

**Columbia River Policy Advisory Group
February 29, 2012**

Out-of Kind Transfers: Twisp Case Study

Twisp Mayor Soo Ing-Moody and Dan Haller of Ecology reviewed the circumstances of the Twisp municipal water right. In 1997 Twisp's water right was reduced by two-thirds, due to abandonment. Subsequently the town has undertaken significant conservation efforts, invested in leak detection and repair, and pursued public education in order to reduce consumption. In 2008 it constructed a reuse facility and adopted a tier rate. All of these actions have helped to reduce consumption, but due to inadequate water supply the city has been thwarted in its efforts to develop residential and commercial property.

In the past year Twisp has sought to acquire additional water rights, with Ecology's assistance, which are "water budget neutral", that is, they do not negatively affect in-stream flow conditions. To date, the quantities that have been identified that are sufficient for the city are in sections of the river reach that would be negatively affected. Ecology believes that as small towns face development pressures, the difficulty of matching up new "budget neutral" water resources will become more difficult.

CRPAG and audience members raised the following questions and observations:

- How many acre feet does the city use; how many people are served? [224 acres feet, about half of what it was. About 1,000 people.]
- Where do the shortages show up? [In watering lawns. But shortage is averted because some people have access to the Methow Valley Irrigation Ditch, while others don't.]
- Do you have any large industrial use? [Not any more.]
- What is the population projection in the next 10 years? [It has slowed, such that we haven't reached the previous growth projection. We are where we were in 2007.]
- Generally this looks like the right kind of mitigation. However, the benefitted reach is different than the one which is impacted, and this is potentially a bad precedent.
- Are there any development plans for the Forest Service facility the town recently took over? [They already had plans for what they wanted to do.]
- How does the water reuse come in? [For a while it helps offset water use, so it allows a little growth.]
- We need to look at the conservation piece of mitigation to see how that pencils out.
- How successful is the Public Works Board in funding leak detection of old infrastructures? [We have gotten some funding; it isn't sufficient. The town is the lead agency for WRIA 48, so we are always looking for partnerships.]
- The municipal state requirement for water system leaks is 10% reduction of the total water pumped from sources. What is the goal for demand reduction? [Don't know.]

- It will become more common that we cannot find exact mitigation. What happens if we don't have flow opportunities for some reaches?

Washington Irrigation Guide

Troy Peters of Washington State University and Leigh Nelson of the Natural Resources Conservation Service briefed the CRPAG on the effort to update the Washington Irrigation Guide. The Guide is used for many purposes including irrigation district design, river basin planning, hydrologic modeling, irrigation scheduling, evaporation pond and wetlands design, water litigation, and water rights transfers. The Guide was updated in 1997, and a supplement was issued in 2005. The Guide has relied on data collected in the 30 years prior to 1982. Last year Ecology funded an effort to update the data and recalculate consumptive use in different circumstances. The current Guide largely depends on an evapotranspiration model constructed on temperature and precipitation. The update develops more sophisticated models that also use humidity, solar radiation, and wind speed. The model used to update the consumptive use rate is the American Society of Ag and Environmental Engineers accepted method.

Troy described in detail how the monitoring stations operate, the challenges of collecting real world data, and the protocols for dealing with data errors. The old Guide didn't show where the information came from; the new Guide is wholly transparent in how data are handled. The draft results show changes across the state in modeled consumptive use. In the Columbia River basin, many of the changes indicate less consumptive use than the current Guide, in some cases significantly. WSU and NRCS will now send the draft out for peer review by other scientists.

CRPAG and audience members raised the following questions and observations:

- Why do you use solar radiation in the equations? [There is a very close association between solar radiation and a plant's water consumption.]
- Why have you set missing precipitation values to zero rather than treating them as missing data? This seems inconsistent with how you handle other data. [It has to do with timing. But we could take another look at how we have handled this.]
- Ecology uses the Guide every day to make water right and water transfer decisions. It sought the new information to get more confidence in these decisions, along with other supply and demand data.
- What will happen after the peer review? [NRCS will work with the State Technical Advisory Committee to get the data out. It will be this fall at the earliest.]
- The new Guide proposes large changes. It needs to be reviewed closely. Irrigators have become comfortable using the old guide. Radical change will be unsettling.
- 10-12 inches of change in the Columbia River Basin is significant. The real question is how Ecology will apply this data to the change and transfer of existing water rights.
- Ecology intends to use the new information unless an applicant can show why it shouldn't. The WIG is the law of the land.

- How sensitive is the new model to wind speed? [Very sensitive. For example, it was the wind speed data that indicated that the Horse Heavens Hill consumption should go up.]
- Is there any thought to how to incorporate climate change into the Guide? [We looked at this, but we really haven't seen much of a difference in the last 30 years versus the previous 100 years.]
- Has there been any groundtruthing with actual crop use, such as alfalfa? [It is difficult to do groundtruthing, because you need to track water use in the root zone.]
- If the formula shows a difference in consumption, where is the other 12 inches of water going? [It is likely that people are over watering in some cases. If they are under watering, they aren't capturing the optimal crop yield.]
- The irrigation Guide also speaks to other uses. Is cooling being captured in the update? [No. Only consumptive use data; other water needs such as cooling, frost control, and leaching would be added on.]
- Many western states use aerial data for groundtruthing. Have you looked at these techniques? [No.] [Ecology looks at LANDSET imagery rather than pilot metric data.]
- Does the current Guide use seasonal data, while the new Guide applies to the entire year? [The new evapotranspiration equations apply to both.]
- Do we know if the differences in the two versions are due to new equations or to changed conditions? [It is most likely due to the new equations and the improved data sets rather than to a change in conditions in the two different 30 year periods.]

Water Related Legislation

Evan Sheffels of Ecology reviewed what has happened to this point in the Legislature on water-related legislation. Many bills were introduced; four remain active. These are:

- HB2212 – Ecology sponsored legislation to extend the termination date for Voluntary Regional Agreements.
- SB6044 – A bill that would authorize the Klickitat County PUD to place the Goldendale Aluminum water right into trust for pump exchange.
- SB6312 – A bill to provide a pilot domestic reservation for exempt wells in the Skagit River Basin.
- HB1381 – A bill indicating that the timeline for relinquishment doesn't continue to run while an application for a use change is being reviewed by Ecology.

The other important bills affecting water are the operating and capital budgets. There has been considerable attention in the Senate budget in particular on how to count water right decisions, insofar as Ecology would preserve \$500,000 in its water program budget if it issues at least 500 decisions by the end of the fiscal year.

CRPAG members and others familiar with legislative activities made the following observations:

- Is there any fiscal impact of the VRA bill? [No.]
- The exempt well bill poses a problem insofar as it is special legislation for a particular basin, which could set an unfortunate precedent in dealing with systemic issues.
- The issue of rural residential development is the centerpiece to the bill on domestic reservations. The question is how to make it work when the applicant comes to the counter. The harsh reality is that this will continue to get the Legislature's attention. It would be better to deal with this issue systematically rather than basin by basin.
- A big focal point in the operating budget is the significant cut to local government budgets, which could affect the integration of land use planning and water use decision making.
- This has been a typical session regarding water legislation: a high number of bills are introduced but few reach the Governor's desk.
- It is apparent that the VRA offers a faster and cheaper decision process, but it isn't necessarily better.
- Ecology has met their performance metric for issuing decisions, which we really appreciate. It is unfortunate that a proposed budget cut to the water program budget is the identical amount that was promised as an incentive to perform.
- There are vast differences in the budgets between the House and Senate in terms of how the Columbia River Program is handled.

Project and Budget Updates

Derek Sandison briefed the CRPAG on project updates:

- The Yakima River Basin Integrated Plan programmatic EIS will be issued on March 2. Work has begun on seeking congressional authorization for the elements of this plan. The Bureau of Reclamation has committed early additional funding to Cle Elum fish passage and to the feasibility of developing augmented use of current reservoirs during drought conditions. The Legislature is poised to commit \$2.5m to the initial planning steps for a pipeline between Keechelus and Kachess to get a better balance of use between these reservoirs.
- The House jobs bill contains funding for canal lining in the Gardena Farms District irrigation district near Touchet.
- In the Odessa Special Study Project EIS, Ecology and the Bureau of Reclamation have adopted the modified preferred alternative wherein the state and federal investments would be to the basic infrastructure and the private parties would fund the laterals and pump stations.
- A thorny issue is the fate of groundwater in the Odessa and the affects of pumping on municipal wells. The Groundwater Management Area assessment will be forthcoming shortly.

- The Weber Siphon is completed and 12 municipal permits have been issued from Lake Roosevelt water.
- In the Icicle Sub basin there is a history of contentious litigation. Ecology has been working with a number of parties to explore what is possible for a water budget that would work for all parties.
- The Boise Cascade aquifer storage recharge project is going forward with possible water available in 2014.
- Discussions on the Canadian Treaty have progressed significantly in the last quarter. County commissioners recently presented to the sovereign review team on issues of importance to them.
- At present there is \$57m in the Columbia River account. About half of those funds have been committed. There is considerable legislative interest in a big new project to develop new water supplies.

Dan Haller Send-off

Ted Sturdevant, director of Ecology, thanked the CRPAG members and the audience for helping the department be successful in finding cooperative approaches to water resource issues in the Columbia Basin.

Ted also noted that this would be Dan Haller's final CRPAG meeting as an Ecology staff member. Ted described Dan as a "superstar" who set a standard of performance throughout the agency. Dan has made an enormous contribution in creative ways to find solutions to vexing and seemingly intractable problems.

Attendees:

CRPAG members and alternates:

Dan Brudevold, Colville Tribes
 Jon Culp, Washington State Conservation Commission
 Jim Fredericks, U.S. Army Corps of Engineers
 Michael Garrity, American Rivers
 Rudy Plager, Adams County Commission
 Phil Rigdon, Yakama Nation
 Dave Sauter, Klickitat County
 Mike Schwisow, Columbia Basin Development League/WA Irrigation Districts
 Teresa Scott, Washington Department of Fish and Wildlife
 Warren Seyler, Spokane Tribe
 Craig Simpson, East Columbia Basin Irrigation District
 Richard Stevens, Grant County Commission
 Leo Stewart, Confederated Tribes of the Umatilla Reservation
 John Stuhlmiller, Washington Farm Bureau
 Rob Swedo, Bonneville Power Administration
 Stephanie Utter, Bureau of Reclamation

Others in attendance:

Neil Aaland, Washington State Association of Counties
Dave Burdick, Department of Ecology
Roscoe Curnutt, National Frozen Foods
Charity Davidson, WA Department of Fish and Wildlife
Mike Dexel, WA Department of Health
Carl Einberger, Golder Associates
Tim Flynn, Aspect Consulting
Adam Gravley, Gordon Derr
Dan Haller, Department of Ecology
Justin Harter, Naches-Selah Irrigation District
Wally Hickerson, ICF International/Jones & Stokes
Cathy Hubbard, Department of Ecology
Eric Johnson, WA Association of Counties
Al Josephy, Department of Ecology
Ted Knight, Spokane Tribe
Jonathan Kohr, WA Department of Fish and Wildlife
Paul La Riviere, Washington Department of Fish and Wildlife
Dave McClure, Klickitat County
Carl Merkle, Confederated Tribes of the Umatilla Reservation
Tom Myrum, WA Water Resources Association
Leigh Nelson, Natural Resources Conservation Service
Troy Peters, WSU
Tom Ring, Yakama Nation
Pat Ryan, Department of Natural Resources
Derek Sandison, Department of Ecology
Evan Sheffels, Department of Ecology
Dan Silver, facilitator
Jim Skalski, Department of Ecology
Paul Stoker, Groundwater Management Area
Tom Tebb, Department of Ecology
Steve Thurin, HDR Inc.
Dawn Vyvyan, Yakama Nation
Bill Wagoner, National Frozen Foods Co-op