

SEP - 1 1987

WATER RESOURCES DEPT.  
SALEM, OREGON

(1)

BEFORE THE WATER RESOURCES COMMISSION  
OF THE  
STATE OF OREGON

IN THE MATTER OF THE CONTESTED	)	PROJECT BACKGROUND,
CASE HEARING FOR CONSIDERATION OF	)	FINDINGS OF FACT,
HYDROELECTRIC PROJECT HE-386 IN	)	CONCLUSION AND ORDER
THE NAME OF DELMER WAGNER		

Hydroelectric License Application HE-386 (the "Project") has been submitted to the Water Resources Commission (the "Commission") by Delmer Wagner. Hydroelectric Development, Inc. ("HDI") is a financial participant in joint venture with Mr. Wagner. HDI and Mr. Wagner will be referred to collectively as the Applicant.

Application HE-386 proposes the use of up to 85 cfs of water from Grave Creek, tributary to the Rogue River, for the development of hydroelectric power. The proposed project would be located in Sections 2, 9, 10, and 11, Township 34 South, Range 5 West, in Josephine County. The project is located in a steeply incised canyon in northeastern Josephine County near the town of Placer, Oregon, approximately 4 miles east of Sunny Valley and 14 air miles north of Grants Pass. The Project rises from 1616 feet above sea level at the powerhouse site to 2180 feet at the diversion site; thus, a head of 564 feet is available.

The Project would operate as a run-of-river plant. Estimated plant capacity is 2.5 megawatts, with average annual energy output of 7,120,000 kilowatt-hours. The Project facilities include a six-foot high diversion structure, a penstock, a powerhouse and an interconnecting line with the Pacific Power and Light Company. The design incorporates four (4) creek-wide, notched sills to facilitate upstream migration of adult steelhead, a screen to prevent entrainment of downward migrating steelhead fry and smolts, and a submersed grated flow diffuser at the powerhouse to prevent false attraction of upward migrating steelhead into the powerhouse.

Pursuant to OAR 690-51-290(1), the Department conducted an investigation to determine the potential for cumulative impacts of the Project with other hydroelectric development in the Middle Rogue River Basin. At its meeting of April 24, 1987, the Commission delegated authority to the Director to make the decision and issue the Order on the potential for cumulative impacts. By Order dated May 7, 1987, the Director found that the Project does not have the potential for cumulative impacts with other existing, approved or proposed projects in the Middle Rogue River Basin and a consolidated review is not required.

A notice of contested case hearing was issued by the Water Resources Department (the "Department") on May 7, 1987.

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By Order dated June 1, 1987, the Commission designated the Oregon Department of Fish and Wildlife ("ODFW") as an interested agency to the above-entitled matter. No petitions for party status were received and ODFW was the only participant in addition to the Applicant.

At a prehearing conference held on June 10, 1987, the applicant and ODFW agreed that most of the evidence submitted at the contested case hearing would be by prefiled written testimony and that ORS 543.017 and implementing regulations contained in OAR Chapter 690, Division 51, constitute the standards against which the Project's merits must be tested. These and other matters agreed to at the prehearing conference were memorialized by Stipulation of Counsel dated June 12, 1987.

On June 19, 1987, the Commission held a contested case hearing in Medford, Oregon. Six Commission members were in attendance, with Commissioner James C. Howland presiding as Hearings Officer. Commissioner Malarkey left the hearing prior to its conclusion. Commissioner Lorna J. Stickel was absent. A quorum of the Commission was present throughout the hearing.

Upon closure of the evidentiary record at the hearing the five members of the Commission then present voted first on a motion to deny and then on a motion for approval of the project. The motion to deny the project failed. The Commission then voted four to one for approval of the project. The Commission did not specify the findings upon which approval was based, and delegated to the staff resolution of necessary design and operational details, with particular attention to screening design. Staff was to see that an appropriate order was drafted.

ODFW filed a Motion to Reconsider on June 25, 1987. Since no final order had yet been entered, the Commission deems the filing premature.

The matter again came before the Commission in a noticed telephone conference meeting on June 29, 1987. At that time the Commission considered a draft order submitted by the applicant together with conditions suggested by staff, an alternative draft from ODFW, and comments of counsel. The Commission did not take final action and asked a subcommittee of the Commission to work with staff on preparation of a revised draft.

A revised draft order was before the Commission as an agenda item of its regularly scheduled meeting on July 17, 1987. At that time, the Commission voted four to three that the proposed project fails to meet the strict standards of OAR 690-51-200(3), and instructed staff to prepare an order rejecting Application HE 386, based on deficiencies identified by the Commission. Each of the members either had been present at the entire June 19, 1987 hearing, or indicated that he or she had reviewed the record.

APPLICABLE STANDARDS

"To be approved, a project must meet the general and resource specific standards in OAR 690-51-170 to OAR 690-51-260. Economic and need for power standards in OAR 690-51-270 and 690-51-280 must be met as well..." OAR 690-51-160. The applicant must demonstrate on the record that all of these standards are met.

The fishery standard embodied in OAR 690-51-200 was the sole contested issue at the hearing, and the Commission concludes that the proposed project meets all other standards of OAR chapter 690, division 51. Therefore, the findings related to fish resources, upon which rejection of the application is based, are presented immediately after discussion of the applicable fishery standards.

The Commission recognizes OAR 690-51-200(3) to be a stringent standard, which the Commission adopted to implement ORS 543.017(a). ORS 543.017(a) includes the directive that "anadromous salmon and steelhead resources of Oregon shall be preserved." OAR 690-51-200(3) states in pertinent part:

"The Commission shall have due regard for salmon and steelhead fish and habitat. No project shall be approved that may result in mortality or injury to an individual anadromous salmon or steelhead or loss of any salmon or steelhead habitat. In order to approve an application, the Commission shall enter appropriate findings on the following standards:

(a) If proposed at an undeveloped site, it is not reasonably foreseeable that the location, design, construction or operation of the project may result in mortality or injury to an individual anadromous salmon or steelhead or loss of any salmon or steelhead habitat;

(b) Modification of an existing facility or project on a stream reach used by anadromous salmon or steelhead or providing anadromous salmon or steelhead habitat shall include measures that..." (emphasis added).

As a result of the hearings held and evidence and testimony given on the matter, the Commission makes the following:

FINDINGS OF FACT

1. All statements of fact contained in the Background description are hereby incorporated as findings of the Commission.
2. Fish Resources (OAR 690-51-200).

(1) The Project is not a modification of an existing facility or project.

(2) Steelhead and cutthroat trout occur in Grave Creek. The cutthroat are in low abundance in the project reach due primarily to low-flow conditions in the summer.

(3) The Project is not located within the Columbia River Basin and therefore the NPPC's Columbia River Basin Fish and Wildlife Program do not apply.

#### Injury or Mortality to Individual Steelhead During Construction

(4) The project reach provides rearing habitat for juvenile steelhead. Both fry and smolt are found in the project reach.

(5) Juvenile steelhead are present in the project reach at all times of the year. Construction of the project will require complete dewatering of the project construction site for a period of four to five weeks.

(6) It is reasonably foreseeable that dewatering for construction may result in injury or mortality to an individual juvenile, even if diversion of water out of the project area is initiated gradually.

#### Injury or Mortality Resulting from the Diversion or Turbines

(7) Turbine intakes must be screened to exclude fish from the intake flow, to prevent mortality associated with passage of downstream migrating juveniles.

(8) The applicant proposed two alternative designs to screen fish out of the penstock and turbines. The screens are to be installed nearly parallel with the stream. One is a sealed drum designed to 'float' with changing water levels. The other is a stationary, sloped perforated steel screen.

(9) State fishery biologists familiar with a variety of screening systems are not aware of any screening system for a diversion facility similar to that proposed by the applicant on Grave Creek that could be operated without potential for injury or mortality to steelhead.

(10) Debris accumulation on screens can impinge juvenile fish and result in mortality or injury. The project will not be continuously supervised by on-site personnel. Manual clearing of trash from the trash racks and debris from the screens is proposed to occur twice daily and more often during high water periods.

(11) It is reasonably foreseeable that debris accumulation on screens proposed for the Grave Creek Project may cause injury or mortality to an individual juvenile steelhead.

(5)

(12) Applicant submitted studies performed at irrigation canals in Washington as evidence that a screening facility can be constructed that, as a statistical matter, safely passes fish from the diversion back to the river. Those fish that moved downstream successfully past the diversion structure under constant flow conditions were not descaled or killed.

(13) In contrast to typical canal diversions, Grave Creek has highly variable flows, ranging from less than 10 cubic feet per second up to over 2000 cubic feet per second. The results of the Washington studies may not be fully transferable to Grave Creek because of this difference.

(14) The Washington studies do not provide evidence as to whether the test facilities allow fish to pass over, through or around the screens into the screened off area.

(15) In order to approve the project, the Commission must find that it is not reasonably foreseeable that the screening facilities, as proposed, may injure or kill fish. Even the applicant's fishery expert recommends that to ensure the screening facilities work as proposed, studies be conducted after construction to determine where problems are located and to allow corrective measures to be taken if necessary.

(16) It is reasonably foreseeable that the location, design and operation of the Grave Creek diversion facilities may result in injury or mortality to an individual steelhead caused by passage into the turbines.

#### Loss of Habitat

(17) There is spawning gravel within the project reach. An estimated 285 square feet is located at the diversion site and an additional 200 square feet of spawning gravel is estimated to occur within the diversion reach.

(18) ODFW witness Jennings testified to sighting a steelhead redd at the diversion site in mid-June of 1987, as well as in the lower project reach on prior occasions. Mr. Jennings also testified that he had observed spawning steelhead at the diversion site. However, in prefiled testimony, ODFW witness Fredd stated that steelhead spawning had not been observed in the project reach. The applicant offered some evidence that consultants working at the diversion site within a few days before Mr. Jennings' sighting of a redd there this spring may have created depressions from footprints in the streambed. The Commission concludes that steelhead spawning very likely occurs in the project reach.

(19) It is reasonably foreseeable that location of the diversion structure in an area where spawning gravel occurs may result in loss of steelhead spawning habitat.

(20) The diversion reach includes two areas (the chute and the boulder gorge) which present severe obstacles to upstream fish migration. These include areas of steep drops and large boulders.

(6)

(21) The abundance of steelhead adults and juveniles above these obstacles shows that adult steelhead are able to pass the obstacles under the natural range of flow conditions in Grave Creek.

(22) The record establishes only estimates of what flows allow successful upstream adult passage. No particular flow level is known to permit adult passage.

(23) Operation of the Project will result in lower and less variable flows through the diversion reach. It is reasonably foreseeable that operation of the project may result in loss of adult passage habitat because of reduction of stream flow volume or reduction of flow variability.

3. Protection of Designated Resource Areas and Special Management Areas (OAR 690-51-170). The Project would not affect any special area.

4. Mitigation, No Net Loss (OAR 690-51-180).

(1)(a) All proposed mitigation is within the project vicinity.

(1)(b) The project includes features proposed to protect steelhead occurring in Grave Creek and their habitat which are discussed below with reference to OAR 690-51-200.

Other proposed mitigation includes preventive measures to avoid water quality degradation during construction. Proposed mitigation for potential wildlife impacts include burying most of the penstock. Proposed mitigation for plant life impacts consist of planting a mix of native species in areas which will be disturbed by the Project, primarily the penstock route. The same mitigation is intended for impacts to soils. The Commission finds these proposed mitigation measures acceptable.

(1)(c) All mitigation measures are proposed to be functional when the Project begins operation.

(1)(d) The collective benefits of the proposed mitigation measures would equal or exceed the collective adverse impacts on natural resources subject to mitigation so that there would be no net loss.

(2) The Commission has consulted with appropriate agencies and finds the proposed mitigation measures would benefit the natural resources which might be affected by construction and operation of the Project.

(3) Except as mentioned above, no mitigation is required for other natural resources.

(4) Except for Fish Resources, there are no natural resources affected by the Project not listed in OAR 690-51-180 (3).

5. Water Resources (OAR 690-51-190)

(1) There is available water to provide for reasonable operation of the proposed Project. Water levels are adequate, under average conditions, to achieve a 31.2 percent plant factor while operating as a run-of-river project.

(2) The Department's files do not indicate active water rights within the Project reach; nor could the Project have an impact upon existing water rights located outside of the Project boundary.

(3) The Project is consistent with the basin program for the Rogue River Basin, adopted by the Commission June 19, 1984.

(4) The Project is consistent with achieving the maximum economic development of Grave Creek since it incorporates the highest efficiency turbine, generator, penstock, electrical and auxiliary equipment economically feasible for this site.

(5) The proposed Project is consistent with making the fullest practical use of the stream's hydroelectric potential in the Project vicinity since it is located to take full advantage of the watershed located above the section of Grave Creek which has the highest relative gradient.

(6) The Project would not constitute wasteful, uneconomic, impracticable or unreasonable use of Grave Creek since the Project's size and plant factor achieves the highest output per unit installed cost.

(7) Except for Fish Resources, the proposed Project is consistent with conserving the highest use of waters of the state since it provides an economical use of the waters while preserving other natural resource values.

(8) The proposed Project is consistent with controlling the waters of the state for drainage, sanitation, flood control and other beneficial purposes since it will not adversely affect these uses. The Project would not store water in sufficient quantities to provide flood control of Grave Creek.

(9) Construction and operation of the Project would comply with applicable water quality standards so long as conducted in accordance with the conditions of the Water Quality Certification issued March 3, 1987, by the Oregon Department of Environmental Quality ("DEQ") pursuant to Section 401 of the Clean Water Act.

6. Wildlife (OAR 690-51-210)

(1) The location, design, construction or operation of the proposed Project would not jeopardize the continued existence of any animal species designated as threatened, endangered, or limited by the USFS, NMFS, ODFW or the Oregon Natural Heritage Data Base.

(8)

(2) The location, design, construction and operation of Project facilities would minimize adverse impacts on wildlife habitat, nesting and wintering grounds, and wildlife migratory routes in the Project area. Ninety-five percent (95%) of the 13,200 foot penstock route would follow an existing abandoned road and would not require clearing vegetation. Loss of riparian vegetation would be minimal. Most of the penstock will be covered to ensure animal passage.

(3) Project construction methods and scheduling have been designed to minimize disruption of wildlife and to avoid premature or unnecessary land clearing. Construction disruptive to wildlife would be limited to the seasonal dry period for the region.

(4) Overall impact to wildlife is minor for the proposed Project. A major wildlife issue raised by federal and state agencies related to the potential for the diversion conduit to act as a barrier for movement of big game and other wildlife. In response to agency concerns, the Applicant proposes to, depending on the location, completely bury, bury to 24" and berm over or elevate the penstock about 6 feet above the ground to allow passage underneath. The Commission finds that these measures, plus revegetation, constitute adequate mitigation for wildlife impacts.

(5) There are no applicable ODFW management programs in force.

(6) The Project is not within the Columbia River Basin and therefore the NPPC's Columbia River Basin's Fish and Wildlife Program does not apply.

7. Plant Life (OAR 690-51-220)

The location, design, construction or operation of the proposed Project would not jeopardize the continued existence of any plant species designated as threatened, endangered or limited by the USFWS or the Oregon Natural Heritage Data Base.

8. Recreation (OAR 690-51-230)

There are no reported existing recreation facilities, activities or opportunities located within the Project boundary except for summer swimming and gold mining activities, or occasional fishing. The Project would not result in a net loss of these recreation opportunities.

(1) Project facilities would be designed, located and operated to substantially avoid visible or audible intrusion. As discussed above, most of the penstock would be buried and invisible to the public; the diversion structure size would be kept to a minimum consistent with fish protection measures, appropriate noise control features are included in the powerhouse design and a subsurface outfall would be used to minimize noise and visual impact.



(9)

(2) The proposed Project would not reduce recreational opportunities in the Project vicinities because such activities occur during the summer months when the Project would not be in operation. Nonwater-dependent recreation would not be affected by the Project and therefore no mitigation is required.

(3) There are no unique, unusual or distinct natural features which might be affected by the Project.

(4) The only impact on water-dependent recreation is construction of the diversion structure upon a mining claim. However, Applicant has reached an understanding with the mining claim owner and with other gold miners to coordinate activity during construction.

(5) & (6) There are no water-dependent recreational opportunities of state-wide significance within the Project vicinity and therefore no mitigation is required.

9. Historic, Cultural and Archeological Resources (OAR 690-51-240)

The Project would not result in significant adverse impacts on any historic district, site, building, structure or object in or eligible for inclusion in the National Register of Historic Places. The Applicant proposes to comply with state laws relating to protection of Indian cultural materials that may be encountered during construction and that any necessary mitigation would be in conformance with professional standards. The Applicant has consulted with all appropriate agencies and tribes.

10. Land Resources (OAR 690-51-250)

(1)-(4) No prime farmlands, wetlands, or outstanding scenic and aesthetic resources identified in the Josephine County Comprehensive Plan or by state or federal agencies are affected by the Project. Impacts on prime forest lands would be minimal.

(5) Project features are designed and located to blend with adjacent features consistent with the need to provide adequate fishery protection.

(6) Mechanical noise caused by the Project would not exceed 55 dba (measured at the north, east, and west property lines), and would comply with applicable noise standards.

(7) The Project would not have an adverse effect on fragile or unstable soils; subsurface drainage and proposed replanting would eliminate the potential for soil erosion.

(8) There are no natural communities or geological features identified by the Oregon Natural Heritage Data Base as threatened or endangered in the Project boundary.

(10)

(9)&(10) Project design includes appropriate safeguards to ensure protection of Project features from geologic disturbances or other naturally occurring conditions or hazards.

11. Land Use (OAR 690-51-260)

The Project has been found to be consistent with the Josephine County Comprehensive Plan and state-wide goals. A variance was granted to accommodate certain features of the Project.

12. Economics (OAR 690-51-270)

The Applicant has demonstrated it has the financial resources to cover estimated construction, maintenance, operating, mitigation and compensation costs.

13. Need for Power (OAR 690-51-280)

The Commission finds there is a need for Project power based upon the existence of a Power Purchase Agreement dated September 29, 1983, between Delmer Wagner and Pacific Power and Light Company.

CONCLUSIONS OF LAW

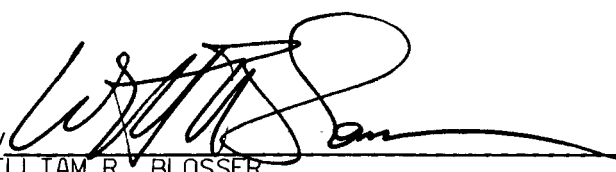
The proposed Grave Creek Project does not meet the standards of OAR 690-51-200(3). Although the proposed project satisfies all other standards in OAR Chapter 690, Division 51, it may not be approved. OAR 690-51-160.

ORDER

Now, therefore, it is ORDERED that Application HE 386 in the name of Delmer Wagner for a hydroelectric license for the proposed Grave Creek Project be and the same is hereby rejected.

Dated and signed at Salem, Oregon, this 28 day of August, 1987.

WATER RESOURCES COMMISSION

  
by  
WILLIAM R. BLOSSER  
Chairman

NOTICE: You are entitled to judicial review of this order. Judicial review may be obtained by filing a petition for review within 60 days from the service (date of mailing) of this order. Judicial review is pursuant to the provisions of ORS 536.075 and 183.482.