



Oregon

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Department of Fish and Wildlife

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May 9, 2011



Ms. Teri Hranac
Water Resources Department
North Mall Office Building
725 Summer Street NE, Suite A
Salem, OR 97301-1271

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MAY 12 2011

WATER RESOURCES DEPT
SALEM, OREGON

REFERENCE: Transfer T-8307

Dear Ms. Hranac,

Please find enclosed Oregon Department of Fish and Wildlife's analysis and discussion of water right transfer T-8307. Our analysis concurs with the Water Resource's findings that the transfer will injure water right Certificate 73188 and 73237. However, the transfer will benefit fish species inhabiting the Deschutes River in the affected reach. We, therefore, recommend that Water Resources consent to the injury of the in-stream water right. This letter and the enclosed analysis are in accordance with OAR 690-380-5050 (3) and OR 540.530(c).

We appreciate the opportunity to work with WRD on these kinds of issues. If you have questions or need additional information about ODFW's recommendation, please contact Rick Kepler at 503-947-6084 or Rick.J.Kepler@state.or.us.

Sincerely,

Bruce McIntosh
Assistant Fish Division Administrator

enclosure

cc: Alex Phillips, Oregon Department of Parks and Recreation, Salem
Brett Hodgson, ODFW, Bend

ODFW's Discussion and Analysis of Transfer T-8307

5/4/2011

Action

This transfer proposes moving one Point of Diversion (POD) upstream approximately $\frac{3}{4}$ of a mile from the authorized POD to a point of appropriation in the NE $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 12, T 10 S, R 12 E. It will be changing from a surface water diversion to a groundwater point of appropriation.

The Water Resources Department (WRD) has determined that transferring this POD upstream will injure at least one in-stream water right. It is Oregon Department of Fish and Wildlife's (ODFW) understanding that Instream Water Rights Certificates 73188 and 73237 are being injured. ODFW and Oregon Parks and Recreation Department applied for instream flows to "provide adequate flows to maintain a significant salmon, steelhead and trout fishery. These flows will also provide for recreational fishing, drift and power boating, and aesthetics in a state and federal scenic waterway (Certificate 73188)." In addition, ODFW applied to protect "migration, spawning, egg incubation, fry emergence and juvenile rearing (Certificate 73237)."

ORS 540.530 (1)(c) allows the WRD to consent to injury of an in-stream water right only if the agency who applied for the in-stream water right recommends that WRD consent to the injury. For the recommendation and consent of injury to occur, the agency that requested the in-stream water right must find that the transfer will result in a net benefit to the resource.

This is ODFW's analysis of the transfer and determination if a net benefit to the resource will occur.

Background

Portland General Electric Company is contractually obligated to provide water to the See's subdivision, which is immediately downstream of the Pelton Re-regulating Dam. During construction of the dam, a well that supplied water to the subdivision went dry.

PGE obtained a water right (C 27497 and S-25800) from the Deschutes River for domestic use for 9 families in the subdivision. The authorized point of diversion is about 800 feet downstream from the dam. They pump water from the river, treat, store it in a large tank and distribute water to the subdivision as needed. The priority date for the water right is 1958 and the rate is 0.02 cubic feet per second.

In 1987, PGE obtained another water right (C 86761 and S 50237) which expanded the right to domestic use for 7 households, irrigation of lawns and non-commercial gardens and to irrigate 1.66 acres. The rate is 0.18 cfs. The water right divides this into 0.03 for expanded domestic use, 0.11 for irrigation of lawns and non-commercial gardens and 0.04 cfs for irrigation.

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MAY 12 2011

WATER RESOURCES DEPT
SALEM, OREGON

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Due to the high cost to maintain the system and to treat river water, PGE drilled a well about 4,000 feet upstream from the dam and 4,800 feet up from the authorized point of diversion. PGE pipes this well water back to the original storage tanks, treats and distributes it to the subdivision.

PGE operates the Pelton Re-regulating dam in conjunction with Round Butte and Pelton hydroelectric power plants. Managers operate these powerhouses as peaking plants. That is, they start passing water through the turbines in the early morning, run them all day following energy demand and shut down in the evening.

The re-regulating dam, which is downstream from the power plants, meters the water out of its reservoir around the clock. In the morning, under normal conditions, the reservoir behind the dam is down 15 to 27 feet. During the day, the re-regulating reservoir fills up from the flows from Round Butte and Pelton power plants. These plants shut down for the night, and the re-regulating reservoir continues to drain in preparation for the next day's inflow.

ODFW staff has commented on this transfer before, Steven Pribyl, Assistant Fish Biologist, in 1999 on a "Transfer Comment Form," and Amy Stuart, Hyrdo Program Biologist, in 2001 in a letter to PGE.

In-stream Water Right

The affected stream reach has established instream water rights (Certificates 73188 and 73237). According to WRD, their stream flow model predicts that natural flow in the Deschutes River is insufficient to meet the requirements of the instream rights. Therefore, moving the point of appropriation upstream has the potential to "injure" the ISWR. Please note the new well affects the surface water source hydraulically connected to the authorized point of diversion. The Water Resources Department has asked ODFW to concur with the injury if we find that the transfer will result in a net benefit to the resource.

Following is ODFW's analysis and evaluation of whether the transfer will result in a net benefit to the resource.

Injury

IS No. 70087 (C73188) has a priority date of October 2, 1989 with flow rates varying between 3000 and 3500 cfs. The second instream right is IS No. 71194 (C73237) with a priority date of January 16, 1991 and flow rates varying from 3500 to 4500 cfs.

Comparison of the ISWRs flows to WRD's Expected Average Natural Flow (EANF) shows there is likely to be injury to IS No. 70087 and 71194 if PGE changes the point of appropriation upstream.

Potential injury would most likely begin in July and continue until the end of January when the Water Availability Analysis shows a shortage of water in the basin. The Water Availability Tables show a water deficiency in the basin between 130 and 600 cfs during these months.

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MAY 12 2011

WATER RESOURCES DEPT
SALEM, OREGON

Discussion and Analysis of Transfer T-8307

ODFW has determined that under ODFW's Mitigation Policy (OAR 635-415), most of the affected habitat would fall into Category 5. ODFW defines Category 5 habitat as having high potential to become either essential or important habitat. The mitigation goal, if impacts are unavoidable, is to provide a net benefit in habitat quantity or quality.

The Pelton Re-regulating dam is highly manipulated to adjust for hydro production upstream. As such, it is a highly altered environment and considered poor habitat for fish. Redband trout use the reservoir pool for rearing only. Migrating fish, such as steelhead and salmon, are trapped and hauled by truck around all the dams in the hydroelectric project.

ODFW considers the 800 feet below the dam to the POD to be Category 2 habitat. Category 2 habitat is essential habitat for a fish or wildlife species, population, or unique assemblage of species and is limited either on a physiographic province or site-specific basis depending on the individual species, population or unique assemblage.

Mitigating Measures

The transfer appears to provide a net benefit for the following reasons:

First, discontinuing the withdrawal of water at the authorized point of diversion will eliminate fish screening problems at this location in the lower Deschutes River. Mid-Columbia steelhead, spring Chinook, fall Chinook and redband trout use this reach of the Deschutes.

Secondly, the new point of appropriation removes water from a well hydraulically connected to the pool behind the re-regulating dam and PGE will no longer withdraw water from below the dam. The managers of the dam will continue to release steady flows below the project to ensure fish habitat and target flow needs. As part of the FERC license and the Settlement Agreement, the Water Right Certificate (82826) for the project requires the dam operators to "hold river flows below the re-regulating facility to within +/- 10 percent of the measured project inflows."

Eliminating water withdrawal at the authorized point of diversion below the dam will improve water flows in the lower reaches of the river. Because of this transfer, there will be about 0.20 cfs more water in the river for the 100 river miles from the authorized point of diversion to the mouth of the river.

ODFW considers the habitat of this part of the Deschutes, the so-called "lower Deschutes," to be of much higher quality than the reservoir, and we have classified it as Category 2 habitat. ODFW defines Category 2 habitat as essential habitat for a fish or wildlife species, population, or unique assemblage of species and is limited either on a physiographic province or site-specific basis depending on the individual species, population or unique assemblage.

The withdrawal from the well will have almost negligible effects on water levels in the reservoir. According to PGE, the well withdraws 0.1 acre-feet a day during peak demand in July or about

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MAY 13 2011

WATER RESOURCES DEPT
SALEM, OREGON

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0.05 cfs. The reservoir behind the re-regulating dam stores about 2,900 acre-feet and inflows range from 3,000 to 4,700 cfs.

Conclusion

Changing the POD upstream approximately 4,000 feet has the potential to injure IS No. 70087 and 71194 by reducing low flows in the reach between the existing point of diversion and proposed point of appropriation. However, ODFW estimates that a series of benefits will more than offset the injury.

Net benefits of the project include:

- Elimination of fish screening problems at the authorized point of diversion.
- Eliminating water withdrawal at the authorized point of diversion below the dam will improve water flows by leaving 0.20 cfs in the final 100 river miles of the Deschutes River. Mid-Columbia steelhead, spring Chinook, fall Chinook and redband trout use this reach of the Deschutes.

Because of these stated reasons ODFW finds that the overall project benefits will more than offset any negative effects and hereby recommends that WRD concur in the injury of IS No. IS No. 70087 and 71194 for the transfer of Water Rights No. S-25800 and S 50237 under T-8307.

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