

BACKGROUND

• National Migratory Bird Treaty Act

An interagency Memorandum of Understanding (MOU) was signed in 2001, with the United States Fish and Wildlife Service to address the Migratory Bird Treaty Act. Priority species given to analyze included threatened, endangered, and proposed species as well as 67 high priority land bird species for Region 5 (each is linked to priority habitats).

“This MOU complements the January 10, 2001 Executive Order 13186 on the responsibilities of federal agencies to protect migratory birds. The actions expected under this MOU will be a precursor to help inform more specific protocols that will be developed in a subsequent MOU pursuant to the Executive Order. The purpose of this MOU is to strengthen migratory bird conservation through enhanced collaboration between the Forest Service and the Fish and Wildlife Service, in coordination with state, tribal and local governments” (USDA 2001a).

The MOU identifies specific activities that will contribute to conserving and managing migratory birds over the next two years. This MOU will serve as a mechanism to advance bird conservation in the Forest Service while development of more detailed guidance is underway. A subsequent MOU between the U.S. Fish and Wildlife Service, the Forest Service and other federal agencies will be developed to address all requirements of the Executive Order within two years (USDA 2001b).

Conservation measures under the MOU (USDA 2001a) that apply to the Last Chance Project and will aid in preventing or reducing non-intentional take are:

- 1) Incorporate migratory bird habitat and population management objectives and recommendations into agency planning processes, in coordination with other governments, state and federal agencies and non-federal partners.
- 2) Strive to protect, restore, enhance, and manage habitat of migratory birds and prevent the further loss or degradation of remaining habitats on National Forest System lands.

• California Avian Conservation Plans

In 2002, the Draft Avian Conservation Plan for the Sierra Nevada Bioregion (Siegel and DeSante 1999). was completed by the Institute of Bird Populations in coordination with the Forest Service and other groups and agencies. The purpose of the draft plan was to summarize and analyze existing information on the status of Sierra bird populations and to suggest conservation actions to safeguard the populations and the habitats on which they depend. Breeding Bird Survey data and mark re-capture trends from Monitoring Bird Activity and Survivorship (MAPS) stations were two methods used to analyze population trends in the Sierra Nevadas. The draft plan stated that species dependent on a few critical habitats (montane meadows, non-meadow riparian, late successional/old growth, and oak woodland) are likely to exhibit decreasing population trends. Conservation strategies for these critical habitats will be assessed as part of the Last Chance Project to determine potential impacts on species that rely on these habitats during all or part of their life cycle. This will also aid in meeting the MOU requirements in protecting and/or enhancing habitat of migratory birds.

The Last Chance Project area contains coniferous forest, brush fields, and riparian stringers. Hardwoods are intermingled amongst the conifers creating mixed conifer stands. There are no pure hardwood stands in the area. The project area is also adjacent to private land consisting of conifer plantations intermixed with shrubs and grass, private homes, and special use facilities.

- **Coniferous Forests**

The Draft Avian Conservation Plan for the Sierra Nevada Bioregion, identifies old forest habitat as one of the top priority habitats for conservation of avian species in the Sierra Nevada. Objectives in the Coniferous Forest Bird Conservation Plan (Robinson & Alexander 2002) include: 1) Prioritize coniferous forest sites for protection; 2) Manage for old-growth/late successional conditions including closed canopy, large trees, large snags and natural fire regimes; 3) Manage for diversity of forest types, processes and characteristics including tree species and age diversity, multi-layer canopy, shrub understory, forest floor complexity, and herbaceous understory and 4) Implement and time management activities to increase avian reproductive success and enhance populations by managing coniferous forest at the landscape level and in conjunction with adjacent habitat.

Overlap between the Sierra Nevada Forest Plan Amendment and the Coniferous Forest Bird Conservation Plan fall primarily into the following management objectives and direction: 1) Old growth/late successional conditions; 2) Mimic natural fire regimes; 3) Large trees; 4) Large snags; and 5) Prioritize existing old growth/late successional coniferous forest habitats.

- **Oak Woodlands**

Objectives in the Oak Woodland Conservation Plan (Zack 2002) include: 1) Prioritize oak woodlands for protection; 2) Increase acreage of protected oak woodlands; 3) Prioritize oak woodland sites for restoration, 4) Restore protected oak woodland systems to benefit healthy bird populations by promoting oak regeneration, re-establishing understory components, mimicking natural fire regimes, providing cavity component, and having a mosaic of different oak species, including age diversity; 5) Implement and time management activities to increase avian reproductive success and enhance populations by managing at the landscape level and providing for a grass and shrub understory; and 6) Manage for diversity of forest types, processes and characteristics including management of non-native species, retaining dead oaks and mistletoe, protecting seedlings and saplings to enhance recruitment, and maintaining corridors between oak woodlands and other habitats.

The following strategies for management of a deciduous canopy as described in the working draft Eldorado National Forest North Fork Cosumnes Landscape Analysis are also applicable to areas within the Last Chance Project: 1) Conduct conifer thinning in young plantations prioritizing treatments where there is potential for understory development of deciduous trees and release of existing older hardwoods; 2) Provide for release of black oaks by thinning of conifers particularly along ridgetops and in lower elevations; 3) Avoid interplanting of conifers and allow natural regeneration of oaks to occur within these areas. This can also apply to landings and roads that are no longer part of the system and will be blended back into the environment; and 4) Manage oaks to provide faster development of canopy closure within areas of California spotted owl and northern goshawk Protected Activity Centers (PACs) that are currently lacking desired canopy closure due to stands of young conifers.

- **Riparian**

The Riparian Bird Conservation Plan (RHJV 2000) identifies Sierran mountain meadows as essential habitat for breeding and migratory stopovers for both neotropical migrants and resident landbirds. The following management actions recommended in the Draft Avian Conservation Plan for the Sierra Nevada Bioregion are also applicable to areas on the Forest: 1) Use a standardized methodology to identify meadows throughout the Sierra that are particularly valuable to breeding, dispersing, and migrating birds; 2) Use existing information to develop and implement management prescriptions for protected meadows; 3) Incorporate avian habitat needs into management practices on all meadows; and 4) Promote active restoration of meadows,

including revegetation and restoration of natural hydrological process, in an adaptive management framework.

- **Forest Service Region 5 Neotropical Migratory Bird (NTMB) Reference Book**

In 1994, the USDA Forest Service, Pacific Southwest Region (R5) undertook a region wide analysis of neotropical birds and produced the Neotropical Migratory Bird Reference Book (USDA 1994). This manual is used to address effects on neotropical migratory birds (NTMBs) from the Last Chance Project unless otherwise stated. On the Eldorado National Forest, ninety-nine NTMB species occur in a variety of habitat types including coniferous, hardwood, riparian, and chaparral (shrub dominated areas).

The peregrine falcon, northern goshawk, and willow flycatcher were addressed in the Last Chance Fuels Reduction Project Terrestrial Wildlife Biological Evaluation and Assessment (USDA 2003a) and therefore will not be discussed in this document. Point counts have not been conducted in the Last Chance Project area, however, based on elevation, species range, and habitat types, the western wood pewee, Hammond flycatcher, Nashville warbler, yellow warbler, yellow-rumped warbler, and hermit

warbler may occur in the area. These particular species were selected for analysis based on their susceptibility to changes in mature conifer forests and/or alterations in riparian zones or understory shrubs within coniferous forests.

The habitat trend analysis for neotropical migratory birds in California by Armijo, in 1992, concluded that “older stands of conifers and their associates, hardwoods, riparian areas, and meadows appear to present the greatest concern for the future trends in forest management for neotropical migrating birds” (USDA 1994). Habitat trends and associated declines or increases of NTMBs are addressed in the 1993 Assessing Risks and Setting Priorities for Neotropical Migratory Birds in California by Manley and Davidson (USDA 1994). The analysis mentioned that “though coniferous forests are one of the most abundant habitat types in California and have retained a somewhat constant species composition, their spatial arrangement and seral stage composition has changed over the past 150 years. Cumulative effects associated with this change have been reducing the number of later seral stands and their associated large trees, snags, and down logs. Uneven-age stands were also converted to even-age stands changing stand diversity. The result is increased habitat for species that require shrubs mixed with young conifers and decreased habitat for species requiring older stand characteristics”. Riparian areas are also listed as a habitat that is of high importance to several groups of NTMBs and has been greatly reduced in California.

PROJECT

For a detailed description of the alternatives refer to the Last Chance Fuels Reduction Project Environmental Assessment (USDA 2003b). Prescriptions and objectives for the Last Chance Project include or will result in:

- No trees over 30” diameter at breast height (dbh) will be harvested unless they pose a threat to human safety.
- Retention of the 2 largest snags per acre (>15” dbh) in defense zones.
- Retention of large diameter down logs.
- Removal of suppressed and intermediate understory trees.
- Removal of shade tolerant thickets of cedar and fir resulting from fire suppression.
- Increased growth of conifer species.
- Hardwood retention and establishment from reduced competition.
- Future recruitment of snags and down logs.

- Reduction of wildfire intensity in existing forested stands.
- Riparian buffers, including meadows.
- Removal of large, dense decadent brushfields with replacement by a more mosaic shrub and forb diversity.

NO ACTION ALTERNATIVE

The no action alternative would maintain habitat as it currently exists. There would be no indirect or direct effects in the short term to migratory bird species from treatment under this alternative. An increase in shade tolerant trees as well as a potential decline in hardwoods from competition with conifers is expected to continue without prescribed fire or mastication and may negatively effect habitat for species dependent on openings and hardwoods in both the short and long term. The Draft Avian Conservation Plan for the Sierras indicates poor black oak recruitment possibly due to fire suppression and estimates that without a change in fire management, the black oak component will only occupy a small portion of its current distribution. This combined with the conversion of lower foothill oak woodland in the past, and foreseeable future urban development will limit the availability of habitat and result in a continued decrease in oak-dependent bird populations (Siegel and DeSante 1999).

Priority habitats in the form of oak woodlands and old growth/late successional forest would not benefit from prescribed fire or thinning which would release hardwoods and increase growth of existing pine species. In addition tree species diversity would decline over time at the expense of avian species preferring pine species over white fir or incense cedar.

Cumulative effects through the continued buildup of fuels and increased risk of habitat loss due to succession of preferred habitat would continue to occur under this alternative. Habitat capability wouldn't improve as decadent brush fields and oaks will not be rejuvenated by prescribed fire. Conditions in which shade-tolerant species are making up the understory, will continue at the expense of oak regeneration and openings for forb and young shrub establishment that would be provided by thinning and burning under this alternative. Landing and riparian restoration as well as road closures will not occur under this alternative, prolonging return to natural forbs and oaks within these openings.

Areas along roads and ridgetops are experiencing black oak declines. Existing black oaks continue to be reduced through both legal and illegal woodcutting. Closure of roads will not occur under this alternative, leaving these areas vulnerable to easy access for removal of black oak. Current habitat capabilities for oak dependent species can also be expected to decline under this alternative from other pressures including increased public need for wood products for heating their homes, and illegal wood theft that targets both small and large black oak. Currently Sudden Oak Death Syndrome has not been detected in the project area and has not contributed to loss of hardwood habitat for wildlife. Potential loss of mature stands from fire, increased decadence of brushfields, decrease or loss of mast, and an ongoing increase in road and trail density will also contribute to the decline of hardwood habitat under this alternative.

Previous management activities within the watersheds, as shown in the Last Chance Cumulative Effects Appendix, have contributed to the degradation of habitat through increased road density and past harvest practices which targeted large diameter trees, and harvested snags. The creation of clearcuts has increased vegetative diversity, but many of these areas have become dominated by manzanita or deerbrush species. Fire suppression has allowed brushfields to become dense and decadent, which reduces vegetative diversity, appropriate patch sizes, and understory vegetation.

Past projects emphasizing thinning treatments resulted in a conversion from dense overstocked timbered stands through thinning prescriptions to more open stands and resultant ground cover.

This will benefit species that prefer this habitat, in the short term. In the long term species that utilize hardwoods, late seral (including cavity dependent species) will benefit as tree vigor is increased from reduced competition in the stands.

Plantation treatment that falls within the watersheds overlapping the Last Chance Project will continue to remove brush and other competing factors to enable stands to reach a mature seral stage. Use of herbicides would limit forage and nesting capabilities within these stands for birds that use low growing vegetation for nest substrates or for cover for nests. It will also affect the diversity of vegetation and associated insect component altering the prey base within the treated areas. Combined with non-herbicide treatments elsewhere in the watersheds, treatments in plantations would have a minimal effect on the forage base provided thinning and prescribed fire enabled young shrubs and other vegetation to replace decadent brush in other areas.

Private land activities will both benefit and impact birds in the area. Orchards, vineyards, and gardens in the residential areas will provide forage and shelter but will also put them at risk from traffic, cats, and homeowners. Fuels treatment proposed by the California Department of Forestry on private land adjoining areas being treated in the Last Chance Project will benefit hardwood associated birds by decreasing the decadent brush component, increasing the oak component, and eradicating noxious weeds, primarily scotch broom.

Overall when the Last Chance no action alternative is combined with existing and proposed projects within the five watersheds, it will have a negative effect as it will contribute to the continuing decline of habitat capability for migratory birds. The alternative will contribute to the long-term decline in population viability but will not lead to a trend in federal listing for birds associated with hardwoods, non-meadow riparian, and late seral forests. It will not alter viability for montane meadows as this habitat is not proposed for treatment in the project area under either of the alternatives. Work conducted by the California Department of Forestry will not be enough to bring up the habitat capability in the watersheds for birds, but may aid individual areas and their associated avian territories.

PROPOSED ACTION ALTERNATIVE

The proposed action alternative would alter current habitat conditions in the project area, including removal of ground fuels in the form of down wood, small thickets of conifers and brushfields. This would affect shrub and ground nesters, ground and shrub feeders, and security cover for both fledglings and adults. Understory trees under 30" dbh would also be removed affecting tree nesters and mid-canopy feeders. It may also alter potential thermal cover around snags for cavity nesters. Harvest, mastication, and prescribed burning during the nesting season could cause disturbance to adults, abandonment of the nest and/or displacement or loss of young. Ground nesting birds are especially vulnerable during this time and entire broods could be lost during prescribed burning. Mastication during the breeding season could affect ground, shrub and small tree nesters. If fuel reduction activities are done early enough in the season, birds may be able to re-nest provided there are unoccupied territories with suitable habitat nearby. Birds typically do not start nesting in the project area until late April on into June, dependent on when the last of the winter weather conditions have passed. Project activities that occur prior to April and after July will have little to no effects on most nesting songbird species as they will have not yet started nesting in the early season, or will have already fledged their young in the late summer. Due to the low elevation, project activities could occur year-round dependent on wet weather conditions.

The following species were analyzed to represent effects to riparian, shrub, and mature forest including multi-story stands and snags. Though not all are species identified in the MOU, they are neotropical birds and represent effects to a variety of habitat types with the project area and associated bird species dependent upon them.

Western Wood Pewee

The western wood pewee nests in mature forests and forages in riparian and natural openings. Management recommendations in the NTMB Reference Book include maintaining snags for feeding perches, maintenance of natural openings for foraging, and mature forests for nesting. Threats to the western wood pewee include fire suppression which enables the understory to fill in the natural openings, and removal of mature trees over time due to competition in the stands. The objectives and prescriptions for the Last Chance project will recreate natural openings and maintain snags, mature trees and riparian areas. The project will improve existing habitat for the species by enhancing foraging habitat and over time will expand nesting habitat as stand vigor and growth increases. The project will have short term benefits to the foraging habitat and long term benefits to the nesting habitat of this species and others with similar habitat needs.

Hammond Flycatcher and Yellow-Rumped Warbler

The Hammond flycatcher and yellow-rumped warbler require a multistoried, mature forest to nest in as well as large trees in the overstory to provide shade. The NTMB Reference Book recommends that mixed conifer areas be managed to provide contiguous habitat to support these species. It also recommends avoiding creating harsh edges when harvesting to prevent entry by the brown-headed cowbird, a nest parasite. The Last Chance project is not utilizing clearcutting prescriptions and natural undulating edges will continue to exist in the project area. Suppressed and intermediary trees are being targeted, leaving the larger dominant and co-dominant trees in the over- and understory, leaving a multilayered canopy. As mentioned for the western wood pewee, the area over time will enhance or expand nesting habitat as stands increase in vigor and growth. The alternative will have a neutral effect in the short term and a benefit in the long term to the nesting habitat for these species and those with similar habitat requirements.

Hermit Warbler

The hermit warbler requires large trees over a stand of smaller trees. Breeding habitat includes large diameter conifers, especially Douglas-fir. The management section of the NTMB Reference Book indicates size of trees is more critical than canopy closure and the species may be able to tolerate understory thinning of the smaller trees. Trees over 30" dbh are being retained within the stands and will continue to provide the requirements needed for the hermit warbler after harvest. Additional large diameter trees will be provided in the future as competition is reduced in the stand and remaining trees increase in growth. The project will have a short term neutral effect and a long term benefit to the nesting habitat of the species.

Yellow Warbler

The yellow warbler nests in riparian shrubs and saplings (as do the Swainson's and hermit thrushes). The NTMB Reference Book mentions to avoid disturbing shrubs and saplings up to 5 meters in riparian areas. Riparian buffers will help retain these habitat characteristics for the yellow warbler and other species requiring these habitat components. Best Management Practices (BMPs) and the guidelines for Riparian Conservation Areas will ensure riparian protection during thinning and prescribed burning. This alternative will have a neutral effect for nesting habitat for riparian dependent species. For species that forage outside the riparian buffers, there may be a short-term effect both negative initially on foraging habitat, as brush, conifer thickets and forbs are consumed by mastication or prescribed burning. However, replacement within a year or less of new forbs, grass, shrubs and tree seedlings will enhance the diversity of plant species in the area and the corresponding invertebrates that utilize them. Areas adjacent to treated areas will provide foraging habitat and will also contribute to vegetative diversity when the treated areas begin supporting new vegetation.

Nashville Warbler

As a result of fire suppression, it is estimated that chaparral has shifted to older, more decadent stands. Older stands are typically not as valuable as habitat as younger stands are to NTMBs (USDA 1994). The Nashville warbler nests in understory shrubs in openings in the forest. The NTMB Reference Book mentions that removal of understory shrubs through management actions such as skidding may result in the abandonment of the area by this species. Retention of randomly distributed pockets of understory brush should be retained to provide habitat for the species. In openings created by understory thinning, it can be expected that newly established shrubs will occur until the time that conifer growth shades out the shrubs in the stand. It is anticipated that pockets of shrubs will be retained after harvest for these species, however, should prescribed burning or mastication occur within the stands, these pockets of shrub retention could be lost.

Recommendations to the burn plan to create a mosaic fire pattern will enable pockets of shrubs to remain after burning. Pockets of brush could be flagged and avoided during mastication treatments resulting in retention of habitat in these units. This alternative will have a negative effect in some areas where shrubs are removed and a benefit where they remain. A long-term benefit of new shrubs created in openings by thinning, landing and riparian restoration, and road closures will have a beneficial effect until succession of the stand occurs and the shrubs are shaded out by conifers.

Hardwood Dependent Species

Species that utilize hardwood stands for nesting and/foraging will benefit in the long term by increased diversity, increase in recruitment of new oak trees, and increased growth and mast production of existing oaks in hardwood stands. Short term negative effects will be loss of cover and loss of seedling and sapling oaks from fire or mastication. If fire is light enough, young oaks will re-sprout and new seedlings will emerge once competing vegetation is removed. Burn prescriptions have provisions to aid in protecting mature oaks, as safety allows. Short-term loss to some old oaks from fire or incidental impact from equipment will be outweighed by the long-term enhancement of hardwood stands across the project area.

Cliff Dependent Species

No cliff associated species will be affected by this alternative.

Cavity Dependent Species

For effects to cavity nesting birds refer to the Last Chance Fuels Reduction Project Management Indicator Species Report (USDA 2003c). Two recommendations for cavity nesters are added here to protect habitat for the acorn woodpecker and the purple martin.

- Acorn woodpecker granaries will be protected from project activities, including hazard tree removal. Removal of a granary (acorn storage site) would adversely affect the family unit and potentially eliminate it from the area.
- Should snags need to be removed, maintain selected large diameter snags on ridgetops to meet purple martin, a colonial species, nesting needs. They prefer large diameter snags in the upper third of the slope, especially on ridgetops.

The proposed action alternative would benefit species dependent on hardwoods, late-seral habitat (including cavity nesters) and riparian habitats, and aid in increasing population viability for these species through maintenance or enhancement of habitat. This alternative would not lead towards a trend for federal listing.

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Appendix

Cumulative Effects Tables: Last Chance Fuels Reduction Project Information obtained from 2003 Cumulative Watershed Effects Reports

Clear Watershed Past Activities

Mechanical Tree Harvest

Project	Year	Type	Acres
Ridgerunner	2001	Biomass Thin	347
Nelly	2000	Thin	139
Tie Die	1999	Thin	29
Nelly	1995	Salvage	3
Halfshot	1992	Heli. Salvage	50
Halfshot	1992	Overstory	23
Halfshot	1991	Clearcut	151
Halfshot	1991	Overstory	142
Plummer FB	1991	Thin/Savage	125
Plummer FB	1990	Clearcut	4
Insect Salvage	1990	Salvage	33
Insect Salvage	1989	Thin/Tree Select	167
Insect Salvage	1985	Clearcut	38
Leoni	1977	Tree Select	34
Caldor	1972	Tree Select	75

Site Preparation

Project	Year	Type	Acres
Ridgerunner	2002	YUM*	38
Tie Die	2000	Pile Burn	3
----	1992	Pile Burn	69
----	1992	Burn	190
----	1986	Burn	38

*YUM-Yard Unmerchantable Material

Herbicides

Project	Year	Type	Acres
Ridgerunner	2000	Herbicides	261
----	1992	Herbicides	40
----	1991	Herbicides	8
----	1989	Grubbing	88
----	1988	Grubbing	88
----	1987	Grubbing	88

Grazing

Allotment	Acres In Watershed	Status	Allotment Plan Revision Schedule
Caldor	349	Inactive as of 1/1998	Not included in current schedule. Earliest to be included for analysis and potential active status would be 2010 or later.

Wildfire

Name	Year	Acres
----	1996	35
----	1996	5

Clear Watershed

Known Future Activities within Ten Years

Mechanical Tree Harvest

Project	Year	Type	Acres
Clear	2003	Thin	45

Site Preparation

Project	Year	Type	Acres
---	2003	Mastication	230
Ridgerunner	2007	Burn	78

Grazing

Allotment	Acres	Status	Allotment Plan Revision Schedule
Caldor	349	Inactive as of 1/1998	N/A. See past activities table.

Dogtown Watershed

Past Activities

Mechanical Tree Harvest

Project	Year	Type	Acres
Ridgerunner	2002	Thin/Biomass	310
Ridgerunner	2001	Thin	82
Tie Die	2001	Thin	70
Tie Die	2000	Thin	891
Capps	1999	Thin	30
LMF	1999	Thin	32
Road Hazard	1996	Ind. Tree Salvage	96
Salvage	1992	Salvage	66
Halfshot	1992	Heli. Salvage	1860
76	1991	Salvage	8
Insect Salvage	1991	Salvage	57
Insect Salvage	1990	Salvage	146
Insect Salvage	1989	Salvage	72
---	1988	Clear Cut	317
---	1987	Clear Cut/Thin	88
---	1985	Clear Cut	6
---	1984	Thin	19
Henry's	1980	Thin	25
Leoni	1980	Salvage	92
Insect Salvage	1978	Salvage	202
Caldor	1977	Thin	590
Ranger Station	1970	Thin	172
Caldor Fire Tank	1969	Thin	65

Site Preparation

Project	Year	Type	Acres
Tie Die	2002	Pile/Burn	155
---	2002	Masticate	53
---	2001	Masticate	327
---	1989	Burn	45
---	1988	Pile/Burn	355

Herbicides

Project	Year	Type	Acres
Ridgerunner	2001	Herbicide	28
---	1992	Herbicide	316
---	1993	Herbicide	88

Prescribed Burn

Project	Year	Type	Acres
Tie Die	2002	Underburn	54
Nelly	2002	Underburn	15
---	1995	Underburn	208
---	1996	Underburn	30

Grazing

Allotment	Acres In Watershed	Status	Allotment Plan Revision Schedule
Caldor	5353	Inactive as of 1/1998	Not included in current schedule. Earliest to be included for analysis and potential active status would be 2010 or later.
Cat Creek	178	Inactive as of 1/1998	Included in current schedule. Earliest to be included for analysis and potential active status would be 2006 or later.
Sopiago	17	Inactive	Included in current schedule. Analysis conducted in 2000, however was placed on inactive status.

Wildfire

Name	Year	Acres
Tie Die Rx Burn	2002	54
Nelly RX Burn	2002	15
Natural Fuels Burning	1995-2000	108
3 rd Entry	1995	100
Low Intensity – No effects	1996	30
Prescribed Burn	1990	175
Prescribed Burn	1988	200
---	1926	125
---	1924	3100
---	1919	415

Dogtown Watershed
Known Future Activities within Ten Years

Mechanical Tree Harvest

Project	Year	Type	Acres
Clear	2003	Thin/Pile/Burn	18

Site Preparation

Project	Year	Type	Acres
Clear	2003	Mastication	77

Burning

Project	Year	Type	Acres
Simpson	2006	Burn	179
Ridgerunner	2005	Burn	128
Clear	2005	Burn	29

Grazing

Allotment	Acres	Status	Allotment Plan Revision Schedule
Caldor	349	Inactive as of 1/1998	N/A. See past activities table.
Cat Creek			Potentially 2006 or later.
Sopiago			Analysis Complete. Inactive

Lower Lower Middle Fork Watershed
Past Activities

Mechanical Tree Harvest

Project	Year	Type	Acres
Ridgerunner	2001	Thin	46
Insect Salvage	1991	Heli. Salvage	850
Insect Salvage	1989	Salvage	10

Site Preparation

Project	Year	Type	Acres
None	N/A	N/A	N/A

Herbicides

Project	Year	Type	Acres
Ridgerunner	2001	Herbicides	10

Grazing

Allotment	Acres In Watershed	Status	Allotment Plan Revision Schedule
None	N/A	N/A	N/A

Wildfire

Name	Year	Acres
None	N/A	N/A

Lower Lower Middle Fork

Known Future Activities within Ten Years

Mechanical Tree Harvest

Project	Year	Type	Acres
Clear	2003	Thin/Masticate	10

Site Preparation

Project	Year	Type	Acres
Ridgerunner	2007	Underburn	15
PPP	2003	Mastication	32
PPP	2007	Mastication	32
PPP	2005	Mastication	32

Grazing

Allotment	Acres	Status	Allotment Plan Revision Schedule
None	N/A	N/A	N/A

Lower Steely Watershed Past Activities

Mechanical Tree Harvest

Project	Year	Type	Acres
Lincoln Log	1999	Harvest	40
Insect Salvage	1992	Salvage	37
Insect Salvage	1991	Salvage	80
---	1991	Clearcut	30
---	1991	Overstory	53
Insect Salvage	1990	Salvage	64
Insect Salvage	1989	Salvage	6
Insect Salvage	1988	Salvage	67
Insect Salvage	1979	Salvage	29
Insect Salvage	1978	Salvage	204
Leoni	1977	Overstory	76

Site Preparation

Project	Year	Type	Acres
Lincoln Log	1999	Pile/Burn	10
---	1992	Broadcast Burn	19
---	1992	Pile/Burn	33

Herbicides

Project	Year	Type	Acres
Ridgerunner	2000	Herbicides	33

Grazing

Allotment	Acres In Watershed	Status	Allotment Plan Revision Schedule
None	N/A	N/A	N/A

Wildfire

Name	Year	Acres
Several Small on private <5 acres	1987-1997	Variable

Lower Steely Watershed Known Future Activities within Ten Years

Mechanical Tree Harvest

Project	Year	Type	Acres
Clear Creek	2003	HandThin/Pile/Burn	29

Site Preparation

Project	Year	Type	Acres
---	2005	Underburn	13
PPP	2003	Masticate/Herbicide	04
---	2003	Mastication	15
Lincoln Log	2003	Burn	12

Grazing

Allotment	Acres	Status	Allotment Plan Revision Schedule
N/A	N/A	N/A	N/A

Upper Steely Watershed Past Activities

Mechanical Tree Harvest

Project	Year	Type	Acres
Ridgerunner	2002	Thin/Biomass	640
Ridgerunner	2001	Thin	172
2 nd Fiddle	2001	Thin	25
Tid Die	1999	Thin	993
Lincoln Log	1999	Thin	141
Road Hazard	1995	Indv. Tree Salvage	210
Halfshot	1992	Heli. Salvage	100
Insect Salvage	1992	Salvage	231
Insect Salvage	1991	Salvage	115
Insect Salvage	1990	Salvage	162
Insect Salvage	1989	Salvage	238
Quick Webster	1987	Clear Cut	30
Steely	1987	Tree Select	94
Steely/Twin	1986	Clear Cut	51
Twin/Leoni/Steely	1986	Overstory	245
Twin	1985	Overstory	110
Twin	1985	Indv. Tree Select	494
Steely	1984	Clearcut	108
Steely	1984	Overstory	10
Gilbert	1979	Salvage	158

Site Preparation

Project	Year	Type	Acres
Tie Die	2002	Handcut/Pile/Burn	363
Steely Dog	2001	Chip/Crush	15
2 nd Fiddle	2001	Pile/Burn	5
Lincoln Log	1999	Pile/Burn	3
Quick Webster	1989	Pile/Burn	21
Steely	1987	Pile/Burn	7
Steely	1987	Burn	33
Steely	1986	Pile/Burn	35
Steely/Twin	1986	Burn	73
Steely	1985	Pile/Burn	50
Steely	1985	Burn	16
Steely	1984	Burn	11

Upper Steely Watershed Past Activities

Herbicides

Project	Year	Type	Acres
Ridgerunner	2001	Herbicides	39
Quick Webster/Steely	1992	Grubbing	25
Steely	1992	Herbicide	29
Quick Webster	1990	Grubbing	21
Steely	1988	Grubbing	33
Steely	1987	Grubbing	130
Twin	1987	Herbicides	10
Twin	1987	Grubbing	14

Grazing

Allotment	Acres In Watershed	Status	Allotment Plan Revision Schedule
Caldor	2158	Inactive	Not included in current schedule. Earliest to be included for analysis and potential active status would be 2010 or later
Steely Creek	3082	Inactive	Not included in current schedule. Earliest to be included for analysis and potential active status would be 2010 or later

Wildfire

Name	Year	Acres	Comments
---	1926	Unknown	Area Recovered

Upper Steely Watershed Known Future Activities within Ten Years

Mechanical Tree Harvest

Project	Year	Type	Acres
---	2003	Hand Thin	118

Site Preparation

Project	Year	Type	Acres
Lincoln Log	2003	Burn	53
PPP	2003	Mastication	149
Ridgerunner	2003	Grapple Pile/Burn	200

Grazing

Allotment	Acres In Watershed	Status	Allotment Plan Revision Schedule
Caldor	2158		N/A. See past activities table.
Steely Creek	3082		N/A. See past activities table.