



Department of Development Services

Tim Snellings, Director
Pete Calarco, Assistant Director

7 County Center Drive
Oroville, California 95965

T: 530.538.7601
F: 530.538.7785

buttecounty.net/dds

**Butte County Planning Commission
PUBLIC WORKSHOP
AGENDA REPORT
DRAFT Oak Woodlands Mitigation Ordinance**

December 14, 2017

To: Butte County Planning Commission
From: Pete Calarco, Assistant Director
Subject: Public Workshop: Draft Oak Woodlands Mitigation Ordinance

Introduction

The Butte County Planning Commission is holding a Public Workshop for the consideration of the proposed Draft Oak Woodlands Mitigation Ordinance. The purpose of this Public Workshop is to introduce the Draft Ordinance to the Planning Commission and public and to answer questions and receive comment and direction. The public is encouraged to attend and provide comment, either written or orally at the Planning Commission Workshop. Further direction from the Planning Commission will be incorporated into a final draft ordinance and a Public Hearing will be scheduled at the Planning Commission for further consideration and action, prior to review by the Board of Supervisors.

The Ordinance is drafted to be applicable to discretionary projects. Examples of discretionary projects include Subdivision Maps, Parcel Maps, Use Permits, and Minor Use Permits. These are applications that are subject to a public hearing and may be approved, denied or modified. Because they are discretionary, such applications are commonly subject to review under the California Environmental Quality Act (CEQA).

Agenda for Public Workshop

- A. Development Services Staff Presentation (20 minutes)
- B. Planning Commission Question and Answer Period (15 minutes)
- C. Public Comment (30 minutes)
- D. Planning Commission Discussion and Direction (20 minutes)

Background

Currently, the impacts of discretionary projects on oak woodlands are reviewed on a case-by-case basis. Adoption of an oak woodlands ordinance would assist in defining impact thresholds under CEQA, standardizing practices so applicants know what to expect from the project review process, provide guidance how to avoid or minimize impacts to oak woodlands and allow staff to process applications more efficiently. There are a number of Goals, Policies and Action items from General Plan 2030 that support an oak woodland ordinance. Staff has also found that one option for mitigation of impacts to oak woodlands, payment to the Oak Woodlands Conservation Fund cannot currently be fulfilled by an applicant. The State will not accept payment unless the local jurisdiction has adopted a fee. The Ordinance as drafted is applicable only to discretionary projects – those that can be approved or denied and impact oak woodlands. Development Services has prepared this draft based on a consultant prepared version.

In 2004, SB 1334 (Kuehl) was enacted adding Section 21083.4 to the Public Resources Code (attached). The statute requires a county, in determining whether CEQA requires an environmental impact report, negative declaration, or mitigated negative declaration, to determine whether a project in its jurisdiction may result in a conversion of oak woodlands that will have a significant effect on the environment, and requires the county, if it determines there may be a significant effect, to require one or more of specified mitigation alternatives to mitigate the significant effect of the conversion of oak woodlands.

In 2006, the Butte County Resource and Conservation District (RCD) prepared an Oak Woodland Resource Assessment Report. Development Services presented the plan to the Planning Commission with a recommendation to the Board of Supervisors. The Board adopted the Oak Woodlands Management Plan Resolution 07-084. This information was in turn used in the General Plan 2030 (GP2030) process. A number of policies related to oak woodlands were included in GP2030 as approved in 2010. A list of General Plan Goals, Policies and Action Items that are directly or indirectly related to the draft Ordinance is attached to this report

Draft Ordinance Overview

The following is a section by section review of the draft Ordinance. After each section of the draft Ordinance, staff has provided a brief discussion.

XX-1 *Title. Butte County Oak Woodland Mitigation Ordinance.*

Staff Discussion:

The reasons for the wording in this title are: 1) the ordinance focuses on oak woodlands as a habitat type and less on specific trees; and, 2) it is applicable only to discretionary projects to help determine potential impacts and establish mitigation approaches through an ordinance instead of a case-by-case basis for each project review.

XX-2 *Findings. In Butte County, oak woodland biological community types include valley oak woodland, blue oak woodland and blue oak-foothill pine. Oak woodlands are scattered throughout the county, but are concentrated in the transition area between the lower valley and higher elevations of the county. Oak woodlands provide wildlife with nesting sites, cover and food. Oak woodlands are common locally and regionally; however, native oak trees and woodland habitats are declining statewide because of development and land management practices. 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. Oak woodlands and their associated forests sequester and store atmospheric carbon in quantities that contribute to the health and well-being of the population of Butte County and the region. The California Oaks Foundation estimates that oak woodlands in Butte County account for 3,283,286 metric tons of sequestered carbon. Carbon sequestration is thought to play an important role in reducing greenhouse gasses in our atmosphere.*

Staff Discussion:

This section states some of the reasons that support the Purpose and Applicability of the Ordinance. These are based on oak woodlands' habitat value and carbon sequestration.

XX-3 *Purpose. The purpose of this chapter is to provide protection for native oak woodlands and oak forests through the establishment of mitigation standards for oak canopy and oak tree removal on discretionary projects. It is the intent of this chapter to implement goals, policies and actions of the Butte County General Plan Conservation and Open Space Element pertaining to oak woodland habitat by setting forth standards for oak canopy retention, significant specimen trees, tree groves and establishing an in-lieu payment for oak woodland canopy removal for discretionary projects. It is further the intent to satisfy the provisions of California Public Resources Code §21083.4 including other mitigation measures developed by*

the County. This chapter provides for the protection of trees on private property where discretionary applications have been filed by controlling tree removal while allowing for reasonable enjoyment of private property rights and property development for the following reasons:

- A. The county finds it necessary to preserve oak woodlands on private property in the interest of the public health, safety and welfare and to preserve scenic beauty.*
- B. Oak woodlands provide soil stability, improve drainage conditions, provide habitat for wildlife and provide aesthetic beauty and screening for privacy.*
- C. Oak woodlands are a vital part of a visually pleasing, healthy environment for the unincorporated area of this County.*
- D. Oak woodlands are proven to sequester carbon which helps to reduce greenhouse gases and achieve local and state greenhouse gas reduction goals.*
- E. Discretionary projects that are consistent with this section are considered to have less than significant impacts with respect to impacts to oak woodlands pursuant to the California Environmental Quality Act (CEQA).*

Staff Discussion

The purpose section includes reference to GP2030 Goals, Policy and Action items (attached to this report). This section includes the Draft Ordinance’s connection to CEQA through the Public Resources Code for discretionary projects and recognizes the importance of oak woodlands and private property. The last bullet items states that, through implementation of the ordinance, the impacts of discretionary projects to oak woodlands are considered less than significant.

XX-4 Applicability. The provisions of this ordinance shall apply to discretionary projects that include the following:

- A. Result in soil disturbance; and*
- B. Result in removal of oak trees or oak woodlands.*

Staff Discussion

This section reinforces that the ordinance is applicable to discretionary projects that affect oak woodlands. It is the first portion of the ordinance that sets the review process in place. Attached to the report is a flow chart showing the basic decision points of the Draft Ordinance.

XX-5 Definitions.

- A. Decision-making authority. The public hearing authority to make a decision on a discretionary project. This includes the Zoning Administrator, Planning Commission or Board of Supervisors.*

- B. *Dbh (Diameter at breast height). This is a measure of the diameter of a tree at 4.5 feet above grade.*
- C. *Project Site. A parcel or parcels of land on which a land development project is proposed.*
- D. *Oak canopy cover. The area directly under the live branches of the oak trees as a percent of a given unit of land.*
- E. *Oak stand. A group of similar trees growing in a contiguous pattern, having sufficiently diverse age-class distribution, composition and structure, and growing on a site of sufficiently uniform quality that it is distinguishable as a unit. Stands are a basic unit of vegetation in the landscape and do not have a set size.*
- F. *Oak tree. The native tree of the genus Quercus, of any age or size over 5 inches dbh.*
- G. *Oak woodland. Project site land where a majority of living trees are native oaks and with 10 percent or greater oak canopy cover. The 10 percent canopy cover standard applies to the individual stand of oaks and not to the entire project site; consequently, a project site may contain one or more oak woodland.*

Staff Discussion

The definitions section should be informative and applicable to terms used within the ordinance. Every term need not be defined. The preference is that the definitions not contain performance criteria or operative parts of the ordinance. This approach cannot always be achieved entirely. Staff’s approach is to keep the definitions section to a minimum.

This draft Ordinance defines an “oak tree” as all native trees of the genus *Quercus* consistent with the State’s definition in Public Resources Code §21083.4. As drafted, all the requirements apply equally to the various oak trees found in the County.

XX-6 *Exemptions. The following types of actions are exempt from this ordinance:*

- A. *Projects undertaken pursuant to an approved Natural Community Conservation Plan or approved subarea plan within an approved Natural Community Conservation Plan that includes oaks as a covered species or that conserves oak habitat through natural community conservation preserve designation and implementation and mitigation measures.*
- B. *Affordable housing projects for lower income households, as defined pursuant to Section 50079.5 of the Health and Safety Code, that are located within an urbanized area, or within a sphere of influence as defined pursuant to Section 56076 of the Government Code.*
- C. *Conversion of oak woodlands on agricultural land, with a zoning designation of Agriculture (AG) or Agriculture Services (AS), that includes land that is used to produce or process plant and animal products for commercial purposes.*
- D. *Projects undertaken pursuant to Section 21080.5 of the Public Resources Code as a State Secretary of Resources Agency certified regulatory program.*

- E. *Hazardous Tree Removal – The removal of trees with structural defects that indicate pending failure as determined by a qualified professional.*
- F. *Existing Structure Defensible Space/Fire Safe Measures – Oak tree removal in the 100-foot defensible space zone around an existing building or structure and fuel modification actions, inside of the 100-foot defensible space zone of an existing structure, unless otherwise directed by the applicable fire agency.*
- G. *Public Road and Public Utility Projects – Oak canopy removal necessary to complete County capital improvement projects when the new alignment is dependent on the existing alignment. This exemption applies to road widening and realignments which are necessary to increase capacity, to protect the public’s health, and to improve the safe movement of people and goods in existing public road rights-of-way, as well as acquired rights-of-way necessary to complete the project. This exemption shall also apply to removal of oak canopy necessary to comply with the safety regulations of the Public Utilities Commission and necessary to maintain a safe operation of utility facilities. Lands owned by public utilities and used for administrative purposes or uses unrelated to the public service provided by the utility are not exempted under this provision. This exemption shall not apply to new roads or utility installation, or to internal circulation roads within new development.*

Staff Discussion

The Exemptions section is the second part of the ordinance in the decision flow. The first four (A through D) are exemptions found in CEQA. It is helpful to include these so as not to add confusion as to what State exemptions the County is or is not including. Staff modified the State exemption shown in C regarding agricultural production to be specific to lands zoned Agriculture and Agriculture Services.

Defensible space, hazardous tree removal and public utilities/rights of way are also common exemption types found in similar ordinances throughout the state. While not required in the ordinance, since oak removal for defensible space is not a discretionary action for example, this helps answer the questions of the public.

- XX-7 *Approval required prior to removal. On applicable discretionary projects, unless exempted under this ordinance, no oak tree, oak woodland or portion thereof shall be removed until all of the following has occurred:*
- A. *The project is approved by the decision-making authority;*
 - B. *Compliance with the applicable requirements of this chapter is established and as otherwise required in the conditions of approval; and*
 - C. *The Department of Development Services has issued a letter to proceed.*

Staff Discussion

Staff included this section to underscore the stages required prior to removal of oak woodlands within a discretionary project. Subsection C requires that a letter be issued by DDS. This is included to help avoid potential confusion as to compliance with the requirements prior to removal.

XX-8 Oak Woodland Evaluation Plan and Retention Standards.

- A. In order to determine the extent of the impact on oak woodland, an Oak Woodland Evaluation Plan shall be required in conjunction with an application for the required discretionary entitlements for a development project. The Oak Woodland Evaluation Plan shall include but not limited to the identification of the location and total acreage of oak woodland on the project site, including oak canopy area, a description of representative samples of the species and sizes of all native oaks five inches or more dbh. The requirements of an Oak Woodland Evaluation Plan shall be specified in a manual prepared and maintained by the Department of Development Services.*
- 1. The Zoning Administrator shall determine that the Oak Woodland Evaluation Plan is complete and distribute with the project environmental document.*
 - 2. The Decision-Making Authority shall include the Oak Woodland Evaluation Plan in its action on the project.*
- B. Retention Standards. After completion of the Oak Woodland Evaluation Plan. Replacement of oak woodlands shall not be required for projects that meet the following standards provided that no oak trees that is 24 inches or greater in dbh are removed:*
- 1. Where the Oak Woodland Evaluation Plan as required in XX-8A shows that there are oak woodlands on the property that are less than 10 percent oak canopy cover.*
 - 2. For oak woodlands that have 10 percent or more of oak canopy cover:*
 - a. Ten percent or less of the oak woodland canopy as identified in the Oak Woodland Evaluation Plan is removed (example: oak canopy cover is 50 percent, this may be reduced to 45 percent). In no circumstance can the canopy cover drop below 10 percent excepting as provided in the following subsection; or*
 - b. Where the Oak Woodland Evaluation Plan demonstrates that the oak woodland contains limited and/or isolated trees and the oak woodland is of a degraded condition, then up to 10 oak trees may be removed without a replacement requirement. Note that trees of 24 inches or greater dbh do not qualify for removal.*
 - 3. Oak Woodlands to remain on the property. The project shall be designed such that the oak woodlands that are to remain are of intact quality, along waterways and/or wildlife corridors including deer migration corridors, are connected with oak woodlands on adjacent lands including public lands or other factors determined by the Department of Development Services.*

Staff Discussion

This section is intended to establish the requirement for an Evaluation Plan and the significance threshold for tree canopy area that can be removed. The significance threshold is extent of removal at which point the impact is determined to be significant and subject to replacement mitigation. Measurement of canopy area appears to be a trend in the last ten years or so focusing on the habitat that the woodland offers instead of individual tree sizes. The Evaluation Plan is required to be distributed together with the project CEQA document and considered by the decision-making authority (Zoning Administrator, Planning Commission or Board of Supervisors).

The standard of 10 percent for oak canopy cover is found in State law pertaining to resources on oak woodlands. There are other jurisdictions that use this same approach. The removal of up to 10 percent of the canopy present is also a concept found in other example ordinances. This section also introduces the requirement for Development Services to prepare and maintain a manual. Staff sees this as helping to keep the detail in a separate document that can be updated as needed based. A draft manual will be prepared by staff and circulated with the draft Ordinance.

XX-9 Oak Woodland Replacement. For projects not meeting the retention standards in Section XX-8B, the project shall include one or a combination of the following at the Replacement Ratio specified in XX-10:

- A. Conservation Easement. Proof of executing a conservation easement subject to County approval/acceptance for the equivalent canopy area removed.*
- B. Payment to mitigation bank. Proof of payment of equivalent canopy area within a County accepted mitigation bank.*
- C. Payment to Land Trust. Proof of payment to an accredited land trust for equivalent canopy area removed.*
- D. Payment to the State Oak Woodlands Conservation Fund. For up to 100 trees, a payment may be made to the State Oak Woodlands Conservation Fund. The calculation of the payment shall be submitted by a certified arborist or consult the International Society of Arboriculture standards for valuing trees of different sizes to the Department of Development Services for acceptance. Proof of payment shall be provided within six months of the Department acceptance of the payment amount calculation.*
- E. On-site replanting does not count toward replacement. On-site replanting (within the project site) for Oak Woodland Replacement is not allowed except as follows:*
 - 1. Exception. Projects processed under a specific plan, planned unit development or similar large-scale development may have opportunity for permanent dedicated open space, maintenance programs and funding mechanisms integrated into the project description where the County may consider alternative replacement programs wholly on-site, off-site or a combination.*

Staff Discussion

This section outlines the mitigation options. The emphasis is toward a managed conservation easement, mitigation bank or land trust. An option is provided for up to 100 trees. We note here that the ordinance shifts to tree count not canopy area. This option is proposed as an option that may be more expedient if the applicant needs to meet a timeframe and if the other options take longer.

Note that subsection E does not allow onsite planting. Many of our projects approved contain the standard language from Public Resources Code §21083.4 allowing up to 50% of the mitigation requirement to be onsite planting as an option for mitigation. Those projects would still be allowed to use that option if the Ordinance were adopted. New projects would be subject to the removal of this option.

The draft Ordinance is different from Public Resources Code, which does allow up to 50% of the mitigation to be on-site planting. Feedback from other jurisdictions and their observations with projects indicates that the onsite planting success rate was low. DDS Staff is proposing that Butte County take a similar approach even though we do not have conclusive data here. The exception in the draft ordinance is for comprehensive projects like Planned Unit Developments, Specific Plans or similar large-scale development. The reason this is included is that we recognize the existing projects like Paradise Summit residential (Planned Development), Whisper Ridge Golf Course (Overlay Zone, Use Permit, Conditional Zoning Agreement) and Rio d'Oro (Specific Plan). These projects had EIR's prepared and have land use designations and controls that can be of a scale that can manage onsite mitigation approaches.

XX-10 Replacement Ratio

- A. 1:1. For canopy removal of up to 50 percent removal of oak canopy area, the replacement ratio of canopy area shall be 1:1 replacement area to removal area.*
- B. 2:1. For canopy removal exceeding 50 percent of the oak canopy area, the replacement ratio of canopy area shall be 2:1 replacement area to removal area exceeding 50 percent.*

Staff Discussion

This section is linked to the preceding Replacement Section. There are a wide range of approaches found in other jurisdictions practices. Replacements are expressed in terms of tree ratios, seedling ratios, fee payments, land area, local mitigation banks, etc. DDS staff is proposing a two-step replacement ratio with the threshold increasing to 2:1 at 50% removal.

- XX-11 Equivalent Canopy Area Replacement standards. The calculation of replacement area for oak woodlands canopy removed is one or a combination of the following:*
- A. Replacement Trees. 200 trees (saplings or one-gallon) per acre of woodland removed*
 - B. Replacement Acorns. 600 acorns per acre of oak woodland canopy removed.*

Staff Discussion

This section helps set a standard for replacement area for conservation easements, land trust or mitigation banks where replanting will occur.

- XX-12 Temporary Impacts. Construction or similar temporary activities can result in temporary impacts to oak woodlands. The Department of Development services shall prepare and maintain a manual containing the standard practices for temporary impacts on oak woodlands.*

Staff Discussion

Similar to Section XX-8, this section sets a requirement for the Department of Development Services to develop and maintain a manual for temporary impacts. Staff recommends this approach to keep mitigation practices in a manual. The draft Department Manual will be circulated with the Draft Ordinance to help with understanding the relationship between the two.

- XX-13 Monitoring of Approved Projects. Staff time for monitoring of compliance with this ordinance shall at the hourly rate under the Board of Supervisors adopted fee schedule for the Planning Division.*

Staff Discussion

This section is intended to connect mitigation monitoring process and cost recovery into the ordinance.

- XX-14 Premature Removal of Oak Trees Prior to Development Approval. If the decision making authority has evidence and concludes that trees were removed prior to development application approvals, then the requirements of this ordinance shall be applied for those trees that were removed prior to approval of the development application. The decision-making authority may also require a penalty of replacement trees of up to 10 to 1 in addition to the ratios outlined in section XX-10. The removal of oak trees up to five years prior to filing the development application is considered premature. In determining the amount of the penalty, the decision-making authority shall consider the following factors:*
- A. The seriousness and scope of the premature removal of oak trees;*
 - B. The relationship to project site design;*
 - C. The impact of the premature removal of oak trees on the community;*

- D. *Whether the property owner or applicant has previously been found responsible for premature removal of oak trees; and*
- E. *Any other factors.*

Staff Discussion

This section is proposed to address some circumstances that have happened in other Counties where oak trees have been prematurely removed prior to development approvals. If there happens to be an applicant that knowingly or otherwise removes oak woodland in advance of filing an application and receiving approval, this is in place as a penalty.

Public Outreach

Staff prepared the draft Ordinance for review by several agencies, interested parties and several previous project applicants in the County. Individual emails were sent as well as the standing email distribution list for the Butte County Users' Group. A meeting of the Users' Group was held on December 6, 2017 with this draft Ordinance as the single agenda item.

At the Users' Group meeting, staff reviewed the structure of the proposed ordinance and received feedback and initial comments. Areas of discussion included:

- Expansion of the list of exempt oak species to include species that are members of the genus *Quercus* that are not designated as Group A or Group B commercial species consistent with PRC 21083.4;
- Removing requirements for approval by a professional prior to removal of hazardous trees;
- Allow on site replanting in specific circumstances;
- Provide flexibility in the 10 tree removal threshold based on specific circumstances; and
- Allow the ability for projects to propose alternatives to ordinance requirements through a project specific analysis.

Generally, those at the Users' Group supported the preparation of an ordinance. The feedback received is preliminary as there is a need to review the additional detail as part of the pending manual.

CEQA Review Pending

Staff will conduct review of the ordinance under the requirements of the California Environmental Quality Act (CEQA). This is required prior to scheduling the public hearings on the ordinance. Staff anticipates preparing a Negative Declaration under CEQA since the ordinance would assist in determining impact standards and mitigation for discretionary projects. A Negative Declaration is a conclusion that no significant impacts would result from the project (i.e. adoption of the ordinance). The project in this case is adoption of the proposed Oak Woodland Mitigation Ordinance.

NEXT STEPS

After the completion of the Public Workshop staff will review comments and direction provided by the Planning Commission and update the draft. Staff will then start the CEQA review process for the ordinance, and schedule a public hearing before the Planning Commission for recommendations to the Board of Supervisors.

ATTACHMENTS

Draft Oak Woodland Mitigation Ordinance
Flow Chart of Draft Ordinance
Public Resources Code 21083.4 (CEQA section regarding oak woodlands)
Applicable General Plan 2030 Goals, Policies and Action Items
Oak Woodlands Management Plan Resolution 07-084

ADDITIONAL RESOURCES

Oak Woodland Impact Decision Matrix 2008
<http://ucanr.edu/sites/oakplanner/files/71734.pdf>

California Wildlife Conservation Board – Oak Woodlands Conservation Program
<https://wcb.ca.gov/Programs/Oaks>

UC Oak Woodland Management –
http://ucanr.edu/sites/oak_range/

Description of County Oak Conservation Policies
http://ucanr.edu/sites/oak_range/Description_of_County_Oak_Conservation_Policies/

Proceedings of the Seventh California Oak Symposium: Managing Oak Woodlands
in a Dynamic Work (2014)
https://www.fs.fed.us/psw/publications/documents/psw_gtr251/psw_gtr251.pdf

Association of Environmental Professionals (AEP) CEQA Threshold of Significance
https://ceqportal.org/tp/Thresholds_of_Significance%2003-23-20161.pdf

PRELIMINARY DRAFT (November 28, 2017)

Butte County Oak Woodland Mitigation Ordinance

Contents

- XX-1 Title
 - XX-2 Findings
 - XX-3 Purpose
 - XX-4 Applicability
 - XX-5 Definitions
 - XX-6 Exemptions
 - XX-7 Approval Required Prior to Removal
 - XX-8 Oak Woodland Evaluation Plan and Retention Standards
 - XX-9 Oak Woodland Replacement Requirements
 - XX-10 Replacement Ratio
 - XX-11 Equivalent Canopy Area Replacement standards
 - XX-12 Temporary Impacts
 - XX-13 Monitoring of Approved Projects
 - XX-14 Penalty for Removal of Oak Trees Prior to Development Approval
- (Separate Manual for Oak Woodland Evaluation Plan methodology and construction measures)

XX-1 Title. Butte County Oak Woodland Mitigation Ordinance.

XX-2 Findings. In Butte County, oak woodland biological community types include valley oak woodland, blue oak woodland and blue oak-foothill pine. Oak woodlands are scattered throughout the county, but are concentrated in the transition area between the lower valley and higher elevations of the county. Oak woodlands provide wildlife with nesting sites, cover and food. Oak woodlands are common locally and regionally; however, native oak trees and woodland habitats are declining statewide because of development and land management practices. 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. Oak woodlands and their associated forests

sequester and store atmospheric carbon in quantities that contribute to the health and well-being of the population of Butte County and the region. The California Oaks Foundation estimate that oak woodlands in Butte County account for 3,283,286 metric tons of sequestered carbon. Carbon sequestration is thought to play an important role in reducing greenhouse gasses in our atmosphere.

XX-3 Purpose. The purpose of this chapter is to provide protection for native oak woodlands and oak forests through the establishment of mitigation standards for oak canopy and oak tree removal on discretionary projects. It is the intent of this chapter to implement goals, policies and actions of the Butte County General Plan Conservation and Open Space Element pertaining to oak woodland habitat by setting forth standards for oak canopy retention, significant specimen trees, tree groves and establishing an in-lieu payment for oak woodland canopy removal for discretionary projects. It is further the intent to satisfy the provisions of California Public Resources Code §21083.4 including other mitigation measures developed by the County. This chapter provides for the protection of trees on private property where discretionary applications have been filed by controlling tree removal while allowing for reasonable enjoyment of private property rights and property development for the following reasons:

- A. The county finds it necessary to preserve oak woodlands on private property in the interest of the public health, safety and welfare and to preserve scenic beauty.
- B. Oak woodlands provide soil stability, improve drainage conditions, provide habitat for wildlife and provide aesthetic beauty and screening for privacy.
- C. Oak woodlands are a vital part of a visually pleasing, healthy environment for the unincorporated area of this County.
- D. Oak woodlands are proven to sequester carbon which helps to reduce greenhouse gases and achieve local and state greenhouse gas reduction goals.
- E. Discretionary projects that are consistent with this section are considered to have less than significant impacts with respect to impacts to oak woodlands pursuant to the California Environmental Quality Act (CEQA).

XX-4 Applicability. The provisions of this ordinance shall apply to discretionary projects that include the following:

- A. Result in soil disturbance; and
- B. Result in removal of oak trees or oak woodlands.

XX-5 Definitions.

- A. Decision-making authority. The public hearing authority to make a decision on a discretionary project. This includes the Zoning Administrator, Planning Commission or Board of Supervisors.
- B. Dbh (Diameter at breast height). This is a measure of the diameter of a tree at 4.5 feet above grade.

- C. Project Site. A parcel or parcels of land on which a land development project is proposed.
- D. Oak canopy cover. The area directly under the live branches of the oak trees as a percent of a given unit of land.
- E. Oak stand. A group of similar trees growing in a contiguous pattern, having sufficiently diverse age-class distribution, composition and structure, and growing on a site of sufficiently uniform quality that it is distinguishable as a unit. Stands are a basic unit of vegetation in the landscape and do not have a set size.
- F. Oak tree. The native tree of the genus *Quercus*, of any age or size over 5 inches dbh.
- G. Oak woodland. Project site land where a majority of living trees are native oaks and with 10 percent or greater oak canopy cover. The 10 percent canopy cover standard applies to the individual stand of oaks and not to the entire project site; consequently, a project site may contain one or more oak woodland.

XX-6 Exemptions. The following types of actions are exempt from this ordinance:

- A. Projects undertaken pursuant to an approved Natural Community Conservation Plan or approved subarea plan within an approved Natural Community Conservation Plan that includes oaks as a covered species or that conserves oak habitat through natural community conservation preserve designation and implementation and mitigation measures.
- B. Affordable housing projects for lower income households, as defined pursuant to Section 50079.5 of the Health and Safety Code, that are located within an urbanized area, or within a sphere of influence as defined pursuant to Section 56076 of the Government Code.
- C. Conversion of oak woodlands on agricultural land, with a zoning designation of Agriculture (AG) or Agriculture Services (AS), that includes land that is used to produce or process plant and animal products for commercial purposes.
- D. Projects undertaken pursuant to Section 21080.5 of the Public Resources Code as a State Secretary of Resources Agency certified regulatory program.
- E. Hazardous Tree Removal – The removal of trees with structural defects that indicate pending failure as determined by a qualified professional.
- F. Existing Structure Defensible Space/Fire Safe Measures – Oak tree removal in the 100-foot defensible space zone around an existing building or structure and fuel modification actions, inside of the 100-foot defensible space zone of an existing structure, unless otherwise directed by the applicable fire agency.
- G. Public Road and Public Utility Projects – Oak canopy removal necessary to complete County capital improvement projects when the new alignment is dependent on the existing alignment. This exemption applies to road widening and realignments which are necessary to increase capacity, to protect the public’s health, and to improve the safe movement of people and goods in existing public road rights-of-way, as well as acquired

rights-of-way necessary to complete the project. This exemption shall also apply to removal of oak canopy necessary to comply with the safety regulations of the Public Utilities Commission and necessary to maintain a safe operation of utility facilities. Lands owned by public utilities and used for administrative purposes or uses unrelated to the public service provided by the utility are not exempted under this provision. This exemption shall not apply to new roads or utility installation, or to internal circulation roads within new development.

XX-7 Approval required prior to removal. On applicable discretionary projects, unless exempted under this ordinance, no oak tree, oak woodland or portion thereof shall be removed until all of the following has occurred:

- A. The project is approved by the decision-making authority
- B. Compliance with the applicable requirements of this chapter is established and as otherwise required in the conditions of approval, and
- C. The Department of Development Services has issued a letter to proceed.

XX-8 Oak Woodland Evaluation Plan and Retention Standards.

A. In order to determine the extent of the impact on oak woodland, an Oak Woodland Evaluation Plan shall be required in conjunction with an application for the required discretionary entitlements for a development project. The Oak Woodland Evaluation Plan shall include but not limited to the identification of the location and total acreage of oak woodland on the project site, including oak canopy area, a description of representative samples of the species and sizes of all native oaks five inches or more dbh. The requirements of an Oak Woodland Evaluation Plan shall be specified in a manual prepared and maintained by the Department of Development Services.

1. The Zoning Administrator shall determine that the Oak Woodland Evaluation Plan is complete and distribute with the project environmental document.
2. The Decision-Making Authority shall include the Oak Woodland Evaluation Plan in its action on the project.

B. Retention Standards. After completion of the Oak Woodland Evaluation Plan. Replacement of oak woodlands shall not be required for projects that meet the following standards provided that no oak trees that is 24 inches or greater in dbh are removed:

1. Where the Oak Woodland Evaluation Plan as required in XX-8A shows that there are oak woodlands on the property that are less than 10 percent oak canopy cover.
2. For oak woodlands that have 10 percent or more of oak canopy cover:
 - a. Ten percent or less of the oak woodland canopy as identified in the Oak Woodland Evaluation Plan is removed (example: oak canopy cover is 50 percent, this may be reduced to 45 percent). In no circumstance can the canopy cover drop below 10 percent excepting as provided in the following subsection; or
 - b. Where the Oak Woodland Evaluation Plan demonstrates that the oak woodland contains limited and/or isolated trees and the oak woodland is of a degraded

condition, then up to 10 oak trees may be removed without a replacement requirement. Note that trees of 24 inches or greater dbh do not qualify for removal.

3. Oak Woodlands to remain on the property. The project shall be designed such that the oak woodlands that are to remain are of intact quality, along waterways and/or wildlife corridors including deer migration corridors, are connected with oak woodlands on adjacent lands including public lands or other factors determined by the Department of Development Services.

XX-9 Oak Woodland Replacement. For projects not meeting the retention standards in Section XX-8B, the project shall include one or a combination of the following at the Replacement Ratio specified in XX-10:

- A. Conservation Easement. Proof of executing a conservation easement subject to County approval/acceptance for the equivalent canopy area removed.
- B. Payment to mitigation bank. Proof of payment of equivalent canopy area within a County accepted mitigation bank.
- C. Payment to Land Trust. Proof of payment to an accredited land trust for equivalent canopy area removed.
- D. Payment to the State Oak Woodlands Conservation Fund. For up to 100 trees, a payment may be made to the State Oak Woodlands Conservation Fund. The calculation of the payment shall be submitted by a certified arborist or consult the International Society of Arboriculture standards for valuing trees of different sizes to the Department of Development Services for acceptance. Proof of payment shall be provided within six months of the Department acceptance of the payment amount calculation.
- E. On-site replanting does not count toward replacement. On-site replanting (within the project site) for Oak Woodland Replacement is not allowed except as follows:
 1. Exception. Projects processed under a specific plan, planned unit development or similar large-scale development may have opportunity for permanent dedicated open space, maintenance programs and funding mechanisms integrated into the project description where the County may consider alternative replacement programs wholly on-site, off-site or a combination.

XX-10 Replacement Ratio

- A. 1:1. For canopy removal of up to 50 percent removal of oak canopy area, the replacement ratio of canopy area shall be 1:1 replacement area to removal area.
- B. 2:1. For canopy removal exceeding 50 percent of the oak canopy area, the replacement ratio of canopy area shall be 2:1 replacement area to removal area exceeding 50 percent.

XX-11 Equivalent Canopy Area Replacement standards. The calculation of replacement area for oak woodlands canopy removed is one or a combination of the following:

- A. Replacement Trees. 200 trees (saplings or one-gallon) per acre of woodland removed
- B. Replacement Acorns. 600 acorns per acre of oak woodland canopy removed.

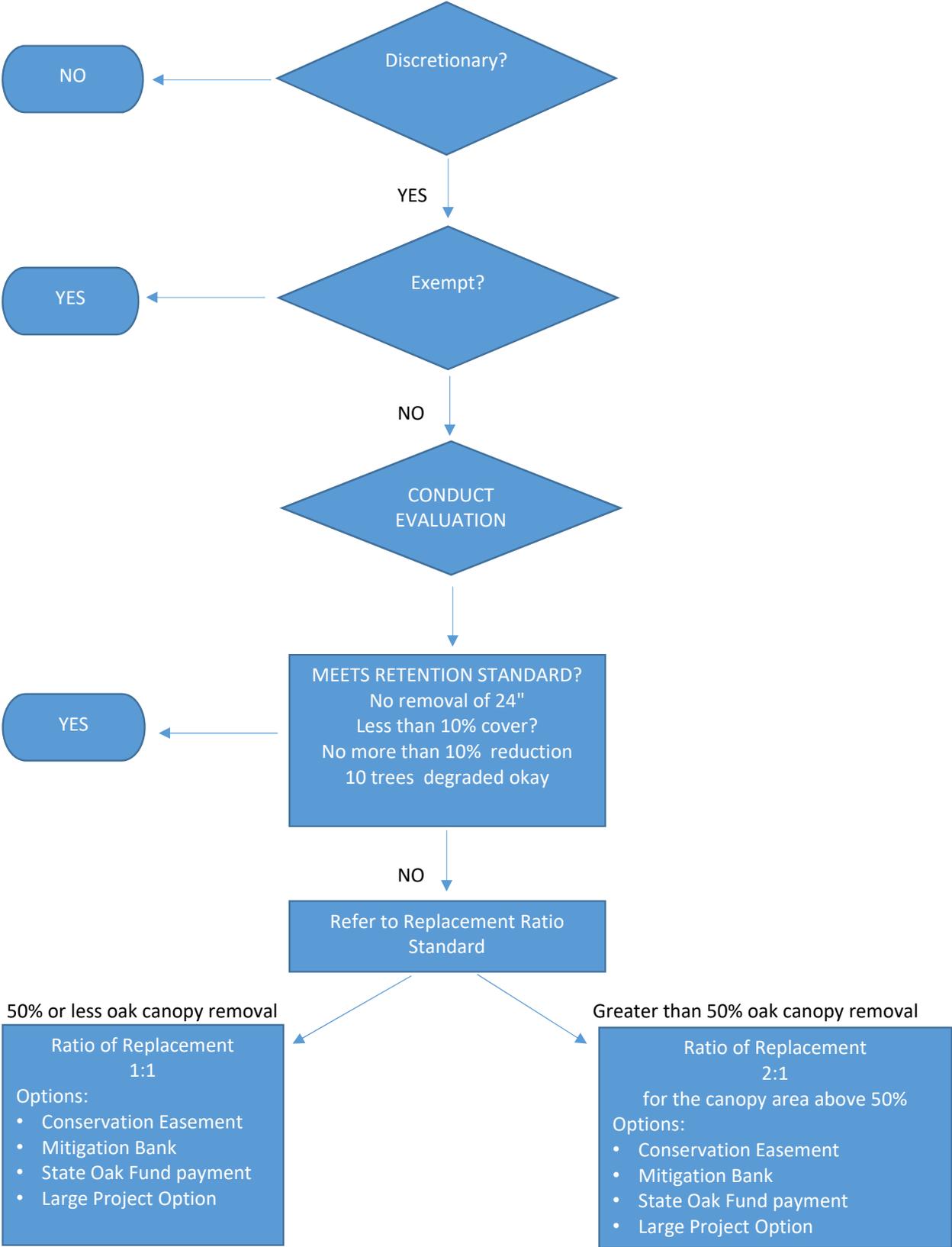
XX-12 Temporary Impacts. Construction or similar temporary activities can result in temporary impacts to oak woodlands. The Department of Development services shall prepare and maintain a manual containing the standard practices for temporary impacts on oak woodlands.

XX-13 Monitoring of Approved Projects. Staff time for monitoring of the compliance with this ordinance shall at the hourly rate under the Board of Supervisors adopted fee schedule for the Planning Division.

XX-14 Premature Removal of Oak Trees Prior to Development Approval. If the decision making authority has evidence and concludes that trees were removed prior to development application approvals, then the requirements of this ordinance shall be applied for those trees that were removed prior to approval of the development application. The decision-making authority may also require a penalty of replacement trees of up to 10 to 1 in addition to the ratios outlined in section XX-10. The removal of oak trees up to five years prior to filing the development application is considered premature. In determining the amount of the penalty, the decision-making authority shall consider the following factors:

- A. The seriousness and scope of the premature removal of oak trees;
- B. The relationship to project site design;
- C. The impact of the premature removal of oak trees on the community;
- D. Whether the property owner or applicant has previously been found responsible for premature removal of oak trees; and
- E. Any other factors.

Butte County Draft Oak Woodland Mitigation Ordinance Flow Chart



Replacement Density: 200 trees (saplings or one-gallon) per acre density
 Acorn conversion: 3 acorns per 1 replacement tree = 600 acorns per acre density

State of California

PUBLIC RESOURCES CODE

Section 21083.4

21083.4. (a) For purposes of this section, “oak” means a native tree species in the genus *Quercus*, not designated as Group A or Group B commercial species pursuant to regulations adopted by the State Board of Forestry and Fire Protection pursuant to Section 4526, and that is 5 inches or more in diameter at breast height.

(b) As part of the determination made pursuant to Section 21080.1, a county shall determine whether a project within its jurisdiction may result in a conversion of oak woodlands that will have a significant effect on the environment. If a county determines that there may be a significant effect to oak woodlands, the county shall require one or more of the following oak woodlands mitigation alternatives to mitigate the significant effect of the conversion of oak woodlands:

(1) Conserve oak woodlands, through the use of conservation easements.

(2) (A) Plant an appropriate number of trees, including maintaining plantings and replacing dead or diseased trees.

(B) The requirement to maintain trees pursuant to this paragraph terminates seven years after the trees are planted.

(C) Mitigation pursuant to this paragraph shall not fulfill more than one-half of the mitigation requirement for the project.

(D) The requirements imposed pursuant to this paragraph also may be used to restore former oak woodlands.

(3) Contribute funds to the Oak Woodlands Conservation Fund, as established under subdivision (a) of Section 1363 of the Fish and Game Code, for the purpose of purchasing oak woodlands conservation easements, as specified under paragraph (1) of subdivision (d) of that section and the guidelines and criteria of the Wildlife Conservation Board. A project applicant that contributes funds under this paragraph shall not receive a grant from the Oak Woodlands Conservation Fund as part of the mitigation for the project.

(4) Other mitigation measures developed by the county.

(c) Notwithstanding subdivision (d) of Section 1363 of the Fish and Game Code, a county may use a grant awarded pursuant to the Oak Woodlands Conservation Act (Article 3.5 (commencing with Section 1360) of Chapter 4 of Division 2 of the Fish and Game Code) to prepare an oak conservation element for a general plan, an oak protection ordinance, or an oak woodlands management plan, or amendments thereto, that meets the requirements of this section.

(d) The following are exempt from this section:

(1) Projects undertaken pursuant to an approved Natural Community Conservation Plan or approved subarea plan within an approved Natural Community Conservation

Plan that includes oaks as a covered species or that conserves oak habitat through natural community conservation preserve designation and implementation and mitigation measures that are consistent with this section.

(2) Affordable housing projects for lower income households, as defined pursuant to Section 50079.5 of the Health and Safety Code, that are located within an urbanized area, or within a sphere of influence as defined pursuant to Section 56076 of the Government Code.

(3) Conversion of oak woodlands on agricultural land that includes land that is used to produce or process plant and animal products for commercial purposes.

(4) Projects undertaken pursuant to Section 21080.5 of the Public Resources Code.

(e) (1) A lead agency that adopts, and a project that incorporates, one or more of the measures specified in this section to mitigate the significant effects to oaks and oak woodlands shall be deemed to be in compliance with this division only as it applies to effects on oaks and oak woodlands.

(2) The Legislature does not intend this section to modify requirements of this division, other than with regard to effects on oaks and oak woodlands.

(f) This section does not preclude the application of Section 21081 to a project.

(g) This section, and the regulations adopted pursuant to this section, shall not be construed as a limitation on the power of a public agency to comply with this division or any other provision of law.

(Added by Stats. 2004, Ch. 732, Sec. 1. Effective January 1, 2005.)

Butte County General Plan 2030 Goals, Policies and Action Items directly or indirectly related to Oak Woodlands.

Butte County General Plan 2030 can be reviewed at the following link:

<http://www.buttecounty.net/dds/Planning/GeneralPlan/Chapters.aspx>

LAND USE ELEMENT

Goal LU-1 Continue to uphold and respect the planning principles on which the County's land use map is based.

Policy

LU-P1.6 The County shall conserve important habitat and watershed areas, while protecting the public safety of County residents.

CONSERVATION AND OPEN SPACE ELEMENT

Goal COS-7 Conserve and enhance habitat for protected species and sensitive biological communities.

Policies

COS-P7.4 New development projects shall mitigate their impacts in habitat areas for protected species through on- or off-site habitat restoration, clustering of development, and/or project design and through the provisions of the Butte Regional Habitat Conservation Plan (HCP) and Natural Community Conservation Plan (NCCP) within the HCP/NCCP Planning Area, upon the future adoption of the HCP/NCCP.*

COS-P7.6 New development projects shall include setbacks and buffers along riparian corridors and adjacent to habitat for protected species, except where permitted in the Butte Regional Habitat Conservation Plan (HCP) and Natural Community Conservation Plan (NCCP) Planning Area and where such development is consistent with the conditions of the HCP/NCCP, upon the future adoption of the HCP/NCCP.*

COS-P7.7 Construction barrier fencing shall be installed around sensitive resources on or adjacent to construction sites. Fencing shall be installed prior to construction activities and maintained throughout the construction period.*

COS-P7.8 Where sensitive on-site biological resources have been identified, construction employees operating equipment or engaged in any development-associated activities involving vegetation removal or ground disturbing activities in sensitive resource areas shall be trained by a qualified biologist and/or botanist who will provide information on the on-site biological

resources (sensitive natural communities, special status plant and wildlife habitats, nests of special-status birds, etc.), avoidance of invasive plant introduction and spread, and the penalties for not complying with biological mitigation requirements and other State and federal regulations.*

COS-P7.9 A biologist shall be retained to conduct construction monitoring in and adjacent to all habitats for protected species when construction is taking place near such habitat areas.*

Action Items

COS-A7.1. Develop and provide incentives to developers to conserve and maintain important habitat areas and sensitive biological resources.

COS-A7.2. Develop a set of guidelines for evaluating development project impacts to habitat in locations outside of the approved Butte Regional Habitat Conservation Plan and Natural Community Conservation Plan Planning Area, as well as for requiring specific mitigations for impacts that are identified

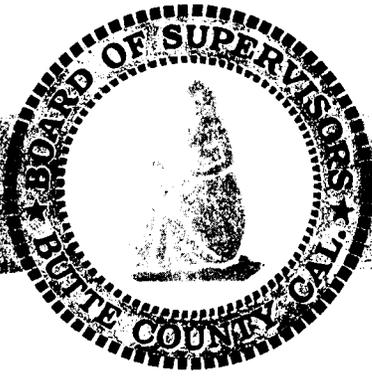
COS-A7.3. Establish a mitigation bank program for impacts to habitats for protected species, such as oak woodlands, riparian woodlands and wetlands, in locations outside of the approved Butte Regional Habitat Conservation Plan and Natural Community Conservation Plan Planning Area, using mitigation fees on new development projects as a funding mechanism.

COS-A7.4. Seek funding to conduct a study to develop an approach to protecting significant specimen trees and tree groves

AREA AND NEIGHBORHOOD PLANS ELEMENT – Durham Dayton Nelson Plan

Goal D2N-5 Protect and maintain areas of native vegetation which include riparian forest, valley freshwater marsh, valley oak woodland, vernal pools, annual grasslands and designated natural areas. Such areas deserve protection as part of the heritage of the communities, for the way such areas add to the aesthetic environment, and as important examples of the diversity of habitats and the wildlife they support within the Planning Area and the State.

*denotes required mitigation measure in General Plan 2030



**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 24 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



**Jeff Mott, CSU Chico
Glenn Nader, UC Coop. Ext
Anthea Maslin, CSU Chico
Marissa Fierro, CSU Chico**

Table of Contents

Butte County Oak Woodland Resource Assessment Report

- 1.0 Introduction**
- 2.0 Goals of WCB Program**
- 3.0 Assessment of Existing Data**
 - 3.1 Habitat Associations**
 - 3.2 Current Acreage**
 - 3.3 Ownership Patterns**
 - 3.4 Oak Species and Distribution in Butte County**
 - 3.4.1 Valley Oak**
 - 3.4.2 Blue Oak**
 - 3.4.3 Black Oak**
 - 3.4.4 Interior Live Oak**
 - 3.4.5 Oracle Oak**
 - 3.4.6 Canyon Oak**
 - 3.4.7 Scrub Oak**
 - 3.4.8 Pests and Pathogens**
- 4.0 Conservation Goals and Policies**
 - 4.1 Work Cooperatively with Private Land Owners**
 - 4.2 Encourage Habitat Conservation**
 - 4.3 Restore Degraded Oak Woodlands**
 - 4.4 Education and Research**
- 5.0 Additional Information Needed**
- 6.0 References**

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 lobota*)
- 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.

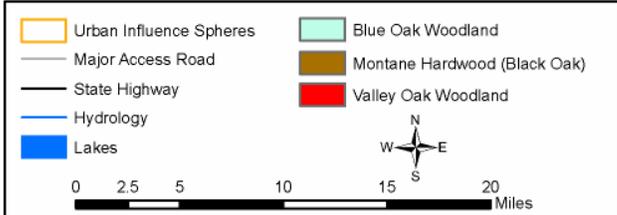
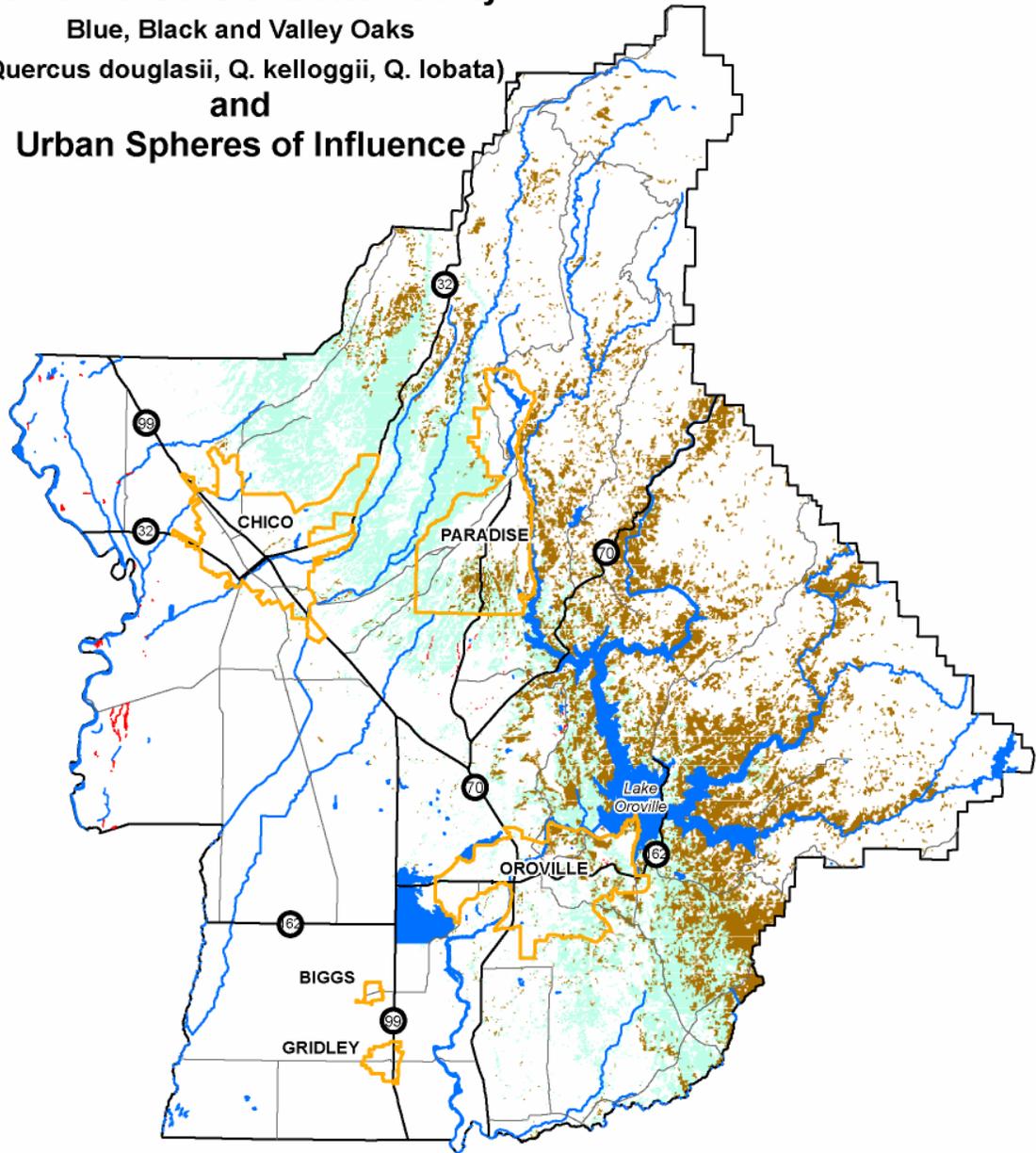
3.4.7 Scrub Oak (*Quercus berberidifolia*)

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 Iveg02_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

Harris, Richard R. and Susan D. Kocher. 2002. Oak Management by County Jurisdictions in the Central Sierra Nevada, California. In: Proceedings of the Fifth Symposium on Oak Woodlands, Oaks in California's Changing Landscape, October 22-25, 2001, San Diego, California. USDA Forest Service. General Technical Report PSW-GTR-184. pp 463-472.

Nelson, C. W., Radabaugh M. 1995. Using Population Distribution Forecasts And GIS Technology To Assess Potential Hardwood Loss In The Northern Sacramento Valley.

Radabaugh, M. 1995. Population Growth Trends and the Allocation of Pattern In the Northern Sacramento Valley.

Oswald, Vernon H. 1994. Manual of the Vascular Plants of Butte County, California. California Native Plant Society, Mt. Lassen Chapter Officers.

Integrated Hardwood Resource Management Program
http://danr.ucop.edu/ihrmp/progprep/02progreport/02_05fundres.html

California Department of Finance (Department of Finance 2004). 2004. Population Projections by Race, Ethnicity, Gender and Age for California and its counties 2000-2005, California Department of Finance, Demographic Research Unit, Sacramento, CA.

California Oak Foundation (COF 2004). 2004. Oak Woodlands Conservation Fund Update California Oak Foundation Current Issues, Oakland, CA
http://www.californiaoaks.org/html/oak_report_04-04.html

California Wildlife Conservation Board (CWCB 2001). 2001. The Oak Woodlands Conservation Act of 2001 Program Application and Guidelines. State of California Resources Agency, Sacramento, CA.

Garrison, B.A., J.M. Harper, R.B. Standiford and J.W. LeBlank. 1997. California Oaks and Deer. Integrated Hardwood Range Management Program Oak Fact Sheet #47, University of California, Berkeley.

Sinton, S, 1999. A New Tool for Conserving Oak Woodlands: The California Rangeland Trust. Oak's n Folks, University of California, Integrated Hardwood Range Management program, 14 (1). University of California Berkeley.

Standiford, R. 1999. Tax Incentives Encourage Open Space Conservation. Oak's n Folks, University of California, Integrated Hardwood Range Management program, 14 (2). University of California Berkeley.