

WASHINGTON'S CRABBY SITUATION

Managing the Invasive European Green Crab Across Washington's Shorelines



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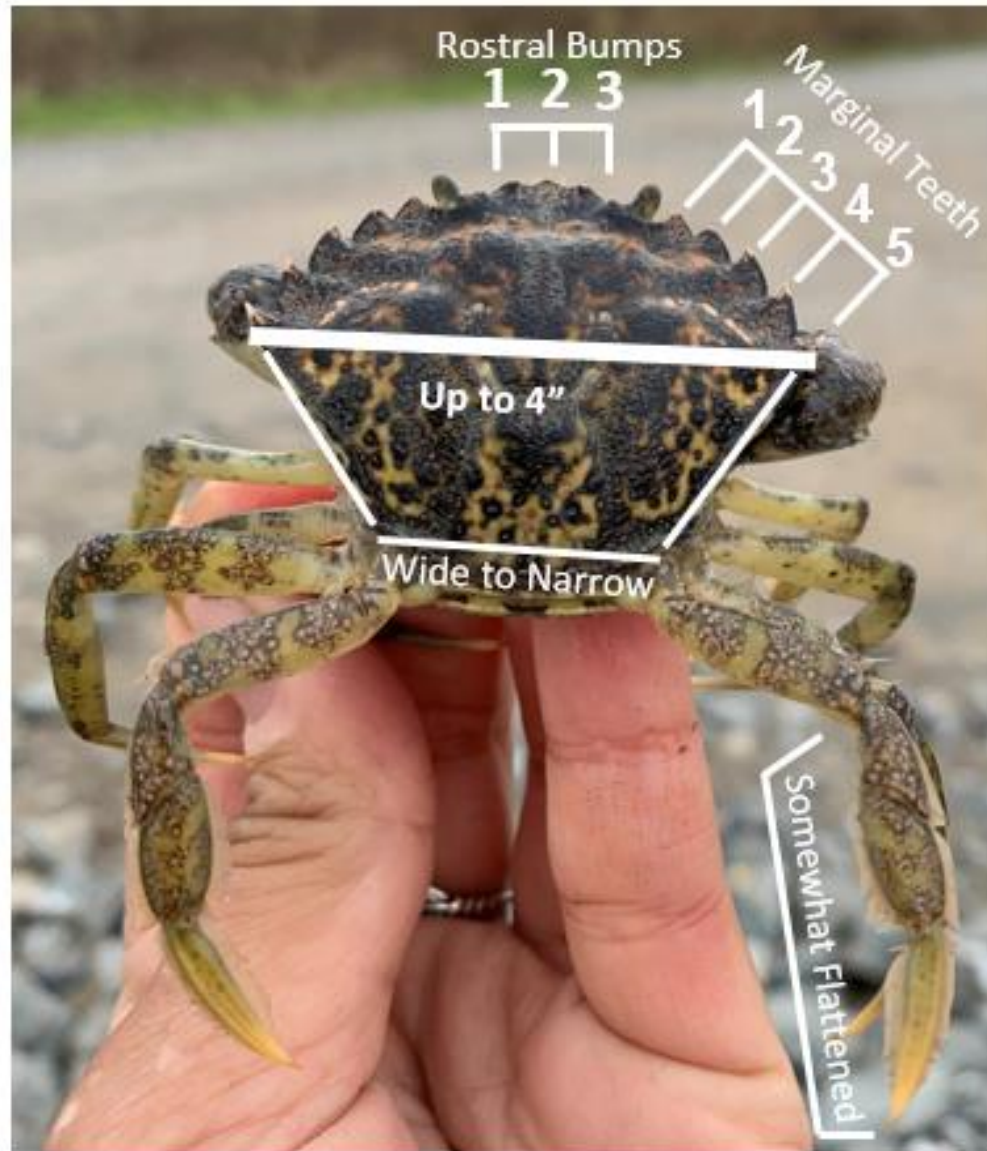


EUROPEAN GREEN CRAB (EGC) IDENTIFICATION

Key Characteristic:

5 spines or marginal teeth!

They are NOT always green!



**NOT
EGC**



EUROPEAN GREEN CRAB

Carcinus maenas

WDFW is the lead state agency for aquatic invasive species/

Classification:

Prohibited Level 1 Species

WAC 220.640.030

(1)(a) Species classified as prohibited level 1 pose the highest invasive risk and are a priority for prevention and expedited rapid response management actions.

Tribes have jurisdiction on their sovereign lands

Federal agencies have jurisdiction on federal lands

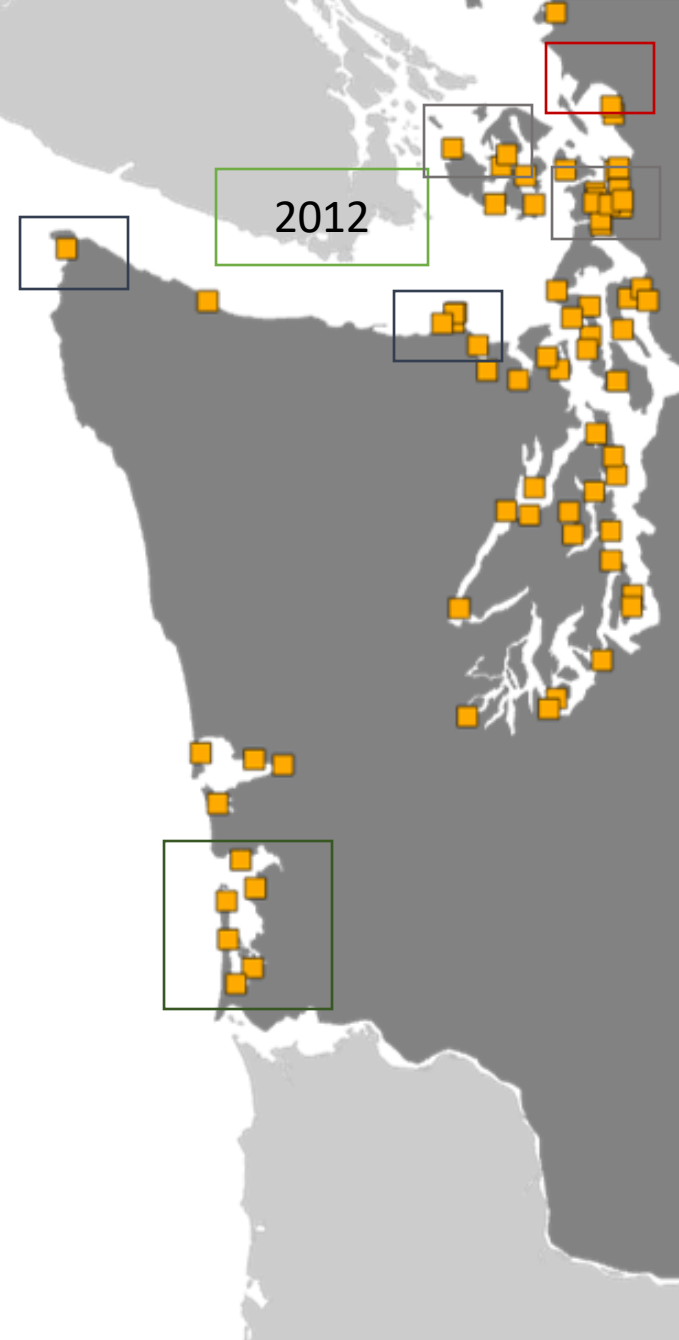
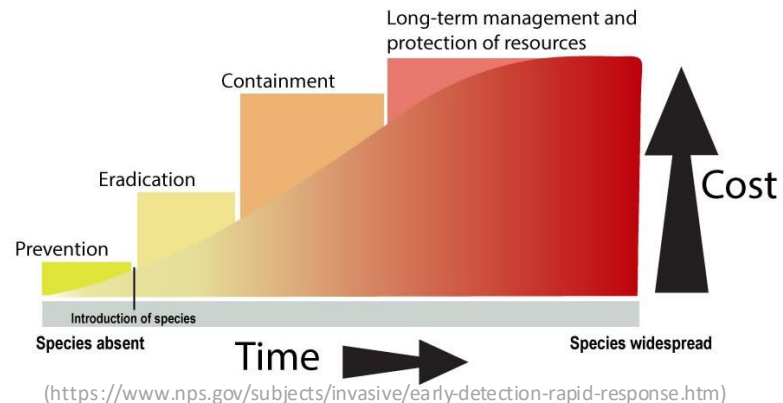


GOVERNOR JAY INSLEE'S EMERGENCY PROCLAMATION 22-02

In 2021, WDFW, in coordination with tribal co-managers and other partners, have found a **significant increase in European green crab populations** within the Lummi Nation's Sea Pond and coastal areas including Makah Bay, Grays Harbor, and Willapa Bay.

Although still at the front end of the invasion curve, information shows a **rapidly evolving danger** of European green crab seriously threatening the environment, economy, and human well-being of the state of Washington.

If an invasive species is not detected and removed early, expensive and long-term management may be unavoidable



Year	Total
1998	364
1999	507
2000	235
2001	142
2002	167
2003	24
2004	4
2005	115
2006-14	68
■ 2015	8
2016	24
2017	165
2018	1,192
2019	1,943
2020	6,829
2021	103,165
2022	285,280
2023*	286,368



“I...do hereby order the Department of Fish and Wildlife to begin implementation of **emergency measures** as necessary to effect the eradication of or to prevent the permanent establishment and expansion of European green crab.”



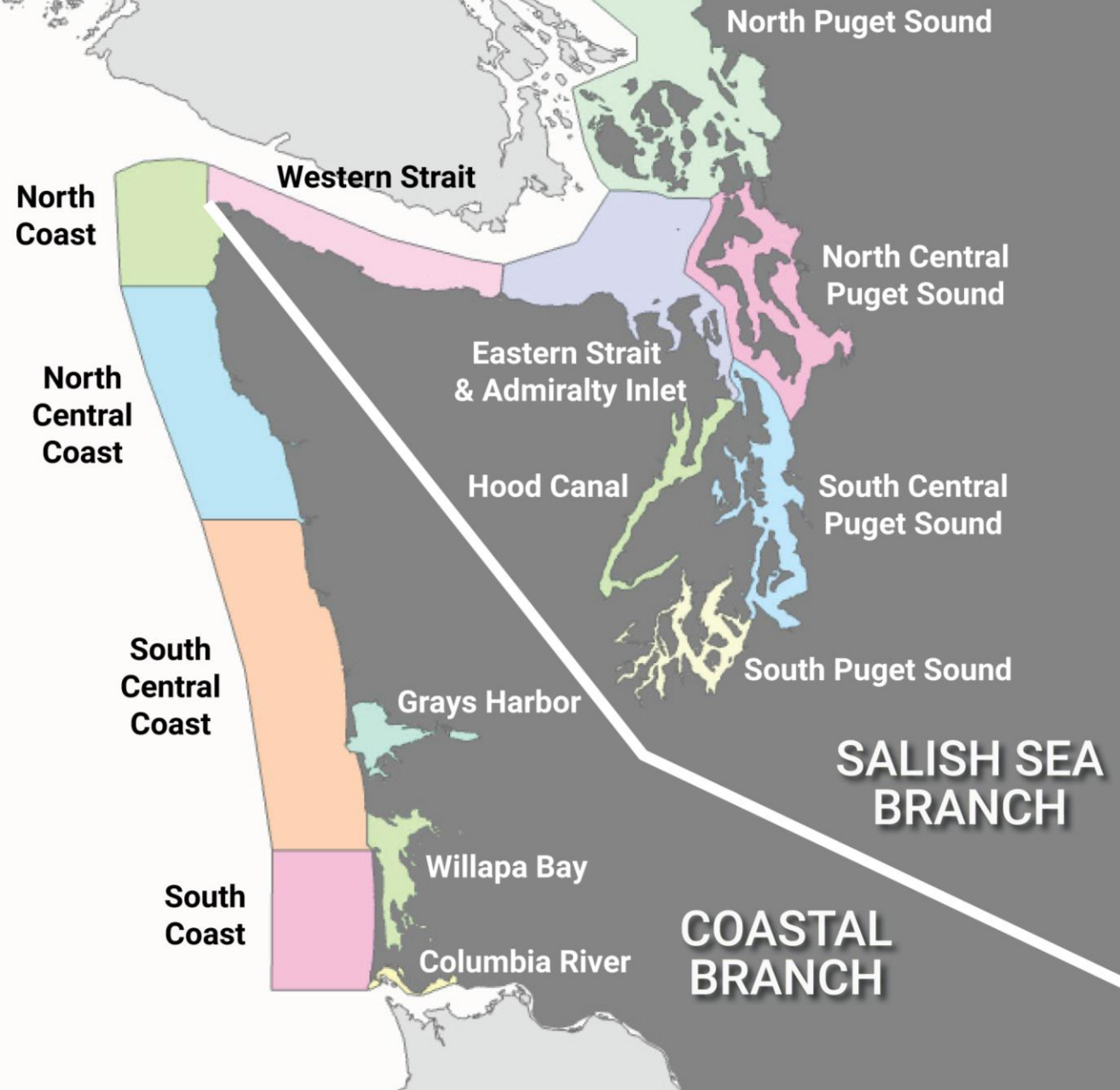
WDFW has responded to the emergency order by hiring field staff, purchasing and distributing trapping equipment, and coordinating with tribes, agencies, and non-governmental partners.



MANAGEMENT AREAS

2 Management Branches

14 Management Areas



COORDINATION AND MANAGEMENT COMPLEXITY

Multiple jurisdictions

Management priorities

Management types

Operational complexities

Resource capacities

Sensitive habitats and species protection

Aquaculture operations



STATEWIDE EMERGENCY MEASURES STRATEGY / OBJECTIVES / ACTIONS

Implemented Incident Command System (ICS)

Respects all jurisdictions

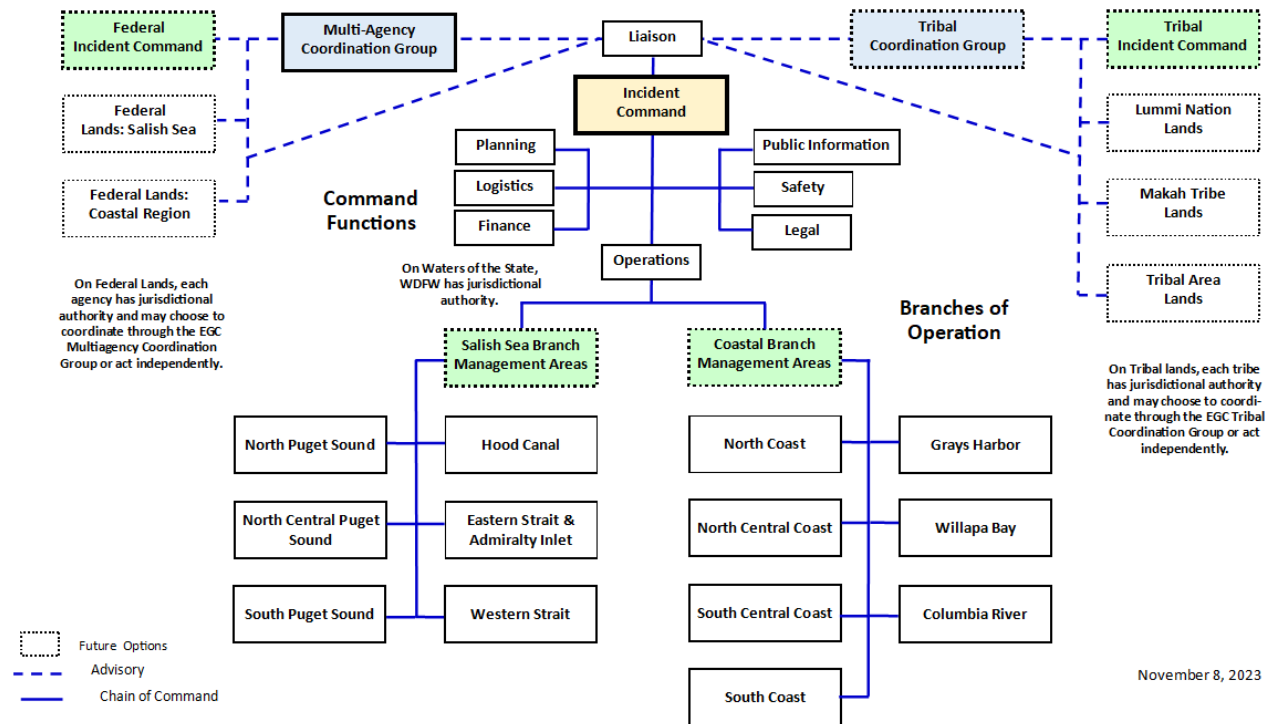
Excellent communication and coordination tool

- Common language across complex and evolving management actions

Effective for multiple jurisdictions across large geographic area

Ensures critical needs and issues are effectively addressed

Provides management transparency for jurisdictions, impacted entities and the public



November 8, 2023

WA EGC 2023
Washington Emergency Management
Division (EMD) Mission # 22-1085



STATEWIDE EMERGENCY MEASURES STRATEGY / OBJECTIVES / ACTIONS

1. Facilitate WDFW implementing Governor's Emergency Proclamation for statewide emergency measures with respect for tribal sovereignty and federal jurisdictions.
2. Health and safety of all participants.
3. Reduce populations below harmful environmental, economic, and cultural resource harm.
4. Collaborative and transparent emergency management.
5. Post-emergency transition to long-term management by local entities.



STATEWIDE EMERGENCY MEASURES STRATEGY / OBJECTIVES / ACTIONS

WDFW actions to date

Continuation of the Incident Command System (ICS) and Multi-Agency Coordination (MAC) Group

Consultation with tribal co-managers on policy representation

Collaboration with shellfish aquaculture on impact and spread risks

Managing contracts and agreements, development of funding programs, and permits



STATEWIDE EMERGENCY MEASURES STRATEGY / OBJECTIVES / ACTIONS

WDFW actions to date

Hiring/training new permanent and seasonal staff

Began organic waste compost program

Trapping support and training for co-managers, tribes, and partners:

- Grays Harbor Conservation District
- Jamestown S'Klallam Tribe
- Lower Elwha Klallam Tribe
- Lummi Nation
- Makah Tribe
- Pacific Conservation District
- Shoalwater Bay Indian Tribe
- Skokomish Indian Tribe
- Suquamish Tribe
- U.S. Fish & Wildlife Service National Wildlife Refuges
- Washington Dept. of Natural Resources
- Washington Sea Grant
- Etc.



STATEWIDE EMERGENCY MEASURES STRATEGY / OBJECTIVES / ACTIONS

WDFW actions to date

- Aggressive federal appropriation requests and engagement with congressional delegation to leverage additional federal resources to support tribal nations, research, and management
- Partnership with state agencies to leverage additional state resources from State Legislature

Invasive European green crab



European green crabs threaten West Coast economies, environments, and tribal, cultural, and commercial resources

Federal funding and reinstatement of NOAA's Office of Aquatic Invasive Species are requested to combat European green crabs.

The European green crab is considered one of the world's worst invasive species. These shore crabs feed on clams, mussels, and other native shellfish. They can compete with Dungeness crabs and impact resources that are part of the cultural identity of tribes and native peoples as well as affect small businesses and low-income rural communities.

While digging for their next meal, European green crabs can also destroy habitats that salmon rely on such as estuaries and eelgrass beds. This could hinder salmon and Southern Resident killer whale recovery efforts, reduce shorebird food supplies, and ultimately affect the overall health and resiliency of the Salish Sea and outer coast waters.

An invasive species emergency in Washington state

European green crabs were detected in California in 1989 and have since spread up the West Coast as far as Alaska. They were discovered on the Washington coast in 1998 and in inland waters near Puget Sound in 2016. Beginning around 2018, significant increases in the invasive crabs were detected, potentially linked to warmer waters.

Washington state has since taken national leadership on managing the European green crab's impacts, which are still at early stages of invasion in our state. As part of this leadership, Washington Governor Jay Inslee and several tribes issued emergency proclamations in 2022 recognizing the threats posed by European green crabs and directing state agencies and partners to coordinate emergency measures to control them, led by the Washington Department of Fish and Wildlife (WDFW).

With funding from the state legislature, more than **285,000 European green crabs were removed from Washington waters in 2022** by WDFW, Native American tribes, shellfish growers, and other agencies and partners.

Yet federal funding levels are insufficient to address the scope of this emergency as evidenced by the state providing state funding to support federally recognized tribes, Washington Sea Grant, and federal agencies to conduct green crab research and protect national wildlife refuges.

We request that Congress and the National Oceanic and Atmospheric Administration (NOAA) recognize the emergency nature and destructive potential of European green crab on the West Coast by providing funding as detailed on the following page.

Contact information:
Meagan West
Federal Policy Coordinator
meagan.west@dhw.wa.gov

May 2023



European green crab federal funding request

Request for federal funding and support for West Coast green crab response

We respectfully request that Congress recognize the emergency nature and destructive potential of European green crab, support Washington and other states' initiatives to combat this species, and act to minimize this destruction by implementing the following requests:

- Fund the reestablishment of the Office of Aquatic Invasive Species at NOAA headquarters to support state, tribal, and federal European green crab management programs.
- Appropriate \$5 million in fiscal year 2024 and future years to the Coastal Aquatic Invasive Species Mitigation Grant Program as authorized under the Frank LoBiondo Vessel Incidental Discharge Act of 2018.
- Provide funding for European green crab prevention, management, and data stewardship to:
 - \$300,000 to U.S. Fish and Wildlife Service's Willapa National Wildlife Refuge and Dungeness National Wildlife Refuge
 - \$750,000 to U.S. Geological Survey's Biological Threats and Invasive Species Research Program for its Western Fisheries Research Center and Alaska Science Center
 - \$8 million to Bureau of Indian Affairs' Invasive Species Program for its Northwest Region
 - Funding to U.S. Department of Agriculture's Animal and Plant Health Inspection Service for Washington's coastal shellfish growers who have been impacted by European green crabs.

European green crab detections in Washington state 2016 – 2022

More information is available online at wdfw.wa.gov/greencrab

May 2023



NEXT STEPS

Continue field operations and collaborations with co-managers, tribes, and partners

Technical meetings help inform future actions

Development of 5-Year Management Plan to guide future funding and activities, including transition to long-term local management

Continue 10-day reports to Governor per RCW 77.135.090(4) emergency measures requirements

Continue implementing ICS process, including monthly Situation Reports

Continue MAC Group and Tribal policy coordination, roles and responsibilities; monthly recurring meetings

Seeking federal funding assistance from National Atmospheric and Oceanographic Administration, Bureau of Indian Affairs, and others.



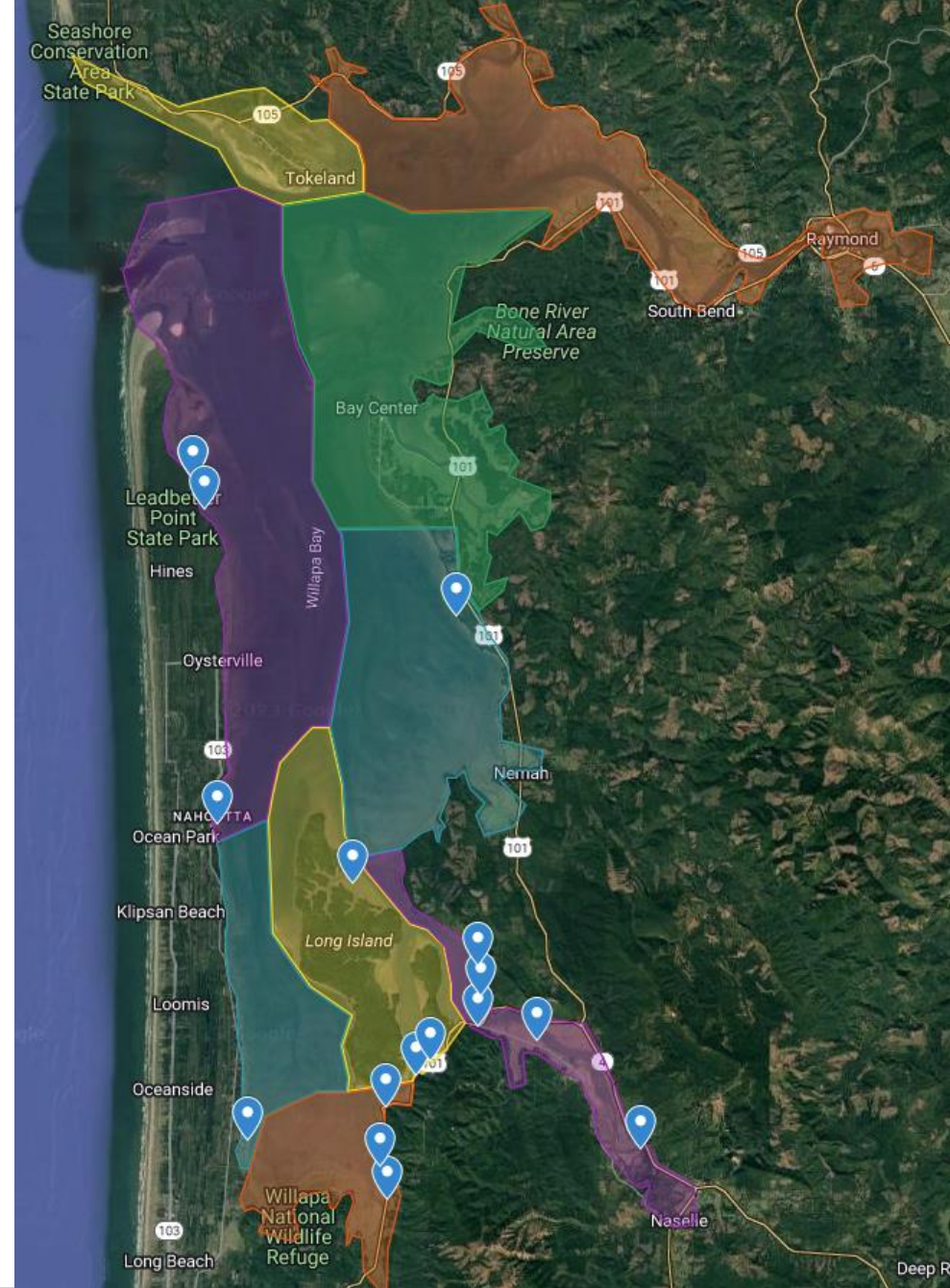
5-Year (2025-2030) Management Plan

Outline goals of co-managers, tribes and partners by Management Area and the actions necessary to achieve

Define scientific best practices and approach

To document planned actions and provide support for funding requests

Living document; transparent, highly collaborative process



5-Year (2025-2030) Management Plan

Starting with initial one-on-one discussions with all co-managers, tribes and partners

Developed first draft for review (December 2023)

Further one-on-one and Management Area discussions

Deliverable	Due	Review Period
Draft 1 Review	1-Dec-23	Dec 1-31, 2023
Draft 2 Review	1-Mar-24	Mar 1-31, 2024
Draft 3 Review	1-Jun-24	Jun 1-30, 2024
Final review	1-Sep-24	Sep 1-30, 2024
Final Plan	1-Dec-24	



RESOURCES

Hub

www.wdfw.wa.gov/greencrabhub

Report a Sighting

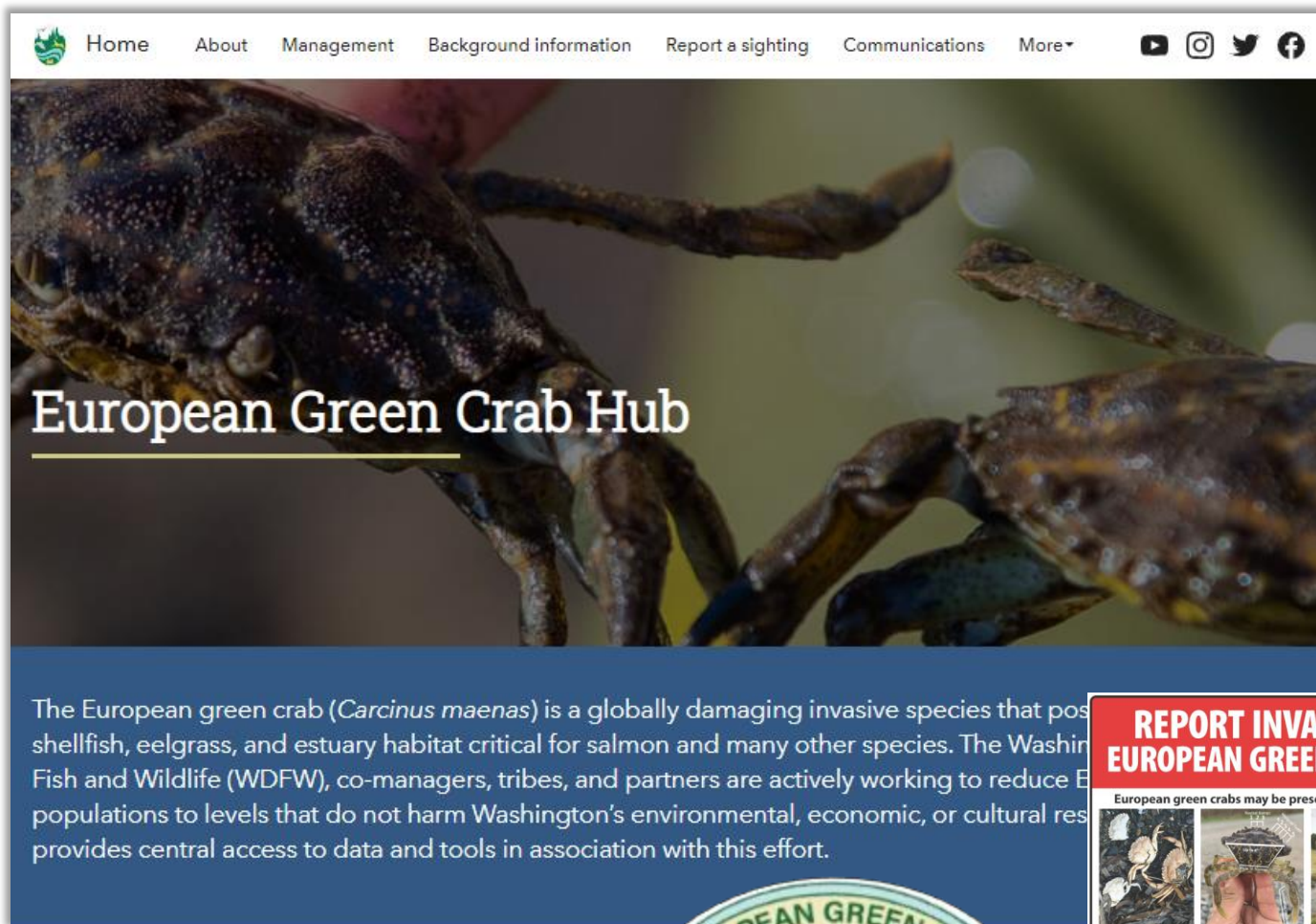
Education/Outreach materials

Links to:

- WDFW EGC Reports
- Public Updates

Management Updates Email List


<https://wdfw.wa.gov/about/lists>



Home About Management Background information Report a sighting Communications More

European Green Crab Hub

The European green crab (*Carcinus maenas*) is a globally damaging invasive species that poses a threat to shellfish, eelgrass, and estuary habitat critical for salmon and many other species. The Washington Department of Fish and Wildlife (WDFW), co-managers, tribes, and partners are actively working to reduce European green crab populations to levels that do not harm Washington's environmental, economic, or cultural resources. This website provides central access to data and tools in association with this effort.



REPORT INVASIVE EUROPEAN GREEN CRAB

European green crabs may be present in this area

If you find a suspected European green crab or their shell, please photograph it, note the location, and report to the Washington Department of Fish and Wildlife.

wdfw.wa.gov/greencrab
Or contact us at:
Phone: 1-888-WDFW-AIS
Email: ais@dfw.wa.gov

European green crab (*Carcinus maenas*) are a damaging invasive species that pose a threat to economic, environmental, and cultural resources. Typically smaller than your fist and found in shallow intertidal areas, these shore crabs are not always green and may be orange, red, or yellow in color. WDFW, tribes, and partners are working to trap and control infestations. As a Prohibited species, it is illegal to possess or transport live European green crab in Washington.

Native crab species commonly mistaken for European green crabs include:

Shore crab, Rock crab, Puget rock crab, Hairy rock crab

Washington Invasive Species Council | Washington Department of Fish and Wildlife



Allocated Funds

WDFW

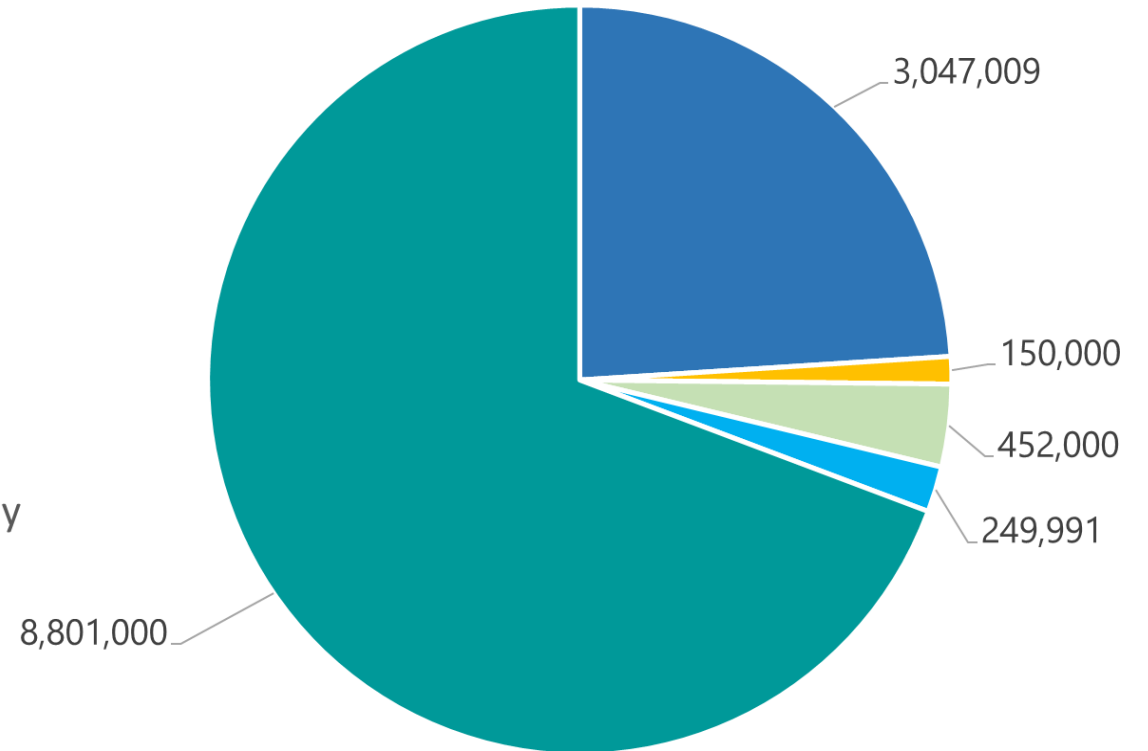
European Green Crab
Emergency Measures Funding
FY23-24 (July 1, 2023-June 30,
2025, performance period)

\$12,700,000 total



Washington
Department of
**FISH and
WILDLIFE**

- Fish Program
- Habitat Program
- Communications and Public Engagement
- Information Technology
- Passthrough Funds to Tribes and Partners



Allocated Funds

WDFW

European Green Crab
Emergency Measures Funding
FY23-24 (July 1, 2023-June 30,
2025, performance period)

\$12,700,000 total



Washington
Department of
**FISH and
WILDLIFE**

Organization	Funding
Washington Department of Fish and Wildlife	\$3,899,000
Fish Program – All costs	\$ 3,047,009
Habitat Program – Funding Coordination	\$ 150,000
Communications and Public Engagement – All costs	\$ 452,000
Information Technology – All costs	\$ 249,991
Lummi Nation	\$ 2,929,000
Washington Recreation and Conservation Office	\$2,942,000
European Green Crab Multi-Agency Coordination Group and Interagency Agreement Administration	\$142,000
Emergency Measures Interagency Agreements	\$2,800,000
Washington Sea Grant (WSG)	\$ 1,340,000
WSG Crab Team	
WSG and Washington State University Molt Search	
Research and Technical Assistance	
Makah Tribe	\$ 950,000
Washington Department of Ecology	\$640,000
Padilla Bay National Estuarine Research Reserve	
Northwest Straits Commission	



Allocated Funds



Washington Department of Fish and Wildlife (WDFW) European Green Crab - Coastal Management Grant Program FY22 (July 1, 2022-June 30, 2023, performance period)

WDFW executed a \$500,000 EGC Coastal Management Grant Program for local, non-profit, or private entities that sought to conduct removal or perform research on the Washington coast.

Partner	Funding
Pacific Conservation District (CD) and partners	\$367,724
Grays Harbor CD	\$84,804
Pacific Shellfish Institute	\$47,472

WDFW, Washington Recreation & Conservation Office Emergency Measures Interagency Agreements FY22 (July 1, 2022-June 30, 2023, performance period)

\$1.1 Million via Interagency Agreements

Partner	Funding
National Oceanographic and Atmospheric Administration	\$91,316*
Washington Department of Natural Resources	\$402,220*
Lummi Indian Business Council (Lummi Sea Pond Analysis)	\$100,000
Washington Department of Ecology (Padilla Bay National Estuarine Research Reserve)	\$75,154
Pacific County Vegetation Management	\$99,312*
U.S. Fish and Wildlife Service (Dungeness Spit)	\$32,897
U.S. Fish and Wildlife Service (Willapa Bay)	\$110,240*
Washington State University (Molt Search)	\$70,517
Grays Harbor CD	\$30,000*
Pacific CD	\$90,000*



Allocated Funds



WASHINGTON STATE
Recreation and
Conservation Office



Washington
Department of
**FISH and
WILDLIFE**

WDFW, Washington Recreation & Conservation Office
European Green Crab Emergency Measures Interagency
Agreements
FY23 (July 1, 2023-June 30, 2024, performance period)

Funding Mechanism: \$1.4 Million via Interagency
Agreements

Partner	Funding
Pacific Conservation District (CD)	\$500,000
Pacific Vegetation Management	
Willapa Grays Harbor Oyster Growers Association	
Willapa Bay Shellfish	
Grays Harbor CD	\$500,000
Willapa Grays Harbor Oyster Growers Association	
Westport Seafoods	
Washington Department of Natural Resources	\$399,588
Washington State University Extension (Research)	\$39,815

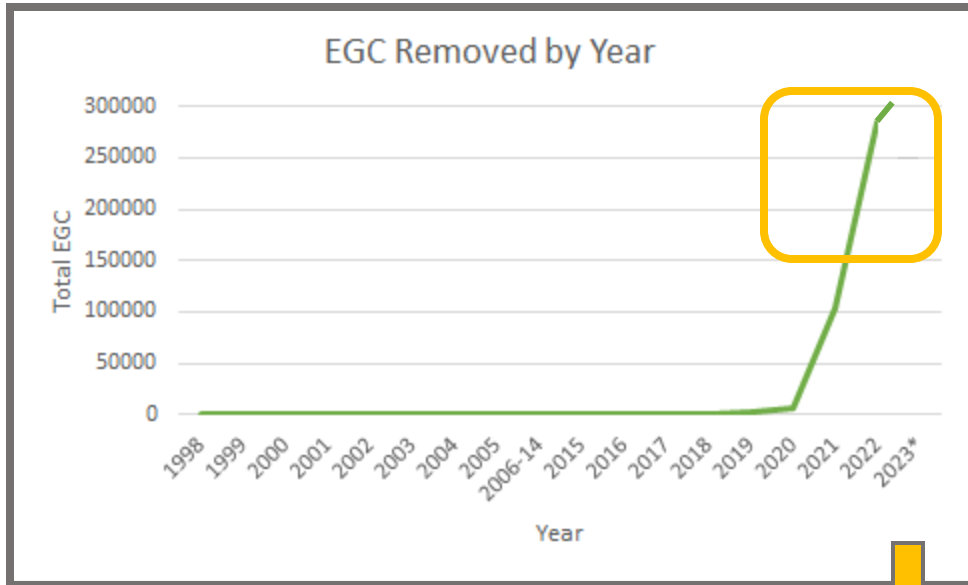
WDFW, Washington Recreation & Conservation Office
European Green Crab Emergency Measures Interagency
Agreements
FY24 (July 1, 2024-June 30, 2025, performance period)

Funding Mechanism: \$1.4 Million via Interagency
Agreements

- Allocations in April/May 2023.
- Washington Department of Natural Resources seeking separate \$857,000 in 2023-2025 Supplemental Budget Session for FY24 and \$1.2 million per biennium ongoing.



EUROPEAN GREEN CRAB RESPONSE



*Data through December 3, 2023

Branch	2023 *
Salish Sea Branch	6,112
Coastal Branch	280,256
Total	286,368

Management Area	2023*
North Puget Sound	5,729
North Coast	9,242
Grays Harbor	71,788
Willapa Bay	199,220

Year	Total
1998	364
1999	507
2000	235
2001	142
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2006-14	68
2015	8
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2017	165
2018	1,192
2019	1,943
2020	6,829
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2023*	339,589





THANK
YOU!



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