PROJECT PROPOSAL – RESTORATION, ACQUISITION, AND COMBINATION RESTORATION/ACQUISITION PROJECTS

INSTRUCTIONS: Salmon Recovery Funding Board applicants must respond to the following items. Please respond to each question individually -- do not summarize your answers collectively in essay format). Local citizen and technical advisory groups will use this information to evaluate your project. Contact your lead entity for additional information that may be required. Limit your response to eight pages.

Submit information via the PRISM attachment process. Application checklists and attachment forms may be downloaded off the SRFB Web site at http://www.rco.wa.gov/srfb/docs.htm.

NOTE: Acquisition, Combination, Fish Passage, and Diversions and Screening projects have supplemental questions embedded within this worksheet. Please answer the questions below and all pertinent supplemental questions.

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1) PROJECT OVERVIEW

Explain your project overall and include the following elements:

a) List your primary project objectives, such as how this project will improve or maintain habitat conditions and habitat forming processes.

The overall goal is the restoration of floodplain connectivity for a .8 mile reach of Tepee Creek between river miles 4.5 to 5.3. Upon implementation, this will have the effect of increasing floodplain storage, reducing severity of active channel hydraulic conditions during high flows, and potentially restoring low flows to this and downstream reaches. Secondary goals include: reducing conifer encroachment into the meadow and increasing the suitability of the valley bottom for medicinal and traditional food plants. The preferred conceptual approach is to restore channel grade and elevation by reconstructing pool-riffle sequences and, if necessary, making planform adjustments.

b) State the nature, source, and extent of the problem that the project will address, including the primary causes of the problem, not just the symptoms. Explain how achieving the project objectives will help solve the problem. (Fish Passage projects and Diversions and Screening projects should refer to the supplemental questions later in this worksheet for further guidance on information to include in their problem statement.)

Extensive reaches (including project reach) of Tepee Creek have become incised and intermittent. Spawning habitat is marginal and rearing conditions are poor. Observed conditions are result of the cumulative effects of livestock grazing and road interactions. Hydrologic modeling, conducted previously, suggest peak discharges in upper Tepee Cr. have increased 7.3% for a 2.5-year storm and 4.8% for a 100-year storm.

Summer refugia is highly limited in Tepee Creek and is necessary for successful rearing within this watershed. Unincised portions of Tepee Cr. and its tributaries provide some

of this necessary perennial habitat. Where perennial pool habitat is present, survival appears to be good, particularly for 0+ and 1+ aged fish. Currently, fry observed migrating as a result of summer freshets are often stranded in areas that dry up (including the project reach). Field indicators and hydraulic modeling in nearby reaches indicate that Tepee Cr. is entrenched 3 to 4 feet within its former flood prone surface. Field indicators in the proposed project reach suggest the channel is incised 3 to 5 feet. The incision restricts floodplain access and has resulted in a higher-energy stream environment in which bed and bank erosion are common and habitat conditions are poor. Capture of a forest road and subsequent avulsion (likely during the 1974 floods) is most likely the primary cause of incision within the project reach.

Construction of pool-riffle sequences, placement of LWD, and restoration of the reach to its pre-disturbance bed elevation during implementation address limiting features and factors identified in LE Salmon Recovery Strategy. Restoration of bed elevation will restore the water table, which is expected to extend flow duration for residual pools. This effect has been observed on a reach upstream (Fig. 1) as a result of the Tepee Creek / IXL Meadows project (RCO # 05-1607). The TepeeIXL project reach has maintained perennial pools (Fig. 2) and supported O. mykiss in both field seasons since project completion. Previously, perennial flow conditions had only been observed in 1 of the 5 years immediately preceding the project.

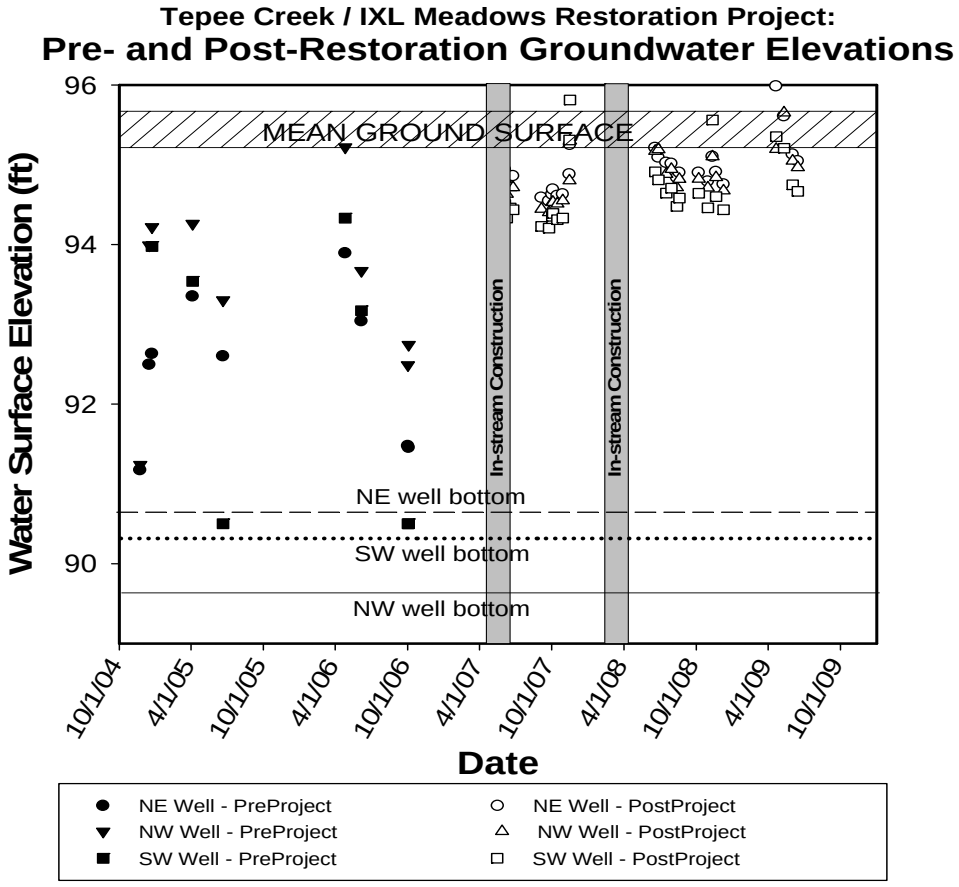

Figure 1. Groundwater data from Tepee Creek / IXL Meadows project reach.

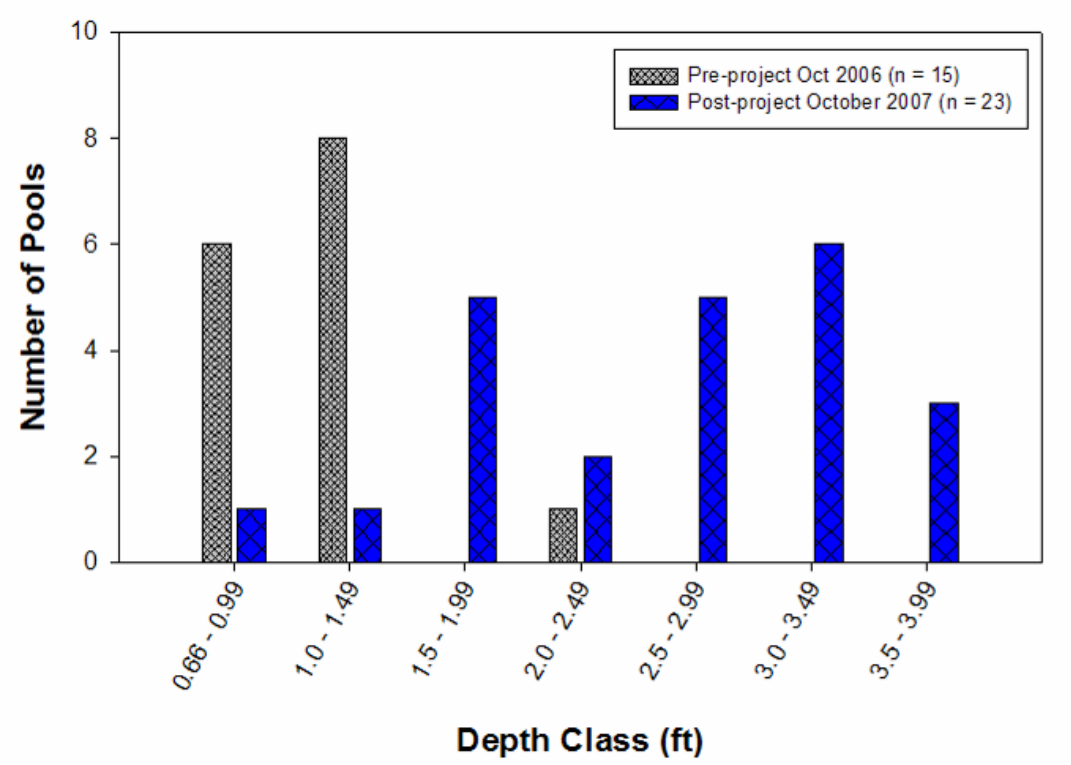

Figure 2. Residual Pool Depths Tepee Creek / IXL Meadows project reach.

Summarized Results of post-project monitoring of Tepee Creek / IXL Meadows:

- **Flow Duration: perennial pools maintained both years since construction**
- **Groundwater: 2-4' increase in summer water table**
- **High Flow Access: at bankfull or lower flows to four side channels totaling 835 linear feet**
- **Pools: increased from 15 to 23 (65%); greater depths and cover**
- **Wetlands: ~3100 ft^2 of emergent wetland created**
- **Riparian Vegetation: rapid recovery, particularly of salvaged plant materials**
- **Spawning: at least five steelhead redds observed**
- **Rearing: 2x-3x increase in juvenile O. mykiss abundance**
- **Macroinvertebrates: rapid colonization by multiple species of caddisflies and mayflies**

c) Describe the fish resources (species and life history stages present, unique populations), the habitat conditions, and other current and historic factors important to understanding this project. Be specific--avoid general statements. Which salmonid species and life cycle stage(s) are targeted to benefit by this project?

Tepee Creek, a tributary to White Creek in the Klickitat River subbasin, provides important spawning and rearing habitat for ESA-listed Middle Columbia River steelhead. The White Creek watershed as a whole is likely the most important spawning and rearing tributary watershed within the Klickitat subbasin. In recent years, the White Creek watershed has accounted for up to 40% of the observed steelhead spawning in the entire Klickitat subbasin. Tepee Creek has accounted for up to 21% of the observed spawning in the Klickitat subbasin in recent years; however in most years it likely accounts for between 5 and 10% (Sampson and Evenson 2003, YN Fisheries Program 2002-2004 spawner survey data).

Summer refugia, in the form of perennially-flowing stream reaches or remnant pools in otherwise dry reaches, are highly limited in Tepee Creek and are necessary for successful rearing within this watershed. Upper Tepee Creek and East Fork Tepee Creek, due to groundwater inputs or intact wetlands that act as reservoirs, provide some of this necessary perennial habitat. Where perennial pool habitat is present, survival appears to be good, particularly for 0+ and 1+ aged fish. Currently, fry observed migrating as a result of summer freshets are often stranded in areas that dry up. Additional refugia are critical for increased survival.

A partial fish barrier downstream of the proposed project reach was replaced in October 2007 as part of the SRFB-funded Tepee Creek Fish Passage Restoration project (Project #04-1716).

Currently, most of the incised reaches in the White Creek watershed (including the project reach) dry up from July through October. Anecdotal accounts from the 1960s suggest that at least some of these reaches were historically perennial. Many of the same reaches showing signs of bed armoring are also characterized by a simplified morphology with low pool frequencies, rectangular, canal-like cross sections, and an absence of large woody debris (LWD). Impacts from grazing (in the form of altered riparian vegetation, bank erosion, and channel incision) are also evident in several meadow reaches within the watershed. Anecdotal evidence, along with watershed size, elevation, and precipitation, suggest that more reaches had perennial flow historically.

The watershed lies within the Yakama Reservation forest; commercial timber harvest has occurred since the 1950's in this area. Current and future land uses also include timber harvest, although riparian management areas (as laid out in the Yakama Nation/Bureau of Indian Affairs Forest Management Plan) will limit timber harvest in streamside areas.

d) Discuss how this project fits within your regional recovery plan or local lead entity strategy (i.e., does the project address a priority action, occur in a priority area, or target priority fish species?).

The project targets Mid-Columbia steelhead (a Tier 1 priority species) and is located within the White Creek watershed which is one of the top-ranked ("A") group of geographic priorities identified in the Salmon Recovery Strategy for the Klickitat Lead Entity. The project addresses limiting habitat features (low pool frequency and volume, poor channel complexity, and intermittent flow conditions) and processes (incision / floodplain connectivity) identified in the Salmon Recovery Strategy. The project area has also been identified in the Northwest Power and Conservation Council's Subbasin Plan for the Klickitat River and NOAA's draft recovery plan.

e) Has any part of this project been previously reviewed and/or funded by the Salmon Recovery Funding Board? If yes, please provide the project name and SRFB project number (or year of application if a project number is not available). If the project was later withdrawn for funding consideration or was not awarded SRFB funding, please describe how the current proposal differs from the original.

In 2008 the SRFB funded the design phase of this project (Tepee Creek Restoration – Phase 2 Design # 08-1926). In addition, Phase 1 of the Tepee Creek Restoration was funded by the SRFB in 2005 (IXL Meadows Restoration #05-1607).

2) PROJECT DESIGN

a) Describe the location of the project in the watershed, including the name of the water body(ies), upper and lower extent of the project (if only a portion of the watershed is targeted), and whether the project occurs in the nearshore, estuary, main stem, tributary, off channel, or other location.

Tepee Creek is a tributary to White Creek, one of the major tributaries supporting natural production of steelhead in the Klickitat subbasin. The White Creek watershed is 138 square miles in area. Elevations range from 1140 to 5100 ft.; most of the watershed lies between 2500 and 3300 ft. in elevation. Average annual precipitation is between 20 and 29 in., with roughly half falling as snow. Current habitat conditions in Tepee Creek and White Creek reflect past riparian timber harvest and road construction throughout the watershed; instream large woody debris (LWD) levels are low in some reaches and base flows are very low to non-existent in many reaches. Changes in channel morphology are related to livestock grazing, road interactions, and in some locations, historic removal of LWD.

Road inventory and analysis of watershed hydrology for the White Creek watershed indicated a 31.8% increase in peak discharge for a 2.5-year storm and a 7.5% increase for a 100-year storm (nhc 2003). Similar analysis conducted for the Upper Tepee Creek watershed indicated a 7.3% increase in peak discharge for a 2.5-year storm and a 4.8% increase for a 100-year storm (nhc 2003). The top ten priority groups in the upper White

Creek drainage, identified in the previously noted road inventory and analysis, were treated in 2005. Additional road maintenance and modifications to restore drainage patterns are being planned, including treatments in the headwaters of Tepee Creek.

b) Describe the project design and how it will be implemented. Describe the extent of the project. Describe specific restoration methods and design elements you plan to employ. If restoration will occur in phases, explain individual sequencing steps, and which of these steps is included in this application. (Acquisition-only projects need not respond to this question.)

The strategy to improve conditions at Tepee Creek would raise stream bed to the same elevation that existed before disturbance and incision. This strategy provides a greater potential benefit than other alternatives as it maximizes potential to store water and increase hydroperiods over the valley width compared to a relatively narrow segment within any excavation project (see other alternatives section, below). Design templates will be configured such that the channel will convey the existing sediment supply, while mitigating the tendency to degrade. To restore former flood prone areas and still have a natural stream channel, treatment would comprise of importing gravel into the existing channel in combination with channel cross-sectional area adjustments and possible planform modifications. The primary design goal will be to configure the channel such that more frequent out-of-bank flooding will occur, which will improve conditions for fish while promoting better wetland habitats and water storage later in the year. Planform modifications will be determined by design slope and hydraulic geometry. Hydraulic geometry, including bankfull width, will be refined by analysis of upstream analog cross-sections and slopes, regional hydraulic geometry relationships, and the creation of a hydraulic model for the project reach. A design hydrology that is as close to actual conditions as possible will be chosen before hydraulic geometry work is accomplished. Once this is completed the proposed channel components will be designed to allow some threshold movement and deformation.

The strategy of imported gravel material to raise the bed elevation raises the question of what type of material will be used, crushed or alluvium. After careful consideration of stream setting, compatibility with project goals, and ethical issues; it has been determined that crushed material will be used. Tepee Creek is a headwater stream and has a very limited bedload supply as a function of hard source parent materials in the watershed and low watershed relief. Bed particles >40 mm are mostly sub-angular, while bed particles <40 mm are sub-rounded to rounded and move at flows <Q_{AA}. Paramount to the success of the project is the maintenance of vertical elevation of controls (riffle crests). Improving spawning habitat is not a goal of the project and could be counter-productive given that the reach is rearing limited. Additionally if alluvial gravels were used the closest source would be the Yakima River floodplain. This would not only increase hauling distances, adding to project costs and the amount of fossil fuels burned but would also contribute to gravel mining operations. As a side note, in

the completed project reach upstream (IXL meadow) spawning has been observed in sub-angular material in all 3 years since riffle material was placed.

Methods/Elements:

- **Large woody debris will be used for transitions between the imported gravel and existing valley bottom surfaces will be constructed primarily using large wood. These elements will encourage local scour that will help maintain pool depths and volumes, control lateral erosion, and provide primary habitat. Channel edges (banks) constructed with wood will be less expensive and more erosion resistant than if fabric were used. If cost efficiencies can be achieved elsewhere in the budget, soil protected by biodegradable erosion control fabric may also be incorporated into the project. Use of fabric-encapsulated banks will facilitate bank deformability and result in greater habitat diversity through the reach.**

- **A roughened channel, on a steepened grade (approximately 3%) will provide downstream control for the reach and transition between restored bed elevations and the somewhat incised channel downstream.**

- **Constructed riffles using imported gravel produced so it won't be mobile at $<Q_{1.3}$ with sufficient fines content to control porosity.**

- **Salvage of existing riparian vegetation and substrate where suitable.**

- **Floodplain prescriptions will be applied to prevent avulsing around edges of the imported material or across smoother floodplain surfaces.**

c) Describe the scale and size of the project or property(s) to be acquired, and its proximity to protected, functioning, or restored habitats. (Fish Passage only projects and Diversions and Screening only projects [i.e., not a combination] need not respond to this question.)

The Project entails a .8 mile reach immediately downstream of the 1700' section restored in the Fall of 2006 and Spring of 2007.

d) Describe the long-term stewardship and maintenance obligations for the project or acquired land. For acquisition and combination projects, identify any planned use of the property, including upland areas.

Fish use, channel conditions, and vegetation survival will be monitored by the Yakama Nation Fisheries Program, which has an active and ongoing monitoring and habitat enhancement program. Grazing-related monitoring will be coordinated with the BIA Range program.

3) PROJECT DEVELOPMENT

a) List the individuals and methods used to identify the project and its location.

The project reach was identified by YNFP specialists in 2003. Monitoring conducted from 2003-2008 have indicated the importance of the area to mid-Columbia Steelhead. The presence of perennial refugia and success in restoring perennial pools upstream of the project reach indicate that a restoration of bed elevation and overbank frequency in the project reach will be successful.

The reach was identified by Will Conley, Watershed Restoration Specialist for the Yakama Nation Fisheries Program on a walking survey of the stream. Subsequent analysis has included GPS data collection, air photo interpretation, and review of spawning survey data. The upstream and downstream ends of the reach are characterized by increased valley confinement and increased bed material size.

A stream gauge was installed about a quarter mile downstream of the project reach in 2008.

b) Explain how the project's cost estimates were determined.

Cost estimates were calculated based on the total project cost from the Tepee Ck/IXL Meadow project, a similar completed project. The total cost was adjusted to account for the inflation that has occurred since. From this total cost, design costs were subtracted because those are being covered by the previously funded SRFB project #08-1926. Due to increased efficiency to be gained from using a closer rock source a reduction in overall project cost was made. Based on the remaining balance, the cost per linear feet was calculated. This per unit cost was then multiplied by the length of the proposed reach (.8 miles). The time to completion was estimated at 40 days, this time increment was then used to estimate construction oversight costs. Finally, the amount that will be contributed as match from the project sponsor was calculated and subtracted from the total to arrive at a total amount to be requested. In addition, this budget assumes that the existing stream planform will be used, as opposed to reconstructing the historic channel that is still visible on the landscape.

c) Describe other approaches, opportunities, and design alternatives that were considered to achieve the project's objectives.

The design process, currently being conducted, will evaluate the feasibility of the realignment of the active channel into the abandoned relic channel visible on the landscape.

A feasibility study was conducted for the Tepee Creek IXL Meadows project in 2004 that considered design alternatives. The alternatives considered while applicable to this

project were not deemed appropriate for this project based on prior experience obtained from previous project. The alternatives considered were:

1) raise or fill the channel to the same elevation that existed before disturbance and incision with fabric lift boundaries. This strategy is similar to the proposed alternative but depends on geotextile fabric along the channel boundaries. Like the proposed alternative it provides a greater potential benefit than alternatives 2 and 3, and is feasible; however, would be more expensive.

2) excavating a new valley bottom floodprone area at an elevation 3 to 4 feet below existing top of bank with LWD channel boundaries. Although much narrower, the excavated area would function in a similar way the historic Tepee Creek valley bottom did before incision. The amount of valley bottom wetland habitat and storage would be less but an improvement over existing conditions. Some modification to the longitudinal profile may be needed. Channel boundaries would be constructed after the banks are pulled back approximately 30 feet along the 1700-foot project reach. This was the least expensive alternative, but it is undesirable because it does not increase floodplain storage and requires very large amounts of excavation which is problematic for gaining Cultural Resource approval.

3) excavating a new valley bottom floodprone area at an elevation 3 to 4 feet below existing top of bank with fabric lift boundaries. Similar to alternative #2 but channel margins are constructed primarily with geotextile fabric. This alternative is more expensive than both the proposed alternative and alternative # 2.

Costs could be reduced for any of the alternatives if only the riffles are filled leaving over-sized pools that would fill in over time. This approach is not desirable because of the bedload-limited nature of Tepee Creek. If it were implemented, reaches downstream of the project reach would become even more starved of bedload-sized alluvium until pools within the reach filled in and reached equilibrium.

d) Describe the consequences of not conducting this project at this time. Consider the current level and imminence of risk to habitat in your discussion.

Simplified habitat conditions will continue to limit salmonid production in the reach in terms of lack of pool quantity and quality as well as lack of habitat forming features such as LWD. Erosion of channel margins will continue as the streambed has degraded to a depth well below the rooting zone of the native vegetation, so the banks and bed are mostly devoid of perennial vegetation. As the soil particles composing the existing banks are silt and clay, cohesion appears to be the dominant soil-stabilizing factor. It is expected that physical processes like wet/dry and freeze/thaw cycles in concert with abrasion will lead to long-term lateral erosion of banks. Biological factors such as cattle grazing can greatly accelerate the lateral expansion rates. Therefore, even if vertical degradation decelerates, the banks at the study site are expected to continue to laterally

erode and eventually develop a new floodprone surface at an elevation 4 to 5 feet lower than the pre-disturbance surface.

e) Describe any concerns about the project raised from the community, recreational user groups, or adjacent land owners, and how you addressed them.

BIA forestry has expressed concerns that floodwater could contact the 175 Road more frequently under restored conditions. The subgrade is composed of native cohesive materials that have seasoned for 30^{+} years and been compacted by truck traffic. The face of the embankment is well-vegetated and would be left intact by preventing clearing except at a limited number of access points.

f) Include a Partner Contribution Form, when required, from each partner outlining its role and contribution to the project. This form may be downloaded off the SRFB Web site. State agencies are required to have a local partner that is independently eligible to be a project sponsor. A Partner Contribution Form is also required from partners providing third-party match.

There will not be any project partners *per se*. Other YN Programs will be consulted prior to project implementation. Matching contributions will come in the form of LWD materials donated in-kind by the Yakama Nation. Services and materials provided in-kind by the YN Fisheries Program will be funded by the Bonneville Power Administration.

g) List all landowner names. Include a signed Landowner Acknowledgement Form (available on the SRFB Web site) from each landowner acknowledging their property is proposed for SRFB funding consideration. If a restoration project covers a large area and encompasses numerous properties, Landowner Acknowledgement Forms are not required. For sponsors proposing work on their own property, this form is not required. For multi-site acquisition projects involving a relatively large group of landowners, include, at a minimum, signed Landowner Acknowledgement Forms for all known priority parcels.

The Confederated Tribes and Bands of the Yakama Nation.

h) Describe your experience managing this type of project. List the names, qualifications, roles, and responsibilities for all known staff, consultants, and subcontractors who will be implementing the project. If unknown, describe the selection process.

Will Conley (YN Fisheries Program), will be responsible for project construction oversight, implementation, and administration of the SRFB contract and consulting subcontract. Mr. Conley has worked as a hydrologist and fisheries biologist for the YN Fisheries Program in the Klickitat subbasin for 9 years and has assessed, designed, and supervised over 24 restoration projects. He has a M.S. in Water Resources (Soil Science minor), a B.S. in Wildlife Ecology, and 13 years of field experience in stream morphology, watershed hydrology, physical stream habitat monitoring, revegetation, construction oversight, GIS, and design of in-stream, floodplain, and watershed restoration projects.

4) TASKS AND SCHEDULE

Tasks	Date
30% design complete	**January 15, 2010**
Submit permit applications	**January 2009**
Bid and award materials collection sub-contract	**April 2010**
Permits received	**May 2010**
Materials collected and stockpiled on site	**June 2010**
Bid and award construction sub-contract	**June 2010**
Start construction	**July 2010**
Complete construction	**November 2011**
Monitor re-vegetation success	**November 2011-November 2012**
Re-plant (if necessary)	**April 2013**

List and describe the major tasks and time schedule you will use to complete the project.
CONSTRAINTS AND UNCERTAINTIES

There is some uncertainty surrounding whether or not to realign a portion of the stream into the relic channel. A cultural survey is currently being conducted, prior to the completion of this survey and review of its findings it is unknown whether there are cultural resources present that will limit or inhibit the proposed project.

Supplemental Questions

5) PROJECTS INVOLVING ACQUISITIONS (Applies to both Acquisition-only and Combination Projects)– Answer the following questions

a) Describe the type of acquisition proposed (e.g., fee title, conservation easement).

b) Describe the habitat types on site (forested riparian/floodplain, wetlands, tributary, main stem, off-channel, bluff-backed beach, barrier beach, open coastal inlet, estuarine delta, pocket estuary, uplands, etc.), their size in acres, and quality. If uplands are included, explain why they are essential for protecting salmonid habitat. Describe any features that make the site unique.

c) State the percentage of the total project area that is intact and fully functioning habitat.

d) Explain the degree to which habitat on site is impaired and the nature and extent of required restoration. If the property is in the channel migration zone, is that function intact (i.e., do

existing levees, riprap, infrastructure, or other features on this or nearby properties inhibit channel migration)? Describe the likely prioritization, timeframe, and funding sources for proposed restoration activities.

e) List existing structures (home, barn, outbuildings, fence) on the property and any proposed modifications. Note: In general, buildings on SRFB-assisted acquisitions must be removed. Refer to Section 2 of SRFB Manual 18 for information about ineligible project elements.

f) Describe adjacent land uses (upstream, downstream, across stream, upland).

g) Describe why acquisition is needed. Explain why federal, state, and local regulations do not provide enough protection. State the zoning and Shoreline Master Plan designation.

h) If buying the land, explain why the acquisition of conservation easements to extinguish certain development, timber, agricultural, mineral, or water rights will not achieve the goals and objectives of the project.

i) For multi-site acquisition projects, identify all the possible parcels that will provide similar benefits and certainty of success and provide a clear description of how parcels will be prioritized and how priority parcels will be pursued for acquisition.

6) FISH PASSAGE PROJECTS -- Answer the following questions:

NOTE: For fish passage design and evaluation guidance, applicants should refer to the WDFW Fish Passage Barrier and Screening Assessment and Prioritization Manual at http://wdfw.wa.gov/hab/engineer/fishbarr.htm, and the Design of Road Culverts for Fish Passage manual at http://wdfw.wa.gov/hab/engineer/cm/. For prioritization questions or technical assistance, contact Dave Collins at Department of Fish and Wildlife at (360) 902-2556 or at david.collins@dfw.wa.gov. For engineering design questions or technical assistance, contact Michelle Cramer at (360) 902-2610 or crememlc@dfw.wa.gov.

a) **Information to include in item 1b, PROBLEM STATEMENT:** Concisely describe the passage problem (outfall, velocity, slope, etc). Describe the current barrier (age, material, shape, and condition). Is the structure a complete or partial barrier? Describe the amount and quality of habitat to be opened if the barrier is corrected.

b) **PROJECT DESIGN**

i) If a culvert is proposed, does it employ a stream simulation, no slope, hydraulic, or other design?

ii) Has the project received a Priority Index (PI) Number? If so, provide the PI number and indicate the method used: Physical Survey, Reduced Sample Full Survey, Expanded Threshold Determination, or WDFW Generated PI (list source, such as a study or inventory).

iii) Identify if there are additional fish passage barriers downstream or upstream of this project.

iv) Complete and attach the Barrier Evaluation Form and Correction Analysis Form. These forms are available in Appendix P of SRFB Manual 18 and can be downloaded off the SRFB Web site at http://www.rco.wa.gov/srfb/docs.htm.

7) DIVERSIONS AND SCREENING PROJECTS -- Answer the following questions:

NOTE: For questions or technical assistance, contact Pat Schille, Department of Fish and Wildlife (WDFW) at (509) 575-2735 or schilpcs@dfw.wa.gov. Refer to the WDFW Fish Passage Barrier and Screening Assessment and Prioritization Manual (August 2000) at http://wdfw.wa.gov/hab/engineer/fishbarr.htm for further guidance.

a) **Information to include in item 1b, PROBLEM STATEMENT:** If the diversion is equipped with a fish screen, provide details of why it is not functioning properly from a fish protection perspective (entrainment or impingement).

b) **PROJECT DESIGN**

i) Has the project received a Screening Priority Index (SPI) Number? If yes, provide the SPI and indicate if the Washington Department of Fish and Wildlife (WDFW) developed the SPI.

ii) Is this a pump or gravity diversion?

iii) What is the flow of the diversion in gallons per minute (gpm)? How was the flow determined (water right; meter – system meter; calculated from irrigation system components, or direct measurement during peak spring/summer diversion using a flow meter)?

iv) If it is not possible to determine the flow, then provide the bank-full, cross-sectional area of the ditch, measured 100-300 feet downstream of the Point of Diversion. Refer to page 25 of the WDFW Fish Passage Barrier and Screening Assessment and Prioritization Manual for instructions on how to collect this information.

v) How much water, if any, will be saved as a result of this project? Will water be put into trust, or are there plans to transfer water rights?