

City of Cambridge Stormwater Management Program

Phase II NPDES
Stormwater Management Program
Public Meeting
March 29, 2012

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 9
 - 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.

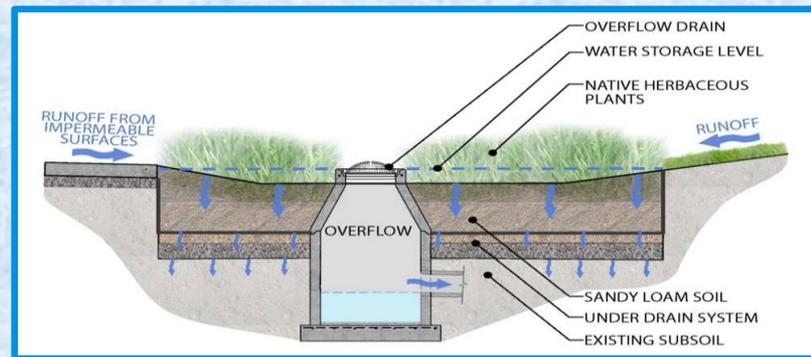


Runoff Discharges
to Nearby Waters



#1. Public Education & Outreach

- **Huron A design process**
 - Extensive outreach on water quality and LID practices
 - 6 Community Meetings and tree walk
- **Alewife Stormwater Wetland**
 - 7 Community Meetings, including Mystic Steering Committee, MyRWA, FAR, business groups and residents
- **Greenport Forum**
 - Value of street trees to climate protection – April 19, 2011
- **Rain Barrel Promotion – May 19, 2011**
 - Displays around City – DPW, City Hall, Water Dept.
 - Fresh Pond Day – Water Dept Ranger Station
- **Curb Marker installations**
- **FAR Park Serve Day – April 16, 2011**
- **Web Site updates**
- **EnviroScape demonstrations**
 - FAR Ecology Camp (July 25)



EnviroScape



#2. Public Participation & Involvement

- FAR Summer Ecology Camp – (July 25)
- Household Hazardous Waste Collection (3)
- Tri Community Meetings (5)
- GoGreen Awards – May 26, 2011
 - Bulfinch Company - Wetland
 - Cascap – rainwater harvesting/infiltration
- Fresh Pond Volunteer Program:
 - Black Swallowwort Pd Patrol
 - Weeding the Kingsley Bioswale
 - Purple Loosestrife Biocontrol Project
- Annual Meeting



GoGreen – Cascap



GoGreen – Bulfinch Companies



Fresh Pond Volunteers

#3. Illicit Discharge Detection & Elimination



Prohibit, identify and remove illicit connections and discharges

- Water quality sampling
 - Charles – 37 Dry, 1 wet, 1 Oil & Grease
 - Alewife - 30 Dry, 1 wet, 1 Oil & Grease
- Illicit Connections Identification/Removal
 - 1 identified and removed (Whittemore Ave)
- Automatic Sampling Stations
 - 3 designed in Year 8 (Harrison Ave, Stormwater Wetland, Western Ave)
 - To be installed Year 10, (stormwater wetland, Harrison Ave)



#5. Post Construction Stormwater Management



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

- Stormwater Control Permit's reviewed - 10
- Post Construction BMP Inspections - 4
- Database maintained for private BMP facilities



23 Sidney Street – Green Roof



Manhole Inspection



211 + 311 Alewife Brook Par
Drainage swale



#6. Pollution Prevention & Good Housekeeping for Municipal Operations

- Street Sweeping— mechanical and vacuum

- 2170 tons of street sweeping debris
- 2558 catch basins cleaned (665 tons)



Street Sweeping

- Demonstration Projects

- ✓ Porous Asphalt – Huron A – in design
- ✓ Rain Gardens – Huron A – in design
- ✓ Stormwater Wetland – Alewife – in construction
- ✓ USGS Vacuum Sweeping study – completed



Porous Pavement

- Trees Planted – 470

- Municipal Facility Inspections

- ✓ 156 +/- total facilities
- ✓ 51 +/- in separated areas
- ✓ 37 inspected Year 9 (to date)



Stormwater Wetland



Capital Improvement Projects during Year 9

- CambridgePark Drive Area Drainage Improvements and Stormwater Wetland Project **construction**
- Myrtle/Magnolia Stormwater Management **construction**
 - Reduce severity and frequency of flooding including a stormwater storage tank on Hovey Ave
- Frost Street Project Area Sewer Separation – Phase II
 - Forest St and portions of Frost and Oxford **construction**
- Common Manhole Contract 7 (last 33 CMHs) **design**
- Western Ave Sewer Separation/Stormwater Mgmt **design**
- Huron A Sewer Separation/Stormwater Mgmt **design**
- Fawcett Street **design**

Habitat Creation



- Deep, emergent and high marsh
- Wet meadow, broadleaf floodplain and open water
- Scrub/shrub and riparian woodland
- Over 115,000 new wetland plants
- Over 3,800 new upland plants

Site Amenities



- Multi-use connector path (Mass DOT)
- Trails and boardwalks (1,600 linear feet)
- Overlooks (3)
- Amphitheatre
- Benches and bike racks
- DCR Kiosk and interpretive signage



Future wetland



Future Oxbow



Future outfall to Forebay

Highlights for next permit year

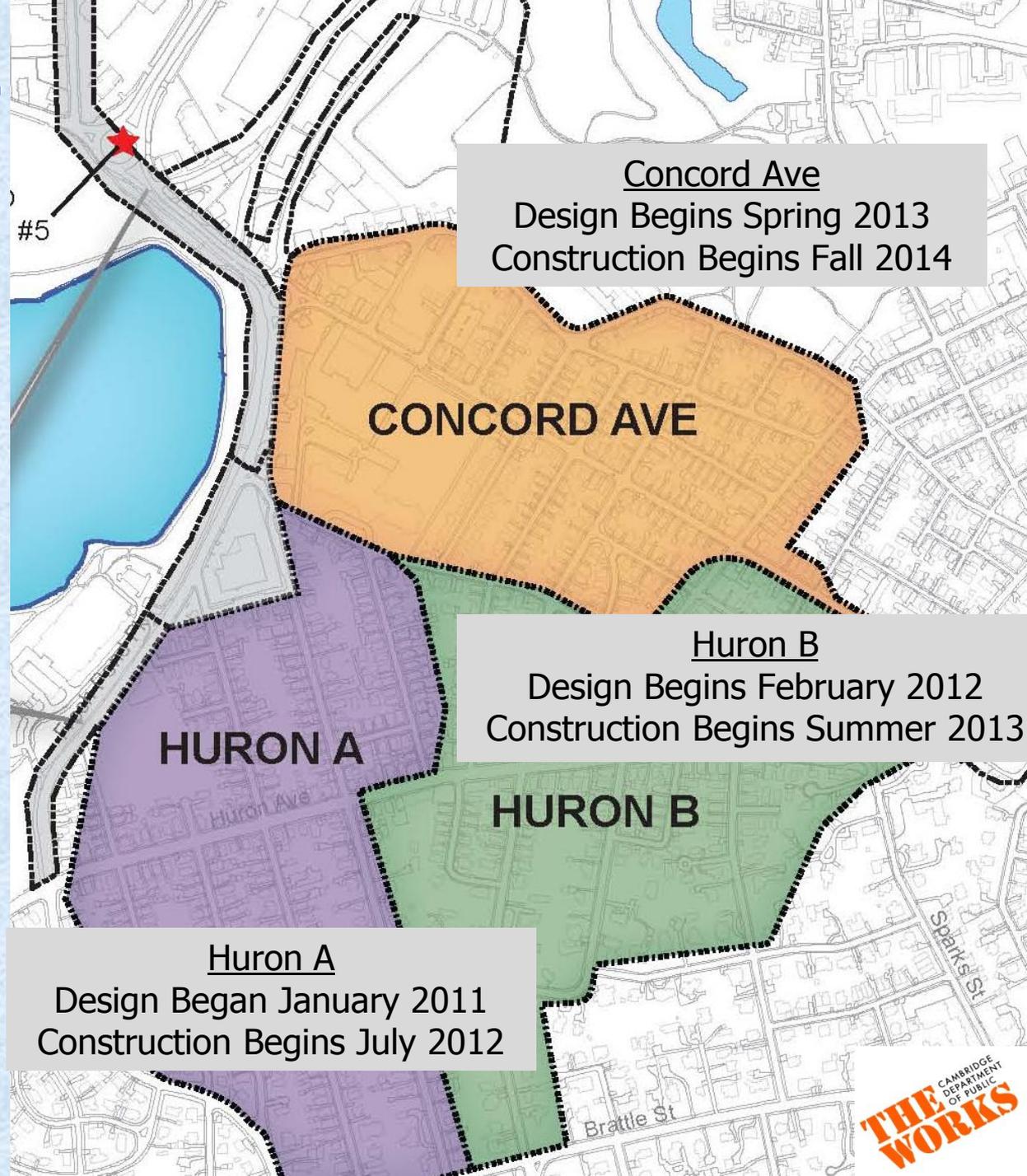


- CambridgePark Dr. Area Drainage Improvements and Stormwater Wetland Project **construction**
- Huron A Sewer Separation (54 acres) **construction**
- Common Manholes Contract 7 **construction**
- Western Ave **construction**
- Climate Adaptation Plan **study**
- Frost St Project Area Sewer Separation (Phase III) **design**
- Huron B **design**



Alewife Sewer Separation Project

- Huron A
- Huron B
- Concord Ave



What we anticipate for the New NPDES Permit

- Draft – still awaiting EPA's response to public comments
- Final – Summer 2012 ??
- Phosphorous Control Plan (TMDL)
- Wet weather sampling
- More focus on LID, reduction of impervious areas



Comments/Questions