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Public Information from DCR's 2011 National Pollutant Discharge Elimination System Municipal Separate Storm Sewer System (NPDES MS4) Annual Report

Summary of Reporting Year 8 for

US Environmental Protection Agency

and

MA Department of Environmental Protection

Commonwealth of Massachusetts

Governor
Deval L. Patrick

Lieutenant Governor
Timothy Murray

Energy and Environmental Secretary
Richard K. Sullivan, Jr.

Department of Conservation and Recreation Commissioner
Edward M. Lambert, Jr.

dcr
Massachusetts

DCR MISSION STATEMENT

To protect, promote and enhance our common wealth of natural, cultural and recreational resources for the well-being of all.

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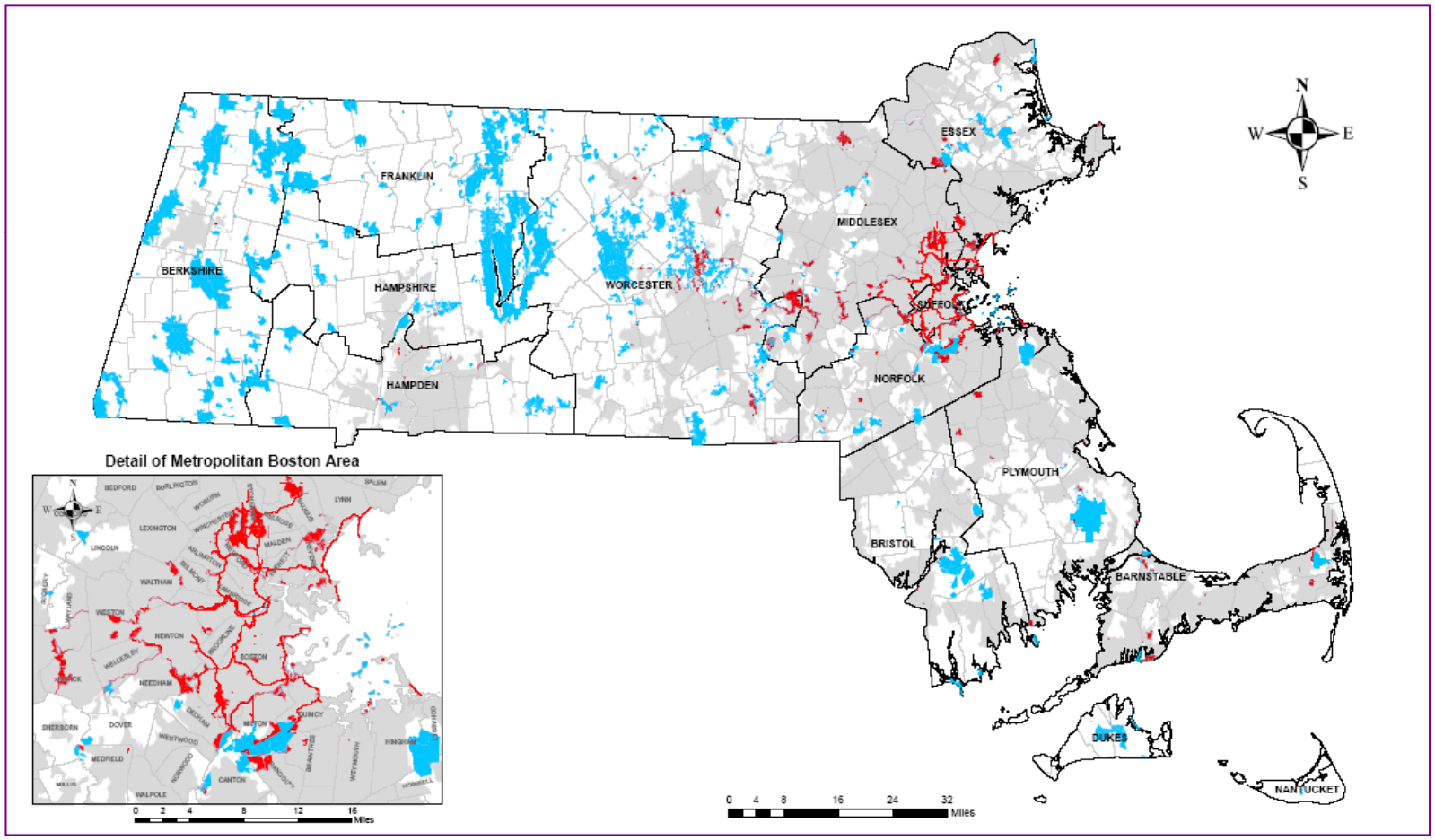
DCR in Urbanized Areas



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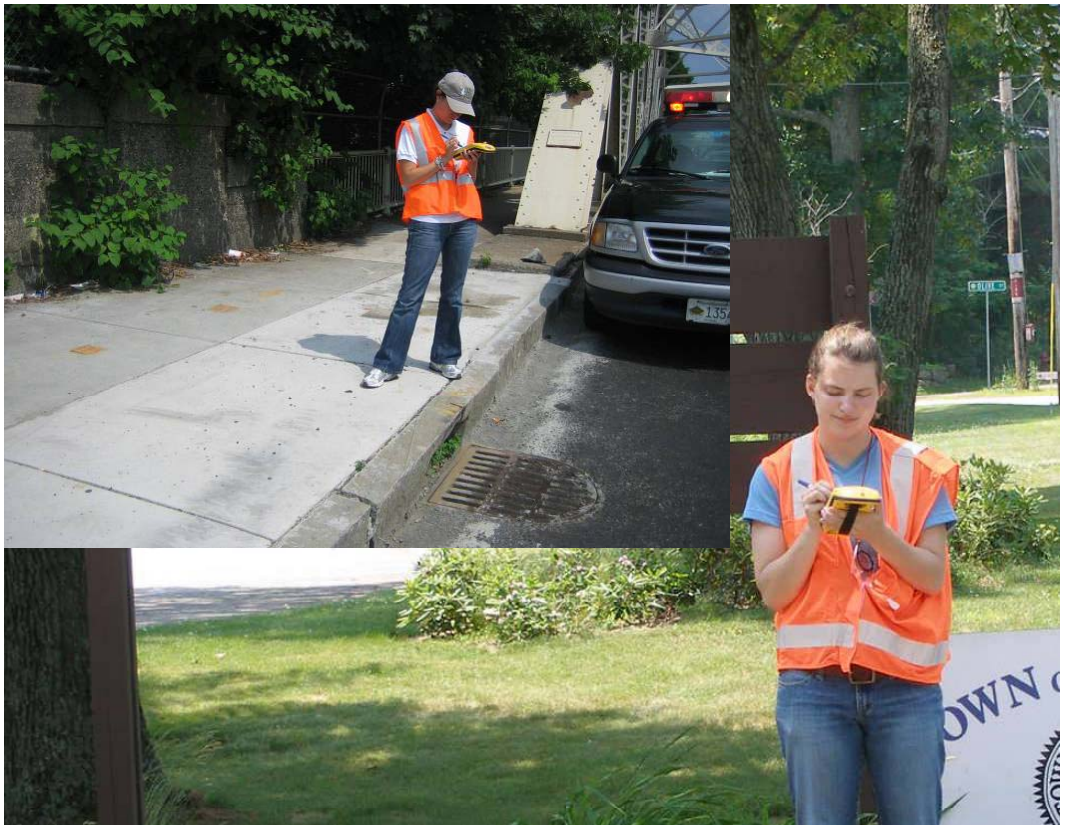
Permitted DCR Properties

- Beaches
- State Forests
- Parkways
- State Parks & Reservations
- Water Supply Protection
- Historical Properties
- Labor Yards

MS4 Challenges



- Diverse Properties
  - Type
  - Size
  - Location
- Funding
- Range of existing knowledge and data
- Overlaps with other municipalities and state organizations

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Drainage Database

- Points
  - Catch Basins
  - Manholes
  - Oil/Grit Separators
  - Outlets/Outfalls
    - headwalls, flared ends, etc.
- Lines
  - Pipes
  - Swales
- Polygons
  - Detention/Retention Ponds
  - Infiltration Chambers

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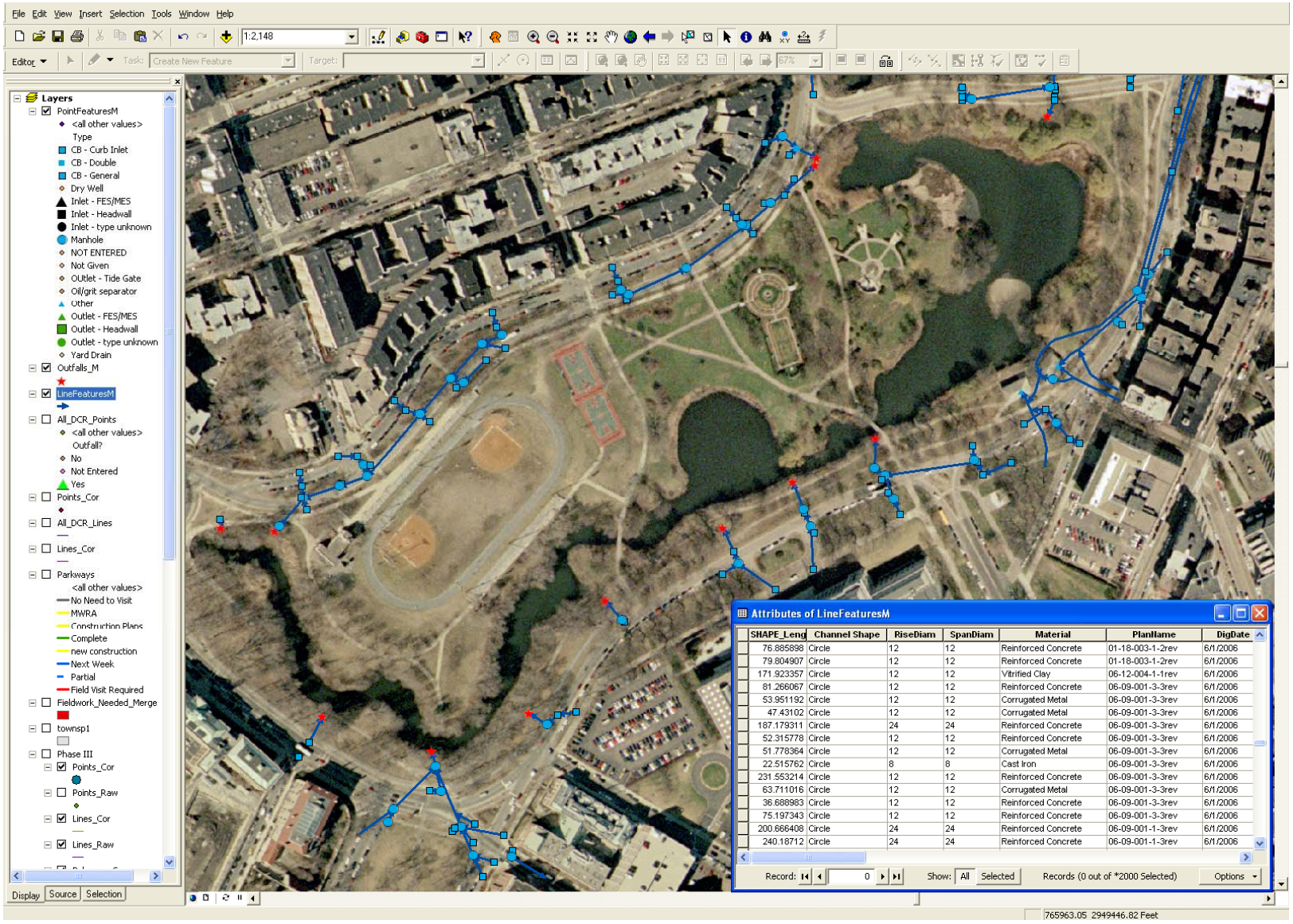

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NPDES MS4 Year 8 Reporting

- Public Education & Outreach
- Public Participation
- Illicit Discharge Detection & Elimination (IDDE)
- Construction Site Storm Water Management (during & post-construction monitoring)
- Pollution Prevention and Good Housekeeping
- Best Management Practices (BMPs) to meet Total Maximum Daily Loads (TMDL) and Waste Load Allocations (WLA)

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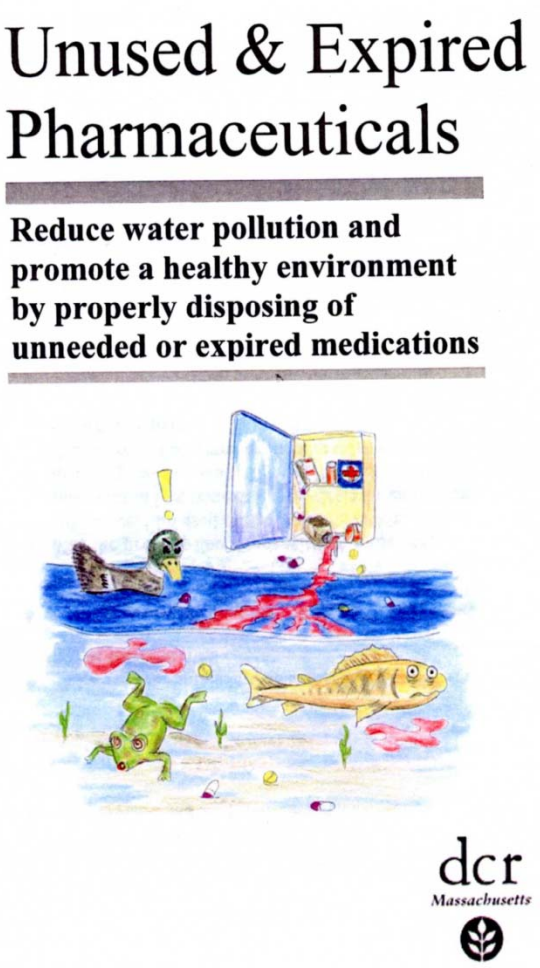
Public Education



- Household Stormwater Pollution Prevention Brochures
- Unused and Expired Pharmaceuticals
- Fertilizer Best Use Practices
- Pet Waste Management

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Public Participation

- Partnerships with Conservation Law Foundation and Charles River Watershed Association
- University of Massachusetts Water Quality Studies at Wachusett Reservoir
- Technical Assistance to Conservation Commissions
- DCR Storm Water Website

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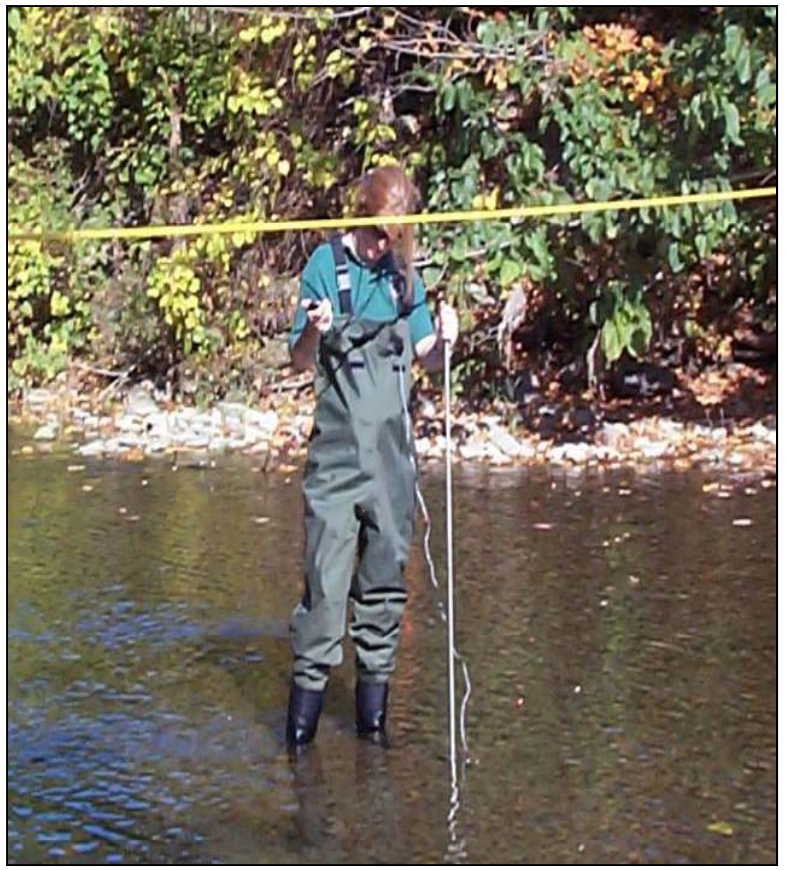
Illicit Discharge Detection

Storm Water Sampling – Dry Weather

- Illicit discharge detection and elimination – 5 year cycle to sample all DCR permitted outfalls
- Samples screened using field tests (laboratory analysis for pathogens, if necessary)
- Photo Record of Feature
- Test for Surfactants, Fluoride
- 1,625 sample locations (2011)
- Identify suspected source



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Catch Basin Cleaning

- Drainage structures mapped on GPS
- DCR has over 15,000 catch basins/drainage manholes
- Vacuum trucks clean pipes to outfall
- Dedicated staff hired to track and quantify waste collected and required maintenance
- Geo-referenced database created to identify drainage structures and to track maintenance activities

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Street Sweeping

- Street sweeping program targets roadways that drain to impaired water bodies
- High efficiency vacuum sweeper units
- Program April 1st to November 30th
- Currently, four sweeping cycles per year for most roadways ; eight cycles per year in commercial/ residential zones (tag & tow)
- Sweeping residuals are composted/recycled
- 3,726 cubic yards in 2010; 5,229 cubic yards in 2011

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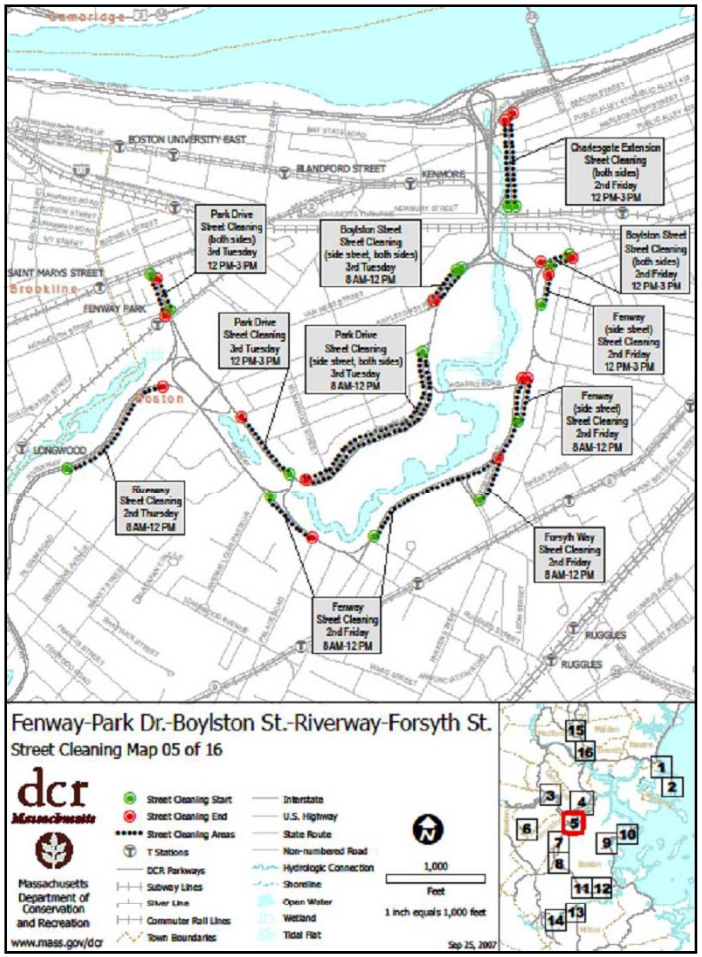
High Efficiency Street Sweepers



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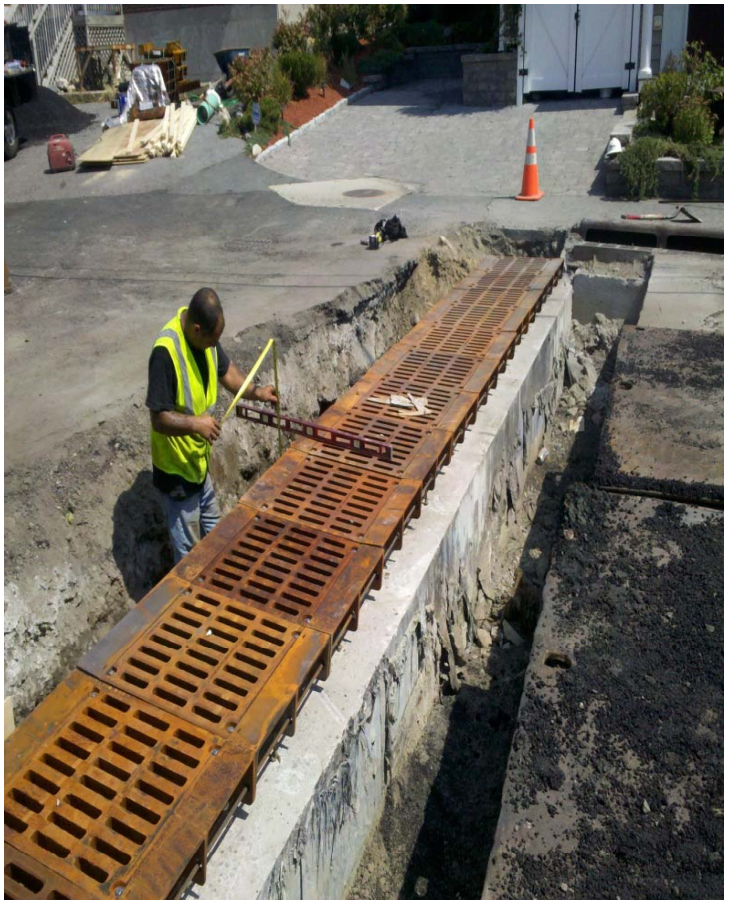
Drainage Repairs



- Identified by catch basin (CB) inspection during cleaning
- Illicit discharge detection and elimination (IDDE) DCR sampled 1,625 locations in 2010
- 257 CBs and 60 pipes maintained and repaired
- Drainage connection permit program
- Repairs recorded on GPS

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Waste Management

Street Sweepings – Composted (MA DEP BUD)

Catch Basin Residuals – Solid Waste Landfill

Abandoned Materials – Hazardous waste management at DEP/EPA permitted facilities

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Pet & Animal Waste Management

- Mutt Mitt Stations & Waste Collection Programs
- Public Education Campaigns (pet waste management, advisory notices to not feed waterfowl, gulls, etc.)

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Planning using Low Impact Development

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Total Maximum Daily Loads (TMDLs)

- Upper/Lower Charles River (Phosphorus, Pathogens)
- Blackstone River (Phosphorus)
- Boston Harbor (Pathogens)
- Cape Cod/Waquoit Bay National Estuarine Research Reserve (Nitrogen studies)

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2012 Stormwater Challenges

- Public & private drainage connections to DCR drainage system
- Additional South Coast and Central MA NPDES permit requirements
- New EPA Permit coming in 2012 ?
- Budget priorities

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Summary and Questions