

Birch Stream Stakeholder Meeting

March 5, 2009

**Thanks to the Non-point Education for Municipal Officials (NEMO)
for use of their photos**

Introductions

- **Municipal Staff**
- **State Dept. of Env. Protection (DEP) Staff**
- **Watershed Stakeholders**
- **Support Stakeholders**

Mission

1. To understand a watershed and how it is affected by human activity;
2. To engage the community in meaningful dialogue with regard to water quality issues in Birch Stream;
3. To help shape solutions to identified water quality problems; and
4. To provide people the opportunity to have input to decisions that will ultimately affect them

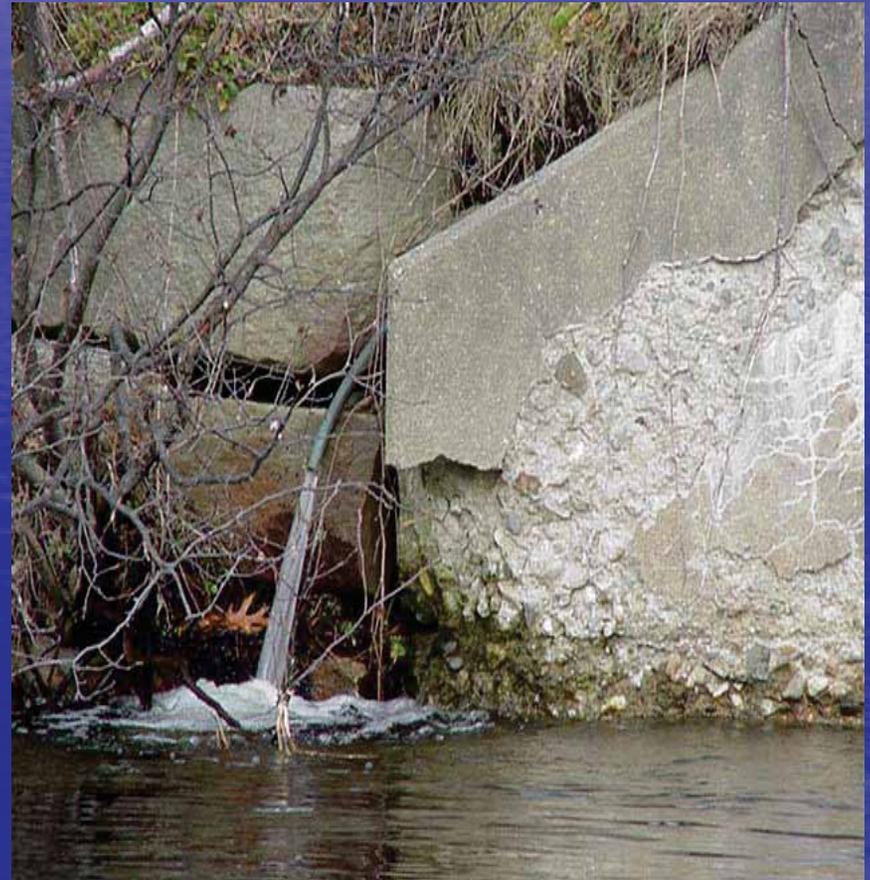
What is STORMWATER?

- **STORMWATER** = Runoff resulting from precipitation: rain water runoff, snow melt runoff, surface runoff, and drainage.
- **NON-STORMWATER DISCHARGE** = fire hydrant flushing, external building wash down, lawn watering, air conditioning condensate, potable waterline flushing and irrigation drainage.

What is NON-POINT SOURCE Pollution?

Point source is a fixed or stationary facility from which pollutants are discharged into a receiving water from a specific point.

Non-point source (NPS) has diffused sources without a single point of origin and with **no specific outlet**



WHY IS STORMWATER REGULATED?

- Contains chemicals, oils, debris, and other pollutants, and
- Flows directly and indirectly into rivers, lakes, ponds, streams, coastal waters and wetlands
- Potential to harm human health and fish and fauna.

WHO REGULATES STORMWATER?

- FEDERAL - Clean Water Act (1972 Amendments)

Goal: **Eliminate Discharge** of Pollutants into Navigable Waters by **1985**

Mandate:

- **No discharge** from a point source without a NPDES permit
- 1987 Amendment requires NPDES Municipal Small Separate **Storm Sewer** (MS4) Permit begin 2003 – regulating NPS

WHO REGULATES STORMWATER?

- The Clean Water Act is Implemented by the Environmental Protection Agency (EPA)
- The EPA **delegated authority** to Maine Department of Environmental Protection (DEP) stormwater permits.
- DEP must report to EPA on the status of its water bodies **biannually**.

WHAT IS THE PROBLEM?

- DEP Biannual Report to EPA = Section 319 of CWA
 - Identify water bodies **not expected to meet attainment of Water Quality Standards**
 - Identify categories of **non-point source pollutants & particular NPS sources**

DEP Targets Urban Impaired Streams

- ***B. Urban impaired streams.*** *A stream is considered impaired if it **fails to meet water quality standards** because of effects of stormwater runoff from developed land.*



CAUSES OF IMPAIRMENT

- Nutrients
- Toxins
- Propylene Glycol
- Dissolved Oxygen
- Temperature
- High Peak Flow
- Suspended Solids

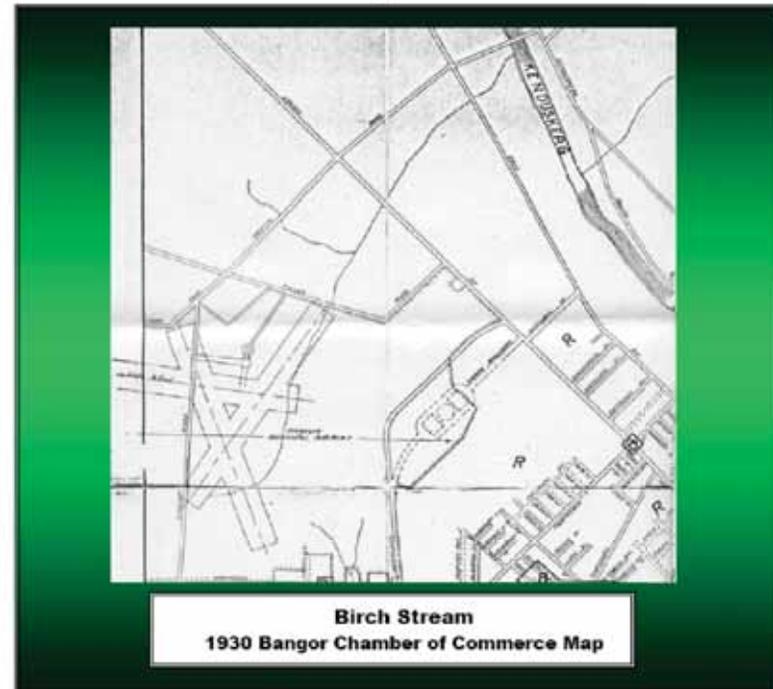
Impaired WATERS require stricter limitations - TMDL

- Total Maximum Daily Load –
 - **Pollution budget** for impaired portions of watershed (the amount of pollutants or pollution a water body can absorb without violating water quality standards)
 - Each point source discharger assigned a *waste load allocation* which is enforceable through **Maine Pollution Discharge Elimination System (MPDES)** permits; OR
 - Communities **demonstrate measurable progress** toward eliminating discharge.

BIRCH STREAM - TMDL REPORT

- Draft Report August, 2005
- Comments / Edits 2006
- Final Report Sept. 2007
- EPA Approved TMDL

Birch Stream Total Maximum Daily Load (TMDL) *Report*



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9/04/2007
Report # DEPLW0715

WHAT IS BEING DONE?

- Steering Committee Formed 2006
 - Additional analysis
 - Stream characterization
 - Baseline flow, velocity, temperature
- Water quality (& soils) testing
 - Maine DEP
 - Maine Air National Guard
 - Bangor International Airport



WHAT IS BEING DONE?

- Stream Clean Ups



2003 = 5 tons

2006 = 2 tons



3/20/2009

WHAT IS BEING DONE?

- Airport Mall Fence

- Joint venture
- Stop dumping by commercial and residential
- Fence – 200' x 8'
- Signs
- Phone # to report



WHAT IS BEING DONE?

- Facility Improvements

BIA & MEANG De-Icing Operations

- Collection and treatment of residuals
- 320,000 gal
- Limit de-icing areas
- \$2.7 Million / 3 years



DE-ICING COLLECT & PUMP



3/20/2009

WHAT IS BEING DONE?

- Facility Improvements

- Fleet Maintenance & Public Works
 - Indoor washing and maintenance \$300k
 - Oil/water separators
 - Spill Kits & Reporting



WHAT IS BEING DONE?

- More Filtration Improvements

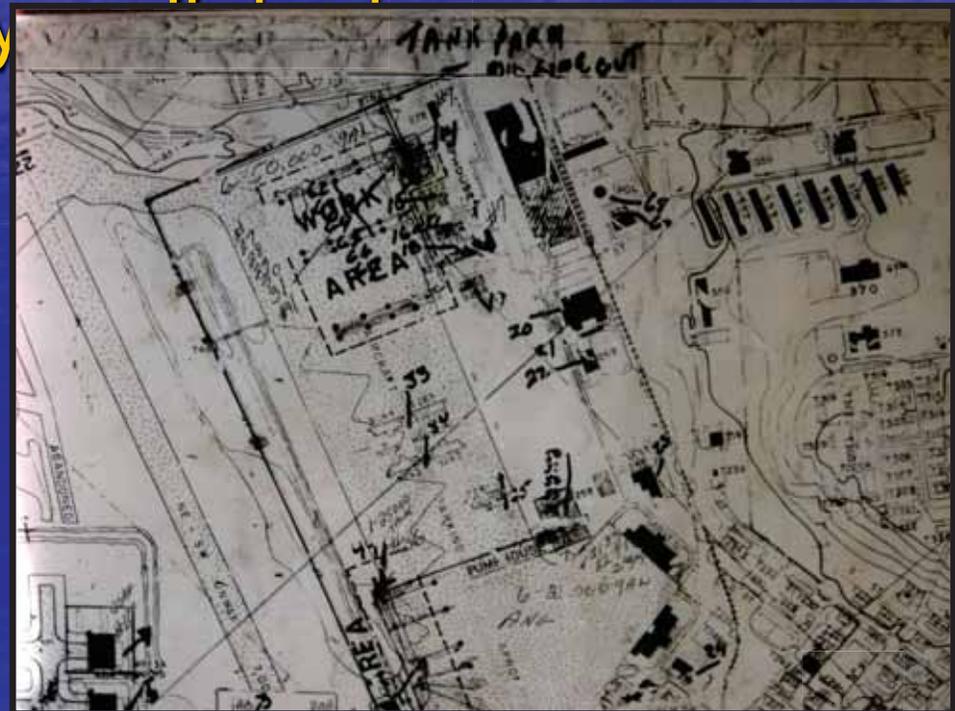
- BIA – Equipment storage & fueling areas
- Fleet Maintenance – fueling areas
- Public Works – equipment & materials storage areas



WHAT IS BEING DONE?

- GIS Mapping

- GIS MAPS Completed by City Staff
 - Map drainage areas, property boundaries, topography sources, infrastructure



WHAT IS BEING DONE?

- Watershed Plan

- Steering Committee
- Stakeholders
- Gathering water data
- Received DEP funding for planning, mapping, BMP recommendations 08-09
- Plan Development
 - Sewall
 - City staff
 - Stakeholders
 - DEP

HOW WILL THIS IMPACT MY PROPERTY?



- Enforcement by way of
 - Development requirements
 - Municipal Small Storm Sewer Permit
 - Infrastructure inspections and maintenance
 - Construction inspections
 - Post Construction maintenance
 - Residual Designation Authority – MPDES Permits – any significant polluter
- Financial – Stormwater Utility District?
- Ordinance restrictions
- Implementation of Plan recommendations