

May 4, 2016

MEMORANDUM

TO: Columbia Basin Partnership Workshop Participants

FROM: Debra Nudelman and Annie Kilburg, Kearns & West

SUBJECT: Columbia Basin Partnership Workshop – May 4, 2016 Draft Summary Memo

Welcome, Opening Remarks, Introductions, Agenda, and Materials

Welcome, Opening Remarks, and Introductions

Barry Thom, *National Oceanic and Atmospheric Administration (NOAA) Fisheries*, welcomed the group and thanked the meeting attendees for their continued interest in developing shared goals for the Columbia Basin Partnership (the Partnership) and their willingness to participate in the first of two informational Partnership Workshops. He asked the group for a round of introductions. The workshop attendees introduced themselves by name and affiliation.

Overview of the Workshop

Barry stated that the purpose of the workshops is to develop a common understanding on the status of Columbia River Basin (the Basin) salmon and steelhead, their life-cycle, and current management approaches. NOAA Fisheries West Coast Region and Northwest Fisheries Science Center (NWFSC) (collectively referred to as NOAA Fisheries) hopes that all participants will gain at least a snapshot into the current conditions for salmon and steelhead, the challenges they face, and the range of actions taking place across the Basin.

He explained that the workshops are designed to provide an overview of a number of different topics. The regional experts presenting on these topics are from NOAA Fisheries and from state and tribal partners. They will share information on current status, trends, and conditions in the Basin. The emphasis of the presentations will be on fish and resource impacts, not institutions and programs. These workshops are not intended to justify, or debate, our existing management approaches, nor are they structured to debate science or management activities.

Barry said that NOAA Fisheries recognizes there are many viewpoints on a number of these topics, and encourages participants to ask questions and raise issues for future discussion. NOAA Fisheries and the facilitation team will capture comments, perspectives, and issues in meeting notes, and work to find a place for more discussion through the formal Partnership once the framework is established. One outcome of the May 4 and June 7 workshops will be to generate a list of potential discussion topics for the Partnership.

Process Update

Barry explained that since the Partnership will be involving both sovereigns and stakeholders, NOAA Fisheries has been exploring options for compliance with the Federal Advisory Committee Act (FACA). NOAA Fisheries wants to have the most inclusive, robust, and solid collaboration as possible. Prior to this workshop, NOAA Fisheries had a discussion with their FACA group called the Marine Fisheries Advisory Committee (MAFAC) about proceeding with the Partnership under their current committee.

In recent years, MAFAC has provided advice on the NOAA Fisheries' Climate Science Strategy, coordination of consultation processes under the Endangered Species Act (ESA), aquaculture policy and research, recreational fishing policies, Magnuson-Stevens Act reauthorization topics, sustainable seafood certification, ocean policy, and catch shares. Member terms are three years, and members may serve two consecutive terms.

MAFAC has agreed to charter a Task Force for the Partnership. NOAA Fisheries can use MAFAC's existing structure to move forward with the Partnership process and will begin working over the next few weeks to distribute a Federal Register notice to re-solicit nominations for the formal Partnership. Barry asked participants to begin thinking about who they might want to represent the stakeholder committee; nominations will have to be formally submitted as required under FACA. NOAA Fisheries hopes to hold the first formal Partnership meeting in September 2016 and they will keep workshop participants informed as the process develops.

Agenda and Materials

Deb Nudelman, *Kearns & West (K&W) Facilitator*, thanked Barry for the welcome and opening remarks.

Deb explained that this workshop is an opportunity for participants to learn more about the potential topics for the Partnership, ask questions, and to engage in dialogue with other sovereigns and stakeholders. She walked participants through the agenda and meeting materials, asked for clarifying questions, and provided an overview of the ground rules for the structure of the workshop dialogue.

Current Status and Trends Information/Presentations

Deb introduced Kurt Fresh, *Northwest Fisheries Science and Center (NWFSC)*, to begin his presentation on the current status and trends, specifically on the topic of the salmon and steelhead life cycle.

For details and copies of the PowerPoint presentations from this workshop, please visit the following website: http://www.westcoast.fisheries.noaa.gov/columbia_river/cbp_May_4_2016_presentations.html.

Salmon and Steelhead Life Cycle

Kurt introduced his topic and talked about the differences between salmon and steelhead and the salmonid life cycle and its life history stages. He also discussed the life history strategies of Chinook salmon and steelhead including timing of return to freshwater from the ocean and juvenile growth stages. He talked about the definition of salmon and steelhead "populations" and their significance in conservation.

Endangered Species Act (ESA) Listed Species

Populations Status from the 2016 5-Year Status Review

Deb introduced Tom Cooney, *NWFSC*, as the next presenter on the topic of the Endangered Species Act (ESA) listed species and the status of these populations from the 2016 review.

Tom greeted attendees and provided information from two reports including the: (1) NWFSC Biological Status Update, and (2) Northwest Regional Office's Status Review, with an updated assessment of limiting factors. While discussing the updates, Tom provided an overview of the Technical Recovery Teams' (TRTs) recovery criteria for salmon and steelhead, which described viability in terms of the population and major population group (MPG) levels. He showed a graphic with viability targets that are based on risk assessments of abundance, productivity, spatial structure and diversity. He also showed maps of the Chinook evolutionarily significant units (ESUs) and steelhead distinct population segments (DPSs) in the Basin and a simple graphic illustrating that the abundance targets for viability (ESA recovery) are above current levels; however, well below historical levels.

Tom also covered short and long term trends for the populations in the Grand Ronde MPG (as examples) and pointed out that in general, abundances have increased. He presented a table that summarized the status of Chinook ESUs with many populations increasing in recent years; however, some remaining well below their viability targets. He provided maps to show where the Technical Recovery Teams identified DPSs of steelhead in the Lower, Middle, and Upper Columbia, the Upper Willamette, and the Snake River. Tom talked about environmental variation and explained that population persistence depends on having sufficient resilience to counter its negative effects. He concluded his presentation with information on the coho and chum salmon ESUs in the Lower Columbia and the sockeye salmon ESU in the Snake River.

Threats Status from 2016 Five-Year Status Reviews

Deb introduced Scott Rumsey, *NOAA Fisheries*, as the next presenter on threats facing ESA-listed salmon and steelhead in the Basin, information NOAA Fisheries developed for the 2016 five-year status reviews.

Scott reviewed the steps that NOAA Fisheries takes in deciding whether a species should be listed under the ESA. The factors they considered include habitat degradation or loss; overutilization of the species for commercial, recreational, scientific, or educational purposes; disease or predation; the inadequacy of regulatory mechanisms; and other natural and manmade factors (e.g. stresses and threats related to hatcheries and to climate change). He described the risk categories attributed to these factors for Middle Columbia River steelhead, Upper Willamette steelhead, and Lower Columbia River coho salmon as examples.

Salmon and Steelhead Abundance Trends Including Non-listed Populations

Deb introduced Guy Norman, *Washington Department of Fish and Wildlife (WDFW)*, as the next presenter on the topic of salmon and steelhead abundance trends, including non-listed populations.

Guy presented numerous graphs showing the average numbers of adult salmon and steelhead returning to the Basin during the period 1980 – 2015. The information included the spring Chinook salmon returns to the Lower and Interior Columbia River; natural-origin spring Chinook salmon to the Yakima and John Day Basins in the Middle Columbia River; total and natural-origin returns of

summer Chinook salmon to the Upper Columbia River; fall Chinook salmon returns to the Hanford Reach (an example of a “healthy” unlisted stock) and to the lower Columbia River; coho, chum, and sockeye salmon; and winter and summer steelhead. Guy said that the upward trends in abundance for the aggregate runs have been building since the late 1990s. These trends show increases in healthy natural populations; hatchery production has also contributed. He ended his presentation by saying that overall, these are improvements; however, these numbers do not reflect what is needed in order to make it to full recovery.

Questions and Answers/Comments

Deb asked participants for clarifying questions on the topics covered. The following are highlights of the questions raised, answers provided, and comments made.

- One participant asked whether the slide presentations would be made available.
 - NOAA Fisheries responded that the facilitation team would make the presentations available on its website (*Note: See website information on page 2*).
- Another participant asked for an explanation on how wild populations are different from hatchery populations in terms of recovery goals.
 - Scott explained that there are two categories when it comes to returns: natural- and hatchery-origin spawners. Hatchery fish generally either return to their hatchery of origin or to the stream near the hatchery. Those that spawn in nature can supplement the natural population and their offspring are considered natural origin (i.e., fish hatched in nature are "natural origin" regardless of whether their parents were "wild" or of hatchery origin). Hatcheries can also help in the near term by providing a genetic safety net. Over the long term, high proportions of hatchery fish spawning in natural areas mask the productivity of the natural population and can pose risks to genetic diversity. In summary, considering how hatchery fish affect progress toward recovery goals depends on the context in which this topic is being discussed.
- A participant stated that it seems some ESUs are trending downwards. Where are the highest risk populations in the Basin?
 - Scott responded that in general, Upper Columbia spring Chinook and steelhead are examples of high risk populations. Upper Willamette steelhead and Upper Willamette Chinook have declined since the last review; to some extent the recent returns reflect what has been happening with ocean conditions, pinniped predation, elevated stream temps, etc. The status of most of the ESUs is about the same as in the last status review; however, there is uncertainty that it will stay at this level in the next few years.
- One participant asked a question regarding the abundance charts presented. It appears that the increases in hatchery numbers were greater than natural numbers. If that is the case, what might the reason be?
 - Guy responded that on a species-specific basis, hatchery fish and wild fish are on the same general trend. This is due to the fish being a part of the same species or stock so they have similar genetic backgrounds. They also have similar experiences once the hatchery fish enter the natural habitat and have similar migration patterns in the ocean. Although their trends have followed similar patterns, this is not a precise statement.
- Another participant stated that there was an oversight in the presentations: the Snake River was excluded from the trend assessments. With the possible exception of the Snake River

Fall Chinook, natural populations of Snake River sockeye, Spring/Summer Chinook and steelhead cannot be described similarly as the remaining Columbia River stocks.

- Following the May 4 Partnership Workshop, Guy noted that his presentation focused on abundance trends for Columbia River Basin salmon and steelhead, including examples of non-listed and healthy salmon and steelhead populations. His aggregate data on abundance at the species level (e.g., Columbia River spring Chinook, Columbia River Fall Chinook, Columbia River sockeye) included Snake River fish. Trends in abundance at the aggregate level have been building since the late 1990s; however, not all individual populations are following the same trend. The status of ESA-listed fish, including Snake River spring/summer Chinook, fall Chinook, steelhead, and sockeye, was addressed in the presentations by Tom Cooney and Scott Rumsey.
- Tom clarified that there is increasing evidence for a relationship between population productivity and population density and that there are a lot of things that can limit density or allow it. In general, there are two ways to increase adult returns given density dependence: (1) improve survivals in downstream sectors, and (2) look at tributary habitat and opportunities to increase stream flow. A diversity of life history patterns tends to expand production.
- In response to a question about listing anadromous steelhead versus the resident form (rainbow trout), Tom responded that when NOAA Fisheries listed steelhead in the Basin, they determined that the anadromous form had declined substantially across most of the region.

Tributary Habitat Information/Presentations

Deb introduced Rich Zabel, *NOAA Fisheries*, to present information on the topic of tributary habitat. Rich explained that he would be presenting on the common habitat impairments and limiting factors; how limiting factors affect productivity, capacity, and density dependence; the potential to improve limiting factors; and challenges (i.e. implementation obstacles, benefit quantification, and climate). He said that his presentation provided an overview of NOAA Fisheries' current work. The objectives of a habitat restoration strategy include: (1) identifying life stages in freshwater that limit salmon population recovery; (2) identifying restoration scenarios that provide the largest benefit to salmon populations; and (3) developing monitoring designs to inform the first two objectives and to help determine the effectiveness of actions.

Rich walked participants through an analytical process of identifying restoration actions based on the root causes of habitat and biological change, and how different species respond differently to various habitats. He explained that NOAA Fisheries is doing a basin-wide evaluation of historical and current habitat capacity. NOAA Fisheries is also participating in more detailed analyses in the Wenatchee and Lemhi River Basins to estimate habitat availability and restoration potential. In addition, Rich presented details of an analysis that characterizes the vulnerability of salmon populations to climate change. He described how such information could be used to help guide restoration actions.

Questions and Answers/Comments

The following are highlights of the questions raised, answers provided, and comments made.

- One participant said that the sub-basin tools shown during this presentation seemed very helpful (i.e., using life cycle models). How close are these tools to being applied throughout the Basin?
 - Rich said that these tools are actively being developed by a broad range of scientists. Several populations have models that are functional. The group is continuing to develop fish-habitat relationships to understand the benefits of habitat actions.
- Another participant commented that this is a lot of detailed and scientific information and there are likely a lot of people struggling to understand it during the workshop. Instead of taking all of the group's time for individual questions, is there someone that could engage in dialogue to help explain this better on a one-on-one basis?
 - Barry responded by suggesting that individuals contact the presenters directly, review the PowerPoints once they are released, and review the workshop notes. He also mentioned that as we get further into this process, we will likely assemble sub-groups for specific topics.
- Another participant said that they are looking for information that resonates, in terms of data, format, and visualization; we need recommendations on what data to consider going forward.
- One participant noted that when discussing habitat, the focus always seems to be on the spawning tributary. It was suggested that NOAA Fisheries consider looking at the mainstem in case there is something to gain.

Ocean and Estuary Information/Presentations

Deb introduced Kurt Fresh, *NOAA Fisheries*, to present information on the ocean and estuary. Kurt explained that his presentation would cover the use of the estuary by ocean- and stream-type fish; estuary habitat loss and improvements; timing of ocean entry and locations of the Columbia River salmon and steelhead in the ocean; large scale indicators of ocean conditions [(the Pacific Decadal Oscillation (PDO) and the El Nino Southern Oscillation (ENSO)]; relationships between these indicators and smolt-to-adult returns (SARs); and climate change.

Kurt showed the group a map of habitat restoration sites in the Columbia River estuary, demonstrating that the region is making major investments in wetland restoration. He described different juvenile life history strategies and suggested that some of those we observed historically may have been lost due to losses of spawning and rearing habitats. With respect to habitat use, larger juveniles (smolts) seem to prefer deeper channels in the estuary; however, we are learning that large juveniles go into shallower channels from PIT tag detections.

Kurt then provided an overview of habitat features affecting salmon and steelhead in the North Pacific Ocean. He described the relationships between cold and warm phases of the PDO and salmon ecology. He also explained that the ENSO is an irregularly periodical climate pattern over the tropical eastern Pacific Ocean that affects conditions in the Northern California Current (i.e., off our coast). As with the PDO, the warm phase of the ENSO (El Nino) is associated with poor salmon survival. He stated that we are in the strongest El Nino condition ever recorded; however, this is expected to end in the next couple of months.

Kurt explained how the upwelling of cold water off our coast can benefit salmon and how the “blob” of warm water that moved onshore in 2014 is likely to be detrimental to these fish. He provided historical information on the average date of ocean entry timing for yearling Chinook and its relationship to growth and survival. Important knowledge gaps include where salmon go after their first year in the ocean, whether smolt density affects survival during this period, the role of predation, and ecosystem changes such as those associated with climate change.

Questions and Answers/Comments

The following are highlights of the questions raised, answers provided, and comments made.

- One participant commented that the presentation indicated that 95% of salmon die in the ocean environment; however, 50% die from hydropower. Is the 95% of salmon that die ones that actually enter the ocean?
 - Kurt responded yes, that is correct.
- Another participant asked for a comparison of mortality at different life stages for 4,000 salmon eggs laid in gravel in a tributary. What are the relative rates of freshwater versus ocean mortality? What about mortality through the Columbia River hydropower system?
 - Kurt said that he would work with Tom and Rich to develop a good comparison for sharing mortality rates in freshwater versus ocean.
 - ACTION: Kurt/Tom/Rich will develop a comparison on freshwater (including hydropower system) versus ocean mortality to share.
- There is a winter fishery in Homer, Alaska. Are those Columbia River fish?
 - Kurt said that he is not sure; however, during September – November, the Gulf of Alaska’s most abundant fish are from the Columbia River. He said that he would not be surprised if the Columbia River fish are up close to Homer.

Ecological Interactions Information/Presentations

Bird Predation

Deb introduced Mike Langeslay, *U.S. Army Corps of Engineers (USACE)*, to present information on the topic of bird predation. Mike stated that fish-eating bird populations have increased predation-related mortality of salmon and steelhead. He showed a graph of the numbers of Caspian terns in the Columbia River estuary since 1986, the colony moved from Rice Island to East Sand Island by the year 2000. Managers have reduced the area suitable for tern nesting on East Sand Island (the “push”) while creating additional nesting sites outside of the Basin (the “pull”) to reduce predation on juvenile steelhead and Chinook. The USACE is also addressing the growth in the colony size of double-crested cormorants nesting on East Sand Island by reducing the amount of habitat available for nesting and the lethal removal of individual birds.

Mike then described measures to reduce avian predation at the mainstem dams including installing wires across the tailrace where fish may be disoriented after downstream passage, water cannons, and active hazing with firecracker shells, paired with monitoring. However, these actions face many challenges because the birds are mobile, adaptable, and unpredictable. The solutions to these predation issues need to be regional in nature.

Fish Predation and Non-natives

Deb introduced Dave Roberts, *Bonneville Power Administration (BPA)*, to present information on the topic of predation by pikeminnows and non-native fishes. Dave stated that BPA's goal is to increase the survival of out-migrating juvenile salmon and steelhead by reducing the number of larger, predatory pikeminnow in the mainstem Columbia and Snake Rivers. The goals include removing 10 - 20% of the predatory-sized pikeminnow each year. They are evaluating the responses of pikeminnow to the sustained sport-reward fishery and checking for compensatory predation by smallmouth bass and walleye. BPA's program has removed over 4.5 million northern pikeminnow from the mainstem Columbia with little adverse impact on resident fishes or anadromous salmonids. The program has reduced predation on salmonids by 38%. BPA works with the Oregon Department of Fish and Wildlife (ODFW), the Washington Department of Fish and Wildlife (WDFW), and Pacific States Marine Fisheries Commission (PSMFC) to implement the program.

With respect to predation by non-native fishes, Dave said that BPA hosted a workshop in 2008 and funded a three-year study in 2011-2013 that examined the diets of walleye, smallmouth bass, and channel catfish in the mid-Columbia River and the role of juvenile American shad. A two-year study (2011-2012) focused on relative densities of smallmouth bass at mainstem dams in the Lower Columbia to identify potential "hotspots" (densities were highest in the forebays of the John Day and McNary Dams). Recently, the Spokane Tribe has begun removing Northern pike from Lake Roosevelt and there is an anecdotal report that this large fish predator has been caught in John Day pool.

Pinnipeds

Deb introduced Michelle Rub, *NOAA Fisheries*, to present information on the topic of pinniped predation in the Lower Columbia River. Michelle explained that she has been conducting a study since 2010 to provide estimates of the run timing and survival of adult spring/summer Chinook salmon returning to the middle and upper Columbia and to the Snake River. This study has been in cooperation with NOAA Fisheries, biologists at ODFW and WDFW, and local fishermen.

Michelle explained that due to the success of the Marine Mammal Protection Act of 1972, Harbor seals and Stellar sea lions have reestablished their presence in the Columbia River and California sea lions have been introduced. The average number of sea lions has increased dramatically in the last five years. In the cooperative study, adult spring Chinook salmon are transferred from a commercial fishing vessel to NOAA Fisheries' research vessel for tissue collection and tagging so that the scientists can track survival to Bonneville Dam. The researchers have tagged more than 2,200 fish since 2010 and average annual survival has ranged from 59 - 90%. Through 2014, the average annual survival of spring Chinook decreased as the number of sea lions hauled out near Astoria, Oregon, increased. Higher seasonal mortality coincides with the peak of sea lion presence in the estuary; however, Michelle cited several factors as potential sources of bias including upriver fish straying into lower Columbia River streams, disease, under-estimates of harvest, and learned behaviors of the predators (i.e., the potential that they aggregate near fishing vessels).

Questions and Answers/Comments

The following are highlights of the questions raised, answers provided, and comments made.

- One participant asked whether there is data on the relative predation rates on hatchery versus wild fish.

- Mike responded by saying yes, the USACE has this information. He explained that he did not have all of the numbers to provide during the workshop; however, Oregon State University (OSU) publishes and posts their reports. You can find information regarding predation on wild versus hatchery fish here: <http://www.birdresearchnw.org/project-info/publications-&-reports/unpublished-reports/> (for example, see Table 9 on p. 156 in the 2014 report).
- Another participant commented that the procedures for tagging fish and determining their survival rates seems complex. What is the mortality for catching and tagging fish? Is there a potential mortality for handling?
 - Michelle responded that the traditional estimate they use for catch and release mortality is 13%; however, NOAA Fisheries does not use a traditional method. They have created special holding tubes and hydrate the fish throughout the process, putting tags only on fish that appear healthy. She sees no evidence of mortality due to handling and tagging in her study.
- One participant asked if her radio-tagged fish have shown up in the sport fishery.
 - Michelle said yes, they had one this year; luckily it was returned so they had good information about its fate and recovered the tag.
- Another participant asked whether sea lion injuries are tracked. If there are bite marks on a fish, is this recorded? Do we know what the survival rate is after an attempted catch by sea lions?
 - Michelle said we do not have estimates of survival rates to the spawning grounds; however, we know that some of the fish caught in the estuary with bite marks make it to Bonneville Dam. Injuries and bites open fish up for fungus and bacterial infections, especially if water temperatures are elevated.
- One participant said that they read an article referencing that 45% of salmon are consumed by pinnipeds. Is this accurate?
 - Michelle said that they estimated 40% mortality due to pinniped predation for spring Chinook salmon in 2014.
- Another participant asked whether anyone is studying juvenile predation by harbor seals?
 - Michelle said that she is not aware of any work currently underway on this topic; however, harbor seals are capable of taking adults and are included in the adult predation numbers.
- One participant asked whether there is compensatory mortality in the ocean by other avian predators even if we reduce predation by cormorants and terns in the estuary.
 - Mike responded that the USACE has reviewed the available information on this subject for its avian predation management plans. Compensatory mortality might exist; however, USACE is unsure how to measure it and it is likely small. The USACE agrees with the analysis of compensatory mortality in NMFS' 2014 Biological Opinion. Mike also observed that the juvenile fish surviving to Bonneville Dam are in good shape (not destined to die as a result of hydropower system passage).
- One participant commented that it would be helpful to get information that compares predation rates relative to other sources of mortality. For example, it would be helpful to diagram how many fish leave the spawning grounds and how many return as adults to understand mortality rates across the full life cycle.

Next Steps and Summary

Barry thanked everyone for their attendance and attention. He stated that he hoped that participants had an opportunity to learn new information and to engage on the questions and answers they were

seeking. He reminded participants that this is only half of the presentation; the second half will occur on June 7. He said that their participation is essential to a successful collaboration and moving forward together.

Barry thanked the group for their positive energy and effort; he stated that if attendees have any comments on the format, structure, and content of the workshop to please contact K&W. He said that he is looking forward to the upcoming months and providing an opportunity for others to participate in this process.

Deb asked meeting attendees to fill out the templates they received and to provide their feedback to K&W before they leave the workshop. If participants have specific questions on a presented topic, feel free to contact the presenter directly by email. She reminded the group that the same workshop format will be used for the June 7 workshop and to please RSVP as soon as possible to help with meeting logistics. The presentations from this workshop and high level meeting notes will be distributed via email and posted to NOAA Fisheries' website (*Note: See website information on page 2*). Deb thanked NOAA staff, the presenters, and those that attended for their attention and willingness to participate. The meeting was adjourned at 3:40 pm.

Upcoming Meeting Dates	Who	Location
June 7, 2016 9:00 – 4:00 pm	Workshop Members	Ambridge Event Center, Marquam Room
Meeting Documents		
<ul style="list-style-type: none"> • Proposed Agenda – 05-04-16 • Biographies for Presenters – 05-04-16 • Workshop Feedback Template – 05-04-16 • Lunch Options – 05-04-16 		
<p><i>The above documents were provided to participants at the May 4, 2016 workshop.</i></p>		
<ul style="list-style-type: none"> • Salmon and Steelhead Life Cycle PowerPoint – 05-04-16 • ESA Listed Species: Populations Status from 2016 Five-Year Status Reviews PowerPoint – 05-04-16 • ESA Listed Species: Threats Status from 2016 Five-Year Status Reviews PowerPoint – 05-04-16 • Salmon and Steelhead Abundance Trends Including Non-Listed Populations PowerPoint – 05-04-16 • Tributary Habitat Information PowerPoint – 05-04-16 • Ocean and Estuary Information PowerPoint – 05-04-16 • Ecological Interactions Information PowerPoint – 05-04-16 		
<p><i>The above documents can be found on the NOAA Fisheries' website (Note: See website information on page 2).</i></p>		



Columbia Basin Partnership Workshop #1 – May 4, 2016

Please provide any clarifying questions/input to the May 4 Workshop topics:

Pre vs. post mgmt. bar charts showing effects of actions taken are useful.

Please share any comments, suggestions, or feedback for the May 4 Workshop:



Columbia Basin Partnership Workshop #1 – May 4, 2016

Please provide any clarifying questions/input to the May 4 Workshop topics:

How is sea level rise being considered when estuary habitat restoration projects are being rated and considered for funding?

Please share any comments, suggestions, or feedback for the May 4 Workshop: