

WDFW – European Green Crab Update

Public Update on European Green Crab Management – May/June 2023



WDFW staff member in the field on the Washington Coast with European green crab traps.

Report Purpose: These regular updates are intended to inform the public, local stakeholders, media, and others regarding the status of European green crab (EGC) management and emergency measures deployment in Washington state, supporting the public information responsibilities of the Incident Command System (ICS) and Public Information Officer (PIO).

For additional information, please see: wdfw.wa.gov/species-habitats/invasive/carcinus-maenas
European green crab news, communications and outreach materials are available under the “Resources” tab.

To report European green crab sightings or obtain identification resources, visit: wdfw.wa.gov/greencrab

May/June 2023 Updates

European Green Crab Incident Command objectives continue to include reduction of EGC populations to below levels harmful to environmental, economic, or cultural resources.

This report summarizes EGC captures, monitoring, and other emergency measures from May and June 2023 as well as field and partner highlights.

WDFW’s Aquatic Invasive Species (AIS) unit anticipates deploying more than 25 staff and 1,000 traps during the 2023 field season, along with other equipment and resources. Willapa Bay and Grays Harbor are top priorities for this field season given continued high EGC capture rates.

2023 European Green Crab Capture/Removal Totals

Total	72,549 as of June 11, 2023
Latest Operational Period	7,386 (May 29 to June 11, 2023)

Coastal Management Branch EGC removal totals:

Year to date	69,082
Latest Operational Period	7,086

Salish Sea Management Branch EGC removal totals:

Year to date	3,467
Latest Operational Period	300

Please see the new European Green Crab Hub for more detailed capture data including by management area: wdfw-egc-hub-wdfw.hub.arcgis.com.

2023-2025 Biennial Budget (July 1, 2023 to June 30, 2025)

In April 2023, the State Legislature and governor appropriated \$6,082,000 annually for European green crab management in the 2023-25 Operating Budget. This continues the Fiscal Year 2023 funding level for the 2023-25 biennium (fiscal years 2024 and 2025).

For 2023-2025, WDFW is funding co-managers, tribes, and partners for continued statewide EGC management as part of the approximately \$12 million dollars appropriated by the Washington State Legislature in this biennium. In total, nearly \$9 million will be passed through including:

- \$2 million for the Pacific and Grays Harbor Conservation Districts to support coastal work;
- \$2.9 million to the Lummi Nation;
- \$950,000 to the Makah Tribe;
- \$1.34 million to Washington Sea Grant;
- \$800,000 to the Washington Department of Natural Resources;
- \$640,000 to the Washington Department of Ecology; and
- \$200,000 to the Recreation and Conservation Office (RCO).

WDFW, as recommended by the Incident Command System (ICS) Multi-Agency Coordination (MAC) Group, has consolidated the Coastal Local Management Grant program into RCO's Inter-Agency Agreement (IAA) Fund program. Additionally, coastal and state agency funding have been separated from the competitive application process. Currently, there is only \$71,000 per fiscal year in uncommitted funds available for solicitation, though this may change as the biennium progresses. WDFW and the MAC Group recognize that additional emergency management funds are needed and continue to advise and work with federal and state legislative partners to find solutions.

Requests for federal assistance, funding for EGC control

WDFW Assistant Director Amy Windrope and Federal Policy Coordinator Meagan West were in Washington, D.C. in May to support Puget Sound recovery and habitat restoration as well as European green crab management. They met with National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) leadership, emphasizing urgent



[requests for federal funding](#) and [reinstatement](#) of the NOAA Office of Aquatic Invasive Species to help combat European green crabs in Washington and across the U.S. West Coast.

WDFW representatives then conveyed this message to the Congressional offices of U.S. Senators Murray and Cantwell, and Representatives Kilmer, Schrier, Strickland, Gluesenkamp Perez, and Larsen. The legislators expressed that they are collectively working to secure funding across several federal agencies to address the European green crab issue.

More information on this request can be found in the following factsheet, which was also distributed to the federal officials listed above: <https://wdfw.wa.gov/sites/default/files/2023-05/wdfw-egc-federal-factsheet-may-8-2023.pdf>

Q3 Report to the Washington State Legislature

The [third EGC Quarterly Report](#) (Q3) to the State Legislature was submitted on June 1. In response to the legislative budget proviso directive in ESSB 5693 (2022), this report has been authored as the third in a series of ongoing quarterly progress reports. This report will serve to outline the successes and challenges of ongoing European green crab emergency response efforts in Washington state from Jan. 1 to March 31, 2023. In addition, this report will put the work during Q3 in the context of the work completed in 2022 (reports for [Quarter 1](#) and [Quarter 2](#)).

Governor's 10-Day Emergency Measures Status Update (June 24, 2023): Per RCW 77.135.090, the WDFW Director continues to evaluate the effects of the European Green Crab emergency measures as provided under Proclamation 22-02, finds that the emergency continues to persist, and advises that all emergency measures should be continued. Details of the evaluation will be provided in Situation Reports (SitReps) reflecting each Incident Command System operational period.

May/June News and Media Coverage Highlights

Coverage from state, local, and national outlets included:

- The Washington State Standard ran an article, which was picked up by the Kitsap Sun and other local media outlets, about EGC in Washington and the state's response to the issue, including details about funding and perspectives from Incident Commander Allen Pleus:
Pincher patrol – Over 400K invasive crabs trapped, killed as fight goes on
<https://washingtonstatestandard.com/2023/06/14/pincher-patrol-400k-invasive-crabs-trapped-killed-as-fight-goes-on/>
- The Skagit Valley Herald published an article about the start of the European green crab trapping field season in Padilla and Samish bays, detailing the status of EGC in the area and the efforts of Padilla Bay National Estuarine Research Reserve, Northwest Straits Commission, and Washington Conservation Corps to control the invasive species:
Trapping of invasive green crabs restarts



https://www.goskagit.com/news/environment/trapping-of-invasive-green-crabs-restarts/article_cdb4a9de-eb74-11ed-906f-1fc9206026f5.html

- Washington Sea Grant announced Molt Search, their new volunteer program for early detection of European green crabs on their blog: **Introducing Molt Search**
<https://wsg.washington.edu/introducing-molt-search/>
- FOX 13 shared the launch of Molt Search with their audience as well: **Washington org announces volunteer program to detect invasive European green crabs**
<https://www.fox13seattle.com/news/washington-org-announces-volunteer-program-to-detect-invasive-european-green-crabs>
- The Pacific Salmon Foundation posted a blog detailing funding designated by the Canadian government for combatting aquatic invasive species, including a \$750,000 grant for the non-profit: **European green crabs addressed thanks to government of Canada funds**
<https://psf.ca/blog/european-green-crabs-addressed-thanks-to-government-of-canada-funds/>
- Hunting and fishing outlet MeatEater published an article about the threat EGC pose to Pacific salmon, detailing why the crab is such a successful invasive species and the extensive damage they can cause to the environment:
The silent threat to Pacific salmon – European green crabs
<https://www.themeateater.com/conservation/wildlife-management/the-silent-threat-to-pacific-salmon-european-green-crabs>
- FOX 13 ran a news segment about WDFW's launch of the European Green Crab Hub: **WDFW creates new hub to fight invasive European green crabs**
<https://www.fox13seattle.com/video/1235613>
<https://news.yahoo.com/wdfw-creates-hub-fight-invasive-004540590.html>

Partner Highlight: WDFW launches online hub for coordinated management of invasive European green crab

The Washington Department of Fish and Wildlife (WDFW) has [launched](#) a new online European Green Crab Hub (EGC Hub) to support the coordination of ongoing emergency measures and provide public information about the management of this invasive species, available at: wdfw-egc-hub-wdfw.hub.arcgis.com.

This coincides with the continued ramp up of trapping to control these harmful shore crabs in Washington waters. WDFW's Aquatic Invasive Species (AIS) unit anticipates deploying more than 25 staff and 1,000 traps during the 2023 field season, along with other equipment and resources. Catch data will be updated on the EGC Hub throughout the spring-fall field season.



"As we continue to expand efforts to control European green crabs, we expect public interest to grow," said Chelsey Buffington, WDFW's European Green Crab Project Lead. "We also expect that more organizations will become involved with EGC management. The EGC Hub provides a streamlined platform for WDFW, Native American tribes, shellfish growers, and other agencies and partners to organize data and share information, increasing communication and transparency."

The EGC Hub features a dashboard showing European green crab catch within the Coastal and Salish Sea Branches, including Management Areas based on established Washington Marine Areas. The online resource also [includes information](#) about the co-managers, tribes, and partners collaborating with WDFW. These emergency response participants can use the EGC Hub to submit catch data, learn about required permits and ways to minimize bycatch, and access information about available funding, equipment, and other resources.

The EGC Hub also features an [interactive StoryMap](#) with a comprehensive overview of European green crabs in Washington and their history, as well as identification resources and ways to [report sightings](#).

Field Highlight: Efforts by coastal shellfish growers, tribes, partners

Without a doubt, co-managers, tribes, and partners working on the Pacific Coast of Washington are catching a lot of European green crabs (EGC). Of the approximately 72,000 EGC caught in our state so far this year, more than 69,000 have come from the coast. In 2022, coastal practitioners removed more than 204,000 of the 285,000-plus EGC caught in Washington waters.

Such high capture numbers are due to the substantial efforts of coastal co-managers, tribes, and partners working to control EGC, including Willapa-Grays Harbor Oyster Growers Association (WGHOGA), the Pacific Coast Shellfish Growers Association, Shoalwater Bay Indian Tribe, Pacific and Grays Harbor Conservation Districts, Pacific County Vegetation Management, WDFW Aquatic Invasive Species unit, Washington Department of Natural Resources, WSU Extension, U.S. Fish and Wildlife Service, and Washington Sea Grant. **WDFW and the ICS are deeply appreciative of these efforts and continue to provide support, resources, equipment, and scientific input.**

WGHOGA and their member shellfish growers have removed more than 17,000 EGC from Willapa Bay and almost 28,000 EGC from Grays Harbor this spring. This makes WGHOGA the organization that has removed the greatest number of EGC in 2023 so far, and it speaks to the commitment of coastal shellfish growers to protecting Washington's marine resources.

The high catch numbers in Willapa Bay and Grays Harbor are likely a sign of a high concentration of invasive crabs at these locations. This makes sense given the area's geography, environment, and that EGC have been on the coast longer than they have been in the Salish Sea. Coastal waters are also more readily inundated with EGC larvae floating in on currents from California, Oregon, and British Columbia. Willapa Bay and Grays Harbor provide a hospitable environment for EGC due to their sheltered, shallow water, and controlling these persistent infestations will take dedicated work.



WDFW is committed to continuing efforts to provide coastal communities with the resources they need to continue the work of controlling EGC. As indicated in an earlier section, the Washington State Legislature and governor designated \$6,082,000 this April to be appropriated annually for green crab management in the 2023-25 biennium. **Significant portions of this funding will be going to the coast**, including \$2 million for the Pacific and Grays Harbor Conservation Districts to support coastal work and \$950,000 to the Makah Tribe.

WDFW has also been supporting coastal efforts with dedicated staff based in Montesano and Nahcotta. These local teams consistently trap dedicated sites and are available to assist other co-managers, tribes, or partners in the field. Additionally, WDFW field teams transport traps, bait, and other equipment, and take EGC that have been caught to a fertilizer company to reduce waste.

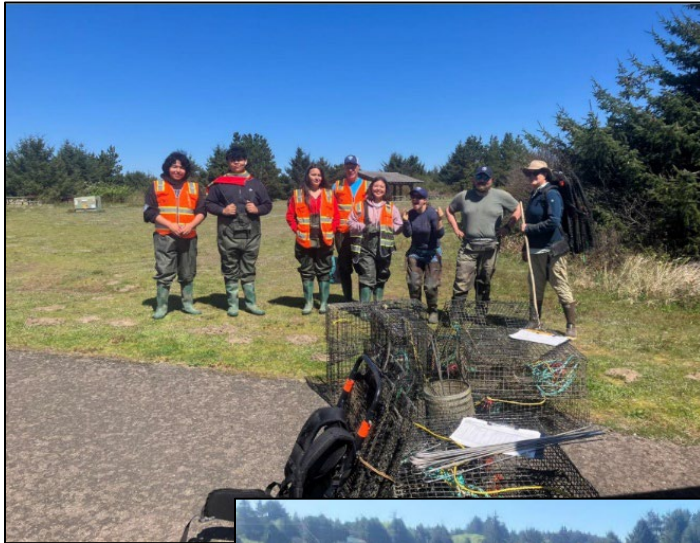
Photos and Multimedia Highlight:



Left: Matthew Hoehn (WDFW) tabling at the Port Townsend Farmers Market on May 20.

Right: WDFW outreach table set up at the Grays Harbor Shorebird Festival on May 6-7.



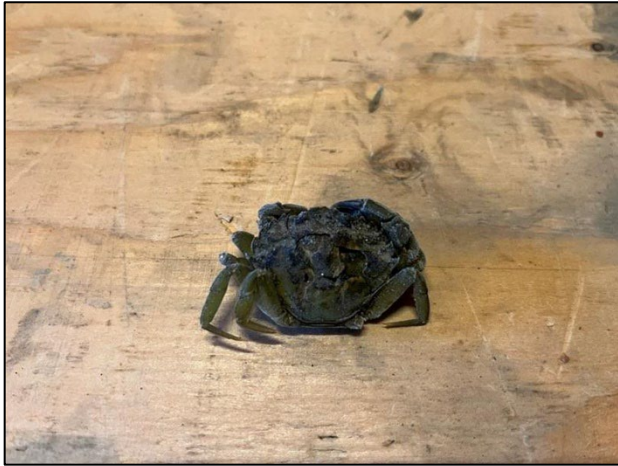


Left: Four Taholah High School students with teacher Jerry Walther, Neville Magone, Lee First, and Alexa Brown (DNR). Photo by Scott Mazzone.



Above: Lee First teaching one Taholah High School students about trapping for green crabs. Jerry Walther, class teacher, is in the background checking a trap with Neville Magone and one student. Photo by Alexa Brown (DNR)





Left: Young of the year green crab caught by LNR. Photo by Jonathan Hallenbeck.

Below left: Aina and Natalie (WSG) processing catch from traps. Photo by Alex Stote (WSG).



Above right: Nate (WSG) holding a young of the year green crab. Photo by Alex Stote (WSG).

General Updates

European Green Crab Multi-Agency Coordination Group

The European Green Crab (EGC) Multi-Agency Coordination Group (MAC Group) met twice in



May and twice in June. At these meetings, MAC Group members discussed the latest research on EGC as well as ongoing emergency measures, management, and funding.

At the May 24 MAC Group meeting, Incident Commander Allen Pleus announced his retirement, scheduled for this fall, and the transition of Justin Bush into the role of WDFW's Aquatic Invasive Species Policy Manager.

Science Research Task Force

The EGC Research Task Force (RTF) is an organization of researchers, managers, and experts on EGC from across the Pacific coast of North America. The RTF provides a forum to discuss the current state of EGC research and promote synergy in research efforts. Additionally, the RTF aims to develop a ranked list of needed EGC research with a primary focus on improving the prevention, detection, and management of EGC. The RTF is informing management efforts in WA by developing technical thresholds for EGC impact, including a threshold at which EGC populations no longer harm environmental, economic, or cultural resources.

Curtis Roegner of the National Oceanic and Atmospheric Administration (NOAA) gave an update on NOAA's telemetry research on EGC movements within Willapa Bay at the May 24, 2023 MAC Group meeting. EGC were found to behave very differently from Dungeness crab, which were also tracked in this study. EGC showed utilization of both intertidal and subtidal areas, and [a time-lapse video was shown](#) of their movements throughout the five-month study. At the May 10, 2023 MAC Group meeting Abby Keller, a Ph.D. Student at University of California Berkeley, gave an overview her research to determine the effect of trapping on EGC populations and what trapping effort is needed to minimize ecological damage.

WDFW EGC staff visit Canada to provide support, expertise

At the end of February and beginning of March of this year, Chelsey Buffington, the European green crab (EGC) project lead for WDFW, made a trip to Canada. In New Westminster, British Columbia she shared the stage with Renny Talbot from the Department of Fisheries and Oceans (DFO) Canada, to present at the Invasive Species Council British Columbia (ISCBC) Annual Forum and Annual General Meeting on transboundary actions underway for EGC management.

After the presentation, Buffington took a ferry to Vancouver Island to visit Sooke (just West of Victoria) and meet with Tyranna Souque and Ryan Chamberland from the Coastal Restoration Society (CRS) and Maria Catanzaro from the Pacific Salmon Foundation (PSF). For the next two days they trapped for EGC from a boat within Sooke Basin in all kinds of weather, including rain, wind, and hail.

All groups were able to learn a lot from one another during this time. WDFW and PSF learned how CRS trapped for EGC from boats using groundlines and their methods for quick and effective trap processing. WDFW shared with CRS and PSF how the agency conducts land-based operations in Washington. CRS and WDFW also learned how innovative technologies, such as app-based data collection tools for streamlined data management and transparency, were being used currently.



WDFW shared the status of the EGC Data Collection tools (Esri's Survey123, Quick Capture, and the [EGC Hub](#)) and shared a presentation on the basics of EGC, native species identification, and various management practices (Early Detection, Monitoring, Assessments, Removal, Control, Education and Outreach) taking place in Washington. There were discussions about the challenges and rewards of working across multiple jurisdictions and how communication and collaboration is vital for all involved in the management of EGC. The information sharing and support across borders has been extremely important in advancing our knowledge and understanding of EGC and how to manage them as we continue to see increases in population and geographical range.

Washington Sea Grant blog: 2022 Season Wrap Up – Washington Coast

On June 15, Washington Sea Grant's Crab Team published their 2022 coastal wrap-up blog, available online (wsg.washington.edu/2022-season-wrap-up-wa-coast) and excerpted below:

"As we dive into the 2023 European green crab trapping season, it's important to reflect on the insights gained from the coastal green crab populations in 2022. This summary of green crab observations from Washington's coastal estuaries complements our [Inland 2022 wrap-up](#), rounding out our focus on the trends and patterns observed from green crab trapping results across the state. We pulled from several different data sources to piece together an understanding of changing population dynamics on the coast, from the expansion into new habitats to changes in abundance and seasonal trends."

Communications, outreach, and community events

Throughout May and June of 2023, WDFW staff and Esri consultants were hard at work preparing for the [launch of the online EGC Hub](#).

During this same period, Washington Sea Grant (WSG) and Washington State University Extension staff have been busy training volunteers on how to identify EGC and complete a community science monitoring protocol. All 2023 trainings have been completed, but you can learn more about the program on the WSG [Molt Search](#) webpage.

Among other outreach, education, and community events on the Washington Coast and in the Puget Sound Region, WDFW attended the Port Townsend Farmers Market, the Grays Harbor Shorebird Festival, and the Pacific County Marine Resource Committee Science Conference. Additionally, WDFW helped organize King County Molt Search training as well as a Shellfish Day on Hood Canal with Outdoor Asian and Pacific Coast Shellfish Growers Association where green crab identification information was shared. More than 600 people were reached at these events.

During the months of May and June of 2023, WDFW distributed more than five thousand [EGC rack cards](#) and over six thousand [EGC wallet ID cards](#) to partners. To reach more community members, WDFW had the EGC rack card translated into a [Spanish language version](#).

Contact jessica.ostfeld@dfw.wa.gov if you are interested in acquiring copies of the Spanish rack card or other EGC [outreach materials](#), or if your organization would benefit from having EGC outreach materials translated into other languages.

Public Reporting and Crab Identification



WDFW continues to receive reports from the public of native crab species misidentified for invasive European green crabs. While we appreciate the public interest in helping to identify invasive species, **these incidents are examples of why WDFW calls on the public to photograph and report suspected green crabs at: wdfw.wa.gov/greencrab**, returning the crab in question unharmed to the water where it was found. A

Most of these native crabs, including Graceful, Kelp, and Hairy shore crabs, are regulated as Unclassified Marine Invertebrates and are illegal to kill, harvest, retain, or possess. If verified as European green crabs, WDFW will follow up with trapping and monitoring if found in a new area.

Crab identification guides and resources are also available [on the EGC Hub](#) (as well as the EGC reporting form) and WDFW's [webpage](#), as well as at www.wdfw.wa.gov/greencrab.

European green crabs are shore crabs and are found in shallow areas—typically less than 25 feet of water—including estuaries, intertidal zones, and beaches. They are not likely to be caught by shrimpers or crabbers operating in deeper water, but may be encountered by beachgoers, waders, clam and oyster harvesters, or those crabbing off docks or piers in shallow areas.

Summary Statement for Background

On January 19, 2022, Washington State Governor Inslee issued Emergency Proclamation 22-02 which ordered the Washington Department of Fish and Wildlife (WDFW) “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.” This is a statewide proclamation for all marine and estuarine waters of the state that to be effective, will require coordination across state, tribal, and federal jurisdictions. To address this large and complex task, WDFW has implemented an Incident Command System (ICS) structure to facilitate a statewide European green crab (EGC) management strategy. The state Emergency Management Division has assigned this as Mission #22-1085. Since this is a relatively slower-moving emergency (as compared to earthquake or wildfire response), the ICS structure will be used as the overall framework for WDFW communications and coordination. WDFW’s Aquatic Invasive Species (AIS) unit anticipates deploying more than 25 staff and 1,000 traps during the 2023 field season, along with other equipment and resources.

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Public updates on European Green Crab Management are posted at:
<https://wdfw.wa.gov/species-habitats/invasive/carcinus-maenas>

For more information or for media inquiries, please contact the European Green Crab Public Information Officer at chase.gunnell@dfw.wa.gov or contact ais@dfw.wa.gov.

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