

Puget Sound Dungeness Crab and Spot Prawn Consumption Advisory

July 2016



Overview

In 2011 and 2012, Washington State Department of Fish and Wildlife (WDFW) conducted an assessment of toxic chemical contaminants in Puget Sound Dungeness crab and spot prawn. Sampling was conducted in nine WDFW Marine Areas and three urban embayments.

The contaminants investigated were persistent organic pollutants which included polychlorinated biphenyls (PCBs), polybrominated diphenyl ethers (PBDEs), polycyclic aromatic hydrocarbons (PAHs), and organochlorine pesticides as well as six metals (mercury, arsenic, cadmium, copper, lead, and zinc).

WDFW evaluated how much of these contaminants were in Dungeness crab muscle (meat), hepatopancreas (crab butter), spot prawn muscle (tail) and head tissue. The Washington State Department of Health (DOH) used this information to determine if they were safe to eat.

Findings

You can safely eat Puget Sound Dungeness crab meat and spot prawn tails from most marine areas. However, there are restrictions on how much crab butter and spot

prawn heads you can eat. **See specific guidance on page 3.**

Dungeness Crab

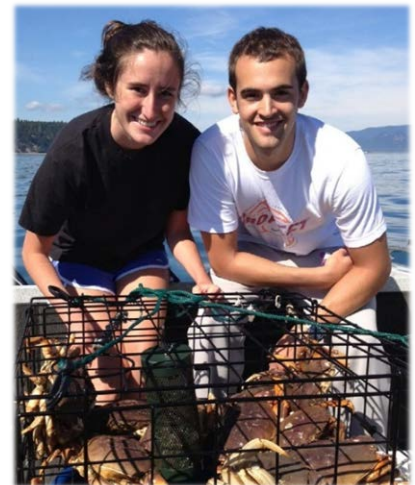
Based on tissue concentrations, frequency of detection, and toxicity, DOH concluded that Dungeness crab meat can be safely eaten at unrestricted amounts from all Puget Sound marine areas except Marine Area 10 and from urban bays.

PCBs were detected in Dungeness crab from all marine areas and were highest in urban areas. DDT, PAHs, and PBDEs were detected in crab but not at levels that impact your health. Guidance for eating crab butter is more restrictive because contaminant concentrations were higher than in crab meat.

Metal concentrations were evenly distributed in Dungeness crab from all marine areas and urban bays. Mercury was the only metal detected at greater levels in crab from urban than non-urban areas.

Spot Prawn

DOH concluded that spot prawn tails can be safely eaten at unrestricted amounts from all Puget Sound marine areas except for Elliott Bay, Sinclair Inlet, and Commencement Bay (no more than



eight meals per month in these urban area bays). However, elevated levels of PCBs, cadmium, and mercury were found in the heads of spot prawn leading to more restrictive guidance.

Everyone should follow this guidance especially women who are or might become pregnant, nursing mothers, and young children.

The developing fetus and child are most at-risk to health impacts when exposed to chemical contaminants.

Marine Area Map

The map outlines nine WDFW “Recreational Marine Areas” (MAs) – (fishery management areas for marine recreational fishing). The tables on page 3 show consumption guidance for each of the MAs outlined and three urbanized embayments.

How To Use Tables (page 3)

If the guidance is unrestricted consumption, you can eat as much as you want. If you eat the recommended amount from an area that has restrictions, no other seafood should be eaten that week or month.

What is a Serving?

A serving size is 8 ounces uncooked seafood for a 160 pound adult.

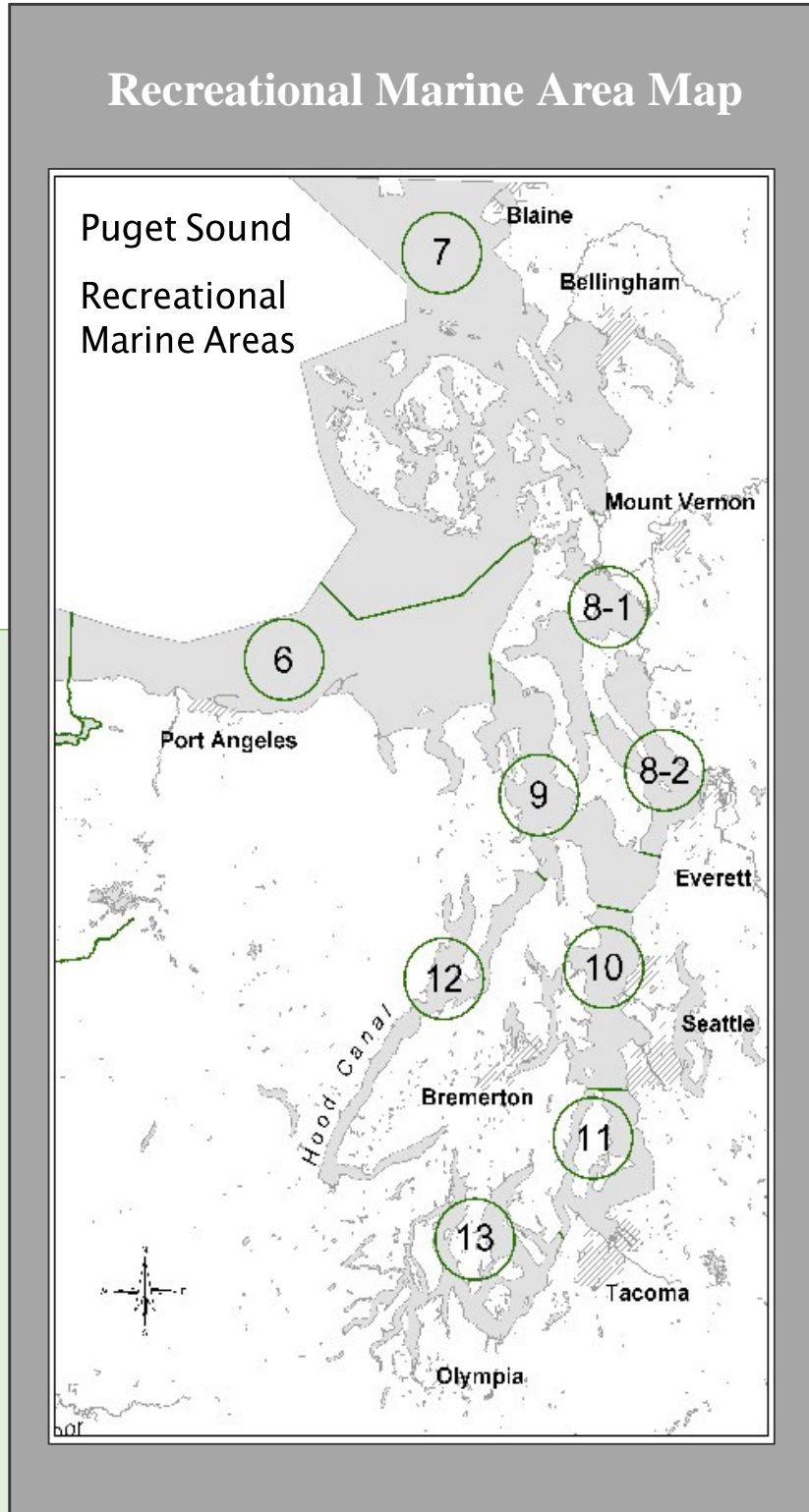
If you weigh more or less than 160 pounds, add or subtract one ounce for every 20-pound difference in body weight.

160 lbs. = 8 ounces uncooked fish
80 lbs. = 4 ounces uncooked fish



For Adults For Children

A serving is about the size and thickness of your hand.



Give children smaller servings.

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Puget Sound Dungeness Crab – Consumption Guidance Table

Avoid Dungeness crab butter.

Marine Area/Location	Crab Meat Consumption Guidance	Crab Butter Consumption Guidance
6 East Juan de Fuca Strait	Unrestricted*	4 servings per month
Exception: Port Angeles Harbor	4 servings per month	Do not eat crab butter
7 San Juan Islands	Unrestricted	4 servings per month
8.1 Deception Pass, Hope Island & Skagit	Unrestricted	4 servings per month
8.2 Port Susan/Port Gardner	Unrestricted	1 serving per month
9 Admiralty Inlet	Unrestricted	2 servings per month
10 Seattle-Bremerton	8 servings per month	Do not eat crab butter
Exception: Elliott Bay	2 servings per month	Do not eat crab butter
Exception: Sinclair Inlet	2 servings per month	Do not eat crab butter
11 Tacoma-Vashon	Unrestricted	2 servings per month
Exception: Commencement Bay	4 servings per month	2 servings per month
12 Hood Canal	Unrestricted	2 servings per month
13 South Puget Sound (South of the Tacoma Narrows)	Unrestricted	1 serving per month

*Consumption is unlimited.



Puget Sound Spot Prawn – Consumption Guidance Table

Avoid spot prawn heads.

Marine Area/Location	Spot Prawn Meat Consumption Guidance	Spot Prawn Heads Consumption Guidance
6 East Juan de Fuca Strait	Unrestricted*	8 servings with heads per month
7 San Juan Islands	Unrestricted	Unrestricted
8.1 Deception Pass, Hope Island & Skagit	Unrestricted	Do not eat heads
8.2 Port Susan/Port Gardner	Unrestricted	Do not eat heads
9 Admiralty Inlet	Unrestricted	Do not eat heads
10 Seattle-Bremerton	Unrestricted	Do not eat heads
Exception: Elliott Bay	8 servings per month	Do not eat heads
Exception: Sinclair Inlet	8 servings per month	Do not eat heads
11 Tacoma-Vashon	Unrestricted	Do not eat heads
Exception: Commencement Bay	4 servings per month	Do not eat heads
12 Hood Canal	Unrestricted	8 servings with heads per month
13 South Puget Sound (South of the Tacoma Narrows)	Unrestricted	Do not eat

*Consumption is unlimited.

How do PCBs and Mercury get into Puget Sound?

Chemical contaminants like PCBs and mercury enter the air, water, and soil during their manufacture, use, or disposal. Once in Puget Sound they settle into sediments. Seafood that eat prey associated with sediments collect these contaminants in their tissues. These contaminants can be passed to humans who eat seafood. Learn more on how contaminants get into seafood at doh.wa.gov/CommunityandEnvironment/Food/Fish/ContaminantsinFish.



For More Information

Health Benefits of Seafood

Seafood are an important part of a healthy diet. Learn more at doh.wa.gov/CommunityandEnvironment/Food/Fish/HealthBenefits

Fish Advisories in Washington State

Washington State Department of Health Fish Consumption Advisory Program 1-877-485-7316
doh.wa.gov/fish

Toxics in Biota

Puget Sound Ecosystem Monitoring Program Washington Department of Fish and Wildlife
wdfw.wa.gov/conservation/research/projects/marine_toxics/index.html

Fishing Regulations in Puget Sound

Washington State Department of Fish and Wildlife 360-902-2700
wdfw.wa.gov/fishing

Seafood graphics courtesy of WDFW

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