2012 – 2013 Long Creek Update

February 3, 2014

Presented by

Tamara Lee Pinard
LCWMD Executive Director
CCSWCD Stormwater Program Manager
1. Welcome
   Dan Bacon, Board President

2. Water Quality & Project Overview
   Tamara Lee Pinard, Executive Director

3. Financial Overview
   Chris Brewer, Program Administrator

4. Awards

5. Social hour
Long Creek Governing Board

Dan Bacon, Board President
Gerard Jalbert, Board VP
Curtis Bohlen, Treasurer
Jerry Collett, Secretary
John Branscom
Brian Goldberg
Craig Gorris

Ed Palmer
Adam Pitcher
Tom Raymond
Doug Roncarati
Steve Tibbetts
Michael Vail
Long Creek Technical Advisory Committee

Luci Benedict - USM
Jeff Dennis - MDEP
Fred Dillon - South Portland
Zach Henderson - Woodard & Curran
Ryan Hodgman - MDOT
Tom Raymond - ecomaine
Robyn Saunders - GZA Geoenvironmental
Long Creek Finance Committee

Curtis Bohlen - Portland nonprofit rep
Brian Goldberg - So. Port. private landowner rep
Craig Gorris - So. Port. private landowner rep
Team
Long Creek

Chris Baldwin
District Engineer

Kate McDonald
Project Scientist

Chris Brewer
Project Administrator

Pat Marass
Urban Watershed Coordinator

Tamara Lee Pinard
Executive Director
Watershed Statistics

Watershed size = 2240 acres (3.5 sq. miles)
Impervious area = 739 acres (33%)
Length of Streams ~ 10 miles
What is the big picture problem?

Long Creek and its tributaries do not meet state water quality standards.
Urbanization is Hard on Streams

• Vegetation along the stream is removed
Urbanization is Hard on Streams

- Vegetation along the stream is removed
- Impervious surfaces heat and speed water to the stream
Urbanization is Hard on Streams

- Vegetation along the stream is removed
- Impervious surfaces heat and speed water to the stream
- Streams channelize, floodplains fill
Urbanization is Hard on Streams

- Vegetation along the stream is removed
- Impervious surfaces heat and speed water to the stream
- Streams channelize, floodplains fill
- Increased pollutant load
Long Creek is Impaired

- Stream flow has been altered
Long Creek is Impaired

- Stream flow has been altered
- Lack of woody debris
Long Creek is Impaired

- Stream flow has been altered
- Lack of woody debris
- Dissolved oxygen is low
Long Creek is Impaired

• Stream flow has been altered
• Lack of woody debris
• Dissolved oxygen is low
• High levels of toxic substances
Long Creek is Impaired

- Stream flow has been altered
- Lack of woody debris
- Dissolved oxygen is low
- High levels of toxic substances
- High levels of chloride
Consistently does not meet standards

Frequently does not meet standards

Occasionally does not meet standards

Meets standards
Dissolved Oxygen: Blanchette Brook

All points under the red line are violations of standards.

Water Quality Results
## Blanchette Brook

### Water Quality Results

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dissolved Oxygen</strong></td>
<td>Site 7</td>
<td><img src="#" alt="Red" /></td>
<td><img src="#" alt="Yellow" /></td>
</tr>
<tr>
<td><strong>Chloride</strong></td>
<td>Site 7</td>
<td><img src="#" alt="Orange" /></td>
<td><img src="#" alt="Yellow" /></td>
</tr>
</tbody>
</table>
## South Branch Water Quality Results

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dissolved Oxygen</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site 1</td>
<td><img src="#" alt="Green" /></td>
<td><img src="#" alt="Green" /></td>
<td><img src="#" alt="Green" /></td>
</tr>
<tr>
<td>Site 4</td>
<td><img src="#" alt="Red" /></td>
<td><img src="#" alt="Gray" /></td>
<td><img src="#" alt="Dash" /></td>
</tr>
<tr>
<td><strong>Chloride</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site 1</td>
<td><img src="#" alt="Red" /></td>
<td><img src="#" alt="Red" /></td>
<td><img src="#" alt="Red" /></td>
</tr>
<tr>
<td>Site 4</td>
<td><img src="#" alt="Red" /></td>
<td><img src="#" alt="Red" /></td>
<td><img src="#" alt="Red" /></td>
</tr>
</tbody>
</table>

*Note: Green indicates good quality, Red indicates poor quality, Gray indicates no data, Dash indicates not applicable.*
## North Branch Water Quality Results

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dissolved Oxygen</strong></td>
<td>Site 3</td>
<td><img src="Image" alt="Orange" /></td>
<td><img src="Image" alt="Green" /></td>
</tr>
<tr>
<td><strong>Chloride</strong></td>
<td>Site 3</td>
<td><img src="Image" alt="Red" /></td>
<td><img src="Image" alt="Red" /></td>
</tr>
</tbody>
</table>
### Water Quality Results

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Site 2</strong></td>
<td><img src="image" alt="Dissolved Oxygen" /></td>
<td><img src="image" alt="Dissolved Oxygen" /></td>
<td><img src="image" alt="Dissolved Oxygen" /></td>
</tr>
<tr>
<td><strong>Site 5</strong></td>
<td><img src="image" alt="Dissolved Oxygen" /></td>
<td><img src="image" alt="Dissolved Oxygen" /></td>
<td><img src="image" alt="Dissolved Oxygen" /></td>
</tr>
<tr>
<td><strong>Site 6</strong></td>
<td><img src="image" alt="Dissolved Oxygen" /></td>
<td><img src="image" alt="Dissolved Oxygen" /></td>
<td><img src="image" alt="Dissolved Oxygen" /></td>
</tr>
<tr>
<td><strong>Dissolved Oxygen</strong></td>
<td><img src="image" alt="Chloride" /></td>
<td><img src="image" alt="Chloride" /></td>
<td><img src="image" alt="Chloride" /></td>
</tr>
<tr>
<td><strong>Site 2</strong></td>
<td><img src="image" alt="Chloride" /></td>
<td><img src="image" alt="Chloride" /></td>
<td><img src="image" alt="Chloride" /></td>
</tr>
<tr>
<td><strong>Site 5</strong></td>
<td><img src="image" alt="Chloride" /></td>
<td><img src="image" alt="Chloride" /></td>
<td><img src="image" alt="Chloride" /></td>
</tr>
<tr>
<td><strong>Site 6</strong></td>
<td><img src="image" alt="Chloride" /></td>
<td><img src="image" alt="Chloride" /></td>
<td><img src="image" alt="Chloride" /></td>
</tr>
</tbody>
</table>
Macroinvertebrates
Flow

The data collected to date suggest the following:

– Water quantity is a known issue throughout the watershed and is being analyzed further.
PAHs (Polycyclic Aromatic Hydrocarbons)

- Detected several PAH chemicals commonly associated with coal tar sealants for three consecutive years
Monitoring Summary

The data collected to date suggest the following:

– Temperature and dissolved oxygen are issues in the upper portion of the watershed.
– Chloride is an issue in the south and north branches.
– Metals and nutrients are issues throughout the watershed.
– Water quantity is a known issue throughout the watershed and is being analyzed further.
Monitoring Summary

– Preliminary data suggest we are seeing improvements in dissolved oxygen in Blanchette Brook and the North Branch; we need more data to confirm this.

– As we predicted, chloride is dependent on the types of storms and the amount and timing of salt applications as related to sample timing, so we continue to see data that fluctuates.
Implementation Strategies

Goal: Meet Water Quality Standards by 2020
How Will Long Creek be Restored?

Implement non-structural measures to address chloride, metals and nutrients.
Non-structural - Sweeping

- Spring Cleanup
- Corner to Corner
- Hot Spot 1
- Hot Spot 2
- Hot Spot 3

- 2011
- 2012
- 2013
Non-structural – Catch Basin Cleaning
Non-structural – Site/BMP Inspections

• Inspections were focused on properties where improvements were needed.
Non-structural measures – Winter Maintenance

• Chloride management is a regional problem and should have a regional solution.

• LCWMD requested that the Maine DEP explore:
  – the development of state-wide salt application BMPs
How Will Long Creek be Restored?

Improve habitat at 10 sites to address dissolved oxygen, temperature, in-stream habitat, fish passage

2 completed (20%)
How Will Long Creek be Restored?

Treat 150 impervious acres to address volume of water, metals, nutrients, dissolved oxygen and temperature

63.42 acres treated (42%)
What Projects Have We Completed?

- E-24 – Philbrook Avenue
- E-02 – Maine Mall Road
- C-11 – Darling Avenue
- A1-03 – Mall Plaza
- B-21 – Blanchette Brook
- Port Resources
- C-08 – Fairchild/North Branch
Long Creek Project Contractors

- Risbara Bros.
- White Brothers
- R.J. Grondin & Sons
- R.J. Grondin & Sons
- R.J. Grondin & Sons
- Biskup Construction
- Shaw Brothers
Impervious Cover Treated: 13.23 acres
Project Cost: $320,385
Texas Instrument, South Portland

Impervious Cover Treated: 5.26 acres
2014: Gorham Road

• Proposed treatment: 1.9 impervious acres
• Estimated cost: $335,000
2014: Maine Mall Road

- Proposed treatment: 7.81 impervious acres
- Estimated cost: $525,341
2015: Maine Mall & Associated Properties

Explore treatment options for the Maine Mall area

66 acre drainage area with 60 acres of impervious
Landowner Obligations

• **Pay Assessments on time**
  - Budget for next fiscal year mailed Feb 1
  - Next year’s assessments mailed April 1
  - Fiscal Year - July 1 – June 30
  - Invoicing biannually - January & July

• **Provide easements for BMPs in Plan**
Landowner Obligations – talk to us!

Tell us when you have plans to ...

• Construct new impervious
• Redevelop
• Sell your property
• Resurface pavement
• Change contractors for winter maintenance or landscaping

Credit: Bill Watterson
Landowner Obligations

• Implement Operation & Maintenance Plans
  – Maintenance of **BMPs** (if you installed it, you maintain it)
  – Winter maintenance
  – Landscaping
  – Vacuum sweeping
  – Catch basin cleaning
  – Inspection of BMPs
Areas for Exploration – Coal Tar Sealants

• Coal tar-based sealcoat produces 30 times more PAHs than no sealcoat.
• Sealcoat wears off over time and ends up in downstream waters where it may harm fish.
• Maine Mall and associated properties RFP to be released in February.
• Analyze 2013 bug data.
• Calibrate H&H
• Convene Expert Review Panel to conduct comprehensive watershed analysis.
• Develop Education Plan.
Financial Status
# Unaudited Balance Sheet
December 31, 2013

<table>
<thead>
<tr>
<th>ASSETS</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank Account</td>
<td>1,464,549</td>
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<tr>
<td>Accounts Receivable</td>
<td>57,388</td>
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<tr>
<td><strong>Total Current Assets</strong></td>
<td><strong>$1,521,937</strong></td>
<td></td>
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<tr>
<td>Monitoring Equipment</td>
<td>25,425</td>
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<tr>
<td>Completed Projects</td>
<td>2,712,431</td>
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<tr>
<td>Construction In Progress</td>
<td>646,733</td>
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<tr>
<td>Accumulated Depreciation</td>
<td>-170,851</td>
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<tr>
<td><strong>Total Fixed Assets</strong></td>
<td><strong>$3,213,738</strong></td>
<td></td>
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<tr>
<td>Other Assets</td>
<td>15,888</td>
<td></td>
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<tr>
<td><strong>Total Assets</strong></td>
<td><strong>$4,751,563</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LIABILITIES</th>
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</thead>
<tbody>
<tr>
<td>Accounts Payable</td>
<td>$73,812</td>
<td></td>
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<tr>
<td>Other Current Liabilities</td>
<td>52,044</td>
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<tr>
<td><strong>Total Current Liabilities</strong></td>
<td><strong>$125,856</strong></td>
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</tr>
<tr>
<td>ME Municipal Bond Bank</td>
<td>1,363,650</td>
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<tr>
<td><strong>Total Long Term Liabilities</strong></td>
<td><strong>$1,363,650</strong></td>
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<tr>
<td><strong>Total Liabilities</strong></td>
<td><strong>1,489,506</strong></td>
<td></td>
</tr>
<tr>
<td>Equity</td>
<td>3,262,057</td>
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</tr>
<tr>
<td><strong>Total Liabilities and Equity</strong></td>
<td><strong>$4,751,563</strong></td>
<td></td>
</tr>
</tbody>
</table>
LCWMD Financial Management

• Basics
  – Fiscal Year – July 1 through June 30
  – Financial Controls Policy
  – Annual Audits
  – Annual Budgets approved by Board by end of January

• Recent Financial Management Tasks
  – Establishment of new budgeting procedures
  – Establishment of 5 year projected budgets and cash flows
Where is the Money Going?

FY 2012 July – December Expense Breakdown

- ADMIN.: 7%
- CONSTR. & MAINT.: 59%
- GOOD HOUSEKEEPING: 23%
- MONITORING: 11%

Total: $417,370

FY 2013 July – December Expense Breakdown

- ADMIN.: 6%
- CONSTR. & MAINT.: 69%
- MONITORING: 9%
- NON-STRUCTURAL: 16%

Total: $1,175,598
Where Will the Money Go?

FY 2014 July – December Expense Breakdown

- Monitoring: 15%
- Non-Structural: 21%
- Constr. & Maint.: 56%
- Admin.: 8%

Total: $1,741,305

FY 2015 July – December Expense Breakdown

- Monitoring: 15%
- Non-Structural: 12%
- Constr. & Maint.: 78%
- Admin.: 5%
- Constr. & Maint.: 5%

Total: $2,580,825
Financial/Invoicing Questions
Chris Brewer
cbrewer@cumberlandswwcd.org
892-4700
2014 Retail Property Manager

Ellen Fontaine – Ginn Real Estate
2014 Retail Property Manager

Ellen Fontaine – Ginn Real Estate
2014 Industrial Property
Texas Instruments
2014 Industrial Property

Texas Instruments
2014 Commercial Property Manager

Todd Dominski – East Brown Cow
2014 Maintenance Excellence
*Deborah Lust* – Dead River
2014 Maintenance Excellence

Deborah Lust – Dead River
2014 Maintenance Excellence
*Deborah Lust* – Dead River
2014 Best Management Practices

*Matt TenEyck – Sable Oaks Golf Course*
2014 Best Management Practices

Matt TenEyck – Sable Oaks Golf Course
2014 Municipality
City of South Portland
2014 Municipality
City of South Portland