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## Understanding shoreline landowner views on water quality best management practices and outreach

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# Understanding Shoreline Landowner Views on Water Quality Best Management Practices and Outreach

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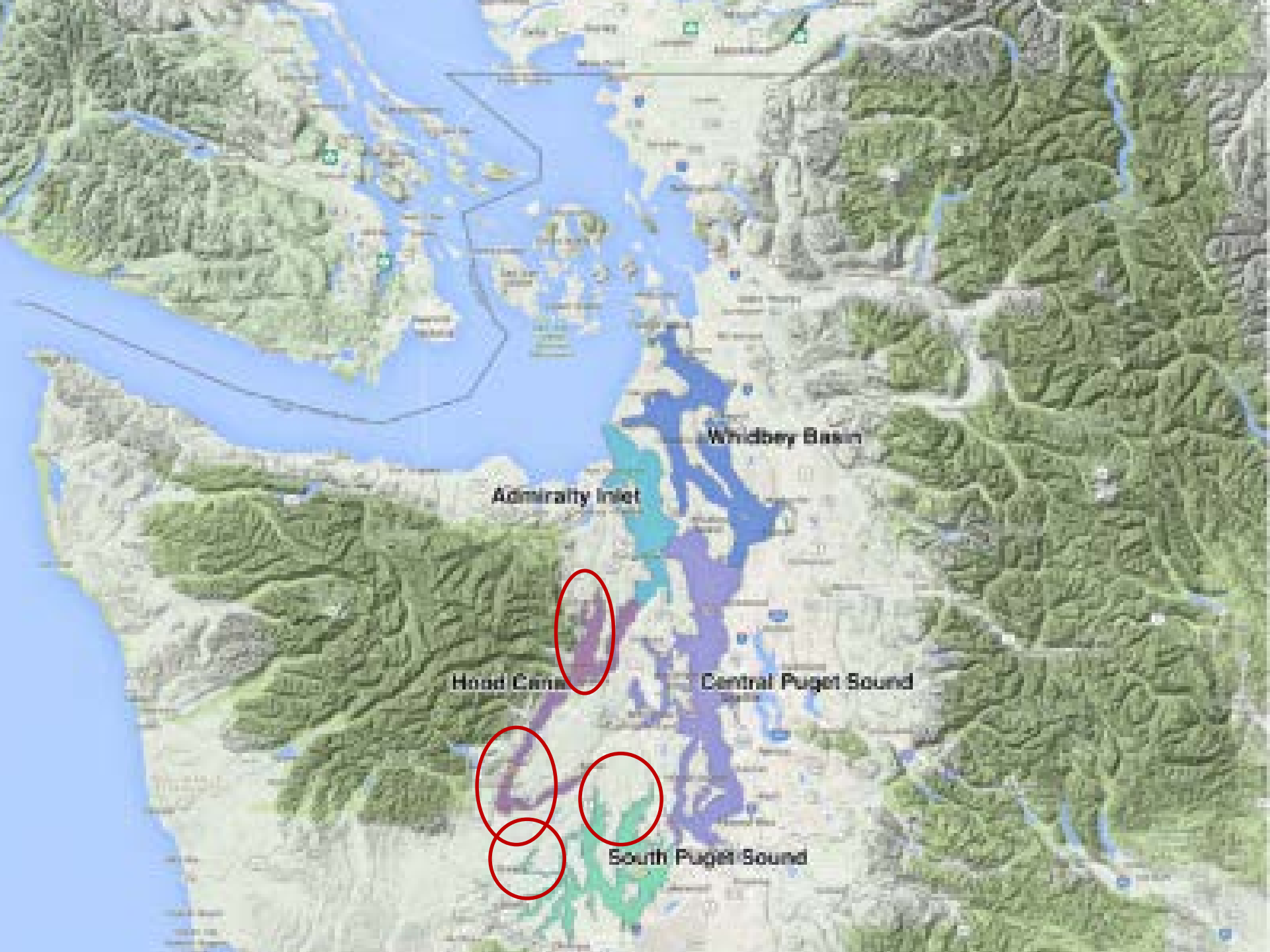
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# Audience Research

- Between 2009 and 2017, 7 different sets of audience research were conducted to determine how to increase the voluntary adoption of water quality BMPs on private land.
- Studies focused on shoreline landowners and were conducted in rural areas in the South Puget Sound and Hood Canal regions.



Whidbey Basin

Admiralty Inlet

Hood Canal

Central Puget Sound

South Puget Sound



# Audience Research

Year	Title	Location	Audience	Method
2009	Exploration of Barriers and Motivators to Adopting Recommended Practices for Septic and Livestock Management in the Oakland Bay Watershed	Oakland Bay	Homeowners with septic throughout watershed	158 Phone interviews
2012	Exploration of Shoreline Property Owner Knowledge and Awareness of Shoreline Management and Habitat Issues	Hood Canal	Shoreline property owners	15 focus group participants; 9 individual interviews
2014	Increasing Beneficial Vegetation on Hood Canal - Homeowner Knowledge, Awareness and Motivation for Planting Along Their Shoreline	Hood Canal	Shoreline property owners	16 participants in 2 focus groups
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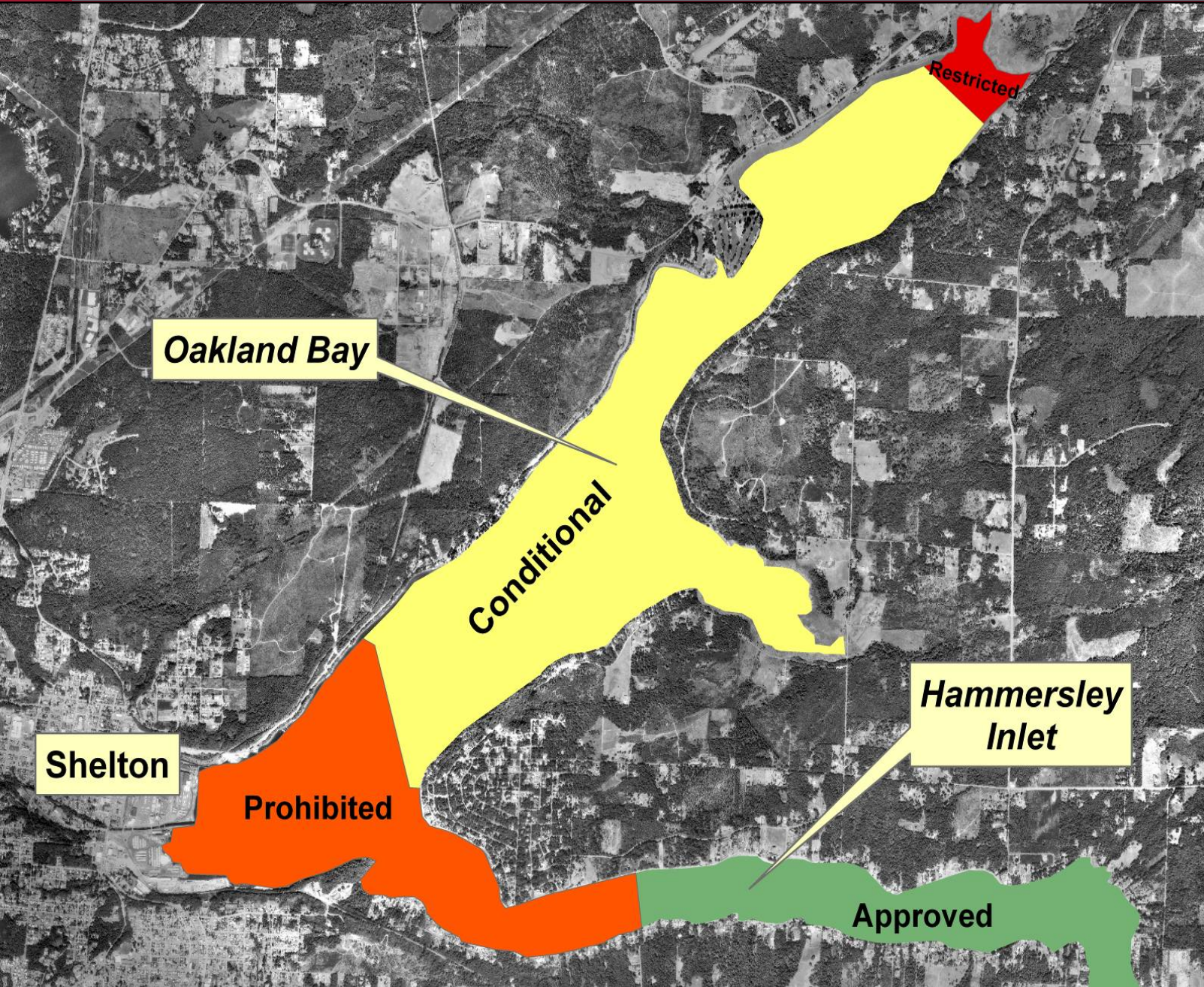


Year	Title	Location	Audience	Method
2017	Hood Canal Regional Pollution Identification and Correction Program: Outreach and Education Project 2016 - Audience Research Report	Hood Canal	Shoreline property owners	15 Phone interview
2017	Hood Canal Regional Pollution Identification and Correction Program Outreach and Education Project 2016 – Supplemental Evaluation of 2015 Site Visits	Hood Canal	Landowners who received a site visit one year prior	16 Phone interviews
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# Oakland Bay – 2008 Shellfish Harvest Status











# Oakland Bay Watershed BMPs

## **Recommended Practices for Septic system maintenance:**

- Inspected every 3 – 5 years, depending on the type of system
- Pumped when inspection indicates that it is needed
- Repaired as needed

## **Recommended Practices for Livestock manure management:**

In the pasture:

- Fence animals out of streams, ditches, ponds, wetlands and saltwater

In and around the barn and/or confinement area:

- Pick up manure at least twice a week
- Store in a covered manner
- Use as fertilizer or mulch, during appropriate times of year, away from water
- Haul off property



# Oakland Bay Audience Research

## Purpose:

- Identify the barriers and motivators for septic and livestock owners for BMP implementation
- Identify how to overcome barriers including what types of appeals, delivery methods and incentives would be most effective.





# Oakland Bay Audience Research

Septic BMPs – 158 phone interviews (10 min.)

Livestock BMPs – 32 phone interviews (10 min.)

## **Key Findings**

Participants were mostly not aware of the problems in Oakland Bay. They were interested in water quality, but did not make the connection of home practices to pollution in the Bay.

In both cases lack of concern regarding that connection was a greater issue than lack of knowledge or cost





# Oakland Bay – Barriers

- Didn't know the recommended schedule for septic inspection
- Low awareness of water quality problems in the Bay
- Did not connect water quality problems with their practices at home





# Oakland Bay – Motivators

Both groups were most motivated by statements that made the problem personal and local:

- Immediate health impact to their family, pets or livestock
- Impacts to local economy and property values
- Restrictions on recreational uses



# Incentives - Septic

- Discounts for maintenance
- Manuals
- Low interest loans
- List of service providers
- Free tank risers

**Septic Tank Pump & Service Report**

Residential       Motel       Mobile Home Park Space # \_\_\_\_\_  
 Community Drainfield       Youth Camp       Food Service Restaurant  
 RV Park       Campground       Other, Please Describe: \_\_\_\_\_

Property Owner Bob Simmons Phone # \_\_\_\_\_  
Business name (if applicable) \_\_\_\_\_  
Mailing address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
Site address 60 SE Home Port Ln City SHELTON  
Tax parcel # \_\_\_\_\_

**SEPTIC TANK**  
Tank Size: 1200 Gallons # of Compartments: 2 Tank Construction:  Manufactured  Home Made  
Tank Material:  Metal  Wood  Concrete  Fiberglass  Other \_\_\_\_\_  
Effluent Level:  High  Normal  Low Tank Condition:  Satisfactory  Needs Repair  
Tank Pumped:  Yes  No Were repairs made to the tank?  Yes  No  
If yes, please explain: \_\_\_\_\_

**BAFFLES**  
Inlet Baffle Condition:  Satisfactory  Needs Repair  
Outlet Baffle Condition:  Satisfactory  Needs Repair  
Center Baffle Condition:  Satisfactory  Needs Repair  Not Applicable  
Effluent Filter Cleaned?  Yes  No  Not Applicable  
Were repairs made to the baffles?  Yes  No  
If yes, please explain: \_\_\_\_\_

**PUMP OR SURGE TANK**  Yes  No If yes, tank size: 350 Gallons  
Were repairs made to the pump or surge tank?  Yes  No  
If yes, please explain: \_\_\_\_\_

**SEPTAGE**  
Depth of Floating Mat: 1st Compartment: 4" 2nd compartment: 0" Pump Tank: 0"  
Depth of Sludge: 1st Compartment: 6" 2nd compartment: 3" Pump Tank: 2"  
Total Gallons Pumped 1200 Disposal Facility:  Biorecycle  Other: \_\_\_\_\_  
General Comments: \_\_\_\_\_

Date Pumped Jan 19, 2009 Recommended Next Pumping Date 3-5 Years  
Certified Pumper Signature Jim Bont Company Name AAA Septic

Findings and determinations of this inspection reflect conditions as they existed on the day the septic tank was pumped. No claim is made by this company, either expressed or implied, concerning success or failure of the septic system.





# Incentives - Livestock

- Manuals/factsheets
- Volunteer or free assistance
- Contact information for haulers/composters
- Free manure covers
- Equipment loan





# Contact Preferences

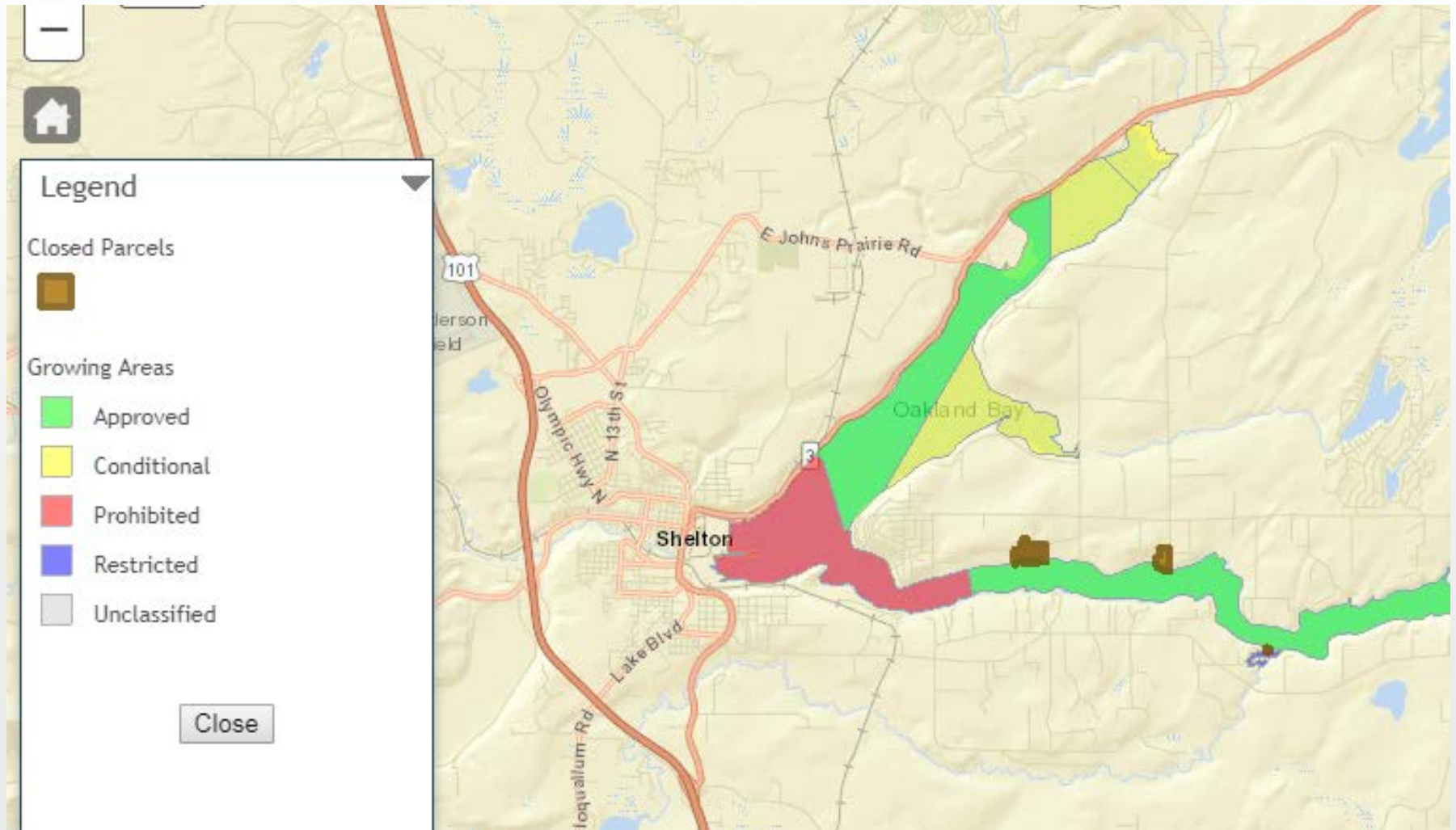
## Direct Mail

**Least interested in having government employees come onto their property or calling their home**



# Results

**Upgrade of 720 acres of shellfish beds from conditionally approved to approved status in 2012.**







# Rocky Bay, Vaughn Bay, and Burley Lagoon



Target Audience: Residents within 250 feet of marine shorelines and their upland tributaries



## **Priority BMPs**

1. Have your septic system professionally inspected at least every 3 years, and make repairs as needed
2. Pick up, bag and dispose of dog waste in garbage
3. Contain, collect, and cover livestock waste
4. Manage water runoff and wet areas
5. Install plantings to absorb and filter water

## **Target Behavior**

Agree to a site visit with a water or farm resources advisor.



## Purpose

- 1) Understand target audience barriers, benefits, and motivators for agreeing to a site visit
- 2) Obtain audience reactions to various ways of describing and communicating about a potential site visit and services we could provide.





## **Methodology**

In-depth telephone interviews were conducted with 32 people who own property within 250 feet of the marine shoreline or its upland tributaries:

11 Marine and 11 upland property owners

10 Livestock owners

Participants were asked a series of open-ended questions.

During the call, they were also sent an email with program ideas and options which they were asked to react and rank in order of preference.



## Summary of Key Findings

There is strong support, with some caveats, for WSU Extension and local conservation districts to offer educational site visits.

The majority of respondents – 24 out of 32 – were very or somewhat interested in having a site visit.

Property owners most likely to request a site visit are those who:

- Have storm water drainage concerns due to nearby development, something that their neighbors have done that impacts their property, or concerns about storm water runoff from roads
- Are concerned about area waters and want education and advice on the latest recommendations



# Barriers

- **Cost.** Although the visit is free, the recommendations could be costly and something they can't afford to address promptly.
- **Fear of regulatory consequences.** People want to be reassured that the advice they get won't become mandatory or incur fines, and they won't be forced to act before they can balance their budget.
- **Logistics and sponsorship.** Who is the sponsoring agency? Who is the "expert" and what are their qualifications? How long will the visit take?
- **Perceive they are compliant or don't need advice.** Some legitimately don't have mud, storm water or drainage issues, while others don't perceive that their practices are a problem. Several who are in compliance with all of the BMPs said they don't want to waste your time (or theirs).



# Motivators

1. Getting free, confidential, customized site-specific recommendations
2. Concerns about nearby waters – Do their part to improve and protect Key Peninsula and Burley-area waters
3. Health reasons – if my septic system fails it can make my family, pets and even my neighbors sick
4. Learning about financial incentives to help implement recommended practices on my property

**Most popular incentives** – rebates for septic inspection and pumping – were the most popular across all three groups: marine, upland and livestock owners.





# Contact Preferences

- Direct Mail

- Least interested in having government employees come onto their property or calling their home





# Conclusions

**Shoreline landowners have a deep connection to their place.**

**Because of this, a nexus between the land they value, their actions, and water quality can be key in securing behavior changes.**





# Conclusions

Key elements for effective messaging included:

- Connecting behavior to a local water quality problem.
- Focusing on personal and family health.
- Keeping information local and specific.
- Presenting the message in a clearly understood and positive manner.
- Providing a viable and achievable solution to a real problem.



# Conclusions

Key elements for effective messaging included:

- Using a credible and trusted source to deliver the message.
- Offering discounted or free goods and services that relate to a BMP as an incentive, such as discounted septic inspection or free plants.
- Selecting direct mail as the initial contact method, accompanied with supporting materials.

(Simmons, et al. 2018, submitted)





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**Gilmore Research Group**

**Squaxin Island Tribe**

**Oakland Bay Clean Water Advisory Committee**

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# Comparison of Views on Planting BMPs

	<b>Hood Canal</b>	<b>Key Peninsula</b>
<b>Views on planting BMP</b>	<b>New and surprising</b> <b>Want help with erosion</b> <b>Want to preserve way of life</b>	<b>New and surprising</b> <b>Concerned about storm water runoff</b>
<b>Barriers to performing planting BMP</b>	<b>Self-efficacy: Have tried and failed</b> <b>Lack of knowledge: Didn't know that planting along bulkhead could help fish and wildlife</b>	<b>Lack of knowledge</b>
<b>Motivators to performing BMPs</b>	<b>Erosion control</b> <b>Improve fish and wildlife habitat</b> <b>Knowing what to plant in Hood Canal "microclimate"</b>	<b>Knowing more about planting to absorb and filter runoff</b>





# Comparison of Views on Septic BMPs

	Oakland Bay	Hood Canal	Key Peninsula
Study participants	Noncompliant households	Mix of compliant & noncompliant	Mix of compliant & noncompliant
Barriers to performing septic BMP	<p>Didn't know the recommended schedule</p> <p>Low awareness of water quality problems</p> <p>Did not connect water quality problems with their practices at home</p>	<p>Make the connection between septic failure and fecal coliform in Hood Canal</p>	<p>High awareness of beach closures but don't connect them to practices at home</p> <p>Hearing conflicting recommendations</p>
Motivators to performing BMPs	<p>Making the impact personal and local:</p> <p>Failing septic could</p> <ol style="list-style-type: none"> <li>1. Cause recreation and shellfish closures</li> <li>2. Impact family health and local economy/jobs</li> <li>3. Lower property values</li> </ol>	<p>Making the impact specific to Hood Canal:</p> <p>Failing septic could</p> <ol style="list-style-type: none"> <li>1. Impact family's health</li> <li>2. Lower property value</li> </ol>	<p>Making the impact specific to local bay:</p> <p>Failing septic could</p> <ol style="list-style-type: none"> <li>1. Impact family's health</li> <li>2. Lower property value</li> </ol>