

## ENVIRONMENTAL MATTERS

### Impact of Environmental Matters

Environmental responsibility and stewardship are identified as corporate values in the Department's strategic and business planning efforts. The Department manages its legal obligations for environmental protection through programs that are expected to produce compliance with regulations. Although the Department cannot predict the outcome or effect of the matters described in this section, the Department does not expect that any of these matters will affect adversely its ability to pay the principal of and interest on the Bonds.

### Waste Management and Disposal Issues

Routine operations in connection with the generation and delivery of electric power are regulated by federal, state and local laws that prescribe standards, work practices and training requirements and require extensive documentation to ensure the protection of the environment and human health. Noncompliance creates the potential for violations that can result in civil and criminal penalties and substantial fines. Some of these laws also impose strict liability for environmentally damaging releases, including costs of investigation and cleanup, damages, restoration, and the costs of agency oversight and enforcement.

Department operations generate a variety of wastes including hazardous wastes. However, the Department's efforts have reduced hazardous waste generation and disposal costs and the Department maintains those reduced levels. The Department promotes compliance with federal and State hazardous waste regulations through use of operations manuals, staff training and periodic internal inspections or audits. During internal audits, compliance with other laws, including the Toxic Substances Control Act, Clean Water Act and Underground Storage Tank regulations, is monitored.

### Contaminated Site Liability

In 2001, the EPA listed the Lower Duwamish Waterway as a Superfund site. In anticipation of this listing, the City (through the Department and Seattle Public Utilities), King County, the Port of Seattle, and the Boeing Company entered into a voluntary administrative consent order with the EPA and the State Department of Ecology to perform a remedial investigation and feasibility study ("RI/FS") along the Lower Duwamish Waterway. As of December 31, 2003, the Department had recorded a \$4.8 million environmental liability for its share of actual and estimated future costs associated with the RI/FS. This amount will be evaluated annually and is subject to adjustment based on future developments. It is likely that the Department will be liable for a portion of the costs of future remediation of the Lower Duwamish site. The Department will be liable for some costs of remediation of an area known as Slip 4, due to the Department's ownership and operation of the Georgetown Steam Plant, which was decommissioned in 1980. The City is taking the lead role in further investigation of contamination at Slip 4. A preliminary estimate of the total cost of investigating and remediating Slip 4 sediments is \$8 million to \$10 million. The Department also will be liable for some of the costs of remediating sediments in an area known as Terminal 117, adjacent to a former asphalt plant. The Port of Seattle has taken the lead role in further investigation of Terminal 117. An estimate is not yet available for the cost of remediation of Terminal 117. The Department expects to share the costs of investigating and remediating contamination of Slip 4 and Terminal 117 with other responsible parties; however, the extent of such sharing or later recovery of costs is not known at this time. The Boeing Company has discovered PCB contamination on its Plant II property, some of which Boeing attributes to a substation operated by the Department. The Department has investigated and believes it is unlikely that the PCBs came from the substation; however, work to determine the source and the extent of the contamination is ongoing. If the substation is determined to be a source of the contamination, then the Department may be liable for some of the costs of investigation and remediation.

No assurances can be given that other contaminated sites do not exist or will not be discovered in the future. The Department's policy has been to undertake voluntary cleanup action when contamination is discovered during maintenance and construction.

## Endangered Species Act Issues

A number of fish species inhabit the waters where hydroelectric projects are owned by the Department, or from which the Department purchases power. Some species have been, or may be in the future, listed under the Endangered Species Act (“ESA”) as either “threatened” or “endangered.” The overall long-run implications of these listings are difficult to assess. Two legal mechanisms that typically come into play and that could affect project operation are the Section 7 “consultation” requirement and the Section 9 “take” prohibition. Where an activity that may affect a listed species has a federal “nexus”—that is, where an activity is undertaken, permitted or funded by a federal agency—that agency is required to consult with either the National Oceanic and Atmospheric Administration (“NOAA Fisheries,” formerly the National Marine Fisheries Service) for salmon and steelhead or the U.S. Fish and Wildlife Service (“USFWS”) for other species, such as bull trout. The purpose of the consultation is to ensure that the activity will not “jeopardize” the continued existence of the species or adversely modify its critical habitat. Biological Opinions are prepared, in appropriate cases, and mandatory conditions may be placed on the conduct of the activity or project in order to avoid causing jeopardy. A FERC decision to issue a hydroelectric project license, or license amendment, has a nexus with ESA and triggers Section 7 consultation.

*Columbia and Snake River Anadromous Fish Issues.* There are three federal “action agencies” responsible for the operation of the Federal System: the Corps, the Bureau and Bonneville. These agencies have been engaged in consultation for a number of years, and NOAA Fisheries has been required as a result of litigation to develop a series of Biological Opinions relating to the Columbia and Snake River fisheries. In 1995, NOAA Fisheries developed a broad species recovery plan, including recommendations for upstream and downstream passage requirements. These requirements include minimum flow targets for the entire Columbia Basin designed to maximize the survival of downstream migrating juvenile salmon and steelhead and upstream migrating adult salmon and steelhead. In May 1998 and December 2000, NOAA Fisheries and USFWS developed supplemental plans that identify reasonable and prudent alternatives to protect and recover not only listed salmon and steelhead but also bull trout and sturgeon that have been listed under the ESA in the Columbia River Basin. A new, draft Biological Opinion was released by NOAA Fisheries in September 2004 and is undergoing regional review.

The Department’s power generation at its Boundary Project has been affected by the recovery plans and the Biological Opinions on which they were based. Specifically, the Biological Opinions require reservoirs upstream from the Boundary Project to store more water during the winter for release in the spring and summer when it is needed for downstream juvenile fish migration. Generation at the Boundary Project therefore is reduced in the fall and winter, when the region experiences its highest sustained energy demand. Due to the recommendations of the Biological Opinions, the water not released in the fall and winter on the Pend Oreille River is released in the spring and summer, when it is sometimes spilled because the Boundary Project does not have sufficient hydraulic capacity to use all the available water for generation. This results in a reduction in the Boundary Project’s firm capability under the terms of the Coordination Agreement. See “Power Resources—Overview of Resources.” The Department does have a contract with Grant County PUD No. 1 to obtain eight percent of the output from the Priest Rapids Project and a contract with Bonneville to receive 4.6676 percent of output from the Federal System. The Biological Opinions may have similar effects on the amounts the Department receives under these contracts. It is unknown at present how new Biological Opinions to support recovery plans will affect power generation capabilities at the Boundary Project. In the opinion of the Department, it is possible that new opinions will result in some changes in flows that could have an impact on the Boundary Project.

*Other Endangered Species Issues.* Other ESA fish listings that may affect Department operations include bull trout and chinook salmon in Puget Sound. Bull trout have a wide geographic range in the Pacific Northwest, and sub-populations are present in most of the reservoirs and rivers used for hydroelectric generation, including all three reservoirs of the Skagit Project. The Skagit populations are generally recognized as being among the healthiest in the State due to excellent habitat conditions, cold water temperatures and an abundant food supply. Bull trout are also found in the Cedar Falls Hydroelectric Project reservoir. Studies currently are under way to determine the status of the populations and any potential impacts of the hydroelectric projects on bull trout downstream of the Skagit Project and in its reservoirs. These studies will be used to develop

management plans and mitigation procedures in cooperation with State and federal agencies to reduce or eliminate the impacts of project operations on this listed species.

Listed chinook salmon are present in the Skagit, Tolt and Cedar Rivers downstream of hydroelectric facilities on those rivers. The hydroelectric facilities are above natural passage barriers in the case of the Skagit and Tolt Rivers. While it is unclear how these listings might affect operations, actions already taken by the Department may mitigate the potential adverse impacts on its operations. On the Cedar River, the Department's activities are covered by a Habitat Conservation Plan that authorizes operations with regard to all listed species of the Cedar Falls Hydroelectric Project and by an incidental take permit. Both the Skagit and South Fork Tolt River projects were licensed through a collaborative process involving State and federal regulatory agencies, including NOAA Fisheries and USFWS, and tribes. These agreements include extensive measures to protect fish, including complex flow controls and non-flow measures such as habitat restoration and research and monitoring. In addition, the Department is continuing an ESA Early Action program that is supporting the recovery of chinook and bull trout populations in the Skagit and Tolt watersheds.

Bull trout are also found in the vicinity of the Boundary Hydroelectric Project. The license for the Boundary Project expires in 2011 and the Department is currently preparing for the relicensing process. The Department expects that bull trout studies will be conducted in support of relicensing, but it is too early to know if and to what extent bull trout protection measures will be necessary or how they could affect power generation.

### **Clean Water Act Issues**

Section 401 of the federal Clean Water Act requires states to provide a "water quality certification" regarding compliance of discharges with State water quality requirements as a precondition for federal actions including licensing of hydroelectric projects. The purpose of the certification is to ensure that the project complies with State water quality standards. These standards address various physical and chemical parameters, and Section 401 also has been interpreted to authorize states to condition their certification on maintenance of a minimum stream flow determined to be necessary to protect fish.

An agreement with State and federal agencies was reached on minimum flows for the Newhalem Creek plant, and incorporated into the FERC license issued in 1997. These minimum flows were a condition of the Section 401 certification issued in 1996. Water quality studies at the Boundary Project are currently underway in support of the relicensing process. The Department also participates in other water quality regulatory processes. It is unknown to what extent these issues may affect power generation capability pursuant to a new license.

### **Renewable Energy and Carbon Dioxide Mitigation**

The City Council has passed resolutions committing the Department to acquire new renewable resources, setting a goal of meeting the incremental electric energy needs of the City with no net greenhouse gas emissions. In response, the Department has signed contracts to acquire greenhouse gas offsets (i.e., a reduction in greenhouse gas emissions at one location to compensate for emissions at another location) and has purchased output and associated environmental attributes from the State Line Wind Project in eastern Washington and Oregon. See "Power Resources—Purchased Power Arrangements—Wind Generation." Finally, the Department is offering customers the opportunity to contribute to the acquisition of additional renewable resources, as required by State law. See "The Department—Retail Rates—Voluntary Green Power Program." Customer contributions initially will be used to install solar electricity systems on public facilities, with an emphasis on schools. The Department is currently evaluating additional renewable energy options to pursue with this funding.