

BEFORE THE WATER RESOURCES COMMISSION  
STATE OF OREGON

IN THE MATTER OF THE CONTESTED	)	
CASE HEARING FOR CONSIDERATION	)	PROJECT BACKGROUND,
OF HYDROELECTRIC PROJECT	)	FINDINGS OF FACT,
APPLICATION 62831 IN THE NAME OF	)	CONCLUSIONS OF LAW
CENTRAL OREGON IRRIGATION	)	AND ORDER
DISTRICT	)	

The Central Oregon Siphon Power Project, Hydroelectric Permit Application 62831, (the "Project"), has been submitted pursuant to ORS Chapter 537 to the Water Resources Commission, (the "Commission"), by Central Oregon Irrigation District, a municipal corporation organized under Chapter 545 of the laws of the State of Oregon, ("COI"), referred to herein as the Applicant.

The proposed Central Oregon Siphon Power Project would be located on the Deschutes River in Deschutes County, Oregon. The Project would utilize the existing Central Oregon irrigation facility which includes an intake head works situated at river mile 170.9, an inverted siphon pipeline and an unlined canal. The project site is located in Section 7, Township 18 South, Range 12 East, Willamette Meridian, and is approximately two miles south of the City of Bend, Oregon. The proposed Project would utilize the existing Central Oregon canal to convey water from the Deschutes River to the proposed turbine penstock.

In 1984, the Water Policy Review Board established a minimum stream flow in the Deschutes River from Spring River to North Canal Dam, which includes the Project reach. That minimum stream flow has a date of priority of November 3, 1983. Application 62831 was filed on September 24, 1981. No minimum stream flow for the Project reach predates Application 62831.

New structures associated with the existing Central Oregon canal irrigation facility include a check structure on the canal to divert water from the canal to the penstock and thence to the power plant, a power plant, tailrace, two 7-foot diameter penstocks, a switchyard and 69 kV transmission line.

The Project also includes a trashrack, a gated check, a flume, sluiceway and a fish bypass which was completed in 1972.

The intake for the proposed power plant would be located on the north side of the Central Oregon canal approximately 1,300 feet downstream from the discharge point of the siphon into the canal.

The Project would be operational only when river discharges are sufficient to permit turbine operation while maintaining irrigation requirements and a minimum instream flow of at least 400 cfs throughout the project reach.

The Project will produce 28.11 million kilowat hours in an average year based on flows ranging from 80 cfs to 640 cfs through the turbines.

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 Upper Deschutes River Basin. At its meeting of July 17, 1987, the Commission delegated authority to the Director to make the decision and issue the Order on the potential of cumulative impacts. By Order dated July 17, 1987, the Director found that the Project does not have the potential for cumulative impacts with other existing, approved or proposed projects in the Upper Deschutes 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 August 10, 1987.

No petitions for party status were received.

On September 27, 1987, the Department held a contested case hearing in Bend, Oregon, with James C. Carver, Jr., presiding as Hearings Officer. Applicant was represented by Robert Lovlien, Attorney at Law, Bend, Oregon. There were no other parties to the contested case.

Unsworn oral and written comments were taken from the Oregon Department of Fish and Wildlife, ("ODFW"), and Tom Throop, a member of the Deschutes County Board of Commissioners. Said testimony was stipulated to and entered into the record.

Sworn oral testimony was taken from Ron Nelson, General Manager of COI.

#### APPLICABLE STANDARDS

To be approved, a project must meet the general and resource specific standards in OAR 690-51-170 to OAR 691-51-260. Economic and need for power standards in OAR 690-51-270 and 690-51-280 must be met as well. OAR 690-51-260. The applicant must demonstrate in the record that all these standards are met.

As a result of the hearing 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. Protection of Designated Resource Areas and Special Management Areas (OAR 690-51-170). The Project will not affect any designated resource area or special management area.

### 3. Fish Resources

#### (1). Wild Game Fish

The Deschutes River from Wickiup Dam to Bend contains six species of resident game fish: brown trout, rainbow trout, brook trout, kokanee, coho and white fish, as well as tui chub, a non-game detrimental species. Since completion of Wickiup Dam in 1947, there has been a slow, but continual loss of fisheries habitat and corresponding loss of game fish population in Deschutes River from Wickiup to Bend. Widely fluctuating river flows by irrigation releases have destroyed by erosion most of the riparian areas.

As a result of ORS 536.325, the Department recommended and the Water Policy Review Board subsequently adopted a 660 cfs minimum for the 25.6 mile section of the Deschutes River from Spring River to Bend. It is this stream section where the proposed 1.6 mile diversion is located. Although the 660 cfs minimum would not automatically govern this earlier-filed application, Applicant agreed to conduct a study by environmental consultant in the fall of 1985 to determine appropriate instream flows for the specific project reach. ODFW was involved in the study design and oversaw data collection and analysis. Following this technical analysis, consultation land owners resulted in agreement that approval of the project should be conditioned upon maintaining an in-stream flow of at least 400 cfs.

As a result of the study of all factors affecting habitat, it was determined that the upper 0.6 miles of the diversion reach contained little useable gamefish habitat.

When all factors affecting habitat in the lower reach were considered, including high velocities, poor pool to riffle ratio, poor quality substrate, and a modest amount of instream and riparian cover, the habitat quality for game fish is low, at any discharge, including the current legal minimum of 660 cfs.

With the additions of structural in-stream habitat improvements, at a flow of 400 cfs wetted perimeter will be maintained or enhanced, compared to that existing with a flow of 660 cfs. A flow of 400 cfs with these structural improvements will not only maintain but enhance the fishery habitat and related wild game fish recreational opportunities within the diversion reach and, subsequently, in other areas within the Deschutes River Basin. These structural improvements will be implemented and maintained by COI over the life of the Project. An agreement between COI and ODFW provides assurances that these enhancement measures will be implemented and maintained.

- A. Mitigation measures are located in the Project vicinity.
- B. Mitigation and enhancement measures will be in effect at the start of project operation.

- C. Based on the Agreement between ODFW and Applicant, there will be no net loss of wild game within the Project reach.
- D. Wild game fish in the Project vicinity will not become hatchery dependent.
- E. Mitigation and enhancement measures are consistent with ODFW management plans and programs.
- F. Mitigation and enhancement measures employ workable, accepted methods best suited to the existing fish populations.

(2) Fish Resources in General

- a. With mitigation as contemplated in the agreement between ODFW and Applicant, fishery habitat and related recreational opportunities for wild game fish would not only be maintained, but enhanced within the diversion reach and then subsequently, in other areas within the Deschutes River Basin.
- b. Project facilities and operations will improve upstream and downstream passage of fish through the Project vicinity through reduction of velocity in the diversion reach and creation of a more beneficial riffle-to-pool ratio, pursuant to the terms of applicants agreement with ODFW.
- c. Project facilities and operations will enhance spawning, rearing, and habitat areas within the diversion reach.
- d. There are no unavoidable adverse impacts on fish or fish management programs.
- e. Project construction is scheduled to occur from July 1988 to December 1989, subject to seasonal weather constraints in the winter and early spring months. Construction of the penstock intake and cement canal lining will occur during the non-irrigation, low-flow season between October and March. Powerhouse construction is scheduled to begin in January of 1989, with use of cofferdams to mitigate any potential for stream sedimentation or bank erosion. There is no instream construction work anticipated. All areas cleared for construction, as well as existing scars from previous construction activities, will be revegetated.
- f. All reasonable fish protective measures within the project reach will be functional when the Project commences operation.
- g. The Project is consistent with ODFW management programs in force

(3) There are no anadromous salmon or steelhead in the Upper Deschutes River.

(4) The Commission finds that Project complies with the Northwest Power Planning Council's Columbia fish basin and wildlife program.

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

- a. All proposed mitigation is within the Project vicinity.
- b. Proposed mitigation is set forth in an agreement between Applicant and ODFW; in an agreement between Applicant and Mt. Bachelor Village Association, an Association of Unit Owners of an adjoined planned unit development; in an agreement between Applicant and Sunrise Village Association, a property owners association of property owners within an adjacent planned unit development; in an agreement between Applicant and Brooks Resources Corporation, owner and developer of an adjoining planned unit development known as Mt. Bachelor Village; and in a conditional use permit issued by Deschutes County.

If the proposed mitigation is implemented, fishery habitat and related recreational opportunities for wild game fish will not only be maintained but enhanced within the diversion reach, with subsequent additional enhancement to other areas within the Deschutes River Basin as well.

The Commission finds the proposed mitigation to be acceptable.

- c. All mitigation measures which reasonably can be completed will be fully functional when the Project begins operation.
- 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.

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

(1) There is available water to provide for reasonable operation of the proposed Project. Based on a 28-year period of historical flow record, the maximum annual production was computed to be 36.61 million kilowat hours and the minimum to be 15.41 million kilowat hours.

(2) Applicant has an irrigation water right which it diverts at the Project. The Project would not have any impact upon this existing irrigation water right. The Department is not aware of any other active water rights within the project reach.

(3) The proposed Project is consistent with the policies set forth in ORS 536.300 to 536.350.

(4) The Project is consistent with achieving the maximum economic development at the Project site since it makes full development of the head from available flows and does not interfere with any other existing or planned hydroelectric project.

(5) Based upon maintenance of a minimum instream flow of 400 cfs and based upon the fact that the Applicant is using an existing diversion structure, the Project will make the fullest practical use of the stream's hydroelectric potential in the Project vicinity.

(6) The Project will not constitute wasteful, uneconomical, impractical or unreasonable use of the waters involved based upon the use of the existing intake structure, the ability to use the waters consistent with a prior irrigation water right, and the Project is an instream rather than consumptive use whereby all waters diverted through the turbine will be returned to the River.

(7)&(8) The proposed Project is consistent with conserving the highest use of waters in the state since it provides an economical use of the waters while preserving other natural resource values. The proposed Project is consistent with controlling waters of the state for drainage, sanitation, flood control and other beneficial purposes since it will not adversely affect these uses.

(9) The Oregon Department of Environmental Quality has granted a waiver to Applicant under Section 401 of the Clean Water Act.

6. Wildlife (OAR 690-51-210)

(1) The location, design, construction or operation of the proposed project will 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.

(2) The location, design, construction and operation of Project facilities would minimize adverse impact on wildlife habitat, nesting and wintering grounds, and wildlife migratory routes. The Project utilizes an existing intake structure and double inverted siphon tube and canal. The penstock and power house will be buried. The transmission lines from the power house to the transformers will be buried. The transmission lines from the transformers to an existing 69 kV transmission line will be raptor proof.

(3) Project construction and scheduling will minimize disruption of wildlife and avoid premature or unnecessary land clearing in the Project vicinity. The penstocks are located in an existing wash created by a prior break in the COI canal. The Project should enhance vegetation and wildlife passage in this area.

(4) Overall impact to wildlife is minor for the proposed Project. The mitigation agreements with adjoining landowners preserves land owned by the Applicant within the Project reach in its current condition which will continue to provide wildlife habitat, even though the Project is located within the Bend Urban Area Growth Boundary. Disturbed and scarred areas will be revegetated, and stream enhancements will improve riparian habitat and carrying capacity.

(5) There are no applicable ODFW management programs in force. The Project is consistent with State fish and wildlife laws, policies and objectives.

(6) The Project is consistent with the provisions of the Northwest Power Planning Council Columbia River Basin Fish and Wildlife Program.

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

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

8. Recreation OAR 690-51-230

There are no identified existing recreational facilities, activities or opportunities located within the Project boundaries except for summer fishing and hiking. The Project would not result in a net loss of these recreation opportunities.

(1) The Project is designed, located and operated to substantially avoid visible or audible intrusion on the natural setting, integral to existing recreation facilities, activities or opportunities. The penstock and powerhouse will be buried and invisible to the public. The transformers will be located in order to comply with Department of Environmental Quality noise standards for quiet areas.

(2) The proposed Project will not reduce the abundance or variety of recreational facilities or opportunities available in the Project vicinity.

(3) Non water-dependent recreation would not be affected by the Project and, therefore, no mitigation is required.

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

(5) Mitigation and enhancement measures implemented pursuant to the agreement between Applicant and ODFW will enhance fishery in the Project vicinity and thereby mitigate any adverse impacts on un-identified water-dependent recreational uses, if any.

(6) & (7) The proposed Project will not cause the loss of or significant adverse impact to any water-dependent recreational opportunities of statewide significance.

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 Application will comply with state laws relating to protection of Indian cultural materials that may be encountered during construction and 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 are identified in the Bend Urban Area Comprehensive Plan or by state or federal agencies. The Project has received a conditional use permit from Deschutes County.

(5) The Project facilities will be designed and located to blend with adjacent features. The design of the power house, location of the transmission lines and landscaping of the double inverted siphon are the subject of mitigation agreements with affected landowners.

(6) Mechanical noise caused by the Project will comply with applicable noise standards and OAR Chapter 340, Division 35.

(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.

(9) & (10) The 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 Applicant has obtained a conditional use permit from Deschutes County for construction of the proposed Project.

12. Economics (OAR 690-51-270)

The Applicant is participating in the Oregon Department of Energy Small Energy Loan Program. The Applicant has demonstrated it has the financial resources to cover estimated construction, maintenance, operating, mitigation and compensation costs.



13. Need for Power (OAR 690-51-230)

The Commission finds that there is a need for Project power based upon the existence of a Power Purchase Agreement dated April 19, 1983, between Applicant and Pacific Power and Light Company

CONCLUSIONS OF LAW

The proposed Central Oregon Siphon Power Project does meet the standards of OAR 690 Division 51. Approval of the project will not impair or be detrimental to public interest and complies with ORS 543.017.

ORDER

Now, therefore, it is ORDERED that Application 62831 submitted by the Central Oregon Irrigation District for a permit to appropriate not to exceed 640 cfs from Deschutes River under a date of priority of September 24, 1981, for generation of hydroelectric power by means of the proposed Central Oregon Siphon Power Project is hereby approved, subject to the following terms and conditions:

1. Diversion of water for power purposes is conditioned on maintenance of at least 400 cfs in the diversion reach of the Project. At no time will operation of the Project reduce the minimum stream flow in the diversion reach to a rate below 400 cfs, in accordance with the agreement between ODFW and Applicant dated March 24, 1987.
2. Construction of penstock intake and cement canal lining will occur during the low-flow season between October 1988-March 1989.

The Commission further notes that Applicant has entered into mitigation agreements with Mt. Bachelor Village Association, Sunrise Village Association, and Brooks Resources Corporation.

Dated and signed this 18<sup>th</sup> day of November, 1987.

WATER RESOURCES COMMISSION

By William H. Young  
WILLIAM H. YOUNG  
Director

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.