# RTT COMMENTS ON SRFB PROPOSALS, 2018

The Upper Columbia Regional Technical Team (RTT) met on 11 July 2018 to score Salmon Recovery Funding Board (SRFB) proposals. What follows are the average benefit scores from 11 reviewers and key issues identified by the RTT during the scoring meeting. Members with conflicts of interest on specific proposals recused themselves from participating in scoring and discussions.

**Table 1. RTT scores, ranks, and cost requests for restoration, protection, assessment, and design projects, 2018. Total possible points = 100. For completeness, we included one monitoring project (Wenatchee EDT Model Assessment) in the overall rankings (see Table 2 for clarification).**

| Project | Type | RTT Score | Rank | SRFB Cost Request |
|---|---|---|---|---|
| Hancock Springs Restoration Phase 4 | Restoration | 87 | 1 | $567,068 |
| Middle Entiat Restoration - Area F (RM 16.2-16.7) | Restoration | 81 | 2 | $401,637 |
| Burns-Garrity Perennial Side Channel | Restoration | 78 | 3 | $419,000 |
| Cottonwood Flats - Entiat Floodplain Restoration | Restoration | 73 | 4 | $510,508 |
| *Wenatchee EDT Model Assessment* | *Monitoring* | *22 out of 30* | *5* | *$92,500* |
| Entiat Basin Fish Passage and Screening | Assessment | 72 | 6 | $45,142 |
| Twisp Floodplain Left Bank Alcove | Restoration | 72 | 7 | $24,569 |
| Merritt Oxbow Feasibility and Design | Design | 70 | 8 | $80,500 |
| Methow Beaver Project: Beaver and Anadromy | Restoration | 67 | 9 | $205,294 |
| Mill Creek Fish Passage Improvement | Restoration | 67 | 10 | $131,476 |
| Peshastin Mill-Larsen Side Channel Design | Design | 67 | 11 | $99,010 |
| Squilchuck Creek Pedestrian Bridge Design | Design | 64 | 12 | $40,000 |
| Goodwin Side Channel Feasibility and Design | Design | 64 | 13 | $75,500 |
| Upper Beaver Creek Feasibility and Design | Design | 62 | 14 | $133,793 |
| Sleepy Hollow Side Channel Design | Design | 60 | 15 | $125,504 |
| Monitor Side Channel Construction | Restoration | 59 | 16 | $249,900 |

| Project | Type | RTT Score | Rank | SRFB Cost Request |
|---|---|---|---|---|
| Larsen Creek Tributary Enhancement | Restoration | 59 | 17 | $58,863 |
| Lower Entiat Tributaries Habitat Assessment | Assessment | 58 | 18 | $140,660 |
| Methow Watershed Riparian Stewardship | Restoration | 57 | 19 | $97,348 |
| Upper Methow Goat Creek Conservation Easement | Protection | 56 | 20 | $214,700 |
| Wenatchee Basin Bull Trout Assessment | Assessment | 54 | 21 | $105,937 |
| Chumstick Creek Fish Passage Barrier - Motteler Road | Restoration | 52 | 22 | $86,162 |
| Sand Creek Fish Passage Improvement | Restoration | 48 | 23 | $186,691 |
| Peshastin Creek Barrier Removal | Restoration | 47 | 24 | $205,000 |

**Table 2. RTT scores, ranks, and cost requests for monitoring projects, 2018. Total possible points = 30. The RTT developed a separate ranking because of differences in scoring and funding processes.**

| Project | Type | RTT Score | Rank | SRFB Cost Request |
|---|---|---|---|---|
| Wenatchee EDT Model Assessment | Monitoring | 22 | 1* | $92,500 |
| Ecology of Fear - Habitat Diversity Lake Wenatchee | Monitoring | 22 | 2** | $139,120 |

* As noted in Table 1, the RTT ranked this project 5$^{th}$ out of all proposed projects because of its importance in guiding future restoration and protection projects throughout the Wenatchee River basin (see specific comments below).

** The RTT did not rank this project among all proposed projects. Although this project received the same score as the EDT project, unlike the EDT project, this project will not lead to a prioritized list of restoration and protection projects throughout the Wenatchee River basin (see specific comments below).

# Restoration Projects

## Burns-Garrity Perennial Side Channel Project

**Average Score: 78**
**Standard Deviation: 8.18**
**RTT Rank: 3**

This project should provide important off-channel habitat during summer and winter. Given the length of the channel and the interception of ground water, the project could provide valuable habitat for ESA-listed salmonids. Some members of the RTT are concerned that the mainstem may not have enough flow during base-flow conditions to support a perennial side channel.

## Twisp Floodplain Left Bank Alcove Project

**Average Score: 72**
**Standard Deviation: 11.81**
**RTT Rank: 7**

The RTT agrees that the wetland should be connected to the mainstem and protected from livestock grazing. We believe the proposed action will improve water quality and provide summer and winter rearing habitat for salmonids. The project is also cost effective. The RTT strongly encourages the project sponsor to increase the duration of the agreement for fence maintenance (20 to 25-year agreement).

## Methow Watershed Riparian Stewardship Program II Project

**Average Score: 57**
**Standard Deviation: 13.64**
**RTT Rank: 19**

Restoring riparian habitat addresses an important natural watershed process. Therefore, the RTT supports enhancing riparian conditions. The largest issue with this project, however, is the lack of information on the size of the proposed action, including existing site characteristics and conditions, and the suite of restoration actions that had been implemented at those locations. This lack of information affected our ability to assess possible biological benefits. In addition, our scoring criteria tend to favor projects that have more immediate benefits. Benefits from riparian restoration tend to accrue after 10-20 years.

## Methow Beaver Project: Beaver and Anadromy Project

**Average Score: 67**
**Standard Deviation: 8.89**
**RTT Rank: 9**

This project will translocate nuisance beavers to locations that are likely to support beaver colonization. That is, this project proposes to remove beavers from locations where there is a conflict with humans and relocate them into areas where they will significantly improve habitat conditions for salmonids. Thus, it addresses landowner problems by providing services to help them reduce beaver impacts (through mitigation or relocation). Several scientific investigations demonstrate that introduced beavers increase base flows, decrease summer water temperatures, increase habitat complexity, restore floodplain and riparian function, aggrade incised channels, and increase salmonid survival, abundance, and production. The RTT believes this project will have multiple benefits to fish and community members. We struggled, however, with estimating biological benefits given the lack of information on where the limited number of beavers and BDAs would be placed.

## Hancock Springs Restoration Phase 4 Project

**Average Score: 87**
**Standard Deviation: 7.47**
**RTT Rank: 1**

The RTT believes this is an excellent project because it restores habitat within a spring-fed stream. Given the size of the project (length of stream), this project will have large effects on summer and winter rearing of ESA-listed salmonids. Given projected climate-change scenarios, this project will provide important thermal refugia during summer and winter within an important spawning reach within the Methow River basin for many years. The RTT commends the project sponsor for including in the proposal fish and habitat data collected from the project area. This information was very helpful in evaluating the proposal. The RTT also appreciated the fact that the sponsor used the extensive monitoring data to inform the enhancement project. This is an excellent example of adaptively managing enhancement actions.

## Cottonwood Flats – Entiat Floodplain Restoration Project

**Average Score: 73**
**Standard Deviation: 11.52**
**RTT Rank: 4**

The RTT agrees with reconnecting floodplain habitat because it restores natural processes. Given the large scale of the proposed project, the RTT believes this project will benefit salmonids during high flow conditions. There was some concern with the limited duration of inundation and the possibility that the outlet will not be connected year-round. In addition, there is uncertainty regarding the overall biological benefit given the low numbers of salmonids in the reach (recruitment limitation). Without a permanent

connection at the outlet, summer-rearing fish cannot access the floodplain habitat and fish entrapment and stranding may occur within the floodplain. However, if stranded pools within the floodplain remain connected to groundwater, fish survival can be high as demonstrated by work in the Methow River basin. Some reviewers also questioned the need for and desirability of an engineered channel beyond the inlet to the floodplain, expressing preference for allowing natural channel formation through the floodplain.

## Middle Entiat Restoration – Area F (RM 16.2-16.7) Project

**Average Score: 81**
**Standard Deviation: 6.44**
**RTT Rank: 2**

As with the Cottonwood Flats project, this project intends to reconnect floodplain habitat. Given the large scale of the proposed project and the perennial connections and various enhancement actions proposed, the RTT believes this project should have large biological benefits. Again, there is some uncertainty regarding the overall biological benefit given the low numbers of salmonids in the reach (recruitment limitation). Nevertheless, this project addresses many ecological concerns within this reach of the Entiat River and restores natural processes.

## Chumstick Creek Fish Passage Barrier – Motteler Road Project

**Average Score: 52**
**Standard Deviation: 9.20**
**RTT Rank: 22**

Although the RTT favors projects that increase fish passage and connectivity, this culvert currently allows a relatively high level of fish passage under all but extreme flow conditions. Thus, there is limited biological benefit associated with this project. As a result, the RTT believes this project has relatively low cost-effectiveness.

## Monitor Side Channel Construction Project

**Average Score: 59**
**Standard Deviation: 13.03**
**RTT Rank: 16**

Because the side channel is already active, this project does not address the primary ecological concern in this reach of the Wenatchee River. On the other hand, the RTT believes the side channel would benefit from adding complexity and narrowing and deepening the channel. Adding structure will likely improve overwinter rearing habitat for Chinook and steelhead. This work could be completed without the use of hydraulic modeling.

## Sand Creek Fish Passage Improvement Project

**Average Score: 48**
**Standard Deviation: 9.91**
**RTT Rank: 23**

Although the RTT favors projects that increase fish passage and connectivity, this culvert currently allows some level of fish passage, as evidenced by PIT-tag-detection data. Thus, there is limited biological benefit associated with the project and therefore it has relatively low cost-effectiveness. That said, the RTT is pleased to see projects proposed in Mission Creek, especially given the relatively large numbers of wild steelhead that spawn within the Mission Creek watershed (the RTT notes that some wild steelhead spawn in Sand Creek upstream from the proposed barrier project). Addressing habitat conditions in the section of the stream flowing through the city of Cashmere, addressing late-season in-stream flow, addressing riparian habitat, and identifying and addressing possible fish passage impediments within the lower reaches of Mission Creek may be more appropriate projects in the near term. The RTT will be evaluating project priorities within Mission Creek in the near future.

## Mill Creek Fish Passage Improvement Project

**Average Score: 67**
**Standard Deviation: 9.22**
**RTT Rank: 10**

The RTT agrees with replacing this complete barrier with a fish-passage structure. There is excellent habitat upstream from the current barrier and providing passage will benefit steelhead and possibly spring Chinook and bull trout. The RTT believes the project is expensive and therefore cost-effectiveness scored relatively low.

## Peshastin Creek Barrier Removal Project

**Average Score: 47**
**Standard Deviation: 10.03**
**RTT Rank: 24**

Although the RTT favors projects that increase fish passage and connectivity, this culvert currently allows a relatively high level of fish passage. Thus, there is limited biological benefit associated with the project. As such, it has relatively low cost-effectiveness.

### Larsen Creek Tributary Enhancement Project

**Average Score: 59**
**Standard Deviation: 12.74**
**RTT Rank: 17**

The RTT considers this a low-cost project, but there are potential issues with flow intermittency, which can strand or entrap fish that move into the stream, and the longevity of the action is questionable. If the intermittency issue can be addressed, the RTT believes this project will have higher biological benefit.

## Protection Projects

### Upper Methow Goat Creek Conservation Easement Project

**Average Score: 56**
**Standard Deviation: 13.22**
**RTT Rank: 20**

The RTT is in favor of protecting high-quality floodplain and riparian habitat. In this case, however, the quality of the habitat to be protected is not high, given the lack of floodplain connectivity. Although the application mentions that there may be enhancement actions implemented in the project site that could fully reconnect the floodplain to the Methow River (part of the Upper Goat Creek Restoration Project), floodplain reconnection was not part of the current proposal (i.e., there was no request for funding to enhance the project site). Therefore, the RTT is uncertain whether enhancement work will actually occur on this site. If the floodplain was already connected with the main-channel, the site would have higher protection value. It would have been beneficial to have included a copy of the terms and conditions of the proposed easement along with a stewardship plan. Likewise, a description of definite plans for enhancement, including scope, scale, and timelines would have provided the RTT with a level of certainty necessary for determining the biological potential of the proposed protection project.

## Design Projects

### Upper Beaver Creek Feasibility and Design Project

**Average Score: 62**
**Standard Deviation: 11.11**
**RTT Rank: 14**

The RTT supports improving fish passage at the diversions and reconnecting off-channel habitat. However, the RTT has series concerns with implementing the project without first addressing upstream issues (sediment recruitment from Volstead Creek). Failure to first address upstream watershed processes will compromise the effectiveness and persistence of restoration actions within this reach.

## Sleepy Hollow Side Channel Design Project

**Average Score: 60**
**Standard Deviation: 12.92**
**RTT Rank: 15**

The RTT acknowledges that this is an important winter rearing area for juvenile Chinook and steelhead. It is also important high-flow habitat for salmonids. Providing access to the side channels during a wider range of flow conditions should increase biological benefit if the enhanced channels intercept groundwater. If groundwater cannot be intercepted, the RTT believes there will be little to no benefit. Indeed, without the interception of groundwater, reconnecting the side channels at lower flows may increase habitat for competitors and predators of juvenile salmonids (ecological trap). Therefore, an important component of this design is determining the likelihood and feasibility of intercepting groundwater.

## Peshastin Mill-Larsen Side Channel Design Project

**Average Score: 67**
**Standard Deviation: 11.74**
**RTT Rank: 11**

The RTT considers this a good site for reconnecting off-channel habitat. Indeed, it is one of only a few locations along Peshastin Creek where off-channel reconnection is likely possible. If designed correctly, this project should restore natural processes, create rearing habitat for ESA-listed salmonids, and improve water quality.

## Squilchuck Creek Pedestrian Bridge Design Project

**Average Score: 64**
**Standard Deviation: 13.29**
**RTT Rank: 12**

The RTT believes that providing passage at this site will increase spatial structure and capacity for the Wenatchee River steelhead population. The RTT is concerned, however, that factors such as water quality and quantity will continue to limit biological benefits in Squilchuck Creek. It would be beneficial to have a developed restoration plan for Squilchuck Creek that addresses these issues. At this time, the RTT has not assessed factors limiting abundance and productivity within Squilchuck. Nevertheless, restoring connectivity is an important first step.

### Merritt Oxbow Feasibility and Design Project

**Average Score: 70**
**Standard Deviation: 7.31**
**RTT Rank: 8**

Reconnecting off-channel habitat within Nason Creek is an important enhancement project because it restores natural processes, improves juvenile salmonid rearing habitat, and improves water quality. Increasing thermal refugia is important and should improve both summer and winter survival of juvenile salmonids. The RTT is concerned that the outlet of the proposed project may not be connected at low flows because of the actively aggrading bar near the outlet of the side channel.

### Goodwin Side Channel Feasibility and Design Project

**Average Score: 64**
**Standard Deviation: 8.17**
**RTT Rank: 13**

As with the Sleepy Hollow Project, this project could provide access to side channels during a wider range of flow conditions and that could potentially increase biological benefit if the enhanced side channels intercept groundwater. If groundwater cannot be intercepted, the RTT believes there will be little to no benefit. The RTT is also concerned that the resulting project may reduce or destroy existing riparian habitat, which is currently functioning properly. The RTT believes the design should focus on simply removing material at the upstream and downstream ends of the existing channel. This should reduce cost and help maintain the existing riparian corridor.

## Assessment Projects

### Lower Entiat Tributaries Habitat Assessment Project

**Average Score: 58**
**Standard Deviation: 8.55**
**RTT Rank: 18**

The RTT believes there are few opportunities for enhancement work in the Mad River. The Forest Service road system is likely the factor most affecting habitat conditions within the Mad River. In addition, the Yakama Nation truncated the upstream extent of their assessment in the Mad River because of the perceived limited opportunities for restoration upstream from the end point of their assessment. On the other hand, there may be enhancement opportunities in Roaring Creek. Therefore, the RTT recommends that the project sponsor reduce the scope of the proposed assessment work to include only Roaring Creek. If the assessment occurs only in Roaring Creek, no hydraulic modeling is needed.

### Entiat Basin Fish Passage and Screening Project

**Average Score: 72**
**Standard Deviation: 9.66**
**RTT Rank: 6**

The RTT supports identifying and fixing fish passage barriers. This not only increases capacity but also improves natural watershed processes. In addition, these results are needed to prioritize barrier passage projects.

### Wenatchee Basin Bull Trout Assessment Project

**Average Score: 54**
**Standard Deviation: 7.86**
**RTT Rank: 21**

The RTT believes this project would best fit under Monitoring. Given that bull trout monitoring is not eligible for PCSRF funds, the sponsor tried to link their monitoring efforts to possible future enhancement actions, making it eligible for funding as an assessment project. The RTT questions how the eDNA work will lead to future enhancement projects. On the other hand, the survey work in Nason Creek and the Little Wenatchee River could lead to future enhancement opportunities, especially upstream from natural barriers. In those locations, fish passage barriers may be issues that need to be addressed. The RTT agrees that this work is needed to better understand bull trout distribution, spatial structure, and spawning abundance.

## Monitoring Projects

This was the third year the RTT used scoring criteria to evaluate monitoring projects. The RTT scores monitoring projects independent of other project types because this is consistent with the unique SRFB allocation process. To maintain scoring independence, the RTT changed the total possible points for monitoring projects from 100 to 30. This scaling will clearly separate monitoring projects from other project types.

### Ecology of Fear – Habitat Diversity Lake Wenatchee Project

**Average Score: 22 (out of 30)**
**Standard Deviation: 4.13**
**RTT Rank: 2 out of 2**

Understanding the effects of predators, or potential predators, on the foraging behavior of fish is an interesting research topic and could lead to the identification of important factors limiting growth and survival of spring Chinook in Lake Wenatchee. To that end, the RTT supports this work. However, the RTT questions what can be done to reduce predation risk if predation is identified as a significant source of mortality within the lake. Increasing removal of northern pikeminnow will have some effect on ESA-listed

bull trout (e.g., incidental capture of bull trout). If bull trout are identified as the primary factor affecting growth and survival of juvenile spring Chinook in the lake, little can be done to reduce this negative effect. Adding cover or structure for juvenile Chinook could reduce predation risk, or the fear of predation, but we question whether adding structure along the margins of the lake will be supported by lake-side residents.

### Wenatchee EDT Model Assessment Project

**Average Score: 22 (out of 30)**
**Standard Deviation: 5.92**
**RTT Rank: 1 out of 2**

The RTT believes EDT is a useful tool for processing information, which is used to prioritize areas for restoration and protection. It is also a useful tool for helping to identify, prioritize, and evaluate possible restoration actions. As such, the RTT sees results from EDT feeding into their updated prioritization strategy and biological strategy. Indeed, our existing Biological Strategy relies entirely on EDT for identifying and prioritizing actions within the Okanogan River basin. There is some concern, however, that there may not be sufficient data in the Wenatchee River basin to populate the model. Some members also questioned the need for yet another model in the Wenatchee River basin. That said, the RTT believes EDT will lead to more potential enhancement projects throughout the Wenatchee River basin than will the Ecology of Fear monitoring project. Thus, even though both monitoring projects earned the same score, the RTT believes EDT will provide more broadly useful information and will greatly inform the Biological Strategy update.

## General Comments

In the past, even though the CAC has encouraged us to do so, the RTT has avoided including monitoring projects in the rankings with other project types (e.g., restoration, protection, design, and assessment projects). This is largely because of the unique nature of monitoring projects and the difficulty in developing an equitable scoring scheme among all project types. In this case, however, the RTT finds great value in the EDT project and therefore ranked it 5$^{th}$ among all proposed projects evaluated this year.

Unlike in recent SRFB funding rounds, the four top-ranked projects in the 2018 SRFB funding round are each major on-the-ground restoration actions, extensive in scope, scale, and complexity. The RTT is pleased at this outcome, and anticipates these projects will provide substantial biological benefit in their respective target reaches. Such projects come at high costs, especially when considering the assessment, scoping, outreach, and design costs that preceded the current implementation phase. Nevertheless, their anticipated benefits warrant the approval of these projects, at the expense of lower ranked projects that fall below the 2018 SRFB funding allocation for our region.