

2010

Maine Healthy Beaches Program: Working Together to Improve Coastal Water Quality (2010 State of the Bay Presentation)

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Maine Healthy Beaches Program: Working Together to Improve Coastal Water Quality

State of the Bay Conference

October 21, 2010

Sarah Mosley &

Keri Lindberg

UMaine Cooperative Extension



Mark Margerum

Maine Department of
Environmental Protection

Funding provided by US EPA

Maine Healthy Beaches Program



Program Elements:

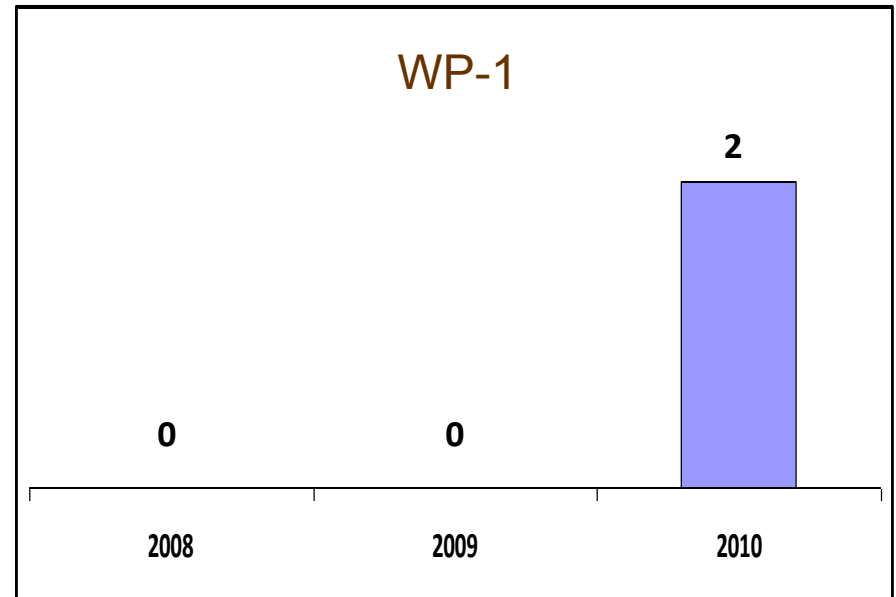
- 28 towns/state parks, 60 beach management areas
- Monitoring, Assessment and Notification
- Special Studies & Sanitary Surveys
- Partners - local, state and federal level



Winslow Park, Freeport, ME



K. Lindberg



Number of Exceedances per Year
(monitoring 2x per month)

Winslow Park, Freeport, ME

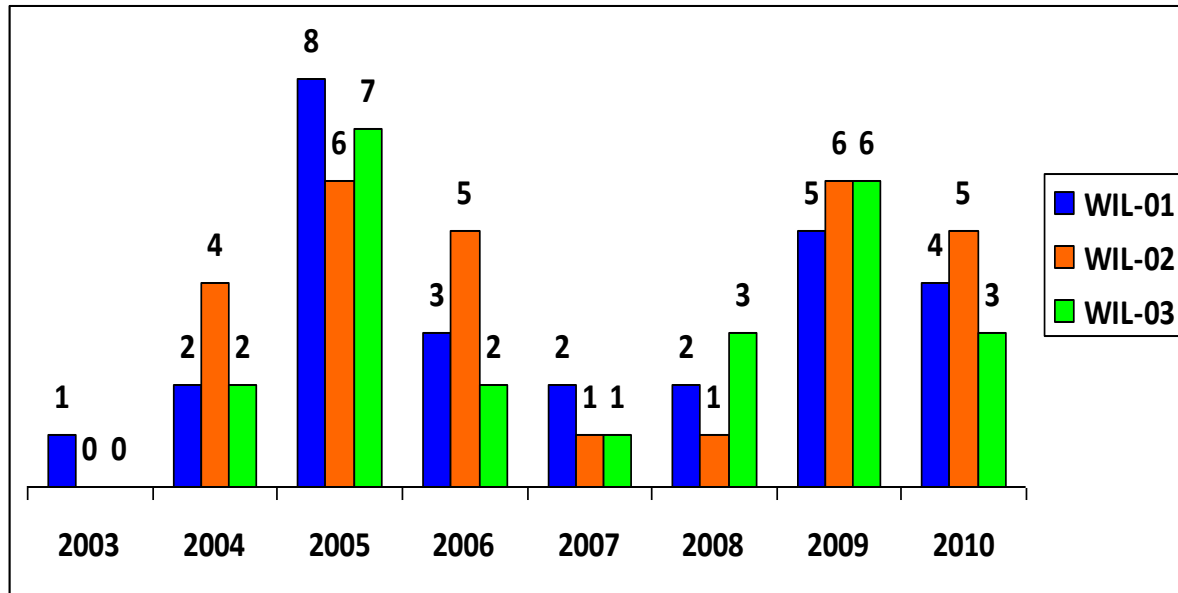


K. Lindberg

Potential Bacteria Sources:

- ✓ Stormwater runoff
- ✓ Boats/moorings
- ✓ Bathers
- ✓ Wildlife
- ✓ Pet waste

Willard Beach, South Portland, ME



Number of Exceedances per Year

(monitoring 2x per week)

Willard Beach, South Portland, ME

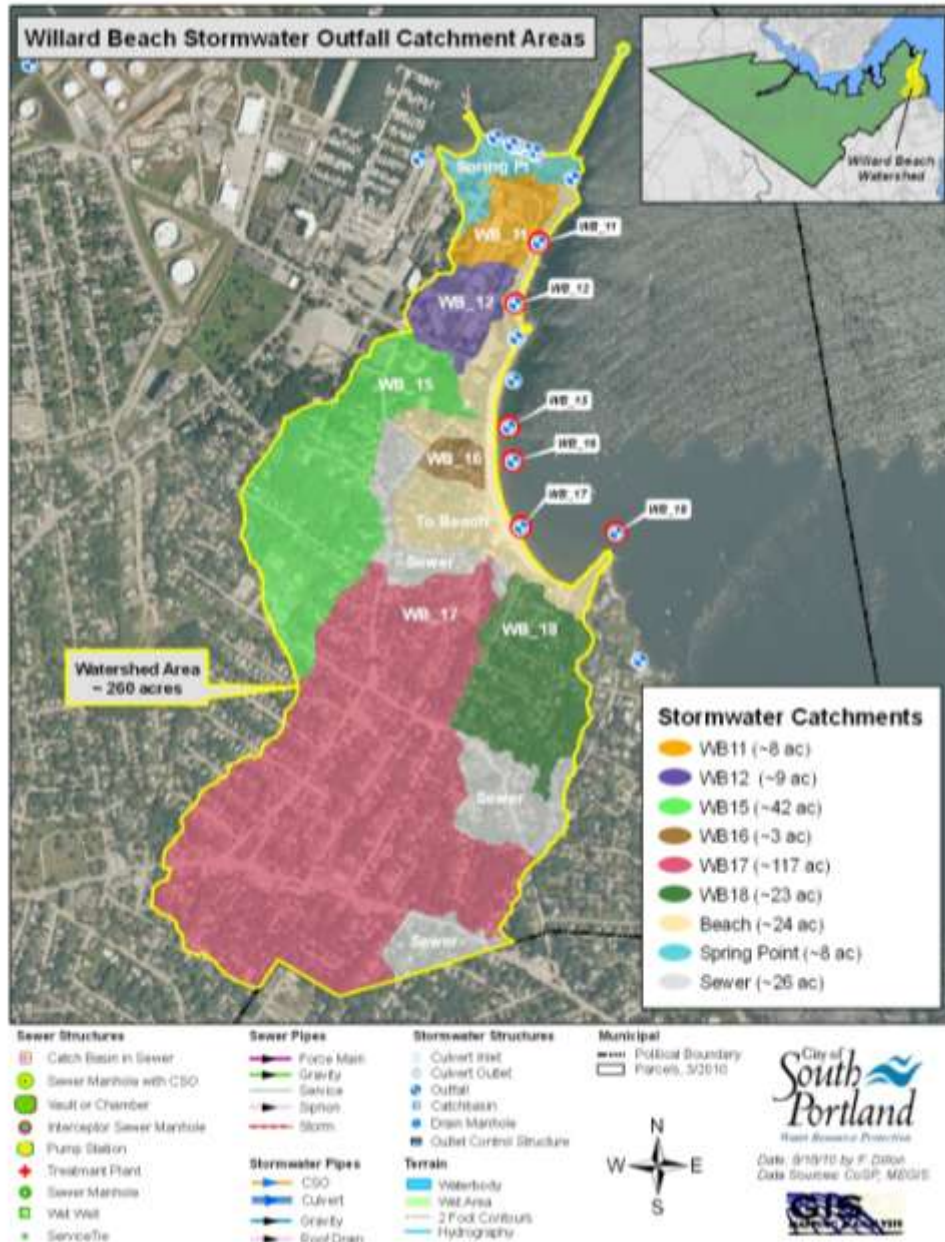


S. Mosley

Potential Bacteria Sources:

- ✓ Storm drain outfalls
- ✓ Impervious surfaces/runoff
- ✓ Boats/moorings
- ✓ Bathers
- ✓ Wildlife
- ✓ Pet waste

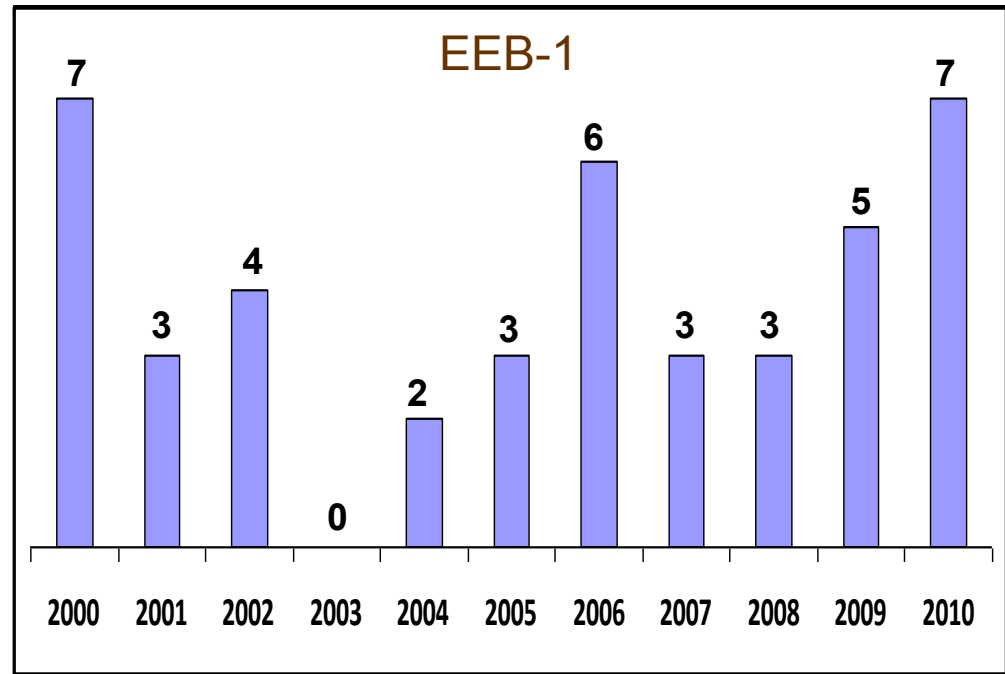
Willard Beach, South Portland, ME



East End Beach, Portland, ME



S. Mosley



Number of Exceedances per Year

(monitoring 3x per week)

East End Beach, Portland, ME



S. Mosley

Potential Bacteria Sources:

- ✓ Combined sewer overflows
- ✓ Storm drains
- ✓ Impervious surfaces/runoff
- ✓ STP outfall
- ✓ Marinas/moorings
- ✓ Presumpscot River mouth
- ✓ Bathers
- ✓ Wildlife
- ✓ Pet waste

Beyond the Shoreline: areas identified as needing special studies/sanitary surveys

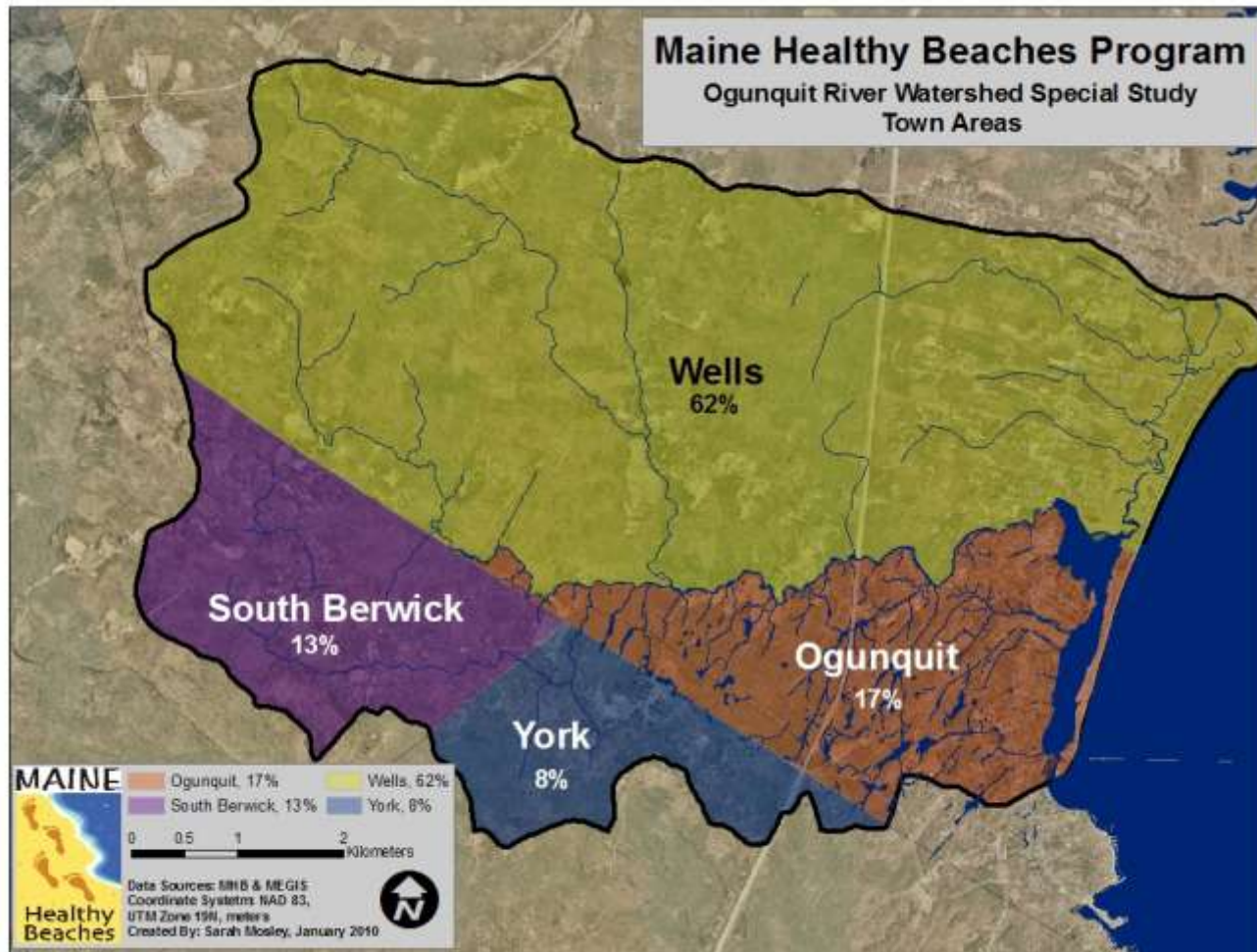
- Biddeford
- Camden
- Kennebunk
- Kennebunkport
- Lincolnville
- MDI
- Ogunquit
- OOB/Saco
- Popham
- **Portland**
- Rockport
- Scarborough
- **South Portland**
- York



Watershed Health = Beach Health



Fecal Contamination= Guts of warm-blooded animals



Explore ALL Bacterial Pathways

- **Malfunctioning septic systems**
- **Leaky sewers/cross connections**
- **Stormwater runoff**
- **Domestic and wild animals**
- **OBD's, POTW outfalls**
- **Boats dumping sewage**
- **Beach activities/characteristics**



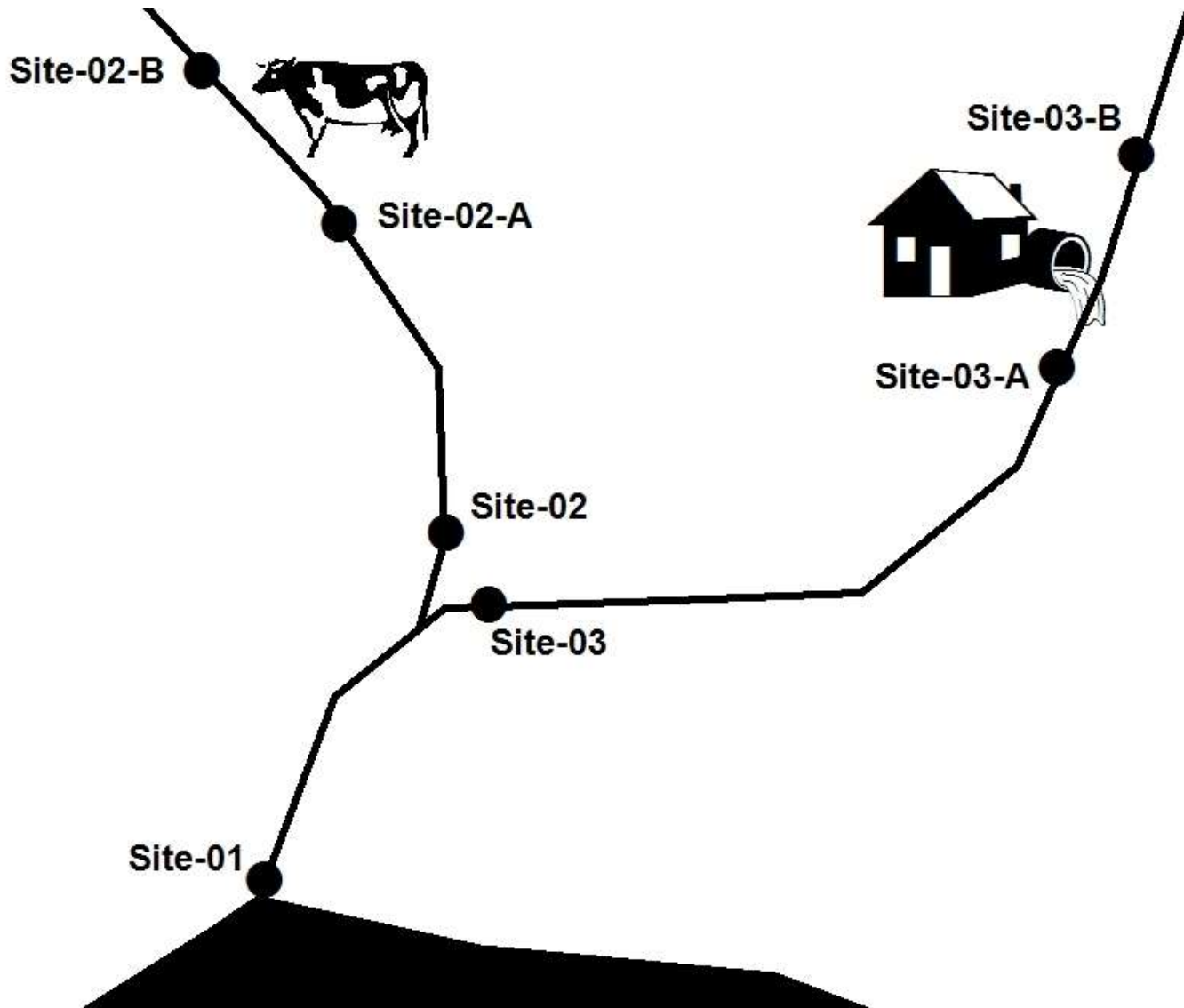
Ogunquit Circulation Study and Data Analysis



Maine Geological Survey, 2008

- Ogunquit River = primary source of contamination
- Rainfall > 1 in. within 5 days of monitoring increases bacteria levels
- Night time ebb tide = entrainment outside surf zone
- Day time flood + wind + waves can bring bacteria back to beach

Pinpointing Sources



Fluorometry



	High Bacteria	Low Bacteria
High Optical Brightener	Black water (e.g. human sources- malfunctioning septic system, sanitary sewer cross connection)	Grey or Gray water (e.g. laundry, wash water)
Low Optical Brightener	Human or non- human sources	Potentially low or no fecal contamination

Potential sources based on bacteria and optical brightener levels

Watershed Risk Analysis



Monitoring data

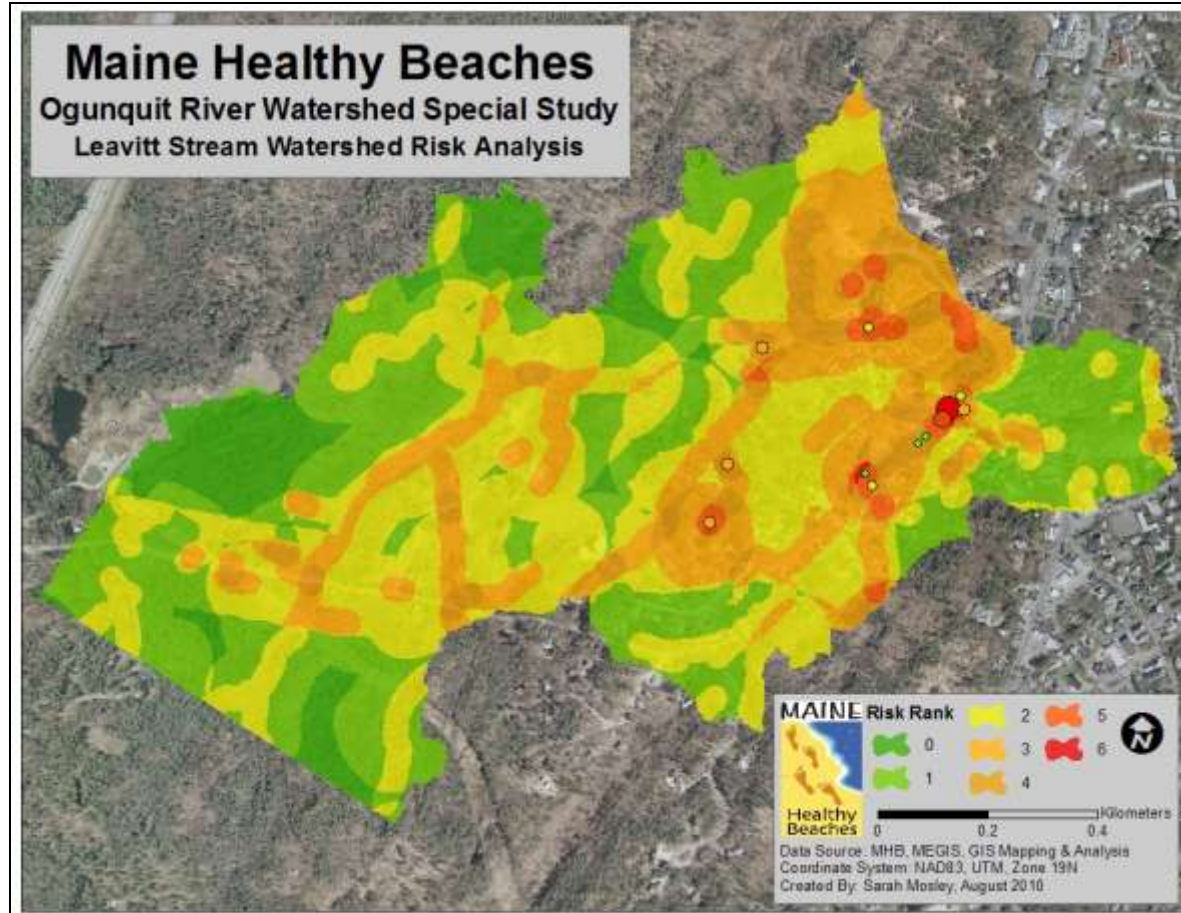
Within 250'
of coast/river/
tidal zone

Slope > 20%

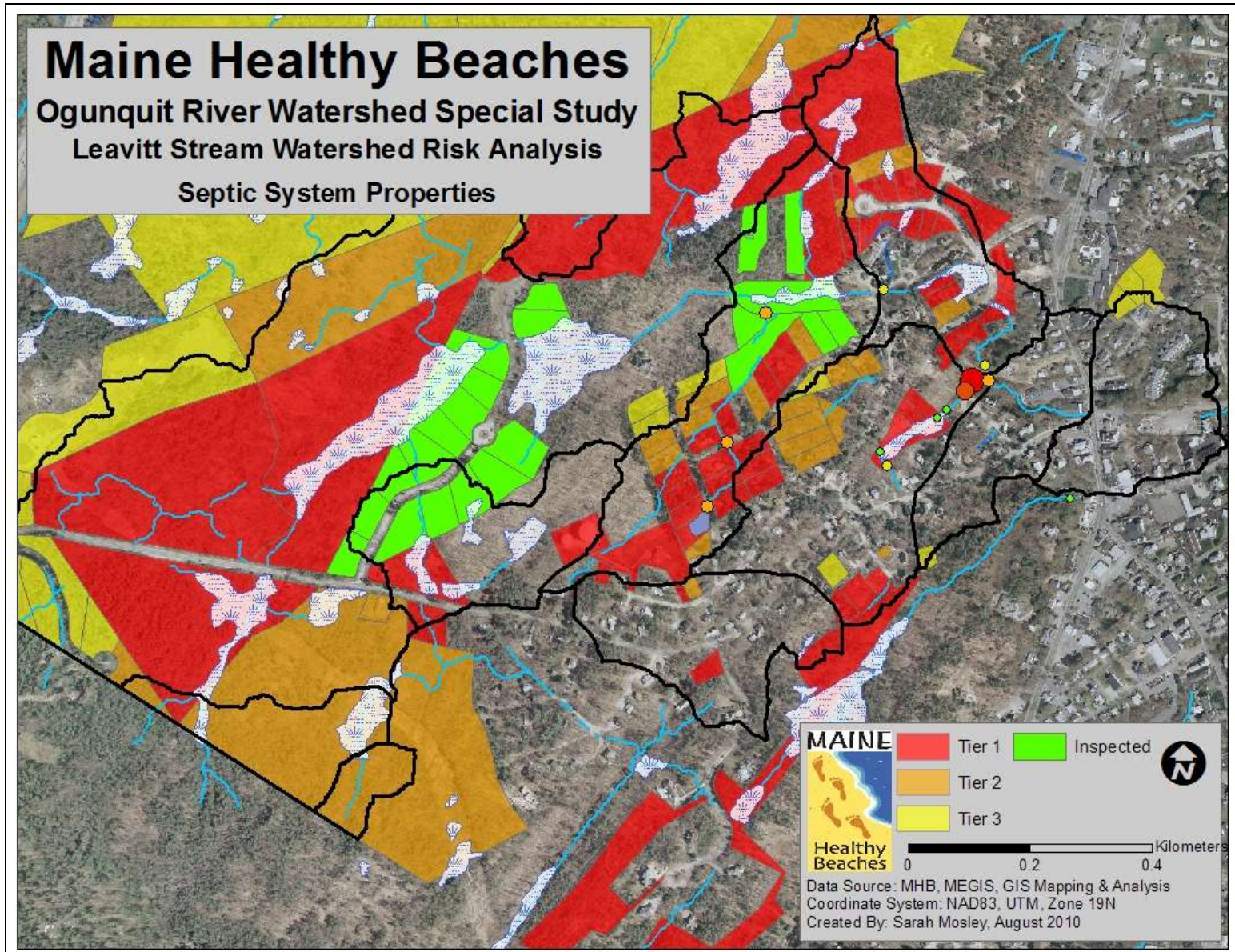
Within 250'
of
waterbody/wetland

Within 250'
of
an Impervious Surface

Within 75'
of a Stream



Septic System Risk Analysis



Surveying Properties



J. Glowa ME DEP



Lincolnton Beach, Maine (K. Lindberg)

Promoting Best Practices



What you can do as a **CITIZEN**:

- Maintain and routinely pump out your septic system.
- Report any illicit or questionable discharges to your local CEO/LPI.
- Properly dispose of pet waste and/or livestock manure.
- Maintain appropriate vegetative buffers along waterways.



Find, Fix & Prevent Sources



Municipal Guide To Clean Water: Conducting Sanitary Surveys to Improve Coastal Water Quality



Maine Healthy Beaches Program

March 2010



Questions?

