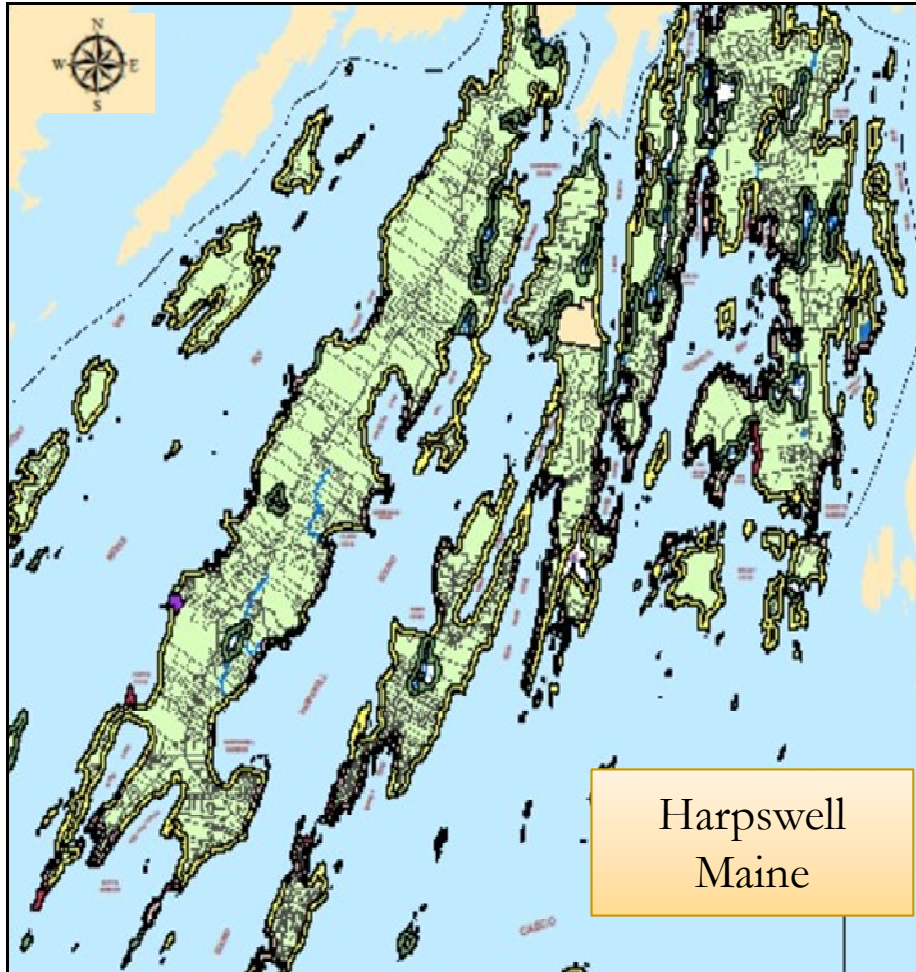

Promoting Resilience to Changing Weather

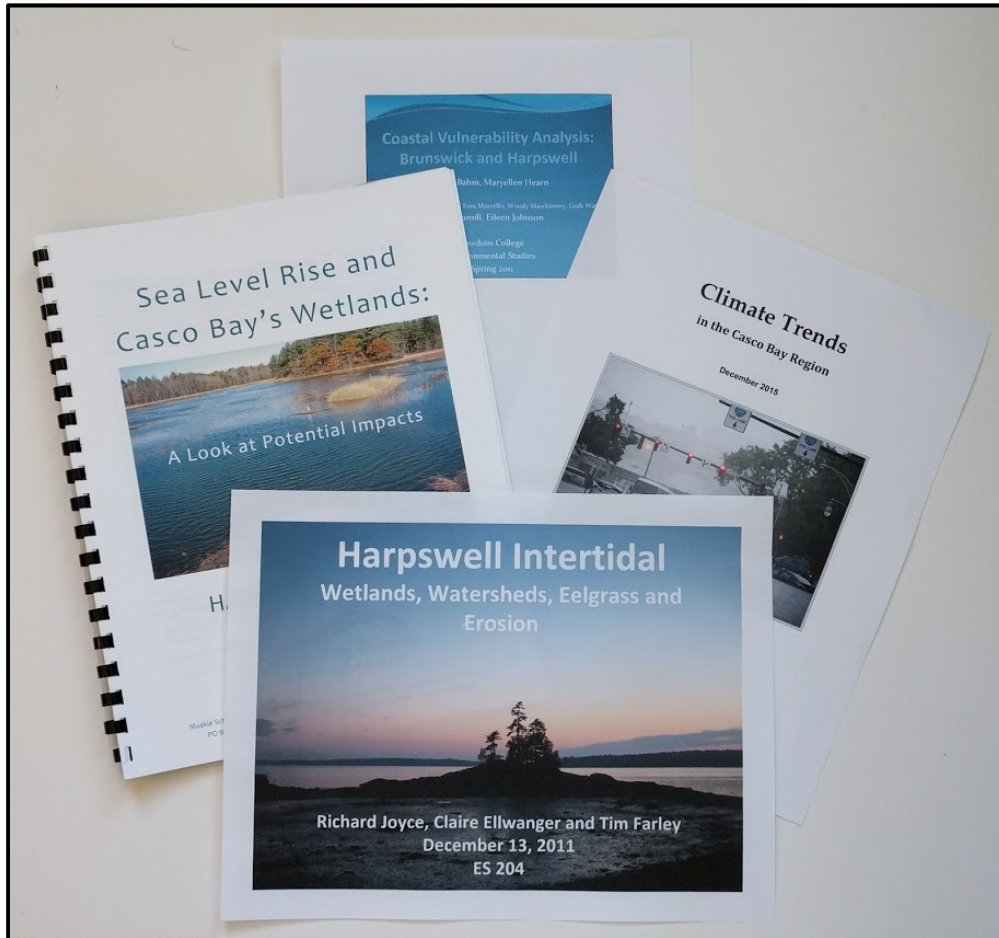


What Does This Mean for Harpswell?



- Topography
 - 216 miles of coastline
 - 20% of land within 250 feet of shore
- Effects:
 - Coastal marshes migrating inland
 - Increased impact on roads

Gathering Resources to Evaluate Changes



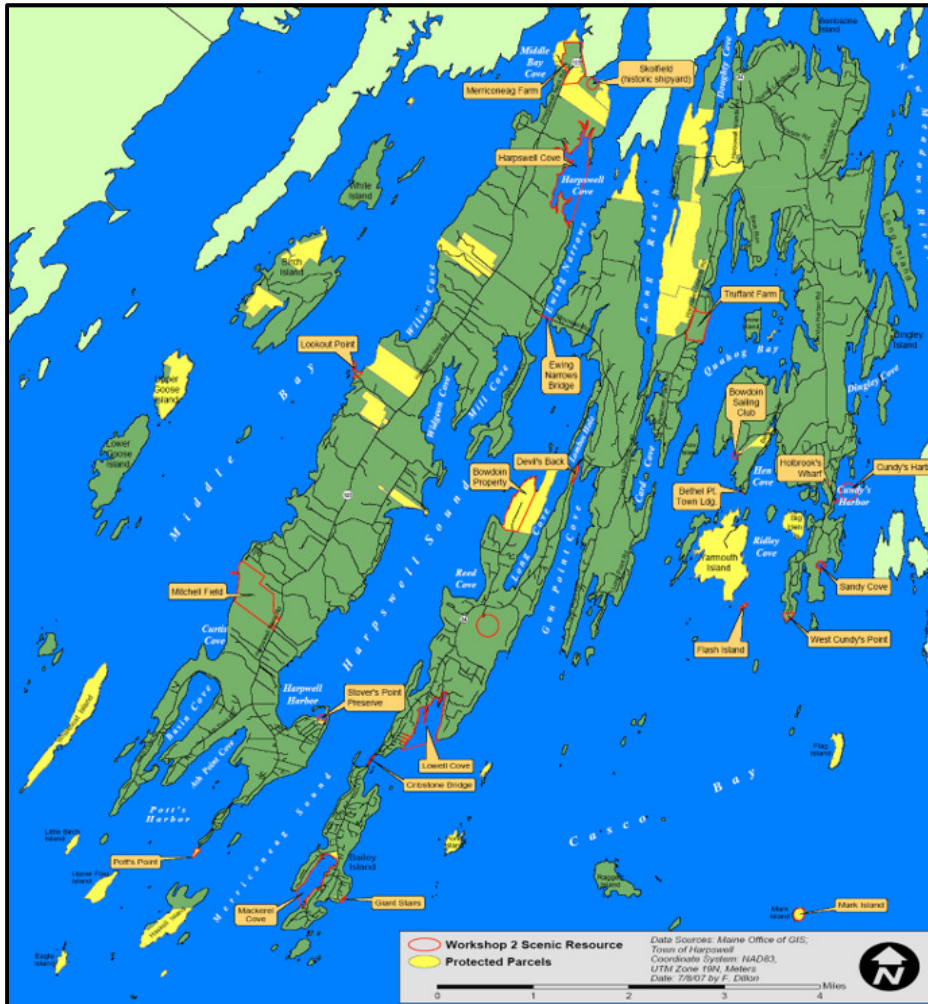
- **2011** - Harpswell Intertidal; wetlands, watersheds, eelgrass and erosion
- **2014** – Sea Level Rise and Casco Bay's Wetlands:
- **2015** – Citizen Introductory Workshop and Coastal Flooding Risk Assessment
- **2015** – Casco Bay Climate Trends
- **2015** - Assessment of Aquifer Vulnerability to Saltwater Intrusion

Began with Community Workshop



- Road Infrastructure
 - Conservation
 - The marine industry
 - Private property
-

Harpswell Roads



- **Roads:** 3 state roads are “the backbone” running length of the peninsulas
- 1 east-west state road connects all together (approx. 50 mi. state roads)
- **60 Town roads** (approx. 28 mi., longest 2.43 miles)
- **Private roads** Over 50% of roadways are private and responsibility for maintenance belongs to owners of the road.

What is the Impact on Harpswell Roads?

Private Roads	1 foot	2 feet	3.3 feet	6 feet
Harpswell Neck:				
High Head Road – Bridge		X	X	X
Stucarro Drive (Lower end)			X	X
Interhaven Road				X
Great Island:				
Little Crow Point (past intersection with Tuttle Road)	X	X	X	X
Tuttle Road/Long Point Road/Little Crow Point		X	X	X
Gun Point Road (near intersection with Long Point Road)			X	X
East Harpswell/Cundy's Harbor				
Wallace Shore Road (both before and after bridge)	X	X	X	X
Shore Road		X	X	X
Hopkins Island Road			X	X
Cundy's Point Road				X
Sailor's Way				X
Orr's and Bailey Island:				
Johnson Point Road - Orr's Island				X
-				
-				
-				

Public Roads	1 foot	2 feet	3.3 feet	6 feet
Harpswell Neck:				
Basin Point Road – Bridge	X	X	X	X
Lookout Point Road. (Lower End)	X	X	X	X
Windsor Lane (Stover's Point Area)	X	X	X	X
Route 123 – Bridge/Potts Point Road			X	X
Harpswell Neck Rd. Rte.123 – Skofield Cove, Near town Line			X	X
Great Island:				
Long Point Road – Near intersection with Little Crow Point	X	X	X	X
Long Point Road – Near intersection with Dirigo Lane			X	X
East Harpswell/Cundy's Harbor				
Dingley Island Road – Bridge		X	X	X
Bethel Point Road – Bridge		X	X	X
Oakhurst Island Road – Either side of bridge			X	X
Bethel Point Road – Culvert near Little Ponds Road				X
Orr's and Bailey Island:				
Lowell's Cove Rd. - Orr's Island	X	X	X	X
Abner Point Rd./Lube La. - Bailey Island		X	X	X
Garrison Cove Road (near Cribstone Bridge)			X	X
Bridge between Great & Orr's Islands, at Eagle Bluff - Harpswell Islands Rd (Rte.24)				X
Harpswell Islands Road (Rte.24) – Beginning and end of Cribstone Bridge				X

Advertisement - Resident Workshops



TUESDAY, JUNE 21ST, 6 p.m.
**PROMOTING
RESILIENCE TO
CHANGING WEATHER IN
HARPSWELL**

At the Harpswell Town Office, 263 Mountain Rd.

Experts from the Casco Bay Estuary Partnership and Cumberland County Soil and Water Conservation District will talk about private roads and how to plan!

- Learn about stream crossings & how to size culverts
- How to assess a road's condition & what to ask the contractor
- How to prepare a road maintenance plan

Presented by:  Harpswell Conservation Commission

**A Workshop
for Harpswell
Residents**

Historical data tells us that the tide in Portland Harbor has risen 0.6 ft. over the last century and the speed at which this is taking place is increasing.

Come hear which roads will be affected first and how you can better protect your roads & culverts in the face of rising tides

www.harpswell.maine.gov

WEDNESDAY, AUGUST 24TH

**PROMOTING RESILIENCE
TO CHANGING WEATHER
IN HARPSWELL**

Is Your Road Association Prepared?



The Conservation Commission presents
A Workshop for Residents Living on Private Roads

Wednesday, August 24th 6:00 p.m.

Local attorney, Hope Hilton explains how Maine statute has made it easier and less expensive to form a legal road association than it once was. Learn why it is an important first step to equitably handle the larger infrastructure expenses that will increase as rising tides and increased use impact roads.



The Harpswell Conservation Commission
<http://www.harpswell.maine.gov>



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**A Workshop for
Harpwell
Residents**

Historical data tells us that tides in Portland Harbor have risen 0.6 ft. over the last century; and the speed at which this is taking place is increasing!

The Conservation Commission has identified roads in town that will be affected as seas continue to rise. Formal road associations will be useful to help raise funds for mitigation.

Materials discussed this evening are available on the town's website under [Environmental, Changing Weather](#). They include:

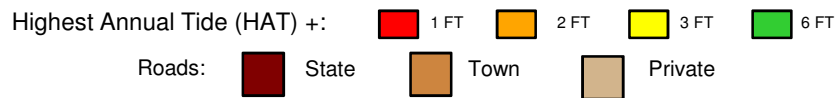
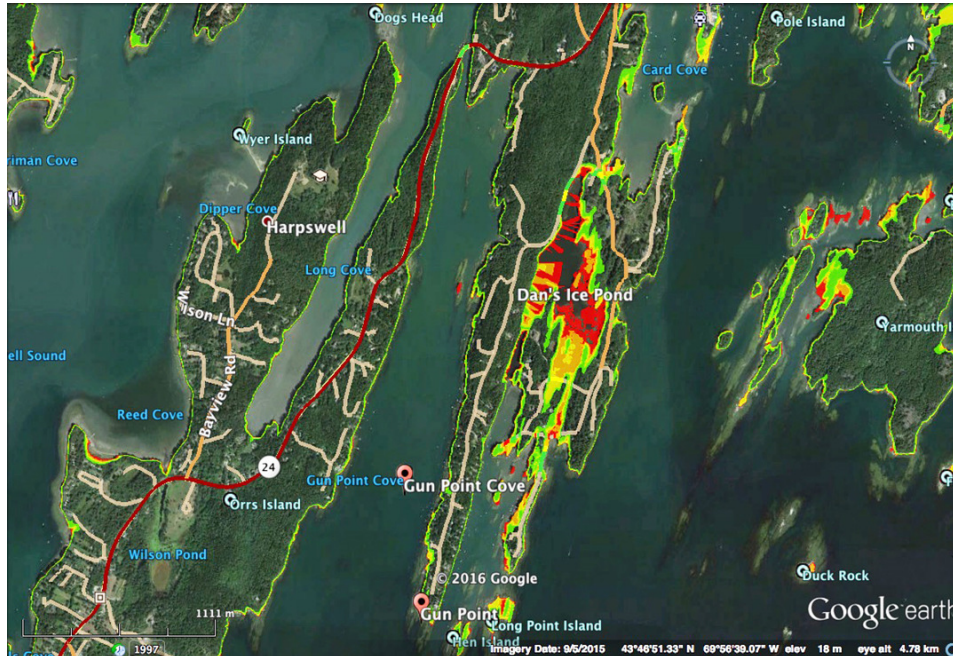
A Guide to Forming Road Associations
Appendix to Guide – Fillable forms
Chapter 23 – Private Way Statutes

Letter to Homeowners

Changing Weather: Your Neighborhood will be Affected

Dear Property Owner,

A public workshop was presented a year ago on sea level rise and how it might affect our town. An outcome of the workshop was The Coastal Flooding Risk Assessment Report that identified areas in town that will be affected as seas begin to rise. The map above is from the report and identifies your area as one likely to be affected. The key indicates road inundation that will occur at elevations above the highest annual tide (HAT).



Maps are prepared by the Harpswell Conservation Commission for general planning purposes only. The sea level rise and storm surge scenarios were developed by the Maine Geological Survey. The Google earth files (.kmz) of these scenarios will be made available for download. Harpswell data was compiled by the Midcoast Council of Government (MCOG) in June 2015.

The projections do not include the additional rise created by a king tide or storm surge.

The Conservation Commission is contacting you because you live on a private road that will be seriously affected by rising tides. Maintenance and emergency access on private roads are the responsibility of the property owners living along their road. Now is the time to begin planning as it may take many steps for you and your neighbors to be in a position to plan for upgrades that may be needed to keep your road passable in the coming years.

The Commission is offering two workshops this summer to look at changing weather's effect on public and private roads and stream crossings. Both will be held at the Harpswell Town Office.

Private Road Maintenance, Mitigating Rising Tides:

Tuesday, June 21st, 6:00 pm. Learn what to keep in mind when planning future road projects and how to budget.

The Advantages of an Official Road Association:

Wednesday, August 24th, 6:00 pm The Maine legislature has made it easier and less expensive than it was previously.

A larger version of this map and workshop details can be found at: www.harpswell.maine.gov Environment sidebar

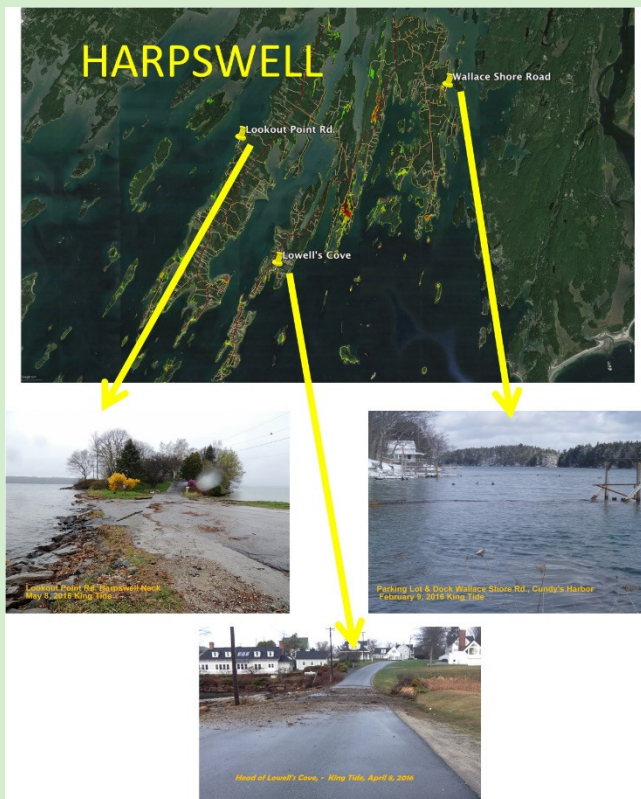
The Conservation Commission hopes you will join us.



Town of Harpswell P.O. Box 39
Harpswell, ME 04079

New Web Presence

Changing Weather and You



Why is Harpswell Vulnerable?

- The Gulf of Maine is warming faster than 99% of the world's oceans.
- The average number of 95° + days expected to increase 300% by mid century.
- We are experiencing an increase in storms and total amount of precipitation.
- Historical data tells us that the tides in Portland Harbor have risen 7 ½ inches since 1912.

Webpage 2 - Interactive Maps & More

What does this mean for Harpswell?

Maps: Areas in Harpswell that currently flood when storms at sea coincide with a spring or king tide. [Click here for maps](#) of inundated areas and to [enter your location](#) on the interactive map.

Reports: Harpswell's participatory studies pertaining to changing weather and its effects on our town.

Road Maintenance and Stream Crossings: We know over 50% of Harpswell roads are private. Maintenance and emergency access on private roads are the responsibility of the property owners living along their road. Helpful Guides to keep in mind when planning future road projects and how to engineer and budget in a cost effective manner.

Road Associations: The nuts and bolts of road associations. Maine statute has made it easier and less expensive than it once was. A legal road association is an important first step to equitably handle the larger infrastructure expenses that will increase as rising tides impact roads.

Monthly King Tide Events

Lookout Point Road



Monthly King Tide Events



Lowell's Cove Road

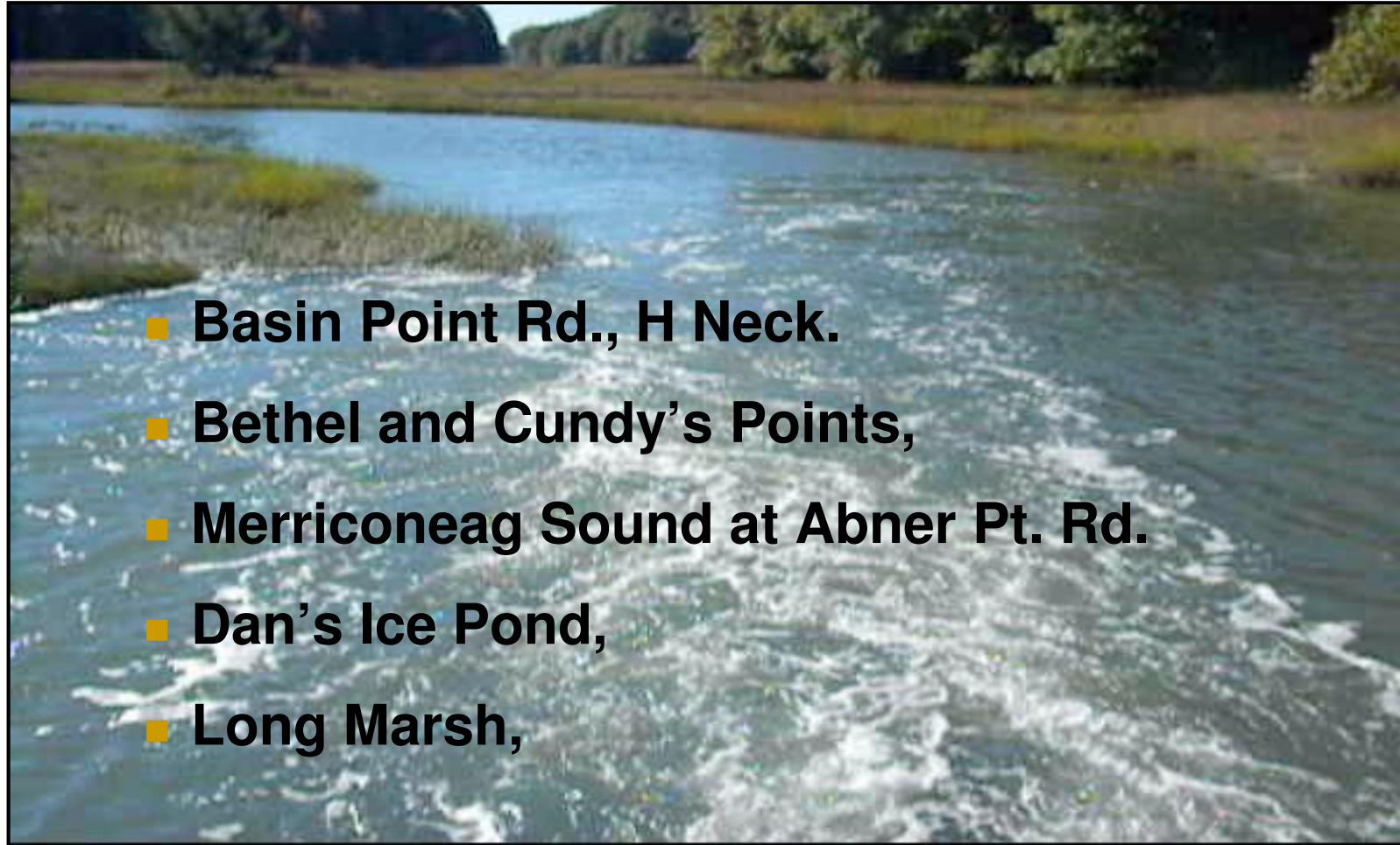


Monthly King Tide Event



Wallace Shore Road
01/11/2016

Planning – What is the Impact on Marshes?



Mitigation



High Head Road Association – December 2016

Basin Point Road



Only access to heavily travelled
2.46 mile road.

King Tide - 11/16/2016





Reports and maps at: www.harpswell.me.gov



Harpswell Conservation
Commission



Bowdoin
Coastal Studies Center

