
UPPER COLUMBIA SRFB PROJECT EVALUATION CRITERIA



UCRTT
UPPER COLUMBIA
REGIONAL
TECHNICAL TEAM

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Introduction

In this document the RTT identifies and describes the scoring criteria used to evaluate restoration, protection, assessment, design, and monitoring proposals. These criteria are designed and intended for the review and scoring of proposals within the Salmon Recovery Funding Board process. The goal of the RTT is to use the most objective evaluation approach possible to ensure a fair and effective review and ranking of proposals across multiple project types. Because the proposal is the primary instrument by which the RTT evaluates potential projects, the clarity and completeness of the proposal is critical to the RTT's ability to assess and score the potential benefits of the project. If a proposal does not clearly identify objectives and methods, and include all supporting materials (figures, maps, references, etc.) necessary for the RTT to understand adequately the proposed project, it will likely score low.

Scoring Criteria

The RTT identified scoring criteria that are specific to each project type (restoration, protection, assessment, design, and monitoring). Importantly, the proposed projects must address important ecological concerns (aka limiting factors) and identify benefits to target species productivity and distribution. Various criteria form the basis for evaluating each of the five project types.

Criteria are assigned weights depending on their importance in the overall evaluation. That is, some criteria are considered more important than others. Thus, those criteria with high weights are considered more important in the evaluation of each project type. The assignment of weights also increases contrast in scores among project proposals.

Based on an evaluation of past projects, the RTT believes that some proposed projects, which score low in biological benefit, should not be elevated to the Citizens' Advisory Committees (CAC) for their evaluation. That is, the RTT believes the CAC should not be burdened with evaluating proposed projects that have little to no biological benefit. Therefore, the RTT will recommend to the UCSRB Lead Entity that projects scoring under 40 points for biological benefit (save monitoring projects) should not be elevated to the CAC for their review.

Cost Effectiveness

The RTT believes it is important to assess the cost effectiveness of each proposed project. The RTT has included the evaluation of cost-benefit in various ways in the past, ranging from a qualitative evaluation that was not part of official scoring, to a quantitative assessment that applied a standardized score to each project for each reviewer. Under the current approach, RTT members will evaluate the cost effectiveness of each proposal independently. Each member will decide the points for cost effectiveness by evaluating the biological benefit and cost of each project. Scores will range from 0 to 7, with the

highest points associated with high benefit-low cost projects and the lowest points associated with low benefit-high cost projects.

Restoration Projects

1. Address Primary Ecological Concerns

- a) Does the proposed restoration project reduce the effects of **primary** ecological concerns (as identified in Appendix E of the Biological Strategy, or other information that pertains to the project location; e.g., if ECs are identified for a tributary of an assessment unit) at the project¹ scale? (20% of total score)

- **Rationale:** Proposed restoration actions must address **primary** ecological concerns limiting the freshwater survival and/or distribution of fish species. Projects that address more than one primary ecological concern, or fully rectify a single ecological concern, achieve the highest scores.

Sequencing of projects also affects scoring. That is, projects that address ecological concerns that are unlikely to affect freshwater survival or distribution without first correcting other primary ecological concerns would achieve relatively low scores, unless the proposed sequencing is justified by extenuating circumstances.

- **Scoring:**
 - 0 = no (or little) improvement in ecological concern(s) at the project scale.
 - 1-6 = intermediate improvement (ecological concern is partially addressed).
 - 7 = fully rectifies ecological concern(s) at the project scale.

2. Location and Scale of the Restoration Project

- a) Is the proposed restoration project sited within an important spawning/rearing area (as identified in Appendix E of the Biological Strategy), or provides access to habitat that would function as important spawning/rearing habitat? (15% of total score)

- **Rationale:** Streams vary in intrinsic potential (i.e., potential quality and quantity of spawning/rearing habitat) because of differences in geology, geomorphology, valley width, elevation, stream size, gradient, and other factors. The RTT has incorporated intrinsic potential and other information in identifying priority/important restoration areas listed in Appendix E of the Biological Strategy. Projects that improve habitat quantity and quality within streams of high intrinsic potential (with consideration of other information), or provide access to such habitat, will achieve the highest scores. For projects that target bull trout, known habitat use by life stage will be used because intrinsic potential has not been developed for bull trout.

¹ In this document, “project-scale” refers to the area within and immediately surrounding the proposed project.

- **Scoring:**
 - See Attachments 1 and 2. The RTT will also consider other information, such as current spawning or rearing use in addition to intrinsic potential.
 - If a proposed project targets both spring Chinook salmon and steelhead, ***the RTT will use the higher of the two intrinsic potential scores.***
 - Attachment 2 is for proposed projects that focus only on bull trout. If a project is proposed for all three listed species, the highest score will prevail.

b) Is the restoration project appropriately scaled and scoped? (10% of total score)

- **Rationale:** Projects must be placed so they function within the geomorphic context of the stream reach. Projects sited without consideration of stream flows, sediment dynamics, and geomorphology will likely fail or provide limited long-term physical and biological benefit, and thus will receive the lowest scores. Similarly, a project may be too small in scope to achieve the purported benefits.
- **Scoring:**
 - 0 = scale and scope of project does not match project objectives.
 - 1-6 = intermediate (scale and scope is appropriate to meet some of the project objectives).
 - 7 = scale and scope are appropriate to meet clearly articulated project objectives.

3. Temporal Effect of Proposed Restoration Action

a) Does the proposed project promote natural stream/watershed processes that are consistent with the geomorphology of the stream? (5% of total score)

- **Rationale:** The RTT defines *natural stream/watershed processes* as those processes where habitat functions at large spatial and temporal scales. Floodplain connectivity, absence of barriers, and large intact riparian zones are all features of natural stream/watershed processes. As discussed within the body of the biological strategy, “process-based restoration” refers to projects that will result in long-term changes to natural watershed and fluvial processes. Projects such as riparian plantings, increasing flows, barrier removal, and floodplain and wetland reconnections are all examples of projects that restore natural processes.
- **Scoring:**
 - 0 = project does not promote watershed processes.

- 1-6 = project improves intermediate levels of watershed processes (some level of restoration of process occurs (or the probability is high) at the *reach* scale).
- 7 = project fully restores watershed processes at the *reach* scale.

b) How long will it take for the project to achieve its intended response? (5% of total score)

- **Rationale:** The type of restoration action will determine how long it will take before the intended response of the action is realized. For example, an engineered log jam may have an immediate effect on cover for fish, while riparian plantings can take over 25 years before the intended effect is realized (Attachment 3). It is important to not reduce the scores of projects that restore processes and take longer to achieve the intended response, and therefore the scoring below ranges from 3 to 7.
- **Scoring:**
 - 3 = >25 years
 - 5 = 10 ≥ 25 years
 - 7 = <10 years

c) How long will the proposed restoration action and its benefits persist? (5% of total score)

- **Rationale:** Restoration projects that promote long-term habitat improvements, and/or require little to no on-going maintenance are likely to have the greatest biological benefit and will receive higher scores (Attachment 3). Projects that treat only symptoms of degraded watershed processes, or require continued on-going maintenance are unlikely to persist for long periods. These projects will receive lower scores.
- **Scoring:**
 - 0 – 3 = restoration project will persist for less than 10 years (or require on-going maintenance).
 - 4-6 = 20-50 years (or longer with some maintenance required).
 - 7 = 50+ years with little to no maintenance.

d) Will the proposed project ameliorate the effects of climate change? (5% of total score)

- **Rationale:** Certain project actions are more likely to reduce or ameliorate the effects of climate change. In general, actions that restore *natural stream/watershed processes* are likely to have the most potential to reduce the effects of long-term climate change (Attachment 3). Projects that have a high likelihood to reduce the effects of climate change will score higher than projects that do not.

- **Scoring:**
 - 0 = will not ameliorate the effects of climate change.
 - 1-6 = likely to ameliorate the effects of climate change.
 - 7 = will ameliorate the effects of climate change.

4. Methods

1. Are the methods² outlined within the proposal adequate to achieve the stated objectives?
(10% of total score)

- **Rationale:** The proposal must describe clearly the methods that will be used to implement the project. The proposal should demonstrate that it is using an accepted approach to achieve the objectives. If the methods are innovative, the proposal should describe how the methods will achieve the stated objectives and demonstrate the benefits of the methods relative to a standard method. In addition, projects that “over-engineer” its components to meet the objectives will likely score lower than projects that allow natural processes to achieve objectives.

- **Scoring:**
 - 0 = the methods do not appear adequate (employs questionable treatments, methods, or practices or those not proven to be effective) to achieve the stated objectives.
 - 1-6 = intermediate (methods need substantial changes (uses methods where results are incomplete) to achieve stated objectives (1 point), or a few changes (employs experimental treatments or methods with well-developed rationale and experimental design; 6 points)).
 - 7 = the methods appear adequate (employs accepted or tested standards, methods, or practices) to achieve the stated objectives.

5. Benefits to Freshwater Survival or Capacity

a) Does the project increase freshwater survival and/or capacity for target species at the project scale? (20% of total score)

- **Rationale:** Habitat restoration projects are implemented to increase freshwater survival, increase capacity, and/or distribution of target fish species. Therefore, it is important to assess the effects of restoration actions on pre-spawn survival, egg-

²Methods for this purpose cover the protocols used to implement projects (such as hand placement of structure instead of machinery) or the types of materials used (e.g., a bottomless culvert instead of a bridge).

smolt survival, and spawner distribution. These factors are evaluated at the project scale.

- **Scoring:**

- 0 = no benefit to freshwater survival, capacity, and/or distribution of target species at the project scale.
- 1-6 = intermediate increase in survival, capacity, and/or distribution of target species at the project scale.
- 7 = highest possible benefit to survival, capacity, and/or distribution of target species at the project scale (e.g., > 100%).

6. Cost Effectiveness of Restoration Project

a) How cost effective is the proposed restoration project? (5% of total score)

- **Rationale:** There are limited funds available for salmon recovery. Therefore, it is important to ensure that the cost of a proposed project is commensurate with the potential biological benefit.

- **Scoring:**

- 0 = no benefit to freshwater survival, capacity, and/or distribution of target species at the project scale. Cost is irrelevant if there is no biological benefit.
- 1-6 = intermediate biological benefit per cost. Greater points are given to restoration projects with high benefit-low costs, while lower points are assigned to projects with low benefit-high costs.
- 7 = highest possible biological benefit at a relatively low cost.

Restoration Project Scoring Sheet

Project Name:					
Reviewer:			Date:		
Criteria	Question	Potential Score	Weighting factor	Total Maximum Potential Score	RTT Score (1-7)
Address Primary Ecological Concerns	Does the proposed restoration project reduce the effects of primary ecological concerns (as identified in Appendix E of the Biological Strategy, or other information that pertains to the project location; e.g., if ECs are identified for a tributary of an assessment unit) at the project ³ scale?	7	2.86	20	
Location and Scale of the Restoration Project	Is the proposed restoration project sited within an important spawning/rearing area (as identified in Appendix E), or provides access to habitat that would function as important spawning/rearing habitat?	7	2.14	15	
	Is the restoration project appropriately scaled and scoped?	7	1.43	10	
Temporal Effect of Proposed Restoration Action	Does the project promote natural stream/watershed processes that are consistent with the geomorphology of the stream?	7	0.71	5	
	How long will it take for the project to achieve its intended response?	7	0.71	5	
	How long will the proposed restoration action and its benefits persist?	7	0.71	5	
	Will the proposed project ameliorate the effects of climate change?	7	0.71	5	
Methods	Are the methods outlined within the proposal adequate to achieve the stated objectives?	7	1.43	10	
Benefits to Freshwater Survival or capacity	Does the project increase freshwater survival and/or capacity for target species at the project scale?	7	2.86	20	
Cost Effectiveness of Restoration Project	How cost effective is the proposed restoration project?	7	0.71	5	
Grand Total		70		100	

³ In this document, “project-scale” refers to the area within and immediately surrounding the proposed project.

Protection Projects

1. Placement of Protection Project

- a) Is the proposed protection project sited within an important spawning/rearing area (as identified in Appendix E of the Biological Strategy)? (15% of total score)
- **Rationale:** Streams vary in intrinsic potential (i.e., potential quality and quantity of spawning/rearing habitat) because of differences in geology, geomorphology, valley width, elevation, stream size, gradient, and other factors. Projects that protect habitat within or along streams of high intrinsic potential (with consideration of other information) will achieve the highest scores.
 - **Scoring:**
 - See Attachments 1 and 2. The RTT will also consider other information, such as current spawning or rearing use in addition to intrinsic potential.
 - If a project targets both spring Chinook salmon and steelhead, **the RTT will use the higher of the two intrinsic potential scores.**
 - Attachment 2 is for projects that focus only on bull trout. If a project is proposed for all three listed species, the highest score will prevail.
- b) To what extent does the proposed project protect high-quality habitat or habitat that can be restored to high quality with appropriate restoration actions? (20% of total score)
- **Rationale:** Maintaining high-quality habitat within priority spawning and rearing areas is critical to the viability of target fish populations. Thus, protecting these areas, or areas with high restoration potential, is important to the conservation of the target species.
 - **Scoring:**
 - 0 = Will not protect important (intact) habitat; site too small to achieve protection goal.
 - 1-6 = 40-60% of total project area is intact habitat with plans for restoration.
 - 7 = More than 60% of total project area is intact habitat; size is sufficient quantity to accommodate goal.
- c) Does the proposed project protect watershed processes or important high-quality habitat? (20% of total score)
- **Rationale:** Large parcels of high-quality riparian/floodplain habitat may facilitate the full expression of watershed processes. In reaches with predominantly dysfunctional habitat, disconnected parcels of high-quality riparian/floodplain habitat can serve as

important strongholds for biological and physical processes. Therefore, the importance of protecting a given parcel depends on the context of the reach or watershed condition. Examples of areas that are important to protect are tributary junctions, parcels that contain multiple channels and side channels, areas that offer cold-water refugia, mature riparian areas for large wood recruitment, major spawning areas, and connected floodplains.

- **Scoring:**
 - 0 = project does not protect important processes or is not an important stronghold.
 - 1-6 = project protects parcels that facilitate watershed processes to some degree or parcels where processes can be restored or are habitat strongholds.
 - 7 = project protects an important parcel that contains important watershed process(es), or is an important habitat stronghold.

2. Threats

a) How imminent is the threat of habitat degradation to the proposed land if the project is not implemented? (15% of total score)

- **Rationale:** Because salmon recovery funds are limited, the most pressing concerns need to be addressed first. When evaluating proposals, it is necessary to predict the extent to which a project will change habitat conditions and assess the significance of that change to fish populations. Therefore, to evaluate a habitat protection project, one must have a reasonable basis for comparing what would happen with and without the project. The ability to predict the fate of a proposed parcel of land for protection or easement is difficult, but improved when informed by knowledge of the intentions of the present landowner, market conditions, and local critical areas and zoning laws, among others. Scoring protection projects by default as if all extant habitat values will be lost but for the project would substantially and artificially inflate the value of these projects as compared to restoration projects.
- **Scoring:**
 - 0 = No clear threat of habitat degradation exists at this time (e.g., what might or could happen is the only threat).
 - 1-6 = The threat to high-quality habitat is not imminent, but the project proponent makes a compelling argument that this protection opportunity will not exist in the future and/or is required for restoration to occur.
 - 7 = There is a demonstrated imminent threat to the property that could lead to loss of high-quality habitat.

3. Benefits to Freshwater Survival or Capacity

a) What would be the anticipated loss in freshwater survival and capacity at the **project** scale and/or distribution of target species if the proposed area was developed (i.e., what habitat values would be lost and to what degree would that loss reduce freshwater survival and/or distribution of target species at the project scale)? *(20% of total score)*

- **Rationale:** Freshwater survival is related to the quality of stream habitat. The loss of high-quality habitat or capacity will result in reduced freshwater survival or distribution of target fish species.
- **Scoring:**
 - 0 = there would be no reduction in freshwater survival, capacity, or distribution if the proposed area is not protected.
 - 1-6 = intermediate reduction in survival or capacity.
 - 7 = there would be a large reduction in freshwater survival, capacity, or distribution if the proposed area is not protected.

4. Cost Effectiveness of Proposed Protection Project

a) How cost effective is the proposed protection project? *(5% of total score)*

- **Rationale:** As with restoration projects, the benefits associated with protecting a parcel of riparian/floodplain habitat should justify the cost of the acquisition or conservation easement.
- **Scoring:**
 - 0 = no benefit to freshwater survival, capacity, and/or distribution of target species at the project scale. Cost is irrelevant if there is no biological benefit.
 - 1-6 = intermediate biological benefit per cost. Greater points are given to protection projects with high benefit-low costs, while lower points are assigned to projects with low benefit-high costs.
 - 7 = highest possible biological benefit at a relatively low cost.

5. Conditions Affecting the Proposed Project

a) Are there any conditions regarding the protection of the property that could limit the existing high-quality habitat? *(5% of total score)*

- **Rationale:** Purchase of a property with explicit provisions for activities or anthropogenic features that may affect the quality of habitat may reduce the overall

value of the purchase or conservation easement in terms of salmon recovery. Scores will be assigned based on whether there are activities or conditions regarding the purchase (or conservation easement) that are detrimental to riparian, floodplain, and stream conditions.

- **Scoring:**
 - 0-3 = conditions on the purchase (or conservation easement) of the property exist that will have some effect on the protection of existing high quality habitat; or the ability to do future restoration work.
 - 4-6 = conditions exist on the purchase (or CE), but will likely have minimal impact to high quality habitat; and do not hinder future restoration actions.
 - 7 = no conditions exist that could impact the protection of high quality habitat in perpetuity nor future restoration actions.

Protection Project Scoring Sheet

Project Name:					
Reviewer:			Date:		
Criteria	Question	Potential Score	Weight	Total Maximum Potential Score	RTT Score (1-7)
Placement of Protection Project	Is the proposed protection project sited within an important spawning/rearing area (as identified in Appendix E of the Biological Strategy)?	7	2.14	15	
	To what extent does the proposed project protect high-quality habitat or habitat that can be restored to high quality with appropriate restoration actions?	7	2.86	20	
	Does the proposed project protect watershed processes or important high-quality habitat?	7	2.86	20	
Threat	How imminent is the threat of habitat degradation to the proposed land if the project is not implemented?	7	2.14	15	
Benefits to Freshwater Survival or Capacity	What would be the anticipated loss in freshwater survival and capacity at the project scale and/or distribution of target species if the proposed area was developed (i.e., what habitat values would be lost and to what degree would that loss reduce freshwater survival and/or distribution of target species at the project scale)?	7	2.86	20	
Cost Effectiveness of Protection Project	How cost effective is the proposed protection project?	7	0.71	5	
Conditions Affecting the Project	Are there any conditions regarding the protection of the property that could limit the existing high-quality habitat?	7	0.71	5	
Grand Total		49		100	

Assessment Projects

1. Address Primary Ecological Concerns

- a) Will the proposed assessment inform the development of projects that reduce the effects of **primary** ecological concerns at the **reach** scale (as identified in Appendix E of the Biological Strategy, or the extent to which it identifies or validates ecological concerns)? (25% of total score)
- **Rationale:** All proposed assessments should link directly to restoration or protection actions addressing **primary** ecological concerns that limit freshwater production and/or distribution of fish species. Assessment projects that inform actions that address more than one primary ecological concern, or fully rectify a single ecological concern at the *reach* scale, will achieve the highest scores. Sequencing will also affect scores.
 - **Scoring:**
 - 0 = assessment will result in projects that lead to no (or little) improvement in ecological concern(s) at the *reach* scale.
 - 1-6 = intermediate change (ecological concern(s) will be partially addressed at the *reach* scale).
 - 7 = assessment will result in projects that fully rectify ecological concern(s) at the *reach* scale.

2. Area Covered by Assessment

- a) Is the proposed assessment sited within an important spawning/rearing area (as identified in Appendix E)? (25% of total score)
- **Rationale:** Streams vary in intrinsic potential (i.e., potential quality and quantity of spawning/rearing habitat) because of differences in geology, geomorphology, valley width, elevation, stream size, gradient, and other factors. The RTT has incorporated intrinsic potential and other information in identifying priority/important areas listed in Appendix E of the Biological Strategy. Assessment projects that inform actions that improve habitat quantity and quality within priority/important areas, or provide access to such habitat, will achieve the highest scores.
 - **Scoring:**
 - See Attachments 1 and 2. The RTT will also consider other information, such as current spawning or rearing use in addition to intrinsic potential.

- If a project targets both spring Chinook salmon and steelhead, ***the RTT will use the higher of the two intrinsic potential scores.***
 - Attachment 2 is for projects that focus only on bull trout. If a project is proposed for all three listed species, the highest score will prevail.
- b) Is the proposed assessment appropriately scaled and scoped? (25% of total score)
- **Rationale:** Assessment projects must be sufficiently comprehensive to anticipate the physical and ecological issues that potentially influence the effectiveness of the restoration projects they inform.
 - **Scoring:**
 - 0 = scale and scope of project cannot provide projected benefits.
 - 1-6 = intermediate (scale and scope should be expanded to achieve full benefit).
 - 7 = the assessment is robust with respect to all factors potentially influencing the success of subsequent projects.

3. Methods

- a) Are the methods outlined within the proposed assessment adequate to achieve the stated objectives? (20% of total score)
- b) **Rationale:** The assessment must clearly describe the methods that will be used to gather and analyze information. The proposal should demonstrate that it is using an accepted approach. If it is innovative, the proposal should discuss how the methods will achieve the stated objectives of the assessment and demonstrate the benefits of the methods relative to a standard method.
- c) **Scoring:**
- 0 = the methods are not adequate (employs questionable methods or practices or those not proven to be effective) to achieve the stated objectives.
 - 1-6 = intermediate (methods need substantial changes (uses methods where results are incomplete) to achieve stated objectives (1 point), or a few changes (employs experimental methods with well-developed rationale and experimental design; 6 points)).
 - 7 = the methods are adequate (employs accepted or tested standards, methods, or practices) to achieve the stated objectives.

4. Cost Effectiveness of Assessment Project

a) How cost effective is the proposed assessment project? (5% of total score)

- **Rationale:** It is important that the cost of an assessment project reflects the use of appropriate methods and sufficient effort to obtain the information. It is also important that the assessment provides information that can be used to guide future restoration or protection actions.
- **Scoring:**
 - 0 = the proposed assessment uses inappropriate methods and will provide no useful information. Cost is irrelevant if the assessment does not provide useful information.
 - 1-6 = intermediate level of useful information per cost of the assessment. Greater points are given to assessment projects that will produce high quality information at low cost, while lower points are assigned to assessments that will produce low quality information at high costs.
 - 7 = highest possible information per cost of the assessment.

Assessment Project Scoring Sheet

Project Name:					
Reviewer:			Date:		
Criteria	Question	Potential Score	Weight	Total Potential Score	RTT Score (1-7)
Address Primary Ecological Concerns	Will the proposed assessment inform the development of projects that reduce the effects of primary ecological concerns at the reach scale (as identified in Appendix E of the Biological Strategy, or the extent to which it identifies or validates ecological concerns)?	7	3.57	25	
Area Covered by Assessment	Is the proposed assessment sited within an important spawning/rearing area (as identified in Appendix E)?	7	3.57	25	
	Is the proposed assessment appropriately scaled and scoped?	7	3.57	25	
Methods	Are the methods outlined within the proposed assessment adequate to achieve the stated objectives?	7	2.86	20	
Cost Effectiveness of Assessment Project	How cost effective is the proposed assessment project?	7	0.71	5	
Grand Total		35		100	

Design Projects

1. Address Primary Ecological Concerns

a) Will the proposed design lead to development of projects that will reduce the effects of **primary** ecological concerns at the **project** scale (as identified in Appendix E of the Biological Strategy, or other information that pertains to the project location; e.g., if ECs are identified for a tributary of an assessment unit)? (20% of total score)

- **Rationale:** All designs proposed should link directly to restoration or protection actions addressing **primary** ecological concerns that limit freshwater survival and/or distribution of fish species at the *project* scale. Design projects with a direct linkage to development of actions addressing more than one important ecological concern, or fully rectifying a single ecological concern, achieve the highest scores. Sequencing also affects scores.
- **Scoring:**
 - 0 = design will result in no (or little) change in ecological concern(s) at the *project* scale.
 - 1-6 = intermediate change (ecological concern is partially addressed) at the *project* scale.
 - 7 = design will result in projects that address more than one primary ecological concern, or fully rectify a single ecological concern at the *project* scale.

2. Area Covered by Design

a) Is the proposed project (created from the design) sited within an important spawning/rearing area, or creates or provides access to habitat that could function as important spawning/rearing habitat? (15% of total score)

- **Rationale:** Streams vary in intrinsic potential (i.e., potential quality and quantity of spawning/rearing habitat) because of differences in geology, geomorphology, valley width, elevation, stream size, gradient, and other factors. Design projects directly leading to actions that improve habitat quantity and quality within priority/important areas, or provide access to such habitat, will achieve the highest scores.
- **Scoring:**

- See Attachments 1 and 2. The RTT will also consider other information, such as current spawning or rearing use in addition to intrinsic potential.
- If a project targets both spring Chinook salmon and steelhead, ***the RTT will use the higher of the two intrinsic potential scores.***
- Attachment 2 is for projects that focus only on bull trout. If a project is proposed for all three listed species, the highest score will prevail.

b) Is the proposed design appropriately scaled and scoped? (10% of total score)

- **Rationale:** Projects must be designed so they will function within the geomorphic context of the stream reach. Projects that are sited without consideration of stream flows, sediment dynamics, and geomorphology will likely fail or provide limited long-term physical and biological benefits and will receive the lowest scores. Similarly, a project may be too small in scope to achieve the purported benefits.
- **Scoring:**
 - 0 = scale and scope of project is not matched to project objectives.
 - 1-6 = intermediate (scale and scope is appropriate to meet some of the project objectives).
 - 7 = scale and scope are appropriate to meet articulated project objectives.

3. Temporal Effect of Proposed Restoration Action

a) Will the proposed project (created from the design) promote natural stream/watershed processes that are consistent with the geomorphology of the stream? (5% of total score)

- **Rationale:** The RTT defines *natural stream/watershed processes* as those processes where habitat functions at large spatial and temporal scales. Floodplain connectivity, absence of barriers, and large intact riparian zones are all features of natural stream/watershed processes. As discussed within the body of the biological strategy, “process-based restoration” refers to projects that will result in long-term changes to natural watershed and fluvial processes. Projects such as riparian plantings, increasing flows, barrier removal, and floodplain and wetland reconnections are all examples of projects that restore natural processes.
- **Scoring:**
 - 0 = project does not promote watershed processes (it has very localized effects).

- 1-6 = project improves intermediate levels of watershed processes (some level of restoration of process occurs (or the probability is high) at the *reach* scale).
- 7 = project fully restores watershed processes at the *reach* scale.

b) How long will it be before the project (created from the design) achieves its intended response? (5% of total score)

- **Rationale:** The type of restoration action will determine how long it will take before the intended response of the action is realized. For example, an engineered log jam may have an immediate effect on cover for fish, while riparian plantings may take over 25 years before the intended effect is realized (Attachment 3). It is important to not reduce the scores of projects that restore processes and take longer to achieve the intended response, and therefore the scoring below ranges from 3 to 7.
- **Scoring:**
 - 3 = >25 years
 - 5 = 10 ≥ 25 years
 - 7 = <10 years

c) How long will the proposed restoration action and its benefits (created from the design) persist? (5% of total score)

- **Rationale:** Restoration projects that promote long-term habitat improvements and/or require little to no on-going maintenance are likely to have the greatest biological benefit and will receive higher scores (Attachment 3). Projects that treat only symptoms of degraded watershed processes, or require continued on-going maintenance are unlikely to persist for long periods. These projects will receive lower scores.
- **Scoring:**
 - 0 – 3 = restoration project will persist for less than 10 years (or require on-going maintenance).
 - 1-6 = 20-50 years (or some maintenance will be required).
 - 7 = 50+ years (and little to no maintenance).

d) Will the proposed project (created from the design) ameliorate the effects of climate change? (5% of total score)

- **Rationale:** Certain project actions are more likely to reduce or ameliorate the effects of climate change. In general, actions that restore *natural stream/watershed processes* are likely to have the most potential to reduce the effects of long-term climate change (Attachment 3). Projects that have a high likelihood to reduce the effects of climate change will score higher than projects that do not.
- **Scoring:**
 - 0 = will not ameliorate the effects of climate change.
 - 1-6 = likely to ameliorate the effects of climate change.
 - 7 = will ameliorate the effects of climate change.

4. Benefits to Freshwater Survival or Capacity

a) Will the proposed project (created from the design) improve freshwater survival or increases capacity for target species at the project scale? (20% of total score)

- **Rationale:** Habitat restoration projects are implemented to increase freshwater survival, increase capacity, and/or distribution of target fish species. Therefore, it is important to assess the effects of restoration actions on pre-spawn survival, egg-smolt survival, and spawner distribution. These factors are evaluated at the project scale.
- **Scoring:**
 - 0 = no benefit to freshwater survival, capacity, and/or distribution of target species at the project scale.
 - 1-6 = intermediate increase in survival, capacity, and/or distribution of target species at the project scale.
 - 7 = highest possible benefit to survival, capacity, and/or distribution of target species at the project scale (e.g., > 100%).

5. Methods

a) Are the methods outlined within the proposed design adequate to achieve the stated objectives? (10% of total score)

- **Rationale:** The proposal must clearly show the methods that will lead to an action (project). The proponent should demonstrate that the methods proposed are an accepted approach. If the methods are innovative, then the proposal should

describe how the methods will achieve the stated objectives of the design and demonstrate the benefits of the innovative method relative to a standard method.

- **Scoring:**
 - 0 = the methods are not adequate (employs questionable methods or practices or those not proven to be effective) to achieve the stated objectives.
 - 1-6 = intermediate (methods need substantial changes (uses methods where results are incomplete) to achieve stated objectives (1 point), or a few changes (employs experimental methods with well-developed rationale and experimental design; 6 points)).
 - 7 = the methods are adequate (employs accepted or tested standards, methods, or practices) to achieve the stated objectives.

6. Cost Effectiveness of Design Project

a) How cost effective is the proposed design project? (5% of total score)

- **Rationale:** It is important that the proposed design leads to a project with high biological benefit at a reasonable design cost.
- **Scoring:**
 - 0 = the design will lead to no benefit to freshwater survival, capacity, and/or distribution of target species at the project scale. Design cost is irrelevant if the design leads to a project with no biological benefit.
 - 1-6 = the design will lead to intermediate biological benefit per design cost. Greater points are given to designs that will lead to high benefit at low design cost, while lower points are assigned to designs that will lead to low benefit at high design cost.
 - 7 = the design will lead to the highest possible biological benefit at relatively low design cost.

Design Project Scoring Sheet

Project Name:					
Reviewer:			Date:		
Criteria	Question	Potential Score	Weight	Total Potential Score	RTT Score (1-7)
Address Primary Ecological Concerns	Will the proposed design lead to development of projects that will reduce the effects of primary ecological concerns at the project scale (as identified in Appendix E of the Biological Strategy, or other information that pertains to the project location; e.g., if ECs are identified for a tributary of an assessment unit)?	7	2.86	20	
Area Covered by Design	Is the proposed project (created from the design) sited within an important spawning/rearing area, or creates or provides access to habitat that could function as important spawning/rearing habitat?	7	2.14	15	
	Is the proposed design appropriately scaled and scoped?	7	1.43	10	
Temporal Effect of Proposed Restoration Action	Will the proposed project (created from the design) promote natural stream/watershed processes that are consistent with the geomorphology of the stream?	7	0.71	5	
	How long will it be before the project (created from the design) achieves its intended response?	7	0.71	5	
	How long will the proposed restoration action and its benefits (created from the design) persist?	7	0.71	5	
	Will the proposed project (created from the design) ameliorate the effects of climate change?	7	0.71	5	
Benefits to Freshwater Survival or Capacity	Will the proposed project (created from the design) improve freshwater survival or increases capacity for target species at the project scale?	7	2.86	20	
Methods	Are the methods outlined within the proposed design adequate to achieve the stated objectives?	7	1.43	10	
Cost Effectiveness	How cost effective is the proposed design project?	7	0.71	5	
Grand Total		70		100	

Monitoring Projects

The RTT agreed to score monitoring projects independent of other project types because this is consistent with the unique SRFB allocation process. That is, scores from monitoring proposals will not be combined with scores from other project types and ranked. To avoid confusion and prevent combining monitoring proposal scores with other proposals, 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.

1. Information Needs

a) Will the proposed monitoring project fill important data gaps identified in the Recovery Plan and Appendix F of the Biological Strategy? (40% of total score)

- **Rationale:** A monitoring project must be designed to inform critical data gaps, as identified by the RTT in Appendix F of the Biological Strategy, *or new information needs identified by a project sponsor that the RTT agrees is an important information need*. Monitoring projects that focus on addressing specific information gaps previously identified by the RTT will score highest. The methods associated with the monitoring project (including study design, sampling methodology, and analytical approaches) should clearly be geared toward elevated understanding with respect to data gaps.
- **Scoring:**
 - 0 = monitoring project will not address an important data gap.
 - 1-6 = intermediate (the monitoring project should be expanded to inform additional data gaps).
 - 7 = monitoring project will address an important data gap.

d) Will results from monitoring be disseminated or freely available to interested parties upon completion of the project? (15% of total score)

- **Rationale:** It is important that the proposal clearly identify how this information will be disseminated and accessed (e.g., on the web) once the project is complete. Monitoring projects that disseminate data in an analyzed and formally reported format (e.g. with metadata and access to QA/QC raw data) will score higher than data disseminated in more raw forms.
- **Scoring:**
 - 0 = no description of information dissemination or accessibility.
 - 1-6 = partial description of information dissemination and accessibility.

- 7 = full description of information dissemination and accessibility.

2. Purpose of Monitoring Project

- a) Do the objectives of the monitoring proposal complement, enhance, or leverage ongoing monitoring efforts? *(15% of total score)*
- **Rationale:** Millions of dollars have been spent on monitoring programs in the Upper Columbia River basin. Future monitoring efforts should be proposed in context with previous and existing monitoring programs. In addition, the proposal should state clearly how it will leverage support or information from existing monitoring programs.
 - **Scoring:**
 - 0-2 = proposed monitoring project will not complement, enhance, or leverage ongoing monitoring efforts.
 - 3-6 = intermediate; information will complement, enhance, or leverage ongoing monitoring efforts to some degree.
 - 7 = proposed monitoring project will completely complement, enhance, or leverage ongoing monitoring efforts.

3. Methods

- a) Are the methods outlined within the monitoring proposal appropriate for addressing the information need? *(15% of total score)*
- **Rationale:** The monitoring proposal must describe clearly the methods (including study design, sampling methodology, and analytical approaches) that will be used to gather and analyze the information. The proposal should demonstrate that it is using accepted methods. If the methods are innovative, the proposal should discuss how the methods will achieve the stated objectives of the monitoring project and demonstrate the benefits of the methods relative to standard methods.
 - **Scoring:**
 - 0 = the methods are not adequate (employs questionable methods or practices or those not proven to be effective) to achieve the stated objectives.
 - 1-6 = intermediate (methods need substantial changes to achieve stated objectives (1 point)), or a few changes; 6 points).
 - 7 = the methods are adequate to achieve the stated objectives.
- b) Is the proposed monitoring project appropriately scaled and scoped? *(10% of total score)*

- **Rationale:** The spatial and temporal scales of a monitoring project must be sufficient to ensure that the information gap can be sufficiently addressed.
- **Scoring:**
 - 0 = the spatial and temporal scale and/or scope of proposal cannot meet the objectives.
 - 1-6 = intermediate (scale and/or scope should be expanded to meet the objectives).
 - 7 = the spatial and temporal scales of the monitoring project are robust with respect to all factors potentially influencing whether the information gap is addressed.

4. Cost Effectiveness of Monitoring Project

a) How cost effective is the proposed monitoring project? (5% of total score)

- **Rationale:** It is important that the cost of monitoring reflects the quality and usefulness of the information generated from the project. It is also important that the monitoring project uses appropriate methods and sufficient effort to obtain the information.
- **Scoring:**
 - 0 = the monitoring project uses inappropriate methods and will provide no useful information to managers or restoration practitioners. Cost is irrelevant if monitoring does not provide useful information.
 - 1-6 = intermediate level of useful information per cost of the monitoring project. Greater points are given to monitoring projects that will produce high-quality, useful information at low cost; lower points are assigned to monitoring projects that will produce low-quality, less useful information at high costs.
 - 7 = highest possible information per cost of the monitoring project.

Monitoring Project Scoring Sheet

Project Name:					
Reviewer:			Date:		
Criteria	Question	Potential Score	Weighting Factor	Total Maximum Potential Score	RTT Score (1-7)
Information Needs	Will the proposed monitoring project fill important data gaps identified in the Recovery Plan and Appendix F of the Biological Strategy?	7	1.71	12	
	Will results from monitoring be disseminated or freely available to interested parties upon completion of the project?	7	0.57	4	
Purpose of Monitoring Project	Do the objectives of the monitoring proposal complement, enhance, or leverage ongoing monitoring efforts?	7	0.57	4	
Methods	Are the methods outlined within the monitoring proposal appropriate for addressing the information need?	7	0.71	5	
	Is the proposed monitoring project appropriately scaled and scoped?	7	0.43	3	
Cost Effectiveness of Restoration Project	How cost effective is the proposed monitoring project?	7	0.29	2	
Grand Total		42		30	

Attachment 1

Intrinsic Potential Scores for Chinook Salmon and Steelhead

Rating scores of standardized intrinsic potential values for each assessment unit within the Wenatchee, Entiat, Methow, and Okanogan basins.

HUC 12 ID	Assessment Unit Name or Area	Description	Steelhead Score	Chinook Score
Wenatchee Basin				
170200110102	Upper White R	Panther Cr - source	1	1
170200110103	Panther Cr		1	1
170200110104	Napeequa R		1	1
170200110105	Lower White R	Mouth to Panther Cr	2	5
170200110110	Lower Little Wenatchee	Mouth to Rainy Cr	2	3
170200110111	Lake Wenatchee		1	1
170200110201	Upper Nason	Whitepine Cr - source	1	1
170200110202	Whitepine Cr		1	1
170200110203	Lower Nason Cr	Mouth - Whitepine Cr	7	6
170200110301	Source Chiwawa R	Phelps Cr - source	1	2
170200110302	Phelps Creek		1	2
170200110303	Upper Chiwawa	Rock-Phelps Creeks	3	7
170200110304	Rock Cr		1	2
170200110305	Middle Chiwawa	Chikamin Cr - Rock Cr	3	6
170200110306	Chikamin Cr.		1	3
170200110307	Big Meadow Creek		2	2
170200110308	Lower Chiwawa	Mouth to Chikamin Cr	4	3
170200110401	Upper Icicle	French Cr - source	1	
170200110402	French Cr		2	
170200110403	Jack Cr		2	
170200110404	Middle Icicle	Eighthmile Cr - French Cr	4	
170200110405	Eightmile Cr		1	
170200110406	Lower Icicle Cr	Mouth - Eighthmile Cr	4	2
170200110501	Upper Peshastin Cr	Ingalls - source	4	1
170200110502	Ingalls Cr		2	2
170200110503	Lower Peshastin Cr	Mouth - Ingalls Cr	5	3
170200110601	EF Mission Cr		3	1
170200110602	Upper Mission Cr	EF Mission Cr - source	3	
170200110603	Sand Cr		3	
170200110604	Lower Mission Cr	Mouth - EF Mission Cr	3	2
170200110701	Upper Wenatchee	Lake - Tumwater Canyon	7	6

HUC 12 ID	Assessment Unit Name or Area	Description	Steelhead Score	Chinook Score
170200110702	Chiwaukum Cr		3	2
170200110703	Middle Wenatchee	Upper Tumwater Canyon - Icicle R.	6	6
170200110704	Eagle Cr		2	1
170200110705	Chumstick Cr		4	2
170200110706	Upper-Lower Wenatchee	Icicle Cr - Peshastin Cr	5	3
170200110707	Mid-Lower Wenatchee	Peshastin Cr - Mission Cr	4	4
170200110708	Lower-Lower Wenatchee	Mission Cr - mouth	3	3
Entiat Basin				
170200100101	Upper Mad R	Wilma Cr - source	4	
170200100102	Tillicum Cr		2	1
170200100103	Lower Mad R	Mouth - Wilma Cr	6	2
170200100204	Upper Entiat	Burns Cr - NF Entiat R	4	4
170200100205	Middle Entiat R	Kelsey Lane Bridge - Burns Cr	5	5
170200100206	Mud Cr		1	1
170200100207	Lower - Middle Entiat	Mad R - Kelsey Lane Bridge	4	3
170200100208	Roaring Cr		3	1
170200100209	Lower Entiat	Mouth - Mad R	4	4
Methow Basin				
170200080104	Lost R		3	4
170200080201	Source Methow	Robinson Cr - source	2	1
170200080202	Robinson Cr		1	1
170200080203	Cedar Cr		1	1
170200080204	Early Winters		2	2
170200080205	Upper Methow	Early Winters Cr - Trout Cr	4	3
170200080303	Source Chewuch	Thirtymile Cr - source	1	1
170200080305	Lake Cr		2	1
170200080306	Upper-Upper Chewuch	Lake Cr - Thirtymile Cr	3	2
170200080401	Twentymile Cr		1	
170200080403	Upper Chewuch	Eightmile Cr ~ Lake Cr	6	6
170200080404	Eightmile Cr		4	2
170200080406	Boulder Cr		1	1
170200080407	Cub Creek		1	1
170200080408	Lower Chewuch	Mouth - Eightmile Cr	7	6
170200080501	Source Twisp	North Cr - source	1	1
170200080502	South Cr		1	1
170200080503	Upper Twisp	Williams Cr - North Cr	2	1
170200080504	War Cr		1	1
170200080506	Buttermilk Cr		2	1

HUC 12 ID	Assessment Unit Name or Area	Description	Steelhead Score	Chinook Score
170200080507	Middle Twisp	Buttermilk - Williams Cr	7	7
170200080508	Little Bridge Cr		2	1
170200080509	Lower Twisp	Mouth - Buttermilk Cr	6	4
170200080601	Goat Cr		2	1
170200080602	Upper Middle Methow	Winthrop to Early Winters	5	7
170200080603	Wolf Cr		2	3
170200080604	Bear Cr		1	1
170200080605	Middle Methow	Wolf Creek - Twisp R	6	5
170200080606	SF Beaver Cr		1	1
170200080607	NF Beaver Cr		2	1
170200080608	Beaver Cr	Mouth ~ SF/NF Beaver	4	2
170200080609	Benson Cr		1	1
170200080610	Lower-Middle Methow	Twisp - Carlton	7	3
170200080701	Libby Cr		2	1
170200080702	Upper-Lower Methow	Gold Cr - Texas Cr	4	3
170200080703	SF Gold Cr		3	1
170200080704	NF Gold Cr		3	1
170200080705	French Cr		1	
170200080706	Middle-Lower Methow	Squaw Cr - Gold Cr	5	4
170200080707	Squaw Cr		1	
170200080708	Black Canyon Cr		2	1
170200080709	Lower Methow R	Mouth - Squaw Cr	4	3
Okanogan Basin				
170200061504	Ninemile Cr		3	2
170200061505	Tonasket Cr		2	1
170200061506	Okanogan R 06	Similkameen R – N basin of Lake Osoyoos	2	1
170200061602	Whitestone Cr		1	1
170200061605	Lower Antoine Cr		4	2
170200061606	Okanogan R 05	Siwash Cr - Similkameen R	1	1
170200061703	Bonaparte Cr		2	1
170200061802	Siwash Cr		1	1
170200061803	Aeneas Cr		2	1
170200061804	Chiwiliken Cr		1	
170200061807	Lower Tunk Cr	Mouth ~ Knox Rd	2	1
170200061808	Okanogan R 04	Tunk Cr - Siwash Cr	1	1
170200061903	Upper Omak Cr	Jim Cr - source	1	
170200061904	Middle Omak Cr	Stapaloop Cr - Jim Cr	2	
170200061905	Lower Omak Cr	Mouth - Stapaloop Cr	5	4

HUC 12 ID	Assessment Unit Name or Area	Description	Steelhead Score	Chinook Score
170200062001	WF Salmon Cr		1	1
170200062002	SF Salmon Cr		1	1
170200062003	NF Salmon Cr		1	2
170200062004	Lower Salmon Cr	Mouth - Conconully Dam	6	5
170200062102	Okanogan R 03	Johnson Cr - Tunk Cr	1	1
170200062104	Johnson Cr		5	3
170200062105	Wannacut Cr		2	
170200062106	Okanogan R 02	Salmon Cr - Johnson Cr	1	
170200062203	Upper Loop Loop Cr	Rock Cr - source	1	
170200062203	Lower Loup Loup Cr	Mouth - Rock Cr	3	2
170200062204	Chiliwist Cr		1	1
170200062205	Okanogan R 01	Chiliwist Cr - Salmon Cr	1	
170200062209	Inundated Okanogan R	Mouth - Salmon Cr	1	1
170200072009	Lower Similkameen R	Mouth - Enloe Falls	3	3

Attachment 2

Intrinsic Potential Scores for Bull Trout

Scores are based on the proportion of bull trout spawning within a given watershed.

Bull trout spawning	Score	Watershed
Bull trout are not known to spawn, rear, or migrate in area	0	
10% or less of bull trout spawn in the watershed	1-3	Icicle, Peshastin, Lower Methow
11-50% of bull trout spawn in the watershed	4-5	White/Little Wenatchee, Entiat River, Chewuch, Upper Methow, Nason
51-75% of bull trout spawn in the watershed	5-6	Mad River, Twisp, Chiwaukum
Greater than 75% of bull trout spawn in the watershed	7	Chiwawa

Attachment 3

Effects of Different Restoration Techniques on Criteria of Success

Typical response times and duration of various types of enhancement actions and whether those actions address natural watershed processes and ameliorating effects of climate change (from Roni et al. 2002; 2013).

Category of Techniques	Restores Processes	Years Until Response	Duration of Restoration	Ameliorate Effects of Climate Δ
Reconnection (floodplain side channel; good groundwater interactions or spring-fed)	Yes	<1	50+	Yes
Reconnection (upstream to perennial colder water)	Yes	<1	50+	Yes
Instream flow (cooler)	Yes	1	varies	Yes
Planting of trees	Yes	25 to 50	100+	Yes
Fencing	Yes	1-5	10+	Yes
Roads	Yes	10-50	100+	Unlikely
LWD	No	1-5	20 – 30	Unlikely
Nutrients	No	<1	1?	No