

## Methow Restoration Council

December 20, 2016

### Participants:

Name	Organization/Affiliation
Amy Martin	OCD
Brian Fisher	MSRF
Charlie Snow	WDFW
Chris Johnson	MSRF
Crystal Elliot	Trout Unlimited
Eric Doyle	ICF
Gene Shull	USFS
Greer Maier	UCSRB
Hans Smith	Yakama Nation
Jarred Johnson	Yakama Nation
Jennifer Molesworth	Reclamation
Jessica Goldberg	MSRF
Joe Connor	BPA
John Arterburn	Colville Tribes
John Baas	MIG, Inc
John Crandall	MRC
John Rohrback	Colville Tribes
Joy Juelson	UCSRB
Jude Trapani	Reclamation
Julie Nelson	Methow Beaver Project, WDFW
Kent Woodruff	Methow Beaver Project, USFS
Kirsten Kirkby	CCFEG
Lance George	USFS
Lynda Hofmann	WDFW
Maddie Eckmann	Yakama Nation
Mariah Mayfield	USFS
Matt Shales	CCFEG
Mitch Mumma	Reclamation
Paul Wagner	Colville Tribes
Rob Crandall	Methow Natives
Ryan Klett	Colville Tribes
Torre Stockard	Methow Beaver Project, WDFW

### Meeting Notes:

**Joy Juelson – UCSRB Updates:** SRFB process is now complete. Last week the SRFB in Olympia blessed our project list. Now all projects above the funding line will be getting under contract. There was also a lot of discussion about the future of PCSRF funds. SRFB funds are a mixture of state and federal money; the Governor's Salmon Recovery Office has requested 55 million from the state budget, and the governor's office came back with an allocation of 30 million. Still in process – we will continue to discuss and bring updates.

Every year we go through a debrief process after the funding round. I sent out a survey, and sponsors came to a debrief meeting. This is the time of the year that we can make changes to our process. We will still accept comments on the process through the end of January – email Joy.

The SRFB conference this year will be in Wenatchee April 25-27. There is an official call for abstracts, previously they had requested sessions, and there will be 40 sessions. If you would like to submit an abstract for presentations within the sessions, they are accepting abstracts through Jan 17.

RTT is looking at updating the biological strategy and prioritization framework. RTT went through comments, and voted on “Okanoganizing” the assessment units, breaking them into smaller units. They will work on getting a consultant under contract for the update.

**Joe Connor – Targeted Solicitation Update:** The Targeted Solicitation is now open. If people have questions about the application, contact Joe at [jwconnor@bpa.gov](mailto:jwconnor@bpa.gov). I sent out an announcement on Monday Dec 5<sup>th</sup> accepting proposals for design and assessment opportunities. The solicitation is open until Jan 20. Then we will compile proposals and deliver to RTT, RTT will score and rank for BPA, and sometime in mid to late-March we will notify people. Three paths for funding: 1. Straight to contracting, 2. Provisional path, where some additional information is needed, and 3. proposed path. In FY 17 BPA has about 4 million, in FY 18 we have just over 2 million. One of the most commonly asked question is about priority areas and actions; people want to know if it is in the priority area but do not address priority actions. We will accept those but may not evaluate them if we receive too many proposals. [Jwconnor@bpa.gov](mailto:jwconnor@bpa.gov) for questions/information.

**Gene Shull & Lance George –Proposed Mission Aquatic/Watershed Restoration Treatments:**

Gene – this project is our first iteration of the Okanogan Wenatchee Forest Restoration Process. The Aquatic piece of mission has been pulled back and modified, this is the first process developed. For future projects, we will have a modified version Aquatics Landscapes Evaluation process.

Project is in Buttermilk and Libby Creek subwatersheds. The project boundary is 50k acres; the upper half is wilderness so the treatment area is smaller.

Goals

- Restore hydrologic/aquatic/riparian function and resiliency to disturbance
- Restore soil productivity in compacted, detrimental areas
- Maintain/restore forest vegetation conditions and resiliency to disturbance
- Maintain/enhance WL and sensitive plan habitat and resiliency to disturbance
- Reduce wildfire risk around private land
- Develop safe, efficient, more affordable, and lower ecological risk road network

Gene – we used EMDS model process, which does photo interpretation of the landscape and compares what would be historic condition to current and future reference conditions. We run through the model, and compare different treatment methods. Biggest treatment will be hazardous fuel reduction. There is overlap between the fuels and commercial harvest. There is 10k acres of proposed fuel reduction and that includes 1951 acres of commercial harvest. We are proposing to cut trees above 10” in diameter, including some trees above 21”.

Discussion – how they determine historical reference condition, includes a lot of variables. Future range of conditions considers climate change projections.

Gene – we landed in the Libby Creek and Buttermilk area having a mix of dry forest departed from natural condition, not in historic condition, and proximity to public land. Have mid-level sub-watershed

analysis, broke area into priority areas to rank for restoration. Included ownership, percent wilderness and roadless, road density, key watershed, TES fish species, aquatic habitat condition; we have done it for the whole forest.

#### MRP/Aqua/Hydro Process

Came up with project area aquatic and habitat limiting factors, primarily riparian roads and livestock. Also some temperature, but there are no specific actions for temperature. Low flows from irrigation withdrawals, artificial drainage network (roads), and loss of beavers

Jennifer Molesworth – roads also interfere with delivery of larger wood material to the streams, we saw that in lower Buttermilk in the 90s when a large beaver dam blew out. A really big impact after a fire.

Gene – we saw that in areas that have a lot of roads after the recent fires.

Jennifer – if we can design the roads to pass that material it is helpful

Gene – Stream channel complexity, riparian harvest, lack of LWD; fish access from barrier culverts; riparian function – harvest, fire exclusion, livestock, roads; and exotic species (brook trout) in Libby.

We selected limiting factors to address; will not address irrigation, livestock grazing, or exotic species.

Irrigation is too complicated for this process; we have a new grazing plan that will allow us to make changes, exotic species is also complicated

Chris Johnson – if you identify where the water quantity issues arise, that can help others focus on where to get funding for

Gene – proposed Treatments – roads: reduce sediment levels (Water Quality). Identified roads priority for decommissioning and hydrologic closure – where we put it into a state that will minimize hydrological impact.

Discussion – roads; closed roads will not be opened to ORVs

Gene – we analyzed 25-43% decommissioned roads. Will upsize 15 stream pipes (culverts), rock armor 33 road/stream crossings, and 4 armored fords. We are proposing to armor all open road crossings to decrease sediment.

Beaver enhancement zones – Greer brought this up. We are looking at installing beaver dam analogs (BDAs), artificial dams to promote beaver habitat. Talked to Kent and the beaver project and are looking at areas, and also analyzed for additional treatment opportunities. Goal is to increase wetland habitat in Libby and Buttermilk Creek drainages to increase base flows in late summer. Will have to manage for cows, will put in fences in areas that need them. In some areas will install BDAs, also some riparian thinning so we can get some hardwood recruitment. Goal is to increase the natural water storage by increasing complexity and reduce drainage efficiency of the system.

Coarse wood addition – we had recent data on wood volume. Looked for areas that are biological hotspots for bull trout and steelhead. A few spots of potentially good spawning habitat on Libby, Buttermilk. Looked for areas that are deficient in wood, looked at reference conditions across the district. Identified 8 miles of treatment areas. We will cut and drop live trees.

Fish passage – identified 8 culverts that are either full or partial barriers, Black Pine creek had 4. Will increase access to about 6 miles of spawning and rearing habitat.

Discussion – how to design culvert size; potential to supersize for anticipated climate change

Kent – last week at the climate change forum, the best presentation was the State's plan to supersize culverts to address climate change. One of the best climate change adaptations we can do

Discussion – culverts on private lands, potential for partnerships, FS needs

Gene – riparian vegetation – we have areas that are overstocked with fuels due to fire exclusion, need to restore species composition to increase RR resiliency (riparian function) a few thousand acres of riparian reserve, will do harvest in the winter or use other light touch method, will have buffers along streams to protect shade and prevent sediment. Will monitor livestock access.

Soils Treatment – 500-600 acres that have substantial impacts from past harvest; we will do a light touch treatment that will increase infiltration rate, decompact soils, only in areas that are impacted. New

treatment available is a special bucket that goes onto an excavator that treats the area. Will also be in concert with beaver release areas.

Gene – we looking to complete planning process in spring/summer 2017, implementation as early as fall 2017, looking for partners for implementation. We get funding to do the planning and permitting, but have little funding to implementation.

Mariah – the draft EA will be released in the New Year. Will send link to Jessica when it comes out. There will be a 45 day comment period, would love letters of support for Alternative 3 for roads.

### **Colville Tribes and ICF – Methow EDT Updates – Reach Networks Developed for Methow Basin:**

Ryan Klett – presentation overview: Habitat Status and Trend Reach Network Update

Eric Doyle – EDT Cornerstones, uses rules, habitat knowledge, and species knowledge. The idea is that we are building an exposure map to the habitat scenarios that we are using in the model. Reach and assessment network, using lessons learned in Okanogan to apply in the Methow.

John Arterburn – it's been almost two years since I last presented. OBMEP was initiated in 2004, goal is to answer hypothesis about how anadromous habitats are changing over time. We continue to improve data quality. By 2013 over 95% of data is considered good or better. EDT basics – survival probabilities are used to evaluate habitat potential across multiple scenarios. Fish experience all habitat metrics at the same time. EDT has a population report card, describes habitat potential in terms of VSP criteria. Focused on providing limiting factors analysis. Linked to actual monitored habitat conditions. We also have a sub-watershed obstruction report card, which is new. Reach scale report cards focus on limiting factor by life stage, uses a Consumer Reports type chart.

Spatial scale – information is consistent with the mapping exercise we are completing for the Methow basin. Important to determine at what spatial we will operate. RTT is in the process of converting the entire UC to the scale we use in the Okanogan; we are currently doing this for the Methow. Spatial scale is important – data can be rolled up but not down, a working standardized spatial scale currency has been lacking in the Columbia River Basin for a long time. Foundation of M&E, Reporting, and Adaptive Management, and allows us to address specific life stages at a fine scale.

Ryan – Building the Methow EDT Model Habitat environment

NRCS has completed 6<sup>th</sup> order sub-watershed HUCs to adopt for sub-watersheds, update stream geometry, incorporate guidance for geomorphic reaches – mouth of creek to fish terminus, geomorphic reach breaks from existing efforts, use GIS data to establish breaks based on gradient and confinement, systematic reach length is 1-4 km. Once complete a strong foundation for the future would be established.

Jennifer – will the model also be able to compare the HUCs against each other?

John – yes, it can be rolled up to any larger scale. That is part of what you get on the population scale report.

Kent – you may need to be flexible in the reach size, also need to pay close attention to the gradient

Ryan – we do have flexibility about where the breaks fall

John – the need for systematic sizes is for the analysis, to avoid a size bias output issue. We have forced a systematic structure to ensure that things aren't too big or too small.

Ryan – specific to the Methow Network, 6th order HUCs; stream geometry digitized – Methow, Twisp, Chewuch rivers and remaining tributaries. Used available information, and additional data can still be incorporated if there is more available. Reach nodes are 1-4 km length, used data from reach assessments; also use geomorphic features - gradient, confinement, management.

Eric – preliminary reach and AU network for the Methow (map) Where the Reclamation geomorphic reach names or sub-reach names were defined, we used those to the greatest extent possible. Tried to align with the existing structure that people were using in the Methow while conforming with the

framework as defined. People will be able to review and comment; we hope to identify the appropriate group of experts to help with the review and comments.

Ryan – we are looking at natural hard barriers to natural anadromy

John Crandall – what about areas where we are less certain?

John A – we started with the existing layer, but we hope to get additional information. Any information that we get on any barrier is helpful to the process. We want to define anadromy as best we can and identify other barriers within the network. This is not a structure you want to be changing very often – changes have huge ripple effects, so we want to get it as right as we can the first time, be as stable as possible. If anyone has any information about where breaks should be, which barriers exist, etc.

John C – what if we have instances where we are making assumptions?

John A – we are hoping to get experts to help us make the calls, we have recruited fish folks, will recruit habitat folks, and will have a meeting to help us make those decisions in as informed a way as possible. This is opportunity for people to weigh in.

Jennifer – it would be good to have a geomorph person

John A – if you can get someone for us that would be great

Kent – how are you going to define potential?

John A – there is a tool, and we also have a lot of information, a lot of information that we can bring to bear to help us make the calls in an informed way. We will of course make mistakes, but we hope to have it as good as possible so we have a product we can use for a long time. In the Okanogan, our goal is to have a duration of at least 8 years.

John C – the smaller areas that we don't know are the ones that are going to come into play

Ryan – some people may have more information than can be addressed with the web tool, and those people can reach out to me or to Eric with that information.

Considerations for review:

- Is the extent appropriate for summer steelhead and spring chinook?
- Are there reach management or naming conventions that should be considered for inclusion?
- Are there landscape features which may define reach breaks that have been omitted?

Chris – suggest that you take what you know and what the Forest Service knows about the Mission project and see how they crosswalk.

Discussion – FS stream layer, local knowledge, FS would be good partners in the vetting process

Next Steps:

- Near Term
  - Distribute web map and review tools to interested parties – share widely
  - Requests or nominations for working group/panel to vet comments
- Mid-January
  - Compile comments
- Late January
  - Convene working group
- February or March MRC
  - Update

John A – would love to have help making break points at meaningful locations

Discussion – data, web tool, sharing GIS layers

### **Jarred and John Baas – Yakama Nation sponsored Recreation Assessments – Upper Methow and Upper Twisp Reaches**

Jarred – we looked at recreation use and existing condition of the reach in terms of existing hazards

John B – these assessments were completed in 2015-2016. YN is evaluating recreation on reaches throughout the Methow subbasin. These assessments cover the Upper Methow and Upper Twisp. Reports will be distributed by YN to MRC lists. Intent of the reports is to evaluate what is there, but not to certify anything as safe or unsafe. Develop an understanding of current use and skill level, existing LWD and hazards, overall reach navigability, existing boater safety practices, emergency response capabilities and history of incidences for the reaches.

We employed a mix of quantitative and qualitative data, interviewed Aero Methow, guides, American Whitewaters, conducted boater surveys, both intercept and online. Boater counts in person and with motion activated cameras, on-water large wood evaluation.

LW evaluations – a function of low, medium, and high flows of boatable flows. While boating we recorded data on characteristics of LW and ranking of potential hazard. Based on existing literature, we then assigned a grade of A-F to potential wood hazards: location in the channel, % projection into the channel, angle of projections, roughness, sight distance, energy, size or number of logs associated with the hazard.

In 2015 we surveyed in the Upper Methow (Weeman Bridge to Lost River confluence), no incidents reported in previous 15 year period. Large wood blocking channel greatest risk in online survey. Over 90 percent of online survey respondents use PFDs, photographs captured much lower PFD usage. Emphasizes difficulty with effective outreach. Recreation use is generally low, use peaked on 4<sup>th</sup> of July, most was tubing. 146 photos captured with motion activated cameras, many photos have more than one person. Most tubers had no PFDs and were consuming alcohol.

Large wood counts, majority of wood was lower hazard, most of the wood between rm 70-74 (upper parts of the reach)

Kristin Kirkby – what is the YN goal for these?

Jarred – to do due diligence, inform potential restoration design and treatments

Hans Smith – for all restoration practitioners

John B – the Upper Twisp Reach (2016) (Newby Creek bridge to War Creek bridge – just upstream of the campground)

Boating recreation on the Upper Twisp is very low

Boaters were only observed on one of the 12 count days, three respondents completed the intercept survey, cameras were stolen twice

Online survey – all were local, trained in swiftwater rescue, 1 person was a heavy user, three didn't see other boaters, rated large wood partially blocking the channel was a greater risk than a channel spanning LW

Intercept survey – all three were from Puget Sound area, 2 out of 3 trained in swiftwater, no other boaters seen, all three rated both partial and complete blocking LW as a hazard

Large Wood results: our professional boaters decided that the upper reach was too dangerous to float at high flows. A lot of wood had low hazard rating, higher hazards in the upper reach

For more information on the assessments contact John Baas, (510) 845-7549, [johnb@migcom.com](mailto:johnb@migcom.com) or Bill Spain [bills@migcom.com](mailto:bills@migcom.com), (831) 703-4359

**Matt Shales – Twisp to Carlton Reach Assessment:** We've been working on this since early 2014, with the original draft in the spring of 2015. After comments, it was apparent that it wasn't as useful a document as hoped. We received funding from the Bureau, began working on a draft in June of this year. Many of the original comments came from the RTT, also Bureau, and members of MRC. For the second draft we followed the outline and level of detail specified in the Appendix D of Biological Strategy and also used the Upper Wenatchee assessment as a model. We did habitat survey analysis of field and existing data, incorporate previous studies. Data better represented in forms and tables,

incorporated a restoration strategy, modified stream reach titles, new set of maps, 2D model results, and a habitat data summary.

Updates to hydrology – flow estimates over a period of record, temporal change, climate change projections.

Assessment Area Conditions – hydraulics, we added inundation maps from Reclamation 2D modeling, side channel activation flows, sediment transport/competence

Geomorphology – summary of habitat unit mapping and morphology, channel migration analysis; key finding was that there was an abrupt reduction in channel migration after 1948 flood due to riprap  
Summary table of assessment area conditions, restoration strategy tables – each sub-reach has its own table; maps are in the appendix with key and correspond to the strategy tables.

New maps in map folio, existing conditions

As part of the channel migration zone analysis, we integrated much more geomorphic mapping. Map of flood inundation, modeled inundation

FLIR data from 2009 mapped with a condensed scale

We presented to the RTT last week, and they will give us comments. Encourage people to review the draft (Jessica will send out a link) and send comments to Matt. If you really want to dive in and review, but don't have time let Matt know. Needs comments by the end of the first week of January, otherwise let Matt know if the timeframe doesn't work. [mshales@ccfeg.org](mailto:mshales@ccfeg.org)

John A – in general the RTT felt that it was an excellent revision and that most of the salient comments were addressed. Gave preliminary approval for people to use it in the Targeted Solicitation. A big improvement.

### **Round Table/Public Comment**

Jennifer Molesworth – Bureau of Reclamation: InterFluve is working on our IMW report; they should have a draft in the spring.

Paul Wagner – Colville Tribes: many projects previously mentioned are in process. We are working with FS on master cost share agreement to work on projects on FS land.

Ryan Klett – Colville Tribes: I will provide contact information to Jessica and updated link and instructions for reviewing the EDT Methow Reach Breaks

Lance George – USFS: we are getting shelf stock built up; we are always looking for funding for road decom and culvert upsizing.

Mariah Mayfield – USFS: we are still on track for Early Winter's campground implementation in July

Gene Shull – USFS: this fall we worked with Jenni Novak at WDFW and updated the Wolf Creek ditch to improve the fish return channel

Kent Woodruff – USFS/Methow Beaver Project: I'm very excited that we are taking a step forward with our partnership with WDFW, now their habitat program will be hosting the Beaver Project

We are working on the Heath property on beaver management to enhance things there, making sure pond leveler devices are fish passable

We just recently finished our film project, will be sharing at one of the next MRC meetings, it is a call to action for climate adaptation.

The Methow Beaver Project is moving forward with the transition from the current manager to the new manager, Torre Stockard

Rob Crandall – Methow Natives: this past month we finished a big replanting at the left bank of the Twisp Ponds, an exciting partnership. We have been working there for 7 years now, and it is revegetated in an area that was cleared for a former home site and recreational field. We did a bioengineering workshop 7 years ago, and now you can't even walk through it. A really good example of a successful revegetation and habitat project. If you go there, drive slow and park very close to the gate out of respect for the neighbors.

We are continuing to make progress on the WDFW trail project. MSRF has a 3-year management agreement with WDFW, and we also have funding from CTCR, UCSRB. Have been working with the high school Environmental studies class to work on the interpretational piece. Moving ahead and it is a pretty cool project.

Chris – a very cool opportunity

Crystal Elliot – TU: I'm still working on abandoned mine restoration funding. Putting together a capital request this year. Still hopeful. Also working with the Forest Health Collaborative on restoration opportunities on Mission.

We wrapped up the Triple Creek restoration project in the Okanogan this fall.

From the water project desk, they are working on a few surface diversions to wells on Beaver Creek and Middle Methow, and are still working with stakeholders on Barkley project.

I'm also still working on the suction dredging legislation.

Jarred Johnson – Yakama Nation: still working on the Beaver Creek RA; we will present to RTT this summer. The YN is currently working on an MOU with DNR to work on SOAL more easily. Hopefully this year the Big Valley project will move forward. Will be sending Jessica the Recreation Assessments to distribute. Will complete Newby Narrows project this summer.

Chris Johnson – MSRF: we are still working on Targeted projects on the Twisp River and Middle Methow with BPA and Bureau. Twisp River Floodplain Phase II is a follow up project to the project completed this year; we are looking at additional options on adjacent properties.

Hans Smith – Yakama Nation: it is amazing how long it can take to get a project fully completed at a project site. Can take acquisitions and persistence.

This year will be a big construction year for YN. We have 5 projects slated to go in the Methow. Big Valley; NEPA process with FS for Chewuch work upstream of the WDFW properties, RM 15-20mile fan. Work will be phased over the next three years. A significant component expected this summer. We are working on the Early Winters campground improvement. Newby Narrows, finishing side channel, and just upstream the Horseshoe side channel project, piercing a levee and putting in a flow through channel, continuing to develop plans for areas in the oxbow upstream from there and doing design work in the War Creek area, looking at the Bridge fill and areas around there, looking at the associated incision. FS related projects for the Twisp fit into their aquatic restoration for their Twisp River project. We are contributing to their assessment of aquatic habitat conditions with work from TetraTech. Will be providing to the FS and working with them on that. Charlie Snow's group assisted with fish surveys at 1890s this fall, still working on funding for the larger monitoring project, and the partnership has helped us get the data.

**Next MRC January 17, 2017**

<b>Definitions of Commonly used Acronyms</b>	
AEM	Action Effectiveness Monitoring
ANS	Aquatic Nuisance Species
AREMP	Aquatic and Riparian Effectiveness Monitoring Program
BACI	Before, After, Control, Impact (study design type)
BDA	Beaver Dam Analogue
BEF	Bonneville Environmental Foundation
BO/BiOp	Biological Opinion
BPA	Bonneville Power Administration
CAC	Citizens Advisory Committee (for SRFB funding applications)
CAO	Critical Areas Ordinance
CBFWA	Columbia Basin Fish and Wildlife Authority (pronounced "cubfwah")
CCFEG	Columbia Cascade Fisheries Enhancement Group
CCT	Colville Confederated Tribes (newer acronym is CTCR – see below)
CTCR	Confederated Tribes of the Colville Reservation (older acronym is CCT – see above)
CHaMP	Columbia Habitat Monitoring Program
CMZ	Channel Migration Zone
CREP	Conservation Reserve Enhancement Program
CSF	Community Salmon Fund
EDT	Ecosystem Diagnosis and Treatment
ESA	Endangered Species Act
FCRPS	Federal Columbia River Power System
FFFP	Family Forest Fish Passage Program
FIA	Forest Inventory and Analysis program (USFS)
Four "H"s	The four factors affecting salmon recovery: Hatchery, Hydro, Habitat, Harvest
HACCP	Hazard Analysis and Critical Control Point
HGMP	Hatchery Genetic Management Plan
HPA	Hydraulic Project Approval
HSRG	Hatchery Scientific Review Group
HWS	Habitat Work Schedule
IMW	Intensively Monitored Watershed
IS	Implementation Schedule
ISEMP	Integrated Status and Effectiveness Monitoring Project
ISRP	Independent Scientific Review Panel
IT	Implementation Team
LW/LWD	Large Wood/Large Woody Debris
M2	Middle Methow (a project area defined as the reach between Winthrop and Twisp)
MaDMC	Monitoring and Data Management Committee (pronounced "madmac")
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MRC	Methow Restoration Council
MSRF	Methow Salmon Recovery Foundation (pronounced "em-surf")
MVRD	Methow Valley Ranger District
MWC	Methow Watershed Council
MYAP	Multi-year Action Plan (also sometimes called the 3-year workplan)
NFF	National Forest Foundation

NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPCC	Northwest Power and Conservation Council
OCD	Okanogan Conservation District
OBMEP	Okanogan Basin Monitoring and Evaluation Program
OWL	Okanogan Wilderness League
PCSRF	Pacific Coastal Salmon Recovery Fund (pronounced "Pacsurf")
PHABSIM	Physical Habitat Simulation
PIBO	PACFISH/INFISH* Biological Opinion
PNAMP	Pacific Northwest Aquatic Monitoring Partnership
PUD	Public Utility District
QAQC	Quality Assurance, Quality Control
RA	Reach Assessment
RCO	(Washington State) Recreation and Conservation Office
REI	Reach-based Ecosystem Indicators (used in Reach Assessments)
RFEG	Regional Fisheries Enhancement Group
RFP	Request for Proposals
RM	River Mile
RPA	Reasonable and Prudent Alternative(s)
RTT	Regional Technical Team
SEPA	State Environmental Policy Act
SMP	Shoreline Management Plan
SOAL	State Owned Aquatic Lands
SOW	Statement of Work
SPIF	Specific Project Information Form (used with the Corps ESA programmatic)
SRFB	(Washington State) Salmon Recovery Funding Board (pronounced "surfboard")
SRP	State Review Panel (for SRFB funding applications)
STEM Database	Status, Trend and Effectiveness Monitoring database at NOAA's Northwest Fisheries Science Center
UCSRB	Upper Columbia Salmon Recovery Board
TRT	Technical Recovery Team (NOAA)
USFS	US Forest Service
USGS	US Geological Survey
VSP	Viable Salmonid Population
WAT	Watershed Action Team (the MRC is our WAT)
WDFW	Washington Department of Fish and Wildlife
WDNR	Washington Department of Natural Resources
WNFH	Winthrop National Fish Hatchery
WWP-TU	Washington Water Project of Trout Unlimited
YN	Yakama Nation

\*PACFISH/INFISH The PACFISH/INFISH Biological Opinion (PIBO) Effectiveness Monitoring Program was initiated in 1998 to provide a consistent framework for monitoring aquatic and riparian resources on most Forest Service and Bureau of Land Management lands within the Upper Columbia River Basin.