

Planning for the Long Creek Watershed

Presentation to
Convening Committee
Sable Oaks Marriott
South Portland, Maine

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Maine's Water Classification Program

- Defines water quality criteria for fresh surface waters, as well as estuarine and marine waters.
- River and stream water classes:
 - AA, A, B, and C
- State legislature has assigned classes to every stream and river in the state.

Maine's Water Classification Program

Water Classification Criteria

- All fresh surface waters are assessed based upon the following primary criteria:
 - Aquatic life
 - Habitat
 - Dissolved oxygen
 - Bacteria (*E. coli*)

Maine's Water Classification Program

Minimum Designated Uses



Water Class Designations For Long Creek



Long Creek Watershed - Water Quality Class Designation Map
Created by Jeff Varricchio; Maine DEP; June 13, 2007

Long Creek's Condition

(in all 3 branches)

- Aquatic life violations:
 - brook trout
 - aquatic “bugs” (macroinvertebrates)
- Water quality violations:
 - dissolved oxygen
 - various pollutants (e.g., metals)
- Habitat / Geomorphology (shape/stability):
 - stressed or degraded in certain locations

Bottom line:

The stream is not meeting its designated classification requirements.

Implications for Land Use Activity

State Stormwater Law: For development, higher construction cost to meet urban impaired stream standard.

Federal Clean Water Act:

- DEP must assess pollutant sources (Total Maximum Daily Load)
- Municipality required to address municipal separate storm sewer system (MS4) impacts
- Industrial discharge license (Multi-Sector Gen. Permit) requirements
- Other significant sources subject to license requirements through Residual Designation Authority.

**So what can we
do about this?**

Stormwater & Stormflow Challenges



Stormwater & Stormflow Retrofit Possibilities

Treat runoff at or close to its source



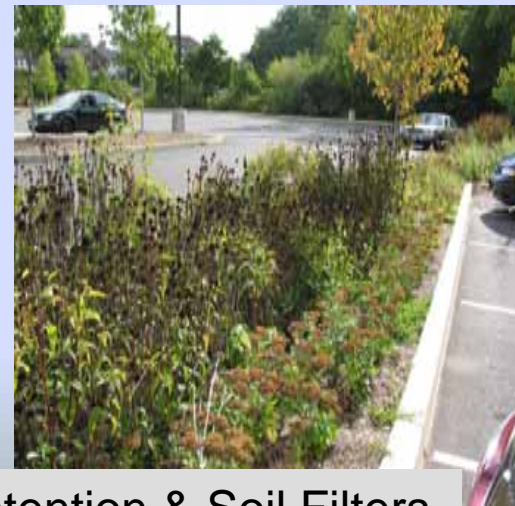
Rain Gardens



Wet Ponds



Parking Lot Bio-Retention & Soil Filters



Riparian (Streamside) Buffers

Healthy condition




Challenged condition



Stream Shading (Riparian Buffer) Opportunities



Long Creek Watershed - Draft Restoration Inventory Map
Created by Jeff Varricchione, Maine DEP, June 11, 2007

Stream Shading Opportunities 



Channel Geomorphology

(degree of channelization [straightening/relocation]; access to floodplain; channel stability)

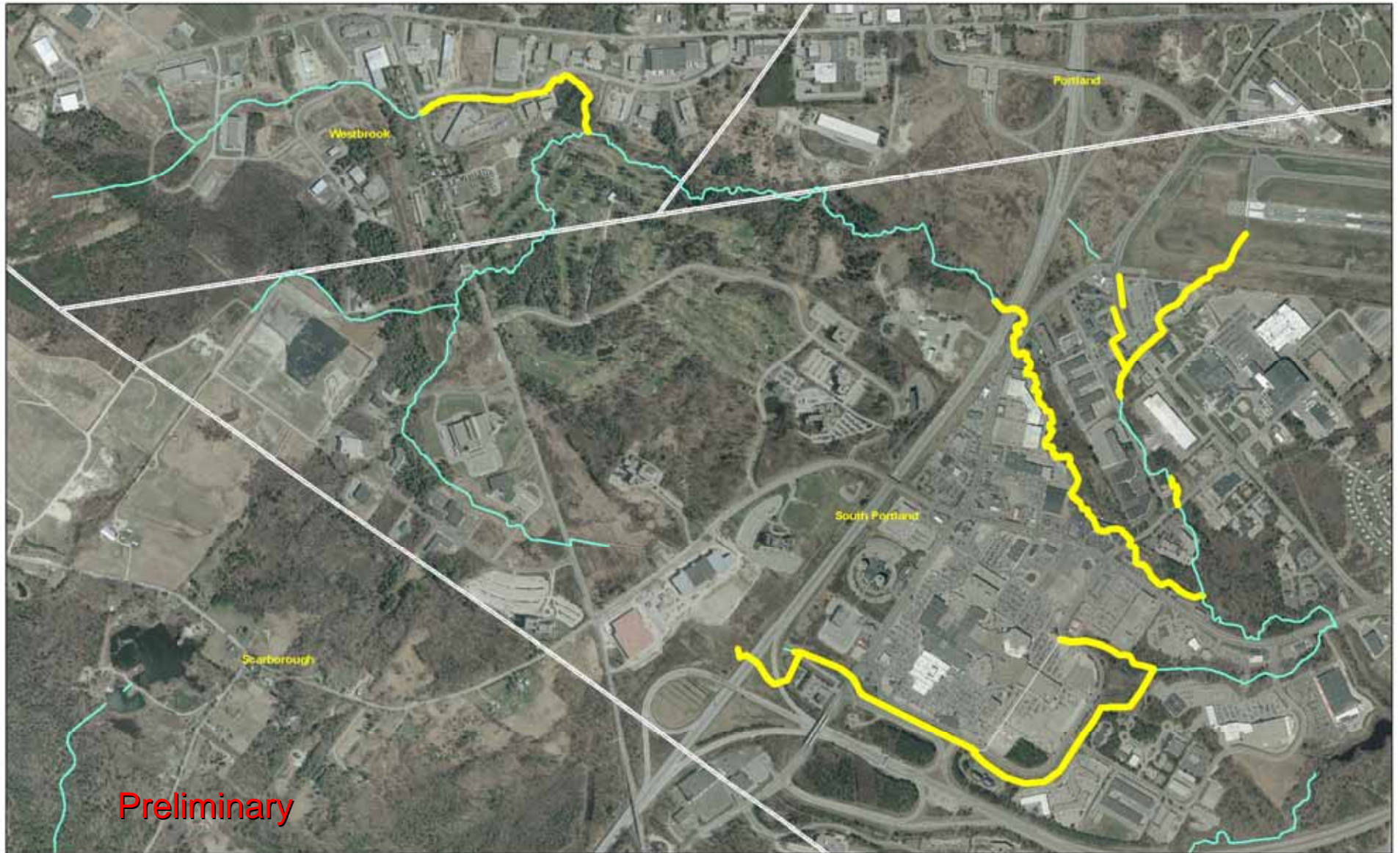
Healthy condition




Challenged condition

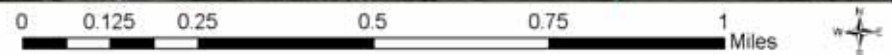


Channel Geomorphology/Floodplain Opportunities



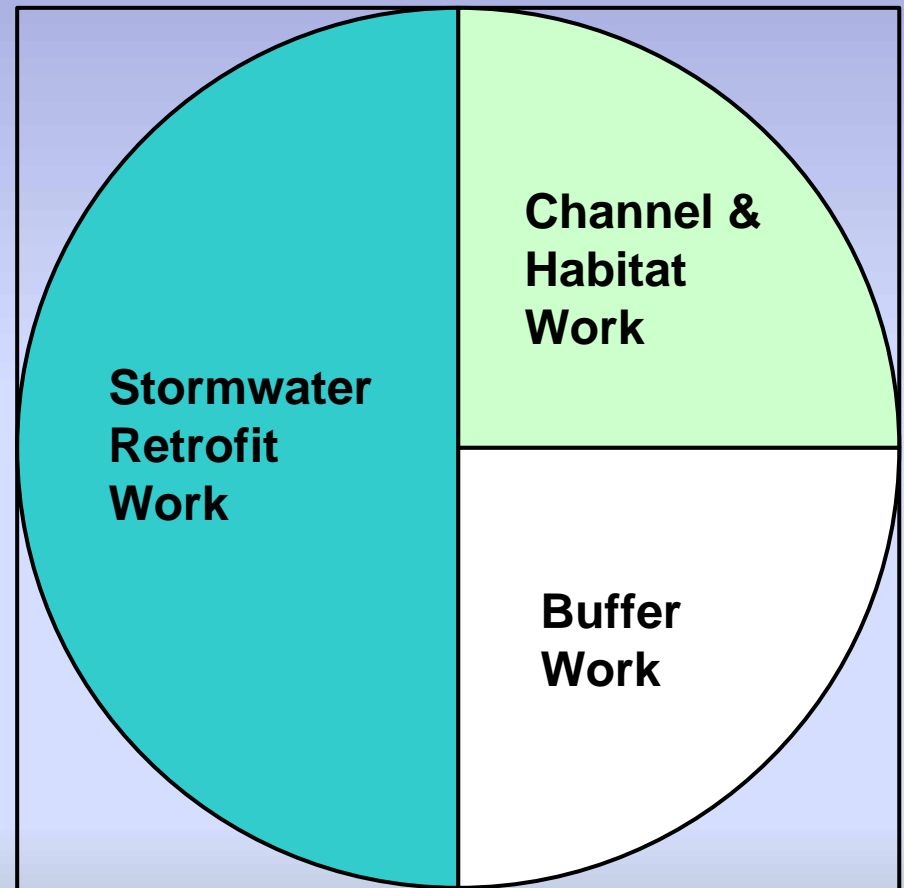
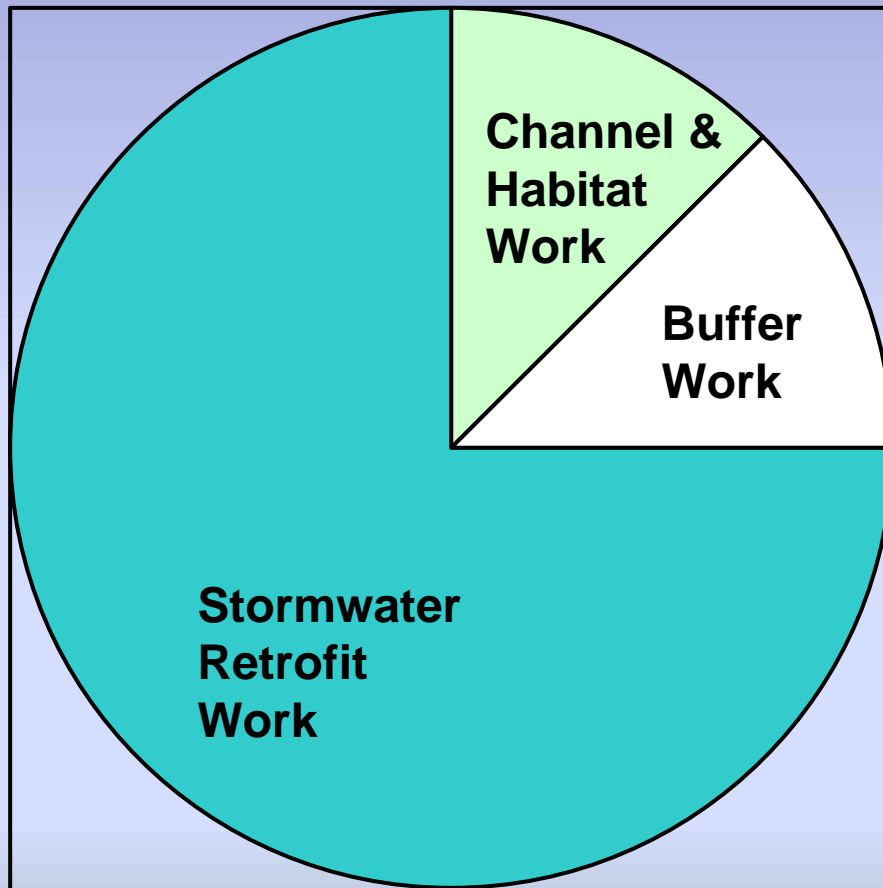
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Created by Jeff Varricchio; Maine DEP; June 11, 2007

Channel Geomorphology /
Floodplain Opportunities 



Some Possible Restoration Strategies

There are multiple paths which can succeed



Examples

Take Home Messages

1. Long Creek is not meeting its designated water classification criteria.
2. Opportunities exist for restoration.
3. It will take a group effort to succeed!