to avoid or minimize impacts. These requirements must be coordinated with the State Historic Preservation Officer. Information used to determine eligibility must be maintained as part of the Storm Water Management Program.

**DCR Programs:** During the summer of 2005, our consultant, ENSR, identified 1,403 storm water outfalls on DCR parkways, roads and facilities in urbanized areas. ENSR then compared the outfall locations to the GIS shapefile available from MassGIS that illustrates historic properties and districts in Massachusetts. ENSR identified those outfalls that are within 500 feet of a historic property or district. DCR properties that have been nominated to be listed on the National Historic Properties Registry

have also been included. DCR's Cultural Resources Review Department has reviewed each of the outfalls. The outfalls from the facilities that they feel may still have an adverse impact were forwarded to Massachusetts Historical Commission (MHC) for review. On September 18, 2006, DCR received a response letter indicating that "since there are no new construction or demolition, I have determined that the project "has no potential to cause effects" (see 36 CFR 800.3(a)(1)) to historic properties". The letters are included as an appendix of the Notice of Intent.

DCR will continue to review new outfalls associated with construction/ design projects in the programs below:

BMP 7-3: Cultural Resources Review – DCR, or its consultant, reviews all projects for impacts to historic properties during the conceptual design stage. If a potential impact is found, the Department works with the designer (DCR or consultant) and consults with Massachusetts Historical Commission to alter the design to mitigate or avoid adverse effects.

*Measurable Goal/ Schedule:* Continue to review projects for impacts to historic properties during conceptual design stage.

### 3.5 Discharges to Water Quality Impaired Waters

**General Permit Requirement:** Part I.C of the permit indicates that if a discharge from the MS4 is within the watershed of a 303(d) listed water body, then the permittee must evaluate the discharge for a series of additional requirements. Waters listed on the 303d list have been determined by Massachusetts DEP to be impaired based on monitoring data. The DEP is then responsible for creating a "pollution budget" designed to restore the health of the impaired waterbody in accordance with the Federal Clean Water Act. This pollution budget is also referred to as a Total Maximum Daily Load budget (TMDL) and includes identifying the causes (types of pollutant) and source(s) (where the pollutants come from) of the pollutant from direct discharges (point sources) and indirect discharges (non-point sources), determining the maximum amount of the pollutant that can be discharged to a specific water body to meet water quality standards, and developing a plan to meet that goal.

1. The permittee must determine whether storm water discharges from any part of the MS4 contribute; either directly or indirectly, to a 303(d) listed water body.
2. The storm water management program must include a section describing how the program will control the discharge of the pollutants of concern and ensure that the discharges will not cause an instream exceedance of the water quality standards. This discussion must specifically identify control measures and BMPs that will collectively control the discharge of the pollutant(s) of concern. Pollutant(s) of concern refer to the pollutant identified as causing the impairment.

**DCR Programs:** Most new construction and redevelopment activities undertaken by DCR are currently subject to the MA DEP’s Stormwater Management Policy and Performance Standards (BMP 5-1) through the Wetlands Protection Act and Clean Water Act Section 401 Water Quality Certification. DCR will continue to comply with this policy and will develop a Handbook (BMP 5-2) which provides guidance in the design of projects to fully comply with the Policy.

DCR has completed the inventory of drainage outfalls within urbanized areas. This inventory has been cross-referenced with DEP’s sub-basin watershed boundaries and impaired waterbodies GIS shape files to develop the table below.

**Table 4 Drainage Outfalls to Impaired Waterbodies**

Receiving Water	No. of Outfalls	Listed as Impaired?	Specify Impairment
Aberjona River	15*	yes	Cause unknown, Unionized Ammonia, Nutrients, Organic enrichment/Low DO, and Pathogens
Alewife Brook	14	yes	Metals, Nutrients, Organic enrichment/Low DO, Pathogens, Oil and grease, and Taste, odor and color
Beaver Brook	2	yes	Cause unknown, Nutrients, Siltation, Organic enrichment/Low DO, Pathogens, Taste, odor and color, and Turbidity
Blacks Nook	5*	yes	Nutrients and Noxious aquatic plants
Blackstone River and Canal	2	yes	Unknown toxicity, Priority organics, Metals, Nutrients, Organic enrichment/Low DO, Pathogens, Taste, odor and color, Suspended solids, and Turbidity
Boston Harbor	1	yes	Priority organics and Pathogens
Boston Inner Harbor	5	yes	Priority organics and Pathogens
Buttery Brook	4	yes	Priority organics, Pathogens, and Suspended solids
Charles River	268	yes	Cause unknown, Unknown toxicity, Priority organics, Metals, Nutrients, Organic enrichment/Low DO, Pathogens, Oil and grease, Taste, odor and color, Noxious aquatic plants, and Turbidity
Charles River (Milford)	2	yes	Metals, Nutrients, Organic enrichment/Low DO, Pathogens, Noxious aquatic plants
Chelsea River	53*	yes	Priority organics, Unionized Ammonia, Organic enrichment/Low DO
Dorchester Bay	99*	yes	Priority organics, Pathogens, Suspended solids, and Turbidity
Furnace Brook	34*	yes	Organic enrichment/Low DO



Receiving Water	No. of Outfalls	Listed as Impaired?	Specify Impairment
Gloucester Harbor	17	yes	Pathogens
Hampton Ponds/Pequot Pond	3	yes	Nutrients, Organic enrichment/Low DO, and Noxious aquatic plants
Jamaica Pond	45*	yes	Nutrients and Organic enrichment/Low DO
Lake Cochituate	4	yes	Priority organics and Organic enrichment/Low DO
Lynn Harbor	111*	yes	Pathogens
Malden River	103*	yes	Organic enrichment/Low DO, Pathogens, Oil and grease, Taste, odor and color, and Suspended Solids
Merrimack River	21	yes	Metals and Pathogens
Merrimack River (eastern section)	3	yes	Priority organics, Metals, Nutrients, Pathogens
Mine Brook	3	yes	Cause unknown
Mother Brook	15*	yes	Nutrients, Organic enrichment/Low DO, Pathogens, and Taste, odor and color
Muddy River	71*	yes	Priority organics, Metals, Nutrients, Siltation, Organic enrichment/Low DO, Pathogens, Oil and grease, and Taste, odor and color
Mystic River	96	yes	Metals, Nutrients, Pathogens
Nahant Bay	204*	yes	Pathogens
Neponset River (south)	8*	yes	Priority organics, Metals, Organic enrichment/Low DO, Pathogens, and Oil and grease
Neponset River (middle)	20*	yes	Priority organics, Metals, Organic enrichment/Low DO, Pathogens, Oil and grease, and Turbidity
Neponset River (estuary)	99*	yes	Priority organics, Organic enrichment/Low DO, Pathogens, and Turbidity
Outer New Bedford Harbor	4	yes	Priority organics, Nonpriority organics, Metals, Nutrients, Organic enrichment/Low DO, and Pathogens
Pine Tree Brook	53*	yes	Organic enrichment/Low DO and Pathogens
Pleasure Bay	16*	yes	Priority organics and Pathogens
Plymouth Harbor	2	yes	Pathogens
Quincy Bay	27*	yes	Priority organics and Pathogens
Saugus River	4	yes	Organic enrichment/Low DO and Pathogens
Sawmill Brook	41*	yes	Other inorganics, Organic enrichment/Low DO, Pathogens, Taste, odor and color, and Noxious aquatic plants

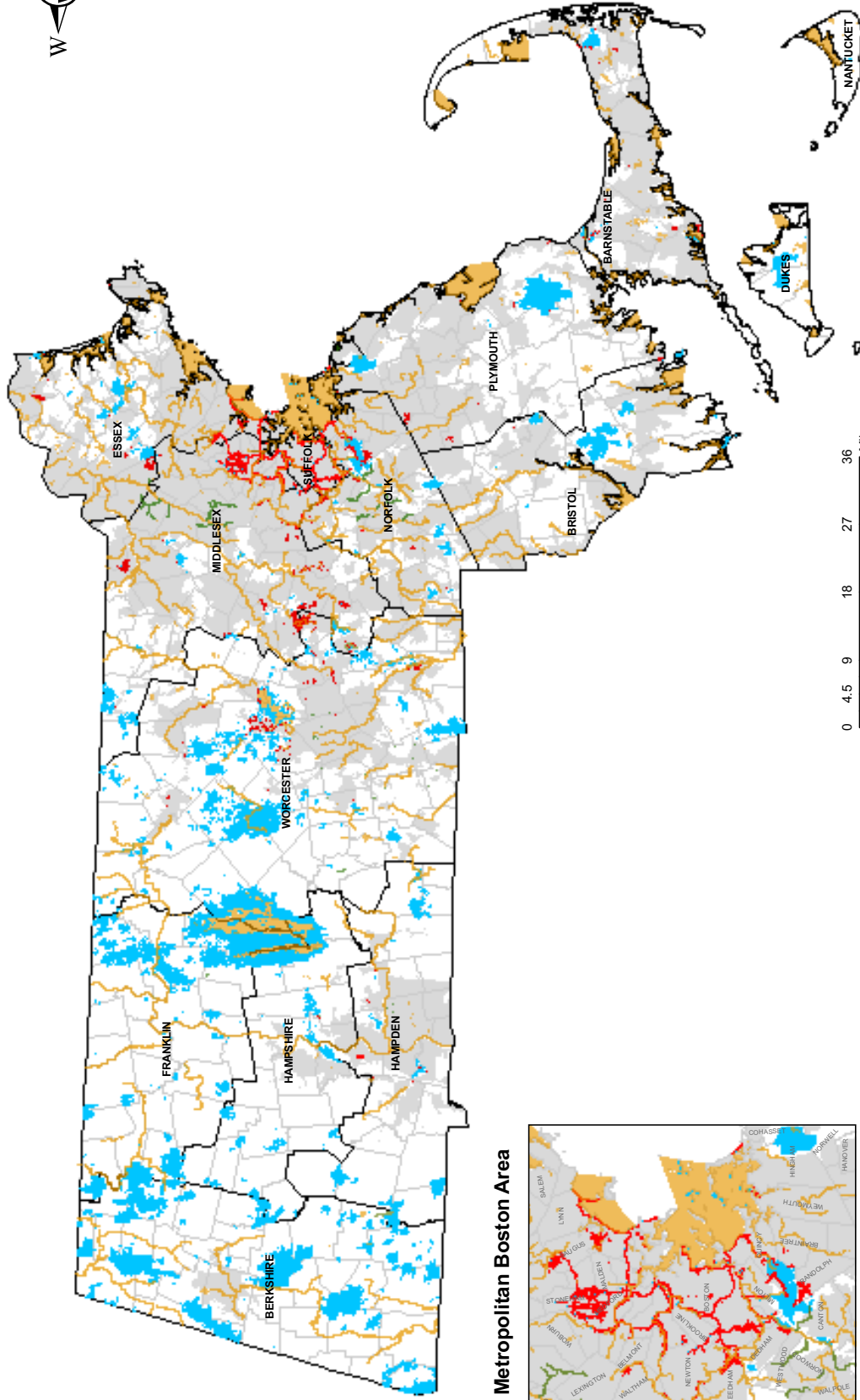
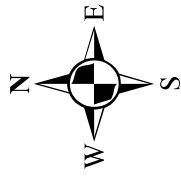


Receiving Water	No. of Outfalls	Listed as Impaired?	Specify Impairment
Shawsheen River	5	yes	Unknown toxicity and Pathogens
Spicket River	6	yes	0000, Metals, Nutrients, Pathogens
Sudbury Reservoir	3	yes	Metals
Taunton River	12	yes	Organic enrichment/Low DO and Pathogens
Weymouth Back River	17	yes	Pathogens
Weymouth Fore River	1	yes	Pathogens

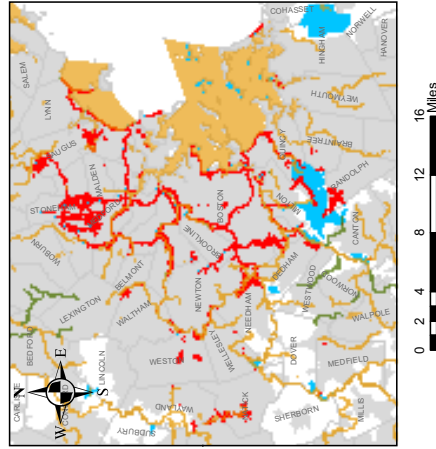
\*Number of outfalls estimated

Figure 2 summarizes DCR facilities within urbanized areas and impaired waterbodies within Massachusetts for reference. This outfalls per receiving waterbody estimate will aid DCR in identifying waterbodies where DCR may be a major contributor of storm water runoff (and therefore potentially to the pollutant load). DCR will focus on working with EPA, DEP and watershed advocacy groups for these waterbodies in developing appropriate implementation measures in waterbody's TMDL reports. The Storm Water Handbook will include requiring projects that drain to an impaired waterbody to include BMPs that control the pollutants of concern so that discharge will not cause instream exceedance of water quality standards.

DCR will continue to update outfalls per receiving waterbody table if new outfalls are identified. DCR will also work with EPA, DEP and watershed advocacy groups during the remainder of the permit term to develop appropriate implementation measures to address pollution to impaired waterbodies for those waterbodies where DCR is determined to be a significant contributor of storm water in the watershed.



Detail of Metropolitan Boston Area



- Legend**
- Urbanized Area
  - DCR Facility in UA
  - DCR Facility Outside UA
  - Mass 303d Listed Waterbodies (2002)  
Category 4a - TMDL Completed
  - Category 5 - Impaired - TMDL Required

**DCR Facilities and Roads Located in Urbanized Areas which Potentially Discharge to Impaired Waterbodies**



Figure Number

2

June 2007



### 3.6 Discharge to Waterbodies with an Approved TMDL

**General Permit Requirement:** According to Part I.D of the permit, if a discharge drains to a listed waterbody for which a Total Maximum Daily Load (TMDL) has been developed and approved by EPA, the permittee must comply with the requirements below:

1. Determine whether the approved TMDL is for a pollutant likely to be found in storm water discharges from the MS4.
2. Determine whether the TMDL includes a pollutant waste load allocation (WLA), BMP recommendations or other performance requirements for storm water discharges. This storm water WLA may be expressed in the TMDL as a gross allotment for the impaired water body. Or, provided no specific WLA for the MS4 exists, determine if a Performance Agreement or Memorandum of Understanding has been established between the MS4, EPA, and MA DEP or NH DES which modifies the BMPs or performance standards of the TMDL. Such Memoranda are posted on the TMDL websites. The Massachusetts site is: <http://www.state.ma.us/dep/brp/wm/tmdl.html>.
3. If the MS4 is required to implement storm water waste load allocation provisions of the TMDL, the permittee must assess whether the WLA is being met through implementation of existing storm water control measures or if additional control measures are necessary. The permittee's assessment of whether the WLA is being met is expected to focus on the adequacy of the permittee's storm water controls (implementation and maintenance), not on the response of the receiving water.
4. Highlight in the storm water management program and annual reports all control measures currently being implemented or planned to be implemented to control pollutants of concern identified in approved TMDLs. Also include a schedule of implementation for all planned controls. Document the assessment which demonstrates that the WLA will be met including any calculations, maintenance log books, or other appropriate controls.

**DCR Programs:** In reviewing the TMDL reports currently approved by EPA, DCR has identified the following actions necessary to meet the TMDL implementation recommendations:

BMP 7-4: Chicopee Basin, French Basin, Mill River Basin, Northern Blackstone and Connecticut Basin TMDLs – These TMDL Reports recommended that during timber harvesting practices DCR shall check that an approved forest cutting plan and BMPs for erosion are followed. DCR already meets this recommendation with current timber harvesting practices. DCR prepares a forest cutting plan for any cutting proposed within the state forests. This plan includes appropriate BMPs for erosion.

*Measurable Goal/ Schedule:* DCR will continue to follow approved forest cutting plans for any cutting proposed within the DCR forests. DCR will provide a summary table of timber harvesting activities, date forest cutting plan was approved and proposed BMPs in each annual report.

BMP 7-5: Connecticut Basin TMDL – The Bureau of Forestry coordinates and meets regularly with city and town Conservation Commissions concerning environmental, water quality, forest cutting practices act, cutting plans, and forest management best management practices. The Bureau submits all proposed and final “cutting plans to the Conservation Commission. DCR regularly meets to discuss issues and is engaged with the Conservation Commission at workshops, conferences, field reviews, etc. pertaining to forestry and its application in Massachusetts.

*Measurable Goal/ Schedule:* DCR will provide technical assistance to all towns with rural forests re: harvesting BMP's.

In addition to these programs, DCR proposes the following program to proactively participate in the development of TMDL for watersheds where DCR has facilities.

BMP 7-6: Permit Year TMDL Summary – Annual reports submitted to EPA will summarize any TMDL reports approved by EPA during the permit year which include recommendations for actions by DCR.

*Measurable Goal/ Schedule:* Include summary in annual report.

### **3.7 Part V – Additional Resources**

Part V of the General Permit includes three requirements that will be addressed by DCR current or proposed programs outlined in this section.

#### **3.7.1 Discharges to Coastal Waters with Public Swimming Beaches**

Part V.A.8 of the permit indicates that MS4s which discharge to coastal waters with public swimming beaches should consider these waters a priority in implementation of the storm water management program.

#### **3.7.2 Groundwater Recharge and Infiltration**

In accordance with Part V.A.9 of the permit, the permittee should consider opportunities for groundwater recharge and infiltration in the implementation of the minimum control measures

described in Section 3 of this report. The permittee must evaluate physical conditions, site design, and best management practices to promote groundwater recharge and infiltration where feasible in the implementation of the control measures described above. During the implementation of the storm water management program, the permittee must address recharge and infiltration for the minimum control measures as well as any reasons for electing not to implement recharge and infiltration. Loss of annual recharge to groundwater should be minimized through the use of infiltration measures to the maximum extent practicable.

Permittees in areas identified as “high” or “medium” in the most recent Massachusetts Water Resources Commission’s *Stressed Basins in Massachusetts* report in effect at the time the permittee submits a Notice of Intent and accompanying storm water management program, must minimize the loss of annual recharge to groundwater from new development and redevelopment, including but not limited to drainage improvements done in conjunction with road improvements, street drain improvement projects and flood mitigation projects, consistent with Standard 3 of the Storm Water Management Policy in areas both within and outside of the jurisdiction of the Massachusetts’ Wetlands Protection Act.

### 3.7.3 Public Drinking Water Supplies

According to Part V.C of the permit,

1. MS4s which discharge to public drinking water sources and their protection areas (Class A and B surface waters used for drinking water and well head protection areas) should consider these waters a priority in implementation of the storm water management program.
2. Discharges to public drinking water supply sources and their protection areas (wellhead protection areas, Class A and Class B waters) should provide pretreatment and spill control capabilities to the extent practicable.
3. Discharges to Class A waters, Zone 1 wellhead protection areas, and the sanitary radius to supply wells should be avoided to the extent feasible.

**DCR Programs:** •DCR has completed the inventory of drainage outfalls within urbanized areas and has mapped the above resources in Figure 6. Most new construction and redevelopment activities undertaken by DCR are currently subject to the Massachusetts DEP’s Stormwater Management Policy (BMP 5-1) and Performance Standards through the Wetlands Protection Act and Clean Water Act Section 401 Water Quality Certification. The Policy includes:

- Standard 3 which requires that the permittee meet certain requirements to minimize the loss of recharge to groundwater from a site.

- Standard 6 which provides additional protection for critical areas including ORWs (which include surface drinking water supplies) and public swimming beaches.

DCR will continue to comply with this policy and will develop a Handbook (BMP 5-1) which provides guidance in the design of projects to fully comply with the Policy and meet the public drinking water supply requirements listed above for the NPDES permit. All projects which discharge to public drinking water supply sources and their protection areas will be designed in accordance with the Storm Water Handbook. The Storm Water Handbook (BMP 5-1) will also incorporate public drinking water supply resources in prioritizing projects to be funded/ designed.

BMP 7-7: Priority Resource Area Review Program: DCR will implement a program to review the outfalls identified in the outfall inventory which discharge to one or more of the resources outlined in Part V and IX of the permit. The program will include:

- Identify outfalls which discharge to priority resource areas using the GIS database created in the outfall inventory
- Capture water quality data if determined necessary
- Review available water quality data for these outfalls
- Determine if BMPS are needed to achieve water quality standards
- Review planned construction or redevelopment within the area which could address the development of BMPs for the outfall
- If no construction project is scheduled in the near future, schedule design of BMPs in overall DCR construction schedule
- Construct BMPs as annual budgets allow

DCR feels that the implementation of the Handbook to all new construction and redevelopment projects statewide and the implementation of BMP 7-10 will adequately address the priority resources in Part V of the permit.

*Measurable Goal/ Schedule:* Implement program by March 2006. Begin to include projects for construction of BMPs in 2007 fiscal budget. Include construction of two projects in each fiscal year's initial budget.

### **3.8 Part IX – Resource Areas Required for Priority Consideration**

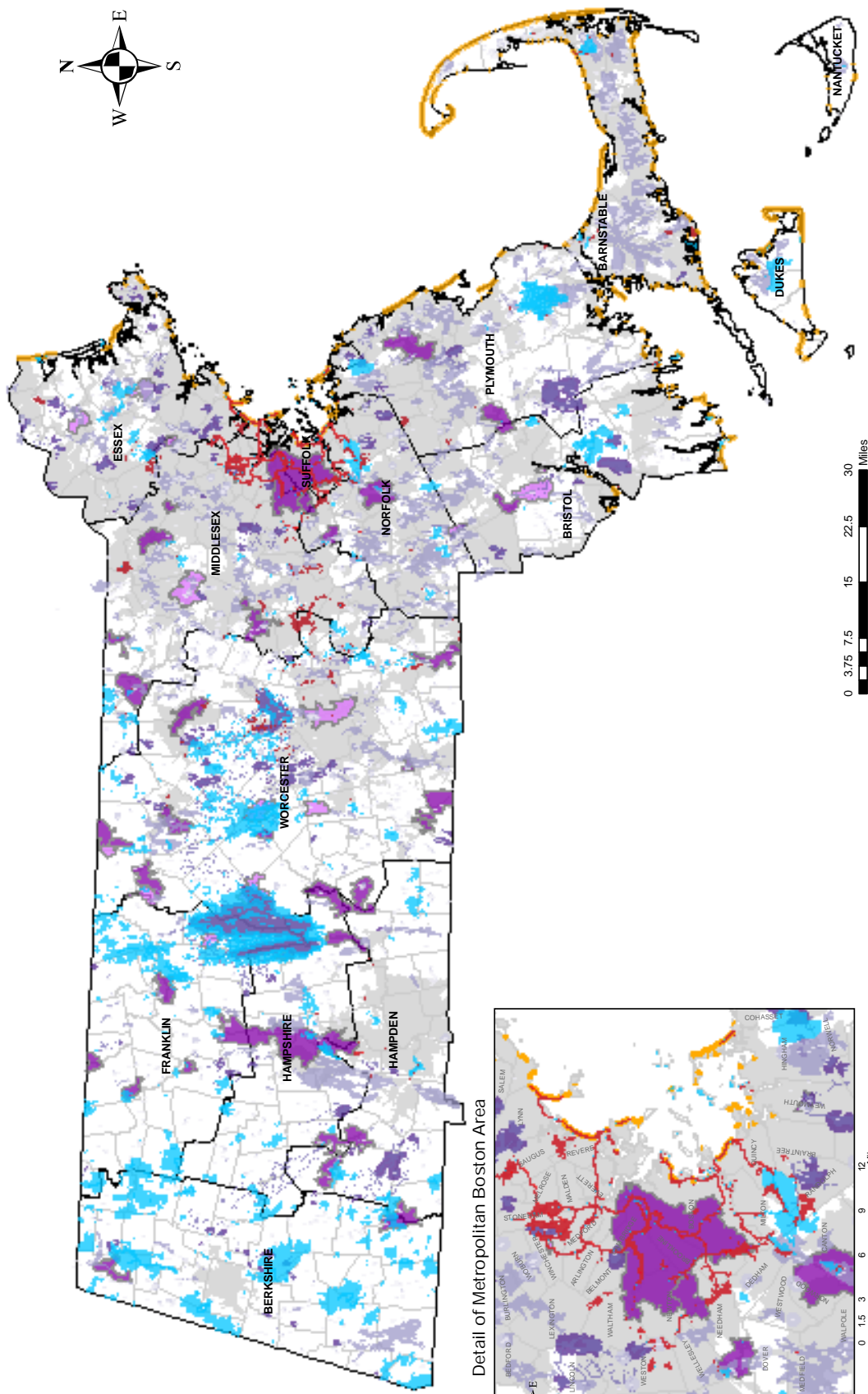
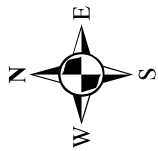


**MA DEP Requirement:** According to Part IX – 401 Water Quality Certification Requirements Section D of the permit, the permittee shall identify discharges to the following resource areas as a priority and indicate in their storm water management programs how storm water controls will be implemented. Identified priority areas include:

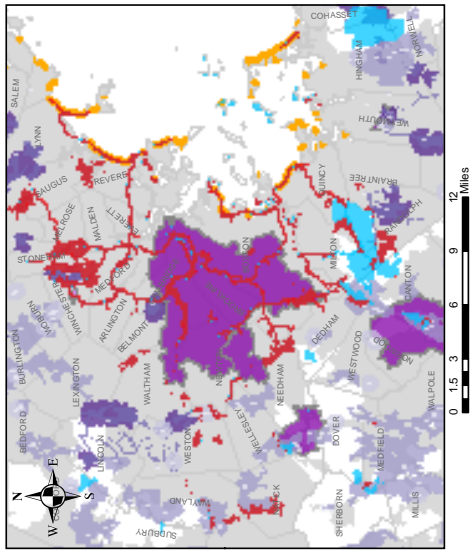
- (a) public water supplies,
- (b) public swimming beaches,
- (c) Outstanding Resource Waters (as designated in 314 CMR 4.00),
- (d) shell fishing areas (open versus closed areas)
- (e) rivers, ponds, lakes and coastal waters which are on the Department 303d list of impaired waters, and
- (f) cold water fishery river segments as identified in 314 CMR 4.00.

DCR has completed the inventory of drainage outfalls within urbanized areas and has mapped the above resources in Figure 4. DCR will incorporate prioritizing projects to be funded/ designed to incorporate these resources in the Storm Water Handbook (BMP 5-2). The Priority Resource Area Review Program (BMP 7-10) will also address priority resource areas covered under this part of the general permit. The review will include all 303d listed waterbodies which are impaired for non-point source or storm water impairments.

DCR feels that the implementation of the Handbook to all new construction and redevelopment projects statewide and the development of the Priority Resource Area Review Program (BMP 7-10), will adequately address the resources in Part IX of the permit.



Detail of Metropolitan Boston Area



- Legend**
- DCR Facility in UA
  - DCR Facility Outside UA
  - Urbanized Area
  - Public Swimming Beaches
  - MWRC Stressed Basins
    - High
    - Medium
  - Public Water Supplies
    - Zone II Wellhead Protection Areas
    - Interim Wellhead Protection Areas
    - Surface Water Supply Protection Zone A
    - Surface Water Supply Protection Zone B

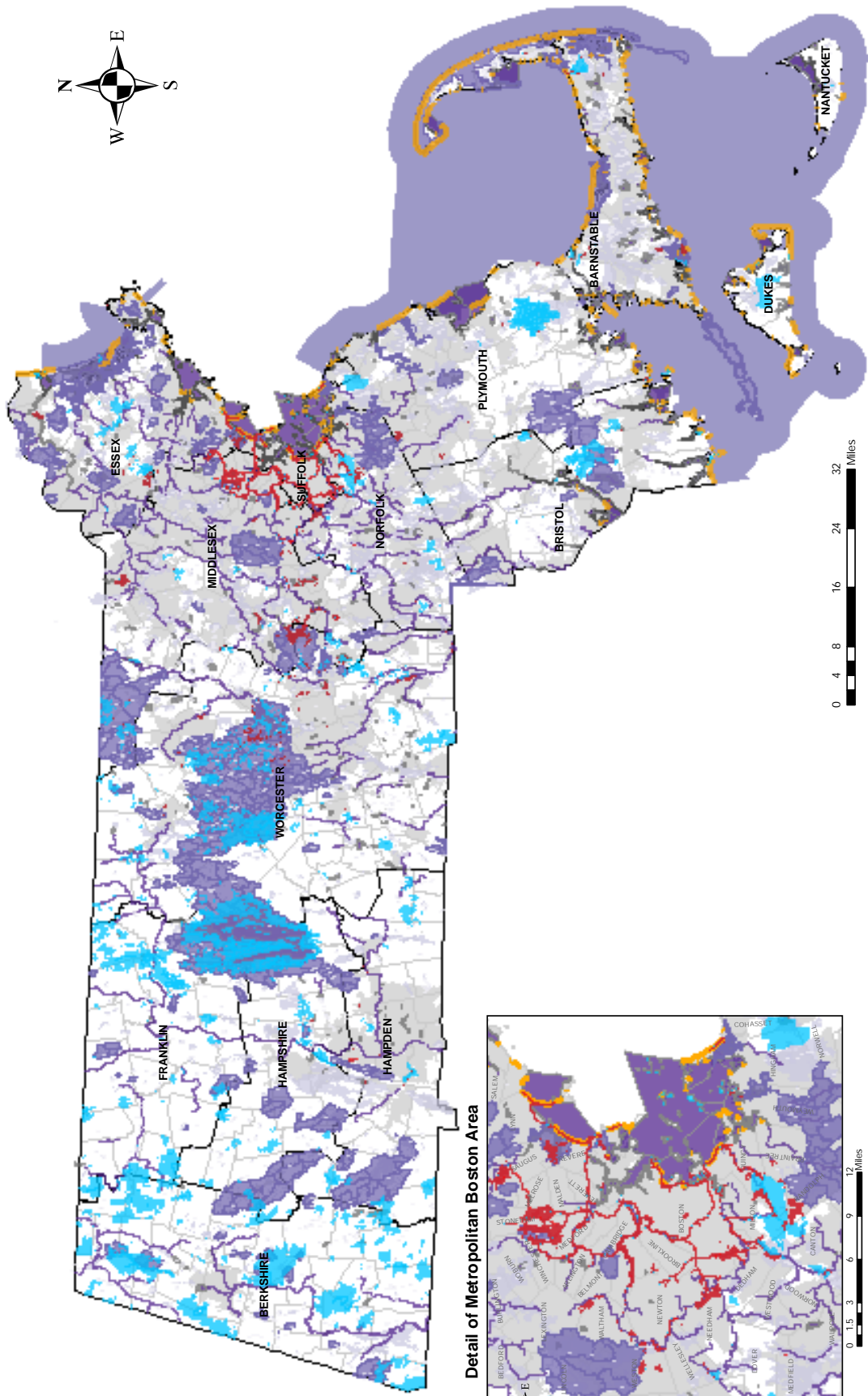
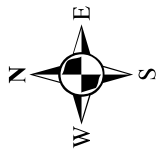
DCR Facilities and Roads Located in Urbanized Areas with Additional Resources



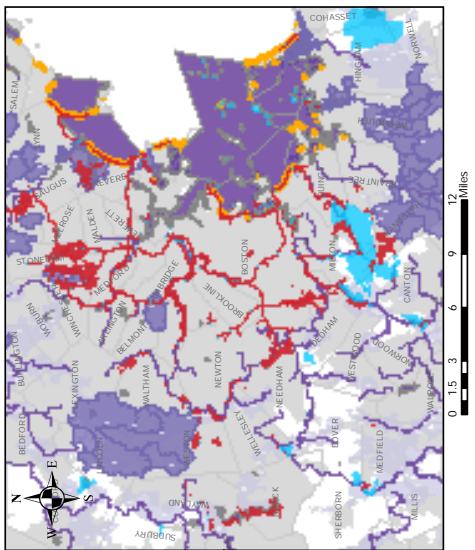
Figure Number

3

June 2007



**Detail of Metropolitan Boston Area**



- Legend**
- DCR Facility in UA
  - DCR Facility Outside UA
  - Public Swimming Beaches
  - Urbanized Area
  - Public Water Supplies
  - PWS Protection Areas
  - Shell Fishing Areas
  - Outstanding Resource Waters
  - 303d Impaired Waterbodies

**DCR Facilities and Roads Located in Urbanized Areas with Priority Consideration Resources**

June 2007



Figure Number

4



## **4.0 EVALUATION AND ASSESSMENT**

This section describes procedures for evaluation and assessment of plan implementation and effectiveness against the identified measurable goals, as well as reporting and record retention requirements.

### **4.1 Plan Evaluation**

DCR will evaluate program compliance with the required minimum control standards, the appropriateness of our identified best management practices, and progress towards achieving our identified measurable goals on an on-going basis as part of implementation of programs and during preparation of the annual report.

### **4.2 Plan Updates**

If upon evaluation, improved, additional or different controls are deemed necessary to meet the required standards or provide a more effective program, DCR will update the storm water management program plan and submit revisions to the EPA and DEP. The submission will meet the following permit requirements:

- (a) Changes adding (but not subtracting or replacing) components, controls or requirements to the SWMP may be made at any time upon written notification to EPA and MA DEP.
- (b) Changes replacing an ineffective or unfeasible BMP specifically identified in the SWMP with an alternative BMP may be requested in writing to EPA and MA DEP at any time. Unless denied, changes proposed in accordance with the criteria below shall be deemed approved and may be implemented 60 days from submittal of the request. If the request is denied, EPA or MA DEP, as applicable, will send a written explanation of the denial.
- (c) Modification requests must include the following information:
  - an analysis of why the BMP is ineffective or infeasible (including cost prohibitive),
  - expectations on the effectiveness of the replacement BMP, and
  - an analysis of why the replacement BMP is expected to achieve the goals of the BMP to be replaced.

Change requests or notifications will be in writing and signed in accordance with the signatory requirements of the permit.



The permit allows EPA or MADEP to require changes to the SWMP as needed to:

- (a) Address impacts on receiving water quality caused or contributed to by discharges from the MS4;
- (b) Include more stringent requirements necessary to comply with a new Federal statutory or regulatory requirement; or
- (c) Include such other conditions deemed necessary to comply with the goals and requirements of the CWA.

According to the permit, any changes requested by EPA or MADEP will be in writing and will set forth the time schedule for the permittee to develop the changes and offer the opportunity to propose alternative program changes to meet the objective of the requested modification.

#### **4.3 Record Keeping**

Records required by the NPDES Phase II permit and related to the implementation of this Storm Water Management Program will be maintained at 251 Causeway Street, Suite 600 Boston, MA 02114-2104. The records will include information used in the development of the storm water management program, any monitoring, copies of reports and all data used in the development of the notice of intent. DCR will retain these records for at least five (5) years. DCR will make such records accessible to the public at reasonable times during regular business hours. A reasonable fee may be charged for copying requests. DCR will not submit records to the EPA or DEP unless specifically requested to do so, except as summarized in the annual reports.

#### **4.4 Annual Reports**

Annual reports will be prepared and submitted to Region 1 EPA and MA DEP. In accordance with the general permit, the report will include:

- A self assessment review of compliance with the permit conditions;
- An assessment of the appropriateness of the BMPs included in the current plan;
- An assessment of the progress towards achieving the selected measurable goals for each minimum control measure;
- A summary of results of any information collected and analyzed (including any type of data);
- A summary of the storm water activities planned for the next reporting cycle;

- A discussion of any changes in identified Best Management Practices or measurable goals for each minimum control measure; and
- Notice of reliance on another governmental entity to satisfy some of the permit obligations (if applicable).

The report shall be submitted annually and summarize the activities of the previous permit year and planned activities for the subsequent year.



## 5.0 REFERENCES

Athayde, D.N. et al. 1983. Results of the Nationwide Urban Runoff Program, Volume I - Final Report. NTIS PB84-18555552. U.S. Environmental Protection Agency, Water Planning Division, Washington, D.C.

DEP. 1997a. Stormwater Management Volume One: Stormwater Policy Handbook. (March 1997), MA Department of Environmental Protection and MA Office of Coastal Zone Management, Boston, MA.

DEP. 1997b. Stormwater Management Volume Two: Stormwater Technical Handbook. (March 1997), MA Department of Environmental Protection and MA Office of Coastal Zone Management, Boston, MA.

Federal Register, December 8, 1999. 40 CFR Parts 9, 122, 123, and 124 National Pollutant Discharge Elimination System--Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule. pg. 68721-68851.

Hughes, Vanessa. July 26, 2005. Keeping Silver Lake Crystal Clear. Lowell Sun, Lowell, MA.

MassHighway. January 2002. The MassHighway Storm Water Handbook. MassHighway Department, Boston, MA.

USEPA. April 18, 2003. National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems. U.S. Environmental Protection Agency, Office of Water, Washington, D.C.

USEPA. April 18, 2003. Response to Comments. U.S. Environmental Agency, Office of Water, Washington, D.C.

USEPA. National Menu of Best Management Practices for NPDES Storm Water Phase II. U.S. Environmental Protection Agency, Office of Water, Washington, D.C.

USEPA. Measurable Goals Guidance for Phase II Small MS4s. U.S. Environmental Protection Agency, Office of Water, Washington, D.C.



*Department of Conservation and Recreation  
NPDES Storm Water Management Program*



**Appendix A: DCR NOI AND SCHEDULE**

Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Watershed Management  
**BRP WM 08A NPDES Stormwater General Permit**  
**Notice of Intent for Discharges from Small Municipal Separate  
Storm Sewer Systems (MS4s)**

W 067040  
Transmittal Number

MAR43001  
Facility ID (if known)

## A. Instructions

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Submission of this Notice of Intent constitutes notice that the entity named at item B1. of this form intends to be authorized by the DEP General Permit issued jointly with EPA for stormwater discharges from the small municipal separate storm sewer system (MS4), in the location identified at item B2. of this form. Submission of the Notice of Intent also constitutes notice that the party identified at item B1. has read, understands and meets the eligibility conditions of Part I.B. of the NPDES Small MS4 General Permit, agrees to comply with all applicable terms and conditions of the NPDES Small MS4 General Permit, and understands that continued authorization to discharge is contingent on maintaining eligibility for coverage. **In order to be granted coverage, all information required on BRP WM 08A, including the Stormwater Management Program Summary and Time Frames form, must be completed. Please read the permit and make sure you comply with all requirements, including the requirement to develop and implement a stormwater management program.**

## B. Applicant Information

### 1. Small MS4 Operator/Owner Information:

Massachusetts Executive Office of Environmental Affairs - Department of Conservation and Recreation  
Name  
251 Causeway Street, Suite 600  
Mailing Address  
Boston MA  
City/Town State  
(508) 509-1757 Robert.Lowell@state.ma.us  
Telephone Number Email (if available)

### 2. Municipality Name

Small MS4s serving DCR parkways, parks and facilities in various locations as identified in Table 1 (see Appendix A). Tables 2 and 3 (Appendix A) identify DCR facilities/ parkways that DCR has determined to not qualify as, or served by, a regulated Small MS4. DCR seeks EPA concurrence of this determination and has provided figures showing each facility included in Table 2 and 3 in pdf form on the CD included as Appendix A. The figures demonstrate the single building nature of the facilities included in Table 2 and the lack of development and/or conveyance systems for facilities listed in Table 3. DCR intends these figures to facilitate EPA's review of the facilities for exclusion from the MS4 permit.

City/Town

### 3. Legal Status:

Federal  City/Town  State  Tribal  Private

Other public entity: \_\_\_\_\_  
Specify Public Entity

### 4. Other regulated MS4(s) within municipal boundaries:



Massachusetts Department of Environmental Protection  
 Bureau of Resource Protection - Watershed Management  
**BRP WM 08A** NPDES Stormwater General Permit  
 Notice of Intent for Discharges from Small Municipal Separate  
 Storm Sewer Systems (MS4s)

W 067040  
 Transmittal Number

MAR43001  
 Facility ID (if known)

**D. Stormwater Management Program Summary**

**1. Public Education:**

1-1

BMP ID #

DCR Storm Water Web Page  
 Specify Best Management Practice

External Affairs/IT Dept.  
(Wendy Fox)

Responsible Dept./Person Name

Web page developed. Includes storm water related publications (inc. SWMP and NOI), information and links on web page. Annual report will be added by June 1st of each year.

Specify Measurable Goal

1-2

BMP ID #

CB Stenciling/ Plaques  
 Specify Best Management Practice

Planning and Engineering  
(Noel Baratta)

Responsible Dept./Person Name

Catch basin cleaning and repair contract includes inspection of stencil/ plaque on catchbasins at park facilities with catchbasins. Annual contract will include maintenance of stencil/ plaque as necessary.

Specify Measurable Goal

1-3

BMP ID #

Publish Water Quality Reports and Post Beaches  
 Specify Best Management Practice

Recreation (Gary Briere)

Responsible Dept./Person Name

Continue to publish water quality reports on web, maintain hotline and post beaches each summer.

Specify Measurable Goal

1-4

BMP ID #

Interactions with Boat Club Programs  
 Specify Best Management Practice

General Counsel (Tom LaRosa)

Responsible Dept./Person Name

Add to boat club permits that they must post and monitor "No Wake" zones, as the permits come up for renewal (5-year leases).

Specify Measurable Goal

1-5

BMP ID #

Mobile Water Quality Education Seminars (statewide)  
 Specify Best Management Practice

Operations (Curt Rudge)

Responsible Dept./Person Name

Provide educational events at a minimum of nine different locations during the year. These events would be in addition to the facility/program specific BMPs also listed in this SWMP.

Specify Measurable Goal

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1-6

BMP ID #

Charles River Conservancy  
 Volunteer Clean Up Program  
 Specify Best Management Practice

Operations (Pat Flynn)  
 Responsible Dept./Person Name

Continue to partner with  
 Conservancy on Charles River  
 Clean Up Program  
 Specify Measurable Goal

1-7

BMP ID #

Charles River Reservation  
 School Program  
 Specify Best Management Practice

Operations (Curt Rudge)  
 Responsible Dept./Person Name

Provide 1 storm water/ water  
 quality related educational  
 program each year.  
 Specify Measurable Goal

1-8

BMP ID #

Camp Nihan  
 Specify Best Management Practice

Operations (Curt Rudge)  
 Responsible Dept./Person Name

Provide 1 storm water/ water  
 quality related educational  
 program each year.  
 Specify Measurable Goal

1-9

BMP ID #

Quabbin Educational  
 Programs (*outside of UA*)  
 Specify Best Management Practice

Water Supply Protection (John  
 Scannell)  
 Responsible Dept./Person Name

Continue to provide multi-  
 session watershed related  
 education programs on an  
 annual basis to two schools in  
 the Quabbin Reservoir  
 watershed.  
 Specify Measurable Goal

1-10

BMP ID #

Wachusett Educational  
 Programs (*outside of UA*)  
 Specify Best Management Practice

Water Supply Protection (John  
 Scannell)  
 Responsible Dept./Person Name

Continue to provide multi-  
 session watershed related  
 education programs on an  
 annual basis to two schools in  
 the Wachusett Reservoir  
 watershed.  
 Specify Measurable Goal

1-11

BMP ID #

Project WET  
 Specify Best Management Practice

Water Supply Protection (John  
 Scannell)  
 Responsible Dept./Person Name

Maintain sponsorship of state  
 water education for teachers  
 program.  
 Specify Measurable Goal



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1-12

BMP ID #

"Downstream" Newsletter  
 Specify Best Management Practice

Water Supply Protection (John Scannell)

Responsible Dept./Person Name

Continue to develop and disseminate newsletter regarding issues relevant to Wachusett Reservoir/ Ware River/ Quabbin Reservoir watersheds twice a year.

Specify Measurable Goal

1-13

BMP ID #

Massachusetts Drinking Water Education Partnership (MADWEP)  
 Specify Best Management Practice

Recreation (Gary Briere)

Responsible Dept./Person Name

Maintain membership.

Specify Measurable Goal

1-14

BMP ID #

Low Impact Development Project  
 Specify Best Management Practice

Water Resources (Mike Gildesgame)

Responsible Dept./Person Name

Pursue the inclusion of public education component within the planning, permitting and implementation of one LID project a year.

Specify Measurable Goal

1-15

BMP ID #

DCR Storm Water Training Workshop  
 Specify Best Management Practice

Planning and Engineering (Noel Baratta)

Responsible Dept./Person Name

Provided ½ day training program to address storm water management regulation, policies and procedures relevant to DCR staff in Permit Year 3. No further action planned. Storm Water Handbook Training will provide training to similar group of staff members in Permit Year 5.

Specify Measurable Goal

1-16

BMP ID #

Ipswich River Demonstration Projects  
 Specify Best Management Practice

Water Resources (Mike Gildesgame)

Responsible Dept./Person Name

Continue to include public education and outreach in the projects funded through the EPA Watershed Grant, as appropriate.

Specify Measurable Goal

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1-17

BMP ID #

Partner with Center for Urban  
 Environmental Studies  
 Specify Best Management Practice

Chief Engineer (Noel Baratta)  
 Responsible Dept./Person Name

Partner with Northeastern  
 University to assist development  
 of new pollution control methods  
 for storm water.  
 Specify Measurable Goal

**2. Public Participation:**

2-1

BMP ID #

Formalize Partnerships with  
 CLF and CRWA  
 Specify Best Management Practice

General Counsel (Tom  
 LaRosa)  
 Responsible Dept./Person Name

Continue to work with CLF and  
 CRWA and abide by Memo of  
 Understanding (MOU)  
 Specify Measurable Goal

2-2

BMP ID #

UMass/ DCR Program to  
 Monitor WQ in target areas of  
 Wachusett Reservoir (*outside  
 of UA*)  
 Specify Best Management Practice

Water Supply Protection (John  
 Scannell)  
 Responsible Dept./Person Name

Continue program with UMass.  
 Specify Measurable Goal

2-3

BMP ID #

Public NPDES Meetings to  
 Discuss Annual Report  
 Specify Best Management Practice

Planning & Engineering (Karst  
 Hoogeboom)  
 Responsible Dept./Person Name

Once coverage is received, hold  
 one meeting at three locations  
 each year for internal staff,  
 interested parties and public  
 after submitting annual report.  
 Track and record comments  
 received and include in next  
 year's annual report.  
 Specify Measurable Goal

2-4

BMP ID #

Partnership and Friends  
 Database  
 Specify Best Management Practice

External Affairs (Wendy Fox)  
 Responsible Dept./Person Name

Send an annual letter regarding  
 storm water/ NPDES issues to  
 the watershed advocacy groups  
 included in their Partnership and  
 Friends database.  
 Specify Measurable Goal

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<u>2-5</u> BMP ID # Storm Water Related Concerns/ Feedback Reported on DCR Web Site Specify Best Management Practice	<u>External Affairs (Wendy Fox)</u> Responsible Dept./Person Name	Continue to maintain staffing to forward concerns/ feedback to appropriate department and track response to concerns submitted by the public via DCR's web site. Specify Measurable Goal
<u>2-6</u> BMP ID # DCR Stewardship Council Specify Best Management Practice	<u>External Affairs (Wendy Fox)</u> Responsible Dept./Person Name	Continue to participate. Specify Measurable Goal
<u>2-7</u> BMP ID # Massachusetts Water Resource Commission (MWRC) Specify Best Management Practice	<u>Water Supply Protection (John          Scannell)</u> Responsible Dept./Person Name	Continue to be involved in program and provide technical and staff support to MWRC. Specify Measurable Goal
<u>2-8</u> BMP ID # Lakes and Ponds Program Specify Best Management Practice	<u>Water Supply Protection (John          Scannell)</u> Responsible Dept./Person Name	Continue to sponsor program. Specify Measurable Goal

**3. Illicit Discharge Detection and Elimination:**

<u>3-1</u> BMP ID # Drainage Outfall Inventory Specify Best Management Practice	<u>Planning &amp; Engineering (Karst          Hoogeboom)</u> Responsible Dept./Person Name	DCR has located all known outfalls owned and operated by DCR within urbanized areas. Specify Measurable Goal
<u>3-2</u> BMP ID # Drainage Inventory Specification Specify Best Management Practice	<u>Chief Engineer (Noel          Baratta/ENSR)</u> Responsible Dept./Person Name	DCR will develop and implement a Drainage Inventory Specification which will require submission of drainage infrastructure information from construction and redevelopment projects to add to the infrastructure database. Specify Measurable Goal

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3-3

BMP ID #

Illicit Drainage Connection  
 Policy

Specify Best Management Practice

General Counsel (Tom  
 LaRosa )

Responsible Dept./Person Name

DCR is preparing a policy prohibiting illicit discharges to the DCR storm water system. The Policy will be finalized and issued. Enforcement will be through the AG's office if necessary.

Specify Measurable Goal

3-4

BMP ID #

Drainage Infrastructure  
 Inventory

Specify Best Management Practice

Chief Engineer (Noel Baratta)

Responsible Dept./Person Name

Identify DCR's roadway, parkway and boulevard drainage infrastructure and add to GIS Drainage Outfall Inventory/ database.

Specify Measurable Goal

3-5

BMP ID #

Illicit Connection Sampling  
 Program

Specify Best Management Practice

Planning & Engineering (Noel  
 Baratta )

Responsible Dept./Person Name

Prioritize and review known potential illicit connections. Once DCR, or its consultant, completes large portions of the drainage infrastructure inventory, develop a priority area list and focus on those systems. Summarize systems reviewed, the outcome of the reviews and any proposed follow up work in each annual report. Include the priority areas list for the next permit year in each annual report..

Specify Measurable Goal

3-6

BMP ID #

Drainage Tie-In Policy

Specify Best Management Practice

General Counsel/ Chief  
 Engineer (Tom LaRosa/ Noel  
 Baratta)

Responsible Dept./Person Name

Develop a SOP regarding drainage tie-ins from private entities to DCR MS4s.

Specify Measurable Goal

3-7

BMP ID #

Develop Storm Water Control  
 Agreements with Other MS4s

Specify Best Management Practice

General Counsel (Tom  
 LaRosa )

Responsible Dept./Person Name

DCR will implement a program to work cooperatively with operators of interconnected MS4s in the instance where storm water discharges impact either system. DCR will develop control agreements with the discharging municipality.

Specify Measurable Goal

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**4. Construction Site Runoff Control:**

<p>4-1          BMP ID #          NPDES Storm Water          Construction General Permit          Specify Best Management Practice</p>	<p>Planning &amp; Engineering (Karst          Hoogeboom)          Responsible Dept./Person Name</p>	<p>Summarize number of          construction sites which filed for          coverage under the CGP each          year. All projects which exceed          one acre threshold will submit for          coverage.          Specify Measurable Goal</p>
<p>4-2          BMP ID #          E&amp;S/ NPDES Contract Bid          Item and Special Provisions          Specify Best Management Practice</p>	<p>Planning &amp; Engineering (Karst          Hoogeboom)          Responsible Dept./Person Name</p>	<p>Prepare contract bid item and          special provisions. Include in all          new contracts which disturb          more than one acre. Bid item          will include erosion control          specifications.          Specify Measurable Goal</p>
<p>4-3          BMP ID #          Construction SWPPP          Template          Specify Best Management Practice</p>	<p>Planning &amp; Engineering (Karst          Hoogeboom)          Responsible Dept./Person Name</p>	<p>DCR will develop a SWPPP          Template for use by Contractors          on DCR projects. Template will          be placed on DCR website for          download by contractors.          Specify Measurable Goal</p>
<p>4-4          BMP ID #          Construction Site Monitoring          Specify Best Management Practice</p>	<p>Planning &amp; Engineering (Karst          Hoogeboom)          Responsible Dept./Person Name</p>	<p>Continue to staff each          construction project with either a          Resident Engineer or Inspector.          Responsibilities include          completion of weekly NPDES          CGP inspections when required.          Specify Measurable Goal</p>
<p>4-5          BMP ID #          On-going Construction          Projects Web Page          Specify Best Management Practice</p>	<p>External Affairs/ IT Dept.          (Wendy Fox)          Responsible Dept./Person Name</p>	<p>DCR will maintain the          construction related web page          that includes information          regarding on-going DCR          construction projects. Add link          for receiving public comments          regarding construction activities          by end of Permit Year 5.          Specify Measurable Goal</p>

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<p><u>4-6</u>          BMP ID #          Annual Erosion Prevention/          Sediment Control Training          Specify Best Management Practice</p>	<p><u>Planning &amp; Engineering (Karst          Hoogeboom)</u>          Responsible Dept./Person Name</p>	<p>Provide annual training to DCR          construction management staff.          Report number of attendees,          topics covered and dates of  <u>training in annual report.</u>          Specify Measurable Goal</p>
<p><u>4-7</u>          BMP ID #          Technical Assistance to          ConComs          Specify Best Management Practice</p>	<p><u>Water Supply Protection (John          Scannell)</u>          Responsible Dept./Person Name</p>	<p>Continue to provide technical          assistance and the staffing level          necessary to provide timely  <u>responses.</u>          Specify Measurable Goal</p>
<p><u>4-8</u>          BMP ID #          Contract Bid Item and Special          Provisions Enforceability          Specify Best Management Practice</p>	<p><u>Planning &amp; Engineering (Karst          Hoogeboom)</u>          Responsible Dept./Person Name</p>	<p>Include notice defining the          procedure for following up with          contractors regarding storm          water related problems identified          at construction sites in all new          contracts by the end of Permit  <u>Year 4.</u>          Specify Measurable Goal</p>
<p><u>4-9</u>          BMP ID #          Construction Runoff          Enforcement from DCR and/or          Offsite Construction Pollution          Specify Best Management Practice</p>	<p><u>General Counsel (Tom          LaRosa )</u>          Responsible Dept./Person Name</p>	<p>Refer offsite/ non-DCR          construction projects that are          causing construction related          pollution on DCR property to          Attorney General's office as          necessary. Refer to EPA as  <u>appropriate.</u>          Specify Measurable Goal</p>
<p><u>4-10</u>          BMP ID #          Utility/ Drainage Tie-In Permit          Specify Best Management Practice</p>	<p><u>Permitting (Don Guidobone)</u>          Responsible Dept./Person Name</p>	<p>Continue to require all offsite          projects which need to tie into a          DCR MS4 to receive a permit  <u>under this program.</u>          Specify Measurable Goal</p>

Also see BMP 2-5: Storm Water Related Concerns/ Feedback Reported on DCR Web Site

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**5. Post Construction Runoff Control:**

5-1

BMP ID #

Compliance with MA DEP  
 Stormwater Management  
 Policy

Specify Best Management Practice

Planning & Engineering (Karst  
 Hoogeboom)

Responsible Dept./Person Name

Apply Stormwater Management  
 Policy Guidelines to all  
 development/ redevelopment  
 projects.

Specify Measurable Goal

5-2

BMP ID #

DCR Storm Water Handbook

Specify Best Management Practice

Planning & Engineering (Karst  
 Hoogeboom)

Responsible Dept./Person Name

Develop Handbook and issue  
 department-wide and to  
 Contractors. New projects will  
 be designed in accordance with  
 the Handbook.

Specify Measurable Goal

5-3

BMP ID #

Storm Water Handbook  
 Training

Specify Best Management Practice

Director of Human Resources  
 (Johanna Zabriskie)

Responsible Dept./Person Name

Provide 2 seminars within 6  
 months of issuing handbook to  
 train internal personnel and  
 consultants. Provide annual  
 seminars thereafter. Record # of  
 attendees and dates of training.

Specify Measurable Goal

5-4

BMP ID #

BMP Long-Term Operation  
 and Maintenance

Specify Best Management Practice

Planning & Engineering /  
 Operations (Karst  
 Hoogeboom/ Jonathan Yeo)

Responsible Dept./Person Name

DCR has committed 1.9 million  
 dollars annually to provide long-  
 term maintenance of BMPs on  
 the schedule indicated in the  
 Maintenance Activity Schedule  
 of the SWMP.

Specify Measurable Goal

5-5

BMP ID #

Low Impact Development  
 Projects

Specify Best Management Practice

Water Resources (Mike  
 Gildesgame)

Responsible Dept./Person Name

Actively work on the planning,  
 permitting and implementation of  
 one Low Impact Development  
 (LID) project each year.

Specify Measurable Goal

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5-6

BMP ID #

Walden Pond Storm Water  
 Improvements (*outside of UA*)  
 Specify Best Management Practice

Planning & Engineering (Karst  
 Hoogeboom)  
 Responsible Dept./Person Name

Complete design of storm water  
 improvements and install.  
 Specify Measurable Goal

5-7

BMP ID #

Post Construction Runoff  
 Enforcement from Offsite  
 Pollution  
 Specify Best Management Practice

Planning & Engineering (Karst  
 Hoogeboom)  
 Responsible Dept./Person Name

Refer off site projects that runoff  
 to DCR property to Attorney  
 General's office as necessary.  
 Specify Measurable Goal

5-8

BMP ID #

Ipswich River EPA Targeted  
 Watershed Grant – Low  
 Impact Development (LID)  
 Subdivision Demonstration  
 Project  
 Specify Best Management Practice

Water Resources (Mike  
 Gildesgame)  
 Responsible Dept./Person Name

The DCR received a \$1.04  
 million grant from the  
 Environmental Protection  
 Agency's Targeted Watershed  
 program to demonstrate an  
 integrated approach to  
 addressing the problems facing  
 the Ipswich River. This approach  
 encompasses two strategies:

- Low-Impact Development (LID) – landscaping and design techniques that capture stormwater and recharge it to the groundwater
- Water Conservation – education strategies and technologies that reduce demands on water supplies, and associated groundwater pumping, especially during dry months

Specify Measurable Goal

5-8a

BMP ID #

Ipswich River EPA Targeted  
 Watershed Grant – Green  
 Roof Demonstration Project  
 Specify Best Management Practice

Water Resources (Mike  
 Gildesgame)  
 Responsible Dept./Person Name

Monitor quality and quantity of  
 runoff from the green roof at  
 Whipple Annex and conventional  
 roof at Ipswich Town Hall.  
 Summarize results and include  
 in annual report  
 Specify Measurable Goal



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5-8b

BMP ID #

Ipswich River EPA Targeted  
 Watershed Grant – Permeable  
 Paving Demonstration Project  
 Specify Best Management Practice

Water Resources (Mike  
 Gildesgame)

Responsible Dept./Person Name

Continue groundwater quality  
 sampling for one year upon  
 completion of project  
 construction. Summarize results  
 in annual report.

Specify Measurable Goal

5-8c

BMP ID #

Ipswich River EPA Targeted  
 Watershed Grant – LID at  
 Silver Lake  
 Specify Best Management Practice

Water Resources (Mike  
 Gildesgame)

Responsible Dept./Person Name

Perform sampling of stormwater  
 volumes and water quality for  
 one year upon completion of  
 project construction. Summarize  
 results versus pre-construction in  
 Year 5 annual report.

Specify Measurable Goal

5-8d

BMP ID #

Ipswich River EPA Targeted  
 Watershed Grant – Rainwater  
 Harvesting  
 Specify Best Management Practice

Water Resources (Mike  
 Gildesgame)

Responsible Dept./Person Name

Continue data collection of  
 outdoor water use or each  
 participating household with  
 rainwater harvesting systems  
 through the irrigation seasons of  
 2007 and 2008. Compare use  
 with historic records and  
 summarize in annual report.  
 Install large underground  
 system.

Specify Measurable Goal

5-8e

BMP ID #

Ipswich River EPA Targeted  
 Watershed Grant – LID Ball  
 Field  
 Specify Best Management Practice

Water Resources (Mike  
 Gildesgame)

Responsible Dept./Person Name

Begin data collection of water  
 use and continuous soil moisture  
 retention on field in 2007 and  
 continue through summer of  
 2008.

Specify Measurable Goal

5-8f

BMP ID #

Ipswich River EPA Targeted  
 Watershed Grant – Weather  
 Based Irrigation  
 Specify Best Management Practice

Water Resources (Mike  
 Gildesgame)

Responsible Dept./Person Name

Compile and analyze post-  
 installation water use records for  
 the 25 weather-based irrigation  
 controllers through summer  
 2008. Summarize in annual  
 report.

Specify Measurable Goal

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**6. Municipal Good Housekeeping:**

6-1  
 BMP ID #

Vehicle Washing Policy  
 Specify Best Management Practice

Operations (Jonathan Yeo)  
 Responsible Dept./Person Name

Maintain practice of washing vehicles at off-site locations. Develop into state-wide written policy and implement.  
 Specify Measurable Goal

6-2  
 BMP ID #

Floor Drain Policy  
 Specify Best Management Practice

Planning & Engineering (Karst Hoogeboom)  
 Responsible Dept./Person Name

Maintain plan for floor drain use and servicing.  
 Specify Measurable Goal

6-3  
 BMP ID #

CB Cleaning Policy  
 Specify Best Management Practice

Chief Engineer / Operations (Noel Baratta/ Jonathan Yeo)  
 Responsible Dept./Person Name

DCR will develop a written plan for regular catch basin cleaning to be implemented in DCR's fiscal year 2006 and thereafter.  
 Specify Measurable Goal

6-4  
 BMP ID #

CB Inspection/ Repair Policy  
 Specify Best Management Practice

Chief Engineer / Operations (Noel Baratta/ Jonathan Yeo)  
 Responsible Dept./Person Name

DCR will develop an agency wide policy for implementing schedule for inspecting catch basins and prioritizing repairs of catch basins and implement.  
 Specify Measurable Goal

6-5  
 BMP ID #

Street Sweeping Policy  
 Specify Best Management Practice

Operations (Jonathan Yeo)  
 Responsible Dept./Person Name

Create and implement agency-wide policy.  
 Specify Measurable Goal

6-6  
 BMP ID #

IPM Policy  
 Specify Best Management Practice

Water Supply Protection (John Scannell)  
 Responsible Dept./Person Name

Create and implement agency-wide policy.  
 Specify Measurable Goal

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<p>6-7          BMP ID #  <u>VMP Training</u>          Specify Best Management Practice</p>	<p>Planning &amp; Engineering (Karst Hooeboom)          Responsible Dept./Person Name</p>	<p>Provide training on DCR Vegetation Management Plan (VMP) to internal maintenance staff once every two years.          Specify Measurable Goal</p>
<p>6-8          BMP ID #  <u>Chemical Applications Meetings</u>          Specify Best Management Practice</p>	<p>Water Supply Protection (Mike Gildesgame)          Responsible Dept./Person Name</p>	<p>Meet with railroad and utility companies which have property, easements or access privileges within the Division of Water Supply Protection's (DWSP) watershed lands bi-annually.          Specify Measurable Goal</p>
<p>6-9          BMP ID #  <u>EMS</u>          Specify Best Management Practice</p>	<p>Planning &amp; Engineering (Karst Hooeboom)          Responsible Dept./Person Name</p>	<p>Continue to provide first response for emergency management situations such as spills and/ or coordinate with Mass. State Police, as appropriate.          Specify Measurable Goal</p>
<p>6-10          BMP ID #  <u>Waste Disposal</u>          Specify Best Management Practice</p>	<p>Planning &amp; Engineering / Dir. of Operations (Karst Hooeboom/ Jonathan Yeo)          Responsible Dept./Person Name</p>	<p>DCR will continue to properly dispose of waste and include in budgets.          Specify Measurable Goal</p>
<p>6-11          BMP ID #  <u>Beneficial Use Determination</u>          Specify Best Management Practice</p>	<p>Planning &amp; Engineering (Karst Hooeboom)          Responsible Dept./Person Name</p>	<p>DCR will work to determine a beneficial use determination (BUD) for catch basin residuals. Prepare plan for review by DEP by the end of Permit Year 5.          Specify Measurable Goal</p>
<p>6-12          BMP ID #  <u>Maintain Spill Prevention Control and Countermeasure (SPCC) Plans</u>          Specify Best Management Practice</p>	<p>Planning &amp; Engineering (Karst Hooeboom)          Responsible Dept./Person Name</p>	<p>DCR has completed plans for the required sites. DCR will continue to maintain compliance with the requirements in these plans.          Specify Measurable Goal</p>

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6-13

BMP ID #

Roadway and Drainage  
 Infrastructure Assessment  
 Specify Best Management Practice

Chief Engineer (Noel Baratta /  
 ENSR)  
 Responsible Dept./Person Name

Perform annual state-wide  
 assessment of DCR roadway  
 and infrastructure conditions.  
 Create assessment report  
 summarizing the drainage  
 infrastructure and roadway in  
 need of repair and/ or  
 maintenance.

Specify Measurable Goal

6-14

BMP ID #

CB Repair/ Discharge Pipe  
 Cleaning Needs Assessment  
 Specify Best Management Practice

Planning & Engineering/  
 Operations (Noel Baratta /  
 Jonathan Yeo)  
 Responsible Dept./Person Name

Perform an annual state wide  
 assessment of the condition and  
 cleaning requirements of visible  
 proximate DCR lateral piping  
 and catch basin repair needs.  
 Pilot project in 2005. Agency  
 wide program in 2006. Annual  
 reports will summarize piping  
 requiring cleaning and catch  
 basin to be repaired and report  
 on progress.

Specify Measurable Goal

6-15

BMP ID #

Wet Weather Review and  
 Repairs  
 Specify Best Management Practice

Operations/ Chief Engineer  
 (Jonathan Yeo/ Noel Baratta)  
 Responsible Dept./Person Name

DCR will annually review roads  
 and parking lots within urbanized  
 areas during wet weather  
 conditions to identify areas of  
 ponding or flooding each year.  
 DCR will develop a priority list,  
 budget and schedule for  
 necessary repairs identified.

Specify Measurable Goal

6-16

BMP ID #

Develop/ implement short term  
 measures for Fenway,  
 Riverway, Jamaica Way and  
 Blue Hill Parkway to address  
 concerns raised by CLF and  
 CRWA  
 Specify Best Management Practice

Operations (Jonathan Yeo)  
 Responsible Dept./Person Name

Implement measures. Continue  
 to note progress to CLF, CRWA  
 and EPA in periodic reports until  
 fully addressed.

Specify Measurable Goal

Massachusetts Department of Environmental Protection  
 Bureau of Resource Protection - Watershed Management  
**BRP WM 08A** NPDES Stormwater General Permit  
 Notice of Intent for Discharges from Small Municipal Separate  
 Storm Sewer Systems (MS4s)

W 067040  
 Transmittal Number

MAR43001  
 Facility ID (if known)

6-17

BMP ID #

Maintenance Tracking System  
 Specify Best Management Practice

Planning & Engineering/  
 Operations (Karst  
 Hoogeboom/ Jonathan Yeo)  
 Responsible Dept./Person Name

Develop a maintenance tracking  
 system. Add storm water  
 infrastructure information  
 inventoried in BMP 3-4. Include  
 inspection/ maintenance  
 schedule and create reports of  
 BMPs that are "scheduled" for  
 cleaning.

Specify Measurable Goal

6-18

BMP ID #

Maintenance Activity Schedule  
 Specify Best Management Practice

Operations ( Jonathan Yeo)  
 Responsible Dept./Person Name

Maintain infrastructure and  
 roadways in compliance with  
 maintenance activity schedule.

Specify Measurable Goal

**7. BMPs for Additional Requirements of General Permit:**

7-1

BMP ID #

Wetland Protection Act  
 Compliance  
 Specify Best Management Practice

Planning & Engineering/  
 Operations (Noel Baratta /  
 Jonathan Yeo)  
 Responsible Dept./Person Name

Continue compliance with WPA.  
 Specify Measurable Goal

7-2

BMP ID #

401 Water Quality Certification  
 Specify Best Management Practice

Planning & Engineering/  
 Operations (Noel Baratta /  
 Jonathan Yeo)  
 Responsible Dept./Person Name

Continue compliance with 401  
 WQ Certification.  
 Specify Measurable Goal

7-3

BMP ID #

Cultural Resources Review  
 Specify Best Management Practice

Chief Archeologist (Tom  
 Mahlstead)  
 Responsible Dept./Person Name

Continue to review potential  
 impact to historic properties  
 during conceptual design stage.  
 Specify Measurable Goal

Massachusetts Department of Environmental Protection  
 Bureau of Resource Protection - Watershed Management  
**BRP WM 08A** NPDES Stormwater General Permit  
 Notice of Intent for Discharges from Small Municipal Separate  
 Storm Sewer Systems (MS4s)

W 067040  
 Transmittal Number

MAR43001  
 Facility ID (if known)

7-4

BMP ID #

**Chicopee Basin, French Basin, Mill River Basin, Northern Blackstone and Connecticut Basin TMDLs –**  
 During timber harvesting practices, DCR shall check that an approved forest cutting plan and BMPs for erosion are followed.

Specify Best Management Practice

Water Supply Protection /  
 Chief Forester (John Scannell/  
Jim Dimaio)

Responsible Dept./Person Name

Provide summary table of timber harvesting activities, date forest cutting plan was approved and proposed BMPs in each annual report.

Specify Measurable Goal

7-5

BMP ID #

**Connecticut Basin TMDL –**  
 Provide training to local ConCom on harvesting BMPs.

Specify Best Management Practice

Chief Forester (Jim Dimaio)

Responsible Dept./Person Name

Provide technical assistance to all towns with rural forests re: harvesting BMP's.

Specify Measurable Goal

7-6

BMP ID #

Permit Year TMDL Summary

Specify Best Management Practice

Planning & Engineering (Karst Hoozeboom)

Responsible Dept./Person Name

Include summary of TMDL reports approved by EPA during the previous permit year which include recommendations for actions by DCR in annual report.

Specify Measurable Goal

7-7

BMP ID #

Priority Resource Area Review Program

Specify Best Management Practice

Planning & Engineering (Karst Hoozeboom)

Responsible Dept./Person Name

Implement a program to review the outfalls identified in the outfall inventory which discharge to one or more of the resources outlined in Part V and IX of the permit.

Specify Measurable Goal

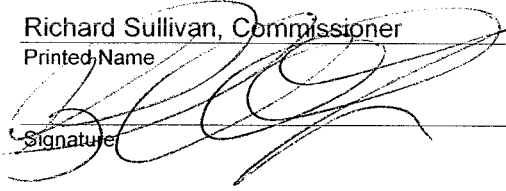
**BRP WM 08A** NPDES Stormwater General Permit  
Notice of Intent for Discharges from Small Municipal Separate  
Storm Sewer Systems (MS4s)

**E. 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.

Richard Sullivan, Commissioner  
Printed Name

Signature



7/23/07  
Date



## **APPENDIX A: FACILITY LIST**





EPA has required that all regulated separate storm sewer systems within urbanized areas owned and operated by DCR must be included in the SWMP. “Urbanized Area” is defined as a land area comprising one or more places —central place(s) — and the adjacent densely settled surrounding area — urban fringe — that together have a residential population of at least 50,000 and an overall population density of at least 1,000 people per square mile. The urbanized area (UA) designation is based on the results of the latest census – the 2000 Census for this permit. Table 1 summarizes the facilities and parkways with small MS4 systems which are located entirely or partially within urbanized areas and are therefore subject to the NPDES Phase II permit. These determinations were made based on the urbanized area GIS datalayers provided by EPA, DCR datalayers/ databases indicating land owned and operated by the Department and field visits to identify outfalls from drainage systems.

**Table 1 DCR Individual Facilities Located within Urbanized Area and Served by MS4s**

<b>State Forests</b>	
Lowell-Dracut-Tyngsboro State Forest	Shawme-Crowell State Forest (including Sandwich State Forest)
<b>Parks/ Reservations</b>	
Abigail Adams State Park (including Back River Reservation, Bare Cove Park, Great Esker Park, Weymouth Back River)	Ames Nowell State Park (including Cleveland Pond)
Alewife Brook Reservation (including Alewife Brook, Blair Pond, Dilboy Pool & Stadium, Little River, and Silver Maple Forest)	Beaver Brook Reservation (including Beaver Brook Little Pond Reservation and Beaver Brook Spray Deck)
Ashland State Park (including Ashland Reservoir)	Belle Isle Marsh Reservation (including Porazzo Rink)
Blackstone River & Canal HSP (including Blackstone Gorge, Hassanamesitt Woods, Lookout Rock, Millville Lock, Plummers Landing, Rice City Pond, and River Bend Farm Visitors Center)	Blue Hills Reservation (including Boyce Hill, Brookwood Farm, Buck Hill, Canton Airport, DCR Canton, Great Blue Hill, Hancock Hill, Hemenway Hill, Hillside Pond, Houghton Hill, Houghton’s Pond Recreation Area, Inidan Line Farm, Metropolis Rink, Quincy Quarries Reservation, Shea Rink, Trailside Museum, Tucker Hill, Ulin Rink, and Wolcott Hill)
Boston Harbor Islands State Park (including Bumpkin Island, Calf Island, DCR Hingham, Deer Island (including Fort Dawes), Gallops Island, George’s Island (including Fort Warren), Grape Island, Great Brewster Island, Green Island, Hangman Island, Little Calf Island, Long Island, Lovells Island (includes Fort Standish), Middle Brewster Island, Moon Island, Nut Island, Outer Brewster Island, Peddocks Island (includes Fort Andrews), Raccoon Island, Rainsford Island, Sheep Island, Slate Island, and Spectacle Island)	Charles River Reservation (including Artesani Playground Wading Pool, Brighton-Allston Pool, Brighton Upper Basin Facility, Brook Farm Historic District, Cambridge Esplanade, Cannalouga Park, Charles River Bank Park, Charles River Basin and Esplanade, Charles River Dam, Charlesbank Park, Christian A. Herter Park, Connors Pool, Daly Field, Daly Recreation Center, CDR Cambridge, Dealtry Memorial Pool, Dr. Paul Dudley White Bike Path, Echo Bridge, Eliot Bridge, Elm Bank Reservation, Forest Grove Reservation, Hatch Shell, Herter Park West, JFK Park, Landry Park/ Lakes District, Lee Memorial Pool/ Wading Pool, Lower Basin, Magazine Beach, Memorial Drive, Med’s Hall Acre, Paul Revere Park, Red Wing Bay, Riverdale Park, Riverside Park, Squibnocket Park, Teddy Ebersol Red Sox Fields at Lederman Park, Upper Basin, Veterans Memorial Swimming and Wading Pool, Village Falls Park, and Watertown Dam)



**Table 1 DCR Individual Facilities Located within Urbanized Area and Served by MS4s**

<b>Parks/Reservations (continued)</b>	
Breakheart Reservation	Cape Cod Rail Trail
City Square Park (including DCR Charlestown)	Columbia Road Park
Cochituate State Park	Constitution Beach
Commercial Point	Dunn Pond State Park
Elm Bank	Fellsmere Park
Franklin Park Zoo	Ft. Phoenix Beach State Reservation
Fall River Heritage State Park (including Battleship Cove, Fall River State Pier, George Bullard House, and Mt. Hope Bay)	Foss Park (including Latta Pool)
Hammond Pond Reservation (including Fisher Hill Reservoir and Gatehouse)	Hampton Ponds State Park
Holyoke Heritage State Park (including Children’s Museum, Holyoke Merry-Go-Round, and Volleyball Hall of Fame)	J. Elwell Conservation Area
Lawrence Riverfront State Park	Leo Martin Golf Course
Lowell Heritage State Park	Lowell Park
Lynn Heritage State Park (including Waterfront Park)	Lynn Shore Reservation (including Kings Beach, Lynn Beach, Nahant Beach Reservation, and Red Rock Park)
Malibu Beach	Mary O’Malley Park
Medfield State Hospital	Middlesex Fells Reservation (including Bear Hill, Bellevue Pond, Botume House, DCR Stoneham, Greenwood Park, Half Mile Pond, Hall Memorial Pool, Long Pond, MDC North Region HQ, Park Hollow Pond, Pine Hill, Spa Pond, and Wrights Pond)
Mother Brook Reservation	Museum of Science
Mystic River Reservation (including Arlington Pump Station, Arlington Reservoir Standpipe, Blessing of the Bay Boathouse, Draw Seven Park, Mary O’Malley Waterfront Park, Mystic Lakes, Sandy Beach, Torbert MacDonald Park, and Veterans Memorial Park)	Nantasket Beach Reservation
Neponset River Reservation (including Doyle Playground, Fowl Meadow, Lower Neponset River Trail, Martini Shell, Moynihan Park, Moynihan Wading Pool, Neponset Marshes, Pope John Paul II Park, Quincy Homestead, Ryan Field, Ryan Wading Pool, and Ventura Street Playground)	Nickerson State Park (including Cliff Pond, Flax Pond, Higgin’s Pond, Keeler’s Pond, Little Cliff Pond, Ruth Pond, and Triangle Pond)
Old Harbor Reservation (including Carson Beach, Castle Island, City Point Beach, DCR South Boston, Fort Independence, M Street Beach, Marine Park, Murphy Rink, Old Harbor Park, and Pleasure Bay)	Pilgrim Memorial State Park



**Table 1 DCR Individual Facilities Located within Urbanized Area and Served by MS4s**

<b>Parks/Reservations (continued)</b>	
Quincy Shore Reservation (including Caddy Park, Houghs Neck, Moswetuset Hummock, and Wollaston Beach)	Quinsigamond State Park (including Lake Park and Regatta Point)
Revere Beach Reservation	Riverwalk Park
Robinson State Park (including Mittineague, Provin Mountain, Robinson Pond, and Trestle)	Roxbury Heritage State Park (including Dillaway-Thomas House and Roxbury Stand Pipe)
Short Beach	South Watuppa Boat Ramp
Southwest Corridor (including Johnson Playground Spray Deck, Mission Hill Spray Deck, and Stony Brook Spray Deck)	Squantum Point Park (including Savin Hill Beach)
State Fish Pier	Stodders Neck
Stone Zoo	Stony Brook Reservation (including Bajko Rink, Bearberry Hill, Bellevue Hill, Bold Knob, Brainard Street House, Connell Fields, Dedham Parkway, Dooley Playground, Enneking Parkway, Kelley Fields, Lawlor Playground, Milkwood Hill, Olsen Pool, Olsen Rink, Overbrook Ledge, Rooney Rock, The Perch, Thompson Center, and Turtle Pond)
Tenean Beach	Winthrop Beach
<b>Parkways/Roads</b>	
Agassiz Road	Alewife Brook Concord Ave Rotary
Alewife Brook Parkway	Alewife Brook Parkway
Arlington Road	Arlington Street
Ashland State Park Road	Austin Street
Babe Ruth Park Drive	Beach Street
Beacon Street	Blue Hill Street
Blue Hills Parkway	Boston University Bridge
Boulevard Road	Berkeley Street
Blue Hills Reservation Parkways (including Green Street, Blue Hill River Road, Chickatawbut Road, Hillside Street, Unquity Road, and Wompatuck Road)	Boylston Street
Breakheart Reservation Parkways (including Forest Street, Hemlock Road, Elm Road, Pine Tops Road)	Broad Sound Avenue
Broadway	Brook Road
Brookline Avenue	Brookline Street
Brooks Street	Brush Hill Road
Bunker Hill Lane	Cambridge Parkway Connector
Cambridge Street	Carroll Parkway
Casassa Overpass	Centre Street



**Table 1 DCR Individual Facilities Located within Urbanized Area and Served by MS4s**

<b>Parkways/Roads (continued)</b>	
Charles Greenough Boulevard	Charles River Dam
Charles River Dam Road	Charles River Reservation Parkways (including Arsenal Street, Birmingham Parkway, Charles River Road, Greenough Boulevard, Nonantum Road, North Beacon Street, Norumbega Road, Quinobequin Road, and Soldiers Field Road)
Charles Street	Charles Street Circle
Charlesgate East	Charlesgate Overpass
Charlesgate West	Charlestown Avenue
Chestnut Hill Drive (including Cambridge Parkway, Memorial Drive, and Storrow Drive)	Chestnut Street
Columbia Road	Commandan'ts Way
Commercial Avenue	Commonwealth Avenue
Concord Avenue	Connector Mystic Valley Parkway
Connector to Eliot Bridge	Constitution Beach Road
Crowell State Forest Road	Dam Road
David G. Mugar Way	Day Boulevard Extension
Dedham Boulevard	Deer Park Road
Earhart Dam Road	East Broadway
Eastern Avenue	Eliot Bridge
Eliot Circle	Embankment Road
Emerald Necklace Parkways (including Arborway, Fenway, Jamaica Way, Park Drive, and Riverway)	Enneking Parkway Branch
Everett Street	Fellsmere Park Parkways (including Boundary Road and West Border Road)
Fellsway Connector Parkways (including East Border Road, Fellsway, Fellsway East, and Fellsway West)	Fenway Connector to Park Drive
First Street	Forest Grove Road
Franklin Park Circle	Fresh Pond Parkway
Furnace Brook Parkway	Furnace Brook Rotary
Gallivan Boulevard	Grove Street
Grove Street Extension	Hammond Pond Parkway
Harvard Avenue	Hawthorne Street
Hayden Street	Higgins Pond Road
High Street	Highland Avenue
Horace James Circle	Humphrey Street
Hyde Park Avenue	Jamaicaway Frontage Road
James Shea Circle	JFK-UMASS Station Road



**Table 1 DCR Individual Facilities Located within Urbanized Area and Served by MS4s**

<b>Parkways/Roads (continued)</b>	
John F. Kennedy Street	Jordan Marsh Service Center Area
Kelley Circle	Kosciuszko Circle
Lagrange Street Extension	Land Boulevard
Longfellow Bridge	Lynn Fells Parkway
Lynn Shore Drive	Lynnway
Lynnway Underpass – Rt. 1A SB to Lynnway	Main Street
Massachusetts Avenue	McGrath O'Brien Highway
Medford Street	Medford Veterans Memorial Highway
Memorial Drive Underpass	Metropolitan District Commission Road
Metropolitan Road	Middle Street
Middlesex Avenue	Middlesex Fells Reservation Parkways (including Elm Street, Hillcrest Parkway, Pond Street, Ravine Road, South Border Road, South Street, and Woodland Road)
Middlesex Rotary	Middleton Street
Milton Street	Monsanto Road
Monsignor Casey Highway	Monsignor O'Brien Highway
Morrissey Boulevard	Morrissey Service Road
Morton Street	Mount Auburn Street
Mount Vernon Street	Murray Circle
Mystic River Road	Mystic Valley Parkway
Mystic Valley Parkway Section V	Mystic Valley – Alewife Brook Rotary
Nahant Beach Boulevard	Nahant Circle
Nantasket Beach Reservation Parkways (including Hull Shore Drive and Nantasket Avenue)	Nash Hill Reservoir Road
Neponset Avenue	Neponset Valley Parkway
New South Street	Noble Street
Nonantum Road Branch	North Border Road
North Harvard Street	North Shore Road
Oak Island Street	Ocean Avenue
Ocean Street	Old Colony Avenue
Park Entrance Road	Park Road
Park Street	Parkman Drive
Pelton Street	Perkins Street
Quincy Shore Drive	Ramp to Charles Circle
Ramp – Berkeley St. to Rt. 28 NB	Ramp – BU Bridge to Memorial Drive EB
Ramp – Cambridgeprt Circle to BU Bridge	Ramp – Cambridgeprt Circle to Memorial Drive WB



**Table 1 DCR Individual Facilities Located within Urbanized Area and Served by MS4s**

<b>Parkways/Roads (continued)</b>	
Ramp – Casassa Overpass to Rt. 107 NB	Ramp – Charles Street to Longfellow Bridge
Ramp – Charlesgate Overpass to Charlesgate	Ramp – Jamaicaway to Rt. 9
Ramp – Main Street to Rt. 16 WB	Ramp – Memorial Drive to Cambridgeprt Circle EB
Ramp – Memorial Drive to Cambridgeprt Circle WB	Ramp – N. Harvard Street to Soldiers Field EB
Ramp – N. Harvard Street to Soldiers Field WB	Ramp – Roosevelt Circle to Valley Street
Ramp – Rt. 107 NB to Rt. 16 EB	Ramp – Rt. 16 WB to Rt. 99
Ramp – Rt. 3 to Rt. 28 SB	Ramp – Rt. 9 to Jamaicaway
Ramp – Soldiers Field EB to N. Harvard Street	Ramp – Soldiers Field Road EB to Western Avenue
Ramp – Soldiers Field Road WB to Birmingham	Ramp – Soldiers Field Road WB to Western Avenue
Ramp – Soldiers Field WB to N. Harvard Street	Ramp – Somerville Avenue to Rt. 28 SB
Ramp – Storrow Drive to Rt. 2A WB	Ramp – Western Avenue to Soldiers Field Road EB
Ramp – Western Avenue to Soldiers Field Road WB	Recreation Road
Reid Rotary	Reservoir Street
Revere Beach Boulevard	Revere Beach Parkway
Revere Beach Parkway	Revere Street
River Street	Riverdale Road
Riverway Frontage Road	Rocky Woods Reservation Road
Roosevelt Circle	Saint Thomas Moore Road
Santilli Circle	Santilli Circle Connector
Sawmill Lane	Shirley Avenue
Shore Drive	Shore Road
Soldiers Field Road Extension	Soldiers Field Service Road Eastbound
Sozio Rotary	State Beach Road
State Park Road	Stony Brook Reservation Parkways (including Bellevue Hill Road, Dedham Parkway, Enneking Parkway, Reservation Road, Smith Field Road, and Turtle Pond Parkway)
Sumner Street	Sweetser Circle
Terminal Road	Truman Highway
Truman Parkway	Turtle Pond Parkway Branch
Unnamed Road	Upper Arborway
Veterans of Foreign Wars Parkway	Wave Avenue
West Boundary Road	West Line Road
West Roxbury Centre Street Rotary	West Roxbury Parkway
West Roxbury VFW Parkway Rotary	Western Avenue
Wharf Avenue	Willard Street
William Day Boulevard	William T. Morrissey Boulevard



**Table 1 DCR Individual Facilities Located within Urbanized Area and Served by MS4s**

<b>Parkways/Roads (continued)</b>	
Willow Pond Road	Winthrop Parkway
Winthrop Shore Drive	Wyoming Avenue
<b>Water Supply Facilities/Reservoirs</b>	
Chestnut Hill Reservoir	Medfield Charles River Street Reservoir
Middlesex Fells Reservoir	Nash Hill Reservoir
New Charles River Dam	



DCR owns many recreational facilities within the urbanized areas which are single buildings. Since these facilities are single facilities, the associated storm water conveyance system associated does not qualify as an MS4. Many of these facilities include skating rinks and pools which DCR owns which are individual buildings. In accordance with Part 1.B.1 of the general permit, “a small municipal separate storm sewer system means all separate storm sewers that are:

(a) owned or operated by the United States, a State, city town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity and Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States.

(b) not defined as large or medium municipal separate storm sewer systems pursuant to 40 CFR §122.26(b)(4) and (b)(7) or designated under 40 CFR §122.26(a)(1)(v).

(c) This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospitals or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.”

These facilities which fall into this category are listed in Table 2 below. DCR requests that EPA review the list below and the figures included as pdf documents in the included CD that document that since these facilities are individual buildings, any drainage system associated with the building does not qualify on its own as an MS4 and is therefore not included in the facilities covered by the general permit authorization.

**Table 2 DCR Individual Facilities Located within Urbanized Area  
 Drainage Systems do not Qualify as a Small MS4 System**

<b>Administrative Facilities</b>	
DCR Boston	DCR West Boylston
<b>State Forests</b>	
F. Gilbert Hills State Forest	
<b>Parks/Reservations</b>	
Baker Chocolate Factory	Dorothy Quincy House
Gardner Heritage State Park	Lake Lorraine State Park
Lawrence Heritage State Park	McMorrow Playground
Medford Boat Club	Oak Island Boat Ramp
Victory Road Park	Webb Memorial State Park
Willis Fishing Pier	
<b>Recreation Facilities</b>	
Allied Veterans Rink	Andrew J. Petro Swimming Pool
Anthony A. LaConte Rink	Arthur R. Driscoll Memorial (Fall River) Rink
Bennett Field Swimming Pool	Brian Rink and Phelan Pool
Buttery Brook Memorial Pool	Cass Rink & Pool
Charles Buffone Memorial (Worcester) Rink	Collins-Moylan Memorial (Greenfield) Rink
Connell Rink/Pool	Connery Rink
Daniel S. Horigan Memorial Rink	Dennis F. Shine Memorial Swimming Pool





**Table 2 DCR Individual Facilities Located within Urbanized Area  
 Drainage Systems do not Qualify as a Small MS4 System**

<b>Recreation Facilities (continued)</b>	
Emmons/Horrigan/O'Neill Rink	Fitzpatrick Skating Rink
Flynn Rink	Frank A. Manning Memorial (Brockton) Pool
Gardner Veterans Skating Rink	Geisler Memorial Pool
George I. Spatcher Memorial Pool	Gerald J. Mason Memorial Pool
Gore Street (Simoni) Rink	Gustave Johnson Memorial (Fitchburg) Pool
Henry Graf Rink	Holland Memorial Pool
John A. Armstrong Memorial (Plymouth) Rink	John G. Asiaf Memorial (Brockton) Rink
John H. Thomas Memorial Pool	John J. Thompson Memorial Pool
John J. Janas Memorial Rink	John J. Navin (Marlboro) Rink
Kelly Rink	Leominster State Pool
Lt. Col. E. J. Higgins Memorial Pool	McCrehan Pool
McVann-O'Keefe Memorial (Peabody) Rink	MDCPAR
Melrose Pool	North End (Steriti) Rink
Philip J. Weihl Memorial (Clinton) Pool	Plymouth Fire Tower ( <i>Exact location not available – single tower with dirt road - no figure created</i> )
Ray Smead Memorial (Springfield) Rink	Raymond J. Lord Memorial Pool
Robert M. Devine Rink	Sara Jane Sherman Memorial Pool
Sen. P. Eugene Casey Memorial Pool	Stephen Hetland Memorial (New Bedford) Rink
Veterans (Waltham) Rink	Veterans Memorial (Fall River) Pool
Veterans Memorial (Haverhill) Rink	Veterans Memorial Rink
Vietnam Veterans Pool	
<b>Water Supply Facilities/Reservoirs</b>	
Amelia Earhart Dam	Wachusett Reservoir
Weston Reservoir	

DCR also identified various parkways and facilities which are located entirely or partially within an urbanized area but the portion of the property within urbanized area does not include a formal storm water conveyance system and, therefore, is not subject to coverage under the general permit. In many cases, these facilities are forests with no development or where the developed portion of the facility is outside of the urbanized area. The facilities are listed in Table 3 below and included in the pdf figures on the CD included in this appendix.

**Table 3 DCR Parkway and Facilities Located Wholly or Partially within Urbanized Areas but Not Served by a Small MS4 System**

<b>Flood Control Facilities</b>	
Brewer Brook Flood Control	Cold Harbor Brook Flood Control
Delaney Flood Control Site	George H. Nichols Flood Control
Hop Brook Flood Control	Moose Hill Flood Control
Rawson Hill Brook Flood Control	Ross Site Flood Control
Town Brook Flood Control	Tyler Site Flood Control
<b>State Forests</b>	
Barnstable State Forest	Billerica State Forest
Boxford State Forest	Brewster State Forest
Bridgewater State Forest	Franklin State Forest
Freetown Fall River State Forest	Georgetown-Rowley State Forest
Harold Parker State Forest	J. Harry Rich State Forest
Kingston State Forest	Leominster State Forest
Marlborough-Sudbury State Forest	Myles Standish State Forest
Otter River State Forest	Raynham State Forest
Spencer State Forest	Squannacook Brook State Forest
Townsend State Forest	Upton State Forest
West Bridgewater State Forest	Willard Brook State Forest
Willowdale State Forest	Wrentham State Forest
<b>Parks/Reservations</b>	
Acushnet Cedar Swamp State Reservation	Appalachian Trail Corridor
Bay Farm	Borderland State Park
Bradley Palmer State Park	Bristol Blake State Reservation
Brook Farm	Callahan State Park
Camp MEIGS	Cedar Swamps
Chelsea Creek Beach	Chicopee Memorial State Park
Chicopee State Boat Ramp	Conley and Tenean St. Park
Crane Swamp	Cushing Memorial State Park
Cutler Park	Dennis Fire Tower
Dugger Park	Ellisville Harbor State Park
Essex Fire Tower	Fort Revere

**Table 3 DCR Parkways and Facilities Located Wholly or Partially within Urbanized Areas but Not Served by a Small MS4 System**

<b>Parks/Reservations (continued)</b>	
Governor Thomas Dudley Park	Great Brook Farm State Park
Great Herring Pond Boat Ramp	Halibut Point State Park
Hancock Woods	Havey Beach
Hawksnest State Park	Hemlock Gorge Reservation
Holyoke Range State Park	Hopkinton State Park
Johnny Appleseed State Park	Kennedy Park
Linden and Town Line Brook	Lost Pond Reservation
Maple St. MDC Land	Massasoit State Park
Maudslay State Park	MET State Hospital
MET State Lot 1	MET State Lot 4
Moore State Park	Mt. Tom State Reservation
Myles Standish Monument State Reservation	Nasketucket Bay State Reservation
Newton Lower Falls Park	Norwottuck Rail Trail
Pattens Cove	Perry Lot
Pilgrim National Monument	Pine Swamp
Plum Island State Reservation	Red Bridge State Park
Rumney Marsh Reservation	Saugus River Reservation
Scusset Beach State Reservation	Sherrin and Dale Street Playground
South Cape Beach State Park	South New England. Trunkline Trail
Spot Pond Brook	Sudbury River
Toohig Park	Town Line Brook
Waquoit Bay Nerr	Watson Pond State Park
West Island State Reservation	Whitehall State Park
Wilson Mountain Reservation	Wompatuck State Park
<b>Parkways/Roads</b>	
Attitash Public Access	Hammond Pond Parkway
<b>Recreational Facilities</b>	
Barnstable Fire Tower	Hopkinton Boat Ramp
<b>Water Supply Facilities/Reservoirs</b>	
Cochituate Aqueduct	Norumbega Reservoir
Sudbury Aqueduct	Sudbury Reservoir
Wachusett Aqueduct	Ware River Watershed Area
Weston Aqueduct	



**Table 3 DCR Parkways and Facilities Located Wholly or Partially within Urbanized Areas but Not Served by a Small MS4 System**

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**Water Supply Facilities/Reservoirs (continued)**

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**Misc. Watershed Lands** - DCR owns and manages watershed lands around the Quabbin and Wachusett Reservoirs in an undeveloped state to protect water quality, prevent soil erosion and promote conservation. Watershed management practices include planning, watershed delineation, Title 5 sanitary surveys, land acquisition, construction and post-construction management and pathogen control. Tree and forestry management practices promote sustainable tree harvesting and control of invasive species through selected cutting and coordination of volunteer conservation efforts.

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**TABLE A**





**Massachusetts Department of Environmental Protection**  
 Bureau of Resource Protection - Watershed Management  
**BRP WM 08A NPDES Stormwater General Permit Notice of Intent**  
**for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s)**  
**F. Example Storm Water Management Program TIME FRAMES**

BMP ID #	PERMIT YEAR THREE			PERMIT YEAR FOUR			PERMIT YEAR FIVE					Facility Type Served							
	Spring 05	Summer 05	Fall 05	Winter 05-06	Spring 06	Summer 06	Fall 06	Winter 06 07	Spring 07	Summer 07	Fall 07	Winter 07-08	Next Permit	Parkway	Park	Beach	Water Supply Facilities/Reservoirs	State Forest	
2-6: DCR Stewardship Council														X	X	X	X	X	X
2-7: MWRC														X	X	X	X	X	X
2-8: Lakes and Ponds Program														X	X	X	X	X	X
<b>Illicit Discharge Detection and Elimination</b>																			
3-1: Drainage Outfall Inventory						X Spec Completed - Inc. in Contracts								X	X	X	X	X	X
3-2: Drainage Inventory Specification													X Issue	X	X	X	X	X	X
3-3: Illicit Drainage Connection Policy											X Complete			X	X	X	X	X	X
3-4: Drainage Infrastructure Inventory														X	X	X	X	X	X
3-5: Illicit Connection Sampling Program									X Identify Priority Area for Rvw	Field Review	Field Review	Follow Up		X	X	X	X	X	X
3-6: Drainage Tie-In Policy													X Issue	X	X	X	X	X	X
3-7: SW Control Agreements														X	X	X	X	X	X
<b>Construction Site Runoff Control</b>																			
4-1: NPDES Construction General Permit			X NOI for on-going projects		X Annual Report				X Annual Report					X Annual Report	X	X	X	X	X
4-2: E&S/ NPDES Contract Bid Item and Special Provisions										X include in new contracts					X	X	X	X	X
4-3: Construction SWPPP Template											X Complete template				X	X	X	X	X
4-4: Construction Site Monitoring														X	X	X	X	X	X
4-5: Construction Projects Web Site													X Add link to receive public comment	X	X	X	X	X	X
4-6: Annual E&S Training									X (May 2007)				X	X	X	X	X	X	X



**Massachusetts Department of Environmental Protection**  
 Bureau of Resource Protection - Watershed Management  
**BRP WM 08A NPDES Stormwater General Permit Notice of Intent**  
 for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s)  
**F. Example Storm Water Management Program TIME FRAMES**

BMP ID #	PERMIT YEAR THREE			PERMIT YEAR FOUR			PERMIT YEAR FIVE			Next Permit	Facility Type Served							
	Spring 05	Summer 05	Fall 05	Winter 05-06	Spring 06	Summer 06	Fall 06	Winter 06	Spring 07		Summer 07	Fall 07	Winter 07-08	Parkway	Park	Beach	Water Supply Facilities/Reservoirs	State Forest
4-7: Technical Assistance to ConComs																	X	
4-8: Contract Bid Item and Special Provisions Enforceability								X Notice Created						X	X	X	X	X
4-9: Construction Runoff Enforcement from DCR and/or Offsite Construction Pollution														X	X	X	X	X
4-10: Utility/ Drainage Tie-In Permit														X	X	X	X	X
<b>Post Construction Runoff Control</b>																		
5-1: SW Management Policy					X Internal Draft									X	X	X	X	X
5-2: Storm Water Handbook														X	X	X	X	X
5-3: Handbook Training												X		X	X	X	X	X
5-4: BMP Long-term O&M														X	X	X	X	X
5-5: LID Projects																		
5-6: Walden Pond Stormwater Improvements			X SW Improve-ments															
5-7: Runoff from Offsite Pollution																		
5-8: LID at Ipswich River Watershed																		
5-8a: Ipswich River -- Green Roof																		
5-8b: Ipswich River -- Permeable Paving		X Pre-construction Monitoring				X Project Complete												
5-8c: Ipswich River -- LID at Silver Lake		X Pre-construction Monitoring				X Project Complete												
5-8d: Ipswich River -- Rainwater Harvesting			X 39 Res. Units Installed			X Summer Water Use Monitored												
5-8e: Ipswich River -- Ball Field					X Apply Soil Amendments													
5-8f: Ipswich River -- Weather Based Irrigation		X Install Controllers			X Season Kick-Off Mtg													
<b>Municipal Good Housekeeping</b>																		







**Massachusetts Department of Environmental Protection**  
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**for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s)**  
**F. Example Storm Water Management Program TIME FRAMES**

BMP ID #	PERMIT YEAR THREE				PERMIT YEAR FOUR				PERMIT YEAR FIVE				Facility Type Served					
	Spring 05	Summer 05	Fall 05	Winter 05-06	Spring 06	Summer 06	Fall 06	Winter 06 07	Spring 07	Summer 07	Fall 07	Winter 07-08	Next Permit	Parkway	Park	Beach	Water Supply Facilities/Reservoirs	State Forest
7-5: CT River Basin - Provide technical assistance to local ConComs on Timber Harvesting Procedures					X								X Annual Report					X
7-6: Permit Year TMDL Summary					X Annual Report				X Annual Report				X Annual Report	X	X	X	X	X
7-7: Priority Resource Area Review Program														X	X	X	X	X



## **APPENDIX A: FACILITY LIST**



EPA has required that all regulated separate storm sewer systems within urbanized areas owned and operated by DCR must be included in the SWMP. “Urbanized Area” is defined as a land area comprising one or more places —central place(s) — and the adjacent densely settled surrounding area — urban fringe — that together have a residential population of at least 50,000 and an overall population density of at least 1,000 people per square mile. The urbanized area (UA) designation is based on the results of the latest census – the 2000 Census for this permit. Table 1 summarizes the facilities and parkways with small MS4 systems which are located entirely or partially within urbanized areas and are therefore subject to the NPDES Phase II permit. These determinations were made based on the urbanized area GIS datalayers provided by EPA, DCR datalayers/ databases indicating land owned and operated by the Department and field visits to identify outfalls from drainage systems.

**Table 1 DCR Individual Facilities Located within Urbanized Area and Served by MS4s**

<b>State Forests</b>	
Lowell-Dracut-Tyngsboro State Forest	Shawme-Crowell State Forest (including Sandwich State Forest)
<b>Parks/ Reservations</b>	
Abigail Adams State Park (including Back River Reservation, Bare Cove Park, Great Esker Park, Weymouth Back River)	Ames Nowell State Park (including Cleveland Pond)
Alewife Brook Reservation (including Alewife Brook, Blair Pond, Dilboy Pool & Stadium, Little River, and Silver Maple Forest)	Beaver Brook Reservation (including Beaver Brook Little Pond Reservation and Beaver Brook Spray Deck)
Ashland State Park (including Ashland Reservoir)	Belle Isle Marsh Reservation (including Porazzo Rink)
Blackstone River & Canal HSP (including Blackstone Gorge, Hassanamesitt Woods, Lookout Rock, Millville Lock, Plummers Landing, Rice City Pond, and River Bend Farm Visitors Center)	Blue Hills Reservation (including Boyce Hill, Brookwood Farm, Buck Hill, Canton Airport, DCR Canton, Great Blue Hill, Hancock Hill, Hemenway Hill, Hillside Pond, Houghton Hill, Houghton’s Pond Recreation Area, Inidan Line Farm, Metropolis Rink, Quincy Quarries Reservation, Shea Rink, Trailside Museum, Tucker Hill, Ulin Rink, and Wolcott Hill)
Boston Harbor Islands State Park (including Bumpkin Island, Calf Island, DCR Hingham, Deer Island (including Fort Dawes), Gallops Island, George’s Island (including Fort Warren), Grape Island, Great Brewster Island, Green Island, Hangman Island, Little Calf Island, Long Island, Lovells Island (includes Fort Standish), Middle Brewster Island, Moon Island, Nut Island, Outer Brewster Island, Peddocks Island (includes Fort Andrews), Raccoon Island, Rainsford Island, Sheep Island, Slate Island, and Spectacle Island)	Charles River Reservation (including Artesani Playground Wading Pool, Brighton-Allston Pool, Brighton Upper Basin Facility, Brook Farm Historic District, Cambridge Esplanade, Cannalouga Park, Charles River Bank Park, Charles River Basin and Esplanade, Charles River Dam, Charlesbank Park, Christian A. Herter Park, Connors Pool, Daly Field, Daly Recreation Center, CDR Cambridge, Dealtry Memorial Pool, Dr. Paul Dudley White Bike Path, Echo Bridge, Eliot Bridge, Elm Bank Reservation, Forest Grove Reservation, Hatch Shell, Herter Park West, JFK Park, Landry Park/ Lakes District, Lee Memorial Pool/ Wading Pool, Lower Basin, Magazine Beach, Memorial Drive, Med’s Hall Acre, Paul Revere Park, Red Wing Bay, Riverdale Park, Riverside Park, Squibnocket Park, Teddy Ebersol Red Sox Fields at Lederman Park, Upper Basin, Veterans Memorial Swimming and Wading Pool, Village Falls Park, and Watertown Dam)

**Table 1 DCR Individual Facilities Located within Urbanized Area and Served by MS4s**

<b>Parks/Reservations (continued)</b>	
Breakheart Reservation	Cape Cod Rail Trail
City Square Park (including DCR Charlestown)	Columbia Road Park
Cochituate State Park	Constitution Beach
Commercial Point	Dunn Pond State Park
Elm Bank	Fellsmere Park
Franklin Park Zoo	Ft. Phoenix Beach State Reservation
Fall River Heritage State Park (including Battleship Cove, Fall River State Pier, George Bullard House, and Mt. Hope Bay)	Foss Park (including Latta Pool)
Hammond Pond Reservation (including Fisher Hill Reservoir and Gatehouse)	Hampton Ponds State Park
Holyoke Heritage State Park (including Children’s Museum, Holyoke Merry-Go-Round, and Volleyball Hall of Fame)	J. Elwell Conservation Area
Lawrence Riverfront State Park	Leo Martin Golf Course
Lowell Heritage State Park	Lowell Park
Lynn Heritage State Park (including Waterfront Park)	Lynn Shore Reservation (including Kings Beach, Lynn Beach, Nahant Beach Reservation, and Red Rock Park)
Malibu Beach	Mary O’Malley Park
Medfield State Hospital	Middlesex Fells Reservation (including Bear Hill, Bellevue Pond, Botume House, DCR Stoneham, Greenwood Park, Half Mile Pond, Hall Memorial Pool, Long Pond, MDC North Region HQ, Park Hollow Pond, Pine Hill, Spa Pond, and Wrights Pond)
Mother Brook Reservation	Museum of Science
Mystic River Reservation (including Arlington Pump Station, Arlington Reservoir Standpipe, Blessing of the Bay Boathouse, Draw Seven Park, Mary O’Malley Waterfront Park, Mystic Lakes, Sandy Beach, Torbert MacDonald Park, and Veterans Memorial Park)	Nantasket Beach Reservation
Neponset River Reservation (including Doyle Playground, Fowl Meadow, Lower Neponset River Trail, Martini Shell, Moynihan Park, Moynihan Wading Pool, Neponset Marshes, Pope John Paul II Park, Quincy Homestead, Ryan Field, Ryan Wading Pool, and Ventura Street Playground)	Nickerson State Park (including Cliff Pond, Flax Pond, Higgin’s Pond, Keeler’s Pond, Little Cliff Pond, Ruth Pond, and Triangle Pond)
Old Harbor Reservation (including Carson Beach, Castle Island, City Point Beach, DCR South Boston, Fort Independence, M Street Beach, Marine Park, Murphy Rink, Old Harbor Park, and Pleasure Bay)	Pilgrim Memorial State Park

**Table 1 DCR Individual Facilities Located within Urbanized Area and Served by MS4s**

<b>Parks/Reservations (continued)</b>	
Quincy Shore Reservation (including Caddy Park, Houghs Neck, Moswetuset Hummock, and Wollaston Beach)	Quinsigamond State Park (including Lake Park and Regatta Point)
Revere Beach Reservation	Riverwalk Park
Robinson State Park (including Mittineague, Provin Mountain, Robinson Pond, and Trestle)	Roxbury Heritage State Park (including Dillaway-Thomas House and Roxbury Stand Pipe)
Short Beach	South Watuppa Boat Ramp
Southwest Corridor (including Johnson Playground Spray Deck, Mission Hill Spray Deck, and Stony Brook Spray Deck)	Squantum Point Park (including Savin Hill Beach)
State Fish Pier	Stodders Neck
Stone Zoo	Stony Brook Reservation (including Bajko Rink, Bearberry Hill, Bellevue Hill, Bold Knob, Brainard Street House, Connell Fields, Dedham Parkway, Dooley Playground, Enneking Parkway, Kelley Fields, Lawlor Playground, Milkwood Hill, Olsen Pool, Olsen Rink, Overbrook Ledge, Rooney Rock, The Perch, Thompson Center, and Turtle Pond)
Tenean Beach	Winthrop Beach
<b>Parkways/Roads</b>	
Agassiz Road	Alewife Brook Concord Ave Rotary
Alewife Brook Parkway	Alewife Brook Parkway
Arlington Road	Arlington Street
Ashland State Park Road	Austin Street
Babe Ruth Park Drive	Beach Street
Beacon Street	Blue Hill Street
Blue Hills Parkway	Boston University Bridge
Boulevard Road	Berkeley Street
Blue Hills Reservation Parkways (including Green Street, Blue Hill River Road, Chickatawbut Road, Hillside Street, Unquity Road, and Wompatuck Road)	Boylston Street
Breakheart Reservation Parkways (including Forest Street, Hemlock Road, Elm Road, Pine Tops Road)	Broad Sound Avenue
Broadway	Brook Road
Brookline Avenue	Brookline Street
Brooks Street	Brush Hill Road
Bunker Hill Lane	Cambridge Parkway Connector
Cambridge Street	Carroll Parkway
Casassa Overpass	Centre Street



**Table 1 DCR Individual Facilities Located within Urbanized Area and Served by MS4s**

<b>Parkways/Roads (continued)</b>	
Charles Greenough Boulevard	Charles River Dam
Charles River Dam Road	Charles River Reservation Parkways (including Arsenal Street, Birmingham Parkway, Charles River Road, Greenough Boulevard, Nonantum Road, North Beacon Street, Norumbega Road, Quinobequin Road, and Soldiers Field Road)
Charles Street	Charles Street Circle
Charlesgate East	Charlesgate Overpass
Charlesgate West	Charlestown Avenue
Chestnut Hill Drive (including Cambridge Parkway, Memorial Drive, and Storrow Drive)	Chestnut Street
Columbia Road	Commandan'ts Way
Commercial Avenue	Commonwealth Avenue
Concord Avenue	Connector Mystic Valley Parkway
Connector to Eliot Bridge	Constitution Beach Road
Crowell State Forest Road	Dam Road
David G. Mugar Way	Day Boulevard Extension
Dedham Boulevard	Deer Park Road
Earhart Dam Road	East Broadway
Eastern Avenue	Eliot Bridge
Eliot Circle	Embankment Road
Emerald Necklace Parkways (including Arborway, Fenway, Jamaica Way, Park Drive, and Riverway)	Enneking Parkway Branch
Everett Street	Fellsmere Park Parkways (including Boundary Road and West Border Road)
Fellsway Connector Parkways (including East Border Road, Fellsway, Fellsway East, and Fellsway West)	Fenway Connector to Park Drive
First Street	Forest Grove Road
Franklin Park Circle	Fresh Pond Parkway
Furnace Brook Parkway	Furnace Brook Rotary
Gallivan Boulevard	Grove Street
Grove Street Extension	Hammond Pond Parkway
Harvard Avenue	Hawthorne Street
Hayden Street	Higgins Pond Road
High Street	Highland Avenue
Horace James Circle	Humphrey Street
Hyde Park Avenue	Jamaicaway Frontage Road
James Shea Circle	JFK-UMASS Station Road



**Table 1 DCR Individual Facilities Located within Urbanized Area and Served by MS4s**

<b>Parkways/Roads (continued)</b>	
John F. Kennedy Street	Jordan Marsh Service Center Area
Kelley Circle	Kosciuszko Circle
Lagrange Street Extension	Land Boulevard
Longfellow Bridge	Lynn Fells Parkway
Lynn Shore Drive	Lynnway
Lynnway Underpass – Rt. 1A SB to Lynnway	Main Street
Massachusetts Avenue	McGrath O'Brien Highway
Medford Street	Medford Veterans Memorial Highway
Memorial Drive Underpass	Metropolitan District Commission Road
Metropolitan Road	Middle Street
Middlesex Avenue	Middlesex Fells Reservation Parkways (including Elm Street, Hillcrest Parkway, Pond Street, Ravine Road, South Border Road, South Street, and Woodland Road)
Middlesex Rotary	Middleton Street
Milton Street	Monsanto Road
Monsignor Casey Highway	Monsignor O'Brien Highway
Morrissey Boulevard	Morrissey Service Road
Morton Street	Mount Auburn Street
Mount Vernon Street	Murray Circle
Mystic River Road	Mystic Valley Parkway
Mystic Valley Parkway Section V	Mystic Valley – Alewife Brook Rotary
Nahant Beach Boulevard	Nahant Circle
Nantasket Beach Reservation Parkways (including Hull Shore Drive and Nantasket Avenue)	Nash Hill Reservoir Road
Neponset Avenue	Neponset Valley Parkway
New South Street	Noble Street
Nonantum Road Branch	North Border Road
North Harvard Street	North Shore Road
Oak Island Street	Ocean Avenue
Ocean Street	Old Colony Avenue
Park Entrance Road	Park Road
Park Street	Parkman Drive
Pelton Street	Perkins Street
Quincy Shore Drive	Ramp to Charles Circle
Ramp – Berkeley St. to Rt. 28 NB	Ramp – BU Bridge to Memorial Drive EB
Ramp – Cambridgeprt Circle to BU Bridge	Ramp – Cambridgeprt Circle to Memorial Drive WB



**Table 1 DCR Individual Facilities Located within Urbanized Area and Served by MS4s**

<b>Parkways/Roads (continued)</b>	
Ramp – Casassa Overpass to Rt. 107 NB	Ramp – Charles Street to Longfellow Bridge
Ramp – Charlesgate Overpass to Charlesgate	Ramp – Jamaicaway to Rt. 9
Ramp – Main Street to Rt. 16 WB	Ramp – Memorial Drive to Cambridgeprt Circle EB
Ramp – Memorial Drive to Cambridgeprt Circle WB	Ramp – N. Harvard Street to Soldiers Field EB
Ramp – N. Harvard Street to Soldiers Field WB	Ramp – Roosevelt Circle to Valley Street
Ramp – Rt. 107 NB to Rt. 16 EB	Ramp – Rt. 16 WB to Rt. 99
Ramp – Rt. 3 to Rt. 28 SB	Ramp – Rt. 9 to Jamaicaway
Ramp – Soldiers Field EB to N. Harvard Street	Ramp – Soldiers Field Road EB to Western Avenue
Ramp – Soldiers Field Road WB to Birmingham	Ramp – Soldiers Field Road WB to Western Avenue
Ramp – Soldiers Field WB to N. Harvard Street	Ramp – Somerville Avenue to Rt. 28 SB
Ramp – Storrow Drive to Rt. 2A WB	Ramp – Western Avenue to Soldiers Field Road EB
Ramp – Western Avenue to Soldiers Field Road WB	Recreation Road
Reid Rotary	Reservoir Street
Revere Beach Boulevard	Revere Beach Parkway
Revere Beach Parkway	Revere Street
River Street	Riverdale Road
Riverway Frontage Road	Rocky Woods Reservation Road
Roosevelt Circle	Saint Thomas Moore Road
Santilli Circle	Santilli Circle Connector
Sawmill Lane	Shirley Avenue
Shore Drive	Shore Road
Soldiers Field Road Extension	Soldiers Field Service Road Eastbound
Sozio Rotary	State Beach Road
State Park Road	Stony Brook Reservation Parkways (including Bellevue Hill Road, Dedham Parkway, Enneking Parkway, Reservation Road, Smith Field Road, and Turtle Pond Parkway)
Sumner Street	Sweetser Circle
Terminal Road	Truman Highway
Truman Parkway	Turtle Pond Parkway Branch
Unnamed Road	Upper Arborway
Veterans of Foreign Wars Parkway	Wave Avenue
West Boundary Road	West Line Road
West Roxbury Centre Street Rotary	West Roxbury Parkway
West Roxbury VFW Parkway Rotary	Western Avenue
Wharf Avenue	Willard Street
William Day Boulevard	William T. Morrissey Boulevard



Table 1 DCR Individual Facilities Located within Urbanized Area and Served by MS4s

<b>Parkways/Roads (continued)</b>	
Willow Pond Road	Winthrop Parkway
Winthrop Shore Drive	Wyoming Avenue
<b>Water Supply Facilities/Reservoirs</b>	
Chestnut Hill Reservoir	Medfield Charles River Street Reservoir
Middlesex Fells Reservoir	Nash Hill Reservoir
New Charles River Dam	



DCR owns many recreational facilities within the urbanized areas which are single buildings. Since these facilities are single facilities, the associated storm water conveyance system associated does not qualify as an MS4. Many of these facilities include skating rinks and pools which DCR owns which are individual buildings. In accordance with Part 1.B.1 of the general permit, “a small municipal separate storm sewer system means all separate storm sewers that are:

(a) owned or operated by the United States, a State, city town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity and Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States.

(b) not defined as large or medium municipal separate storm sewer systems pursuant to 40 CFR §122.26(b)(4) and (b)(7) or designated under 40 CFR §122.26(a)(1)(v).

(c) This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospitals or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.”

These facilities which fall into this category are listed in Table 2 below. DCR requests that EPA review the list below and the figures included as pdf documents in the included CD that document that since these facilities are individual buildings, any drainage system associated with the building does not qualify on its own as an MS4 and is therefore not included in the facilities covered by the general permit authorization.

**Table 2 DCR Individual Facilities Located within Urbanized Area  
 Drainage Systems do not Qualify as a Small MS4 System**

<b>Administrative Facilities</b>	
DCR Boston	DCR West Boylston
<b>State Forests</b>	
F. Gilbert Hills State Forest	
<b>Parks/Reservations</b>	
Baker Chocolate Factory	Dorothy Quincy House
Gardner Heritage State Park	Lake Lorraine State Park
Lawrence Heritage State Park	McMorrow Playground
Medford Boat Club	Oak Island Boat Ramp
Victory Road Park	Webb Memorial State Park
Willis Fishing Pier	
<b>Recreation Facilities</b>	
Allied Veterans Rink	Andrew J. Petro Swimming Pool
Anthony A. LaConte Rink	Arthur R. Driscoll Memorial (Fall River) Rink
Bennett Field Swimming Pool	Brian Rink and Phelan Pool
Buttery Brook Memorial Pool	Cass Rink & Pool
Charles Buffone Memorial (Worcester) Rink	Collins-Moylan Memorial (Greenfield) Rink
Connell Rink/Pool	Connery Rink
Daniel S. Horigan Memorial Rink	Dennis F. Shine Memorial Swimming Pool

**Table 2 DCR Individual Facilities Located within Urbanized Area Drainage Systems do not Qualify as a Small MS4 System**

<b>Recreation Facilities (continued)</b>	
Emmons/Horrigan/O'Neill Rink	Fitzpatrick Skating Rink
Flynn Rink	Frank A. Manning Memorial (Brockton) Pool
Gardner Veterans Skating Rink	Geisler Memorial Pool
George I. Spatcher Memorial Pool	Gerald J. Mason Memorial Pool
Gore Street (Simoni) Rink	Gustave Johnson Memorial (Fitchburg) Pool
Henry Graf Rink	Holland Memorial Pool
John A. Armstrong Memorial (Plymouth) Rink	John G. Asiaf Memorial (Brockton) Rink
John H. Thomas Memorial Pool	John J. Thompson Memorial Pool
John J. Janas Memorial Rink	John J. Navin (Marlboro) Rink
Kelly Rink	Leominster State Pool
Lt. Col. E. J. Higgins Memorial Pool	McCrehan Pool
McVann-O'Keefe Memorial (Peabody) Rink	MDCPAR
Melrose Pool	North End (Steriti) Rink
Philip J. Weihl Memorial (Clinton) Pool	Plymouth Fire Tower ( <i>Exact location not available – single tower with dirt road - no figure created</i> )
Ray Smead Memorial (Springfield) Rink	Raymond J. Lord Memorial Pool
Robert M. Devine Rink	Sara Jane Sherman Memorial Pool
Sen. P. Eugene Casey Memorial Pool	Stephen Hetland Memorial (New Bedford) Rink
Veterans (Waltham) Rink	Veterans Memorial (Fall River) Pool
Veterans Memorial (Haverhill) Rink	Veterans Memorial Rink
Vietnam Veterans Pool	
<b>Water Supply Facilities/Reservoirs</b>	
Amelia Earhart Dam	Wachusett Reservoir
Weston Reservoir	

DCR also identified various parkways and facilities which are located entirely or partially within an urbanized area but the portion of the property within urbanized area does not include a formal storm water conveyance system and, therefore, is not subject to coverage under the general permit. In many cases, these facilities are forests with no development or where the developed portion of the facility is outside of the urbanized area. The facilities are listed in Table 3 below and included in the pdf figures on the CD included in this appendix.

**Table 3 DCR Parkway and Facilities Located Wholly or Partially within Urbanized Areas but Not Served by a Small MS4 System**

<b>Flood Control Facilities</b>	
Brewer Brook Flood Control	Cold Harbor Brook Flood Control
Delaney Flood Control Site	George H. Nichols Flood Control
Hop Brook Flood Control	Moose Hill Flood Control
Rawson Hill Brook Flood Control	Ross Site Flood Control
Town Brook Flood Control	Tyler Site Flood Control
<b>State Forests</b>	
Barnstable State Forest	Billerica State Forest
Boxford State Forest	Brewster State Forest
Bridgewater State Forest	Franklin State Forest
Freetown Fall River State Forest	Georgetown-Rowley State Forest
Harold Parker State Forest	J. Harry Rich State Forest
Kingston State Forest	Leominster State Forest
Marlborough-Sudbury State Forest	Myles Standish State Forest
Otter River State Forest	Raynham State Forest
Spencer State Forest	Squannacook Brook State Forest
Townsend State Forest	Upton State Forest
West Bridgewater State Forest	Willard Brook State Forest
Willowdale State Forest	Wrentham State Forest
<b>Parks/Reservations</b>	
Acushnet Cedar Swamp State Reservation	Appalachian Trail Corridor
Bay Farm	Borderland State Park
Bradley Palmer State Park	Bristol Blake State Reservation
Brook Farm	Callahan State Park
Camp MEIGS	Cedar Swamps
Chelsea Creek Beach	Chicopee Memorial State Park
Chicopee State Boat Ramp	Conley and Tenean St. Park
Crane Swamp	Cushing Memorial State Park
Cutler Park	Dennis Fire Tower
Dugger Park	Ellisville Harbor State Park
Essex Fire Tower	Fort Revere



**Table 3 DCR Parkways and Facilities Located Wholly or Partially within Urbanized Areas but Not Served by a Small MS4 System**

<b>Parks/Reservations (continued)</b>	
Governor Thomas Dudley Park	Great Brook Farm State Park
Great Herring Pond Boat Ramp	Halibut Point State Park
Hancock Woods	Havey Beach
Hawksnest State Park	Hemlock Gorge Reservation
Holyoke Range State Park	Hopkinton State Park
Johnny Appleseed State Park	Kennedy Park
Linden and Town Line Brook	Lost Pond Reservation
Maple St. MDC Land	Massasoit State Park
Maudslay State Park	MET State Hospital
MET State Lot 1	MET State Lot 4
Moore State Park	Mt. Tom State Reservation
Myles Standish Monument State Reservation	Nasketucket Bay State Reservation
Newton Lower Falls Park	Norwottuck Rail Trail
Pattens Cove	Perry Lot
Pilgrim National Monument	Pine Swamp
Plum Island State Reservation	Red Bridge State Park
Rumney Marsh Reservation	Saugus River Reservation
Scusset Beach State Reservation	Sherrin and Dale Street Playground
South Cape Beach State Park	South New England. Trunkline Trail
Spot Pond Brook	Sudbury River
Toohig Park	Town Line Brook
Waquoit Bay Nerr	Watson Pond State Park
West Island State Reservation	Whitehall State Park
Wilson Mountain Reservation	Wompatuck State Park
<b>Parkways/Roads</b>	
Attitash Public Access	Hammond Pond Parkway
<b>Recreational Facilities</b>	
Barnstable Fire Tower	Hopkinton Boat Ramp
<b>Water Supply Facilities/Reservoirs</b>	
Cochituate Aqueduct	Norumbega Reservoir
Sudbury Aqueduct	Sudbury Reservoir
Wachusett Aqueduct	Ware River Watershed Area
Weston Aqueduct	



**Table 3 DCR Parkways and Facilities Located Wholly or Partially within Urbanized Areas but Not Served by a Small MS4 System**

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**Water Supply Facilities/Reservoirs (continued)**

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**Misc. Watershed Lands** - DCR owns and manages watershed lands around the Quabbin and Wachusett Reservoirs in an undeveloped state to protect water quality, prevent soil erosion and promote conservation. Watershed management practices include planning, watershed delineation, Title 5 sanitary surveys, land acquisition, construction and post-construction management and pathogen control. Tree and forestry management practices promote sustainable tree harvesting and control of invasive species through selected cutting and coordination of volunteer conservation efforts.

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**TABLE A**





**BRP WM 08A NPDES Stormwater General Permit**  
**Notice of Intent for Discharges from Small Municipal Separate**  
**Storm Sewer Systems (MS4s)**

**Table A. Names of (Presently Known) Receiving Waters**

<b>Receiving Water</b>	<b>No. of Outfalls</b>	<b>Listed as Impaired?</b>	<b>Specify Impairment</b>
Aberjona River	15*	yes	Cause unknown, Unionized Ammonia, Nutrients, Organic enrichment/Low DO, and Pathogens
Alewife Brook	14	yes	Metals, Nutrients, Organic enrichment/Low DO, Pathogens, Oil and grease, and Taste, odor and color
Ashland Reservoir	13	no	
Atlantic Ocean	26*	no	
Beaver Brook	2	yes	Cause unknown, Nutrients, Siltation, Organic enrichment/Low DO, Pathogens, Taste, odor and color, and Turbidity
Bellevue Pond	1	no	
Blacks Nook	5*	yes	Nutrients and Noxious aquatic plants
Blackstone River and Canal	2	yes	Unknown toxicity, Priority organics, Metals, Nutrients, Organic enrichment/Low DO, Pathogens, Taste, odor and color, Suspended solids, and Turbidity
Boston Harbor	1	yes	Priority organics and Pathogens
Boston Inner Harbor	5	yes	Priority organics and Pathogens
Buttery Brook	4	yes	Priority organics, Pathogens, and Suspended solids
Cape Cod Bay	4	no	
Charles River	268	yes	Cause unknown, Unknown toxicity, Priority organics, Metals, Nutrients, Organic enrichment/Low DO, Pathogens, Oil and grease, Taste, odor and color, Noxious aquatic plants, and Turbidity
Charles River (Milford)	2	yes	Metals, Nutrients, Organic enrichment/Low DO, Pathogens, Noxious aquatic plants
Chelsea River	53*	yes	Priority organics, Unionized Ammonia, Organic enrichment/Low DO
Chestnut Hill Reservoir	16*	no	
Cleveland Pond	8	no	
Cranberry Pond	1	no	
Crystal Lake/ Perley Brook Reservoir	2	no	
Dike Pond	4*	no	
Dorchester Bay	99*	yes	Priority organics, Pathogens, Suspended solids, and Turbidity



**BRP WM 08A NPDES Stormwater General Permit**  
**Notice of Intent for Discharges from Small Municipal**  
**Separate Storm Sewer Systems (MS4s)**

**Table A. Names of (Presently Known) Receiving Waters (continued)**

<b>Receiving Water</b>	<b>No. of Outfalls</b>	<b>Listed as Impaired?</b>	<b>Specify Impairment</b>
Dunn Pond	5	no	
Fells Reservoir	11*	no	
Fellsmere Pond	7*	no	
Flint Pond	1	no	
Furnace Brook	34*	yes	Organic enrichment/Low DO
Gloucester Harbor	17	yes	Pathogens
Hammond Pond	25*	no	Cause unknown, Unionized Ammonia, Nutrients, Organic enrichment/Low DO, and Pathogens
Hampton Ponds/Pequot Pond	3	yes	Nutrients, Organic enrichment/Low DO, and Noxious aquatic plants
Hoosicwhisick Pond	9*	no	
Jamaica Pond	45*	yes	Nutrients and Organic enrichment/Low DO
Lake Cochituate	4	yes	Priority organics and Organic enrichment/Low DO
Lake Quinsigamond	5	no	
Lynn Harbor	111*	yes	Pathogens
Malden River	103*	yes	Organic enrichment/Low DO, Pathogens, Oil and grease, Taste, odor and color, and Suspended Solids
Merrimack River	21	yes	Metals and Pathogens
Merrimack River (eastern section)	3	yes	Priority organics, Metals, Nutrients, Pathogens
Mine Brook	3	yes	Cause unknown
Mother Brook	15*	yes	Nutrients, Organic enrichment/Low DO, Pathogens, and Taste, odor and color
Muddy River	71*	yes	Priority organics, Metals, Nutrients, Siltation, Organic enrichment/Low DO, Pathogens, Oil and grease, and Taste, odor and color
Mystic River	96	yes	Metals, Nutrients, Pathogens
Nahant Bay	204*	yes	Pathogens
Nash Hill Reservoir	3	no	

Massachusetts Department of Environmental Protection  
 Bureau of Resource Protection - Watershed Management  
**BRP WM 08A** NPDES Stormwater General Permit  
 Notice of Intent for Discharges from Small Municipal  
 Separate Storm Sewer Systems (MS4s)

W 067040  
 Transmittal Number

Facility ID (if known)

**Table A. Names of (Presently Known) Receiving Waters (continued)**

Receiving Water	No. of Outfalls	Listed as Impaired?	Specify Impairment
Neponset River (south)	8*	yes	Priority organics, Metals, Organic enrichment/Low DO, Pathogens, and Oil and grease
Neponset River (middle)	20*	yes	Priority organics, Metals, Organic enrichment/Low DO, Pathogens, Oil and grease, and Turbidity
Neponset River (estuary)	99*	yes	Priority organics, Organic enrichment/Low DO, Pathogens, and Turbidity
North Reservoir (Fells)	8*	no	
Outer New Bedford Harbor	4	yes	Priority organics, Nonpriority organics, Metals, Nutrients, Organic enrichment/Low DO, and Pathogens
Pine Tree Brook	53*	yes	Organic enrichment/Low DO and Pathogens
Pleasure Bay	16*	yes	Priority organics and Pathogens
Plymouth Harbor	2	yes	Pathogens
Quarter Mile Pond	2	no	
Quincy Bay	27*	yes	Priority organics and Pathogens
Quinsigamond Lake	8	no	
Saugus River	4	yes	Organic enrichment/Low DO and Pathogens
Sawmill Brook	41*	yes	Other inorganics, Organic enrichment/Low DO, Pathogens, Taste, odor and color, and Noxious aquatic plants
Scarboro Golf Course Pond	4	no	
Scargo Lake	1	no	
Shawme Lake	15	no	
Shawsheen River	5	yes	Unknown toxicity and Pathogens
South Reservoir (Fells)	11*	no	
South Watuppa Pond	3	no	
Spicket River	6	yes	0000, Metals, Nutrients, Pathogens
Spot Pond	99*	no	

Massachusetts Department of Environmental Protection  
 Bureau of Resource Protection - Watershed Management  
**BRP WM 08A** NPDES Stormwater General Permit  
 Notice of Intent for Discharges from Small Municipal  
 Separate Storm Sewer Systems (MS4s)

W 067040  
 Transmittal Number

Facility ID (if known)

**Table A. Names of (Presently Known) Receiving Waters (continued)**

Receiving Water	No. of Outfalls	Listed as Impaired?	Specify Impairment
Stony Brook Pond	6	no	
Sudbury Reservoir	3	yes	Metals
Taunton River	12	yes	Organic enrichment/Low DO and Pathogens
Trull Brook	1	no	
Upper Pond (Breakheart Res.)	4	no	
Westfield River	2	no	
Weymouth Back River	17	yes	Pathogens
Weymouth Fore River	1	yes	Pathogens
Wrights Pond	25*	no	

\*Number of outfalls estimated



**Appendix B: ENDANGERED SPECIES CORRESPONDENCE**



March 6, 2006

Julie Crocker  
National Oceanic and Atmospheric Administration  
Northeast Regional Office (NERO)  
One Blackburn Drive  
Gloucester, MA 01930-2298

**Subject: DCR NPDES MS4 Permit Outfall Within Short Nose Sturgeon Habitat**

Dear Ms. Crocker:

The NPDES General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) requires that permit applicants review the potential impact of drainage system outfalls on federal threatened and endangered species habitat. We are writing to request your review of outfalls identified at DCR's Holyoke Heritage State Park for potential impact to Short Nose Sturgeon habitat.

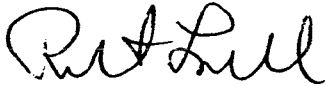
The Massachusetts Department of Conservation and Recreation (DCR) has submitted an application for coverage under this permit to EPA and is awaiting coverage notification. In the Storm Water Management Plan (SWMP) prepared as part of the submittal, DCR stated that they would review storm water outfalls from their facilities for potential adverse impacts to rare and endangered species habitat. Outfalls are eligible for coverage if the discharge or discharge related activity are not likely to jeopardize the continued existence of any species that are listed as endangered or threatened under the Endangered Species Act (ESA) or result in the adverse modification or destruction of habitat that is designated as critical under the ESA.

During the summer of 2005, our consultant, ENSR, identified storm water outfalls on DCR parkways, roads and facilities in urbanized areas. In total, 1,403 outfalls were identified.

The Massachusetts Division of Fisheries and Wildlife informed ENSR that the Connecticut River is designated as short nose sturgeon habitat. Using GIS, ENSR identified DCR outfall locations within the Connecticut River watershed. The Holyoke Heritage State Park was the only facility with outfalls that met these criteria. A detailed facility map including the location of the outfall in question is attached to this memo.

We ask that you review the figure and let us know if you feel there is a potential adverse impact from the identified outfall to the short nose sturgeon. If DCR could provide additional information for help in the review, please contact us.

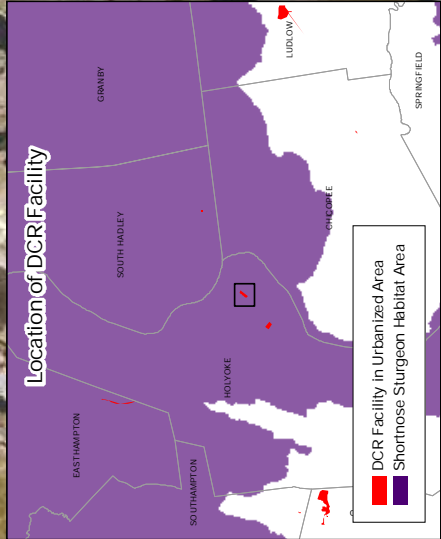
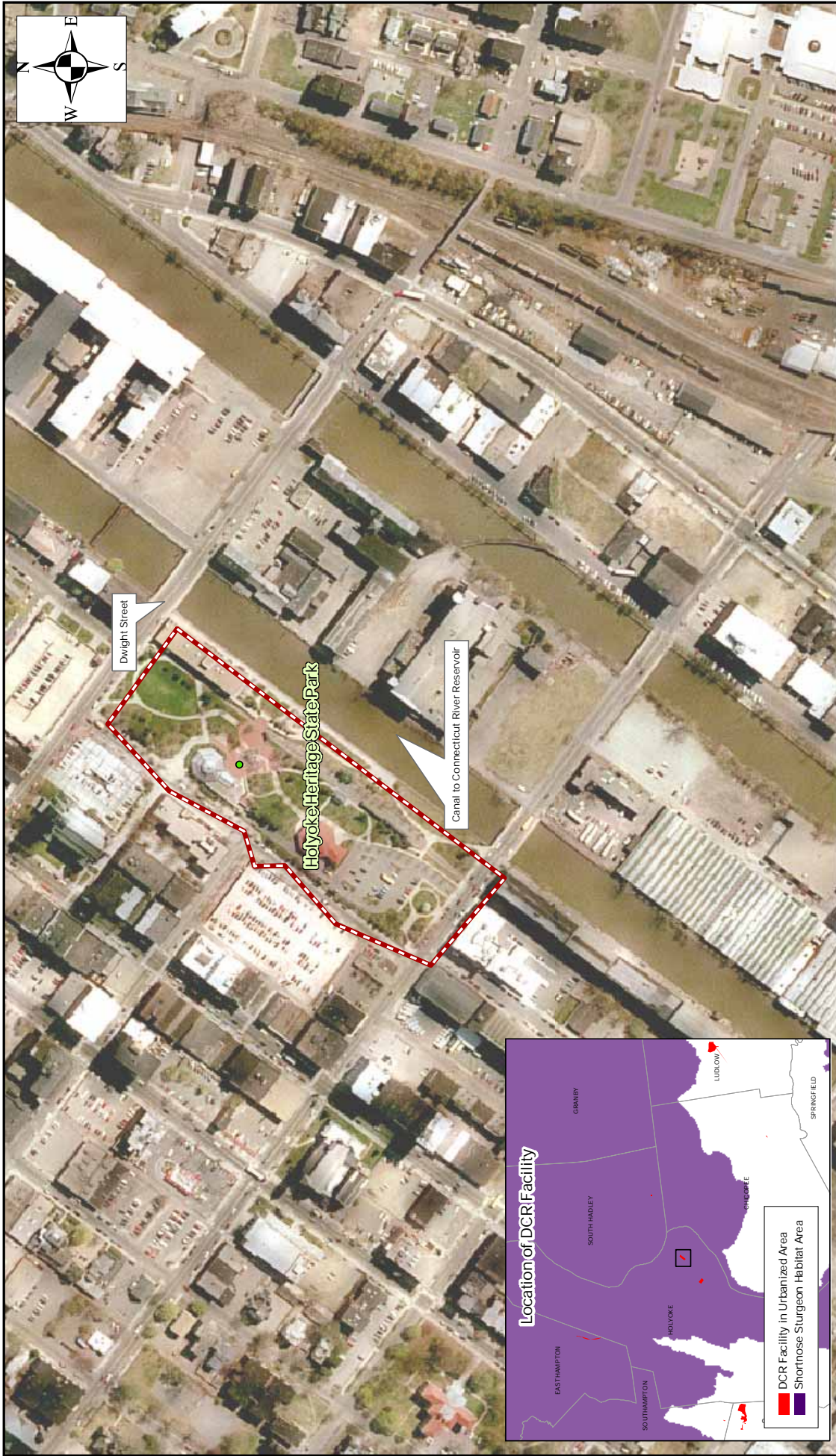
Sincerely,

A handwritten signature in black ink, appearing to read "Rob Lowell". The signature is written in a cursive style with a large initial "R" and "L".

Rob Lowell

Storm Water Manager

cc: Caroline Hampton, ENSR



DCR Facility with Storm Water Outfall to Short Nose Sturgeon Habitat Area:  
Holyoke Heritage State Park

February 2006

Legend

- Facility in Short Nose Sturgeon Habitat Area
- DCR Storm Water Outfall





UNITED STATES DEPARTMENT OF COMMERCE  
 National Oceanic and Atmospheric Administration  
 NATIONAL MARINE FISHERIES SERVICE  
 NORTHEAST REGION  
 One Blackburn Drive  
 Gloucester, MA 01930-2298

MAR 10 2006

Rob Lowell  
 Massachusetts Executive Office of Environmental Affairs  
 Department of Conservation and Recreation  
 251 Causeway Street, Suite 600  
 Boston, Massachusetts 02114-2119

Re: DCR NPDES MS4 (Shortnose Sturgeon)

Dear Mr. Lowell,

This is in response to your letter dated March 6, 2006 regarding an application by the Massachusetts Department of Conservation and Recreation (DCR) for coverage under the National Pollutant Discharge Elimination System (NPDES) Small Municipal Separate Storm Sewer System (MS4) permit issued by the US Environmental Protection Agency. Stormwater outfalls are eligible for coverage if the discharge or related activity is not likely to jeopardize the continued existence of any listed species.

As noted in your letter, a population of the federally endangered shortnose sturgeon (*Acipenser brevirostrum*) occurs in the Connecticut River from the dam at Turner's Falls to the mouth of the river. DCR has identified one facility, the Holyoke Heritage State Park, with outfalls that discharge into the Connecticut River watershed. This facility has several stormwater outfalls which discharge into a canal that ultimately discharges into the Connecticut River. As the only discharge associated with these outfalls is clean stormwater and any discharge will be significantly diluted before it reaches the mainstem of the Connecticut River, this discharge will have no effect to shortnose sturgeon or their habitat. As such, no further coordination with NOAA's National Marine Fisheries Service (NMFS) is necessary in regards to DCR's coverage under the MS4 permit. Should you have any questions regarding these comments, please contact Julie Crocker of my staff at (978)281-9300 x6530.

Sincerely,

Mary A. Colligan  
 Assistant Regional Administrator  
 for Protected Resources

File Code: Sec 7 EPA CT River Mass DCR MS4





August 24, 2006

Julie Crocker  
National Oceanic and Atmospheric Administration  
Northeast Regional Office (NERO)  
One Blackburn Drive  
Gloucester, MA 01930-2298

**Subject: DCR NPDES MS4 Permit Outfall within Merrimack River portion of Short Nose Sturgeon Habitat**

Dear Ms. Crocker:

The NPDES General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) requires that permit applicants review the potential impact of drainage system outfalls on federal threatened and endangered species habitat. The Massachusetts Department of Conservation and Recreation (DCR) has submitted an application for coverage under this permit to EPA and is awaiting coverage notification. In the Storm Water Management Plan (SWMP) prepared as part of the submittal, DCR stated that they would review storm water outfalls from their facilities for potential adverse impacts to rare and endangered species habitat. Outfalls are eligible for coverage if the discharge or discharge related activity are not likely to jeopardize the continued existence of any species that are listed as endangered or threatened under the Endangered Species Act (ESA) or result in the adverse modification or destruction of habitat that is designated as critical under the ESA.

During the summer of 2005, our consultant, ENSR, identified storm water outfalls on DCR parkways, roads and facilities in urbanized areas. In total, 1,403 outfalls were identified.

According to Addendum A of the MS4 General Permit, the Merrimack River below the Lawrence Dam and the Connecticut River are designated as short nose sturgeon habitat. We previously submitted a letter dated March 6, 2006 requesting your review of impacts from storm water outfalls in the Connecticut River short-nosed sturgeon habitat. We received a response from your office indicating that "as the only discharge associated with these outfalls is clean storm water and any discharge will be significantly diluted before it reaches the Connecticut River, this discharge will have no effect to short nose sturgeon or their habitat."

We are writing to request your review of outfalls identified within the Merrimack River for impact to short nose sturgeon habitat. Using GIS, ENSR identified DCR outfall locations within the Merrimack River watershed below the Lawrence Dam and identified an outfall from

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www.mass.gov/dcr



Mitt Romney  
Governor

Kerry Healey  
Lt. Governor

Robert W. Gollidge, Jr., Secretary  
Executive Office of Environmental Affairs

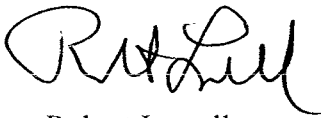
Stephen H. Burrington, Commissioner  
Department of Conservation & Recreation

the Lawrence Heritage State Park. A detailed facility map including outfall locations is attached to this letter.

We ask that you review the figure and let us know if you feel there is a potential adverse impact from the identified outfall to the short nose sturgeon. If DCR could provide additional information for help in the review, please contact me at 617-626-1340 or email me at [Robert.Lowell@state.ma.us](mailto:Robert.Lowell@state.ma.us).

Sincerely,

Department of Conservation and Recreation

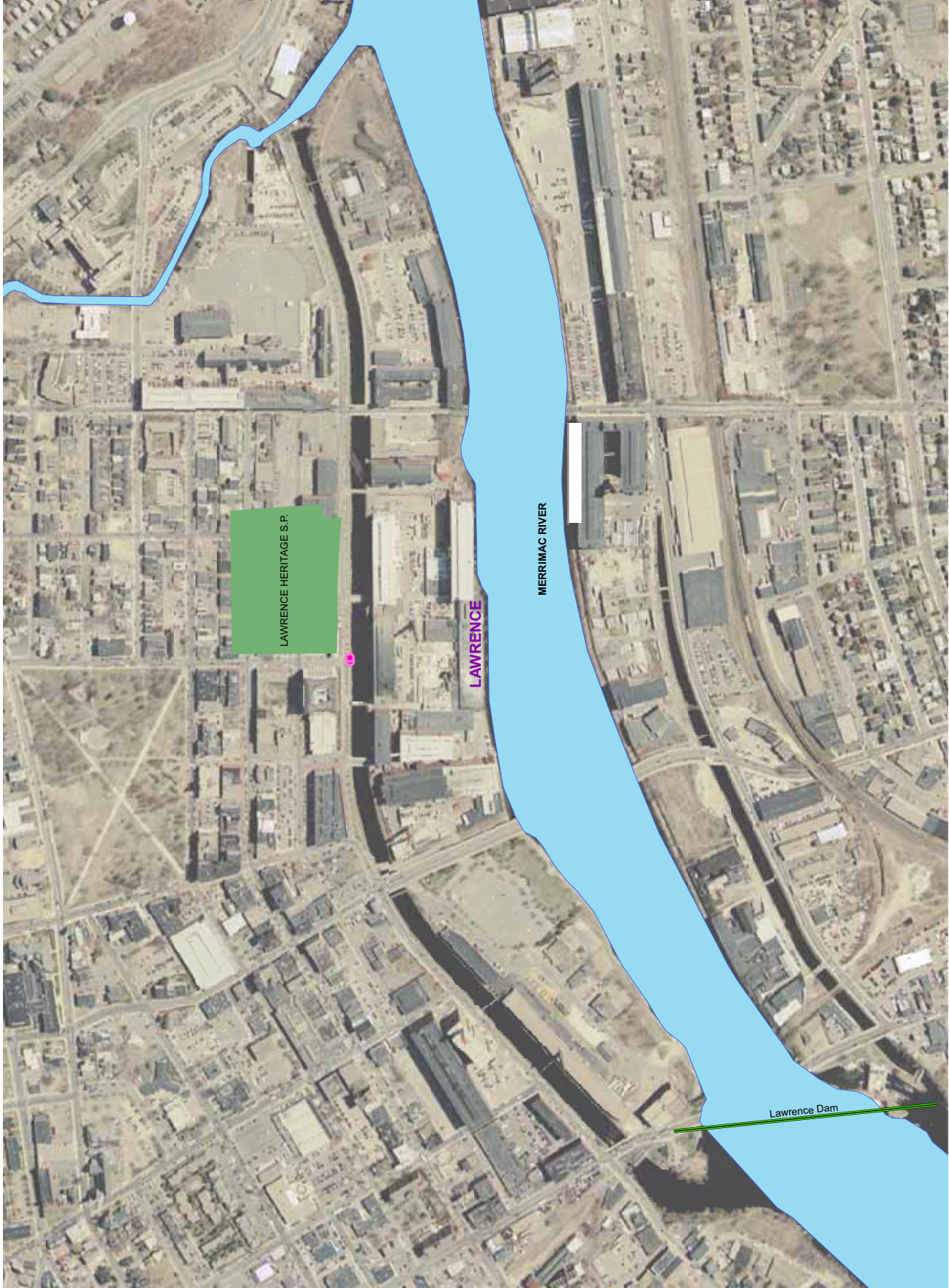
A handwritten signature in black ink, appearing to read "Robert Lowell". The signature is fluid and cursive, with the first name "Robert" being more prominent than the last name "Lowell".

Robert Lowell

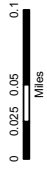
Storm Water Manager

Division of Planning and Engineering

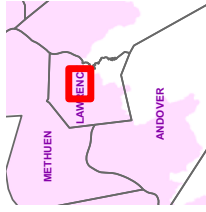
cc: Thomas LaRosa, Office of the General Counsel  
Nicholas Vontzalides, Office of the General Counsel  
Caroline Hampton, ENSR



DCR FACILITIES IN  
URBANIZED AREAS IN  
SHORTNOSE STURGEON HABITAT



VICINITY MAP



LOCUS MAP



Legend

- Town Boundary
- Watershed to Merrimac River
- DCR Storm Water Outfall
- DCR Facility in UA Intersecting Watershed
- Merrimac River
- Lawrence Dam

Sheet: Lawrence Heritage State Park

Note: According to addendum A of the MSJ general permit, the shortnose sturgeon habitat is located below the Lawrence dam.





UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
NORTHEAST REGION  
One Blackburn Drive  
Gloucester, MA 01930-2298

AUG 31 2006

Robert Lowell  
Division of Planning and Engineering  
Commonwealth of Massachusetts  
Department of Conservation and Recreation  
251 Causeway Street, Suite 600  
Boston, Massachusetts 02114-2119

Dear Mr. Lowell,

This is in response to your letter dated August 24, 2006 regarding an application by the Massachusetts Department of Conservation and Recreation (DCR) for coverage under the NPDES General Permit for discharges from Small Municipal Separate Storm Water Systems (MS4s). DCR is seeking permit coverage for storm water discharges from the Lawrence Heritage State Park in Lawrence, Massachusetts. Storm water runoff from the park enters the Merrimack River below the Lawrence Dam.

As noted in your letter, a population of the federally endangered shortnose sturgeon (*Acipenser brevirostrum*) occurs in the Merrimack River. In order to be eligible for coverage under the MS4 permit, DCR must demonstrate to the US Environmental Protection Agency (EPA) that the discharge is not likely to adversely affect any listed species. The information presented in your letter supports the conclusion made by DCR that discharges from the Lawrence Heritage State Park will not have any effect on water quality in the Merrimack River or on shortnose sturgeon. As such, no further coordination with NMFS is necessary regarding coverage of the park under this permit. Should you have any questions regarding this letter, please contact Julie Crocker of my staff at (978)281-9300 x6530 or by e-mail ([Julie.Crocker@noaa.gov](mailto:Julie.Crocker@noaa.gov)).

Sincerely,

Mary A. Colligan  
Assistant Regional Administrator  
for Protected Resources





August 24, 2006

Michael J. Amaral  
US Fish and Wildlife Service  
70 Commerce Street  
Suite 300  
Concord, NH 03301

**Subject: DCR NPDES MS4 Permit Outfalls within Dwarf Wedge Mussel Habitat**

Dear Mr. Amaral:

The NPDES General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) requires that permit applicants review the potential impact of drainage system outfalls on federal threatened and endangered species habitat. We are writing to request your review of outfalls identified from a DCR facility for potential impact to dwarf wedge mussel habitat.

The Massachusetts Department of Conservation and Recreation (DCR) submitted an application for coverage under the MS4 General Permit to EPA and is awaiting coverage notification. In the Storm Water Management Plan (SWMP) prepared as part of the submittal, DCR stated that they would review storm water outfalls from their facilities for potential adverse impacts to rare and endangered species habitat. Outfalls are eligible for coverage if the discharge or discharge related activity are not likely to jeopardize the continued existence of any species that are listed as endangered or threatened under the Endangered Species Act (ESA) or result in the adverse modification or destruction of habitat that is designated as critical under the ESA.

During the summer of 2005 our consultant, ENSR, identified storm water outfalls on DCR parkways, roads and facilities in urbanized areas. In total, 1,403 outfalls were identified.

According to Addendum A of the MS4 General Permit, the Connecticut River is designated as dwarf wedge mussel habitat. Using GIS, ENSR identified DCR outfall locations within the Connecticut River watershed. The only facility with outfalls to the Connecticut River is Holyoke Heritage State Park. A detailed facility map including outfall locations is attached to this memo.

We ask that you review the figures and let us know if you feel there is a potential adverse impact from any of the identified outfalls to the dwarf wedge mussel. If DCR could provide

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[www.mass.gov/dcr](http://www.mass.gov/dcr)



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Lt. Governor

Robert W. Gollidge, Jr., Secretary  
Executive Office of Environmental Affairs

Stephen H. Burrington, Commissioner  
Department of Conservation & Recreation

additional information for help in the review, please contact me at 617-626-1340 or email me at Robert.Lowell@state.ma.us.

Sincerely,

Department of Conservation and Recreation

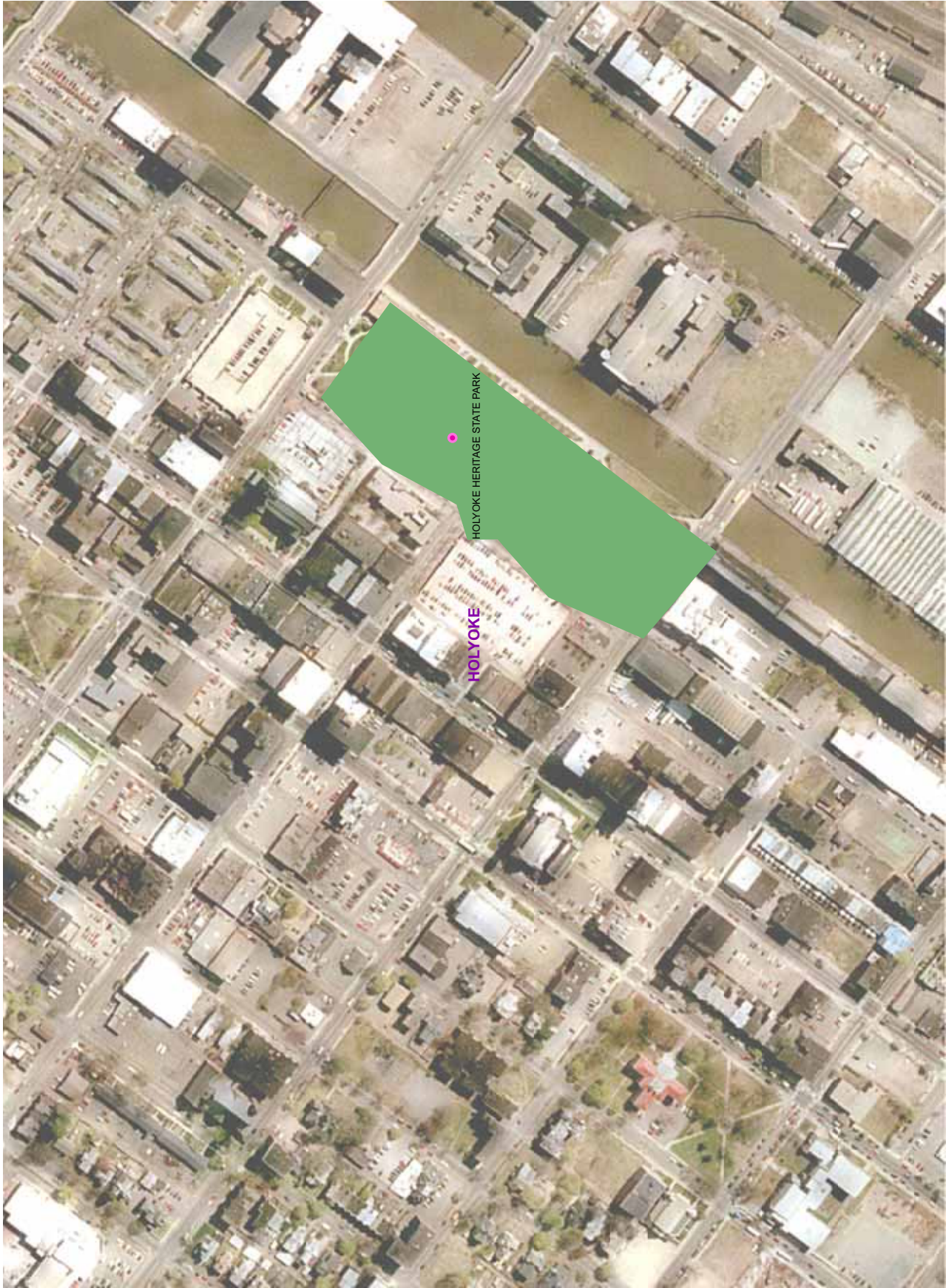
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Robert Lowell

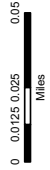
Storm Water Manager

Division of Planning and Engineering

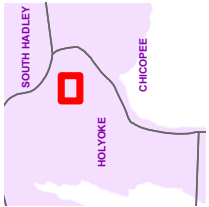
cc: Thomas LaRosa, Office of the General Counsel  
Nicholas Vontzalides, Office of the General Counsel  
Caroline Hampton, ENSR



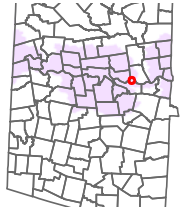
DCR FACILITIES IN  
URBANIZED AREAS IN  
DWARF WEDGEMUSSEL HABITAT



VICINITY MAP



LOCUS MAP



Legend

- Town Boundary
- Watershed to Connecticut River
- DCR Storm Water Outfall
- DCR Facility in UA Intersecting Watershed

Sheet: Holyoke Heritage State Park









**Appendix C: HISTORIC PROPERTIES CORRESPONDENCE**



September 11, 2006

Ms. Brona Simon  
Deputy State Historic Preservation Officer  
Massachusetts Historical Commission  
220 Morrissey Boulevard  
Boston, MA 02125-3314

**Subject: DCR NPDES MS4 Permit Facilities near Historic Properties/ Districts**

Dear Ms. Simon:

The NPDES General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) requires that permit applicants review the potential impact of drainage system outfalls on properties listed or eligible to be listed in the National Register of Historic Places.

DCR has submitted an application for coverage under this permit to EPA and is awaiting authorization. In the Storm Water Management Plan (SWMP) prepared as part of the submittal, DCR agreed to review urbanized area roads and facilities owned by DCR for currently known adverse effects on historic properties caused by storm water discharges from the roadway/ facility. Discharges that adversely affect properties listed or eligible to be listed on the National Register of Historic Places would not be authorized for coverage under the MS4 General Permit.

During the summer of 2005, our consultant, ENSR, identified storm water outfalls on DCR parkways and facilities in urbanized areas. In total, they identified 1,403 outfalls.

Massachusetts Office of Geographic and Environmental Information Systems (MassGIS) provided ENSR with a GIS data layer of historic properties and sites. Using GIS, ENSR identified DCR facilities within 500-feet of historic properties or districts. DCR's Office of Cultural Resources also provided a list of DCR properties which are on the National Historic Properties list or are eligible for listing. ENSR used this list to identify the additional properties that were not included in MassGIS's historic properties database (more recently listed or eligible to be listed). Using GIS, ENSR identified DCR facilities within 500-feet of historic properties or districts. The list of facilities and associated figures identify DCR facilities with outfalls (or suspected outfalls) that need further review by Massachusetts Historical Society to determine if there is a potential for the discharge to adversely impact the historic property. In lieu of providing a large number of individual printed figures for these

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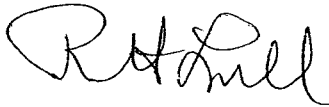
locations, we enclose a digital file (CD) with a figure for each of the facilities that illustrates the outfall location and the historic property/district under review.

DCR Office of Cultural Resources is not aware of any known outfalls that are adversely affecting a property listed in, or eligible for listing in the National Register. We would greatly appreciate if you or your staff could review the enclosed figures and confirm our opinion that there is, at present, no known storm water discharges from the shown DCR facilities causing adverse effects on historic properties.

If we can provide additional information for help in the review, please feel free to contact me at (617) 626-1340.

Sincerely,

Department of Conservation and Recreation

A handwritten signature in black ink, appearing to read "Robert Lowell". The signature is fluid and cursive, with the first name being more prominent.

Robert Lowell

Storm Water Manager

cc: Caroline Hampton, ENSR

Jeffrey Harris, DCR Office of Cultural Resources

Patrice Kish, DCR Office of Cultural Resources

Attachment: List of DCR Outfalls w/i 500-feet of Historic Properties

Enclosure: Figures of Listed DCR Historic Properties (CD)

DCR Facilities with Outfalls within 500 ft of Historic Properties/Districts

DCR Facility Name	Number of Outfalls	Historic Property/District	Sheet Number
Abigail Adams State Park	1	Abigail Adams State Park	DA_138
Agassiz Road	suspected outfalls	Back Bay Fens, Sections O1 Fenway - Boylston Street Historic District Fenway Studios Massachusetts Historical Society Building New Riding Club Park Drive	DA_124 CN_125, CN_126, CO_125, CP_125, CO_125, CO_126 DC_126 DC_126 DC_126 DC_125, DC_126, DD_125
Alewale Brook Parkway	14	Alewale Brook Reservation Butterfield - Whittemore House Cambridge Almshouse Cook, Thomas House Mystic Pumping Station Mystic River Reservation Mystic Valley Parkway	CS_123, CT_123, CU_121, CU_122, CU_123 CU_122 CU_123 CT_123 CS_123 CR_122, CR_123, CR_124, CS_122, CS_123, CS_124, CS_125, CT_125, CT_126, CU_126, CU_127, CU_128 CN_122, CN_123, CO_122, CP_122, CO_122, CR_121, CR_122, CR_123, CR_124, CS_122, CS_123, CS_124, CS_125, CT_125, CT_126
Blackstone HSP	2	Robondreau, Alfred E. House Blackstone Canal Historic District	CU_122 DA_119
Blue Hill River Road	3	Blue Hill River Road Blue Hills Reservation Blue Hills Reservation Refreshment Pavilion Hillside Street	DV_125, DW_125 DQ_126, DQ_131, DR_131, DT_127, DT_128, DU_126, DU_127, DV_125, DV_126, DW_125 DV_126 DU_125, DV_125
Blue Hills Parkway	6	Blue Hills Parkway Blue Hills Reservation Neponset River Reservation Truman Parkway Unquity Road	GN_126, DQ_126, DP_126, DQ_126 DQ_126, DQ_131, DR_131, DT_127, DT_128, DU_126, DU_127, DV_125, DV_126, DW_125 DN_126, DO_126, DP_123, DQ_123, DR_123, DS_124 DN_126, DO_126 DN_125, DO_125, DP_126, DQ_126
Blue Hills Reservation	6	Blue Hills Headquarters Blue Hills Reservation Chickatawbut Road Hillside Street Metropolitan District Commission Stable Scott's Woods Historic District	DU_126 DQ_126, DQ_131, DR_131, DT_127, DT_128, DU_126, DU_127, DV_125, DV_126, DW_125 DT_127, DT_128, DU_126, DU_127 DU_126, DV_126 DU_126 BP_160
Boston Embankment	2	Back Bay Architectural District Back Bay Historic District Beacon Hill Historic District Boston Center For Adult Education Boston Common Boston Common And Public Garden Boston Public Garden Charles River Basin Historic District Charles Street Meeting House Gibson, Charles Jr. House Hayden, Lewis House Ollis, Second Harrison Gray House Parkman, Francis House Prescott, William Hicking House Suffolk County Jail	DA_124 DA_124 CO_121 DA_127 DA_127 DA_127 DA_127 CY_115 CW_126 CZ_119, DA_119, DA_120 DA_127 CO_122 CZ_128 CO_122 CY_124 CZ_128
Breakheart Reservation	9	Breakheart Reservation Forest Street Lyrra Fells Parkway Rivertide Park Veterans Administration Medical Center Veterans Of Foreign Wars Parkway	CH_131, CI_131, CJ_131 CH_131, CI_131, CJ_131 CI_131, CJ_131 DM_120 CL_137 DJ_122, DJ_123, DK_120, DL_120, DM_120
Brook Farm Parkway	2	Brash Hill Rd Neponset River Reservation Neponset Valley Parkway	CR_123 DN_126, DO_126, DP_123, DQ_123, DR_123, DS_124 DS_124
Bush Hill Road	6	Paul's Bridge - Hubbard's Bridge Blue Hills Reservation Quincy Granite Railway	DU_126, DO_131, DR_131, DT_127, DT_128, DU_126, DU_127, DV_125, DV_126, DW_125 DR_131

DCR Facilities with Outfalls within 500 ft of Historic Properties/Districts

DCR Facility Name	Number of Outfalls	Historic Property/District	Sheet Number
Cambridge parkway	4	American Net And Twine Company Factory Athenaeum Press Building Bottle House Block Cambridge Parkway Cambridge Parkway Connector Charles River Basin Historic District East Cambridge Historic District Edward J. Lopez Avenue, 42 Little, Annur D. Inc. Building Luke Building	CZ_127 CZ_127 CZ_127 CZ_127 CZ_127, DA_127 CW_126 CO_126, CP_126, CP_127 CZ_127 DA_127 CZ_127
Casassa Overpass	suspected outfalls	Revere Beach Parkway Slade Spoke Mill	CT_131, CT_133, CU_127, CU_128, CU_132, CU_134 CU_132
Charles River Reservation	42	Arsenal Street B & B Chemical Company Back Bay Architectural District Back Bay F. ens. Sections OI Back Bay Historic District Baker House Banks, E. Sybill House Bay State Road - Back Bay West Architectural Beacon Hill Historic District Bemis Mill Boston Center For Adult Education Boston Common Boston Common And Public Garden Boston Manufacturing Company Historic District Boston Manufacturing Company Housing Boston Public Garden Charles River Basin Historic District Charles River Dam Charles Street Meeting House Childs, Mayor Edwin O. House Cochituate Aqueduct Linear District Commonwealth Avenue Mall Collage Farm Historic District Collage Farm Local Historic District Crowninshield House Curtis, Allan Crockier House Elmwood (James Russell Lowell House) Engine House #34 Evangelical Baptist Church First Baptist Church Fientie, Ernst House Fort Washington Fort Washington Historic District Fresh Pond Parkway Fuller, Peter Building Gibson, Charles Jr. House Gilbrae Inn Greenough Boulevard Harvard Stadium Hastings Square Historic District Hill, Aaron House Holbrook, Richard House Hooper - Lee - Nichols House Howe House Hubbard Park Historic District Lawton Place Historic District Lowell School Massachusetts General Hospital - Bulfinch Building Massachusetts General Hospital - Ether Dome	CY_115 DA_121, DA_122 DA_124 DA_124 DA_124 DA_124 DA_126 CY_115 CO_121 CO_121 CZ_117 DA_127 DA_127 DA_127 DA_127 CY_115 CY_115 CW_126 CW_126 CZ_117 CZ_117 CY_114 DA_120 CT_123 CT_123 DB_127 DB_127 DF_124 CO_125, CO_126, CP_125 CZ_122 CZ_117 DB_127, GP_121 DA_124 DA_125 DA_125 CY_123 DB_124 DA_127 CY_115 CY_123, DA_120, DA_121 CZ_123 CY_124 CW_126 CY_115 DV_009 CN_122 CN_122 BE_119, BF_119 CY_123 CZ_128 CZ_128

DCR Facilities with Outfalls within 500 ft of Historic Properties/Districts

DCR Facility Name	Number of Outfalls	Historic Property/District	Sheet Number
Charles River Reservation	42	Memorial Drive Moulton, Eaton Mill Mount Auburn Cemetery Mount Auburn Hospital - Main Building Mount Auburn Hospital - Surgical Building Mount Auburn Street, 259 New England Hebrew Academy Newton Street Bridge Norumbega Road Olcott, John E. House Old Cambridge Historic District Olmsted Park System Orne, Sarah House Porter - O'Brien House Quinobegun Road Shell Oil Company "Spectacular" Sign Soldiers Field Road Soldiers Field Road Extension Storrows Drive Trinity Rectory Waltham Gas And Electric Company Generating Plant Waltham Gas Light Company Historic District Wake Paper Mill Watertown Arsenal Urban Renewal Parcel Weston Aqueduct Linear District	CY_123, CY_124, CZ_124, CZ_127, DA_124, DA_125, DA_126, DA_127, DB_124, DB_125 DF_113 DF_113 CY_123 CY_123 CY_123 DB_124 CY_115 DB_113, DC_113 CY_115 CY_124 CZ_128 CZ_128 CY_115 DF_114, DF_115, DG_115, DG_116 DA_124 CY_123, CZ_122, CZ_123, CZ_124, DA_121, DA_122, DA_124, DB_124 CY_123 DA_127, DB_124, DB_125, DB_126, DB_127 DB_127 CY_115 CY_115 DF_113 CY_114 DH_120, DH_121, DF_121, DL_122, DJ_122, DL_122 DA_119 CZ_119, DA_119, DA_120 DA_120 DA_119 DA_119 DA_119 CZ_119, DA_119, DA_120, DA_121 DA_119 CZ_119 DA_120 DA_120 DA_119
Charles River Road	19	Bigelow, Henry House Charles River Road Commanding Officer's Quarters, Bldg. 111, Anemic Jackson, Samuel Jr. House Maple Street, 68 Nonantum Road Nonantum Road Branch Pratt, Miles House Simpson House William Street, 60	DA_119 CZ_119, DA_119, DA_120 DA_120 DA_119 DA_119 CZ_119, DA_119, DA_120, DA_121 DA_119 CZ_119 DA_120 DA_120 DA_119
Chestnut Hill Driveway	suspected outfalls	Chestnut Hill Historic District Chestnut Hill Reservoir & Pumping Stations Chestnut Hill Reservoir Historic District Chestnut Hill Reservoir Linear District Cochituate Aqueduct Linear District Old Chestnut Hill Historic District Sudbury Aqueduct Linear District	CY_114 CY_114 CY_114 CY_114 CY_124 DF_115 CQ_121
Chestnut Hill Reservation	2	Beacon Street Historic District Chestnut Hill Historic District Chestnut Hill Reservoir & Pumping Stations Chestnut Hill Reservoir Historic District Chestnut Hill Reservoir Linear District Cochituate Aqueduct Linear District Fisher Hill Historic District Old Chestnut Hill Historic District Sudbury Aqueduct Linear District	CY_114 CY_114 CY_114 CY_114 CY_114 CY_115 CY_124 DF_115
Chestnut Street	suspected outfalls	Corday, James Michael House Emerald Necklace Parks Olmsted Park System Pill Hill Historic District Pill Hill Local Historic District	DF_124 CO_125, CO_126, CP_125 CZ_128 DS_124 DS_124

DCR Facilities with Outfalls within 500 ft of Historic Properties/Districts

DCR Facility Name	Number of Outfalls	Historic Property/District	Sheet Number
Chickatawbout Road	24	Blue Hills Headquarters Blue Hills Reservation Chickatawbout Observation Tower Chickatawbout Road Hillside Street Metropolitan District Commission Stable Scott S. Woods Historic District	DU_126 DU_126_UQ_131_DR_131_DT_127_DT_128_DU_126_DU_127_DV_125_DV_126_DW_125 DT_128 DU_127_DT_128_DU_128_DU_126_DU_127 DU_126_DV_125 DU_126 BP_160
Concord Turnpike	9	Alewite Brook Reservation Pleasant Street Historic District	CS_123_CT_123_CU_121_CU_122_CU_123 CO_132
Devoll Street	1	Charles River Basin Historic District	CW_126
		Delphic Club Farwell - Russell Store Happgood, Richard House Harvard Houses Historic District Harvard Lampoon Building Harvard Square Historic District Harvard Union Harvard Yard Historic District Hasty Pudding Club Memorial Drive Old Cambridge Baptist Church Old Cambridge Historic District Porcellian Club Reversible Collar Company Building Santis, Hiram House Second Cambridge Savings Bank Building Stickney - Shepard House	CY_124 CY_124 CY_124 CY_115 CY_124 CY_124 CY_124 CY_124 CY_124 CY_124 CY_123_CY_124_CZ_124_CZ_127_DA_124_DA_125_DA_126_DA_127_DB_124_DB_125 CY_124 CY_124 CY_124 CY_124 CY_124 CY_124 CY_124 CY_124 CY_124
East Border Road	3	East Border Road Fellsway East	CO_126_CP_126_CP_127 CJ_131_CK_129_CK_130_CL_128_CM_127_CN_127_CO_127_CP_127_CQ_126
Elm Street	4	Elm Street Woodland Road	CO_125_CO_126_CP_125 CM_126_CN_126_CO_126
Embankment Road	3	Back Bay Architectural District Beacon Hill Historic District Boston Center For Adult Education Boston Common Boston Common And Public Garden Boston Public Garden Charles River Basin Historic District Charles Street Meeting House Commonwealth Avenue Mall Crowninshield House First Baptist Church Gibson, Charles Jr. House Hayden, Lewis House Parkman, Francis House Prescott, William Hicking House Storrow Drive Trinity Rectory	DA_124 DA_124 DA_127 DA_127 DA_127 CY_115 CW_126 DA_120 DB_127 DA_127_GP_121 DA_127 CO_122 CY_124 DA_127_DB_124_DB_125_DB_126_DB_127 DB_127
Eugene pool	2	Prospect Heights Historic District	BP_159



DCR Facilities with Outfalls within 500 ft of Historic Properties/Districts

DCR Facility Name	Number of Outfalls	Historic Property/District	Sheet Number
Fall River Heritage State Park	9	American Printing - Metacombet Mill Anthony, David House Downtown Fall River Historic District Earle, John M. House Fall River Public Library First Baptist Church Lafayette - Durfee House Lindsey, William House Lower Highlands Historic District Pt Boat 617 Pt Boat 796 Quequechan Club Unitarian Society In Fall River USS Joseph P. Kennedy USS Lionfish USS Massachusetts	CZ_127 GP_121 CZ_114 GP_121 GP_121 DB_127, GP_121 GP_121 GP_121 CY_123 GP_121 GP_121 GP_121 GP_121 GP_121 GP_121 GP_121 GP_121 GP_121
Fallsway East	11	Boundary Road Fallsway East Middlesex Fells Reservoirs Historic District West Border Road	CQ_126 CJ_131, CK_129, CL_130, CL_128, CM_127, CN_127, CO_127, CP_127, CO_126 DA_126 CO_126 CO_125, CO_126, CP_125
Fallsway West	27	Elm Street Fallsway West Middlesex Fells Reservoirs Historic District South Border Road South Street	CL_125, CM_125, CT_126, CU_126, CV_127 CM_125, CN_125, CO_125, CP_125, CQ_125, CQ_126 DA_126 CN_123, CO_123, CQ_125 CL_125, CL_126
Fenway	3	Back Bay Fens, Sections Of Cox Building Dillaway School Dudley Station Historic District Eliot, John Square Historic District Fenway - Boylston Street Historic District First Church In Roxbury Gardner, Isabella Stewart Museum Greek Orthodox Cathedral Of New England Hale, Edward Everett House Kiltredge, Alvah House Milestone, 1767 Olmsted Park System Roxbury Highlands Historic District	DA_124 DE_126 DE_126 CZ_114 CN_122 CM_125, CN_125, CO_125, CP_125, CQ_125, CQ_126 DE_126 DD_125 DD_126 DE_126 DE_120 CY_124, DE_124, DE_126 CZ_128 CY_134
Fenway	suspected outfalls	Roxbury Highlands Historic District Back Bay Architectural District Back Bay Fens, Sections Of Back Bay Historic District Bay State Road - Back Bay West Architectural Charles River Basin Historic District Commonwealth Avenue Mall Emerald Necklace Parks Fenway - Boylston Street Historic District Fenway Studios Gardner, Isabella Stewart Museum Greek Orthodox Cathedral Of New England Greek Orthodox Cathedral Of New England Massachusetts Historical Society Building New Riding Club Olmsted Park System Park Drive Elm Street	DA_124 DA_124 DA_124 CQ_121 CW_126 DA_120 CO_125, CO_126, CP_125 CM_125, CN_125, CO_125, CP_125, CQ_125, CQ_126 DC_126 DD_125 DD_129 DD_126 DC_126 DC_126 CZ_128 DC_125, DC_126, DD_125 DA_126 CM_126, CP_125
Flynn Rink	3	Middlesex Fells Reservoirs Historic District Woodland Road	CM_126, CN_126, CO_126

DCR Facilities with Outfalls within 500 ft of Historic Properties/Districts

DCR Facility Name	Number of Outfalls	Historic Property/District	Sheet Number
Fort Revere	1	Fort Revere Tower Hull Village Historic District Telegraph Hill	DD_132 DM_144 CW_126
Franklin Park Zoo	4	Franklin Park Garrison, William Lloyd School Climsted Park System	DE_124 DH_126 CZ_128
Frontage Road	1	Atlewick Brook Reservation	GS_123, CT_123, CU_121, CU_122, CU_123
Furnace Brook Parkway	31	Adams National Historic Site Complex Barker, George A. House Barker, Henry F. House Blue Hills Reservation Dorothy Q Apartments Fortbes Hill Sprudgpe Furnace Brook Parkway Mount Wollaston Cemetery New England Telephone Building Newcomb Place Quincy Center Local Historic District Quincy Granite Railway Quincy Homestead Quincy Shore Drive Quincy Shore Reservation Sheppard, Eben W. House Wampaluck Road Winfield House Woodward Institute	DD_136 DO_133 DO_133 DO_126, DQ_131, DR_131, DT_127, DT_128, DU_126, DU_127, DV_125, DV_126, DW_125 DU_133 CY_124 DN_133, DO_132, DO_133, DP_131, DQ_131, DR_131 CY_123 DO_133 DO_133 GP_121 DR_131 DO_132 DK_131, DL_132, DM_133, DN_133, DO_133 DK_131, DL_132, DM_133, DN_133 DR_131 DO_132 BP_159 CL_137 CO_122 GP_121 CO_126
Gardner Innk	1	Gardner News Building Heywood - Wakefield Company Complex Lake Street Fire Station West Gardner Square Historic District	CL_137 CO_122 GP_121 CO_126
Greenough Blvd	26	Arsenal Street Charles River Basin Historic District Charles River Road Commanding Officer's Quarters, Bldg. 111, Ammir Engine House #34 Greenough Boulevard Mount Auburn Cemetery Mount Auburn Hospital - Surgical Building North Beacon Street Soldiers Field Road Watertown Arsenal Urban Renewal Parcel	DA_121, DA_122 CW_126 CZ_119, DA_119, DA_120 DA_120 CZ_122 CY_123, DA_120, DA_121 DF_113 CY_123 DA_120, DA_121 CY_123, CZ_122, CZ_123, CZ_124, DA_121, DA_122, DA_124, DB_124 CY_114
Hammond Pond Parkway	22	Chestnut Hill Historic District Commonwealth Avenue Historic District Dupee Estate Gray Cliff Historic District Hammond Pond Parkway Holyhood Cemetery Kingsbury House Monsahock Road Historic District Old Chestnut Hill Historic District Subbury Aqueduct Linear District	CY_114 DA_120 DE_119 CR_124 DE_119, DF_119, DF_120, DH_120 CW_126 CN_123 BP_159 CY_124 DF_115
Hessey Street	1	Linney	CL_137, CM_136, CM_137, CM_138, CN_136
Hillside Road	4	Blue Hill River Road Blue Hills Headquarters Blue Hills Reservation Blue Hills Reservation Refreshment Pavilion Hillside Street Metropolitan District Commission Stable	DV_125, DW_125 DU_126 DQ_126, DQ_131, DR_131, DT_127, DT_128, DU_126, DU_127, DV_125, DV_126, DW_125 DV_126 DU_126, DV_125 DU_126

DCR Facilities with Outfalls within 500 ft of Historic Properties/Districts

DCR Facility Name	Number of Outfalls	Historic Property/District	Sheet Number
Holyoak Heritage State Park	1	Caledonia Building	DV_009
		Holyoke Canal System	CW_126
		Holyoke City Hall	DV_009
		Maplewood Hotel	DA_119
		North High Street Historic District	DA_120, DA_121
		U. S. Post Office - Holyoke Main Branch	DE_124
		suspected outfalls	CK_140
		suspected outfalls	DM_144
			DM_144, DN_145, DQ_123, DR_123, DS_124
			DF_124
Jamaica Way	1	Curfey, James Michael House	CO_125, CO_126, CP_125
		Emerald Necklace Parks	DG_124
		Jamaica Pond Boathouse	DC_125, DD_124, DD_125, DE_124, DF_124, DG_124
		Jamaicaway	BP_159
		Monument Square Historic District	CZ_128
		Olmsted Park System	DC_125
		suspected outfalls	DF_124
			CO_125, CO_126, CP_125
			DE_124
			DE_124
Jamaicaway	1	Jamaica Pond Boathouse	DG_124
		Milestone, 1767	DC_125, DD_124, DD_125, DE_124, DF_124, DG_124
		Monument Square Historic District	CY_124, DE_124, DE_126
		Olmsted Park System	BP_159
		Pill Hill Historic District	CZ_128
		Richards, Ellen Swallow House	DS_124
		Spurr, Elphaleet House	CY_124
		White Place Historic District	DE_124
		Cambridge Parkway	DH_120, DH_121, DI_121, DI_122, DJ_122, DL_122
			CZ_127
Lawrence Heritage State Park	2	Charles River Basin Historic District	CW_126
		East Cambridge Historic District	CO_126, CP_126, CP_127
		Edward J. Lopez Avenue, 42	CZ_127
		Downtown Lawrence Historic District	CZ_114
		Essex Company Machine Shop	DL_122, DO_122, DO_123
		Essex Company Office And Yard	DL_122, DO_122, DO_123
		Gleason Building	CN_122
		Grace Episcopal Church	CR_124
		Jackson Terrace	DB_113
		Lawrence City Hall	CW_126
Land Blvd	1	Mechanics block Historic District	CY_127
		North Canal	DA_120, DA_121
		North Canal Historic District	DA_120, DA_121

DCR Facilities with Outfalls within 500 ft of Historic Properties/Districts

DCR Facility Name	Number of Outfalls	Historic Property/District	Sheet Number
Lawrence River Front State Park	2	Lawrence Riverfront S.P.	BE_119, BF_119
Lynn Shore Drive	128	Lynn Shore Drive Lynn Shore Reservation	CL_138, CL_139, CM_138 CL_138, CL_139, CM_138
Lynn Shore Reservation	4	Lynn Shore Drive Lynn Shore Reservation Newhall, Lucian House	CL_138, CL_139, CM_138 CL_138
Lynnells Parkway	13	Boardman House Fellsday East Lynn Fells Parkway Melrose Public Library Melrose Town Center Historic District Trinity Episcopal Church	CK_130 CJ_131, CK_129, OK_130, CL_128, CM_127, CN_127, CO_127, CP_127, CQ_126 CL_131, CJ_131 CH_124 CF_124 DB_127
Lynnway	17	Bank Block Central Building (Sweetser Factory Building) Central Square Historic District Fabens Building G.A.R. Hall And Museum Lynn Common Historic District Lynn Heritage State Park Lynn Masonic Hall Lynn Realty Company Building #2 Lynn Shore Drive Lynn Shore Reservation Lynnway Lowery's Block Nahant Beach/Lynn Shore Reserv Newhall, Lucian House Tapley Building Vanip Building	CL_137 CL_137 CW_126 CL_137 CL_137 CZ_127 CL_137, CM_137 CL_137 CL_137 CL_138, CL_139, CM_138 CL_138, CL_139, CM_138 CL_137, CM_136, CM_137, CM_138, CN_136 CL_137 CM_138, CN_138, CO_138, CP_138 CL_138 CL_137 CL_137
Mcgrath Highway	1	Blodgett, Elizabeth House Bonner, William House Brockett, S. E. House Brooks, James H. House Carvill, Alphonso And Jenimia House Central Library Columbus Avenue - Warren Avenue Historic District Gilson House Grace Baptist Church Grandview, The Gustin, Julia House Hailey, Fred House Highland, The Hollander Blocks Ireland, Samuel House Lancmaid Building Lovejoy, Avian L. House Marden, Jennie House Munroe, Benjamin House Munroe, Edwin And Benjamin House Munroe, Robert House Niles, Louville House Parkear - Burnett House Pleasant Avenue Historic District Prospect Hill Tower And Observatory Robbins, Henry House Sylvester, John House Taylor, Adoniram House And Stable Williams, Charles House Wright House	CW_126 CK_130 CN_123 CF_123 CW_126 CW_126 DF_115 CY_115 CR_124 CY_123, DA_120, DA_121 CW_126 CW_126 BP_159 CW_126 DA_127 CW_126 CL_137 CW_126 CW_126 CW_126 CW_126 DC_132 BP_159 CW_126 CW_126 CW_126 CW_126 CW_126

DCR Facilities with Outfalls within 500 ft of Historic Properties/Districts

DCR Facility Name	Historic Property/District	Sheet Number
Memorial Drive	Ash Street Historic District	DA_121, DA_122
	Athenaeum Press Building	CZ_127
	B & B Chemical Company	DA_124
	Baker House	DA_126
	Bay State Road - Back Bay West Architectural	CQ_121
	Berkeley Street Historic District	DB_127
	Birkhoff, George D. Residence	DA_119
	Brattle Hall	CY_124
	Brattle, William House	CY_124
	Cambridge Armory	DA_126
	Cambridge Common Historic District	DA_126
	Cambridge Parkway	CZ_127
	Cambridge Parkway Connector	CZ_127, DA_127
	Charles River Basin Historic District	CW_126
	Christ Church	CY_124
	Church Street, 26-28	CY_124
	College House	CY_124
	Conventual Church Of St. Mary & St. John	CY_123
	Cottage Farm Historic District	CT_123
	Cottage Farm Local Historic District	CT_123
	Cox - Hicks House	CY_124
	Craigie Arms	CY_124
	Daly, Reginald A. House	CY_123
	Dana - Palmer House	CY_124
	Delphic Club	CY_124
	Elmwood (James Russell Lowell House)	CO_125, CO_126, CP_125
	Farwell - Russell Store	CY_124
	First Church Unitarian	CY_124
	Fenlie, Ernst House	DA_124
	Fort Washington	DA_125
	Fort Washington Historic District	DA_125
	Fresh Pond Parkway	CY_123
	Frost, Robert House	BP_159
	Fuller, Peter Building	DB_124
	Greenough Boulevard	CY_123, DA_120, DA_121
	Happold, Richard House	CY_124
	Harvard Houses Historic District	CY_115
	Harvard Lampoon Building	CY_124
	Harvard Square Historic District	CY_124
	Harvard Square Subway Kiosk	CY_124
	Harvard Stadium	CZ_123
	Harvard Union	CY_124
	Harvard Yard Historic District	CY_124
	Hastings Square Historic District	CY_124
	Hastings, Oliver House	CY_124
	Hasty Pudding Club	CY_124
	Hill, Aaron House	CW_126
	Holmes, Joseph House	CW_126
	Hooper - Lee - Nichols House	DV_009
	Houghton Beech Tree	CY_124
	Howe House	CN_122
	Hubbard Park Historic District	CN_122
	Hyde - Taylor House	CY_124
	Kresge Auditorium	DA_126
	Little, Arthur D. Inc. Building	DA_127
	Longfellow National Historic Site	DA_127
	Lowell School	CY_123
	Luke Building	CZ_127
	M.I.T. Chapel	DA_126
	Massachusetts Hall	CY_124
	Massachusetts Institute Of Technology Nr District	DC_126
	Memorial Drive	CY_123, CY_124, CZ_124, CZ_127, DA_124, DA_125, DA_126, DA_127, DB_124, DB_125

Number of Outfalls  
125



DCR Facilities with Outfalls within 500 ft of Historic Properties/Districts

DCR Facility Name	Number of Outfalls	Historic Property/District	Sheet Number
Mother Brook Reservation	2	Franklin Square - Court Street Historic District Mother Brook Reservation	DE_124 DP_120, DQ_123
Mount Auburn St.	1	Ash Street Historic District Berkeley Street Historic District Birkhoff, George D., Residence Charles River Basin Historic District Daly, Reginald A., House Frost, Robert House Hastings, Oliver House Hill, Aaron House Howe House Hubbard Park Historic District Longfellow National Historic Site Lowell School Memorial Drive Memorial Drive Apartments Historic District Mount Auburn Hospital - Main Building Mount Auburn Hospital - Surgical Building Mount Auburn Street, 259 Old Cambridge Historic District Soldiers Field Road Extension Soughton, Mary Fisk House	DA_121, DA_122 DB_127 DA_119 CW_126 CY_123 BP_159 CY_124 CW_126 CN_122 DA_127 CY_123 CY_123, CY_124, CZ_124, CZ_127, DA_124, DA_125, DA_126, DA_127, DB_124, DB_125 CY_123 CY_123 CY_123 CY_124 CY_123 CY_123
Mystic Lakes	3	Bassett, Maria House Mystic Dam Mystic Gatehouse Mystic Lakes	CQ_121 CQ_121, CQ_122 CQ_122 CQ_122, CP_122, CQ_122, CR_122, CS_122, CS_123
Mystic River Reservation	35	Fellsway Mystic River Reservation Mystic Valley Parkway Old Ship Street Historic District Park Street Railroad Station Revere Beach Parkway	CL_125, CM_125, CI_126, CU_125, CU_127 CH_122, CH_123, CH_124, CS_122, CS_123, CS_124, CS_125, CT_125, CT_126, CU_126, CU_127, CU_128 CN_122, CN_123, CO_122, CP_122, CQ_122, CR_121, CR_122, CR_123, CR_124, CS_124, CS_125, CT_125, CT_126 CL_137 CS_125 CT_131, CT_133, CU_127, CU_128, CU_132, CU_134 CO_122, CP_122, CQ_122, CR_122, CS_122, CS_123 CH_122, CH_123, CH_124, CS_122, CS_123, CS_124, CS_125, CT_125, CT_126, CU_126, CU_127, CU_128 CN_122, CN_123, CO_122, CP_122, CQ_122, CR_121, CR_122, CR_123, CR_124, CS_124, CS_125, CT_125, CT_126 CS_122
Mystic River Road	3	Mystic Lakes Mystic River Reservation Mystic Valley Parkway Rawson, Warner House	CS_123, CT_123, CU_121, CU_122, CU_123 CR_124 CO_122 CO_122 DB_127 CN_123 CR_123 CR_123 CR_123 CW_122 CN_123 CN_123 CS_124 CN_122 CN_122 CZ_117 CR_124 CY_115 CR_124 CN_123 CN_122 CN_122 CR_124 CR_124 CR_124 CR_124 CR_124 CO_122
Mystic Valley Parkway	89	Alewile Brook Reservation Angier, John B., House Ayer, Albert House Ayer, Thomas Prentiss House Bacon, Robert House Bigelow Block Brackett, Edward A., House Brooks, Charles House Brooks, Jonathan House Brooks, Shepherd Estate Carr, Mary - Jeeves, Thomas House Childs, Webster House Cole, Frank House Curtis, Paul House Derohmont House Elder, Samuel House Everett Avenue - Sheffield Road Historic District Fennell, George P., House Firth - Glangarry Historic District Fletcher, Jonathan House Gardner, Oliver W., House Ginn, Edwin S., Carriage House Ginn, Edwin S., Gardener's Cottage Grace Episcopal Church Hall, Isaac House Hatch, Horace House	CS_123, CT_123, CU_121, CU_122, CU_123 CR_124 CO_122 CO_122 DB_127 CN_123 CR_123 CR_123 CR_123 CW_122 CN_123 CN_123 CS_124 CN_122 CN_122 CZ_117 CR_124 CY_115 CR_124 CN_123 CN_122 CN_122 CR_124 CR_124 CR_124 CR_124 CR_124 CO_122





DCR Facilities with Outfalls within 500 ft of Historic Properties/Districts

DCR Facility Name	Number of Outfalls	Historic Property/District	Sheet Number
North Border Road	1	Chamuelain, Samuel House Dike, Lyman - Crme, Joshua House Jones, John House Boyyden Hall Norumbega Road	CW_126 CN_122 DC_125, DD_124, DD_125, DE_124, DG_124, DG_124 DD_124 DB_113, DC_113
Norumbega Road	1	Fort Independence	DD_132
Old Harbor Reservation	1	Old Harbor Reservation	DD_132, DE_129, DE_130
Parkman Drive / Perkins Street	suspected outfalls	Curley, James Michael House Emerald Necklace Parks Green Hill Historic District Jamaica Pond Boatouse Jamaicaway Monument Square Historic District Olmsted Park System Richards, Ellen Swallow House Sarpent S Pond	DF_124 CO_125, CO_126, CP_125 DD_126 DG_124 DC_125, DD_124, DD_125, DE_124, DG_124, DG_124 BP_159 CZ_128 CY_124 CY_124
Pilgrim National Monument	2	National Monument To The Forefathers Plymouth Historic District	FE_158 DO_132
Pond Street	1	Metropolitan District Commission Pumping House Middlesex Falls Reservoirs Historic District Pond Street	CM_126 DA_126 CL_126, CM_126, CM_127
Quincy Shore Drive	12	Furnace Brook Parkway Glover House Mount Wollaston Cemetery Quincy Shore Drive Quincy Shore Reservation	DN_133, DO_132, DO_133, DP_131, DQ_131, DR_131 BP_159 CY_123 DK_131, DL_132, DM_133, DN_133, DO_133 DK_131, DL_132, DM_133, DN_133
Quinobequin Road	15	Cochituate Aqueduct Linear District Curtis, Allan Crocker House Curtis, William House Echo Bridge Moulton, Eaton Mill Newton Lower Falls Historic District Newton Upper Falls Historic District Quinobequin Road Sawyer, C. A. House #2 Sudbury Aqueduct Linear District Upper Falls Historic District Ware Paper Mill	CY_114 DF_124 DF_113 DG_115, DG_116 DF_113 DA_124 CY_115 DF_114, DF_115, DG_115, DG_116 DF_115 DF_115 DN_126, DO_126, DP_126, DQ_126 DF_113
Ravin Road	3	Bottrume, John House Metropolitan District Commission Pumping House Middlesex Falls Reservoirs Historic District Ravine Road	CM_126 CM_126 DA_126 CM_126, CM_127
Ravine Road	5	Fellsway East Metropolitan District Commission Pumping House Middlesex Falls Reservoirs Historic District Pond Street Ravine Road	CJ_131, CK_129, CK_130, CL_128, CM_127, CN_127, CO_127, CP_127, CQ_126 CM_126 DA_126 CL_126, CM_126, CM_127 CM_126, CM_127
Revere Beach Pkwy	14	Revere Beach Boulevard Revere Beach Parkway Revere Beach Reservation Stade Spice Mill Winthrop Parkway	CR_134, CU_134 CT_131, CT_133, CU_127, CU_128, CU_132, CU_134 CR_134, CU_134 CU_132 CU_134, CV_134
River Street	2	Cochituate Aqueduct Linear District Curtis, William House Emhence, The Mother Brook Reservation Moulton, Eaton Mill Newton Lower Falls Historic District Saint Mary'S Cemetery Saint Mary'S Episcopal Church Turtle Pond Parkway Ware Paper Mill	CY_114 DF_113 DF_113 DP_120, DQ_123 DF_113 DA_124 DF_113 DF_113 DF_113 DO_122, DP_122, DQ_123 DF_113

DCR Facilities with Outfalls within 500 ft of Historic Properties/Districts

DCR Facility Name	Number of Outfalls	Historic Property/District	Sheet Number
River Walk Park	4	American Waltham Watch Company Historic District Baker, Charles House Baker, Charles Property Beth Eden Baptist Church Boston Manufacturing Company Historic District Buttrick, Francis House Buttrick, Francis Library - Waltham Public Library Central Square Historic District Charles Street Workers' Housing Historic District Charles Street, 202-204 Christ Episcopal Church And Parish House Clough, Benjamin F., House Colburn, Gilbert House First Congregational Church Fisher, Henry N., House Fitch, Ezra Elementary School Fuller - Bemis House Hull, Henry C., House Harrington Block Moody Street Historic District Mount Faake Cemetery Murray, Robert House Oxford, The Robbins, Royal Elementary School U. S. Post Office - Waltham Main Branch Waltham State Armory Waltham Water Works Shop	CZ_127 CZ_114 CZ_114 DB_127 DA_127 CY_114 CY_114 CW_126 CZ_119, DA_119, DA_120 CY_114 CY_114 CY_114 CY_114 CY_115 CY_114 CZ_114 CZ_114 CY_114 CY_115 BP_169 CY_123 CY_114 CY_115 CW_126 CY_114 CY_114 CY_114
Riverway / Riverway Frontage Road	suspected outfalls	Bowditch, William Ingersoll House Brookline Arts Center Davis, Thomas Aspinwall House Dutch House, The Jamaicaway Linden Square Massachusetts Mental Health Center Massachusetts School Of Art Milestone, 1767 Riverway Seas Roeback And Company Mail Order Store Standish, James H., House Stoddard, Bela House Toussaint, Winand House Twitchell, Ginery House Back Bay Fens, Sections Of Beacon Street Historic District Brookline Village Commercial District Cottage Farm Historic District Cottage Farm Local Historic District Emerald Necklace Parks Longwood Historic District Olmsted Park System Pill Hill Local Historic District White Place Historic District	DD_124 DC_125 DD_124 DD_124 DC_125, DD_124, DD_125, DE_124, DF_124, DG_124 DD_124 DD_124 DC_125, DE_124, DE_126 DD_125 DC_125, DD_124, DD_125, DE_124 DC_125 DD_124 DD_124 DD_124 DE_124 DA_124 CQ_121 DC_125 CT_123 CT_123 CO_125, CO_126, CP_125 DA_127 CZ_128 DS_124 DH_120, DH_121, DI_121, DI_122, DI_122, DL_122 DL_122, DJ_123, DK_120, DL_120, DM_120
Roxbury Parkway	2	Veterans Of Foreign Wars Parkway Walnut Hills Cemetery	DH_120, DH_121, DI_121, DI_122, DJ_122, DL_122 CR_124
Shawnee State Forest	14	West Roxbury Parkway	DH_120, DH_121, DI_121, DI_122, DJ_122, DL_122
Shore Drive	3	Old King'S Highway Regional Historic District Mystic River Reservation	DD_132, DE_129, DE_130 CR_122, CR_123, CR_124, CS_122, CS_123, CS_124, CS_125, CT_125, CT_126, CU_126, CU_127, CU_128

DCR Facilities with Outfalls within 500 ft of Historic Properties/Districts

DCR Facility Name	Number of Outfalls	Historic Property/District	Sheet Number
Soldiers Field Road	100	Arsenal Street	DA_121, DA_122
		Ash Street Historic District	DA_121, DA_122
		B & B Chemical Company	DA_124
		Back Bay Architectural District	DA_124
		Back Bay Fens, Sections OI	DA_124
		Back Bay Historic District	DA_124
		Bay State Road - Back Bay West Architectural	CO_121
		Berkeley Street Historic District	DB_127
		Brattle Hall	CY_124
		Brattle, William House	CY_124
		Charles River Basin Historic District	CW_126
		Commonwealth Avenue Mall	DA_120
		Conventual Church Of St. Mary & St. John	CY_123
		Collage Farm Historic District	CT_123
		Collage Farm Local Historic District	CT_123
		Cox - Hicks House	CY_124
		Craigie Arms	CY_124
		Daly, Reginald A., House	CY_123
		Delphic Club	CY_124
		Engine House #34	CZ_122
		Fienlje, Ernst House	DA_124
		Fuller, Peter Building	DB_124
		Harvard Houses Historic District	CY_115
		Harvard Lampoon Building	CY_124
		Harvard Square Historic District	CY_124
		Harvard Stadium	CZ_123
		Hastings Square Historic District	CY_124
		Hastings, Oliver House	CY_124
		Hill, Aaron House	CW_126
		Hubbard Park Historic District	CN_122
		Hyde - Taylor House	CY_124
		Longfellow National Historic Site	DA_127
		Lowell School	CY_123
		Memorial Drive	CY_123, CY_124, CZ_124, CZ_127, DA_124, DA_125, DA_126, DA_127, DB_124, DB_125
Memorial Drive Apartments Historic District	CY_123, CY_124, CZ_124, CZ_127, DA_124, DA_125, DA_126, DA_127, DB_124, DB_125		
Mount Auburn Cemetery	DF_113		
Mount Auburn Hospital - Main Building	CY_123		
Mount Auburn Hospital - Surgical Building	CY_123		
Mount Auburn Street, 259	CY_123		
New England Hebrew Academy	DB_124		
Old Cambridge Historic District	CY_124		
Olmsted Park System	CZ_128		
Pratt, Dexter House	CY_124		
Reversible Collar Company Building	CY_124		
Sands, Hiram House	CY_124		
Shell Oil Company "Spectacular" Sign	DA_124		
Soldiers Field Road	CY_123, CZ_122, CZ_123, CZ_124, DA_121, DA_122, DA_124, DB_124		
Soldiers Field Road Extension	CY_123		
Storrow Drive	DA_127, DB_124, DB_125, DB_126, DB_127		
Stoughton, Mary Fisk House	CY_123		
Waterfown Arsenal Urban Renewal Parcel	CY_114		

DCR Facilities with Outfalls within 500 ft of Historic Properties/Districts

DCR Facility Name	Number of Outfalls	Historic Property/District	Sheet Number
Soldiers Field Road Ext.	13	Arsenal Street Charles River Road Commanding Officers Quarters, Bldg. 111, Anmmic Greenough Boulevard Mount Auburn Cemetery Nonantum Road North Beacon Street Soldiers Field Road Watertown Arsenal Urban Renewal Parcel	DA_121, DA_122 CZ_119, DA_119, DA_120 DA_120 CY_123, DA_120, DA_121 DF_113 CZ_119, DA_119, DA_120, DA_121 DA_120, DA_121 CY_123, CZ_122, CZ_123, CZ_124, DA_121, DA_122, DA_124, DB_124 CY_114
South Border Road	2	South Border Road	CN_123, CO_123, CQ_125
South Street	7	Middlesex Falls Reservoirs Historic District South Street	DA_126 CL_125, CL_126
Squamam Point Park	1	Squamam Point Park	DI_131
State Fish Pier	14	Friend Street, 14 Our Lady Of Good Voyage Church Schooner Adventure Staten Street, 7	BP_159 BP_159 BP_160 BP_159
Soldiers Neck	12	Stodders Neck	DP_138, DP_139, DQ_138, DQ_139
Stony Brook Reservation	2	Debham Parkway Erneking Parkway Smith Field Road	DO_122, DP_122 DL_122, DO_122, DO_123 CU_132
		Turtle Pond Parkway Turtle Pond Parkway Branch	DO_122, DP_122, DQ_123 DO_122, DP_122
Stonybrook Reservation	17	Enneking Parkway Reservation Road Smith Field Road Turtle Pond Parkway Turtle Pond Parkway Branch	DL_122, DQ_122, DQ_123 DP_123 CU_132 DO_122, DP_122, DQ_123 DO_122, DP_122
Storrow Drive	34	Back Bay Architectural District Back Bay Fens, Sections Of Back Bay Historic District Bay State Road - Back Bay West Architectural Beacon Hill Historic District Boston Center For Adult Education Boston Common Boston Common And Public Garden Boston Public Garden Charles River Basin Historic District Charles Street Meeting House Commonwealth Avenue Mall Cottage Farm Historic District Cottage Farm Local Historic District Crowninshield House Fenway - Boylston Street Historic District Fenway Studios First Baptist Church Gibson, Charles Jr. House Hayden, Lewis House Olmsted Park System Oils, Second Harrison Gray House Parkman, Francis House Presscott, William Hicking House Storrow Drive Suffolk County Jail Trinity Rectory	DA_124 DA_124 DA_124 CQ_121 CQ_121 DA_127 DA_127 DA_127 DA_127 CY_115 CW_126 CZ_119, DA_119, DA_120 DA_120 CT_123 CT_123 DB_127 DC_126 CM_125, CN_125, CO_125, CP_125, CO_125, CO_126 DB_127, GP_121 DA_127 CO_122 CZ_128 CZ_128 CQ_122 CY_124 DA_127, DB_124, DB_125, DB_126, DB_127 CZ_128 DB_127
Sudbury Aqueduct	1	Echo Bridge Newton Upper Falls Historic District Sudbury Aqueduct Linear District	DG_115, DG_116 CY_115 DF_115
Sudbury Reservation	3	Upper Falls Historic District Sudbury Dam Historic District Weston Aqueduct Linear District	DN_128, DO_128, DP_128, DQ_128 DF_115 DH_120, DH_121, DI_121, DI_122, DJ_122, DL_122, DL_122

DCR Facilities with Outfalls within 500 ft of Historic Properties/Districts

DCR Facility Name	Number of Outfalls	Historic Property/District	Sheet Number
Telford Street	5	Charles River Basin historic District Engine House #34 Harvard Stadium Mount Auburn Cemetery Soldiers Field Road	CW_126 CZ_122 CZ_123 DF_113 CY_123, CZ_122, CZ_123, CZ_124, DA_121, DA_122, DA_124, DB_124
Truman Parkway	1	Neponset River Reservation	DN_126, DO_126, DP_123, DQ_123, DR_123, DS_124
Turtle Pond Parkway	4	Truman Parkway	DN_126, DO_126
VFW Parkway	6	Turtle Pond Parkway Arnold Arboretum Brandegee Estate Brook Farm Harris, John House And Farm (Allandale Farm) Veterans Administration Medical Center Veterans Of Foreign Wars Parkway	DO_122, DP_122, DQ_123 DQ_124 CY_124 DO_132 CY_115 CL_137 DJ_122, DJ_123, DK_120, DL_120, DM_120
Water Street	3	Bigelow, Henry House Charles River Road Farlow And Kenrick Parks Historic District Jackson, Samuel Jr. House Maple Street, 68 Nonantum Road Nonantum Road Branch William Street, 60	DA_119 CZ_119, DA_119, DA_120 GP_121 DA_119 DA_119 CZ_119, DA_119, DA_120, DA_121 DA_119 DA_119
West Roxbury Parkway	30	Bellevue Hill Road Enneking Parkway Hammond Pond Parkway Harris, John House And Farm Jackson, Thaddeus House Veterans Of Foreign Wars Parkway Walnut Hills Cemetery West Roxbury Parkway	DL_122 DL_122, DO_122, DO_123 DE_119, DF_119, DF_120, DH_120 CY_115 DH_121 DJ_122, DJ_123, DK_120, DL_120, DM_120 CR_124 DH_120, DH_121, DL_121, DL_122, DJ_122, DL_122
Willow Pond Road	suspected outfalls	West Roxbury Parkway	CZ_128
Winthrop Parkway	10	Olmsted Park System Phill Hill Local Historic District Ronan, Mary T. School Winthrop Parkway	DS_124 CV_134 CU_134, CV_134
Winthrop Shore Reservation	2	Winthrop Beach Winthrop Shore Drive	CW_135, CX_135, CY_136 CW_135, CX_135, CY_136
Winthrop Shore Drive	9	Winthrop Beach Winthrop Shore Drive	CW_135, CX_135, CY_136 CW_135, CX_135, CY_136
WM J Day Blvd	7	Winthrop Shore Drive Dorchester Heights National Historic Site Old Harbor Reservation	DE_126 DD_132, DE_129, DE_130
Woodland Road	20	Elm Street Middlesex Fells Reservoirs Historic District Woodland Road	CO_125, CO_126, CP_125 DA_126 CM_126, CN_126, CO_126
Wyoming Avenue	2	Havine Road	CM_126, CM_127