

**BOARD OF SUPERVISORS
COUNTY OF BUTTE, STATE OF CALIFORNIA**

Resolution No. 07-084

OAK WOODLANDS MANAGEMENT PLAN RESOLUTION OF THE BOARD OF SUPERVISORS OF THE COUNTY OF BUTTE, STATE OF CALIFORNIA, ADOPTING AN OAK WOODLANDS MANAGEMENT PLAN, AND PROMOTING PRIVATE LAND STEWARDSHIP AND CONSERVATION BY OFFERING PRIVATE LANDOWNERS THE OPPORTUNITY TO PARTICIPATE IN THE OAK WOODLANDS CONSERVATION PROGRAM.

WHEREAS, the County of Butte wishes to provide incentive-based, voluntary opportunities to private landowners who wish to pursue strategies for oak woodland conservation as provided by the California Wildlife Conservation Board pursuant to Section 1366 (f) of the Oak Woodlands Conservation Act of 2001; and

WHEREAS, the Butte County Resource Conservation District developed an Oak Woodland Resource Assessment Report dated May 2006 which includes a description of all native oak species, estimates of the current and historical distributions of oak woodlands, existing threats, status of natural regeneration and growth trends, and maps displaying the current distribution of oak woodlands within the county; and

WHEREAS, the Oak Woodland Resource Assessment Report has documented that several oak species of both tree and shrub form occur naturally within Butte County's boundaries; and

WHEREAS, it has been determined that the majority of these oak woodlands occur on privately-owned land; and

WHEREAS, historic land-use practices have removed large tracts of oak woodlands in valleys and other low-lying areas; and

WHEREAS, oak woodlands continue to provide sites subject to land-use practices that could further reduce woodland acreage; and

WHEREAS, oak woodlands continue to serve as the foundation for many agricultural operations including ranching and farming that are compatible with oak woodland retention; and

WHEREAS, the County of Butte wishes to recognize the economic, environmental and social values associated with oak woodlands; and

WHEREAS, the County of Butte wishes to recognize those private landowners who elect to voluntarily adopt conservation measures to insure oak woodland viability.

NOW, THEREFORE, BE IT RESOLVED that the Butte County Board of Supervisors adopts the Oak Woodland Resource Assessment Report, attached as Exhibit "A," as the Butte County Oak Woodlands Management Plan; and

BE IT FURTHER RESOLVED that the Butte County Board of Supervisors supports those landowners who voluntarily participate in the Oak Woodlands Conservation Program provided by the California Wildlife Conservation Board (WCB) pursuant to Section 1366 (f) of the Oak Woodlands Conservation Act of 2001 and will certify that individual grant proposals to WCB are consistent with the Butte County Oak Woodlands Management Plan; and

BE IT FURTHER RESOLVED that the Butte County Board of Supervisors recognizes that the California Oaks of Butte County map, found on page 8 of Exhibit "A," is not a parcel specific map indicating qualifying properties, but is a general dispersal map indicating general locations of oak woodlands in Butte County. Individuals applying for WCB grants will need to independently document the extent of oak woodlands present on their properties to justify receiving a grant; and

BE IT FURTHER RESOLVED that individual grant applications to the WCB for the funds available under this program shall be reviewed and accepted by the Board of Supervisors by being placed on its Consent Agenda prior to being forwarded to the WCB; and

BE IT FURTHER RESOLVED that the Butte County Board of Supervisors shall review and update, as necessary, its Oak Woodlands Management Plan; and

BE IT FURTHER RESOLVED that the Butte County Board of Supervisors continues to support educational efforts that demonstrate the economic, social and ecological values associated with oak woodlands and encourages the Butte County Resource Conservation District to continue to pursue similar efforts;

PASSED AND ADOPTED by the Board of Supervisors of the County of Butte, State of California, on the 24th day of April, 2007, by the following vote:

AYES Supervisors Connelly, Kirk, Josiassen, Yamaguchi, and Chair Dolan

NOES: None

ABSENT: None

NOT VOTING: None



JANE DOLAN, Chair
Butte County Board of Supervisors

ATTEST:

PAUL MCINTOSH, Chief Administrative Officer
and Clerk of the Board of Supervisors

By: 

Deputy

Butte County Oak Woodland Resource Assessment Report

July 2006

Prepared by:

Butte County Resource Conservation District



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1.0 Introduction

Butte County supports significant acreage of oak woodland habitat. The historical importance of oaks is apparent in the names of towns, cities, streets and residential complexes throughout California. Butte County's oak woodlands enhance the natural and scenic beauty of the area, provide forage and shelter for more than 300 species of wildlife, facilitate nutrient cycling, moderate temperature extremes, reduce soil erosion, sustain water quality and increase the monetary and ecological value of property.

Contiguous oak woodland habitat is being lost throughout California through residential, commercial and industrial development, conversion to intensive agricultural development such as orchards and vineyards, woodcutting and a lack of regeneration in specific oak species. Statewide and in Butte County, the majority of oak woodland habitat is owned privately. The Oak Woodlands Conservation Program of California's Wildlife Conservation Board provides money for landowners, conservation organizations, cities and counties to facilitate the voluntary conservation and restoration of oak woodlands.

The first step in conservation and restoration is an assessment of the information that currently exists. The following document represents an introduction to oak woodlands in Butte County, and recommendations for an oak woodlands management plan.



PROBLEM STATEMENT

Oak woodlands are rich in wildlife and are a favored place for people to recreate, build their homes, and pursue their livelihoods. Unfortunately, oak woodlands are disappearing throughout the state. Millions of acres of California's oak woodlands have been lost and only about one-third of the 10-12 million acres of oak woodlands that once graced our valleys and hills remain. Vast acres have been lost to intensive agriculture, woodcutting, housing and other urban development (Garrison et al. 2000). Statewide, over 30,000 acres of oak woodlands are converted to residential and commercial uses each year and only about 4 percent of the remaining woodlands are protected (California Oak Foundation Statistics). Eighty-percent of the state's hardwood rangelands are privately held (Standiford 1999).

It is estimated that California's population will grow from its current level of 31 million to over 63 million in the next 50 years. Butte County is projected to grow from its current population of roughly 204,000, to over 287,000 by 2050 (California Department of Finance 2004). As the county's population grows, there will be continuing pressure to convert oak woodlands to more intensive uses such as housing and ranchettes.

2.0 Goals of WCB Program:

- Provide technical and financial assistance to counties that will result in effective voluntary oak conservation measures in local planning efforts. Such measures shall encourage and support the conservation, enhancement and management of sustainable oak woodlands across working landscapes and other privately owned oak woodlands.
- Provide financial incentives, education and technical assistance on a voluntary basis to private landowners that will result in oak habitat conservation and enhancement across working landscapes and other privately owned oak woodlands.
- Support projects in counties that have adopted oak retention, enhancement and management policies consistent with the intent of the Oak Woodlands Conservation Act of 2001. Using long-term agreements and easements, voluntary projects shall be designed to benefit private landowners that conserve oak woodlands, the community and wildlife species dependent on oak woodlands and associated habitats.

3.0 Existing Oak Woodlands Data:

3.1 Current Acreage of Oaks

According to the assessment done by the Geographical Information Center in 1995, at California State University, Chico, (outlining potential hardwood loss in the Northern Sacramento Valley), Butte County had approximately 242,771 acres of oaks, which occupied 21.6 % of the county. In addition to the assessment of the current oak acreage, an assessment of potential oak areas that would be affected by development were identified to be 117, 972 acres, which is 48.6% of the total oak acres (Nelson, 1995).

3.2 Ownership Patterns

The development of a conservation plan for natural resources must include an overview of ownership patterns and the juxtaposition of both public and private holdings. The relationship between private and public ownership is fundamental when considering the spatial and temporal needs of terrestrial and aquatic oak woodland dependent species.

Private lands account for 80% of oak woodland ownership in California (Standiford 1999). This pattern is similar in Butte County where the majority of oak dominated sites are privately held. This ownership pattern offers opportunities by providing voluntary

programs in oak conservation that strives to recognize and protect the private property rights, while recognizing the need to protect public trust resources.

3.3 Oak Species and Distribution in Butte County

The native oaks species, family *Fagaceae*, genus *Quercus*, found in Butte County include:

- Valley Oak (*Quercus lobata*)
- Blue Oak (*Quercus douglasii*)
- Black Oak (*Quercus kelloggii*)
- Interior Live Oak (*Quercus wislizenii*)
- Oracle Oak (*Quercus x morehus*)
- Canyon Live Oak (*Quercus chrysolepis*)
- Scrub Oak (*Quercus berbidifolia*)

Oak trees can be found throughout the valley and eastern slopes of Butte County. The common names imply the location and geographical regions where the oak species are found, e.g. valley oak and canyon oaks. The geographic distributions of other species are more diverse.

3.4.1 Valley Oak (*Quercus lobata*)

The valley oak is unique to California, and may be the largest North American oak. The largest trees have trunks sometimes six or seven feet in diameter. It is a winter-deciduous tree with small (2-4" long), deeply-lobed leaves. Smaller branches on mature trees will sometimes droop or weep. Valley oak branches often have woody, spherical galls containing native wasp larvae. The valley oak has been known to hybridize with the blue oak (*Q. douglasii*); the hybrid is referred to as *Q. x jolonensis* Sarg.

As indicated by the common name, the valley oak prefers fertile soils of bottomlands or valley floors. It is usually found at elevations below 2,000 feet, though it ranges into higher elevations (up to 5,600 feet) in foothills and low mountains with poorer soil as long as its roots have sufficient access to moisture.

Valley oaks are often found in riparian forests, open foothill woodlands and river valley savannas. Historically, there was an extensive population on the valley floor of Butte County, though many of these trees have been lost in the development of this area. The valley oak is generally recognized as not regenerating adequately across its biological range to ensure its ecological survival.

3.4.2 Blue Oak (*Quercus douglasii*)

Blue oak is extremely drought resistant and generally associated with hot, dry, upland sites. It is a small to medium sized deciduous tree, with small (1-3" long), shallowly-lobed/wavy-margined leaves, most of which are retained nearly year round when sufficient water is available. In extremely hot or dry years, blue oaks resort to dormancy, dropping their leaves. The name, blue oak, comes from the bluish-green color of the leaves, which is most pronounced in mid to late summer when the leaves are mature. Blue oak is common on foothills bordering hot interior valleys in poor soil with low annual rainfall (15-35 inches). At low elevations, blue oaks are often scattered in grassland, forming blue oak savannas, which, with all their inhabitants, have been called the Pacific Coast version of Africa's Serengeti Plain. The stands of oaks are denser at higher elevations, including other kinds of trees and shrubs to form blue oak woodland. Like the valley oak, blue oak is only found in California, and is another species generally recognized as not regenerating sufficiently across its range to ensure its ecological survival.

3.4.3 Black Oak (*Quercus kelloggii*)

Black oak is a tall, winter-deciduous tree with larger leaves than most of the other oaks in the area. The leaves are 2-6" long when fully developed and divided into angular lobes, each lobe with a long, soft bristle on the point. The black oak is found in mountainous areas away from the immediate coast, at elevations between 2,000 to 6,000 feet. Black oaks are widely distributed throughout coniferous forest areas on the higher slopes of foothill canyons.

3.4.4 Interior Live Oak (*Quercus wislizeni*)

Interior live oak and canyon oak are Butte County's two evergreen oak species. Both have very similar leaves that are smooth-margined above the browse line in older trees and spiky below the browse line or in younger trees. The trees can be told apart by the underside color of the leaves. The underside of interior live oak leaves are very similar in shade to the upper side of the leaves, while the underside of canyon oak leaves are very light-colored, looking nearly white in comparison to the upper side.

Interior live oak is an important species in blue oak woodland, and is well represented in mixed evergreen forest and scrub oak chaparral as a shrub. It is widespread on upland slopes below an elevation of 5,000 feet, across low foothills, within river floodplains and in valley bottoms away from the coast.

3.4.4 Oracle Oak (*Quercus x morehus*)

Oracle oak is a cross between black oak and interior live oak. Physical and physiological characteristics are often quite variable; hybrids may resemble either parent or be perfectly intermediate. It is also possible for mature hybrids to cross with one of the parent species.

3.4.6 Canyon Live Oak (*Quercus chrysolepis*)

Canyon oak and interior live oak are Butte County's two evergreen oak trees. Both have very similar leaves that are smooth-margined above the browse line in older trees and spiky below the browse line or in younger trees. The trees can be told apart by the underside color of the leaves. The underside of canyon oak leaves are very light-colored, looking nearly white in comparison to the upper side, while the underside of interior live oak leaves are very similar in shade to the upper side of the leaves.

Canyon oak ranges from Oregon to Baja California, spanning elevations between sea level and 9,000 feet. The growth form of the canyon oak is very different depending on habitat conditions. In moist forests, canyon oaks become large, rounded, single-trunk trees. On the opposite end of the spectrum, on exposed cliffs or ridges, or where the young plant is heavily browsed so that it never grows above the browse line, mature canyon oaks are densely-branched shrubs. Canyon oak is common on brushy slopes in foothill canyons and on shaded mountain slopes. It is also sometimes found growing in granitic or volcanic outcrops.

3.4.7 Scrub Oak (*Quercus berberidifolia*)

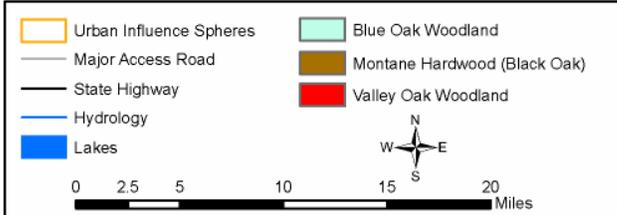
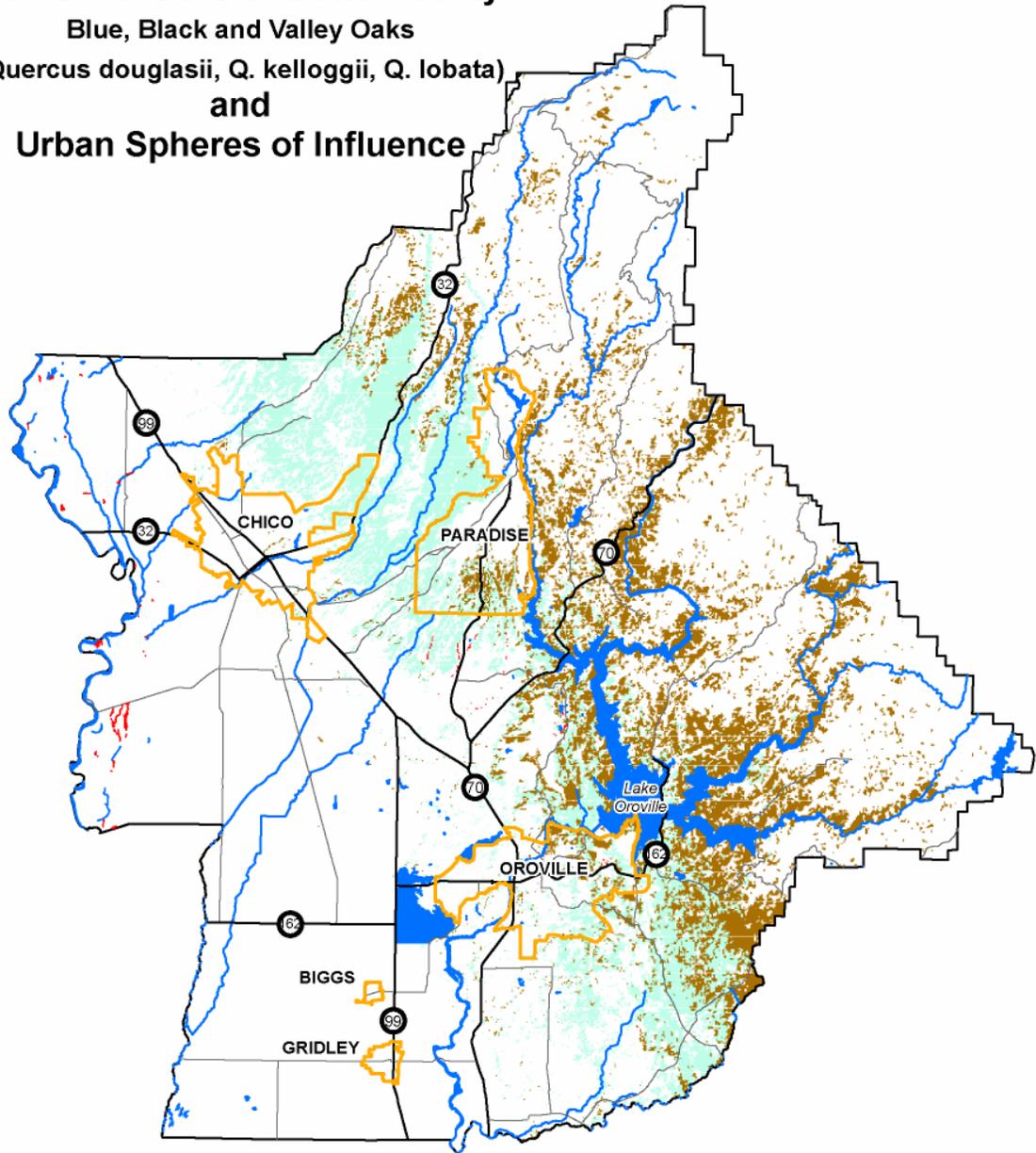
Scrub oak is one of the two most common oaks in California. It grows 6 to 15 feet tall and can establish dense thickets that shade out other understory plants. The scrub oak is found in the foothills below 5,000 feet and is an important member of chaparral and woodland vegetation.

3.4.8 Pests and Pathogens

Oak trees are prone to a variety of pests and pathogens. These pest and pathogens consist of insects, vertebrates, bacterial and fungal organisms. In historical times, oak woodlands had not been subject to substantial pest infestations that are commonly linked to coniferous forests. One of the latest diseases, Sudden Oak Death (*Phytophthora* sp.) has impacted coast live oaks, black oaks and tan oaks growing in coastal stands. There are currently no confirmed cases of this disease in Butte County.

California Oaks of Butte County

Blue, Black and Valley Oaks
 (*Quercus douglasii*, *Q. kelloggii*, *Q. lobata*)
 and
 Urban Spheres of Influence



Source: Hardwoods, FRAP Iyeg02_2.4g, Urban Influence Spheres, Butte County 2006; Roads, Hydrology, Lakes, Geographical Information Center 2006. June 22, 2006

4.0 CONSERVATION GOALS & POLICIES

4.1 WORK COOPERATIVELY WITH PRIVATE LAND OWNERS

GOAL: Encourage voluntary education and protection programs that assist private landowners in the management of their productive oak woodlands.

Policy:

4.1.1 Promote economic studies on the value of alternative and sustainable rangeland products such as fee hunting, eco-tourism, wild herb production, and firewood production.

4.1.2 Educate county landowners on the economic benefits of maintaining and restoring oak woodlands.

When harvesting oaks for fuel or range improvement, encourage land owners to maintain an average leaf canopy of at least 30 percent (Standiford and Tinnin 1996).

Retain trees of all sizes and species represented at the site.

When safety permits, leave old hollow trees and those actively being used for nesting, roosting and feeding.

Where low fire risk and aesthetics allow, pile limbs and brush to provide wildlife cover.

Where commercial or extensive harvest is being contemplated, seek professional advice from such resources as UC Cooperative Extension (Farm Advisor), USDA Natural Resource Conservation Service (NRCS), California Department of Forestry and Fire Protection (CDF) and private consultants.

4.1.3 When building within oak woodland, encourage land owners to:

Consider the impact of construction practices on the long-term management of oaks found on their property.

Cluster houses to preserve wildlife corridors and habitats.

Protect existing oaks during construction.

Avoid root compaction by limiting heavy equipment in the root zone.

Carefully plan roads, cuts and fills, building foundation and septic systems to avoid damage to tree roots.

Avoid landscaping which requires or allows irrigation and runoff within the drip line of oak trees.

Consider replacing trees, whose removal during construction is unavoidable, with native tree species.

Remove dead and rotting trees from areas immediately adjacent to homes and other structures.

4.1.4 Inform private landowners regarding the value of well-managed oak woodlands.

Educate landowners about potential threats to this resource.

Seek funding that supports outreach to private landowners through the Butte County RCD, the NRCS, UC Cooperative Extension as well as others.

4.2 ENCOURAGE HABITAT CONSERVATION

GOAL: Encourage landowners to protect oak woodlands for future generations.

Policy:

Conserve large working ranches with significant oak woodlands.
Recognize sites according to landscape variables size, shape, and connectivity to other habitats such as riparian that support rich sustainable wildlife populations.
Recognize sites that warrant voluntary protection according to threat and funding potential.

Encourage the voluntary protection of woodlands through these and other voluntary options:

Development of sustainable ranching and farming operations.
Partnerships between government and non-profits.
Establishing Williamson Act contracts.
Conservation easements and other forms of real estate transactions.

4.3 RESTORE DEGRADED OAK WOODLANDS

GOAL: Encourage the restoration of oak woodlands that suffer from lack of regeneration and exotic species invasions.

Policy

Restore oak woodlands that lack regeneration. In areas where oaks have been removed and are not regenerating, promote voluntary tree planting programs and measures that provide protection of oak seedlings from browsing and weeds.
Participate in state and federal cost share programs and grants.

Control invasive weed species in oak woodlands. Where possible introduce prescribed fire and other methods to help control the spread of medusahead grass, yellow starthistle, and other invasive wildland weed species.

Reestablish native understory species. Encourage diverse understory vegetation including shrubs. (Habitat with multiple layers of vegetation provide habitat for many bird species).

4.4 EDUCATION AND RESEARCH

Increase communication between land managers, ranchers, and scientists regarding the protection and management of oak woodlands.
Encourage workshops, symposiums, field trips and other methods of outreach regarding oak woodlands.
Encourage research on oak woodland habitats.
Encourage studies which evaluate oak regeneration in Butte County.
Encourage studies that evaluate the effects of changing land uses on oak woodland's current values (wildlife, ranching, water, economics, etc.).

5.0 ADDITIONAL INFORMATION NEEDED

Future amendments to this report should consider including the following information:

5.1 STATUS OF OAK WOODLANDS IN BUTTE COUNTY

Biological Assessment of oak woodlands

- species present
- range of oak species
- distribution
- habitat associations

Data assessment of oak woodland resources

- current acreage
- ownership patterns

5.2 PROGRAMS FOCUSING ON OAK WOODLAND CONSERVATION IN BUTTE COUNTY

5.2.1 STATE AND CITY LANDS

Ownership patterns/locations within Butte County

Chico State University (Big Chico Creek Ecological Reserve) and Bidwell Park. Identify acreage and dominant vegetation types within the region of ownership.

Recognize the other state agencies that have control or influence over substantial acreages of potential oak woodland restoration and protective sites, e.g. Caltrans roadside right- of-way easements. Such agencies potentially offer sites for oak regeneration, recruitment and mitigation, set-asides, and projects aimed at maintaining habitat connectivity.

Address problem of non-authorized use and trespass of oak woodland properties, resulting from the lack of appropriate resources to deal with refuse disposal, unlawful trespass, and vandalism.

Identify opportunity for state of California to secure appropriate oak woodland sites from willing sellers as a means of providing public access to highly desirable areas while providing the support resources to minimize problems.

5.2.2 FEDERAL LANDS

Identify federal agencies that have jurisdiction over oak woodland acreage within Butte County

Identify lands that are owned by the BLM and other federal agencies that contain substantial oak woodland acreage.

Identify BLM current goals to acquire desirable oak woodland parcels from willing sellers for the specific purpose of improving long-term, high quality wildlife habitat.

Outline management objectives: use and management of landholdings. i.e. the Forest Service recognizes that the passive management may lead to long-term reduction of an oak component in some areas in the absence of disturbance.

Forest Service acknowledgment of the need for continued research on oak woodland regeneration and recruitment as it relates to controlled burns and other management techniques.

5.2.3 TRIBAL LANDS

Tribal involvement in future resource conservation planning is vital and any voluntary conservation programs should provide a forum for tribal involvement in planning incentive-based programs.

5.2.4 PRIVATE LANDS

Improve the GIS mapping the current distribution, ownership patterns, land-use patterns and biological and physical aspects of the oak woodlands found within the county.

5.2.5 VOLUNTARY PROGRAMS TARGETING PRIVATE LANDS

Land Trust Organizations

Educational and Outreach Services

Estate Planning and Consulting

Cooperative Conservation Programming

Conservation Easements—provide a valuable planning mechanism for landowners interested in long-term, generational planning. Specifically conservation easements provide:

- permanent recorded deed restrictions, voluntarily negotiated between the landowner and the land trust,
- a tailored approach to achieve the financial ownership and conservation goals of the landowner,
- an opportunity to reserve land use rights that can include agriculture, timber and limited development rights, and
- monetary benefits from property and estate tax reduction.

Identify the total number of acres of oak woodland under protection in Butte County.

Prioritize specific geographical regions within the county for conservation easements.

5.2.6 EDUCATIONAL PROGRAMS FOCUSING ON OAK WOODLANDS

1. University of Calif., IHRMP: Integrated Hardwood Resource Management Program
2. NRCS: Natural Resource Conservation Service
3. Butte County RCD - Landowner Education Workshops

Summary

Privately owned lands provide an opportunity for long-term maintenance of contiguous acres of oak woodlands in Butte County. Inclusion of these lands in a voluntary incentive-based program is paramount to the protection and enhancement of Butte County's natural resources.

An opportunity exists for the State of California to be a more active participant in the protection and management of oak resources within Butte County. Creative planning scenarios should be utilized by including state agencies that may not often be considered when developing oak woodland management strategies; e.g. California Department of Parks and Recreation and Caltrans.

6.0 REFERENCES

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