

DIOXIN AND FURAN RESIDUES IN FISH/SHELLFISH AND SEAWEED FROM THE VICINITY OF BRITISH COLUMBIA PULP MILLS

Summary of Results and Recommendations

<u>Site</u>	<u>Species</u>	<u>Sampling Location</u>	<u>Potential Dioxin/Furan Exposure</u>	<u>Present Fishing Status at Location</u>	<u>Health Protection Branch Consumption Recommendation</u>
Burrard Inlet	English Sole - fillet	Vancouver Harbour, mouth of Seymour River	Low	Recreational, native and commercial harvesting of this species	No restriction on consumption
	English Sole - liver	Vancouver Harbour, mouth of Seymour River	Low	Potential recreational and native harvesting of this species	No restriction on consumption
	Coonstripe Shrimp - soft tissue	Vancouver Harbour, mouth of Seymour River	Low	Minor recreational and commercial harvesting of this species	No restriction on consumption
	Dungeness Crab - muscle	Vancouver Harbour, Mosquito Creek Marina	Low	Closed to commercial and recreational harvesting for navigational reasons	No restriction on consumption
	Dungeness Crab - hepatopancreas	Vancouver Harbour, Mosquito Creek Marina	High	"	Consumption of crab hepatopancreas should not exceed 90 g/week (3 oz/week)
	Dungeness Crab - muscle	Vancouver Harbour, off Berry Point	Low	Recreational and commercial harvesting of this species	No restriction on consumption
	Dungeness Crab - hepatopancreas	Vancouver Harbour, off Berry Point	Low	"	No restriction on consumption
	English Sole - fillet	Port Moody, Reed Pt. Marina	Low	Recreational, native and commercial harvesting of this species	No restriction on consumption
	English Sole - liver	Port Moody, Reed Pt. Marina	Low	Potential recreational and native harvesting of this species	No restriction on consumption
	Clams - soft tissue	Port Moody, mouth of Mossam Creek	Low	"	No restriction on consumption
	Dungeness Crab - muscle	Port Moody Arm, opposite ESSO refinery	Low	Recreational and commercial harvesting of this species	No restriction on consumption
	Dungeness Crab - hepatopancreas	Port Moody Arm, opposite ESSO refinery	Low	"	No restriction on consumption
	Dungeness Crab - muscle	Bedwell Bay	Low	Recreational and commercial harvesting of this species	No restriction on consumption
	Dungeness Crab - hepatopancreas	Bedwell Bay	Low	"	No restriction on consumption
	English Sole - fillet	False Creek, E of Cambie Bridge	Low	Potential recreational and native harvesting of this species	No restriction on consumption

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Port Alberni	English Sole - liver	False Creek, E of Cambie Bridge	Low	"	No restriction on consumption
	Dungeness Crab - muscle	False Creek, Granville Island	Low	Closed to commercial and recreational harvesting for navigational reasons	No restriction on consumption
	Dungeness Crab - hepatopancreas	False Creek, Granville Island	Low	"	No restriction on consumption
	Abalones - soft tissue	Barkley Sound, Effingham Inlet (50km SW of Port Alberni Mill)	Low	Closed due to declining stocks of this species	No restriction on consumption
	Sea cucumbers - soft tissue	Barkley Sound, Effingham Inlet (50km SW of Port Alberni Mill)	Low	Commercial and potential native harvesting of this species	No restriction on consumption
Port Alberni	Sea urchins - gonads	Barkley Sound, Effingham Inlet (50km SW of Port Alberni Mill)	Low	Commercial and native harvesting of this species	No restriction on consumption
	Clams - soft tissue	Barkley Sound, Mayne Bay (67km SW of Port Alberni Mill)	Low	Commercial, recreational and native harvesting of this species	No restriction on consumption
	Limpets - soft tissue	Barkley Sound, Mayne Bay (67km SW of Port Alberni Mill)	Low	Potential recreational and native harvesting of this species	No restriction on consumption
Elk Falls	Gooseneck Barnacles - soft tissue	Barkley Sound, Humphrey's Reef (76km SW of Port Alberni Mill)	Low	Commercial and native harvesting of this species	No restriction on consumption
	Porphyra - vegetative leaf	Quadra Island, South of Campbell River (16km SE of Elk Falls mill)	Low	No known commercial, recreational or harvesting of this species	No restriction on consumption
Harmac	Chitons - soft tissue	Dodd Narrows, south of Nanaimo (4.5km SE of Harmac mill)	Low	Native harvesting of this species	No restriction on consumption

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	Sea urchins - gonads	Kendrick Island, near Manaimo (12km W of Harmac mill)	Low	Commercial and native harvesting of this species	No restriction on consumption
	Butter clams - soft tissue	Qualicum Beach, north of Manaimo (52km NW of Harmac mill)	Low	No information available	No restriction on consumption
	Pacific oysters - soft tissue	Qualicum Beach, north of Manaimo (52km NW of Harmac mill)	Low	"	No restriction on consumption
Crofton	Chitons - soft tissue	Between Crofton mill and Ferry Wharf (300m S of Crofton mill)	Low	Native harvesting of this species	No restriction on consumption
	Oysters - soft tissue	Sansum Narrows (9km SE of Crofton mill)	Low	Recreational, commercial and native harvesting of this species	No restriction on consumption
Gold River	Coho Salmon - roe	Gold River (800m S of Gold River Mill)	Low	Native harvesting of this species	No restriction on consumption
	Oysters - soft tissue	Gold River, Silverado Creek (17km SW of Gold River Mill)	Low	Recreational, commercial and native harvesting of this species	No restriction on consumption
Powell River	Oysters - soft tissue	Cortes Island, Squirrel Cove (44km NW of Powell River Mill)	Low	"	No restriction on consumption
	Oysters - soft tissue	Cortes Island, Gorge Harbour (46km NW of Powell River Mill)	Low	Recreational, commercial harvesting of this species; no known native harvesting	No restriction on consumption
	Oysters - soft tissue	Central Coast, Townley Islands (28km NW of Powell River Mill)	Low	No known recreational, commercial or native harvesting of this species	No restriction on consumption

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Powell River	Oysters - soft tissue	Nelson Island, Vanguard Bay (43km SE of Powell River Mill)	Low	Commercial farming and recreational harvesting of this species	No restriction on consumption
	Oysters - soft tissue	Nelson Island, Blind Bay (39km SE of Powell River Mill)	Low	"	No restriction on consumption
Kitimat Arm	Eulachon - grease	Kemano River (121km SE of Eurocan Pulp Mill)	Low	Minor recreational and native harvesting of this species; no commercial harvesting activities	No restriction on consumption
	Prawn - muscle	Kildata Arm (34km SE of Eurocan Pulp Mill)	Low	Minor native harvesting of this species; no commercial activities	No restriction on consumption
	Prawn - muscle	Coste Island, West Side (31km S of Eurocan Pulp Mill)	Low	No known harvesting of this species from this site	No restriction on consumption
	Mussels - soft tissue	Hilton Point (42km SW of Eurocan Pulp Mill)	Low	Recreational, commercial and native harvesting of this species closed due to paralytic shellfish poisoning toxins	No restriction on consumption
	Clams - soft tissue	Gobeil Island (30km S of Eurocan Pulp Mill)	Low	"	No restriction on consumption
	Mussels - soft tissue	Loretta Channel (46km SW of Eurocan Pulp Mill)	Low	"	No restriction on consumption
	Clams - soft tissue	Alcan Beach (17km S of Eurocan Pulp Mill)	Low	"	No restriction on consumption
	Dungeness Crab - muscle	Foch Lagoon (54km SW of Eurocan Pulp Mill)	Low	Major recreational and native harvesting of this species; no commercial activities	No restriction on consumption
	Dungeness Crab - hepatopancreas	Foch Lagoon (54km SW of Eurocan Pulp Mill)	Low	"	No restriction on consumption

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	Dungeness Crab - muscle	Emsley Cove (29km SW of Eurocan Pulp Mill)	Low	Recreational, commercial and native harvesting of this species closed due to coliform contamination	No restriction on consumption
	Dungeness Crab - hepatopancreas	Emsley Cove (29km SW of Eurocan Pulp Mill)	Low	"	No restriction on consumption
	Dungeness Crab - muscle	Hawkesbury Island, Northern Bay (52km SW of Eurocan Pulp Mill)	Low	Major recreational and native harvesting of this species; no commercial activities	No restriction on consumption
	Dungeness Crab - hepatopancreas	Hawkesbury Island, Northern Bay (52km SW of Eurocan Pulp Mill)	Low	Major recreational and native harvesting of this species; no commercial activities	No restriction on consumption
	Mussel - soft tissue	Eagle Bay (36km S of Eurocan Pulp Mill)	Low	Recreational, commercial, and native harvesting of this species closed due to paralytic shellfish poisoning toxins	No restriction on consumption
	Dungeness Crab - muscle	Markland Point (36km SW of Eurocan Pulp Mill)	NA	Minor recreational and native harvesting of this species; no commercial activities	No restriction on consumption
	Dungeness Crab - hepatopancreas	Markland Point (36km SW of Eurocan Pulp Mill)	Low	Minor recreational and native harvesting of this species; no commercial activities	No restriction on consumption
Kitimat Arm	Dungeness Crab - hepatopancreas	Kitimat Estuary (15km S of Eurocan Pulp Mill)	High	Closure in effect for commercial harvesting of Crabs due to dioxin/furan contamination; advisories involving consumption of crab hepatopancreas have been issued to native and sportsfishermen	Consumption of crab hepatopancreas should not exceed 80 g/week (3 oz/week)
	Dungeness Crab - hepatopancreas	Minette Bay (15km SE of Eurocan Pulp Mill)	High	"	Consumption of crab hepatopancreas should not exceed 90 g/week (3 oz/week)
	Dungeness Crab - hepatopancreas	Kitimaat Village (19km SE of Eurocan Pulp Mill)	Low	"	No restriction on consumption*
	Dungeness Crab - hepatopancreas	Gobeil Bay (32km S of Eurocan Pulp Mill)	Low	Recreational, commercial and native harvesting of this species	No restriction on consumption

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B.C. Coast	Red Snapper - fillet	Queen Charlotte Islands, Skidegate Narrows	NA	Recreational, commercial and native harvesting of this species	No restriction on consumption
	Red Snapper - liver	Queen Charlotte Islands, Skidegate Narrows	NA	"	No restriction on consumption
	Prawn - muscle	Queen Charlotte Islands, Trounce Inlet	Low	Commercial harvesting under an Indian food fishery permit; minor recreational harvesting of this species	No restriction on consumption
	Dungeness Crab - muscle	Queen Charlotte Islands, Government Creek	Low	No commercial harvesting; minor native and recreational harvesting of this species	No restriction on consumption
	Dungeness Crab - hepatopancreas	Queen Charlotte Islands, Government Creek	Low	"	No restriction on consumption
	Dungeness Crab - muscle	Central Coast, Burke Channel	Low	Native and recreational harvesting of this species; closed to commercial harvest since site allocated to sport and native activities	No restriction on consumption
	Dungeness Crab - hepatopancreas	Central Coast, Burke Channel	Low	"	No restriction on consumption
	Dungeness Crab - muscle	Johnstone Strait, Philips Arm (500m W of logging camp, at mouth of Philips R.)	Low	Recreational, commercial and native harvesting of this species	No restriction on consumption
	Dungeness Crab - hepatopancreas	Johnstone Strait, Philips Arm (500m W of logging camp, at mouth of Philips R.)	Low	"	No restriction on consumption
	Prawn/shrimp - muscle	Johnstone Strait, Philips Arm (4km S of logging camp at mouth of Philips R.)	Low	Commercial and some recreational harvesting of this species	No restriction on consumption

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Victoria Harbour	Dungeness Crab - muscle	Victoria, Selkirk Water	Low	Recreational and commercial harvesting of this species	No restriction on consumption
	Dungeness Crab - hepatopancreas	Victoria, Selkirk Water	Low	"	No restriction on consumption
	Dungeness Crab - muscle	Victoria, West Bay	Low	"	No restriction on consumption
	Dungeness Crab - hepatopancreas	Victoria, West Bay	High	"	Consumption of crab hepatopancreas should not exceed 85 g/week (3 oz/week)

Notes:

- m - meters; Km - Kilometers; E - East; S - South; W - West; NW - NorthWest; SW - SouthWest; SE - SouthEast
 * - Based on the weighted average of present and previous results
 NA - Not applicable because no dioxins nor furans were detected in this sample