

## 3.5 FISH

The Columbia River supports steelhead trout and three species of salmon and represents a fishery resource of global importance. Withdrawal of water from the Columbia River for the proposed power plant could potentially have an adverse effect on the fishery.

### 3.5.1 Affected Environment

Anadromous fish in the Columbia River that pass through McNary Dam at Umatilla include steelhead and three species of salmon: chinook, coho, and sockeye (*Oncorhynchus nerka*). Spring, summer, and fall runs of chinook and summer and winter steelhead are present during appropriate times of the year when adults and smolt migrate to and from spawning areas (Woodward-Clyde Consultants 1993).

The National Marine Fisheries Service in 1991 and 1992 listed spring/summer and fall chinook runs in the Snake River as threatened and the Snake River sockeye as endangered. Both species were noted by the USFWS as occurring in the project vicinity (personal communication, Peterson 1994).

The mid-Columbia steelhead trout (Middle Columbia River Evolutionarily Significant Unit [ESU]) (*Oncorhynchus mykiss*) is federally listed as threatened. This is part of an ESU occupying the Columbia River Basin from above the Wind River in Washington and the Hood River in Oregon upstream to include the Yakima River, Washington. All steelhead in the Columbia River Basin upstream from the Dalles Dam are summer-run, inland steelhead (Schreck et. al. 1986, Reinsenbichler et. al. 1992, Chapman et. al. 1994) and include steelhead in the vicinity of the proposed project.

Total steelhead abundance in the ESU has increased recently, but the majority of natural stocks for which data exists have declined. This includes steelhead in the John Day River, the largest producer of wild steelhead. Hatchery steelhead are widespread within the mid-Columbia ESU, though the ESU primarily consists of within-basin stocks. Steelhead in this ESU are vulnerable to degradation from grazing and water diversions.

ONHP had one record of the mid-Columbia steelhead within 5 miles of the proposed project (ONHP 2000). This record was established from Oregon Department of Fish and Wildlife distribution maps that show undocumented but potential occurrences of the mid-Columbia steelhead in the Umatilla River and its tributaries.

Cutthroat trout (*Oncorhynchus clarki*) occurring in the vicinity of the facility would be considered part of the recently proposed Southwestern Washington/Columbia River ESU. This cutthroat trout ESU is proposed as threatened by the U.S. Fish and Wildlife Service. This ESU comprises cutthroat trout in the Columbia River and its tributaries downstream

from the Klickitat River in Washington and Fifteenmile Creek in Oregon (inclusive) and the Willamette River and its tributaries downstream from Willamette Falls (Weitkamp et al., 1996). The ESU also includes cutthroat trout in Washington coastal drainages from the Columbia River to Grays Harbor (inclusive). Support for these ESU boundaries comes primarily from ecological and genetic information. Ecological characteristics of this region include the presence of extensive intertidal mud and sandflats, similarities in freshwater and estuarine fish faunas, and differences from estuaries to the north of Grays Harbor and to the south of the Columbia River. Genetic samples from coastal cutthroat in southwestern Washington also show a relatively close genetic affinity to the samples from the Columbia River.

The decline of cutthroat trout is attributed to habitat destruction and/or modification and overfishing (Bryant and Lynch, 1996; NMFS, 1997; and NMFS, 1998b). ONHP had no record of the Columbia River cutthroat trout within the vicinity of the proposed project. Although coastal cutthroat trout may exist above the City of The Dalles, the referenced ESU applies only to those stocks below Fifteenmile Creek at the City of The Dalles, well downstream of the mouth of the Umatilla River. Therefore, this ESU of the species is very unlikely to occur within the proposed project's analysis area.

### **3.5.2 Environmental Consequences and Mitigation Measures**

The proposed project has the potential to affect the fisheries of the Umatilla and Columbia Rivers. Although the proposed project is located within the Umatilla River watershed, the proposed project would neither withdraw water from the Umatilla River nor discharge wastewater to it. Consequently, the proposed project would have no adverse impact on water quality or fisheries in the Umatilla River.

#### Impact 3.5.1 Diversion of water from the Columbia River.

Assessment of Impact The primary uses of water at the proposed project would be to generate steam and cool the steam process. The proposed project would include a number of features that minimize water use. A recirculating cooling system using cooling towers with high-efficiency drift eliminators would minimize the volume of water needed to cool the turbines. All wash water and other aqueous wastewater streams produced at the proposed power plant would be recycled and used a second time as cooling water. To remove nitrogen oxides from exhaust gases, the proposed plant would employ equipment that does not require water. Peak average water demand would be 0.16 cubic meters per second (5.76 cfs). Average annual water demand at the project would be 0.15 cubic meters per second (5.12 cfs).

The source of water for the proposed project is the Port of Umatilla's regional water supply system. The Port has a municipal water use permit (Permit No. 49497) issued by the Oregon

Water Resources Department. Permit No. 49497 has a priority date of January 19, 1979 and authorizes the Port to divert up to 155 cfs from the Columbia River.

All “in river” improvements (steel piles and intake tubes) are adequate to deliver the water required for the proposed project. The intake tubes are equipped with fish screens. The Port likely will need to install a new pump and upgrade an existing pump inside the existing pump house in order to serve additional demand, including from the proposed project and an unrelated energy project currently under construction. The Port does not need to modify or enlarge the intake. Any modifications will be within the existing pump house authorized under the Army Corps of Engineers Permit No. 93-00941. The permit was issued to the Port of Umatilla on March 14, 1994, under Section 10 of the Rivers and Harbors Act (for work in or affecting navigable waters of the United States) and Section 404 of the Clean Water Act (for discharge of dredged or fill material into waters of the United States). The permit authorized the installation by the Port of Umatilla of 50 piles to support a pump station. The permit was issued following consultation with the National Marine Fisheries Service pursuant to Section 7 of the Endangered Species Act. Consultation included preparation of a Biological Assessment (“Port of Umatilla Water Intake Project Biological Assessment,” CH2M Hill, Northwest, December 1993). The “Permit Evaluation and Decision Document” prepared by the Corps of Engineers in conjunction with Permit No. 93-00941 includes an Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) in compliance with NEPA requirements. The EA indicates that the Port’s intake project would have the capacity to withdraw approximately 62 cfs from the Columbia River. The Port can meet the needs of the proposed Umatilla Generating Project without exceeding that capacity. Moreover, as discussed above, there will be no additional work in the river, and therefore no requirement for a new permit from the Corps of Engineers or for consultation with the National Marine Fisheries Service.

Discharge in the Columbia River is typically in the range of 3,030 to 3,228 cubic meters per second (107,000 to 114,000 cfs) during the low-flow period in the fall. The water diverted under the Port of Umatilla’s existing municipal water use permit and provided for the proposed project would represent about 0.005 % of river discharge during the low-flow period and less during high flows. During the worst drought of record the water diverted for the proposed project would represent about 0.01 % of river discharge. Such a small change in river discharge would not be expected to have any effect on the Columbia River fishery. Additionally, as noted above, the contemplated withdrawal for the proposed power plant will come from the Port of Umatilla’s existing Columbia River allotment. This allotment is included in the long-term Columbia River water management plan that, in part, assures fishery protection.

Recommended Mitigation Measures No measures beyond those included in the proposed project are recommended.

### **3.5.3 Cumulative Impacts**

The proposed project would have no direct adverse effects on fish because the withdrawal of water from the Columbia River for the proposed project would be very small in volume relative to river discharge.

The Columbia River salmon fishery has been adversely affected by human activities over the last 150 years. Adverse effects are attributable to over fishing, the construction of large dams that alter the natural patterns of river flow and restrict or block fish passage, diversion of water, introduction of non-native fish species and the replacement of native vegetation by crops in the watershed. In the last decade, several government agencies have begun acting to try to restore the salmon runs. Their efforts have been accelerated by the listing of several salmon species under the Endangered Species Act. As part of these efforts, there is an effective moratorium on new diversions of water from the Columbia River as described in Section 3.3.3. Any cumulative effect of water diversion for the proposed project, together with other diversions, is expected to be limited to diversions that have already been permitted.