APPENDIX B: Approach used by the Little Lost River Recovery Unit Team to develop potential recovery tasks.

Instructions

Step 1. The purpose of this step is to list, define, and describe each bull trout population. On Table 1, complete the following:

A. Population: List the name of each population

B. Population Description:

1. Define the drainage occupied by the population

2. List the streams or stream reaches currently occupied

3. Provide an estimate of the amount of occupied habitat

4. Provide an estimate of the current adult population (fish greater than180 millimeters)

5. Discuss significant habitat that is unoccupied

6. Describe significant artificial and natural barriers

Step2 . The purpose of this step is to determine which populations are currently meeting recovery objectives and which populations are not. On Table 2, complete the following:

A. Population: From Table 1, list the name of each population

B. Evaluation of Recovery Objectives

1. Distribution/Abundance: Categorize the current distribution and abundance of the bull trout population relative to historic levels. If available, this determination should be based on data. If sufficient data are unavailable, this determination may be based on professional judgment.

a. Yes – Abundance and/or distribution is at or near historic levels

b. No – Relative to historic levels, abundance and/or distribution of the population has experienced major declines or the population is extinct

c. Unknown

2. Trend: Categorize the current population trend. If available, this determination should be based on data. If sufficient data are unavailable, this determination may be based on professional judgment.

a. Yes – Abundance and distribution is increasing or stable over all or most of the drainage

b. No – Abundance and/or distribution is decreasing over all or most of the drainage

c. Unknown

3. Habitat Conditions: Categorize the habitat conditions as to whether they are suitable to maintain all life- history stages and strategies

a. Yes– Relative to historic levels, suitable habitat exists to maintain all life-history stages and strategies over all or most of the drainage

b. No – Relative to historic levels, suitable habitat does not exist to maintain all life-history stages and strategies over all or most of the drainage

c. Unknown

4. Genetic Exchange: Categorize whether artificial barriers have interfered with the ability of fish to move out of or into the population.

a. Yes – Artificial barriers do not restrict the ability of fish to move into or out of historically occupied habitat over all or most of the drainage

b. No – Artificial barriers do restrict the ability of fish to move into or out of historically occupied habitat over all or most of the drainage

c. Unknown

5. Does the population meet recovery objectives?: In order to qualify for a "Yes" all four recovery objectives must have been answered with a "Yes". Otherwise, enter a "No".

Step 3. The purpose of this step is to identify potential actions to ensure populations that are currently meeting recovery objectives continue to meet recovery objectives. On Table 3, complete the following:

A. Population: From Table 2, list those populations that are currently meeting the recovery objectives.

B. Potential Actions to Ensure that the Populations Continues to Meet Recovery Objectives: List potential actions, if any, that might be implemented to ensure the population continues to meet recovery objectives?

Step 4. The purpose of this step is to determine why populations that are not meeting recovery objectives are not meeting recovery objectives. On Table 4, complete the following:

A. Population: From Table 2, list the name of each population that is not meeting recovery objectives.

B. Life History Stage, Factor, Evaluation: Using natural conditions as the baseline, evaluate the effect of each factor on the population with '0" being no affect and "3" being a severe effect. For example, if the team were evaluating the factor "Has access between fluvial adult rearing and spawning areas been physically blocked or restricted?" and a diversion structure 5 feet high with no bypass facilities had been placed in the migratory corridor, they would likely rate this factor as a "3". However, if a completely functional bypass structure was in place they would likely rate this as a "0." Remember to focus the evaluation only on the particular life history stage. For example, if an irrigation diversion was in operation during July and August and reduced flows resulted in increased temperatures only during that time, then it would be inappropriate to identify modified temperatures as affecting incubation, hatching, and emergence. "Unknown" may be entered where information is insufficient to make a determination.

C. Discussion: Briefly discuss rationale for the decision.

Step 5. The purpose of this step is to develop potential recovery actions for those populations that are currently not meeting recovery objectives that will result in the population meeting the recovery objectives. On Table 5, complete the following:

A. Population: From Table 4, list the name of each population that is not meeting the recovery objectives.

B. Critical Factors Adversely Affecting the Population: From Table 4, list factors that are preventing the population from meeting recovery objectives. This will generally be factors rated as "2" or "3." For example, if the team rated the factor "Has access between fluvial adult rearing and spawning areas been physically blocked or restricted?" as a "3," they would likely list this as a critical factor on this table.

C. Cause of the Factors Adversely Affecting the Population: Determine the cause of the factor adversely affecting the population. For example, if the team had listed "access between fluvial adult rearing and spawning areas has been physically blocked", they would list the reason, or reasons, why the access was blocked.

D. Potential Actions to Remove or Reduce the Adverse Affect: Determine potential specific, on the ground actions that would remove or reduce the adverse affect.

Step 6. The purpose of this step is to identify any additional potential actions to protect existing bull trout populations that are currently not meeting recovery objectives. On Table 6, complete the following:

A. Population: From Table 4, list the name of each population that is not meeting the recovery objectives.

B. Potential Actions to Protect Populations: List potential actions, if any, which might be implemented to protect the population.

Step 7. The purpose of this step is to determine the appropriate protection and recovery actions. These actions will ensure that those populations that are currently meeting recovery objectives continue to meet recovery objectives and those populations that are not meeting recovery objectives will meet recovery objectives. On Table 7, complete the following:

A. Population: From Table 1, list all populations.

B. Potential Actions to Protect of Recover the Population: Using the last column of Table 3, the last column of Table 5, and the last column of Table 6, list potential actions to protect and/or recover the population.

C. Is the action biologically, economically, and socially feasible?: Determine if the proposed recovery action is biologically, economically, and socially feasible to implement. In order to answer "Yes", the action should meet all three criteria.

D. Discussion: If action is not biologically, economically, and/or socially feasible, briefly discuss why.

E. Recommended Action: If the potential action is determined to be biologically, economically, and socially feasible, enter a "Yes".

Step 8. The purpose of this step is to develop the protection and recovery plan. On Table 8, complete the following:

A. Population: From Table 1, list all populations.

B. Recommended Action: From Table 7, list all recommended actions to protect or recover each population. If no actions are recommended for a population enter "None".

C. Responsible Organization(s): Determine the organization(s) that will be responsible for carrying out the recommended action.

D. Target Date: Determine the target date for implementing the recommended action.