



Oregon

Theodore R. Kulongoski, Governor

Department of Fish and Wildlife

Fish Division
3406 Cherry Avenue NE
Salem, OR 97303
(503) 947-6200
Fax (503) 947-6202
TTY (503) 947-6339
www.dfw.state.or.us

July 26, 2010

Dwight French
Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, OR 97301



REFERENCE: Transfer T-10997

The Department has received notification of your finding that transfer application T-10997 cannot be made without injury to an existing in-stream water right. You also indicated that the applicant intends to seek approval under ORS 540.530(1)(b) – (e). Based on this, you have requested ODFW make a recommendation on whether OWRD should consent to injury of an in-stream water right. For the ODFW to consent to injury of an in-stream water right, ODFW must find that the transfer will provide a net benefit to the resource consistent with the purposes of the in-stream water right, in this case fish and fish habitat.

The ODFW has evaluated the proposed transfers and finds that the over all benefits of the transfer provides a net benefit, which offsets the injury to the in-stream water right caused by the transfer. The attached analysis provides ODFW's reasoning for recommending the consent to injury of the in-stream water right.

If you have any questions please contact Jeff Neal in our John Day office (541-575-1167) or Rick Kepler in our Salem office (503-947-6084).

Bruce McIntosh
Assistant Fish Division Administrator
Fish Division

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Cc: Jeff Neal, ODFW John Day Office
Eric Julsrud, WRD Canyon City Office
Rick Kepler, ODFW Salem
Alex Phillips, State Parks and Recreation

Attachment: ODFW's Discussion and Analysis of Transfer T-10997 (July 22, 2010)



ODFW's Discussion and Analysis of Transfer T-10997

July 26, 2010

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Action

This project involves moving one Point of Diversion (POD) for water right permit 1239, certificate No. 946 upstream approximately 900 feet to a second POD that is being reconstructed to allow fish passage and includes a fish screen to keep fish in the stream. This action will remove two pushup dams which will improve fish habitat and passage. An additional benefit is the newly constructed POD will have a fish screen to keep fish from diverting out of the stream which the old POD being moved did not have. The authorized quantity of water for water right No. 946 is .25 cfs. The Water Resources Department (WRD) has determined that transferring this water right upstream will injure at least one in-stream water right. ORS 540.530 (1)(c) allows the WRD to consent to injury of an in-stream water right only if the agency that 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 Oregon Department of Fish and Wildlife's (ODFW) analysis of the transfer and determination of whether a net benefit to the resource will occur.

ODFW's understanding of the In-stream Water Right IS 69946 (C63251) being injured is it's a joint water right for both ODFW and State Parks so both Departments need to provide consent to injury. The purpose for the flows is for "Anadromous and Resident Fish Habitat and Recreational Fishing"

Background

The John Day river basin encompasses approximately 8,100 square miles, is the second longest free-flowing river in the lower 48 states and is one of the few rivers in the Columbia River basin that is managed exclusively for wild anadromous fish. The North Fork John Day River enters the John Day River at approximately river mile 185 near the community of Kimberly. The North Fork supports populations of wild redband trout, spring Chinook salmon, bull trout and summer steelhead, as well as mountain whitefish and many species of non-game fish. Cottonwood Creek is a tributary to the North Fork John Day entering at RM 15.5 and has similar uses by the same species.

Over the last 20 years, hundreds of fish habitat improvement projects have been implemented throughout the John Day River basin by ODFW, Watershed Councils, and Soil and Water Conservation Districts. These riparian fencing, irrigation diversion, streambank stabilization and upland restoration projects were funded to address fish passage barriers, habitat, water quality, flows, and screening. Many of the projects contribute to irrigation efficiency and effectiveness.

In recent years the North Fork John Day River Watershed Council (Watershed Council) has focused restoration efforts on improving fish passage and riparian function at irrigation diversion dams. The accepted historic irrigation water diversion method in the basin has been almost exclusively to use gravel push-up dams. These push-up dams require reconstruction prior to each irrigation season using a bulldozer, loader or backhoe to push stream gravels and cobble into a semi-porous berm that is angled across the stream. The dam spans all or most of the stream

Discussion and Analysis of Transfers T-10984 (5-06-10)

channel and often requires modifications throughout the summer to ensure that the legal rate of irrigation water is diverted as streamflows recede. Sealing the push-up often includes placing plastic or canvas on the upstream face of the dam, which can further impede adult and juvenile fish passage upstream. In many years, spring or early summer precipitation events wash out the push-up dam, requiring it to be installed a second or even third time. Each dam may divert water for several water rights and several different landowners. Some of these dams are significant barriers to up and down stream migration of adult and juvenile salmon and steelhead.

In its continuing effort to improve fish passage and habitat, the North Fork John Day Watershed Council has proposed replacing 2 push-up dams on the North Fork John Day River with a driven sheetpiling diversion that provides for fish passage and fish screening. In this proposed transfer, 2 pushup dam POD's are being combined with the movement of one of the water rights upstream to take advantage of combining the 2 POD's into one and only having one structure in the stream with better fish passage and screening.

Benefits resulting from replacing two push-up dams are the elimination of two barriers to fish passage and eliminating annual streambed and bank disturbance. Eliminating annual streambed and bank disturbance will improve stream riparian habitat conditions over time, promoting greater stream stability and more rapid riparian vegetative recovery. An additional benefit is removing a POD without a fish screen and providing fish screening at the new POD location which eliminates fish from being diverted from the stream into an irrigation ditch and onto an agricultural field.

In-stream Water Right

The project stream reach has an established instream water rights (IS No. 69946 (C63251)). According to WRD watermaster, stream flows in Cottonwood Creek ISWR's are not always able to be met in the summer. Therefore, moving the POD upstream has the potential to "injure" the ISWR. The Water Resources Department has determined that transferring this water right upstream 900 feet will injure the in-stream water right and 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.

IS No. 69946 (C63251) has a priority date of June 12, 1989 with flow rates varying between 6 and 33 cfs. Comparison of the ISWRs flows to WRD's Expected Average Natural Flow (EANF) shows there is likely to be injury to IS No. 69946 if the point of diversion is moved (transferred) upstream.

Injury

Potential injury of the IS No. 69946 would most likely occur during the irrigation season beginning in June until the end of the irrigation season at the end of September. The Water Availability Tables show a deficient of between 7 and 21 cfs in flows.

Habitat within the affected reach is utilized during the period of expected impact to the ISWR by adult and juvenile Chinook salmon, adult and juvenile steelhead, resident redband trout and Pacific Lamprey. The greatest potential for negative impact to the in-stream water right would

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JUL 30 2010

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Discussion and Analysis of Transfers T-10984 (5-06-10)

be in late September when resident redband trout, and juvenile Chinook and steelhead would be moving downstream through this stream reach. During downstream migration juvenile salmon and steelhead and fluvial sized resident redband trout will utilize this stream reach for foraging and escape cover much like they would habitat that is occupied all year long. Potential impacts include reduced availability of foraging habitat, reduced availability of edge habitat (hiding cover offered by stream bank sedges and slightly submerged vegetation), reduced water depth, and any effects that less water in the channel would have on water quality such as increased water temperature. Because of these impacts on the habitat in this stream reach, ODFW has determined that under ODFW's Mitigation Policy (OAR 635-415) the habitat would fall into Category 3. Category 3 habitat is essential or important habitat that is limited on a physiographic province or on a site-specific basis. If impacts are unavoidable, ODFW requires in-kind, in-proximity replacement of impacted habitat and no net loss of habitat quantity or quality. In this case reduced flows have the potential to limit fish migration, escape cover and forage opportunities.

Mitigating Measures

Installing a sheetpile diversion with fish passage and screening would assure that all life stages of fish will have passage at all stream flows throughout the entire year. Salmon, trout, and steelhead have adapted life history patterns within the basin to take advantage of the most desirable habitats and water temperatures needed for survival. One of these adaptations is for them to move either upstream or downstream seeking cool water refuge areas. Push-up dams have the potential to prevent these juvenile salmonids from reaching refuge areas. Removal of the historically used push-up dams and replacing them with one structure that provides for fish passage will greatly benefit fish passage in Cottonwood Creek and allow these juvenile fish access to the most desirable water temperatures and habitat.

A second benefit of removing the push-up dams is that stream bed material will no longer be disturbed each year to construct the push-up dam. This will result in more stable stream banks at the retired push-up dams construction site and likely will result in a more stable stream channel downstream from the former pushup dam sites. By not disturbing streambed material each year the stream channel will, over time, become more stable which should result in improved riparian vegetation at the site and a narrower and deeper stream channel. Other similar projects completed within the North Fork watershed have resulted in increased sedge growth at the waters edge, increased willow growth on the stabilized gravel bars, and a gradual narrowing and deepening of the stream channel. The improvements in fish passage, riparian vegetation and stream structure would provide additional higher quality habitat than the habitat found where a pushup dam is being used.

An additional advantage is the elimination of a diversion that did not have a fish screen. This will also benefit juveniles and adult fish by not diverting them out of the stream.

Conclusion

Transferring water right No. 1239 (C 946) upstream approximately 900 feet has the potential to injure IS No. 69946 by potentially reducing low flows by .25 cfs in the reach between the two current PODs. This in turn has the potential to limit fish migration, and make escape cover and forage opportunities less accessible. In considering this water right transfer, ODFW estimates

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SALEM, OREGON

Discussion and Analysis of Transfers T-10984 (5-06-10)

that a series of benefits will offset the injury. ODFW believes fish migration will not be prevented any further than under current conditions by the reduction in flow caused by the upstream transfer. Any flow reductions will be offset by an increase in quantity and quality of fish habitat as a result of the removal of 2 pushup dams. The habitats that are increased or improved include escape cover, foraging habitat and reduction in water temperature. The channel is expected to narrow and stabilize at and for a substantial distance below the pushup dam site. This entire stream reach is fenced to exclude livestock and enrolled in the Conservation Reserve Enhancement Program which in turn will allow riparian vegetation to recolonize the area providing more escape and forage habitat for fish. Allowing stream banks to stabilize will improve riparian vegetation providing shade and a deeper channel which should, at a minimum, curtail warming of the stream and has the potential to allow the stream to maintain cooler water temperatures. By improving fish habitat, fish populations can better sustain themselves leading to possible improvements in recreational fishing opportunities in Cottonwood Creek and the North Fork John Day Basin. Additionally, as a net benefit the new POD will allow volitional passage past the diversion, whereas, the pushup dams blocked such passage and provide fish screening which will keep fish in the stream rather than being diverted into a ditch. 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. 69946 for the transfer of Water Right No. 1239 (C 946) under T-10997.

References

Lauman, J. E. 1977. Fish and wildlife resources of the John Day basin, Oregon, and their water requirements. Oregon Department of Fish and Wildlife. Portland, Oregon

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Theodore R. Kulongoski, Governor

Parks and Recreation Department

725 Summer Street NE, Suite C

Salem, OR 97301-1266

(503) 986-0707

FAX (503) 986-0794

www.oregonstateparks.org

July 22, 2010

Oregon Water Resources Department
Dwight French
725 Summer Street NE, Suite A
Salem, OR 97301



REFERENCE: Transfer T-10997

Dear Mr. French:

This letter is in response to your May 19, 2010 letter requesting the State Parks and Recreation Department's (OPRD) recommendation on consent to injury to the instream water right in Cottonwood Creek, certificate 63251. The water right is established to maintain instream flow for anadromous and resident fish habitat and recreational fishing. OPRD's interest in this water right pertains especially to recreational fishing.

OPRD concurs with Oregon Department of Fish and Wildlife that overall, the transfer provides a net benefit to recreational fishing, which offsets the injury to the instream water right caused by the transfer. While the proposed project would result in an injury because of a reduction in flow within the current authorized point of diversion and the upstream proposed point, the proposed project gives net benefit because the removal of two push up dams will eliminate yearly instream disturbances and the use of fish screening at the new point of division will prevent diversion of fish into irrigation channels. It is our belief that this will result in improved conditions for fish to thrive and improve recreational fishing opportunities over time.

If you have any question regarding this matter please contact Alex Phillips at (503)986-0631.

Sincerely,

Kyleen Stone

Assistant Director, Recreation Programs & Planning

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