2018 Annual Meeting

May 14, 2018
Long Creek Watershed
Regulatory Background
<table>
<thead>
<tr>
<th>Level</th>
<th>Entity</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal</td>
<td>U.S. Environmental Protection Agency</td>
<td>oversight of “Clean Water Act” ationally</td>
</tr>
<tr>
<td>State</td>
<td>Maine DEP</td>
<td>implements Clean Water Act in Maine</td>
</tr>
<tr>
<td>Municipal</td>
<td>Portland, Scarborough, South Portland, Westbrook</td>
<td>subject to Clean Water Act requirements</td>
</tr>
<tr>
<td>Quasi-Municipal</td>
<td>Long Creek Watershed Management District</td>
<td>implements Long Creek Watershed Management Plan</td>
</tr>
</tbody>
</table>
38 M.R.S.A. § 465: The department shall have 4 standards for the classification of fresh surface waters which are not classified as great ponds.

- Class AA waters
- Class A waters
- Class B waters
- Class C waters
Long Creek Identified as Failing to Meet Water Quality Standards by 1998

- Under Section 303(d) of the CWA, states are required to develop, and update every two years, lists of waters - rivers, lakes, coastal waters and estuaries - that are impaired (or threatened) by one or more pollutants.
Maine DEP looking at Long Creek in-depth in 2002
• Compares Long Creek (highly developed) with Red Brook (less developed)
• Similar sandy-silty bottomed streams
• Long Creek has greater impervious area and appears more stressed
• Segments of Long Creek fail to meet water quality classification
Why am I required to have a permit?

40 C.F.R. § 122.26(a)(9)(i)(D):

(9)(i) On and after October 1, 1994, for discharges composed entirely of storm water, that are not required by paragraph (a)(1) of this section to obtain a permit, operators shall be required to obtain a NPDES permit only if:

(D) The Director, or in States with approved NPDES programs either the Director or the EPA Regional Administrator, determines that the discharge, or category of discharges, within a geographic area contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.
Permitting Options

General Permit
• Participating Landowner Agreement with District
• District Implements Long Creek Watershed Management Plan on Behalf of Owner or Operator
• Owner or Operator has Some Responsibilities

Individual Permit
• Individual Landowner Submits full MEPDES Application to Maine DEP
• Owner or Operator Responsible for Implementing Permit Requirements
Incentives for Participating Under General Permit

- Streamlined permitting process – only file Notice of Intent to Comply.
- Provides ability to work across property lines and geopolitical boundaries.
- Ability to construct larger BMP projects that serve several landowner parcels.
- Lower cost to implement collectively than individually – economies of scale.
- LCWMD provides services such as annual parcel inspections, pavement sweeping, and catch basin cleaning.
- LCWMD provides technical support and education and outreach.
Long Creek General Permit

State of Maine, Department of Environmental Protection, *General Permit – Post Construction Discharge of Stormwater in the Long Creek Watershed* (April 15, 2015), requires:

1. Implementation of the Long Creek Watershed Management Plan,
2. Inspection and Maintenance Plan, and
Long Creek Watershed Management Plan

• Structural Best Management Practices (BMPs)
• In-stream, Riparian Habitat, and Floodplain Restoration
• Non-Structural Best Management Practices (BMPs)
Best Management Practice (BMP)

**Definition:** A method that has been determined to be an effective, practical means of preventing or reducing pollution or protecting resources.
Formation of the Long Creek Watershed Management District
Interlocal Agreement -
August 28, 2009

- Portland, Scarborough, South Portland, and Westbrook
- Purpose . . . is to establish the Long Creek Watershed Management District as a quasi-municipal special purpose district . . . to . . . allow the Parties and other Participating Landowners to share in the costs and the benefits of implementation of the Long Creek Watershed Management Plan.
- Plan includes design, engineering, construction, installation, operation and maintenance, repair, replacement and monitoring of Best Management Practices in and along Long Creek and within the Long Creek Watershed.
Articles of Incorporation - January 14, 2010

• Long Creek Watershed Management District (“LCWMD”)
• Maine Nonprofit Corporation
• Board of Directors – up to 16
  • 14 appointed by municipalities
  • 1 appointed by Maine Turnpike Authority
  • 1 appointed by Maine DOT
• Implementation by Executive Director
Long Creek Board of Directors

2018 Officers
Fred Dillon, Chair, City of South Portland
Peter Newkirk, Vice Chair, Maine Department of Transportation
Curtis Bohlen, Treasurer, Casco Bay Estuary Partnership
Brian Goldberg, Secretary, The Bramlie Corporation

Board Members
Angela Blanchette, Town of Scarborough
Arthur Colvin, Eco Maine
Eric Dudley, City of Westbrook
Craig Gorris, GGP-Maine Mall L.L.C.
Will Haskell, Gorrill Palmer
Councilor Susan Henderson, City of South Portland
Ed Palmer, Portland Marriott at Sable Oaks
Doug Roncarati, City of Portland
Michael Vail, ON Semiconductor
Participating Landowners
Participating Landowner Agreements

- 40-page legal document upon which over 100 private, public, and quasi-public entities needed to agree
- Reportedly took 10 months and 20 drafts
- Prescribes LCWMD Responsibilities
- Prescribes Landowner Responsibilities
- $3,000 per acre of impervious cover to fund implementation of the Watershed Management Plan
- Annual revenue approximately $1.5 million
Current Statistics

- 690.02 acres of impervious cover in watershed
- 606.27 acres of regulated impervious cover (88% of total impervious cover)
- 579.67 acres of regulated impervious cover managed under general permit (96% of regulated impervious cover)
- 22.567 acres of regulated impervious cover managed under individual permits (4% of regulated impervious cover)
Who participates?

- 106 private parcels
- 15 municipal parcels (South Portland)
- 8 municipal parcels (Portland)
- 6 municipal parcels (Westbrook)
- 4 state parcels (DOT and MTA)
- 1 municipal parcel (Scarborough)
Participating Landowners
Watershed Management Plan Implementation
Structural Best Management Practices

*Treat* impervious acres to address volume of water, metals, nutrients, dissolved oxygen, and temperature.
Status of Structural BMPs

• Goal of the Long Creek Watershed Management Plan is to treat 150 acres of impervious cover by the end of the second permit cycle (i.e. June 2020)
• Constructed 92 structural BMPs treating approximately 101 acres of impervious cover.
## LCWMD-Owned-or-Operated BMPs in Long Creek Watershed

<table>
<thead>
<tr>
<th>Breakdown by Type</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONTECH Filterra® Bioretention System</td>
<td>18</td>
</tr>
<tr>
<td>Vegetated Swale</td>
<td>9</td>
</tr>
<tr>
<td>Underdrained Soil Filter</td>
<td>18</td>
</tr>
<tr>
<td>Gravel Wetland</td>
<td>3</td>
</tr>
<tr>
<td>Bioretention Cell/Rain Garden</td>
<td>9</td>
</tr>
<tr>
<td>ADS Storm-Pure™ Catch Basin Insert</td>
<td>1</td>
</tr>
<tr>
<td>CONTECH Jellyfish® Filter</td>
<td>3</td>
</tr>
<tr>
<td>Hydro First Defense® Catch Basin Insert</td>
<td>2</td>
</tr>
<tr>
<td>Hydro Downstream Defender® Catch Basin Insert</td>
<td>4</td>
</tr>
<tr>
<td>ADS StormTech® Infiltration and Treatment BMP</td>
<td>9</td>
</tr>
<tr>
<td>StormTreat Bioretention and Treatment BMP</td>
<td>15</td>
</tr>
<tr>
<td>Brentwood StormTank® Subsurface Retention BMP</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>92</strong></td>
</tr>
</tbody>
</table>
Future Project: “Hannaford Basin”
Anticipated project in 2020 to treat 47.4 acres of Impervious cover
“Hannaford Basin” Summary

- Budgeted for construction in 2020
- Would treat 47.4 acres to reach goal of treating 150 by 2020
- Cost: approximately $450,000
- Treats stormwater discharging to South Branch
- South Branch impacted by chlorides
- Ongoing Discussion: construct, modify, not construct?
Long Creek Watershed
Adaptive Management

• Adaptive management is the process by which new information about the health of the watershed is incorporated into the watershed management plan.
• Stakeholders can evaluate the effectiveness of one set of restoration actions and either adopt or modify them before implementing effective measures in the next round of restoration activities.
• Review monitoring data and effectiveness and cost of previously installed BMPs.
In-stream, Riparian Habitat, and Floodplain Restoration

Improve stream sites to address dissolved oxygen, temperature, in-stream habitat, and fish passage
Current Project: Main Stem Restoration
Main Stem Restoration Summary

- Budgeted for construction in 2018 and 2019
- Focus is habitat restoration
- Cost: approximately $1,000,000
- Design plans at 95%
- Working on acquiring easements
Non-Structural Best Management Practices

Implement non-structural measures to address chloride, metals, and nutrients.
Inspection and Maintenance

• Revised “Inspection and Maintenance” Plan
• Participating Landowners:
  – Inspect and maintain private structural BMPs
  – Reporting form to LCWMD
• LCWMD:
  – Sweeping
  – Catch Basin Cleaning
  – Inspect and maintain private structural BMPs
• Parcel Inspections Begin in June
Inspection and Maintenance Plan

• Inspection and Maintenance Responsibilities
• Inspection Program
• Maintenance Program
• Structural BMPs
• Pavement Sweeping
• Catch Basin Cleaning
• Reporting


1. PURPOSE: The Long Creek Watershed Management District ("LCWMD") was formed as a quasi-municipal special purpose district to implement the Long Creek Watershed Management Plan (the "Plan"). Implementation of the Plan is required by those landowners and operators in the Long Creek Watershed who have chosen to participate in the implementation of the Plan ("Participating Landowners") through the General Permit - Post Construction Discharge of Stormwater in the Long Creek Watershed issued by the Maine Department of Environmental Protection ("Maine DEP") on November 6, 2009 and its renewal, reissuance, or replacement, as such may be modified from time to time (the "Long Creek General Permit").

The Plan requires include, but are not limited to: design, engineering, construction, reconstruction, installation, operation, modification, alteration, use, maintenance, repair, replacement, inspection and monitoring of public and private stormwater management structures, facilities and improvements, including structural and non-structural Best Management Practices ("BMPs"). Among Long Creek and within the Long Creek Watershed, the assessment of fees upon Participating Landowners for implementation of the Plan. The Plan calls for the development and implementation of pollution prevention and good housekeeping tools, including pavement sweeping and a "Private Facility Inspection & Maintenance Program."

The Plan requirements are made applicable to Participating Landowners by the Long Creek General Permit. Compliance with the Long Creek General Permit is the responsibility of Participating Landowners. LCWMD implements certain requirements of the Plan on behalf of Participating Landowners. The respective obligations of LCWMD and Participating Landowners are set forth in agreements between LCWMD and Participating Landowners ("Participating Landowner Agreements").

The purpose of this Standard Operating Procedure is to ensure that LCWMD and Participating Landowners meet their respective obligations to implement the pollution prevention and good housekeeping tools required by the Plan, as further detailed in Participating Landowner Agreements, and to ensure that these obligations are implemented in accordance with the LCWMD Board of Director's ("Board") policy determinations. Furthermore, LCWMD has entered into a Services Agreement for administrative services with the Cumberland County Soil & Water Conservation District ("CCSWCD") to assist in the implementation of the Plan, which includes implementation of certain aspects of the
Site-Specific Operation and Maintenance Plans

A summary of Participating Landowner responsibilities under the revised, Site-Specific Operation and Maintenance Plan, is as follows:

• PARTICIPATING LANDOWNERS WITH PRIVATE STRUCTURAL BMPs ON THEIR PARCELS are responsible for:
  – The annual inspection of private structural BMPs, to be performed by a qualified third-party inspector;
  – Maintenance, when needed, of private structural BMPs to ensure that each is functioning as designed; and
  – Providing LCWMD with annual inspection and maintenance reports for private structural BMPs.

• ALL PARTICIPATING LANDOWNERS are required to report to LCWMD annual parcel-specific information, including: a description of landscape management BMPs; a pavement sealing schedule and type of materials used; a description of winter deicer applications; and a description of pavement shading efforts.
Parcel Information and O&M Site Plans

Link: www.restorelongcreek.org/pages/general/parcelinfo
2017 Statistics

- 672 acres of pavement swept
- 135.91 tons of sweepings collected; approximately 405 pounds per acre
- 540 catch basins cleaned
- 45.70 tons of catch basin grit collected; approximately 170 pounds per catch basin
- 109 parcel inspections
- 13 “incident reports”
Most Common Inspection Issues

• Poorly-Vegetated or Bare Areas (Grass or Landscaped) – 33
• Catch Basin Structural Maintenance Needed – 32
• Fats, Oils, Grease – 28
• Swales or Ditches in Poor Condition – 27
• Dumpster Management – 27
• Trash/Litter – 26
• Hazardous Materials Storage or Oil Spill or Leak – 15
• Snow Storage Area in Poor Condition – 11
• Poor Outfall Stability – 8
• Pavement in Poor Condition – 8
• Culverts in Poor Condition – 3
Non-structural Measures: Winter Maintenance

- Chloride management is a regional problem and should have a regional solution.
- LCWMD has been working with landowners and winter maintenance contractors to understand the practicalities of winter maintenance.
- Winter Maintenance Workshop with contractors in February.
Signage

This landowner is helping

RESTORE LONG CREEK

www.RestoreLongCreek.org

ABSOLUTELY NO DUMPING

www.RestoreLongCreek.org

These drains flow to Long Creek
IF YOU SEE DUMPING PLEASE CALL 892-4700 FOR ASSISTANCE

www.RestoreLongCreek.org

Link: www.restorelongcreek.org/pages/general/signage
NO DUMPING FLOWS TO LONG CREEK
KEEP OUR WATER CLEAN

Link: www.restorelongcreek.org/pages/general/signage
Water Quality Monitoring
Long Creek Monitoring Plan

- Continuous Water Quality Monitoring
- Grab Water Quality Monitoring
- Hydrology and Flow Monitoring
- Weather Monitoring
- Biomonitoring
- Sediment Investigation
Maine DEP Biomonitoring Program

- The abundance and generic richness of a macroinvertebrate community in a river or stream is determined by counting the number of species or genera in a standardized sampling unit—either a rock bag, rock basket, or cone, depending on water depth where the sample is taken.

- A multivariate statistical model designed and used by the Biological Monitoring Program uses macroinvertebrate data collected from rivers and streams to determine the likelihood that a sampled water body is attaining its designated class.

- Simply put, this model provides a way of using numeric data, such as generic richness and total abundance, to determine if samples are attaining desired biological criteria (A, B, or C) in a way that is reproducible and scientifically rigorous.
Biomonitoring Status
Financial Status
LCWMD Financial Management

Basics
- Fiscal Year: July 1 through June 30
- Documentation of Internal Financial Control Structure
- Annual Audits
- Annual Budgets approved by Board Prior to July 1

Recent Financial Management Tasks
- Development of FY2019 Budget – provisionally adopted
- Financial Projection through End of Current Permit Cycle (June 20, 2020)
- Goal is to have $500,000 on hand at end of permit cycle for future operational costs
- Forecast long-term maintenance, repair, and replacement costs for structural BMPS
FY18 Expenses by Category

Construction & Maintenance

- CP Catchment B-21: $151,705.50 (12%)
- CP Hannaford Basin (E-34): $40,114.00 (3%)
- IS Main Stem Restoration: $124,216.23 (9%)
- IS South Branch: $50,000.00 (4%)
- IS North Branch: $15,000.00 (1%)
- IS South Branch: $909,491.01 (69%)
- Construction & Maintenance Other: $25,100.00 (2%)
## Balance Sheet

**Long Creek Watershed Management**

**District Balance Sheet**  
April 30, 2018

### ASSETS

#### Current Assets
- **Checking/Savings**
  - 1110 · Biddeford Savings - Checking: $9,551.11
  - 1116 · Biddeford Savings Savings Base: $200,000.00
  - 1118 · Biddeford Savings Sweep Savings: $2,634,576.83
- **Total Checking/Savings**: $2,844,127.94
- **Accounts Receivable**: $141,450.58
- **Other Current Assets**: -$17,500.00
- **Total Current Assets**: $2,968,078.52

#### Fixed Assets
- **1700 · FIXED ASSETS**
  - 1730 · Monitoring Equipment: $2,542,500.00
  - 1740 · Infrastructure: $4,768,946.77
  - 1780 · Construction in Process: $645,951.51
  - 1790 · Accumulated Depreciation: -$488,830.62
- **Total 1700 · FIXED ASSETS**: $4,951,492.66
- **Total Fixed Assets**: $4,951,492.66

#### Other Assets
- **Other Assets**: $12,149.75

**TOTAL ASSETS**: $7,931,720.93

### LIABILITIES & EQUITY

#### Liabilities
- **Current Liabilities**: $28,120.57
- **Long Term Liabilities**: $1,060,616.20
- **Total Liabilities**: $1,088,736.77

#### Equity
- **Equity**: $6,842,984.16

**TOTAL LIABILITIES & EQUITY**: $7,931,720.93
The Future
What happens in June 2020?

- Current permit cycle ends in June 2020
- No indication from U.S. EPA that “residual designation” will be rescinded
- Permit requirement would continue
- Long Creek Watershed Management Plan contemplated first 10 years of implementation
- BMPs need to be inspected and maintained
- Non-Structural BMPs will likely need to continue (pavement sweeping, catch basin cleaning, parcel inspections)
- Some elements of water quality monitoring will likely need to continue