



Revised Analysis Plan

Rescue Towing Analysis Model

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July 13th, 2022

Today's agenda

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Introduction

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Model and Analysis Review

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Summary of Feedback

4

Questions and Comments

Materials for Today's Event



Combined Analysis Plan (Revised)



Model Description (Revised)



Model Analysis Projects



Evaluation of Tug Escorts

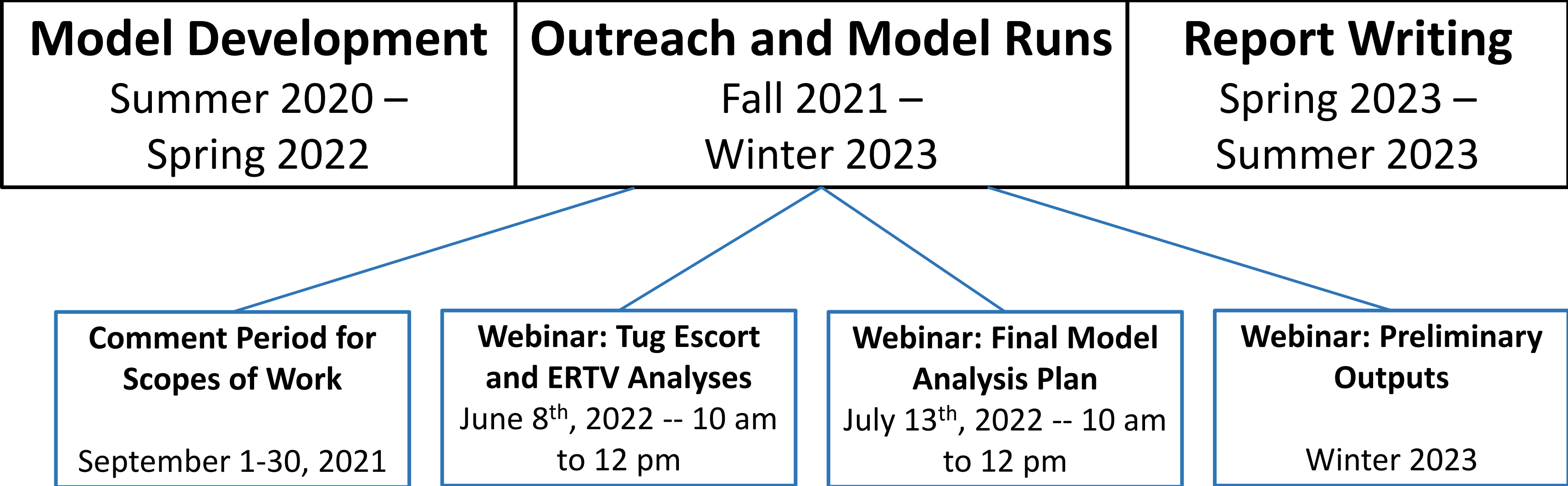
“To inform rule making, the Board of Pilotage Commissioners must conduct an analysis of tug escorts using the model developed by the Department of Ecology”

Evaluation of a Response Tug

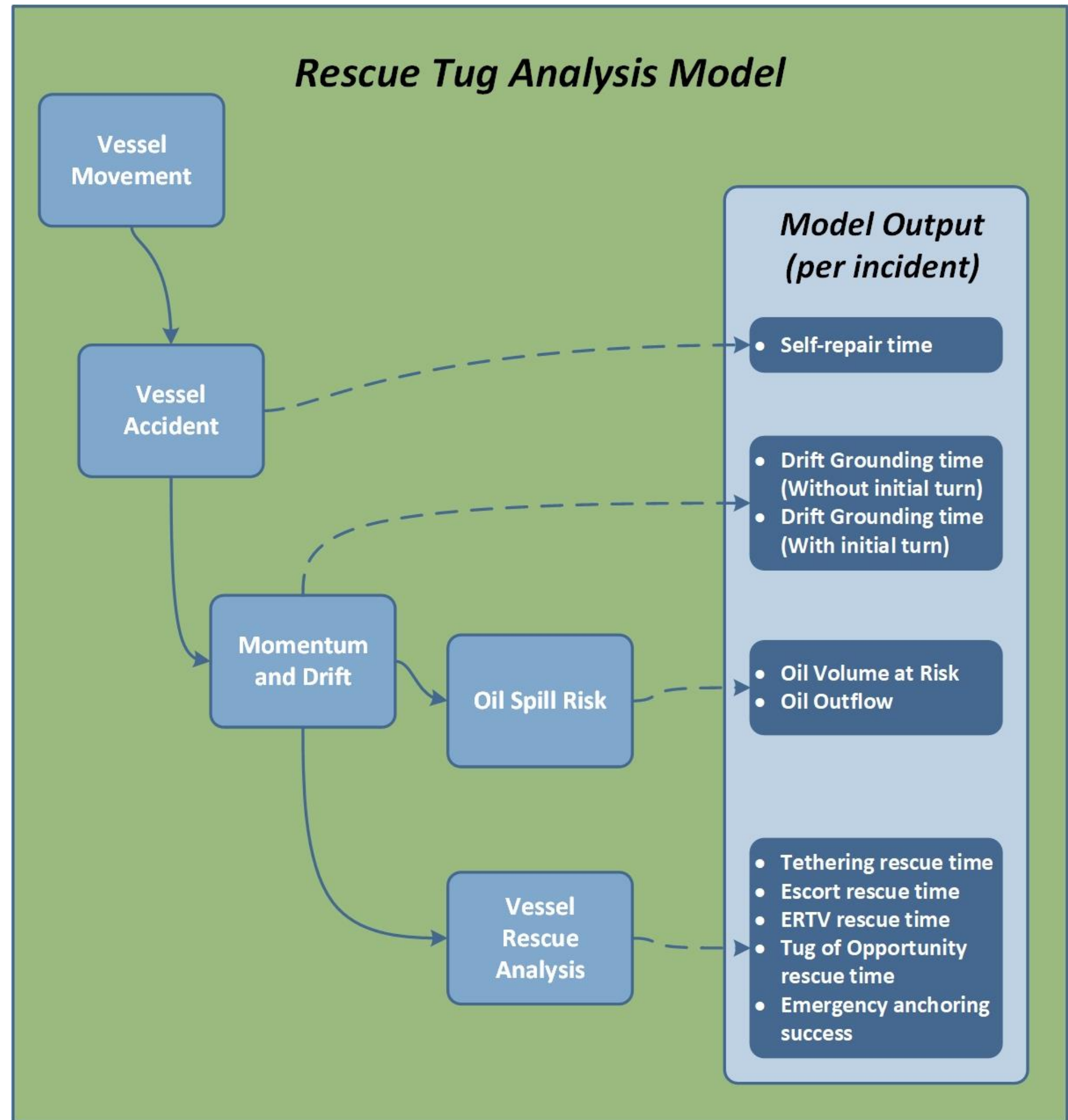
“Quantitatively assess whether an emergency response towing vessel serving Haro Strait, Boundary Pass, Rosario Strait, and connected navigable waterways will reduce oil spill risk”



Outreach and Consultation Timeline



Model and Analysis Review



Independent Evaluation

With Initial Turn Included

Ship Actions

- Self-repair time
- Drift to ground time
- Emergency anchoring time

Tug Interventions

- ERTV response time
- Escort response time
- Tug of opportunity response time

Risk Metrics

- Drift grounding event
- Oil volume at risk
- Oil outflow

Without Initial Turn Included

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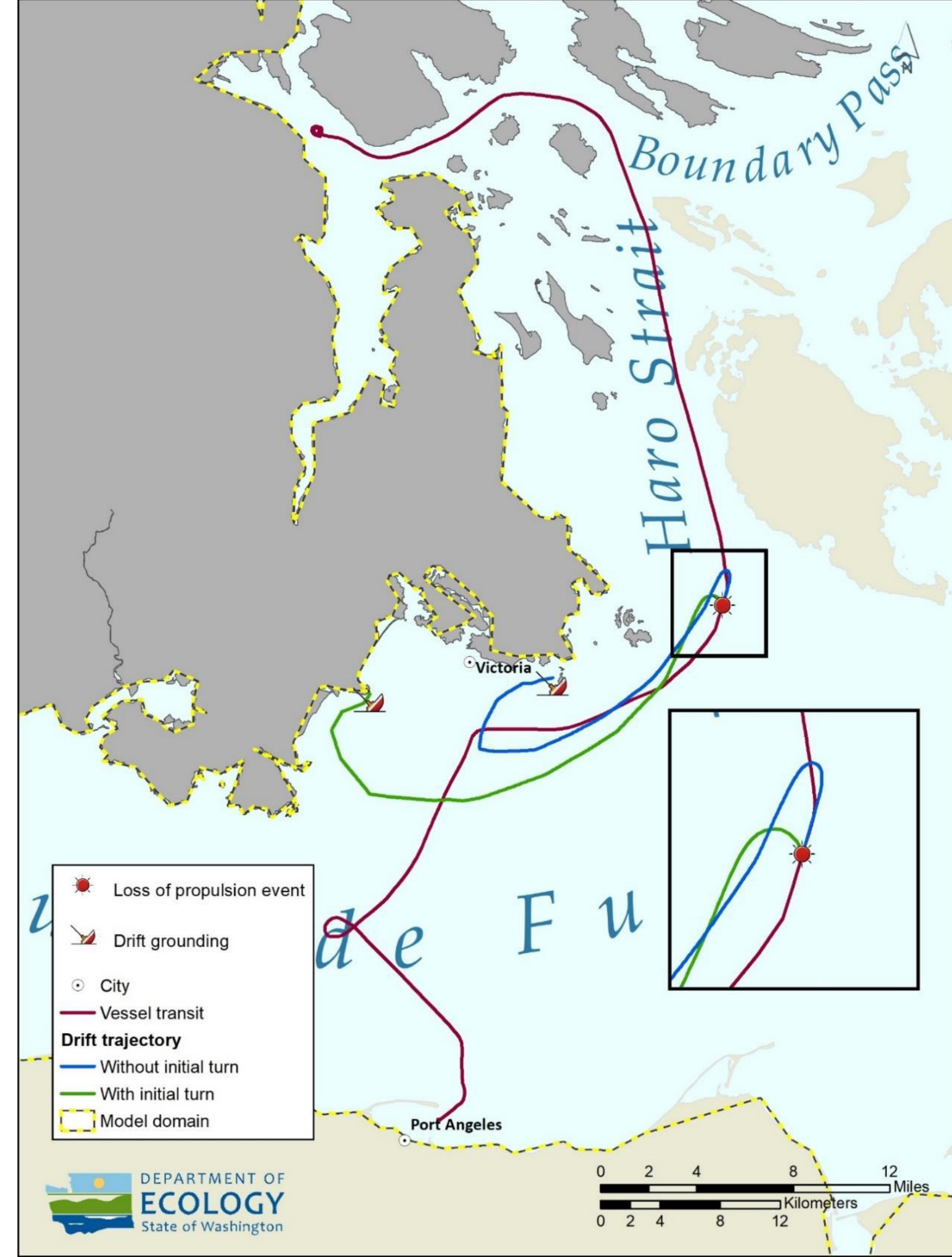
Independent Evaluation

Two Drift Paths Per LOP

- One with initial turn (green)
- One without initial turn (blue)

All Actions Calculated for Each Drift Path

- Drift to ground time
- Emergency anchoring
- ERTV response time
- Escort response time
- Tug of opportunity response time



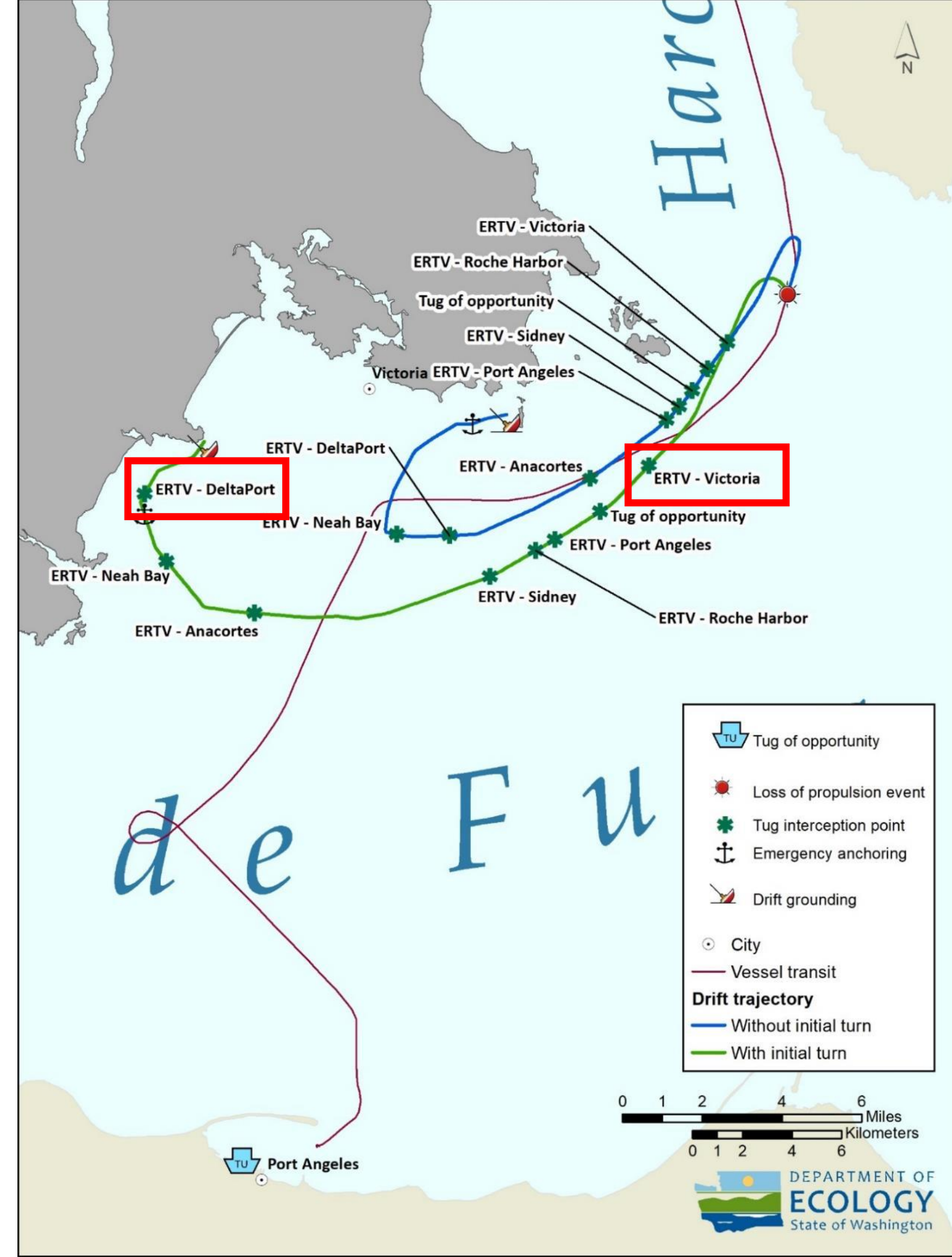
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Independent Evaluation

Model Output	Without Initial Turn	With Initial Turn
Time to drift grounding	489 minutes	402 minutes
Time to rescue (Victoria ERTV)	102 minutes	93 minutes
Time to rescue (Deltaport ERTV)	315 minutes	358 minutes
Time to rescue (Neah Bay ERTV)	351 minutes	322 minutes
Time to rescue (Closest Tug of Op)	152 minutes	130 minutes
Self Repair time	37 minutes	37 minutes
Emergency Anchoring Time	470 minutes	347 minutes

Summary of Feedback



- **Tug Response Parameters**
- **ERTV Locations**

Tug Response Parameters

Response Parameter	Current Approach
Notification Time	Immediate
ERTV Mobilization Time	20 Minutes
Assist/Escort Tug Mobilization Time	Immediate
Tug Average Response Speed	10 knots
Time to Connect	15 minutes
Time to Control	15 minutes



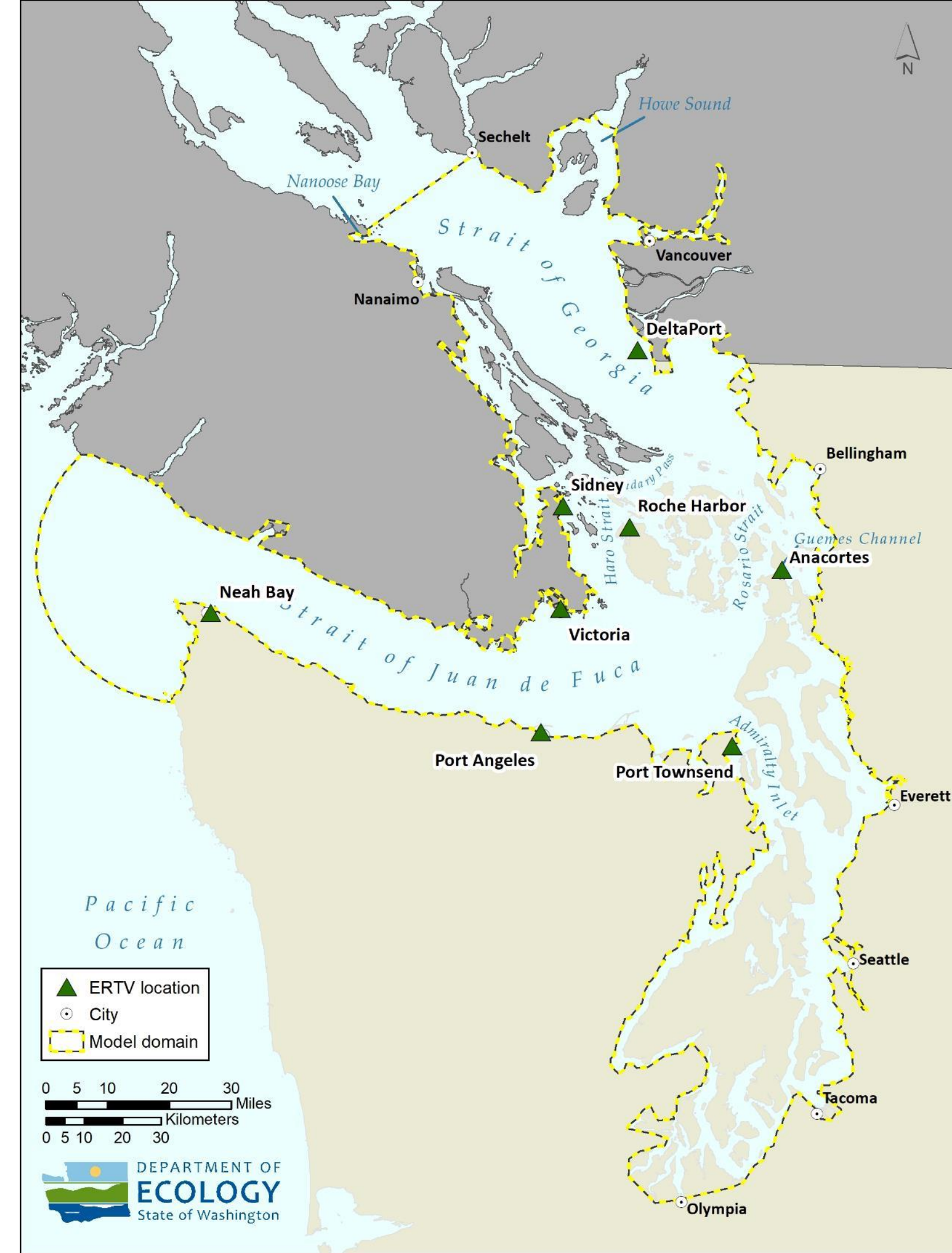
Update to ERTV Scenarios

Same Tug Escort Scenarios

- Pre-2020 requirements
- Current requirements
- Escorts required throughout study area

ERTV Locations

- Port Angeles, WA
- Victoria, BC
- Anacortes, WA
- Roche Harbor, WA
- Sidney, BC
- Deltaport, BC
- **Port Townsend, WA**



Other Topics

**Potential future Offshore Supply Vessel (OSV)
in Beecher Bay**

**Scenario 3 – Escort tugs added to all geographic
zones**



Modification to TMEP Scenario

TMEP Scenario

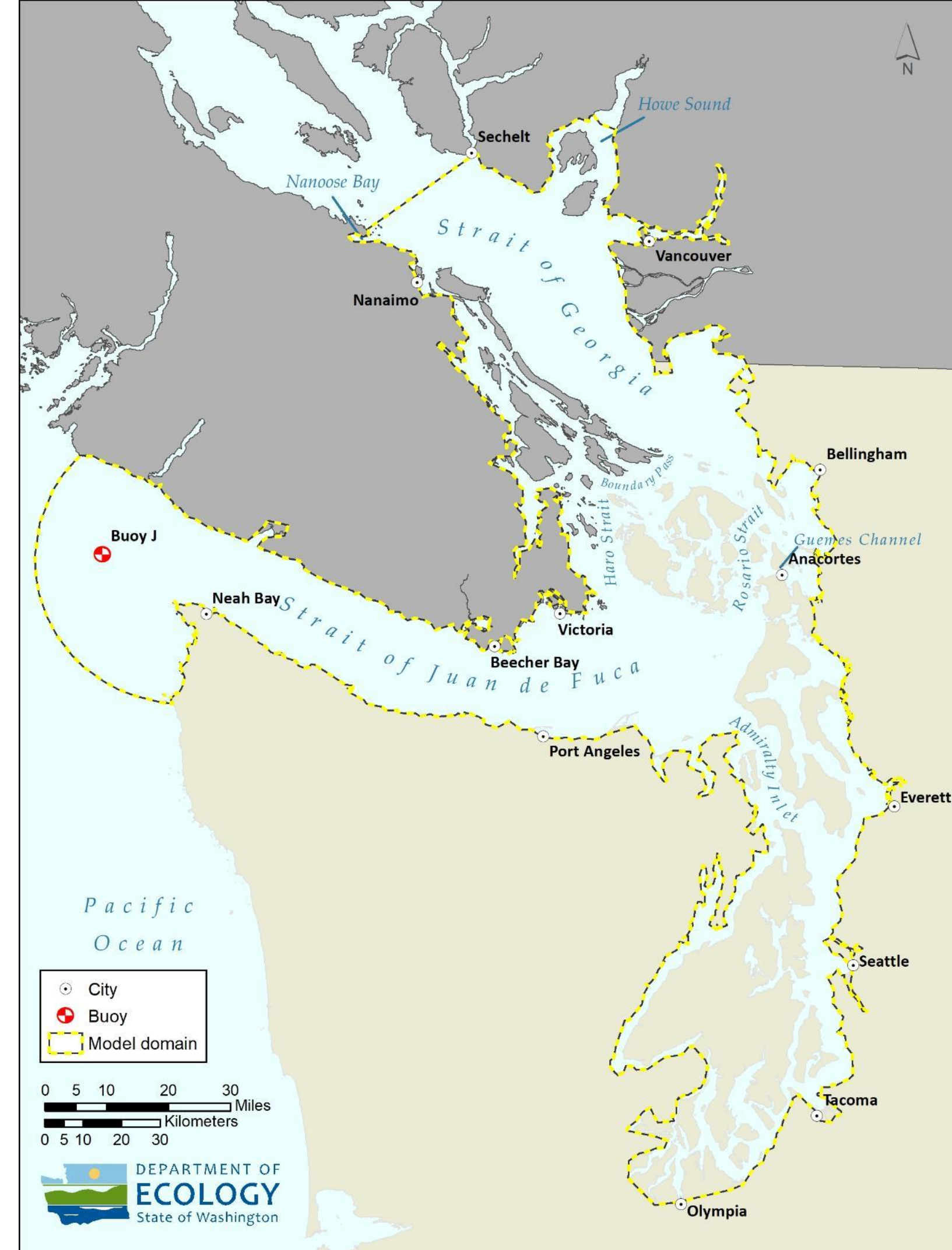
- A traffic simulation to evaluate escorts associated with projected round-trip tank ship transits from the J-Buoy at the entrance to the Strait of Juan de Fuca to Westridge Terminal

Offshore Supply Vessel Stationed in Beecher Bay

- Potential future resource, tasked with some escort duties
- Could respond to vessel emergencies

Modification to Analysis Plan

- Modified to include “a dedicated Offshore Supply Vessel (OSV) capable of performing rescue towing...in Beecher Bay, BC”



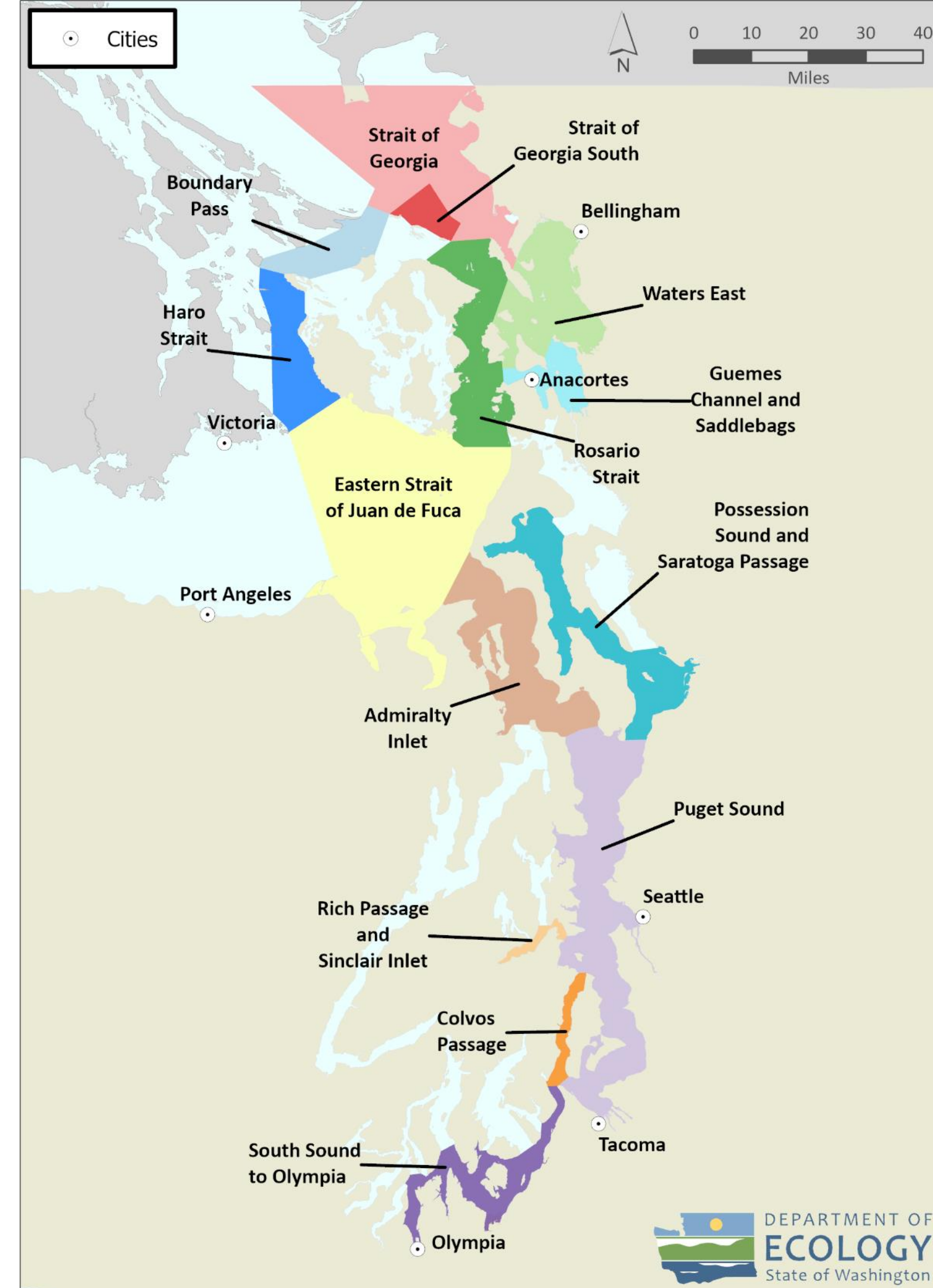
Tug Escort Scenarios

Scenario 1: Pre-2020 requirements

Scenario 2: Current requirements

Scenario 3: Escorts Required Throughout Study Area

- Allows us to determine which area might have a higher potential benefit from requiring tug escorts
- Approach allows us to avoid prejudging which areas might be at higher risk



Next Steps and Upcoming events



Initial Model Runs

- July - August 2022

Webinar: Preliminary Outputs

- Winter 2023

Report Due to Legislature, September 2023

Today's discussion topics

- Requests for clarification or additional information
- Feedback on model description or other documentation
- Feedback on model structure and assumptions



Contact Info

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Discussion logistics

The screenshot displays the GoToWebinar interface. At the top, there is a menu bar with 'File', 'View', and 'Help'. Below this is the 'Audio' control panel, which includes a 'Sound Check' indicator and two radio buttons: 'Computer audio' (selected) and 'Phone call'. A microphone icon is shown with a red 'MUTED' label. Below the microphone, there is a dropdown menu for 'Transmit (Plantronics Savi 7xx-M)'. A volume slider is visible, and another dropdown menu for 'Receive (Plantronics Savi 7xx-M)' is at the bottom of the audio section. A red circle highlights the microphone icon. Below the audio controls, it says 'Talking: Liz Davis'. A red-bordered box highlights the 'Questions' section, which contains a text input field with the placeholder '[Enter a question for staff]' and a 'Send' button. At the bottom of the interface, the text 'Webinar Housekeeping' and 'Webinar ID: 608-865-371' is displayed, along with the GoToWebinar logo.