Scriver Creek Integrated Restoration Project
Boise National Forest, Emmett Ranger District
Boise and Valley Counties
Project Description

Project Location

The project area encompasses approximately 11,500 acres and is located in the Scriver Creek sub-watershed. The Scriver Creek sub-watershed is a tributary to the Middle Fork Payette River drainage and is located approximately 6 miles north of Crouch, Idaho (Figure 1). The project area is located entirely on National Forest lands in Township 10 North, Range 4 East, sections 3-10, 15-18, and 20; Township 11 North, Range 4 East, sections 21-23, and 26-34; Boise Meridian, Boise and Valley Counties, Idaho.

Purpose and Need

Three primary purposes, with associated needs, have been identified for the project:

Purpose 1: Modify stand density, structure, species composition, and surface fuels to restore suitable white-headed woodpecker and flammulated owl habitat; in addition to providing forest conditions that are more resistant to insects, disease and wildfire.

- The Ponderosa Pine Task Force of the Idaho Partners in Flight (IDPIF, 2000) identified several stands within the analysis area as having high restoration potential for white-headed woodpecker and flammulated owl habitat. These stands were identified approximately 10 years ago. When other stands in the project area were grown to present time, there are about 3,583 acres total (including all of the IDPIF stands) that contain at least 5 – 20 inch (DBH) Ponderosa pine trees per acre and exhibit high restoration potential for these wildlife species. Both species are Region 4 Sensitive species and the white-headed woodpecker is also a Management Indicator Species (MIS) for the Boise National Forest. Approximately 2,400 of the proposed treatment acres are co-located within the IDPIF areas, as expanded, and are currently not functioning as source habitat. Retention of large ponderosa pine and reducing canopy closure to 25-40 and 40-70 percent would improve the quality of white-headed woodpecker and flammulated owl habitat, respectively, throughout the project area.

- The document "A Forest-Wide Risk Assessment for Management of the Boise National Forest" (Forest Service, 2000a) classifies the watershed in which the project is located as having a moderate/high fire hazard and fire occurrence. The Scriver Project is identified in the Boise County Wildfire Mitigation Plan. The Boise National Forest Plan identifies the sub-watershed as a Wildland Urban Interface (WUI). The adjacent communities of Crouch and Garden Valley are "designated" communities and the drainage is a municipal watershed with one surface water withdrawal from Scriver Creek. A portion of the project area contains fire regimes and condition classes known to represent elevated risk of uncharacteristic fire. Based on historic fire frequency data and field review, PVGs 2 and 5 within the project area most likely are a Fire Regime I (i.e., low-severity fires historically occurred every 0-35 years), while PVG 6 is likely a Fire Regime III (i.e. mixed-severity fires historically occurred every 35-100+ years). The PVGs 2 and 5 stands are also most likely either a condition class 2 or a condition class 3 (i.e., fire regimes have been moderately or significantly altered from historic ranges, with moderate or high risk of losing key ecosystem components from fire), while PVG 6 is likely a condition class 1 (i.e. within the natural (historical) range of variability of vegetation characteristics, fire frequency and severity). The PVG 2 stands are primarily located in the southern portion of the project area adjacent to private lands. Within the PVG 2 stands there is a need to reduce stand densities and decrease surface fuel loading to reduce wildfire risk and increase wildland firefighter and public safety.

- Potential Vegetation Groups (PVGs) 2, 5, and 6 within the 5th field watershed in which the project occurs are currently comprised of 18, 18, and 27 percent of the large tree size class, respectively (Dickerson,

2006). The desired percentage ranges identified in the Forest Plan (within MPC 5.2) are 30-58 percent for PVG 2, 33-65 percent for PVG 5, and 20-27 percent for PVG 6 (USDA Forest Service, 2003a, p. A-4, Table A-4). Within the analysis area the large tree size class represents 92 percent of PVG 2, 41 percent of PVG 5, and 91 percent of PVG 6 (Dickerson, 2006). Acres currently represented by the large tree size class would be maintained. The stand structure of small and medium tree size class stands, in areas proposed for treatment, would be manipulated to accelerate their movement towards the large tree size class.

- Canopy closures (stand densities) of stands identified as large tree size class within the analysis area currently exceed the desired conditions for high (>=70%) as portrayed in Appendix A of the Forest Plan. Reduce canopy closure within high-density stands and move the density of all treated stands toward the desired conditions relative to low and moderate canopy closure.

- Currently, there is an over-abundance of Douglas-fir in PVG 2 stands within the analysis area while grand fir in PVGs 5 and 6 exceeds its desired range by a wide margin (Dickerson, 2006). Increase the acreage of stands dominated by ponderosa pine (and western larch in PVG 6) and move species composition toward desired conditions described in the Forest Plan (Forest Service, 2003a, p. A-7, Table A-7).

- Currently, 93 percent of the project area is at moderate to high risk of mortality or growth loss from spruce budworm (Choristoneura occidentalis). Manipulate stand structure, density, and species composition to decrease high and moderate susceptibility levels as well as to maintain and perpetuate existing low or moderate susceptibility levels.

- Densities of small diameter trees (< 8" dbh) in plantations within the analysis area are rapidly approaching levels where inter-tree competition will begin to adversely impact growth and yield. Within 3-5 years (from 2006) non-commercial thinning the portion of these stands outside of riparian areas would achieve benefits relative to improved growth and yield and reduced susceptibility to insects, disease, and wildfire. Non-commercial thinning within riparian areas would result in stand conditions more representative of sustainable riparian habitat and, in the long-term, contribute toward improving riparian function and ecological processes.

- Ninety-three (93) percent of the project area is at moderate to high risk from crown fire. Crown fire risk was calculated using the Fire and Fuels Extension (FFE) (Reinhardt et al., 2003) to the Forest Vegetation Simulator program. The FFE generates two wildfire risk indices: torching index and crowning index. Fiedler's (et al., 2001) recent work supports using crowning index as a wildfire risk quantifier for the Scriver Project.

Purpose 2: Initiate watershed restoration within the Scriver Creek 6th Field hydrologic unit (sub-watershed) to improve watershed conditions and reduce long-term sedimentation caused by existing roads; in addition to reducing road-related impacts to wildlife, fish, soil, and water resources.

- Reduce management-induced sediment in Scriver Creek below current levels. Much of the existing road system in the Scriver Creek sub-watershed are poorly located (within RCAs) and/or are deteriorating. The Scriver Creek Roads Analysis determined that these roads are the primary source of management-induced sediment reaching Scriver Creek (Forest Service, 2006). Scriver Creek drains to a segment of the Middle Fork Payette River (MFPR) (Assessment Unit ID17050121SW001_04), which is currently listed in Section 4a, Impaired Waterbodies with a TMDL complete, of the Environmental Protection Agency (EPA) approved 2002 State of Idaho Integrated Report (State of Idaho, 2005). The Middle Fork Payette River has an Environmental Protection Agency (EPA) approved Total Maximum Daily Load (TMDL) for sediment (Idaho, State of, 1998a). In addition, Idaho Department of Environmental Quality (DEQ) issued TMDL Implementation Plan in August 2003 (Idaho, State of, 2003a). The goal of the TMDL and TMDL Implementation Plan is to reduce excessive sediment loads resulting from land management activities in the Middle Fork Payette River Sub-Basin (Idaho, State of, 1998a and Idaho, State of, 2003a). Cooperation and participation with the State of Idaho for implementing the TMDL for the Middle Fork Payette River is a

specific objective for the Lower Middle Fork Payette River Management Area 14, the Forest Plan management area in which the project area lies.

- Roads within riparian areas are detrimental to fish and wildlife species due to their association with a reduction in large woody debris and snags, as well as an increase in sediment contribution to streams. There are 23.98 miles of roads within RCA's contained in the project area. A reduction in road miles will enhance habitat for non-ESA listed fish species by increasing large woody debris potential, increasing shade and reducing sediment delivery to streams. It will also benefit wildlife species like fisher (R4 Sensitive species) that use areas along streams disproportionately higher than uplands for foraging, denning, and dispersal as disturbance in these areas is lessened and more protection is afforded for snag retention and recruitment. Other wildlife species that use snags and are likely to occur in the project area (e.g. white-headed woodpecker and flammulated owl, R4 Sensitive Species) will benefit by an overall reduction in road miles and reduction in areas accessible to woodcutters. There is a need to reduce road density and move toward the threshold for low negative effects related to the spatial arrangement of roads.

- Total road density and RCA road density within the Scriver Creek sub-watershed are approximately 4.7 miles/miles^2 and 5.2 miles/miles^2, respectively. Roads are considered total soil resource commitment (TSRC), conversion of a productive site to an essentially non-productive site for more 50 years (Forest Service, 2003a, p. GL-37). Obliteration or decommissioning of roads within the Scriver Creek sub-watershed would work toward the Forest Plan goal (SWRA (Soil Water Riparian and Aquatic Resources) Goal - SWGO01) of restoring soil productivity and ecological processes in order to improve physical, chemical and biological properties of the soils to support desired vegetation conditions and soil-hydrologic functions and processes within watersheds (Forest Service, 2003a, p. III-19). Reducing road-related effects on soil productivity, water quality, and aquatic/riparian species and their habitats is identified in the Forest Plan as a SWRA Objective (SWOB18) (Forest Service, 2003a, p. III-21).

- The Forest Plan states that the transportation system will be managed to reduce degradation of resources, and that roads not needed for long-term objectives should be decommissioned and stabilized (USDA, Forest Service, 2003a, p. III-58).

Purpose 3: Provide commercial timber that supports local and/or regional sawmills, employment, and economies.

- Sustain local and/or regional economies and related employment infrastructure by encouraging the continuing operation of wood processing facilities.

- The Forest Plan allocates the analysis area to management prescription category (MPC) 5.2 (Forest Service, 2003a, p. III-266). MPC 5.2 emphasizes achieving sustainable resource conditions that support commodity outputs, particularly timber production in forested settings, and management activities designed to maintain and restore forest ecosystem health to reduce potential for long-term impacts from uncharacteristic disturbance events (Forest Service, 2003a, p. III-89). The Scriver Project is entirely located within MPC 5.2.

Forest Plan

Activities associated with the Proposed Action would facilitate movement of vegetation and other area resources toward desired conditions as described in Forest Plan goals and objectives. Specifically, the Proposed Action would contribute toward the accomplishment of the following Forest Plan, and specific Management Area (MA) goals and objectives:

Forest-wide direction includes:

Goal SWGO01 "Maintain soil productivity and ecological processes where functioning properly, and restore where currently degraded. Maintain the physical, chemical, and biological properties of soils to support desired vegetation conditions and soil-hydrologic functions and processes within watersheds." (Forest Service, 2003a, p. III-19)

Goal SWGO08 "Manage water quality to meet requirements under the Clean Water Act and Safe Drinking Water Act, with special emphasis on de-listing water quality limited water bodies under Section 303(d) and supporting state development and implementation of TMDLs." (Forest Service, 2003a, p. III-19)

Objective SWOB05 "Cooperate with the State, Tribes, other agencies and organizations to develop and implement Total Maximum Daily Loads (TMDLs) and their implementation plans for 303(d) impaired water bodies influenced by National Forest System management." (Forest Service, 2003a, p. III-20)

Goal SWOB18 "Reduce road-related effects on soil productivity, water quality, and aquatic/riparian species and their habitats. Refer to the Watershed Recovery and Aquatic Recovery Strategy (WARS) for mid-scale prioritization indicators to assist in fine and site/project scale restoration prioritization planning." (Forest Service, 2003a, p. III-21)

Objective WIOB09 "During fine-scale analyses, identify and prioritize opportunities for restoring degraded MIS and Sensitive species habitat." (Forest Service, 2003a, p. III-26)

Objective WIOB12 "Implement temporary, seasonal, or permanent area and transportation route closures through special orders to address big game vulnerability and public access needs. Coordinate closures with appropriate state agencies, other federal agencies, and tribal governments." (Forest Service, 2003a, p. III-26)

Goal VEGGO01 "Maintain or restore desired plant community components, including species composition, size classes, canopy closures, structure, snags, and coarse woody debris as described in Appendix A." (Forest Service, 2003a, p. III-30)

Goal VEGGO03 "Maintain or restore vegetative conditions as described in Appendix A to reduce frequency, extent, severity, and intensity of uncharacteristic or undesirable disturbances, such as fire, insects, and pathogens." (Forest Service, 2003a, p. III-30) Appendix A of the Plan describes the desired future conditions (DFC) for forest vegetation, outside of designated wilderness areas, in terms of: tree size class, canopy closure, species composition, and snags and coarse woody debris, by potential vegetation group (PVG) and management prescription category (MPC).

Goal VEGGO04 "Maintain or restore distribution and abundance of habitats that contribute to viable populations of existing native and desirable non-native plant, fish, and wildlife species." (Forest Service, 2003a, p. III-30)

Goal TRGO01 "Manage forested vegetation to achieve: (Forest Service, 2003a, p. III-41)

a) Conditions that are resilient and resistant to uncharacteristic fire, insect, and disease damage, and
b) Conditions that contribute to desired vegetative conditions, including, distribution of tree sizes, species composition, and canopy cover.

Goal TRGO02 "Manage suited timberlands to achieve: (Forest Service, 2003a, p. III-41)

a) Growth rates and yields that are compatible with other resources,
b) Annual harvest of expected timber volume,
c) Maintenance of improvement, where possible, of genetic diversity within tree species,
d) Successful reforestation through the application of appropriate and available silvicultural techniques,

e) Vegetative conditions (structure, density, etc.) in plantations and surrounding stands that result in reduced hazard for loss from uncharacteristic disturbance events, and
f) Sustained yield, even flow of high-quality forest products, including timber and non-timber forest products.

Objective TROB02 "Make available an estimated 450 million board feet of timber for the decade, which will contribute to Allowable Sale Quanity (ASQ)." (Forest Service, 2003a, p. III-42)

Objective FROB04 "During fine-scale analyses, identify opportunities to reduce road-related degrading effects to help achieve other resource objectives." (Forest Service, 2003a, p. III-58)

Objective FROB06 "Identify roads and facilities that are not needed for land and resource management, and evaluate for disposal or decommissioning." (Forest Service, 2003a, p. III-59)

Objective SEOB01 "Provide a predictable supply of Forest goods and services within sustainable limits of the ecosystem that help meet public demand." (Forest Service, 2003a, p. III-77)

Management Area 14 direction includes:

Objective 1420 "Cooperate and participate with the State of Idaho for implementation of the TMDL for the Middle Fork of the Payette River." (Forest Service, 2003a, p. III-262)

Objective 1423 "Restore desired species composition, tree size classes, and stand structure (as described in Appendix A) in the Dry Grand Fir, Cool Moist Douglas-fir, Cool Moist Grand Fir, Cool Moist Douglas-fir, Warm Dry Douglas-fir/Moist Ponderosa Pine vegetation groups." (Forest Service, 2003a, p. III-262)

Objective 1450 "Manage stand density through thinning and other appropriate silvicultural treatments on suited timberlands to promote growth, to provide timber products, and to reduce hazards from uncharacteristic fire, insects, and diseases. Use thinning also to reduce the spread and intensification of dwarf mistletoe." (Forest Service, 2003a, p. III-264)

Objective 1454 "Use prescribed fire and mechanical treatments, to reduce fuels, or to maintain desirable fuel loadings, within and adjacent to wildland-urban interface areas and developed sites to reduce wildfire hazards. Develop and prioritize vegetation treatment plans in coordination with local and tribal governments, agencies, and landowners." (Forest Service, 2003a, p. III-265)

Objective 1458 "Reduce road-related impacts to wildlife, fish, soil, and water resources through road reconstruction and rehabilitation, or decommissioning, with emphasis on the Anderson Creek, Cow Creek, Wetfoot, Sixmile, and Scriver Creek drainages." (Forest Service, 2003a, p. III-265)

Proposed Action

The actions proposed by the Forest Service to meet the stated purposes and needs include:

1. Approximately 2,826 acres of silvicultural activities. Silvicultural prescriptions emphasize wildlife habitat restoration (white-headed woodpecker and flammulated owls) and include the following:

   - 570 acres of commercial thinning from below.
   - 1,445 acres of commercial thinning from below followed by prescribed fire.
   - 811 acres of commercial thinning from below followed by machine piling and burning.
   - All acres proposed for commercial harvest would also include thinning small diameter understory trees following the commercial harvest.
   - Yarding systems proposed to accomplish the above prescriptions would include:
     - Off-road jammer/Tractor on about 928 acres.
     - Skyline on about 870 acres.
     - Helicopter on about 1,028 acres.

- Approximately 12 helicopter landings (including service landings) that are roughly 1 acre in size will be used (existing) or constructed to facilitate the helicopter logging.
- 846 acres of small diameter (typically less than 8" diameter at breast height [DBH]) thinning from below in existing plantations. Non-commercial thinning would be accomplished by hand felling with chainsaws. Approximately 163 acres of the small diameter thinning would occur within portions of riparian conservation areas (RCAs). Slash generated through non-commercial thinning would be lopped and left on-site.

2. Approximately 16.5 miles of road decommissioning (includes timber sale roads, non-sale roads, unauthorized roads, and decommissioning in conjunction with the realignment) by procedures that would include one or more of the following activities: recontour up to sight distance from existing junctions and other portions of road segments where resource concerns exist, barricade, pull existing pipes and stabilize crossings, provide long-term drainage (e.g. waterbars and dips), and scarify and/or rip and seed the existing road prism.

3. Approximately 0.7 miles of Forest road #696 would be decommissioned (not included in item #2 above) while leaving existing drainage and road prism sufficient to retain access for a future motorized trail. The trail designation will be analyzed in a future NEPA document and included in a separate decision. Otherwise, all activities identified for decommissioning in item #2 above may be utilized.

4. Approximately 16.1 miles of road improvements on Forest roads 693, 693O, 695B, and 696 that would include surface gravel replacement and drainage improvements for segments within RCAs.

5. All perennial crossings will have up to 300 feet of surface gravel applied on both sides of the crossing on those roads used in conjunction with timber harvest (except for roads to be decommisioned).

6. Approximately 1.3 miles of road reconstruction on Forest road 693A, including restoring fish passage at the main stem of Scriver Creek.

7. Restore fish passage on Scriver Creek and Middle Fork Scriver Creek drainages by replacing 2 existing fish barriers (culverts) on Forest Roads 693 and 695 with structures passible by fish and other aquatic organisms.

8. Approximately 3.8 miles of road realignment on Forest roads 696 and 693B to continue to provide necessary access and eliminate roads and road segments paralleling within RCA corridors.

9. Except for administrative use, closing year-round about 20.5 miles of classified road to motorized use after vegetation treatment. These roads would be closed and the maintenance operational level reduced to 1[1]. The following forest roads are identified for closure: 693A, 693D, 693D2, 693L, 693L1, 693L2, 693L4, 693L5, 693O, 693P, 693QA, 693R, 695A, 695B, 695E, 695E2, 695E3, 696B, 696C, 696C1, and 696D.

10. Construct approximately 2.4 miles of new specified road.

11. Construct approximately 1.1 miles of temporary road. Temporary road would be a low standard road that would be reclaimed following use.

12. Provide sawlogs to local and/or regional processing facilities.

[1] Operational Maintenance Level 1 is defined by the Boise National Forest Plan (2003a) as intermittent service roads during the time that they are closed to vehicular traffic. Basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities.

Figure 1 – Scriver Project Vicinity Map

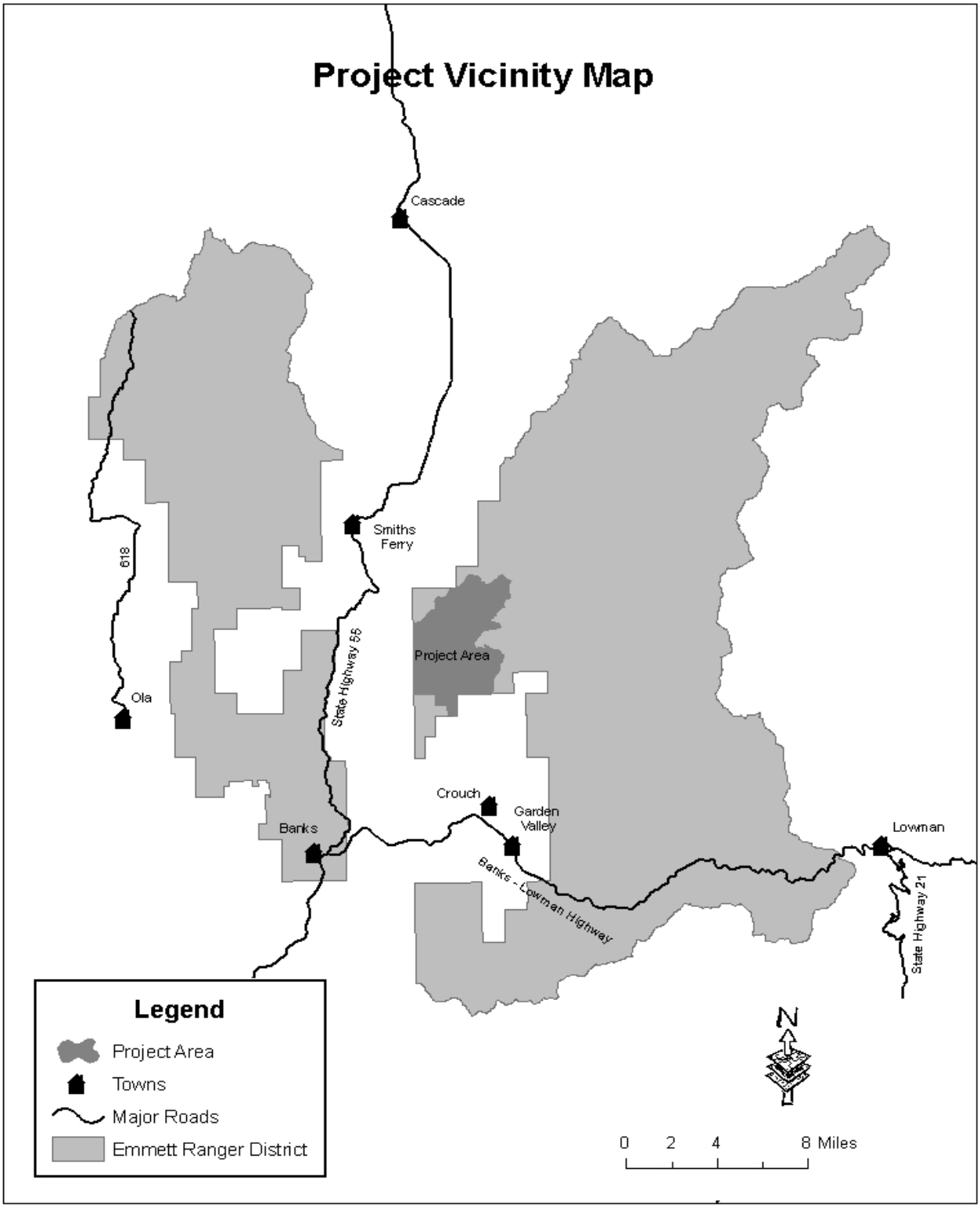

Figure 2 – Scriver Project Proposed Action Map