

APPENDIX F: MEETING PRESENTATIONS



Route 1 Falmouth Commercial District

Stormwater Planning for Long-Term Sustainable Growth

This presentation was prepared by the Town of Falmouth under award NOAA CZM NA10NOS4190188 to the Maine Coastal Program from the National Oceanic and Atmospheric Administration, U.S. Department of Commerce. The statements, findings, conclusions, and recommendations are those of the author(s) and do not necessarily reflect the views of the National Oceanic and Atmospheric Administration or the Department of Commerce.



Introductions

Theo Holtwijk, Director of Long Range Planning
Mel Dickenson, Conservation Commission

Zach Henderson, Woodard & Curran
Curtis Bohlen, Casco Bay Estuary Partnership



Meeting Goals

To provide overview of Stormwater Management Plan project.

To get your input.

Town officials have made no decisions on any matters that will be discussed here.



How did this Project come about?

The future of Route 1 has been discussed since 2002.

Current work has two components:

- Zoning - Town land use rules
- Infrastructure -Town financial investment
 - Traffic
 - Utilities, incl. stormwater
 - Streetscape/Landscaping

February 2012: Maine Competitive Coastal Grant Program



Project Goals

Our project hopes to accomplish the following through a collaborative partnership between state, town and private property owners:

1. Identification of opportunities for shared runoff management versus conventional approach where each property owner manages stormwater runoff on their own property.
2. Evaluation of the potential cost savings and reduced permitting requirements for managing stormwater runoff in the project area.
3. Enhanced capacity for future commercial growth.
4. A roadmap to better water quality in Mill Creek, Mussel Cove and Casco Bay.



What About Drainage?

- Drainage is not the sewer we often think of, but it *is* an underground system of pipes that maintains our urban built environment.
- Drainage systems convey fallen rainwater, called *stormwater*, from paved streets, parking lots, our lawns and basements (via sump pump) to prevent pooling and flooding.





Drainage Prevents Damage

Stormwater is drained away to prevent expensive damage to our infrastructure.

basements



cracking

streets



flooding

beneath roadways



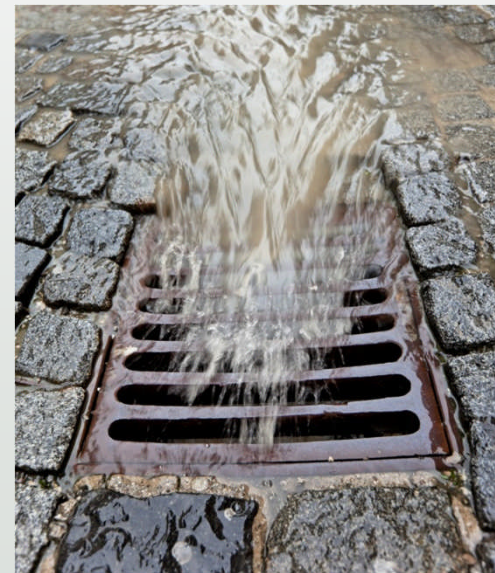
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Polluted Stormwater

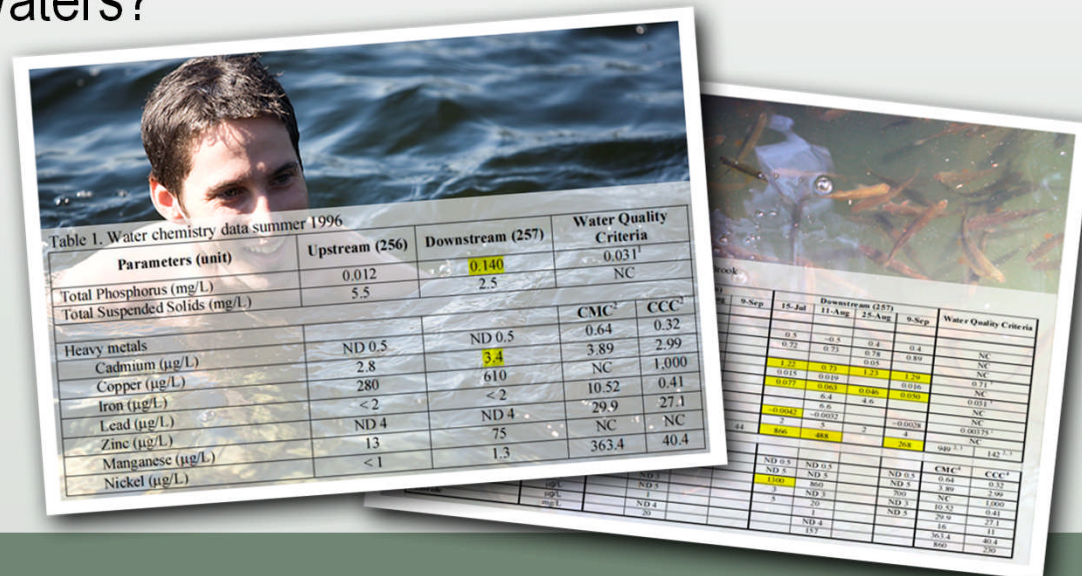
- Unfortunately, our drainage systems also carry pollutants like oil, fertilizers, sediment and trash.
- Rainwater that falls on paved streets, lawns, parking lots and sidewalks becomes polluted stormwater.



Stormwater & Maine Water Pollution

So, polluted stormwater from our neighborhoods runs directly to streams and water bodies, including the Casco Bay.

- **Did You Know:** polluted stormwater runoff is the largest source of water quality problems for Maine's waters?

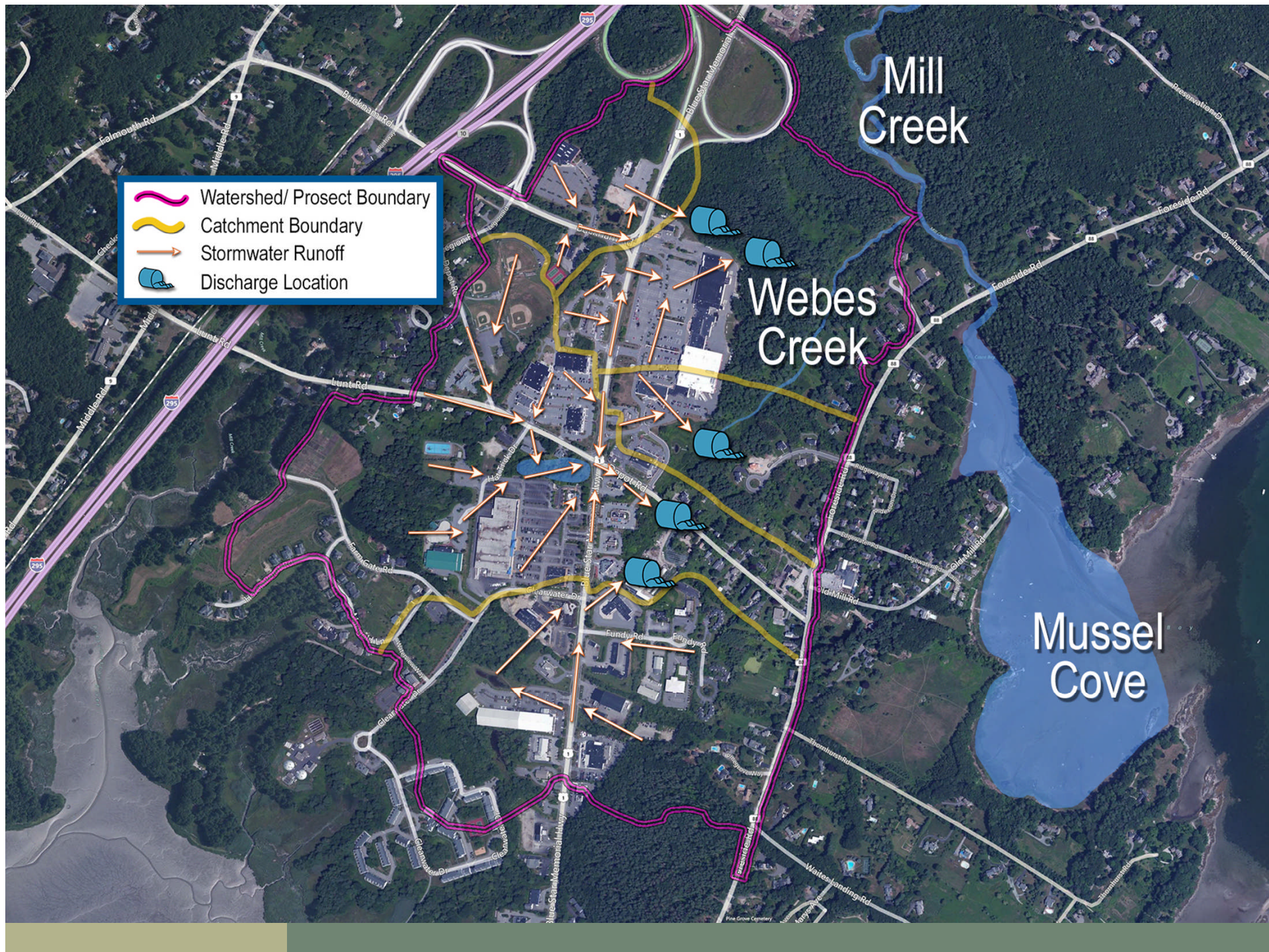


That Storm Drain does **NOT** lead to the Sewer

Water from your toilet and sink
sewer and on to the treatment

Polluted stormwater enters the
through the storm drains, which drain directly to
rivers and streams. Stormwater is







How is Stormwater Regulated?

Clean Water Act

- **Maine Pollution Discharge Elimination System (MEPDES)**
 - Maine is a delegated state and issues permits
 - Establishes required discharge limits and testing requirements.
- **Municipal Separate Storm Sewer System Discharges**
 - Five year general permit – 6 management measures
 - Progress required to clean up urban impaired streams
- **Residual Designation Authority (Long Creek)**

Maine Law

- State Stormwater Management Law (Chapter 500)
- Urban Impaired Streams
- Provision for waiver where local program addresses stormwater



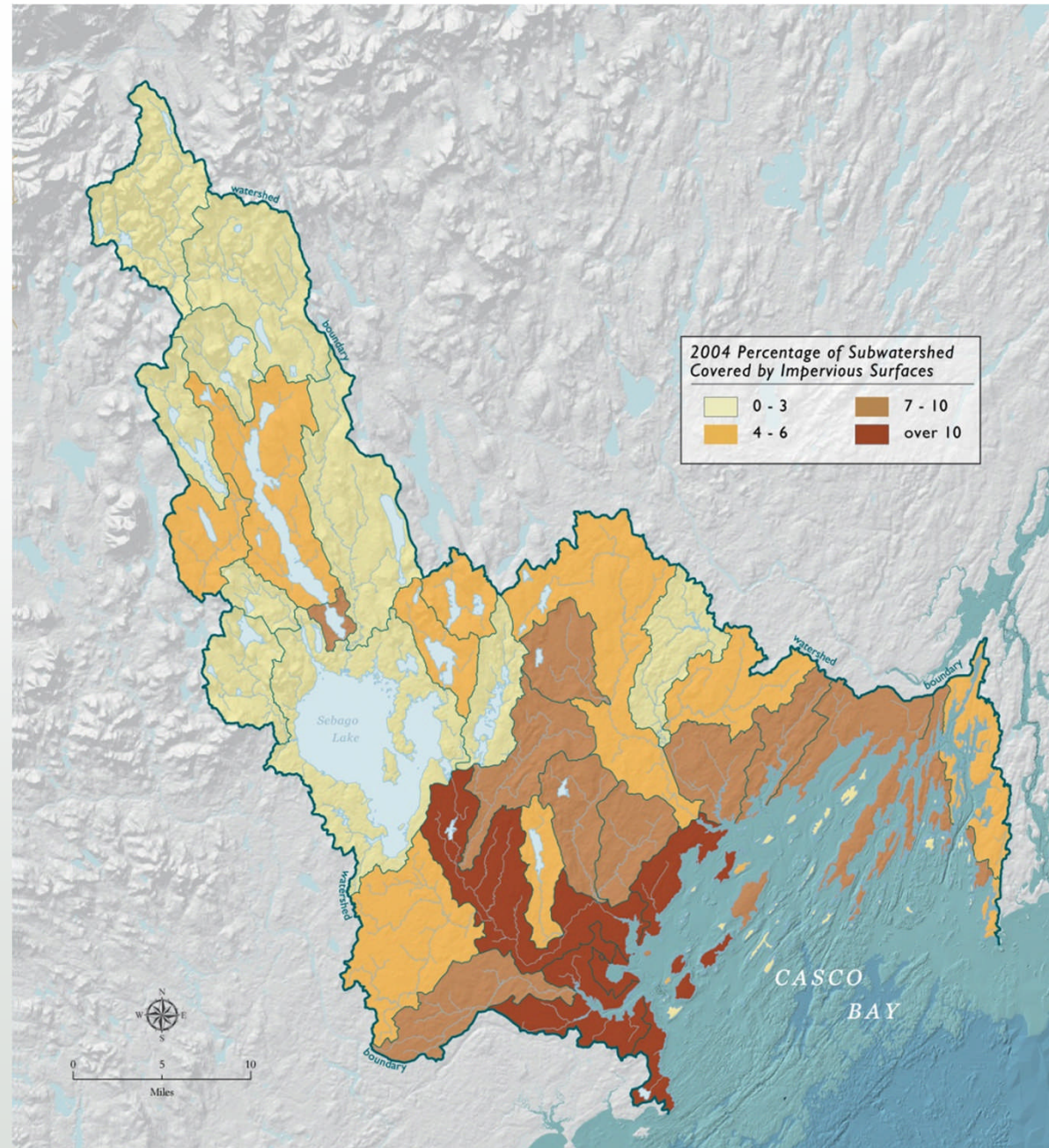
Components of Maine Law

- Basic Standards – Erosion and Sediment Control
- General Standards – Storing and treating the first inch of runoff
- Flooding Standards – Storing and slowly releasing the runoff associated with the 2, 10 and 25 year events
- Urban Impaired Waters



Casco Bay Impaired Waters Are Suburban

A close relationship between impaired waters and stormwater derived from roads and rooftops



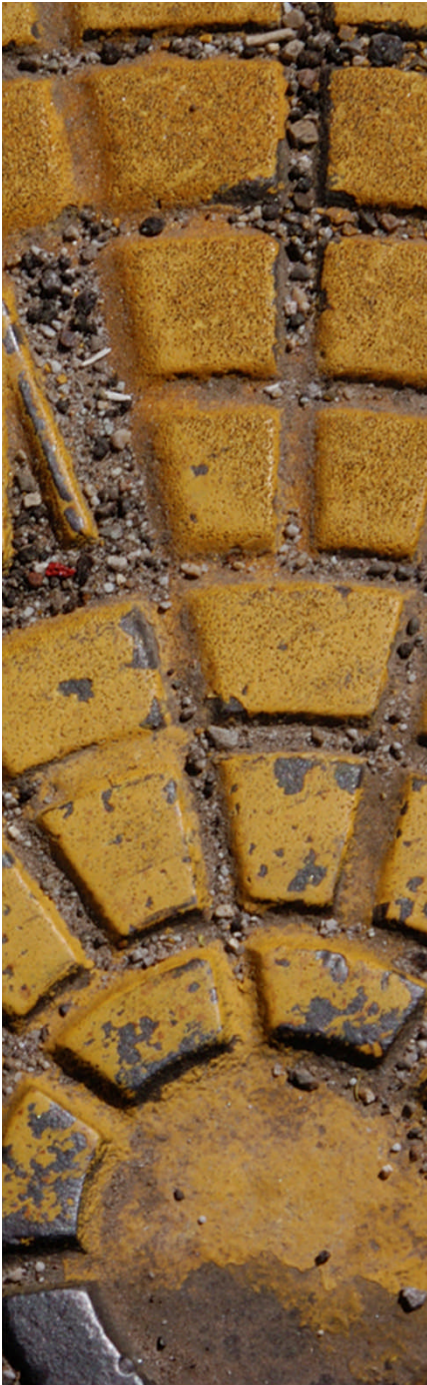
Our cities and towns can be hard on Casco Bay

- Developed land pollutants degrade coastal water quality
 - High bacteria counts can close clam flats, swimming beaches
 - Nutrients in runoff affect coastal water quality
 - algae blooms
 - low DO
 - potential fish kills
 - Toxic chemicals accumulate in sediments and marine organisms, especially top predators like Osprey
- (Sub) urbanization triggers loss and reduction in quality of habitat



Status of Casco Bay Clam Flats

- DMR has mapped nearly 11,000 acres of softshell clam habitat and close to 1,300 acres of quahog habitat in Casco Bay
- Slightly less than 2/3 of Casco Bay Flats are usually open for harvest
- Nearly 1/4 are permanently closed to harvest





Status of Mussel Cove

- DMR divides Mussel Cove into Inner and Outer portions, managed differently
- Harvesting clams is prohibited in Inner Mussel Cove
 - No single source of bacteria has been identified but the site has a history of high levels
 - Water samples from near Route 1 have shown high bacteria levels
- Outer Mussel Cove is closed seasonally





Project Tasks

- Identification of opportunities for shared runoff management and cost savings.
 - Mapping
 - Evaluation of private and public stormwater management



Project Tasks

- Integration with Route 1 Infrastructure Study
 - Build out Analysis
 - Zoning modifications



Project Tasks

- Enhanced capacity for future commercial growth.
 - Stormwater management on cooperative basis, particularly for flooding criteria.
 - Ordinance and Rule Changes



Project Tasks

- A Roadmap to better water quality in Mill Creek, Mussel Cove and Casco Bay.
 - MDOT Demonstration project



Questions & Discussion