

**\*Contact: Wendy Christensen, Columbia-Cascades Area Office, (509) 575-5848, ext. 203  
Derek Sandison, Washington State Department of Ecology, (509) 457-7120**

## Meeting Notes

### **Yakima River Basin Water Enhancement Project (YRBWEP) Workgroup**

**December 17, 2014**

**Yakima Arboretum, Yakima WA**

#### **Welcome, Introductions and Agenda Overview**

Ben Floyd, Anchor QEA meeting facilitator, welcomed the Yakima River Basin Water Enhancement Project (YRBWEP) Workgroup members and other attendees, led introductions, and provided an overview of the agenda. These notes summarize highlights from the presentations, Workgroup comments and public comments. For more detail, please see the full presentations which are available on the project website <http://www.usbr.gov/pn/programs/yrbwep/2011integratedplan/index.html>

#### **Executive Committee and Subcommittee Updates**

Wendy Christensen, Reclamation, discussed the Western Watershed Enhancement Partnership (WWEP). The U.S. Department of the Interior and U.S. Department of Agriculture have launched this partnership to support investments in building resilience for critical water resource infrastructure. The partnership will work to increase forest resilience, improve water quality, and reduce the risk of catastrophic damage from wildfire. The two departments selected the Yakima River basin as a pilot for watershed enhancements; Reclamation and the Forest Service are collaborating on a Memorandum of Understanding to implement watershed and forest health projects throughout the basin. Wendy also noted that the Deputy Secretary of the Interior plans to sign a proclamation acknowledging the common goals of the WWEP and the Integrated Plan to restore, protect and maintain watershed health.

Derek Sandison, Department of Ecology, discussed the \$30 million proposal for the Integrated Plan included in the Governor's 2-year capital budget for the State of Washington. The proposal includes \$10 million for water supply, \$10 million for fish passage, \$5 million for habitat improvement, and \$5 million for water conservation initiatives.

#### *Habitat Subcommittee*

Jeff Tayer, Subcommittee Chair, summarized the Habitat Subcommittee's activities. The subcommittee recently developed the \$5 million habitat improvement proposal elements included in the Governor's capital budget request described above. This proposal encompasses a range of projects including fish passage on tributaries, floodplain protection, and habitat restoration. The subcommittee also coordinated the development of a proposal for the federal Natural Resources Conservation Service (NRCS) Regional Conservation Partnership Program (RCPP). Lisa Pelly, Washington Water Project,



Trout Unlimited, explained that the final NRCS RCPP proposal was submitted in October. This \$15 million proposal included a variety of Integrated Plan projects. The Yakama Nation also submitted a separate RCPP proposal for on-reservation actions, complementary to the off-reservation Yakima basin proposal. Although the NRCS has asked other regions submitting grant requests to reduce their funding request, Lisa has not received this request for the Yakima basin for the Integrated Plan proposal. Lisa noted that the NRCS selection process has been delayed; she hopes to receive their response in January.

#### *Watershed Land Conservation Subcommittee*

Peter Dykstra, Subcommittee Chair, discussed the subcommittee's recent activities. Public agencies have now acquired or will soon complete acquisition of approximately 55,000 acres of upper watershed forested lands targeted in the 2012 Watershed Land Conservation Subcommittee Proposal and the Subcommittee considers that component of the plan to be complete. Shrub-steppe land acquisitions are still underway and a 2,900 acre acquisition was recently made in Cowiche Canyon. The subcommittee has begun proposing special designations for certain stream reaches in the Cle Elum River watershed; however it is waiting for the Forest Service to complete its Forest Plan revision process before proposing designations on other federal lands or waters.

#### *Water Use Subcommittee*

Scott Revell, Subcommittee Chair, summarized the Water Use Subcommittee efforts. The subcommittee recently developed the \$5 million water conservation proposal elements included in the Governor's capital budget request described above. The proposal includes projects throughout the basin, with focus areas on priority reaches also important to salmon and steelhead recovery. Most of the projects involve irrigation facilities but there is one municipal water conservation project proposed for the City of Yakima. The subcommittee will continue to identify potential projects for future funding opportunities.

#### *Outreach Subcommittee*

Michael Garrity, American Rivers, discussed the Outreach Subcommittee's recent activities. The Subcommittee has nearly completed a short film about the Integrated Plan and expects the film to be available in February 2015.

#### *Joint Subcommittees Meeting*

Jeff Tayer, Peter Dykstra and Scott Revell shared that the Water Use, Habitat, and Watershed Land Conservation Subcommittees met jointly on December 11 to discuss areas of shared interest and opportunities to collaborate. Increased collaboration among the subcommittees can help the Workgroup continue to advance the plan in an integrated fashion. Through a unified approach, the Subcommittees can more closely work together to leverage opportunities that achieve overlapping goals. The three Subcommittees also discussed developing an enhanced watershed-scale approach to achieve ecosystem restoration and water supply goals. The three subcommittees will hold another joint meeting next summer, with ongoing coordination efforts occurring between now and then.

## **Washington State University Benefit-Cost Analysis of the Integrated Plan**

Jonathon Yoder, Washington State University (WSU), presented results from WSU's Benefit-Cost Analysis of the Integrated Plan (the study team also included contributors from the University of Washington and consulting groups). As part of the 2013 State of Washington capital budget, the State Legislature directed WSU to prepare separate cost-benefit analyses for each proposed project in the Integrated Plan. Benefits evaluated included improvements to fish populations, irrigation water reliability, and municipal water supply. WSU consulted with YRBWEP Workgroup members and the HDR consulting team for available information, but carried out the analysis independently. Consistent with direction from the Legislature, WSU used existing studies where possible, supplemented by primary research. For example they used the same RiverWare model that Reclamation and the HDR team has been using, and they used the same basic framework and crop-valuation model as the 2012 "Four-Accounts" analysis.

The study took into account multiple variables including hydrologic modeling of the Yakima River basin, crop modeling in the region, water allocation and market processes, municipal conservation efforts and population growth, fish abundance and growth rates, climate conditions, and irrigation curtailment rates.

When evaluating the full Integrated Plan, the study found a benefit-cost ratio less than 1:1 (i.e. costs greater than benefits) for each of the out-of-stream elements, and a benefit-cost ratio greater than 1:1 (i.e. costs less than benefits) for fish production elements. Overall, the study suggested the following net present values for each benefit category if the full Integrated Plan were implemented (assuming the moderate climate change and market scenario):

- Agricultural Benefits: \$117 million
- Municipal Benefits: \$32 million
- Fish Benefits: \$1 to \$2 billion

These results are lower than those estimated in the 2012 Four-Accounts Analysis conducted as part of the Integrated Plan. The differences are due primarily to differences in the following areas:

- they could not replicate the results of the crop valuation model (though their "proportional fallowing" run came close);
- they used a different approach to modeling the frequency and severity of drought conditions,
- their treatment of fish population baseline abundance and growth rates over time,
- opportunities for water market development, and
- valuation of water for municipal uses, where the WSU team believes the Four-Accounts analysis contains an error in how values were calculated.

The changes in fish population estimates were not available when the WSU draft report was issued in late November so this information is new. These changes from the draft to the final have a significant effect on the results, and Dr. Yoder apologized that the analysis was not completed and included in the draft so that the Workgroup and other reviewers could have seen it before the document was finalized. There are two key differences in this part of the analysis: First, the study team found that fish are now

more numerous than they were in the late 1990's when the fish valuation study used in the Four-Accounts analysis was performed, so the value that the public places on adding more fish should now be lower. Second, the WSU study team believes that the population growth rates assigned to fish in the Yakima River basin do not conform to observations of habitat restoration programs in other locations (40% per year growth rate in the fish population implied by the Integrated Plan Four-Accounts analysis, vs. only 5% per year growth rate observed in other locations).

Dr. Yoder noted that non-market valuation is very difficult to do well. The Four-Accounts analysis of fisheries value was well done in this regard and used the best valuation information available.

When evaluating the out-of-stream net benefits produced by individual projects under the moderate and most adverse climate scenarios, the study found that all projects had a benefit-cost ratio less than 1:1. Under the most adverse climate scenario, the Cle Elum Pool Raise (CEPR) project by itself and the combination of the Keechelus-to-Kachess Conveyance (KKC) plus the Kachess Drought Relief Pumping Plant (KDRPP) project produced benefit-cost ratios slightly greater than 1:1.

The study also evaluated a range of water market scenarios from no trade to full trade. Gains from trade are potentially substantial. The study team recognizes that the actual market for water rights in the Yakima Basin may not function consistently with an economic model. The analysis therefore is best viewed as providing the "outer bounds" for market activity. The market analysis included senior water rights in the Kittitas Valley, which were not included in the Four-Accounts analysis.

When evaluating fish passage in individual reservoirs, the study found that all fish passage projects produced a benefit-cost ratio greater than 1:1. Stream flow benefits could be achieved less expensively by purchasing water rights from agricultural users rather than constructing the proposed infrastructure projects.

Evaluation of the full Integrated Plan showed that economic benefits are lower for each individual component when it is added to all of the other projects, compared with each individual project by itself. This illustrates "diminishing returns," which is a common feature of economic systems.

Further details of the analysis can be found in the *Benefit-Cost Analysis of the Yakima Basin Integrated Plan Projects* report which can be found at: <http://swwrc.wsu.edu/category/research/>

#### Workgroup Discussion:

- Mike Leita, Yakima County: Why is there such a wide range in the results for fish benefits compared to the range reported for the agricultural and municipal benefits? *The estimated range for fish benefits reflects the range of uncertainty in the fish abundance baseline.*
- Paul Jewell, Kittitas County: Over what period of time are benefits and costs evaluated? *The study calculates all net present values over a 100-year period using a 4-percent interest rate.*

- Michael Garrity, American Rivers: Why is there a benefit-cost ratio of zero for conservation in the most adverse climate scenario? *In the Yakima RiverWare model, conservation actions only move water. Conservation does not create new storage; instead conservation results in the reallocation of water. Therefore, the analysis only considers the benefit from the reallocated use and its associated opportunity cost.*
- David Fast, Yakama Nation: Why would the benefit per project reduce as other projects are added? *This is a result of the law of diminishing returns. As the amount of water available increases, consumers become less willing to pay for each additional unit of water.*
- Paul Jewell: Is the law of diminishing returns useful for this application since we are primarily concerned with water availability during drought years when there is not enough water stored? *The law of diminishing returns also applies to the marginal benefit received from reductions in curtailment rates during droughts.*
- Peter Dykstra, Plauché & Carr, LLP: Are litigation costs included in the marginal cost of water? *No, litigation costs associated with curtailment are not included. However, transaction costs are included in the analysis and are applied per transaction, not per unit of water.*
- Tom Ring, Yakama Nation: Improvements in instream flow due to conservation also improve fish migration in tributaries. The RiverWare Model does not capture this type of benefit. Has this benefit been captured in the analysis in another way? *In addition to the RiverWare Model, WSU study participants also used the Yakima River basin fish productivity model. However, tributary access benefits are likely not fully captured in the fish productivity model.*
- Michael Garrity: Delisting of steelhead is a potential benefit resulting from improved flows to tributaries. This is an important benefit that should be attributed to conservation.
- David Fast: Does the analysis consider operational benefits from improved reservoir storage management? *Yes, reservoir storage balancing (i.e., flip flop operations) is included in the RiverWare Model.*
- Jon Yoder: *Note that the study uses a sampling distribution of historical curtailments between 1925 and 2009 to model management of water shortages. The analysis does not incorporate deficit irrigation practices.*
- Tom Ring: He notes that the approach used seems to view all sockeye in the Columbia River basin as the same. Yet they are not the same to the Yakama Nation. It matters that the Integrated Plan would restore sockeye in the Yakima basin.
- Tom Ring: Regarding the analysis of market transfers, were water acquisitions based on water diversion rights or consumptive use? *Water acquisitions should be based on consumptive use, not water diversion rights. In the Kittitas Valley the diversion quantities can be as much as 10 to 20 times higher than the consumptive use. So using the diversion quantities would significantly overestimate the water available for transfer. Water acquisitions are based on water diversion rights. Consumptive use is assumed to be the same across districts.*
- Mike Leita: We appreciate WSU conducting this analysis. However, the theory does not reflect real world results. The time and resource constraints limit the ability for this economic analysis to account for social, political, and legal dimensions that are critical for understanding the basin's water resources. In the past, individual attempts to improve fish production or water supply have

failed. A collaborative solution is necessary to achieve measurable improvements in fish production and water supply. *This comment is reasonable; a benefit-cost analysis is only one aspect of describing the situation. Decision makers should consider this analysis along with other factors.*

- Paul Jewell: In the report, does the acquisition of a new water source produce additional costs to the end-user? *The report recognizes that treatment and conveyance costs would be incurred. However, those costs to end-users would be separate from the Integrated Plan costs.*
- Paul Jewell: Why was Kittitas County not consulted during the development of the study? There is a lot of information available on the actual costs of acquiring water for municipal and domestic uses. This experience shows that water acquisition costs are much higher than estimated by WSU, so the municipal benefits should also be higher. *The WSU study participants spoke with many entities involved in the Integrated Plan; because of limited time and resources we were not able to speak to everyone.*
- Dave Brown, City of Yakima: As part of the Integrated Plan, the municipalities aim to reduce water consumption by 49,000 acre-feet. Ultimately, the municipalities are “paying into” the Integrated Plan. Is this type of commitment accounted for in the analysis? *The opportunity cost of this commitment is accounted for in the analysis. The analysis assumes that water users (irrigators, municipalities, and other entities involved) share the implementation costs.*
- Sean Gross, National Marine Fisheries Service: Compared to the 2012 Four-Accounts Analysis, the value of fish benefits in the WSU study are significantly less. The 2012 Four-Accounts Analysis relied heavily on the value of reintroducing sockeye into the Yakima River basin. The WSU analysis assumes that the growth rate for sockeye would be the same as the growth rate for other fish species; this may be an inaccurate assumption. The Integrated Plan fish passage projects would make significant incremental improvements for some species, but for sockeye these projects would make dramatic improvements because without these passage projects there would be no sustainable sockeye populations in the Yakima River basin. Therefore, a higher growth rate for sockeye than for other species is probably warranted. In addition, the intent of the parties to the Integrated Plan is that sockeye reintroduction will accompany passage projects, which should speed up recovery of sockeye populations in the basin. The WSU analysis does not appear to account for these reintroduction efforts, and therefore may underestimate benefits. *Unfortunately, WSU was not able to finish the fish benefits component in the draft version of the report in order to get comments such as this. It is not clear what the outcome would be using the baseline and growth rates you’ve suggested. Sockeye could still potentially have a lower growth rate since the population would be small when reintroduced.*
- Michael Garrity: I share Sean Gross’ concerns regarding the sockeye baseline and population growth rate values used in the WSU study. The results for the Yakama Nation sockeye reintroduction program suggest better fish productivity results. *Note, that there is nothing in the Integrated Plan about hatchery costs, so gains due to reintroduction are not considered. If those gains were to be considered, the costs of reintroduction would also need to be considered.*

- David Fast: The Yakama Nation sockeye reintroduction had minimal or no hatchery cost. Sockeye population growth is expected to be substantial. *Reintroduction of sockeye would likely need to be evaluated individually to identify their unique contribution to net benefits.*

### **Implementation Committee Update**

Derek Sandison provided an update on Implementation Committee efforts. The committee is currently working on an authorization bill for the KKC, KDRPP, CEPR, fish passage, and water conservation initiatives. The President's Budget included a component for fish passage and water conservation. Urban Eberhart, Kittitas Reclamation District, noted that the President's Budget includes additional drought response funding. Reclamation has been encouraged to seek drought response funding to advance Integrated Plan projects. Urban emphasized that it is very encouraging that the Integrated Plan has been recognized in this way.

U.S. Treasury Secretary Jacob Lew came to Seattle to discuss aging and inadequate infrastructure. Derek Sandison met with him and highlighted the Integrated Plan in the context of national infrastructure needs. He described to the Secretary how the Integrated Plan addresses economic needs, ecological restoration, and climate adaptation.

### **Technical Work Update**

Wendy Christensen discussed the progress of ongoing projects. The KDRPP and KKC Draft Environmental Impact Statement (DEIS) will be released in January, 2015. This DEIS includes bull trout enhancement as a component of the action alternatives. Analyses of key considerations are ongoing for the Bumping Reservoir Enlargement and Wymer Dam and Reservoir. WDFW and others are conducting wildlife surveys at both of these sites. Approximately 20 comment letters were received on the CEPR DEIS; Reclamation and Ecology are carefully considering all comments and developing responses that will be included in the Final EIS. The fish study related to Clear Lake Fish Passage is ongoing, and Reclamation and the Service are preparing a report documenting 2014 study results. Wells are being drilled to evaluate recharge potential in the Kittitas Reclamation District area, as part of the groundwater infiltration actions under the Integrated Plan.

### *Wymer Dam and Reservoir Cost-Risk Analysis*

Andrew Graham, HDR Engineering, discussed the Wymer Dam and Reservoir Cost-Risk Analysis conducted by HDR and Reclamation staff. Cost-risk analysis establishes a reasonable range of costs by replacing the general contingencies identified in a standard construction cost estimate with specific risk items and associated probabilities. Cost-risk analyses can be updated from time to time as new information becomes available, making the estimates more accurate over time. The geotechnical exploration of the project site was completed in 2014 and provided significant new information related to project costs. A workshop was held in October 2014 to review the findings from the Wymer site geotechnical exploration and provide an updated characterization of conditions that affect construction cost. The workshop team was composed of engineering, geotechnical, construction management, cost

estimators and other discipline area experts. The workshop team considered how alternative designs, dam materials, and reservoir sizes would affect project costs.

Three reservoir sizes were evaluated: 162,500 acre-feet, 120,000 acre-feet, and 110,000 acre-feet. The two larger reservoir options included construction of a main dam and a saddle dike. The smallest reservoir option only included construction of a main dam. The workshop team also identified construction events that could impact the cost and the probability that each event would occur. The following bullets list the 70<sup>th</sup> percentile estimates from the cost-risk analysis (meaning there is a 70 percent chance that costs would not exceed these values):

- 162,500 acre-feet reservoir option: \$1,136 million dollars
- 120,000 acre-feet reservoir option: \$932 million dollars
- 110,000 acre-feet reservoir option : \$647 million dollars.

These costs and cost-saving options can be further refined when the project progresses to the feasibility study phase. Water supply and ecosystem restoration benefits would be less for the smaller reservoir sizes, so it will be important to consider whether cost savings would be worth the reduced benefits.

#### *Cle Elum Dam Fish Passage*

Walt Larrick, Reclamation, discussed the progress of the Cle Elum Dam fish passage project. The project is in final design and would be constructed in phases, with the first phase being constructing site access improvements, including a bridge across the existing dam spillway channel. Reclamation expects to construct the bridge in fall 2015.

#### *Habitat Conservation Project Implementation*

Jeff Tayer discussed the progress of basin-wide habitat enhancement projects. Many projects are moving forward and those involved have continued to work collaboratively. The resources made available by the Integrated Plan have been instrumental in advancing these projects. In the City of Yakima, the 42-inch outfall pipe has been installed as part of the Gap-to-Gap Outfall Relocation project. For the Gap-to-Gap Property Acquisition initiative, Yakima County is currently involved in negotiations. In the Kittitas County Conservation District, the Manastash Consolidated Pipeline and Manastash Water Ditch Association Pipeline project has been completed; this project will allow for more efficient use of irrigation water thereby improving instream flows. The Toppenish Fan Recharge facility foundation is being prepared; this project will capture peak flows to store additional water in the aquifer. The Bateman Island Causeway Modification Conceptual Design Project preliminary temperature results have been gathered. The Cle Elum River Side-Channel Restoration project is underway; this project will help to restore the floodplain. The design of the Ellensburg Water Company/Coleman Creek Restoration is complete; construction of this project is scheduled to begin in fall 2015. Yakima County is close to completing the Trout Meadows acquisition process. The Bull Trout Task Force has completed a spawning survey to identify restoration needs for bull trout. The Kittitas Conservation Trust has completed their second year of hydrologic monitoring on the Gold Creek project.

Scott Revell, Roza Irrigation District, discussed the progress of agricultural conservation projects. The Kennewick Irrigation District Division IV Lining project access road has been constructed and canal shaping is currently in progress. The Yakama Nation Wapato Irrigation Project Lateral 4-414C pipeline has been completed. Kittitas County Conservation District and Trout Unlimited continue to work on the Manastash Creek/Anderson Diversion Irrigation Water acquisition project. The Manastash Creek Sprinkler Conservation project will be completed and tested prior to the 2015 irrigation season.

Mike Leita noted that the collaboration of multiple entities due to the Integrated Plan is unprecedented and has stimulated activities outside of the Integrated Plan, such as floodplain restoration and groundwater recharge projects.

#### *Teanaway Community Forest*

Mike Livingston, WDFW, provided an update on the Teanaway Community Forest (TCF). The TCF Advisory Committee is advising Washington Department of Natural Resources (DNR) and WDFW on development of a strategic plan for the TCF; the agencies plan to have the draft strategic plan completed by March 2015. The strategic plan is taking shape: it identifies goals for the TCF and establishes metrics to measure progress; the committee is currently discussing baseline conditions. Benefits measured against the baseline can be attributed to the Integrated Plan. The committee has been gathering input on a proposed outreach plan and DNR and WDFW aim to initiate outreach efforts in January 2015. There have been diverse viewpoints regarding the use of motorized-vehicles in the TCF. The committee is working to get consensus on this issue. Because recreation is a complex issue, the committee plans to develop a recreation plan as a follow-on to the TCF strategic plan.

#### **Workgroup Roundtable Discussion**

Ben Floyd opened the floor to Workgroup members. Specific comments included the following:

- Wendy Christensen: Reclamation appreciates the work done by several members of the Workgroup and Richard Visser (US Fish and Wildlife) on the bull trout enhancement program—it has come a long way in a short time. The BTE report will be included as an appendix to the KKC/KDRPP DEIS.
- Ron VanGundy, Roza Irrigation District: It seems that the benefits to the irrigation districts identified in the WSU study are too low. The proratable irrigation districts will bear the majority of costs and clearly see a high value in the improved water supply that would be made available. *Jonathan Yoder: If the irrigation districts fully cover the costs of the water supply projects, this would indeed demonstrate that the benefits estimated in the WSU study indeed are too low.*
- Mike Leita: We expect that 2015 will be a positive year for the Integrated Plan.
- Michael Garrity: The Integrated Plan projects are moving forward, this will help keep momentum throughout 2015.
- Urban Eberhart: The Integrated Plan is the first of its kind in the country. It is gratifying to see support from Congress.
- Alex Conley: It is great to see the habitat projects moving forward with the other pieces of the Integrated Plan.

- Seth Defoe, Kennewick Irrigation District: The WSU study raised questions about the returns of groundwater to surface flows and how this is modeled in the Yakima RiverWare model. We want to be confident that the Yakima RiverWare model accurately depicts the impacts to Kennewick Irrigation District.
- Dave Brown: The City of Yakima's aquifer storage and recovery project is moving forward. We are close to putting water in the ground.
- Patty Garvey-Darda, U.S. Forest Service: It was great being involved in the development of the KKC/KDRPP DEIS. We were excited to see the incorporation of bull trout enhancement in the action alternatives.

## Public Comment

- Grant Learned, Lake Kachess Home Owners Association: The WSU study was a rigorous analysis based on good data and should be treated as such. It is concerning that no one in the YRBWEP Workgroup is considering that the Integrated Plan could have a benefit-cost ratio less than 1:1. The Workgroup should be open-minded.
- Mike McPhee, Bumping Lake: Why is the passive value of the old growth forest surrounding Bumping Lake not considered? According to an exchange he had recently with Jonathan Yoder, this forest that would be inundated by the Bumping Reservoir expansion could be worth as much as \$1.85 billion. *Jonathan Yoder: Note that the estimate his team provided for the forest's value was calculated relatively quickly compared to the elements evaluated in the full WSU analysis of the Integrated Plan.*
- Nadine Maykut, Friends of Bumping Lake: We are against the expansion of Bumping Dam, but approve of constructing fish passage at the existing dam site.
- Elaine Packard, Seattle Chapter of Sierra Club: We oppose the Bumping Lake expansion. We are conducting a study of the forested area which would be inundated. This is a unique forest with great biodiversity. We are concerned with the lack of open-mindedness from those involved in the Integrated Plan. In particular, there has been no discussion of alternatives to expanding the dam.
- Ann Louis, Kachess Lake Home Owners Association: Those who live in the upper Yakima River basin are not being considered.
- Bill Campbell, a Kachess Lake homeowner: The Normandeau Associates study and the WSU study have produced similar results. These results suggest that the water supply projects are poor investments and can be satisfied with water trading, while the fish projects clearly provide most of the benefits. The fish restoration projects should be the focus moving forward.
- Bob Hall, Yakima Basin Storage Alliance: We hope that the Workgroup will consider the results of both the WSU and the Normandeau Associates studies moving forward.
- Ben Floyd, facilitator. Noted that a person from the Wise Use Movement provided a letter with comments, and it will be posted with the meeting materials.

Ben Floyd closed the meeting by noting upcoming meeting dates in 2015: March 11, June 3, September 9, and December 16.

**Workgroup Members in Attendance**

Dale Bambrick, National Marine Fisheries Service  
Dave Brown, City of Yakima  
Wendy Christensen, Bureau of Reclamation - Columbia-Cascades Area Office  
Alex Conley, Yakima Basin Fish & Wildlife Recovery Board  
Ron Cowin, SVID  
Seth Defoe, Kennewick Irrigation District  
Charlie de la Chapelle, YBSA  
Peter Dykstra, Plauché & Carr, LLP  
Urban Eberhart, Kittitas Reclamation District  
David Fast, Yakama Nation - Yakima/Klickitat Fisheries Project  
Michael Garrity, American Rivers  
Patty Garvey-Darda, U.S. Forest Service - Cle Elum Ranger District  
Jaelyn Hancock, Washington State Department of Agriculture  
Paul Jewell, Kittitas County  
Mike Leita, Yakima County  
Mike Livingston, Washington Department of Fish and Wildlife  
Scott Revell, Roza Irrigation District  
Derek Sandison, Washington State Department of Ecology - Office of Columbia River  
Mike Shuttleworth, Benton County  
Jeff Thomas, USFWS - Mid-Columbia River Fishery Office  
Ron VanGundy, Roza Irrigation District  
Dawn Wiedmeier, Bureau of Reclamation - Columbia-Cascades Area Office

**Other Attendees**

Bill Campbell, Lake Kachess HOA  
Debbie Carlson, Bonneville Power Administration  
David Child, Yakima Basin Joint Board  
Dan Church, Bureau of Reclamation - Columbia-Cascades Area Office  
Marie Cobb  
Tony Coluccio, Frank Coluccio Construction  
Stuart Crane, Yakama Nation  
Susan Crawford, Bureau of Reclamation  
James Davenport, JH Davenport, LLC  
Warren Dickman, YBSA  
Jack and Beneitta Eaton  
Don Gatchalian, Yakima County  
Raelene Gold, Seattle Audubon  
Andrew Graham, HDR Engineering, Inc.  
Sean Gross, National Marine Fisheries Service  
Bob Hall, YBSA/Yakima Auto Dealers  
Ken Hasbrouck, Kittitas Reclamation District  
Chuck Klarich, YBSA  
Mattson Larson, Kiewit  
Steve Malloch, Western Water Futures LLC (alt. for American Rivers)

Daniel Martinez, S. Martinez Livestock  
Naydene Maykut, Friends of Bumping Lake  
Jason McCormick, Washington Water Trust  
Tim McCoy, Bureau of Reclamation  
Patrick McGuire, Kennewick Irrigation District  
Miles McPhee  
Saundra McPhee  
Jim Milton, Yakima-Tieton Irrigation District  
Bryan Myre, Yakama Reservation Irrigation District  
David Ortman  
Elaine Packard, Water/Salmon Committee, Cascade Chapter, Sierra Club  
Sarah Pistorese, HDR Engineering, Inc.  
Kate Prengaman, Yakima Herald-Republic  
David Reeploeg, Office of Senator Maria Cantwell  
Kristina Ribellia, Washington Water Trust  
Dan Silver  
Jeff Tayer, WDFW  
Richard Visser, US Fish & Wildlife Service  
Jonathan Yoder, Washington State University  
John Daugherty  
Jenn Alendoze, Friends of Toppenish Creek  
Jerry Waltz  
Ann Lewis  
Grant Learned Sr.  
Grant Learned Jr.  
Dan Haller, Aspect Consulting

### **Where to Find Workgroup Information**

Meeting materials, notes, presentations, and materials submitted during public comment for the Workgroup meetings will be posted on the project website (<http://www.usbr.gov/pn/programs/yrbwep/2011integratedplan/index.html>). A bibliography of information sources, many of which are available online, is also posted on the website.

If anyone needs help finding an information source, contact those listed at the top of page 1 of these notes or Ben Floyd at Anchor QEA, Kennewick office, (509) 491-3151, or [bfloyd@anchoragea.com](mailto:bfloyd@anchoragea.com).