

Interstate Management & Protection of Instream Flows

Potential Development and Implementation of 'Agreements Not To Divert' to Protect Instream Flows Contributions from Oregon in Washington.

Background:

As a result of a negotiated settlement agreement between the Hudson Bay and Walla Walla River Irrigation Districts in Oregon and Gardena Farms Irrigation District No. 13 in Washington ('the Districts'), the Districts agreed to voluntarily bypass water past their respective diversion points at all times when they are diverting water into their canals for irrigation purposes. These agreements were initially entered into in 2001. While the settlement agreements have since expired, the Districts are still adhering to the bypass flows contained in the latest version of those agreements. Those bypass numbers are currently as follows:

HB/WWRID (Oregon): 27 cfs from 1/1 – 6/30; 25 cfs from 7/1 - 12/31
GFID (Washington): 19 cfs from 1/1 – 6/30; 18 cfs from 7/1 - 12/31

Additionally, water is being contributed as instream flow through implementation of Conserved Water projects in Oregon, which function similarly to Trust water rights in Washington. These instream flows continue down the mainstem Walla Walla River at which point they reach stateline. There is significant loss of water in this reach of the river, primarily due to bedloss. The most infamous losing reach of stream between the diversion and stateline is known as "Bush's Hole", an old gravel excavation in the riverbed through which a significant portion of the riverflow can infiltrate downward as it passes through this reach.

At during low flow periods, less than one-half the bypass flows will reach stateline, as measured at the Pepper Bridge Gauge S-108 (currently operated by the Walla Walla Basin Watershed Council). Once flows of the Walla Walla River cross stateline, the Oregon instream flows lose whatever "identity" they had in terms of Oregon water law, and become available for appropriation by valid water right holders in Washington, under conditions and authority of Washington water law. The inability to protect instream flow water rights across stateline has become an impediment to further implementation of conservation projects in Oregon as well as a significant hurdle to be overcome in implementation of a potential major Flow Project (reservoir and/or Columbia River Exchange) in the Basin.

Voluntary Bypass Flow Protection in Washington

There are a number of potential methods that have been examined to provide interstate protection of Walla Walla River instream flow water rights passing across stateline from Oregon into Washington. These options include, but are not limited to:

- Interstate Compacts
- CTUIR claim to 'time immemorial' water right
- State legislative changes to existing water laws
- Trust water right protection
- Basin-wide agreements – Voluntary Agreements Not to Divert (ANTD)

Most of these options include legal/legislative actions that would be costly and time intensive to enact. The implementation of these options would also be regulatory in nature, with the exception of possible exception of ANTD's to let certain quantities of water flow past diversion stations, in an attempt to protect or maintain instream flows. This concept paper will explore in more detail the issues and opportunities voluntary bypass agreements present to protection of bypass flows across stateline.

In exploring the feasibility of voluntary agreements not to divert (ANTD), there are several key issues that would need to be addressed. Some of the primary issues:

- What quantity of water to protect?
- How will an agreement to protect flows across stateline relate to the GFID bypass?
- Will priority dates be of any consideration?
- How will ANTD relate to relinquishment of contributed water?
- What will the timing of the agreements be?
- What data will be necessary to implement?
- What river reaches will be impacted by ANTD?
- Who are the potential participants? How many and what volumes of water?
- How might an ANTD program be administered?

A. *Quantity of Water to Protect*

Stateline: The full quantities of water bypassed by the Oregon districts do not make it to stateline. As the objective of this program would be to protect those flows not present instream but for the Oregon district bypass/conserved water projects, an evaluation of historical flow of the Walla Walla River at the Pepper Bridge gauge site would seem to be in order. There is one diversion in Washington above this gauging site (~0.5 cfs); historically, the reach through the Pepper Bridge gaging site has never been completely dry.

Ground Water Return Flows: Water contributed to instream flow in Oregon is partially "lost" to subsurface infiltration. Much of this water may enhance surface water as groundwater likely re-emerges at some point downgradient of where it goes subsurface. Additionally, Managed Aquifer Recharge ("MAR") projects in Oregon may add to instream flows through groundwater contribution at some point downgradient of the MAR project. The returning volumes, as well as spatial and temporal aspects, of this exchange are not at present well quantified. It should also be noted that the quantities of water bypassed by the Oregon districts have been partially offset by conservation efforts which reduce groundwater recharge (e.g. piping) and increased groundwater withdrawals which impact groundwater aquifers and their interaction with surface waters in the basin.

Incorporation of Washington Trust Water Rights: There are currently approximately 18 cfs of Trust Water Rights (TWR) - exclusive of GFID bypass - on the mainstem Walla Walla River. These rights vary in instantaneous quantities at different times in the irrigation season, and are located throughout the mainstem, although the largest proportion are found within the lower reaches of the river.

Are the Oregon bypass quantities to be protected an absolute number, or as part of the overall scheme of instream flow water rights? That is, if we again assume a stateline bypass quantity of a certain cfs, is the objective of the ANTD scenario to see only that quantity is protected to the mouth of the WW River, or to have that quantity be considered as additive to other efforts to put additional flows instream? It is assumed here that the bypass quantities are to be considered as additive in nature. One important distinction between the TWR and the Oregon instream flows is that the TWR carry a priority date, and are subject to formal regulation, both for against, within Washington. So assuming that the bypass is additive to the TWR, one portion of instream flow to be protected (TWR) is regulatory in nature, the other (Oregon bypass) would be protected through voluntary ANTD, which would be more flexible in nature.

Proposal: *Evaluate historic flows at Pepper Bridge gage near stateline to determine Oregon contribution to flow regime at that point. Utilize the Integrated Water Flow Model (IWF) to attempt to determine contributions to instream flow resulting from groundwater return flows/MAR projects at specific points downstream from Pepper Bridge. Overall goal to determine, with a reasonable amount of certainty, what water is present as instream flow in the Walla Walla River at specific (gaging) points in Washington, water which would not be present but for implementation of surface/groundwater enhancement projects in Oregon. ANTD would be established to protect the Oregon instream flow contributions, structured to provide flexibility for rightholders and which may include actions such as conjunctive use of ground/surface water, cropping adjustments and deficit irrigation.*

B. Relationship to GFID Diversion Site:

The next streamflow gauge site on the mainstem Walla Walla River downstream of stateline is at Beet Road, immediately below the GFID diversion. As noted above, GFID is voluntarily maintaining the expired settlement agreement flows past their diversion, a portion of which are constituted by contributions to instream flow in Oregon. In recent years these bypass flows have been placed into Trust, making them legally protectable downstream. GFID typically diverts water from October to mid-July; because of low streamflow conditions and senior rights downstream, they cease to divert water for most of the summer. In recent years, GFID has placed their bypass water into Trust, which theoretically allows for regulation protection of that water from junior appropriators as it flows downstream. Due to the differences between the regulatory structure of TWR and the voluntary, flexible nature of ANTD, the two may be best treated separately for the near term.

As an alternative, the GFID bypass could be considered as the sum total of Oregon instream flow impacts into Washington, and that flow protected by means of ANTD. But as the bypass flows at GFID, when placed into Trust, are already protectable by statutory authority, using that quantity for the basis of ANTD may actually lessen the theoretical protection afforded to those instream flows.

Proposal: *Consider the GFID bypass flows as a separate (additive?) flow input to the Oregon instream flow contributions. GFID bypass flows, when in Trust, would be subject to protection through regulatory actions on the part of Ecology; ANTD would be voluntary, flexible plans that would seek to protect Oregon flow contributions through actions of junior rightholders which may not necessarily include complete cessation of pumping.*

C. Priority Date Considerations

Oregon-Washington: Both Oregon and Washington water right systems are operated on the basis of “first in time, first in right”. Priority date is paramount in these water right systems, in particular when there is insufficient water to satisfy all water rights. A premise of protection of Oregon bypass flows in Washington is that without such protection, the Oregon water crossing stateline immediately becomes available for appropriation by “junior” Washington water rights, which pre-bypass may not have had water available to divert during low periods in the summer. The question here is if water rightholders in Washington with priority dates senior to the District rights in Oregon would still be asked to voluntarily let the bypass flows go by their diversions.

Oregon and Washington mainstem Walla Walla River water rights, while based on the priority system, do not legally run against each other. Since the premise of this program is to protect water instream that was not previously available for appropriation but for voluntary bypass/and instream flow contributions since 2000, it is recommended that the focus of ANTD be with those juniors benefitting from additions to instream flows since 2000. That said, efforts should also be directed to more senior water right holders who can provide basin leadership and whom may also benefit from participation in instream flow improvement efforts.

Regulation of Junior Water Rights: On the mainstem Walla Walla River in Washington, the distinction between “senior” and “junior” water rights generally falls to Class 30, or those rights with a priority date of 1892. Water rights on the mainstem Walla Walla River with a priority date prior to 1892 are rarely, if ever, regulated in favor of more senior downstream water rights.

An issue with respect to priority date deals with the ability of senior Washington water rights to make a call on (shut-off) upstream junior rights during times of shortage. Junior upstream rights may only be regulated when it can be shown there is insufficient water available to satisfy a more senior right downstream at their authorized point of diversion. Through ANTD, if water is voluntarily being left instream by a senior water right holder, Ecology cannot regulate junior water rights upstream in favor of that senior water right, as there is water technically available for diversion being voluntarily left instream. So by entering into an ANTD, a senior water right holder can lose their ability to call on junior upstream rights, on the mainstem WW River as well as on upstream tributaries to the mainstem. The ability to regulate these junior upstream rights can be a significant benefit to both instream flows in the reach between the senior and junior water rights, as well as to the senior water right holder.

Proposal: Focus ANTD efforts on junior rightholders on the mainstem Walla Walla. Stress flexibility potential of ANTD as opposed to more strict regulatory structure of priority date regulation to encourage participation on the part of junior water right holders.

D. Relinquishment Issues

Failure to beneficially use all or any portion of a water right for 5 successive years without sufficient cause results in relinquishment of that right. ANTD are not currently considered “sufficient cause for non-use” in the relinquishment statutes. ANTD should be structured so that any water voluntarily foregone is placed into the Partnership Water Bank so that it is protected from potential relinquishment.

Proposal: ANTD will be focused on mainstem Walla Walla River diversions with water rights of Class 30 and late (more junior) priority dates. Voluntary bypass agreements should be structured so that any water voluntarily bypassed through ANTD will be automatically placed into the Partnership Water Bank so as to prevent potential relinquishment. Water left instream by virtue of ANTD will be bypassed without consideration of priority dates between the participating Washington water rights and the Oregon District water rights.

E. Timing of ANTD

With respect to the timing of protecting enhanced flows generated in Oregon, a compromise between priority instream flow needs for fish and an implementation timeframe structured to encourage initial participation by Washington irrigators must be made. It is suggested that May 1 to June 30 and September 1 to October 31 timeframes for initial implementation of ANTD would provide benefit to fish while allowing for a reasonable sacrifice on the part of irrigators. It should be noted that July 1 to August 31 is a period within which many junior water rights on the mainstem Walla Walla are being called on by downstream senior water rightholders. It would also be most appropriate for a pilot program to consider a 1-year term for agreements, allowing for adaptive management as the program progresses and lessons learned.

Any ANTD implemented during this season of use should be structured so that any forgone water be placed into the Partnership Water Bank/Trust so that 1). Participating senior water right holders may continue to make calls on upstream junior water rights, and 2). Forgone water does not become subject to relinquishment due to non-use.

Proposal: Initial ANTD should be established for the periods of May 1 – June 30 and September 1 to October 31. The agreements should be structured to place any water voluntarily bypassed through ANTD into the Partnership Water Bank so this water will not become subject to relinquishment.

F. What data is necessary to implement ANTD?

Some of the primary data requirements necessary to implement ANTD are as follows:

- What portion of the flow across stateline is only there but for the contributions to instream flow from projects/actions in Oregon?
- Where and of what magnitude are the gaining and losing reaches of the River?
- What are the groundwater contributions to instream flow and various points, and to what extent are those groundwater contributions the result of actions taken in Oregon to benefit instream flows?
- How do overall Oregon/Washington actions to improve instream flows (Trust water rights, MAR, voluntary bypass flows) impact instream flows at any particular point (presumably mainstem gaging sites) on the mainstem Walla Walla River?
- What are the diversionary impacts to instream flow upstream from any particular point on the river, and how will they be accounted for in determination of a quantity to be protected?

Proposal: Utilize Integrated Flow Model developed through the WW Basin Watershed Council to determine Oregon contributions to instream flow in Washington. Maintain telemetry for all gaging points, consolidated diversion dam near Lowden, and potential new stations along Walla Walla River mainstem for determining when low flows trigger implementation of ANTD. Telemetry of existing and potential additional flow measurement points along mainstream will not only inform ANTD triggers, but also to provide real time information to participants and managers on mainstream flow conditions.

G. For What Reaches will the ANTD be effective?

Protect those Quantities Contributed by Cumulative Oregon Actions: Once the quantity of water to be protected crossing stateline is established, the question is how does that quantity of water vary as it travels downstream. At any point on the mainstem WW River where a water user is being asked to bypass water, a distinction should be able to be made as to what portion of the flow at that point is water that would not otherwise be there but for the Oregon instream flow actions. This necessarily requires a significant amount of information, including data on gaining and losing reaches of the stream, tributary inputs, and water being diverted by existing pumping stations. The difficulty in determining or distinguishing the sources of mainstem flows at any one point in the river is the primary reason that TWR in Washington are generally not protected below the historic point of diversion of that right.

Protect the Oregon Instream Contributions at Stateline to the Mouth: As an alternative (assuming the necessary data requirements outlined above could not be met) the quantity of water to be protected instream by virtue of ANTD at any one point on the mainstream in Washington can be defined as simply that quantity determined to be contributed to instream flows at stateline. This would greatly simplify preparing and implementing ANTD, but could also potentially negatively impact water users who might end up leaving instream quantities of water in excess of what was actually being contributed by Oregon activities bypass. This in turn could potentially limit participation in the overall program.

TWR – ANTD Incorporation: Protection of Trust instream flow water rights in Washington involve formal regulatory actions on the part of Ecology, which involve complete curtailment of junior water rights. These actions do not allow for the flexibility afforded by ANTD. Regulation in favor of Trust instream rights cannot, by law, impair any existing water rights. The difficulty associated with being able to differentiate between Trust and inherent instream flows at any point is one of the primary reasons that TWR are largely not protected below their original point of diversion. Using the basin model to estimate what TWR are instream at any particular point in the river could enhance the ability of Ecology to regulate for those flows. But given the different nature of ANTD as voluntary, flexible agreements and protection of TWR as more strict, regulatory actions, it is recommended that the two be kept separate, at least initially.

Proposal: Promote agreements which would protect the Oregon instream flow contributions to the full extent the benefit flows in Washington, through the length of the mainstem WW River. Preferably, the combined sw/gw contributions to instream flow should be incorporated in ANTD, provided that modelling can determine with a reasonable amount of certainty where, when and how much water is contributed to flows in Washington. If this cannot be accomplished, look to ANTD to protect Oregon contribution at stateline to the mouth.

H. Who are the potential participants? How many users and what volumes of water are potentially involved?

Potential ANTD participants are any water users, within Washington, that have valid water rights to water from the mainstem WW River. As discussed previously, it may be most appropriate to target those water rights on the mainstem WW River of Class 30 priority (1892) and later. This would be consistent with the intent of ANTD to protect water which would not be instream but for actions taken in Oregon since 2000, the results of which have primarily benefited those junior water rightholders.

There are approximately 60 pump stations on the mainstem WW River. Many of these stations pump water under multiple water rights – the consolidated diversion near Lowden (Garden City, Lowden #2, Old Lowden, Bergevin-Williams) is the largest diversion below GFID and contains the most individual users/water rights (86 separate water rights) of any other diversion on the river.

An estimate of the allocation to water rights of Class 30 or higher (more junior) on the mainstem Walla Walla River, from April 1 to July 1, is approximately 77 cfs (excluding the 93.33 cfs allocated to GFID). A subset of those rights which authorize a diversion rate of 0.5 cfs or more totals approximately 50 cfs, involving 43 individual water rights, with a lesser number of actual water right holders. *(These estimates, for the most part, involve paper water rights and does not necessarily reflect actual use)*. It would appear that the most productive course may be to focus ANTD efforts on those water rights authorizing 0.5 cfs and above.

Proposal: Focus ANTD on junior (Class 30 and above) water rights on the mainstem Walla Walla River. Primary efforts should be directed towards larger water right holders.

I. How would an ANTD Program be Administered?

A key to the potential success of an ANTD program is transparency in data and process. Data used to establish instream flow triggers must be robust and explainable to participants. It may be worthwhile to consider reconstitution of a River Operations Group (ROG) similar to which existing 15-20 years ago to coordinate activities on the river. A ROG could be a forum within which to review data and set flow triggers for implementation of ANTD. A ROG, or similar type organization should have significant water right holder membership, with open and transparent meetings and exchange of information. Such a group could convey leadership, trust and legitimacy to the effort. Outreach/update efforts could include e-mail listservs and a website devoted to dissemination information regarding current river conditions and ANTD triggers.

With respect to enforcement, ANTD are expected to be voluntary in nature. Partnership and/or Ecology staff could be utilized to spot-check compliance with agreements, with results conveyed to and made public through the ROG.

Proposal: Consider formation of a River Operations Group which would review available data and determine flow triggers. Any such group should have extensive rightholder membership to provide transparency and encourage participation.

J. Impediments to Implementation

There are a number of complicating factors which would have to be overcome/addressed in order for implementation of ANTD to be successful:

- It has been 16+ years since ID bypass flows initiated. Many, if not most, junior rightholders have become accustomed to presence of water instream not available prior to 2000. *Need to educate as to historic regulatory/flow structure.*
- Can contributions to instream flow at various gaging points be estimated with reasonable amount of confidence? Need to address not only quantity, but temporal and spatial aspects as well. *Need to be completely transparent as to how flow contributions/flow triggers are calculated.*
- ANTD are voluntary. Peer pressure, potential benefits of participation, recognition of overall basin efforts are motivations. *Need to have transparent, inclusive management structure to encourage participation. Stress flexibility potential of ANTD vs. more strict, priority based existing regulatory structure of “first in time, first in right”.*
- For senior water right holders, ANTD could result in the inability to call on junior upstream users during times of low flow. *Need to consider scenarios, potentially utilizing Partnership Bank, Trust, LWP’s to create situations where bypassed water will not preclude regulation of junior upstream in favor of senior downstream rights.*