

Washington Department of Fish and Wildlife

# EUROPEAN GREEN CRAB RESPONSE

Presented to the  
Columbia River Basin Team

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December 4, 2018



# European Green Crab

## Management and Status of Invasive European Green Crab in the Salish Sea: White Paper



December 2018



Canada  
FISHERIES AND OCEANS

Sea Grant  
Washington

PUGET SOUND  
PARTNERSHIP

## Salish Sea Transboundary Action Plan for Invasive European Green Crab



December 2018



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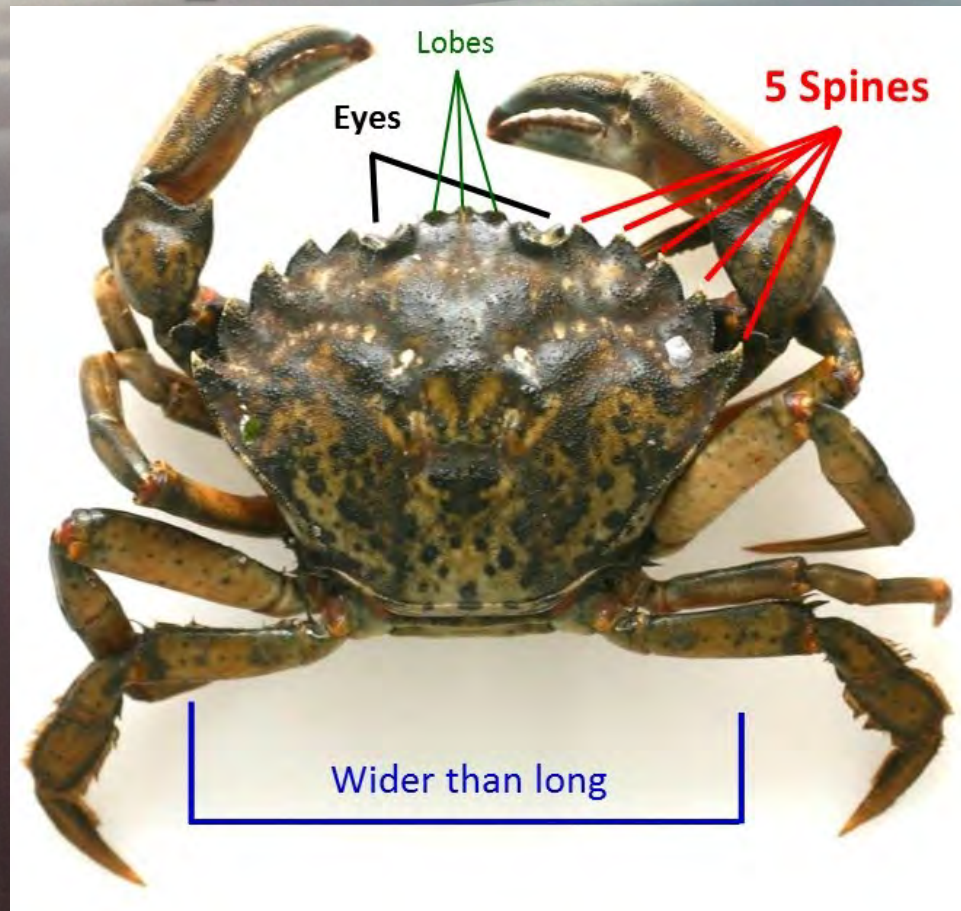
WDFW Pleus





# European Green Crab

IUCN 100 of the  
world's worst alien  
invasive species

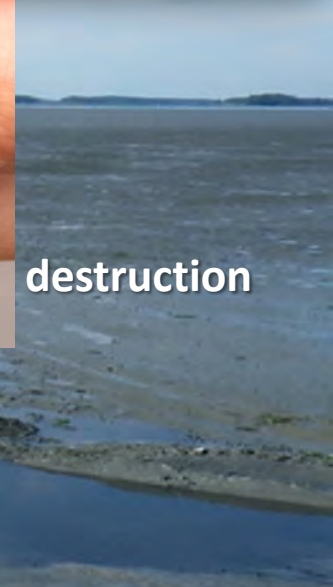


“Species for Control”  
in Canada

**WA Prohibited Level 1 Species:** (1)(a) Species classified as prohibited level 1 pose a high invasive risk and are a priority for prevention and expedited rapid response management actions.



# EGC Impacts





# Action Plan Objectives

1. Collaboratively manage the response to EGC
2. Prevent human-mediated introduction and spread of EGC
3. Detect EGC presence at earliest invasion stage
4. Rapidly eradicate or reduce newly detected populations
5. Control persistent infested site populations to eliminate or minimize environmental, economic and human resource harm
6. Conduct research to develop increasingly effective adaptive management strategies

# Benefits

- It is not too late – we're still ahead of the curve!
- Successful and efficient management program
- Science-based, cost-effective framework preventing the much higher environmental, economic and cultural costs if EGC become established in the Salish Sea
- Integrated management approach of international partners and stakeholders including citizen science volunteers, shellfish growers, state/ provincial and local governments, Tribes/First Nations, and federal governments/ agencies



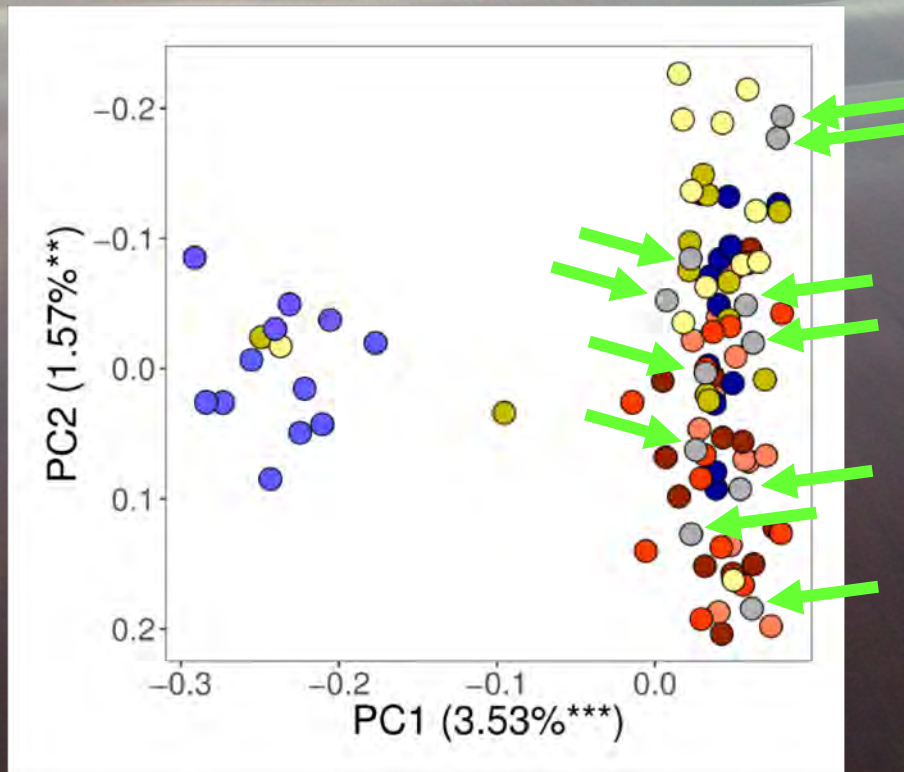


# Collaborative Management

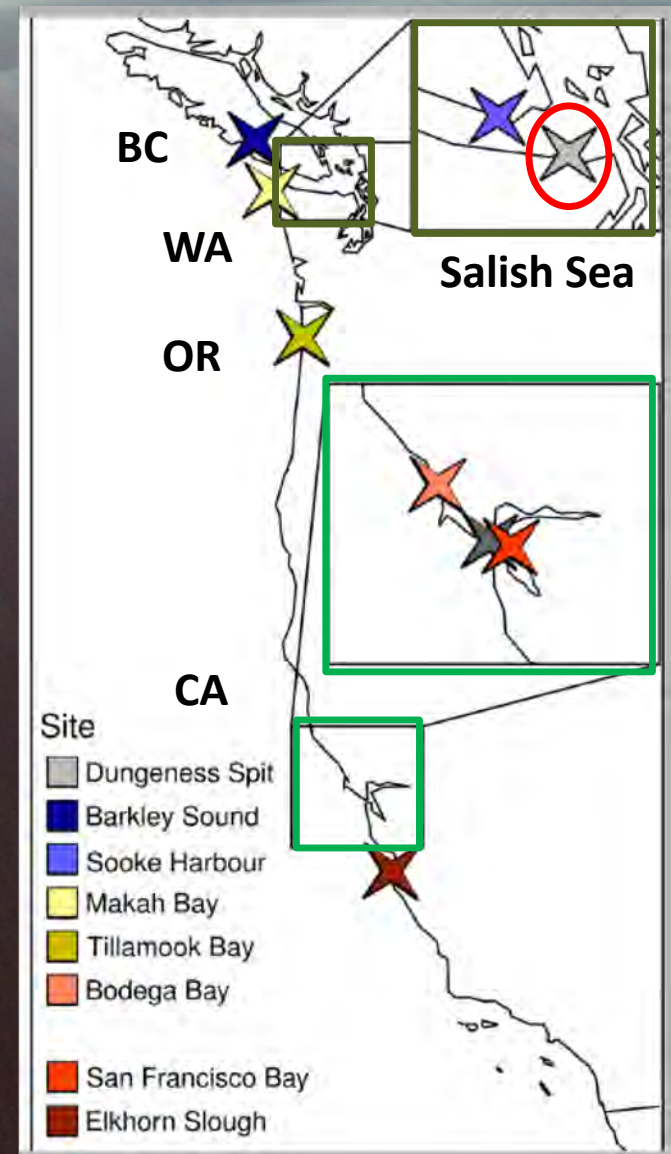
- WDFW & DFO provide context, coordination, and authorities to manage the situation
- WA Sea Grant provides species expertise and early detection infrastructure
- WDFW provides rapid response coordination and assistance
- Partners and stakeholders provide energy and main ingredients for hearty and fulfilling action plan
- Everyone owns success



# Where do they come from: Genetics

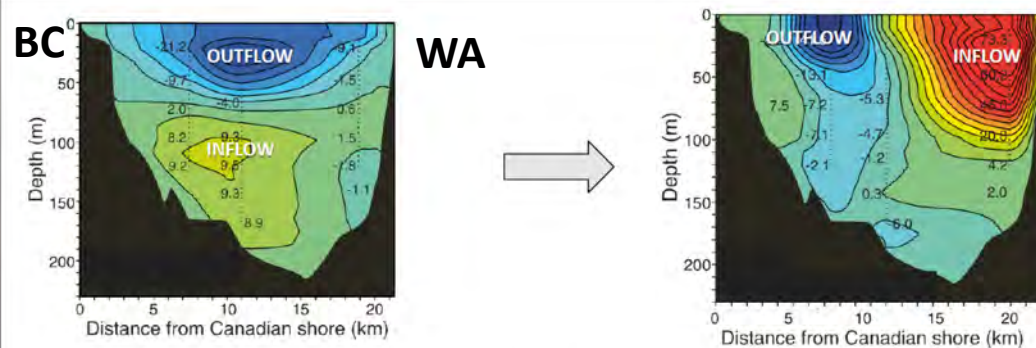


- Dungeness Spit crabs are from the outer west coast
- Sooke crabs are distinct
- Outer west coast is well-connected







# How do they get here: Modeling

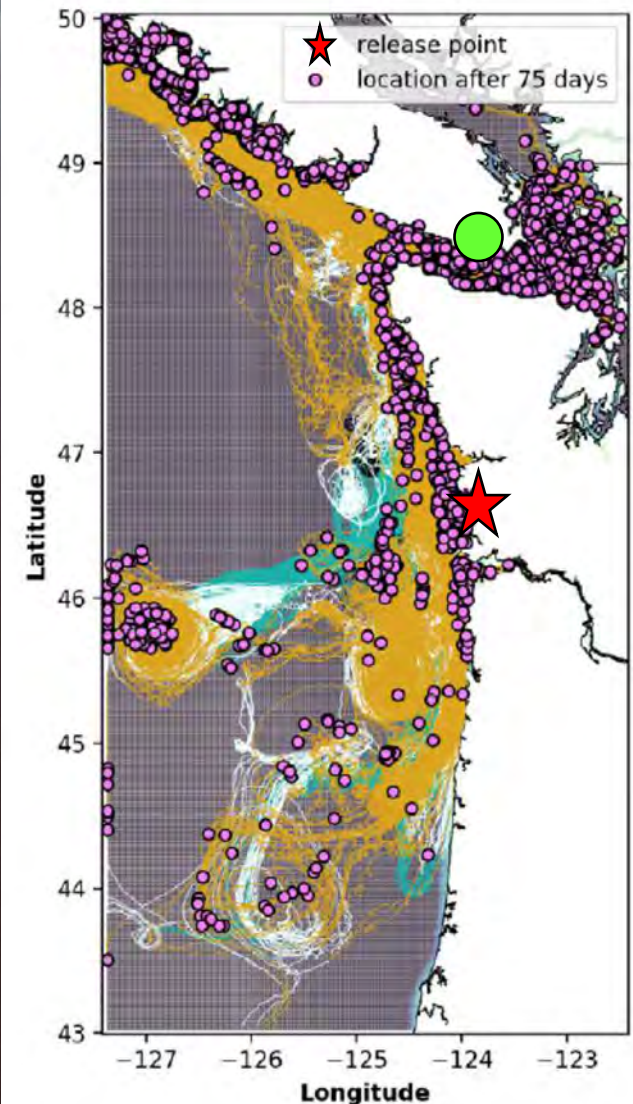


Flow reversals from northward wind occur approximately 10% of the time in summer and 45% of the time in winter

Mo-Year	 Sooke, BC	Barkley Sound, BC	 Willapa Bay, WA	Coos Bay, OR
Aug-14	11.38%	4.10%	27.46%	0.22%

- Coastal WA invasion is most likely during unseasonably warm winters (like 2014 and 2015) or unseasonably stormy summers
- Sooke invasion is almost always possible

Brasseale & McCreedy et al 2018





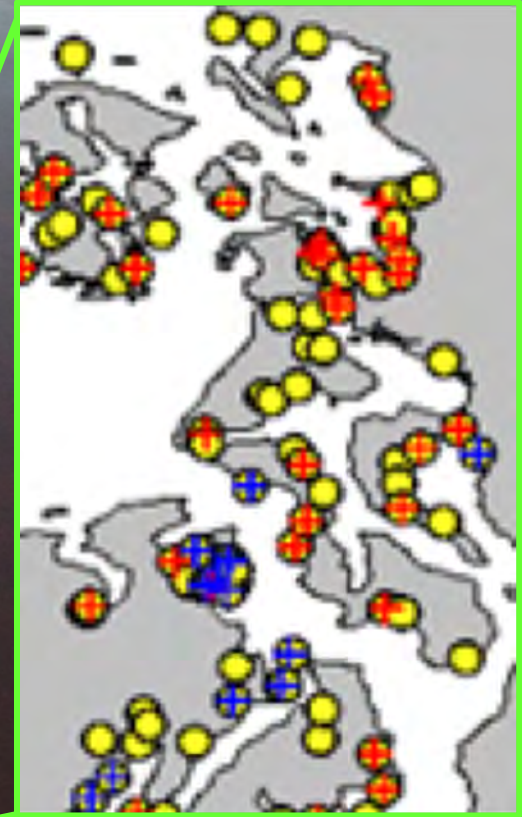
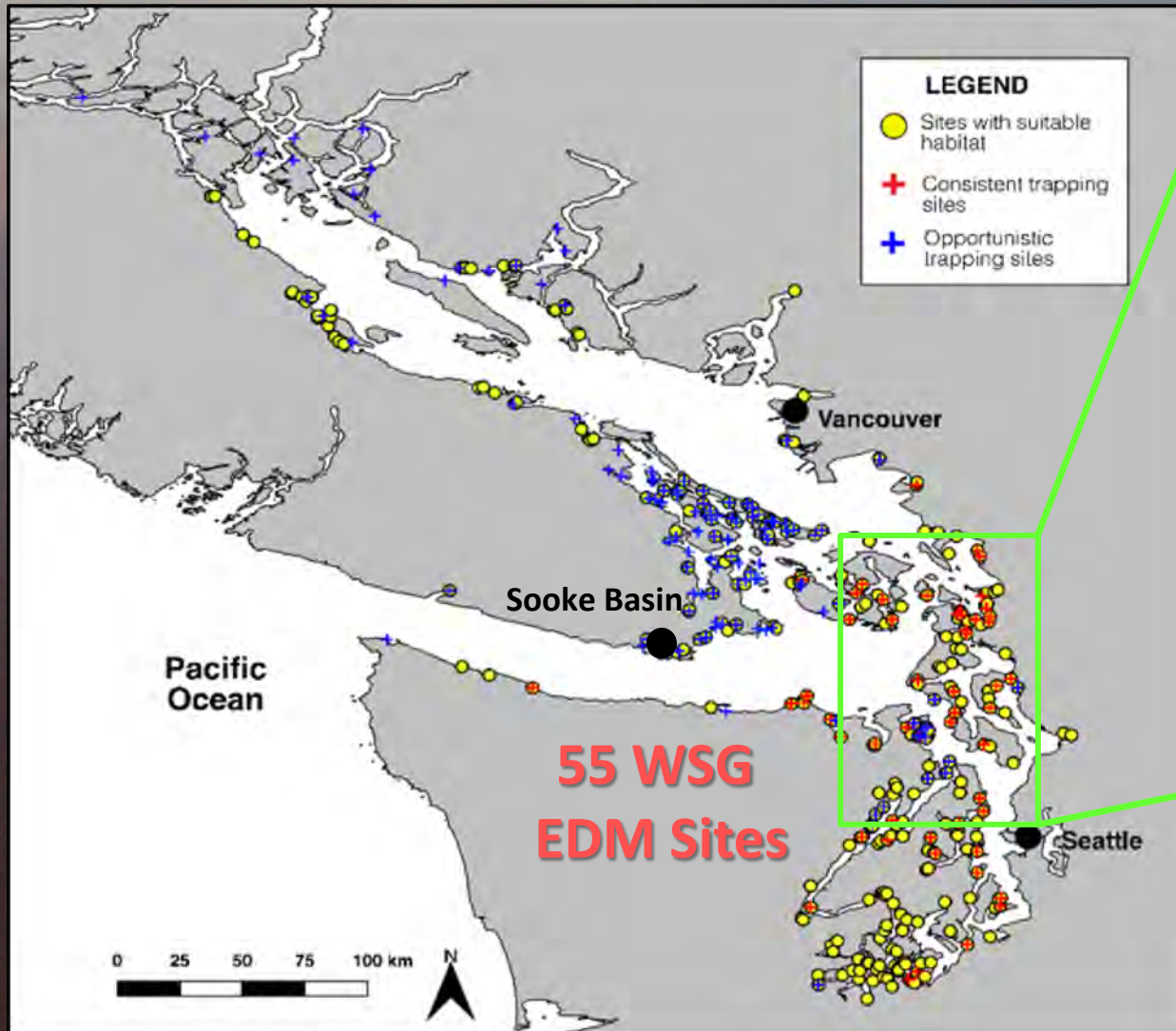
# Solution Details

- **Early Detection actions to detect new EGC populations within first year of settlement for maximum control/eradication opportunities**
  - **Consistent actions to conduct standardized and repetitive trapping investigations of high and moderate risk sites as part of a formal early detection network**
  - **Opportunistic actions to conduct intensive trapping investigations of high and moderate risk sites not part of WSG early detection network**





# EGC Habitat & Monitoring



~25% of WA Sites  
Consistently  
Monitored



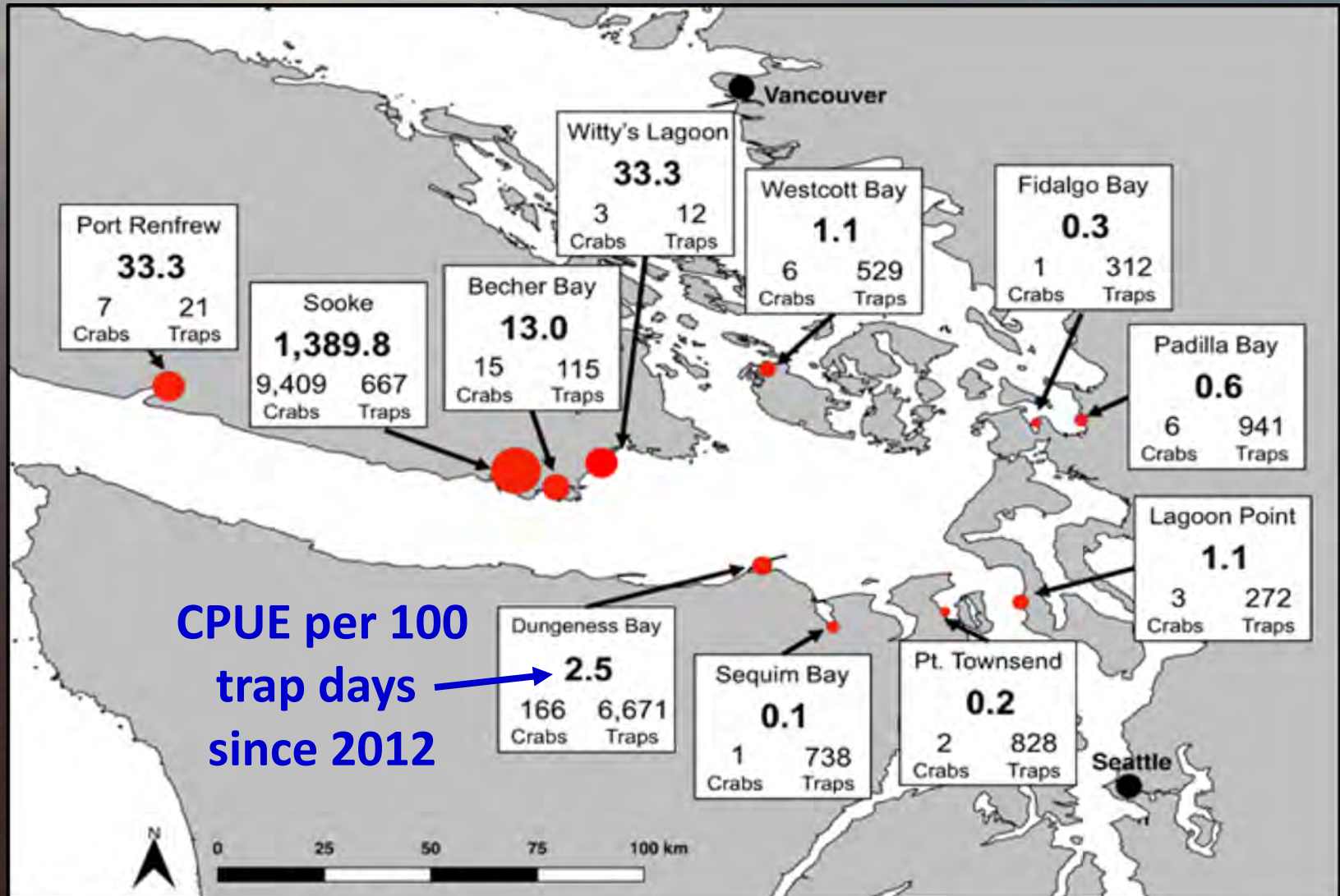
# Solution Details

- Rapid response actions to stop new ECG detections before they get bigger and send off new larvae to start other populations
- Response Monitoring to conduct intensive trapping investigations of previous detection sites to confirm control levels are maintained





# EGC Habitat & Monitoring





# Call to Action

**The Salish Sea Transboundary Action Plan for Invasive European Green Crab** provides a clear pathway for effective and efficient management of EGC to prevent their establishment. Next steps:

1. Gathering signatures from partners and stakeholders stating that they recognize EGC management is essential for the protection of the Salish Sea;
2. Securing short-term funding to continue current levels of early detection monitoring and rapid response capacity; and
3. Securing long-term funding to ensure effective and efficient EGC management into the future.





A man with a beard and a Washington Department of Fish and Wildlife cap is holding a large crab. The crab has red eyes. The background is a forested area with a body of water.

# Questions?

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