

MEDOMAK RIVER

Reflecting on the Success of Remediating Fecal
Pollution Using a Collaborative Task Force

Julie Keizer, Town Manager, Waldoboro ME

Maggie Burns, Hydrologist, FB Environmental Associates





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Town of Waldoboro, Maine



Maggie Burns, Hydrologist
FB Environmental



MEDOMAK RIVER

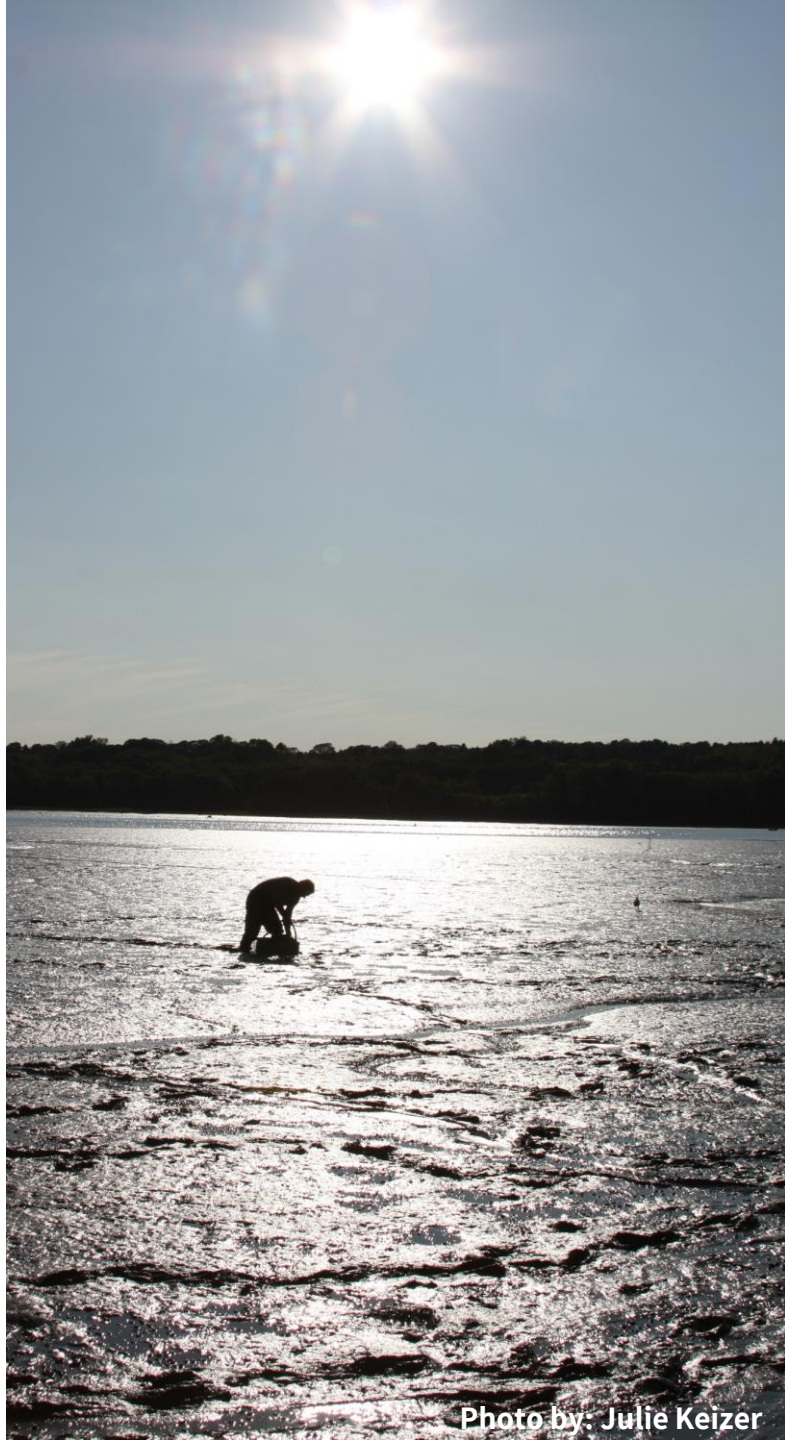


Photo by: Julie Keizer



Photo by: Melissa Smith Maine DMR



WALDOBORO

SOFTSHELL CLAMS



Photo by: Julie Keizer

VALUE OF SOFTSHELL CLAMS IN WALDOBORO:

Year	Pounds (Live)	Value
2007	935,455	\$1,296,841
2008	894,930	\$1,118,548
2009	353,571	\$391,813
2010	611,145	\$747,529
2011	1,030,154	\$1,406,147
2012	653,879	\$914,055
2013	726,879	\$1,144,579
2014	410,005	\$752,623
2015	847,192	\$2,223,605
2016	980,592	\$2,108,897
2017	910,903	\$1,604,253



1.5 – 2.2 million in value



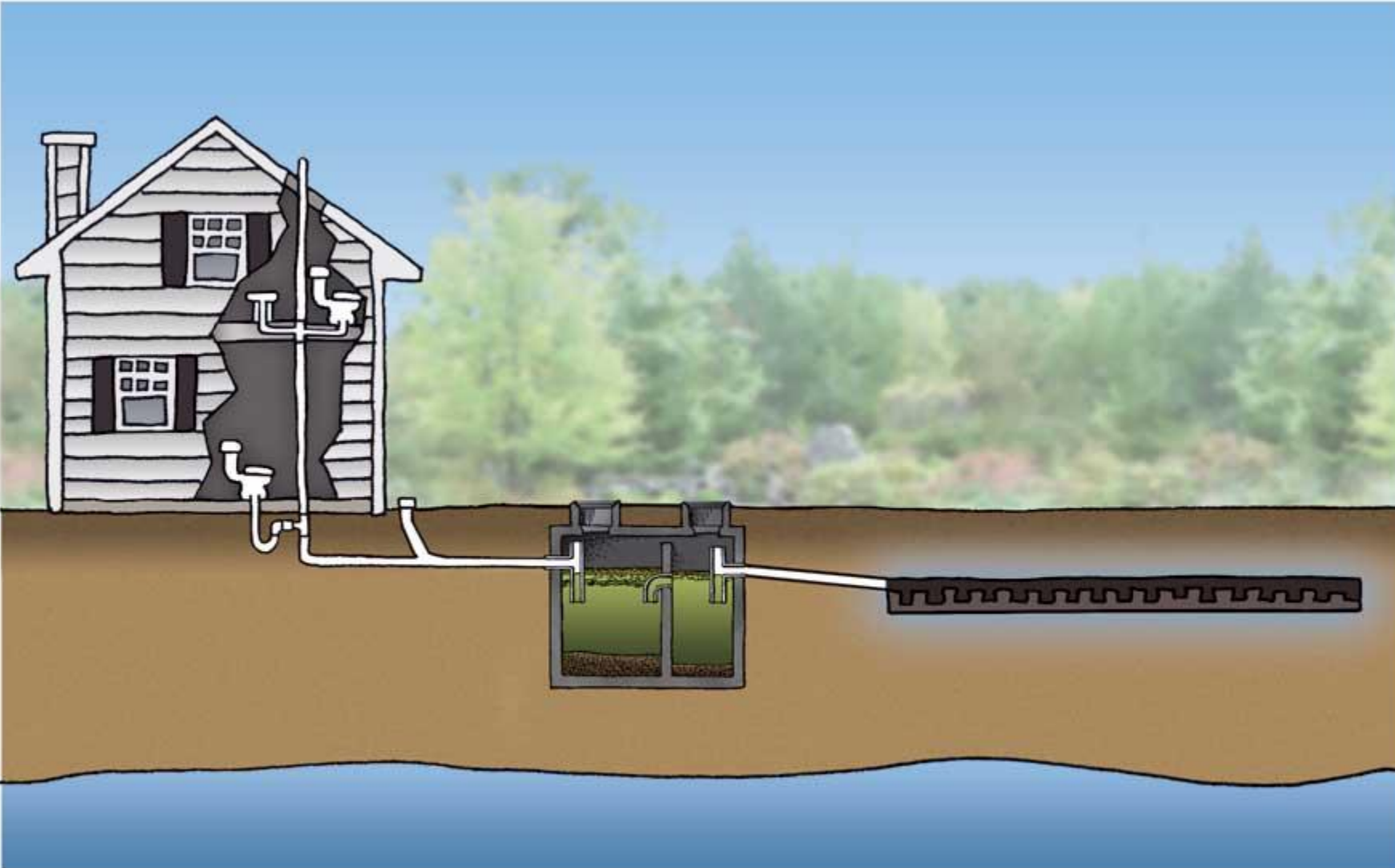
FILTER FEEDERS

Clams clean our waters

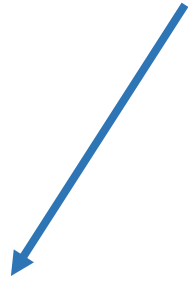


OCEAN POLLUTION

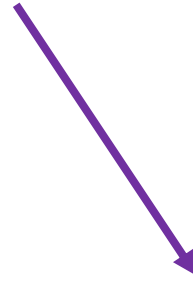
BACTERIA



CLASSIFICATION OF MAINE WATERS

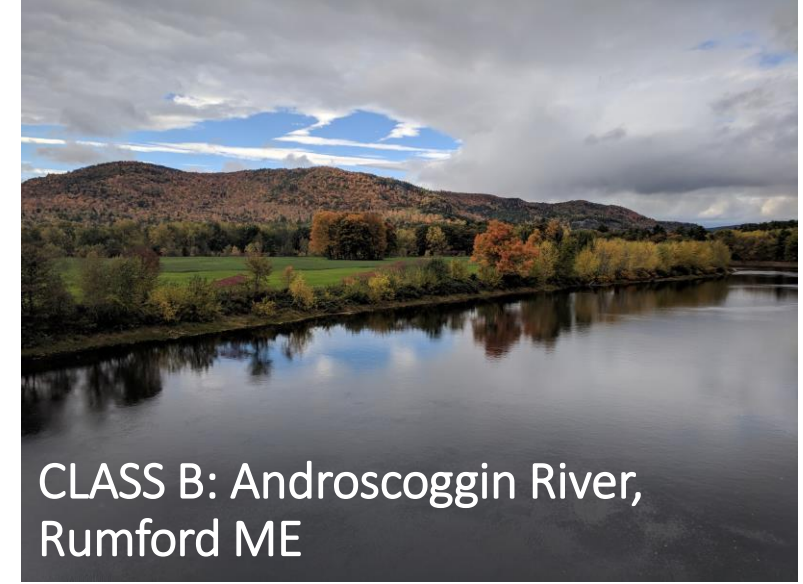


Freshwater

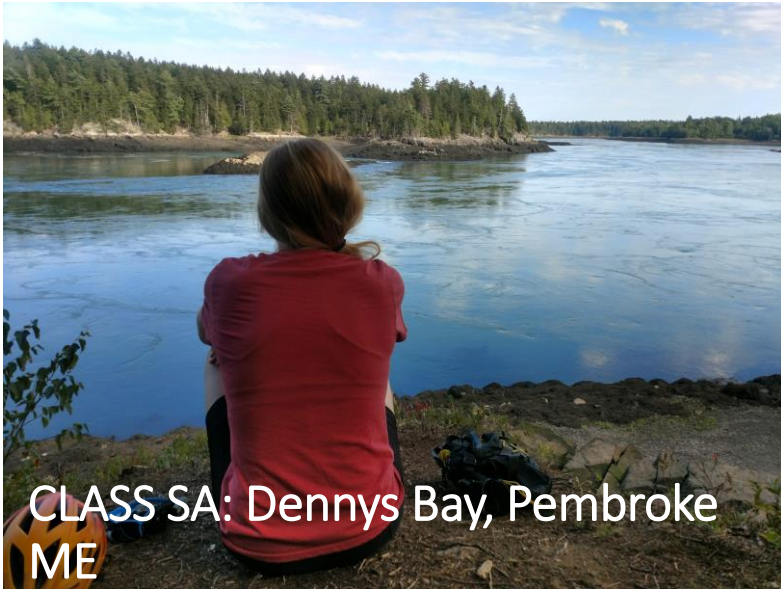


Marine

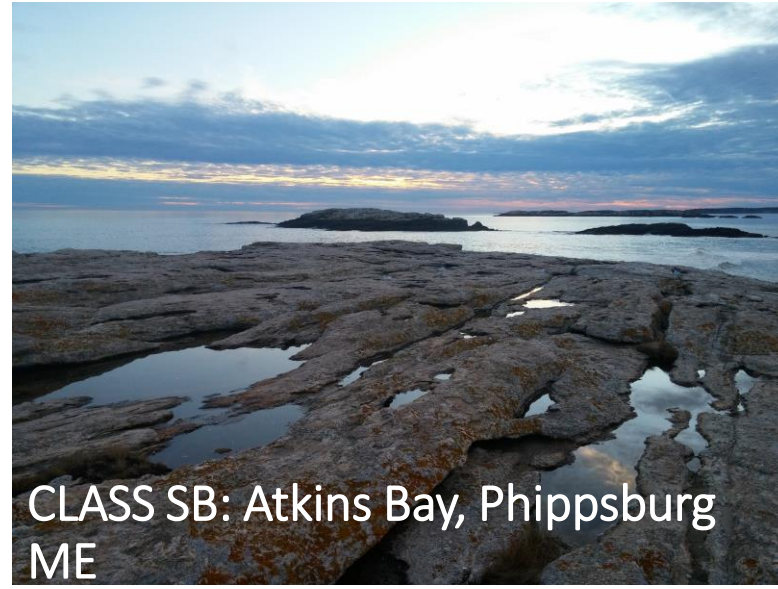
FRESHWATER CLASSIFICATION



MARINE CLASSIFICATION



CLASS SA: Dennys Bay, Pembroke
ME



CLASS SB: Atkins Bay, Phippsburg
ME



CLASS SC: Casco Bay, Portland ME

Photo from: City of Portland

SHELLFISH CLASSIFICATION

Conditionally Approved: Harvesting is allowed except during specified conditions. Example: Rainfall and Seasonal closures.

Conditionally Restricted: Depuration and/or relay harvesting allowed except during specified conditions.

Prohibited: No harvesting allowed or water use allowed for processing.

Restricted: Depuration and/or relay harvesting only.

MAINE DEP:
Freshwater

Class A: above Wagner's
Bridge Road and all
tributaries

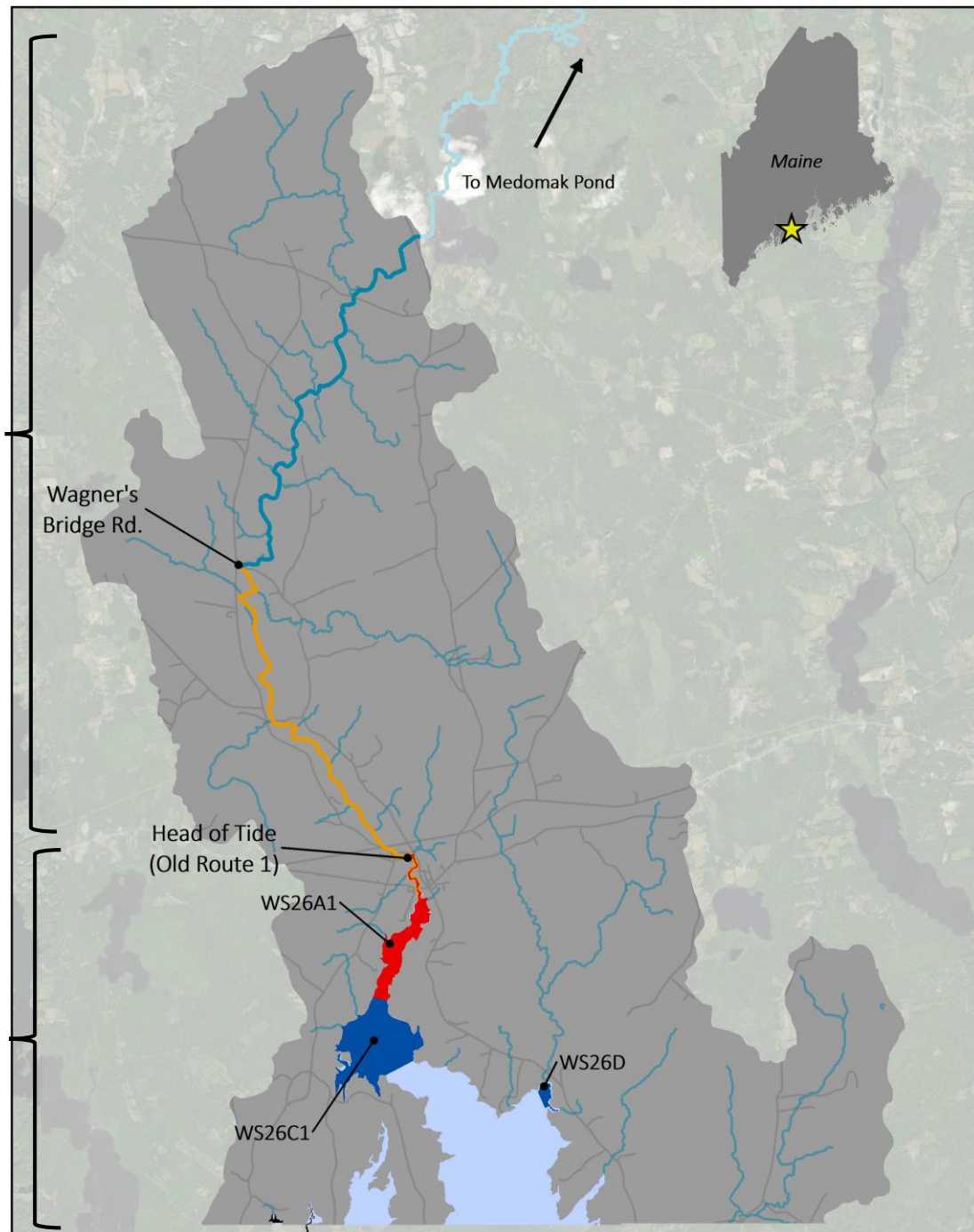
Class B: Head of Tide to
Wagner's Bridge Road

MAINE DMR:

Marine Waters

Conditionally Approved:
WS26C1 and WS26D

Prohibited: WS26A1





BRIEF HISTORY



MEDOMAK RIVER PROJECT TIMELINE

1990's

- River not meeting class
- Wastewater treatment facility discharges effluent directly to Medomak River estuary

2001

- Lagoon and land application treatment facility constructed
- Wastewater discharge terminated August 20, 2001

2002

- DMR imposes conditional rainfall closures period of 2 weeks on Medomak River

2003 - 2004

- Maine DEP survey work in direct watershed area around conditional closures
- Involved UMaine Cooperative Extension

2008 - 2009

- Elevated bacteria following rain persists
- Maine DMR (with Maine DEP assistance) conducts another survey in conditional areas

2013

- The Medomak Task Force begins (January 2013)
- DMR increases routine sampling (goal = once/month)
- Volunteers sampled on days 1 and 3 post-rain (events > 1"/24hrs). DMR samples on days 5 and 7.
- Sampling upstream of US Rte 1

2014

- Paired three-day wet/dry weather studies in village
- DMR sampling reduced to six times per year
- Sampling upstream of US Rte 1 continued
- Canine detection survey

2019

- Watershed-based Management Plan published

2018

- As part of the WBMP, the task force completes storm event sampling in June
- Gabby Hillyer, UMaine, conducts drifter study to model hydrodynamic flushing
- DMR continues routine sampling
- Beaver dams removed

2017

- Task Force submits proposal for Maine DEP 604(b) funds for Watershed-Based Management Plan
- Monthly routine DMR sampling continued

2016

- Paired *E. coli* and microbial source tracking (MST) sampling
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2015

- Subgroup designed 2015 sampling; sampling of small tidewater tributary streams
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■ = SANITARY SURVEY WORK (*Winslow's Mills Road, Village Area, Depot Street, Deb's Diner Drainage, Orff Brook, Benner Brook, Skyview Ridge Mobile Home Park*)

■ = UNDER 604(b) PLANNING GRANT

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ABDEN



Photo by: Julie Keizer

GLEN



Photo by: Bridie McGreavy

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= SANITARY
Mills Road
Deb's Diner
Benner Brook
Home Park

= UNDER 6

MEDOMAK TASK FORCE



MIDCOAST CONSERVANCY



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— = UNDER 604(b) PLANNING GRANT

— = M... D... B... H... environmental

Winlow's at Street, Brook, Mobile

• sampling
• Beaver dams removed



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2019

- As part of task force storm June
- Gabby conduct model flushing
- DMR conduct sampling
- Beaver

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Yellow line = SANITARY SURVEY WORK (Winslow's Mills Road, Village Area, Depot Street, Deb's Diner Drainage, Orff Brook, Benner Brook, Skyview Ridge Mobile Home Park)

Green line = UNDER 604(b) PLANNING GRANT



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MEDOMAK RIVER PROJECT



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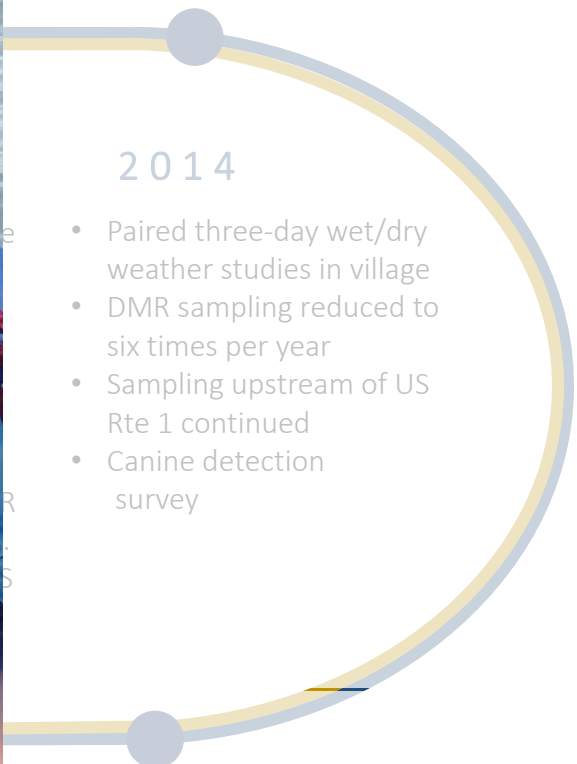
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GABBY

Photo by: Julie Keizer



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Photo by: Julie Keizer

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- As part of the task force...
- Gabrielle...
- DMR...
- Bea...



JULIE

Photo by: Maggie Burns

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E. coli and fecal source tracking sampling
routine DMR sampling continued

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SUCCESSES

Photo by: Melissa Smith Maine DMR

**2013:
Condenser repairs
at kelp processor**



Photo by: Maggie Burns

**2013-2014:
Implementation of
various
agricultural BMPs**



Photo by: Maine Farmland Trust – non on Medomak River.

**2016:
Dog restrictions at
town landing**



Photo by: Maggie Burns

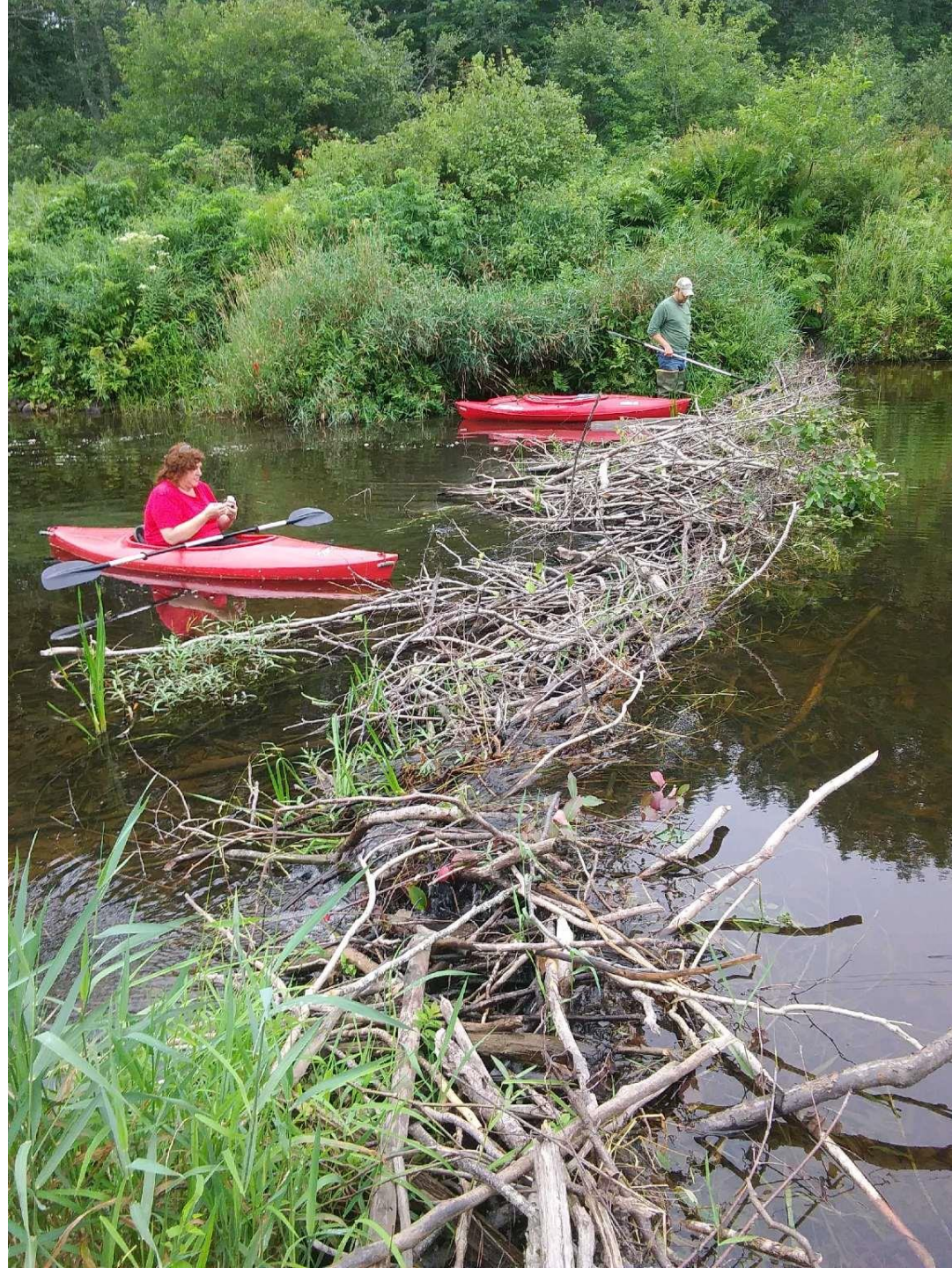


**2016:
Smoke testing at mobile
home park sewer system**



Photo by: Waldoboro Utility District

**2018:
Beaver dam
removal on
tributaries**



P90 Score

- <2 - 15
- 15.1 - 25
- 25.1 - 31.4
- 31.5 - 163.5
- > 163.5

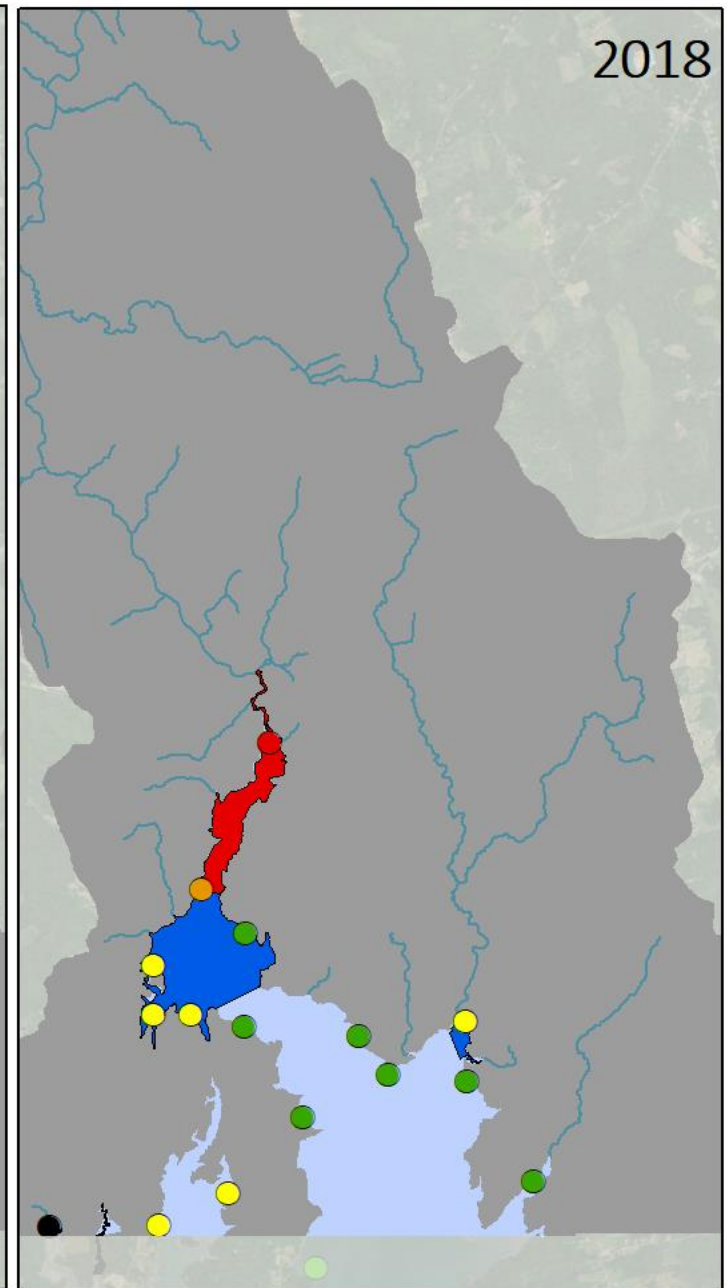
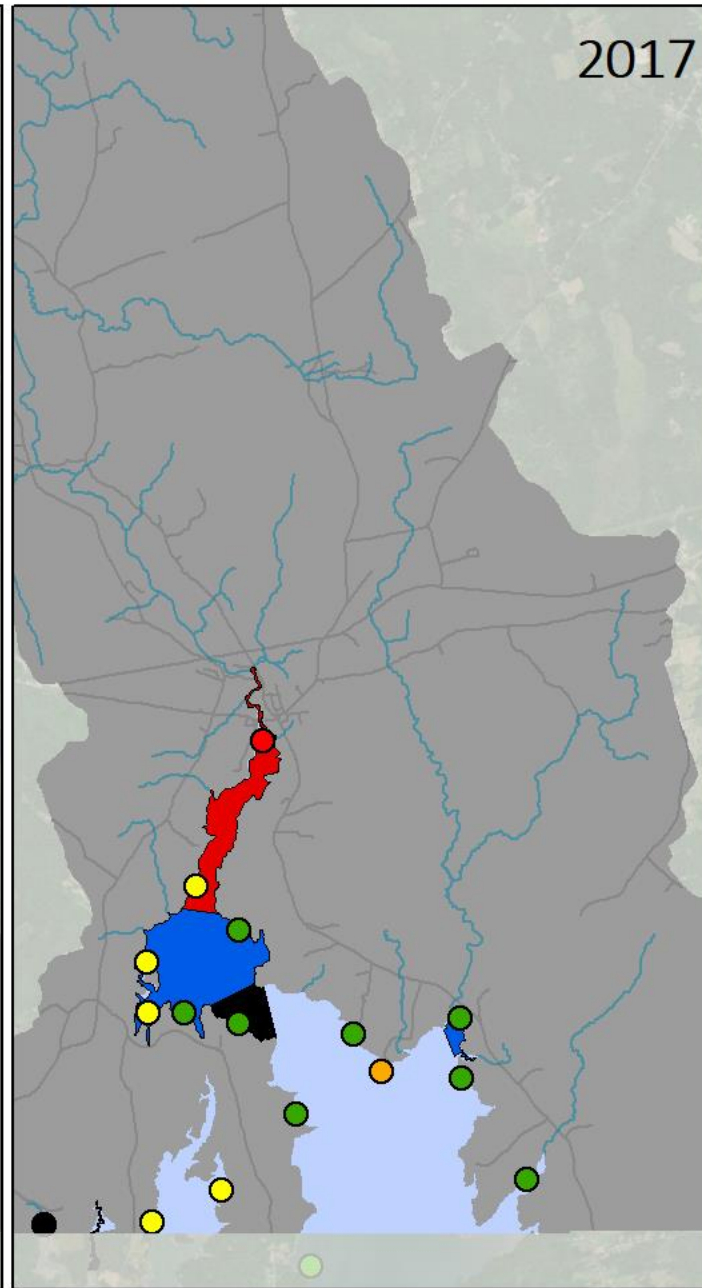
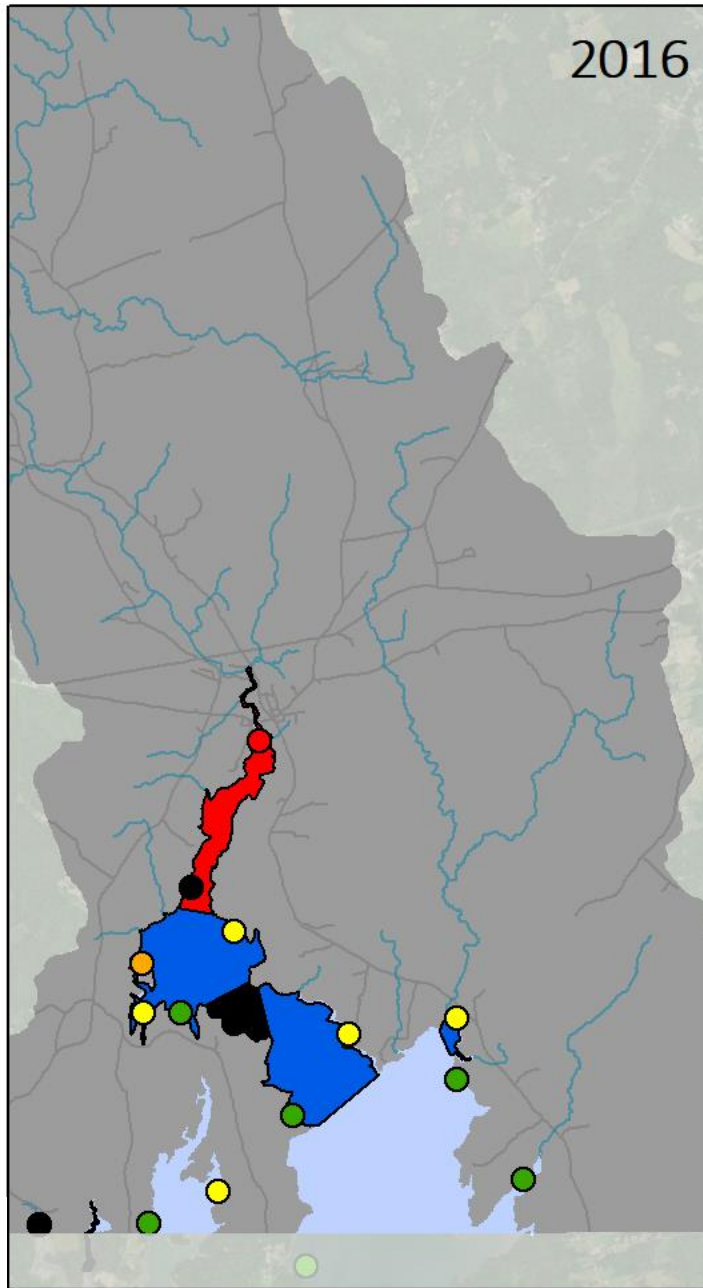
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- Prohibited
- Restricted
- Conditionally Restricted
- Conditionally Approved

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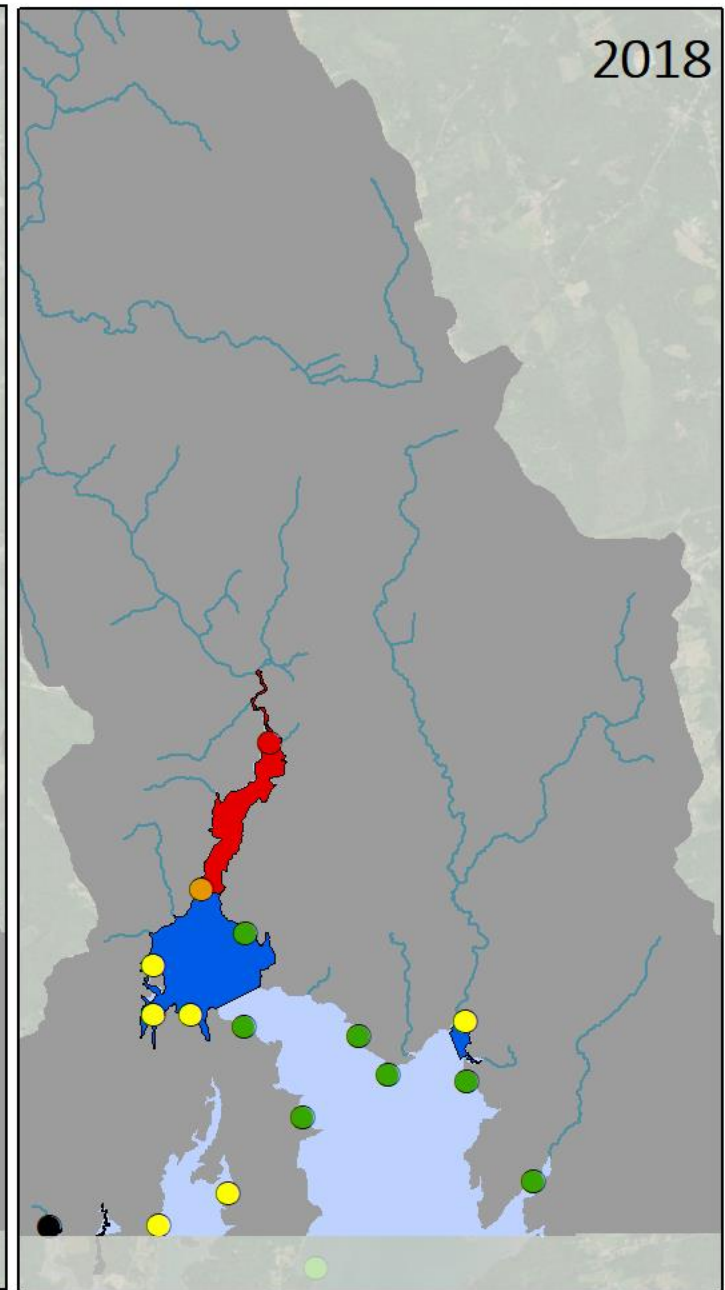
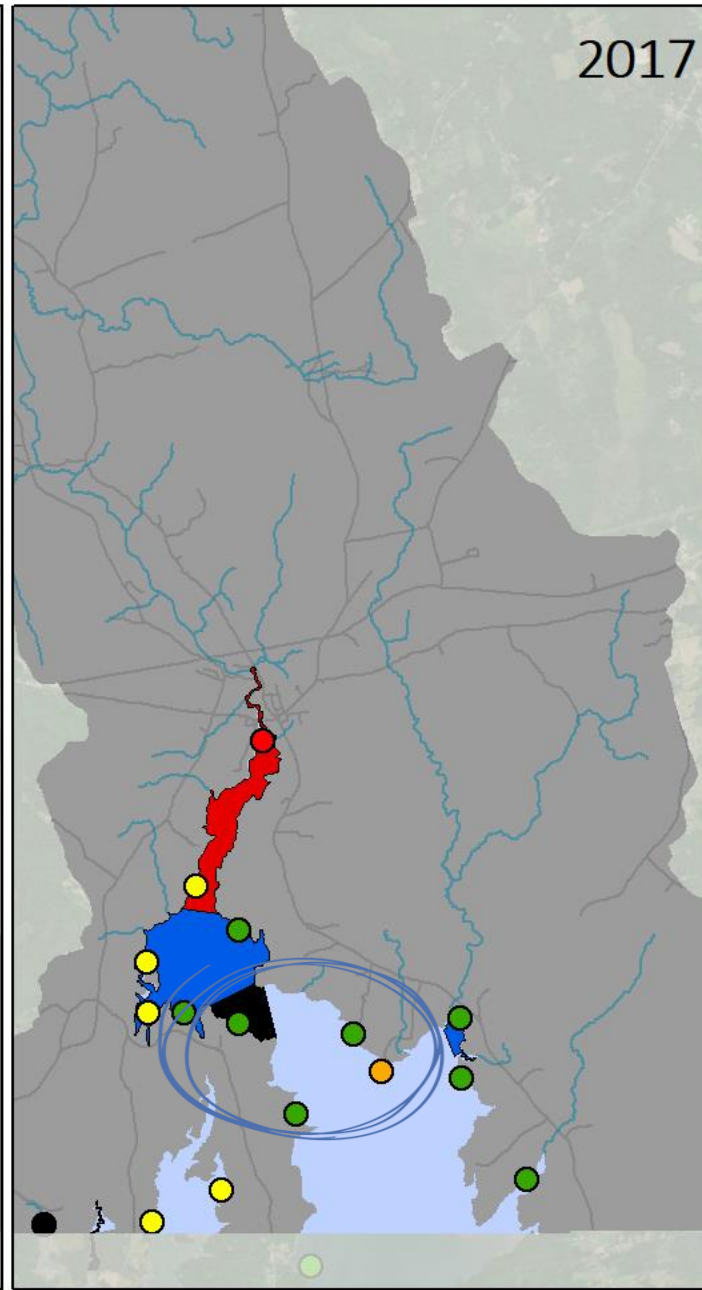
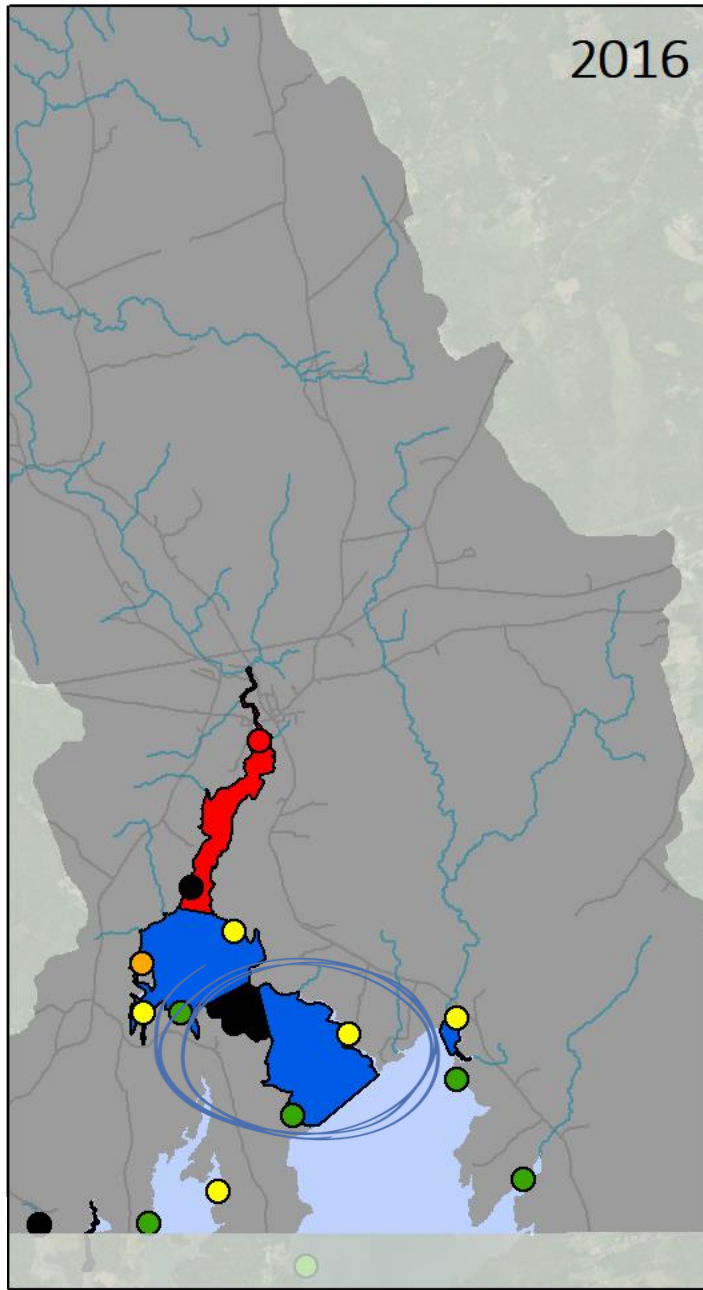
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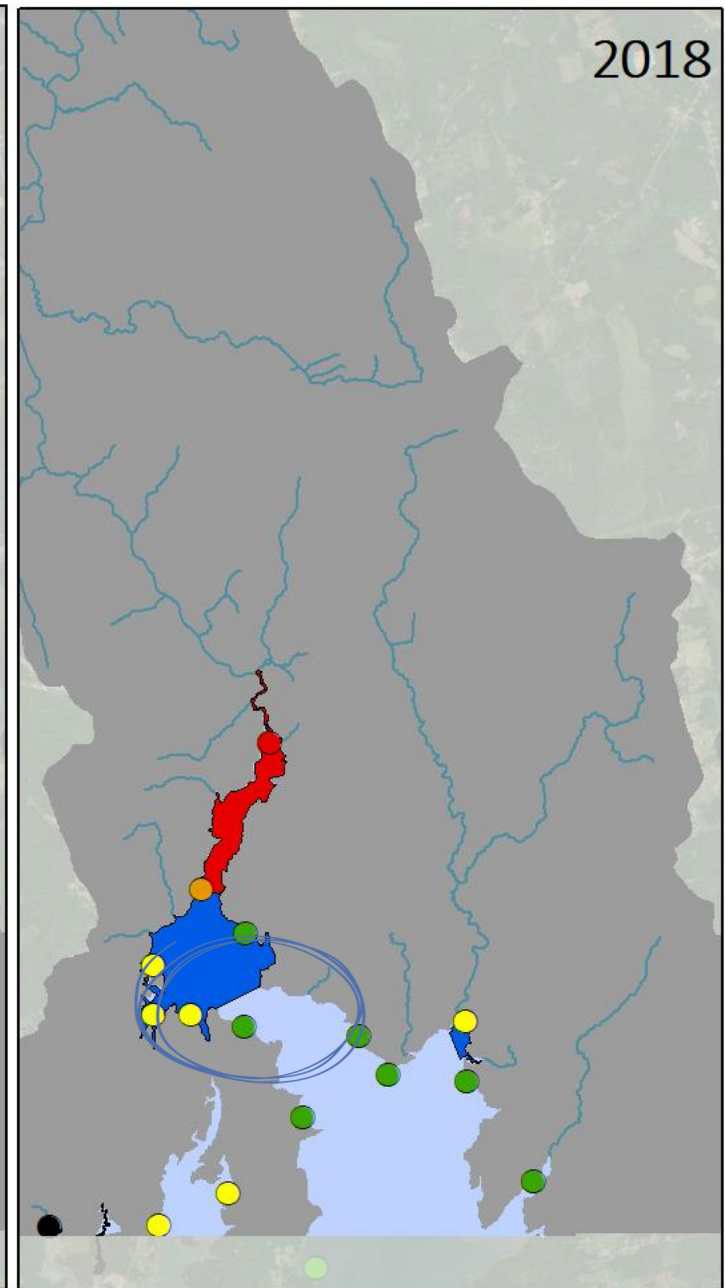
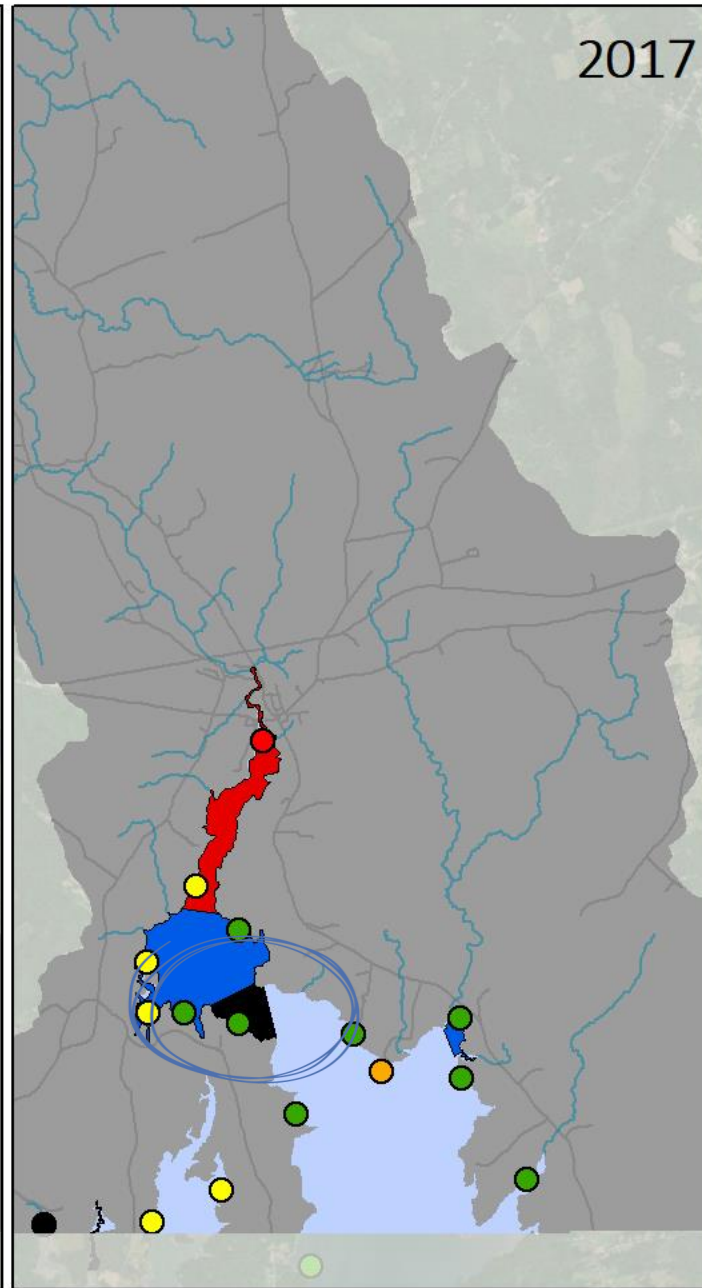
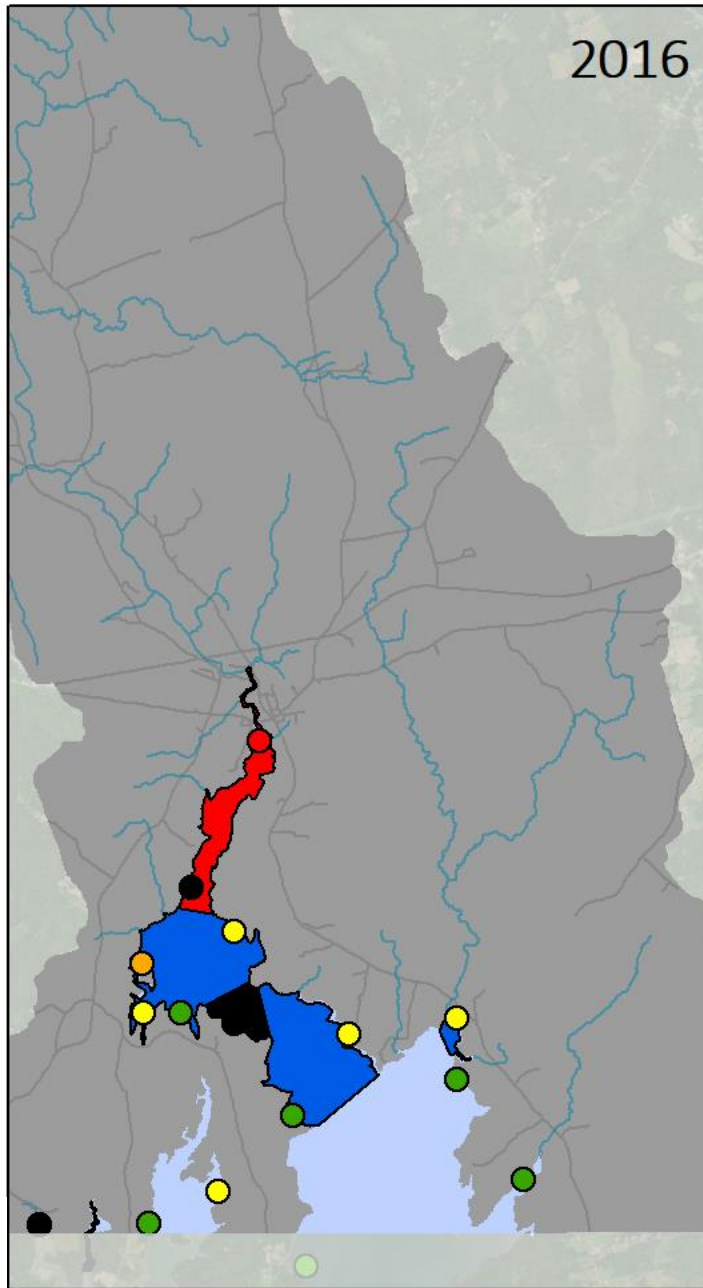
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WHAT HAS MADE THE TASK FORCE SUCCESSFUL?



- Leadership from the Town and shellfish committee
- Collaboration with State agencies
- Volunteer effort and love for the river
- Motivation from economic value



Photo by: Village Soup



WHAT'S NEXT?

WHAT'S NEXT?

“Baby Clam” Grant



Photo from: San Diego Reader

Restricted Area



Open Area

WHAT'S NEXT?

Implementation of Watershed Management Plan



WHAT'S NEXT?

Continued Hydrodynamic Modeling of Estuary

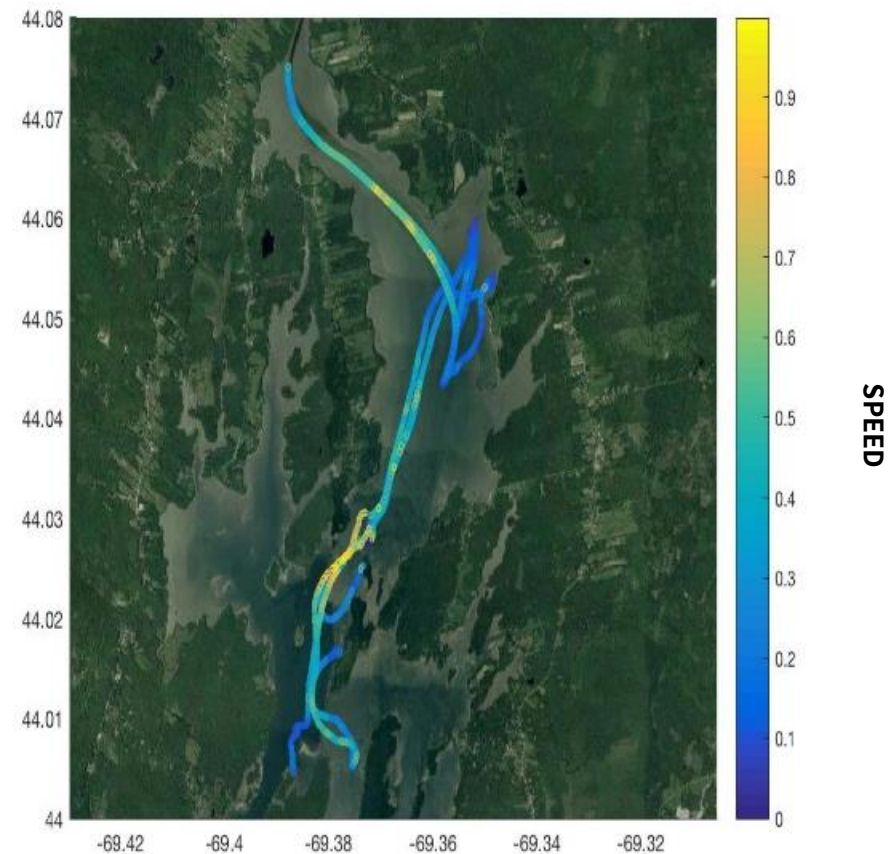


Photo and figure by Gabby Hillyer, University of Maine

WHAT'S NEXT?

Sewer Line Repairs



QUESTIONS?



Julie Keizer
townmgr@waldoboromaine.org



Maggie Burns
margaretb@fbenvironmental.com