

## Appendix D. RTT Biological Strategy: Project Evaluation Criteria.

The RTT has developed a set of project rating criteria that has two major components, biological benefit and certainty of success. The biological benefit component of rating a project has 4-5 criteria, depending on the type of project being assessed (restoration, protection, assessment, or design). These criteria focus on limiting factors and benefits to Viable Salmonid Population (VSP) criteria for listed species (spring Chinook, steelhead, and bull trout). The certainty of success criteria were developed to rate the adequacy of the proposal and the likelihood that the project, as proposed, will achieve its objectives. This is an important set of criteria that is designed to address several technical aspects involved in project development and implementation, with the intention of identifying weaknesses that might lead to project failure or unintended results.

A separate scoring system was developed for each project type (restoration, protection, assessment, and project design) with 100 points allotted to the biological benefit criteria and 50 points to the certainty of success criteria.

Additional evaluation will occur regarding cost effectiveness after the reviewers apply the scoring criteria outlined in this appendix. Specifically, the biological benefit portion of the reviewer's scores will be divided by the project cost and this statistic will be reported in a table along with the scores for biological benefit, certainty of success, and total score. Total score will still determine the rank order of our recommendations and we stress that our discussion notes are a critical component of the review. Where needed, our discussion notes and charts or graphics will highlight cost-effectiveness comparisons and issues.

### Restoration Projects

#### **Biological Benefit**

*Abundance and productivity.*—The highest proportion of points were allotted to the abundance and productivity criteria because all populations in the Upper Columbia need large improvements in these viability criteria (UCSRB 2007; ICTRT 2007) (Table D1). The point distribution may be reconsidered as population status changes, and considering population-specific impairments. Factors considered for determining high, moderate, or low benefit for this criterion include the scale of the project, the biological significance of the project area, and the number and significance of life stages affected (Table D2). For this criterion, it is particularly important for project sponsors to clearly describe the quantity of habitat affected by the project. Depending on the project type, examples of this would be:

- acres/hectares of riparian habitat restored or protected
- linear distance (ft or m) of channel restored or protected
- linear distance (ft or m) of bank stabilized
- area (m<sup>2</sup> or ft<sup>2</sup>) of stream channel affected
- number of pools and area (m<sup>2</sup> or ft<sup>2</sup>) of pool habitat created
- quantity that flow is increased (cfs or m<sup>3</sup>/s)
- quantity of flow screened (cfs screened compared to cfs in the stream)

- linear distance (ft or m) and area of habitat above a barrier

Table D1. Project rating criteria and scoring system developed by the Upper Columbia Regional Technical Team for rating habitat restoration projects.

<b>Project Name:</b>	<b>Comment summary:</b>	
<b>Project ID#</b>		
<b>Project Type: Restoration</b>		
<b>Biological Benefit</b>	<b>Score</b>	<b>Notes</b>
Benefit to VSP abundance and/or productivity	35	See decision support matrix (Table D2.a) for guidance on scoring.
Benefit to VSP spatial structure and/or diversity	15	See decision support matrix (Table D2.b) for guidance on scoring.
Does the project address one or more limiting factors identified in the Recovery Plan or Biological Strategy?	10	See decision support matrix (Table D2.c) for guidance on scoring.
Is this a priority watershed (or major spawning area) for the populations?	10	See decision support matrix (Table D2.d)
Is this project dependent on other limiting factors being addressed first (sequencing)?	20	See decision support matrix (Table D2.e) for guidance on scoring.
Will the project benefit multiple listed species?	10	See decision support matrix (Table D2.f) for guidance on scoring.
<b>Subtotal for biological benefit =</b>	<b>100</b>	
<b>Certainty of Success</b>	<b>Score</b>	<b>Notes</b>
Is the project design adequate to achieve the stated objectives?	30	See decision support matrix (Table D4.a) for guidance on scoring.
Permitting	4	See decision support matrix (Table D4.b) for guidance on scoring.
Restoration costs	16	See decision support matrix (Table D4.c) for guidance on scoring.
<b>Subtotal for Certainty of Success =</b>	<b>50</b>	
<b>Total Score =</b>	<b>150</b>	
Was implementation monitoring included in the project?	Y / N	If yes, the RTT will describe the adequacy. See the Project Monitoring section of Appendix D
Was Level 1 effectiveness monitoring included in the project?	Y / N	If yes, the RTT will describe the adequacy. See Table D5.
Will the project be included as part of a larger scale Level 2 or 3 effectiveness monitoring program?	Y / N	The project sponsor does not necessarily need to know this. The RTT will determine this or determine if the project would be a good candidate for the higher level of monitoring.

Table D2. Decision support matrices for evaluating the potential biological benefit of a restoration project developed by the Upper Columbia Regional Technical Team.

	Criteria	Benefit	Score
a.	Abundance and Productivity	High	25-35
		Moderate	15-24
		Low	0-14
b.	Spatial Structure and Diversity	Very High	13-15
		High	9-12
		Moderate	5-8
		Low	0-4
c.	Number of Primary Limiting Factors Addressed	3+	8-10
		2	6-7
		1	1-5
d.	Priority Watershed	Category 1	7-10
		Category 2	7-10
		Category 3	3-6
		Category 4-5	0-2
e.	Sequencing	# of Preceding Limiting Factors 0	16-20
		1	5-15
		2+	0-4
f.	Benefits for Multiple Listed Species	How Many Species? 1	1-3
		2	4-6
		3	7-10

Table D3. Details for determining the level of biological benefit to spatial structure and diversity from a habitat restoration action. Major (MaSA) and minor (MiSA) spawning areas were defined in the Salmon Recovery Plan (UCSRB 2007) based on recommendations by the Interior Columbia Technical Recovery Team (ICTRT 2007).

Benefit	Description
Very high	Adding or protecting (in its entirety) a Major Spawning Area
High	Adding or protecting (in its entirety) a Minor Spawning Area
Moderate	Adding, enhancing, or protecting branches or re-capturing previously unoccupied area (m <sup>2</sup> ) to existing MaSA or MiSA that are "not well occupied". This is an effort to broaden the distribution and strengthen the abundance in spawning areas that have not been acting as strongholds.
Low	Adding, enhancing, or protecting branches or area (m <sup>2</sup> ) to existing MaSA or MiSA that are already strongholds.

*Spatial structure and diversity.*—Spatial structure and diversity were allotted fewer potential points (15) because the status assessments indicated that spatial structure and habitat-related diversity metrics were generally not limiting Upper Columbia populations from achieving low to moderate viability risk ratings (UCSRB 2007; ICTRT 2007). Factors considered for determining very high, high, moderate, or low benefit are focused on the Major and Minor Spawning Area concept developed by the ICTRT (2007) and are described in Table D3.

*Number of limiting factors addressed.*—This criterion was designed to assess whether a project is focused on one or more primary limiting factors identified in the Recovery Plan. Up to 10 points may be allotted for a project that addresses three or more primary limiting factors (Table D2). Considerations for this criterion are also embedded within the abundance and productivity and spatial structure and diversity criteria; however, the RTT thought it was important to isolate this criterion to help focus the efforts of project sponsors and ensure that projects are relating directly back to limiting factors identified in previous planning documents.

*Priority watershed.*—This criterion provides points for projects based on its location and the associated watershed category (as defined in the RTT Biological Strategy, see Appendix A of this document). Up to 10 points may be allotted for this criterion (Table D2). If a project area falls outside the boundaries of where the RTT has designated watershed categories then the RTT will determine the category based on the definitions provided in the Biological Strategy. Considerations for this criterion are also embedded within the abundance and productivity and spatial structure and diversity criteria; however, the RTT thought it was important to isolate this criterion to help focus the efforts of project sponsors.

*Sequencing.*—This criterion was developed to ensure that there are not other limiting factors that should be addressed before those proposed by the project at hand. Full credit is given to a project that has zero limiting factors that should be addressed prior to implementation of the project at hand (Table D2). This criterion is focused on the biological and ecological order of operations for limiting factors in a particular subwatershed. The RTT recognizes that there could be social, economic, or feasibility considerations for implementing projects in a different order. However, those considerations are outside the purview of the RTT.

*Benefits to Multiple Listed Species.*—This criterion assesses benefits to up to three listed species (spring Chinook, steelhead, bull trout), providing up to 10 points for a project that will have direct benefits for all three (Table D2.f). The range of points available within each number of species allows for reviewers to provide more or less points depending on the extent to which multiple life stages will benefit. For example, a project might benefit spawning and rearing for one species but only a small amount of rearing for a second species. In that case, reviewers might want to award fewer points than a project that would provide benefits to all life stages of both species.

### **Certainty of Success (restoration projects)**

The certainty of success criteria were developed to rate the adequacy of the proposal and the likelihood that the project, as proposed, will achieve its objectives. For restoration projects, the criteria include a set of questions regarding the project design, permitting, and budget.

*Project design.*— Several questions were developed to cover the major areas of importance for this category (Table D4.a). These questions are intended to evaluate the adequacy of the proposal, the projects longevity, site and scale issues, and the reliability of the techniques used for implementation.

*Permitting.*—A small proportion of points were allotted to the permitting question because of the uncertainty in evaluating the likelihood of receiving a permit. This criterion is intended to highlight potential permitting hurdles or project efficiencies for projects that already have permits in hand. Given the major role that permitting plays in implementing projects, the RTT thought it was important to include some assessment of the permit status or “permitability” of a particular project (Table D4.b).

*Restoration costs.*—Sixteen points were allotted to the criterion for restoration costs and the sub-questions in Table D4.c are intended to address one of the two cost-related evaluation criteria. :

- 1) Are the costs appropriate for the project that is being proposed?

We developed two questions for this criterion that allow us to focus on technical aspects of the budget. The questions allow the RTT to point out discrepancies between the project objectives and the budget. For example, a lower score for restoration cost sub-question 1 in Table D4.c would be likely if a culvert replacement project did not have a culvert identified in the budget.

Likewise, a lower score for sub-question two would be likely if a riparian restoration project was supposed to plant 1,000 trees but only included salary line items for a project manager and an engineer.

In our second cost-related evaluation, we ask the question: Are the potential ecological benefits appropriately scaled with the costs? This question takes into account the contribution to ecological benefits and the cost simultaneously. For example, two different culvert projects might provide access to two streams with similar quantity and quality habitat so the biological benefits are similar. Additionally, the project costs for each one might be appropriate for what is needed at each site (i.e. fill, pipe size, road management, etc.) but the final costs could be vastly different. The simpler, low cost project would have obvious cost effectiveness advantages. As previously described at the beginning of this appendix, the RTT will provide information on cost effectiveness outside our formal scoring system used by individual reviewers.

The RTT will address this second question through our comments / notes as well as by providing graphs and tabular summaries of cost effectiveness. Due to the difficulty of comparing across project types that use different metrics, our evaluation will be based on the average Biological Benefit score from the review group and the total cost of the project. Additional analysis may take into account the range of scores and the range of costs to account for the fact that the scoring system has an upper limit for biological benefit but proposal costs do not.

Table D4. Certainty of success criteria developed by the Upper Columbia Regional Technical Team for rating habitat restoration projects.

Criteria	Sub-question	Score
a. Project Design	Does the proposal provide adequate information?	0-8
	Is it a proven technique, or if innovative, does it appear it will work?	0-7
	Is the project properly sited and scaled?	0-7
	What is the likelihood that the projects structural integrity will be maintained over the appropriate timeframe?	0-8
	Project Design Subtotal =	
b. Permitting	Is it already permitted?	4
	Are permits in process?	3
	Does it appear that permits could be obtained?	2
	It does not appear that permits could be obtained.	0
Permitting Subtotal =		4
c. Restoration Costs	Are all necessary materials included in the budget? Are relevant items missing or not adequately estimated or described?	0-8
	Are all items in the budget relevant to biological benefits, necessary for this project to be successful, and/or appropriate for the objectives of the proposal?	0-8
	Restoration Costs Subtotal =	
Total for Restoration Certainty of Success =		50

### Project Monitoring

Implementation and Level 1 effectiveness monitoring are important components of the RTT certainty of success category; however, certain funding sources have decided not to fund project monitoring. Therefore, the implementation and effectiveness monitoring questions are not included in the certainty of success category and will be assessed separately, if a project sponsor has a monitoring plan that can be implemented from a different funding source.

*Implementation monitoring.*—Implementation monitoring simply provides proof that the action was carried out as planned. An adequate implementation-monitoring plan should include photo points with position descriptions. Position descriptions should include both a physical description (i.e. 200 ft SW of County Rd 4, next to the old barn) as well as GPS coordinates (in case the old barn burns down). These photo points and position

descriptions are important in case someone wants to go back and evaluate the effectiveness or longevity of the project.

Additional written documentation should accompany the photo points and outline how well and when the objectives were met. This is as simple as including the date of project completion and the quantity of each objective that was completed. See Hillman (2005) for examples of objectives for each project type.

*Level 1 effectiveness monitoring.*—Level 1 effectiveness monitoring is needed to demonstrate that the restoration action has at least affected the environmental parameters that were the target of restoration (Hillman 2005). Level 1 effectiveness monitoring primarily relies on photographs, counts, and presence/absence surveys (Hillman 2005) conducted at set intervals (seasonally, annually, bi-annually). Level 1 effectiveness monitoring seeks to answer questions such as:

- 1) What was the survival of trees planted in a riparian project?
- 2) Is the restoration structure (i.e. fence, rock weir, culvert, etc.) still in place?
- 3) Is the restoration target (i.e. pools, wood, spawning gravel, sidechannel connection, etc.) still there after multiple high water events?
- 4) Are the terms of the easement being upheld through time?
- 5) Will target fish species / lifestage be present in the sidechannel?
- 6) Additional examples are provided in Hillman (2005).

To determine the adequacy of a project's level 1 effectiveness monitoring plan, the RTT will consider seven sequential steps (Table D5).

*Level 2 and Level 3 effectiveness monitoring.*—Level 2 and Level 3 effectiveness monitoring are more intensive and seek to determine effects and statistically significant changes to environmental and biological parameters at larger spatial scales (Hillman 2005). The RTT believes that Level 2 and 3 effectiveness monitoring are extremely important and should be carried out on select projects and sub-watersheds in each of the Upper Columbia Subbasins. The RTT does not believe that every project sponsor who wants to implement a restoration or protection project should or could successfully implement level 2 and 3 effectiveness monitoring. Level 2 and Level 3 effectiveness monitoring are generally beyond the scope and purview of most project sponsors. These levels of effectiveness monitoring require a much higher degree of monitoring expertise, in depth planning, experimental design, statistical design, data management, data analysis, and reporting. If a project sponsor wants to implement level 2 or 3 effectiveness monitoring then they should probably apply for it as a separate project in the assessment category.

Table D5. Steps for setting up a monitoring plan adapted from Roni (2005) that are appropriate for Level 1 effectiveness monitoring as defined by Hillman (2005).

- 
1. Define goals and objectives
  2. Define key questions and/or hypotheses
  3. Select appropriate monitoring design
  4. Select monitoring parameters
  5. Identify number of sites and years to monitor
  6. Determine sampling scheme
  7. Appropriate reporting
- 

## Protection Projects

### Biological Benefit

*Abundance and productivity.*—The same point allotment and decision support matrix was used for protection projects as restoration projects for abundance and productivity (Table D2.a). However, the RTT has adopted the over-arching strategy that protecting functional habitat is the highest priority (NRC 1996; Roni et al. 2002); therefore, protection projects are more likely to score in the “high” category for this criterion.

*Spatial structure and diversity.*—The same point allotment and decision support matrix was used for protection projects as restoration projects for spatial structure and diversity (Table D2.b).

*Priority watershed.*—A relatively large proportion of points was allotted to the priority watershed criteria for a protection project to ensure that protection efforts were focused in areas where the greatest benefits would accrue (i.e. category 1 and 2 watersheds) (Table D6).

*Connectivity to other protected areas.*— This criterion was designed to give protection projects credit when they are adjacent to or associated with other protected areas. This will promote creating habitat strong holds with the assumption that large blocks of continuous functional habitat will be more effective and provide more biological benefit than a patchwork approach. Additionally, points can be awarded if there is a demonstrated link between the protection property and some needed restoration projects, such as floodplain connectivity or riparian restoration.

Table D6. Project rating criteria and scoring system developed by the Upper Columbia Regional Technical Team for rating habitat protection projects.

<b>Project Name:</b>		<b>Comment summary:</b>	
<b>Project ID#</b>			
<b>Project Type: Protection</b>			
<b>Biological Benefit</b>	<b>Score</b>	<b>Notes</b>	
Does the acquisition or easement protect or enhance a benefit to VSP abundance and/or productivity	35	See decision support matrix (Table D2.a) for guidance on scoring.	
Does the acquisition or easement protect or enhance a benefit to VSP spatial structure and/or diversity	15	See decision support matrix (Table D2.b) for guidance on scoring.	
Is this a priority watershed for the populations?	35	Category 1=35 points; C2=25 points C3=15; C4=10 points; C5=5 points.	
Is this acquisition/easement associated with other protected areas (habitat strong holds) or (if needed) restoration projects?	15	0= no ; 1-14= partial; 15 = yes	
<b>Subtotal for biological benefit =</b>		<b>100</b>	
<b>Certainty of Success</b>	<b>Score</b>	<b>Notes</b>	
Is there a sign letter of commitment from the current land owner?	10	yes = 10; no = 0 or (1-9 pts possible depending on level of landowner interactions described in the proposal.	
Has an appraisal been completed?	10	yes = 10; no = 0 ; (or 1-9 pts possible if land-cost comparisons were provided in the proposal).	
Do management actions associated with this acquisition/easement promote fish habitat conservation?	14	Proposal needs to describe the parameters of the easement; I.e. what can and cannot be done on the land?	
Protection Costs	16	See decision support matrix (Table D4.c) for guidance on scoring.	
<b>Subtotal for Certainty of Success =</b>		<b>50</b>	
<b>Total Score =</b>		<b>150</b>	
Was implementation monitoring included in the project?	Y / N	If yes, the RTT will describe the adequacy. See the Project Monitoring section of Appendix D	
Was Level 1 effectiveness monitoring included in the project ?	Y / N	If yes, the RTT will describe the adequacy. See Table D5.	
Will the project be included as part of a larger scale Level 2 or 3 effectiveness monitoring program?	Y / N	The project sponsor does not necessarily need to know this. The RTT will determine this or determine if the project would be a good candidate for the higher level of monitoring.	

## **Certainty of Success (protection projects)**

There are four criteria for certainty of success for protection projects (Table D6). These criteria cover commitments from the landowners, completed appraisals, the terms and conditions of the protection effort, and protection costs. For the terms and conditions of the protection action, it is particularly important for project sponsors to describe the types and extent of activities (# of homesites before and after, logging, grazing, road building restrictions, etc.) that can or cannot occur on the land and in the stream after the protection action is in place. There should be some site-specific nuances that are articulated in the proposal along with a list of general terms or examples from previous easements.

For protection project costs, we use the same questions and point system as was described for restoration projects (Table D4.c), with the following adjustments / considerations.

- 1) Are all necessary transaction costs included in the budget? This includes appraisals, outreach, legal review, etc.
- 2) Are all items in the budget relevant to biological benefits? For example, the inclusion of upland areas that increase the cost of the protection action but do not add to the protection benefits of the riparian/aquatic area or anthropogenic structures that increase the price of the acquisition / easement without adding protection benefits.

## **Assessment Projects**

### **Biological Benefit**

*Abundance and productivity.*— Thirty five points were available for assessment projects that would lead to a better understanding of limiting factors to abundance and/or productivity or contribute to a status evaluation for abundance and/or productivity (Tables D7 and D8a).

*Spatial structure and diversity.*— Thirty five points were available for assessment projects that would lead to a better understanding of limiting factors to spatial structure and Diversity or contribute to a status evaluation for spatial structure and diversity (Tables D7 and D8b).

*Scale of applicability.*—This criterion was designed to evaluate how broadly or narrowly the assessment results might be applied. More points will be given to projects that provide valuable information across multiple spatial scales (Tables D7 and D8c)

*Use of information.*—This criterion was used to evaluate several aspects related to the usefulness of the information collected during the assessment. There were two main subcategories that were considered for this criterion:

- 1) Create information
  - a) Is the question answerable?
    - i.e. Does the technology exist to answer the question?
  - b) Are there foreseeable management actions that could be done to use the information?
  - c) Will filling the data gap improve a fundamental scientific understanding?
- 2) Formulate policy
  - a) Has the information specifically been requested by management and/or policy makers?

### **Certainty of Success** (Assessment Projects)

*Assessment.* — Proposals need to address the 7 steps for setting up a monitoring plan as outlined in Table D5. Additionally, standard protocols or methods should be used to ensure data quality, repeatability, and statistical comparisons. Or, if new and innovative protocols/methods are implemented, or if it is an assessment for alternatives at a restoration site/reach, then sufficient explanation and justification needs to be outlined in the proposal so that the RTT can objectively evaluate the likelihood that it will be successful.

*Permitting.*—See permitting discussion and point allotments described in the restoration project section and in Table D4.b.

*Assessment costs.*—For assessment project costs, we use the same questions and point system as was described for restoration projects (Table D4.c).

*Data management and reporting.*—This criteria was designed to highlight the importance of data management and reporting that is particularly relevant to assessment projects. Project sponsors need to be particularly cognizant of multiple levels of data management and dissemination including local, regional, and perhaps statewide or Columbia Basin wide. If the proposal is for an assessment of alternatives at a restoration site/reach then reports, outreach to management and regulatory agencies and the public or local landowners should be described.

Deleted: ¶

Table D7. Project rating criteria and scoring system developed by the Upper Columbia Regional Technical Team for rating assessment projects.

<b>Project Name:</b>	<b>Comment summary:</b>	
<b>Project ID#</b>		
<b>Project Type: Assessment</b>		
<b>Biological Benefit</b>	<b>Score</b>	<b>Notes</b>
Benefit to VSP Abundance and/or Productivity	35	See Table D8a. for guidance on scoring.
Benefit to VSP Spatial Structure and/or Diversity	35	See Table D8b. for guidance on scoring.
Scale of Applicability	10	See Table D8c. for guidance on scoring.
Use of Information	20	See Table D8d. for guidance on scoring.
<b>Subtotal for biological benefit =</b>	<b>100</b>	
<b>Certainty of Success</b>	<b>Score</b>	<b>Notes</b>
Is the assessment design adequate to achieve the stated objectives?	26	See Table D9 for guidance on scoring.
Permitting	4	See Table D9 for guidance on scoring.
Assessment Costs	16	See Table D9 for guidance on scoring.
Is there an avenue described to disseminate information to interested parties once the assessment is completed?	4	See Table D9 for guidance on scoring.
<b>Subtotal for Certainty of Success =</b>	<b>50</b>	
<b>Grand Total</b>	<b>150</b>	

Table D8. Project proposal evaluation criteria developed by the Upper Columbia Regional Technical Team for rating assessment projects for biological benefit.

	<b>Criteria</b>	<b>Description</b>	<b>Benefit</b>	<b>Score</b>
a	Benefit to VSP, Abundance and/or Productivity	Does the assessment contribute to knowledge of abundance and/or productivity? Or could the assessment directly result in action that will increase abundance and/or productivity?	High	25 to 35
			Moderate	15 to 24
			Low	1 to 14
			None	0
b	Benefit to VSP, Spatial Structure and/or Diversity	Does the assessment contribute to knowledge of spatial structure and/or diversity? Or could the assessment directly result in action that will increase spatial structure and/or diversity?	High	25 to 35
			Moderate	15 to 24
			Low	1 to 14
			None	0
c	Scale of Applicability	Local, Population, ESU	Local	2
			Sub-basin (population)	5
			Regional (ESU)	10
d	Use of Information	Is the question answerable (i.e. does the technology exist)? Are there foreseeable management actions that may use the information? Will filling the data gap improve a fundamental scientific understanding? Has the information specifically been requested by management and/or policy makers?	High	14 to 20
			Moderate	6 to 13
			Low	0 to 5

Table D9. Certainty of success criteria developed by the Upper Columbia Regional Technical Team for rating assessment proposals.

<b>Criteria</b>	<b>Sub-question</b>	<b>Score</b>	
a.	Assessment Details	Does the proposal provide adequate information? (objectives, methods, etc)	0-7
		Is the study design and analysis sufficient to meet the stated objectives?	0-7
		Is the assessment properly sited and scaled?	0-6
		Is it a proven technique, or if innovative does it appear it will work?	0-6
		<b>Assessment Design Subtotal</b>	<b>26</b>
b.	Permitting	Is it already permitted?	4
		Are permits in process?	3
		Does it appear that permits could be obtained?	2
		It does not appear that permits could be obtained	0
		<b>Assessment Permitting Subtotal</b>	<b>4</b>
c.	Costs	Are all necessary materials included in the budget? Are relevant items missing or not adequately estimated or described?	0-8
		Are all items in the budget relevant to biological benefits, necessary for this project to be successful, and/or appropriate for the objectives of the proposal?	0-8
		<b>Assessment Costs Subtotal</b>	<b>16</b>
d.	Dissemination of Information	Is there an avenue identified to disseminate information to pertinent parties? (i.e. agency report, peer reviewed journal, etc plus data management procedures described including QAQC and public access).	4
		Partial credit based on adequacy of proposal to describe how the information will be summarized, shared, and made available.	1-3
		No means of disseminating information is described.	0
		<b>Dissemination of Information Subtotal</b>	<b>4</b>
<b>Total for Assessment Certainty of Success =</b>		<b>50</b>	

## Project Design Proposals

These projects are generally the first part of a phased approach that first seeks to determine the right restoration prescription for a specific site and develop the engineering design plans for the chosen alternative.

### **Biological Benefit**

*Abundance and productivity.*— The same point allotment and decision support matrix was used for project design projects as restoration projects for the abundance and productivity criteria (Tables D10 and D2.a). The RTT will evaluate the potential benefits to abundance and productivity for the likely project that will result from the design. In some cases, the exact project alternative will not be known and the RTT will have to make and document their assumptions in the project review narrative.

*Spatial structure and diversity.*—The same point allotment and decision support matrix was used for project design projects as restoration projects for the spatial structure and diversity criteria (Tables D10 and D2.b). The RTT will evaluate the potential benefits to spatial structure and diversity for the likely project that will result from the design. In some cases, the exact project alternative will not be known and the RTT will have to make and document their assumptions in the project review narrative.

*Number of limiting factors addressed.*—The same point allotment and rational will be used for this criterion as was described for restoration project proposals. The RTT will evaluate the potential number and importance of limiting factors addressed for the likely project that will result from the design. In some cases, the exact project alternative will not be known and the RTT will have to make and document their assumptions in the project review narrative.

*Priority watershed.*— The same point allotment and rational will be used for this criterion as was described for restoration project proposals.

*Sequencing.*— The same point allotment and rational will be used for this criterion as was described for restoration project proposals. In most cases, project designs should follow an assessment and be consistent with a restoration strategy that aims to restore natural processes within a reach context.

*Future Check-ins.*—Are there milestones for future check-ins with the RTT as the design progresses?<sup>1</sup> This criterion was developed to provide additional points for project sponsors that intend to solicit feedback as the design develops. We believe this will increase the probability that the chosen alternative achieves the intended biological benefit and that Phase 2 (project implementation) will be more successful.

---

<sup>1</sup> Future check-ins would involve scheduling time with the RTT after the proposal is accepted and the project planning / design is underway. Generally, these check-ins would need to occur between November and May and the timing, format, content, and details would need to be worked out between the RTT and the project sponsor.

Table D10. Project rating criteria and scoring system developed by the Upper Columbia Regional Technical Team for rating project design or feasibility proposals.

Project Name:	Comment summary:	
Project ID#		
Project Type: Project Design		
Biological Benefit	Score	Notes
Is this design likely to lead to a project that will benefit abundance and/or productivity?	35	See decision support matrix (Table D2.a) for guidance on scoring.
Is this design likely to lead to a project that will benefit spatial structure and/or diversity.	15	See decision support matrix (Table D2.b) for guidance on scoring.
Is this design likely to lead to a project that addresses limiting factors identified in the Recovery Plan or Biological Strategy?	10	See decision support matrix (Table D2.c) for guidance on scoring.
Is this a priority watershed (or major spawning area) for the target populations?	10	See decision support matrix (Table D2.d)
Is this design out of sequence with an assessment or is the design likely to lead to a project that is dependent on other limiting factors being addressed first (sequencing)?	20	See decision support matrix (Table D2.e) for guidance on scoring.
Are there milestones for future check-ins with the RTT as the design progresses?	10	30% design = 3 points; 30 & 60% design = 6 points; 30, 60, 90% = 10 points
<b>Subtotal for biological benefit =</b>	<b>100</b>	
<b>Certainty of Success</b>		
Certainty of Success	Score	Notes
Is the design/feasibility proposal adequate to achieve the stated objectives?	22	See decision support matrix (Table D11) for guidance on scoring.
Will the design/feasibility study produce a product that will be implemented in the next phase (Design or Study Level)?	12	See decision support matrix (Table D12) for guidance on scoring.
Design Costs	16	See decision support matrix (Table D4.c) for guidance on scoring.
<b>Subtotal for Certainty of Success =</b>	<b>50</b>	
<b>Grand Total</b>	<b>150</b>	

**Certainty of Success** (Project Design Proposals)

*Is the design/feasibility proposal adequate to achieve the stated objectives?* — A set of sub-questions was developed to cover the major areas of importance for this category (Table D11).

*Will the design/feasibility study produce a product that will be implemented in the next phase.*— Points were allotted to three questions related to how close to a finished product (project ready for implementation) will be obtained (Table D12). Will there be a preferred alternative chosen? Will the design be completed to obtain permits? Will the design be final with permits in-hand and ready for construction?

*Project costs.*— Sixteen points were allotted to the criterion for project design costs and the sub-questions are consistent with those outlined in Table D4.c.

Table D11. Certainty of success criteria developed by the Upper Columbia Regional Technical Team for rating Project Design and Feasibility proposals.

Criteria	Sub-question	Score
Project design	Is it a proven technique, or if innovative, does it appear it will work?	0-6
	Is the project properly sited and scaled?	0-8
	What is the likelihood that the projects structural integrity will be maintained over the appropriate timeframe?	0-8
Project Design Subtotal =		22

Table D12. Certainty of success criteria developed by the Upper Columbia Regional Technical Team for rating Project Design and Feasibility Studies.

Criteria	Level	Sub-question	Score	Notes
Design Level	I (Planning)	Will there be a preferred alternative chosen?	4	Yes= 4; no= 0; partial= 1-3
	II (Permitting)	Will the design be completed to obtain permits?	4	Yes= 4; no= 0; partial= 1-3
	III (Design)	Will the design be final with permits in-hand and ready for construction?	4	Yes= 4; no= 0; partial= 1-3
	<b>Total Score Possible</b>		<b>12</b>	

## Literature Cited

- Hillman, T. W. 2005. Project monitoring: A guide to sponsors in the Upper Columbia Basin. Prepared for the Chelan County Natural Resource Department. Wenatchee, Washington.
- Interior Columbia Technical Recovery Team. 2007. Viability Criteria for Application to Interior Columbia Basin Salmonid ESUs. Review draft available at: [http://www.nwfsc.noaa.gov/trt/trt\\_viability.cfm](http://www.nwfsc.noaa.gov/trt/trt_viability.cfm).
- National Research Council (NRC). 1996. Upstream: salmon and society in the Pacific Northwest. National Academy Press, Washington, D.C.
- Roni, P., Beechie, T. J., Bilby, R. E. Leonetti, F. E., Pollock, M. M., and G. R. Pess. 2002. A review of stream restoration techniques and a hierarchical strategy for prioritizing restoration in Pacific Northwest watersheds. *North American Journal of Fisheries Management* 22:1-20.
- Roni, P., editor. 2005. Monitoring stream and watershed restoration. American Fisheries Society, Bethesda, Maryland.
- Upper Columbia Salmon Recovery Board. 2007. Upper Columbia spring Chinook salmon and steelhead recovery plan. Prepared for the National Oceanic and Atmospheric Administration National Marine Fisheries Service and the U.S. Fish and Wildlife Service, Portland, OR. *in* Available online: <http://okanogancounty.org/water/salmon%20recovery;%20draft%20review%20coerner.htm>.