

Attachment 2 Fish Species Identified in the Lower Duwamish Waterway

COMMON NAME	SCIENTIFIC NAME	FAMILY	ABUNDANCE ^a	ABUNDANCE CITATION	ENVIRONMENT	HABITAT	E/H CITATION	DIET	DIET CITATION
American shad	<i>Alosa sapidissima</i>	Engraulidae	rare	9, 10, 11, 12, 41	anadromous	bays, estuaries, freshwater	32	plankton, copepods, mysids, small fish	33
Bay goby	<i>Lepidogobius lepidus</i>	Gobiidae	rare	2, 3, 6	marine (estuary)	benthic (mud bottom)	13	benthic organisms	28
Bay pipefish	<i>Syngnathus grisiolineatum</i>	Syngnathidae	common	11	marine	demersal (associated with eel grass in the intertidal areas)	15	isopods, amphipods	14
			rare	6, 10					
Big skate	<i>Raja binoculata</i>	Rajidae	rare	7, 11	marine	benthic (sandy and gravelly bottoms)	16	crustaceans, fish	14
Blackbelly eelpout	<i>Lycodopsis pacifica</i>	Zoarcidae	rare	11	marine	over soft bottoms	32	worms, crustaceans, small bivalves, brittle stars	34
Bluegill	<i>Lepomis macrochirus</i>	Centrarchidae	rare	41	freshwater	weed beds	21	snails, worms, small crayfish, insects	21
Brown rockfish	<i>Sebastes auriculatus</i>	Scorpaenidae	rare	11, 12	marine	shallow, low-profile, rocky reefs	32	finfish, benthic crustaceans, fish eggs, larvae	35
Buffalo sculpin	<i>Enophrys bison</i>	Cottidae	rare	1, 2, 3, 4, 7, 11, 12	marine (estuary)	benthic (inshore rocky and sandy areas)	13	mainly algae, also amphipods, small fishes, crabs, polychaetes, nudibranchs, isopods	13, 29
Bull trout	<i>Salvelinus confluentes</i>	Salmonidae	rare	6, 9	anadromous	benthopelagic (near shore)	21	mainly fish, plus zooplankton	31
Butter sole	<i>Isopsetta isolepis</i>	Pleuronectidae	common	6	marine (estuary)	benthic (sandy bottom)	13	worms, fish, shrimps	14
			rare	7					
Chinook salmon ^b	<i>Oncorhynchus tshawytscha</i>	Salmonidae	abundant	1, 4, 5, 6, 9, 10, 41	anadromous	benthopelagic	27	juveniles: insects, epibenthic crustaceans, pelagic organisms	30
			rare	2					
Chum salmon	<i>Oncorhynchus keta</i>	Salmonidae	abundant	5, 6, 9, 41	anadromous	benthopelagic	27	juveniles: copepods, amphipods, cumaceans, euphausiids	29
			common	10					
			rare	1, 4					

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C-O sole	<i>Pleuronichthys coenosus</i>	Pleuronectidae	rare	7, 11	marine	benthic (flat bottoms, rocky areas)	13	isopods, fish, polychaetes, amphipods, turbellarians, bivalves	29
Coho salmon ^b	<i>Oncorhynchus kisutch</i>	Salmonidae	abundant	6, 9, 10	anadromous	benthopelagic	27	juveniles: insects, epibenthic crustaceans, pelagic organisms, small fish	29
			common	4, 10, 41					
			rare	1, 2					
Crescent gunnel	<i>Pholis laeta</i>	Pholidae	rare	6, 9, 11, 41	marine (estuary)	demersal (intertidal areas, under rocks)	13	gammarid amphipods, copepods, tanaids, isopods	29
Cutthroat trout	<i>Oncorhynchus clarki</i>	Salmonidae	rare	1, 4, 5, 6, 9, 10, 41	anadromous	benthopelagic	22	fish, epibenthic crustaceans, pelagic organisms, insects	18
Dolly Varden	<i>Salvelinus malma</i>	Salmonidae	rare	1, 4	freshwater	benthopelagic	21	fish, epibenthic crustaceans, pelagic organisms, insects	14
Dover sole	<i>Microstomus pacificus</i>	Pleuronectidae	common	2, 11	marine	benthic (mud bottom)	13	benthic invertebrates, echinoderms, mollusks, polychaetes	24
			rare	3					
English sole	<i>Parophrys vetulus</i>	Pleuronectidae	abundant	2, 3, 4, 7, 11, 12	marine (estuary)	benthic (sand and mud bottoms)	18	cumaceans, gammarid amphipods, polychaetes, tanaids, crabs, bivalves	29
			rare	1, 6					
Eulachon	<i>Thaleichthys pacificus</i>	Osmeridae	rare	3	anadromous	pelagic	13	plankton (only feeds while at sea)	20
Flathead sole	<i>Hippoglossoides elassodon</i>	Pleuronectidae	rare	2, 11, 12	marine	benthic (soft mud bottom, adults below 180 m)	13	polychaetes, cumaceans, gammarid amphipods, isopods, bivalves	29
Gunnel sp.	<i>Apodichthys sp.</i>	Pholidae	rare	10	marine	intertidal zone among rocks and shallow eelgrass beds	32	small crustaceans, mollusks	13
Great sculpin	<i>Myoxocephalus polyacanthocephalus</i>	Cottidae	rare	11	marine	intertidal areas, sand and mud bottoms	13	small fish	13

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Hybrid sole	<i>Inopsetta isopsetta ischyra</i>	Pleuronectidae	rare	1, 12	marine (estuary)	benthic	13	benthic organisms	14
Kelp perch	<i>Brachyistius frenatus</i>	Embiotocidae	rare	9	marine	among fronds in kelp beds from near surface to depths of about 30 m	32	small crustaceans, parasites	13
Largescale sucker	<i>Catostomus macrocheilus</i>	Catostomidae	rare	1, 2, 4, 6, 41	freshwater	demersal	21	algae, diatoms, insects, amphipods, and mollusks	20
Longfin sculpin	<i>Jordania zonope</i>	Cottidae	rare	11	marine	demersal, intertidal areas, rocky areas and kelp	13	amphipods, benthic copepods, crabs, shrimp, gastropods, polychaetes	38
Longfin smelt	<i>Spirinchus thaleichthys</i>	Osmeridae	abundant	1, 2, 11	anadromous	benthopelagic (close to shore, in bays and estuaries)	21	crab larvae, copepods, mysid shrimp	29
			common	12					
			rare	7, 9					
Longnose dace	<i>Rhinichthys cataractae</i>	Cyprinidae	rare	6	freshwater	demersal	21	mayflies, blackflies, and midges	20
Longnose skate	<i>Raja rhina</i>	Rajidae	rare	11	marine	partially or entirely buried in sand or silt bottoms	36	small fish, crustaceans, worms, mollusks	36
Mountain whitefish	<i>Prosopium williamsoni</i>	Salmonidae	rare	1, 6, 9	freshwater	benthopelagic	14	insects, invertebrates, eggs, small fish	14
Northern pikeminnow	<i>Ptychocheilus oregonensis</i>	Cyprinidae	rare	1, 6	freshwater	benthopelagic	20	insects, fish	20
Northern ronquil	<i>Ronquilus jordani</i>	Bathymasteridae	rare	11	marine	demersal	13	polychaetes, plankton, invertebrates, cladocerans, copepods	14
Northern sculpin	<i>Icelinus borealis</i>	Cottidae	rare	6	marine	demersal	13	benthic crustaceans, shrimps/prawns	14, 29
Pacific cod	<i>Gadus macrocephalus</i>	Gadidae	rare	2, 3, 4	marine	(demersal, continental shelf and upper slopes)	23	fish, octopi, large crustaceans, worms, amphipods	26, 29
Pacific herring	<i>Clupea pallasii</i>	Clupeidae	abundant	4, 9, 11	marine	benthopelagic (coastal, first year in bays)	14	planktonic crustaceans, fish larvae	14, 29
			common	1, 2, 7, 12					
			rare	6, 10					

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Pacific sand dab	<i>Citharichthys sordidus</i>	Paralichthyidae	common	11	marine	over soft sand bottoms	13	benthic crustaceans, worms	24
			rare	12					
Pacific sandlance	<i>Ammodytes hexapterus</i>	Ammodytidae	abundant	6, 9, 41	marine (brackish)	benthopelagic (surface or burrowed in sand)	13	zooplankton	17, 29
			common	4					
			rare	1, 10, 11					
Pacific staghorn sculpin	<i>Leptocottus armatus</i>	Cottidae	abundant	1, 2, 3, 4, 6, 9, 10, 11, 12	marine (lower estuary, offshore)	benthic (sandy bottom)	13	isopods, bivalve siphons, polychaetes, crabs, fish, tanaids, shrimp	19
			common	7					
Pacific tomcod	<i>Microgadus proximus</i>	Gadidae	abundant (juveniles)	7, 11	marine (brackish)	benthic (over sand)	23	shrimps, amphipods, isopods, gastropods, mussels, fishes	24
			common	2, 3, 12					
			rare	1, 4					
Padded sculpin	<i>Artedius fenestralis</i>	Cottidae	common	2, 3	marine	benthic	13	gammarid amphipods, isopods, tanaids, shrimp, copepods, small fish	18, 29
			rare	7, 12					
Peamouth chub	<i>Mylocheilus caurinus</i>	Cyprinidae	rare	9, 41	freshwater	demersal (brackish)	21	aquatic insects, larvae, terrestrial insects, crustaceans, mollusks, small fish	21
Penpoint gunnel	<i>Apodichthys flavidus</i>	Pholidae	rare	5, 6, 9	marine (estuary)	demersal (intertidal tide pools)	13	isopods, amphipods, shrimp, gastropods, other epibenthic crustaceans	29
Pile perch	<i>Rhacochilus vacca</i>	Embiotocidae	abundant	12	marine	demersal (rocky shores; near kelp, pilings, underwater structures)	13	isopods, bivalves, crabs, amphipods	29
			common	4, 7, 11					
			rare	1, 2, 3, 6, 9, 41					
Pink salmon ^b	<i>Oncorhynchus gorbuscha</i>	Salmonidae	rare	6, 41	anadromous	benthopelagic	27	juveniles: copepods, amphipods, barnacle larvae, cumaceans	27, 28
Plainfin midshipman	<i>Porichthys notatus</i>	Batrachoididae	common	11	marine	benthic (nearshore shelf, sand/mud bottom)	18	crustaceans, fish	14
			rare	2					

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Prickly sculpin	<i>Cottus asper</i>	Cottidae	common	12, 41	marine	benthic	13	benthic organisms	20
			rare	1, 2, 3, 4, 6, 9, 11					
Pygmy poacher	<i>Odontopyxis trispinosa</i>	Agonidae	rare	2, 3, 7, 11	marine	demersal (soft bottoms)	13	epibenthic invertebrates	14
Ratfish	<i>Hydrolagus colliei</i>	Chimeridae	rare	2, 7, 11	marine	demersal (sandy bottom)	13	worms, bivalves, crustaceans, fishes	17, 29
Redsided shiner	<i>Richardsonius balteatus</i>	Cyprinidae	common	6	freshwater	demersal	20	zooplankton, algae, insects	20
Rex sole	<i>Errex zachirus</i>	Pleuronectidae	rare	11	marine	demersal	37	worms, benthic crustaceans, mollusks	24
River lamprey	<i>Lampetra ayresi</i>	Petromyzontidae	rare	1, 4, 6, 9	anadromous	demersal	14	adult: fish juveniles: detritus, algae	20
Rock sole	<i>Lepidopsetta bilineata</i>	Pleuronectidae	abundant	7,11	marine (estuary)	benthic (more pebbly bottom than most other flatfish)	13	isopods, gammarid amphipods, polychaetes, cumaceans, bivalves, crabs, fish	29
			common	2, 3, 12					
Rockfish	<i>Sebastes</i> spp.	Scorpaenidae	rare	1, 8	marine	demersal (near structure)	25	crabs, gammarid amphipods, mysids, shrimp, fish	26
Roughback sculpin	<i>Chitonotus pugetensis</i>	Cottidae	common	11,12	marine	benthic (sand/mud bottom)	13	shrimps and other crustaceans	18
			rare	2, 3, 7					
Saddleback gunnel	<i>Pholis ornata</i>	Pholidae	rare	3, 5, 6, 9, 11, 12, 41	marine (estuary)	demersal (sandy bottom)	13	amphipods, isopods, polychaetes, copepods, cumaceans	29
Sand sole	<i>Psettichthys melanostictus</i>	Pleuronectidae	common	1, 2, 3, 7, 11, 12	marine, estuary	benthic (sandy bottom)	14	fishes, worms, crustaceans, and mollusks	14, 29
			rare	1					
Sailfin sculpin	<i>Nautichthys oculofasciatus</i>	Hemitripteridae	rare	11	marine	over rocks from inshore to depths of 110 m, often with algae	32	finfish, benthic crustaceans	19
Sharpnose sculpin	<i>Clinocottus acuticeps</i>	Cottidae	rare	6	marine	benthic (sand/vegetation)	13	benthic organisms	22

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Shiner surfperch	<i>Cymatogaster aggregata</i>	Embiotocidae	abundant	1, 4, 5, 6, 7, 9, 10, 11, 12, 41	marine (estuary)	demersal (in shallow water, around eelgrass beds, piers and pilings commonly in bays and quiet back waters)	13	amphipods, cumaceans, polychaetes, copepods, isopods, algae	22, 29
			common	2, 3					
Slender sole	<i>Lyopsetta exilis</i>	Pleuronectidae	rare	3, 11	marine	benthic (> 200 m depth)	13	carnivore	24
Snake prickleback	<i>Lumpenus saggita</i>	Stichaeidae	abundant	1, 2, 3, 4, 6	marine	benthopelagic (shallow bays and offshore waters)	13	bivalves, marine worms, amphipods	29
			common	9, 10, 11, 12					
			rare	7, 41					
Sockeye salmon ^b	<i>Oncorhynchus nerka</i>	Salmonidae	rare	40, 41	anadromous	benthopelagic	27	juveniles: insects, epibenthic crustaceans, pelagic organisms	28
Soft sculpin	<i>Gilbertidia sigalutes</i>	Cottidae	rare	4	marine	demersal	13	epibenthic crustaceans, phytoplankton, fish eggs/larvae	14
Speckled sanddab	<i>Citharichthys stigmaeus</i>	Bothidae	rare	7, 9, 11	marine	benthic (sandy bottom)	13	crustaceans, fish	19
Spiny dogfish	<i>Squalus acanthias</i>	Squalidae	rare	2, 11	marine	benthopelagic	26	primarily fish	27
Starry flounder	<i>Platichthys stellatus</i>	Pleuronectidae	abundant	1, 2, 3, 4, 6, 7, 9, 10, 11, 12, 41	marine (estuary, brackish)	benthic	22	isopods, fish, gammarid amphipods, polychaetes, gastropods, worms	14
			common	5					
Steelhead ^b	<i>Oncorhynchus mykiss</i>	Salmonidae	common	9, 10	anadromous	benthopelagic	39	juveniles: insects, epibenthic crustaceans, pelagic organisms	29
			rare	1, 4, 5, 6, 11, 41					
Striped seaperch	<i>Embiotoca lateralis</i>	Embiotocidae	common	1, 4, 12	marine	demersal	13	amphipods, isopods, crabs, shrimp	29
			rare	2, 3, 5, 6, 7, 9, 10					
Sturgeon poacher	<i>Podothecus acipenserinus</i>	Agonidae	rare	3, 11	marine	demersal (soft bottom)	13	cumaceans, gammarid amphipods, shrimp, copepods, polychaetes, tanaids	29
Surf smelt	<i>Hypomesus pretiosus</i>	Osmeridae	abundant	9	marine (brackish)	benthopelagic	22	isopods, cumaceans, larvaceans, copepods,	29
			common	1, 4, 6, 7, 41					

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			rare	11				amphipods	
Three-spine stickleback	<i>Gasterosteus aculeatus</i>	Gasterosteidae	abundant	41	marine, anadromous	benthopelagic (in/near vegetation)	21	worms, crustaceans, insects/larvae, small fish	20, 29
			common	1, 5, 6, 10, 11					
			rare	4, 12					
Tidepool sculpin	<i>Oligocottus maculosus</i>	Cottidae	rare	41	marine	demersal	13	unknown	
Torrent sculpin	<i>Cottus rhotheus</i>	Cottidae	rare	11	freshwater	demersal	21	crustaceans, midges and mayflies larvae, minnows	21
Tubesnout poacher	<i>Pallasina barbata</i>	Agonidae	rare	3, 11	marine	demersal (eelgrass & seaweeds)	13	amphipods, polychaetes, copepods, mysids	29
Walleye pollock	<i>Theragra chalcogramma</i>	Gadidae	rare	1, 2, 4	freshwater	benthopelagic	23	insects, midge larvae, fish	14
Whitespotted greenling	<i>Hexagrammos stelleri</i>	Hexagrammidae	common	7	marine (intertidal)	demersal (nearshore, near rocks, pilings and eelgrass beds)	23	gammarid amphipods, shrimp, crabs, fish, polychaetes	29
			rare	2, 11					

^a Abundance: abundant (numerically dominant); common (occurs in most samples); rare (occurs in few samples). Abundance characterizations reflect data collected by authors in the cited study. These data may reflect sampling gear bias for the species identified.

^b Adults are found in the LDW only as they migrate to spawning ground upstream of the LDW and include wild and hatchery species.

E/H – environment/habitat

Citations

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