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Yakima River Basin Study– Out of Stream Needs (Task 2) Subcommittee

**Meeting Notes, February 25, 2010, City of Yakima Public Works Large Training Room in
Yakima, Washington**

Status of 2010 Basin Study, Subcommittee role and WSU Peer Review Team

Wendy Christensen, Reclamation, provided an overview of initial efforts in getting the Basin study underway. Reclamation and Ecology have a signed intergovernmental agreement now. HDR and Anchor QEA are under contract to help get efforts underway, while a selection process for a consultant to complete the overall basin study occurs.

Two Out of Stream Needs (Task 2) Subcommittee and two Instream Flow Needs (Task 3) Subcommittee meetings are planned, along with the March 24 Workgroup meeting at the Arboretum. At the initial meetings, the Subcommittee will provide input to the approaches for completing the Task 2 and 3 work identified in the Basin Study work plan. Later meetings will also be scheduled to review and comment on draft work products. The full YRBWEP Workgroup will also have opportunity to comment on work plans and work products.

The subcommittee members can also help the consultant collect information for the needs assessment.

Derek Sandison updated the subcommittee on the plan for WSU peer reviewing the Task 2 effort. Ecology is amending an existing agreement the state has with WSU on the Columbia River program to include Yakima Out of Stream Needs assessment methodology and work products. Ecology and HDR coordination with WSU will begin in March. The peer review will help provide validity to the process and results, and help ensure results are consistent with the Eastern WA demand forecast and needs assessment being developed by WSU for Ecology in 2011. The WSU work for Eastern WA will go through November 2011.

Ron Van Gundy would like to share some thoughts with Reclamation, Ecology and the consultant selected for the Basin study on how to approach inactive storage, sharing lessons learned from the 1970s floating pump station experience. Reclamation and Ecology will provide Ron with this opportunity within the next month or so.

Key Objectives and Desired Work Products

The subcommittee members reviewed the HDR handout with objectives and related issues, and preliminarily agreed to the following objectives to address in a needs assessment:

- Characterize/validate existing out of stream needs for agriculture and M&I, first under current conditions



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- Then characterize/validate projected future out of stream needs for agriculture and M&I, looking at twenty year (2030) and fifty year (2060) scenarios
- Assess expected effects of climate change on water needs;
- Evaluate effects of farm lands converting to urban uses.
- Assess continued growth of permit-exempt wells.
- Assess water conservation effects.
- Assess growth of municipal systems without access to Yakima Project water (aiming towards supply solutions).

In conducting scenario analysis,

- Verify whether water management projects from the draft IWRMP are all needed (and by when)
- Verify whether water management projects are adequate to meet the Basin's needs (and for how long.)

Derek Sandison described the legislative direction provided through RCW 90.90 (Columbia River Management Program) to develop a long-term water supply and demand forecast, and that the demand projection for the Yakima Basin and the other drainage areas comprising the Columbia River Basin be updated every 5 years (rolling review). Ecology completed the first Columbia river long-term water supply and demand forecast in late 2006, and the next update is scheduled for 2011, and every five years thereafter.

Tom Ring noted, agriculture acreage is fixed for irrigation districts. These districts have described what they need, so approach should avoid duplicating previous efforts.

Basin study should be comprehensive, addressing all agricultural and M&I needs, regardless of whether they are served by Reclamation's water supply system.

Tom Ring said the documentation on current, unmet needs is more solid; while discussion of additional future needs will be more speculative.

Michael Garrity said that need should be considered in terms of whether it makes economic sense. Also the assessment should include consideration of how water users react to changing conditions.

Ron Van Gundy said that the definition of need is more precise than the yield from the new supply projects under consideration. It is more important to evaluate the projects against the need.

Data Considerations, Alternative Forecasting Approaches and Scenarios

Andrew Graham presented a powerpoint presentation showing conceptually the different categories of water need in the Yakima Basin; and discussing alternative methods for quantifying needs. These include simple trend extrapolation, unit use methods, end use method, econometric analysis and hybrid approaches that combine econometrics with unit use. He also presented an example model of the

agricultural irrigation component of a water needs assessment prepared for the Oregon Water Resources Department.

The subcommittee discussed the level of complexity a water needs model for the Yakima Basin will need to be, when considering crop usage, conveyance loss, and return flows (timing and location). HDR noted the needs assessments will be linked into the basin hydrology and instream flow needs analysis that will be performed using Riverware.

Charlie de la Chappelle suggested looking at a 2 or 3 year sequential drought scenario to come up with what the greatest need might look like. Chris Lynch said this should be assigned a probability to put it in context.

Whatever forecast is developed will need to be compared to what the Irrigation Districts have identified as their need, and verify and validate these needs.

For climate change, Reclamation is working with BPA and USACE through a Reservoir Management Joint Operating Committee (RMJOC) on a climate change model for the Columbia Basin, which will include a Yakima Basin planning forecast for supply based upon climate change. This should be available in late April or May.

Joel Freudenthal asked if we were considering water right applications as part of unmet need and also ag users not served by Reclamation? Tom offered that if water right applications are considered, recognize that many are supplemental requests, particularly below Parker.

Jerry Kelso suggested using information from Reclamation data to calibrate the ag need assessment.

The group had a significant discussion on the importance of not only characterizing the need but also demonstrate how it would be met and to be sure to characterize return flow and reuse as it occurs in the basin. Along these lines, Tom Ring – suggested model characterize how needs are met considering/explaining the following conditions: 1) storage control, 2) conditions above and below Sunnyside dam, 3) Kittitas Valley and lower Valley conditions and 4) return flows and how water is “recycled” downstream. An example of this is Kittitas Reclamation District, where conservation efforts would actually decrease TWSA, because it changes the timing of when water is available instream. See YRBWEP Phase 2 EIS from 1990s and CAG report.

In Kittitas County focus on targeted conservation on tribs that don’t affect TWSA. Consider timing and location of actions.

Need to, as part of this process, help others to better understand how conditions in the basin affect water management operations and opportunities.

Use spatial analysis to show the hydrograph and it would change over time seasonally, by climate change, and through actions in the integrated plan.

Dave Brown felt the Workgroup needed to go through the exercise of characterizing needs to demonstrate needs and nuances of how things work.

Ron Van Gundy reminded the subcommittee that conveyance efficiency changes from year to year and within season, so this needs to be accounted for or noted. The Oregon model Andrew presented seems like it could easily get the numbers wrong.

Ron also noted that the larger districts have made an assessment of conservation opportunities and many have implemented these opportunities, or have plans to do so. The irrigation districts have an inventory of conservation improvements available.

Tom Ring said it would be necessary to use different methods for assessing agricultural vs. municipal conservation opportunities and needs. Ag is more fixed, while municipal will likely grow.

Michael asked if it was important to look at whether people are growing the right crops? No additional discussion ensued.

Municipal Needs Forecast

Jerry Kelso suggested a simpler, basin wide calculation might be all that is needed. Others (Dave, Don, Michael) felt it needed to be more detailed to account for varied conditions in communities across the basin.

Tom Ring added that the forecast will need to account for return flow from wastewater treatment plants (WWTPs) and septic systems, and also need to characterize landscape irrigation. Some cities are served by separate potable and irrigation systems.

Dave Brown noted that the WA State Water Efficiency Rule should improve data available from cities. They have to report certain information to state DOH every year.

Michael Garrity wanted tools to require reduction in water usage to be considered .

Don Gatchalian noted that Water System Plans required every five years from Group A systems have data that can be used. Group Bs will be difficult to estimate needs. Yakima County has information on the Group A and B systems that it owns.

Action Items

Today's meeting helped clarify issues to consider in the needs assessment. Andrew and Ben will work between now and the next meeting to develop a proposed approach.

Attendance

Dave Brown, City of Yakima
Wendy Christensen, Bureau of Reclamation
Urban Eberhart, Kittitas Reclamation District
Michael Garrity, American Rivers
Joel Freudenthal, Yakima County
Chris Lynch, Bureau of Reclamation
Charlie De la Chappelle, Yakima Basin Storage Alliance
Tom Ring, Yakama Nation – Natural Resources
Derek Sandison, Washington Department of Ecology
Ron Van Gundy, Roza Irrigation District

Don Gatchalian, Yakima County
Gerald Kelso, Consultant to Bureau of Reclamation
Jim Milton, Yakima Basin Water Resources Agency
Stuart Crane, Yakama Nation Water Resources
Ben Floyd, HDR Engineering
Andrew Graham, HDR Engineering
Chris Behr, HDR Engineering (by phone)

Next Subcommittee Meeting

The next meeting will be held March 18, 2010, 1- 4 PM at the City of Yakima Public Works Training Conference Room at the address above.