

City of Cambridge Stormwater Management Program

Phase II NPDES
Stormwater Management Program
Public Meeting
March 29, 2011

Brief Overview



- **National Pollutant Discharge Elimination System (NPDES) permit program authorized by the Clean Water Act (CWA)**
 - **1999: Phase II NPDES Stormwater Management Program**
 - Regulates stormwater discharges from small Municipal Separate Storm Sewer Systems (MS4)
 - Initial Notice of Intent submitted July 2003
 - Currently Completing Year 8
 - Awaiting release of new 5-year permit

Stormwater Management Program

- Address 6 Minimum Control Measures
 1. Public education/outreach
 2. Public involvement/participation
 3. Illicit discharge detection/elimination
 4. Post-construction stormwater management
 5. Construction Site stormwater runoff control
 6. Pollution prevention/good housekeeping for municipal operations
- Develop and implement Best Management Practices to address each program area

Program Objective

Reduce discharges of pollutants from a regulated stormwater system (MS4) to the *maximum extent practicable*, to protect water quality.



Runoff Discharges
to Nearby Waters

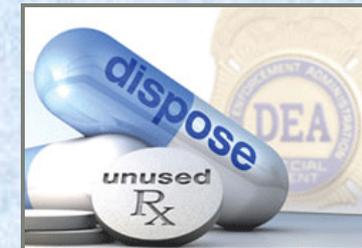
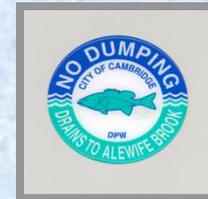


#1. Public Education & Outreach

- Web Site redesign and updates
 - New Stormwater webpage went live
 - Construction control best practices added
 - CSO information
- CAC – Remediate/Re-vision – July 6 – August 20
- Park Spark Program – August 26 – September 25
- Prescription Drop Off Program - 24/7
- Rain Barrel Promotion - May 20
 - Displays around City – DPW, City Hall, Water Dept.
 - Container Gardening Workshop (May 22)
 - Fresh Pond Day – Water Dept Ranger Station
- Curb Marker installation
- FAR Park Serve Day – April 24, 2010
- EnviroScape demonstrations
 - DPW Road Show (May 18)
 - Team Green Sense (July 14)
 - FAR Ecology Camp (July 28)



Park Spark – Pacific/ Street Park



EnviroScape



#2. Public Participation & Involvement

- Fresh Pond Shared Use Process – (5 meetings: Sept 14, Oct 19 and Nov 30, 2010; and Feb 16 and March 16, 2011)
- FAR Summer Ecology Camp – (2 presentations: July 28 and August 9)
- Household Hazardous Waste Collection (3)
- Tri Community Meetings (5)
- Earth Day – Pfizer, April 22, 2010
- Arbor Day – April 30, 2010
- GoGreen Awards – May 25, 2010
 - Linear Retail, Alewife Brook Parkway - LID
 - MIT– Stata Center, Vasser Street – rainwater harvesting
- Annual Meeting



Fresh Pond



GoGreen – Stata Center



GoGreen – Linear Retail

#3. Illicit Discharge Detection & Elimination



Prohibit, identify and remove illicit connections and discharges

- Water quality sampling
 - Charles – 21 Dry, 1 wet, 1 Oil & Grease
 - Alewife - 24 Dry, 1 wet, 1 Oil & Grease
- Illicit Connections Identification/Removal
 - 5 identified (3 removed)
- Common Manhole Separation 14
 - Contracts: CMH 4 (1), CAM400 (13)
- Automatic Sampling Stations designed (3)
 - Outfalls: Harrison Ave., stormwater wetland, Western Ave



#5. Post Construction Stormwater Management



Address runoff from significant new and redevelopment projects through the use of BMPs

- Stormwater Control Permit's reviewed - 8
- Post Construction BMP Inspections - 2
- Database development for private BMP facilities



23 Sidney Street – Green Roof



Manhole Inspection



211 + 311 Alewife Brook Parkway
Drainage swale



#6. Pollution Prevention & Good Housekeeping for Municipal Operations

- Street Sweeping— mechanical and vacuum
 - 850 tons of street sweeping debris
 - 1981 catch basins cleaned (752 tons)



Porous Pavement



USGS Study Area

Demonstration Projects

- ✓ Porous Asphalt – Morse School
 - ✓ MWRA/SEP project
- ✓ USGS Vacuum Sweeping study
 - ✓ 3 multifamily residential streets – Broadway, Highland, Fayette
 - ✓ 3 commercial streets - Cambridge, Mnt. Auburn, Green
- ✓ Infiltrating Catch Basins (Whittemore Ave, Prentiss St)

Municipal Facility Inspections

- ✓ 155 +/- total facilities
- ✓ 50 +/- in separated areas
- ✓ 23 inspected Year 8 (to date)

Dumpster Ordinance - 932

Trees Planted – 296



Dumpster Permits



Street Vacuuming

#6 Pollution Prevention cont.

- FOG Inspections and Reviews

- ✓ 15 plans reviewed
- ✓ 17 facility inspections
- ✓ 10 non-compliance letters sent



FOG Inspection – Grease Problem

- Capital Improvement Projects

- ✓ Common Manhole Removal - 14
- ✓ Remedial – (\$1.67M) pipe and emergency repairs
- ✓ TV & Cleaning - (\$300K)
- ✓ Closure of CAM400 CSO regulator and creation of New Harrison Avenue outfall
- ✓ Floatables control installed at CAM001, CAM002A, CAM002B and CAM401B
- ✓ Frost Street Area Sewer Separation – Phase I
Prentiss St and portions of Frost and Oxford

Highlights for next permit year



- CambridgePark Dr. Area Drainage Project – construction
- Contract 8A Sewer Separation (54 acres) - design
- Common Manholes
 - Contract 7 design
 - Contract 4A – 3 CMHs on Pearl and Erie and illicit removal
- Remedial (\$1.75M)
- CAM017 Bending Weir
- Myrtle/Magnolia Stormwater Management
 - Reduce severity and frequency of flooding including a stormwater storage tank on Hovey Ave
- Frost Street Project Area Sewer Separation – Phase II
 - Forest Street and portions of Frost and Oxford

Highlights for next permit year – cont.

- Fawcett Street – design
- Western Avenue – finalize design
- Common Manhole Separation:
 - CMH 7 – design (32 last remaining CMHs in separated areas)
- TV and Cleaning – new contract begins Sept
- Climate Change Adaptation Plan



What we anticipate for the New NPDES Permit

- Draft – awaiting EPA's response to public comments from 3 draft permits
- Final – Summer 2011 ??
- Phosphorous Control Plan (TMDL)
- Wet weather sampling
- More focus on LID, reduction of impervious areas

Comments/Questions