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# Grays Harbor Vessel Traffic Risk Assessment

February 22, 2018

Spills Prevention and Preparedness



# Agenda

- Introductions
- Grays Harbor Vessel Traffic Risk Assessment overview
- Hazard Identification
  - Hazard Identification workshops
  - Response Capability Assessment
  - Commercial Fishing, Tribal Fishing, and Recreational Vessel workshop
- Public participation opportunities
- Next steps



# Why Are We Conducting a Study?

- Ecology is funded in the 2017-2019 biennium to conduct a vessel traffic risk assessment (VTRA) for Grays Harbor
- This study builds on previous legislature-directed work
  - Marine and Rail Oil Transportation Study, 2015
  - Salish Sea Oil Spill Prevention Workshop, 2016
  - Update to Puget Sound VTRA, 2017
  - Columbia River Vessel Traffic Evaluation and Safety Assessment, 2017
- Opportunity to:
  - Document current baseline of oil spill prevention and preparedness in Grays Harbor
  - Develop regionally specific recommendations for improvement



# Grays Harbor VTRA - Goals

- Assess baseline and changing oil spill risks
  - Identify measures that could help reduce the risks of oil spills
- Assess oil spill response preparedness
  - Identify baseline response capability



# GH VTRA Study Approach

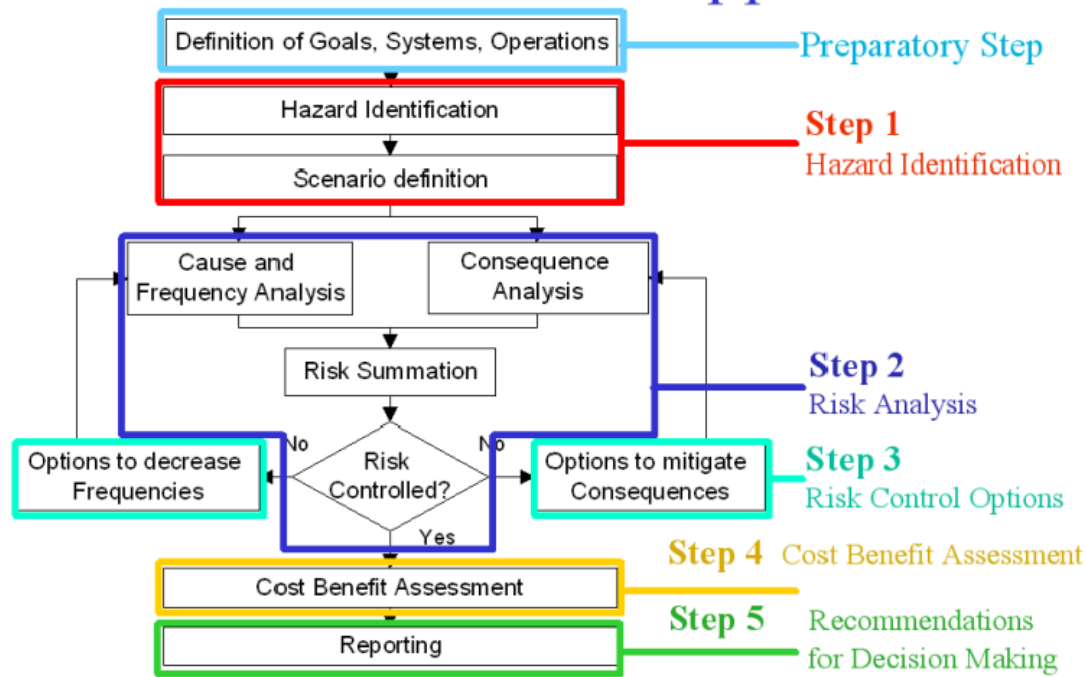
- Use a standard framework
  - International Maritime Organization (IMO) Formal Safety Assessment process
- Conduct a collaborative, deliberative assessment
  - Engage the Grays Harbor community
  - Deliverables and decision points at each step
- Focus on regionally specific improvements



# International Maritime Organization (IMO) Formal Safety Assessment

- Reference: [IMO FSA](#)
- 5-step process

## FSA - a risk based approach



# IMO Formal Safety Assessment Steps

- Preparatory Step
  - Definition of Goals, Systems and Operations
- Hazard Identification
- Risk Analysis
- Risk Control Options
- Cost-Benefit Analysis
- Recommendations for Decision Making





# Focus: Step 1, Hazard Identification

- Ecology's initial focus is on Step 1, Hazard Identification
- Accomplishing Hazard Identification through facilitated workshops
- Additional workshops will look at spill response capability, and oil spill prevention for smaller vessels
- Decision point in the spring of 2018 on the need to continue the Formal Safety Assessment
  - Process can stop after Hazard Identification
  - Decision based on the results of the Hazard Identification, and direction, funding and priorities from the 2018 legislative session



# Workshop Schedule

Date	Event
January, 2018	Hazard Identification Workshop 1
February, 2018	Hazard Identification Workshop 2
April, 2018	Response Capability Workshop
April, 2018	Commercial Fishing, Tribal Fishing, and Recreational Vessel Oil Spill Prevention and Preparedness Workshop
June, 2018	Hazard Identification and Response Capability Preliminary Report



# Hazard Identification Workshop 1

- Scope
  - Identify local factors associated with hazards to commercial vessel operations in Grays Harbor that could result in an oil spill
- Method
  - Facilitate collaborative brainstorming with workshop participants
- Outcome
  - List of local factors



# Hazard Identification Workshops

## Invited Participants

- Brusco Tug
- Confederated Tribes of the Chehalis Reservation
- City of Hoquiam
- Contanda
- General Steamship
- Grays Harbor Pilots
- Hoh Indian Tribe
- Jones Stevedoring
- Makah Tribe
- Marine Spill Response Corporation
- National Response Corporation
- NOAA
  - Office of Coast Survey
  - Scientific Support Coordinator
  - Olympic Coast National Marine Sanctuary
- Ocean Companies
- Port of Grays Harbor
- Quileute Tribe
- Quinault Indian Nation
- REG Grays Harbor
- Shoalwater Bay Indian Tribe



# Hazard Identification Workshops

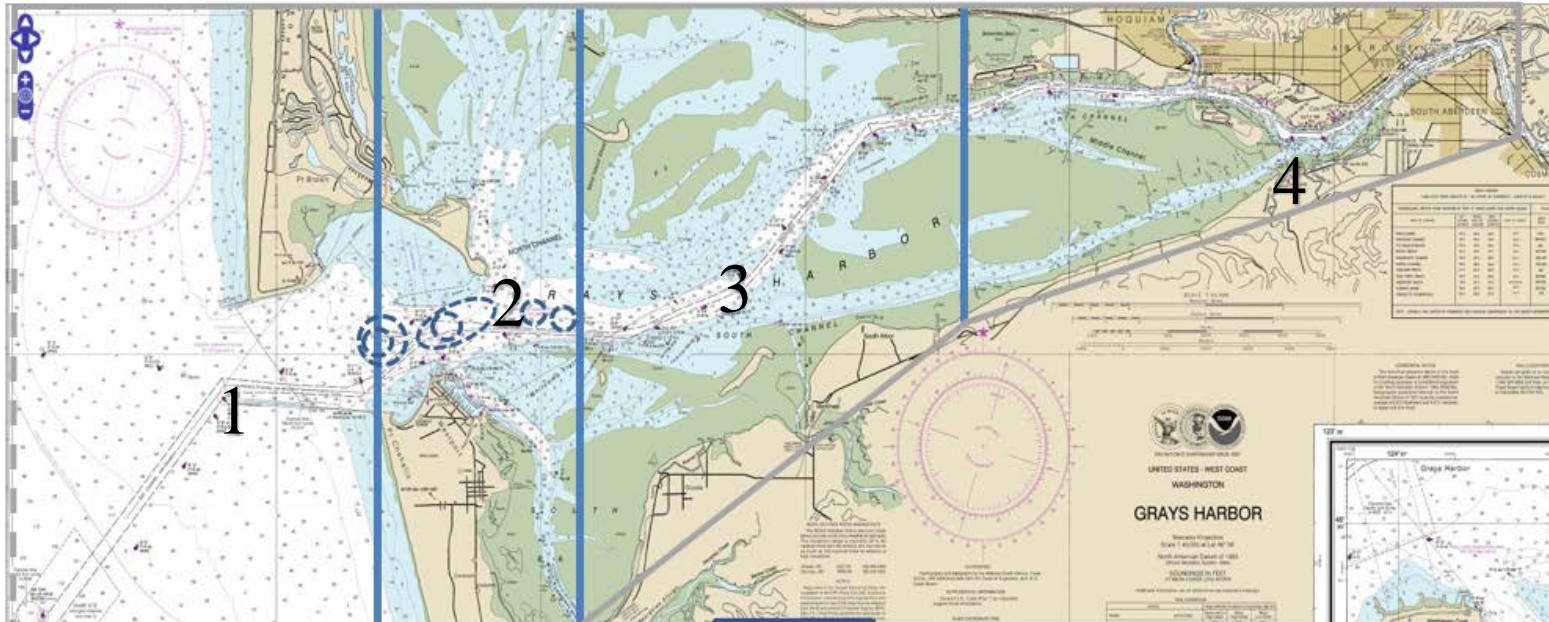
## Invited Participants

- The Nature Conservancy
- US Army Corps of Engineers
- US Coast Guard
  - MSU Portland
  - Station Grays Harbor
- Washington Department of Natural Resources
- Washington Dungeness Crab Fishing Association
- Washington State Maritime Cooperative
- Washington Trollers Association



# Hazard Identification Waterway Areas

## Waterway Areas



Discussion of offshore vessel traffic management may extend westward of buoy "GH"

- Hazard Identification focuses on the risk of spills throughout the commercially navigable waterway of Grays Harbor
- We divided the waterway into four areas to facilitate discussions
- Workshop participants systematically discussed the risks that could lead to an oil spill from a commercial vessel in each of the waterway areas

# Hazard Identification Template Example

## Template 1: Area 1, Underway, Collision

**Area 1: Bar Channel and Entrance Channel to Point Chehalis Reach (inside buoy 11)**

**Vessel Activity: Underway**

**Incident Category: Collision**

### **How could an incident occur (examples)?**

- Contact with a fishing net or crab pot
- Difficulty crossing the bar
- Failure to maintain position in channel
- Failure to negotiate turn to entrance channel
- Failure to take action to avoid another vessel
- Incident related to vessels offshore, including areas westward of buoy “GH”

### **Possible immediate causes/contributing factors (examples)**

- Environmental
- Equipment failure
  - Resulting in full or partial loss of electrical power
  - Resulting in full or partial loss of propulsion
  - Resulting in loss of navigational equipment
  - Resulting in loss of steering
- Human error
- Organization/maintenance failure
- Other

### **Local factors**

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- 
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# Hazard Identification Workshop 2

- Scope
  - Review local factors identified in Workshop 1
  - Describe safeguards and high-level recommendations related to the local risk factors
- Method
  - Facilitate collaborative brainstorming with workshop participants
- Outcome
  - For each local factor identified in Workshop 1 - a description of the safeguards intended to prevent the hazard, and any high-level recommendations to reduce the likelihood or consequence of the hazards
  - A list of any identified changes to safeguards or recommendations, based on current or potential future increases in vessel traffic





# Response Capability Assessment

## Study Goals

- Characterize the response systems capability (skimming) not the impact of the spill to the environment
- Use the Response Options Calculator – a modeling tool developed by NOAA
- Model parameters to account for risk scenarios identified by the workgroup in Hazard ID workshop 1 & 2
- Considerations include location, time of the spill, type of oil, season, wind speed, and spill volume - these impact the maximum capacity of response resources to recover oil
- Identify an estimated maximum potential response capacity for on-water recovery

## Response Capability Workshop structure

- Propose parameters of response equipment assessment
- Discuss and agree on study scope and purpose of resulting recommendations



# Commercial, Tribal Fishing and Recreational Vessel Workshop

- Planning a workshop for late April, 2018
- Intended audience is commercial fishermen, tribal fishermen, and recreational vessel operators
- Goal is to review historic oil spill incidents, and identify potential practices/solutions that could reduce oil spills



# Public Participation and Comment Opportunities

- Review our progress
  - Information about the GHVTRA study will be posted on the Ecology webpage throughout the study process
- Attend Grays Harbor Safety Meetings
  - Meetings are public and will include regular progress updates about the study
- Review and comment on the draft report
  - Report will be posted at <https://ecology.wa.gov/Spills-Cleanup/Spills/Oil-spill-prevention/Oil-transportation-in-Washington>
  - Public comments will be taken for 30 days following posting
  - Ecology will consider all comments submitted



# Next steps

- Complete Hazard Identification
- Conduct Response Capability Assessment
- Hold Commercial Fishing, Tribal Fishing, and Recreational Vessel Spill Prevention and Preparedness workshop
- Draft report with results from all four workshops
  - Post for public comment
  - Publish final report
- Determine whether to continue the Formal Safety Assessment process



# Questions?

- Contact Brian Kirk ([brian.kirk@ecy.wa.gov](mailto:brian.kirk@ecy.wa.gov)) with any questions about the Grays Harbor VTRA or the Hazard Identification process
- Contact Sonja Larson ([sonja.Larson@ecy.wa.gov](mailto:sonja.Larson@ecy.wa.gov)) with any questions about the Response Capability Assessment

