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# UPPER COLUMBIA FULL PROPOSAL EVALUATION CRITERIA

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**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 full proposals. These criteria are designed and intended for the review and scoring of proposals. 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 be placed in high-priority areas, address important limiting factors, and identify benefits to focal 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. Projects scoring less than 40 points out of 100 total points are specifically called out as having "low biological benefit" so that funders and other reviewers can determine whether the project is worth further evaluation or funding.

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 evaluate the cost effectiveness of each proposal independently. Each member decides 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 Limiting Factors

- a) Does the proposed restoration project reduce the effects of **primary** limiting factors (as identified in the Prioritization Strategy; [Prioritization Portal](#)) at the reach<sup>1</sup> scale? (20% of total score)

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

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

Limiting factor ranks are based on outputs in the [Prioritization Portal](#).

- **Scoring:**
  - 0 = project does not address ranked limiting factor(s) at the *reach* scale.
  - 1-6 = project provides some level of improvement to ranked limiting factor(s) (rated unacceptable or at-risk at the *reach* scale).
  - 7 = project fully rectifies a Rank 1 limiting factor(s) at the *reach* scale.

## 2. Location and Scale of the Restoration Project

- a) Is the proposed restoration project sited within an important “assessment unit” for restoration? (10% of total score)

- **Rationale:** Streams vary in intrinsic potential and habitat quantity and quality because of differences in geology, geomorphology, valley width, elevation, stream size, gradient, and other factors. The RTT incorporated intrinsic potential and other information in identifying high-priority assessment units for restoration within each sub-basin (see Step 1 in the Habitat Action Prioritization Within the Upper Columbia River Basin document; [Prioritization Strategy](#)). Projects that improve habitat quantity and quality within high-priority assessments units, or provide access to

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<sup>1</sup> A reach is one of the nested hierarchical subdivisions of a drainage network. It is smaller than a valley segment and larger than a channel unit. A reach is classified by the geomorphic attributes of valley confinement, bed material, channel geometry, slope, and assemblages of geomorphic units (e.g., pool, riffle, etc.). Reaches in the Upper Columbia are set to be 1-4 km long and are identified in the Prioritization Strategy.

such habitat, will achieve the highest scores. Scores are based on outputs in the [Prioritization Portal](#).

- **Scoring:**
  - 0 = Not a priority.
  - 1 = Tier 3 Lower Priority.
  - 4 = Tier 2 Moderate Priority.
  - 7 = Tier 1 High Priority.
  - If a proposed project targets a combination of spring Chinook salmon, steelhead, and bull trout, ***the RTT will use the higher of the AU prioritization scores.***

b) Is the proposed restoration project sited within an important “reach” within a priority assessment unit? (5% of total score)

- **Rationale:** Because reaches vary in habitat quality, habitat quantity, connectivity, and geomorphology, they do not have equal restoration potential. Therefore, restoration actions should occur first in reaches with the highest potential for restoration. The RTT has incorporated several factors in identifying high-priority reaches for restoration within assessment units (see Step 2 in the Habitat Action Prioritization Within the Upper Columbia River Basin document; [Prioritization Strategy](#)). Projects that improve habitat quantity and quality within high-priority reaches, or provide access to such habitat, will achieve the highest scores. Scores are based on outputs in the [Prioritization Portal](#).

- **Scoring:**
  - 0 = Unranked Reach.
  - 1 = Rank 3 Reach.
  - 4 = Rank 2 Reach.
  - 7 = Rank 1 Reach.
  - If a proposed project targets a combination of spring Chinook salmon, steelhead, and bull trout, ***the RTT will use the higher of the Reach prioritization scores.***

c) Is the restoration project appropriately scaled and scoped? (5% 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 dynamic processes affecting habitat form and function at multiple spatial and temporal scales. Floodplain connectivity, complex instream structure, absence of barriers, and large intact riparian zones are all features of natural stream/watershed processes. As discussed within 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 1). It is important to not reduce the scores of projects that restore processes and take longer to achieve the intended response; thus, no project will receive a score of 0.

- **Scoring:**

- 1 = >50 years
- 2-6 = 1-50 years
- 7 = ≤1 year

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 1). 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 fewer than 10 years (or require on-going maintenance).
  - 4-6 = 10-50 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 1). 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 within a high-risk reach for climate change.

#### 4. Methods

1. Are the methods<sup>2</sup> outlined within the proposal adequate to achieve the stated objectives? (5% of total score)

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<sup>2</sup> Methods for this purpose include 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).

- **Rationale:** The proposal must clearly describe 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) Will the project increase freshwater survival and/or capacity for focal species and life stages at the **reach** scale? (30% of total score)
- **Rationale:** Habitat restoration projects are implemented to increase freshwater survival, increase capacity, and/or expand the distribution of focal 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 **reach** scale. Species and life stage priorities are based on outputs in the [Prioritization Portal](#).
  - **Scoring:**
    - 0 = no benefit to freshwater survival, capacity, and/or distribution of focal species and life stages at the *reach* scale.
    - 1-6 = intermediate increase in survival, capacity, and/or distribution of focal species and priority life stages at the *reach* scale.
    - 7 = highest possible benefit to survival, capacity, and/or distribution of focal species and high priority life stages at the *reach* scale.



## 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 focal species at the reach 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)
<b>Address Primary Limiting Factors</b>	Does the proposed restoration project reduce the effects of <b>primary</b> limiting factors (as identified in the Prioritization Strategy) at the reach scale?	7	2.86	20	
<b>Location and Scale of the Restoration Project</b>	Is the proposed restoration project sited within an important “assessment unit” for restoration?	7	1.43	10	
	Is the proposed restoration project sited within an important “reach” within a priority assessment unit?	7	0.71	5	
	Is the restoration project appropriately scaled and scoped?	7	0.71	5	
<b>Temporal Effect of Proposed Restoration Action</b>	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	
<b>Methods</b>	Are the methods outlined within the proposal adequate to achieve the stated objectives?	7	0.71	5	
<b>Benefits to Freshwater Survival or capacity</b>	Will the project increase freshwater survival and/or capacity for focal species and life stages at the reach scale?	7	4.29	30	
<b>Cost Effectiveness of Restoration Project</b>	How cost effective is the proposed restoration project?	7	0.71	5	
<b>Grand Total</b>		<b>77</b>		<b>100</b>	

# Protection Projects

## 1. Placement of Protection Project

a) Is the proposed protection project sited within an important “assessment unit” for protection? (10% of total score)

- **Rationale:** Streams vary in intrinsic potential and habitat quantity and quality because of differences in geology, geomorphology, valley width, elevation, stream size, gradient, and other factors. The RTT incorporated intrinsic potential and other information in identifying high-priority assessment units for protection within each sub-basin (see Step 1 in the Habitat Action Prioritization Within the Upper Columbia River Basin document; [Prioritization Strategy](#)). Projects that protect high-quality habitat within priority assessments units will achieve the highest scores. Scores are based on outputs in the [Prioritization Portal](#).
- **Scoring:**
  - 0 = Not a priority.
  - 1 = Tier 3 Lower Priority.
  - 4 = Tier 2 Moderate Priority.
  - 7 = Tier 1 High Priority.
  - If a proposed project targets a combination of spring Chinook salmon, steelhead, and bull trout, **the RTT will use the higher of the AU prioritization scores.**

b) Is the proposed protection project sited within an important “reach” within a priority assessment unit? (5% of total score)

- **Rationale:** Because reaches vary in habitat quality, habitat quantity, connectivity, and geomorphology, they do not have equal protection value. Therefore, protection actions should occur first in reaches with the highest protection value. The RTT has incorporated several factors in identifying high-priority reaches for protection within assessment units (see Step 2 in the Habitat Action Prioritization Within the Upper Columbia River Basin document; [Prioritization Strategy](#)). Projects that protect habitat quantity and quality within high-priority reaches will achieve the highest scores. Scores are based on outputs in the [Prioritization Portal](#).
- **Scoring:**
  - 0 = Unranked Reach.
  - 1 = Rank 3 Reach.

- 4 = Rank 2 Reach.
- 7 = Rank 1 Reach.
- If a proposed project targets a combination of spring Chinook salmon, steelhead, and bull trout, ***the RTT will use the higher of the Reach prioritization scores.***

c) To what extent does the proposed project protect high-quality habitat or habitat that can be restored to high quality with appropriate restoration actions? (15% of total score)

- **Rationale:** Maintaining high-quality habitat within priority spawning and rearing areas is critical to the viability of focal fish populations. Thus, protecting these areas, or areas with high restoration potential, is important to the conservation of the focal 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.

d) Will 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 **reach** scale and/or distribution of focal species and priority life stages 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 focal species at the reach scale)? (25% 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, abundance, or distribution of focal fish species and priority life stages.
- **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 focal species at the *reach* 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)
<b>Placement of Protection Project</b>	Is the proposed protection project sited within an important “assessment unit” for protection?	7	1.43	10	
	Is the proposed protection project sited within an important “reach” within a priority assessment unit?	7	0.71	5	
	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	2.14	15	
	Will the proposed project protect watershed processes or important high-quality habitat?	7	2.86	20	
<b>Threat</b>	How imminent is the threat of habitat degradation to the proposed land if the project is not implemented?	7	2.14	15	
<b>Benefits to Freshwater Survival or Capacity</b>	What would be the anticipated loss in freshwater survival and capacity at the <b>reach</b> scale and/or distribution of focal species and priority life stages 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 focal species and life stages at the reach scale)?	7	3.57	25	
<b>Cost Effectiveness of Protection Project</b>	How cost effective is the proposed protection project?	7	0.71	5	
<b>Conditions Affecting the Project</b>	Are there any conditions regarding the protection of the property that could limit the existing high-quality habitat?	7	0.71	5	
<b>Grand Total</b>		<b>56</b>		<b>100</b>	



# Assessment Projects

## 1. Addresses High Priority Data Gaps

- a) Will the proposed assessment address important data gaps ([Data Gaps](#)) that inform prioritization and/or the development of projects? (20% of total score)
- **Rationale:** All proposed assessments should fill important data gaps and/or link directly to restoration or protection actions addressing **primary** factors that limit freshwater production and/or distribution of fish species. Assessment projects that fill critical data gaps in prioritization and/or inform actions that address more than one limiting factor, or fully rectify a single limiting factor at the *reach* scale, will achieve the highest scores. Sequencing will also affect scores.
  - **Scoring:**
    - 0 = assessment will not fill a critical data gap in prioritization, nor will it result in projects that lead to improvement in limiting factor(s) at the *reach* scale.
    - 1-6 = assessment will only partially fill a critical data gap in prioritization, and/or will result in intermediate change in limiting factor(s) (limiting factor(s) will be partially addressed at the *reach* scale).
    - 7 = assessment will completely fill data gaps in Prioritization in Tier 1 AUs and/or will result in projects that fully rectify limiting factor(s) at the *reach* scale.

## 2. Area Covered by Assessment

- a) Is the proposed assessment project sited within an important “assessment unit” for restoration? (25% of total score)
- **Rationale:** Streams vary in intrinsic potential and habitat quantity and quality because of differences in geology, geomorphology, valley width, elevation, stream size, gradient, and other factors. The RTT incorporated intrinsic potential and other information in identifying high-priority assessment units for restoration within each sub-basin (see Step 1 in the Habitat Action Prioritization Within the Upper Columbia River Basin document; [Prioritization Strategy](#)). Projects that improve habitat quantity and quality within high-priority assessments units, or provide access to such habitat, will achieve the highest scores. Scores are based on outputs in the [Prioritization Portal](#).
  - **Scoring:**

- 0 = Not a priority.
- 1 = Tier 3 Lower Priority.
- 4 = Tier 2 Moderate Priority.
- 7 = Tier 1 High Priority.
- If a proposed project targets a combination of spring Chinook salmon, steelhead, and bull trout, ***the RTT will use the higher of the AU prioritization scores.***

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)

- **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 (i.e., the RTT Reach Assessment Guidance document). 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 the [RTT Reach Assessment Guidance](#).
- **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 methods described in the RTT Reach Assessment Guidance document) to achieve the stated objectives.

#### 4. Dissemination of Data and Results

a) How will results and data from the assessment be disseminated to interested parties upon completion of the project? (5% of total score)

- **Rationale:** It is important that the proposal clearly identify how assessment information will be used and how data and information will be disseminated and accessed (e.g., on the web) once the project is complete. Assessment projects that produce useful information and 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, and data or information generated will be of limited use or use is unknown.
- 1-6 = some plan for information dissemination and accessibility, and/or some level of uncertainty regarding the usefulness of data and information generated.
- 7 = full description of information dissemination and accessibility, and clear and compelling description of the usefulness of data and information generated.

#### 5. Cost Effectiveness of Assessment Project

b) 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)
<b>Addresses High Priority Data Gaps</b>	Will the proposed assessment address important data gaps that inform prioritization and/or the development of projects?	7	2.86	20	
<b>Area Covered by Assessment</b>	Is the proposed assessment project sited within an important "assessment unit" for restoration?	7	3.57	25	
	Is the proposed assessment appropriately scaled and scoped?	7	3.57	25	
<b>Methods</b>	Are the methods outlined within the proposed assessment adequate to achieve the stated objectives?	7	2.86	20	
<b>Dissemination of Results and Data</b>	How will results and data from the assessment be disseminated to interested parties upon completion of the project?	7	0.71	5	
<b>Cost Effectiveness of Assessment Project</b>	How cost effective is the proposed assessment project?	7	0.71	5	
<b>Grand Total</b>		<b>42</b>		<b>100</b>	

# Design Projects

## 1. Address Primary Limiting Factors

- a) Will the proposed design lead to development of projects that will reduce the effects of **primary** limiting factors at the **reach** scale (as identified in the Prioritization Strategy; [Prioritization Portal](#))? (20% of total score)

- **Rationale:** All designs proposed should link directly to restoration or protection actions addressing **primary** limiting factors that limit freshwater survival and/or distribution of fish species at the *reach* scale. Design projects with a direct linkage to development of actions addressing more than one important limiting factor, or fully rectifying a single limiting factor, achieve the highest scores. Sequencing also affects scores.

Limiting factor ranks are based on outputs in the [Prioritization Portal](#).

- **Scoring:**
  - 0 = design will not address ranked limiting factor(s) at the *reach* scale.
  - 1-6 = design will provide some level of improvement to ranked limiting factor(s) (rated unacceptable or at-risk at the *reach* scale).
  - 7 = design will fully rectify Rank 1 limiting factor(s) at the *reach* scale.

## 2. Area Covered by Design

- a) Is the proposed project (created from the design) sited within an important “assessment unit” for restoration? (10% of total score)

- **Rationale:** Streams vary in intrinsic potential and habitat quantity and quality because of differences in geology, geomorphology, valley width, elevation, stream size, gradient, and other factors. The RTT incorporated intrinsic potential and other information in identifying high-priority assessment units for restoration within each sub-basin (see Step 1 in the Habitat Action Prioritization Within the Upper Columbia River Basin document; [Prioritization Strategy](#)). Design projects that improve habitat quantity and quality within high-priority assessments units, or provide access to such habitat, will achieve the highest scores. Scores are based on outputs in the [Prioritization Portal](#).

- **Scoring:**
  - 0 = Not a priority.
  - 1 = Tier 3 Lower Priority.

- 4 = Tier 2 Moderate Priority.
- 7 = Tier 1 High Priority.
- If a proposed project targets a combination of spring Chinook salmon, steelhead, and bull trout, ***the RTT will use the higher of the AU prioritization scores.***

b) Is the proposed project (created from the design) sited within an important “reach” within a priority assessment unit? (5% of total score)

- **Rationale:** Because reaches vary in habitat quality, habitat quantity, connectivity, and geomorphology, they do not have equal restoration potential. Therefore, restoration actions should occur first in reaches with the highest potential for restoration. The RTT has incorporated several factors in identifying high-priority reaches for restoration within assessment units (see Step 2 in the Habitat Action Prioritization Within the Upper Columbia River Basin document; [Prioritization Strategy](#)). Design projects that improve habitat quantity and quality within high-priority reaches, or provide access to such habitat, will achieve the highest scores. Scores are based on outputs in the [Prioritization Portal](#).

- **Scoring:**

- 0 = Unranked Reach.
- 1 = Rank 3 Reach.
- 4 = Rank 2 Reach.
- 7 = Rank 1 Reach.
- If a proposed project targets a combination of spring Chinook salmon, steelhead, and bull trout, ***the RTT will use the higher of the Reach prioritization scores.***

c) 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 dynamic processes affecting habitat form and function at multiple spatial and temporal scales. Floodplain connectivity, complex instream structure, absence of barriers, and large intact riparian zones are all features of natural stream/watershed processes. As discussed within 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 1). It is important to not reduce the scores of projects that restore processes and take longer to achieve the intended response; thus, no project will receive a score of 0.
- **Scoring:**
  - 1 = >50 years
  - 2-6 = 1-50 years



- 7 = ≤1 year

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 1). 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 1). 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 focal species and priority life stages at the reach scale? (20% of total score)

- **Rationale:** Habitat restoration projects are implemented to increase freshwater survival, increase capacity, and/or distribution of focal fish species and priority life

stages. 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 **reach** scale. Species and life stage priorities are based on outputs in the [Prioritization Portal](#).

- **Scoring:**
  - 0 = no benefit to freshwater survival, capacity, and/or distribution of focal species and life stages at the *reach* scale.
  - 1-6 = intermediate increase in survival, capacity, and/or distribution of focal species and priority life stages at the *reach* scale.
  - 7 = highest possible benefit to survival, capacity, and/or distribution of focal species and high priority life stages at the *reach* scale.

## 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 focal species at the *reach* 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)
<b>Address Primary Limiting Factors</b>	Will the proposed design lead to development of projects that will reduce the effects of <b>primary</b> limiting factors at the <b>reach</b> scale (as identified in the Prioritization Strategy)?	7	2.86	20	
<b>Area Covered by Design</b>	Is the proposed project (created from the design) sited within an important "assessment unit" for restoration?	7	1.43	10	
	Is the proposed project (created from the design) sited within an important "reach" within a priority assessment unit?	7	0.71	5	
	Is the proposed design appropriately scaled and scoped?	7	1.43	10	
<b>Temporal Effect of Proposed Restoration Action</b>	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	
<b>Benefits to Freshwater Survival or Capacity</b>	Will the proposed project (created from the design) improve freshwater survival or increases capacity for focal species and priority life stages at the <b>reach</b> scale?	7	2.86	20	
<b>Methods</b>	Are the methods outlined within the proposed design adequate to achieve the stated objectives?	7	1.43	10	
<b>Cost Effectiveness</b>	How cost effective is the proposed design project?	7	0.71	5	
<b>Grand Total</b>		<b>77</b>		<b>100</b>	

# Monitoring Projects

The RTT agreed to score monitoring projects independent of other project types. 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.

As noted in Manual 18, “*Regional monitoring projects must address high priority information needs or data gaps identified within a recovery plan; associated regional research, monitoring, and evaluation plan; or lead entity strategy. Regional monitoring projects should complement, enhance, or leverage ongoing monitoring efforts.*” High-priority monitoring projects fill data gaps associated with population status and trends, limiting factors, project implementation, and effectiveness monitoring. This information is needed to evaluate the status of listed populations, identify limiting life stages, and track changes in habitat conditions over time.

## 1. Information Needs

- a) Will the proposed monitoring project fill a Tier 1 data gap identified in the Upper Columbia Monitoring and Data Management Committee (MaDMC) data gaps list ([Upper Columbia Data Gaps List](#))? (20% of total score)
- **Rationale:** A monitoring project must be designed to address Tier 1 data gaps, as identified by the MaDMC, *or new information needs identified by a project sponsor that the RTT agrees are important information needs*. Monitoring projects that focus on addressing specific information gaps previously identified by the RTT will score highest.
  - **Scoring:**
    - 0 = monitoring project will not address an important data gap.
    - 1-6 = monitoring project will address a less important data gap or should be expanded to more fully address the Tier 1 data gap.
    - 7 = monitoring project will adequately address a Tier 1 data gap.
- b) What is the scale of inference of the proposed monitoring study? (20% of total score)
- **Rationale:** A monitoring project that provides information at the population or across populations (ESU/DPS) scales will score higher than a monitoring project that provides information at the reach or project scale.
  - **Scoring:**

- 1 = monitoring project provides information at the site scale (i.e., 10s of meters).
  - 2 = monitoring project provides information at the reach scale (i.e., 100s of meters).
  - 3 = monitoring project provides information at the stream scale (i.e., kilometers).
  - 4 = monitoring project provides information at a watershed scale smaller than AU (e.g., HUC 14).
  - 5 = monitoring project provides information at the AU scale (i.e., HUC 12).
  - 6 = monitoring project provides information at the population scale.
  - 7 = monitoring project provide information across populations (i.e., ESU/DPS scale).
- c) How will monitoring data (raw and processed) and results be disseminated 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 used and how data and information will be disseminated and accessed (e.g., on the web) once the project is complete. Monitoring projects that produce useful information and 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, and data or information generated will be of limited use or use is unknown.
    - 1-6 = some plan for information dissemination and accessibility, and/or some level of uncertainty regarding the usefulness of data and information generated.
    - 7 = full description of information dissemination and accessibility, and clear and compelling description of the usefulness of data and information generated.

## 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 clearly state how it will use 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 clearly describe 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 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 the information gap can be addressed sufficiently.

- **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 project addresses the information gap(s).

#### 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 not fill a data gap. 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 = completely fills a data gap at a relatively low cost.



## Monitoring Project Scoring Sheet

Project Name:					
Reviewer:			Date:		
Criteria	Question	Potential Score	Weighting Factor	Total Maximum Potential Score	RTT Score (1-7)
<b>Information Needs</b>	Will the proposed monitoring project fill a Tier 1 data gap identified in the Upper Columbia Monitoring and Data Management Committee's data gaps list?	7	0.86	6.0	
	What is the scale of inference of the proposed monitoring study?	7	0.86	6.0	
	How will monitoring data (raw and processed) and results be disseminated to interested parties upon completion of the project?	7	0.64	4.5	
<b>Purpose of Monitoring Project</b>	Do the objectives of the monitoring proposal complement, enhance, or leverage ongoing monitoring efforts?	7	0.64	4.5	
<b>Methods</b>	Are the methods outlined within the monitoring proposal appropriate for addressing the information need?	7	0.64	4.5	
	Is the proposed monitoring project appropriately scaled and scoped?	7	0.43	3.0	
<b>Cost Effectiveness of Monitoring Project</b>	How cost effective is the proposed monitoring project?	7	0.21	1.5	
<b>Grand Total</b>		<b>49</b>		<b>30</b>	

# Attachment 1

## 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 with modifications).

Category of Techniques	Restores Processes	Years Until Response	Duration of Restoration	Ameliorate Effects of Climate $\Delta$
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