

**From:** Michael Garrity [mailto:[mgarrity@americanrivers.org](mailto:mgarrity@americanrivers.org)]  
**Sent:** Friday, February 26, 2010 2:43 PM  
**To:** Floyd, Benjamin; Sandison, Derek (ECY); [gchristensen@usbr.gov](mailto:gchristensen@usbr.gov)  
**Cc:** Steve Malloch  
**Subject:** yesterday's meeting

Ben, Derek, and Wendy,

Some thoughts on yesterday's meeting. I was caught a little off guard by the idea that we just need to assume that the way things are is the way things need to be when it comes to demand. It may be that changes in water use (including conservation and water markets) by the irrigation districts will result in only small reductions in demand from the ID's calculations, but a credible process can't be designed to confirm what existing water users think they need. With WSU now playing only a framing/reviewing role rather than a lead role in the demand study, this concern is magnified. An independent analysis is critical, as most of the people on the workgroup who understand irrigation demand at a really high level also have an economic interest in arriving at certain conclusions.

Ben, feel free to forward to Andrew -- I didn't have his email handy. I did appreciate that Andrew's comments emphasized the need to communicate to the outside world, but no one (including me) pushed back hard enough on the idea that this study should be about confirming what folks in the basin have already determined for themselves. I'm sure you all know this, but for both substantive and political reasons, I think Ecology and Reclamation need to insist on a good process here even if it makes people other than me uncomfortable. Let me know if you'd like to discuss this further.

Thanks,  
Michael

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3/1/2010

Ben,

I am sorry that I cannot be at your meeting this afternoon. If I were doing this task, i.e., estimating out of stream demand, I would begin by freshening the data. In order to do so, I would do the following:

Ask Reclamation for its delivery statistics (how much water they have delivered at each of their required delivery points identified in the 1945 Consent Decree) for the last ten years.

Ask parties entitled to deliveries under the 1945 Consent Decree to report the amount of water they have taken delivery of in the past ten years.

You will find a copy of the 1945 Consent Decree attached.

Estimate how much water has passed-through the respective recipient's facilities(returned to river) in the past ten years.

Square this information with Table 2-3 in the 12/08 YRB Water Storage Feasibility Study

Estimate the amount of agricultural ground water use has occurred each year for the past ten years.

Make a determination of Agricultural out-of-stream demand.

Reanalyze Table 2.4 of the Feasibility Study and be satisfied that estimates of municipal demand are correct.

Total Ag and Municipal demand.

Please excuse my kibbitzing if you have already mapped this out.

Jim

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**From:** Steve Malloch [mailto:MallochS@nwf.org]  
**Sent:** Thursday, March 18, 2010 3:31 PM  
**To:** Floyd, Benjamin  
**Subject:** Re: FW: YRBWEP Out of Stream Needs Subcommittee - Mtg Agenda

Ben -

One issue we did not really touch on is price of water. Some of the supply options we are considering will result in really expensive drought year water - billion dollar reservoirs that may provide water used once every three to five years. That is really expensive. There has to be a role in the analysis for that price - people are going to want less water if the price is way high.

Where does price and least-cost alternative analysis fit into this analysis?

Steve

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5/19/10

Andrew,

I did not see any response in your Out-of-Stream committee meeting notes, nor hear one presented orally at the Work Group meeting April 28, addressing the suggestion that the analysis verify all out-of-stream demand, not just "needs" as you are apparently using the concept. As I understand it, the "needs" approach you are utilizing will only permit analysis of certain supplemental water supply issues, but not look comprehensively at demand. I do not understand how the more limited analysis you are contemplating can supply the necessary data to evaluate an "integrated" program in the nature that Ecology has already acted to adopt. Environmental compliance for a less-than-integrated program would seem to require amendment to the programmatic EIS adopted last year. I don't understand how out-of-stream demand can be combined with in-stream demand, so as to suggest total demand (I understand this is not purely arithmetic), unless a comprehensive demand analysis is performed. I also do not understand how hydrographic modelling analysis can be performed on an integrated plan without the complete demand scenario available to be compared against base case and individual integrated plan supply proposals. Please advise.

Jim Davenport

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5/28/10

Hi Andrew,

I have a couple of questions/comments regarding the approach to forecasting how water conservation may affect the Yakima Basin:

1. It is not clear to me how the savings resulting from municipal water systems meeting the new standard of less than 10% water loss will be calculated. For some systems, reducing water loss will not result in a reduction in the water withdrawn from the source because the loss percentage calculated is due to inaccurate meter readings rather than leakage.
2. The assumption under Scenario 2 that municipal systems water losses will be reduced to 5% seems optimistic. We will be happy if we can make it to 10%.

Let me know if you have any questions. Thanks.

Joe Stump

Utilities Manager

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**From:** jamesdavenport@netzero.com [mailto:jamesdavenport@netzero.com]  
**Sent:** Monday, May 31, 2010 10:16 AM  
**To:** Ben Floyd  
**Cc:** Ben Floyd; Keith.Underwood@hdrinc.com  
**Subject:** Re: Yakima Basin Study Update and Items for Review

Ben,

A couple of initial observations:

Is it reasonable to conclude from the information you've sent that the climate change analysis will be as competent and integrated into the analysis as that described in the "Framework" document you sent? This is not specifically called out in either the water supply/demand analysis document or the fish habitat benefits analysis document.

It is a bit unclear from the water supply/demand analysis document precisely which "control points" will be used to demarcate river segments in that study. The fish habitat benefits document is more specific, in that it identifies "at minimum Easton, Cle Elum, Umtanum, lower Naches, Parker and others." In any event, the control points and intervening river reaches should be the same in both the water supply/demand analysis and the fishery habitat benefit analysis. When you get to correlative evaluation, i.e., when you get to modeling the projected operation of the river, given assumptions about what you want to accomplish environmentally and existing diversion rights on the river, these will need to be analyzed in tandem. (This is the same point I've made before in asking the rhetorical question: "How do you intend to combine out-of-stream demand with in-stream demand?") Only if the fundamental units of information are put together using the same hydrographic units of the river can the output of the model be appreciated for its real significance, i.e., how much water does it take to do the things we want to do, how much do individual projects (and the aggregate of projects) cost to realize that much water, and what are the benefits of having that much water. That is the type of information a policy maker needs to begin to prioritize things.

Riverware is capable of producing all these outcomes, (or at least deliverables into other models to garner specific conclusions derivative of Riverware conclusions) but it won't do it if you don't begin with equivalent data sets

Hope this helps.

Jim

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6/11/10

Ben and others:

Sorry I missed part of your meeting yesterday due to YTID Board meeting. If I missed something because of that please let me know but here are my thoughts on the Out of Stream meeting and discussion of growth rates and domestic water use:

Municipal representation was noticeably absent yesterday with the exception of Yakima County!

There was a rather heated discussion of what the numbers should be for domestic water use at the Water Transfer Work Group meeting this week. Should the numbers be 350 GPD per WDOE guidance or 200 GPD per WDOH? I saw some parallels in yesterdays discussion as you have suggested reductions from the numbers used in the WSP. The same issue is involved in the projected population growth rate to be used. Pushing both of these numbers too low may not provide for the certainty we would hope for future resource management.

By asking the question if 3.5% or 0.3% population growth rate is the correct number for projected population growth (I happen to believe that 0.3 % is way too low) I believe you are asking the wrong question. What we should be seeking to achieve is a goal of adequate municipal and rural water supply for a growing population and certainty of available water rights for those who will be applying for new conjunctively managed groundwater rights and efficiency and effectiveness in the issuance of those requested rights. The question should be will Ecology be able to effectively and efficiently issue water rights to those who need water over the next 50 years if a Q of X is provided as mitigation water for instream purposes? Also, will all of the players at the YRBWEP Work Group table, including YN, USBR, Ecology accept X as adequate mitigation even if 0.3 is used but 3.5 is the actual growth rate? If Ellensburg needs water for 5% growth rate will all of the players at the table agree to not go to court to block their water right request even if an allocation of X is exceeded and there could be claims of impairment to senior water rights holders? I believe this will drive your numbers up, to reach agreement, but will better provide the long term solutions that are needed.

An even larger question than future rights is how to address all post 1905 groundwater rights (530,000 ac-ft according to USGS) that the cities, irrigators, exempt well users, may think they have. As you are well aware the Watershed Plan clearly laid out this issue. Because of this, in our review of water system plans over the past several years we have been including a disclaimer, in our review letters for consistency with the plan, that is included below. So, will the Integrated Plan provide adequate municipal/rural/exempt mitigation water supply in order to avoid future claims against existing municipal, irrigation or exempt wells? Without this being addressed we will not have the certainty needed for the next 50 years.

Thanks for you consideration of these comments.

Jim

6/14/10

Hi Ben,

So you know YBSA has not bought off on the phasing approach.

Also we would like you to confirm the water volumes anticipated from Wymer, BLE, dead storage at Cle Elum, and conservation, and that those volumes are not double counted- that is stored water reduces instream flow below diversions.

Thank you.

Charlie De La

**From:** Gene Jenkins [mailto:eugenej@fairpoint.net]

**Sent:** Wednesday, June 02, 2010 8:01 PM

**To:** Ben Floyd

**Cc:** Don Jacobs; LD Green; Jack Field (WCA); Sue Olson; Steve Knight; Steve George; Max Fernandez; Mark Herke; Justan Waddington; John & Lynn Ashbaugh; Jerri Honeyford; Heinz Humann; Gail Thorton; Dave Cowan; Bob St. Hilaire; Bob Groenweg; Don Young; Ed Campbell; Sam Hull; Frank Hendrix; Larry Dykes; Steven Shepherd ; Mark Charlton

**Subject:** Re: Yakima Basin Study Update and Items for Review

**Importance:** High

Ben,

I have reviewed a number the documents and the document that is concerning WSU and their review has me concerned.

First under the Non-Federally Supplied Lands there are a number of places in which the amount of water required may be found.

1. All sub-basins that have had conditional final orders signed contain the amounts of water needed to meet those individual water rights. These can easily be compiled and determined.
2. All sub-basins that are required to have a stream-patrolman or ditchrider who regulates and records all waters within those sub-basin send these records to the DoE every month. Those records are available at the DoE office in Yakima.
3. Those records that are required for all individuals who divert 1 cfs or more and must report these to the DoE office. These records are also at the DoE office in Yakima.
4. All irrigations districts that do not receive federally supplied water do keep records for withdrawals within the boundaries of their districts.

In addition most of the water found held by individuals that is non-federally supplied hold a senior water right to those held under federally supplied. As such under what is being proposed would have the greatest possibility of coming up on the short end of the stick so to speak.

Similarly there seems to be a misconception that those individuals who withdraw ground water of 1 cfs or more not required to report such usage. These records should be also located at the DoE office in Yakima.

The amount of water that will be determined by doing a population comparison between incorporated and unincorporated areas within the basin would come up with some vastly misinterpretable numbers. This does not take into account of the unlimited stockwatering provided by exempt wells that was recently part of a ruling in Franklin County Superior Court as well as a Attorney General's Opinion. While current cropping patterns, water usage etc. do give a snap shot of what is occurring it does not by any extent give the flexibility that is needed to determine future ag water supplies needed.

I would also point out that any attempt to construct a limitation that may reduce an existing water right might land the whole process in court.

Thank you,

Gene Jenkins  
Selah, WA.

June 4, 2010

Ben Floyd:

Here are my comments regarding Task 2, out-of-stream water needs and Task 7, ecosystem analysis. Please review:

### **Technical Memorandum – Water Needs Methods and Data**

**Page 3, Objectives of the Water Needs Assessment, 5<sup>th</sup> paragraph** - - Reference is made that the major sub-areas affecting water management are the upper Basin above the Parker gage, the lower basin below the Parker gage, and the Naches River basin. It is suggested the information on current and future water use be presented for four subareas as was done in the 2001 Yakima River Basin Watershed Assessment: Upper Yakima, Naches, Middle Yakima, and Lower Yakima (see Exhibit 2.3 of the June 2000 Final Review Document). This is important because of the surface and subsurface return flows from irrigation and the hydrogeology information to be published shortly by the U.S.G.S.

**Page 4, Current Needs - Irrigated Agriculture on Federally Supplied Lands** - - Current irrigation needs of lands receiving federal water supplies are to be based on diversions for the 20-year period of 1990-2009 (15 non-proration and 5 proration water years). In the recently completed Storage Study, the period of record for the Yak-RW hydrologic model are the 25 water years of 1981-2005 (18 non-proration and 7 proration water years). Columbia River flows at Priest Rapids Dam and the monthly volumes available to pump in excess of instream target flows also reflect this same 25-year period. Why is the period of record now being changed for the Integrated Plan operation simulation studies rather than maintaining consistency with the just completed Storage Study? How will this change affect any probability analysis of the reoccurrence of dry water years in the future?

It is indicated that “Drought year diversions will be compared with legal entitlements and with average diversions during non-drought years. Deficiencies can then be calculated in relation to alternative standards; such as full entitlements;

percentages of full entitlements; and normal-year diversions”. However, there is no indication of how a “benchmark” of the point at which less than “x water supply” cannot be tolerated is to be determined. To what extent will the Economic Analysis be used in determining this “benchmark”?

### **Overall Comment**

It is noted that similar processes in determining current water use and needs to that outlined in the Technical Memorandum was done in the “Watershed Assessment of the Yakima River Basin” completed in 2001. The primary difference is (1) the basic data will be updated, and (2) projected data will be for 50-year period through 2060 rather than 2050.

### **Task 7 – Draft Appraisal Level Fish Benefits Analysis**

Our understanding of the proposed Ecosystem Analysis is that it is designed to provide population estimates of the six focal fish species (steelhead, spring/summer Chinook, fall Chinook, coho, bull trout, and sockeye) attributed to Phase I of the Integrated Plan essentially as structured in the December 2009 Final Report. While it appears the steps outlined in this analysis will provide the appropriate information, nevertheless we continue to be concerned that despite repeated suggestions there is no effort being made to identify the instream needs necessary for a sustainable anadromous fishery population in conjunction with reasonable assurance of a reliable water supply not adversely impacted because of instream water supply constraints.

It seems this is most appropriate in view of the proposed phasing of the Integrated Plan as well as to inform the public and those who will be asked to authorize and fund the Integrated Plan how far Phase I can take us in meeting the Yakima basin water supply needs.

6/13 and 14 /2010

Ben and Keith,

Looking at this preliminary description of the economic analysis, it's clear some groundwork needs to be done soon to identify the outcomes that will be analyzed vis a vi the habitat and fish passage elements so that we can assure that the habitat committee and modeling work produces the outcomes needed for the econ analysis. This short pdf on the economic analysis references a few fish metrics (expansion of available fish habitat (miles); increases in fish population (number of fish), and reduction of excessive flows in irrigation season (in cfs- pulled from table), and implies these are but a few examples. It also notes that the desire is to calculate benefits for each project element and phase. It'd be good to think through the fish elements, the outcome metrics for each, and how benefits will be determined (eg how do we attempt to separate out fish benefits from different project elements (habitat proposal elements, reservoir fish passage and fish benefits from infrastructure projects that allow for improved flows), and how do we separate benefits presumed to occur eventually with existing funding (but faster with the package)? I think some early back and forth would help both econ folks and us ensure that the fish modeling and hab and instream committee work feeds cleanly into the economic analysis... Might be a good topic for a habitat/fish passage/instream committee joint meeting.

Alex

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Joel Freudenthal add-on

I agree with Alex, this is the heart of the beast and we should at least take a coarse look at how it can fit together.



## **Comments on Instream Flow Matrix**

YBSA appreciates the opportunity to comment on the Yakima River Reaches: Instream Flow Improvement Matrix (Rev. 1) dated April 2010. While the document re-states many of the instream flow problems that have been extensively documented over the past half-century, we are greatly disappointed in both the scope and magnitude of the projects offered as potential solutions. Indeed, the entire document appears timid and unable to come to grips with the serious instream flow challenges that continue to severely limit salmon restoration in the Yakima Basin. These challenges will not be surmounted by minor alterations to project operations or the addition of small amounts of water for instream flows.

It is nothing less than shocking that some 3 decades after the Yakima River Basin Water Enhancement Project was initiated by Congress, the agencies and some stakeholders have not moved beyond the discussion phase of projects that might provide water for instream flows, at least one of which has been on the table for over 60 years. At the same time, other options that could provide significant water for instream flows are ignored and not included in the matrix.

Significant progress has been made over the last 30 years with respect to anadromous fish restoration in the Yakima Basin. Research and supplementation facilities have been constructed and are in operation, fish passage facilities have been installed at most diversions, floodplain habitat has been acquired, some instream flows have been implemented, water quality has been improved, and Project operations have been modified to assist restoration. In addition, notice should be taken of the collaboration that has developed between agricultural and fisheries interests as these activities have been undertaken.

Review of all that has transpired over the past 30 years during the YRBWEP planning process, implementation of the Quackenbush Decision, and implementation of the Power Council's Fish and Wildlife Program, only serves to make manifest the inadequacies of the Matrix, which is, at best, merely a rehash of instream flow problems and potential projects that have been enumerated in several planning documents produced by the very same agencies leading the current planning effort. While the Matrix is deficient in a number of areas, we would like to focus on three that seem especially important:

1. Projects and activities listed in the "Potential Projects" column range from activities that could (and should) be implemented immediately, to projects that are, at best, highly speculative, and in reality, simply not doable. The former includes the subordination of Roza and Chandler Power plants at times when additional water is needed for instream flows downstream of the respective dams. The later includes Bumping Lake Enlargement and access to "dead storage".

Bumping Lake Enlargement has been the subject of multiple planning studies over the last 60 years and was submitted to Congress for authorization some 30 years ago. It failed. The majority of the environmental community continues to oppose this project. The project is constrained by limited water and its headwaters location, which would exacerbate non-normative flows in the Bumping and Naches Rivers. To pretend that this project is viable renders the entire planning effort highly suspect.

Any attempt to access dead storage would raise both operational and legal issues. Indeed, when pumping of dead storage was seriously proposed during the 1970's a long legal process ensued. Tunneling into dead storage would raise additional issues from both instream flows and irrigation water supply perspectives. Dead storage is exactly that: Dead. To continue to include it in the Potential Projects column as if it were a viable source of water for instream flows comes perilously close to deception.

2. If Bumping Lake Enlargement and dead storage are removed from the Potential Projects column, what is left? How much "new" water is provided for instream flows to address all the problems identified in the Problem column? Answer: Very little. Some water out of Wymer, and relatively minor amounts from K-K pipeline, conservation efforts, and Cle Elum pool raise (another project that is highly speculative).

Which brings us to the heart of the matter: There is not enough water provided from projects in this Matrix that are actually likely to happen to come anywhere close to meeting the needs of instream flows in various reaches of the Yakima River and its tributaries. This Matrix is like changing the spark plugs on small pick-up, when what the Basin needs is a ten-ton truck that runs on alternative fuels.

3. We continue to be mystified by the almost total lack of concern in the Matrix for the serious temperature problems in the Yakima River downstream of Sunnyside Dam, which are voluminously documented in various planning reports. In the Matrix it is only mentioned once in the "Other Notes" column. Historically, the bulk of anadromous fish migrated in and/or out during the late spring, summer, and early fall. There is a reason why the only remnant runs that existed in 1980 were spring Chinook, a few fall Chinook, and steelhead; they could migrate around the edges of the calendar when the lower Yakima River was not a death trap. Coho, summer Chinook, and sockeye were extirpated in the Yakima Basin.

Now, extensive, and expensive, efforts are in progress to restore summer-run fish, including sockeye, Coho, and summer Chinook, and to increase production of fall Chinook and steelhead. YBSA strongly supports these efforts. However, we do not understand how these efforts can be successful if the temperature problems are not addressed so that fish can migrate, rear, and spawn throughout the lower 100 miles of the Yakima River. The Matrix fails miserably on this subject.

In summary, YBSA believes that the Yakima River Reaches: Instream flow Improvement Matrix (REV. 1) dated April 2010 is fatally flawed in its current form. It includes projects that almost certainly can not be implemented, provides far too little water to address the instream flow problems identified, and totally ignores the temperature problems in the lower

Yakima River. We strongly urge that the Matrix be re-formulated to include realistic projects that yield sufficient water to address instream flow problems in the Yakima Basin, and that it specifically address temperature problems in the lower Yakima River.



Sid Morrison  
Chairman Yakima Basin Storage Alliance

## **TASK 7–DRAFT APPRAISAL LEVEL FISH BENEFITS ANALYSIS**

The YBSA is would like to submit the following comments on TASK 7-Draft Appraisal Level Fish Benefits Analysis:

The YBSA is in general agreement with the language contained in Task 7, provided that one or more of the six scenarios referenced in paragraph 7.3 includes importation of water from the Columbia River. On-going efforts initiated over 30 years ago to provide secure water supplies for irrigation and restore salmon populations in the Yakima Basin have clearly demonstrated that neither goal can be achieved with water provided solely by the Yakima Basin. It is imperative that at least one scenario analyses the benefits of water imported from the Columbia River to both agriculture and fish restoration. In addition, the scenario dealing with Columbia River water should include the fish benefits of restoring the lower 100 miles of the Yakima River, including flows, reconnecting floodplain habitat, and temperature moderation.

The YBSA looks forward to working with all entities to secure the future of the Yakima Basin.