



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
Seattle, WA 98115

NMFS Tracking Nos.:
2007/06695

February 7, 2008

Stacy Mason
Environmental Coordinator
Bonneville Power Administration – KEC
P.O. Box 3621
Portland, Oregon 97208-3621

Re: Endangered Species Act Section 7 Informal Consultation and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for the Port Angeles-Juan de Fuca Transmission Project (Dungeness-Elwha, HUC 17110020)

Dear Ms. Mason:

This correspondence is in response to your request for consultation under the Endangered Species Act (ESA). Additionally, this letter serves to meet the requirements for consultation under the Magnuson-Stevens Fishery Conservation and Management Act (MSA).

Endangered Species Act

The National Marine Fisheries Service (NMFS) has reviewed the Biological Assessment (BA) for the Port Angeles-Juan de Fuca Transmission Project and your request for consultation under the Endangered Species Act (ESA) on the effects of this project on Puget Sound (PS) Chinook salmon (*Oncorhynchus tshawytscha*), Hood Canal summer-run (HCSR) chum salmon (*O. keta*), PS steelhead (*O. mykiss*), humpback whales (*Megaptera novaeangliae*), Steller sea lions (*Eumentopias jubatus*), and Southern Resident (SR) killer whales (*Orcinus orca*). SR killer and humpback whales are listed as “endangered” and the other species are listed as “threatened” under the ESA, and may be present in the action area. In addition, you requested concurrence with your effect determination of “may affect, but not likely to adversely affect” designated critical habitat for PS Chinook salmon, HCSR chum salmon, and SR killer whales. This consultation with the Department of Energy’s Bonneville Power Administration (BPA) is conducted under section 7(a)(2) of the ESA, and its implementing regulations, 50 CFR Part 402.

According to the BA (received September 28, 2007) and supplemental information (received November 5, 2007, December 14, 2007 and January 14, 2008), the BPA proposes to authorize Sea Breeze Olympic Converter, L.P. to construct the U.S. portion



of an international electric power transmission cable that will extend from Victoria, British Columbia, Canada, across the bottom of the Strait of Juan de Fuca to Port Angeles, Clallam County, Washington. The cable will carry up to 550 megawatts of high-voltage direct current (HVDC) and will connect with BPA's substation at Port Angeles.

The cable will cross the Strait of Juan de Fuca, with approximately 10.5 miles being within waters of the United States, from the international boundary to the shoreline of Port Angeles Harbor. Where possible, the cable will be buried in the seafloor, using hydro-jetting with a remotely operated vehicle controlled by a ship following the cable-laying vessel or a sea plow or hydro-plow towed behind the cable-laying vessel. Where rocky bottoms are encountered, the cable will be laid on the surface and, in most cases, a protective pre-cast concrete or grout blanket would be placed over the cable for protection. In the shallow nearshore of Port Angeles Harbor, the cable will be installed using a horizontal directional drill (HDD). The HDD will bore a hole from an upland converter station, under the intertidal zone, and out to a distance of approximately 475 meters to 506 meters from the shoreline, where it will break through the sediment surface at a depth of approximately 8 meters below mean lower low water. At marine exit point for the HDD, approximately 8 cubic meters of sediment will be excavated to provide a smooth curve from the drill hole to the sea floor. Approximately 503 meters of the cable, from the HDD exit hole to the beginning of the trench, will be jetted into the substrate by divers.

Underwater noise levels (root mean square, or rms) associated with cable-laying operations are estimated to be 178 decibels (re: 1 micro-Pascal, μPa) at one meter from the vessel. These sounds are expected to attenuate to 160 dB (re: 1 μPa) at 16 meters from the vessel.

When the cable is carrying an electrical current, the temperature of the surrounding water and sediment will be increased and the local magnetic field will be disrupted. These effects will be greatest in areas where the cable cannot be buried and is lying on the surface, but the changes in temperature or the magnetic field are expected to dissipate and be undetectable within 1 to 2 meters of the cable.

Conservation measures intended to reduce the potential adverse effects to listed species include, but are not limited to:

- In-water work will be conducted between July 16 through February 15, to avoid migrating juveniles of PS Chinook salmon, HCSR chum salmon, and PS steelhead;
- The use of the HDD in the marine nearshore will avoid alteration of the intertidal habitat used by juvenile salmonids and potential impacts to spawning by forage fishes.
- If feasible, the contractor will utilize a forward-reaming drilling method and flushing of the HDD bore hole to minimize the discharge of drilling fluids into the marine

environment. This will reduce the volume of drilling fluid being discharged from approximately 80 cubic meters to approximately 7 cubic meters.

- The HDD exit hole has been moved 50 to 80 meters farther offshore to minimize the impact to macroalgae. The original location was in an area with at least 50 percent coverage by macroalgae, and the new location will be in an area with less than 25 percent coverage. A pre-project survey of the macroalgae, in the area 50 to 80 meters farther offshore of the original location, will be conducted to select the final location for the HDD exit hole, in order to minimize effects to macroalgae.
- Effects to macroalgae near the HDD exit hole and along the cable corridor will be assessed within two weeks of completion of the project. If a determination is made, in consultation with NMFS, that the macroalgae community is not likely to recover within one year, a plan to mitigate these effects will be developed. The plan may include annual monitoring for up to three years. Should the density of macroalgae in the disturbed area not recover to at least 80 percent of parallel reference transects after one year, additional mitigation measures will be taken. Potential measures include placing appropriate material such as rocks or quarry spalls to enhance macroalgae attachment, and additional monitoring to document effectiveness of the mitigation action.
- Best management practices (BMPs) will be implemented to minimize the potential for frac-out (fracturing of the materials overlying the HDD hole) and subsequent release of drilling fluids into the marine environment. If a frac-out occurs, BMPs will be implemented to minimize and control the volume of drilling fluids released into the marine environment.
- Work lights on the cable-laying vessel and support vessels will be directed to the work area to minimize illumination of the adjacent waters.
- The cable-laying vessel will have a trained marine mammal observer on board to record any observations of marine mammals, especially ESA-listed species. During cable-laying, observations for a minimum of 10 minutes will be made four times per hour. If an individual or group of any listed species are observed, the following procedures will be followed:
 - If listed species are observed within 1000 yards, the behavior of the animals will be recorded and vessel operators will be notified, but no changes to cable-laying operations will be required;
 - If listed species are observed within 500 yards of the vessel, the behavior of the animals will continue to be recorded, the vessel operators will be notified, and preparations to reduce speed of cable-laying will begin;
 - If listed species are observed within 400 yards, the behavior of the animals will continue to be recorded, the vessel operators will be notified, and cable-

laying operations will be reduced to one-half speed. The operator will prepare to stop cable-laying operations if necessary;

- If listed species approach to within 100 yards of the vessel, the behavior of the animals will continue to be recorded, the vessel operators will be notified, and cable-laying operations will cease until the animals have moved beyond 100 yards, at which time the operations may resume.

NMFS has determined that the action area is 0.8 km on both sides of the proposed marine cable, vertically from the seafloor to the surface of the water column, and horizontally from the converter station to the International Boundary in the Strait of Juan de Fuca. NMFS expects underwater sounds and turbidity, the most far-reaching effects of the project, to attenuate to background levels within this area.

Species Determination

Puget Sound Chinook salmon
 Hood Canal Summer-Run chum salmon
 Puget Sound steelhead

NMFS expects that the direct effects to listed salmonids from cable-laying are likely to be discountable because the cable will be laid during a time of the year when the juveniles of PS Chinook salmon, HCSR chum salmon, and PS steelhead are less likely to be in the action area.

NMFS expects other effects of the project are likely to be insignificant because: (1) installing the cable with the HDD will avoid effects to the nearshore marine areas that function as important migratory and foraging habitats for juveniles of PS Chinook salmon and HCSR chum salmon; (2) any PS Chinook salmon or HCSR chum that do occur in the area during construction activities are likely to be larger, non-nearshore dependent juveniles and are, therefore, expected to be less susceptible to construction activities and able to avoid the immediate project vicinity; (3) the monitoring and mitigation plan is expected to ensure that macroalgae in the area disturbed by trenching and the HDD exit hole recovers to at least 80 percent of the density of macroalgae in adjacent, undisturbed transects; (4) localized increases in the temperature of the sediment and water are not expected to pose a significant risk to ESA-listed salmonids because they will affect a small area directly along the route of the cable and will not elevate temperatures to levels expected to directly harm these fishes; (5) localized disruption of the magnetic field is not expected to significantly affect the ability of ESA-listed salmon or their prey to migrate through the action area; (6) the underwater noise generated by the trenching and cable-laying operations are not expected to present a risk of physical injury or significant behavioral disruption to ESA-listed fishes or their prey resources; and (6) because the project will use HDD to install the cable through the nearshore habitats, and will monitor, and if necessary, mitigate, for effects to macroalgae, no significant effects to forage fish are expected to result from the project.

Based on these factors, NMFS concurs with the BPA’s determination that the project “may affect, but is not likely to adversely affect” PS Chinook salmon, HCSR chum salmon, and PS steelhead.

Southern Resident Killer Whales

The Southern Resident Killer Whale (SR killer whale) DPS composed of J, K, and L pods was listed as endangered under the ESA on November 18, 2005 (70 FR 69903). The final rule listing SR killer whales as endangered identified several potential factors that may have resulted in the decline or may be limiting recovery of these whales, including: quantity and quality of prey, toxic chemicals which accumulate in top predators, and disturbance from sound and vessel traffic. The rule further identified oil spills as a potential risk factor for this species. The final recovery plan (73 FR 4176) also includes information on these potential threats to SR killer whales. The potential effects of the proposed action relate to the following threats identified in the listing and recovery plan: vessel and sound disturbance and environmental contaminants. Neither the abundance nor contaminant levels of salmonids (prey of SR killer whales) are likely to be adversely affected by the project as discussed above. In addition, the minor temperature and magnetic effects of running electricity through the cable are not expected to displace salmonids to an extent that affects the ability of killer whales to forage.

The SR killer whales have been documented in the vicinity of the project area with varying frequency throughout the proposed work window. A review of sighting data compiled by the Whale Museum in Friday Harbor, Washington, from 1990 to 2005 indicates that SR killer whales have potential to occur in the project vicinity (Table 1). Based on the sighting data, there is a possibility of SR killer whale occurrence in the project vicinity during the proposed construction work window.

Table 1. Southern Resident Killer Whale Sightings in the Project Vicinity

MONTH	NUMBER OF DAYS SIGHTED ¹
July	61
August	39
September	18
October	6
November	3
December	0
January	0
February	0

¹ Unique sighting days during the work window from 1990 to 2005. Source: The Whale Museum 2007.

Vessel and Sound Disturbance: SR killer whales could be injured or disturbed by sound pressure generated by cable installation. To avoid this possibility, the applicant will use marine mammal observers onboard the cable installation vessel and onshore to survey for the presence of marine mammals, and cable-laying operations will cease if marine mammals are within a 100 yards (91 meters) of the vessel. Cable installation will not initiate or temporarily suspend if an ESA-listed marine mammal is within the 100-yard buffer area. The 100-yard buffer makes it highly unlikely, and therefore discountable that SR killer whales will be exposed to sound pressure levels that could cause injury or disturbance, as explained in more detail below.

NMFS is currently developing comprehensive guidance on sound exposure levels likely to cause injury and behavioral disruption in the context of the Marine Mammal Protection Act. Until formal guidance is available, NMFS uses conservative thresholds of sound exposure levels from broad band impulse sounds that cause behavioral disturbance ($160\text{dB}_{\text{RMS}}$ re: $1\mu\text{Pa}$) and injury ($180\text{dB}_{\text{RMS}}$ re: $1\mu\text{Pa}$) to whales. Sound levels generated by cable installation would be below 180 dB at 1 meter from the vessel, and below 160 dB at 16 meters from the vessel. The project will adopt a buffer zone that encompasses the $160\text{dB}_{\text{RMS}}$ isopleth, or threshold for behavioral disturbance. Monitoring the buffer zone and ceasing work when marine mammals are present will ensure that marine mammals are not exposed to sound from cable installation that would cause injury or behavioral disturbance. It is possible that SR killer whales outside the buffer zone could detect the sound from cable installation, but any response to the sound would be insignificant.

Vessel activity associated with project activities will not significantly affect SR killer whales because the vessels used during cable installation do not target whales and should be easily detected by passing whales, with discountable effects on whale passage. Thus, vessel strikes are extremely unlikely and therefore discountable and any potential encounters with SR killer whales are expected to be sporadic and transitory in nature.

Environmental Contaminants: Installation of the cable waterward of the HDD exit hole will cause short-term, localized re-suspension of small quantities of sediment. However, tests of the sediment indicate that contaminants are not at a level of concern. Contaminant release from equipment use during construction will be at insignificant levels. The project will be covered by a spill prevention and countermeasure plan for responsive action and equipment inspection to prevent release of hazardous materials during construction. Thus, it is unlikely that SR killer whales or their potential prey will be exposed to release of contaminants or hazardous material from construction activities and any exposure will be insignificant.

Based on these factors, NMFS concurs with the BPA's determination that the project "may affect, but is not likely to adversely affect" SR killer whales.

Steller Sea Lions

NMFS listed Steller sea lions as threatened under the ESA on November 26, 1990 (55 FR 49204) across their entire range. Continued declines in the western portion of the population led to listing the western stock as endangered on May 5, 1997 (62 FR 24345), however the eastern stock remained listed as threatened. Steller sea lions in Washington are from the eastern stock. The draft recovery plan (58 FR 45269) identified factors having the potential to affect the recovery of the eastern stock. The potential effects of proposed actions on Steller sea lions arise from sound disturbance and environmental contaminants. Salmonid prey resources of Steller sea lions are not likely to be adversely affected by the project as discussed above.

Steller sea lions of the eastern stock can occur in Washington waters throughout the year, however there are no breeding rookeries in Washington. Haul out locations are used by Steller sea lions in coastal and inland waters of Washington. Steller sea lions do not use haul out locations within approximately 50 miles of the proposed action. Thus, proposed actions will have no effect on breeding and have discountable effects on haul out activities of Steller sea lions. Sound associated with the proposed action is expected to cause insignificant potential disturbance to Steller sea lions potentially in transit through the project area, as discussed above for SR killer whales. The proposed action is expected to have an insignificant effect on water quality, also described above for SR killer whales. Thus, it is unlikely that Steller sea lions or their prey will be exposed to release of contaminants.

Based on these factors, NMFS concurs with the BPA's determination that the project "may affect, but is not likely to adversely affect" Steller sea lions.

Humpback Whales

The humpback whale was listed as endangered under the ESA on June 2, 1970 (35 FR 8491). The eastern North Pacific Stock, which includes humpback whales in the waters of Washington State, is generally located along coastal Central America during winter/spring, and migrates to the coast of California north to southern British Columbia during the summer (NMFS 2005). Although humpback whales are sighted with increasing frequency in the inside waters of Washington in recent years, primarily during autumn with two sightings during spring (13 individual whales identified in 2003 and 2004; Falcone et al. 2005), they are more common in coastal waters outside the action area (NMFS 2005).

Humpback whales are extremely unlikely to be present near the project; therefore, disturbance from the proposed action is discountable. In the unlikely event that humpback whales were in the vicinity of the project, potential adverse effects from sound disturbance and contaminants would be insignificant as discussed above for SR killer whales.

Based on these factors, NMFS concurs with the BPA's determination that the project "may affect, but is not likely to adversely affect" humpback whales.

Critical Habitat Determination

Puget Sound Chinook salmon
Hood Canal Summer Run chum salmon

NMFS designated critical habitat for PS Chinook salmon on September 2, 2005 (70 FR 52630). The primary constituent element (PCE) for salmon critical habitat in the action area is:

Nearshore marine areas free of obstruction and excessive predation with: (i) water quality and quantity conditions and forage, including aquatic invertebrates and fishes, supporting growth and maturation; and (ii) natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels.

NMFS has analyzed the potential impacts of the project on designated critical habitat and the PCE. Critical habitat boundaries within the action area for the proposed project include areas contiguous with the shoreline from the line of extreme high water out to a depth no greater than 98.4 feet (30 meters) relative to mean lower low water.

NMFS has determined that the effects to this PCE will be insignificant because: (1) the project will not result in a migration barrier to or through any marine habitat; (2) the project will not increase the risk of predation; (3) the project is not expected to adversely affect water quality; (4) the project will not significantly affect the forage base for juvenile or adult PS Chinook salmon and HCSR chum salmon; and (5) the natural structure of the nearshore habitat is not expected to be significantly affected because the project will not remove any existing natural structures and will not result in the loss of any nearshore habitat. Based upon this reasoning, NMFS concurs with the BPA's determination that the project "may affect, but is not likely to adversely affect" the designated critical habitat of PS Chinook salmon.

Southern Resident Killer Whales

Critical habitat for SR killer whales was designated in three specific areas: 1) Summer Core Area in Haro Strait and waters around the San Juan Islands; 2) Puget Sound; and 3) the Strait of Juan de Fuca, on November 29, 2006 (71 FR 69054). Critical habitat includes approximately 2,560 square miles of Puget Sound, excluding areas with water less than 20 feet deep relative to extreme high water. The PCEs for SR killer whale are:

(1) Water quality to support growth and development; (2) prey species of sufficient quantity, quality, and availability to support individual growth, reproduction and development, as well as overall population growth; and (3) passage conditions to allow for migration, resting, and foraging.

The potential effects of the project relate to the following PCEs: contamination of water and/or prey, and interference with passage. The proposed project is not likely to adversely affect salmonid prey resources of SR killer whales or their critical habitat.

Contamination of water and/or prey: The potential for contamination of water and/or prey from the proposed actions will be insignificant. Potential contaminant release from equipment use during construction will be at insignificant levels, as described above. Additionally, any short-term, localized sediment mobilization during construction will have insignificant direct and indirect effects on prey of SR killer whales, as described above for salmonids.

Interference with Passage: The potential for proposed actions to interfere with SR killer whale passage are expected to be insignificant. During and immediately prior to proposed cable installation, marine mammal observers will monitor a marine mammal buffer zone that encompasses the 160dB_{RMS} isopleth (100 yard radius around cable installation vessel), which will avoid behavioral disturbance of SR killer whales and therefore have insignificant effects on passage.

Based upon this reasoning, NMFS concurs with the BPA's determination that the project "may affect, but is not likely to adversely affect" the designated critical habitat of SR killer whales.

This concludes informal consultation pursuant to the regulations implementing the ESA at 50 CFR 402.10. The BPA must reinstate this consultation if (1) new information reveals effects of the action that may affect listed species in a way not previously considered; (2) the action is modified in a manner that causes an effect to the listed species or critical habitat that was not previously considered; or (3) a new species is listed, or critical habitat designated, that may be affected by the identified action.

Magnuson-Stevens Fishery Conservation and Management Act

Federal agencies are required, under section 305(b)(2) of the MSA and its implementing regulations (50 CFR 600 Subpart K), to consult with NMFS regarding actions that are authorized, funded, or undertaken by that agency that may adversely affect Essential Fish Habitat (EFH). The MSA (section 3) defines EFH as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." If an action would adversely affect EFH, NMFS is required to provide the Federal action agency with EFH conservation recommendations (MSA section 305(b)(4)(A)). This consultation is based, in part, on information provided by the Federal agency and descriptions of EFH for Pacific coast groundfish, coastal pelagic species, and Pacific salmon contained in the Fishery Management Plans developed by the Pacific Fishery Management Council and approved by the Secretary of Commerce.

The project is described above and in the BA. The project areas include habitat which has been designated as EFH for various life stages for those fish listed in Table 1.

NMFS has determined that this project may have the following adverse effects to the designated EFH for Pacific coast groundfishes:

1. Burial of the cable in the photic zone will have temporary adverse effects to the macroalgae community, a habitat that is important for many species of groundfish, and one that has been identified as a Habitat Area of Particular Concern by the Pacific Fishery Management Council;
2. Burial of the cable or covering the cable with concrete mattresses will disturb the benthic community and may result in temporary alterations of the prey base of MSA-managed fishes;
3. In areas where the cable is exposed (i.e., when crossing rocky substrates), the surface of the cable can reach 140 degrees Fahrenheit (60 degree Celsius). Such temperatures may injure or kill MSA-managed fishes or their prey that directly contact the cable and may impair the movement of MSA-managed fishes or their prey in the immediate vicinity of the exposed cable;
4. In areas where the cable is exposed, localized disruption of the ambient magnetic field may interfere with the movement or navigation of MSA-managed fishes or their prey in the immediate vicinity of the exposed cable.

Essential Fish Habitat Conservation Recommendations:

Pursuant to Section 305(b)(4)(A) of the MSA, NMFS is required to provide EFH conservation recommendations to Federal agencies regarding actions that would adversely affect EFH. Although NMFS believes that the conservation measures described in the BA are sufficient to address the effects of cable-installation on macroalgae and the benthic prey community, it does not believe that these measures are adequate to address the remaining adverse effects to EFH described above. Therefore, NMFS recommends the following conservation measure to minimize the effects of localized increases in temperature and localized disturbance of the ambient magnetic field, and conserve EFH for the species in Table 1:

- The Federal action agency with the appropriate authority, such as the BPA or the U.S. Army Corps of Engineers, should ensure that, where possible, the cable is buried. Where substrate conditions do not allow for burial, all exposed sections of cable should be covered by a pre-cast concrete or grout blanket. Doing so will prevent direct contact with the potentially hot cable as well as reduce the effects of the localized disruption of the ambient magnetic field on MSA-managed fishes and their prey.

Statutory Response Requirement:

Federal agencies are required to provide a detailed written response to NMFS' EFH conservation recommendations within 30 days of receipt of these recommendations (50

CFR 600.920(j)(1)). The response must include a description of measures proposed to avoid, mitigate, or offset the adverse effects of the activity on EFH. If the response is inconsistent with the EFH conservation recommendations, the response must explain the reasons for not following the recommendations. The reasons must include the scientific justification for any disagreements over the anticipated effects of the proposed action and the measures needed to avoid, minimize, mitigate, or offset such effects.

If the proposed action is modified in a manner that may adversely affect EFH, or if new information becomes available that affects the basis for NMFS' EFH conservation recommendations, the BPA will need to reinitiate consultation in accordance with the implementing regulations for EFH at 50 CFR 600.920(l).

Thank you for your effort to protect ESA-listed species and EFH. If you have any questions, please contact John Stadler of my staff at (360) 753-9576 or via email at john.stadler@noaa.gov. If you have questions about the marine mammal analyses please contact Alison Agness (Alison.Agness@noaa.gov, (206) 526-6152).

Sincerely,

A handwritten signature in black ink, appearing to read "D. Robert Lohn". The signature is fluid and cursive, with a large initial "D" and "L".

D. Robert Lohn
Regional Administrator

cc: David Molenaar – WDFW
Olivia Romano – COE Seattle District
Cameron Fisher – Ecology & Environment, Inc
Karen Myers – USFWS

Enclosure

Table 1. Species of fishes with designated EFH in the project area.

Groundfish	Greenstriped rockfish	Rex sole
Species	<i>S. elongatus</i>	<i>Glyptocephalus zachirus</i>
Spiny dogfish	Quillback rockfish	Rock sole
<i>Squalus acanthias</i>	<i>S. maliger</i>	<i>Lepidopsetta bilineata</i>
Spotted ratfish	Redstripe rockfish	Sand sole
<i>Hydrolagus colliei</i>	<i>S. proriger</i>	<i>Psettichthys melanostictus</i>
Big skate	Splitnose rockfish	Starry flounder
<i>Raja binoculata</i>	<i>S. diploproa</i>	<i>Platichthys stellatus</i>
Longnose skate	Tiger rockfish	
<i>Raja rhina</i>	<i>S. nigrocinctus</i>	
Pacific hake	Widow rockfish	Coastal Pelagic
<i>Merluccius productus</i>	<i>S. entomelas</i>	Species
Kelp greenling	Yelloweye rockfish	anchovy
<i>Hexagrammos decagrammus</i>	<i>S. ruberrimus</i>	<i>Engraulis mordax</i>
Lingcod	Yellowtail rockfish	Pacific sardine
<i>Ophiodon elongates</i>	<i>S. flavidus</i>	<i>Sardinops sagax</i>
Sablefish	Cabezon	Pacific mackerel
<i>Anoplopoma fimbria</i>	<i>Scorpaenichthys marmoratus</i>	<i>Scomber japonicus</i>
Black rockfish	Butter sole	market squid
<i>Sebastes melanops</i>	<i>Isopsetta isolepis</i>	<i>Loligo opalescens</i>
Blue rockfish	Dover sole	
<i>S. mystinus</i>	<i>Microstomus pacificus</i>	
Bocaccio	English sole	Pacific Salmon
<i>S. paucispinis</i>	<i>Parophrys vetulus</i>	Species
Brown rockfish	Flathead sole	Chinook salmon
<i>S. auriculatus</i>	<i>Hippoglossoides elassodon</i>	<i>Oncorhynchus tshawytscha</i>
China rockfish	Pacific sanddab	coho salmon
<i>S. nebulosus</i>	<i>Citharichthys sordidus</i>	<i>O. kisutch</i>
Copper rockfish	Petrale sole	Puget Sound pink salmon
<i>S. caurinus</i>	<i>Eopsetta jordani</i>	<i>O. gorbuscha</i>

References

Falcone, E., J. Calambokidis, G. Steiger, M. Malleson, and J. Ford. 2005. Humpback whales in the Puget Sound/Georgia Strait Region. Proceedings of the 2005 Puget Sound Georgia Basin Research Conference. 3 pp.

National Marine Fisheries Service (NMFS). 2005. Humpback whale (*Megaptera novaeangliae*): Eastern North Pacific Stock. Marine Mammal Stock Assessment Reports. <http://www.nmfs.noaa.gov/pr/pdfs/sars/po2005whhb-en.pdf>.

The Whale Museum. 2007. Southern Resident Killer Whale Sightings Compilation 1990-2005. The Whale Museum, Friday Harbor, WA.