Monitoring Land Cover Changes in California

California Land Cover Mapping and Monitoring Program

Northern Sierra Project Area

Cycle II

June 2004

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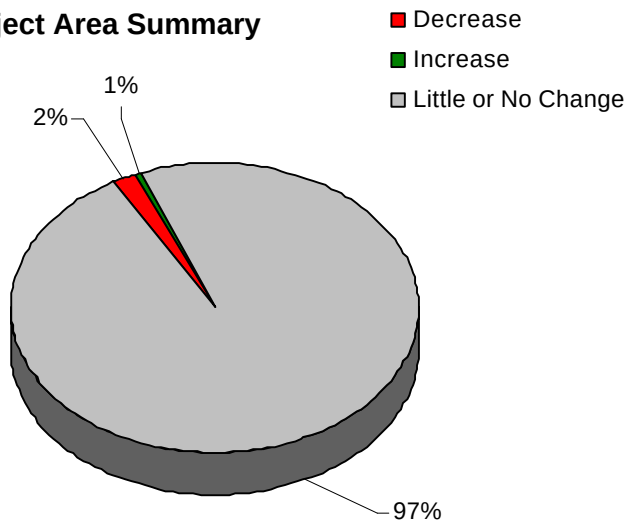
SUMMARY & HIGHLIGHTS

The California Land Cover Mapping and Monitoring Program (LCMMP) uses Landsat Thematic Mapper (TM) satellite imagery to map vegetation and derive land cover change (losses and gains) within five-year time periods. TM satellite imagery has a spatial resolution of 900 square meters (each pixel within a TM image is 30 meters on each side), or about 1/5 of an acre. The purpose of this program is not only to monitor vegetation changes over time, but also to provide information about trends as well. This data can inform mangers as to whether landscape management plans and policies are accomplishing their intended purposes. Land cover monitoring information should be a key source of information for consultation when starting land management plan revisions, preparing wildlife conservation assessments, and developing fire and vegetation policies.

This report focuses on land cover change from 1995/1996 through 2000 in the Northern Sierra project area, which is one of five project areas in California. The Northern Sierra project area covers 9.1 million acres, including all or most of Alpine, Amador, Calaveras, El Dorado, Placer, Plumas, Nevada, Sierra and Tuolumne Counties, while partially covering nine other counties. It also encompasses all or most of five national forests (Plumas, Tahoe, Lake Tahoe Basin Management Unit, Eldorado and Stanislaus), small portions of four other national forests (Lassen, Sierra, Inyo and Toiyabe) and other federal, state and privately owned lands. This report assesses vegetation cover changes on 8.7 million acres within hardwood, conifer, shrub/chaparral and grass/forb vegetation types. Although the total project area spans 9.1 million acres, 400,000 acres are not forest, shrub/chaparral or grass/forb (e.g., urban, agriculture, and water) and are not assessed in this report.

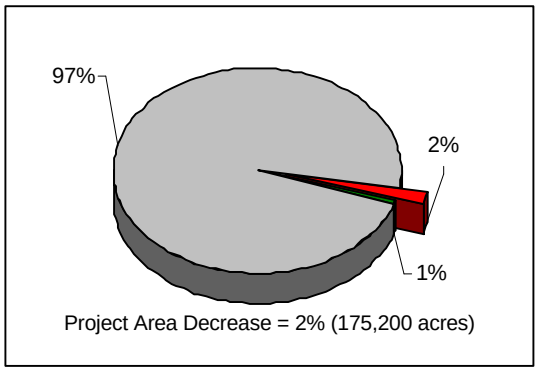
Change classes for LCMMP monitoring data are based on change in cover (CC). For hardwood, shrub/chaparral and conifer cover loss, change classes are broken down into three categories: –71 to –100% CC (71 to 100% decrease in cover), –41 to –70% CC and –16 to –40% CC. For hardwood, shrub/chaparral and conifer cover gain, change classes are broken down into two categories: +16 to +40% CC and +41 to +100% CC. In the grass and forb vegetation types, the change classes are quantified as a decrease or increase in vegetation cover of 16% or greater. The cause of change is also determined when possible. Monitoring data for this project area have an overall accuracy of 82.3%.

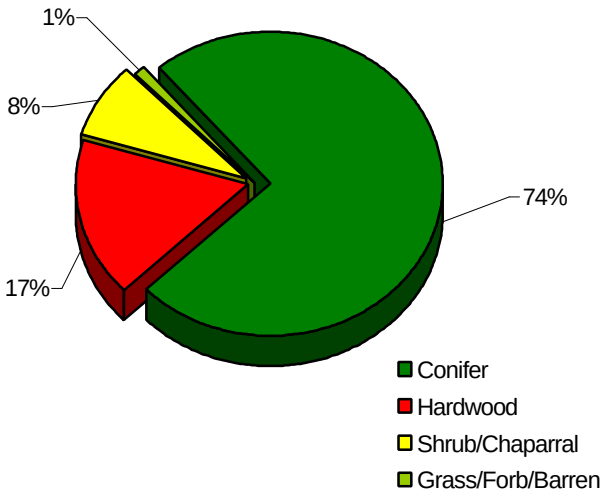
Project Area Summary



- Results show that 97% of the vegetation in the assessed 8.7 million acres does not have a detectable change between 1995/96 and 2000.
- Decreases across all vegetation types occur on approximately 175,200 acres (2% of the project area). Increases occur on about 49,700 acres (1% of the project area).

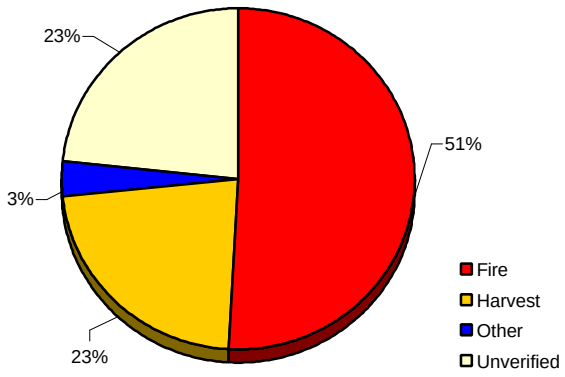
Decrease in Vegetation Cover



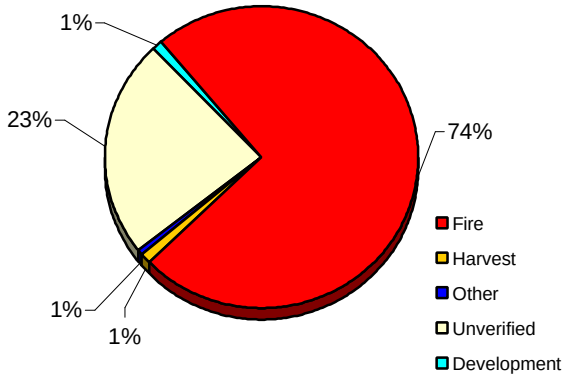


- Decreases in conifer account for about 129,500 acres of the total decrease in vegetation within the project area.
- Hardwood and shrub/chaparral show a decrease on about 29,900 acres and 14,000 acres, respectively.
- Fire is the primary cause of change in both the conifer and the hardwood vegetation types, affecting about 65,600 acres and 21,900 acres, respectively.
- Harvest is a major cause of change within conifer types, accounting for approximately 29,200 acres of the total decrease.

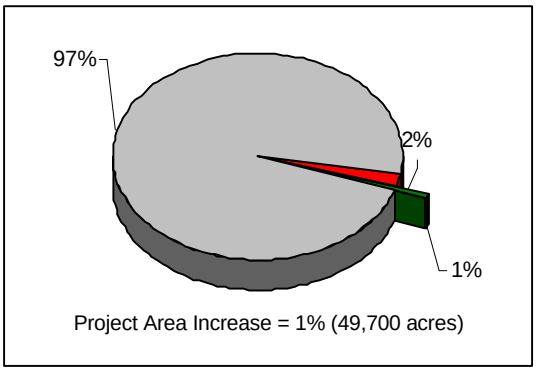
Conifer Decrease by Cause

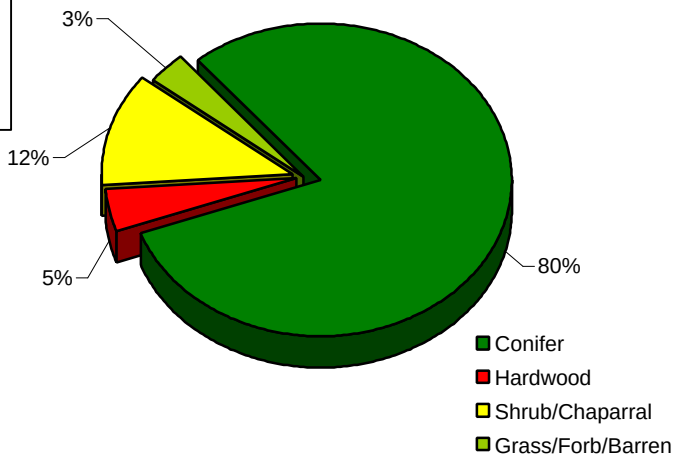


Hardwood Decrease by Cause



Increase in Vegetation Cover

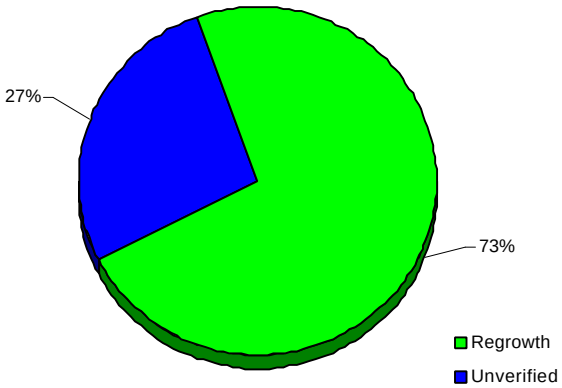




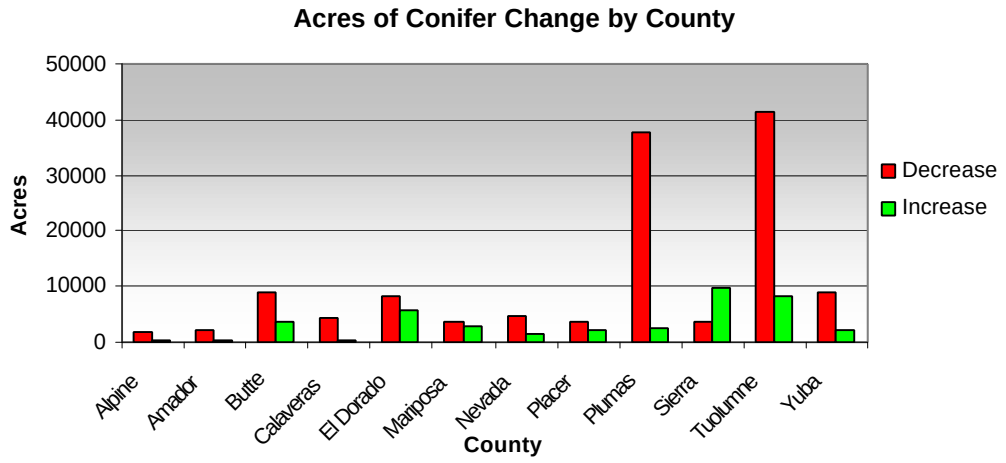
- Increases in conifer account for nearly 40,000 acres of the total increase in vegetation in the project area.
- Shrub/chaparral shows an increase on about 5,700 acres.
- Regrowth is the primary cause for increase in both conifer and shrub/chaparral types, affecting about 26,600 acres and 4,200 acres, respectively.
- Cause of change is unverified on more than one-quarter of the increase in both the conifer and the shrub/chaparral types.

Conifer Increase by Cause

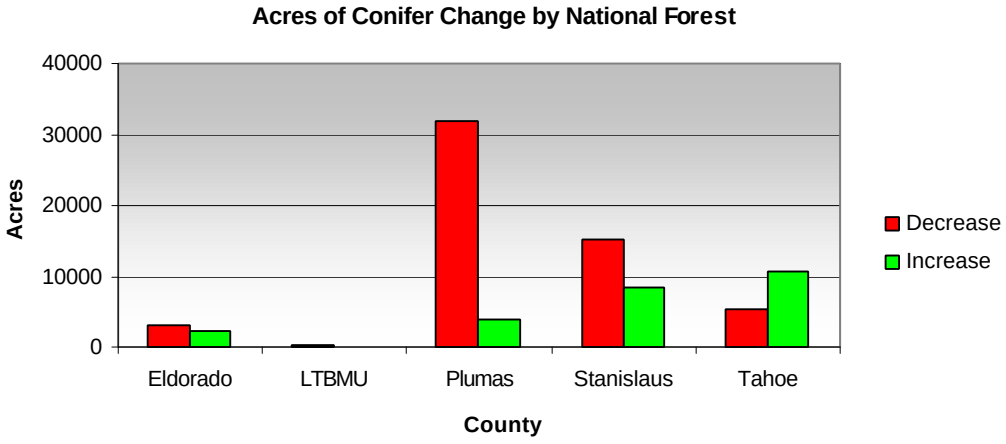
Shrub/Chaparral Increase by Cause



Conifer Highlights

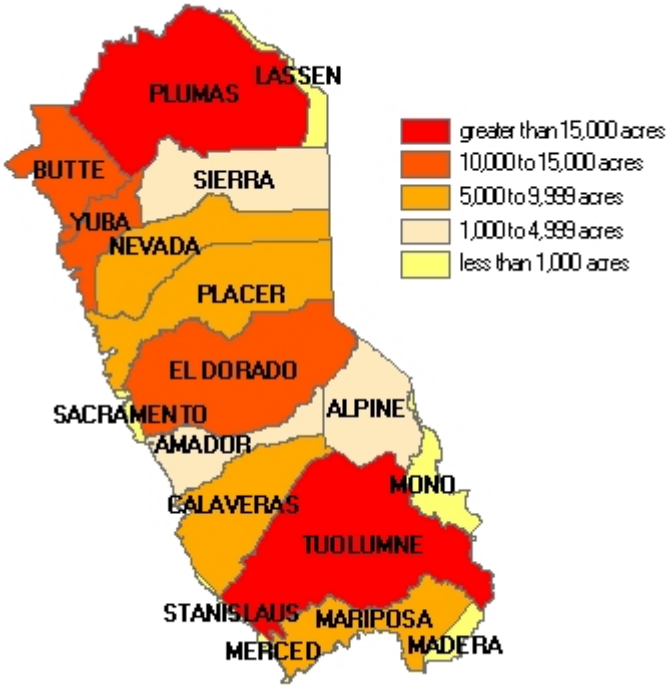


- Decreases in conifer are present in every county analyzed, with the largest amounts occurring in Tuolumne and Plumas Counties (approximately 41,300 acres and 37,800 acres affected, respectively).
- Increases in conifer are largest in Sierra and Tuolumne Counties, with about 9,700 acres and 8,400 acres affected, respectively.
- At the National Forest Level, Plumas National Forest show the most decrease in conifer, with about 32,600 acres affected, while the Tahoe National Forest shows the largest amount of increase in conifer, with about 11,000 acres affected.



Total Vegetation Change by County

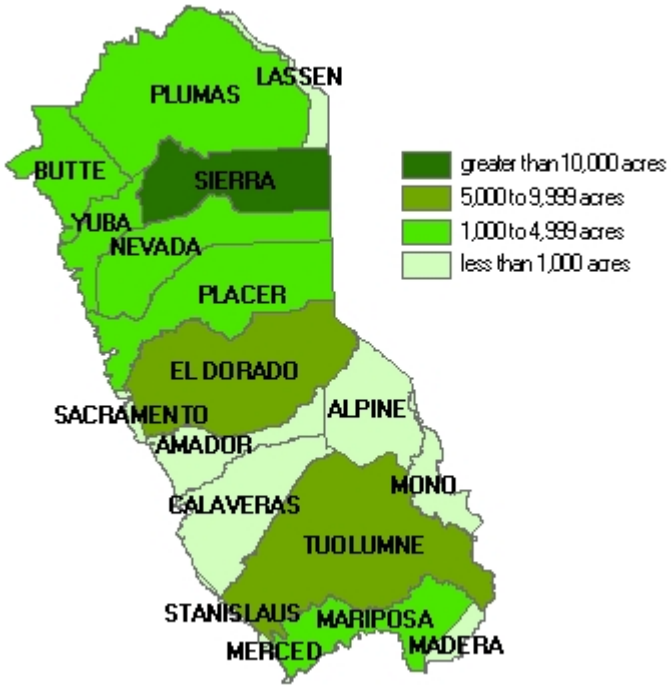
Decrease



- Tuolumne and Plumas Counties show the greatest amount of decrease in vegetation, with about 54,400 acres and 44,600 acres affected, respectively.
- Fire is the predominant cause of decrease for these two counties and is the primary cause of vegetation decrease in Yuba and Butte

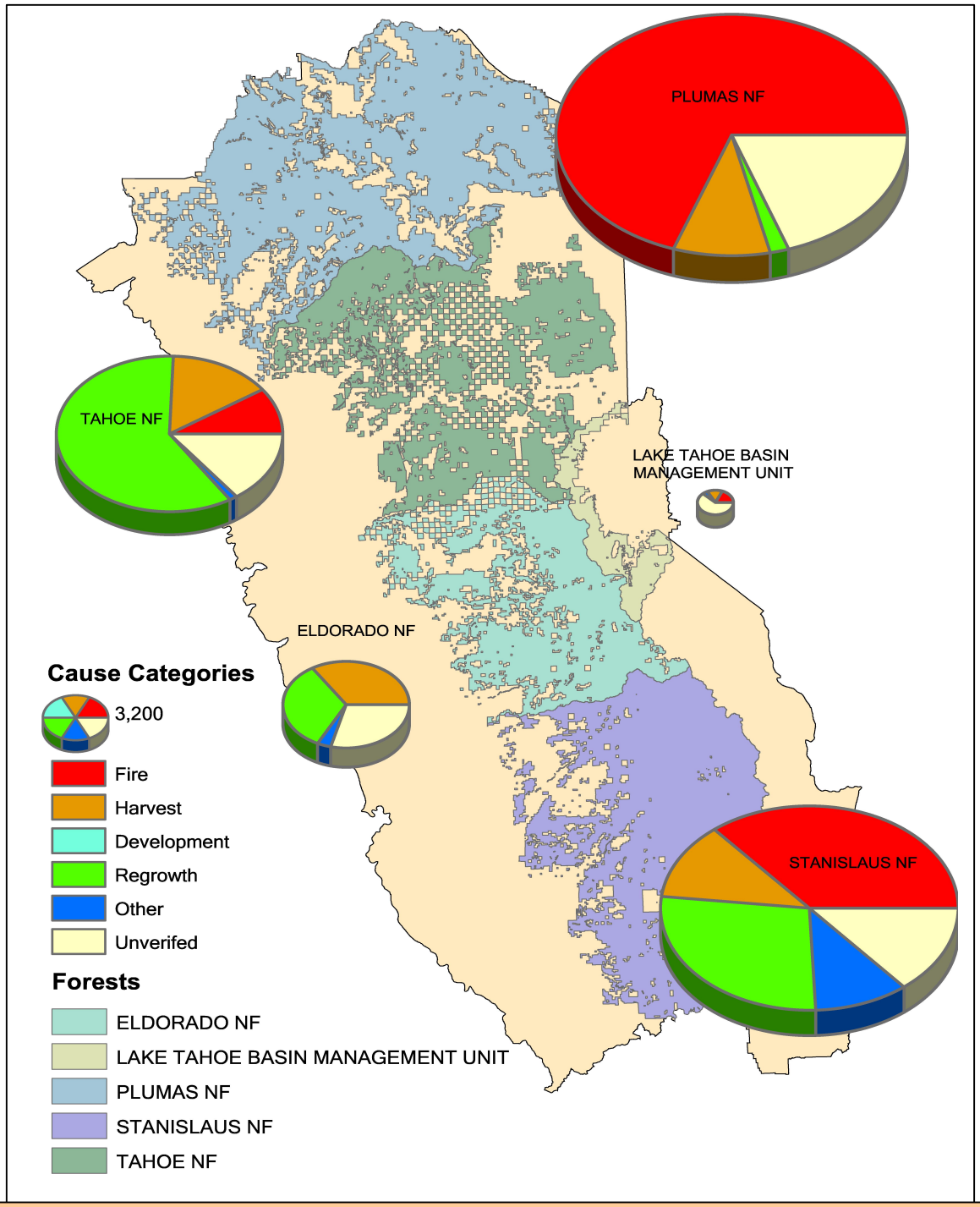
Increase

- Sierra County has the largest amount of increase in vegetation, with about 12,600 acres affected.
- Eldorado County also shows a significant amount of increase in vegetation, with approximately 6,700 acres affected.
- The primary cause for increase in vegetation in all counties is regrowth.



Cause of Change by National Forest *

***** *size of pie charts are in proportion to the amount of change on each forest*

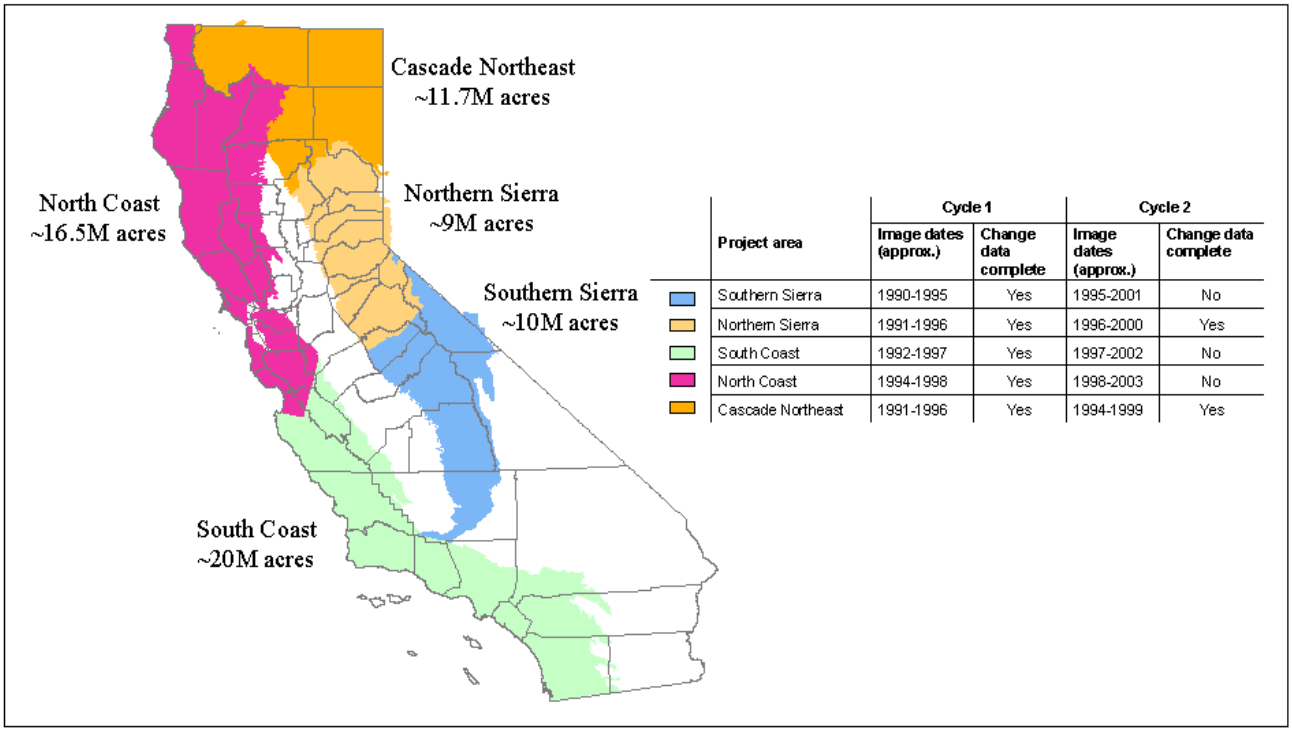


- Fire is the predominant cause of vegetation change on both the Plumas NF and the Stanislaus NF, affecting about 29,200 acres and 11,550 acres, respectively.
- Harvest accounts for some change within every forest; the largest proportion of change is found on the Eldorado (~2,000 acres). Large amounts of vegetation change caused by harvest are found on the Plumas NF and Stanislaus NF as well (~4,650 acres & ~3,300 acres, respectively).
- Regrowth is most evident on the Tahoe NF, with 10,850 acres showing an increase due to regrowth.

INTRODUCTION

The California Land Cover Mapping and Monitoring Program (LCMMP[1]) is a collaboration between the USDA Forest Service (FS) and the California Department of Forestry and Fire Protection (CDF) to create seamless vegetation and monitoring data across all ownerships within the Forest and Rangeland vegetation types in California. This program uses Landsat Thematic Mapper (TM) satellite imagery to derive land cover change (vegetation decreases and increases) within five-year time periods. It also determines the cause of change through fieldwork, aerial photo interpretation and Geographic Information Systems (GIS) analysis. Monitoring data created by the LCMMP quantify changes in California's landscape and provide necessary information for regional assessment across jurisdictional boundaries. These data provide consistent, high quality information to help manage, assess and protect California's diverse vegetation resources at a low per acre cost (approximately 2 cents per acre).

Monitoring of land cover change occurs in one of five distinct project areas per year (Figure 1). Analysis is complete for all project areas in the first statewide cycle. Each project area will be revisited during the next statewide cycle. Land cover monitoring maps can be downloaded from http://frap.cdf.ca.gov/data/frapgismaps/select.asp or http://www.fs.fed.us/r5/spf/about/fhp-change.shtml. Reporting is complete or in progress for all areas. Completed reports can be downloaded from http://frap.cdf.ca.gov/titles/publications.asp. Additionally, an interactive mapping application is available for some project areas on a CDF internet map sever (IMS) at http://frap.cdf.ca.gov/projects/land_cover/monitoring/index.html.



Project area	Cycle 1 Image dates (approx.)	Cycle 1 Change data complete	Cycle 2 Image dates (approx.)	Cycle 2 Change data complete
Southern Sierra	1990-1995	Yes	1995-2001	No
Northern Sierra	1991-1996	Yes	1996-2000	Yes
South Coast	1992-1997	Yes	1997-2002	No
North Coast	1994-1998	Yes	1998-2003	No
Cascade Northeast	1991-1996	Yes	1994-1999	Yes

Figure 1. Location and extent of project areas with monitoring schedule.

[1]For additional information visit our web pages at http://frap.cdf.ca.gov/projects/land_cover/index.html or http://www.fs.fed.us/r5/spf/about/fhp-change.shtml

The FS and CDF have mapping, resource management and resource protection responsibilities across much of the non-irrigated and non-urban land in the Northern Sierra region. The FS manages most resource activities within the national forests, such as timber management, recreation, forest health programs, fire protection and grazing allotments. CDF is responsible for providing fire protection on most private and state lands, regulating timber harvests on private lands and monitoring resource conditions across all wildlands in the area. The LCMMP monitoring information provides a single consistent source of current landscape level and site-specific change to the FS and CDF as well as other interested federal agencies (e.g., Fish and Wildlife Service, National Park Service, Bureau of Land Management), state agencies (Fish and Game, Parks and Recreation, State Water Resources Control Board), county governments, city governments and other interested parties. The project area covers all or most of Alpine, Amador, Calaveras, El Dorado, Placer, Plumas, Nevada, Sierra and Tuolumne Counties, while partially covering nine other counties, as indicated in Table 1. It also encompasses all or most of five national forests (Plumas, Tahoe, Lake Tahoe Basin Management Unit, Eldorado, and Stanislaus), small portions of four other national forests (Lassen, Sierra, Inyo, and Toiyabe) and other federal, state and privately owned lands (Figures 2 and 3). This report assesses land cover changes on 8.7 million acres within conifer, hardwood, shrub/chaparral and grass/forb vegetation types. Although the total project area spans 9.1 million acres of land, 400,000 acres are not forest, shrub, chaparral or grass lands (e.g., urban, agriculture and water) and are not included in this analysis.

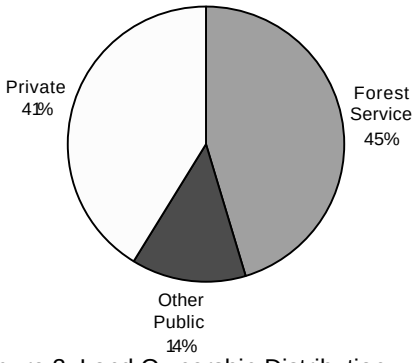


Figure 2. Land Ownership Distribution

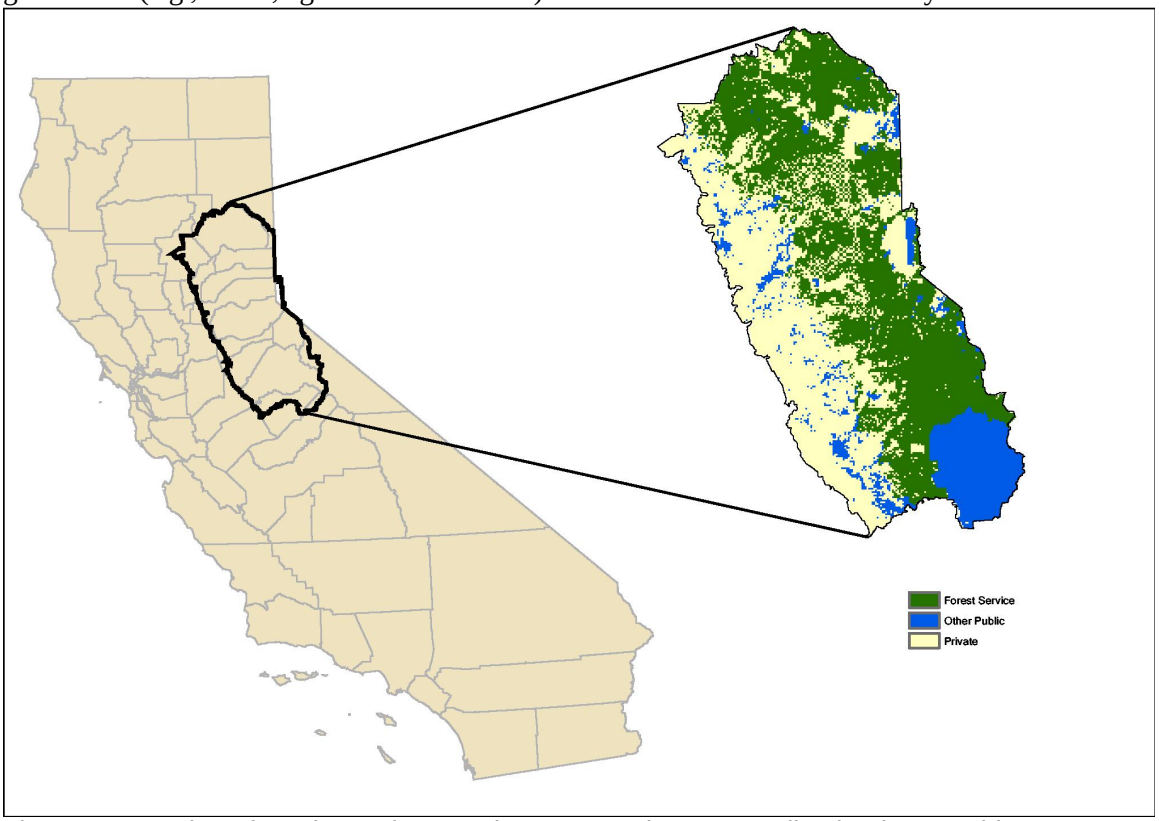


Figure 3. Location of Northern Sierra Project Area and corresponding land ownership.

Table 1 shows the proportion of each county covered by the project area. In this report, some counties are only partially analyzed, as the boundary of the Northern Sierra project area does not overlap completely with these counties. This is because project area boundaries are predominantly defined by ecological zones. Other factors are also taken into account in defining project area boundaries, such as national forest and TM scene boundaries. Additionally, agriculturally dominated areas are excluded from the project area.

Table 1. Acres of County Analyzed by Private and Public Ownership (California Only)

COUNTY	Private	Public	Total Acres in County	% Of County Analyzed
ALPINE	34,947	438,042	474,575	100
AMADOR	243,222	88,008	387,750	85
BUTTE	298,512	111,713	1,072,262	38
CALAVERAS	476,494	132,614	662,780	92
EL DORADO	603,046	541,786	1,144,833	100
LASSEN	41,525	70,545	3,020,854	4
MADERA	0	77,963	1,378,684	6
MARIPOSA	109,895	380,578	936,170	52
MERCED	8,657	0	1,261,165	1
MONO	2,547	186,034	2,007,749	9
NEVADA	406,788	216,841	623,650	100
PLACER	439,560	381,513	959,874	86
PLUMAS	326,444	1,033,695	1,672,043	81
SACRAMENTO	31,033	914	635,644	5
SIERRA	176,037	438,771	615,256	100
STANISLAUS	22,370	0	969,742	2
TUOLUMNE	356,978	1,101,347	1,458,463	100
YUBA	171,158	72,550	411,511	59

CHANGE DETECTION MONITORING PROCEDURES

Images and Maps

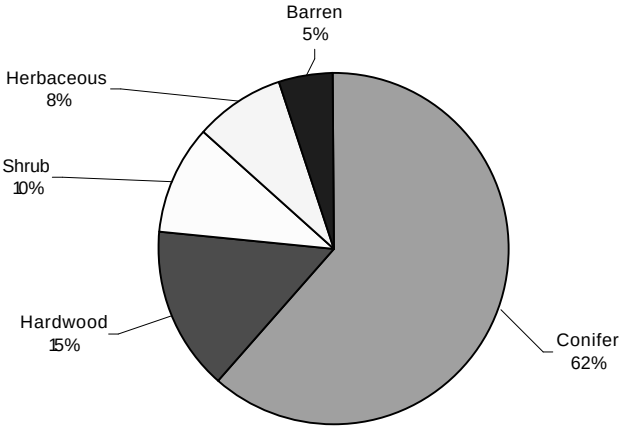


Figure 4. Proportion of each lifeform in project area.

The LCMMP uses two dates of TM imagery to derive land cover change. Change detection techniques interpret differences in spectral reflectance between image dates to produce a map depicting various levels of vegetation change. A difference in spectral reflectance (the amount of sunlight reflected from surface features to the satellite in space) between image dates indicates where change probably occurred (for further details, see Appendix B). For hardwood, shrub/chaparral and conifer cover loss, change classes are broken down into three categories: -71 to -100% CC (71 to 100% decrease in cover), -41 to -70% CC and -16 to -40% CC. For hardwood, shrub/chaparral and conifer cover gain, change classes are broken down into two categories: +16 to +40% CC and +41 to +100% CC. In the grass and forb vegetation types, the change classes are quantified as a decrease or increase in vegetation cover of 16% or greater (Figure 5; Table 2).

The overall accuracy of the Northern Sierra change map is 82.3%. A total of 492 randomly selected change areas with known reference information were evaluated to assess the accuracy of the change map. Out of the 492 sample sites, 405 were correctly classified (see Appendix C for details on the accuracy assessment).

Vegetation data are used to determine which lifeforms, WHR types and CALVEG types are experiencing various magnitudes of change. "Lifeforms" are general land cover categories, such as conifer and hardwood (Figure 4). WHR stands for Wildlife Habitat Relationships System, and is a habitat classification system (e.g., Blue Oak Woodland, Klamath mixed conifer, and Coastal Scrub). CALVEG is a vegetation classification scheme based on the Classification and Assessment of Visible Ecological Groupings system. CALVEG types are more specific vegetation types (e.g., coast live oak and red fir) and are only used to summarize change on Forest Service land in this report (see Appendix A for more details on vegetation data). Every WHR and CALVEG type is represented by a lifeform (Appendix E and F).

Because many vegetation layers exist for different parts of the project area, the best available vegetation data are collected and combined into one seamless data layer. Vegetation layers not containing a WHR classification (Mayer and Laudenslayer, 1988) are given a WHR classification based on the information in that layer. LCMMP vegetation data are used for the entire project area, and contain lifeform, WHR and CALVEG type. See Appendix A for vegetation data sources.

Causes of Change

Once the final change map is complete, an attempt is made to verify cause on all change areas. Causes of change are verified through GIS analysis, fieldwork, photo interpretation and interpretation by land managers, landowners and other stakeholders. The GIS analysis uses the CDF forest practices database, FS stand record system and statewide fire history layer to attribute changes caused by harvests, regeneration and wildfires. Aerial survey mortality data are also often used to help identify pest-related changes. FS resource managers interpret change maps by applying local knowledge and fieldwork to identify sources of change on Forest Service lands. Similarly, University of California (UC) Integrated Hardwood Rangeland Management Program (IHRMP) personnel consult private landowners to verify causes of change in hardwood rangelands. Despite all of these efforts, complete cause verification is not always possible due to the large number of change areas, insufficient information and inaccessible lands (see Appendix B for more information on cause verification).

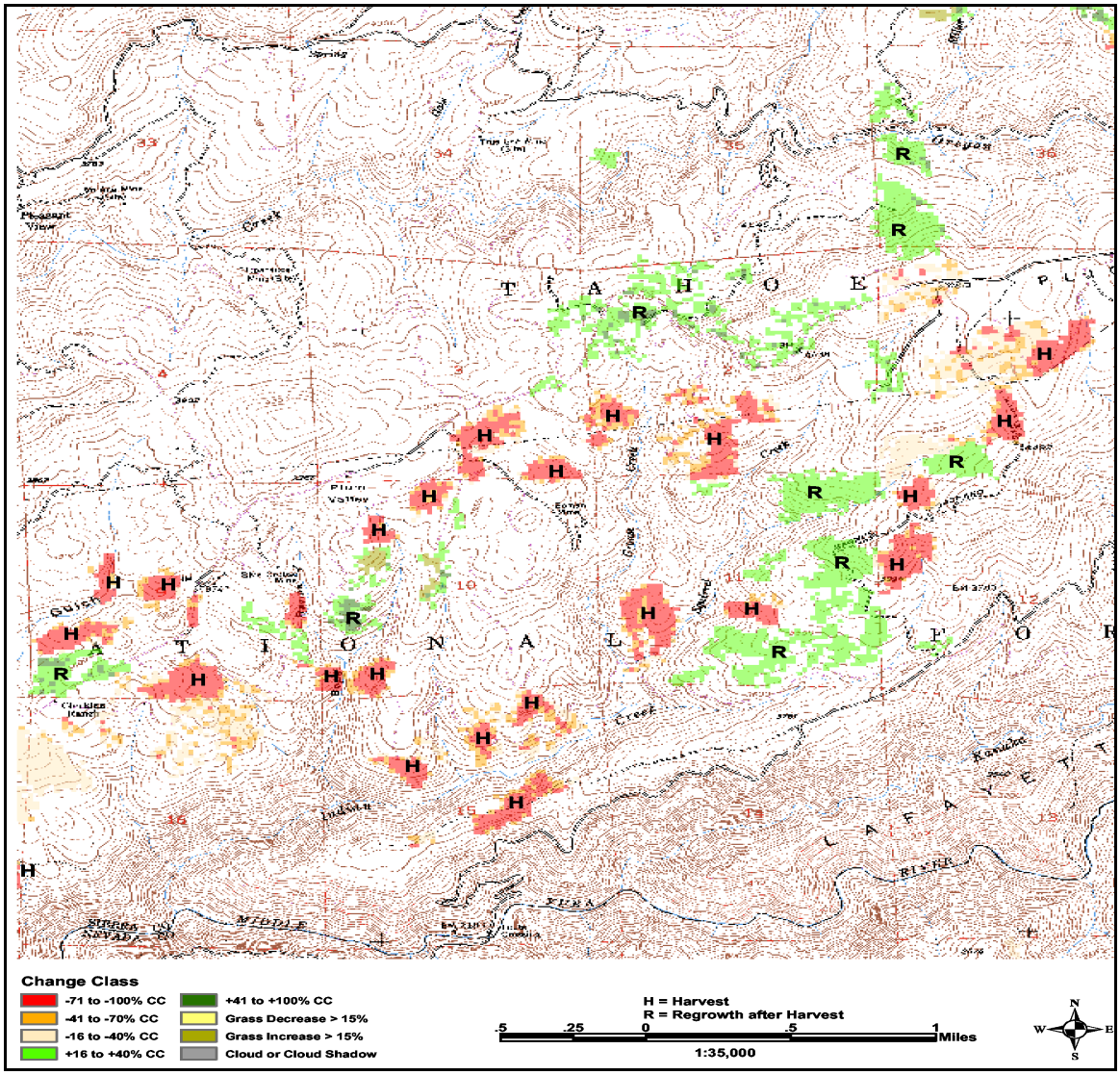


Figure 5. Portion of change map with typical harvest pattern in the Pike quadrangle, Sierra County

INTERPRETING RESULTS

Interpreting Change

Mapped vegetation change indicates areas that have undergone some form of vegetation decrease or increase between image dates (refer to Figure 1a in Appendix A for exact dates). For shrub/chaparral, hardwood and conifer cover loss, change classes are broken down into three categories: -71 to -100% CC (71 to 100% decrease in cover), -41 to -70% CC and -16 to -40% CC. For shrub/chaparral, hardwood and conifer cover gain, change classes are broken down into two categories: +16 to +40% CC and +41 to +100% CC. In the grass and forb vegetation types, the change classes are quantified as a decrease or increase in vegetation cover of 16% or greater. The little to no change class indicates that change within the existing vegetation is either nonexistent or too subtle to detect. Table 2 describes the different change classes.

Multiple change classes are created to represent quantifiable levels of cover change (Table 2). In the text and tables of the main report, however, changes are generalized and denoted simply as an "increase" or "decrease" in cover. To see details on each change class, see the tables in Appendix G.

Table 2. Change Classes and Corresponding Description

CHANGE CLASS	DESCRIPTION
-71 to -100% CC	71 to 100% decrease in cover
-41 to -70% CC	41 to 70% decrease in cover
-16 to -40% CC	16 to 40% decrease in cover
+15 to -15% CC (Little or No Change)	Little or no change in cover
+16 to +40% CC	16 to 40% increase in cover
+41 to +100% CC	41 to 100% increase in cover
Grass Decrease > 15%	16 to 100% decrease in grass
Grass Increase > 15%	16 to 100% increase in grass
Cloud or Cloud Shadow	Cloud or cloud shadow (prevents change assessment)

Change values are reported in two ways: by area, or acres of change, and by proportion. A particular value in acres, such as 15,000 acres, indicates that 15,000 acres have undergone a vegetation change of 16% or more. Proportion refers to the amount of land undergoing a change relative to the total area of that particular vegetation type. As an example, if 1.3% of montane hardwood experienced a decrease in cover, then 1.3% of the montane hardwood analyzed in the project area experienced a cover change of 16% or more. This does not mean that 1.3% of montane hardwood is gone, that the cover of montane hardwood has decreased by 1.3%, nor does it mean that the volume of montane hardwood has decreased by 1.3%.

Bear in mind that a detected vegetation cover increase, particularly a small increase, does not necessarily represent a gain in canopy or extent of a specific vegetation type. In some cases it represents understory regrowth or seasonal variation. The hardwood and shrub/chaparral types with low canopy cover are particularly sensitive to this phenomenon due to the presence of understory grasses and forbs within these types. Conversely, once vegetation fully covers a site, a change may not be detected even though biomass is increasing or stand structure is changing.

Results are particularly difficult to interpret for brushland types. Land uses that cause type conversion from brushlands (e.g., development) are most likely to result in detectable levels of vegetation change. Disturbances that do not result in type conversion (e.g., changes in grazing or

low intensity fires) may escape detection. For example, Figure 6 shows two fires that burned chaparral dominated areas in 1990. The monitoring process detected regrowth in the northernmost fire, but not in the southernmost, possibly because the area in the southernmost fire had burned and regrown prior to the second image date, causing the monitoring process to effectively "miss it" due to timing. Complex interactions between many factors such as site quality, vegetation composition and structure and fire intensity determine conditions at the two monitoring dates, and thus whether or not a change can be detected. Additional research is needed to explore potential improvements in the methodology for monitoring brushlands and changes due to seasonality.

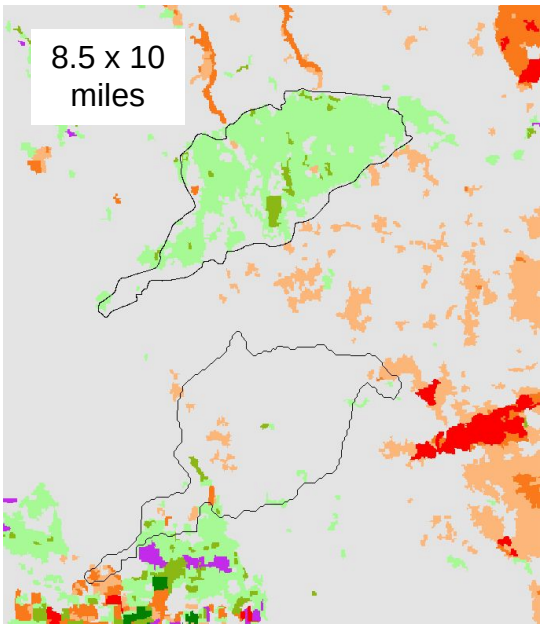


Figure 6. Comparison of two fires that burned in chaparral dominated areas.

Interpreting Cause

When interpreting results by cause, it is important to note that some ancillary data sources are more complete than others. Change caused by wildfire is generally easily verified because the FS and CDF maintain a fairly comprehensive fire perimeter data layer. Other sources of change are often more difficult to verify as data is unavailable and exhaustive fieldwork to identify all changes is impractical.

Cause is usually identified in one or more of three ways. First, ancillary data layers (e.g., FS plantation database, state fire history database, etc.) are used to identify cause. Second, regional experts familiar with a particular area are asked to identify causes of change. And lastly, photo interpretation is used to identify causes of vegetation change. Some error in cause attribution is expected as ground experts may make errors, ancillary data layers may not be perfect and photo interpreters may not be 100% correct.

Vegetation mapping errors may also contribute to change/cause combinations that seem unrealistic or inconsistent. For instance, Table 16 shows that 491 acres of shrub/chaparral change are caused by harvest. This could be due to the attribution errors mentioned in the previous paragraph, or this could be due to errors in the input vegetation data. In this case, it is likely that harvest is the identified cause of change according to data layers or ground experts, but because the input vegetation shows the area as shrub/chaparral, the area is classified as a shrub/chaparral decrease due to harvest.

Many causes are extremely difficult to verify, particularly causes that affect only small areas, such as development. However, just because a particular cause may have little or no affected area, it does not necessarily follow that this cause was not important. The unverified cause acreage could belong to any of the categories mentioned in this report, such as harvest or development. But the unverified cause could also be due to other causal agents, such as landslides, local mortality or management activity; therefore, acres listed for the various causes represent a minimum acreage of change.

Calculating a “net” change by simply comparing acres of decrease and increase does not necessarily provide a full and accurate portrait of change. Vegetation decreases are usually quick and dramatic, such as those caused by fire, harvest, and development, while increases in vegetation are often more gradual (particularly for hardwood and conifer), and may not increase at the minimum change class of at least 16% during a five year period. A decrease in large trees or other mature vegetation types will be followed by decades of net regrowth, although only the first five to ten years will have sufficient change in cover to register as an increase. Some decreases in vegetation, such as development and conversion to agriculture, are permanent losses to that particular vegetation. Comparing vegetation that is permanently lost or removed to vegetation that has temporarily increased mixes two different processes.

DISCUSSION OF RESULTS: ENTIRE PROJECT AREA

Of the 9.1 million acres in the project area, about 400,000 acres are bare rock, agriculture, water or urban. The remaining 8.7 million vegetated acres are composed of the conifer, hardwood, shrub/chaparral and grass/forb lifeforms, each covering about 5.3, 1.3, 0.9 and 0.7 million acres, respectively.

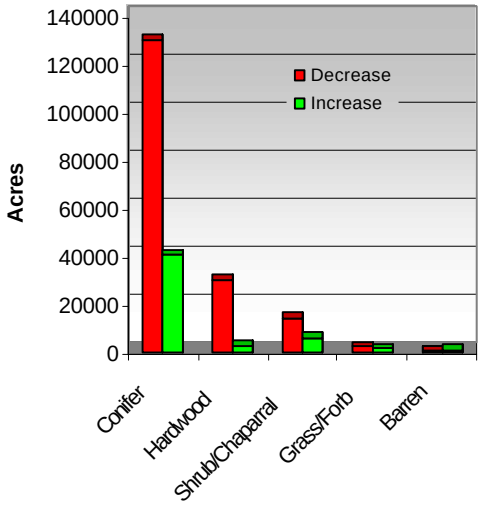


Figure 7. Acres of vegetation change by lifeform.

Approximately 97.0% of the vegetation in the project area does not exhibit a detectable change between 1995/1996 and 2000. Decreases in vegetation cover occur on approximately 2.0% (~175,200 acres) of the assessed 8.7 million acres in the project area and increases occur on about 0.6% (~49,700 acres). Most of the change occurs in the conifer lifeform (Figure 7). All lifeforms show a larger area affected by a decrease in vegetation than by an increase in vegetation. Both the conifer and the hardwood lifeforms contain over twice as much decrease in vegetation as increase. See Appendix G for more detailed change tables.

Cause of change is verified on 165,636 acres (73.6% of the vegetation change within the project area). Fire is the predominant cause of change, followed by regrowth and harvest. These causes are verified on about 97,000 acres, 32,000 acres and 30,000 acres, respectively. Cause of vegetation change could not be verified on 59,177 acres. See Appendix B for more information on unverified cause.

Conifers

The conifer lifeform encompasses about 5.3 million acres of the Northern Sierra project area. The predominant conifer types are sierran mixed conifer, red fir, montane hardwood conifer, ponderosa pine and Douglas fir; together they comprise about 74% of the conifer area. Sierran mixed conifer covers about 40.0% of the conifer area, red fir about 10.4%, montane hardwood conifer covers about 8.6%, ponderosa pine about 7.8% and Douglas fir about 7.2%. The remaining area is distributed among Jeffrey pine (5.4%), eastside pine (5.3%), lodgepole pine (4.7%), pinyon-juniper (4.7%), juniper (0.3%) and closed cone pine-cypress (<. 01%).

Conifers show a change in cover on 169,490 acres within the project area, or 3.2% of their total area (Table 3). Decreases occur on 129,498 acres (2.4%) and increases occur on 39,991 acres (0.7%). Cause is verified on 126,659 acres, or 75% of the conifer change. Fire is the overwhelming cause of conifer change (65,632 acres), followed by harvest (29,206 acres) and regrowth (26,636 acres).

Of the conifer types in the project area, sierran mixed conifer displays the largest area affected by a decrease in cover with 65,957 acres affected (3.1%). Proportionally, ponderosa pine exhibits the largest decrease at 4.1% (17,127 acres). Similarly, the largest areas and proportions of increase are also found in these types, with sierran mixed conifer having the largest area of increase with 22,626 acres affected (1.1%) and ponderosa pine showing the greatest proportion of increase at 1.5% (6,492 acres). Table 3 shows conifer cover change by WHR type.

Table 3. Acres of Conifer Cover Change by WHR Type

WHR Type	Decrease in Cover	% Decrease	Increase in Cover	% Increase	Total Change	Total % Change
Unknown Conifer Type	23	1.2	2	0.1	25	1.3
Closed Cone Pine-Cypress	11	0.6	14	0.8	24	1.4
Douglas Fir	10,520	2.7	4,140	1.1	14,661	3.8
Eastside Pine	6,253	2.2	1,143	0.4	7,395	2.6
Jeffrey Pine	3,579	1.2	268	0.1	3,847	1.3
Juniper	53	0.4	3	<0.1	56	0.4
Lodgepole Pine	948	0.4	49	<0.1	997	0.4
Montane Hardwood-Conifer	12,346	2.7	3,269	0.7	15,614	3.4
Pinyon-Juniper	295	0.4	10	<0.1	304	0.5
Ponderosa Pine	17,127	4.1	6,492	1.5	23,619	5.6
Red Fir	5,843	1.1	518	0.1	6,361	1.1
Subalpine Conifer	517	0.2	36	<0.1	553	0.2
Sierran Mixed Conifer	65,957	3.1	22,626	1.1	88,583	4.1
White Fir	6,027	2.4	1,424	0.6	7,451	3.0
Total	**129,499**	**2.4**	**39,991**	**0.7**	**169,490**	**3.2**

Fire is responsible for over half of the conifer decrease within the project area and affects nearly every conifer type (Table 4). Sierran mixed conifer (30,984 acres), ponderosa pine (8596 acres), montane hardwood-conifer (8,125 acres) and Douglas fir (5,950 acres) are the conifer types with the largest areas affected by fire. Sierran mixed conifer also exhibits the largest area of change due to harvest. Harvest is a verified cause of change on 19,341 acres of sierran mixed conifer, 3,409 acres of eastside pine and 3,216 acres of ponderosa pine. Regrowth accounts for similar amounts of change within the conifer lifeform. Sierran mixed conifer, ponderosa pine and Douglas fir have the largest areas of confirmed regrowth, with 15,664 acres, 4,794 acres and 2,545 acres affected, respectively. Within the cause category "Other" both sierran mixed conifer and ponderosa pine show significant areas of decrease (2,747 acres and 1,277 acres, respectively). Detailed cause information indicates that the primary source of these changes is site preparation. Development plays a very minor role in conifer change, with only 194 acres verified, most of these in red fir (65 acres) and eastside pine (46 acres). Cause of change is unverified on 42,831 acres of conifer. Almost half of this unverified change is in sierran mixed conifer (19,838 acres). Ponderosa pine (5,730 acres), Douglas fir (5,113 acres) and montane hardwood-conifer (5,095 acres) also have significant levels of unverified change. Although the unverified change could belong to any cause category, causes with the largest areas of change (i.e. fire, harvest, regrowth) are the most likely agents of change.

Table 4. Acres of Conifer Change by Cause and WHR Type

WHR Type	Fire	Harvest	Develop-ment	Pest Related	Regrowth	Other	Unverified Cause	All Causes
Unknown Conifer Type	12	0	0	0	0	0	12	25
Closed Cone Pine-Cypress	10	0	0	0	12	0	2	24
Douglas Fir	5,950	932	0	0	2,545	121	5,113	14,661
Eastside Pine	1,327	3,409	46	0	960	62	1,591	7,395
Jeffrey Pine	2,107	66	8	0	76	110	1,481	3,847
Juniper	0	0	0	0	0	0	56	56
Lodgepole Pine	361	99	22	0	2	59	453	997
Montane Hardwood-Conifer	8,125	890	31	0	1,401	72	5,095	15,614
Pinyon-Juniper	0	0	0	0	3	0	301	304
Ponderosa Pine	8,596	3,216	6	0	4,794	1,277	5,730	23,619
Red Fir	3,799	408	65	1	293	521	1,272	6,361
Subalpine Conifer	221	0	4	0	0	0	327	553
Sierran Mixed Conifer	30,984	19,341	8	1	15,664	2,747	19,838	88,583
White Fir	4,140	845	2	0	887	19	1,559	7,451
Total	**65,632**	**29,206**	**194**	**2**	**26,636**	**4,989**	**42,831**	**169,490**

At the county level, Tuolumne County shows the largest area of decrease in conifer cover, with 41,278 acres of decrease (4.9%; Table 5). Large areas of decreased conifer cover also occur in Plumas County (37,844 acres; 3.6%) and Yuba County (9,099 acres; 9.5%). The largest area of increase in conifer cover takes place in Sierra County, with 9,699 acres, or 2.3%, showing an increase. Tuolumne and El Dorado Counties also contain large areas of increases in conifer cover, with 8,389 acres (1.0%) and 5,887 acres (0.9%) affected, respectively.

Table 5. Acres of Conifer Cover Change by County

County	Decrease in Cover	% Decrease	Increase in Cover	% Increase	Total Change	Total % Change
Alpine	1,629	0.5	193	0.1	1,822	0.6
Amador	2,001	1.6	283	0.2	2,284	1.9
Butte	8,838	4.5	3,656	1.9	12,493	6.4
Calaveras	4,353	1.7	512	0.2	4,865	1.9
El Dorado	8,129	1.2	5,887	0.9	14,017	2.1
Lassen	164	0.5	14	<0.1	177	0.5
Madera	12	<0.1	<0.1	<0.1	12	<0.1
Mariposa	3,650	1.3	2,941	1.1	6,592	2.4
Mono	550	0.4	9	<0.1	559	0.4
Nevada	4,637	1.3	1,456	0.4	6,092	1.7
Placer	3,573	0.8	2,156	0.5	5,729	1.3
Plumas	37,844	3.6	2,553	0.2	40,397	3.9
Sierra	3,695	0.9	9,699	2.3	13,394	3.1
Tuolumne	41,278	4.9	8,389	1.0	49,667	5.9
Yuba	9,099	9.5	2,226	2.3	11,325	11.9
Nevada counties	47	0.1	18	<0.1	66	0.2
Total	**129,499**	**2.4**	**39,991**	**0.7**	**169,490**	**3.2**

Fire is responsible for large portions of conifer change in both Tuolumne and Plumas Counties, with 29,141 acres and 23,644 acres affected by a decrease, respectively (Table 6). Harvest is also responsible for large areas of decrease in both of these counties as well, with 6,737 acres and

6,427 acres verified, respectively. These two causes of change account for 86.9% of the total conifer decrease in Tuolumne County and 79.5% of the conifer decrease in Plumas County. Other counties with notable levels of conifer decrease caused by fire or harvest include Yuba (6,189 acres caused by fire), El Dorado (5,158 acres caused by harvest) and Calaveras (3,381 acres caused by harvest). Regrowth is the verified cause of conifer increase on 8,884 acres in Sierra County, 6,668 acres in Tuolumne County and 4,057 acres in El Dorado County. Cause of change is unverified on about two-thirds of the conifer change in Butte County (8,269 acres), as well as about one-fourth of the conifer change in Plumas County (9,423 acres).

Table 6. Acres of Conifer Change by Cause and County

County	Fire	Harvest	Develop-ment	Pest Related	Regrowth	Other	Unverified Cause	All Causes
Alpine	407	0	0	0	5	0	1,409	1,822
Amador	34	1,474	0	0	112	0	664	2,284
Butte	3,628	0	0	0	597	0	8,269	12,493
Calaveras	385	3,387	20	0	149	99	825	4,865
El Dorado	23	5,158	43	0	4,057	240	4,497	14,017
Lassen	21	132	0	0	3	0	21	177
Madera	12	0	0	0	0	0	0	12
Mariposa	1,588	183	5	0	2,766	693	1,356	6,592
Mono	0	0	0	0	3	0	556	559
Nevada	359	1,561	0	0	734	86	3,352	6,092
Placer	142	1,369	30	0	902	134	3,152	5,729
Plumas	23,644	6,427	46	0	847	12	9,423	40,398
Sierra	54	2,605	0	0	8,884	93	1,758	13,394
Tuolumne	29,141	6,737	50	0	6,668	3,621	3,450	49,667
Yuba	6,189	166	0	0	910	0	4,061	11,325
Nevada counties	6	7	0	2	0	11	38	66
Total	**65,632**	**29,206**	**194**	**2**	**26,636**	**4,989**	**42,831**	**169,490**

When analyzed by ownership, Forest Service land shows the largest area of conifer cover decrease (57,062 acres; Table 7). Proportionally, however, private land shows a larger decrease at 3.1%. Increases in conifer cover are similar in proportion on both Forest Service and private land (0.9% and 0.8%, respectively).

Table 7. Acres of Conifer Cover Change by Owner

Owner	Decrease in Cover	% Decrease	Increase in Cover	% Increase	Total Change	Total % Change
Forest Service	57,062	1.8	25,866	0.8	82,928	2.6
Other Public	26,087	3.8	1,010	0.1	27,097	3.9
Private	46,350	3.1	13,115	0.9	59,465	3.9
Total	**129,499**	**2.4**	**39,991**	**0.7**	**169,490**	**3.2**

On Forest Service land, fire, regrowth and harvest are the main causes of change, verified on 31,920 acres, 19,310 acres and 12,604 acres, respectively (Table 8). Site preparation, which is included in the "other" cause category, is responsible for most of those 3,817 acres of change on Forest Service land. Harvest is verified on 16,484 acres of private land, and regrowth is verified on 6,639 acres. Cause of change could not be verified on 25,590 acres of private land and 15,220 acres of Forest Service land.

Table 8. Acres of Conifer Change by Cause and Owner

Owner	Fire	Harvest	Develop-ment	Pest Related	Regrowth	Other	Unverified Cause	All Causes
Forest Service	31,920	12,604	56	0	19,310	3,817	15,220	82,928
Other Public	23,421	118	22	2	687	826	2,021	27,097
Private	10,291	16,484	115	0	6,639	346	25,590	59,465
Total	**65,632**	**29,206**	**194**	**2**	**26,636**	**4,989**	**42,831**	**169,490**

Hardwoods

Hardwood vegetation types cover approximately 1.3 million acres within the project area. Over 90% of the hardwood lifeform is comprised of montane hardwood and blue oak woodland (65.9% and 27.4%, respectively). The remainder of the hardwood lifeform is made up of blue oak-foothill pine (4.2%), montane riparian (1.5%), valley oak woodland (0.6%), aspen (0.4%) and a very minute amount of eucalyptus (<0.01%)

Between 1995/1996 and 2000 the hardwoods in the project area show a cover change on about 2.5% of their area (31,497 acres; Table 9). A decrease in cover of at least 16% is detected on 2.3% (29,659 acres) and an increase is detected on 0.2% (2,228 acres). The cause of change is verified on 23,410 acres, which is about 73.3% of the change in the hardwood lifeform. The overwhelming verified cause of change within the hardwood lifeform is fire, affecting 21,880 acres. Cause of change is unverified on 8,537 acres (Table 10).

Of the hardwoods within the project area, montane hardwood experiences the largest area of decrease in cover, with 22,925 acres affected (2.7%) Proportionally, however, blue oak-foothill pine shows a larger decrease in cover, at 6.7% (3,685 acres). Though increases are relatively small for the hardwoods in the project area montane hardwood does have the largest area of increase, with 1,987 acres showing an increase in cover. Table 9 shows change in cover by hardwood type.

Table 9. Acres of Hardwood Cover Change by WHR Type

WHR Type	Decrease in Cover	% Decrease	Increase in Cover	% Increase	Total Change	Total % Change
Aspen	65	1.2	5	0.1	70	1.3
Blue Oak-Foothill Pine	3,685	6.7	29	0.1	3,713	6.8
Blue Oak Woodland	2,463	0.7	243	0.1	2,706	0.8
Coastal Oak Woodland	8	3.8	0	0.1	8	3.9
Montane Hardwood	22,925	2.7	1,987	0.2	24,912	2.9
Montane Riparian	437	2.3	14	0.1	450	2.4
Valley Oak Woodland	76	0.9	12	0.1	88	1.1
Total	**29,659**	**2.3**	**2,288**	**0.2**	**31,947**	**2.5**

Fire is the major cause of change within the montane hardwood type (17,554 acres), as well as within the blue oak-foothill pine type (3,500 acres; Table 10). Most of the development is concentrated within the blue oak woodland and montane hardwood types (165 acres and 160 acres, respectively). Overall, fire is the most significant agent of change in hardwood vegetation types.

Table 10. Acres of Hardwood Change by Cause and WHR Type

WHR Type	Fire	Harvest	Develop-ment	Pest Related	Regrowth	Other	Unverified Cause	All Causes
Aspen	3	3	0	4	4	0	57	70
Blue Oak-Foothill Pine	3,500	0	4	0	10	0	200	3,713
Blue Oak Woodland	706	0	165	0	31	26	1,778	2,706
Coastal Oak Woodland	0	2	0	0	0	0	6	8
Montane Hardwood	17,554	336	160	0	596	158	6,108	24,912
Montane Riparian	86	28	0	0	3	0	333	450
Valley Oak Woodland	31	0	0	0	0	0	57	88
Total	**21,880**	**370**	**329**	**4**	**643**	**184**	**8,537**	**31,947**

When examining the hardwood lifeform at the county level, the largest area of decrease in cover occurs in Tuolumne County (8,920 acres; 5.1%; Table 11). Proportionately, the largest decrease occurs in Plumas County (4,511 acres; 11.9%). Other counties with large areas or proportions of decrease in hardwood cover include Butte (5,457 acres; 5.0%) and Yuba (4,730 acres; 5.1%). Areas of increase in hardwood cover are much smaller and are scattered fairly evenly throughout all of the counties in the project area.

Table 11. Acres of Hardwood Cover Change by County

County	Decrease in Cover	% Decrease	Increase in Cover	% Increase	Total Change	Total % Change
Alpine	140	4.1	0	<0.1	140	4.1
Amador	618	0.6	59	0.1	677	0.6
Butte	5,457	4.0	326	0.2	5,783	4.3
Calaveras	1,090	0.7	66	<0.1	1,156	0.8
El Dorado	1,266	0.6	409	0.2	1,676	0.8
Lassen	28	0.7	0	<0.1	28	0.7
Madera	0	<0.1	0	<0.1	0	<0.1
Mariposa	474	0.7	178	0.3	653	1.0
Merced	0	<0.1	0	<0.1	0	<0.1
Mono	10	0.3	0	<0.1	10	0.3
Nevada	1,165	0.9	363	0.3	1,528	1.2
Placer	1,135	0.7	266	0.2	1,400	0.9
Plumas	4,511	11.9	40	0.1	4,551	12.0
Sacramento	37	0.6	0	<0.1	37	0.6
Sierra	74	0.3	142	0.7	216	1.0
Stanislaus	0	<0.1	0	<0.1	0	<0.1
Tuolumne	8,920	5.1	170	0.1	9,091	5.2
Yuba	4,730	5.1	269	0.3	4,999	5.4
Nevada counties	5	2.7	0	<0.1	5	2.7
Total	**29,659**	**2.3**	**2,288**	**0.2**	**31,947**	**2.5**

Most of the change in hardwood cover is caused by fire. This is especially evident in Tuolumne (8,366 acres), Plumas (4,220 acres) and Yuba counties (3,434 acres; Table 12). Development is responsible for 163 acres of change in El Dorado County, as well as 90 acres of change in Placer County. Cause remains unverified on 1,557 acres in Yuba County, 1,278 acres in El Dorado County and 1,265 acres in Butte County.

Table 12. Acres of Hardwood Change by Cause and County

County	Fire	Harvest	Develop-ment	Pest Related	Regrowth	Other	Unverified Cause	All Causes
Alpine	3	0	0	0	0	0	137	140
Amador	61	15	0	0	3	48	551	677
Butte	4,449	0	0	0	69	0	1,265	5,783
Calaveras	647	74	47	0	12	50	326	1,156
El Dorado	8	79	163	0	99	48	1,278	1,676
Lassen	0	16	0	0	0	0	12	28
Mariposa	341	7	0	0	57	0	248	653
Mono	0	0	0	0	0	0	10	10
Nevada	287	18	0	0	146	0	1,077	1,528
Placer	63	5	90	0	23	0	1,219	1,400
Plumas	4,220	64	0	0	2	0	265	4,551
Sacramento	0	0	30	0	0	0	7	37
Sierra	0	13	0	0	102	0	101	216
Tuolumne	8,366	79	0	0	123	38	485	9,091
Yuba	3,434	0	0	0	7	0	1,557	4,999
Nevada counties	0	0	0	4	0	0	2	5
Total	**21,880**	**370**	**329**	**4**	**643**	**184**	**8,537**	**31,947**

When analyzed by ownership, private land displays the largest area affected by a decrease in hardwood cover (14,509 acres; 2.0%; Table 13). Proportionally, however, the largest decreases in hardwood cover are seen on Forest Service and other public land (3.9%; 7,551 acres and 5.3%; 7,559 acres, respectively). Private land also exhibits the largest area affected by an increase in hardwood cover (1,564 acres; 0.2%).

Table 13. Acres of Hardwood Cover Change by Owner

Owner	Decrease in Cover	% Decrease	Increase in Cover	% Increase	Total Change	Total % Change
Forest Service	7,551	3.9	592	0.3	8,142	4.2
Other Public	7,599	5.3	133	0.1	7,732	5.4
Private	14,509	1.5	1,564	0.2	16,073	1.7
Total	**29,659**	**2.3**	**2,288**	**0.2**	**31,947**	**2.5**

Fire is the major cause of change across all ownerships, affecting 6,933 acres of Forest Service land, 7,945 acres of private land and 7,002 acres of "other public" land (Table 14). Development is found solely on private land and is verified on 329 acres. Change due to other causes is relatively insignificant within the hardwood lifeform. However, cause is unverified on 7,101 acres of private land and could conceivably belong to any of the verified cause categories.

Table 14. Acres of Hardwood Change by Cause and Owner

Owner	Fire	Harvest	Develop-ment	Pest Related	Regrowth	Other	Unverified Cause	All Causes
Forest Service	6,933	77	0	0	319	67	746	8,142
Other Public	7,002	5	0	4	29	2	690	7,732
Private	7,945	288	329	0	295	115	7,101	16,073
Total	**21,880**	**370**	**329**	**4**	**643**	**184**	**8,537**	**31,947**

Shrub/Chaparral

The shrub/chaparral lifeform encompasses 897,000 acres within the Northern Sierra project area. The predominant shrub/chaparral types in the project area are montane chaparral (36.2%), sagebrush (28.8%) and mixed chaparral (24.9%); together they cover about 89.9% of the shrub/chaparral in the project area. The remainder is covered by the shrub/chaparral types of chamise-redshank chaparral (5.2%), low sagebrush (1.0%), alpine dwarf shrub (0.4%), bitterbrush (0.1%) and desert scrub (<0.01%). Unknown shrub types also make up 3.4% of the shrub/chaparral within the project area.

The shrub/chaparral within the project area displays a decrease on 13,978 acres (1.6%) and an increase on 5,739 acres (0.6%; Table 15). The primary verified cause of change is fire, with 8,516 acres affected (Table 16). Regrowth is responsible for 4,191 acres of shrub/chaparral change. The cause of change is undetermined on nearly one-fourth of all shrub/chaparral change (10,749 acres) (Table 16).

Among the different shrub/chaparral types, montane chaparral displays the largest area of decrease in cover, with 5,282 acres of decrease (1.6%; Table 15). Mixed chaparral also shows a large area of decrease in cover with 4,357 acres affected (0.7%). Proportionally, chamise-redshank chaparral shows the largest decrease in cover at 4.6% (2,156 acres). Montane chaparral exhibits the largest area and proportion of increase with 3,523 acres, or 1.1%, showing an increase in shrub/chaparral cover.

Table 15. Acres of Shrub/Chaparral Cover Change by WHR Type

WHR Type	Decrease in Cover	% Decrease	Increase in Cover	% Increase	Total Change	Total % Change
Alpine Dwarf Shrub	18	0.6	3	0.1	21	0.6
Bitterbrush	2	0.2	0	<0.1	2	0.2
Chamise-Redshank Chaparral	2,156	4.6	39	0.1	2,195	4.7
Low Sagebrush	129	1.5	0	<0.1	129	1.5
Mixed Chaparral	4,357	1.9	1,661	0.7	6,018	2.7
Montane Chaparral	5,282	1.6	3,523	1.1	8,805	2.7
Sagebrush	1,600	0.6	507	0.2	2,107	0.8
Unknown Shrub Type	434	1.4	6	<0.1	440	1.4
Total	**13,978**	**1.6**	**5,739**	**0.6**	**19,717**	**2.2**

About 40% of the shrub/chaparral change in the montane chaparral and mixed chaparral types is due to fire (Table 16). Regrowth is a verified cause of change on 2,651 acres of montane chaparral and 1,164 acres of mixed chaparral. Cause is undetermined on at least 29% of all of the shrub/chaparral change within the project area.

Table 16. Acres of Shrub/Chaparral Change by Cause and WHR Type

WHR Type	Fire	Harvest	Develop-ment	Pest Related	Regrowth	Other	Unverified Cause	All Causes
Alpine Dwarf Shrub	0	0	0	0	0	3	18	21
Bitterbrush	0	0	0	0	0	0	2	2
Chamise-Redshank Chaparral	1,652	0	25	0	4	71	444	2,195
Low Sagebrush	0	0	0	0	0	0	129	129
Mixed Chaparral	2,485	177	102		1,164	237	1,853	6,018
Montane Chaparral	3,240	266	3	15	2,651	42	2,590	8,805
Sagebrush	732	48	6	7	367	236	712	2,107
Unknown Shrub Type	407	0	0	0	5	0	27	440
Total	**8,516**	**491**	**135**	**22**	**4,191**	**588**	**5,775**	**19,717**

Tuolumne and Plumas Counties show the largest decrease in shrub/chaparral cover, with decreases on 3,775 acres (3.1%) and 2,166 acres (1.5%) respectively (Table 17). Large decreases in shrub/chaparral cover are also seen in Calaveras County (1,785 acres; 2.5%), Mariposa County (1,574 acres; 2.3%) and Alpine County (1,260 acres; 1.7%). Sierra County contains the only area of significant increase in shrub/chaparral cover, with 2,719 acres showing an increase (2.6%).

Table 17. Acres of Shrub/Chaparral Cover Change by County

County	Decrease in Cover	% Decrease	Increase in Cover	% Increase	Total Change	Total % Change
Alpine	1,260	1.7	0	<0.1	1,260	1.7
Amador	524	2.6	25	0.1	548	2.7
Butte	173	2.1	483	5.8	656	7.9
Calaveras	1,785	2.5	37	0.1	1,822	2.5
El Dorado	661	0.8	170	0.2	831	1.0
Lassen	675	1.0	4	<0.1	678	1.0
Madera	0	<0.1	0	<0.1	0	<0.1
Mariposa	1,574	2.3	979	1.4	2,553	3.7
Merced	0	<0.1	0	<0.1	0	<0.1
Mono	1	<0.1	0	<0.1	1	<0.1
Nevada	581	1.2	98	0.2	680	1.4
Placer	298	0.5	126	0.2	423	0.7
Plumas	2,166	1.5	357	0.3	2,522	1.8
Sacramento	0	<0.1	0	<0.1	0	<0.1
Sierra	323	0.3	2,719	2.6	3,042	2.9
Stanislaus	0	<0.1	0	<0.1	0	<0.1
Tuolumne	3,775	3.1	685	0.6	4,459	3.7
Yuba	111	6.4	51	2.9	162	9.3
Nevada counties	73	0.9	7	0.1	80	1.0
Total	**13,978**	**1.6**	**5,739**	**0.6**	**19,717**	**2.2**

Fire is the primary cause of shrub/chaparral change in nearly every county within the project area Table 18). In particular, the counties of Tuolumne (2,954 acres), Plumas (2,022 acres), Mariposa (1,364 acres) and Calaveras (1,165 acres) show notable levels of change due to fire. Regrowth accounts for 2,321 acres of shrub/chaparral change in Sierra County. Cause is unverified on 5,775 acres of shrub/chaparral within the project area, the largest portion of which is in Alpine County (1,184 acres).

Table 18. Acres of Shrub/Chaparral Change by Cause and County

County	Fire	Harvest	Develop-ment	Pest Related	Regrowth	Other	Unverified Cause	All Causes
Alpine	76	0	0	0	0	0	1,184	1,260
Amador	115	31	0	0	2	0	401	548
Butte	82	0	0	0	147	0	427	656
Calaveras	1,165	123	37	0	1	127	370	1,822
El Dorado	126	30	75	0	67	13	519	831
Lassen	441	7	0	0	0	218	13	678
Mariposa	1,364	28	0	0	968	20	174	2,553
Mono	0	0	0	0	0	0	1	1
Nevada	77	17	0	0	17	41	527	680
Placer	4	6	3	0	51	0	359	423
Plumas	2,022	33	2	0	66	0	400	2,522
Sierra	0	33	0	0	2,321	4	685	3,042
Tuolumne	2,954	180	18	0	540	151	617	4,459
Yuba	70	0	0	0	12	0	80	162
Nevada counties	22	4	0	22	0	14	19	80
Total	**8,516**	**491**	**135**	**22**	**4,191**	**588**	**5,775**	**19,717**

Decreases in shrub/chaparral cover occur in similar amounts on forest service and privately owned lands (5,155 acres and 5,955 acres, respectively; Table 19). On the other hand, increases are found in nearly twice the amount on forest service land as on private land (3,822 acres vs. 1,776 acres, respectively).

Table 19. Acres of Shrub/Chaparral Cover Change by Owner

Owner	Decrease in Cover	% Decrease	Increase in Cover	% Increase	Total Change	Total % Change
Forest Service	5,155	1.3	3,822	0.9	8,977	2.2
Other Public	2,868	1.9	141	0.1	3,009	2.0
Private	5,955	1.8	1,776	0.5	7,731	2.3
Total	**13,978**	**1.6**	**5,739**	**0.6**	**19,717**	**2.2**

Fire is a verified cause of shrub/chaparral change on 2,451 acres of private land and 3,440 acres of Forest Service land (Table 20). Regrowth in shrub/chaparral occurs almost exclusively on Forest Service land (3,321 acres). Of the 135 acres of development, 126 fall on private land. Over half of the unverified cause occurs on private land (3,678 acres).

Table 20. Acres of Shrub/Chaparral Change by Cause and Owner

Owner	Fire	Harvest	Develop-ment	Pest Related	Regrowth	Other	Unverified Causes	All Causes
Forest Service	3,440	158	4	0	3,321	187	1,866	8,977
Other Public	2,625	11	5	22	97	20	230	3,009
Private	2,451	323	126	0	773	381	3,678	7,731
Total	**8,516**	**491**	**135**	**22**	**4,191**	**588**	**5,775**	**19,717**

Grass/Forb and Non-Forested Other

The "Non-Forested Other" (NFO) category contains land classified as water, urban, agriculture and barren. In some instances, land classified as "barren" is actually sparsely vegetated

grassland, and hence is able to undergo vegetation change. Additionally, there are a few instances where recent clearcuts have been classified as NFO (barren). Most of these areas have a vegetation increase after the clearcut. Because of the confusion between these two lifeforms, they have been combined. But because the NFO lifeform contains legitimately barren lands, no percentages of change are given due to the complexities of the calculation. See Appendix G for more details on the change in the grass/forb and NFO lifeform.

In the grass/forb and NFO lifeforms, fire is verified on 526 acres (Table 21). Regrowth is verified on 521 acres within these lifeforms. The cause of vegetation change is unverified on 1,395 acres.

At the county level fire is verified on 300 acres in Tuolumne County (Table 21). Regrowth is responsible for 196 acres of change in El Dorado County and development is responsible for another 117 acres of change.

Table 21. Acres of Grass/Forb and NFO Change by Cause and County

County	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified Cause	All Causes
Alpine	0	0	0	0	0	10	10
Amador	0	0	0	4	1	65	70
Butte	23	0	0	118	0	179	320
Calaveras	99	6	5	0	19	75	204
El Dorado	0	2	117	196	1	178	493
Lassen	0	0	0	0	0	0	1
Mariposa	8	0	0	24	0	22	55
Nevada	10	0	0	0	13	275	298
Placer	0	0	63	0	0	148	211
Plumas	37	6	0	60	1	55	159
Sacramento	0	0	7	0	0	31	38
Sierra	0	10	0	2	0	19	32
Tuolumne	300	19	0	116	8	56	499
Yuba	48	0	0	0	0	281	329
Total	**526**	**43**	**193**	**521**	**43**	**1,395**	**2,719**

Over 70% (1,969 acres) of the vegetation change in the grass/forb and NFO lifeform occurs on private land (Table 22). Regrowth, fire and development are the major causes of change on private land, accounting for 389 acres, 230 acres and 192 acres of grass/forb/NFO change, respectively. The cause of change is unverified on 1,395 acres of the grass/forb and NFO lifeforms, 1,094 acres of which are on private land.

Table 22. Acres of Grass/Forb and NFO Change by Cause and Owner

Owner	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified Causes	All Causes
Forest Service	98	14	0	98	7	51	268
Other Public	198	0	0	34	1	250	482
Private	230	29	192	389	35	1,094	1,969
Total	**526**	**43**	**193**	**521**	**43**	**1,395**	**2,719**

All Lifeforms

Table 23 offers an overview of all causes across the project area, showing all causes of vegetation change sorted by county. This includes the conifer, hardwood, shrub/chaparral, grass/forb and NFO lifeforms. In this way, a better understanding of each contributing cause and its magnitude compared to other causes can be obtained.

Fire is the predominant cause of change throughout the project area, verified on 96,620 acres or 42.9% of the change within the project area. Regrowth and harvest are the other significant causes of change, verified on 32,186 acres and 30,132 acres, respectively. Development is responsible for 852 acres of change throughout the project area. Cause remains unverified on 59,197 acres.

Tuolumne and Plumas Counties experience the most change due to fire, with 40,772 acres and 29,945 acres affected, respectively. Harvest primarily affects the counties of Tuolumne (7,024 acres), Plumas (6,530 acres), El Dorado (5,272 acres) and Calaveras (3,592 acres). Regrowth is verified on 11,360 acres in Sierra County, 7,447 acres in Tuolumne County and 4,420 acres in El Dorado County. Most of the change due to development is located in El Dorado and Placer counties (398 acres and 187 acres, respectively). Large areas of change with an unverified cause are found in Plumas County (10,146 acres) and Butte County (10,244 acres).

Table 23. Acres of All Lifeform Change by Cause and County

County	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified Causes	All Causes
Alpine	493	0	0	5	0	2,743	3,242
Amador	210	1,520	0	120	49	1,681	3,580
Butte	8,183	0	0	956	0	10,244	19,383
Calaveras	2,313	3,592	109	162	298	1,596	8,070
El Dorado	157	5,272	398	4,420	303	6,489	17,038
Lassen	462	156	0	3	218	45	884
Madera	12	0	0	0	0	2	14
Mariposa	3,301	218	5	3,816	713	1,808	9,860
Mono	0	0	0	3	0	570	573
Nevada	735	1,605	0	897	144	5,277	8,656
Placer	209	1,379	187	1,055	134	5,037	8,002
Plumas	29,945	6,530	48	974	12	10,146	47,655
Sacramento	0	0	37	0	0	74	111
Sierra	54	2,661	0	11,360	103	2,576	16,754
Tuolumne	40,772	7,024	68	7,447	3,817	4,631	63,760
Yuba	9,746	166	0	967	0	6,212	17,092
Total	**96,592**	**30,121**	**852**	**32,186**	**5,791**	**59,130**	**224,672**

DISCUSSION OF RESULTS: FOREST SERVICE LAND

In this portion of the report, in which Forest Service land is analyzed, CALVEG vegetation types are used instead of WHR vegetation types. This is done because Forest Service managers and personnel use the more detailed CALVEG classification. As CALVEG and WHR are different classification systems, it is not appropriate to compare the two. See Appendix A for more details on the WHR and CALVEG classification systems.

All Vegetation

Within the 9.1 million acres Northern Sierra project area, Forest Service land covers nearly 4.1 million acres. The Plumas National Forest (NF) covers just less than 1.2 million acres, the Stanislaus NF covers approximately 889,000 acres, the Tahoe NF covers about 814,000 acres, the Eldorado NF covers about 587,000 acres and the Lake Tahoe Basin Management Unit (LTBMU) covers around 148,000 acres. Small portions of the Inyo, Lassen, Sierra and Toiyabe NF are also included within the project area; however, these forests are not analyzed in this project area, as they are covered more completely in another project area. The acres of change (3,546 for all non-analyzed forests) are included in the totals for national forest lands.

Overall, Forest Service land displays a decrease in vegetation on 70,005 acres (2.4%) and an increase in vegetation on 30,502 acres (1.0%; Table 24). Cause has been verified on about 82% of the change on Forest Service land. Fire is verified on 42,426 acres, regrowth on 23,133 acres and harvest on 12,857 acres (Table 25). Cause of change is unverified on 17,946 acres or about 17.9% of the total conifer change within the project area.

Among the national forests, the Plumas NF exhibits both the largest area as well as the highest proportion of decrease in vegetation, with 38,285 acres, or 3.2% affected (Table 24). The Tahoe NF shows the largest area of increase in vegetation with 11,891 acres (1.4%) showing an increase. It is also the only national forest in the project area to have a larger area of increase in vegetation than decrease.

Table 24. Acres of Change of All Vegetation by National Forest

Forest	Decrease in Cover	% Decrease	Increase in Cover	% Increase	Total Change	Total % Change
Eldorado	3,198	0.5	2,324	0.4	5,523	0.9
Lake Tahoe Basin Management Unit	396	0.3	48	<0.1	444	0.3
Plumas	38,285	3.2	4,371	0.4	42,657	3.5
Stanislaus	20,551	2.3	10,075	1.1	30,625	3.4
Tahoe	5,822	0.7	11,891	1.4	17,713	2.1
Total*	**70,005**	2.4	**30,502**	1.0	**100,508**	3.4

*Includes acres from Inyo, Lassen, Sierra, and Toiyabe National Forest

Examination of the causes of vegetation change on Forest Service land indicates that the majority of decrease due to fire is concentrated in the Plumas NF, with 29,199 acres verified (Table 25). The Stanislaus NF also shows significant levels of decrease due to fire (11,546 acres), as well as a substantial amount of change identified with the cause category “other”. Detailed cause information indicates that the cause for majority of these 3,623 acres of change is site preparation. Regrowth is most prominent on the Tahoe NF, with 10,850 acres verified. Harvest only accounts

for around 11% of the total change on both the Plumas and the Stanislaus NF (4,658 acres and 3,291 acres, respectively). However, the cause of change could not be verified on 7,916 acres of the Plumas NF and 3,760 acres of the Stanislaus NF.

Table 25. Acres of Change of All Vegetation by Cause and National Forest

Forest	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified Causes	All Causes
Eldorado	16	1,962	0	1,676	228	1,641	5,523
Lake Tahoe Basin Management Unit	76	73	3	0	23	268	444
Plumas	29,199	4,658	0	884	0	7,916	42,657
Stanislaus	11,546	3,291	51	8,354	3,623	3,760	30,625
Tahoe	1,436	2,873	6	10,850	212	2,337	17,713
Total*	**42,426**	**12,857**	**60**	**23,133**	**4,085**	**17,946**	**100,508**

*Includes acres from Inyo, Lassen, Sierra, and Toiyabe National Forest

Conifers

All Forest Service land within the project area exhibits a decrease in conifer cover on 56,543 acres (2.0%) and an increase on 26,057 acres (0.9%; Table 26). Among the five national forests analyzed, the Plumas NF shows the largest area of decrease in conifer cover, with 32,609 acres affected (3.2%). In conifer cover increases, the Tahoe NF shows the largest area of increase with 11,069 acres (1.7%).

Of the conifer types within the national forests, mixed conifer-pine in the Plumas NF shows the largest area affected by a decrease in cover, with a decrease on 13,710 acres (3.9%; Table 26). The mixed conifer-pine on the Stanislaus NF shows the highest proportion affected, with 5.4% of its area showing a decrease (8,027 acres). Other CALVEG types displaying large areas or proportions of decrease include the ponderosa pine on the Stanislaus NF (4,182 acres; 4.8%), the mixed conifer-fir on the Plumas NF (5,728 acres; 2.9%), as well as the eastside pine on the Plumas NF (3,814 acres; 2.5%). The largest increases in conifer cover occur in the mixed conifer-pine on the Tahoe NF, with 4,468 acres showing an increase (2.2%). Proportionally, the largest increase occurs in the ponderosa pine on the Stanislaus NF, which shows an increase on 4.0% of its area (3,454 acres).

Table 26. Acres of Conifer Cover Change by National Forest and CALVEG Type

Forest	CAL-VEG**	Decrease in Cover	% Decrease	Increase in Cover	% Increase	Total Change	Total % Change
Eldorado	RF	91	0.1	56	<0.1	148	0.1
	MF	843	0.7	812	0.7	1,655	1.4
	MP	1,490	1.4	783	0.8	2,273	2.2
	DP	145	0.3	122	0.3	266	0.6
	PP	255	0.6	411	0.9	666	1.5
	WF	223	0.9	90	0.4	313	1.3
	Other*	10	<0.1	5	<0.1	15	<0.1
	Total	**3,057**	**0.6**	**2,279**	**<0.1**	**5,336**	**<0.1**
Lake Tahoe Basin Management Unit	MF	52	0.1	16	<0.1	68	0.2
	LP	83	0.3	18	0.1	100	0.4
	RF	36	0.2	1	<0.1	38	0.2
	JP	68	0.4	2	<0.1	70	0.4
	Other*	2	<0.1	1	<0.1	3	0.1
	Total	**241**	**0.2**	**37**	**<0.1**	**278**	**0.2**
Plumas	MP	13,710	3.9	1,780	0.5	15,491	4.4
	MF	5,728	2.9	697	0.3	6,425	3.2
	EP	3,814	2.5	284	0.2	4,098	2.7
	WF	4,857	4.1	394	0.3	5,251	4.4
	DP	3,728	3.2	916	0.8	4,644	4.0
	RF	400	0.8	41	0.1	441	0.9
	Other*	373	1.5	22	0.1	394	1.6
	Total	**32,609**	**3.2**	**4,135**	**0.4**	**36,744**	**3.6**
Stanislaus	MF	2,004	1.3	727	0.5	2,731	1.8
	MP	8,027	5.4	3,758	2.5	11,786	7.9
	PP	4,182	4.8	3,454	4.0	7,635	8.8
	RF	215	0.3	6	<0.1	221	0.3
	LP	369	0.6	1	<0.1	370	0.6
	Other*	418	0.7	440	0.7	857	1.4
	Total	**15,214**	**2.6**	**8,386**	**1.4**	**23,600**	**4.0**
Tahoe	MP	989	0.5	4,468	2.2	5,458	2.7
	MF	1,179	0.8	2,453	1.6	3,632	2.4
	RF	149	0.2	175	0.2	325	0.4
	EP	1,140	1.5	1,002	1.3	2,142	2.9
	DP	1,321	2.2	1,992	3.3	3,314	5.5
	WF	273	0.7	680	1.7	953	2.3
	Other*	252	0.8	298	1.0	551	1.8
	Total	**5,304**	**0.8**	**11,069**	**1.7**	**16,374**	**2.5**
All Forests* **		**56,543**	**2.0**	**26,057**	**0.9**	**82,600**	**2.9**

*CALVEG types composing less than 5% of the conifer lifeform in the particular forest are combined into this category

**See Appendix F for CALVEG code descriptions

***Includes acres from Inyo, Lassen, Sierra, and Toiyabe National Forest

On the Plumas NF fire is the verified cause of change on over 64% of the total conifer change, occurring on 23,701 acres (Table 27). Fire is also responsible for about one-third of the change on the Stanislaus NF (7,400 acres). Regrowth is a verified cause of change on more than half of the change in the Tahoe NF, with 10,118 acres verified. Harvest accounts for only modest amounts of change on all forests, with the largest amount found on the Plumas NF (4,623 acres). The cause of change is unverified on 7,551 acres of conifer in the Plumas NF.

Over half of the decrease due to fire on the Plumas NF is found in the mixed conifer-pine type, with 12,371 acres affected (Table 27). Fire also accounts for large amounts of change in the mixed conifer-pine on the Stanislaus NF (4,651 acres), as well as in the white fir on the Plumas NF (4,016 acres). On the Tahoe NF fire is found almost exclusively in the Douglas fir-pine type (1,184 acres). Regrowth is verified on 4,034 acres of mixed conifer-pine and 2,283 acres of mixed conifer-fir on the Tahoe NF. On the Stanislaus NF regrowth is verified on 3,042 acres of mixed conifer-pine and 2,815 acres of ponderosa pine. Harvest is verified on 2,528 acres of mixed conifer-pine and 1,702 acres of eastside pine on the Plumas NF. Harvest is also verified on 1,165 acres of mixed conifer-pine in the Eldorado NF. The mixed conifer-pine and the ponderosa pine on the Stanislaus NF have 2,204 acres and 1,144 acres, respectively, of change categorized as "other". Detailed cause information shows that the majority of this change is caused by site preparation. Cause of change could not be verified on 2,918 acres of mixed conifer-pine, 1,343 acres of Douglas fir-pine and 1,271 acres of mixed conifer-fir in the Plumas NF, as well as 1,217 acres of ponderosa pine in the Stanislaus NF.

Table 27. Acres of Conifer Change by Cause, National Forest and CALVEG Type

Forest	CAL-VEG**	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified Causes	All Causes
Eldorado	RF	5	12	0	4	0	127	148
	MF	9	407	0	542	110	587	1,655
	MP	2	1,165	0	604	3	500	2,273
	DP	0	66	0	92	47	62	266
	PP	0	117	0	362	63	124	666
	WF	0	181	0	60	0	71	313
	Other*	0	0	0	2	0	14	15
	Total	**16**	**1,947**	**0**	**1,664**	**223**	**1,485**	**5,336**
Lake Tahoe Basin Management Unit	MF	25	10	0	0	0	34	68
	LP	0	27	0	0	15	58	100
	RF	19	0	0	0	2	17	38
	JP	3	31	2	0	0	33	70
	Other*	0	0	0	0	0	3	3
	Total	**46**	**68**	**2**	**0**	**17**	**144**	**278**
Plumas	MP	12,371	31	0	171	0	2,918	15,491
	MF	2,172	2,528	0	454	0	1,271	6,425
	EP	1,232	1,702	0	153	0	1,011	4,098
	WF	4,016	344	0	63	0	829	5,251
	DP	3,257	15	0	29	0	1,343	4,644
	RF	302	0	0	0	0	139	441
	Other*	351	3	0	0	0	40	394
	Total	**23,701**	**4,623**	**0**	**870**	**0**	**7,551**	**36,744**
Stanislaus	MF	667	1,159	0	568	4	333	2,731
	MP	4,651	1,035	1	3,042	2,204	854	11,786
	PP	1,574	886	0	2,815	1,144	1,217	7,635
	RF	40	47	49	4	0	81	221
	LP	232	6	1	1	0	130	370
	Other*	237	14	0	385	51	170	857
	Total	**7,400**	**3,146**	**51**	**6,815**	**3,403**	**2,785**	**23,600**
Tahoe	MP	109	474	0	4,034	63	778	5,458
	MF	0	901	1	2,283	73	374	3,632
	RF	0	132	0	99	1	92	325
	EP	1	852	0	954	25	310	2,142
	DP	1,184	33	0	1,877	0	219	3,314
	WF	0	229	0	643	13	68	953
	Other*	0	206	2	227	13	103	551
	Total	**1,293**	**2,828**	**3**	**10,118**	**189**	**1,943**	**16,374**
All Forests* **		**32,540**	**12,612**	**56**	**19,581**	**3,831**	**13,980**	**82,600**

*CALVEG types composing less than 5% of the conifer lifeform in the particular forest are combined into this category

**See Appendix F for CALVEG code descriptions

***Includes acres from Inyo, Lassen, Sierra, and Toiyabe National Forest

Hardwoods

All of the Forest Service land within the project area displays a hardwood cover decrease on 6,755 acres (3.9%) and an increase on 401 acres (0.2%). Over half of the decreases in hardwood cover on Forest Service land occur in the Plumas NF, which shows 3,841 acres of decrease, or 7.9% (Table 28). The cause for most of this decrease in cover is fire (Table 29). Increases in hardwood cover are relatively small, with the largest amount seen on the Stanislaus NF (256 acres: 0.4%).

The largest area of decrease in hardwood cover is found in the California black oak on the Plumas NF, with 2,583 acres showing a decrease (9.7%). Canyon live oak and interior live oak, on the Stanislaus NF, also show large areas of decrease, with 1,354 acres (4.0%) and 1,247 acres (4.6%) affected, respectively. A large proportion of decrease is also seen in the canyon live oak on the Plumas NF, with 7.0%, or 1,125 acres, showing a decrease in hardwood cover.

Table 28. Acres of Hardwood Cover Change by National Forest and CALVEG Type

Forest	CAL-VEG**	Decrease in Cover	% Decrease	Increase in Cover	% Increase	Total Change	Total % Change
Eldorado	QC	3	<0.1	7	0.1	9	0.1
	QK	8	0.1	16	0.3	24	0.4
	Other*	3	1.2	0	<0.1	3	1.2
	Total	**14**	**0.1**	**22**	**0.1**	**36**	**0.2**
Lake Tahoe Basin Management Unit	QQ	11	1.6	1	0.1	12	1.7
	Total	**11**	**1.6**	**1**	**0.1**	**12**	**1.7**
Plumas	QK	2,583	9.7	14	0.1	2,596	9.8
	QC	1,125	7.0	17	0.1	1,142	7.1
	Other*	133	2.3	7	0.1	140	2.4
	Total	**3,841**	**7.9**	**37**	**0.1**	**3,878**	**8.0**
Stanislaus	QC	1,354	4.0	162	0.5	1,516	4.5
	QW	1,247	4.6	83	0.3	1,329	4.9
	QK	32	1.0	12	0.4	43	1.3
	Other*	11	2.5	0	<0.1	11	2.5
	Total	**2,643**	**4.1**	**256**	**0.4**	**2,899**	**4.5**
Tahoe	QC	53	0.3	38	0.2	90	0.4
	QK	67	0.4	35	0.2	102	0.6
	TA	42	1.5	2	0.1	43	1.5
	Other*	85	4.0	3	0.1	88	4.1
	Total	**246**	**0.6**	**77**	**0.2**	**324**	**0.7**
All Forests* **		**6,755**	**3.9**	**401**	**0.2**	**7,156**	**4.1**

*CALVEG types composing less than 5% of the conifer lifeform in the particular forest are combined into this category

**See Appendix F for CALVEG code descriptions

***Includes acres from Inyo, Lassen, Sierra, and Toiyabe National Forest

In the Plumas NF more than 95% of the hardwood change is attributed to fire (Table 29). Over 84% of the hardwood change in the Stanislaus NF is due to fire. Other cause categories, such as harvest or regrowth, account for very insignificant amounts of change. CALVEG types with large areas affected by fire include California Black Oak (2,538 acres) and canyon live oak (1,099

acres) on the Plumas NF, as well as canyon live oak (1,263 acres) and interior live oak (1,183 acres) on the Stanislaus NF.

Table 29. Acres of Hardwood Change by Cause, National Forest and CALVEG Type

Forest	CAL-VEG**	Fire	Harvest	Regrowth	Other	Unverified Causes	All Causes
Eldorado	QC	0	1	3	0	5	9
	QK	0	4	4	0	16	24
	Other*	0	0	0	0	3	3
	Total	**0**	**5**	**7**	**0**	**23**	**36**
Lake Tahoe Basin Management Unit	QQ	0	0	0	0	12	12
	Total	**0**	**0**	**0**	**0**	**12**	**12**
Plumas	QK	2,538	1	0	0	58	2,596
	QC	1,099	0	0	0	43	1,142
	Other*	83	19	0	0	38	140
	Total	**3,719**	**20**	**0**	**0**	**139**	**3,878**
Stanislaus	QC	1,263	25	126	42	61	1,516
	QW	1,183	6	23	15	102	1,329
	QK	8	3	11	0	21	43
	Other*	3	0	0	0	8	11
	Total	**2,457**	**34**	**160**	**56**	**192**	**2,899**
Tahoe	QC	45	0	20	0	25	90
	QK	48	5	18	0	32	102
	TA	0	0	0	0	43	43
	Other*	45	4	2	0	37	88
	Total	**138**	**10**	**40**	**0**	**137**	**324**
All Forests* **		**6,314**	**69**	**215**	**56**	**503**	**7,156**

*CALVEG types composing less than 5% of the conifer lifeform in the particular forest are combined into this category
**See Appendix F for CALVEG code descriptions
***Includes acres from Inyo, Lassen, Sierra, and Toiyabe National Forest

Shrub/Chaparral

Combined, the five national forests in the project area show a decrease on 4,979 acres of shrub/chaparral cover (1.4%; Table 30). Increases in shrub/chaparral cover on Forest Service land occur on 3,643 acres, or 1.0%. The Stanislaus NF has the largest decrease by both area and proportion, with 2,549 acres, or 2.6%, exhibiting a decrease. The largest area of increase in shrub/chaparral cover is also found on the Stanislaus NF, with 1,333 acres displaying an increase (1.3%). With the exception of the Tahoe NF, all forests in the project area show a larger decrease in shrub/chaparral cover than an increase.

Among the CALVEG types in the national forests, ceanothus chaparral in the Stanislaus NF experiences the largest area of decrease (1687 acres; 3.8%). The largest proportion of decrease is seen in the montane mixed chaparral on the Plumas NF, with 4.7% experiencing a decrease (1,615 acres). The largest increases in shrub/chaparral cover occur in the ceanothus chaparral on the Stanislaus NF (875 acres; 2.0%). Montane mixed chaparral on the Stanislaus NF also experiences an increase on 456 acres (1.8%).

Table 30. Acres of Shrub/Chaparral Cover Change by National Forest and CALVEG Type

Forest	CAL-VEG**	Decrease in Cover	% Decrease	Increase in Cover	% Increase	Total Change	Total % Change
Eldorado	CX	27	0.2	2	<0.1	29	0.2
	CM	73	0.6	0	<0.1	73	0.6
	Cover	14	0.4	19	0.6	33	1.0
	CH	3	0.1	0	<0.1	3	0.1
	Other*	2	1.5	0	<0.1	2	1.5
	Total	**119**	**0.4**	**21**	**0.1**	**140**	**0.4**
Lake Tahoe Basin Management Unit	CX	63	0.6	2	<0.1	65	0.6
	CH	29	0.4	1	<0.1	30	0.4
	CM	19	0.4	2	<0.1	21	0.5
	AX	18	0.8	3	0.1	21	0.9
	Other*	3	0.3	3	0.2	6	0.5
	Total	**132**	**0.5**	**9**	**<0.1**	**141**	**0.5**
Plumas	BS	32	0.1	14	<0.1	46	0.1
	CX	1,615	4.7	135	0.4	1,750	5.1
	Other*	148	1.3	28	0.2	176	1.5
	Total	**1,795**	**1.8**	**176**	**0.2**	**1,972**	**2.0**
Stanislaus	CC	1,687	3.8	875	2.0	2,562	5.7
	CX	310	1.2	456	1.8	766	3.1
	CM	483	2.1	0	<0.1	483	2.1
	Other*	70	1.1	2	<0.1	72	1.2
	Total	**2,549**	**2.6**	**1,333**	**1.3**	**3,882**	**3.9**
Tahoe	CX	85	0.3	337	1.0	422	1.3
	CH	56	0.2	4	<0.1	60	0.2
	BS	95	0.6	60	0.4	154	1.0
	Other*	8	0.1	246	4.2	253	4.4
	Total	**244**	**0.3**	**646**	**0.8**	**890**	**1.1**
All Forests* **		**4,979**	**1.4**	**3,643**	**1.0**	**8,621**	**2.4**

*CALVEG types composing less than 5% of the conifer lifeform in the particular forest are combined into this category
**See Appendix F for CALVEG code descriptions
***Includes acres from Inyo, Lassen, Sierra, and Toiyabe National Forest

On Forest Service land, fire is the largest verified cause of shrub/chaparral change, with 3,440 acres, or nearly 40% of the total change, verified to be fire (Table 31). Regrowth is another major cause of change, with 3,152 acres affected. The cause of change remains unverified on 1,684 acres. Most of the change in shrub/chaparral due to fire is located on the Plumas NF and the Stanislaus NF (1,750 acres and 1,586 acres, respectively). Most of the verified regrowth, on the other hand, is found on the Stanislaus NF and the Tahoe NF (1,284 acres and 607 acres, respectively. Cause is unverified on 755 acres in the Stanislaus NF.

Fire is the verified cause of change on 1,591 acres of montane mixed-chaparral in the Plumas NF, as well as on 1,353 acres of ceanothus chaparral in the Stanislaus NF (Table 31). Regrowth is verified on 833 acres of ceanothus chaparral and 451 acres of montane mixed chaparral in the Stanislaus NF. On the Tahoe NF 310 acres of montane mixed chaparral are verified to be regrowth. Other forests and CALVEG types within the project area show little, if any, change for this time period.

Table 31. Acres of Shrub/Chaparral Change by Cause, National Forest and CALVEG Type

Forest	CAL-VEG**	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified Causes	All Causes
Eldorado	CX	0	2	0	2	1	25	29
	CM	0	0	0	0	0	73	73
	CC	0	6	0	3	3	21	33
	CH	0	0	0	0	0	3	3
	Other*	0	0	0	0	0	2	2
	Total	**0**	**7**	**0**	**4**	**5**	**124**	**140**
Lake Tahoe Basin Management Unit	CX	30	4	0	0	4	28	65
	CH	0	0	0	0	0	30	30
	CM	0	0	0	0	0	21	21
	AX	0	0	0	0	3	18	21
	Other*	0	1	1	0	0	4	6
	Total	**30**	**5**	**1**	**0**	**6**	**99**	**141**
Plumas	BS	16	11	0	2	0	18	46
	CX	1,591	0	0	9	0	150	1,750
	Other*	143	0	0	1	0	31	176
	Total	**1,750**	**11**	**0**	**12**	**0**	**199**	**1,972**
Stanislaus	CC	1,353	68	0	833	157	150	2,562
	CX	201	33	0	451	0	81	766
	CM	30	0	0	0	0	453	483
	Other*	1	0	0	0	0	71	72
	Total	**1,586**	**101**	**0**	**1,284**	**157**	**755**	**3,882**
Tahoe	CX	0	14	0	310	15	83	422
	CH	0	0	3	0	0	57	60
	BS	0	19	0	59	0	75	154
	Other*	5	0	0	238	0	10	253
	Total	**5**	**34**	**3**	**607**	**16**	**225**	**890**
All Forests* **		**3,440**	**158**	**4**	**3,152**	**184**	**1,684**	**8,621**

*CALVEG types composing less than 5% of the conifer lifeform in the particular forest are combined into this category
**See Appendix F for CALVEG code descriptions
***Includes acres from Inyo, Lassen, Sierra, and Toiyabe National Forest

DATA AVAILABILITY

The land cover monitoring data are available in Arc/Info GRID format and the cause data are available in Arc/Info polygon format. These data are available in UTM zone 10 and Albers projections using the North American datum of 1927 (NAD27). To obtain these data, visit the CDF-FRAP website at http://frap.cdf.ca.gov or the State and Private Forestry website at http://www.fs.fed.us/r5/spf/about/fhp-change.shtml, or contact CDF-FRAP at (916) 327-3939 or the USDA Forest Service at (916) 454-0803.

TERMINOLOGY

CALVEG – A vegetation classification scheme based on the Classification and Assessment with Landsat of Visible Ecological Groupings system. This classification system, developed by the USDA Forest Service, describes existing vegetation communities. It is appropriate for mapping vegetation using Landsat TM imagery and recognizes eight regions within California.

Change Classes – Categorical classes of vegetation change used for this program. These levels are relative amounts of change in vegetation cover (a -16 to -40% CC has less vegetation change than a -41 to -70% CC). The Cloud/Shadow class includes areas covered by clouds, cloud shadows and terrain shadows.

Co-registration – The process of aligning pixels in one date of imagery to the corresponding pixels in another date of imagery that are in the same path and row.

Landsat TM Imagery – Thematic Mapper image data from the Landsat satellite. Each image covers approximately 13,225 square miles, has a pixel resolution of 900 square meters (30 m on a side) and contains seven bands of data. Six of the bands (bands 1-5 and band 7) contain information on the amount of reflected sunlight from ground features within specific wavelengths. The sixth band is a thermal band and is not used in the change detection process.

Lifeform – A plant community aggregation into the broad land cover classes of conifer, hardwood, shrub and grass.

Minimum Mapping Unit – The minimum size or dimensions for features to be mapped as lines or areas.

Mosaic – The process of piecing together several images into one larger image.

Nearest Neighbor Resampling – A resampling method where the output pixel value is the same as the input pixel value, but whose coordinates are closest to the resampled coordinates of the output pixel.

Pixel – The smallest unit of information in an image or raster map, also referred to as a cell in an image.

Radiometric Correction – The process of correcting variations in atmospheric conditions and sun angles in multiple dates of imagery.

Supervised Classification – A process aggregating pixels into classes based on training data (known areas representing the different classes) and multivariate statistics.

Thresholding – A process in which easily identified change classes (large increases and decreases in vegetation, little or no change) are masked out in order to reduce the number of pixels submitted to the classifier.

Unsupervised Classification – Classification algorithms that examine the unknown pixels in an image and aggregate them into a number of classes based on the natural groupings or clusters present in the image values.

WHR – A vegetation classification scheme based on the California Wildlife Habitat Relationships System. This classification system describes wildlife habitats of vertebrate animals and tends to have broad vegetation classes.

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APPENDIX A – DATA SOURCES

Image Data

TM imagery provides the base data for deriving changes in vegetation cover. The Northern Sierra project area requires six TM images from each date (12 total TM images). Images for each year are selected as close to the anniversary date as possible to minimize differences in vegetation moisture content and shadow effects. Images are also selected for minimal cloud coverage and overall image quality. TM imagery consists of thousands of pixels, each having a spatial resolution of 900 m^2 (30 m on each side) or approximately 1/5 of an acre. Figure 1a shows the path and row (World Reference System), image boundaries and date for the imagery used in Northern Sierra project area.

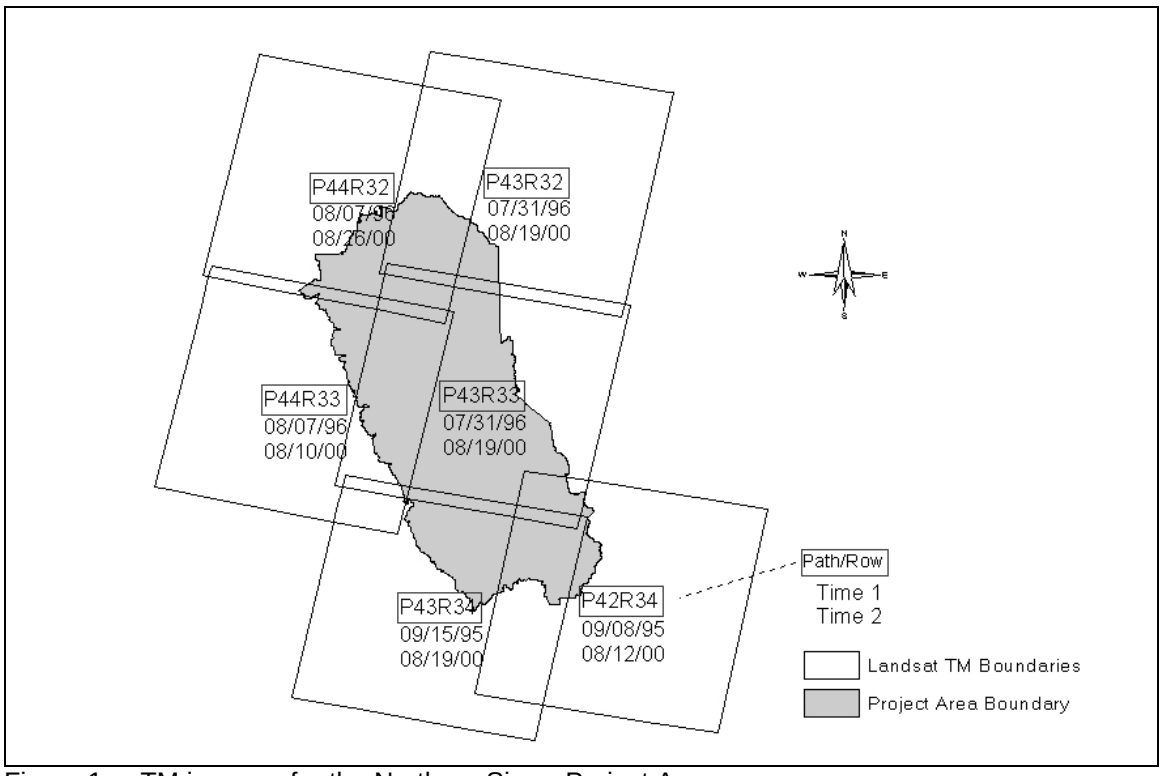


Figure 1a. TM imagery for the Northern Sierra Project Area.

Vegetation Data

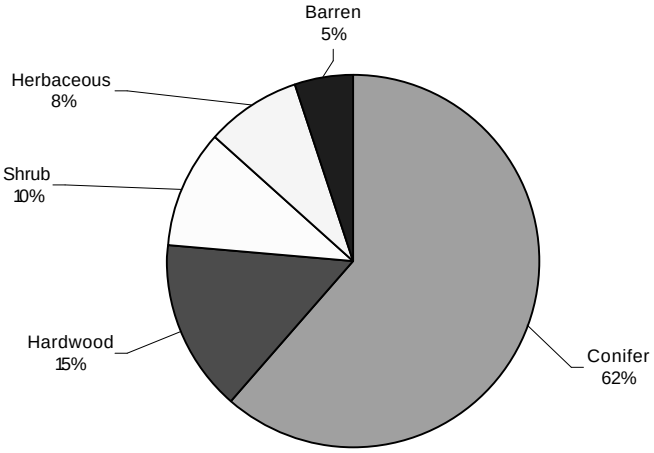


Figure 2a. Proportion of each lifeform in project area.

Vegetation data are used to determine which lifeforms, WHR types and CALVEG types are experiencing various magnitudes of change. "Lifeforms" are general land cover categories, such as conifer and hardwood (Figure 2a). WHR stands for Wildlife Habitat Relationships System, and is a habitat classification system (e.g., Blue Oak Woodland, Ponderosa Pine, and Coastal Scrub). Every WHR type is represented by a lifeform (See Appendix E for WHR types and corresponding lifeforms). The more specific CALVEG types approximate alliance level and usually correspond to the primary overstory species. CALVEG is the principal label mapped and used by the LCMMP, so only LCMMP vegetation data carries the CALVEG label. Because the CALVEG label is more specific, it is not possible to extrapolate, or crosswalk, CALVEG types from WHR types or other vegetation labels from non-LCMMP vegetation layers. However, WHR types can be ascertained, or crosswalked, from CALVEG labels, which is the current method for obtaining WHR types in areas mapped by LCMMP.

For the analysis of the Northern Sierra project area, CALVEG types are analyzed only on Forest Service land, because Forest Service managers and personnel prefer the detailed CALVEG label. For reporting that is not limited to Forest Service land, analysis is performed and summarized using the WHR type. See Appendix E and F for WHR and CALVEG code descriptions.

LCMMP vegetation data cover the entire project area and, as mentioned previously, are mapped to the CALVEG type. The WHR type and lifeform are extrapolated/crosswalked from the CALVEG label. In areas where two vegetation types exist, for example conifers and hardwoods coexisting, there is a primary CALVEG label and a secondary CALVEG label. The primary CALVEG label does not necessarily represent a more prominent vegetation type, as the secondary CALVEG type can represent larger trees and a higher density. In areas where both a primary and secondary CALVEG label exists, the lifeform is labeled as "mixed." Since reporting on a mixed lifeform is somewhat confusing and less than optimal, a lifeform labeled as "mixed" is changed to hardwood, conifer or shrub/chaparral depending on what WHR type is assigned to the area. As an example, many areas have hardwood and conifer both present, and hence have a primary and secondary CALVEG label and are assigned a mixed lifeform. Depending on the size and density of the hardwoods and conifers present, the WHR type can be either montane hardwood or montane hardwood-conifer. Those areas assigned a WHR type of montane hardwood are given a lifeform of hardwood and those areas assigned a WHR type of montane hardwood-conifer are given a lifeform of conifer.

In areas where both a primary and secondary CALVEG label exists, the WHR type also drives what CALVEG type is to be used in the analysis. Using the example from the previous paragraph, if the primary CALVEG label is Sitka spruce and the secondary CALVEG label is red alder, then, depending on the size and density of each CALVEG type, some of the areas would be assigned a WHR type of montane hardwood and some of the areas would be assigned a WHR

type of montane hardwood-conifer. In those areas assigned a WHR type of montane hardwood, red alder would be the CALVEG type that is reported on and analyzed. Conversely, in those areas assigned a WHR type of montane hardwood-conifer, Sitka spruce would be the CALVEG type that is reported on and analyzed.

Table 1a. Vegetation Data for the Northern Sierra Project Area

Name	Classification	Source	Scale	Extent	% of Project Area
CA Mapping & Monitoring Program Vegetation Data	CALVEG / WHR	1996 TM imagery	2.5 acre mmu*	All of project area excluding in and around the Bay Area	100

*mmu - minimum mapping unit.

Other Data

Table 2a describes data layers that supplement our monitoring program. These layers are used to stratify change areas, verify causes and correlate change to mortality levels.

Table 2a. Supplemental Data for the Northern Sierra Project Area

Name	Description	Data Type	Scale	Source	Extent
Ownership	Local, state federal, private	Polygon	1:100,000	CaSIL Data Center	Statewide
County	County boundaries	Polygon	1:24,000	CaSIL Data Center	Statewide
Fire Perimeters	Recent and past fires	Regions (polygon)	Varies; 1:24,000 to 1:100,000	Maintained by CDF and FS	Statewide
Harvest / Plantation	Silvicultural practices	Polygon	1:24,000	FS	Forest Service lands
THP Database	Harvest practices on private land	Polygon	1:24,000	CDF	Selected watersheds
NHFEU* Boundaries	Ecological subsection boundaries	Polygon	1:7,500,000	FS	Statewide
Digital Orthophoto Quads	1994	Image	$1m^2$ pixels	FS and CDF	Statewide
Aerial Survey Data	Sketch mapped mortality data	Polygon	Variable	FS	Forest Service lands, National Parks
Aerial Photos	9” x 9”	Print photograph	1:15,840 nominal	FS	Forest Service lands
	Color Infrared	Digital photograph	1:3,000 nominal	FS	Selected sites within project area

*National Hierarchical Framework of Ecological Units.

APPENDIX B – METHODOLOGY

Database Building

Database building includes the preparation of Thematic Mapper (TM) imagery for processing. The early date TM image (time 1) is registered to the later date TM image (time 2). Registration matches the position of ground features (from time 1 and time 2) and is accomplished by creating control points that identify identical features throughout both images (e.g., road intersections). These control points are used in a nearest neighbor resampling technique to assign the early date pixel values to the later date pixel locations. These new pixel locations must be within ½ pixel of the later date pixels to help reduce false change. The images are then radiometrically corrected to account for differences in atmospheric conditions (e.g., haze and water vapor). This process involves the selection of dark and light groups of pixels in each image date followed by the application of a regression-based correction to the pixel brightness values of the early date image to effectively remove differences in atmospheric conditions (Schott et al., 1988).

Change Processing

A TM image contains spectral (or reflectance) information for 7 bands of data, each representing a different range of the electromagnetic spectrum. For instance, band 1 of the Landsat TM measures the reflectance of wavelengths from 0.45μm to 0.52μm, which corresponds to the color blue. The thermal-IR band is not used because its pixel size is 120 meters on each side (all other bands are 30 meters on each side). The spectral information of the 12 bands (six for each date) of the co-registered and radiometrically corrected TM imagery is reduced to three bands in two steps. First, a Kauth-Thomas transformation is applied to each date. For each TM image, the Kauth-Thomas transformation uses the spectral information from six bands with model coefficients to produce new images depicting values of brightness, greenness and wetness (Crist and Cicone, 1984). Brightness identifies variation in reflectance, greenness is related to the amount of green vegetation present in the scene and wetness correlates to canopy and soil moisture. Then the brightness, greenness and wetness values from the first image (time 1) are subtracted from the brightness, greenness and wetness values of the second image (time 2; time 2 – time 1) to produce a new three band image depicting changes in those components on a pixel-by-pixel basis (the delta brightness/greenness/wetness (dBGW) image).

Threshold Mask

A thematic layer is created for each scene processing area which identifies the following classes: urban, water, and agriculture (derived directly from the master vegetation image) and thresholded pixels representing much of the little or no change, large decrease in vegetation, large increase in vegetation and non-vegetation change which are easy to identify. In the thresholding process, ranges of delta brightness, delta greenness and delta wetness for these classes are determined interactively on an 8-bit dBGW image by manipulating the lookup table breakpoints (Maurizi and Longmire, 2002) and then applied in a model to create the threshold mask. This mask reduces the number of pixels that need to be classified and labeled.

Classification

Classification is a multi-step process that converts the dBGW change image into a change map depicting decreases and increases in cover or changes in grass (Figure 5 of main report). The

change image is divided into multiple parts (stratified), with each part (or map subset) corresponding to a different lifeform type (e.g., conifer, hardwood, shrub/chaparral). This is accomplished by overlaying the vegetation layer and threshold mask and selecting those areas in the change image that have the same lifeform and are not already identified with a change class. The result is multiple change images, with each one corresponding to a different lifeform and spatial extent. An unsupervised classification of the 16 bit dBGW image is performed on each individual lifeform change image to create 15 to 30 distinct classes (depending on lifeform and areal extent), with each class containing pixels that have similar levels of brightness, greenness and wetness.

Change Labeling

The pixels are temporarily labeled according to their level of change based on a qualitative gradient from large decreases in vegetation to large increases in vegetation. Image appearance, aerial photos, bispectral plots (e.g., greenness vs. wetness), and vegetation and topographic maps are used to aid in assigning the final quantitative change classes (Table 1b). Each individual lifeform change image is then mosaicked (pieced back together) into one project area change map.

Table 1b. Change Classes and Corresponding Description

CHANGE CLASS	DESCRIPTION
-71 to -100% CC	71 to 100% decrease in cover
-41 to -70% CC	41 to 70% decrease in cover
-16 to -40% CC	16 to 40% decrease in cover
+15 to -15% CC (Little or No Change)	Little or no change in cover
+16 to +40% CC	16 to 40% increase in cover
+41 to +100% CC	41 to 100% increase in cover
Grass Decrease > 15%	16 to 100% decrease in grass
Grass Increase > 15%	16 to 100% increase in grass
Cloud, Cloud Shadow or Smoke	Clouds, cloud shadows or smoke (prevents change assessment)

Once the change image is mosaicked, pixels of similar change classes that are adjacent to each other are temporarily grouped together. All increases in cover and shrub/grass are grouped together, all decreases in cover and shrub/grass are grouped together and non-vegetation change pixels are grouped together. These groups are then filtered to see if they meet the minimum mapping unit (mmu) of 2.5 acres, or 11 pixels. All groups that do not meet the mmu are removed from the change map and assigned the change class matching the majority of the surrounding pixels (usually little or no change). The temporary groupings are then removed, giving the pixels their original value (change class).

The classification system is designed to discriminate between different levels of change in cover (i.e., 16 to 40% CC decrease vs. 71 to 100% CC decrease). The +15 to -15% CC (little or no change) indicates either that change did not occur, that the change area falls below the mmu or that the change was too subtle to be detected. The cloud or cloud shadow class accounts for clouds, cloud shadows and shadows in mountainous areas that obscure ground cover and make it impossible to determine whether the vegetation has changed or remained stable in these areas.

Cause Verification

Once the final change map is complete, an attempt is made to verify cause on all change areas. GIS overlay analysis, fieldwork and photo interpretation are used to determine the causes of change areas. The statewide fire history database is overlaid onto the change map to attribute changes caused by wildfires (Figure 6 of main report). A series of cause identification workshops are conducted and include FS resource managers, CDF personnel and other stakeholders in the project area. FS, CDF and other land managers interpret change maps by applying local knowledge and fieldwork to identify sources of change on public lands. Similarly, UC Integrated Hardwood Rangeland Management Program (IHRMP) personnel consult private landowners to identify sources of change in hardwood rangelands. Areas without a causal agent identified through the above processes become the focus of further field efforts and aerial photo interpretation. Despite all of these efforts, complete coverage of cause verification is not always possible due to the large number of change areas, insufficient information and inaccessible lands.

Unverified Cause

While a certain amount of vegetation change without a verified cause is expected in every project area, errors during cause database building contributed to the amount of unverified cause in the Northern Sierra Project area. Attribution of polygons with cause data was already underway when a grid snapping error was discovered. This error had to be corrected to guarantee continuity between the vegetation change data and the cause data. A slight pixel shift was experienced during the correction of this error, causing some pixels already attributed with cause information (i.e. harvest, regrowth, etc.,) to lose this information. Generally speaking, these pixels were on the edges of attributed polygons and were widespread throughout the project area. Adjustments were made to correct as many of these now “unverified” pixels as possible, however, ultimately not all pixels could be placed into their correct cause category. Overall, it is estimated that approximately 10,000 to 15,000 acres of the nearly 60,000 acres of change with an unverified cause had been attributed with cause information originally. While it is impossible to precisely determine the actual cause category these “unverified changes” belong to, nearby polygons with cause information may offer some insight. As with other change with unverified cause information, the most likely categories for these “unverified pixels” are those with the greatest amount of change within the project area (fire, harvest and regrowth).

APPENDIX C - DATA ACCURACY

To assess the accuracy of the change map, 492 randomly selected change areas were compared with known reference information of the same areas. All change classes were represented with accuracy assessment sites based on the acreage amount of change (e.g., the little to no change class has the largest acreage thus contains the most sites). Sites were developed randomly selecting 5 to 20 acre polygons from all of the change areas. These areas were interpreted for cover and shrub/chaparral change using color aerial photography at a scale of 1:15,840, digital camera images at a scale of 1:3000, Digital Orthophoto Quadrangles with a 1-meter cell size and field collected data. Essentially, this assessment takes the 492 reference sites with known vegetation change and compares them to the classified change map.

Table 1c. Change Code and Corresponding Change Class

Change Code	CHANGE CLASS
1	-71 to -100% CC
2	-41 to -70% CC
3	-16 to -40% CC
4	+15 to -15% CC (Little or No Change)
5	+16 to +40% CC
6	+41 to +100% CC
7	Grass Decrease > 15%
8	Grass Increase > 15%
15	Cloud or Cloud Shadow

Table 2c displays the error matrix for the Northern Sierra project area. (See Table 1c for change code descriptions). The overall accuracy of the change map is 82.3%. This means that of the 492 sample sites, 405 were correctly classified (the reference and classified classes are the same; Congalton and Green, 1999). Errors of commission (reference class included in the wrong classified class) and omission (reference class excluded from the correct classified class) are also evident. For example, Table 2c shows that one site was classified as shrub/grass increase >15% when the reference class shows it was actually little or no change. Therefore, one area was

Table 2c. Change Map Accuracy Assessment for the Northern Sierra Project Area

		Reference Class								
Classified As	**Change Code**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**Total**
	1	38	8	2	1					**49**
	2	4	36	3	2					**45**
	3	1	7	27	7					**42**
	4	1		3	189	9	3			**205**
	5				8	25	5			**38**
	6				7	13	24			**44**
	7				3			19		**19**
	8								47	**47**
	Total	**44**	**51**	**35**	**217**	**47**	**32**	**19**	**47**	**492**

omitted from the correct little or no change class and committed to the incorrect shrub/grass increase >15% class. The producer's accuracy of each change class ranged from 53% to 100% and the user's accuracy ranged from 55% to 100% (Table 3c). Producer's accuracy represents how well a particular class is classified. In other words, of all the referenced sites that have a particular change class, how many times (or in what proportion) did those sites get classified as such? For instance, of the 35 reference sites with a –16 to –40% CC, 27 of those sites were classified correctly. The user's accuracy looks at the matrix from a different approach. Instead of looking at known reference data and calculating how many are correct (producer's accuracy), the user's accuracy looks at the number correctly classified and compares that to the number of sites

in that classification. For example, 42 sites are classified into the –16 to –40% CC class, but only 27 of those sites are actually referenced to be in that class. User's accuracy indicates the probability that a given change class actually represents that same change on the ground.

Table 3c. Producer's and User's Accuracy of Each Class

Change Code	Producer's Accuracy	User's Accuracy
1	86.36%	77.55%
2	70.59%	80.00%
3	77.14%	64.29%
4	87.10%	92.20%
5	53.19%	65.79%
6	75.00%	54.55%
7	100.00%	86.36%
8	100.00%	100.00%

The accuracy assessment also shows that general vegetation cover decreases and increases were mapped well. Accuracy assessment sites classified as a decrease were never a referenced increase, although a few sites were referenced as little or no change. The same is true for the areas classified as an increase. Additionally, a referenced decrease site was never classified as an increase and a referenced increase site was never classified as a decrease.

APPENDIX D – WHR TYPE DESCRIPTIONS

Species Compositions for major Hardwood, Conifer and Shrub/Chaparral WHR Types; Species in bold are dominant and species in non-bold are associates.

MONTANE HARDWOOD	BLUE OAK WOODLAND	Blue Oak/ FOOTHILL PINE
CA black oak **pacific madrone** **tanoak** **alder** **interior live oak** **canyon live oak**	**blue oak**	**blue oak** **foothill pine**
Oregon white oak coast live oak California laurel valley oak blue oak foothill pine ponderosa pine	interior live oak coast live oak buckeye juniper canyon live oak valley oak ponderosa pine	coast live oak interior live oak canyon live oak

DOUGLAS FIR	SIERRA MIXED CONIFER	KLAMATH MIXED CONIFER
Douglas fir **port orford cedar** **Jeffrey pine** **sugar pine** **western hemlock**	**white fir** **Douglas fir** **Ponerosa pine** **sugar pine** **incense cedar**	**Douglas fir** **white fir** **ponderosa pine** **incense cedar** **sugar pine**
tanoak CA huckleberry poison oak	western redcedar	lodgepole pine Jeffrey pine knobcone pine port orford cedar canyon live oak CA black oak

EASTSIDE PINE	WHITE FIR	MONTANE HARDWOOD-CONIFER
ponderosa pine	**white fir**	
Jeffrey pine lodgepole pine white fir incense cedar Douglas fir CA black oak western juniper	Jeffrey pine sugar pine incense cedar red fir	Ponderosa pine incense cedar Douglas fir tanoak madrone canyon live oak coast live oak

MIXED CHAPARRAL	MONTANE CHAPARRAL	SAGEBRUSH
oaks **ceanothus** **manzanita**	**ceanothus** **manzanita** **bitter cherry**	**sagebrush** **rabbitbrush** **gooseberry**
chamise mountain mahogany buckeye sumac buckthorn California fremontia		

Source: Mayer and Laudenslayer, 1988.

APPENDIX E – WHR VEGETATION HIERARCHY

Lifeform	WHR Code	WHR Type
Hardwood	ASP	Aspen
	BOP	Blue Oak- Foothill Pine
	COW	Coastal Oak Woodland
	EUC	Eucalyptus
	MHW	Montane Hardwood
	MRI	Montane Riparian
	VOW	Valley Oak Woodland
	VRI	Valley Foothill Riparian
Conifer	JUN	Juniper
	CPC	Closed Cone Pine-Cypress
	DFR	Douglas Fir
	EPN	Eastside Pine
	JPN	Jeffrey Pine
	KMC	Klamath Mixed Conifer
	LPN	Lodgepole Pine
	MHC	Montane Hardwood-Conifer
	PPN	Ponderosa Pine
	RDW	Redwood
	SCN	Subalpine Conifer
	SMC	Sierran Mixed Conifer
	UCN	Undetermined Conifer
	WFR	White Fir
Shrub/ Chaparral	BBR	Bitterbrush
	CRC	Chamise-Redshank Chaparral
	CSC	Coastal Scrub
	DSC	Desert Scrub
	LSG	Low Sagebrush
	MCH	Mixed Chaparral
	MCP	Montane Chaparral
	SGB	Sagebrush
	UND	Undetermined Shrub/Chaparral Type

Source: Mayer and Laudenslayer, 1988.

APPENDIX F – CALVEG CODES

Lifeform	CALVEG Code	CALVEG Description
Hardwood	QC	Canyon Live Oak
	QD	Blue Oak
	QG	Oregon White Oak
	QJ	Cottonwood/Alder
	QK	California Black Oak
	QM	Bigleaf Maple (Dogwood)
	QO	Willow
	QQ	Quaking Aspen
	QR	Red Alder
	QT	Tanoak
	QY	Willow-Alder
	QW	Interior Live Oak
	TA	Mountain Alder
	TC	Tree Chinquapin
Conifer	DF	Pacific Douglas-Fir
	DP	Douglas Fir-Pine
	DT	Douglas Fir-Tanoak
	DW	Douglas Fir-White Fir
	EP	Eastside Pine
	JP	Jeffrey Pine
	KP	Knobcone Pine
	LP	Lodgepole Pine
	MF	Mixed Conifer-Fir
	MP	Mixed Conifer-Pine
	PD	Gray Pine
	PO	Port Oreford Cedar
	PP	Ponderosa Pine
	PW	Ponderosa Pine-White Fir
	RD	Redwood-Douglas Fir
	RF	Red Fir
	SA	Subalpine Conifers
	WB	Whitebark Pine
	WF	White Fir
	WJ	Western Juniper
	WW	Western White Pine
Shrub/Chaparral	BB	Bitterbrush
	BL	Low Sagebrush
	BS	Basin Sagebrush
	CB	Salal-California Huckleberry Shrub
	CC	Ceanothus Chaparral
	CG	Greenleaf Manzanita
	CH	Huckleberry Oak
	CL	Wedgeleaf Ceanothus
	CM	Upper Montane Mixed Shrub
	CN	Pinemat Manzanita
	CQ	Lower Montane Mixed Chaparral
	CS	Scrub Oak
	CW	Whiteleaf Manzanita
	CX	Montane Mixed Chaparral

Source: USDA Forest Service Regional Ecology Group, 1981.

APPENDIX G – DETAILED MAPS AND TABLES

Project Area Maps and Tables

1. Project Area Change Map
2. Acres of Classified change by Lifeform Type
3. Acres of Classified Change by Conifer Cover Type
4. Acres of Classified Change by Hardwood Cover Type
5. Acres of Classified Change by Shrub/Chaparral Types
6. Acres of Classified Change by Grass/Forb Types
7. Acres of Verified Change by Cause for All Lifeform Cover Types and Owner Classes
8. Acres of Classified Change by Lifeform Type and Owner Class
9. Acres of Classified Change by Conifer Type and Owner Class
10. Acres of Classified Change by Hardwood Cover Type and Owner Class
11. Acres of Classified Change by Shrub/Chaparral Types and Owner Class
12. Acres of Classified Change by Grass/Forb Type and Owner Class
13. Acres of Verified Change in All Conifer Cover Types by Cause and Owner Class
14. Acres of Verified Change in All Hardwood Cover Types by Cause and Owner Class
15. Acres of Verified Change in All Shrub/Chaparral Types by Cause and Owner Class
16. Acres of Verified Change in All Grass/Forb Types by Cause and Owner Class

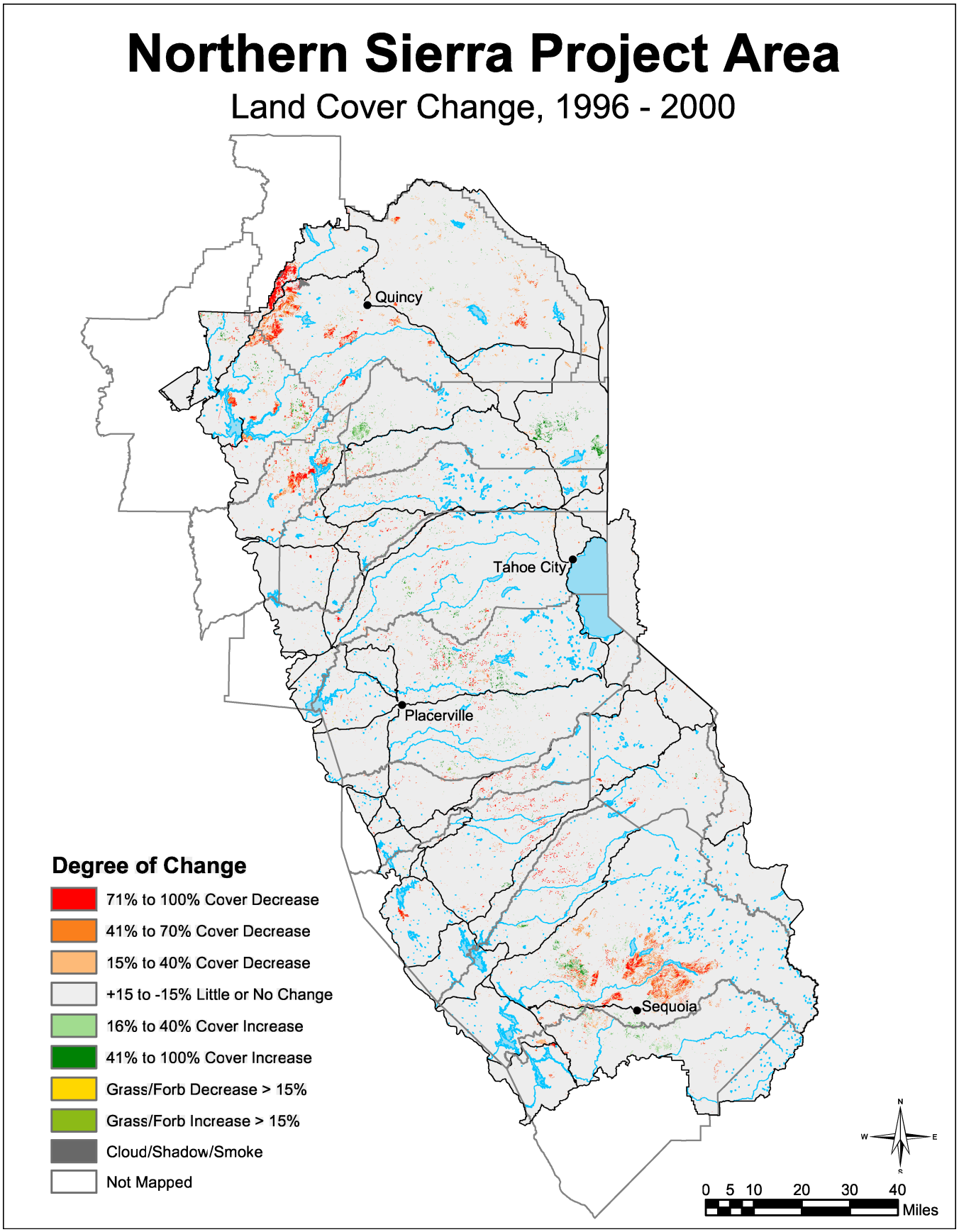

Northern Sierra Project Area
Land Cover Change, 1996 - 2000
Quincy
Tahoe City
Placerville
Sequoia
Degree of Change
71% to 100% Cover Decrease
41% to 70% Cover Decrease
15% to 40% Cover Decrease
+15 to -15% Little or No Change
16% to 40% Cover Increase
41% to 100% Cover Increase
Grass/Forb Decrease > 15%
Grass/Forb Increase > 15%
Cloud/Shadow/Smoke
Not Mapped
N
W
E
S
0 5 10 20 30 40
Miles

Table P-1 Acres of Classified Change by Lifeform Type

	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		All Lifeforms	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	51,402	1	12,777	1	5,904	1			70,083	1
-41 to –70% CC	39,834	1	7,310	1	4,694	1			51,838	1
-16 to –40% CC	38,262	1	9,571	1	3,380				51,213	1
-15 to + 15% CC (Little or No Change)	5,163,397	97	1,271,645	98	877,498	98	724,525	100	8,463,211	97
+16 to + 40% CC	18,242		1,132		2,887				22,261	
+41 to + 100% CC	21,749		1,157		2,851				25,757	
Grass Decrease > 15%							1,727		2,033	
Grass Increase > 15%							992		1,647	
Cloud or Cloud Shadow	2,599		121		82				2,816	
Total	5,335,486	100	1,303,713	100	897,297	100	727,244	100	8,690,860	100

Table P-2 Acres of Classified Change by Conifer Cover Type

	Closed Cone Pine-Cypress		Douglas Fir		Eastside Pine		Jeffrey Pine		Juniper	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	1		4,761	1	890		1,200		22	
-41 to –70% CC	4		2,486	1	1,816	1	1,158		13	
-16 to –40% CC	6		3,273	1	3,547	1	1,222		18	
-15 to + 15% CC (Little or No Change)	1,675	99	371,649	96	273,672	97	284,325	99	13,907	100
+16 to + 40% CC	12	1	2,631	1	166		99		1	
+41 to + 100% CC	2		1,509		977		169		2	
Total	1,699	100	386,698	100	281,068	100	288,172	100	13,963	100

	Lodgepole Pine		Montane Hardwood-Conifer		Pinyon-Juniper		Red Fir		Sierran Mixed Conifer	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	377		5,993	1	110		1,451		27,198	1
-41 to –70% CC	264		2,944	1	83		2,141		20,925	1
-16 to –40% CC	307		3,409	1	102		2,252		17,834	1
-15 to + 15% CC (Little or No Change)	247,553	100	445,674	97	67,176	100	547,794	99	2,044,778	96
+16 to + 40% CC	10		1,341		1		271		9,768	
+41 to + 100% CC	39		1,928		8		247		12,857	1
Cloud or Cloud Shadow			130				6		1,920	
Total	248,549	100	461,418	100	67,480	100	554,161	100	2,135,280	100

Table P-2 Acres of Classified Change by Conifer Cover Type

	Ponderosa Pine		Subalpine Conifer		White Fir		Unknown Conifer Type		All Conifer	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	6,010	1	157		3,225	1	9		51,402	1
-41 to –70% CC	6,024	1	143		1,826	1	9		39,834	1
-16 to –40% CC	5,094	1	218		976		5		38,262	1
-15 to + 15% CC (Little or No Change)	396,091	94	227,348	100	239,916	97	1,841	99	5,163,397	97
+16 to + 40% CC	3,511	1	27		403				18,242	
+41 to + 100% CC	2,981	1	9		1,021		1		21,749	
Cloud or Cloud Shadow	49				106				2,599	
Total	419,759	100	227,901	100	247,472	100	1,865	100	5,335,486	100

Table P-3 Acres of Classified Change by Hardwood Cover Type

	Aspen		Blue Oak Woodland		Blue Oak-Foothill Pine		Coastal Oak Woodland		Eucalyptus	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	9		1,427		1,311	2	1	1		
-41 to -70% CC	7		637		688	1	4	2		
-16 to -40% CC	49	1	399		1,686	3	2	1		
-15 to + 15% CC (Little or No Change)	5,509	99	354,413	99	51,016	93	190	96	38	100
+16 to + 40% CC			99		21					
+41 to + 100% CC	5		144		8					
Total	5,579	100	357,118	100	54,730	100	198	100	38	100

	Montane Hardwood		Montane Riparian		Valley Foothill Riparian		Valley Oak Woodland		All Hardwood	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	9,876	1	121	1			31		12,777	1
-41 to -70% CC	5,872	1	73				30		7,310	1
-16 to -40% CC	7,177	1	243	1			15		9,571	1
-15 to + 15% CC (Little or No Change)	833,916	97	18,484	98		100	8,080	99	1,271,645	98
+16 to + 40% CC	1,000		3				8		1,132	
+41 to + 100% CC	987		10				3		1,157	
Cloud or Cloud Shadow	117		4						121	
Total	858,945	100	18,938	100		100	8,167	100	1,303,713	100

Table P-4 Acres of Classified Change by Shrub/Chaparral Cover Type

	Alpine Dwarf Shrub		Bitterbrush		Chamise-Redshank Chaparral		Desert Scrub		Low Sagebrush	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	7				923	2			26	
-41 to -70% CC	8		2		591	1			52	1
-16 to -40% CC	4				642	1			51	1
-15 to + 15% CC (Little or No Change)	3,181	99	1,234	100	44,344	95	313	100	8,418	98
+16 to + 40% CC					22					
+41 to + 100% CC	3				17					
Total	3,201	100	1,236	100	46,538	100	313	100	8,547	100

	Mixed Chaparral		Montane Chaparral		Sagebrush		Unknown Shrub/Chaparral		All Shrub/Chaparral	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	1,998	1	2,354	1	308		289	1	5,904	1
-41 to -70% CC	1,508	1	1,721	1	703		110		4,694	1
-16 to -40% CC	851		1,207		590		35		3,380	
-15 to + 15% CC (Little or No Change)	217,446	97	315,586	97	256,693	99	30,284	99	877,498	98
+16 to + 40% CC	1,142	1	1,537		181		5		2,887	
+41 to + 100% CC	520		1,987	1	325		1		2,851	
Cloud or Cloud Shadow	2		80						82	
Total	223,466	100	324,471	100	258,800	100	30,724	100	897,297	100

Table P-5 Acres of Classified Change by Grass/Forb Cover Types

	Annual Grass		Freshwater Emergen Wetland		Perennial Grassland		Wet Meadow		Unknown Grass/Forb		All Grass/Forb	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-15 to + 15% CC (Little or No Change)	639,660	100	60	100	366	100	44,606	100	39,834	100	724,525	100
Grass Decrease > 15%	1,644						64		19		1,727	
Grass Increase > 15%	988						4				992	
Total	642,292	100	60	100	366	100	44,674	100	39,853	100	727,244	100

Table P-6 Acres of Verified Change by Cause for All Lifeforms and Owner Classes

	Fire	Harvest	Develop-ment	Pest Related	Regrowth	Other	Unverified Cause	All Causes
-71 to -100% CC	39,923	13,199	403	7		1,578	14,974	70,083
-41 to -70% CC	31,258	7,711	179	9		1,836	10,845	51,838
-16 to -40% CC	24,847	9,157	76	11		1,594	15,529	51,213
+16 to + 40% CC					14,773	482	7,006	22,261
+41 to + 100% CC					16,697	271	8,789	25,757
Grass Decrease > 15%	592	66	194			49	1,132	2,033
Grass Increase > 15%					716	9	923	1,647
Total	96,620	30,132	852	27	32,186	5,819	59,197	224,833

Table P-7 Acres of Classified Change by Lifeform and Owner Class

	Forest Service											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Forest Service Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	21,047	1	3,565	2	2,430	1					27,043	1
-41 to -70% CC	18,646	1	1,873	1	1,834						22,353	1
-16 to -40% CC	17,369	1	2,112	1	890						20,371	1
-15 to + 15% CC (Little or No Change)	3,048,603	97	187,512	96	401,306	98	70,740	100	257,491	100	3,965,653	97
+16 to + 40% CC	12,057		371		1,953						14,381	
+41 to + 100% CC	13,809		221		1,870						15,899	
Grass Decrease > 15%							154		84		238	
Grass Increase > 15%							114		109		222	
Cloud or Cloud Shadow	2,488		116		82				13		2,699	
Total	3,134,019	100	195,770	100	410,365	100	71,008	100	257,697	100	4,068,859	100

	Other Public											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Other Public Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	6,791	1	2,935	2	693						10,418	1
-41 to -70% CC	10,826	2	1,215	1	807	1					12,848	1
-16 to -40% CC	8,471	1	3,449	2	1,369	1					13,289	1
-15 to + 15% CC (Little or No Change)	668,242	96	136,504	95	149,863	98	49,562	99	136,267	100	1,140,437	97
+16 to + 40% CC	702		59		106						867	
+41 to + 100% CC	308		74		35						417	
Grass Decrease > 15%							430	1	29		459	
Grass Increase > 15%							52		7		59	
Total	695,339	100	144,236	100	152,872	100	50,044	100	136,303	100	1,178,794	100

	Private											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Private Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	23,564	2	6,277	1	2,782	1					32,623	1
-41 to -70% CC	10,363	1	4,222		2,053	1					16,638	
-16 to -40% CC	12,422	1	4,011		1,121						17,554	1
-15 to + 15% CC (Little or No Change)	1,446,552	96	947,629	98	326,329	98	604,223	100	32,388	98	3,357,120	97
+16 to + 40% CC	5,482		702		829						7,013	
+41 to + 100% CC	7,632	1	862		947						9,441	
Grass Decrease > 15%							1,143		192	1	1,335	
Grass Increase > 15%							827		539	2	1,366	
Cloud or Cloud Shadow	111		5						1		117	
Total	1,506,127	100	963,707	100	334,060	100	606,192	100	33,121	100	3,443,207	100

Table P-8 Acres of Classified Change by Conifer Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Unknown Conifer Type								
-71 to -100% CC			5		4	1	9	
-41 to -70% CC			3		6	1	9	
-16 to -40% CC			1		5	1	5	
-15 to + 15% CC (Little or No Change)			1,121	99	720	98	1,841	99
+16 to + 40% CC								
+41 to + 100% CC			1				1	
Total			1,131	100	734	100	1,865	100
Closed Cone Pine-Cypress								
-71 to -100% CC					1		1	
-41 to -70% CC					4	1	4	
-16 to -40% CC					6	1	6	
-15 to + 15% CC (Little or No Change)	1,214	99	5	100	456	97	1,675	99
+16 to + 40% CC	11	1			1		12	1
+41 to + 100% CC	1						2	
Total	1,226	100	5	100	467	100	1,699	100
Douglas Fir								
-71 to -100% CC	1,564	1	80		3,118	2	4,761	1
-41 to -70% CC	948		76		1,463	1	2,486	1
-16 to -40% CC	1,374	1	79		1,819	1	3,273	1
-15 to + 15% CC (Little or No Change)	195,021	97	20,057	99	156,571	95	371,649	96
+16 to + 40% CC	1,806	1	13		813		2,631	1
+41 to + 100% CC	998		9		502		1,509	
Cloud or Cloud Shadow	315				73		388	
Total	202,026	100	20,314	100	164,358	100	386,698	100
Eastside Pine								
-71 to -100% CC	706		10		173		890	
-41 to -70% CC	1,561	1	10		246		1,816	1
-16 to -40% CC	2,725	1	18		803	1	3,547	1
-15 to + 15% CC (Little or No Change)	209,415	97	5,235	99	59,023	98	273,672	97
+16 to + 40% CC	162		3		1		166	
+41 to + 100% CC	965		8		4		977	
Total	215,534	100	5,284	100	60,250	100	281,068	100
Jeffrey Pine								
-71 to -100% CC	345		806	1	49		1,200	
-41 to -70% CC	286		843	1	28		1,158	
-16 to -40% CC	348		847	1	26		1,222	
-15 to + 15% CC (Little or No Change)	179,698	99	76,005	97	28,622	100	284,325	99
+16 to + 40% CC	17		79		3		99	
+41 to + 100% CC	138		28		4		169	
Total	180,833	100	78,608	100	28,732	100	288,172	100

Table P-8 Acres of Classified Change by Conifer Cover Type and Owner Class (cont.)

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Juniper								
-71 to -100% CC	22						22	
-41 to -70% CC	12		1				13	
-16 to -40% CC	18						18	
-15 to + 15% CC (Little or No Change)	11,792	100	1,243	100	872	100	13,907	100
+16 to + 40% CC	1						1	
+41 to + 100% CC	2						2	
Total	11,847	100	1,244	100	872	100	13,963	100
Lodgepole Pine								
-71 to -100% CC	253		96		29		377	
-41 to -70% CC	153		62		48		264	
-16 to -40% CC	194		62		51		307	
-15 to + 15% CC (Little or No Change)	123,424	99	111,599	100	12,529	99	247,553	100
+16 to + 40% CC	6		2		2		10	
+41 to + 100% CC	29		3		7		39	
Total	124,060	100	111,823	100	12,666	100	248,549	100
Montane Hardwood-Conifer								
-71 to -100% CC	2,814	2	181		2,998	1	5,993	1
-41 to -70% CC	1,381	1	136		1,427		2,944	1
-16 to -40% CC	1,222	1	302	1	1,885	1	3,409	1
-15 to + 15% CC (Little or No Change)	119,361	94	38,626	98	287,687	97	445,674	97
+16 to + 40% CC	779	1	20		542		1,341	
+41 to + 100% CC	909	1	13		1,005		1,928	
Cloud or Cloud Shadow	121				9		130	
Total	126,588	100	39,278	100	295,553	100	461,418	100
Pinyon-Juniper								
-71 to -100% CC	94		3		13		110	
-41 to -70% CC	66		11		5		83	
-16 to -40% CC	88		12		2		102	
-15 to + 15% CC (Little or No Change)	49,966	99	13,914	100	3,296	99	67,176	100
+16 to + 40% CC	1				1		1	
+41 to + 100% CC	5				3		8	
Total	50,220	100	13,940	100	3,320	100	67,480	100
Ponderosa Pine								
-71 to -100% CC	1,208	1	1,179	2	3,623	2	6,010	1
-41 to -70% CC	1,450	1	2,698	4	1,876	1	6,024	1
-16 to -40% CC	1,670	1	1,717	3	1,707	1	5,094	1
-15 to + 15% CC (Little or No Change)	125,616	94	60,690	91	209,784	96	396,091	94
+16 to + 40% CC	2,302	2	110		1,099	1	3,511	1
+41 to + 100% CC	1,842	1	38		1,102	1	2,981	1
Cloud or Cloud Shadow	43				7		49	
Total	134,130	100	66,432	100	219,197	100	419,759	100

Table P-8 Acres of Classified Change by Conifer Cover Type and Owner Class (cont.)

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Red Fir								
-71 to -100% CC	259		1,124	1	68		1,451	
-41 to -70% CC	361		1,636	2	144		2,141	
-16 to -40% CC	339		1,705	2	208		2,252	
-15 to + 15% CC (Little or No Change)	382,124	100	104,248	96	61,423	99	547,794	99
+16 to + 40% CC	71		186		14		271	
+41 to + 100% CC	209		11		27		247	
Cloud or Cloud Shadow	6						6	
Total	383,369	100	108,909	100	61,883	100	554,161	100
Subalpine Conifer								
-71 to -100% CC	67		85		4		157	
-41 to -70% CC	27		110		6		143	
-16 to -40% CC	100		112		6		218	
-15 to + 15% CC (Little or No Change)	100,335	100	125,022	100	1,991	99	227,348	100
+16 to + 40% CC	2		25				27	
+41 to + 100% CC	5		3		1		9	
Total	100,536	100	125,357	100	2,009	100	227,901	100
Sierran Mixed Conifer								
-71 to -100% CC	10,959	1	3,186	3	13,054	2	27,198	1
-41 to -70% CC	10,699	1	5,235	5	4,990	1	20,925	1
-16 to -40% CC	8,487	1	3,598	3	5,749	1	17,834	1
-15 to + 15% CC (Little or No Change)	1,368,870	97	98,382	89	577,525	95	2,044,778	96
+16 to + 40% CC	6,590		217		2,962		9,768	
+41 to + 100% CC	7,852	1	187		4,818	1	12,857	1
Cloud or Cloud Shadow	1,899				22		1,920	
Total	1,415,356	100	110,805	100	609,120	100	2,135,280	100
White Fir								
-71 to -100% CC	2,756	1	37		432	1	3,225	1
-41 to -70% CC	1,702	1	4		120		1,826	1
-16 to -40% CC	803		17		155		976	
-15 to + 15% CC (Little or No Change)	181,767	97	12,094	99	46,055	98	239,916	97
+16 to + 40% CC	310		48		45		403	
+41 to + 100% CC	854		9		159		1,021	
Cloud or Cloud Shadow	106						106	
Total	188,297	100	12,209	100	46,966	100	247,472	100
All Conifer	3,134,019		695,339		1,506,127		5,335,486	

Table P-9 Acres of Classified Change by Hardwood Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Aspen								
-71 to -100% CC	8		2	2			9	
-41 to -70% CC	6				1		7	
-16 to -40% CC	42	1	2	2	5	1	49	1
-15 to + 15% CC (Little or No Change)	4,973	99	113	97	423	99	5,509	99
+41 to + 100% CC	5						5	
Total	5,034	100	116	100	429	100	5,579	100
Blue Oak-Foothill Pine								
-71 to -100% CC			936	6	375	1	1,311	2
-41 to -70% CC			353	2	335	1	688	1
-16 to -40% CC			1,449	9	237	1	1,686	3
-15 to + 15% CC (Little or No Change)	968	100	12,843	82	37,206	97	51,016	93
+16 to + 40% CC			13		8		21	
+41 to + 100% CC			6		1		8	
Total	968	100	15,599	100	38,163	100	54,730	100
Blue Oak Woodland								
-71 to -100% CC			161	1	1,266		1,427	
-41 to -70% CC			29		608		637	
-16 to -40% CC			63		336		399	
-15 to + 15% CC (Little or No Change)	164	100	27,666	99	326,583	99	354,413	99
+16 to + 40% CC			5		94		99	
+41 to + 100% CC			3		141		144	
Total	164	100	27,927	100	329,028	100	357,118	100
Coastal Oak Woodland								
-71 to -100% CC					1	1	1	1
-41 to -70% CC	1	1			3	3	4	2
-16 to -40% CC					2	2	2	1
-15 to + 15% CC (Little or No Change)	87	98			103	95	190	96
+41 to + 100% CC								
Total	89	100			109	100	198	100
Eucalyptus								
-15 to + 15% CC (Little or No Change)					38	100	38	100
Total					38	100	38	100
Montane Hardwood								
-71 to -100% CC	3,476	2	1,830	2	4,570	1	9,876	1
-41 to -70% CC	1,814	1	832	1	3,226	1	5,872	1
-16 to -40% CC	1,913	1	1,932	2	3,333	1	7,177	1
-15 to + 15% CC (Little or No Change)	170,511	96	93,759	95	569,646	98	833,916	97
+16 to + 40% CC	369		41		590		1,000	
+41 to + 100% CC	209		65		714		987	
Cloud or Cloud Shadow	111				5		117	
Total	178,402	100	98,459	100	582,084	100	858,945	100

Table P-9 Acres of Classified Change by Hardwood Cover Type and Owner Class (cont.)

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Montane Riparian								
-71 to -100% CC	82	1	6		33	1	121	1
-41 to -70% CC	53		1		19		73	
-16 to -40% CC	157	1	3		83	1	243	1
-15 to + 15% CC (Little or No Change)	10,810	97	1,918	99	5,756	98	18,484	98
+16 to + 40% CC	2				1		3	
+41 to + 100% CC	7				3		10	
Cloud or Cloud Shadow	4						4	
Total	11,115	100	1,929	100	5,895	100	18,938	100
Valley Oak Woodland								
-71 to -100% CC					31		31	
-41 to -70% CC					30		30	
-16 to -40% CC					15		15	
-15 to + 15% CC (Little or No Change)			205	100	7,874	99	8,080	99
+16 to + 40% CC					8		8	
+41 to + 100% CC					3		3	
Total			205	100	7,962	100	8,167	100
Valley Foothill Riparian								
-15 to + 15% CC (Little or No Change)						100		100
Total						100		100
All Hardwood	195,770		144,236		963,707		1,303,713	

Table P-10 Acres of Classified Change Shrub/Chaparral Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Alpine Dwarf Shrub								
-71 to -100% CC	7						7	
-41 to -70% CC	8						8	
-16 to -40% CC	4						4	
-15 to + 15% CC (Little or No Change)	2,938	99	121	100	121	100	3,181	99
+41 to + 100% CC	3						3	
Total	2,959	100	121	100	121	100	3,201	100
Bitterbrush								
-71 to -100% CC								
-41 to -70% CC	1	1					2	
-16 to -40% CC								
-15 to + 15% CC (Little or No Change)	201	99	63	100	969	100	1,234	100
Total	203	100	63	100	970	100	1,236	100

Table P-10 Acres of Classified Change Shrub/Chaparral Cover Type and Owner Class (cont.)

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Chamise-Redshank Chaparral								
-71 to -100% CC			92	1	831	3	923	2
-41 to -70% CC			82	1	509	2	591	1
-16 to -40% CC			355	2	287	1	642	1
-15 to + 15% CC (Little or No Change)	63	100	13,727	96	30,554	95	44,344	95
+16 to + 40% CC			6		17		22	
+41 to + 100% CC			1		15		17	
Total	63	100	14,263	100	32,213	100	46,538	100
Desert Scrub								
-15 to + 15% CC (Little or No Change)	313	100					313	100
Total	313	100					313	100
Low Sagebrush								
-71 to -100% CC	24				2	1	26	
-41 to -70% CC	51	1			1		52	1
-16 to -40% CC	51	1					51	1
-15 to + 15% CC (Little or No Change)	6,424	98	1,710	100	284	99	8,418	98
Total	6,550	100	1,710	100	287	100	8,547	100
Mixed Chaparral								
-71 to -100% CC	762	1	143		1,093	1	1,998	1
-41 to -70% CC	588	1	194		726	1	1,508	1
-16 to -40% CC	373	1	249	1	228		851	
-15 to + 15% CC (Little or No Change)	54,349	95	41,147	98	121,950	98	217,446	97
+16 to + 40% CC	753	1	56		333		1,142	1
+41 to + 100% CC	169		25		326		520	
Cloud or Cloud Shadow	2						2	
Total	56,997	100	41,814	100	124,655	100	223,466	100
Montane Chaparral								
-71 to -100% CC	1,558	1	268	2	528	1	2,354	1
-41 to -70% CC	1,091		318	2	312		1,721	1
-16 to -40% CC	401		630	4	177		1,207	
-15 to + 15% CC (Little or No Change)	231,501	98	15,356	92	68,729	97	315,586	97
+16 to + 40% CC	1,091		40		406	1	1,537	
+41 to + 100% CC	1,502	1	9		476	1	1,987	1
Cloud or Cloud Shadow	80						80	
Total	237,224	100	16,620	100	70,627	100	324,471	100

Table P-10 Acres of Classified Change Shrub/Chaparral Cover Type and Owner Class (cont.)

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Sagebrush								
-71 to -100% CC	79		18		211		308	
-41 to -70% CC	95		153		455		703	
-16 to -40% CC	62		102		426		590	
-15 to + 15% CC (Little or No Change)	105,516	99	57,715	100	93,462	99	256,693	99
+16 to + 40% CC	109		1		72		181	
+41 to + 100% CC	196				129		325	
Total	106,056	100	57,989	100	94,755	100	258,800	100
Unknown Shrub/Chaparral								
-71 to -100% CC			173	1	116	1	289	1
-41 to -70% CC			60		51		110	
-16 to -40% CC			31		3		35	
-15 to + 15% CC (Little or No Change)			20,024	99	10,261	98	30,284	99
+16 to + 40% CC			4		2		5	
+41 to + 100% CC			1				1	
Total			20,292	100	10,432	100	30,724	100
All Shrub/Chaparral	410,365		152,872		334,060		897,297	

Table P-11 Acres of Classified Change Grass/Forb Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Annual Grass								
-15 to + 15% CC (Little or No Change)	51,327	100	36,173	99	552,161	100	639,660	100
Grass Decrease > 15%	138		412	1	1,094		1,644	
Grass Increase > 15%	114		52		822		988	
Total	51,579	100	36,636	100	554,077	100	642,292	100
Freshwater Emergen Wetland								
-15 to + 15% CC (Little or No Change)					60	100	60	100
Total					60	100	60	100
Unknown Grass/Forb								
-15 to + 15% CC (Little or No Change)			2,526	100	37,307	100	39,834	100
Grass Decrease > 15%			6		14		19	
Total			2,532	100	37,321	100	39,853	100
Perennial Grassland								
-15 to + 15% CC (Little or No Change)			366	100			366	100
Total			366	100			366	100
Wet Meadow								
-15 to + 15% CC (Little or No Change)	19,414	100	10,497	100	14,695	100	44,606	100
Grass Decrease > 15%	16		13		35		64	
Grass Increase > 15%					4		4	
Total	19,430	100	10,510	100	14,734	100	44,674	100
All Grass/Forb	71,008		50,044		606,192		727,244	

Table P-12 Acres of Verified Change in All Conifer Cover Types by Cause and Owner Class

	Fire	Harvest	Development	Pest Related	Regrowth	Other	Unverified	All Causes
Forest Service								
-71 to -100% CC	16,443	2,008	20			868	1,709	21,047
-41 to -70% CC	10,600	4,528	23			1,370	2,124	18,646
-16 to -40% CC	4,877	6,068	13			926	5,485	17,369
+16 to + 40% CC					9,168	428	2,461	12,057
+41 to + 100% CC					10,142	226	3,441	13,809
Total	31,920	12,604	56		19,310	3,817	15,220	82,928
Other Public								
-71 to -100% CC	5,945	60	8			280	497	6,791
-41 to -70% CC	10,159	40	11	1		175	440	10,826
-16 to -40% CC	7,317	18	3	1		371	760	8,471
+16 to + 40% CC					526		177	702
+41 to + 100% CC					162		146	308
Total	23,421	118	22	2	687	826	2,021	27,097
Private								
-71 to -100% CC	5,521	10,679	43			92	7,229	23,564
-41 to -70% CC	2,324	2,898	30			72	5,040	10,363
-16 to -40% CC	2,447	2,907	42			94	6,933	12,422
+16 to + 40% CC					2,544	49	2,889	5,482
+41 to + 100% CC					4,094	39	3,500	7,632
Total	10,291	16,484	115		6,639	346	25,590	59,465
All Owners	65,632	29,206	194	2	26,636	4,989	42,831	169,490

Table P-13 Acres of Verified Change in All Hardwood Cover Types by Cause and Owner Class

	Fire	Harvest	Development	Pest Related	Regrowth	Other	Unverified	All Causes
Forest Service								
-71 to -100% CC	3,426	20				16	104	3,565
-41 to -70% CC	1,760	21				12	80	1,873
-16 to -40% CC	1,747	36				38	291	2,112
+16 to + 40% CC					222	1	148	371
+41 to + 100% CC					97		124	221
Total	6,933	77			319	67	746	8,142
Other Public								
-71 to -100% CC	2,649	1		2		1	282	2,935
-41 to -70% CC	1,081	2				1	131	1,215
-16 to -40% CC	3,272	3		2			172	3,449
+16 to + 40% CC					16		43	59
+41 to + 100% CC					13		61	74
Total	7,002	5		4	29	2	690	7,732
Private								
-71 to -100% CC	2,626	171	245			82	3,153	6,277
-41 to -70% CC	2,616	44	73			19	1,471	4,222
-16 to -40% CC	2,703	73	12			14	1,210	4,011
+16 to + 40% CC					139		563	702
+41 to + 100% CC					156	1	705	862
Total	7,945	288	329		295	115	7,101	16,073
All Owners	21,880	370	329	4	643	184	8,537	31,947

Table P-14 Acres of Verified Change in All Shrub/Chaparral Cover Types by Cause and Owner Class

	Fire	Harvest	Development	Pest Related	Regrowth	Other	Unverified	All Causes
Forest Service								
-71 to -100% CC	1,700	79	1			109	542	2,430
-41 to -70% CC	1,233	60	3			60	479	1,834
-16 to -40% CC	508	19				16	348	890
+16 to + 40% CC					1,704	1	248	1,953
+41 to + 100% CC					1,617	3	250	1,870
Total	3,440	158	4		3,321	187	1,866	8,977
Other Public								
-71 to -100% CC	611	1	3	5		11	62	693
-41 to -70% CC	689	7	2	8		3	97	807
-16 to -40% CC	1,325	2		8		7	27	1,369
+16 to + 40% CC					82		24	106
+41 to + 100% CC					15		20	35
Total	2,625	11	5	22	97	20	230	3,009
Private								
-71 to -100% CC	1,004	181	83			119	1,395	2,782
-41 to -70% CC	796	111	37			125	984	2,053
-16 to -40% CC	651	31	6			130	303	1,121
+16 to + 40% CC					372	3	453	829
+41 to + 100% CC					400	4	543	947
Total	2,451	323	126		773	381	3,678	7,731
All Owners	8,516	491	135	22	4,191	588	5,775	19,717

Table P-15 Acres of Verified Change in All Grass/Forb Cover Types by Cause and Owner Class

	Fire	Harvest	Development	Regrowth	Other	Unverified	All Causes
Forest Service							
Grass Decrease > 15%	98	14			6	36	154
Grass Increase > 15%				98	1	15	114
Total	98	14		98	7	51	268
Other Public							
Grass Decrease > 15%	198				1	232	430
Grass Increase > 15%				34		18	52
Total	198			34	1	250	482
Private							
Grass Decrease > 15%	230	29	192		34	658	1,143
Grass Increase > 15%				389	1	436	827
Total	230	29	192	389	35	1,094	1,969
All Owners	526	43	193	521	43	1,395	2,719

County Maps and Tables

For each county (if relevant), the following will be present:

1. Change Map
2. Table of Change by Ownership and Lifeform
3. Table of Verified Change by Cause and Lifeform
4. Table of Change by Conifer Type
5. Table of Change by Harwood Type
6. Table of Change by Shrub/Chaparral Type
7. Table of Change by Grass/Forb Type
8. Table of Conifer Change by Cause
9. Table of Hardwood Change by Cause
10. Table of Shrub/Chaparral Change by Cause
11. Table of Grass/Forb Change by Cause

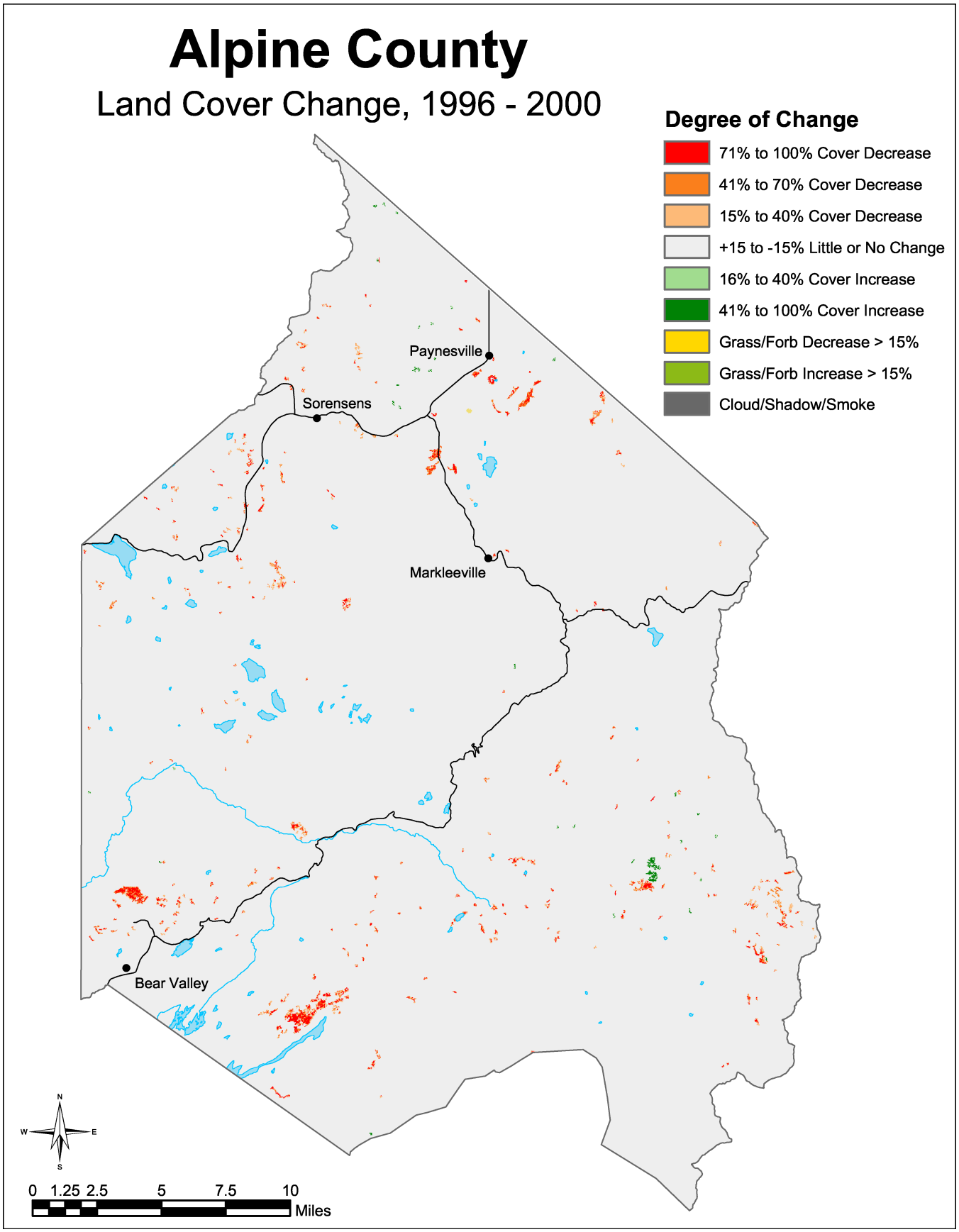

Alpine County
Land Cover Change, 1996 - 2000
Degree of Change
71% to 100% Cover Decrease
41% to 70% Cover Decrease
15% to 40% Cover Decrease
+15 to -15% Little or No Change
16% to 40% Cover Increase
41% to 100% Cover Increase
Grass/Forb Decrease > 15%
Grass/Forb Increase > 15%
Cloud/Shadow/Smoke
Paynesville
Sorensens
Markleeville
Bear Valley
N
W
E
S
0 1.25 2.5 5 7.5 10
Miles

Table C-1 Acres of Classified Change in Alpine County by Lifeform Type and Owner Class

	Forest Service											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Forest Service Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	647		23	1	419	1					1,089	
-41 to -70% CC	302		18	1	258	1					578	
-16 to -40% CC	534		99	3	221						854	
-15 to + 15% CC (Little or No Change)	296,049	99	3,037	96	49,075	98	7,721	100	49,462	100	405,344	99
+16 to + 40% CC	26										26	
+41 to + 100% CC	154										154	
Grass Decrease > 15%							8		10		18	
Total	297,712	100	3,177	100	49,972	100	7,729	100	49,472	100	408,062	100

	Other Public											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Other Public Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	21				15						36	
-41 to -70% CC	12				12						24	
-16 to -40% CC	21				1						22	
-15 to + 15% CC (Little or No Change)	14,697	100	11	100	11,093	100	933	100	9	100	26,743	100
+16 to + 40% CC	1										1	
+41 to + 100% CC	3										3	
Grass Decrease > 15%												
Total	14,754	100	11	100	11,121	100	933	100	9	100	26,828	100

	Private											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Private Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	37				174	1					211	1
-41 to -70% CC	25				152	1					177	1
-16 to -40% CC	30				10						40	
-15 to + 15% CC (Little or No Change)	15,909	99	193	100	11,526	97	1,894	100	448	100	29,969	99
+16 to + 40% CC	3										3	
+41 to + 100% CC	6										6	
Grass Decrease > 15%							2				2	
Total	16,010	100	193	100	11,861	100	1,896	100	448	100	30,408	100

Table C-1 Acres of Classified Change in Alpine County by Lifeform Type and Owner Class (cont.)

	All Owners											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	704		23	1	608	1					1,335	
-41 to -70% CC	339		18	1	421	1					778	
-16 to -40% CC	585		99	3	231						915	
-15 to + 15% CC (Little or No Change)	326,654	99	3,240	96	71,694	98	10,548	100	49,919	100	462,055	99
+16 to + 40% CC	30										30	
+41 to + 100% CC	163										163	
Grass Decrease > 15%							10		10		20	
Total	328,476	100	3,380	100	72,954	100	10,558	100	49,929	100	465,297	100

Table C-2 Acres of Verified Change in Alpine County by Cause and Lifeform

	Fire	Regrowth	Unverified	All Causes
Conifer				
-71 to -100% CC	235		469	704
-41 to -70% CC	68		271	339
-16 to -40% CC	105		481	585
+16 to + 40% CC		2	29	30
+41 to + 100% CC		4	159	163
Total	407	5	1,409	1,822
Hardwood				
-71 to -100% CC			23	23
-41 to -70% CC			18	18
-16 to -40% CC	2		97	99
Total	3		137	140
Shrub/Chaparral				
-71 to -100% CC	59		549	608
-41 to -70% CC	11		410	421
-16 to -40% CC	6		225	231
+16 to + 40% CC				
Total	76		1,184	1,260
Grass/Forb				
Grass Decrease > 15%			10	10
Total			10	10
Barren				
Grass Decrease > 15%	7		3	10
Total	7		3	10
All Lifeforms	493	5	2,733	3,231

Table C-3 Acres of Classified Change in Alpine County by Conifer Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Jeffrey Pine								
-71 to -100% CC	228		21		26		274	
-41 to -70% CC	109		12		14		135	
-16 to -40% CC	176		21		15		212	
-15 to + 15% CC (Little or No Change)	86,992	99	8,465	99	8,029	99	103,486	99
+16 to + 40% CC	12		1		1		14	
+41 to + 100% CC	126		3		1		130	
Total	87,643	100	8,522	100	8,086	100	104,251	100
Juniper								
-71 to -100% CC	18	1					18	1
-41 to -70% CC	11						11	
-16 to -40% CC	17	1					17	1
-15 to + 15% CC (Little or No Change)	2,393	98		100	177	100	2,570	98
+16 to + 40% CC	1						1	
+41 to + 100% CC	2						2	
Total	2,441	100		100	177	100	2,618	100
Lodgepole Pine								
-71 to -100% CC	224						224	
-41 to -70% CC	91						91	
-16 to -40% CC	120						120	
-15 to + 15% CC (Little or No Change)	46,308	99	205	100	1,243	100	47,756	99
+16 to + 40% CC	4						4	
+41 to + 100% CC	12						12	
Total	46,759	100	205	100	1,243	100	48,207	100
Montane Hardwood-Conifer								
-71 to -100% CC	4	1					4	1
-41 to -70% CC	4	2					4	2
-16 to -40% CC	14	5					14	5
-15 to + 15% CC (Little or No Change)	243	92					243	92
Total	265	100					265	100
Pinyon-Juniper								
-71 to -100% CC	4				2		6	
-41 to -70% CC	2				1		3	
-16 to -40% CC	9						9	
-15 to + 15% CC (Little or No Change)	19,445	100	4,773	100	2,535	100	26,753	100
+16 to + 40% CC					1		1	
+41 to + 100% CC					3		3	
Total	19,460	100	4,773	100	2,542	100	26,776	100

Table C-3 Acres of Classified Change in Alpine County by Conifer Cover Type and Owner Class (cont.)

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Ponderosa Pine								
-15 to + 15% CC (Little or No Change)	19	100					19	100
Total	19	100					19	100
Red Fir								
-71 to -100% CC	72				9		81	
-41 to -70% CC	42				10		52	
-16 to -40% CC	86				15		102	
-15 to + 15% CC (Little or No Change)	74,089	100	920	100	3,293	99	78,303	100
+16 to + 40% CC	2				1		3	
+41 to + 100% CC	3				1		4	
Total	74,294	100	921	100	3,330	100	78,545	100
Subalpine Conifer								
-71 to -100% CC	58						58	
-41 to -70% CC	17						17	
-16 to -40% CC	59						59	
-15 to + 15% CC (Little or No Change)	48,351	100	156	100	461	100	48,968	100
+16 to + 40% CC	2						2	
+41 to + 100% CC	4						4	
Total	48,491	100	156	100	461	100	49,108	100
Sierran Mixed Conifer								
-71 to -100% CC	29						29	
-41 to -70% CC	14						14	
-16 to -40% CC	25						25	
-15 to + 15% CC (Little or No Change)	12,993	99			30	100	13,023	99
+16 to + 40% CC	3						3	
+41 to + 100% CC	5						5	
Total	13,068	100			30	100	13,098	100
White Fir								
-71 to -100% CC	10						10	
-41 to -70% CC	12						12	
-16 to -40% CC	29	1					29	1
-15 to + 15% CC (Little or No Change)	5,216	99	177	100	142	100	5,534	99
+16 to + 40% CC	3						3	
+41 to + 100% CC	2						2	
Total	5,271	100	177	100	142	100	5,589	100
All Conifer	297,693		14,754		16,010		328,457	

Table C-4 Acres of Classified Change in Alpine County by Hardwood Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Aspen								
-71 to -100% CC	4						4	
-41 to -70% CC	5						5	
-16 to -40% CC	32	2					32	1
-15 to + 15% CC (Little or No Change)	2,009	98	11	100	193	100	2,213	98
Total	2,050	100	11	100	193	100	2,253	100
-71 to -100% CC	7	1					7	1
-41 to -70% CC	3						3	
-16 to -40% CC	5	1					5	1
-15 to + 15% CC (Little or No Change)	744	98					744	98
Total	759	100					759	100
-71 to -100% CC	12	3					12	3
-41 to -70% CC	11	3					11	3
-16 to -40% CC	62	17					62	17
-15 to + 15% CC (Little or No Change)	284	77					284	77
Total	368	100					368	100
All Hardwood	3,177		11		193		3,380	

Table C-5 Acres of Classified Change in Alpine County by Shrub/Chaparral Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
Alpine Dwarf Shrub								
-41 to -70% CC								
-16 to -40% CC								
-15 to + 15% CC (Little or No Change)	395	100					395	100
Total	395	100					396	100
Low Sagebrush								
-71 to -100% CC	24				2	1	26	
-41 to -70% CC	51	1			1		52	1
-16 to -40% CC	51	1					51	1
-15 to + 15% CC (Little or No Change)	5,803	98	1,708	100	284	99	7,795	98
Total	5,929	100	1,708	100	287	100	7,924	100
Mixed Chaparral								
-15 to + 15% CC (Little or No Change)	22	100					22	100
Total	22	100					22	100
Montane Chaparral								
-71 to -100% CC	383	1	3		60	2	446	1
-41 to -70% CC	187	1	1		71	2	259	1
-16 to -40% CC	163	1			3		166	1
-15 to + 15% CC (Little or No Change)	26,122	97	1,305	100	3,031	96	30,457	97
+16 to + 40% CC								
Total	26,855	100	1,309	100	3,164	100	31,328	100
Sagebrush								
-71 to -100% CC	12		12		112	1	136	
-41 to -70% CC	19		11		80	1	110	
-16 to -40% CC	6		1		6		13	
-15 to + 15% CC (Little or No Change)	16,734	100	8,080	100	8,212	98	33,025	99
Total	16,770	100	8,104	100	8,410	100	33,284	100
All Shrub/Chaparral	49,972		11,121		11,861		72,954	

Table C-6 Acres of Classified Change in Alpine County by Grass/Forb Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
Annual Grass								
-15 to + 15% CC (Little or No Change)	3,184	100			61	100	3,245	100
Grass Decrease > 15%	2						2	
Total	3,186	100			61	100	3,247	100
Wet Meadow								
-15 to + 15% CC (Little or No Change)	4,537	100	933	100	1,833	100	7,303	100
Grass Decrease > 15%	6				2		8	
Total	4,543	100	933	100	1,835	100	7,312	100
All Grass/Forb	7,729		933		1,896		10,558	

Table C-7 Acres of Verified Change in Alpine County by Cause and Conifer Cover Type

	Fire	Regrowth	Unverified	All Causes
Jeffrey Pine				
-71 to -100% CC	68		206	274
-41 to -70% CC	17		118	135
-16 to -40% CC	38		174	212
+16 to + 40% CC		1	13	14
+41 to + 100% CC		1	129	130
Total	123	2	640	765
Juniper				
-71 to -100% CC			18	18
-41 to -70% CC			11	11
-16 to -40% CC			17	17
+16 to + 40% CC			1	1
+41 to + 100% CC			2	2
Total			49	49
Lodgepole Pine				
-71 to -100% CC	128		96	224
-41 to -70% CC	35		56	91
-16 to -40% CC	34		86	120
+16 to + 40% CC			4	4
+41 to + 100% CC			12	12
Total	196		255	451
Montane Hardwood-Conifer				
-71 to -100% CC			4	4
-41 to -70% CC			4	4
-16 to -40% CC			14	14
Total			22	22
Pinyon-Juniper				
-71 to -100% CC			6	6
-41 to -70% CC			3	3
-16 to -40% CC			9	9
+16 to + 40% CC			1	1
+41 to + 100% CC			3	3
Total			22	22
Red Fir				
-71 to -100% CC	22		59	81
-41 to -70% CC	7		46	52
-16 to -40% CC	15		87	102
+16 to + 40% CC			3	3
+41 to + 100% CC			4	4
Total	43		199	242

Table C-7 Acres of Verified Change in Alpine County by Cause and Conifer Cover Type (cont.)

	Fire	Regrowth	Unverified	All Causes
Subalpine Conifer				
-71 to -100% CC			58	58
-41 to -70% CC			17	17
-16 to -40% CC			59	59
+16 to + 40% CC			2	2
+41 to + 100% CC			4	4
Total			140	140
Sierran Mixed Conifer				
-71 to -100% CC	16		13	29
-41 to -70% CC	10		4	14
-16 to -40% CC	19		6	25
+16 to + 40% CC			3	3
+41 to + 100% CC		3	3	5
Total	45	3	28	75
White Fir				
-71 to -100% CC			10	10
-41 to -70% CC			12	12
-16 to -40% CC			29	29
+16 to + 40% CC			3	3
+41 to + 100% CC			2	2
Total			55	55
All Conifer	407	5	1,409	1,822

Table C-8 Acres of Verified Change in Alpine County by Cause and Hardwood Cover Type

	Fire	Unverified	All Causes
Aspen			
-71 to -100% CC		4	4
-41 to -70% CC		5	5
-16 to -40% CC	2	30	32
Total	3	38	41
Montane Hardwood			
-71 to -100% CC		7	7
-41 to -70% CC		3	3
-16 to -40% CC		5	5
Total		15	15
Montane Riparian			
-71 to -100% CC		12	12
-41 to -70% CC		11	11
-16 to -40% CC		62	62
Total		85	85
All Hardwood	3	137	140

Table C-9 Acres of Verified Change in Alpine County by Cause and Shrub/Chaparral Cover Type

	Fire	Unverified	All Causes
Alpine Dwarf Shrub			
-41 to -70% CC			
-16 to -40% CC			
Total		1	1
Low Sagebrush			
-71 to -100% CC		26	26
-41 to -70% CC		52	52
-16 to -40% CC		51	51
Total		129	129
Montane Chaparral			
-71 to -100% CC	59	387	446
-41 to -70% CC	11	248	259
-16 to -40% CC	6	160	166
+16 to + 40% CC			
Total	76	796	872
Sagebrush			
-71 to -100% CC		136	136
-41 to -70% CC		110	110
-16 to -40% CC		13	13
Total		258	258
All Shrub/Chaparral	76	1,184	1,260

Table C-10 Acres of Verified Change in Alpine County by Cause and Grass/Forb Cover Type

	Unverified	All Causes
Annual Grass		
Grass Decrease > 15%	2	2
Total	2	2
Wet Meadow		
Grass Decrease > 15%	8	8
Total	8	8
All Grass/Forb	10	10

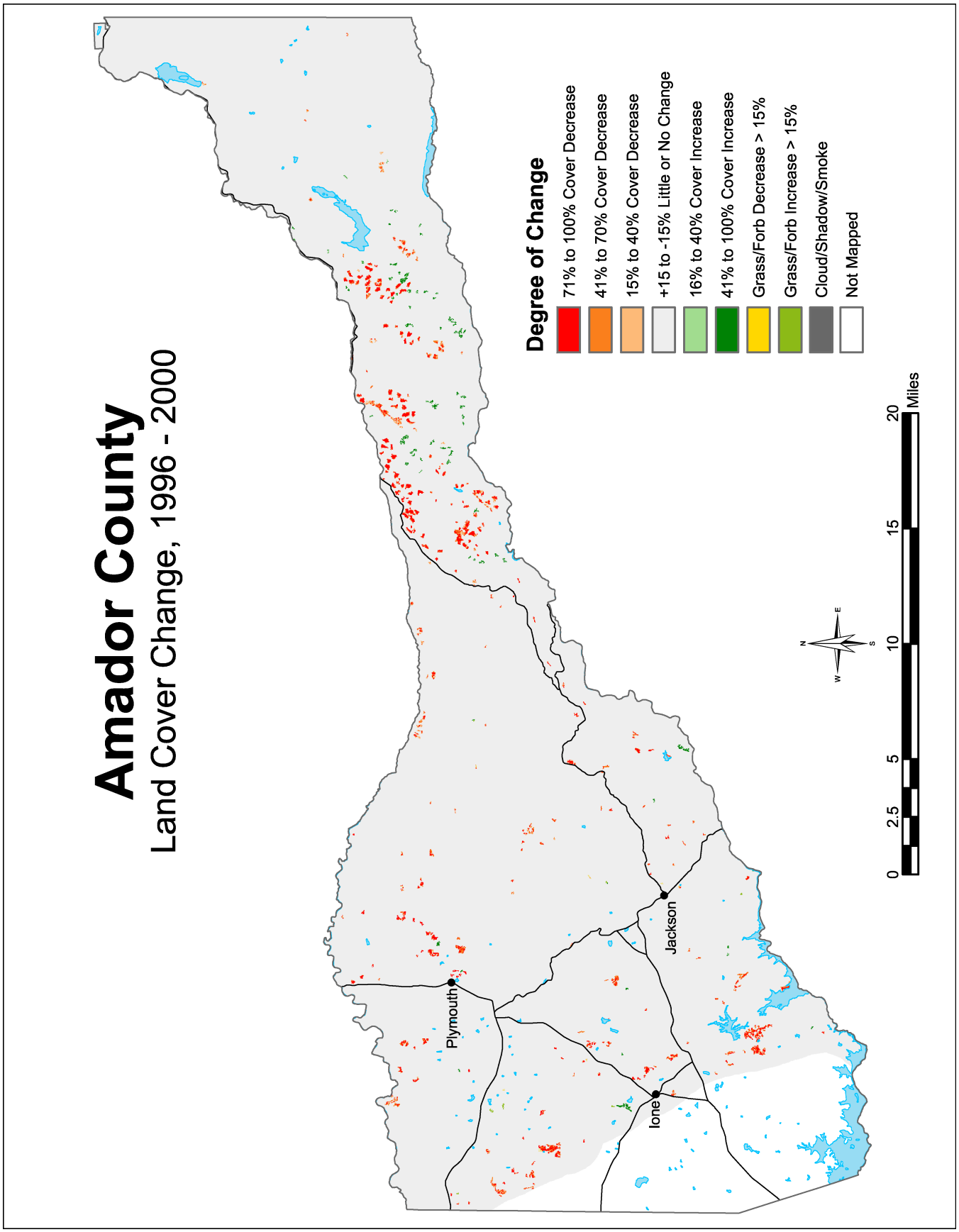

Amador County
Land Cover Change, 1996 - 2000
Degree of Change
71% to 100% Cover Decrease
41% to 70% Cover Decrease
15% to 40% Cover Decrease
+15 to -15% Little or No Change
16% to 40% Cover Increase
41% to 100% Cover Increase
Grass/Forb Decrease > 15%
Grass/Forb Increase > 15%
Cloud/Shadow/Smoke
Not Mapped
Plymouth
Jackson
Ione
0
2.5
5
10
15
20
Miles

Table C-11 Acres of Classified Change in Amador County by Lifeform Type and Owner Class

	Forest Service											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Forest Service Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	15				4						19	
-41 to -70% CC	11		1		5						16	
-16 to -40% CC	14		1		2						17	
-15 to + 15% CC (Little or No Change)	56,923	100	4,134	100	5,418	100	1,293	100	8,847	100	76,615	100
+16 to + 40% CC	17										17	
+41 to + 100% CC	111		3								114	
Total	57,091	100	4,140	100	5,428	100	1,293	100	8,847	100	76,798	100

	Other Public											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Other Public Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	1		1		3						4	
-41 to -70% CC					2						3	
-16 to -40% CC												
-15 to + 15% CC (Little or No Change)	2,575	100	4,652	100	1,224	100	476	100	3	100	8,929	100
Total	2,576	100	4,653	100	1,229	100	476	100	3	100	8,936	100

	Private											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Private Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	1,311	2	411		318	2					2,040	1
-41 to -70% CC	409	1	169		188	1					766	
-16 to -40% CC	241		35		2						278	
-15 to + 15% CC (Little or No Change)	61,420	97	99,478	99	13,268	96	56,717	100	800	100	231,682	99
+16 to + 40% CC	16		4		1						21	
+41 to + 100% CC	140		52		23						215	
Grass Decrease > 15%							49				49	
Grass Increase > 15%							22				22	
Total	63,536	100	100,149	100	13,801	100	56,787	100	800	100	235,072	100

	All Owners											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		All Owners Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	1,326	1	412		324	2					2,063	1
-41 to -70% CC	420		170		195	1					785	
-16 to -40% CC	255		36		4						295	
-15 to + 15% CC (Little or No Change)	120,918	98	108,264	99	19,909	97	58,486	100	9,649	100	317,226	99
+16 to + 40% CC	33		4		2						38	
+41 to + 100% CC	251		55		23						329	
Grass Decrease > 15%							49				49	
Grass Increase > 15%							22				22	
Total	123,202	100	108,941	100	20,458	100	58,556	100	9,649	100	320,806	100

Table C-12 Acres of Verified Change in Amador County by Cause and Lifeform

	Fire	Harvest	Regrowth	Other	Unverified	All Causes
Conifer						
-71 to -100% CC	28	1,071			227	1,326
-41 to -70% CC	4	247			169	420
-16 to -40% CC	2	156			97	255
+16 to + 40% CC			16		17	33
+41 to + 100% CC			96		154	251
Total	34	1,474	112		664	2,284
Hardwood						
-71 to -100% CC	35	8		42	328	412
-41 to -70% CC	25	4		6	136	170
-16 to -40% CC	2	4		1	30	36
+16 to + 40% CC					4	4
+41 to + 100% CC			3		52	55
Total	61	15	3	48	551	677
Shrub/Chaparral						
-71 to -100% CC	78	17			229	324
-41 to -70% CC	37	13			145	195
-16 to -40% CC					4	4
+16 to + 40% CC			1		1	2
+41 to + 100% CC			1		22	23
Total	115	31	2		401	548
Grass/Forb						
Grass Decrease > 15%				1	47	49
Grass Increase > 15%			4		18	22
Total			4	1	65	70
All Lifeforms	210	1,520	117	48	1,616	3,510

Table C-13 Acres of Classified Change in Amador County by Conifer Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Closed Cone Pine-Cypress								
-15 to + 15% CC (Little or No Change)					155	100	155	100
Total					155	100	155	100
Douglas Fir								
-71 to -100% CC					16	1	16	
-41 to -70% CC					6		6	
-16 to -40% CC					2		2	
-15 to + 15% CC (Little or No Change)	932	100	80	100	2,950	99	3,962	99
+16 to + 40% CC								
+41 to + 100% CC					4		4	
Total	932	100	80	100	2,980	100	3,991	100
Jeffrey Pine								
-15 to + 15% CC (Little or No Change)	646	100			29	100	675	100
Total	646	100			29	100	675	100

Table C-13 Acres of Classified Change in Amador County by Conifer Cover Type and Owner Class (cont.)

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Lodgepole Pine								
-15 to + 15% CC (Little or No Change)	872	100		100	196	100	1,068	100
Total	872	100		100	196	100	1,068	100
Montane Hardwood-Conifer								
-71 to -100% CC			1	0	68	0	69	0
-41 to -70% CC			0	0	23	0	24	0
-16 to -40% CC					16		16	
-15 to + 15% CC (Little or No Change)	1,723	100	1,727	100	16,663	99	20,113	99
+16 to + 40% CC					1		1	
+41 to + 100% CC	3				27		30	
Total	1,726	100	1,728	100	16,799	100	20,253	100
Ponderosa Pine								
-71 to -100% CC					152	1	152	1
-41 to -70% CC	1				65		66	
-16 to -40% CC	1				40		41	
-15 to + 15% CC (Little or No Change)	2,052	100	618	100	18,789	99	21,458	99
+16 to + 40% CC	1				1		2	
+41 to + 100% CC	7				16		23	
Total	2,062	100	618	100	19,062	100	21,742	100
Red Fir								
-71 to -100% CC	1				2		3	
-41 to -70% CC	1				2		3	
-16 to -40% CC	1				8		9	
-15 to + 15% CC (Little or No Change)	28,518	100	2	100	1,942	99	30,462	100
+16 to + 40% CC	4						4	
+41 to + 100% CC	8						8	
Total	28,533	100	2	100	1,953	100	30,489	100
Subalpine Conifer								
-15 to + 15% CC (Little or No Change)	1,147	100			2	100	1,149	100
Total	1,147	100			2	100	1,149	100
Sierran Mixed Conifer								
-71 to -100% CC	14				1,068	5	1,082	3
-41 to -70% CC	9				309	1	317	1
-16 to -40% CC	11				173	1	184	
-15 to + 15% CC (Little or No Change)	18,408	99	147	100	20,407	92	38,962	96
+16 to + 40% CC	12				13		25	
+41 to + 100% CC	91				93		184	
Total	18,545	100	147	100	22,063	100	40,755	100
White Fir								
-71 to -100% CC					4	1	4	
-41 to -70% CC					4	1	4	
-16 to -40% CC					2	1	2	
-15 to + 15% CC (Little or No Change)	2,626	100		100	288	97	2,914	100
+41 to + 100% CC	2						2	
Total	2,628	100		100	297	100	2,926	100
All Conifer	57,091		2,576		63,536		123,202	

Table C-14 Acres of Classified Change in Amador County by Hardwood Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Blue Oak-Foothill Pine								
-71 to -100% CC					1		1	
-41 to -70% CC								
-15 to + 15% CC (Little or No Change)			47	100	2,250	100	2,297	100
Total			47	100	2,250	100	2,298	100
Blue Oak Woodland								
-71 to -100% CC					193	1	193	1
-41 to -70% CC					76		76	
-16 to -40% CC					6		6	
-15 to + 15% CC (Little or No Change)			208	100	36,759	99	36,967	99
+16 to + 40% CC					2		2	
+41 to + 100% CC					22		22	
Total			208	100	37,058	100	37,265	100
Montane Hardwood								
-71 to -100% CC			1		217		218	
-41 to -70% CC	1				93		94	
-16 to -40% CC	1				29		30	
-15 to + 15% CC (Little or No Change)	4,065	100	4,357	100	59,204	99	67,626	99
+16 to + 40% CC					2		2	
+41 to + 100% CC	3				30		33	
Total	4,070	100	4,358	100	59,575	100	68,002	100
Montane Riparian								
-15 to + 15% CC (Little or No Change)	70	100	18	100	200	100	287	100
Total	70	100	18	100	200	100	287	100
Valley Oak Woodland								
-71 to -100% CC					1		1	
-41 to -70% CC								
-15 to + 15% CC (Little or No Change)			22	100	1,065	100	1,088	100
Total			22	100	1,066	100	1,088	100
All Hardwood	4,140		4,653		100,149		108,941	

Table C-15 Acres of Classified Change in Amador County by Shrub/Chaparral Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Chamise-Redshank Chaparral								
-71 to -100% CC			1		97	2	98	2
-41 to -70% CC					51	1	51	1
-16 to -40% CC								
-15 to + 15% CC (Little or No Change)			268	100	4,112	96	4,379	97
+16 to + 40% CC								
+41 to + 100% CC					6		6	
Total			269	100	4,266	100	4,534	100
Mixed Chaparral								
-71 to -100% CC			2		219	3	220	2
-41 to -70% CC			2		134	2	136	1
-16 to -40% CC					2		2	
-15 to + 15% CC (Little or No Change)	417	100	926	100	7,962	96	9,305	96
+16 to + 40% CC					1		1	
+41 to + 100% CC					17		17	
Total	417	100	930	100	8,335	100	9,682	100
Montane Chaparral								
-71 to -100% CC	4				2		6	
-41 to -70% CC	5				4		8	
-16 to -40% CC	2						2	
-15 to + 15% CC (Little or No Change)	4,993	100	30	100	1,194	100	6,217	100
+16 to + 40% CC								
+41 to + 100% CC								
Total	5,004	100	30	100	1,200	100	6,233	100
Sagebrush								
-15 to + 15% CC (Little or No Change)	8	100					8	100
Total	8	100					8	100
All Shrub/Chaparral	10,422		1,259		14,994		26,673	

Table C-16 Acres of Classified Change in Amador County by Grass/Forb Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Annual Grass								
-15 to + 15% CC (Little or No Change)	621	100	476	100	56,442	100	57,538	100
Grass Decrease > 15%					44		44	
Grass Increase > 15%					22		22	
Total	621	100	476	100	56,507	100	57,604	100
Wet Meadow								
-15 to + 15% CC (Little or No Change)	672	100			275	98	947	100
Grass Decrease > 15%					5	2	5	
Total	672	100			280	100	952	100
All Grass/Forb	1,293		476		56,787		58,556	

Table C-17 Acres of Verified Change in Amador County by Cause and Conifer Cover Type

	Fire	Harvest	Regrowth	Other	Unverified	All Causes
Douglas Fir						
-71 to -100% CC		11			6	16
-41 to -70% CC		4			3	6
-16 to -40% CC					2	2
+16 to + 40% CC						
+41 to + 100% CC			2		2	4
Total		15	2		13	30
Montane Hardwood-Conifer						
-71 to -100% CC	3	19			47	69
-41 to -70% CC	1	4			19	24
-16 to -40% CC		4			13	16
+16 to + 40% CC					1	1
+41 to + 100% CC			2		28	30
Total	4	26	2		108	140
Ponderosa Pine						
-71 to -100% CC	2	83			68	152
-41 to -70% CC	1	21			44	66
-16 to -40% CC		8			33	41
+16 to + 40% CC			1		1	2
+41 to + 100% CC			6		16	23
Total	3	112	7		162	283
Red Fir						
-71 to -100% CC		2			2	3
-41 to -70% CC		1			2	3
-16 to -40% CC		5			4	9
+16 to + 40% CC					4	4
+41 to + 100% CC					8	8
Total		7			19	27
Sierran Mixed Conifer						
-71 to -100% CC	23	953			105	1,082
-41 to -70% CC	3	214			100	317
-16 to -40% CC	1	139			45	184
+16 to + 40% CC			15		10	25
+41 to + 100% CC			87		97	184
Total	28	1,306	102		357	1,793
White Fir						
-71 to -100% CC		4				4
-41 to -70% CC		3			1	4
-16 to -40% CC		1			1	2
+41 to + 100% CC					2	2
Total		8			4	12
All Conifer	34	1,474	112		664	2,284

Table C-18 Acres of Verified Change in Amador County by Cause and Hardwood Cover Type

	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified	All Causes
Blue Oak-Foothill Pine							
-71 to -100% CC						1	1
-41 to -70% CC							
Total						1	1
Blue Oak Woodland							
-71 to -100% CC	13				17	163	193
-41 to -70% CC	15				1	59	76
-16 to -40% CC						6	6
+16 to + 40% CC						2	2
+41 to + 100% CC				1		21	22
Total	29			1	18	252	299
Montane Hardwood							
-71 to -100% CC	22	8			25	163	218
-41 to -70% CC	9	4			5	77	94
-16 to -40% CC	2	4				25	30
+16 to + 40% CC						2	2
+41 to + 100% CC				2		31	33
Total	33	15		2	31	297	377
Valley Oak Woodland							
-71 to -100% CC						1	1
-41 to -70% CC							
Total						1	1
All Hardwood	61	15		3	48	550	677

Table C-19 Acres of Verified Change in Amador County by Cause and Shrub/Chaparral Cover Type

	Fire	Harvest	Regrowth	Unverified	All Causes
Chamise-Redshank Chaparral					
-71 to -100% CC	22			77	98
-41 to -70% CC	10			41	51
-16 to -40% CC					
+16 to + 40% CC					
+41 to + 100% CC				6	6
Total	32			124	156
Mixed Chaparral					
-71 to -100% CC	56	16		149	220
-41 to -70% CC	27	12		97	136
-16 to -40% CC				2	2
+16 to + 40% CC			1		1
+41 to + 100% CC			1	16	17
Total	83	28	2	264	377
Montane Chaparral					
-71 to -100% CC		2		4	6
-41 to -70% CC		1		7	8
-16 to -40% CC				2	2
+16 to + 40% CC					
+41 to + 100% CC					
Total		3		13	16
All Shrub/Chaparral	115	31	2	401	548

Table C-20 Acres of Verified Change in Amador County by Cause and Grass/Forb Cover Type

	Regrowth	Other	Unverified	All Causes
Annual Grass				
Grass Decrease > 15%		1	43	44
Grass Increase > 15%	4		18	22
Total	4	1	61	65
Wet Meadow				
Grass Decrease > 15%			5	5
Total			5	5
All Grass/Forb	4	1	65	70

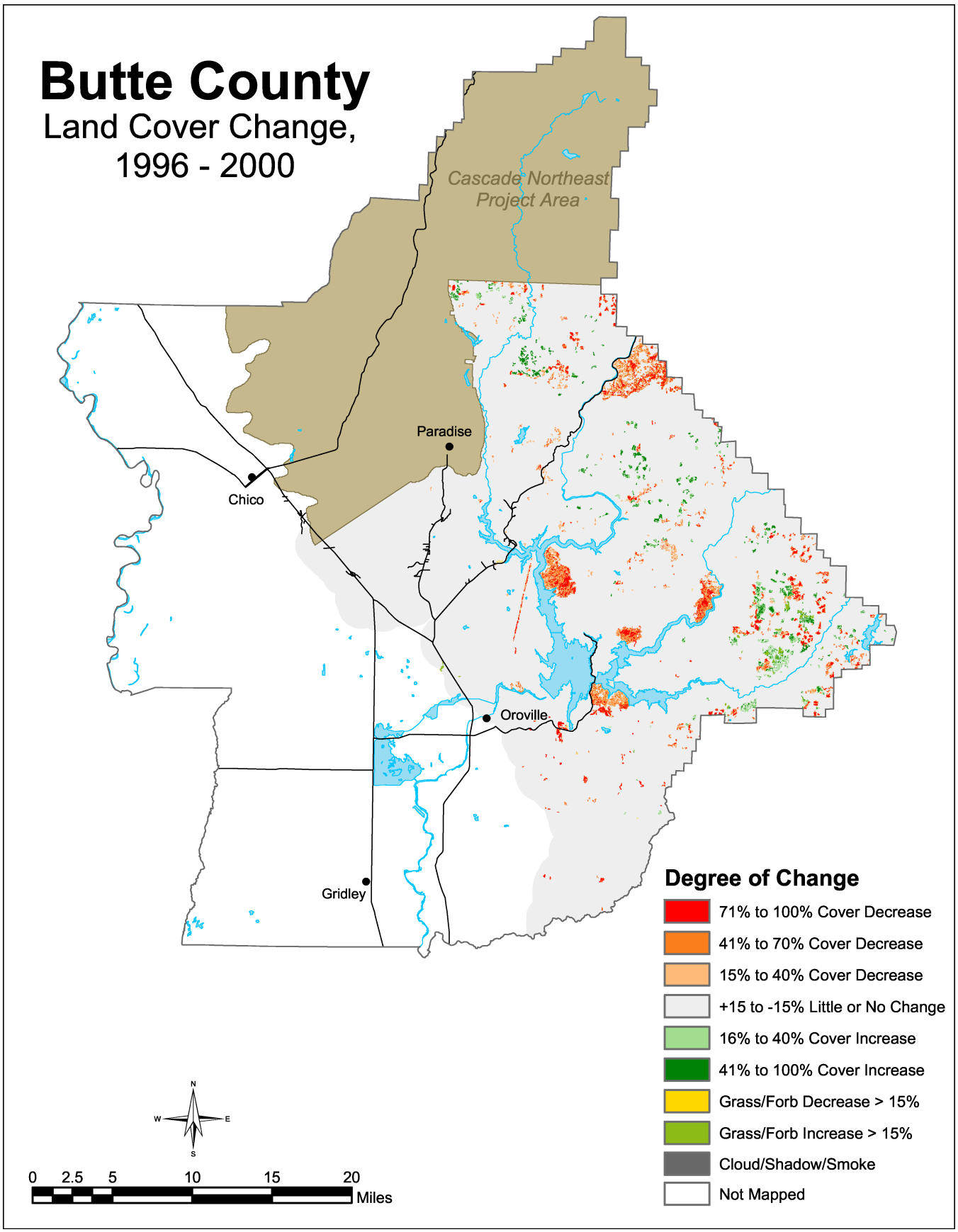

Butte County
Land Cover Change,
1996 - 2000
Cascade Northeast
Project Area
Paradise
Chico
Oroville
Gridley
Degree of Change
71% to 100% Cover Decrease
41% to 70% Cover Decrease
15% to 40% Cover Decrease
+15 to -15% Little or No Change
16% to 40% Cover Increase
41% to 100% Cover Increase
Grass/Forb Decrease > 15%
Grass/Forb Increase > 15%
Cloud/Shadow/Smoke
Not Mapped
N
W
E
S
0 2.5 5 10 15 20
Miles

Table C-21 Acres of Classified Change in Butte County by Lifeform Type and Owner Class

	Forest Service											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Forest Service Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	547	1	76								623	1
-41 to -70% CC	771	1	275	1							1,046	1
-16 to -40% CC	540	1	294	2							834	1
-15 to + 15% CC (Little or No Change)	72,746	96	17,704	96	1,613	99	140	100	1,050	99	93,253	96
+16 to + 40% CC	403	1	16		10	1					429	
+41 to + 100% CC	784	1	23		2						808	1
Grass Decrease > 15%									2		2	
Grass Increase > 15%									5		5	
Total	75,790	100	18,388	100	1,625	100	140	100	1,057	100	97,000	100

	Other Public											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Other Public Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	70	2	160	3	17	3					248	2
-41 to -70% CC	111	3	315	6	8	2					434	4
-16 to -40% CC	125	4	366	7	1						492	4
-15 to + 15% CC (Little or No Change)	2,956	91	4,624	85	493	95	2,831	100	151	100	11,054	90
+16 to + 40% CC	3		1								4	
Grass Decrease > 15%							8				9	
Total	3,266	100	5,467	100	519	100	2,839	100	151	100	12,242	100

	Private											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Private Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	3,071	3	1,545	1	68	1					4,684	2
-41 to -70% CC	1,490	1	1,113	1	53	1					2,656	1
-16 to -40% CC	2,113	2	1,311	1	25						3,450	1
-15 to + 15% CC (Little or No Change)	106,166	92	107,810	96	5,511	90	43,747	99	1,913	94	265,147	95
+16 to + 40% CC	1,367	1	159		197	3					1,723	1
+41 to + 100% CC	1,099	1	127		274	4					1,500	1
Grass Decrease > 15%							53		26	1	79	
Grass Increase > 15%							259	1	99	5	357	
Total	115,306	100	112,065	100	6,128	100	44,059	100	2,037	100	279,595	100

Table C-21 Acres of Classified Change in Butte County by Lifeform Type and Owner Class (cont.)

	All Owners											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		All Owners Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	3,688	2	1,782	1	85	1					5,555	1
-41 to -70% CC	2,372	1	1,703	1	61	1					4,136	1
-16 to -40% CC	2,778	1	1,972	1	26						4,776	1
-15 to + 15% CC (Little or No Change)	181,868	94	130,137	96	7,617	92	46,719	99	3,114	96	369,455	95
+16 to + 40% CC	1,773	1	176		207	2					2,156	1
+41 to + 100% CC	1,883	1	150		276	3					2,308	1
Grass Decrease > 15%							61		28	1	89	
Grass Increase > 15%							259	1	103	3	362	
Total	194,362	100	135,920	100	8,273	100	47,038	100	3,245	100	388,837	100

Table C-22 Acres of Verified Change in Butte County by Cause and Lifeform

	Fire	Regrowth	Unverified	All Causes
Conifer				
-71 to -100% CC	1,353		2,335	3,688
-41 to -70% CC	1,336		1,036	2,372
-16 to -40% CC	938		1,840	2,778
+16 to + 40% CC		404	1,369	1,773
+41 to + 100% CC		193	1,689	1,883
Total	3,628	597	8,269	12,493
Hardwood				
-71 to -100% CC	1,305		476	1,782
-41 to -70% CC	1,548		155	1,703
-16 to -40% CC	1,596		376	1,972
+16 to + 40% CC		32	145	176
+41 to + 100% CC		37	112	150
Total	4,449	69	1,265	5,783
Shrub/Chaparral				
-71 to -100% CC	39		46	85
-41 to -70% CC	40		22	61
-16 to -40% CC	3		23	26
+16 to + 40% CC		58	148	207
+41 to + 100% CC		88	188	276
Total	82	147	427	656
Grass/Forb				
Grass Decrease > 15%	23		39	61
Grass Increase > 15%		118	141	259
Total	23	118	179	320
Barren				
Grass Decrease > 15%	2		25	28
Grass Increase > 15%		25	79	103
Total	2	25	104	131
All Lifeforms	8,183	956	10,244	19,383

Table C-23 Acres of Classified Change in Butte County by Conifer Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Closed Cone Pine-Cypress								
-15 to + 15% CC (Little or No Change)	10	100					10	100
Total	10	100					10	100
-71 to -100% CC	48				404	2	453	1
-41 to -70% CC	162	1			323	1	485	1
-16 to -40% CC	253	1			426	2	680	1
-15 to + 15% CC (Little or No Change)	30,283	97	544	99	23,514	94	54,341	96
+16 to + 40% CC	187	1	3	1	313	1	503	1
+41 to + 100% CC	224	1			90		314	1
Total	31,158	100	548	100	25,070	100	56,776	100
-71 to -100% CC	103	1	30	2	789	2	921	2
-41 to -70% CC	185	1	54	4	358	1	596	1
-16 to -40% CC	199	2	63	5	732	2	994	2
-15 to + 15% CC (Little or No Change)	11,581	93	1,053	88	30,223	92	42,856	92
+16 to + 40% CC	49				191	1	239	1
+41 to + 100% CC	334	3			445	1	780	2
Total	12,450	100	1,199	100	32,738	100	46,387	100
-71 to -100% CC	14		39	3	344	2	397	2
-41 to -70% CC	22		57	4	192	1	272	1
-16 to -40% CC	11		61	4	230	1	302	1
-15 to + 15% CC (Little or No Change)	4,739	99	1,316	89	15,943	94	21,998	95
+16 to + 40% CC					163	1	163	1
+41 to + 100% CC					60		60	
Total	4,786	100	1,474	100	16,931	100	23,191	100
-71 to -100% CC	360	1	1	2	1,534	4	1,895	3
-41 to -70% CC	387	1			617	2	1,004	1
-16 to -40% CC	76			1	726	2	802	1
-15 to + 15% CC (Little or No Change)	25,898	96	43	97	36,486	90	62,426	92
+16 to + 40% CC	167	1			701	2	868	1
+41 to + 100% CC	225	1			503	1	729	1
Total	27,113	100	44	100	40,567	100	67,724	100
-71 to -100% CC	22	8					22	8
-41 to -70% CC	14	5					14	5
-16 to -40% CC								
-15 to + 15% CC (Little or No Change)	237	87				100	237	87
Total	274	100				100	274	100
All Conifer	75,790		3,266		115,306		194,362	

Table C-24 Acres of Classified Change in Butte County by Hardwood Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Blue Oak-Foothill Pine								
-71 to -100% CC			13	2	232	3	245	3
-41 to -70% CC			69	11	194	2	263	3
-16 to -40% CC			44	7	167	2	211	2
-15 to + 15% CC (Little or No Change)	145	100	504	80	8,294	93	8,943	93
Total	145	100	629	100	8,888	100	9,662	100
-71 to -100% CC					295	1	295	1
-41 to -70% CC			4	1	110		114	
-16 to -40% CC			2	1	106		109	
-15 to + 15% CC (Little or No Change)			446	99	34,557	99	35,003	99
+16 to + 40% CC					6		6	
+41 to + 100% CC					2		2	
Total			452	100	35,076	100	35,528	100
-41 to -70% CC						1		
-16 to -40% CC					2	5	2	4
-15 to + 15% CC (Little or No Change)	13	100			28	93	40	95
+41 to + 100% CC						1		
Total	13	100			30	100	42	100
-71 to -100% CC	76		147	3	1,018	2	1,241	1
-41 to -70% CC	275	2	243	6	809	1	1,326	1
-16 to -40% CC	294	2	320	7	1,034	2	1,648	2
-15 to + 15% CC (Little or No Change)	17,537	96	3,675	84	64,422	95	85,634	95
+16 to + 40% CC	16		1		153		170	
+41 to + 100% CC	23				125		148	
Total	18,222	100	4,386	100	67,560	100	90,168	100
-71 to -100% CC								
-16 to -40% CC					2	1	2	1
-15 to + 15% CC (Little or No Change)	8	100			215	99	223	99
Total	8	100			217	100	226	100
-15 to + 15% CC (Little or No Change)					294	100	294	100
Total					294	100	100	100
-15 to + 15% CC (Little or No Change)								100
Total								100
All Hardwood	18,388		5,467		112,065		135,726	

Table C-25 Acres of Classified Change in Butte County by Shrub/Chaparral Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Mixed Chaparral								
-71 to -100% CC			17	3	25	1	42	1
-41 to -70% CC			8	2	34	1	42	1
-16 to -40% CC			1		10		11	
-15 to + 15% CC (Little or No Change)	1,481	99	493	95	4,497	94	6,471	95
+16 to + 40% CC	9	1			111	2	120	2
+41 to + 100% CC	2				101	2	103	2
Total	1,493	100	519	100	4,778	100	6,789	100
Montane Chaparral								
-71 to -100% CC					43	3	43	3
-41 to -70% CC					19	1	19	1
-16 to -40% CC					15	1	15	1
-15 to + 15% CC (Little or No Change)	132	99			1,014	75	1,146	77
+16 to + 40% CC	1	1			86	6	87	6
+41 to + 100% CC					173	13	173	12
Total	133	100			1,351	100	1,483	100
All Shrub/Chaparral	1,625		519		6,128		8,273	

Table C-26 Acres of Classified Change in Butte County by Grass/Forb Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Annual Grass								
-15 to + 15% CC (Little or No Change)	140	100	2,831	100	43,701	99	46,672	99
Grass Decrease > 15%			8		53		61	
Grass Increase > 15%					259	1	259	1
Total	140	100	2,839	100	44,013	100	46,992	100
Freshwater Emergen Wetland								
-15 to + 15% CC (Little or No Change)					10	100	10	100
Total					10	100	10	100
Wet Meadow								
-15 to + 15% CC (Little or No Change)					36	100	36	100
Total					36	100	36	100
All Grass/Forb	140		2,839		44,059		47,038	

Table C-27 Acres of Verified Change in Butte County by Cause and Conifer Cover Type

	Fire	Regrowth	Unverified	All Causes
Douglas Fir				
-71 to -100% CC	103		350	453
-41 to -70% CC	252		233	485
-16 to -40% CC	225		455	680
+16 to + 40% CC		43	460	503
+41 to + 100% CC		12	302	314
Total	580	55	1,801	2,435
Montane Hardwood-Conifer				
-71 to -100% CC	509		412	921
-41 to -70% CC	476		121	596
-16 to -40% CC	463		531	994
+16 to + 40% CC		48	191	239
+41 to + 100% CC		62	718	780
Total	1,448	110	1,972	3,530
Ponderosa Pine				
-71 to -100% CC	307		90	397
-41 to -70% CC	185		87	272
-16 to -40% CC	215		87	302
+16 to + 40% CC		81	82	163
+41 to + 100% CC		5	55	60
Total	707	86	401	1,194
Sierran Mixed Conifer				
-71 to -100% CC	412		1,483	1,895
-41 to -70% CC	410		595	1,004
-16 to -40% CC	35		767	802
+16 to + 40% CC		232	636	868
+41 to + 100% CC		115	614	729
Total	857	347	4,095	5,298
White Fir				
-71 to -100% CC	22			22
-41 to -70% CC	14			14
-16 to -40% CC				
Total	37			37
All Conifer	3,628	597	8,269	12,493

Table C-28 Acres of Verified Change in Butte County by Cause and Hardwood Cover Type

	Fire	Regrowth	Unverified	All Causes
Blue Oak-Foothill Pine				
-71 to -100% CC	231		14	245
-41 to -70% CC	250		13	263
-16 to -40% CC	201		10	211
Total	682		37	719
Blue Oak Woodland				
-71 to -100% CC	57		239	295
-41 to -70% CC	42		71	114
-16 to -40% CC	72		37	109
+16 to + 40% CC			6	6
+41 to + 100% CC			2	2
Total	171		355	525
Coastal Oak Woodland				
-41 to -70% CC				
-16 to -40% CC			2	2
+41 to + 100% CC				
Total			2	2
Montane Hardwood				
-71 to -100% CC	1,018		224	1,241
-41 to -70% CC	1,256		71	1,326
-16 to -40% CC	1,323		325	1,648
+16 to + 40% CC		32	139	170
+41 to + 100% CC		37	111	148
Total	3,596	69	868	4,534
Montane Riparian				
-71 to -100% CC				
-16 to -40% CC			2	2
Total			3	3
All Hardwood	4,449	69	1,265	5,783

Table C-29 Acres of Verified Change in Butte County by Cause and Shrub/Chaparral Cover Type

	Fire	Regrowth	Unverified	All Causes
Mixed Chaparral				
-71 to -100% CC	39		4	42
-41 to -70% CC	37		5	42
-16 to -40% CC	3		8	11
+16 to + 40% CC		36	84	120
+41 to + 100% CC		52	51	103
Total	79	88	151	318
Montane Chaparral				
-71 to -100% CC			43	43
-41 to -70% CC	2		17	19
-16 to -40% CC			15	15
+16 to + 40% CC		22	65	87
+41 to + 100% CC		37	137	173
Total	2	59	276	337
All Shrub/Chaparral	82	147	427	656

Table C-30 Acres of Verified Change in Butte County by Cause and Grass/Forb Cover Type

	Fire	Regrowth	Unverified	All Causes
Annual Grass				
Grass Decrease > 15%	23		39	61
Grass Increase > 15%		118	141	259
Total	23	118	179	320
All Grass/Forb	23	118	179	320

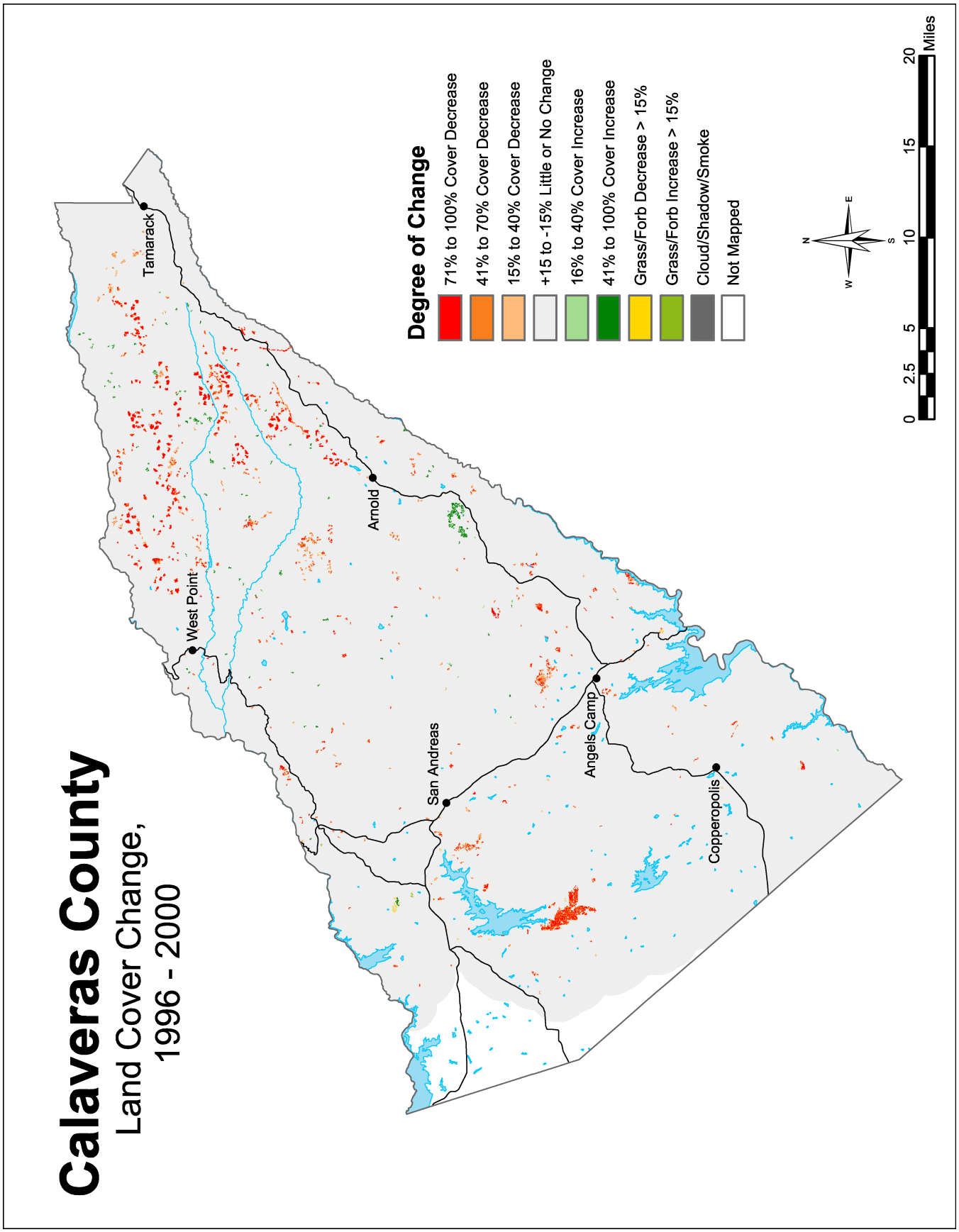

Calaveras County
Land Cover Change,
1996 - 2000
Degree of Change
71% to 100% Cover Decrease
41% to 70% Cover Decrease
15% to 40% Cover Decrease
+15 to -15% Little or No Change
16% to 40% Cover Increase
41% to 100% Cover Increase
Grass/Forb Decrease > 15%
Grass/Forb Increase > 15%
Cloud/Shadow/Smoke
Not Mapped
Tamarack
West Point
Arnold
San Andreas
Angels Camp
Copperopolis
N
W
E
S
0
2.5
5
10
15
20
Miles

Table C-31 Acres of Classified Change in Calaveras County by Lifeform Type and Owner Class

	Forest Service											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Forest Service Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	202		10		11						223	
-41 to -70% CC	95		5		25						125	
-16 to -40% CC	90		18		9						117	
-15 to + 15% CC (Little or No Change)	61,473	99	5,592	99	7,023	99	1,121	100	1,483	100	76,693	99
+16 to + 40% CC	62										62	
+41 to + 100% CC	315	1	3		2						319	
Grass Decrease > 15%									2		2	
Grass Increase > 15%							2				2	
Total	62,236	100	5,627	100	7,070	100	1,124	100	1,485	100	77,542	100

	Other Public											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Other Public Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	1		30		65	1					96	
-41 to -70% CC	3		5		33						41	
-16 to -40% CC	2		14		80	1					95	
-15 to + 15% CC (Little or No Change)	19,954	100	11,794	100	12,445	99	7,164	100	744	100	52,100	100
+16 to + 40% CC					4						4	
+41 to + 100% CC	2				1						2	
Grass Decrease > 15%							12				12	
Total	19,962	100	11,842	100	12,627	100	7,176	100	744	100	52,351	100

	Private											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Private Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	2,591	1	433		906	2					3,930	1
-41 to -70% CC	808		342		563	1					1,713	
-16 to -40% CC	561		234		94						888	
-15 to + 15% CC (Little or No Change)	174,340	98	131,712	99	50,724	97	106,888	100	2,747	99	466,411	99
+16 to + 40% CC	19		2		24						46	
+41 to + 100% CC	115		61		6						182	
Grass Decrease > 15%							176		21	1	198	
Grass Increase > 15%							13				13	
Total	178,434	100	132,784	100	52,317	100	107,078	100	2,768	100	473,381	100

Table C-31 Acres of Classified Change in Calaveras County by Lifeform Type and Owner Class (cont.)

	All Owners											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		All Owners Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	2,794	1	473		982	1					4,249	1
-41 to -70% CC	906		351		621	1					1,879	
-16 to -40% CC	652		265		182						1,100	
-15 to + 15% CC (Little or No Change)	255,767	98	149,098	99	70,192	97	115,173	100	4,974	100	595,203	99
+16 to + 40% CC	81		2		28						111	
+41 to + 100% CC	431		64		9						504	
Grass Decrease > 15%							188		23		212	
Grass Increase > 15%							16				16	
Total	260,631	100	150,254	100	72,014	100	115,377	100	4,997	100	603,273	100

Table C-32 Acres of Verified Change in Calaveras County by Cause and Lifeform

	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified	All Causes
Conifer							
-71 to -100% CC	170	2,413	11		52	147	2,794
-41 to -70% CC	116	598	7		25	160	906
-16 to -40% CC	98	376	2		20	157	652
+16 to + 40% CC				40	1	40	81
+41 to + 100% CC				110	2	320	431
Total	385	3,387	20	149	99	825	4,865
Hardwood							
-71 to -100% CC	243	52	26		20	132	473
-41 to -70% CC	220	11	18		9	95	351
-16 to -40% CC	184	11	4		21	45	265
+16 to + 40% CC						2	2
+41 to + 100% CC				12		52	64
Total	647	74	47	12	50	326	1,156
Shrub/Chaparral							
-71 to -100% CC	661	64	23		90	144	982
-41 to -70% CC	368	53	12		33	155	621
-16 to -40% CC	135	6	2		1	38	182
+16 to + 40% CC					2	26	28
+41 to + 100% CC				1	1	7	9
Total	1,165	123	37	1	127	370	1,822
Grass/Forb							
Grass Decrease > 15%	99	6	5		19	59	188
Grass Increase > 15%						16	16
Total	99	6	5		19	75	204
Barren							
Grass Decrease > 15%	18	2			2	2	23
Total	18	2			2	2	23
All Lifeforms	2,313	3,592	109	162	298	1,596	8,070

Table C-33 Acres of Classified Change in Calaveras County by Conifer Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Douglas Fir								
-71 to -100% CC					13		13	
-41 to -70% CC			1		16		17	
-16 to -40% CC					15		15	
-15 to + 15% CC (Little or No Change)	2,317	100	2,577	100	5,987	99	10,881	100
+16 to + 40% CC								
+41 to + 100% CC	1				2		3	
Total	2,318	100	2,578	100	6,033	100	10,930	100
Jeffrey Pine								
-71 to -100% CC	5						5	
-41 to -70% CC	3						3	
-16 to -40% CC	4						4	
-15 to + 15% CC (Little or No Change)	1,924	99		100	320	100	2,244	100
Total	1,935	100		100	320	100	2,255	100
Lodgepole Pine								
-71 to -100% CC								
-41 to -70% CC	5						5	
-16 to -40% CC	4						4	
-15 to + 15% CC (Little or No Change)	3,362	100		100	596	100	3,958	100
+16 to + 40% CC								
Total	3,371	100		100	596	100	3,967	100
Montane Hardwood-Conifer								
-71 to -100% CC	10		1		239		250	
-41 to -70% CC	4		2		154		160	
-16 to -40% CC	6				93		99	
-15 to + 15% CC (Little or No Change)	3,113	99	9,286	100	74,536	99	86,935	99
+16 to + 40% CC					2		2	
+41 to + 100% CC	2				29		30	
Total	3,135	100	9,289	100	75,052	100	87,476	100
Ponderosa Pine								
-71 to -100% CC	22				585	1	607	1
-41 to -70% CC	17		1		139		156	
-16 to -40% CC	12		1		142		154	
-15 to + 15% CC (Little or No Change)	7,782	97	5,922	100	39,622	98	53,326	98
+16 to + 40% CC	14				4		18	
+41 to + 100% CC	146	2	2		27		174	
Total	7,992	100	5,926	100	40,518	100	54,435	100
Red Fir								
-71 to -100% CC	6						6	
-41 to -70% CC	11						11	
-16 to -40% CC	24						24	
-15 to + 15% CC (Little or No Change)	5,385	99		100	264	100	5,649	99
+16 to + 40% CC	2						2	
+41 to + 100% CC	2						2	
Total	5,429	100		100	264	100	5,693	100

Table C-33 Acres of Classified Change in Calaveras County by Conifer Cover Type and Owner Class (cont.)

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Sierran Mixed Conifer								
-71 to -100% CC	160				1,754	3	1,913	2
-41 to -70% CC	56				500	1	555	1
-16 to -40% CC	41				312	1	352	
-15 to + 15% CC (Little or No Change)	37,591	99	2,168	100	53,015	95	92,774	97
+16 to + 40% CC	45				13		58	
+41 to + 100% CC	165				57		222	
Total	38,057	100	2,168	100	55,650	100	95,875	100
All Conifer	62,236		19,962		178,434		260,631	

Table C-34 Acres of Classified Change in Calaveras County by Hardwood Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Blue Oak-Foothill Pine								
-71 to -100% CC					3		3	
-41 to -70% CC					3		3	
-16 to -40% CC								
-15 to + 15% CC (Little or No Change)	47	100	334	100	1,607	100	1,988	100
Total	47	100	334	100	1,613	100	1,994	100
Blue Oak Woodland								
-71 to -100% CC			16	1	135		151	
-41 to -70% CC					98		98	
-16 to -40% CC			4		26		30	
-15 to + 15% CC (Little or No Change)			2,910	99	48,983	99	51,894	99
+16 to + 40% CC					1		1	
+41 to + 100% CC					13		13	
Total			2,931	100	49,256	100	52,186	100
Montane Hardwood								
-71 to -100% CC	10		15		295		319	
-41 to -70% CC	5		4		242		251	
-16 to -40% CC	18		9		208		236	
-15 to + 15% CC (Little or No Change)	5,535	99	8,549	100	81,114	99	95,198	99
+16 to + 40% CC					1		1	
+41 to + 100% CC	3				48		51	
Total	5,570	100	8,577	100	81,908	100	96,055	100
Montane Riparian								
-15 to + 15% CC (Little or No Change)	10	100			8	100	18	100
Total	10	100			8	100	18	100
All Hardwood	5,627		11,842		132,784		150,254	

Table C-35 Acres of Classified Change in Calaveras County by Shrub/Chaparral Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Chamise-Redshank Chaparral								
-71 to -100% CC			23	1	650	4	673	3
-41 to -70% CC			20		390	2	410	2
-16 to -40% CC			8		24		33	
-15 to + 15% CC (Little or No Change)			4,129	99	15,495	94	19,624	95
+16 to + 40% CC			1		7		8	
+41 to + 100% CC					1		1	
Total			4,182	100	16,566	100	20,748	100
Mixed Chaparral								
-71 to -100% CC	4		42		209	1	255	1
-41 to -70% CC	4		13		133		151	
-16 to -40% CC	1		71	1	62		133	
-15 to + 15% CC (Little or No Change)	2,268	100	8,306	98	33,598	99	44,173	99
+16 to + 40% CC			3		17		19	
+41 to + 100% CC	2		1		5		7	
Total	2,279	100	8,436	100	34,024	100	44,739	100
Montane Chaparral								
-71 to -100% CC	7				47	3	54	1
-41 to -70% CC	21				40	2	61	1
-16 to -40% CC	9				8		16	
-15 to + 15% CC (Little or No Change)	4,754	99	10	100	1,631	94	6,395	98
+16 to + 40% CC					1		1	
+41 to + 100% CC					1		1	
Total	4,791	100	10	100	1,727	100	6,528	100
All Shrub/Chaparral	7,070		12,627		52,317		72,014	

Table C-36 Acres of Classified Change in Calaveras County by Grass/Forb Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Chamise-Redshank Chaparral								
-15 to + 15% CC (Little or No Change)	945	100	6,619	100	103,900	100	111,464	100
Grass Decrease > 15%			12		173		184	
Grass Increase > 15%	2				13		16	
Total	947	100	6,631	100	104,086	100	111,664	100
Unknown Grass/Forb								
-15 to + 15% CC (Little or No Change)			539	100	2,771	100	3,310	100
Grass Decrease > 15%					3		3	
Total			539	100	2,775	100	3,313	100
Wet Meadow								
-15 to + 15% CC (Little or No Change)	177	100	7	100	216	100	400	100
Grass Decrease > 15%							1	
Total	177	100	7	100	217	100	400	100
All Grass/Forb	1,124		7,176		107,078		115,377	

Table C-37 Acres of Verified Change in Calaveras County by Cause and Conifer Cover Type

	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified	All Causes
Douglas Fir							
-71 to -100% CC	1	3				9	13
-41 to -70% CC	2	5				9	17
-16 to -40% CC		1				14	15
+16 to + 40% CC							
+41 to + 100% CC						3	3
Total	4	10				35	48
Jeffrey Pine							
-71 to -100% CC		5					5
-41 to -70% CC		3					3
-16 to -40% CC		4					4
Total		11					11
Lodgepole Pine							
-71 to -100% CC							
-41 to -70% CC		3				1	5
-16 to -40% CC		2				2	4
+16 to + 40% CC							
Total		6				3	9
Montane Hardwood-Conifer							
-71 to -100% CC	80	95	11		10	54	250
-41 to -70% CC	85	12	6		12	45	160
-16 to -40% CC	60	12	2		7	19	99
+16 to + 40% CC						2	2
+41 to + 100% CC				7		23	30
Total	224	119	19	7	29	143	541
Ponderosa Pine							
-71 to -100% CC	63	486			8	50	607
-41 to -70% CC	23	79	1		11	42	156
-16 to -40% CC	29	63			7	56	154
+16 to + 40% CC				1	1	16	18
+41 to + 100% CC				10	2	162	174
Total	115	629	2	11	28	326	1,109
Red Fir							
-71 to -100% CC		6					6
-41 to -70% CC		10				1	11
-16 to -40% CC		18				6	24
+16 to + 40% CC				2			2
+41 to + 100% CC				2			2
Total		34		3		7	44
Sierran Mixed Conifer							
-71 to -100% CC	26	1,818			35	35	1,913
-41 to -70% CC	7	485			2	61	555
-16 to -40% CC	10	275			6	62	352
+16 to + 40% CC				37		21	58
+41 to + 100% CC				91		131	222
Total	42	2,579		128	43	310	3,102
All Conifer	385	3,387	20	149	99	825	4,865

Table C-38 Acres of Verified Change in Calaveras County by Cause and Hardwood Cover Type

	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified	All Causes
Blue Oak-Foothill Pine							
-71 to -100% CC	2					1	3
-41 to -70% CC	2					1	3
-16 to -40% CC							
Total	5					1	6
Blue Oak Woodland							
-71 to -100% CC	100		2		4	46	151
-41 to -70% CC	71		3		2	23	98
-16 to -40% CC	11		2		1	16	30
+16 to + 40% CC						1	1
+41 to + 100% CC				11		2	13
Total	181		7	11	7	88	293
Montane Hardwood							
-71 to -100% CC	142	52	24		17	85	319
-41 to -70% CC	147	11	15		7	72	251
-16 to -40% CC	174	11	2		20	29	236
+16 to + 40% CC						1	1
+41 to + 100% CC				1		50	51
Total	462	74	40	1	44	236	857
All Hardwood	647	74	47	12	50	326	1,156

Table C-39 Acres of Verified Change in Calaveras County by Cause and Shrub/Chaparral Cover Type

	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified	All Causes
Chamise-Redshank Chaparral							
-71 to -100% CC	562		6		46	59	673
-41 to -70% CC	314		3		24	68	410
-16 to -40% CC	13				1	19	33
+16 to + 40% CC						8	8
+41 to + 100% CC						1	1
Total	889		10		71	155	1,124
Mixed Chaparral							
-71 to -100% CC	100	15	17		44	79	255
-41 to -70% CC	54	18	9		9	62	151
-16 to -40% CC	122	2	2			7	133
+16 to + 40% CC					2	18	19
+41 to + 100% CC					1	6	7
Total	276	35	28		57	171	566
Montane Chaparral							
-71 to -100% CC		48				6	54
-41 to -70% CC		36				25	61
-16 to -40% CC		4				12	16
+16 to + 40% CC						1	1
+41 to + 100% CC				1			1
Total		88		1		44	133
All Shrub/Chaparral	1,165	123	37	1	127	370	1,822

Table C-40 Acres of Verified Change in Calaveras County by Cause and Grass/Forb Cover Type

	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified	All Causes
Chamise-Redshank Chaparral							
Grass Decrease > 15%	99	6	5		18	57	184
Grass Increase > 15%						16	16
Total	99	6	5		18	73	200
Unknown Grass/Forb							
Grass Decrease > 15%					2	1	3
Total					2	1	3
Wet Meadow							
Grass Decrease > 15%						1	1
Total						1	1
All Grass/Forb	99	6	5		19	75	204

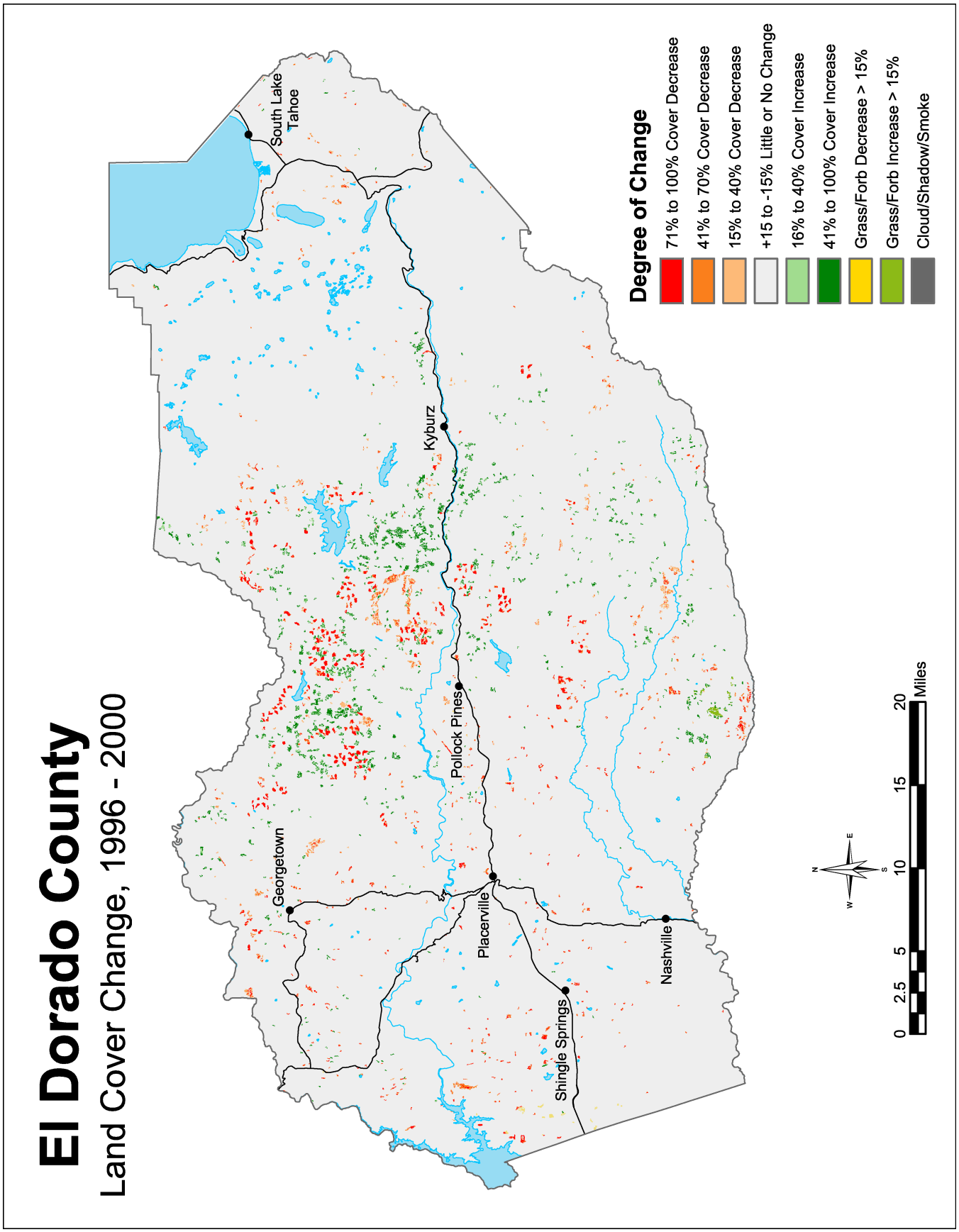

El Dorado County
Land Cover Change, 1996 - 2000
Degree of Change
71% to 100% Cover Decrease
41% to 70% Cover Decrease
15% to 40% Cover Decrease
+15 to -15% Little or No Change
16% to 40% Cover Increase
41% to 100% Cover Increase
Grass/Forb Decrease > 15%
Grass/Forb Increase > 15%
Cloud/Shadow/Smoke
South Lake Tahoe
Kyburz
Pollock Pines
Georgetown
Placerville
Nashville
Shingle Springs
50
0 2.5 5 10 15 20
Miles

Table C-41 Acres of Classified Change in El Dorado County by Lifeform Type and Owner Class

	Forest Service											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Forest Service Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	543		9		41						593	
-41 to -70% CC	710		7		38						755	
-16 to -40% CC	1,241		11		20						1,271	
-15 to + 15% CC (Little or No Change)	404,868	99	10,937	100	33,359	100	8,460	100	28,304	100	485,926	99
+16 to + 40% CC	331		2		17						351	
+41 to + 100% CC	1,454		23		10						1,487	
Grass Decrease > 15%							5		4		9	
Grass Increase > 15%									2		2	
Total	409,147	100	10,988	100	33,484	100	8,465	100	28,309	100	490,394	100

	Other Public											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Other Public Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	114	1	18		17						148	
-41 to -70% CC	52		22		97	1					172	
-16 to -40% CC	54		38								91	
-15 to + 15% CC (Little or No Change)	13,868	98	16,291	99	7,886	99	2,158	99	213	99	40,416	99
+16 to + 40% CC	30		2		1						34	
+41 to + 100% CC	86	1	12		2						100	
Grass Decrease > 15%							14	1	1	1	15	
Grass Increase > 15%							4				4	
Total	14,205	100	16,382	100	8,002	100	2,176	100	215	100	40,979	100

	Private											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Private Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	3,912	2	699		248	1					4,859	1
-41 to -70% CC	744		315		188						1,247	
-16 to -40% CC	759		150		13						921	
-15 to + 15% CC (Little or No Change)	229,085	96	178,582	99	41,861	99	78,606	99	2,573	99	530,706	98
+16 to + 40% CC	648		21		46						714	
+41 to + 100% CC	3,338	1	349		95						3,782	1
Grass Decrease > 15%							207		10		218	
Grass Increase > 15%							263		4		267	
Total	238,485	100	180,114	100	42,450	100	79,076	100	2,586	100	542,713	100

Table C-41 Acres of Classified Change in El Dorado County by Lifeform Type and Owner Class (cont.)

	All Owners											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		All Owners Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	4,570	1	725		305						5,600	1
-41 to -70% CC	1,506		344		323						2,173	
-16 to -40% CC	2,053		198		32						2,283	
-15 to + 15% CC (Little or No Change)	647,820	98	205,809	99	83,106	99	89,224	99	31,089	100	1,057,048	98
+16 to + 40% CC	1,010		25		63						1,098	
+41 to + 100% CC	4,878	1	384		107						5,369	
Grass Decrease > 15%							226		16		242	
Grass Increase > 15%							267		5		273	
Total	661,837	100	207,485	100	83,937	100	89,717	100	31,110	100	1,074,086	100

Table C-42 Acres of Verified Change in El Dorado County by Cause and Lifeform

	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified	All Causes
Conifer							
-71 to -100% CC	10	3,327	21		80	1,132	4,570
-41 to -70% CC	6	824	15		57	605	1,506
-16 to -40% CC	7	1,008	6		101	932	2,053
+16 to + 40% CC				683	1	325	1,010
+41 to + 100% CC				3,373	1	1,504	4,878
Total	23	5,158	43	4,057	240	4,497	14,017
Hardwood							
-71 to -100% CC	4	54	114		31	522	725
-41 to -70% CC	4	13	47		10	270	344
-16 to -40% CC	0	12	2		7	175	198
+16 to + 40% CC				9		17	25
+41 to + 100% CC				91		293	384
Total	8	79	163	99	48	1,278	1,676
Shrub/Chaparral							
-71 to -100% CC	15	16	54		8	213	305
-41 to -70% CC	111	13	21		4	175	323
-16 to -40% CC	0	2	1		1	29	32
+16 to + 40% CC				23		41	63
+41 to + 100% CC				44	1	62	107
Total	126	30	75	67	13	519	831
Grass/Forb							
Grass Decrease > 15%		2	117		1	106	226
Grass Increase > 15%				196		72	267
Total		2	117	196	1	178	493
Barren							
Grass Decrease > 15%		3				12	16
Grass Increase > 15%						5	5
Total		3				17	21
All Lifeforms	157	5,272	398	4,420	303	6,489	17,038

Table C-43 Acres of Classified Change in El Dorado County by Conifer Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Closed Cone Pine-Cypress								
-15 to + 15% CC (Little or No Change)		100			14	100	15	100
Total		100			14	100	15	100
Douglas Fir								
-71 to -100% CC	31		20	1	387	1	438	1
-41 to -70% CC	36		2		99		136	
-16 to -40% CC	68		14	1	84		166	
-15 to + 15% CC (Little or No Change)	35,165	99	2,534	99	29,576	97	67,275	98
+16 to + 40% CC	13				43		57	
+41 to + 100% CC	79				238	1	317	
Total	35,391	100	2,571	100	30,427	100	68,389	100
Jeffrey Pine								
-71 to -100% CC	8				7		15	
-41 to -70% CC	24		5		11		40	
-16 to -40% CC	32		4		7		43	
-15 to + 15% CC (Little or No Change)	10,025	99	1,512	99	8,624	100	20,161	99
+16 to + 40% CC	1				1		1	
+41 to + 100% CC	6				2		9	
Total	10,096	100	1,521	100	8,651	100	20,268	100
Lodgepole Pine								
-71 to -100% CC	16		8	1	3		27	
-41 to -70% CC	27		9	1	3		39	
-16 to -40% CC	28		11	2	4		43	
-15 to + 15% CC (Little or No Change)	22,100	100	648	96	1,686	99	24,433	99
+16 to + 40% CC	2				2		3	
+41 to + 100% CC	16				6		22	
Total	22,188	100	675	100	1,704	100	24,567	100
Montane Hardwood-Conifer								
-71 to -100% CC	12		3		306	1	321	1
-41 to -70% CC	5		1		72		78	
-16 to -40% CC	6		5		62		72	
-15 to + 15% CC (Little or No Change)	8,310	100	3,253	100	36,778	98	48,341	98
+16 to + 40% CC	1				31		32	
+41 to + 100% CC	12		1		241	1	254	1
Total	8,346	100	3,263	100	37,490	100	49,098	100
Ponderosa Pine								
-71 to -100% CC	85		4		668	2	757	1
-41 to -70% CC	53		1		197		250	
-16 to -40% CC	85		1		145		232	
-15 to + 15% CC (Little or No Change)	31,115	98	1,806	100	40,093	97	73,014	97
+16 to + 40% CC	71				42		113	
+41 to + 100% CC	322	1	1		204		526	1
Total	31,731	100	1,812	100	41,349	100	74,893	100

Table C-43 Acres of Classified Change in El Dorado County by Conifer Cover Type and Owner Class (cont.)

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Closed Cone Pine-Cypress								
Red Fir								
-71 to -100% CC	11		6	4	1		18	
-41 to -70% CC	26		4	2	1		31	
-16 to -40% CC	28		6	4	2		36	
-15 to + 15% CC (Little or No Change)	85,258	100	153	90	4,554	100	89,965	100
+16 to + 40% CC	4						4	
+41 to + 100% CC	40						40	
Total	85,366	100	170	100	4,558	100	90,094	100
Subalpine Conifer								
-71 to -100% CC	1						1	
-41 to -70% CC								
-16 to -40% CC								
-15 to + 15% CC (Little or No Change)	5,463	100			22	100	5,484	100
+16 to + 40% CC								
+41 to + 100% CC	1						1	
Total	5,465	100			22	100	5,486	100
-71 to -100% CC	355		73	2	2,487	2	2,915	1
-41 to -70% CC	519		30	1	352		901	
-16 to -40% CC	977	1	13		447		1,437	
-15 to + 15% CC (Little or No Change)	188,249	98	3,889	94	102,293	94	294,430	97
+16 to + 40% CC	225		30	1	522		777	
+41 to + 100% CC	947		85	2	2,561	2	3,592	1
Total	191,271	100	4,119	100	108,662	100	304,053	100
-71 to -100% CC	24				53	1	77	
-41 to -70% CC	20				10		30	
-16 to -40% CC	17				7		24	
-15 to + 15% CC (Little or No Change)	19,184	99	73	100	5,446	97	24,703	99
+16 to + 40% CC	16				7		23	
+41 to + 100% CC	32				85	2	117	
Total	19,292	100	73	100	5,609	100	24,973	100
All Conifer	409,147		14,205		238,485		661,837	

Table C-44 Acres of Classified Change in El Dorado County by Hardwood Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Aspen								
-71 to -100% CC	1						1	
-16 to -40% CC	2	1					2	1
-15 to + 15% CC (Little or No Change)	356	99	12	100	30	100	398	99
+41 to + 100% CC	1						1	
Total	360	100	12	100	30	100	402	100
Blue Oak-Foothill Pine								
-71 to -100% CC			3	1	14		17	
-41 to -70% CC			2		12		13	
-16 to -40% CC			7	1	1		9	
-15 to + 15% CC (Little or No Change)	209	100	566	98	3,400	99	4,174	99
+41 to + 100% CC							1	
Total	209	100	578	100	3,427	100	4,214	100
Blue Oak Woodland								
-71 to -100% CC			2		118		120	
-41 to -70% CC			3		59		61	
-16 to -40% CC			1		12		13	
-15 to + 15% CC (Little or No Change)	125	100	2,331	100	40,390	99	42,846	99
+16 to + 40% CC					6		6	
+41 to + 100% CC			2		67		69	
Total	125	100	2,338	100	40,652	100	43,114	100
Eucalyptus								
-15 to + 15% CC (Little or No Change)					38	100	38	100
Total					38	100	38	100
Montane Hardwood								
-71 to -100% CC	8		13		561		582	
-41 to -70% CC	7		18		240		264	
-16 to -40% CC	8		30		135		173	
-15 to + 15% CC (Little or No Change)	10,237	100	13,214	99	130,949	99	154,400	99
+16 to + 40% CC	2		2		15		19	
+41 to + 100% CC	22		10		279		311	
Total	10,285	100	13,287	100	132,179	100	155,751	100
Montane Riparian								
-71 to -100% CC					1		1	
-41 to -70% CC					1		1	
-16 to -40% CC								
-15 to + 15% CC (Little or No Change)	10	100	49	100	640	100	698	100
+41 to + 100% CC								
Total	10	100	49	100	642	100	701	100
Valley Oak Woodland								
-71 to -100% CC					4		4	
-41 to -70% CC					4		4	
-15 to + 15% CC (Little or No Change)			119	100	3,135	100	3,255	100
+41 to + 100% CC					2		2	
Total			119	100	3,146	100	3,265	100
All Hardwood	10,988		16,382		180,114		207,485	

Table C-45 Acres of Classified Change in El Dorado County by Shrub/Chaparral Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Alpine Dwarf Shrub								
-71 to -100% CC	5						5	
-41 to -70% CC	7	1					7	1
-16 to -40% CC	3						3	
-15 to + 15% CC (Little or No Change)	1,116	99			16	100	1,132	99
+41 to + 100% CC	1						1	
Total	1,132	100			16	100	1,148	100
Chamise-Redshank Chaparral								
-71 to -100% CC					3		3	
-41 to -70% CC					2		2	
-16 to -40% CC								
-15 to + 15% CC (Little or No Change)			715	100	2,950	100	3,666	100
+41 to + 100% CC								
Total			715	100	2,956	100	3,671	100
Mixed Chaparral								
-71 to -100% CC	8		15		220	1	243	1
-41 to -70% CC	5		95	1	168	1	268	1
-16 to -40% CC	1				4		5	
-15 to + 15% CC (Little or No Change)	2,473	99	6,694	98	30,171	98	39,338	98
+16 to + 40% CC	16	1	1		20		36	
+41 to + 100% CC	3		2		56		61	
Total	2,506	100	6,807	100	30,639	100	39,952	100
Montane Chaparral								
-71 to -100% CC	27		2		22		51	
-41 to -70% CC	23		1		16		40	
-16 to -40% CC	15				8		23	
-15 to + 15% CC (Little or No Change)	29,405	100	434	99	8,050	99	37,888	100
+16 to + 40% CC	1				26		27	
+41 to + 100% CC	3				39		42	
Total	29,475	100	437	100	8,160	100	38,071	100
Sagebrush								
-71 to -100% CC					3		4	
-41 to -70% CC	3	1	1	3	3		7	1
-16 to -40% CC							1	
-15 to + 15% CC (Little or No Change)	366	98	42	97	674	99	1,082	99
+41 to + 100% CC	3	1					3	
Total	372	100	43	100	681	100	1,095	100
All Shrub/Chaparral	33,484		8,002		42,450		83,937	

Table C-46 Acres of Classified Change in El Dorado County by Grass/Forb Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Annual Grass								
-15 to + 15% CC (Little or No Change)	2,921	100	1,866	100	75,689	99	80,476	99
Grass Decrease > 15%			1		198		200	
Grass Increase > 15%			4		259		264	
Total	2,922	100	1,871	100	76,147	100	80,939	100
Wet Meadow								
-15 to + 15% CC (Little or No Change)	5,539	100	292	96	2,917	100	8,747	100
Grass Decrease > 15%	5		13	4	9		26	
Grass Increase > 15%					4		4	
Total	5,544	100	304	100	2,930	100	8,778	100
All Grass/Forb	8,465		2,176		79,076		89,717	

Table C-47 Acres of Verified Change in El Dorado County by Cause and Conifer Cover Type

	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified	All Causes
Douglas Fir							
-71 to -100% CC		313			14	112	438
-41 to -70% CC		65			15	57	136
-16 to -40% CC		49			45	73	166
+16 to + 40% CC				36		20	57
+41 to + 100% CC				209		108	317
Total		427		246	73	369	1,114
Jeffrey Pine							
-71 to -100% CC		8	1			6	15
-41 to -70% CC		18	4			18	40
-16 to -40% CC		16	2			24	43
+16 to + 40% CC						1	1
+41 to + 100% CC				2		7	9
Total		41	8	2		57	108
Lodgepole Pine							
-71 to -100% CC		4	8		8	7	27
-41 to -70% CC		12	9		3	16	39
-16 to -40% CC		13	3		3	25	43
+16 to + 40% CC					1	2	3
+41 to + 100% CC					1	21	22
Total		28	20		16	71	134
Montane Hardwood-Conifer							
-71 to -100% CC	8	155	9		5	145	321
-41 to -70% CC	1	18	2		2	56	78
-16 to -40% CC		9	1		3	60	72
+16 to + 40% CC				22		10	32
+41 to + 100% CC				142		112	254
Total	9	182	11	164	9	382	758

Table C-47 Acres of Verified Change in El Dorado County by Cause and Conifer Cover Type (cont.)

	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified	All Causes
Ponderosa Pine							
-71 to -100% CC	2	531	2		25	197	757
-41 to -70% CC	1	84	1		21	143	250
-16 to -40% CC		84	1		42	106	232
+16 to + 40% CC				92		22	113
+41 to + 100% CC				375		151	526
Total	3	699	4	467	88	618	1,879
Red Fir							
-71 to -100% CC		2				16	18
-41 to -70% CC		6				25	31
-16 to -40% CC		4				33	36
+16 to + 40% CC						3	4
+41 to + 100% CC				3		37	40
Total		12		4		114	129
Subalpine Conifer							
-71 to -100% CC						1	1
-41 to -70% CC							
-16 to -40% CC							
+16 to + 40% CC							
+41 to + 100% CC						1	1
Total						2	2
Sierran Mixed Conifer							
-71 to -100% CC	1	2,287			28	599	2,915
-41 to -70% CC	4	604			17	276	901
-16 to -40% CC	7	823			9	599	1,437
+16 to + 40% CC				517		261	777
+41 to + 100% CC				2,550		1,042	3,592
Total	11	3,714		3,066	54	2,777	9,623
White Fir							
-71 to -100% CC		27				50	77
-41 to -70% CC		17				13	30
-16 to -40% CC		11				13	24
+16 to + 40% CC				17		6	23
+41 to + 100% CC				91		25	117
Total		55		108		107	270
All Conifer	23	5,158	43	4,057	240	4,497	14,017

Table C-48 Acres of Verified Change in El Dorado County by Cause and Hardwood Cover Type

	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified	All Causes
Aspen							
-71 to -100% CC						1	1
-16 to -40% CC						2	2
+41 to + 100% CC						1	1
Total						4	4
Blue Oak-Foothill Pine							
-71 to -100% CC	3		4			10	17
-41 to -70% CC	4					9	13
-16 to -40% CC						9	9
+16 to + 40% CC							
+41 to + 100% CC						1	1
Total	8		4			28	39
Blue Oak Woodland							
-71 to -100% CC			30			89	120
-41 to -70% CC			14			48	61
-16 to -40% CC					1	11	13
+16 to + 40% CC				3		3	6
+41 to + 100% CC				3		66	69
Total			44	6	2	217	268
Montane Hardwood							
-71 to -100% CC		54	80		31	417	582
-41 to -70% CC		13	33		10	209	264
-16 to -40% CC		12	2		6	153	173
+16 to + 40% CC				6		14	19
+41 to + 100% CC				87		224	311
Total	1	79	115	93	47	1,016	1,351
Montane Riparian							
-71 to -100% CC						1	1
-41 to -70% CC						1	1
-16 to -40% CC							
+41 to + 100% CC							
Total						3	3
Valley Oak Woodland							
-71 to -100% CC						4	4
-41 to -70% CC						4	4
-16 to -40% CC							
+41 to + 100% CC						2	2
Total						11	11
All Hardwood	8	79	163	99	48	1,278	1,676

Table C-49 Acres of Verified Change in El Dorado County by Cause and Shrub/Chaparral Cover Type

	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified	All Causes
Alpine Dwarf Shrub							
-71 to -100% CC						5	5
-41 to -70% CC						7	7
-16 to -40% CC						3	3
+41 to + 100% CC					1		1
Total					1	16	16
Chamise-Redshank Chaparral							
-71 to -100% CC						3	3
-41 to -70% CC						1	2
-16 to -40% CC							
+41 to + 100% CC							
Total			1			4	5
Mixed Chaparral							
-71 to -100% CC	11	13	53		6	160	243
-41 to -70% CC	110	10	17		3	127	268
-16 to -40% CC					1	3	5
+16 to + 40% CC				10		26	36
+41 to + 100% CC				14		48	61
Total	121	23	71	24	10	365	613
Montane Chaparral							
-71 to -100% CC	4	3			2	41	51
-41 to -70% CC	1	2			1	37	40
-16 to -40% CC		1				22	23
+16 to + 40% CC				13		14	27
+41 to + 100% CC				31		11	42
Total	5	6		44	3	125	183
Sagebrush							
-71 to -100% CC			1			3	4
-41 to -70% CC		1	3			3	7
-16 to -40% CC							1
+41 to + 100% CC						3	3
Total		1	4			9	14
All Shrub/Chaparral	126	30	75	67	13	519	831

Table C-50 Acres of Verified Change in El Dorado County by Cause and Grass/Forb Cover Type

	Harvest	Develop-ment	Regrowth	Other	Unverified	All Causes
Annual Grass						
Grass Decrease > 15%		117		1	81	200
Grass Increase > 15%			193		71	264
Total		117	193	1	152	463
Wet Meadow						
Grass Decrease > 15%	1				25	26
Grass Increase > 15%			3		1	4
Total	1		3		26	30
Barren						
Grass Decrease > 15%	3				12	16
Grass Increase > 15%					5	5
Total	3				17	21
All Grass/Forb	5	117	196	1	195	514

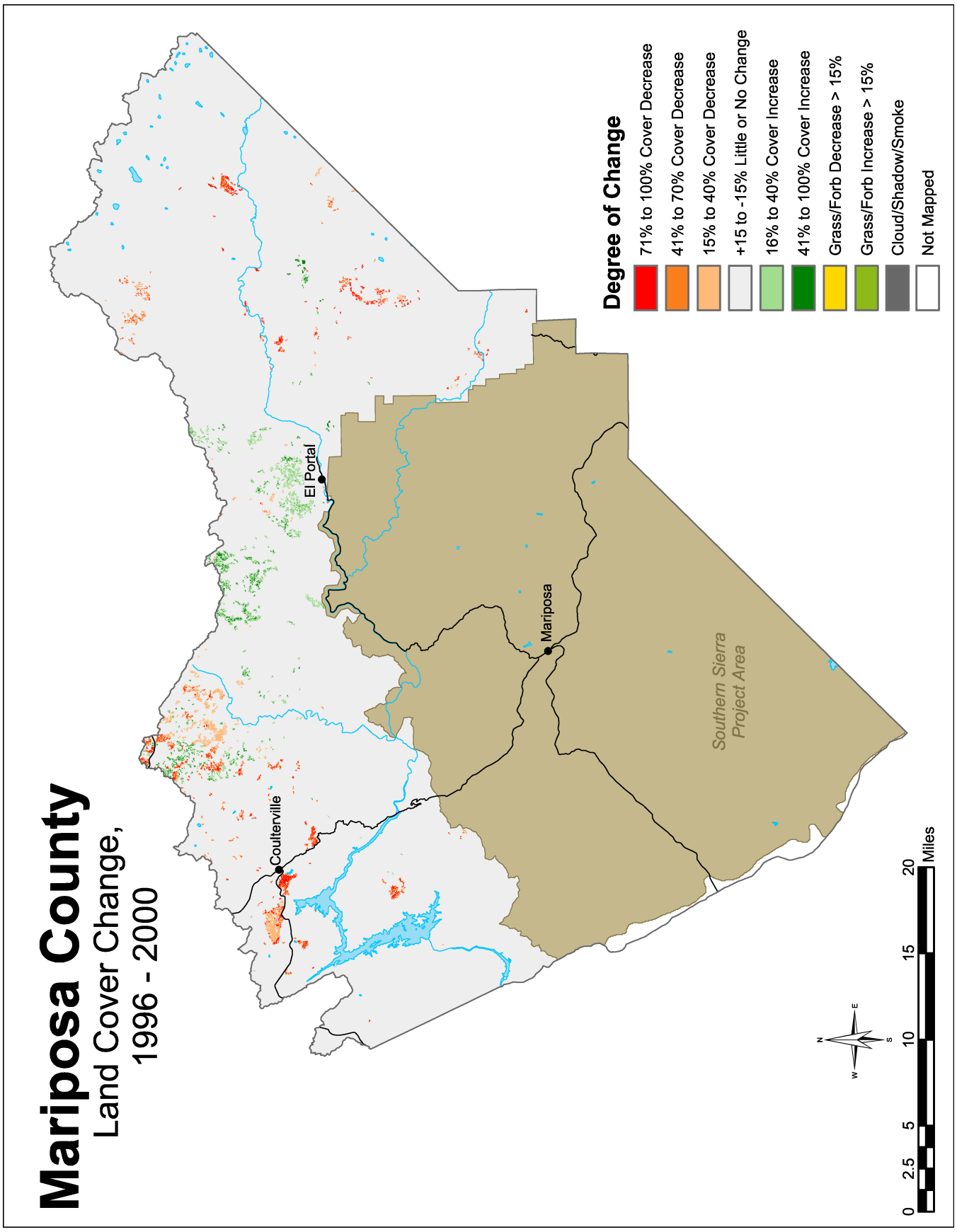

Mariposa County
Land Cover Change,
1996 - 2000
Degree of Change
71% to 100% Cover Decrease
41% to 70% Cover Decrease
15% to 40% Cover Decrease
+15 to -15% Little or No Change
16% to 40% Cover Increase
41% to 100% Cover Increase
Grass/Forb Decrease > 15%
Grass/Forb Increase > 15%
Cloud/Shadow/Smoke
Not Mapped
El Portal
Mariposa
Coulterville
Southern Sierra
Project Area
N
E
S
W
0
2.5
5
10
15
20
Miles

Table C-51 Acres of Classified Change in Mariposa County by Lifeform Type and Owner Class

	Forest Service											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Forest Service Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	351	1	5		97	1					453	1
-41 to -70% CC	363	1	5		49						417	
-16 to -40% CC	1,348	3	5		36						1,388	2
-15 to + 15% CC (Little or No Change)	49,122	92	7,584	98	17,914	95	4,113	99	111	100	78,844	94
+16 to + 40% CC	1,488	3	118	2	805	4					2,411	3
+41 to + 100% CC	714	1	4		36						754	1
Grass Decrease > 15%							3				3	
Grass Increase > 15%							19				19	
Total	53,385	100	7,720	100	18,937	100	4,135	100	112	100	84,289	100

	Other Public											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Other Public Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	580		76		205	1					862	
-41 to -70% CC	416		47		68						530	
-16 to -40% CC	433		36		469	1					938	
-15 to + 15% CC (Little or No Change)	208,934	99	25,425	99	32,795	98	4,224	100	21,565	100	292,943	99
+16 to + 40% CC	382		9		68						458	
+41 to + 100% CC	157		1		8						166	
Grass Decrease > 15%							6		8		14	
Grass Increase > 15%							3				3	
Total	210,902	100	25,593	100	33,612	100	4,233	100	21,574	100	295,913	100

	Private											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Private Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	57		112		222	1					391	
-41 to -70% CC	55		127		99	1					281	
-16 to -40% CC	48		61		329	2					439	
-15 to + 15% CC (Little or No Change)	13,378	97	33,568	99	16,444	96	42,644	100	575	100	106,609	99
+16 to + 40% CC	135	1	44		60						239	
+41 to + 100% CC	66		3		3						72	
Grass Decrease > 15%							18				18	
Grass Increase > 15%							6				6	
Total	13,738	100	33,915	100	17,157	100	42,668	100	575	100	108,054	100

Table C-51 Acres of Classified Change in Mariposa County by Lifeform Type and Owner Class (cont.)

	All Owners											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		All Owners Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	989		193		525	1					1,706	
-41 to -70% CC	833		179		216						1,228	
-16 to -40% CC	1,829	1	102		834	1					2,765	1
-15 to + 15% CC (Little or No Change)	271,434	98	66,576	99	67,153	96	50,981	100	22,251	100	478,395	98
+16 to + 40% CC	2,004	1	170		933	1					3,108	1
+41 to + 100% CC	937		8		46						991	
Grass Decrease > 15%							27		8		35	
Grass Increase > 15%							28				28	
Total	278,025	100	67,229	100	69,706	100	51,036	100	22,260	100	488,255	100

Table C-52 Acres of Verified Change in Mariposa County by Cause and Lifeform

	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified	All Causes
Conifer							
-71 to -100% CC	532	77			120	260	989
-41 to -70% CC	398	79			124	232	833
-16 to -40% CC	658	28	5		437	700	1,829
+16 to + 40% CC				1,876	11	116	2,004
+41 to + 100% CC				890		47	937
Total	1,588	183	5	2,766	693	1,356	6,592
Hardwood							
-71 to -100% CC	159	2				32	193
-41 to -70% CC	127	2				50	179
-16 to -40% CC	55	2				45	102
+16 to + 40% CC				53		117	170
+41 to + 100% CC				4		4	8
Total	341	7		57		248	653
Shrub/Chaparral							
-71 to -100% CC	403	19			10	93	525
-41 to -70% CC	140	8			9	60	216
-16 to -40% CC	821	1			2	10	834
+16 to + 40% CC				924		9	933
+41 to + 100% CC				44		2	46
Total	1,364	28		968	20	174	2,553
Grass/Forb							
Grass Decrease > 15%	8					19	27
Grass Increase > 15%				24		4	28
Total	8			24		22	55
Barren							
Grass Decrease > 15%	0					8	8
Grass Increase > 15%							
Total						8	9
All Lifeforms	3,301	218	5	3,816	713	1,808	9,860

Table C-53 Acres of Classified Change in Mariposa County by Conifer Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Unknown Conifer Type								
-71 to -100% CC			5		4	1	9	
-41 to -70% CC			3		6	1	9	
-16 to -40% CC			1		5	1	5	
-15 to + 15% CC (Little or No Change)			1,121	99	717	98	1,839	99
+16 to + 40% CC								
+41 to + 100% CC			1				1	
Total			1,131	100	732	100	1,863	100
Closed Cone Pine-Cypress								
-15 to + 15% CC (Little or No Change)	555	98	1	100	22	100	577	98
+16 to + 40% CC	11	2					11	2
+41 to + 100% CC	1						1	
Total	568	100	1	100	22	100	590	100
Douglas Fir								
-41 to -70% CC								
-15 to + 15% CC (Little or No Change)	903	99	799	100	74	100	1,776	99
+16 to + 40% CC	5	1	1				6	
+41 to + 100% CC	6	1	1				8	
Total	915	100	801	100	74	100	1,790	100
Jeffrey Pine								
-71 to -100% CC			93				93	
-41 to -70% CC			51				51	
-16 to -40% CC			26				26	
-15 to + 15% CC (Little or No Change)			20,939	99			20,939	99
+16 to + 40% CC			6				6	
+41 to + 100% CC			15				15	
Total			21,130	100			21,130	100
Lodgepole Pine								
-71 to -100% CC			63				63	
-41 to -70% CC			32				32	
-16 to -40% CC			33				33	
-15 to + 15% CC (Little or No Change)			36,380	100			36,380	100
Total			36,508	100			36,508	100
Montane Hardwood-Conifer								
-71 to -100% CC	7		23		35		65	
-41 to -70% CC	8		4		21		32	
-16 to -40% CC	10		12		15		36	
-15 to + 15% CC (Little or No Change)	6,263	99	5,190	99	8,164	99	19,617	99
+16 to + 40% CC	39	1	5		1		45	
+41 to + 100% CC	2		1				2	
Total	6,328	100	5,234	100	8,236	100	19,797	100

Table C-53 Acres of Classified Change in Mariposa County by Conifer Cover Type and Owner Class (cont.)

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Ponderosa Pine								
-71 to -100% CC	290	1	57		18		365	1
-41 to -70% CC	299	1	27		27	1	353	1
-16 to -40% CC	920	4	32		21		973	2
-15 to + 15% CC (Little or No Change)	21,689	89	23,768	99	4,055	94	49,513	94
+16 to + 40% CC	741	3	94		119	3	954	2
+41 to + 100% CC	364	1	26		57	1	447	1
Total	24,304	100	24,003	100	4,298	100	52,605	100
Red Fir								
-71 to -100% CC			208				208	
-41 to -70% CC			198				198	
-16 to -40% CC			254				254	
-15 to + 15% CC (Little or No Change)			60,220	99			60,220	99
+16 to + 40% CC			53				53	
+41 to + 100% CC			9				9	
Total			60,941	100			60,941	100
Subalpine Conifer								
-71 to -100% CC			3				3	
-41 to -70% CC			3				3	
-16 to -40% CC			4				4	
-15 to + 15% CC (Little or No Change)			9,412	100			9,412	100
Total			9,422	100			9,422	100
Sierran Mixed Conifer								
-71 to -100% CC	54		126				179	
-41 to -70% CC	56		99		1		155	
-16 to -40% CC	418	2	72		8	2	498	1
-15 to + 15% CC (Little or No Change)	19,711	93	48,292	99	346	92	68,348	97
+16 to + 40% CC	692	3	177		15	4	884	1
+41 to + 100% CC	341	2	97		9	2	446	1
Total	21,272	100	48,862	100	377	100	70,510	100
White Fir								
-71 to -100% CC			3				3	
-41 to -70% CC								
-16 to -40% CC			1				1	
-15 to + 15% CC (Little or No Change)			2,813	98			2,813	98
+16 to + 40% CC			46	2			46	2
+41 to + 100% CC			8				8	
Total			2,870	100			2,870	100
All Conifer	53,385		210,902		13,738		278,025	

Table C-54 Acres of Classified Change in Mariposa County by Hardwood Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Blue Oak-Foothill Pine								
-71 to -100% CC			24		43		66	
-41 to -70% CC			30		61		91	
-16 to -40% CC			3		17		20	
-15 to + 15% CC (Little or No Change)			6,368	99	15,399	99	21,767	99
+16 to + 40% CC			3		2		6	
+41 to + 100% CC			1				1	
Total			6,428	100	15,523	100	21,951	100
Blue Oak Woodland								
-71 to -100% CC			22		48		70	
-41 to -70% CC			11		42		53	
-16 to -40% CC			11		19		29	
-15 to + 15% CC (Little or No Change)	39	100	6,148	99	11,505	99	17,691	99
+16 to + 40% CC			1		9		10	
+41 to + 100% CC								
Total	39	100	6,192	100	11,622	100	17,853	100
Montane Hardwood								
-71 to -100% CC	5		31		22		57	
-41 to -70% CC	5		6		24		35	
-16 to -40% CC	5		23		26		53	
-15 to + 15% CC (Little or No Change)	7,545	98	12,909	100	6,664	98	27,118	99
+16 to + 40% CC	118	2	5		33		155	1
+41 to + 100% CC	4				3		7	
Total	7,681	100	12,973	100	6,771	100	27,425	100
All Hardwood	7,720		25,593		33,915		67,228	

Table C-55 Acres of Classified Change in Mariposa County by Shrub/Chaparral Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Chamise-Redshank Chaparral								
-71 to -100% CC			24	1	21	2	45	2
-41 to -70% CC			4		7	1	10	
-16 to -40% CC			315	19	227	21	542	19
-15 to + 15% CC (Little or No Change)	63	100	1,347	80	825	76	2,235	79
+16 to + 40% CC			1				1	
+41 to + 100% CC			1				1	
Total	63	100	1,691	100	1,079	100	2,833	100
Mixed Chaparral								
-71 to -100% CC	96	1	8		85	1	190	1
-41 to -70% CC	49		4		42	1	95	
-16 to -40% CC	35		123	1	99	2	256	1
-15 to + 15% CC (Little or No Change)	16,132	96	8,063	98	5,440	95	29,634	96
+16 to + 40% CC	539	3	29		53	1	621	2
+41 to + 100% CC	17				1		19	
Total	16,869	100	8,226	100	5,719	100	30,814	100

Table C-55 Acres of Classified Change in Mariposa County by Shrub/Chaparral Cover Type and Owner Class (cont.)

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Montane Chaparral								
-71 to -100% CC	1						1	
-41 to -70% CC			1				1	
-16 to -40% CC	1						1	
-15 to + 15% CC (Little or No Change)	1,719	86	3,362	99	33	82	5,113	94
+16 to + 40% CC	266	13	34	1	6	14	306	6
+41 to + 100% CC	18	1	5		2	4	25	
Total	2,005	100	3,402	100	40	100	5,447	100
Unknown Shrub/Chaparral								
-71 to -100% CC			173	1	116	1	289	1
-41 to -70% CC			60		51		110	
-16 to -40% CC			31		3		35	
-15 to + 15% CC (Little or No Change)			20,024	99	10,147	98	30,171	99
+16 to + 40% CC			4		2		5	
+41 to + 100% CC			1				1	
Total			20,292	100	10,319	100	30,611	100
All Shrub/Chaparral	18,937		33,612		17,157		69,706	

Table C-56 Acres of Classified Change in Mariposa County by Grass/Forb Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Annual Grass								
-15 to + 15% CC (Little or No Change)	4,100	99	2,007	100	12,603	100	18,710	100
Grass Decrease > 15%	3				8		11	
Grass Increase > 15%	19		3		6		28	
Total	4,122	100	2,010	100	12,617	100	18,749	100
Unknown Grass/Forb								
-15 to + 15% CC (Little or No Change)			1,988	100	30,041	100	32,029	100
Grass Decrease > 15%			6		10		16	
Total			1,994	100	30,051	100	32,045	100
Wet Meadow								
-15 to + 15% CC (Little or No Change)	13	100	230	100			242	100
Total	13	100	230	100			242	100
All Grass/Forb	4,135		4,233		42,668		51,036	

Table C-57 Acres of Verified Change in Mariposa County by Cause and Conifer Cover Type

	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified	All Causes
Unknown Conifer Type							
-71 to -100% CC	6					3	9
-41 to -70% CC	5					4	9
-16 to -40% CC	1					4	5
+16 to + 40% CC							
+41 to + 100% CC						1	1
Total	12					12	25
Closed Cone Pine-Cypress							
+16 to + 40% CC				11			11
+41 to + 100% CC				1			1
Total				12			12
Douglas Fir							
-41 to -70% CC							
+16 to + 40% CC				5		1	6
+41 to + 100% CC				6		1	8
Total				11		2	13
Jeffrey Pine							
-71 to -100% CC	92					1	93
-41 to -70% CC	50					1	51
-16 to -40% CC	22					3	26
+16 to + 40% CC				2		4	6
+41 to + 100% CC				15			15
Total	165			17		9	191
Lodgepole Pine							
-71 to -100% CC	40				11	12	63
-41 to -70% CC	29				2	1	32
-16 to -40% CC	19				12	3	33
Total	87				25	16	128
Montane Hardwood-Conifer							
-71 to -100% CC	28	2			15	20	65
-41 to -70% CC	2	4			2	25	32
-16 to -40% CC	9	3			5	18	36
+16 to + 40% CC				38		7	45
+41 to + 100% CC				2			2
Total	39	9		40	22	70	180
Ponderosa Pine							
-71 to -100% CC	61	48			93	163	365
-41 to -70% CC	27	52			115	159	353
-16 to -40% CC	165	17			400	391	973
+16 to + 40% CC				896	8	50	954
+41 to + 100% CC				430		17	447
Total	253	117		1,326	616	781	3,092

Table C-57 Acres of Verified Change in Mariposa County by Cause and Conifer Cover Type (cont.)

	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified	All Causes
Red Fir							
-71 to -100% CC	184					24	208
-41 to -70% CC	186					12	198
-16 to -40% CC	215					39	254
+16 to + 40% CC				46		7	53
+41 to + 100% CC				7		2	9
Total	585			53		84	721
Subalpine Conifer							
-71 to -100% CC	1					2	3
-41 to -70% CC	2						3
-16 to -40% CC	4						4
Total	7					2	9
Sierran Mixed Conifer							
-71 to -100% CC	118	26			1	34	179
-41 to -70% CC	97	23			5	31	155
-16 to -40% CC	224	8	5		20	241	498
+16 to + 40% CC				837	3	43	884
+41 to + 100% CC				421		25	446
Total	439	57	5	1,258	29	373	2,162
White Fir							
-71 to -100% CC	1					1	3
-41 to -70% CC							
-16 to -40% CC						1	1
+16 to + 40% CC				42		4	46
+41 to + 100% CC				7			8
Total	2			49		7	57
All Conifer	1,588	183	5	2,766	693	1,356	6,591

Table C-58 Acres of Verified Change in Mariposa County by Cause and Hardwood Cover Type

	Fire	Harvest	Regrowth	Unverified	All Causes
Blue Oak-Foothill Pine					
-71 to -100% CC	53			14	66
-41 to -70% CC	71			20	91
-16 to -40% CC	15			5	20
+16 to + 40% CC			2	4	6
+41 to + 100% CC				1	1
Total	138		2	44	184
Blue Oak Woodland					
-71 to -100% CC	64			6	70
-41 to -70% CC	43			10	53
-16 to -40% CC	24			6	29
+16 to + 40% CC				9	10
+41 to + 100% CC					
Total	130			31	162

Table C-58 Acres of Verified Change in Mariposa County by Cause and Hardwood Cover Type (cont.)

	Fire	Harvest	Regrowth	Unverified	All Causes
Montane Hardwood					
-71 to -100% CC	43	2		12	57
-41 to -70% CC	13	2		20	35
-16 to -40% CC	17	2		34	53
+16 to + 40% CC			52	104	155
+41 to + 100% CC			4	3	7
Total	72	7	56	173	307
All Hardwood	341	7	57	248	653

Table C-59 Acres of Verified Change in Mariposa County by Cause and Shrub/Chaparral Cover Type

	Fire	Harvest	Regrowth	Other	Unverified	All Causes
Chamise-Redshank Chaparral						
-71 to -100% CC	37				8	45
-41 to -70% CC	4				6	10
-16 to -40% CC	542					542
+16 to + 40% CC					1	1
+41 to + 100% CC					1	1
Total	582				17	599
Mixed Chaparral						
-71 to -100% CC	84	19		10	77	190
-41 to -70% CC	43	8		9	35	95
-16 to -40% CC	246	1		2	8	256
+16 to + 40% CC			615		6	621
+41 to + 100% CC			19			19
Total	373	28	633	20	126	1,180
Montane Chaparral						
-71 to -100% CC					1	1
-41 to -70% CC	1					1
-16 to -40% CC					1	1
+16 to + 40% CC			305		1	306
+41 to + 100% CC			24		1	25
Total	1		329		4	334
Unknown Shrub/Chaparral						
-71 to -100% CC	281				8	289
-41 to -70% CC	93				18	110
-16 to -40% CC	34				1	35
+16 to + 40% CC			5		1	5
+41 to + 100% CC			1			1
Total	407		5		27	440
All Shrub/Chaparral	1,364	28	968	20	174	2,553

Table C-60 Acres of Verified Change in Mariposa County by Cause and Grass/Forb Cover Type

	Fire	Regrowth	Unverified	All Causes
Annual Grass				
Grass Decrease > 15%			11	11
Grass Increase > 15%		24	4	28
Total		24	15	39
Unknown Grass/Forb				
Grass Decrease > 15%	8		8	16
Total	8		8	16
All Grass/Forb	8	24	22	55

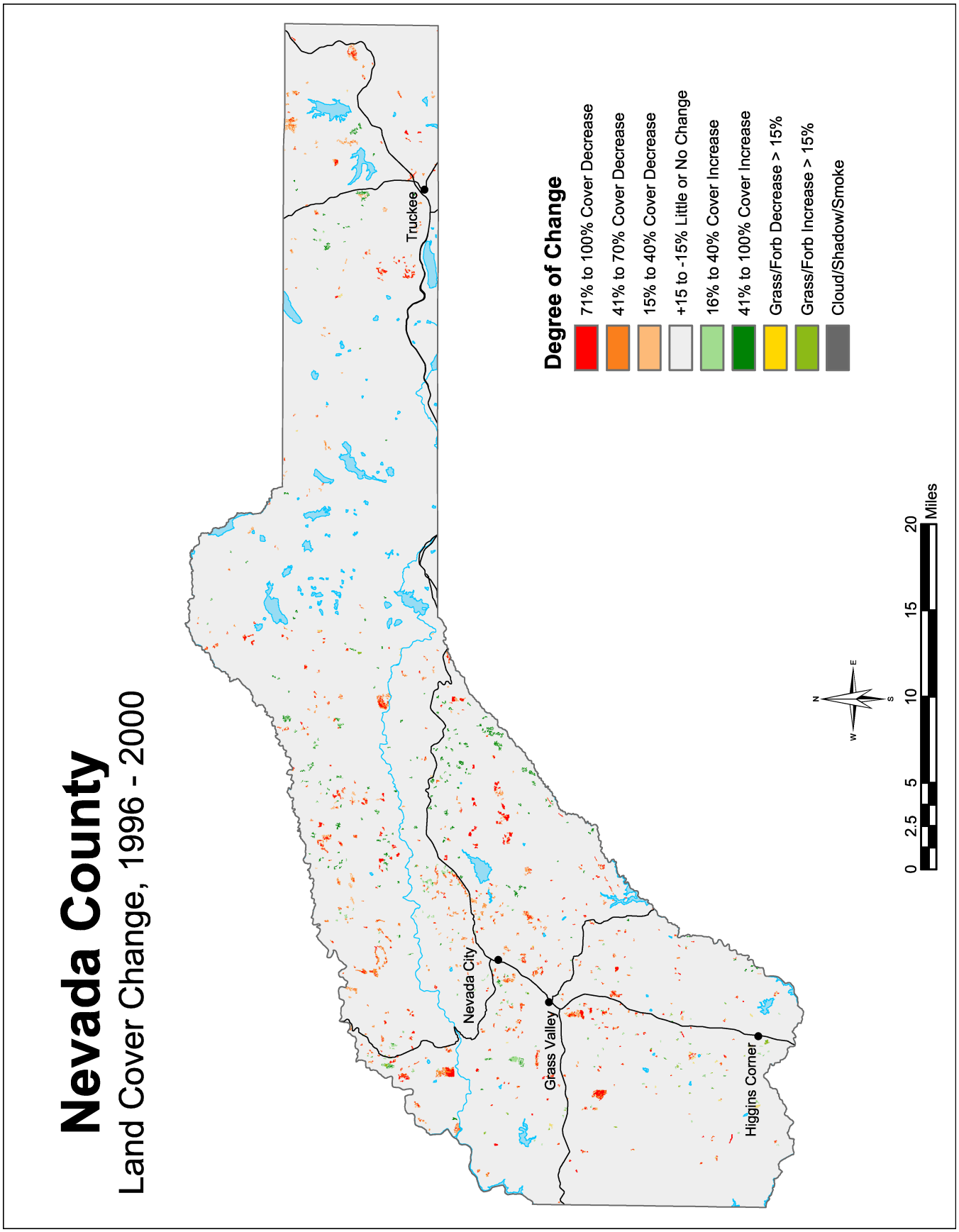

Nevada County
Land Cover Change, 1996 - 2000
Degree of Change
71% to 100% Cover Decrease
41% to 70% Cover Decrease
15% to 40% Cover Decrease
+15 to -15% Little or No Change
16% to 40% Cover Increase
41% to 100% Cover Increase
Grass/Forb Decrease > 15%
Grass/Forb Increase > 15%
Cloud/Shadow/Smoke
Truckee
Nevada City
Grass Valley
Higgins Corner
N
E
S
W
0
2.5
5
10
15
20
Miles

Table C-61 Acres of Classified Change in Nevada County by Lifeform Type and Owner Class

	Forest Service											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Forest Service Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	202		23		47						272	
-41 to -70% CC	312		17		34						363	
-16 to -40% CC	578		43	1	46						666	
-15 to + 15% CC (Little or No Change)	134,868	99	6,072	98	21,241	99	3,472	100	15,381	100	181,035	99
+16 to + 40% CC	310		8		2						319	
+41 to + 100% CC	477		40	1							517	
Grass Decrease > 15%							2		12		14	
Grass Increase > 15%									1		1	
Total	136,746	100	6,204	100	21,369	100	3,474	100	15,394	100	183,187	100

	Other Public											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Other Public Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	15		21		3						38	
-41 to -70% CC	39		37		6						82	
-16 to -40% CC	23		20		3						45	
-15 to + 15% CC (Little or No Change)	15,824	99	10,196	99	1,887	98	1,122	100	647	100	29,676	99
+16 to + 40% CC	29		5		9						43	
+41 to + 100% CC	12		15		9						36	
Grass Decrease > 15%												
Grass Increase > 15%							1				1	
Total	15,941	100	10,294	100	1,916	100	1,123	100	648	100	29,922	100

	Private											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Private Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	1,447	1	562	1	262	1					2,270	1
-41 to -70% CC	1,195	1	309		110						1,615	
-16 to -40% CC	827		133		72						1,032	
-15 to + 15% CC (Little or No Change)	198,957	98	110,689	99	24,627	98	31,012	99	9,222	100	374,507	98
+16 to + 40% CC	267		225		35						526	
+41 to + 100% CC	362		71		44						476	
Grass Decrease > 15%							194	1	43		237	
Grass Increase > 15%							102		2		103	
Total	203,055	100	111,988	100	25,149	100	31,308	100	9,267	100	380,766	100

Table C-61 Acres of Classified Change in Nevada County by Lifeform Type and Owner Class (cont.)

	All Owners											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		All Owners Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	1,663		606		311	1					2,580	
-41 to -70% CC	1,546		364		150						2,060	
-16 to -40% CC	1,428		195		120						1,743	
-15 to + 15% CC (Little or No Change)	349,650	98	126,957	99	47,755	99	35,606	99	25,251	100	585,218	99
+16 to + 40% CC	605		238		45						888	
+41 to + 100% CC	851		126		53						1,029	
Grass Decrease > 15%							196	1	55		251	
Grass Increase > 15%							102		2		105	
Total	355,742	100	128,486	100	48,435	100	35,904	100	25,309	100	593,875	100

Table C-62 Acres of Verified Change in Nevada County by Cause and Lifeform

	Fire	Harvest	Regrowth	Other	Unverified	All Causes
Conifer						
-71 to -100% CC	140	629		35	860	1,663
-41 to -70% CC	134	382		9	1,021	1,546
-16 to -40% CC	86	550		42	750	1,428
+16 to + 40% CC			317		288	605
+41 to + 100% CC			417		434	851
Total	359	1,561	734	86	3,352	6,092
Hardwood						
-71 to -100% CC	107	9			490	606
-41 to -70% CC	132	4			228	364
-16 to -40% CC	48	6			142	195
+16 to + 40% CC			86		152	238
+41 to + 100% CC			60		66	126
Total	287	18	146		1,077	1,528
Shrub/Chaparral						
-71 to -100% CC	24	10		34	244	311
-41 to -70% CC	16	5		4	126	150
-16 to -40% CC	37	3		4	77	120
+16 to + 40% CC			9		36	45
+41 to + 100% CC			8		45	53
Total	77	17	17	41	527	680
Grass/Forb						
Grass Decrease > 15%	10			13	173	196
Grass Increase > 15%					102	102
Total	10			13	275	298
Barren						
Grass Decrease > 15%	1	8		4	43	55
Grass Increase > 15%					2	2
Total	1	8		4	45	58
All Lifeforms	735	1,605	897	144	5,277	8,656

Table C-63 Acres of Classified Change in Nevada County by Conifer Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Closed Cone Pine-Cypress								
-71 to -100% CC								
-41 to -70% CC								
-15 to + 15% CC (Little or No Change)	31	100	1	100	142	99	174	99
+16 to + 40% CC					1	1	1	1
+41 to + 100% CC								
Total	31	100	1	100	144	100	176	100
Douglas Fir								
-71 to -100% CC	32		3		212	1	247	1
-41 to -70% CC	33		10		259	1	302	1
-16 to -40% CC	16		4		185	1	206	
-15 to + 15% CC (Little or No Change)	11,838	99	5,658	100	27,412	97	44,908	98
+16 to + 40% CC	21		3		37		61	
+41 to + 100% CC	20				71		91	
Total	11,960	100	5,678	100	28,176	100	45,814	100
Eastside Pine								
-71 to -100% CC	34				46		80	
-41 to -70% CC	93	1			26		119	
-16 to -40% CC	300	2	2		42		344	1
-15 to + 15% CC (Little or No Change)	16,794	97	481	99	11,764	99	29,038	98
+16 to + 40% CC	29		1				30	
+41 to + 100% CC	73		4	1			76	
Total	17,322	100	487	100	11,877	100	29,687	100
Jeffrey Pine								
-71 to -100% CC	1						1	
-16 to -40% CC	1						1	
-15 to + 15% CC (Little or No Change)	753	100		100	450	100	1,203	100
Total	755	100		100	450	100	1,205	100
Juniper								
-15 to + 15% CC (Little or No Change)					7	100	7	100
Total					7	100	7	100
Lodgepole Pine								
-71 to -100% CC	2						2	
-41 to -70% CC	1						1	
-16 to -40% CC	2						2	
-15 to + 15% CC (Little or No Change)	1,755	100	195	100	2,991	100	4,941	100
Total	1,760	100	195	100	2,991	100	4,946	100
Montane Hardwood-Conifer								
-71 to -100% CC	3		3		197	1	202	1
-41 to -70% CC	3		6		145	1	155	1
-16 to -40% CC	4		2		43		49	
-15 to + 15% CC (Little or No Change)	3,165	97	2,065	99	24,586	98	29,816	98
+16 to + 40% CC	36	1	13	1	76		124	
+41 to + 100% CC	64	2	1		60		126	
Total	3,275	100	2,090	100	25,107	100	30,472	100

Table C-63 Acres of Classified Change in Nevada County by Conifer Cover Type and Owner Class (cont.)

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Ponderosa Pine								
-71 to -100% CC	5		8		351	1	365	1
-41 to -70% CC	21	1	23		477	1	521	1
-16 to -40% CC	30	1	16		203	1	249	1
-15 to + 15% CC (Little or No Change)	1,943	95	5,718	99	35,261	97	42,921	97
+16 to + 40% CC	11	1	12		74		97	
+41 to + 100% CC	26	1	7		23		56	
Total	2,036	100	5,783	100	36,389	100	44,208	100
Red Fir								
-71 to -100% CC	1				4		5	
-41 to -70% CC	9				7		16	
-16 to -40% CC	13				10		23	
-15 to + 15% CC (Little or No Change)	21,110	100	41	100	16,692	100	37,843	100
+16 to + 40% CC	1				3		4	
+41 to + 100% CC	6				12		19	
Total	21,140	100	41	100	16,728	100	37,909	100
Subalpine Conifer								
-71 to -100% CC					1		1	
-41 to -70% CC					5	1	5	
-16 to -40% CC					4	1	4	
-15 to + 15% CC (Little or No Change)	1,987	100			615	98	2,602	100
+16 to + 40% CC								
+41 to + 100% CC					1		1	
Total	1,987	100			626	100	2,612	100
Sierran Mixed Conifer								
-71 to -100% CC	115				593	1	708	
-41 to -70% CC	149				266		415	
-16 to -40% CC	204				329		533	
-15 to + 15% CC (Little or No Change)	70,298	99	1,664	100	73,354	98	145,316	98
+16 to + 40% CC	203				76		280	
+41 to + 100% CC	271				194		465	
Total	71,239	100	1,664	100	74,813	100	147,716	100
White Fir								
-71 to -100% CC	10				43	1	53	
-41 to -70% CC	3				10		13	
-16 to -40% CC	6				11		17	
-15 to + 15% CC (Little or No Change)	5,197	99	1	100	5,684	99	10,881	99
+16 to + 40% CC	9						9	
+41 to + 100% CC	16				1		17	
Total	5,241	100	1	100	5,748	100	10,990	100
All Conifer	135,991		15,941		202,605	1,100	354,537	

Table C-64 Acres of Classified Change in Nevada County by Hardwood Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Aspen								
-41 to -70% CC					1	3	1	3
-16 to -40% CC					2	7	2	7
-15 to + 15% CC (Little or No Change)	1	100			26	90	28	90
Total	1	100	0	0	29	100	30	100
Blue Oak-Foothill Pine								
-41 to -70% CC					4		5	
-16 to -40% CC					3		3	
-15 to + 15% CC (Little or No Change)	172	100	520	100	3,690	100	4,381	100
+16 to + 40% CC					6		6	
+41 to + 100% CC								
Total	172	100	520	100	3,702	100	4,395	100
Blue Oak Woodland								
-71 to -100% CC			1		55		56	
-41 to -70% CC					48		48	
-16 to -40% CC					8		8	
-15 to + 15% CC (Little or No Change)			2,323	100	27,715	99	30,038	100
+16 to + 40% CC					32		32	
+41 to + 100% CC					6		6	
Total			2,325	100	27,863	100	30,188	100
Coastal Oak Woodland								
-71 to -100% CC		1						
-41 to -70% CC	1	4				1	2	2
-16 to -40% CC		1						
-15 to + 15% CC (Little or No Change)	32	94			56	99	89	97
Total	34	100			57	100	91	100
Montane Hardwood								
-71 to -100% CC	16		18		488	1	522	1
-41 to -70% CC	13		36		241		290	
-16 to -40% CC	28	1	19		94		142	
-15 to + 15% CC (Little or No Change)	5,144	98	7,276	99	76,489	99	88,909	99
+16 to + 40% CC	8		5		178		191	
+41 to + 100% CC	39	1	15		63		117	
Total	5,247	100	7,369	100	77,553	100	90,169	100
Montane Riparian								
-71 to -100% CC	7	1	1	2	4		12	1
-41 to -70% CC	3		1	1	4	1	8	
-16 to -40% CC	14	2			25	3	39	2
-15 to + 15% CC (Little or No Change)	723	97	64	97	759	96	1,546	96
+16 to + 40% CC								
+41 to + 100% CC	2						2	
Total	749	100	66	100	792	100	1,607	100

Table C-64 Acres of Classified Change in Nevada County by Hardwood Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Valley Oak Woodland								
-71 to -100% CC					14	1	14	1
-41 to -70% CC					11	1	11	1
-16 to -40% CC					1		1	
-15 to + 15% CC (Little or No Change)			14	100	1,954	98	1,968	98
+16 to + 40% CC					8		8	
+41 to + 100% CC					1		1	
Total			14	100	1,990	100	2,004	100
All Hardwood	6,204		10,293		111,987		128,484	

Table C-65 Acres of Classified Change in Nevada County by Shrub/Chaparral Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Bitterbrush								
-71 to -100% CC								
-41 to -70% CC	1	1					2	
-16 to -40% CC								
-15 to + 15% CC (Little or No Change)	195	99	63	100	795	100	1,053	100
Total	196	100	63	100	796	100	1,055	100
Mixed Chaparral								
-71 to -100% CC			2		99	1	100	1
-41 to -70% CC			4		55	1	59	1
-16 to -40% CC			2		22		24	
-15 to + 15% CC (Little or No Change)	290	100	1,427	98	7,128	97	8,845	97
+16 to + 40% CC			9	1	34		43	
+41 to + 100% CC			9	1	42	1	51	1
Total	290	100	1,452	100	7,379	100	9,121	100
Montane Chaparral								
-71 to -100% CC	22				127	1	149	1
-41 to -70% CC	13				41		54	
-16 to -40% CC	9				48		57	
-15 to + 15% CC (Little or No Change)	15,320	100	93	100	11,362	98	26,775	99
+16 to + 40% CC	1				1		2	
+41 to + 100% CC					2		2	
Total	15,366	100	93	100	11,580	100	27,039	100
Sagebrush								
-71 to -100% CC	24		2	1	36	1	62	1
-41 to -70% CC	19		2	1	15		36	
-16 to -40% CC	36	1	1		2		39	
-15 to + 15% CC (Little or No Change)	5,437	99	304	99	5,342	99	11,082	99
Total	5,516	100	308	100	5,395	100	11,219	100
All Shrub/Chaparral	21,369		1,916		25,149		48,435	

Table C-66 Acres of Classified Change in Nevada County by Grass/Forb Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Annual Grass								
-15 to + 15% CC (Little or No Change)	1,497	100	1,102	100	29,413	99	32,012	99
Grass Decrease > 15%					188	1	188	1
Grass Increase > 15%			1		102		102	
Total	1,497	100	1,102	100	29,703	100	32,301	100
Freshwater Emergen Wetland								
-15 to + 15% CC (Little or No Change)					29	100	29	100
Total					29	100	29	100
Wet Meadow								
-15 to + 15% CC (Little or No Change)	1,975	100	21	100	1,570	100	3,566	100
Grass Decrease > 15%	2				7		8	
Total	1,977	100	21	100	1,577	100	3,574	100
All Grass/Forb	3,474		1,123		31,308		35,904	

Table C-67 Acres of Verified Change in Nevada County by Cause and Conifer Cover Type

	Fire	Harvest	Regrowth	Other	Unverified	All Causes
Closed Cone Pine-Cypress						
-71 to -100% CC						
-41 to -70% CC						
+16 to + 40% CC					1	1
+41 to + 100% CC						
Total					2	2
Douglas Fir						
-71 to -100% CC	33	43			171	247
-41 to -70% CC	47	17			238	302
-16 to -40% CC	13	12			181	206
+16 to + 40% CC			21		40	61
+41 to + 100% CC			17		75	91
Total	93	72	38		704	906
Eastside Pine						
-71 to -100% CC	12	36		22	9	80
-41 to -70% CC	3	93		2	22	119
-16 to -40% CC	45	192		26	81	344
+16 to + 40% CC			29		1	30
+41 to + 100% CC			71		5	76
Total	60	321	100	50	118	648
Jeffrey Pine						
-71 to -100% CC					1	1
-16 to -40% CC					1	1
Total					2	2
Lodgepole Pine						
-71 to -100% CC				2		2
-41 to -70% CC					1	1
-16 to -40% CC				2		2
Total				4	1	5

Table C-67 Acres of Verified Change in Nevada County by Cause and Conifer Cover Type (cont.)

	Fire	Harvest	Regrowth	Other	Unverified	All Causes
Montane Hardwood-Conifer						
-71 to -100% CC	18	27		1	157	202
-41 to -70% CC	45	6		1	103	155
-16 to -40% CC	3	6		3	36	49
+16 to + 40% CC			45		79	124
+41 to + 100% CC			52		73	126
Total	66	39	97	5	448	655
Ponderosa Pine						
-71 to -100% CC	23	7			335	365
-41 to -70% CC	12	22			487	521
-16 to -40% CC	2	35			213	249
+16 to + 40% CC			15		82	97
+41 to + 100% CC			9		46	56
Total	36	64	24		1,163	1,287
Red Fir						
-71 to -100% CC		2			3	5
-41 to -70% CC		11			4	16
-16 to -40% CC		11			12	23
+16 to + 40% CC					3	4
+41 to + 100% CC					19	19
Total	0	25	0	0	41	66
Subalpine Conifer						
-71 to -100% CC					1	1
-41 to -70% CC					5	5
-16 to -40% CC					4	4
+16 to + 40% CC						
+41 to + 100% CC					1	1
Total					11	11
Sierran Mixed Conifer						
-71 to -100% CC	54	494		3	157	708
-41 to -70% CC	28	227		6	155	415
-16 to -40% CC	23	289		10	211	533
+16 to + 40% CC			199		80	280
+41 to + 100% CC			251		214	465
Total	105	1,010	450	20	817	2,401
White Fir						
-71 to -100% CC		19		6	27	53
-41 to -70% CC		6			7	13
-16 to -40% CC		5		1	11	17
+16 to + 40% CC			9		1	9
+41 to + 100% CC			16		1	17
Total		30	25	7	46	109
All Conifer	359	1,561	734	86	3,352	6,092

Table C-68 Acres of Verified Change in Nevada County by Cause and Hardwood Cover Type

	Fire	Harvest	Regrowth	Unverified	All Causes
Aspen					
-41 to -70% CC				1	1
-16 to -40% CC				2	2
Total				3	3
Blue Oak-Foothill Pine					
-71 to -100% CC				2	2
-41 to -70% CC				4	5
-16 to -40% CC				3	3
+16 to + 40% CC				6	6
+41 to + 100% CC					
Total	1			15	16
Blue Oak Woodland					
-71 to -100% CC	9			47	56
-41 to -70% CC	15			33	48
-16 to -40% CC	1			7	8
+16 to + 40% CC			9	24	32
+41 to + 100% CC			4	2	6
Total	26		13	112	150
Coastal Oak Woodland					
-71 to -100% CC					
-41 to -70% CC		1			2
-16 to -40% CC					
Total		2			2
Montane Hardwood					
-71 to -100% CC	98	7		417	522
-41 to -70% CC	116	2		171	290
-16 to -40% CC	47	5		90	142
+16 to + 40% CC			77	113	191
+41 to + 100% CC			56	61	117
Total	261	14	133	852	1,260
Montane Riparian					
-71 to -100% CC		2		10	12
-41 to -70% CC		1		7	8
-16 to -40% CC				39	39
+16 to + 40% CC					
+41 to + 100% CC				2	2
Total		2		59	61
Valley Oak Woodland					
-71 to -100% CC				14	14
-41 to -70% CC				11	11
-16 to -40% CC				1	1
+16 to + 40% CC				8	8
+41 to + 100% CC				1	1
Total				36	36
All Hardwood	287	18	146	1,077	1,528

Table C-69 Acres of Verified Change in Nevada County by Cause and Shrub/Chaparral Cover Type

	Fire	Harvest	Regrowth	Other	Unverified	All Causes
Bitterbrush						
-41 to -70% CC					2	2
Total					2	2
Mixed Chaparral						
-71 to -100% CC	1	2			98	100
-41 to -70% CC	4	2			52	59
-16 to -40% CC	2				22	24
+16 to + 40% CC			8		35	43
+41 to + 100% CC			7		44	51
Total	7	3	15		251	277
Montane Chaparral						
-71 to -100% CC	1	8		17	123	149
-41 to -70% CC	1	2		3	48	54
-16 to -40% CC	2	3		3	49	57
+16 to + 40% CC			1		1	2
+41 to + 100% CC					2	2
Total	3	13	2	23	223	264
Sagebrush						
-71 to -100% CC	22			17	23	62
-41 to -70% CC	11	1		1	24	36
-16 to -40% CC	34				5	39
Total	67	1		18	51	137
All Shrub/Chaparral	77	17	17	41	527	680

Table C-70 Acres of Verified Change in Nevada County by Cause and Grass/Forb Cover Type

	Fire	Other	Unverified	All Causes
Annual Grass				
Grass Decrease > 15%	10	7	171	188
Grass Increase > 15%			102	102
Total	10	7	272	290
Wet Meadow				
Grass Decrease > 15%		6	2	8
Total		6	2	8
All Grass/Forb	10	13	275	298

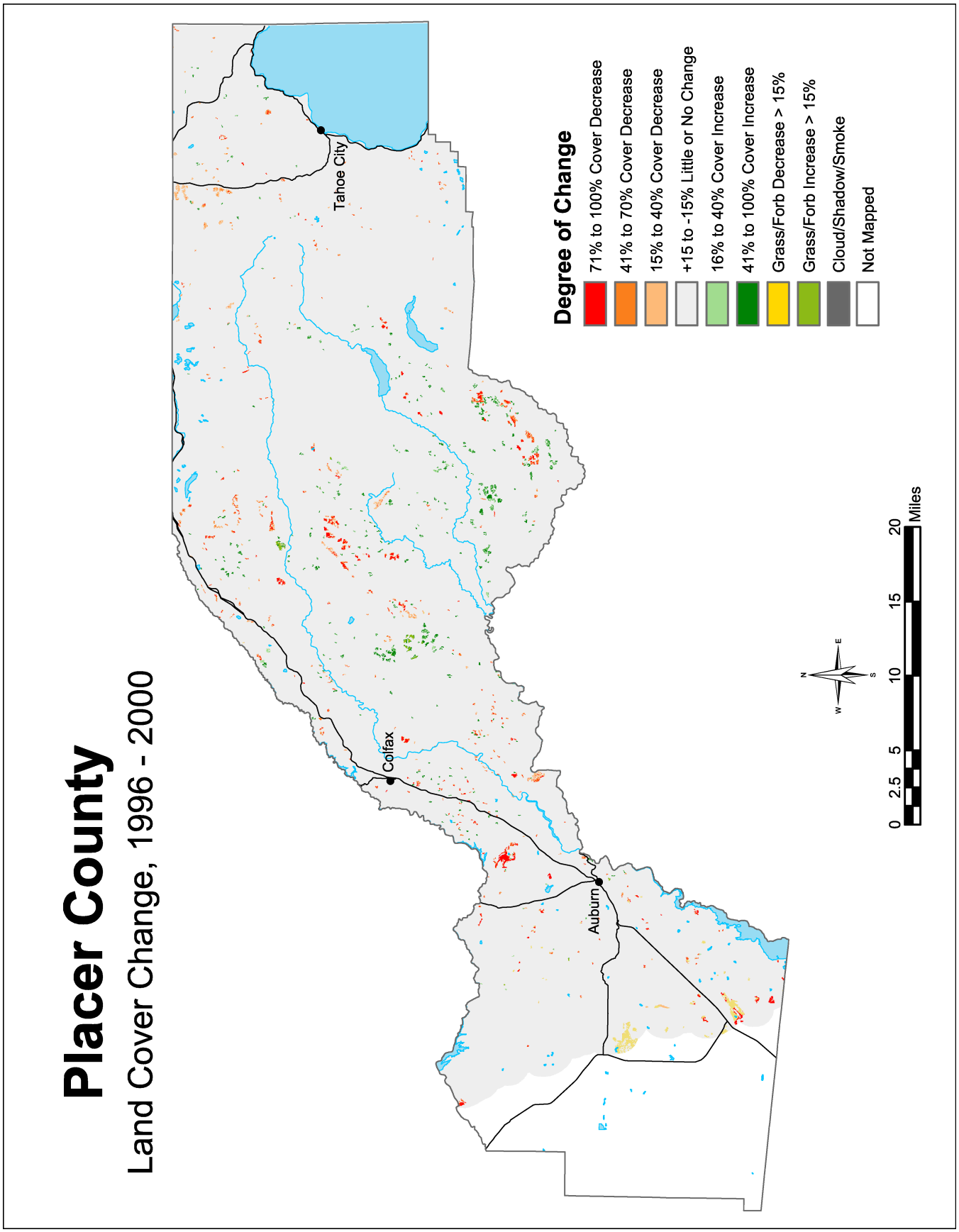

Placer County
Land Cover Change, 1996 - 2000
Tahoe City
Colfax
Auburn
Degree of Change
71% to 100% Cover Decrease
41% to 70% Cover Decrease
15% to 40% Cover Decrease
+15 to -15% Little or No Change
16% to 40% Cover Increase
41% to 100% Cover Increase
Grass/Forb Decrease > 15%
Grass/Forb Increase > 15%
Cloud/Shadow/Smoke
Not Mapped
N
E
S
W
0 2.5 5 10 15 20
Miles

Table C-71 Acres of Classified Change in Placer County by Lifeform Type and Owner Class

	Forest Service											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Forest Service Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	541		30		34						606	
-41 to -70% CC	453		8		44						505	
-16 to -40% CC	837		41		40						918	
-15 to + 15% CC (Little or No Change)	252,252	99	32,531	100	36,300	100	1,882	100	10,491	99	333,456	99
+16 to + 40% CC	312		6		3						321	
+41 to + 100% CC	771		47		9						827	
Grass Decrease > 15%							1		8		9	
Grass Increase > 15%									79	1	79	
Total	255,166	100	32,663	100	36,431	100	1,883	100	10,579	100	336,722	100

	Other Public											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Other Public Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	23		32		4						59	
-41 to -70% CC	33		27		6						65	
-16 to -40% CC	73		80	1	2						155	
-15 to + 15% CC (Little or No Change)	21,569	99	14,421	99	3,677	100	785	99	351	100	40,803	99
+16 to + 40% CC	1		2								3	
+41 to + 100% CC	13		41		3						57	
Grass Decrease > 15%							1				1	
Grass Increase > 15%							6	1			6	
Total	21,713	100	14,602	100	3,692	100	791	100	351	100	41,150	100

	Private											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Private Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	872		632	1	87						1,591	
-41 to -70% CC	305		147		60						512	
-16 to -40% CC	435		138		20						593	
-15 to + 15% CC (Little or No Change)	175,039	98	110,065	99	24,507	99	43,190	100	6,960	98	359,761	99
+16 to + 40% CC	312		33		25						370	
+41 to + 100% CC	747		138		85						969	
Grass Decrease > 15%							192		13		205	
Grass Increase > 15%							11		138	2	149	
Total	177,710	100	111,152	100	24,784	100	43,393	100	7,112	100	364,152	100

Table C-71 Acres of Classified Change in Placer County by Lifeform Type and Owner Class (cont.)

	All Owners											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		All Owners Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	1,437		694		125						2,256	
-41 to -70% CC	792		181		110						1,083	
-16 to -40% CC	1,344		259		62						1,666	
-15 to + 15% CC (Little or No Change)	448,860	99	157,017	99	64,485	99	45,857	100	17,802	99	734,021	99
+16 to + 40% CC	625		41		28						694	
+41 to + 100% CC	1,531		225		97						1,853	
Grass Decrease > 15%							194		22		216	
Grass Increase > 15%							17		217	1	235	
Total	454,588	100	158,418	100	64,908	100	46,068	100	18,041	100	742,023	100

Table C-72 Acres of Verified Change in Placer County by Cause and Lifeform

	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified	All Causes
Conifer							
-71 to -100% CC	25	526	12		74	800	1,437
-41 to -70% CC	47	344	11		39	351	792
-16 to -40% CC	70	499	7		22	747	1,344
+16 to + 40% CC				261		364	625
+41 to + 100% CC				641		890	1,531
Total	142	1,369	30	902	134	3,152	5,729
Hardwood							0
-71 to -100% CC	9	3	80			603	694
-41 to -70% CC	3	1	6			171	181
-16 to -40% CC	52	1	3			203	259
+16 to + 40% CC				4		37	41
+41 to + 100% CC				19		206	225
Total	63	5	90	23	0	1,219	1,400
Shrub/Chaparral							0
-71 to -100% CC	1	2	1		0	121	125
-41 to -70% CC	1	2	2			106	110
-16 to -40% CC	2	2				59	62
+16 to + 40% CC				3		25	28
+41 to + 100% CC				48		49	97
Total	4	6	3	51	0	359	423
Grass/Forb							0
Grass Decrease > 15%			63			131	194
Grass Increase > 15%						17	17
Total	0	0	63	0	0	148	211
Barren							0
Grass Decrease > 15%		0	1			20	22
Grass Increase > 15%				79		139	217
Total	0	0	1	79	0	159	239
All Lifeforms	209	1,379	187	1,055	134	5,037	8,002

Table C-73 Acres of Classified Change in Placer County by Conifer Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Closed Cone Pine-Cypress								
-15 to + 15% CC (Little or No Change)	618	100	3	100	41	100	662	100
Total	618	100	3	100	41	100	662	100
Douglas Fir								
-71 to -100% CC			9		81		91	
-41 to -70% CC	3		21		50		73	
-16 to -40% CC	2		5		36		43	
-15 to + 15% CC (Little or No Change)	17,976	99	6,281	99	24,138	99	48,394	99
+16 to + 40% CC	29				28		57	
+41 to + 100% CC	60		3		40		102	
Total	18,069	100	6,319	100	24,372	100	48,760	100
Eastside Pine								
-71 to -100% CC							1	
-41 to -70% CC	1				2		3	
-16 to -40% CC	63	6			12		75	2
-15 to + 15% CC (Little or No Change)	926	94	35	100	2,693	99	3,654	98
Total	990	100	35	100	2,707	100	3,732	100
Jeffrey Pine								
-71 to -100% CC			1		13		15	
-41 to -70% CC			4	1	2		7	
-16 to -40% CC					1		1	
-15 to + 15% CC (Little or No Change)	2,535	100	358	98	4,434	100	7,327	100
+16 to + 40% CC	1						1	
+41 to + 100% CC	1						1	
Total	2,537	100	364	100	4,451	100	7,352	100
Juniper								
-15 to + 15% CC (Little or No Change)					5	100	5	100
Total					5	100	5	100
Lodgepole Pine								
-71 to -100% CC	2				5		8	
-41 to -70% CC	5				5		11	
-16 to -40% CC	10				13		23	
-15 to + 15% CC (Little or No Change)	4,552	100	123	100	2,789	99	7,463	99
+16 to + 40% CC					1		1	
+41 to + 100% CC					1		1	
Total	4,570	100	123	100	2,814	100	7,506	100
Montane Hardwood-Conifer								
-71 to -100% CC	15		8		327	1	350	1
-41 to -70% CC	8		6		64		78	
-16 to -40% CC	29		61	1	108		198	
-15 to + 15% CC (Little or No Change)	22,097	99	7,038	99	30,824	98	59,959	99
+16 to + 40% CC	8				9		17	
+41 to + 100% CC	143	1	9		69		221	
Total	22,301	100	7,123	100	31,400	100	60,824	100

Table C-73 Acres of Classified Change in Placer County by Conifer Cover Type and Owner Class (cont.)

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Ponderosa Pine								
-71 to -100% CC	32		4		53		89	
-41 to -70% CC	15		2		26		43	
-16 to -40% CC	119	1	7		32		158	
-15 to + 15% CC (Little or No Change)	12,793	98	4,127	100	16,590	98	33,510	98
+16 to + 40% CC	37				62		99	
+41 to + 100% CC	53		1		167	1	221	1
Total	13,049	100	4,141	100	16,930	100	34,120	100
Red Fir								
-71 to -100% CC	7				7		14	
-41 to -70% CC	19				17		36	
-16 to -40% CC	21				37		58	
-15 to + 15% CC (Little or No Change)	32,544	100	183	100	15,654	100	48,381	100
+16 to + 40% CC	3				7		10	
+41 to + 100% CC	3				7		10	
Total	32,596	100	183	100	15,729	100	48,508	100
Subalpine Conifer								
-71 to -100% CC					3	1	3	
-41 to -70% CC					2		2	
-16 to -40% CC					2		2	
-15 to + 15% CC (Little or No Change)	741	100			611	99	1,352	100
Total	741	100			617	100	1,358	100
Sierran Mixed Conifer								
-71 to -100% CC	335				328	1	662	
-41 to -70% CC	336				124		459	
-16 to -40% CC	557				184		741	
-15 to + 15% CC (Little or No Change)	137,456	99	2,918	100	62,897	98	203,271	98
+16 to + 40% CC	203				189		392	
+41 to + 100% CC	443				415	1	858	
Total	139,328	100	2,918	100	64,136	100	206,383	100
White Fir								
-71 to -100% CC	150	1			55		205	1
-41 to -70% CC	67				13		80	
-16 to -40% CC	35				10		46	
-15 to + 15% CC (Little or No Change)	20,015	98	504	100	14,364	99	34,882	99
+16 to + 40% CC	31				18		49	
+41 to + 100% CC	69				48		117	
Total	20,366	100	504	100	14,508	100	35,379	100
All Conifer	255,166		21,713		177,710		454,588	

Table C-74 Acres of Classified Change in Placer County by Hardwood Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Aspen								
-71 to -100% CC	1	1					1	
-16 to -40% CC	3	1			2	2	5	1
-15 to + 15% CC (Little or No Change)	241	98		100	83	98	324	98
Total	245	100		100	84	100	330	100
Blue Oak-Foothill Pine								
-71 to -100% CC			6	1	1		7	
-41 to -70% CC			2		1		3	
-16 to -40% CC			4	1			4	
-15 to + 15% CC (Little or No Change)	346	100	561	97	694	100	1,601	99
+16 to + 40% CC			1				1	
+41 to + 100% CC			5	1			6	
Total	346	100	579	100	697	100	1,621	100
Blue Oak Woodland								
-71 to -100% CC			1		255		256	
-41 to -70% CC					70		70	
-16 to -40% CC			3	1	63		66	
-15 to + 15% CC (Little or No Change)			396	99	61,419	99	61,815	99
+16 to + 40% CC					15		15	
+41 to + 100% CC					23		23	
Total			400	100	61,846	100	62,245	100
Montane Hardwood								
-71 to -100% CC	15		25		364	1	404	
-41 to -70% CC	5		24		70		99	
-16 to -40% CC	11		74	1	63		148	
-15 to + 15% CC (Little or No Change)	29,803	100	13,429	99	46,620	99	89,851	99
+16 to + 40% CC	6		1		17		24	
+41 to + 100% CC	47		35		114		196	
Total	29,886	100	13,589	100	47,248	100	90,722	100
Montane Riparian								
-71 to -100% CC	14	1			12	1	26	1
-41 to -70% CC	3				6	1	9	
-16 to -40% CC	28	1			10	1	37	1
-15 to + 15% CC (Little or No Change)	2,141	98	36	100	990	97	3,167	98
+16 to + 40% CC								
+41 to + 100% CC					1		1	
Total	2,186	100	36	100	1,019	100	3,240	100
Valley Oak Woodland								
-15 to + 15% CC (Little or No Change)					259	100	259	100
Total					259	100	259	100
All Hardwood	32,663		14,602		111,152		158,418	

Table C-75 Acres of Classified Change in Placer County by Shrub/Chaparral Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Alpine Dwarf Shrub								
-15 to + 15% CC (Little or No Change)	678	100		100	83	100	761	100
Total	678	100		100	83	100	761	100
Bitterbrush								
-15 to + 15% CC (Little or No Change)					174	100	174	100
Total					174	100	174	100
Mixed Chaparral								
-71 to -100% CC			4		38	1	42	
-41 to -70% CC			6		30		35	
-16 to -40% CC			2		6		7	
-15 to + 15% CC (Little or No Change)	3,107	100	3,219	100	5,932	98	12,258	99
+16 to + 40% CC					23		23	
+41 to + 100% CC			3		55	1	59	
Total	3,108	100	3,234	100	6,083	100	12,424	100
Montane Chaparral								
-71 to -100% CC	34				47		81	
-41 to -70% CC	44				29		73	
-16 to -40% CC	40				15		55	
-15 to + 15% CC (Little or No Change)	32,497	100	455	100	17,092	99	50,044	99
+16 to + 40% CC	3				2		6	
+41 to + 100% CC	9				30		39	
Total	32,628	100	455	100	17,214	100	50,297	100
Sagebrush								
-71 to -100% CC					2		2	
-41 to -70% CC					2		2	
-16 to -40% CC								
-15 to + 15% CC (Little or No Change)	18	100	3	100	1,227	100	1,248	100
Total	18	100	3	100	1,231	100	1,252	100
All Shrub/Chaparral	36,431		3,692		24,784		64,908	

Table C-76 Acres of Classified Change in Placer County by Shrub/Chaparral Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Annual Grass								
-15 to + 15% CC (Little or No Change)	454	100	726	99	41,510	100	42,690	100
Grass Decrease > 15%			1		192		193	
Grass Increase > 15%			6	1	11		17	
Total	454	100	733	100	41,712	100	42,899	100
Wet Meadow								
-15 to + 15% CC (Little or No Change)	1,428	100	59	100	1,681	100	3,167	100
Grass Decrease > 15%	1						1	
Grass Increase > 15%								
Total	1,429	100	59	100	1,681	100	3,169	100
All Grass/Forb	1,883		791		43,393		46,068	

Table C-77 Acres of Verified Change in Placer County by Cause and Conifer Cover Type

	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified	All Causes
Douglas Fir							
-71 to -100% CC	8					82	91
-41 to -70% CC	20	2				52	73
-16 to -40% CC	4	2				37	43
+16 to + 40% CC				24		33	57
+41 to + 100% CC				39		63	102
Total	32	4		63		267	366
Eastside Pine							
-71 to -100% CC						1	1
-41 to -70% CC						3	3
-16 to -40% CC						75	75
Total						78	78
Jeffrey Pine							
-71 to -100% CC		12				3	15
-41 to -70% CC		1				6	7
-16 to -40% CC						1	1
+16 to + 40% CC						1	1
+41 to + 100% CC						1	1
Total		14				11	25
Lodgepole Pine							
-71 to -100% CC			1			6	8
-41 to -70% CC		1	1			9	11
-16 to -40% CC		7	1			16	23
+16 to + 40% CC						1	1
+41 to + 100% CC						1	1
Total		8	2			33	43
Montane Hardwood-Conifer							
-71 to -100% CC	6	64			3	278	350
-41 to -70% CC	2	8				67	78
-16 to -40% CC	52	25	1			120	198
+16 to + 40% CC				5		13	17
+41 to + 100% CC				101		120	221
Total	59	97	1	106	3	598	865
Ponderosa Pine							
-71 to -100% CC	1	26			5	57	89
-41 to -70% CC	1	14			1	28	43
-16 to -40% CC	6	109				43	158
+16 to + 40% CC				35		65	99
+41 to + 100% CC				47		174	221
Total	8	149		82	5	367	611

Table C-77 Acres of Verified Change in Placer County by Cause and Conifer Cover Type (cont.)

	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified	All Causes
Red Fir							
-71 to -100% CC	5	1	5			4	14
-41 to -70% CC	11	2	9			14	36
-16 to -40% CC	3	2	3			50	58
+16 to + 40% CC				1		9	10
+41 to + 100% CC				2		8	10
Total	19	4	16	3		85	127
Subalpine Conifer							
-71 to -100% CC			3				3
-41 to -70% CC						1	2
-16 to -40% CC			1			1	2
Total			4			2	7
Sierran Mixed Conifer							
-71 to -100% CC	5	261	1		66	329	662
-41 to -70% CC	13	261	1		38	147	459
-16 to -40% CC	6	318	1		21	393	741
+16 to + 40% CC				173		219	392
+41 to + 100% CC				404		454	858
Total	25	840	3	577	126	1,542	3,112
White Fir							
-71 to -100% CC		162	2			40	205
-41 to -70% CC		55				25	80
-16 to -40% CC		35				10	46
+16 to + 40% CC				24		25	49
+41 to + 100% CC				47		70	117
Total		252	2	71		171	496
All Conifer	142	1,369	30	902	134	3,152	5,729

Table C-78 Acres of Verified Change in Placer County by Cause and Hardwood Cover Type

	Fire	Harvest	Develop-ment	Regrowth	Unverified	All Causes
Aspen						
-71 to -100% CC					1	1
-16 to -40% CC					5	5
Total					6	6
Blue Oak-Foothill Pine						
-71 to -100% CC					7	7
-41 to -70% CC					3	3
-16 to -40% CC					4	4
+16 to + 40% CC					1	1
+41 to + 100% CC					6	6
Total					20	20
Blue Oak Woodland						
-71 to -100% CC			79		177	256
-41 to -70% CC			6		64	70
-16 to -40% CC	2		3		60	66
+16 to + 40% CC					15	15
+41 to + 100% CC					23	23
Total	3		88		339	430
Montane Hardwood						
-71 to -100% CC	8	3	1		391	404
-41 to -70% CC	3	1			96	99
-16 to -40% CC	49	1			97	148
+16 to + 40% CC				4	20	24
+41 to + 100% CC				19	177	196
Total	60	5	2	23	781	871
Montane Riparian						
-71 to -100% CC					26	26
-41 to -70% CC					9	9
-16 to -40% CC					37	37
+16 to + 40% CC						
+41 to + 100% CC					1	1
Total					74	74
All Hardwood	63	5	90	23	1,219	1,400

Table C-79 Acres of Verified Change in Placer County by Cause and Shrub/Chaparral Cover Type

	Fire	Harvest	Develop-ment	Regrowth	Unverified	All Causes
Mixed Chaparral						
-71 to -100% CC	1				41	42
-41 to -70% CC					35	35
-16 to -40% CC		1			6	7
+16 to + 40% CC				1	21	23
+41 to + 100% CC				36	22	59
Total	1	2		38	126	166
Montane Chaparral						
-71 to -100% CC	1	2	1		78	81
-41 to -70% CC		1	2		69	73
-16 to -40% CC	2				53	55
+16 to + 40% CC				2	4	6
+41 to + 100% CC				12	27	39
Total	3	3	3	14	230	253
Sagebrush						
-71 to -100% CC					2	2
-41 to -70% CC					2	2
-16 to -40% CC						
Total					4	4
All Shrub/Chaparral	4	6	3	51	359	423

Table C-80 Acres of Verified Change in Placer County by Cause and Grass/Forb Cover Type

	Develop-ment	Unverified	All Causes
Annual Grass			
Grass Decrease > 15%	63	130	193
Grass Increase > 15%		17	17
Total	63	146	209
Wet Meadow			
Grass Decrease > 15%		1	1
Grass Increase > 15%			
Total		2	2
All Grass/Forb	63	148	211

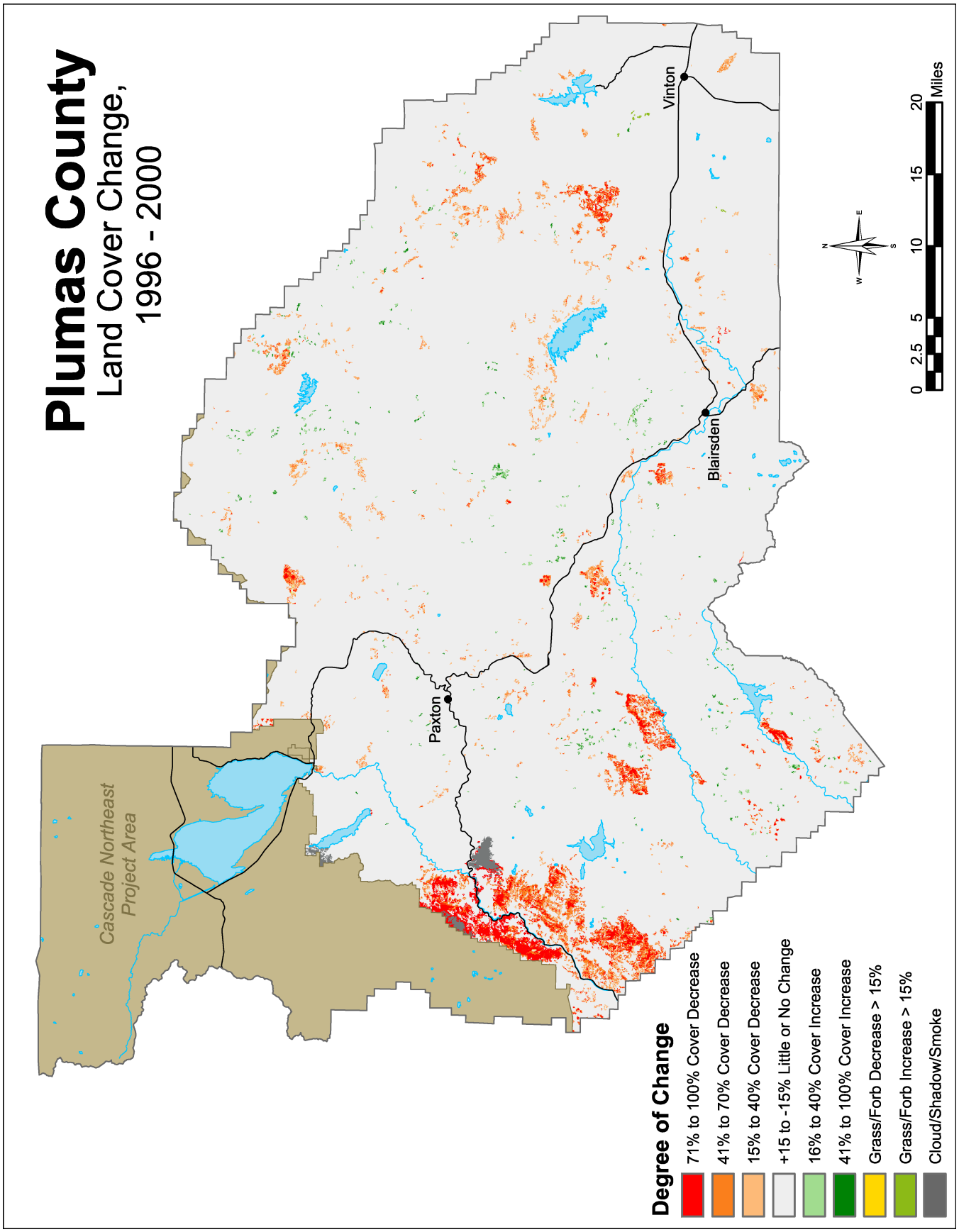

Plumas County
Land Cover Change,
1996 - 2000
Vinton
Blairsden
Paxton
Cascade Northeast
Project Area
N
E
S
W
0
2.5
5
10
15
20
Miles
Degree of Change
71% to 100% Cover Decrease
41% to 70% Cover Decrease
15% to 40% Cover Decrease
+15 to -15% Little or No Change
16% to 40% Cover Increase
41% to 100% Cover Increase
Grass/Forb Decrease > 15%
Grass/Forb Increase > 15%
Cloud/Shadow/Smoke

Table C-81 Acres of Classified Change in Plumas County by Lifeform Type and Owner Class

	Forest Service											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Forest Service Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	12,840	2	2,048	7	973	1					15,860	2
-41 to -70% CC	9,353	1	1,106	4	737	1					11,197	1
-16 to -40% CC	7,306	1	636	2	82						8,025	1
-15 to + 15% CC (Little or No Change)	816,572	96	26,822	87	89,835	98	20,819	100	8,311	100	962,359	96
+16 to + 40% CC	1,357		7		106						1,470	
+41 to + 100% CC	1,044		15		52						1,110	
Grass Decrease > 15%							15		23		38	
Grass Increase > 15%							14				14	
Cloud or Cloud Shadow	2,488		116		82				13		2,699	
Total	850,961	100	30,749	100	91,867	100	20,848	100	8,347	100	1,002,771	100

	Other Public											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Other Public Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	158	2	14	4	5						177	1
-41 to -70% CC	49	1	11	3	96	1					157	1
-16 to -40% CC	27		7	2	65	1					100	1
-15 to + 15% CC (Little or No Change)	6,885	97	330	91	10,772	98	1,084	97	71	99	19,141	98
+16 to + 40% CC	10				1						11	
+41 to + 100% CC	3										4	
Grass Increase > 15%							30	3		1	30	
Cloud or Cloud Shadow												
Total	7,133	100	362	100	10,938	100	1,114	100	71	100	19,619	100

	Private											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Private Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	2,412	1	198	3	54						2,664	1
-41 to -70% CC	1,866	1	181	3	52						2,098	1
-16 to -40% CC	3,834	2	310	4	102						4,245	2
-15 to + 15% CC (Little or No Change)	182,744	96	6,236	90	37,678	99	23,374	100	1,526	100	251,558	96
+16 to + 40% CC	70		5		133						208	
+41 to + 100% CC	69		12		65						146	
Grass Decrease > 15%							51		2		53	
Grass Increase > 15%							50				50	
Cloud or Cloud Shadow	111		5						1		117	
Total	191,104	100	6,947	100	38,085	100	23,475	100	1,529	100	261,139	100

Table C-81 Acres of Classified Change in Plumas County by Lifeform Type and Owner Class (cont.)

	All Owners											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		All Owners Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	15,409	1	2,260	6	1,032	1					18,700	1
-41 to -70% CC	11,268	1	1,298	3	885	1					13,451	1
-16 to -40% CC	11,167	1	953	3	249						12,370	1
-15 to + 15% CC (Little or No Change)	1,006,201	96	33,387	88	138,285	98	45,277	100	9,907	100	1,233,058	96
+16 to + 40% CC	1,437		12		240						1,689	
+41 to + 100% CC	1,116		27		117						1,260	
Grass Decrease > 15%							66		25		91	
Grass Increase > 15%							93				94	
Cloud or Cloud Shadow	2,599		121		82				14		2,816	
Total	1,049,198	100	38,059	100	140,890	100	45,437	100	9,947	100	1,283,529	100

Table C-82 Acres of Verified Change in Plumas County by Cause and Lifeform

	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified	All Causes
Conifer							
-71 to -100% CC	13,279	848	9			1,272	15,409
-41 to -70% CC	7,836	1,807	9		1	1,614	11,268
-16 to -40% CC	2,528	3,772	28		10	4,830	11,167
+16 to + 40% CC				477		960	1,437
+41 to + 100% CC				370		746	1,116
Total	23,644	6,427	46	847	12	9,423	40,398
Hardwood							
-71 to -100% CC	2,186	20				54	2,260
-41 to -70% CC	1,271	4				23	1,298
-16 to -40% CC	764	40				150	953
+16 to + 40% CC						12	12
+41 to + 100% CC				2		26	27
Total	4,220	64		2		265	4,551
Shrub/Chaparral							
-71 to -100% CC	1,010	8				14	1,032
-41 to -70% CC	854	9	1			21	885
-16 to -40% CC	157	16	1			74	249
+16 to + 40% CC				45		195	240
+41 to + 100% CC				21		96	117
Total	2,022	33	2	66		400	2,522
Grass/Forb							
Grass Decrease > 15%	37	6			1	22	66
Grass Increase > 15%				60		33	93
Total	37	6		60	1	55	159
Barren							
Grass Decrease > 15%	23					2	25
Grass Increase > 15%							
Total	23					3	26
All Lifeforms	29,945	6,530	48	974	12	10,146	47,655

Table C-83 Acres of Classified Change in Plumas County by Conifer Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Douglas Fir								
-71 to -100% CC	950	2	9	3	196	1	1,156	1
-41 to -70% CC	521	1	8	2	203	1	732	1
-16 to -40% CC	356	1	2		384	2	741	1
-15 to + 15% CC (Little or No Change)	54,988	96	323	94	23,211	96	78,522	96
+16 to + 40% CC	30				4		34	
+41 to + 100% CC	30						31	
Cloud or Cloud Shadow	315	1			73		388	
Total	57,190	100	341	100	24,071	100	81,603	100
Eastside Pine								
-71 to -100% CC	623		1		95		719	
-41 to -70% CC	1,235	1	1		154	1	1,389	1
-16 to -40% CC	1,937	1	5		578	2	2,520	1
-15 to + 15% CC (Little or No Change)	136,583	97	1,355	100	29,891	97	167,829	97
+16 to + 40% CC	108						108	
+41 to + 100% CC	161						161	
Total	140,646	100	1,362	100	30,718	100	172,726	100
Jeffrey Pine								
-71 to -100% CC	41						41	
-41 to -70% CC	98	1					98	1
-16 to -40% CC	39				1		40	
-15 to + 15% CC (Little or No Change)	9,931	98	1	100	489	100	10,420	98
+16 to + 40% CC	1						1	
+41 to + 100% CC	2						2	
Total	10,111	100	1	100	490	100	10,602	100
Juniper								
-15 to + 15% CC (Little or No Change)	51	100			3	100	54	100
Total	51	100			3	100	54	100
Lodgepole Pine								
-71 to -100% CC								
-41 to -70% CC	1				2	1	3	
-16 to -40% CC	4				16	5	20	1
-15 to + 15% CC (Little or No Change)	1,273	100		100	310	94	1,584	99
Total	1,277	100		100	329	100	1,607	100
Montane Hardwood-Conifer								
-71 to -100% CC	2,102	10	5	3	110	2	2,217	8
-41 to -70% CC	856	4	5	3	74	1	935	3
-16 to -40% CC	469	2	2	1	200	4	670	2
-15 to + 15% CC (Little or No Change)	18,402	84	149	91	4,857	92	23,408	85
+16 to + 40% CC	21		1		1		23	
+41 to + 100% CC	32		2	1	10		43	
Cloud or Cloud Shadow	121	1			9		130	
Total	22,002	100	164	100	5,261	100	27,427	100

Table C-83 Acres of Classified Change in Plumas County by Conifer Cover Type and Owner Class (cont.)

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Ponderosa Pine								
-71 to -100% CC	5				11		16	
-41 to -70% CC	21	1			19		40	
-16 to -40% CC	4				79	2	83	1
-15 to + 15% CC (Little or No Change)	3,342	98	7	100	4,971	98	8,321	98
+41 to + 100% CC					1		1	
Cloud or Cloud Shadow	43	1			7		49	1
Total	3,415	100	7	100	5,088	100	8,510	100
Red Fir								
-71 to -100% CC	127				2		129	
-41 to -70% CC	161				8		169	
-16 to -40% CC	65				24	1	89	
-15 to + 15% CC (Little or No Change)	42,407	99	691	100	1,912	98	45,010	99
+16 to + 40% CC	23						23	
+41 to + 100% CC	19						19	
Cloud or Cloud Shadow	6						6	
Total	42,806	100	691	100	1,947	100	45,444	100
Subalpine Conifer								
-15 to + 15% CC (Little or No Change)	8	100					8	100
Total	8	100					8	100
Sierran Mixed Conifer								
-71 to -100% CC	6,461	1	111	4	1,722	2	8,295	1
-41 to -70% CC	4,921	1	32	1	1,329	1	6,282	1
-16 to -40% CC	3,828	1	16	1	2,443	2	6,286	1
-15 to + 15% CC (Little or No Change)	447,312	96	2,978	95	103,476	95	553,765	96
+16 to + 40% CC	948		8		50		1,006	
+41 to + 100% CC	636		1		39		676	
Cloud or Cloud Shadow	1,899				22		1,920	
Total	466,004	100	3,145	100	109,081	100	578,230	100
White Fir								
-71 to -100% CC	2,530	2	31	2	274	2	2,836	2
-41 to -70% CC	1,541	1	4		76	1	1,621	1
-16 to -40% CC	606	1	3		110	1	720	1
-15 to + 15% CC (Little or No Change)	102,276	95	1,381	97	13,624	97	117,281	95
+16 to + 40% CC	227		2		15		243	
+41 to + 100% CC	164		1		18		183	
Cloud or Cloud Shadow	106						106	
Total	107,449	100	1,422	100	14,117	100	122,988	100
All Conifer	850,961		7,133		191,104		1,049,198	

Table C-84 Acres of Classified Change in Plumas County by Hardwood Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Aspen								
-71 to -100% CC								
-41 to -70% CC	1						1	
-16 to -40% CC	2	1					2	1
-15 to + 15% CC (Little or No Change)	220	98	5	100	35	100	259	99
Total	223	100	5	100	35	100	262	100
Montane Hardwood								
-71 to -100% CC	2,003	8	14	5	189	4	2,206	7
-41 to -70% CC	1,073	4	11	4	177	3	1,261	4
-16 to -40% CC	593	2	7	2	274	5	875	3
-15 to + 15% CC (Little or No Change)	22,644	86	266	89	4,624	88	27,534	86
+16 to + 40% CC	6				4		11	
+41 to + 100% CC	12				11		23	
Cloud or Cloud Shadow	111				5		117	
Total	26,442	100	299	100	5,284	100	32,026	100
Montane Riparian								
-71 to -100% CC	45	1			9	1	54	1
-41 to -70% CC	33	1			3		36	1
-16 to -40% CC	41	1			36	2	76	1
-15 to + 15% CC (Little or No Change)	3,958	97	58	100	1,578	97	5,594	97
+16 to + 40% CC	1				1		2	
+41 to + 100% CC	3				2		4	
Cloud or Cloud Shadow	4						4	
Total	4,084	100	58	100	1,628	100	5,771	100
All Hardwood	30,749		362		6,947		38,059	

Table C-85 Acres of Classified Change in Plumas County by Shrub/Chaparral Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Mixed Chaparral								
-71 to -100% CC	5						5	
-41 to -70% CC	7				2		9	
-16 to -40% CC	5				4		8	
-15 to + 15% CC (Little or No Change)	3,886	99	4	100	743	99	4,633	99
+16 to + 40% CC	2				4	1	7	
+41 to + 100% CC	1						2	
Cloud or Cloud Shadow	2						2	
Total	3,909	100	4	100	754	100	4,666	100
Montane Chaparral								
-71 to -100% CC	961	3	5		52	1	1,018	2
-41 to -70% CC	716	2	7		19		743	2
-16 to -40% CC	66		2		13		80	
-15 to + 15% CC (Little or No Change)	35,329	95	1,564	99	5,534	95	42,427	95
+16 to + 40% CC	96				128	2	224	1
+41 to + 100% CC	44				64	1	108	
Cloud or Cloud Shadow	80						80	
Total	37,291	100	1,578	100	5,811	100	44,679	100
Sagebrush								
-71 to -100% CC	7				2		9	
-41 to -70% CC	13		89	1	31		133	
-16 to -40% CC	12		64	1	85		160	
-15 to + 15% CC (Little or No Change)	50,621	100	9,204	98	31,400	100	91,225	100
+16 to + 40% CC	8		1		1		9	
+41 to + 100% CC	7				1		8	
Total	50,667	100	9,357	100	31,520	100	91,544	100
All Shrub/Chaparral	91,867		10,938		38,085		140,890	

Table C-86 Acres of Classified Change in Plumas County by Grass/Forb Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Annual Grass								
-15 to + 15% CC (Little or No Change)	18,987	100	1,070	97	20,970	100	41,028	100
Grass Decrease > 15%	15				45		60	
Grass Increase > 15%	14		30	3	50		93	
Total	19,016	100	1,099	100	21,066	100	41,181	100
Wet Meadow								
-15 to + 15% CC (Little or No Change)	1,832	100	14	100	2,404	100	4,250	100
Grass Decrease > 15%					6		6	
Total	1,832	100	14	100	2,409	100	4,255	100
All Grass/Forb	20,848		1,114		23,475		45,437	

Table C-87 Acres of Verified Change in Plumas County by Cause and Conifer Cover Type

	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified	All Causes
Douglas Fir							
-71 to -100% CC	1,057	53				46	1,156
-41 to -70% CC	589	46				96	732
-16 to -40% CC	340	102				299	741
+16 to + 40% CC						34	34
+41 to + 100% CC						31	31
Total	1,986	201				505	2,693
Eastside Pine							
-71 to -100% CC	428	211	9			71	719
-41 to -70% CC	454	673	9		1	252	1,389
-16 to -40% CC	365	1,396	28		10	720	2,520
+16 to + 40% CC				66		43	108
+41 to + 100% CC				80		81	161
Total	1,247	2,280	46	146	12	1,167	4,897
Jeffrey Pine							
-71 to -100% CC	41						41
-41 to -70% CC	96					2	98
-16 to -40% CC	39					1	40
+16 to + 40% CC						1	1
+41 to + 100% CC						2	2
Total	175					6	181
Lodgepole Pine							
-71 to -100% CC							
-41 to -70% CC						2	3
-16 to -40% CC		3				16	20
Total		3				19	23
Montane Hardwood-Conifer							
-71 to -100% CC	2,188	2				27	2,217
-41 to -70% CC	924	1				10	935
-16 to -40% CC	515	30				126	670
+16 to + 40% CC						23	23
+41 to + 100% CC						43	43
Total	3,627	32		1		229	3,889
Ponderosa Pine							
-71 to -100% CC	5					12	16
-41 to -70% CC	20	1				20	40
-16 to -40% CC		5				77	83
+41 to + 100% CC						1	1
Total	25	6				110	140

Table C-87 Acres of Verified Change in Plumas County by Cause and Conifer Cover Type (cont.)

	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified	All Causes
Red Fir							
-71 to -100% CC	117					12	129
-41 to -70% CC	142					27	169
-16 to -40% CC	29					60	89
+16 to + 40% CC						23	23
+41 to + 100% CC						19	19
Total	288					140	428
Sierran Mixed Conifer							
-71 to -100% CC	6,828	544				923	8,295
-41 to -70% CC	4,302	969				1,011	6,282
-16 to -40% CC	1,075	2,030				3,181	6,286
+16 to + 40% CC				364		642	1,006
+41 to + 100% CC				272		404	676
Total	12,206	3,543		636		6,160	22,544
White Fir							
-71 to -100% CC	2,617	39				180	2,836
-41 to -70% CC	1,309	117				195	1,621
-16 to -40% CC	164	205				351	720
+16 to + 40% CC				47		196	243
+41 to + 100% CC				17		166	183
Total	4,089	361		64		1,087	5,602
All Conifer	23,644	6,427	46	847	12	9,423	40,398

Table C-88 Acres of Verified Change in Plumas County by Cause and Hardwood Cover Type

	Fire	Harvest	Regrowth	Unverified	All Causes
Aspen					
-71 to -100% CC					
-41 to -70% CC		1			1
-16 to -40% CC		2			2
Total		3			3
Montane Hardwood					
-71 to -100% CC	2,146	15		45	2,206
-41 to -70% CC	1,245	1		15	1,261
-16 to -40% CC	752	21		102	875
+16 to + 40% CC				11	11
+41 to + 100% CC			2	21	23
Total	4,143	37	2	193	4,375
Montane Riparian					
-71 to -100% CC	40	4		10	54
-41 to -70% CC	26	3		8	36
-16 to -40% CC	12	17		48	76
+16 to + 40% CC				2	2
+41 to + 100% CC				4	4
Total	77	24		72	172
All Hardwood	4,220	64	2	265	4,551

Table C-89 Acres of Verified Change in Plumas County by Cause and Shrub/Chaparral Cover Type

	Fire	Harvest	Develop-ment	Regrowth	Unverified	All Causes
Mixed Chaparral						
-71 to -100% CC	5					5
-41 to -70% CC	7	1			1	9
-16 to -40% CC	1	3			5	8
+16 to + 40% CC				2	4	7
+41 to + 100% CC					2	2
Total	13	4		2	12	31
Montane Chaparral						
-71 to -100% CC	999	7			11	1,018
-41 to -70% CC	722	4			17	743
-16 to -40% CC	55	4			22	80
+16 to + 40% CC				40	184	224
+41 to + 100% CC				19	88	108
Total	1,776	15		60	322	2,172
Sagebrush						
-71 to -100% CC	6	1			2	9
-41 to -70% CC	125	3	1		4	133
-16 to -40% CC	102	10	1		48	160
+16 to + 40% CC				2	7	9
+41 to + 100% CC				2	6	8
Total	233	15	2	4	67	320
All Shrub/Chaparral	2,022	33	2	66	400	2,522

Table C-90 Acres of Verified Change in Plumas County by Cause and Grass/Forb Cover Type

	Fire	Harvest	Regrowth	Other	Unverified	All Causes
Annual Grass						
Grass Decrease > 15%	37	6		1	17	60
Grass Increase > 15%			60		33	93
Total	37	6	60	1	50	154
Wet Meadow						
Grass Decrease > 15%					5	6
Total					5	6
All Grass/Forb	37	6	60	1	55	159

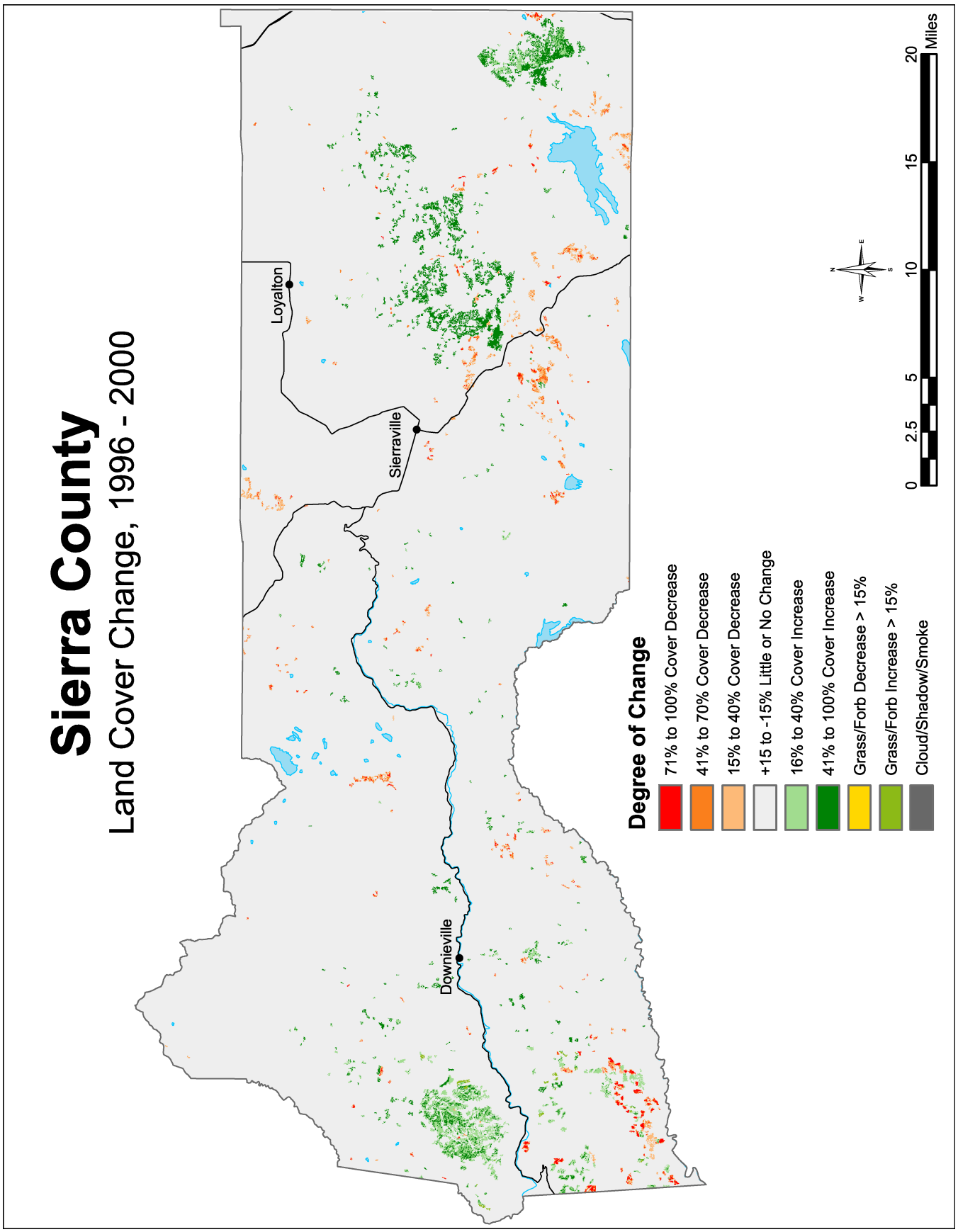

Sierra County
Land Cover Change, 1996 - 2000
Loyalton
Sierraville
Downieville
Degree of Change
71% to 100% Cover Decrease
41% to 70% Cover Decrease
15% to 40% Cover Decrease
+15 to -15% Little or No Change
16% to 40% Cover Increase
41% to 100% Cover Increase
Grass/Forb Decrease > 15%
Grass/Forb Increase > 15%
Cloud/Shadow/Smoke
0
2.5
5
10
15
20
Miles

Table C-91 Acres of Classified Change in Sierra County by Lifeform Type and Owner Class

	Forest Service											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Forest Service Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	201		4		47						251	
-41 to -70% CC	646		3		60						709	
-16 to -40% CC	1,086		7		10						1,103	
-15 to + 15% CC (Little or No Change)	318,751	97	15,440	99	58,118	96	6,008	100	6,479	100	404,795	97
+16 to + 40% CC	3,871	1	65		665	1					4,601	1
+41 to + 100% CC	5,171	2	29		1,598	3					6,798	2
Grass Decrease > 15%							5				5	
Grass Increase > 15%							1		15		16	
Total	329,726	100	15,548	100	60,498	100	6,014	100	6,494	100	418,279	100

	Other Public											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Other Public Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	2										2	
-41 to -70% CC	2										2	
-16 to -40% CC	10										10	
-15 to + 15% CC (Little or No Change)	3,787	99	31	100	10,770	100	592	100	1	100	15,182	100
+16 to + 40% CC	3				4						7	
+41 to + 100% CC	9				1						10	
Grass Decrease > 15%												
Grass Increase > 15%												
Total	3,813	100	31	100	10,775	100	593	100	1	100	15,213	100

	Private											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Private Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	612	1	29		72						713	1
-41 to -70% CC	437		11		84						532	
-16 to -40% CC	699	1	20		50						769	1
-15 to + 15% CC (Little or No Change)	92,482	97	5,855	98	32,753	98	5,743	100	2,142	97	138,975	98
+16 to + 40% CC	436		30		183	1					649	
+41 to + 100% CC	209		18		267	1					494	
Grass Decrease > 15%							16		1		16	
Grass Increase > 15%							9		56	3	65	
Total	94,874	100	5,962	100	33,409	100	5,768	100	2,199	100	142,212	100

Table C-91 Acres of Classified Change in Sierra County by Lifeform Type and Owner Class (cont.)

	All Owners											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		All Owners Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	815		33		118						966	
-41 to -70% CC	1,085		14		144						1,243	
-16 to -40% CC	1,795		27		60						1,882	
-15 to + 15% CC (Little or No Change)	415,020	97	21,326	99	101,640	97	12,344	100	8,622	99	558,951	97
+16 to + 40% CC	4,310	1	95		853	1					5,257	1
+41 to + 100% CC	5,389	1	47		1,866	2					7,302	1
Grass Decrease > 15%							21		1		22	
Grass Increase > 15%							10		71	1	81	
Total	428,413	100	21,541	100	104,682	100	12,375	100	8,694	100	575,705	100

Table C-92 Acres of Verified Change in Sierra County by Cause and Lifeform

	Fire	Harvest	Regrowth	Other	Unverified	All Causes
Conifer						
-71 to -100% CC	34	553		1	227	815
-41 to -70% CC	12	823		10	240	1,085
-16 to -40% CC	8	1,229		51	506	1,795
+16 to + 40% CC			3,964	26	320	4,310
+41 to + 100% CC			4,920	4	465	5,389
Total	54	2,605	8,883	93	1,758	13,394
Hardwood						
-71 to -100% CC		9			24	33
-41 to -70% CC		2			12	14
-16 to -40% CC		2			24	27
+16 to + 40% CC			77		18	95
+41 to + 100% CC			25		22	47
Total		13	102		101	216
Shrub/Chaparral						
-71 to -100% CC		16		4	99	118
-41 to -70% CC		8			136	144
-16 to -40% CC		9			52	60
+16 to + 40% CC			722		131	853
+41 to + 100% CC			1,599		267	1,866
Total		33	2,321	4	685	3,042
Grass/Forb						
Grass Decrease > 15%		10			11	21
Grass Increase > 15%			2		8	10
Total		10	2		19	32
Barren						
Grass Decrease > 15%					1	1
Grass Increase > 15%			51	7	13	71
Total			51	7	13	71
All Lifeforms	54	2,661	11,360	103	2,576	16,754

Table C-93 Acres of Classified Change in Sierra County by Conifer Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Douglas Fir								
-71 to -100% CC	4				176	4	180	1
-41 to -70% CC	19				65	2	84	
-16 to -40% CC	50				104	3	153	1
-15 to + 15% CC (Little or No Change)	14,430	90	3	100	3,442	88	17,875	90
+16 to + 40% CC	1,143	7			128	3	1,272	6
+41 to + 100% CC	314	2			4		317	2
Total	15,959	100	3	100	3,919	100	19,880	100
Eastside Pine								
-71 to -100% CC	48		2		23		73	
-41 to -70% CC	222		2		38		262	
-16 to -40% CC	421	1	10		149	1	579	1
-15 to + 15% CC (Little or No Change)	46,821	97	3,044	99	10,185	98	60,051	97
+16 to + 40% CC	20		2				22	
+41 to + 100% CC	727	2	4		4		735	1
Total	48,259	100	3,064	100	10,399	100	61,722	100
Jeffrey Pine								
-15 to + 15% CC (Little or No Change)	807	100		100	192	100	999	100
+41 to + 100% CC	1						1	
Total	809	100		100	192	100	1,001	100
Juniper								
-15 to + 15% CC (Little or No Change)	225	100	122	100	124	100	470	100
Total	225	100	122	100	124	100	470	100
Lodgepole Pine								
-71 to -100% CC					17	1	17	1
-41 to -70% CC					26	2	26	1
-16 to -40% CC	1				15	1	15	1
-15 to + 15% CC (Little or No Change)	1,563	100			1,340	96	2,902	98
+16 to + 40% CC								
Total	1,564	100			1,397	100	2,961	100
Montane Hardwood-Conifer								
-71 to -100% CC	2				33	1	35	
-41 to -70% CC	2				11		13	
-16 to -40% CC	6				8		13	
-15 to + 15% CC (Little or No Change)	8,501	93	9	100	3,874	96	12,384	94
+16 to + 40% CC	376	4			47	1	423	3
+41 to + 100% CC	237	3			67	2	304	2
Total	9,123	100	9	100	4,039	100	13,172	100
Ponderosa Pine								
-71 to -100% CC					12	1	12	
-41 to -70% CC					11	1	12	
-16 to -40% CC	2				43	3	45	1
-15 to + 15% CC (Little or No Change)	2,695	95		100	1,492	93	4,187	94
+16 to + 40% CC	106	4			48	3	154	3
+41 to + 100% CC	34	1			6		40	1
Total	2,837	100		100	1,612	100	4,449	100

Table C-93 Acres of Classified Change in Sierra County by Conifer Cover Type and Owner Class (cont.)

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Red Fir								
-71 to -100% CC	12				42		54	
-41 to -70% CC	58				98	1	156	
-16 to -40% CC	77				112	1	189	
-15 to + 15% CC (Little or No Change)	42,923	99	3	100	15,883	98	58,810	99
+16 to + 40% CC	34				2		37	
+41 to + 100% CC	128				7		135	
Total	43,232	100	3	100	16,145	100	59,381	100
Subalpine Conifer								
-15 to + 15% CC (Little or No Change)	465	100			203	100	668	100
Total	465	100			203	100	668	100
Sierran Mixed Conifer								
-71 to -100% CC	126				306	1	432	
-41 to -70% CC	299				181		480	
-16 to -40% CC	422				254	1	676	
-15 to + 15% CC (Little or No Change)	174,102	97	604	99	49,340	98	224,045	97
+16 to + 40% CC	2,166	1	1		205		2,371	1
+41 to + 100% CC	3,161	2	5	1	116		3,282	1
Total	180,275	100	609	100	50,401	100	231,285	100
White Fir								
-71 to -100% CC	10				4		14	
-41 to -70% CC	46				7		53	
-16 to -40% CC	110				15		125	
-15 to + 15% CC (Little or No Change)	26,219	97	2	100	6,408	99	32,629	98
+16 to + 40% CC	25				5		30	
+41 to + 100% CC	569	2			6		575	2
Total	26,978	100	2	100	6,445	100	33,425	100
All Conifer	250,950		615		73,193		324,758	

Table C-94 Acres of Classified Change in Sierra County by Hardwood Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Aspen								
-15 to + 15% CC (Little or No Change)	29	88					29	88
+41 to + 100% CC	4	12					4	12
Total	33	100					33	100
Blue Oak Woodland								
-71 to -100% CC						2		2
-41 to -70% CC						3		3
-15 to + 15% CC (Little or No Change)					11	92	11	92
+16 to + 40% CC						3		3
Total					12	100	12	100
Coastal Oak Woodland								
-15 to + 15% CC (Little or No Change)	42	100					42	100
Total	42	100					42	100
Montane Hardwood								
-71 to -100% CC					24		24	
-41 to -70% CC					8		8	
-16 to -40% CC					14		14	
-15 to + 15% CC (Little or No Change)	13,620	99	7	100	4,902	98	18,529	99
+16 to + 40% CC	64				29	1	93	
+41 to + 100% CC	22				18		40	
Total	13,706	100	7	100	4,994	100	18,707	100
Montane Riparian								
-71 to -100% CC	4				5	1	9	
-41 to -70% CC	3				3		6	
-16 to -40% CC	7				6	1	13	
-15 to + 15% CC (Little or No Change)	1,749	99	25	100	941	98	2,714	99
+16 to + 40% CC	1						1	
+41 to + 100% CC	3						4	
Total	1,766	100	25	100	956	100	2,747	100
All Hardwood	15,548		31		5,962		21,541	

Table C-95 Acres of Classified Change in Sierra County by Shrub/Chaparral Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Bitterbrush								
-15 to + 15% CC (Little or No Change)	7	100					7	100
Total	7	100					7	100
Mixed Chaparral								
-71 to -100% CC					1		1	
-41 to -70% CC					2	1	2	
-16 to -40% CC								
-15 to + 15% CC (Little or No Change)	508	99			148	94	656	98
+16 to + 40% CC	6	1			5	3	11	2
+41 to + 100% CC	1				2	1	3	
Total	515	100			158	100	672	100
Montane Chaparral								
-71 to -100% CC	11				17		28	
-41 to -70% CC	20				17		37	
-16 to -40% CC	3				40		43	
-15 to + 15% CC (Little or No Change)	41,896	95	1,043	100	10,935	97	53,873	96
+16 to + 40% CC	560	1	4		107	1	672	1
+41 to + 100% CC	1,411	3	1		137	1	1,548	3
Total	43,900	100	1,048	100	11,253	100	56,200	100
Sagebrush								
-71 to -100% CC	36				54		90	
-41 to -70% CC	40				65		105	
-16 to -40% CC	7				9		17	
-15 to + 15% CC (Little or No Change)	15,707	98	9,727	100	21,670	99	47,104	99
+16 to + 40% CC	99	1			71		170	
+41 to + 100% CC	187	1			128	1	315	1
Total	16,076	100	9,727	100	21,999	100	47,802	100
All Shrub/Chaparral	60,498		10,775		33,409		104,682	

Table C-96 Acres of Classified Change in Sierra County by Grass/Forb Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Annual Grass								
-15 to + 15% CC (Little or No Change)	4,117	100	592	100	3,675	99	8,384	100
Grass Decrease > 15%	4				11		15	
Grass Increase > 15%	1				9		10	
Total	4,121	100	593	100	3,694	100	8,409	100
Wet Meadow								
-15 to + 15% CC (Little or No Change)	1,891	100			2,069	100	3,960	100
Grass Decrease > 15%	2				5		6	
Total	1,893	100			2,074	100	3,966	100
All Grass/Forb	6,014		593		5,768		12,375	

Table C-97 Acres of Verified Change in Sierra County by Cause and Conifer Cover Type

	Fire	Harvest	Regrowth	Other	Unverified	All Causes
Douglas Fir						
-71 to -100% CC	34	93			53	180
-41 to -70% CC	12	30			41	84
-16 to -40% CC	8	25			121	153
+16 to + 40% CC			1,254		17	1,272
+41 to + 100% CC			315		2	317
Total	54	148	1,569		234	2,006
Eastside Pine						
-71 to -100% CC		51			21	73
-41 to -70% CC		212			50	262
-16 to -40% CC		486			93	579
+16 to + 40% CC			14		9	22
+41 to + 100% CC			698		37	735
Total		749	711		210	1,671
Jeffrey Pine						
+16 to + 40% CC						
+41 to + 100% CC					1	1
Total					1	1
Lodgepole Pine						
-71 to -100% CC		16			1	17
-41 to -70% CC		25			2	26
-16 to -40% CC		14			2	15
+16 to + 40% CC						
Total		55			4	59
Montane Hardwood-Conifer						
-71 to -100% CC		24			11	35
-41 to -70% CC		6			8	13
-16 to -40% CC		4			9	13
+16 to + 40% CC			385		38	423
+41 to + 100% CC			273		32	304
Total		33	658		97	788
Ponderosa Pine						
-71 to -100% CC		2			9	12
-41 to -70% CC		3			8	12
-16 to -40% CC		26			19	45
+16 to + 40% CC			108		47	154
+41 to + 100% CC			16		24	40
Total		31	123		108	262
Red Fir						
-71 to -100% CC		39			15	54
-41 to -70% CC		132			24	156
-16 to -40% CC		141		1	47	189
+16 to + 40% CC			19		17	37
+41 to + 100% CC			78		57	135
Total		313	97	1	160	571

Table C-97 Acres of Verified Change in Sierra County by Cause and Conifer Cover Type (cont.)

	Fire	Harvest	Regrowth	Other	Unverified	All Causes
Sierran Mixed Conifer						
-71 to -100% CC		317		1	114	432
-41 to -70% CC		372		9	99	480
-16 to -40% CC		450		40	186	676
+16 to + 40% CC			2,164	26	181	2,371
+41 to + 100% CC			2,991	4	288	3,282
Total		1,139	5,155	80	867	7,240
White Fir						
-71 to -100% CC		11			3	14
-41 to -70% CC		43		1	9	53
-16 to -40% CC		84		11	30	125
+16 to + 40% CC			19		11	30
+41 to + 100% CC			550		25	575
Total		138	569	11	77	796
All Conifer	54	2,605	8,883	93	1,758	13,393

Table C-98 Acres of Verified Change in Sierra County by Cause and Hardwood Cover Type

	Harvest	Regrowth	Unverified	All Causes
Aspen				
+41 to + 100% CC		4		4
Total		4		4
Blue Oak Woodland				
-71 to -100% CC				
-41 to -70% CC				
+16 to + 40% CC				
Total			1	1
Montane Hardwood				
-71 to -100% CC	7		16	24
-41 to -70% CC	1		7	8
-16 to -40% CC	2		12	14
+16 to + 40% CC		77	17	93
+41 to + 100% CC		18	22	40
Total	10	95	73	178
Montane Riparian				
-71 to -100% CC	1		8	9
-41 to -70% CC	1		5	6
-16 to -40% CC			13	13
+16 to + 40% CC			1	1
+41 to + 100% CC		3		4
Total	3	3	27	32
All Hardwood	13	102	101	216

Table C-99 Acres of Verified Change in Sierra County by Cause and Shrub/Chaparral Cover Type

	Harvest	Regrowth	Other	Unverified	All Causes
Mixed Chaparral					
-71 to -100% CC					1
-41 to -70% CC				2	2
-16 to -40% CC					
+16 to + 40% CC		6		5	11
+41 to + 100% CC		1		2	3
Total		7		9	16
Montane Chaparral					
-71 to -100% CC	2		4	22	28
-41 to -70% CC	4			33	37
-16 to -40% CC	2			41	43
+16 to + 40% CC		582		90	672
+41 to + 100% CC		1,369		179	1,548
Total	8	1,951	4	366	2,327
Sagebrush					
-71 to -100% CC	14			77	90
-41 to -70% CC	4			101	105
-16 to -40% CC	7			10	17
+16 to + 40% CC		134		37	170
+41 to + 100% CC		229		85	315
Total	25	363		310	698
All Shrub/Chaparral	33	2,321	4	685	3,042

Table C-100 Acres of Verified Change in Sierra County by Cause and Grass/Forb Cover Type

	Harvest	Regrowth	Unverified	All Causes
Annual Grass				
Grass Decrease > 15%	6		9	15
Grass Increase > 15%		2	8	10
Total	6	2	17	25
Wet Meadow				
Grass Decrease > 15%	4		2	6
Total	4		2	6
All Grass/Forb	10	2	19	32

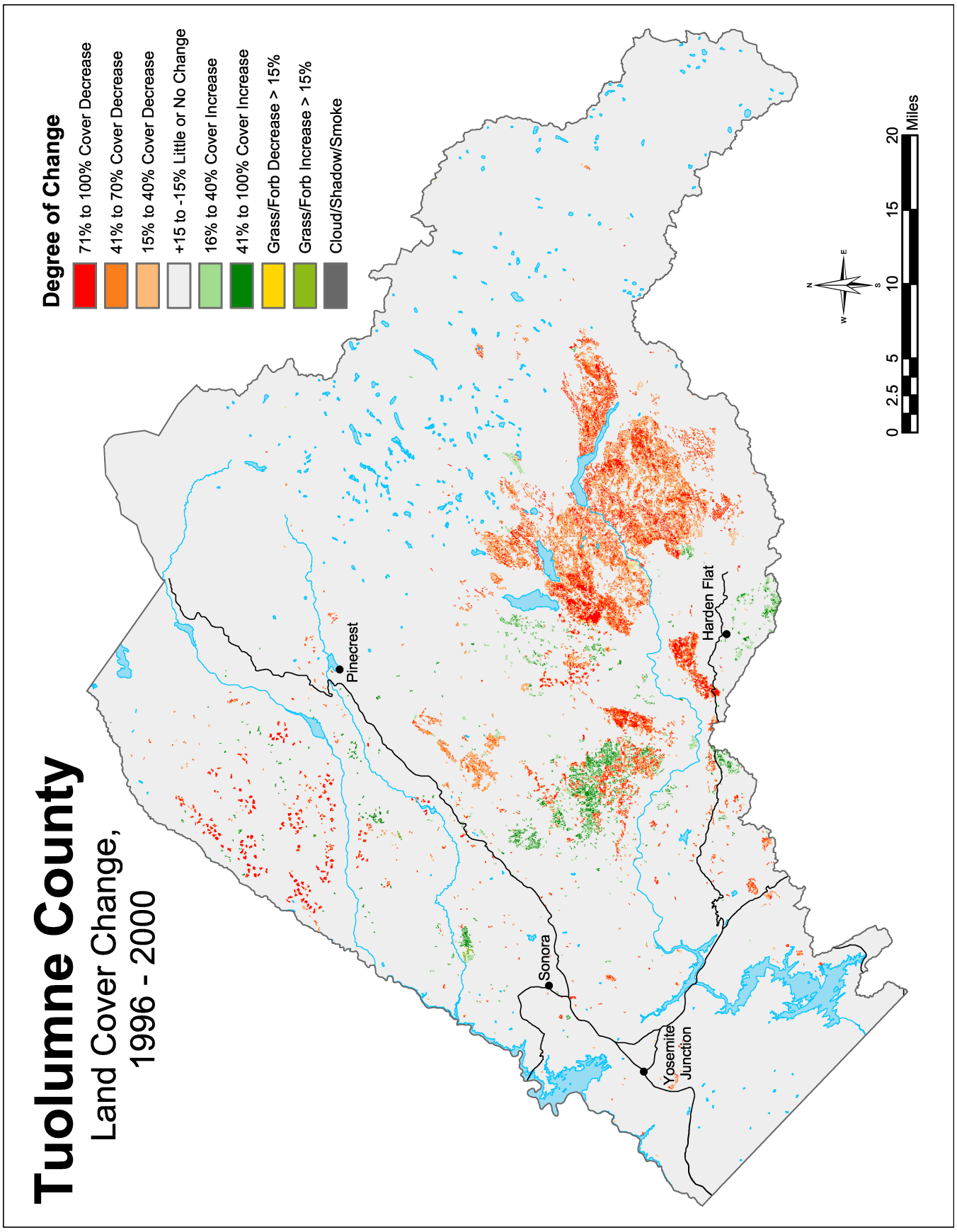

Tuolumne County
Land Cover Change,
1996 - 2000
Degree of Change
71% to 100% Cover Decrease
41% to 70% Cover Decrease
15% to 40% Cover Decrease
+15 to -15% Little or No Change
16% to 40% Cover Increase
41% to 100% Cover Increase
Grass/Forb Decrease > 15%
Grass/Forb Increase > 15%
Cloud/Shadow/Smoke
Pinecrest
Harden Flat
Sonora
Yosemite Junction
0 2.5 5 10 15 20
Miles

Table C-101 Acres of Classified Change in Tuolumne County by Lifeform Type and Owner Class

	Forest Service											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Forest Service Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	4,127	1	1,300	3	729	1					6,156	1
-41 to -70% CC	5,279	1	413	1	579	1					6,271	1
-16 to -40% CC	2,646	1	858	2	423	1					3,927	1
-15 to + 15% CC (Little or No Change)	377,574	95	47,868	95	56,418	96	12,431	98	88,808	100	583,099	96
+16 to + 40% CC	3,173	1	102		338	1					3,613	1
+41 to + 100% CC	2,627	1	30		152						2,809	
Grass Decrease > 15%							114	1	13		127	
Grass Increase > 15%							78	1			78	
Total	395,425	100	50,571	100	58,640	100	12,623	100	88,821	100	606,080	100

	Other Public											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Other Public Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	5,693	2	2,353	6	347	1					8,394	2
-41 to -70% CC	10,061	3	682	2	416	2					11,159	2
-16 to -40% CC	7,625	2	2,844	7	704	3					11,173	2
-15 to + 15% CC (Little or No Change)	289,567	92	34,530	85	22,902	94	16,231	99	86,606	100	449,836	94
+16 to + 40% CC	238		13		19						270	
+41 to + 100% CC	18				11						29	
Grass Decrease > 15%							195	1	19		213	
Grass Increase > 15%							1		4		5	
Total	313,201	100	40,423	100	24,399	100	16,426	100	86,629	100	481,078	100

	Private											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Private Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	3,523	3	193		321	1					4,038	1
-41 to -70% CC	1,475	1	143		181						1,800	1
-16 to -40% CC	850	1	133		74						1,056	
-15 to + 15% CC (Little or No Change)	128,029	94	84,406	99	36,772	98	87,980	100	2,000	100	339,186	97
+16 to + 40% CC	1,081	1	20		99						1,200	
+41 to + 100% CC	1,252	1	6		66						1,323	
Grass Decrease > 15%							62		9		71	
Grass Increase > 15%							49				49	
Total	136,209	100	84,900	100	37,513	100	88,091	100	2,008	100	348,721	100

Table C-101 Acres of Classified Change in Tuolumne County by Lifeform Type and Owner Class (cont.)

	All Owners											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		All Owners Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	13,342	2	3,847	2	1,398	1					18,587	1
-41 to -70% CC	16,815	2	1,239	1	1,176	1					19,230	1
-16 to -40% CC	11,120	1	3,835	2	1,201	1					16,156	1
-15 to + 15% CC (Little or No Change)	795,169	94	166,803	95	116,092	96	116,641	100	177,414	100	1,372,120	96
+16 to + 40% CC	4,492	1	135		456						5,083	
+41 to + 100% CC	3,897		36		229						4,161	
Grass Decrease > 15%							371		40		411	
Grass Increase > 15%							129		4		132	
Total	844,836	100	175,894	100	120,552	100	117,141	100	177,458	100	1,435,880	100

Table C-102 Acres of Verified Change in Tuolumne County by Cause and Lifeform

	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified	All Causes
Conifer							
-71 to -100% CC	8,644	3,156	18		872	653	13,342
-41 to -70% CC	12,412	2,275	22		1,350	757	16,815
-16 to -40% CC	8,086	1,306	10		705	1,013	11,120
+16 to + 40% CC				3,419	437	635	4,492
+41 to + 100% CC				3,248	257	392	3,897
Total	29,141	6,737	50	6,668	3,621	3,450	49,667
Hardwood							
-71 to -100% CC	3,662	36			5	144	3,847
-41 to -70% CC	1,067	25			8	139	1,239
-16 to -40% CC	3,637	19			23	156	3,835
+16 to + 40% CC				111	1	23	135
+41 to + 100% CC				13	1	22	36
Total	8,366	79		123	38	485	9,091
Shrub/Chaparral							
-71 to -100% CC	977	107	9		85	221	1,398
-41 to -70% CC	880	63	7		49	177	1,176
-16 to -40% CC	1,097	10	3		12	79	1,201
+16 to + 40% CC				364	2	90	456
+41 to + 100% CC				176	2	50	229
Total	2,954	180	18	540	151	617	4,459
Grass/Forb							
Grass Decrease > 15%	300	19			6	46	371
Grass Increase > 15%				116	2	10	129
Total	300	19		116	8	56	499
Barren							
Grass Decrease > 15%	11	9				20	40
Grass Increase > 15%						4	4
Total	11	9				24	44

All Lifeforms	40,772	7,024	68	7,447	3,817	4,631	63,760

Table C-103 Acres of Classified Change in Tuolumne County by Conifer Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Douglas Fir								
-71 to -100% CC	37		25	2	18	1	81	1
-41 to -70% CC	57	1	33	2	17	1	107	1
-16 to -40% CC	43		48	4	6		96	1
-15 to + 15% CC (Little or No Change)	9,305	94	1,204	92	1,572	96	12,080	94
+16 to + 40% CC	178	2	2		11	1	191	1
+41 to + 100% CC	231	2	3		7		240	2
Total	9,851	100	1,314	100	1,630	100	12,795	100
Jeffrey Pine								
-71 to -100% CC	3		690	2			694	1
-41 to -70% CC	10		770	2	1		781	1
-16 to -40% CC	6		797	2			803	1
-15 to + 15% CC (Little or No Change)	13,954	100	41,296	95	348	100	55,597	96
+16 to + 40% CC			73				73	
+41 to + 100% CC			9				9	
Total	13,973	100	43,634	100	349	100	57,956	100
Juniper								
-15 to + 15% CC (Little or No Change)			507	100			507	100
Total			507	100			507	100
Lodgepole Pine								
-71 to -100% CC	5		24		1		30	
-41 to -70% CC	17		21		7	1	45	
-16 to -40% CC	19		18		1		38	
-15 to + 15% CC (Little or No Change)	31,644	100	52,012	100	698	99	84,353	100
+16 to + 40% CC								
+41 to + 100% CC	1						1	
Total	31,685	100	52,075	100	708	100	84,467	100
Montane Hardwood-Conifer								
-71 to -100% CC	477	1	100	1	311	1	888	1
-41 to -70% CC	252	1	55	1	155		462	1
-16 to -40% CC	263	1	152	2	120		535	1
-15 to + 15% CC (Little or No Change)	31,102	96	8,008	96	46,452	99	85,561	98
+16 to + 40% CC	113		2		15		130	
+41 to + 100% CC	35				10		46	
Total	32,242	100	8,316	100	47,062	100	87,621	100
Ponderosa Pine								
-71 to -100% CC	750	2	989	5	562	2	2,302	3
-41 to -70% CC	1,000	3	2,577	12	273	1	3,850	5
-16 to -40% CC	484	1	1,555	7	139	1	2,178	3
-15 to + 15% CC (Little or No Change)	35,480	89	15,839	76	21,263	91	72,582	86
+16 to + 40% CC	1,294	3	3		498	2	1,795	2
+41 to + 100% CC	884	2	1		529	2	1,414	2
Total	39,892	100	20,964	100	23,263	100	84,120	100

Table C-103 Acres of Classified Change in Tuolumne County by Conifer Cover Type and Owner Class (cont.)

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Red Fir								
-71 to -100% CC	21		907	2			928	1
-41 to -70% CC	32		1,431	4			1,463	2
-16 to -40% CC	21		1,438	4			1,459	2
-15 to + 15% CC (Little or No Change)	45,490	100	34,384	90	605	100	80,478	95
+16 to + 40% CC			134				134	
+41 to + 100% CC			2				2	
Total	45,565	100	38,295	100	605	100	84,464	100
Subalpine Conifer								
-71 to -100% CC			82				82	
-41 to -70% CC			107				107	
-16 to -40% CC			108				109	
-15 to + 15% CC (Little or No Change)	11,705	100	100,125	100			111,830	100
+16 to + 40% CC			25				25	
+41 to + 100% CC			3				3	
Total	11,706	100	100,450	100			112,155	100
Sierran Mixed Conifer								
-71 to -100% CC	2,833	1	2,871	7	2,630	4	8,335	3
-41 to -70% CC	3,910	2	5,068	13	1,023	2	10,001	3
-16 to -40% CC	1,810	1	3,495	9	584	1	5,890	2
-15 to + 15% CC (Little or No Change)	198,415	94	29,069	72	57,091	91	284,575	91
+16 to + 40% CC	1,587	1	1		558	1	2,145	1
+41 to + 100% CC	1,476	1			706	1	2,182	1
Total	210,031	100	40,504	100	62,592	100	313,128	100
White Fir								
-71 to -100% CC			3				3	
-16 to -40% CC			14				14	
-15 to + 15% CC (Little or No Change)	481	100	7,124	100			7,605	100
+16 to + 40% CC								
+41 to + 100% CC			1				1	
Total	481	100	7,142	100			7,623	100
All Conifer	395,425		313,201		136,209		844,836	

Table C-104 Acres of Classified Change in Tuolumne County by Hardwood Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Aspen								
-15 to + 15% CC (Little or No Change)	124	100	27	100			151	100
Total	124	100	27	100			151	100
Blue Oak-Foothill Pine								
-71 to -100% CC			884	15			884	14
-41 to -70% CC			251	4			251	4
-16 to -40% CC			1,390	23			1,390	22
-15 to + 15% CC (Little or No Change)	49	100	3,559	58	207	100	3,815	60
+16 to + 40% CC			8				8	
Total	49	100	6,091	100	207	100	6,347	100
Blue Oak Woodland								
-71 to -100% CC			6		8		13	
-41 to -70% CC			8		8		16	
-16 to -40% CC			34	1	29		63	
-15 to + 15% CC (Little or No Change)			4,067	99	24,071	100	28,138	100
+16 to + 40% CC			2		4		7	
+41 to + 100% CC					1		1	
Total			4,116	100	24,121	100	28,237	100
Montane Hardwood								
-71 to -100% CC	1,300	3	1,458	5	186		2,945	2
-41 to -70% CC	413	1	424	1	135		972	1
-16 to -40% CC	858	2	1,418	5	104		2,379	2
-15 to + 15% CC (Little or No Change)	47,544	95	25,321	88	60,128	99	132,992	95
+16 to + 40% CC	102		2		15		120	
+41 to + 100% CC	30				5		35	
Total	50,247	100	28,623	100	60,572	100	139,442	100
Montane Riparian								
-71 to -100% CC			5				5	
-41 to -70% CC								
-16 to -40% CC			3				3	
-15 to + 15% CC (Little or No Change)	151	100	1,557	99			1,708	99
Total	151	100	1,565	100			1,716	100
All Hardwood	50,571		40,423		84,900		175,894	

Table C-105 Acres of Classified Change in Tuolumne County by Shrub/Chaparral Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Alpine Dwarf Shrub								
-15 to + 15% CC (Little or No Change)			111	100		100	111	100
Total			111	100		100	111	100
Chamise-Redshank Chaparral								
-71 to -100% CC			44	1	60	1	104	1
-41 to -70% CC			58	1	61	1	119	1
-16 to -40% CC			32		35		67	
-15 to + 15% CC (Little or No Change)			7,268	98	7,137	98	14,405	98
+16 to + 40% CC			4		10		13	
+41 to + 100% CC					8		8	
Total			7,406	100	7,310	100	14,716	100
Mixed Chaparral								
-71 to -100% CC	644	3	50		159	1	853	1
-41 to -70% CC	521	2	57		77		655	1
-16 to -40% CC	332	1	50		16		398	1
-15 to + 15% CC (Little or No Change)	23,661	93	11,882	98	24,799	99	60,342	96
+16 to + 40% CC	178	1	14		58		250	
+41 to + 100% CC	139	1	10		40		189	
Total	25,474	100	12,064	100	25,150	100	62,688	100
Montane Chaparral								
-71 to -100% CC	85		254	6	102	2	441	1
-41 to -70% CC	58		301	7	44	1	402	1
-16 to -40% CC	92		621	15	23		736	2
-15 to + 15% CC (Little or No Change)	31,603	99	2,974	72	4,835	96	39,412	96
+16 to + 40% CC	159		1		31	1	191	
+41 to + 100% CC	13		1		17		31	
Total	32,009	100	4,152	100	5,052	100	41,213	100
Sagebrush								
-15 to + 15% CC (Little or No Change)	1,155	100	667	100			1,822	100
+16 to + 40% CC	2						2	
+41 to + 100% CC								
Total	1,157	100	667	100			1,824	100
All Shrub/Chaparral	58,640		24,399		37,513		120,552	

Table C-106 Acres of Classified Change in Tuolumne County by Grass/Forb Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Annual Grass								
-15 to + 15% CC (Little or No Change)	11,611	98	7,668	98	87,630	100	106,908	100
Grass Decrease > 15%	114	1	195	2	61		369	
Grass Increase > 15%	78	1	1		49		129	
Total	11,802	100	7,863	100	87,740	100	107,406	100
Perennial Grassland								
-15 to + 15% CC (Little or No Change)			366	100			366	100
Total			366	100			366	100
Wet Meadow								
-15 to + 15% CC (Little or No Change)	820	100	8,197	100	350	100	9,368	100
Grass Decrease > 15%	1				1		2	
Total	821	100	8,197	100	351	100	9,369	100
All Grass/Forb	12,623		16,426		88,091		117,141	

Table C-107 Acres of Verified Change in Tuolumne County by Cause and Conifer Cover Type

	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified	All Causes
Douglas Fir							
-71 to -100% CC	67	6			6	2	81
-41 to -70% CC	69	7			24	7	107
-16 to -40% CC	79	3			11	3	96
+16 to + 40% CC				161	5	25	191
+41 to + 100% CC				217	2	21	240
Total	215	15		377	49	59	715
Jeffrey Pine							
-71 to -100% CC	541				32	121	694
-41 to -70% CC	597				35	149	781
-16 to -40% CC	501				42	260	803
+16 to + 40% CC				53		20	73
+41 to + 100% CC				2		7	9
Total	1,638			54	110	557	2,359
Lodgepole Pine							
-71 to -100% CC	22				3	5	30
-41 to -70% CC	30				2	13	45
-16 to -40% CC	25				6	6	38
+16 to + 40% CC							
+41 to + 100% CC				1			1
Total	78		1	1	11	24	114

Table C-107 Acres of Verified Change in Tuolumne County by Cause and Conifer Cover Type (cont.)

	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified	All Causes
Montane Hardwood-Conifer							
-71 to -100% CC	570	229			2	88	888
-41 to -70% CC	305	70			2	85	462
-16 to -40% CC	404	36				95	535
+16 to + 40% CC				112		17	130
+41 to + 100% CC				42		4	46
Total	1,278	335		154	4	288	2,060
Ponderosa Pine							
-71 to -100% CC	1,506	603			104	89	2,302
-41 to -70% CC	3,038	514			161	137	3,850
-16 to -40% CC	1,721	289			43	126	2,178
+16 to + 40% CC				1,419	154	222	1,795
+41 to + 100% CC				1,232	80	102	1,414
Total	6,264	1,406		2,651	541	677	11,538
Red Fir							
-71 to -100% CC	599	1	18		176	135	928
-41 to -70% CC	1,249	5	22		95	93	1,463
-16 to -40% CC	1,007	7	10		247	189	1,459
+16 to + 40% CC				132		2	134
+41 to + 100% CC				2			2
Total	2,855	13	49	134	518	418	3,986
Subalpine Conifer							
-71 to -100% CC	52					31	82
-41 to -70% CC	84					23	107
-16 to -40% CC	78					31	109
+16 to + 40% CC						25	25
+41 to + 100% CC						3	3
Total	214					112	326
Sierran Mixed Conifer							
-71 to -100% CC	5,285	2,318			550	182	8,335
-41 to -70% CC	7,040	1,680			1,031	251	10,001
-16 to -40% CC	4,263	972			356	299	5,890
+16 to + 40% CC				1,543	279	324	2,145
+41 to + 100% CC				1,753	174	255	2,182
Total	16,588	4,969		3,296	2,389	1,311	28,553
White Fir							
-71 to -100% CC	3						3
-16 to -40% CC	10					4	14
+16 to + 40% CC							
+41 to + 100% CC				1			1
Total	12			1		4	18
All Conifer	29,141	6,737	50	6,668	3,621	3,450	49,667

Table C-108 Acres of Verified Change in Tuolumne County by Cause and Hardwood Cover Type

	Fire	Harvest	Regrowth	Other	Unverified	All Causes
Blue Oak-Foothill Pine						
-71 to -100% CC	880				4	884
-41 to -70% CC	249				2	251
-16 to -40% CC	1,378				12	1,390
+16 to + 40% CC			8			8
Total	2,506		8		18	2,533
Blue Oak Woodland						
-71 to -100% CC	5				8	13
-41 to -70% CC	6				10	16
-16 to -40% CC	53				10	63
+16 to + 40% CC					7	7
+41 to + 100% CC					1	1
Total	64				35	99
Montane Hardwood						
-71 to -100% CC	2,772	36		5	132	2,945
-41 to -70% CC	812	25		8	127	972
-16 to -40% CC	2,203	19		23	135	2,379
+16 to + 40% CC			103	1	16	120
+41 to + 100% CC			13	1	22	35
Total	5,787	79	115	38	431	6,450
Montane Riparian						
-71 to -100% CC	5					5
-41 to -70% CC						
-16 to -40% CC	3					3
Total	9					9
All Hardwood	8,366	79	123	38	485	9,091

Table C-109 Acres of Verified Change in Tuolumne County by Cause and Shrub/Chaparral Cover Type

	Fire	Harvest	Develop-ment	Regrowth	Other	Unverified	All Causes
Chamise-Redshank Chaparral							
-71 to -100% CC	54		7			43	104
-41 to -70% CC	56		5			57	119
-16 to -40% CC	38		3			26	67
+16 to + 40% CC				4		10	13
+41 to + 100% CC						8	8
Total	149		15	4		144	311
Mixed Chaparral							
-71 to -100% CC	610	28	2		85	129	853
-41 to -70% CC	491	26	2		49	88	655
-16 to -40% CC	361	1			12	24	398
+16 to + 40% CC				200	2	48	250
+41 to + 100% CC				155	2	31	189
Total	1,462	54	4	355	151	320	2,346
Montane Chaparral							
-71 to -100% CC	313	79				49	441
-41 to -70% CC	333	37				32	402
-16 to -40% CC	698	9				29	736
+16 to + 40% CC				160		31	191
+41 to + 100% CC				21		10	31
Total	1,343	125		181		152	1,801
Sagebrush							
+16 to + 40% CC						2	2
+41 to + 100% CC							
Total						2	2
All Shrub/Chaparral	2,954	180	18	540	151	617	4,459

Table C-110 Acres of Verified Change in Tuolumne County by Cause and Grass/Forb Cover Type

	Fire	Harvest	Regrowth	Other	Unverified	All Causes
Annual Grass						
Grass Decrease > 15%	300	18		6	45	369
Grass Increase > 15%			116	2	10	129
Total	300	18	116	8	55	497
Wet Meadow						
Grass Decrease > 15%		1			1	2
Total		1			1	2
All Grass/Forb	300	19	116	8	56	499

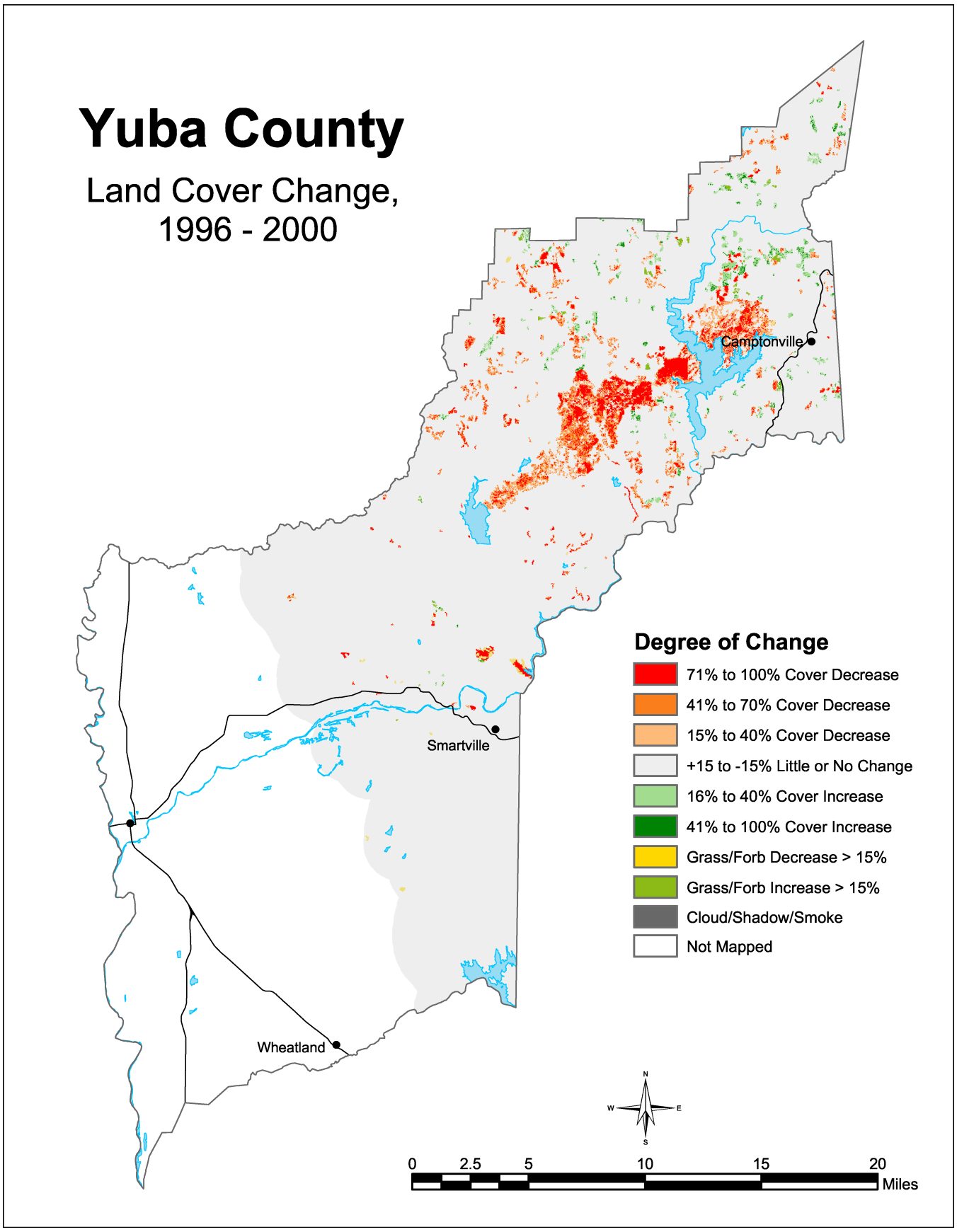

Yuba County
Land Cover Change,
1996 - 2000
Camptonville
Smartville
Wheatland
Degree of Change
71% to 100% Cover Decrease
41% to 70% Cover Decrease
15% to 40% Cover Decrease
+15 to -15% Little or No Change
16% to 40% Cover Increase
41% to 100% Cover Increase
Grass/Forb Decrease > 15%
Grass/Forb Increase > 15%
Cloud/Shadow/Smoke
Not Mapped
N
W
E
S
0
2.5
5
10
15
20
Miles

Table C-111 Acres of Classified Change in Yuba County by Lifeform Type and Owner Class

	Forest Service											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Forest Service Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	660	2	37	1	4	3					701	2
-41 to -70% CC	213	1	14		1						228	1
-16 to -40% CC	914	2	91	3	1	1					1,006	2
-15 to + 15% CC (Little or No Change)	36,852	93	3,183	94	141	91	4	100	127	95	40,307	93
+16 to + 40% CC	699	2	47	1	3	2					749	2
+41 to + 100% CC	170		5		5	3					179	
Grass Increase > 15%									7	5	7	
Total	39,508	100	3,377	100	154	100	4	100	134	100	43,177	100

	Other Public											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Other Public Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	96	10	227	2	4	3					328	1
-41 to -70% CC	15	2	69	1	5	4					89	
-16 to -40% CC	56	6	41								96	
-15 to + 15% CC (Little or No Change)	807	82	13,400	97	133	94	10,656	98	84	100	25,080	97
+16 to + 40% CC	5		27								31	
+41 to + 100% CC	1		4								5	
Grass Decrease > 15%							195	2			195	1
Grass Increase > 15%							7				7	
Total	980	100	13,768	100	142	100	10,858	100	84	100	25,831	100

	Private											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		Private Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	3,671	7	1,426	2	39	3					5,136	3
-41 to -70% CC	1,499	3	1,359	2	52	4					2,910	2
-16 to -40% CC	1,974	4	1,466	2	6						3,446	2
-15 to + 15% CC (Little or No Change)	46,527	85	70,552	94	1,312	90	31,404	100	811	75	150,605	92
+16 to + 40% CC	1,126	2	160		26	2					1,312	1
+41 to + 100% CC	226		26		17	1					269	
Grass Decrease > 15%							91		29	3	120	
Grass Increase > 15%							36		242	22	277	
Total	55,023	100	74,989	100	1,451	100	31,531	100	1,081	100	164,076	100

Table C-111 Acres of Classified Change in Yuba County by Lifeform Type and Owner Class (cont.)

	All Owners											
	Conifer		Hardwood		Shrub/Chaparral		Grass/Forb		Barren		All Owners Total	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
-71 to -100% CC	4,428	5	1,691	2	47	3					6,165	3
-41 to -70% CC	1,727	2	1,442	2	57	3					3,227	1
-16 to -40% CC	2,944	3	1,597	2	7						4,548	2
-15 to + 15% CC (Little or No Change)	84,186	88	87,136	95	1,586	91	42,064	99	1,021	79	215,992	93
+16 to + 40% CC	1,830	2	234		29	2					2,092	1
+41 to + 100% CC	397		35		22	1					454	
Grass Decrease > 15%							286	1	29	2	315	
Grass Increase > 15%							43		249	19	292	
Total	95,511	100	92,134	100	1,748	100	42,393	100	1,299	100	233,084	100

Table C-112 Acres of Verified Change in Yuba County by Cause and Lifeform

	Fire	Harvest	Regrowth	Unverified	All Causes
Conifer					
-71 to -100% CC	3,454	104		870	4,428
-41 to -70% CC	696	40		991	1,727
-16 to -40% CC	2,039	22		883	2,944
+16 to + 40% CC			778	1,052	1,830
+41 to + 100% CC			132	265	397
Total	6,189	166	910	4,061	11,325
Hardwood					
-71 to -100% CC	991			700	1,691
-41 to -70% CC	1,062			380	1,442
-16 to -40% CC	1,382			215	1,597
+16 to + 40% CC			6	228	234
+41 to + 100% CC			1	34	35
Total	3,434		7	1,557	4,999
Shrub/Chaparral					
-71 to -100% CC	27			20	47
-41 to -70% CC	38			19	57
-16 to -40% CC	5			2	7
+16 to + 40% CC			9	20	29
+41 to + 100% CC			3	19	22
Total	70		12	80	162
Grass/Forb					
Grass Decrease > 15%	48			238	286
Grass Increase > 15%				43	43
Total	48			281	329
Barren					
Grass Decrease > 15%	5			24	29
Grass Increase > 15%			39	210	249
Total	5		39	234	277
All Lifeforms	9,746	166	967	6,212	17,092

Table C-113 Acres of Classified Change in Yuba County by Conifer Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Closed Cone Pine-Cypress								
-71 to -100% CC								
-41 to -70% CC					4	4	4	4
-16 to -40% CC					6	7	6	7
-15 to + 15% CC (Little or No Change)				100	82	89	82	89
Total				100	92	100	92	100
Douglas Fir								
-71 to -100% CC	462	3	12	16	1,614	9	2,088	6
-41 to -70% CC	118	1	2	3	424	2	544	2
-16 to -40% CC	585	3	7	8	578	3	1,170	3
-15 to + 15% CC (Little or No Change)	16,885	92	54	68	14,696	83	31,635	88
+16 to + 40% CC	199	1	4	5	249	1	452	1
+41 to + 100% CC	34		1	1	47		82	
Total	18,283	100	80	100	17,608	100	35,970	100
Montane Hardwood-Conifer								
-71 to -100% CC	82	2	7	2	582	5	671	4
-41 to -70% CC	54	1	2	1	350	3	406	3
-16 to -40% CC	218	6	5	1	490	4	713	5
-15 to + 15% CC (Little or No Change)	3,162	86	370	96	10,099	86	13,630	86
+16 to + 40% CC	136	4			169	1	305	2
+41 to + 100% CC	44	1			47		92	1
Total	3,697	100	384	100	11,737	100	15,818	100
Ponderosa Pine								
-71 to -100% CC	3		78	15	868	7	948	7
-41 to -70% CC	1		11	2	449	3	461	3
-16 to -40% CC	2		44	9	629	5	675	5
-15 to + 15% CC (Little or No Change)	1,037	96	378	74	10,853	84	12,269	85
+16 to + 40% CC	25	2	1		89	1	115	1
+41 to + 100% CC	7	1			12		20	
Total	1,075	100	511	100	12,901	100	14,488	100
Sierran Mixed Conifer								
-71 to -100% CC	114	1			607	5	721	2
-41 to -70% CC	40				272	2	312	1
-16 to -40% CC	109	1			271	2	380	1
-15 to + 15% CC (Little or No Change)	15,768	96	4	100	10,797	85	26,570	91
+16 to + 40% CC	338	2			619	5	957	3
+41 to + 100% CC	85	1			120	1	204	1
Total	16,453	100	4	100	12,686	100	29,143	100
All Conifer	39,508		980		55,023		95,511	

Table C-114 Acres of Classified Change in Yuba County by Hardwood Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Blue Oak-Foothill Pine								
-71 to -100% CC			6	1	81	4	86	4
-41 to -70% CC					60	3	60	3
-16 to -40% CC			1		49	3	50	2
-15 to + 15% CC (Little or No Change)		100	384	98	1,612	89	1,996	91
Total		100	391	100	1,802	100	2,192	100
Blue Oak Woodland								
-71 to -100% CC			115	1	134		249	1
-41 to -70% CC			4		94		98	
-16 to -40% CC			8		67		75	
-15 to + 15% CC (Little or No Change)			8,572	99	34,342	99	42,913	99
+16 to + 40% CC			2		18		20	
+41 to + 100% CC			1		7		8	
Total			8,701	100	34,662	100	43,362	100
Coastal Oak Woodland								
-71 to -100% CC					1	4	1	4
-41 to -70% CC					2	10	2	10
-16 to -40% CC						2		2
-15 to + 15% CC (Little or No Change)					19	84	19	84
Total					22	100	22	100
Montane Hardwood								
-71 to -100% CC	37	1	107	2	1,199	3	1,343	3
-41 to -70% CC	14		65	1	1,187	3	1,267	3
-16 to -40% CC	91	3	31	1	1,337	4	1,458	3
-15 to + 15% CC (Little or No Change)	3,171	94	4,282	95	33,208	90	40,661	90
+16 to + 40% CC	47	1	25	1	142		214	
+41 to + 100% CC	5		4		19		27	
Total	3,365	100	4,514	100	37,091	100	44,970	100
Montane Riparian								
-41 to -70% CC								
-16 to -40% CC								
-15 to + 15% CC (Little or No Change)	12	100	113	100	206	100	331	100
Total	12	100	113	100	206	100	331	100
Valley Oak Woodland								
-71 to -100% CC					12	1	12	1
-41 to -70% CC					15	1	15	1
-16 to -40% CC					13	1	13	1
-15 to + 15% CC (Little or No Change)			50	100	1,166	97	1,216	97
Total			50	100	1,206	100	1,256	100
All Hardwood	3,377		13,768		74,989		92,134	

Table C-115 Acres of Classified Change in Yuba County by Shrub/Chaparral Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Mixed Chaparral								
-71 to -100% CC	4	3	4	3	39	3	46	3
-41 to -70% CC	1	1	5	4	50	4	56	4
-16 to -40% CC	1	1			5		6	
-15 to + 15% CC (Little or No Change)	105	90	133	94	1,225	92	1,463	92
+16 to + 40% CC	2	2			8	1	10	1
+41 to + 100% CC	4	3			6		10	1
Total	117	100	142	100	1,332	100	1,592	100
Montane Chaparral								
-71 to -100% CC								
-41 to -70% CC					1	1	1	1
-16 to -40% CC					1	1	1	1
-15 to + 15% CC (Little or No Change)	36	96			87	73	123	79
+16 to + 40% CC		1			18	15	19	12
+41 to + 100% CC	1	2			11	9	12	8
Total	37	100			119	100	156	100
All Shrub/Chaparral	154		142		1,451		1,748	

Table C-116 Acres of Classified Change in Yuba County by Grass/Forb Cover Type and Owner Class

	Forest Service		Other Public		Private		All Owners	
	Acres	%	Acres	%	Acres	%	Acres	%
Annual Grass								
-15 to + 15% CC (Little or No Change)	4	100	10,656	98	31,378	100	42,037	99
Grass Decrease > 15%			195	2	91		286	1
Grass Increase > 15%			7		36		43	
Total	4	100	10,858	100	31,505	100	42,366	100
Freshwater Emergen Wetland								
-15 to + 15% CC (Little or No Change)					21	100	21	100
Total					21	100	21	100
Wet Meadow								
-15 to + 15% CC (Little or No Change)					5	100	5	100
Total					5	100	5	100
All Grass/Forb	4		10,858		31,531		42,393	

Table C-117 Acres of Verified Change in Yuba County by Cause and Conifer Cover Type

	Fire	Harvest	Regrowth	Unverified	All Causes
Closed Cone Pine-Cypress					
-71 to -100% CC					
-41 to -70% CC	4				4
-16 to -40% CC	6				6
Total	10				10
Douglas Fir					
-71 to -100% CC	1,797	29		262	2,088
-41 to -70% CC	267	8		269	544
-16 to -40% CC	923	4		243	1,170
+16 to + 40% CC			164	288	452
+41 to + 100% CC			20	62	82
Total	2,986	41	184	1,124	4,335
Montane Hardwood-Conifer					
-71 to -100% CC	500	9		161	671
-41 to -70% CC	275	4		128	406
-16 to -40% CC	596	3		114	713
+16 to + 40% CC			50	256	305
+41 to + 100% CC			13	78	92
Total	1,371	16	63	737	2,187
Ponderosa Pine					
-71 to -100% CC	702			247	948
-41 to -70% CC	104			357	461
-16 to -40% CC	378			297	675
+16 to + 40% CC			15	101	115
+41 to + 100% CC			1	18	20
Total	1,184		16	1,019	2,219
Sierran Mixed Conifer					
-71 to -100% CC	455	66		200	721
-41 to -70% CC	47	28		237	312
-16 to -40% CC	136	15		229	380
+16 to + 40% CC			550	408	957
+41 to + 100% CC			97	107	204
Total	637	109	647	1,180	2,574
All Conifer	6,189	166	910	4,061	11,325

Table C-118 Acres of Verified Change in Yuba County by Cause and Hardwood Cover Type

	Fire	Regrowth	Unverified	All Causes
Blue Oak-Foothill Pine				
-71 to -100% CC	66		20	86
-41 to -70% CC	51		9	60
-16 to -40% CC	45		5	50
Total	161		35	196
Blue Oak Woodland				
-71 to -100% CC	7		242	249
-41 to -70% CC	43		55	98
-16 to -40% CC	54		21	75
+16 to + 40% CC			20	20
+41 to + 100% CC			8	8
Total	103		346	449
Coastal Oak Woodland				
-71 to -100% CC			1	1
-41 to -70% CC			2	2
-16 to -40% CC				
Total			4	4
Montane Hardwood				
-71 to -100% CC	913		430	1,343
-41 to -70% CC	954		313	1,267
-16 to -40% CC	1,271		187	1,458
+16 to + 40% CC		6	208	214
+41 to + 100% CC		1	27	27
Total	3,139	7	1,164	4,310
Montane Riparian				
-41 to -70% CC				
-16 to -40% CC				
Total				1
Valley Oak Woodland				
-71 to -100% CC	5		7	12
-41 to -70% CC	14		1	15
-16 to -40% CC	12		1	13
Total	31		9	40
All Hardwood	3,434	7	1,557	4,999

Table C-119 Acres of Verified Change in Yuba County by Cause and Shrub/Chaparral Cover Type

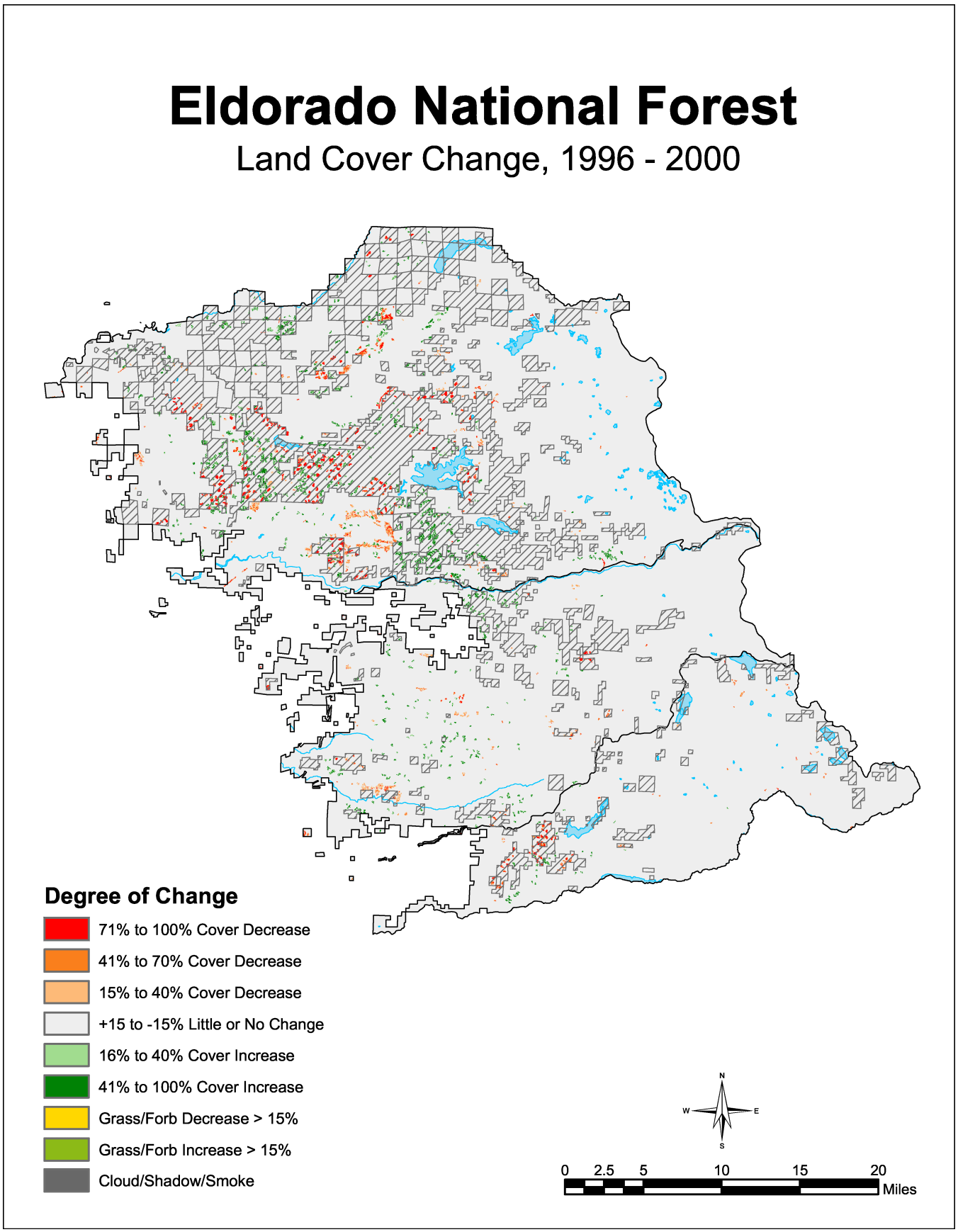
	Fire	Regrowth	Unverified	All Causes
Mixed Chaparral				
-71 to -100% CC	27		20	46
-41 to -70% CC	38		18	56
-16 to -40% CC	5		1	6
+16 to + 40% CC			10	10
+41 to + 100% CC			10	10
Total	70		58	128
Montane Chaparral				
-71 to -100% CC				
-41 to -70% CC			1	1
-16 to -40% CC			1	1
+16 to + 40% CC		9	10	19
+41 to + 100% CC		3	9	12
Total		12	22	33
All Shrub/Chaparral	70	12	80	162

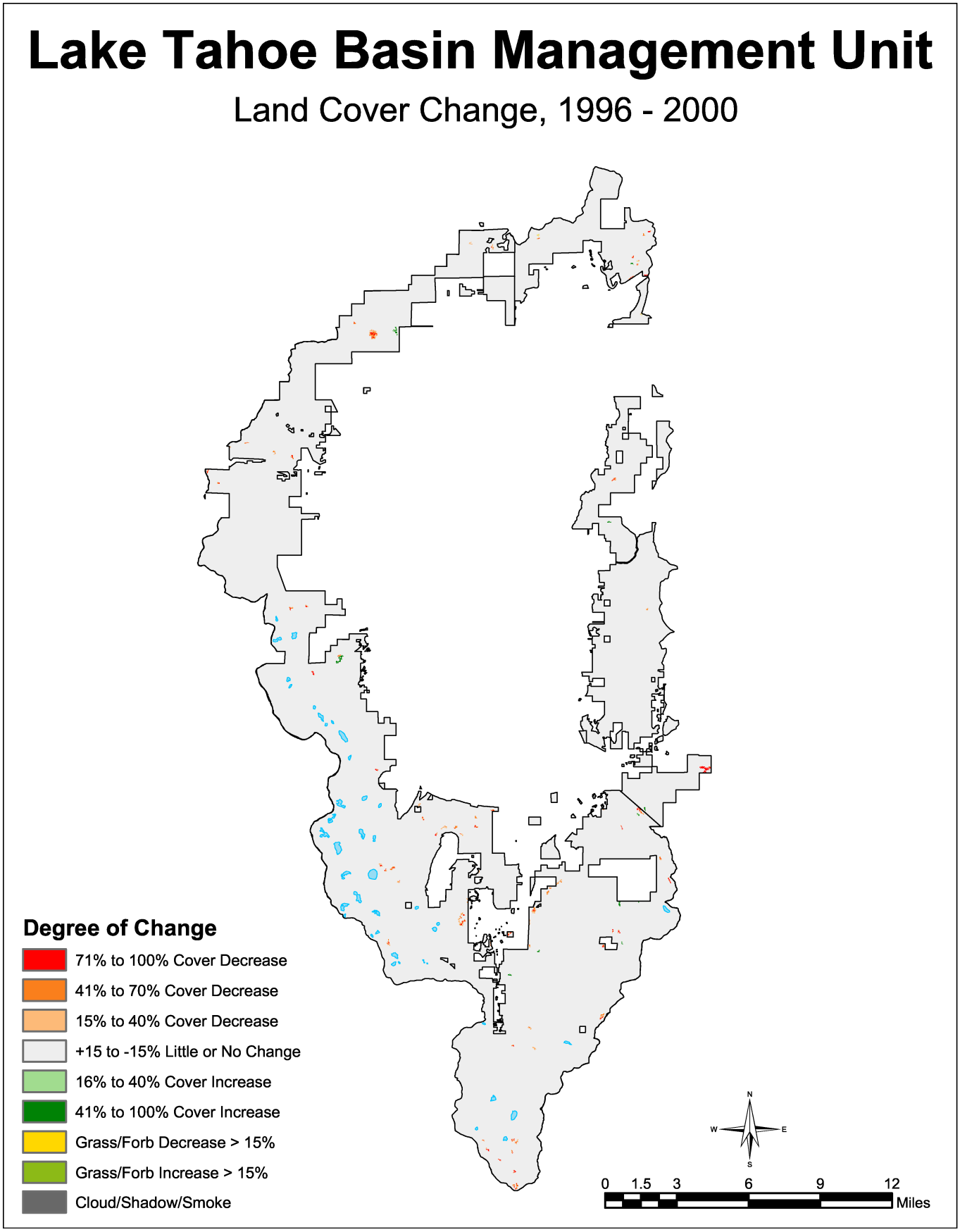
Table C-120 Acres of Verified Change in Yuba County by Cause and Grass/Forb Cover Type

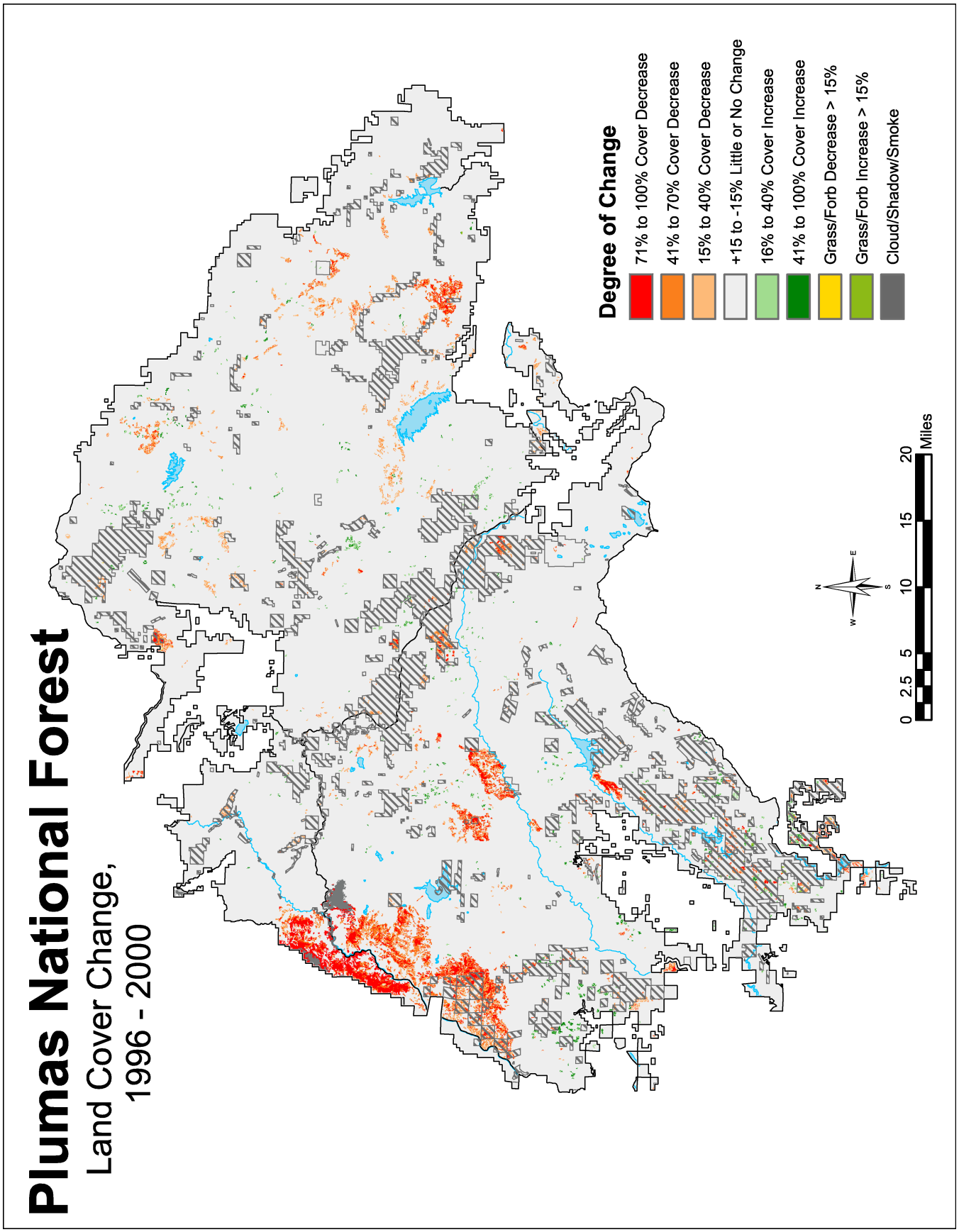
	Fire	Regrowth	Unverified	All Causes
Annual Grass				
Grass Decrease > 15%	48		238	286
Grass Increase > 15%			43	43
Total	48		281	329
Barren				
Grass Decrease > 15%	5		24	29
Grass Increase > 15%		39	210	249
Total	5	39	234	277
All Grass/Forb	53	39	514	606

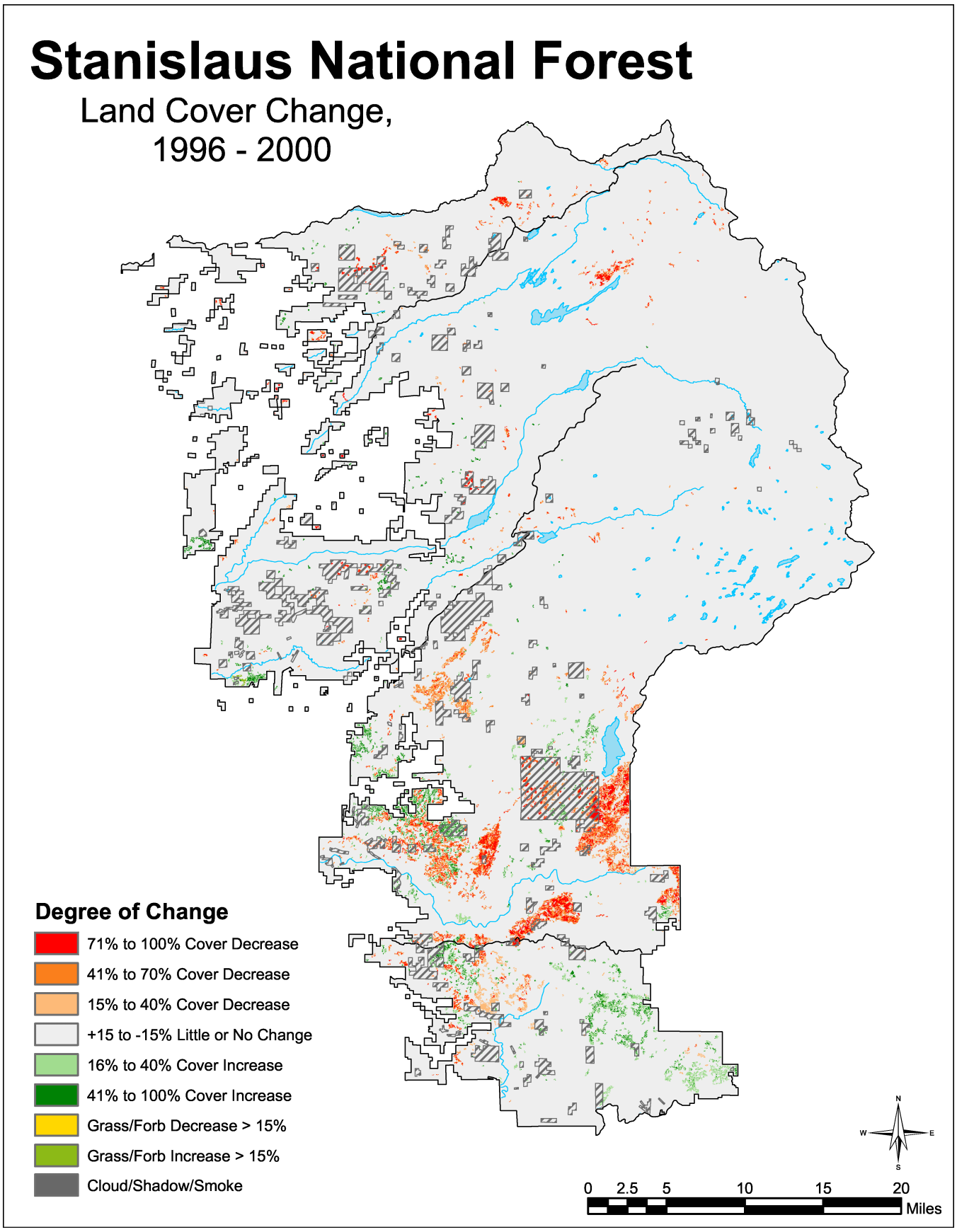
National Forest Maps and Tables

1. Forest Change Maps
2. Acres of Classified Change by Lifeform and National Forest
3. Acres of Classified Change by Cause and Lifeform
4. Acres of Classified Conifer Change by CALVEG Type and National Forest
5. Acres of Classified Hardwood Change by CALVEG Type and National Forest
6. Acres of Classified Shrub/Chaparral Change by CALVEG Type and National Forest
7. Acres of Classified Grass/Forb Change by CALVEG Type and National Forest
8. Acres of Verified Change by Cause and Conifer CALVEG Type
9. Acres of Verified Change by Cause and Hardwood CALVEG Type
10. Acres of Verified Change by Cause and Shrub/Chaparral CALVEG Type
11. Acres of Verified Change by Cause and Grass/Forb CALVEG Type


Eldorado National Forest
Land Cover Change, 1996 - 2000
Degree of Change
71% to 100% Cover Decrease
41% to 70% Cover Decrease
15% to 40% Cover Decrease
+15 to -15% Little or No Change
16% to 40% Cover Increase
41% to 100% Cover Increase
Grass/Forb Decrease > 15%
Grass/Forb Increase > 15%
Cloud/Shadow/Smoke
N
W
E
S
0 2.5 5 10 15 20
Miles


Lake Tahoe Basin Management Unit
Land Cover Change, 1996 - 2000
Degree of Change
71% to 100% Cover Decrease
41% to 70% Cover Decrease
15% to 40% Cover Decrease
+15 to -15% Little or No Change
16% to 40% Cover Increase
41% to 100% Cover Increase
Grass/Forb Decrease > 15%
Grass/Forb Increase > 15%
Cloud/Shadow/Smoke
N
W
E
S
0 1.5 3 6 9 12
Miles


Plumas National Forest
Land Cover Change,
1996 - 2000
Degree of Change
71% to 100% Cover Decrease
41% to 70% Cover Decrease
15% to 40% Cover Decrease
+15 to -15% Little or No Change
16% to 40% Cover Increase
41% to 100% Cover Increase
Grass/Forb Decrease > 15%
Grass/Forb Increase > 15%
Cloud/Shadow/Smoke
0 2.5 5 10 15 20
Miles
N
E
S
W


Stanislaus National Forest
Land Cover Change,
1996 - 2000
Degree of Change
71% to 100% Cover Decrease
41% to 70% Cover Decrease
15% to 40% Cover Decrease
+15 to -15% Little or No Change
16% to 40% Cover Increase
41% to 100% Cover Increase
Grass/Forb Decrease > 15%
Grass/Forb Increase > 15%
Cloud/Shadow/Smoke
N
W
E
S
0 2.5 5 10 15 20
Miles

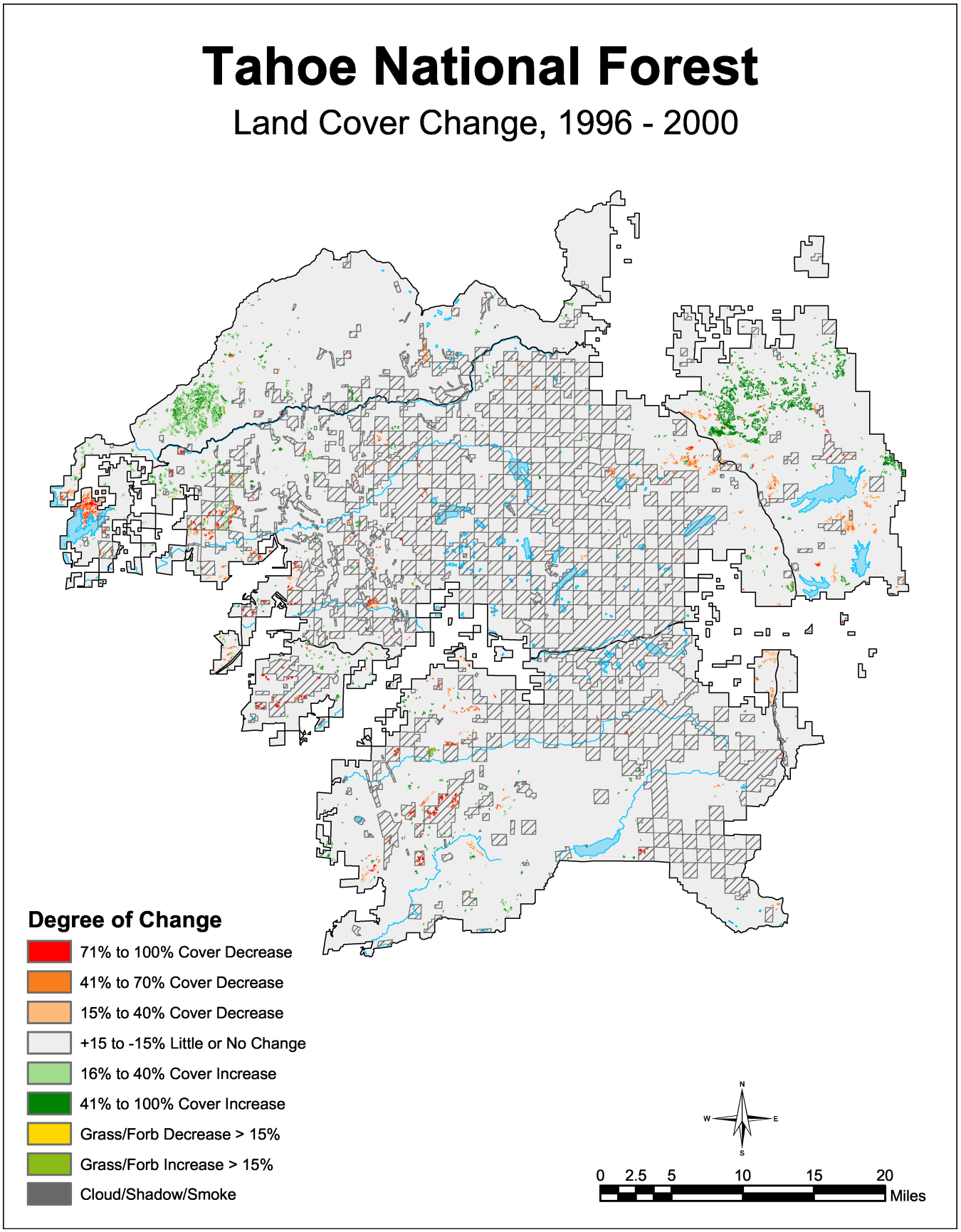

Tahoe National Forest
Land Cover Change, 1996 - 2000
Degree of Change
71% to 100% Cover Decrease
41% to 70% Cover Decrease
15% to 40% Cover Decrease
+15 to -15% Little or No Change
16% to 40% Cover Increase
41% to 100% Cover Increase
Grass/Forb Decrease > 15%
Grass/Forb Increase > 15%
Cloud/Shadow/Smoke
N
W
E
S
0 2.5 5 10 15 20
Miles

Table F-1 Acres of Classified Change by Lifeform and National Forest

	Eldorado		Lake Tahoe Basin Management Unit		Plumas		Stanislaus		Tahoe		All Forests	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
Conifer												
-71 to -100% CC	843		51		13,921	1	5,037	1	1,033		20,884	1
-41 to -70% CC	895		95		10,436	1	5,864	1	1,280		18,568	1
-16 to -40% CC	1,320		95		8,253	1	4,314	1	2,992		16,973	1
-15 to + 15% CC (Little or No Change)	475,141	99	112,378	100	970,743	96	570,197	96	630,254	97	2,758,712	97
+16 to + 40% CC	477		5		2,128		4,725	1	4,805	1	12,139	
+41 to + 100% CC	1,802		32		2,007		3,662	1	6,264	1	13,767	
Cloud or Cloud Shadow					2,522						2,522	
Total	480,477	100	112,656	100	1,010,009	100	593,797	100	646,627	100	2,843,565	100
Hardwood												
-71 to -100% CC	3		4	1	1,844	4	1,326	2	73		3,250	2
-41 to -70% CC	5		1		1,188	2	426	1	32		1,652	1
-16 to -40% CC	6		7	1	809	2	891	1	141		1,854	1
-15 to + 15% CC (Little or No Change)	16,998	100	698	98	44,453	92	61,499	95	43,456	99	167,104	96
+16 to + 40% CC	3				24		219		34		280	
+41 to + 100% CC	20		1		14		36		43		114	
Cloud or Cloud Shadow					79						79	
Total	17,034	100	711	100	48,409	100	64,398	100	43,779	100	174,331	100
Shrub/Chaparral												
-71 to -100% CC	42		56		975	1	1,166	1	94		2,333	1
-41 to -70% CC	47		49		737	1	798	1	98		1,729	1
-16 to -40% CC	30		27		83		584	1	52		776	
-15 to + 15% CC (Little or No Change)	33,340	100	25,621	99	95,331	98	95,034	96	82,241	99	331,566	98
+16 to + 40% CC	17				118		1,144	1	94		1,373	
+41 to + 100% CC	4		9		58		190		553	1	813	
Cloud or Cloud Shadow					82						82	
Total	33,480	100	25,762	100	97,385	100	98,916	100	83,131	100	338,673	100
Grass/Forb												
-15 to + 15% CC (Little or No Change)	7,820	100	5,519	100	23,082	100	19,735	99	10,802	100	66,958	100
Grass Decrease > 15%	5		4		15		120	1	8		152	
Grass Increase > 15%					14		99		1		114	
Total	7,825	100	5,523	100	23,111	100	19,954	100	10,811	100	67,224	100
Barren												
-15 to + 15% CC (Little or No Change)	48,150	100	3,577	100	11,525	100	112,340	100	29,106	100	204,697	100
Grass Decrease > 15%	4		8		25		25		20		82	
Grass Increase > 15%	2				9				98		109	
Cloud or Cloud Shadow					13						13	
Total	48,155	100	3,585	100	11,571	100	112,365	100	29,223	100	204,900	100
All Lifeforms	586,971		148,237		1,190,485		889,429		813,571		3,628,693	

Table F-2 Acres of Verified Change in the Eldorado National Forest by Cause and Lifeform

	Fire	Harvest	Regrowth	Other	Unverified	All Causes
Conifer						
-71 to -100% CC	2	551		93	197	843
-41 to -70% CC	5	614		53	223	895
-16 to -40% CC	9	783		77	451	1,320
+16 to + 40% CC			388		89	477
+41 to + 100% CC			1,276		526	1,802
Total	16	1,947	1,664	223	1,485	5,336
Hardwood						
-71 to -100% CC					3	3
-41 to -70% CC		2			3	5
-16 to -40% CC		3			3	6
+16 to + 40% CC			2		1	3
+41 to + 100% CC			6		14	20
Total		5	7		23	36
Shrub/Chaparral						
-71 to -100% CC		4		3	36	42
-41 to -70% CC		3		1	43	47
-16 to -40% CC		1		1	29	30
+16 to + 40% CC			4		14	17
+41 to + 100% CC			1		3	4
Total		7	4	5	124	140
Grass/Forb						
Grass Decrease > 15%					5	5
Grass Increase > 15%						
Total					5	5
Barren						
Grass Decrease > 15%		2			3	4
Grass Increase > 15%					2	2
Total		2			4	6
All Lifeforms	16	1,962	1,676	228	1,641	5,523

Table F-3 Acres of Verified Change in the Lake Tahoe Basin Management Unit National Forest by Cause and Lifeform

	Fire	Harvest	Development	Other	Unverified	All Causes
Conifer						
-71 to -100% CC	11	13	1	8	18	51
-41 to -70% CC	25	26	1	3	41	95
-16 to -40% CC	11	29	1	3	51	95
+16 to + 40% CC				1	4	5
+41 to + 100% CC				2	30	32
Total	46	68	2	17	144	278
Hardwood						
-71 to -100% CC					4	4
-41 to -70% CC					1	1
-16 to -40% CC					7	7
+41 to + 100% CC					1	1
Total					12	12
Shrub/Chaparral						
-71 to -100% CC	26	2		2	26	56
-41 to -70% CC	2	2	1	1	42	49
-16 to -40% CC	2				25	27
+16 to + 40% CC						
+41 to + 100% CC				3	7	9
Total	30	5	1	6	99	141
Grass/Forb						
Grass Decrease > 15%					4	4
Total					4	4
Barren						
Grass Decrease > 15%					8	8
Total					8	8
All Lifeforms	76	73	3	23	264	439

Table F-4 Acres of Verified Change in the Plumas National Forest by Cause and Lifeform

	Fire	Harvest	Regrowth	Unverified	All Causes
Conifer					
-71 to -100% CC	12,998	443		481	13,921
-41 to -70% CC	8,065	1,391		980	10,436
-16 to -40% CC	2,638	2,790		2,825	8,253
+16 to + 40% CC			477	1,651	2,128
+41 to + 100% CC			393	1,615	2,007
Total	23,701	4,623	870	7,551	36,744
Hardwood					
-71 to -100% CC	1,818	3		22	1,844
-41 to -70% CC	1,169	3		16	1,188
-16 to -40% CC	732	13		64	809
+16 to + 40% CC				24	24
+41 to + 100% CC				14	14
Total	3,719	20		139	3,878
Shrub/Chaparral					
-71 to -100% CC	970	1		4	975
-41 to -70% CC	726	3		9	737
-16 to -40% CC	54	7		22	83
+16 to + 40% CC			10	109	118
+41 to + 100% CC			2	56	58
Total	1,750	11	12	199	1,972
Grass/Forb					
Grass Decrease > 15%	5	4		6	15
Grass Increase > 15%			2	11	14
Total	5	4	2	18	29
Barren					
Grass Decrease > 15%	24			1	25
Grass Increase > 15%				9	9
Total	24			10	34
All Lifeforms	29,199	4,658	884	7,916	42,657

Table F-5 Acres of Verified Change in the Stanislaus National Forest by Cause and Lifeform

	Fire	Harvest	Development	Regrowth	Other	Unverified	All Causes
Conifer							
-71 to -100% CC	3,222	639	18		727	431	5,037
-41 to -70% CC	2,553	1,585	22		1,292	412	5,864
-16 to -40% CC	1,626	922	11		764	991	4,314
+16 to + 40% CC				3,887	401	437	4,725
+41 to + 100% CC				2,928	220	514	3,662
Total	7,400	3,146	51	6,815	3,403	2,785	23,600
Hardwood							
-71 to -100% CC	1,278	10			11	27	1,326
-41 to -70% CC	382	11			9	25	426
-16 to -40% CC	797	13			35	45	891
+16 to + 40% CC				145	1	74	219
+41 to + 100% CC				15		21	36
Total	2,457	34		160	56	192	2,899
Shrub/Chaparral							
-71 to -100% CC	677	52			87	350	1,166
-41 to -70% CC	493	42			56	207	798
-16 to -40% CC	417	6			13	149	584
+16 to + 40% CC				1,113	1	30	1,144
+41 to + 100% CC				171		18	190
Total	1,586	101		1,284	157	755	3,882
Grass/Forb							
Grass Decrease > 15%	92	8			6	14	120
Grass Increase > 15%				95	1	4	99
Total	92	8		95	7	17	219
Barren							
Grass Decrease > 15%	11	2				12	25
Grass Increase > 15%							
Total	11	2				12	25
All Lifeforms	11,546	3,291	51	8,354	3,623	3,760	30,625

Table F-6 Acres of Verified Change in the Tahoe National Forest by Cause and Lifeform

	Fire	Harvest	Development	Regrowth	Other	Unverified	All Causes
Conifer							
-71 to -100% CC	472	365	1		49	146	1,033
-41 to -70% CC	140	915	1		25	199	1,280
-16 to -40% CC	681	1,547	1		85	677	2,992
+16 to + 40% CC				4,479	26	300	4,805
+41 to + 100% CC				5,639	4	621	6,264
Total	1,293	2,828	3	10,118	189	1,943	16,374
Hardwood							
-71 to -100% CC	39	3				31	73
-41 to -70% CC	17	3				12	32
-16 to -40% CC	82	3				56	141
+16 to + 40% CC				29		5	34
+41 to + 100% CC				11		32	43
Total	138	10		40		137	324
Shrub/Chaparral							
-71 to -100% CC	4	20	1		12	57	94
-41 to -70% CC		10	2		2	85	98
-16 to -40% CC	1	4			2	45	52
+16 to + 40% CC				82		12	94
+41 to + 100% CC				526		27	553
Total	5	34	3	607	16	225	890
Grass/Forb							
Grass Decrease > 15%		2				6	8
Grass Increase > 15%				1			1
Total		2		1		6	9
Barren							
Grass Decrease > 15%						19	20
Grass Increase > 15%				84	7	7	98
Total				84	7	26	117
All Lifeforms	1,436	2,873	6	10,850	212	2,337	17,713

Table F-7 Classified Conifer Change by CALVEG Type and National Forest

	Eldorado		Lake Tahoe Basin Management Unit		Plumas		STANISLAUS		Tahoe		All Forests	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
Unknown Conifer												
-15 to + 15% CC (Little or No Change)			32	100							32	100
Total			32	100							32	100
Douglas Fir - Pine												
-71 to -100% CC	36				1,882	2	42		449	1	2,410	1
-41 to -70% CC	39				919	1	63		174		1,196	
-16 to -40% CC	70				927	1	51		698	1	1,745	1
-15 to + 15% CC (Little or No Change)	46,670	99			110,381	96	16,823	97	57,238	95	231,112	96
+16 to + 40% CC	29				356		187	1	1,475	2	2,047	1
+41 to + 100% CC	93				560		240	1	517	1	1,410	1
Cloud or Cloud Shadow					397						397	
Total	46,936	100			115,422	100	17,407	100	60,552	100	240,317	100
Eastside Pine												
-71 to -100% CC					627				75		703	
-41 to -70% CC					1,245	1			320		1,564	1
-16 to -40% CC					1,942	1			745	1	2,687	1
-15 to + 15% CC (Little or No Change)					146,840	97			72,257	97	219,097	97
+16 to + 40% CC					117				66		183	
+41 to + 100% CC					167				936	1	1,103	
Total					150,938	100			74,399	100	225,337	100
Jeffrey Pine												
-71 to -100% CC			11		41		121		1		174	
-41 to -70% CC	1		25		98	1	47				169	
-16 to -40% CC			33		39		87		1		159	
-15 to + 15% CC (Little or No Change)	2,983	100	17,313	100	10,051	98	25,882	99	2,364	100	58,592	99
+16 to + 40% CC	1				1				1		3	
+41 to + 100% CC	5		2		2				2		10	
Total	2,988	100	17,382	100	10,231	100	26,137	100	2,369	100	59,107	100
Knobcone Pine												
-15 to + 15% CC (Little or No Change)							570	98	909	100	1,479	99
+16 to + 40% CC							11	2			11	1
+41 to + 100% CC							1				1	
Total							583	100	909	100	1,492	100

Table F-7 Classified Conifer Change by CALVEG Type and National Forest (cont.)

	Eldorado		Lake Tahoe Basin Management Unit		Plumas		STANISLAUS		Tahoe		All Forests	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
Lodgepole Pine												
-71 to -100% CC			19				177		4		200	
-41 to -70% CC	1		32		1		81		4		119	
-16 to -40% CC	2		31		4		111		14		162	
-15 to + 15% CC (Little or No Change)	9,702	100	24,997	100	1,289	100	61,057	99	5,280	100	102,326	100
+16 to + 40% CC			2								2	
+41 to + 100% CC			16				1				17	
Total	9,705	100	25,098	100	1,293	100	61,427	100	5,302	100	102,825	100
Mixed Conifer - Giant Sequoia												
-15 to + 15% CC (Little or No Change)							2	100	10	100	12	100
Total							2	100	10	100	12	100
Mixed Conifer - Fir												
-71 to -100% CC	280		13		1,373	1	539		116		2,321	
-41 to -70% CC	259		22		1,668	1	894	1	360		3,203	
-16 to -40% CC	303		18		2,687	1	571		703		4,282	1
-15 to + 15% CC (Little or No Change)	118,236	99	44,851	100	193,370	97	151,068	98	148,782	98	656,306	98
+16 to + 40% CC	182		4		403		393		122		1,103	
+41 to + 100% CC	631	1	12		294		335		2,331	2	3,602	1
Total	119,891	100	44,918	100	199,795	100	153,799	100	152,414	100	670,817	100
Mountain Hemlock												
-15 to + 15% CC (Little or No Change)							907	100	39	100	946	100
Total							907	100	39	100	946	100
McNab Cypress												
-15 to + 15% CC (Little or No Change)					10	100					10	100
Total					10	100					10	100
Mixed Conifer - Pine												
-71 to -100% CC	285				7,178	2	2,793	2	278		10,533	1
-41 to -70% CC	432				4,639	1	3,334	2	256		8,661	1
-16 to -40% CC	773	1			1,893	1	1,901	1	455		5,023	1
-15 to + 15% CC (Little or No Change)	100,676	98			331,638	95	136,509	92	197,847	97	766,670	95
+16 to + 40% CC	155				988		2,072	1	2,880	1	6,095	1
+41 to + 100% CC	628	1			792		1,687	1	1,588	1	4,695	1
Cloud or Cloud Shadow					1,971	1					1,971	
Total	102,949	100			349,099	100	148,295	100	203,304	100	803,647	100

Table F-7 Classified Conifer Change by CALVEG Type and National Forest (cont.)

	Eldorado		Lake Tahoe Basin Management Unit		Plumas		STANISLAUS		Tahoe		All Forests	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
Gray Pine												
-71 to -100% CC					29	8					30	1
-41 to -70% CC					3	1					4	
-16 to -40% CC					3	1					3	
-15 to + 15% CC (Little or No Change)	280	100			335	91	530	100	1,168	100	2,313	98
Total	281	100			370	100	530	100	1,168	100	2,349	100
Ponderosa Pine												
-71 to -100% CC	99				43		1,293	1	37		1,472	1
-41 to -70% CC	61				68	1	1,381	2	36		1,546	1
-16 to -40% CC	94				46		1,507	2	156	1	1,803	1
-15 to + 15% CC (Little or No Change)	43,058	98			12,897	98	78,788	91	17,540	97	152,283	94
+16 to + 40% CC	73				12		2,059	2	171	1	2,315	1
+41 to + 100% CC	338	1			6		1,394	2	124	1	1,863	1
Cloud or Cloud Shadow					43						43	
Total	43,724	100			13,114	100	86,423	100	18,063	100	161,324	100
Red Fir												
-71 to -100% CC	13		7		143		70		7		240	
-41 to -70% CC	35		16		176		63		58		348	
-16 to -40% CC	43		13		81		82		84		304	
-15 to + 15% CC (Little or No Change)	121,731	100	20,632	100	49,858	99	81,391	100	83,503	100	357,115	100
+16 to + 40% CC	9				23		2		38		71	
+41 to + 100% CC	48		1		19		4		137		209	
Cloud or Cloud Shadow					6						6	
Total	121,879	100	20,670	100	50,305	100	81,612	100	83,827	100	358,293	100
Subalpine Conifers												
-71 to -100% CC	1		1				2				4	
-41 to -70% CC	4						1				5	
-16 to -40% CC	2						4				6	
-15 to + 15% CC (Little or No Change)	7,946	100	4,047	100	14	100	16,188	100	2,900	100	31,095	100
+16 to + 40% CC												
+41 to + 100% CC			1								1	
Total	7,953	100	4,050	100	14	100	16,195	100	2,900	100	31,111	100

Table F-7 Classified Conifer Change by CALVEG Type and National Forest (cont.)

	Eldorado		Lake Tahoe Basin Management Unit		Plumas		STANISLAUS		Tahoe		All Forests	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
White Fir												
-71 to -100% CC	128	1			2,605	2			66		2,799	2
-41 to -70% CC	63				1,619	1			72		1,754	1
-16 to -40% CC	33				633	1			135		800	
-15 to + 15% CC (Little or No Change)	23,858	99	507	100	114,003	96	482	100	40,130	98	178,980	96
+16 to + 40% CC	29				227				52		308	
+41 to + 100% CC	61				167				628	2	856	
Cloud or Cloud Shadow					105						105	
Total	24,171	100	507	100	119,359	100	482	100	41,083	100	185,602	100
Western Juniper												
-15 to + 15% CC (Little or No Change)					51	100			225	100	275	100
Total					51	100			225	100	275	100
Washoe Pine												
-15 to + 15% CC (Little or No Change)									6	100	6	100
Total									6	100	6	100
Western White Pine												
-15 to + 15% CC (Little or No Change)					8	100			57	100	65	100
Total					8	100			57	100	65	100

Table F-8 Classified Hardwood Change by CALVEG Type and National Forest

	Eldorado		Lake Tahoe Basin Management Unit		Plumas		STANISLAUS		Tahoe		All Forests	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
Mixed Hardwoods (Non-productive												
-71 to -100% CC									12	17	12	9
-41 to -70% CC									3	4	3	2
-16 to -40% CC									14	19	14	10
-15 to + 15% CC (Little or No Change)					63	100			45	61	108	79
Total												100
California Bay												
-15 to + 15% CC (Little or No Change)									44	100	44	100
Total									44	100	44	100
Canyon Live Oak												
-71 to -100% CC	1				396	2	729	2	16		1,141	1
-41 to -70% CC					330	2	214	1	12		557	1
-16 to -40% CC	2				399	2	411	1	24		836	1
-15 to + 15% CC (Little or No Change)	7,508	100			14,835	93	32,175	96	20,591	100	75,108	96
+16 to + 40% CC	1				10		130		17		158	
+41 to + 100% CC	6				7		32		20		65	
Cloud or Cloud Shadow					9						9	
Total	7,517	100			15,985	100	33,691	100	20,681	100	77,873	100
Blue Oak												
-15 to + 15% CC (Little or No Change)	125	100					39	100			164	100
Total	125	100					39	100			164	100
White Alder												
-15 to + 15% CC (Little or No Change)					8	100			18	100	26	100
Total					8	100			18	100	26	100
Fremont Cottonwood												
-15 to + 15% CC (Little or No Change)					7	100					7	100
Total					7	100					7	100
Madrone												
-71 to -100% CC										1		1
-41 to -70% CC									1	4	1	3
-16 to -40% CC										1		
-15 to + 15% CC (Little or No Change)					13	100			30	94	43	96
Total					13	100			32	100	45	100

Table F-8 Classified Hardwood Change by CALVEG Type and National Forest (cont.)

	Eldorado		Lake Tahoe Basin Management Unit		Plumas		STANISLAUS		Tahoe		All Forests	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
California Black Oak												
-71 to -100% CC	1				1,396	5	11		18		1,426	3
-41 to -70% CC	4				822	3	5		6		837	2
-16 to -40% CC	4				364	1	16		43		427	1
-15 to + 15% CC (Little or No Change)	6,011	100			23,851	90	3,204	99	18,039	99	51,104	95
+16 to + 40% CC	2				10		11		14		37	
+41 to + 100% CC	14				3		1		21		39	
Cloud or Cloud Shadow					66						66	
Total	6,034	100			26,513	100	3,247	100	18,141	100	53,935	100
California Black Oak												
-15 to + 15% CC (Little or No Change)									163	100	163	100
Total									163	100	163	100
Willow												
-71 to -100% CC					9	1	4	2	9	1	22	1
-41 to -70% CC					4		1		5		9	
-16 to -40% CC					22	2	3	1	21	2	46	2
-15 to + 15% CC (Little or No Change)					1,044	97	222	97	1,335	97	2,600	97
+16 to + 40% CC					1						1	
+41 to + 100% CC									1		1	
Total					1,079	100	229	100	1,371	100	2,679	100
Quaking Aspen												
-71 to -100% CC			4	1							5	
-41 to -70% CC			1		1						1	
-16 to -40% CC			7	1	2	1	2	1			12	1
-15 to + 15% CC (Little or No Change)			696	98	248	99	158	98	15	100	1,117	98
+41 to + 100% CC			1								1	
Total			709	100	251	100	161	100	15	100	1,136	100
Willow - Aspen												
-71 to -100% CC					4				1	1	5	
-41 to -70% CC					5						5	
-16 to -40% CC					8	1			2	1	10	1
-15 to + 15% CC (Little or No Change)					1,110	99			218	99	1,329	99
Total					1,127	100			222	100	1,348	100

Table F-8 Classified Hardwood Change by CALVEG Type and National Forest (cont.)

	Eldorado		Lake Tahoe Basin Management Unit		Plumas		STANISLAUS		Tahoe		All Forests	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
Tanoak (Madrone)												
-71 to -100% CC					7	1			3	2	10	1
-41 to -70% CC					2				1	1	4	
-16 to -40% CC					2				13	8	15	1
-15 to + 15% CC (Little or No Change)					1,201	99			135	88	1,336	98
+16 to + 40% CC					3				2	1	4	
+41 to + 100% CC					1						1	
Total					1,216	100			153	100	1,369	100
Interior Live Oak												
-71 to -100% CC							582	2			582	2
-41 to -70% CC							206	1			206	1
-16 to -40% CC							458	2			458	2
-15 to + 15% CC (Little or No Change)	3,238	100			104	100	25,702	95	7	100	29,050	96
+16 to + 40% CC							79				79	
+41 to + 100% CC							4				4	
Total	3,239	100			104	100	27,031	100	7	100	30,380	100
Black Cottonwood												
-15 to + 15% CC (Little or No Change)									51	100	51	100
Total									51	100	51	100
-71 to -100% CC	2	1			15	5					16	4
-41 to -70% CC											1	
-16 to -40% CC	1	1									1	
-15 to + 15% CC (Little or No Change)	106	97			297	94					403	95
+41 to + 100% CC					1						1	
Cloud or Cloud Shadow					4	1					4	1
Total	109	100			317	100					426	100
Mountain Alder												
-71 to -100% CC					18	1			13		31	1
-41 to -70% CC					25	1			4		28	1
-16 to -40% CC					10	1			25	1	35	1
-15 to + 15% CC (Little or No Change)	11	100	2	100	1,673	97			2,765	98	4,451	98
+16 to + 40% CC									1		1	
+41 to + 100% CC					2						2	
Cloud or Cloud Shadow												
Total	11	100	2	100	1,728	100			2,808	100	4,549	100

Table F-9 Classified Shrub/Chaparral Change by CALVEG Type and National Forest

	Eldorado		Lake Tahoe Basin Management Unit		Plumas		STANISLAUS		Tahoe		All Forests	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
Mixed Alpine Scrub												
-71 to -100% CC			7								7	
-41 to -70% CC			8								8	
-16 to -40% CC			4								4	
-15 to + 15% CC (Little or No Change)	1	100	2,256	99							2,257	99
+41 to + 100% CC			3								3	
Total	1	100	2,276	100							2,277	100
Bitterbrush												
-71 to -100% CC												
-41 to -70% CC									1	1	1	1
-16 to -40% CC												
-15 to + 15% CC (Little or No Change)									201	99	201	99
Total									203	100	203	100
Curlleaf Mountain Mahogany												
-15 to + 15% CC (Little or No Change)					836	100			1,296	100	2,132	100
+16 to + 40% CC									1		1	
+41 to + 100% CC									1		1	
Total					837	100			1,298	100	2,134	100
Basin Sagebrush												
-71 to -100% CC					7				38		45	
-41 to -70% CC	2	2	3		13				48		66	
-16 to -40% CC					12				9		21	
-15 to + 15% CC (Little or No Change)	96	98	1,142	99	51,776	100	1,503	100	15,506	99	70,023	100
+16 to + 40% CC					8		2		1		10	
+41 to + 100% CC			3		7				58		68	
Total	98	100	1,147	100	51,823	100	1,505	100	15,660	100	70,233	100
Ultramafic Mixed Shrub												
-15 to + 15% CC (Little or No Change)					582	100					582	100
Total					582	100					582	100
Chamise												
-15 to + 15% CC (Little or No Change)							63	100			63	100
Total							63	100			63	100

Table F-9 Classified Shrub/Chaparral Change by CALVEG Type and National Forest (cont.)

	Eldorado		Lake Tahoe Basin Management Unit		Plumas		STANISLAUS		Tahoe		All Forests	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
Ceanothus Mixed Chaparral												
-71 to -100% CC	8						745	2			753	2
-41 to -70% CC	5						575	1			580	1
-16 to -40% CC	1						367	1			368	1
-15 to + 15% CC (Little or No Change)	3,276	99			162	100	42,080	94			45,518	95
+16 to + 40% CC	16						717	2			733	2
+41 to + 100% CC	3						158				161	
Total	3,309	100			162	100	44,642	100			48,113	100
Huckleberry Oak												
-71 to -100% CC	1		8		65	2	42	1	17		132	
-41 to -70% CC	1		12		58	2	21		25		116	
-16 to -40% CC	1		9		8		7		15		40	
-15 to + 15% CC (Little or No Change)	2,371	100	7,169	100	3,134	96	4,602	99	28,614	100	45,890	99
+16 to + 40% CC					1						2	
+41 to + 100% CC					1				4		5	
Total	2,374	100	7,199	100	3,266	100	4,672	100	28,674	100	46,184	100
Upper Montane Mixed Shrub												
-71 to -100% CC	18		4				231	1			253	1
-41 to -70% CC	31		9				139	1			179	
-16 to -40% CC	24		6				113				143	
-15 to + 15% CC (Little or No Change)	12,546	99	4,321	100			22,721	98			39,588	99
+16 to + 40% CC												
+41 to + 100% CC			2								2	
Total	12,619	100	4,342	100			23,204	100			40,165	100
Lower Montane Mixed Chaparral												
-71 to -100% CC					5				4		9	
-41 to -70% CC					7				1		8	
-16 to -40% CC					5				1		6	
-15 to + 15% CC (Little or No Change)	6	100			4,619	99			3,516	100	8,141	99
+16 to + 40% CC					14				6		20	
+41 to + 100% CC					7				2		8	
Cloud or Cloud Shadow					2						2	
Total	6	100			4,659	100			3,530	100	8,195	100
Snowbrush												
-71 to -100% CC												
-41 to -70% CC					1						1	
-15 to + 15% CC (Little or No Change)					1,963	100			553	70	2,516	91
+16 to + 40% CC					3				3		6	
+41 to + 100% CC					2				233	30	235	9
Total					1,969	100			789	100	2,758	100

Table F-9 Classified Shrub/Chaparral Change by CALVEG Type and National Forest (cont.)

	Eldorado		Lake Tahoe Basin Management Unit		Plumas		STANISLAUS		Tahoe		All Forests	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
Whiteleaf Manzanita												
-15 to + 15% CC (Little or No Change)	34	100			75	100					108	100
Total	34	100			75	100					108	100
Upper Montane Mixed Chaparral												
-71 to -100% CC	15		38		898	3	148	1	35		1,134	1
-41 to -70% CC	8		17		658	2	64		24		771	1
-16 to -40% CC	4		8		59		97		26		195	
-15 to + 15% CC (Little or No Change)	15,011	100	10,730	99	32,183	95	24,064	97	32,556	99	114,544	97
+16 to + 40% CC	1				92		425	2	82		601	1
+41 to + 100% CC	1		2		43		31		255	1	332	
Cloud or Cloud Shadow					80						80	
Total	15,040	100	10,794	100	34,013	100	24,830	100	32,979	100	117,656	100
Unknown Shrub/Chaparral												
-15 to + 15% CC (Little or No Change)			3	100							3	100
Total			3	100							3	100

Table F-10 Classified Grass/Forb Change by CALVEG Type and National Forest

	Eldorado		Lake Tahoe Basin Management Unit		Plumas		STANISLAUS		Tahoe		All Forests	
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%
Cushion Plant												
-15 to + 15% CC (Little or No Change)			13	100					665	100	678	100
Total			13	100					665	100	678	100
Unknown Grass (obsolete)												
-15 to + 15% CC (Little or No Change)							18,320	99			18,320	99
Grass Decrease > 15%							118	1			118	1
Grass Increase > 15%							99	1			99	1
Total							18,537	100			18,537	100
Annual Grass/Forb												
-15 to + 15% CC (Little or No Change)	1,384	100	3,234	100	21,047	100	66	100	5,300	100	31,031	100
Grass Decrease > 15%			1		15				4		20	
Grass Increase > 15%					14				1		15	
Total	1,384	100	3,235	100	21,075	100	66	100	5,305	100	31,066	100
Wet Meadows (Grass/Sedge/Rush)												
-15 to + 15% CC (Little or No Change)	6,436	100	2,271	100	706	100	1,349	100	1,942	100	12,703	100
Grass Decrease > 15%	5		4				2		2		12	
Total	6,440	100	2,274	100	706	100	1,351	100	1,944	100	12,715	100
Perennial Grass/Forb												
-15 to + 15% CC (Little or No Change)			1	100	1,330	100			2,895	100	4,226	100
Grass Decrease > 15%									2		2	
Total			1	100	1,330	100			2,897	100	4,228	100

Table F-11 Acres of Verified Change in the Eldorado National Forest by Cause and Conifer CALVEG Type

	Fire	Harvest	Regrowth	Other	Unverified	All Causes
Douglas-Fir - Pine						
-71 to -100% CC		16		8	11	36
-41 to -70% CC		23		6	10	39
-16 to -40% CC		26		33	11	70
+16 to + 40% CC			25		4	29
+41 to + 100% CC			67		26	93
Total		66	92	47	62	266
Jeffrey Pine						
-41 to -70% CC					1	1
+16 to + 40% CC					1	1
+41 to + 100% CC			2		3	5
Total			2		4	6
Lodgepole Pine						
-71 to -100% CC						
-41 to -70% CC					1	1
-16 to -40% CC					2	2
Total					3	3
Mixed Conifer - Fir						
-71 to -100% CC	1	132		58	90	280
-41 to -70% CC	3	148		34	73	259
-16 to -40% CC	5	127		19	153	303
+16 to + 40% CC			145		36	182
+41 to + 100% CC			397		234	631
Total	9	407	542	110	587	1,655
Mixed Conifer - Pine						
-71 to -100% CC		248		2	36	285
-41 to -70% CC		360			71	432
-16 to -40% CC	2	557		1	214	773
+16 to + 40% CC			128		27	155
+41 to + 100% CC			475		152	628
Total	2	1,165	604	3	500	2,273
Gray Pine						
-71 to -100% CC						
Total						
Ponderosa Pine						
-71 to -100% CC		40		26	33	99
-41 to -70% CC		29		13	19	61
-16 to -40% CC		48		24	22	94
+16 to + 40% CC			68		5	73
+41 to + 100% CC			293		45	338
Total		117	362	63	124	666

Table F-11 Acres of Verified Change in the Eldorado National Forest by Cause and Conifer CALVEG Type (cont.)

	Fire	Harvest	Regrowth	Other	Unverified	All Causes
Red Fir						
-71 to -100% CC	1	2			10	13
-41 to -70% CC	2	6			27	35
-16 to -40% CC	2	4			37	43
+16 to + 40% CC					8	9
+41 to + 100% CC			3		44	48
Total	5	12	4		127	148
Subalpine Conifers						
-71 to -100% CC					1	1
-41 to -70% CC					4	4
-16 to -40% CC					2	2
Total					6	6
White Fir						
-71 to -100% CC		112			16	128
-41 to -70% CC		47			16	63
-16 to -40% CC		22			10	33
+16 to + 40% CC			21		8	29
+41 to + 100% CC			39		22	61
Total		181	60		71	313
All Conifer	16	1,947	1,664	223	1,485	5,336

Table F-12 Acres of Verified Change in the Eldorado National Forest by Cause and Hardwood CALVEG Type

	Harvest	Regrowth	Unverified	All Causes
Canyon Live Oak				
-71 to -100% CC				1
-41 to -70% CC				
-16 to -40% CC	1		1	2
+16 to + 40% CC		1		1
+41 to + 100% CC		3	3	6
Total	1	3	5	9
California Black Oak				
-71 to -100% CC			1	1
-41 to -70% CC	2		2	4
-16 to -40% CC	2		1	4
+16 to + 40% CC		1	1	2
+41 to + 100% CC		3	10	14
Total	4	4	16	24
Interior Live Oak				
+41 to + 100% CC				
Total				
Willow - Alder				
-71 to -100% CC			2	2
-41 to -70% CC				
-16 to -40% CC			1	1
Total			3	3
All Hardwood	5	7	23	36

Table F-13 Acres of Verified Change in the Eldorado National Forest by Cause and Shrub/Chaparral CALVEG Type

	Harvest	Regrowth	Other	Unverified	All Causes
Basin Sagebrush					
-41 to -70% CC				2	2
Total				2	2
Ceanothus Mixed Chaparral					
-71 to -100% CC	3		2	4	8
-41 to -70% CC	3		1	1	5
-16 to -40% CC			1		1
+16 to + 40% CC		2		14	16
+41 to + 100% CC				3	3
Total	6	3	3	21	33
Huckleberry Oak					
-71 to -100% CC				1	1
-41 to -70% CC				1	1
-16 to -40% CC				1	1
Total				3	3
Upper Montane Mixed Shrub					
-71 to -100% CC				18	18
-41 to -70% CC				31	31
-16 to -40% CC				24	24
+16 to + 40% CC					
Total				73	73
Upper Montane Mixed Chaparral					
-71 to -100% CC	1		1	13	15
-41 to -70% CC				8	8
-16 to -40% CC	1			3	4
+16 to + 40% CC		1			1
+41 to + 100% CC					1
Total	2	2	1	25	29
All Shrub/Chaparral	7	4	5	124	140

Table F-14 Acres of Verified Change in the Eldorado National Forest by Cause and Grass/Forb CALVEG Type

	Unverified	All Causes
Wet Meadows (Grass/Sedge/Rush)		
Grass Decrease > 15%	5	5
Total	5	5
All Grass/Forb	5	5

Table F-15 Acres of Verified Change in the Lake Tahoe Basin Management Unit National Forest by Cause and Conifer CALVEG Type

	Fire	Harvest	Development	Other	Unverified	All Causes
Jeffrey Pine						
-71 to -100% CC	2	6	1		3	11
-41 to -70% CC		13	1		10	25
-16 to -40% CC	1	13	1		19	33
+41 to + 100% CC					2	2
Total	3	31	2		33	70
Lodgepole Pine						
-71 to -100% CC		4		7	9	19
-41 to -70% CC		11		3	19	32
-16 to -40% CC		13		3	16	31
+16 to + 40% CC				1		2
+41 to + 100% CC				2	14	16
Total		27		15	58	100
Mixed Conifer - Fir						
-71 to -100% CC	5	4			4	13
-41 to -70% CC	13	2			7	22
-16 to -40% CC	6	4			7	18
+16 to + 40% CC					4	4
+41 to + 100% CC					12	12
Total	25	10			34	68
Red Fir						
-71 to -100% CC	5			1	2	7
-41 to -70% CC	11				4	16
-16 to -40% CC	3				10	13
+41 to + 100% CC					1	1
Total	19			2	17	38
Subalpine Conifers						
-71 to -100% CC					1	1
-41 to -70% CC						
-16 to -40% CC						
+16 to + 40% CC						
+41 to + 100% CC					1	1
Total					3	3
All Conifer	46	68	2	17	144	278

Table F-16 Acres of Verified Change in the Lake Tahoe Basin Management Unit National Forest by Cause and Hardwood CALVEG Type

	Unverified	All Causes
Quaking Aspen		
-71 to -100% CC	4	4
-41 to -70% CC	1	1
-16 to -40% CC	7	7
+41 to + 100% CC	1	1
Total	12	12
All Hardwood	12	12

Table F-17 Acres of Verified Change in the Lake Tahoe Basin Management Unit National Forest by Cause and Shrub/Chaparral CALVEG Type

	Fire	Harvest	Development	Other	Unverified	All Causes
Mixed Alpine Scrub						
-71 to -100% CC					7	7
-41 to -70% CC					8	8
-16 to -40% CC					4	4
+41 to + 100% CC				3		3
Total				3	18	21
Basin Sagebrush						
-41 to -70% CC		1	1		1	3
-16 to -40% CC						
+41 to + 100% CC					3	3
Total		1	1		4	6
Huckleberry Oak						
-71 to -100% CC					8	8
-41 to -70% CC					12	12
-16 to -40% CC					9	9
+16 to + 40% CC						
+41 to + 100% CC						
Total					30	30
Upper Montane Mixed Shrub						
-71 to -100% CC					4	4
-41 to -70% CC					9	9
-16 to -40% CC					6	6
+41 to + 100% CC					2	2
Total					21	21
Upper Montane Mixed Chaparral						
-71 to -100% CC	26	2		2	8	38
-41 to -70% CC	2	2		1	12	17
-16 to -40% CC	2				6	8
+16 to + 40% CC						
+41 to + 100% CC					2	2
Total	30	4		4	28	65
All Shrub/Chaparral	30	5	1	6	99	141

Table F-18 Acres of Verified Change in the Lake Tahoe Basin Management Unit National Forest by Cause and Grass/Forb CALVEG Type

	Unverified	All Causes
Annual Grass/Forb		
Grass Decrease > 15%		1
Total		1
Wet Meadows (Grass/Sedge/Rush)		
Grass Decrease > 15%	4	4
Total	4	4
All Grass/Forb	4	4

Table F-19 Acres of Verified Change in the Plumas National Forest by Cause and Conifer CALVEG Type

	Fire	Harvest	Regrowth	Unverified	All Causes
Douglas-Fir - Pine					
-71 to -100% CC	1,822	3		57	1,882
-41 to -70% CC	834	2		84	919
-16 to -40% CC	602	10		315	927
+16 to + 40% CC			7	349	356
+41 to + 100% CC			23	538	560
Total	3,257	15	29	1,343	4,644
Eastside Pine					
-71 to -100% CC	426	146		56	627
-41 to -70% CC	441	578		226	1,245
-16 to -40% CC	365	978		598	1,942
+16 to + 40% CC			70	48	117
+41 to + 100% CC			84	84	167
Total	1,232	1,702	153	1,011	4,098
Jeffrey Pine					
-71 to -100% CC	41				41
-41 to -70% CC	96			2	98
-16 to -40% CC	38			1	39
+16 to + 40% CC				1	1
+41 to + 100% CC				2	2
Total	174			6	180
Lodgepole Pine					
-41 to -70% CC					1
-16 to -40% CC		3			4
Total		3		1	4
Mixed Conifer - Fir					
-71 to -100% CC	1,070	260		43	1,373
-41 to -70% CC	847	695		126	1,668
-16 to -40% CC	255	1,573		859	2,687
+16 to + 40% CC			253	150	403
+41 to + 100% CC			201	93	294
Total	2,172	2,528	454	1,271	6,425
Mixed Conifer - Pine					
-71 to -100% CC	6,962	1		214	7,178
-41 to -70% CC	4,275	2		363	4,639
-16 to -40% CC	1,134	28		732	1,893
+16 to + 40% CC			101	887	988
+41 to + 100% CC			69	723	792
Total	12,371	31	171	2,918	15,491
Gray Pine					
-71 to -100% CC	29				29
-41 to -70% CC	3				3
-16 to -40% CC	3				3
Total	35				35

Table F-19 Acres of Verified Change in the Plumas National Forest by Cause and Conifer CALVEG Type (cont.)

	Fire	Harvest	Regrowth	Unverified	All Causes
Ponderosa Pine					
-71 to -100% CC	38			5	43
-41 to -70% CC	64			4	68
-16 to -40% CC	40			6	46
+16 to + 40% CC				12	12
+41 to + 100% CC				6	6
Total	142			33	175
Red Fir					
-71 to -100% CC	124			18	143
-41 to -70% CC	147			30	176
-16 to -40% CC	31			50	81
+16 to + 40% CC				23	23
+41 to + 100% CC				19	19
Total	302			139	441
White Fir					
-71 to -100% CC	2,485	33		87	2,605
-41 to -70% CC	1,361	113		146	1,619
-16 to -40% CC	170	198		264	633
+16 to + 40% CC			46	181	227
+41 to + 100% CC			16	151	167
Total	4,016	344	63	829	5,251
All Conifer	23,701	4,623	870	7,551	36,744

Table F-20 Acres of Verified Change in the Plumas National Forest by Cause and Hardwood CALVEG Type

	Fire	Harvest	Unverified	All Causes
Canyon Live Oak				
-71 to -100% CC	388		8	396
-41 to -70% CC	326		4	330
-16 to -40% CC	385		14	399
+16 to + 40% CC			10	10
+41 to + 100% CC			7	7
Total	1,099		43	1,142
California Black Oak				
-71 to -100% CC	1,386		11	1,396
-41 to -70% CC	817		6	822
-16 to -40% CC	335	1	28	364
+16 to + 40% CC			10	10
+41 to + 100% CC			3	3
Total	2,538	1	58	2,596
Willow				
-71 to -100% CC	7	2		9
-41 to -70% CC		1	3	4
-16 to -40% CC		8	14	22
+16 to + 40% CC			1	1
-41 to -70% CC		1		1
-16 to -40% CC		2		2
Total	7	14	17	39
Willow - Aspen				
-71 to -100% CC		2	2	4
-41 to -70% CC		2	3	5
-16 to -40% CC		2	6	8
Total		5	11	16
Tanoak (Madrone)				
-71 to -100% CC	6		1	7
-41 to -70% CC	1		1	2
-16 to -40% CC	1		1	2
+16 to + 40% CC			3	3
+41 to + 100% CC			1	1
Total	8		7	15
Willow - Alder				
-71 to -100% CC	15			15
-16 to -40% CC				
+41 to + 100% CC			1	1
Total	15		1	16
Mountain Alder				
-71 to -100% CC	18			18
-41 to -70% CC	25			25
-16 to -40% CC	10			10
+41 to + 100% CC			2	2
Total	52		2	54
All Hardwood	3,719	20	139	3,878

Table F-21 Acres of Verified Change in the Plumas National Forest by Cause and Shrub/Chaparral CALVEG Type

	Fire	Harvest	Regrowth	Unverified	All Causes
Curlleaf Mountain Mahogany					
+16 to + 40% CC					
Total					
Basin Sagebrush					
-71 to -100% CC	6	1			7
-41 to -70% CC	9	3		2	13
-16 to -40% CC	1	7		4	12
+16 to + 40% CC			1	6	8
+41 to + 100% CC				6	7
Total	16	11	2	18	46
Huckleberry Oak					
-71 to -100% CC	65				65
-41 to -70% CC	58				58
-16 to -40% CC	7				8
+16 to + 40% CC				1	1
+41 to + 100% CC				1	1
Total	129			2	132
Lower Montane Mixed Chaparral					
-71 to -100% CC	5				5
-41 to -70% CC	7				7
-16 to -40% CC	1			4	5
+16 to + 40% CC				14	14
+41 to + 100% CC				7	7
Total	13			25	38
Snowbrush					
-71 to -100% CC					
-41 to -70% CC	1				1
+16 to + 40% CC			1	2	3
+41 to + 100% CC			1	1	2
Total	1		1	4	6
Upper Montane Mixed Chaparral					
-71 to -100% CC	895			3	898
-41 to -70% CC	652			7	658
-16 to -40% CC	45			14	59
+16 to + 40% CC			8	84	92
+41 to + 100% CC			1	42	43
Total	1,591		9	150	1,750
All Shrub/Chaparral	1,750	11	12	199	1,972

Table F-22 Acres of Verified Change in the Plumas National Forest by Cause and Grass/Forb CALVEG Type

	Fire	Harvest	Regrowth	Unverified	All Causes
Annual Grass/Forb					
Grass Decrease > 15%	5	4		6	15
Grass Increase > 15%			2	11	14
Total	5	4	2	18	29
All Grass/Forb	5	4	2	18	29

Table F-23 Acres of Verified Change in the Stanislaus National Forest by Cause and Conifer CALVEG Type

	Fire	Harvest	Development	Regrowth	Other	Unverified	All Causes
Douglas-Fir - Pine							
-71 to -100% CC	34				8	1	42
-41 to -70% CC	34	1			25	3	63
-16 to -40% CC	37	1			11	1	51
+16 to + 40% CC				158	5	25	187
+41 to + 100% CC				215	2	22	240
Total	105	3		373	51	52	583
Jeffrey Pine							
-71 to -100% CC	69	5				47	121
-41 to -70% CC	23	3				21	47
-16 to -40% CC	40	4				43	87
Total	132	11				111	254
Knobcone Pine							
+16 to + 40% CC				11			11
+41 to + 100% CC				1			1
Total				12			12
Lodgepole Pine							
-71 to -100% CC	132					44	177
-41 to -70% CC	49	3				28	81
-16 to -40% CC	50	2				58	111
+16 to + 40% CC							
+41 to + 100% CC				1			1
Total	232	6	1	1		130	370
Mixed Conifer - Fir							
-71 to -100% CC	229	258			4	48	539
-41 to -70% CC	274	580				40	894
-16 to -40% CC	164	321				86	571
+16 to + 40% CC				312		81	393
+41 to + 100% CC				257		78	335
Total	667	1,159		568	4	333	2,731

Table F-23 Acres of Verified Change in the Stanislaus National Forest by Cause and Conifer CALVEG Type (cont.)

	Fire	Harvest	Development	Regrowth	Other	Unverified	All Causes
Mixed Conifer - Pine							
-71 to -100% CC	2,019	180			515	79	2,793
-41 to -70% CC	1,694	541			984	114	3,334
-16 to -40% CC	938	314	1		307	342	1,901
+16 to + 40% CC				1,685	250	137	2,072
+41 to + 100% CC				1,357	148	182	1,687
Total	4,651	1,035	1	3,042	2,204	854	11,786
Ponderosa Pine							
-71 to -100% CC	718	189			201	185	1,293
-41 to -70% CC	472	442			283	185	1,381
-16 to -40% CC	384	255			445	424	1,507
+16 to + 40% CC				1,720	145	194	2,059
+41 to + 100% CC				1,094	71	229	1,394
Total	1,574	886		2,815	1,144	1,217	7,635
Red Fir							
-71 to -100% CC	21	7	18			24	70
-41 to -70% CC	6	15	22			20	63
-16 to -40% CC	13	25	10			34	82
+16 to + 40% CC				2		1	2
+41 to + 100% CC				2		2	4
Total	40	47	49	4		81	221
Subalpine Conifers							
-71 to -100% CC						2	2
-41 to -70% CC						1	1
-16 to -40% CC						4	4
+41 to + 100% CC							
Total						8	8
All Conifer	7,400	3,146	51	6,815	3,403	2,785	23,600

Table F-24 Acres of Verified Change in the Stanislaus National Forest by Cause and Hardwood CALVEG Type

	Fire	Harvest	Regrowth	Other	Unverified	All Causes
Canyon Live Oak						
-71 to -100% CC	703	8		10	8	729
-41 to -70% CC	194	8		6	7	214
-16 to -40% CC	366	9		26	11	411
+16 to + 40% CC			114	1	15	130
+41 to + 100% CC			12		20	32
Total	1,263	25	126	42	61	1,516
California Black Oak						
-71 to -100% CC		1			9	11
-41 to -70% CC		1			4	5
-16 to -40% CC	7	1			8	16
+16 to + 40% CC			11			11
+41 to + 100% CC			1			1
Total	8	3	11		21	43
Willow						
-71 to -100% CC					4	4
-41 to -70% CC					1	1
-16 to -40% CC					3	3
Total					8	8
Quaking Aspen						
-71 to -100% CC						
-41 to -70% CC						
-16 to -40% CC	2					2
Total	3					3
Interior Live Oak						
-71 to -100% CC	574	1		2	5	582
-41 to -70% CC	187	2		4	14	206
-16 to -40% CC	422	3		9	23	458
+16 to + 40% CC			21		58	79
+41 to + 100% CC			3		1	4
Total	1,183	6	23	15	102	1,329
All Hardwood	2,457	34	160	56	192	2,899

Table F-25 Acres of Verified Change in the Stanislaus National Forest by Cause and Shrub/Chaparral CALVEG Type

	Fire	Harvest	Regrowth	Other	Unverified	All Causes
Basin Sagebrush						
+16 to + 40% CC					2	2
+41 to + 100% CC						
Total					2	2
Ceanothus Mixed Chaparral						
-71 to -100% CC	563	38		87	56	745
-41 to -70% CC	453	28		56	38	575
-16 to -40% CC	337	2		13	15	367
+16 to + 40% CC			693	1	24	717
+41 to + 100% CC			141		17	158
Total	1,353	68	833	157	150	2,562
Huckleberry Oak						
-71 to -100% CC					42	42
-41 to -70% CC					21	21
-16 to -40% CC	1				6	7
Total	1				69	70
Upper Montane Mixed Shrub						
-71 to -100% CC	21				210	231
-41 to -70% CC	6				132	139
-16 to -40% CC	3				110	113
Total	30				453	483
Upper Montane Mixed Chaparral						
-71 to -100% CC	92	14			41	148
-41 to -70% CC	33	15			17	64
-16 to -40% CC	76	4			17	97
+16 to + 40% CC			420		5	425
+41 to + 100% CC			30		1	31
Total	201	33	451		81	766
All Shrub/Chaparral	1,586	101	1,284	157	755	3,882

Table F-26 Acres of Verified Change in the Stanislaus National Forest by Cause and Grass/Forb CALVEG Type

	Fire	Harvest	Regrowth	Other	Unverified	All Causes
Unknown Grass (obsolete)						
Grass Decrease > 15%	92	8		6	12	118
Grass Increase > 15%			95	1	4	99
Total	92	8	95	7	16	217
Wet Meadows (Grass/Sedge/Rush)						
Grass Decrease > 15%					1	2
Total					1	2
All Grass/Forb	92	8	95	7	17	219

Table F-27 Acres of Verified Change in the Tahoe National Forest by Cause and Conifer CALVEG Type

	Fire	Harvest	Development	Regrowth	Other	Unverified	All Causes
Douglas-Fir - Pine							
-71 to -100% CC	428	9				12	449
-41 to -70% CC	129	12				33	174
-16 to -40% CC	627	12				59	698
+16 to + 40% CC				1,421		54	1,475
+41 to + 100% CC				456		61	517
Total	1,184	33		1,877		219	3,314
Eastside Pine							
-71 to -100% CC		53			11	11	75
-41 to -70% CC		263			1	56	320
-16 to -40% CC	1	536			14	195	745
+16 to + 40% CC				58		8	66
+41 to + 100% CC				896		40	936
Total	1	852		954	25	310	2,142
Jeffrey Pine							
-71 to -100% CC						1	1
-16 to -40% CC						1	1
+16 to + 40% CC						1	1
+41 to + 100% CC						2	2
Total						5	6
Lodgepole Pine							
-71 to -100% CC			1		3		4
-41 to -70% CC		1	1			2	4
-16 to -40% CC		6			4	3	14
+16 to + 40% CC							
Total		7	2		7	5	22
Mixed Conifer - Fir							
-71 to -100% CC		90			8	18	116
-41 to -70% CC		314			16	30	360
-16 to -40% CC		497	1		50	155	703
+16 to + 40% CC				98		24	122
+41 to + 100% CC				2,185		146	2,331
Total		901	1	2,283	73	374	3,632
Mixed Conifer - Pine							
-71 to -100% CC	43	124			23	88	278
-41 to -70% CC	11	168			6	70	256
-16 to -40% CC	54	182			4	215	455
+16 to + 40% CC				2,685	26	169	2,880
+41 to + 100% CC				1,349	4	236	1,588
Total	109	474		4,034	63	778	5,458
Gray Pine							
-71 to -100% CC							
-41 to -70% CC							
Total							

Table F-27 Acres of Verified Change in the Tahoe National Forest by Cause and Conifer CALVEG Type (cont.)

	Fire	Harvest	Development	Regrowth	Other	Unverified	All Causes
Ponderosa Pine							
-71 to -100% CC		27			5	5	37
-41 to -70% CC		34			1	1	36
-16 to -40% CC		138				18	156
+16 to + 40% CC				153		18	171
+41 to + 100% CC				74		50	124
Total		198		226	6	93	523
Red Fir							
-71 to -100% CC		4				3	7
-41 to -70% CC		56				3	58
-16 to -40% CC		73			1	10	84
+16 to + 40% CC				20		18	38
+41 to + 100% CC				79		58	137
Total		132		99	1	92	325
White Fir							
-71 to -100% CC		59				7	66
-41 to -70% CC		67			1	4	72
-16 to -40% CC		103			12	20	135
+16 to + 40% CC				43		9	52
+41 to + 100% CC				600		28	628
Total		229		643	13	68	953
All Conifer	1,293	2,828	3	10,117	189	1,943	16,373

Table F-28 Acres of Verified Change in the Tahoe National Forest by Cause and Hardwood CALVEG Type

	Fire	Harvest	Regrowth	Unverified	All Causes
Mixed Hardwoods (Non-productive					
-71 to -100% CC	12				12
-41 to -70% CC	3				3
-16 to -40% CC	14				14
Total	29				29
Canyon Live Oak					
-71 to -100% CC	14			2	16
-41 to -70% CC	9			3	12
-16 to -40% CC	21			3	24
+16 to + 40% CC			15	2	17
+41 to + 100% CC			5	15	20
Total	45		20	25	90
Madrone					
-41 to -70% CC		1			1
-16 to -40% CC					
Total		2			2
California Black Oak					
-71 to -100% CC	10	2		6	18
-41 to -70% CC	3	1		2	6
-16 to -40% CC	35	3		6	43
+16 to + 40% CC			12	2	14
+41 to + 100% CC			6	16	21
Total	48	5	18	32	102
Willow					
-71 to -100% CC		2		8	9
-41 to -70% CC		1		4	5
-16 to -40% CC				20	21
+41 to + 100% CC				1	1
Total		2		34	36
Willow - Aspen					
-71 to -100% CC				1	1
-16 to -40% CC				2	2
Total				3	3
Tanoak (Madrone)					
-71 to -100% CC	3				3
-41 to -70% CC	1				1
-16 to -40% CC	13				13
+16 to + 40% CC			2		2
Total	17		2		18
Mountain Alder					
-71 to -100% CC				13	13
-41 to -70% CC				4	4
-16 to -40% CC				25	25
+16 to + 40% CC				1	1
Total				43	43
All Hardwood	138	10	40	137	324

Table F-29 Acres of Verified Change in the Tahoe National Forest by Cause and Shrub/Chaparral CALVEG Type

	Fire	Harvest	Development	Regrowth	Other	Unverified	All Causes
Bitterbrush							
-71 to -100% CC							
-41 to -70% CC						1	1
-16 to -40% CC							
Total						2	2
Curlleaf Mountain Mahogany							
+16 to + 40% CC						1	1
+41 to + 100% CC						1	1
Total						2	2
Basin Sagebrush							
-71 to -100% CC		13				25	38
-41 to -70% CC		5				42	48
-16 to -40% CC		1				8	9
+16 to + 40% CC				1			1
+41 to + 100% CC				58			58
Total		19		59		75	154
Huckleberry Oak							
-71 to -100% CC			1			16	17
-41 to -70% CC			2			23	25
-16 to -40% CC						15	15
+16 to + 40% CC							
+41 to + 100% CC						3	4
Total			3			57	60
Lower Montane Mixed Chaparral							
-71 to -100% CC	4						4
-41 to -70% CC						1	1
-16 to -40% CC	1						1
+16 to + 40% CC				6			6
+41 to + 100% CC				2			2
Total	5			8		1	14
Snowbrush							
+16 to + 40% CC				3			3
+41 to + 100% CC				227		6	233
Total				230		6	236
Upper Montane Mixed Chaparral							
-71 to -100% CC		6			12	16	35
-41 to -70% CC		5			2	18	24
-16 to -40% CC		3			1	22	26
+16 to + 40% CC				72		10	82
+41 to + 100% CC				239		17	255
Total		14		310	15	83	422
All Shrub/Chaparral	5	34	3	607	16	225	890

Table F-30 Acres of Verified Change in the Tahoe National Forest by Cause and Grass/Forb CALVEG Type

	Harvest	Regrowth	Unverified	All Causes
Annual Grass/Forb				
Grass Decrease > 15%	1		3	4
Grass Increase > 15%		1		1
Total	1	1	3	5
Wet Meadows (Grass/Sedge/Rush)				
Grass Decrease > 15%	1		1	2
Total	1		1	2
Perennial Grass/Forb				
Grass Decrease > 15%			2	2
Total			2	2
All Grass/Forb	2	1	6	9