

## ENVIRONMENTAL CHECKLIST FORM

1. **Project Title:** Red Clover/McReynolds Creek Restoration Project
2. **Lead Agency Name and Address:** Plumas County Planning and Building Services, 555 Main Street Quincy, CA 95971
3. **Contact Person and Phone Number:** Rebecca Herrin, Senior Planner; (530) 283-7011
4. **Project Location:** T.24N. R.13E. Portions of the following sections: 1, 10, 11, 12; T.25N. R.13E. SE ¼ of section 36 This project is on private lands owned by George Goodwin, with a small portion on USFS managed lands. (Also see Project Description).
5. **Project Sponsor's Name and Address:** Plumas Corporation, 550 Crescent Street, Quincy, CA 95971; and George Goodwin, 24089 Lake Gregory Dr., Crestline, CA 92325
6. **General Plan Designation:** Agricultural Preserve, Timber Production Zone
7. **Zoning:** AP, TPZ
8. **Description of Project:** see attached
9. **Surrounding Land Uses and Setting:** The Red Clover valley is used primarily for grazing. The private land is surrounded by the Plumas National Forest, and is used for grazing and infrequent dispersed recreation. The more frequently used Davis Lake Recreation Area is approximately three air miles to the south.
10. **Other agencies whose approval is required (e.g., permits, financing approval, or participation agreements):**  
California Dept. of Fish & Game – 1603 Agreement  
California Regional Water Quality Control Board – 401 Certification  
Army Corps of Engineers – Notification for NWP 27

### Environmental Factors Potentially Affected:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Land Use and Planning  | <input type="checkbox"/> Transportation/Circulation         | <input type="checkbox"/> Public Services               |
| <input type="checkbox"/> Population and Housing | <input type="checkbox"/> Biological Resources               | <input type="checkbox"/> Utilities and Service Systems |
| <input type="checkbox"/> Geological Problems    | <input type="checkbox"/> Energy and Mineral Resources       | <input type="checkbox"/> Aesthetics                    |
| <input type="checkbox"/> Water                  | <input type="checkbox"/> Hazards                            | <input type="checkbox"/> Cultural Resources            |
| <input type="checkbox"/> Air Quality            | <input type="checkbox"/> Noise                              | <input type="checkbox"/> Recreation                    |
|   | <input type="checkbox"/> Mandatory Findings of Significance |  |

**Determination.**

(To be completed by the Lead Agency.)

On the basis of this initial evaluation:

- I find that the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A **NEGATIVE DECLARATION** will be prepared.
- I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.
- I find that the proposed project **MAY** have a significant effect(s) on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets, if the effect is a "potentially significant impact" or "potentially significant unless mitigated." An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, there **WILL NOT** be a significant effect in this case because all potentially significant effects (a) have been analyzed adequately in an earlier **EIR** pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier **EIR**, including revisions or mitigation measures that are imposed upon the proposed project.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
On behalf of

## 8. (from page 1) Description of Project

Please refer to the following figures:

Figure 1a -- Project Description – Project Vicinity.

Figure 1b – Project Description – Project Location

### **Introduction**

The Red Clover/McReynolds Creek Restoration Project is funded by the CalFed Watershed Program with Proposition 13 bond funding. CalFed is a state-federal partnership formed to address the issues associated with Sacramento/San Joaquin Delta water allocation for competing needs such as agriculture, industry, residential, fish, etcetera. Millions of dollars have been appropriated to fund project proposals that meet CalFed objectives, with most of the watershed restoration funds distributed to projects in California's Central Valley. This is the second Feather River Coordinated Resource Management Group (FR-CRM) project (at this time) that expands the CalFed area of concern upstream of the Central Valley, at the water's source (see Figure 1a). Similar to our first CalFed-funded project in the headwaters of the Last Chance Creek drainage, the Red Clover project employs the "pond and plug" technique. This restoration technique addresses floodplain function as the fundamental pre-cursor to all other project objectives (i.e. reduced bank erosion, improved water quality, improved fish and wildlife habitat, reduced flood flows, and increased base flows). After 20 years, and 53 restoration projects, it has been the experience of the FR-CRM that once full floodplain function has been restored, other project objectives are more effectively achieved, because in a riparian ecosystem, they are inextricably linked. The pond and plug technique has been successfully employed in the Feather River watershed at Last Chance, Big Flat, Ward Creek, Bagley Meadow, Little Schneider Creek, and other locations.

The project area is over three miles long within Red Clover valley, along the stream channels of Red Clover Creek and McReynolds Creek, encompassing a total of 775 acres of valley meadow (see Figure 1b). Future restoration is proposed on Plumas National Forest (PNF) lands continuing another three miles downstream on Red Clover Creek. This CEQA document addresses the currently proposed project on Red Clover and McReynolds Creek on private land. The small portions of USFS-administered lands at the up- and downstream ends of the project area will be addressed in a NEPA document, with on-the-ground cumulative effects addressed in both documents. This area is rich in archeological resources, and home to a few species of rare plants, both of which have influenced project scope and design.

**Figure 1a- Project Vicinity Map:**

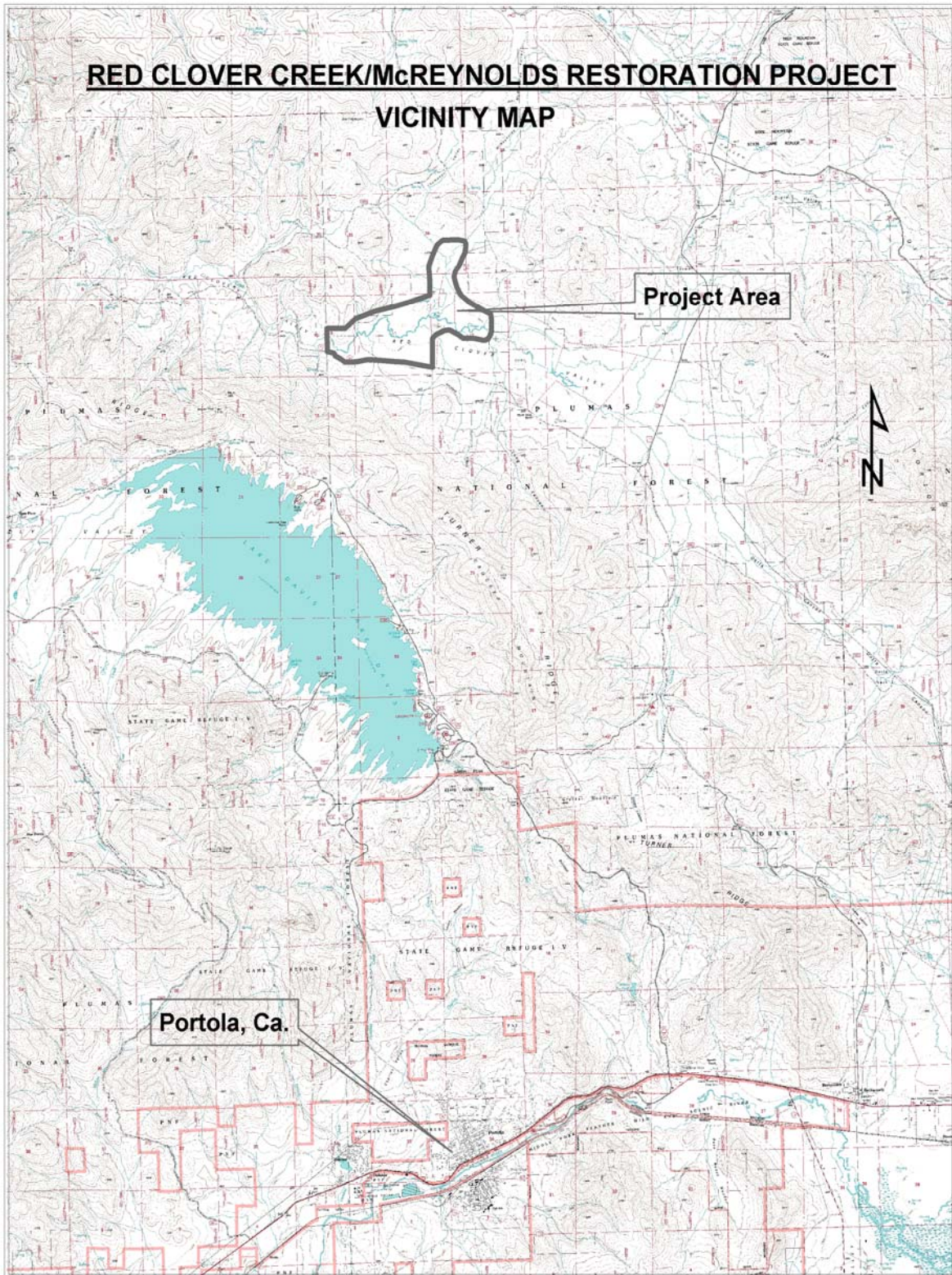
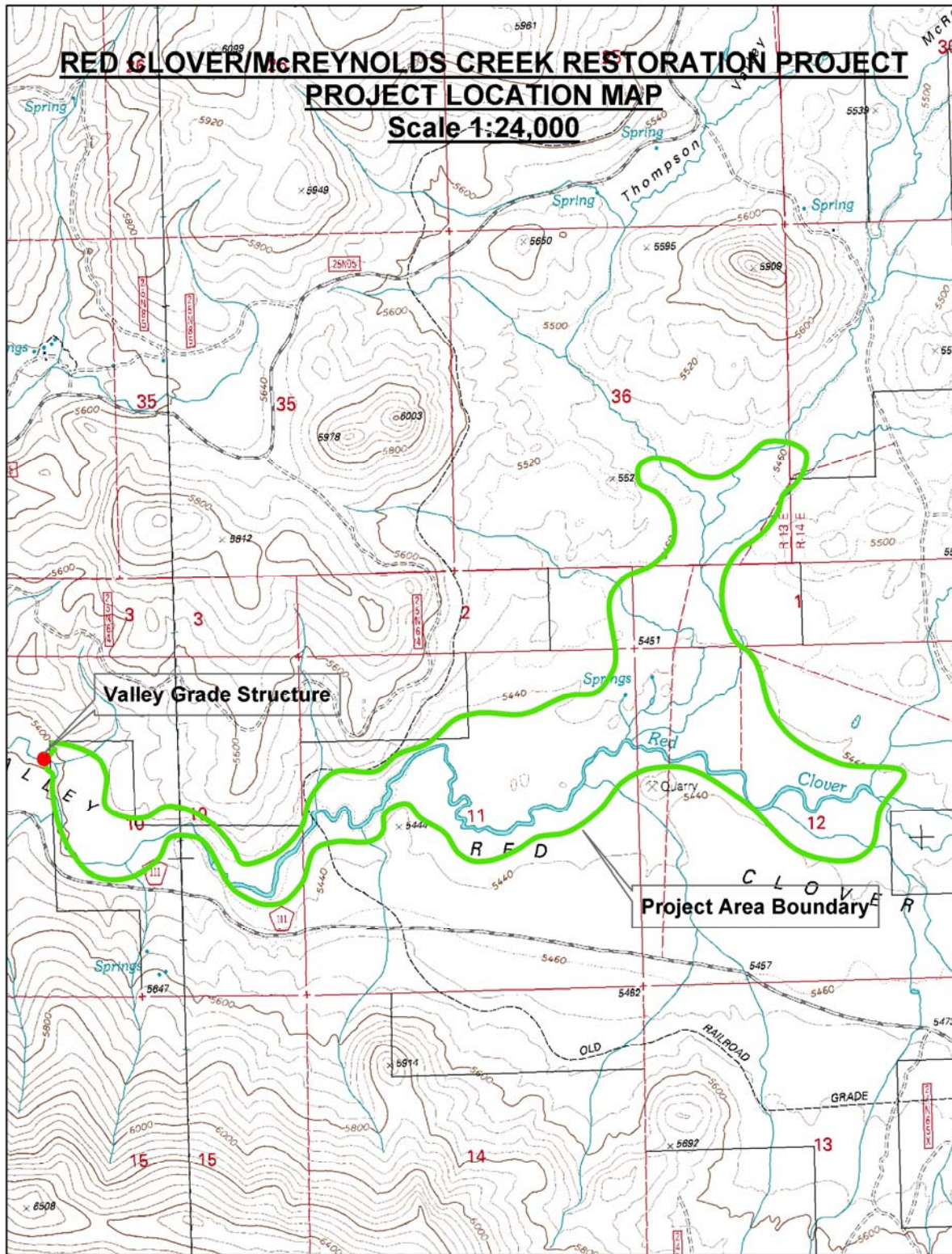


Figure 1b- Project Location Map:



## Project Design

This project is a collaborative effort between the FRCRM, the PNF, and landowner, George Goodwin. As with all FR-CRM projects, the design is proposed and refined by a Technical Advisory Committee (TAC) to ensure technical integrity and feasibility, and that the objectives and concerns of all interested parties are met or addressed. The project encompasses channel/meadow and grazing management components on Red Clover Creek and one of its tributaries, McReynolds Creek. Project design for both creeks is discussed below. Project work is projected to begin in late June or early July of 2006, with completion scheduled in November 2006. If weather prohibits project completion by Fall of 2006, it would then be finished the Summer of 2007.

Please refer to the following when reading this section:

- Figure 2a. Project Description - Watershed Area.
- Figure 2b. Project Description – Cross Sections
- Figure 2c. Project Description - Pond and Plug Design with Cultural and Botanical Resources
- Figure 2d. Project Description - Infrastructure Design

The McReynolds Creek portion of the project extends north from the confluence with Red Clover Creek approximately 5,000 linear feet upstream. The effective floodplain averages 700 feet in width. Cumulative watershed area is 8 square miles from the confluence of the two creeks north to the ridge separating Thompson and McReynolds valleys from Squaw Valley. The Red Clover Creek portion of the project is 11,250 linear feet, with an average effective floodplain width of 672 feet within Red Clover valley. The cumulative watershed area for the Red Clover Creek project area is 81 square miles (see Figure 2a).

The design addresses two restoration components, restoring channel/floodplain connection and grazing management:

1.) The extensive gully networks on Red Clover and McReynolds Creeks have resulted in lower water tables in the valley meadow, with concurrent ecosystem adjustments such as encroaching sage, loss of meadow productivity, diminished summer flows, and severe bank erosion. Remnants of the original meadow vegetative community now occur near springs, hill slope sub-flow zones, and in gully bottoms. The objective here is to return streamflows to the original meadow/channel elevations. This will be achieved by using the pond and plug technique within the extensive gully networks. McReynolds Creek will be restored from its confluence with Red Clover north to its confluence with Thompson Creek. Red Clover Creek will be restored from the bottom of the 1985 demonstration project area near the quarry, downstream approximately 2.3 miles to the boundary between private and PNF lands (see Figure 1b). The pond and plug technique will re-water the meadow by eliminating the gully network. The project design contains 59 ponded water areas (either excavated or abandoned gully segments) and 66 plugs on the main or finger gullies. The plug elevations will be the same or slightly higher than other meadow elevations, so flood flows will sheet overland at low velocities (<1 ft/second), with only a few inches in depth. Normal discharges will flow into existing remnant channels. The key attribute to both Red Clover and McReynolds Creeks is the presence of multiple channels. McReynolds Creek has three (3) nearly continuous channels, while Red Clover Creek has up to five (5) channels that will be active depending on stage. While one dominant or base channel is displayed in the design cross-sections and plan view, this channel surcharges progressively into other channels long before bankfull stage is reached. As a consequence, "design" channel dimensions and capacity (Q) are considerably less than what would be expected statistically. This is also an indication these reaches evolved under a very low sediment supply prior to channel downcutting. Project design will accommodate the design streamflow and sediment contributions of these basins. The base remnant channel for McReynolds Creek averages eight feet wide and one foot deep, and 46 feet wide and two feet deep on Red Clover Creek. Remnant channel area is consistent through the project area on both channel reaches. A channel area of 7 square feet for McReynolds gives an initial discharge value of approximately 25 cubic feet per second (cfs). Red Clover Creek channel area is 50 square feet above the confluence with McReynolds Creek, equating to a channel capacity of approximately 101 cfs. At the downstream end of the project the channel cross-sectional area increase to 56 square feet with a discharge of 133 cfs. The overall valley gradient is 0.2%, with an average channel gradient of 0.16%. Several long reaches of the channel/valley have a flat gradient. Total remnant channel length is 4.2 miles, in comparison to the 3.3 miles of existing gullied channel. All the ponds will be connected to ground water sources, with surface water flowing through only four ponds on the remnant channel of McReynolds Creek, and six ponds on Red Clover Creek. Two plugs will incorporate rock into the surface of the plug: one at a valley constriction (cross section #30); and the second is a valley grade structure at the downstream (west) end of the project (cross section #36; see Figure 2b). Figure 2c indicates the locations of plugs, ponds, and grade controls, as well as the new channel alignment, which utilizes existing remnant

channels.

The extensive network of gullies along McReynolds and Red Clover Creeks will require approximately 22,000 cubic yards and 208,000 cubic yards, respectively, of gully plug material excavated from the ponds. Any existing meadow sod and willow in the gully bottoms will be transplanted to completed plugs, pond margins, and to areas of remnant channel that are currently un-vegetated. Topsoil from the borrow ponds will be salvaged, stockpiled and spread on top of completed plugs. Plugs will be re-vegetated with locally collected native grass and forb seeds.

2.) Restoring meadow productivity includes more intensive management of livestock grazing. This will be accomplished by re-aligning existing fences and constructing approximately 24,000 feet of new fence to establish riparian and upland pastures. The fencing is in conjunction with two spring developments for off-channel water supply, reducing impacts to sensitive riparian areas (see Figure 2d). Three years of grazing deferment within approximately 400 acres of the recovering riparian area will allow for sustainable recovery of those areas now dominated by sage. Coordination with the landowner, USFS, and the NRCS will be done prior to project completion to develop a prescribed grazing management plan for the project area. The landowner currently is an active permittee on three USFS administered range allotments within the watershed. One allotment, Thompson Valley, is partially within the project area boundary.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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**I. LAND USE AND PLANNING.** Would the proposal:

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Conflict with general plan designation or zoning? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

The project area is currently zoned Agricultural Preserve and Timber Production Zone, and will remain the same.

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| b) Conflict with applicable environmental plans or policies adopted by agencies with jurisdiction over the project? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

The project area is currently zoned Agricultural Preserve and a Timber Production Zone. Land use protection measures for this site are to maintain agricultural areas. Agricultural uses will be maintained and enhanced by the project objectives of restoring the functionality of the floodplain and productivity of the meadow. Grazing management will be coordinated between the private and USFS lands.

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| c) Be incompatible with existing land use in the vicinity? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

The existing land use is agricultural livestock grazing, and this use will continue. Temporary (3 years) grazing deferment post-project will occur, with two years of prescribed grazing following the non-use. The landowner is working with the Natural Resources Conservation Service on a grazing management plan for the project area, in coordination with the landowner's permitted grazing on two USFS grazing allotments.

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| d) Affect agricultural resources or operations (e.g., impacts to soils or farmlands, or impacts from incompatible land uses)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

The project is compatible with existing agricultural operations, i.e. livestock grazing. Actual affects are expected to be beneficial to agricultural resources through the restoration of meadow productivity and improved grazing management.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Disrupt or divide the physical arrangement of an established community (including a low income or minority community)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

There is no community established in the area.

**II. POPULATION AND HOUSING.** (Would the proposal:

a) Cumulatively exceed official regional or local population projections?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Induce substantial growth in an area either directly or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace existing housing, especially affordable housing?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

As a stream restoration project, this proposal has no impact on population or housing. There are no residences in the area, nor are any planned or proposed.

**III. GEOLOGIC PROBLEMS.** Would the proposal result in or expose people to potential impacts involving:

a) Fault rupture?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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The project is not on or near an identified hazardous fault (Plumas County General Plan).

b) Seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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The project is not on or near an identified hazardous fault, and there will be no seismic ground shaking associated with the project.

c) Seismic ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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The project is not on or near an area of potential ground failure (Plumas County General Plan).

d) Seiche, tsunami, or volcanic hazard?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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There is no chance of a seiche or tsunami near the project area, which is 150 miles from the Pacific Ocean at an elevation of 5400 to 5500 feet. Volcanic hazards for this area have not been identified.

e) Landslides or mudflows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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The project is not on or near an identified area of potential ground failure.

f) Erosion, changes in topography or unstable soil conditions from excavation, grading, or fill? ( )	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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The project is within an area identified as having a moderate erosion potential (Plumas County General Plan constraint maps). Due to severe channel incision and bank erosion, the Red Clover Creek watershed channel system was determined to be the 3<sup>rd</sup> highest sediment producing subwatershed in the East Branch North Fork Feather River watershed (EBNFFR Erosion Inventory Report, USDA- Soil Conservation Service, 1989). Restoration efforts to improve floodplain function by filling the gullies and restoring streamflow to the meadow surface will decrease current rates of erosion.

	<b>Potentially Significant Impact</b>	<b>Potentially Significant Unless Mitigation Incorporated</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
g) Subsidence of the land? ( ) The project is not on, or near, an identified area of potential ground failure, nor will groundwater be tapped as a result of this project.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expansive soils? ( ) The project is not on or near an identified area of potential ground failure.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Unique geologic or physical features? ( ) No unique geologic or physical features are identified in the Plumas County General Plan for this area.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**IV. WATER.** Would the proposal result in:

a) Changes in absorption rates, drainage patterns, or the rate and amount of surface runoff? ( ) The project is a stream channel and meadow restoration activity. One of the objectives of the project is to improve absorption rates, drainage patterns and the rate and amount of runoff. Absorption rates would be improved by elevating the stream channel out of its current gullied depth, back onto the meadow elevation. This, in turn, is expected to reverse the vegetative trend from xeric species and bare, compacted soils to a vigorous community of wet meadow species. The root system of this community, as well as the restored function of the floodplain, is expected to increase absorption rates, thereby attenuating flood flows, and increasing summer base flows. This improved timing of the drainage pattern, and the rate and amount of runoff, is another project objective. No significant change in drainage pattern locations is expected. Flows will be returned to historic remnant channels on the surface of the meadow, which have been abandoned due to the relatively recent (last 50 years) channel incision.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of people or property to water related hazards such as flooding? ( ) This project is expected to incrementally decrease the exposure of people and property in downstream areas to flooding hazards (see IVa).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Discharge into surface waters or other alteration of surface water quality (e.g. temperature, dissolved oxygen or turbidity)? ( ) This project is expected to improve such water quality parameters as temperature, dissolved oxygen, sediment and turbidity. The poor water quality attribute of high summer temperatures should be improved by augmented summer flows. The increased volume of summer flows, a narrow, deeper channel and expected improvement of riparian vegetation (shade) should lower summer temperatures. Decreased temperature and increased hyporheic exchange with the floodplain will result in higher dissolved oxygen levels. By removing flood flows out of channels with unstable, unvegetated gully walls, and restoring floodplain function, the current severe erosion and turbidity should decrease. Before construction begins, surface water flow will be diverted into the remnant channel, so work will not occur in a live channel.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- d) Changes in the amount of surface water in any water body? ( )

This project may slightly increase the area of surface water in the Red Clover Creek drainage. One of the proposed restoration techniques is “pond and plug.” This would result in some areas of the gully being filled, with the fill (plug) material coming from digging borrow ponds in other areas of the gully. The borrow areas will become ponds as the meadow groundwater rises. Flows would no longer route through the gully system, but would go through a remnant channel. High surface water flows will sheet overland at low velocities at only a few inches in depth, while normal discharges will flow into existing remnant channels. This is apt to decrease the likelihood of floods downstream during the high runoff periods in winter and early spring. It is projected that increased absorption rates in the meadow will result in greater groundwater recharge and increased summer base flows.

	<b>Potentially Significant Impact</b>	<b>Potentially Significant Unless Mitigation Incorporated</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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- e) Changes in currents, or the course or direction of water movements? ( )

The project will have no impact on the current, course, or direction of water movements. Historic flows through the project area (as in most meadow systems) were dynamic, with channels regularly being created, filled and abandoned over geologic time. The gully has disrupted this natural dynamic, creating a single entrenched channel that acts like a flume, directing flood flows at high velocities downstream. The project seeks to restore the floodplain function by reconnecting flows to remnant channels at the original meadow elevation, attenuating flood flows.

- f) Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations, or through substantial loss of groundwater recharge capability? ( )

By increasing filtration in the floodplain meadow, this project is expected to increase groundwater recharge during high winter flows for slower release throughout the drier summer. The groundwater table is expected to raise within 1.5 feet of the meadow surface, reducing wide seasonal fluctuations in water levels and providing for late winter/spring saturation of the meadow.

- g) Altered direction or rate of flow of groundwater? ( )

This project is not expected to change the direction of groundwater flow or drainage patterns. Most of the Red Clover watershed is an area of low water yields, with average annual runoff calculated at nine inches or 59,000 acre-feet of water, accounting for 27% of the average annual precipitation (Red Clover Creek Watershed Analysis, Plumas National Forest-Beckwourth Ranger District, 2005). Through restoring the floodplain function and increasing absorption rates in the meadow, the rate of groundwater release is expected to slow down. Resulting probable benefits long term are increased summer base flows and improved timing of drainage patterns.

- h) Impacts to groundwater quality? ( )

This project is expected to improve groundwater quality by enhancing the exchange of water between surface and subsurface sources and filtering precipitation recharge through a more vigorous vegetation layer.

- i) Substantial reduction in the amount of groundwater otherwise available for public water supplies? ( )

This project will not change the amount of water available for public water supplies. Long term this project is anticipated to improve the timing of drainage patterns, improving the availability of water supplies late in the season.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>V. AIR QUALITY.</b> Would the proposal:				
a) Violate any air quality standard or contribute to an existing or projected air quality violation? ( )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Expose sensitive receptors to pollutants? ( )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Alter air movement, moisture, or temperature, or cause any change in climate? ( )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create objectionable odors? ( )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

This project will not release anything into the atmosphere. There is no evidence that this project will result in a violation of any air quality standard or contribute to an existing or projected air quality violation. It will not expose sensitive receptors to pollutants, alter air movement, moisture, temperature, cause any change in climate, or create objectionable odors.

**VI. TRANSPORTATION / CIRCULATION.**

Would the proposal result in:

a) Increased vehicle trips or traffic congestion? ( )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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This project will not increase vehicle trips or congestion because there will be no increase in population or change of use. There will be an insignificant short-term increase in vehicle trips during construction in the Summer and Fall of 2006. Estimated increase is about 4 vehicles per day for four months.

b) Hazards to safety from design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)? ( )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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No road work is proposed as part of this project. Heavy equipment used for restoration work will not be used on any public road systems.

c) Inadequate emergency access or access to nearby uses? ( )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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This project does not change any existing emergency access, nor access to nearby uses.

d) Insufficient parking capacity on-site or off-site? ( )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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This project has no effect on parking.

e) Hazards or barriers for pedestrians or bicyclists? ( )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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This project creates no hazards or barriers for pedestrians or bicycles.

f) Conflicts with adopted policies supporting alternative transportation (e.g. bus turnouts, bicycle racks)? ( )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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This project does not conflict with alternative transportation policies of the General Plan and Regional Transportation Plan.

g) Rail, waterborne or air traffic impacts? ( )

There is no rail, waterborne, or air traffic that will be affected by this project.

	<b>Potentially Significant Impact</b>	<b>Potentially Significant Unless Mitigation Incorporated</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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**VII. BIOLOGICAL RESOURCES**

Would the proposal result in impacts to:

a) Endangered, threatened, or rare species or their habitats (including but not limited to plants, fish, insects, animals, and birds)? ( )

The California Natural Diversity Database (CNDD) was consulted for sightings of plants and animals within the area covered by the USGS Crocker Mountain and Grizzly Valley 7 1/2 minute quadrangles. Additionally, surveys were conducted for rare plants (see Attachment 2), amphibians (see Attachment 3), willow flycatchers, great gray owls, bald eagles, and greater sandhill cranes (see Attachment 1). No special status amphibians were found.

No federally listed threatened, endangered, or candidate species will be adversely affected by the proposed project; however, five California state listed or U.S. Forest Service sensitive species (Greater sandhill crane, Willow flycatcher, Pallid bat, Townsend's big-eared bad, and Western red bat) may be directly or indirectly affected by implementation of the proposed action in the short term, but are likely to benefit from this action in the long term (3-10+ years). Direct effects resulting from the alteration of existing habitat and disturbance due to equipment activity and noise is expected within the designated construction area. Primary impacts to existing habitat for USFS Sensitive Species includes (1) removing channel flows from existing gully system to remnant channels in order to obliterate the current incised channel, and (2) the removal and replanting of existing meadow and riparian vegetation to the new remnant channels or constructed ponds and plugs. These impacts will have a direct, but short term effect (1-3 years) on the Greater sandhill crane and Willow flycatcher; however, these species are likely to benefit from this action in the long term (3-10+ years). Indirect effects due to the reduction of in-stream macro-invertebrates, which complete their life cycle as reproductive terrestrial winged insects, may result in a possible reduction in foraging and prey species availability in the short term (1-3 years) for the Willow flycatcher, Pallid bat, Townsend's big-eared bat and Western red bat. Over the long-term the creation of ponds may provide additional foraging habitat that benefit these species and their associated prey. Additional surveys for willow flycatchers will be conducted in 2006 prior to restoration activities to reduce the likelihood of disturbance to potentially present species. Species specific mitigations will include creating islands within 25% of the constructed ponds suitable for nesting Greater sandhill cranes or other waterfowl. Should wildlife surveys conducted in 2006 prior to construction activities find any target species, limited operating periods would be implemented on a site specific need.

Three plant species that are on the US Forest Service Region 5 species of concern (sensitive and special concern) Plant List (*Astragalus lentiformis*, *Ivesia sericoleuca*, and *Trifolium lemmonii*) were found. These three plant species have no special state or federal status at this time. Despite the lack of special status, in a good faith effort to protect significant biological resources, the project has been designed to avoid areas of special plant occurrences. Project Description Figure 2c shows plant occurrences and project ground-disturbing activities. Due to the elevated locations of existing plant populations, impacts from the expected change in meadow hydrology will not occur. There is no effect to threatened, endangered, or proposed plant species. The proposed project will not affect individuals and will not cause a trend toward federal listing or loss of viability to sensitive plant species. No plants listed in the "Noxious Weeds on the Plumas National Forest-1999" were detected in the project area. Equipment will be steamed cleaned prior to entering the project site to reduce the risk of introducing noxious weeds. All plugs will be seeded with native grasses and forbs. In addition, monitoring will be done post-project for three years for noxious weed invasion and hand removed.

b) Locally designated species (e.g., heritage trees)? ( )

There are no locally designated species in this area.

c) Locally designated natural communities (e.g., oak forest, coastal habitat, etc.)? ( )

There are no locally designated natural communities in this area.

- d) Wetland habitat (e.g., marsh, riparian, and vernal pool)? ( )

The de-watered meadow currently has remnant areas of seasonally wet meadow that dry out later in the summer. One objective of the project is to raise the water table in the meadow, which would enhance wetland vegetation, as well as increase the area of perennially moist meadow, and improve riparian vegetation vigor.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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- e) Wildlife dispersal or migration corridors? ( )

The project area is not within a seasonal migration corridor for deer or any other species (Plumas County General Plan). Two objectives of the project are to improve base flow volumes and restore the productivity of the meadow, both of which will enhance the value of this area for general wildlife habitat.

**VIII. ENERGY AND MINERAL RESOURCES.**

Would the proposal:

- a) Conflict with adopted energy conservation plans? ( )

No adopted energy conservation plans with which this project might conflict have been found.

- b) Use non-renewable resources in a wasteful and inefficient manner? ( )

This project will not induce wasteful or inefficient use of non-renewable resources.

- c) Result in the loss of availability of a known mineral resource that would be of future value to the region and the residents of the State? ( )

There are no known mineral resources in the project area (General Plan).

**IX. HAZARDS.** Would the proposal involve:

- a) A risk of accidental explosion or release of hazardous substances (including, but not limited to: oil, pesticides, chemicals, or radiation)? ( )

There is no risk of accidental explosion or release of hazardous substances associated with this project, other than those normally associated with use of any equipment with an internal combustion engine. Re-fueling and equipment maintenance will be conducted in designated areas outside of the riparian area.

- b) Possible interference with an emergency response plan or emergency evacuation plan? ( )

This project does not conflict with the Plumas County Emergency Plan.

- c) The creation of any health hazard or potential health hazard? ( )

There is no evidence that this project will result in a new source of health hazards.

- d) Exposure of people to existing sources of potential health hazards? ( )

No existing health hazards, including those on lists compiled pursuant to Government Code Section 65962.5, can be identified to which people will be exposed as a result of the project.

- e) Increased fire hazard in areas with flammable brush, grass, or trees? ( )

The project area is managed for cattle grazing, and will remain in that use resulting in no change in fire hazard as a result of the project. Project construction will be in moist channel areas where there is no fire hazard, and a water truck will be on site during construction

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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**X. NOISE.** Would the proposal result in:

- a) Increases in existing noise levels? ( )
- b) Exposure of people to severe noise levels? ( )

The ambient outside noise level for Agricultural Preserve area is 33-55 decibels (General Plan). Currently, there is infrequent noise in the area due to infrequent traffic on Plumas County Road 111. The constructed project will not change current noise levels. Noise from heavy equipment during construction will not be greater than truck noise. This noise easily disperses in the large meadow systems, where there are no people.

**XI. PUBLIC SERVICES.** Would the proposal have an effect upon, or result in a need for new or altered government services in any of the following areas:

- a) Fire protection? ( )
- b) Police protection? ( )
- c) Schools? ( )
- d) Maintenance of public facilities, including roads? ( )
- e) Other governmental services? ( )

Since the project is a stream restoration project with no impacts on population or housing, there will be no effect upon public services.

**XII. UTILITIES AND SERVICE SYSTEMS.** Would the proposal result in a need for new systems or supplies, or substantial alterations to the following utilities:

- a) Power or natural gas? ( )
- b) Communications systems? ( )
- c) Local or regional water treatment or distribution facilities? ( )
- d) Sewer or septic tanks? ( )
- e) Storm water drainage? ( )
- f) Solid waste disposal? ( )

g) Local or regional water supplies? ( )

Since the project is a stream restoration project, where there are no houses or residents, and there are no associated impacts on populations or housing, there will be no need for new utility or service systems, or alterations to existing systems.

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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**XIII. AESTHETICS.** Would the proposal:

a) Affect a scenic vista or scenic highway? ( )

The project area is not within or along a designated scenic area or highway. The project conforms to current land uses, maintaining agricultural uses. The project objectives of restoring the functionality of the floodplain and productivity of the meadow will enhance agricultural and scenic qualities.

b) Have a demonstrable negative aesthetic effect? ( )

By restoring the historic hydrology and attendant vegetative communities, the project is expected to have a demonstrable positive aesthetic effect.

c) Create light or glare? ( )

The only glare associated with this restoration project, would be more sunlight reflecting off of water retained in wet meadow areas or in the ponds.

**XIV. CULTURAL RESOURCES.**

Note: Cultural resource surveys were conducted in the entire three mile project area in summer 2005. Attachment 4 summarizes survey results for the private land section discussed in this document.

Would the proposal:

a) Disturb paleontological resources? ( )

There were no paleontological resources found in the project area (defined as evidence of life forms older than 10,000 years).

b) Disturb archaeological resources? ( )

Prehistoric site patterns identified in the Red Clover Valley demonstrate an intensive prehistoric seasonal presence. The private land survey report and historic resource records have been sent to, and received by, the Northeast Center of the California Historical Resources Information System in Chico (see Attachment 5). Final project design was not developed until archeological resource sites were flagged on the ground and mapped. Project Description Figure 2c shows the areas of archeological sites in relation to project ground-disturbance. One prehistoric site (Site 7) was located within the area of potential effects (APE) and was consulted on with an Army Corp of Engineers (ACOE) archaeologist. ACOE confirmed that sites within the APE must be formally evaluated for the eligibility to the National Register of Historic Places (NRHP), under Section 106 of the National Historic Preservation Act. The evaluation report will be submitted to the ACOE and the Sacramento Office of Historic Preservation in January 2006. MITIGATION: All known archeological resources have been flagged and will be avoided. In the event that an archeological resource is uncovered during construction activities, there would be a temporary halt to the activity until a determination is made by a qualified archeologist on how to proceed.

c) Affect historical resources? ( )

Historic use of Red Clover Valley was characterized by the early development of Plumas County transportation routes, dairy ranches, and railroad logging. Historic resources were found in the project area, and are mitigated for in the same manner as archeological resources (i.e. flagged and avoided). Attachment 4 and Project Description Figure 2c describe both historic and archeological resources. A spur of an historic railroad grade was identified within the APE and was

evaluated for NRHP eligibility under Section 106. Under the proposed project, approximately 200 feet of this grade would be removed in order to restore the floodplain of Red Clover Creek. The Significance of Evaluation report for NRHP eligibility found the Clover Valley Railroad eligible to the National Register; however, the 200 feet of dismantled railroad spur lacked sufficient integrity to convey this significance. Recommendations were to document the site recording of the spur section located in the APE. The report was submitted to ACOE and the Sacramento Office of Historic Preservation in November 2005. Other historic resources uncovered during construction activities would also warrant a temporary halt to activity until a determination is made by a qualified archeologist on how to proceed.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Have the potential to cause a physical change which would effect unique ethnic cultural values? ( ) There are no unique ethnic cultural values in the area.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Restrict existing religious or sacred uses within the potential impact area? ( ) There are no religious or sacred uses of this area.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**XV. RECREATION.** Would the proposal:

a) Increase the demand for neighborhood or regional parks or other recreational facilities? ( ) No additional population will result from this project, therefore no additional demand for regional parks or recreational facilities will be created.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Affect existing recreational opportunities? ( ) There is no evidence that the project will directly affect existing recreational opportunities. However, one expected benefit of the project is improved fish and wildlife habitat, which may result in improved hunting and fishing opportunities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**XVI. MANDATORY FINDINGS OF SIGNIFICANCE.**

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory? As mentioned above, and in the project description, the objective of the project is to improve the quality of the environment by restoring the water table in the meadow to natural levels. It is believed that the gullies in the meadow have formed due to over a century of land use practices that did not consider stream and meadow morphological principles (i.e. railroads, road building, and over-grazing). These practices caused the current degraded situation that the project seeks to address. Specifically, by improving the quality of the environment, it is expected to increase habitat for, and subsequent populations and communities of, fish and wildlife species. The Evaluation of Significance on the 200 feet of dismantled railroad grade within the APE was found to lack sufficient integrity to convey the significance of the overall Clover Valley Railroad system. Project activities, therefore, will not eliminate an important example of railroad logging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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history in California, nor its prehistory. The evaluation report for the prehistoric site within the APE will be submitted to the ACOE and the Sacramento Office of Historic Preservation in January 2006. Any findings or recommended protective measures within the Evaluation of Significance for the prehistoric site will be incorporated into the project. Other project mitigations to enhance wildlife habitat and protect archeological resources have already been incorporated into the project design. Twenty-five percent of constructed ponds will include islands suitable for nesting Greater sandhill cranes and other waterfowl. If wildlife surveys conducted in 2006 prior to construction activities documents target species, limited operating periods would be implemented on a site specific need. All known archeological and sensitive botanical resources have been flagged and will be avoided. In the event that an archeological resource is uncovered during construction activities, there would be a temporary halt to the activity until a determination is made by a qualified archeologist on how to proceed.

	<b>Potentially Significant Impact</b>	<b>Potentially Significant Unless Mitigation Incorporated</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
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b) Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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The pond and plug technique used in this restoration is a long term, sustainable solution to degradation-related problems in the area. The technique addresses the root problem – loss of channel access to the floodplain, and the subsequent de-watering of the meadow. By obliterating the gully and restoring the natural functionality of the system, the ecosystem will be able to maintain its environmental integrity over the long term. Long term benefits expected from this project include: transition from arid vegetative species like sagebrush to a community of wet meadow species; increased absorption rates and groundwater levels; improved timing of drainage patterns, resulting in attenuated flood flows, and increased summer base flows. In addition, improved grazing management is anticipated to protect restored riparian conditions.

c) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Red Clover is a sub-watershed of the East Branch North Fork Feather River, and is 116.8 square miles in area with 409 total miles of channel (main stem and tributaries). The FR-CRM's 1994 East Branch North Fork Feather River Erosion Control Strategy identified 323 miles of eroding channel within the Red Clover watershed (79%), characterizing the majority of the system as degraded. The 3-mile reach proposed for restoration is one of the most degraded areas within the Red Clover watershed, rated in PNF's 2005 Red Clover Creek Watershed Analysis as an area "Functioning at Risk" (degraded trend). The continued degradation of Red Clover Creek and its tributaries is a result of cumulative impacts of historic and current land use in the watershed.

The Plumas National Forest is a major landowner in the watershed, and has over the past several decades, conducted numerous restoration efforts with varying degrees of success. In 1985, the Feather River CRM implemented the Red Clover Creek Erosion Control Demonstration Project located on the main stem of Red Clover Creek, just upstream of McReynolds Creek. Twenty years later, the success of that project can be seen through increased bird populations, enlarged areas of wet meadow habitat, and decreased water temperatures within the demonstration project area. Because of the nature of stream channels and watersheds, it is assumed that impacts of the proposed project in conjunction with other past and future restoration efforts will result in cumulative benefits, restoring the area from a non-functioning condition to a proper functioning meadow floodplain.

Additional projects within the vicinity of the proposed project area include two USFS projects: the Red Clover DFPZ Project located to the northwest, and the Red Clover Group Selection Project located to the north of the project area. The DFPZ project will utilize a combination of mechanical harvest, hand thinning, piling, and under burning to open stands and

reduce surface ladder fuels to create a zone safe from stand replacing wildfire. The Group Selection Project will utilize conventional and mechanical harvest methods to remove timber within 1630 acres. Additional site treatments will include: thinning of non-commercial stands, grappling or hand piling and burning, and sub-soiling of landings. Projects such as these are generally beneficial, however the removal of vegetation, burning, construction and use of roads, as well as other access trails can cause increased surface runoff, which can increase erosion within and offsite of the project. Implementation of Riparian Standards and Guidelines and Best Management Practices on these projects will minimize the erosion potential resulting from these projects, and are not expected to have a measurable, detrimental effect to the health of the watershed.

While measurable benefits are expected in the immediate project area, the limited scale of this project within the greater Red Clover watershed is expected to produce minimal measurable benefits at the watershed scale. This will not be obtained until a greater portion of the Red Clover Creek sub-watershed is explicitly managed for watershed improvement. The FRCRM has established a trend monitoring station 7 miles downstream of the project. This station is expected to document the cumulative long-term effects of this, and other, watershed restoration projects. In addition, the Department of Water Resources is conducting a water budget study along Thompson Creek, a tributary to McReynolds Creek and Red Clover. This study will help monitor project effects to groundwater resources, and document long-term cumulative effects, in addition to other monitoring efforts incorporated into the project plan (see Attachment 5).

This CEQA document covers the Goodwin private land within the Calfed-funded three mile-long project (715 acres), with a small portion (60 acres) on Plumas National Forest land. Surveys in the entire three-mile project area were conducted this year (2005). An Environmental Analysis will be written this winter for project activities that are expected to occur on PNF lands within the proposed project area. In addition, the USFS is planning a Phase II Red Clover project in 2007 continuing restoration efforts for another three miles downstream of the current proposed project. However, given that only three to possibly six miles of channel will be treated out of 323 miles of eroding channels in the watershed, cumulative effects are still expected to be negligible.

	<b>Potentially Significant Impact</b>	<b>Potentially Significant Unless Mitigation Incorporated</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
d) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Since there is little human activity in the area, and the project is in accordance with current uses of the area, this project does not have environmental effects, which will cause direct or indirect adverse effects on human beings.

**XVII. EARLIER ANALYSES.**

Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, one or more effects have been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case a discussion should identify the following on attached sheets:

- a) **Earlier analyses used.** Identify earlier analyses and state where they are available for review.
- b) **Impacts adequately addressed.** Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
- c) **Mitigation measures.** For effects that are "Less than Significant with Mitigation Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

The effects of this project are addressed in this CEQA document only, and are not tiered to any other analysis.