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State of California
The Resource Agency
DEPARTMENT OF FISH AND GAME

FINAL MANAGEMENT PLAN

for the

LAKE BERRYESSA WILDLIFE AREA

DEPARTMENT OF THE INTERIOR
Bureau of Reclamation

April
1998

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I. INTRODUCTION

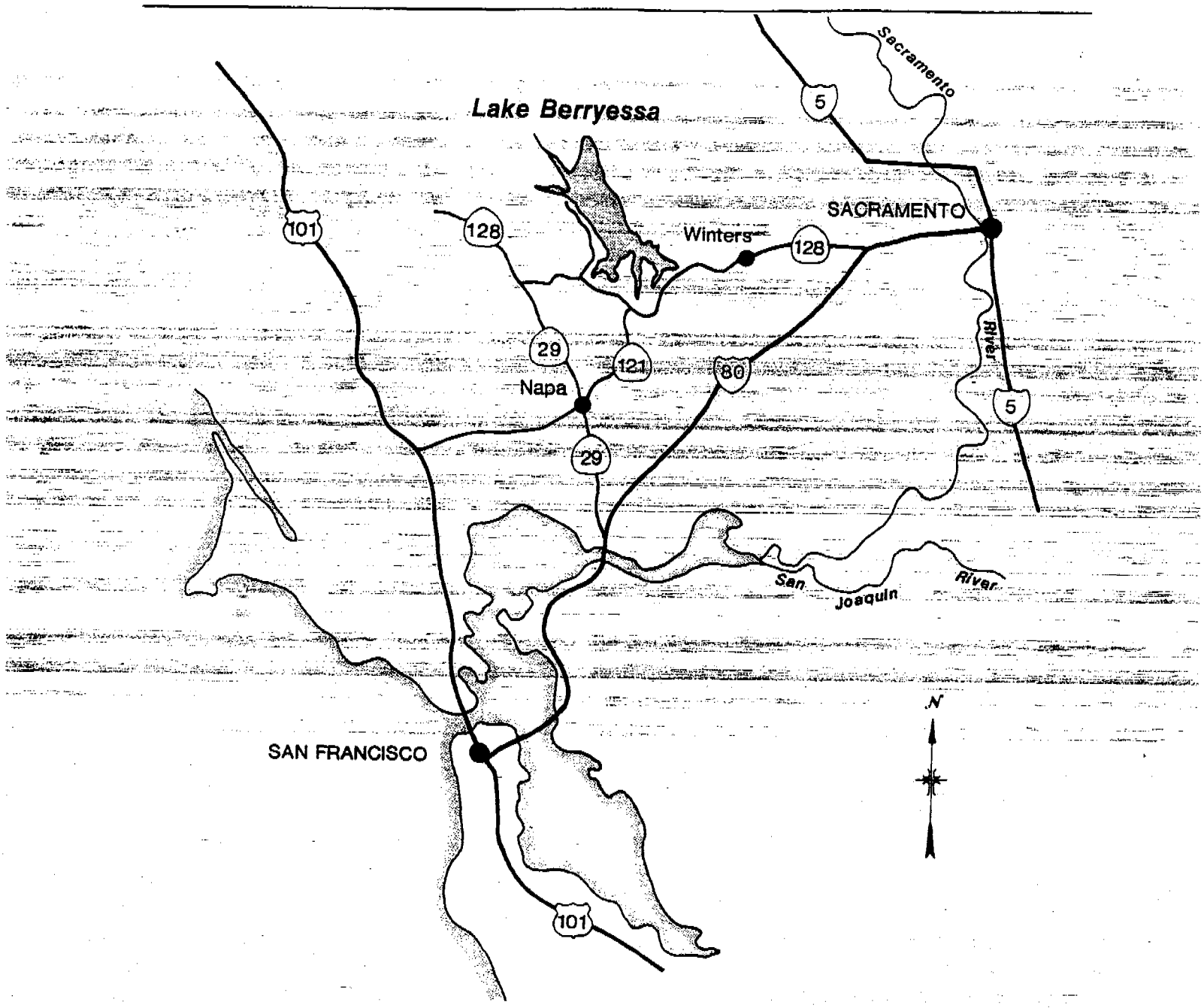
A. Purpose and History

The 1993 Record of Decision for the Lake Berryessa Reservoir Area Management Plan, Environmental Impact Statement provided for that the Bureau of Reclamation (BOR) and the California Department of Fish and Game (CDFG) to enter into a cooperative agreement to plan, establish and manage the Lake Berryessa Wildlife Area (LBWA) on the east side of Lake Berryessa, extending from Eticuera Creek south to Monticello Dam. (See Figure 2 and 3)

The lands on the east side of Lake Berryessa included in this management plan are owned by the Federal government and administered by the BOR. This plan will guide management activities for habitats, species, and programs described herein to achieve the Department's mission to protect and enhance fish and wildlife values and the Actions described in the 1995 Memorandum of Understanding (MOU) between the Department and the Bureau of Reclamation. This plan is intended to set forth the general direction of the wildlife area management. Specific detail of individual proposals including site specific impacts will be address, where necessary, as required by NEPA and CEQA, prior to implementation. The actions that will require additional site specific environmental documentation are listed in appendix I.

The primary purpose of the Lake Berryessa Wildlife Area, as described in the 1995 MOU, is to restore, enhance, and protect the fish and wildlife resources along the east side of Lake Berryessa. A secondary purpose is to manage compatible outdoor recreational opportunities for the public. The Federal land on the east side of Lake Berryessa above the high-water mark (elevation 440) totals approximately 2,000 acres of undeveloped annual grassland and blue oak woodland (Ritter 1988). However, due to reservoir fluctuations, the actual acreage of available land varies. The area has been primarily managed for cattle grazing and non-intensive recreational uses.

Historically, there has been little attention to the management of fish and wildlife resources. The Lake Berryessa Wildlife Area is ecologically interconnected within and among various levels of ecological organization. Ecological organization, is a hierarchically arranged continuum, and therefore enhancing and improving ecological elements and processes at one level will improve elements at all levels. By creating, enhancing and protecting habitat values on the LBWA, the entire ecosystem will also benefit. The area has considerable potential for increasing fish and wildlife habitat values, which could be achieved through enhancement and restoration techniques,



LAKE BERRYESSA
LOCATION MAP

FIGURE 1

thus securing the long-term health and viability of habitats and re-establishing links among habitats. This will be accomplished by creating new wetlands; protecting and enhancing riparian vegetation; establishing and protecting oak trees; preserving and enhancing water quality by reducing erosion; and enhancing and conserving habitat, for diverse populations of sport fish, native fish, and wildlife species. These will include but are not limited to threatened and endangered species, such as the bald eagle and, peregrine falcon.

B. Public Scoping Sessions

A series of two public scoping sessions were held in the Department of Fish and Game Region 3 Office (7329 Silverado Trail, Napa Calif.) on October 6, 1994 and December 7, 1994. During the meetings, a brief overview of the history of the Lake Berryessa Wildlife Area was presented with preliminary thoughts on the possible fish and wildlife enhancements the Department was considering for the wildlife area management plan. The public, including adjacent landowners, special interest groups, and other agencies were then asked for their thoughts and concerns. All ideas were recorded and placed into four categories. These categories were 1) access, 2) wildlife issues, 3) fisheries; and, 4) other. Toward the end of the second meeting, everyone was asked to rate the ideas on a scale of one to five (except for "other issues" which was rated on a scale of one to ten). The results of this exercise are presented as they were voted on and placed in the order of importance as selected by the group (Appendix H). The relative ranking score each issue received is shown to the left of the statement. These issues and ideas were considered and some have contributed to this plan. Each of the above categories are addressed within public use and facility maintenance elements.

II. PROPERTY DESCRIPTION

A. Geographical Setting

The Lake Berryessa Wildlife Area consists of approximately 2,000 acres of land above the 440-foot elevation, which is the spillway elevation of Monticello Dam. With annual and seasonal fluctuations in the lake elevation, additional acreage is periodically available for fisheries/wildlife management activities.

Lake Berryessa is located in the northeastern portion of Napa County (Figures 1 and 2) among the hilly-to-steep mountains of the California Coast Range. The lake was formed behind Monticello Dam. The dam, built in 1957, is fed by Putah Creek and Pope Creek and their tributaries.

Access to the lands on the northern portion of the LBWA is gained by a gravel road maintained by BOR. The purpose of the road is to: 1) provide access to "eastside" owners; 2) serve as a livestock easement; 3) provide fire protection; 4) serve BOR, CDFG, and California Department of Forestry & Fire Protection (CDF) for administrative purposes; 5) and provide recreational access to the public. At present, the eastside road has very limited public use capability. Public use was minimally addressed in the Lake Berryessa RAMP. Public use would be limited such that East Side naturalness would be maintained and would be consistent with LBWA plans developed.

Access to the southern portion of the LBWA is by boat only from several launching ramps on the west and south shores. The southern section is composed of steep hills and canyons dropping steeply into the lake. Vegetation is dense with small scattered openings throughout.

B. Property Boundaries and Adjacent Land Use

The Lake Berryessa Wildlife Area is located on the east side of Lake Berryessa from Monticello Dam on the south to Eticuera Creek on the north. The western boundary of the wildlife area is the eastern shoreline of Lake Berryessa including the fluctuation zone and appropriate open water areas. The eastern boundary of the wildlife area is defined by a levee line adjacent to the gravel road in the northern portion from the Berryessa-Knoxville Road south to the Gunn property line. From the Gunn property south to Monticello Dam, the eastern boundary is defined as the "take-line" extending approximately 300 feet or greater horizontally from the surcharge elevation of 455.5 feet (Figure 3).

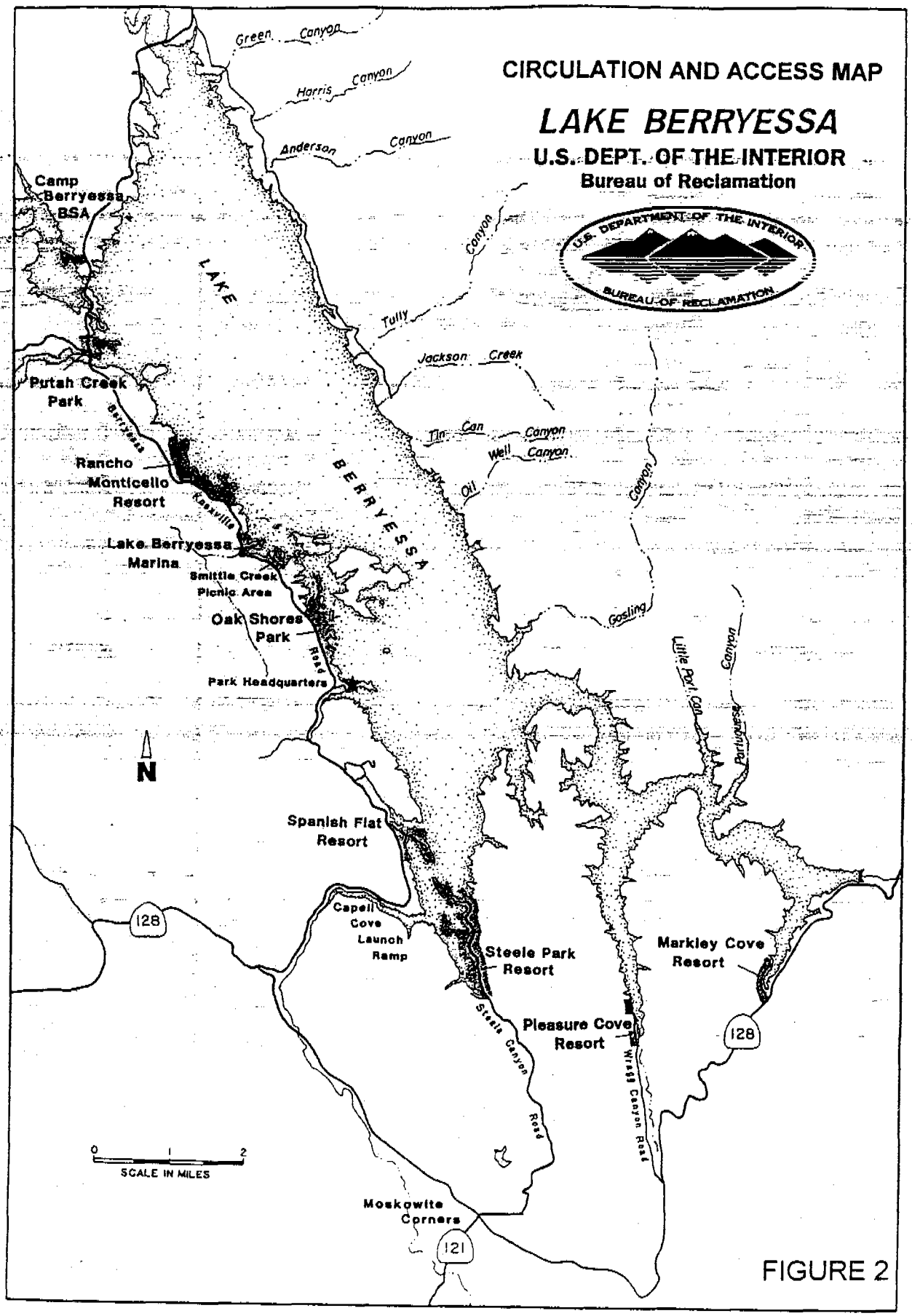

CIRCULATION AND ACCESS MAP
LAKE BERRYESSA
U.S. DEPT. OF THE INTERIOR
Bureau of Reclamation
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
Green Canyon
Harris Canyon
Anderson Canyon
Camp Berryessa BSA
LAKE
BERRYESSA
Tully Canyon
Jackson Creek
Putah Creek Park
Berryessa
Rancho Monticello Resort
Knoxville
Tin Can Canyon
Well Canyon
Oil Canyon
Lake Berryessa Marina
Smittle Creek Picnic Area
Oak Shores Park
Road
Park Headquarters
Gosling
Little Port Can
Portuguese Canyon
N
Spanish Flat Resort
128
Capell Cove Launch Ramp
Steele Park Resort
Markley Cove Resort
Pleasure Cove Resort
Steele Canyon Road
Wragg Canyon Road
0 1 2
SCALE IN MILES
Moskowite Corners
121

FIGURE 2

The lands to the east of the wildlife area are privately owned and used primarily for ranching and cattle grazing. The Gunn ranch itself has a non-exclusive grazing easement (Appendix C) down the 440-foot elevation on the wildlife area (592-acre parcel) which may preclude certain wildlife management activities. In addition, there are several long-established hunting clubs located on these adjacent lands.

The U.S.G.S. topographic map quadrangles in which the LBWA is included are: Walter Springs, Brooks, Lake Berryessa, and Monticello Dam.

C. Geology, Soils, Climate, and Hydrology

The eastern shore and both ends of Lake Berryessa are composed predominantly by cretaceous Knoxville sandstone and shale, over which the Bressa, Dibble, Los Gatos, Maymen, Sobrante, and Tehama soils series formed. The coast range mountains between Monticello Dam and the Pacific Ocean are cut by numerous faults. The dam is located within Algermissen Seismic Risk Zone 2, in which major damage could result from strong earthquake shocks.

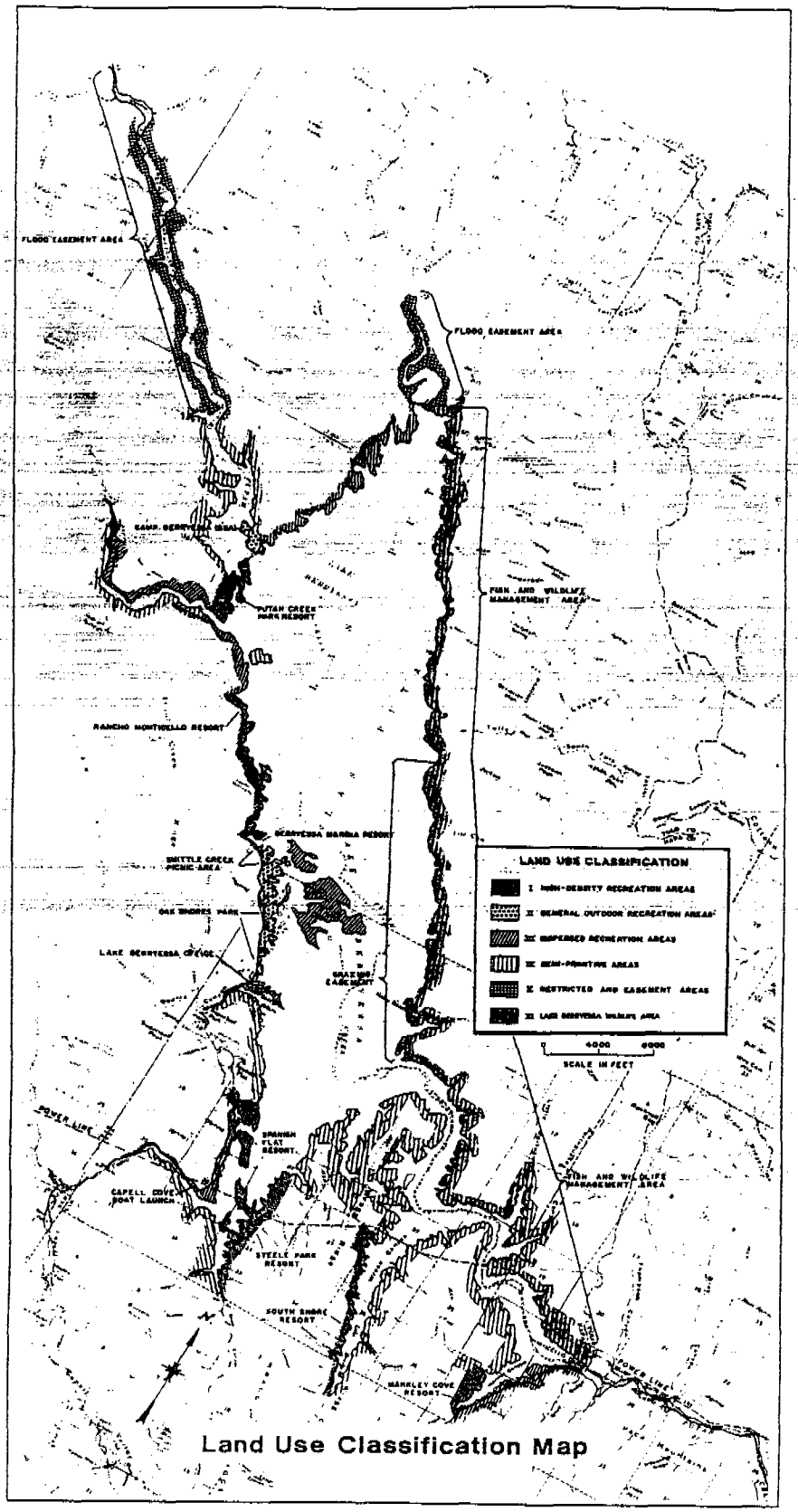
The water supply for Lake Berryessa is derived from the 568 square mile drainage basin above the dam. The elevation of the basin ranges from 182 feet at the dam to 4,722 feet at the upper end of Putah Creek with the majority of the basin lying below 1,500 feet. Of the four major creeks that flow into the lake, only one impinges at the north end of the LBWA. The four primary intermittent streams on the east side of Lake Berryessa that pass through the wildlife area are the unnamed creeks in Green Canyon, Harris Canyon, Anderson Canyon, and Tully Canyon. Several other intermittent drainages flow into the lake through the southern portion of the wildlife area.

The climate of the basin is mild and typically composed of two seasons, a warm, dry season from May through October and a cool, wet season from November through April. Rainfall averages 30 inches per year falling mainly mid-December through mid-March.

The BOR has secured a Post-Reservation water right totaling 1,000-acre feet annually for fish, wildlife and riparian enhancement proposed in and around Lake Berryessa. Water taken form the lake or prevented from reaching the lake and stored for more than 30 days will be counted against the annual reservation. The water will be used to support the various habitat enhancement/development projects proposed in this management plan.

D. Cultural Features

The first systematic cultural resource studies in the reservoir area were conducted during construction of Monticello Dam. Two subsequent investigations were conducted



Land Use Classification Map

FIGURE 3

in the 1970's and 1980's. To date, a large portion of the recreation lands have been surveyed for cultural resources. As a result of the most recent surveys, it has been determined that many of the resources are buried; therefore, in most instances only where the surface area has been eroded or disturbed are cultural resources found.

Fifty three (53) archaeological sites were recorded during the creation of the lake. Forty eight (48) of these sites were inundated with the filling of the lake. Subsequently, an additional 29 archaeological sites have been recorded. Many of these sites are partly or fully covered during periods of high water. The archaeological sites consist of isolated artifacts, artifact scatters, artifact concentrations, campsites, and large village sites. The large village sites were located adjacent to the major drainages and are now well below low-water levels.

At least two periods of occupation are represented in the archaeological remains C an early occupation from 5,000 to 2,000 years ago, and a late occupation from 2,000 years ago to proto-historic times. The early sites are characterized by large milling tools and choppers/scrapers. Late sites are characterized by clam shell disc beads, obsidian arrowheads, mortars and pestles, and, in proto-historic times, glass trade beads.

At the beginning of the Euroamerican era, the area was occupied Patwin speaking Native Americans. This group's territory covered the southwestern portion of the Sacramento River and included Berryessa Valley. At least one ethnographic village , Topayto or Topai, and possibly one other, Chemoco or Chemocu, was located in the reservoir area. Stephen powers reported in 1877 that Topai-di-sel was the name of the group living Berryessa Valley, but it is likely the area's native culture was destroyed by the late 1830's. The suffix "sel" means people, thus the name most likely refers to the people of Topai.

Rancho Las Putas, located on Putah Creek and covering most of Berryessa Valley, consisted of eight square leagues. It was granted by the Mexican Governor Micheltoreana in 1843 to Jose and Sixto (Sisto) Berryessa. The land grant contained 35,515.82 acres and was confirmed by the United States Court in 1855.

By 1866, ownership of the rancho was in other hands and being subdivided. In the same year, the town of Monticello was laid out. By 1867, a hotel and store were in operation, and in 1868 another hotel was under construction. At the end of 1867, the whole valley was taken up by new settlers. On September 17, 1874, the last of the Berryessa brothers died.

III. HABITAT AND SPECIES DESCRIPTION

A. Vegetation Communities, Habitats, and Plant Species

Of the six major habitats that occur in the Lake Berryessa area, only two dominate the LBWA. Blue oak woodland (Ritter 1988) occurs as open forests along the southern portion of the LBWA. Annual grassland habitat (Kie 1988) covers nearly all of the northeast shore. Historically, the entire area probably supported blue oak woodland, but past brush and tree clearing and livestock grazing have converted it to grassland. There are scattered groups of remnant valley oaks in the LBWA, but oak regeneration is not evident.

There are no riparian woodland communities found along the intermittent drainages through the LBWA. Additionally, due to the annual fluctuations in lake levels, there are no wetlands occurring in the LBWA.

An inventory of the plant species known to occur in the Lake Berryessa area is included in Appendix L. A specific plant inventory of the LBWA has not been conducted, but additional species beyond those included in Appendix L are not anticipated.

B. Animal Species

Mammalian species (scientific names included in Appendix M) commonly present on the LBWA include black-tailed deer, coyote, bobcat, grey fox, raccoon, striped skunk, black-tailed jackrabbit, California ground squirrel, deer mouse, voles, and various other small and medium sized mammals. Several species of songbirds, waterfowl, raptors, and shorebirds are either resident, winter, or migrate through the area. Western rattlesnakes, king snakes, gopher snakes, skinks, and western fence lizards are common reptiles found on the eastside, while salamanders, toads, and various frogs are common amphibian species in the lacustrine influence area.

Lake Berryessa supports both warmwater and coldwater fish populations (scientific names included in Appendix M). Currently, largemouth bass, smallmouth bass, black crappie, white crappie, white catfish, channel catfish, and bluegill are the principal warmwater sport fishes at Lake Berryessa. Each of these species is a self-sustaining population (not stocked). The current coldwater fisheries management consists of annually stocked rainbow trout, and chinook salmon. Approximately 100,000 trout are planted each spring by the Department. Half of this allotment consists of rainbows of the Coleman Kamloops strain, and the remainder are Eagle Lake strain. The chinook salmon have been introduced as part of a program to create a self sustaining salmonoid species for the lake. In previous years, Kokanee salmon, silver salmon, and

brown trout were planted by the Department. However, these species have not been reported in several years.

One significant factor limiting warmwater fish production at Lake Berryessa is the lack of cover, especially for juvenile fish. Initial removal of brush and trees from the reservoir basin eliminated valuable fish habitat. Successful reproduction of warmwater fishes has been restricted because juvenile fish have no escape cover and are easily captured by predators, often such nongame species as Pike Minnow (*Ptychocheilus* sp.). Previous fish habitat enhancement projects include, the placement of brush shelters and catfish spawning structures along portions of the shoreline, reduced boat speeds in narrow cove areas, and planting willows in numerous coves and on Big Island.

Another important factor limiting warmwater sport fish populations at Lake Berryessa is reservoir fluctuation during the spring bass spawning period. Water withdrawal from the reservoir normally commences in the late spring during the period that largemouth and smallmouth bass are spawning. Consequently, the drawdown may interrupt spawning and nesting activities resulting in nesting abandonment, dewatering of nests, and altered environmental conditions for eggs and fry. The conditions listed above all contribute to reduced nesting success and diminished survivability of eggs and recently hatched fish.

An inventory of the fish and wildlife species found in and around Lake Berryessa is included in Appendix M. A specific fisheries and wildlife inventory of the LBWA has not been conducted, but additional species beyond those included in appendices L and M are not anticipated other than occasional visitors.

C. Endangered, Threatened, and Rare Species

A number of endangered, threatened, and rare species, as well as proposed, candidate and species of special concern are known to occur or are occasional visitors at Lake Berryessa. One listed species is known to occur in the wildlife area seasonally on an annual basis. Bald eagles, winter on the lake and in the fluctuation zone. Waterfowl on and around the lake attract the eagle, and the open water and sprouting grasses provide habitat and food for waterfowl. The Peregrine falcon is thought to be an occasional visitor to the wildlife area. The Peregrine falcon has been spotted infrequently around the lake, and the LBWA does provide open areas and prey for foraging. The area surrounding Lake Berryessa has been designated by the U.S. Fish and Wildlife Service as potential critical habitat for the Red-legged frog.

Appendix K includes a list of all endangered, threatened and rare species including candidate and species of special concern known to occur in the Lake Berryessa area.

Other than the species noted above, none are known to occur in the wildlife area other than as transitory visitors.

IV. MANAGEMENT GOALS AND ENVIRONMENTAL IMPACTS

Definition of Terms Used in This Plan

Element: An element refers to any biological, public use, or facility maintenance program as defined below for which goals and objective have been prepared and presented within this plan.

Biological Element: These elements consist of species, habitats, or communities for which specific management goals and objectives have been developed within the plan.

Public Use Element: Public use elements are any recreational, scientific, or other use programs appropriate to and compatible with the purpose for which this property was acquired.

Facility Maintenance Element: This is a general purpose element describing the maintenance and administrative program which must be implemented in order to maintain orderly and beneficial management of the area.

Biological Goal: A biological goal is the statement of intended long-range results of management based upon the feasibility of maintaining, enhancing, or restoring species populations and/or habitat.

Public Use Goal: A public use goal is the statement of the desired type and level of public use compatible with the biological element goals previously specified in the plan.

Objective: Objectives are statements of the intended results of management actions which promote the biological, public use, or operations/maintenance goals on the property.

Task: Tasks are the individual projects or work elements which implement the objective and are useful in planning operation and maintenance budgets.

Fluctuation Zone: The area around the reservoir that the lake elevation fluctuates.

Takeline: extending approximately 300 feet or greater horizontally from the surcharge elevation of 455.5 feet.

Lacustrine habitat: this is inland depressions or dammed riverine channels containing standing water.

Acronyms and Abbreviations Used in This Plan

ac-ft: acre-feet (1 acre-foot is equal to approximately 325,000 gallons, one acre of water one foot deep)

BOR: Bureau of Reclamation

CEQA: California Environmental Quality Act

CDF: California Department of Forestry and Fire Protection

CDFG: California Department of Fish and Game

EIS: Environmental Impact Statement

LBWA: Lake Berryessa Wildlife Area

NEPA: National Environmental Policy Act

RAMP: Lake Berryessa Reservoir Area Management Plan

TAKELINE: The Reclamation property ownership line

EASTSIDE ROAD: The portion of the gravel surfaced road within the LBWA which extends from Knoxville Road to the Gunn Grazing Easement

sp: species

spp: sub-species

BIOLOGICAL ELEMENTS: GOALS, OBJECTIVES, AND ENVIRONMENTAL IMPACTS

The "Habitat and Species Description" section discusses the plant and animal communities which are currently found along the east side of Lake Berryessa. Initial implementation of this management plan will focus on the area north of the Gunn Ranch above the 440-foot elevation and the fluctuation zone below the 440-foot elevation for the entire length of the LBWA. The enhancement potential of these lands is very high. The potential benefits include: watchable wildlife and education opportunities, resource interpretation, additional sport fishing opportunities, and improved water quality. This management plan addresses enhancement potential while preserving existing values and provides for the eventual extension of viable projects to the entire LBWA and adjoining lands as management criteria, project benefits and cooperators are identified. The goals, objectives and tasks for the biological elements are summarized in Appendix H, with information on time line, and whether site specific projects plans and/or environmental documents need to be prepared prior to implementing the tasks.

A. RIPARIAN ELEMENT: Valley Foothill Riparian

Valley foothill riparian habitats provide water, food, migration and dispersal corridors, escape, and nesting and thermal cover for an abundance of wildlife (Grenfell 1988). The shape of riparian zones, namely the linear nature of streams, maximizes the development of edge which is highly productive for wildlife (Thomas 1979). The transition to adjacent non-riparian vegetation is usually abrupt (Cheatham and Haller 1975). The riparian corridors are often found in association with grasslands and oak woodlands, and it is this type of habitat mix that is proposed for the wildlife area.

All drainages that flow into Lake Berryessa along its east shore currently do not support riparian vegetation. Only a few scattered oaks exist with little to no understory vegetation. Foraging by wildlife and cattle grazing have maintained this condition, although these drainages probably never supported dense riparian before the creation of Lake Berryessa. The proximity of the lake to these drainages permits the evaluation of establishment and maintenance of riparian vegetation along them. The increased wildlife habitat value that would result from riparian habitat makes its establishment a goal of this management plan.

A1. Goal: Continuous riparian vegetation along the larger drainages of the eastside.

A1a. Objective: Vegetate drainages within the wildlife area.

A1a(1) Task: Identify and prioritize drainages where vegetation would provide the maximum benefit.

A1a(2) Task: Evaluate appropriate native tree and shrub species to be planted along the drainages.

A1a(3) Task: Evaluate necessary planting procedures and necessary protection measures to permit maximum plant survival

A1a(4) Task: Develop experimental areas for riparian vegetation

A1a(5) Task: Develop and Implement vegetation plantings.

A1b. Objective: Increases the duration of flow in the vegetated streams (drainages).

A1b(1) Task: Evaluate the feasibility, costs, maintenance, and reliability requirements of dams, solar pumps and windmills to move water from the lake to the upstream areas.

A1b(2) Task: Implement if appropriate

A1c. Objective: Extend riparian vegetation east up to the headwaters of drainages.

A1c(1) Task: Initiate discussions with eastside landowners concerning vegetating drainages on their lands.

A1c(2) Task: Evaluate the ramifications and requirements (i.e. costs, impacts, and locations) of constructing a dam(s) to store water on private lands east of the wildlife area.

A1c(3) Task: Evaluate fencing to protect new riparian plantings on both public and private lands

A1c(4) Task: Consider and evaluate the costs and benefits for wildlife for providing water to eastside landowners for cattle watering in exchange for habitat improvement on private lands.

A1c(5) Task Implement if appropriate

Potential Impact: The overall impact would be beneficial by providing increased

cover, nesting, and foraging habitat and additional water to a wide variety of wildlife species.

Mitigation: Site specific mitigation will be developed, if necessary to eliminate or minimize any temporary negative impacts which may result from implementing riparian vegetation tasks.

B. LACUSTRINE ELEMENT: Lacustrine Habitat

Lacustrine habitats are inland depressions or dammed riverine channels containing standing water (Cowarden 1979). They may vary from small ponds to areas covering several square kilometers. Depths can vary from a few centimeters to hundreds of meters. Typical habitats include permanently flooded lakes, intermittent lakes, and ponds so shallow that emergent vegetation can root on the bottom (Grenfell 1988). Lacustrine habitats support numerous invertebrate species which are a source of food for many birds and amphibians. The calm waters and associated vegetation provides roosting and nesting habitat for birds, cover and water for mammals and various other vertebrate species. The topography of a number of the drainages on the east side of Lake Berryessa may permit the development of impoundments on some of the drainages. Such impoundments would hold water in the uplands, throughout the year, provide wetland habitat and some additional riparian habitat vegetation.

B1 Goal: Establish temporary and permanent water above and within the lake fluctuation zone for wildlife and habitat development.

B1a Objective: Create ponds and manage flows in drainages to develop fish and wildlife habitat values on the wildlife area.

B1a(1) Task: Evaluate all drainages and prioritize benefits by drainage and select appropriate location(s) for engineered structures to impound water.

B1a(2) Task: Develop vegetation to provide riparian/freshwater marsh habitat at the upper end and edges of the ponds.

B1a(3) Task: Develop plan for creating seasonal ponds during the winter and spring.

B1a(4) Task Implement recommendation for tasks 1-3.

Potential Impact: Short-term negative impacts during construction and creation of shallow depressions would occur such as dust, noise, or other construction

related conditions.

Mitigation: Erect temporary construction fencing to limit work to designated areas. Allow work only during normal working hours, and adhere to standard industry practices.

B2 Goal: To enhance the physical habitat elements critical to warmwater sport fish spawning, survival and recruitment.

B2a Objective: Enhance largemouth bass and warm water sport fish spawning habitat.

B2a(1) Task: Place suitable substrates in appropriate cove areas to reduce erosion, provide nest material, reduce wind-wave action.

B2a(2) Task: Plant flood-tolerant plants such as willow (*Salix* sp.) and button brush (*Cephalanthus occidentalis*) to provide macro and micro habitat.

B2a(3) Task: Install hardwood brush shelters and large woody cover in and adjacent to spawning areas.

B2a(4) Task: Evaluate potential to excavate channels to access water ways upslope.

B2a(5) Task: Plant annual and perennial grasses in cove areas.

B2a(6) Task: Coordinate with Solano County Water Agency on water release schedules during the spring to minimize adverse affects to fish populations caused by dewatering spawning areas.

B2a(7) Task: Evaluate and develop plan to install berms, bank protection and reefs.

B2a(8) Task: Plan and construct warmwater sport fish brood ponds.

B2a(9) Task: Monitor fish populations.

B2a(10) Task: Establish a boat speed of five mph in fish and wildlife habitat areas.

B2b Objective: Enhance channel catfish spawning habitat.

B2b(1) Task: Install channel catfish spawning structures

B2c(2) Task: Provide escape cover adjacent to spawning structures.

Potential Impacts: These objectives and tasks would increase native flora and fauna and improve sport fishing opportunities.

Mitigation: Site specific mitigation measure would be implemented to eliminate or minimize any adverse affects associated with creating and enhancing fish habitat as necessary.

B3 Goal: Maintain Cold Water Fishery

B3a Objective: Maintain trout and salmon fishery.

B3a(1) Task: Continue stocking following Fisheries Management policy which calls for the lake to be managed as a trophy trout and warm water sport fisheries lake. Continue salmon introduction as outlined in management plan for salmon introduction to the lake.

Potential Impacts: This objective and tasks would maintain sport fishing opportunities for the public.

Mitigation: None necessary.

B4 Goal: Maximize native aquatic and terrestrial bio-diversity.

B4a Objective: Manage for native species.

B4a(1) Task: Where possible, utilize native vegetation to accomplish habitat objectives.

Potential Impacts: The accomplishment of this goal will increase natural flora and fauna.

Mitigation: None necessary.

B5 Goal: Improve water quality.

B5a Objective: Reduce erosion in the lake fluctuation zone.

B5a(1) Task: Install berms or other setbacks in the lake fluctuation zone to reduce soil transport.

B5a(2) Task: Plant and maintain vegetation in the lake fluctuation zone.

B5a(3) Task: Develop riparian habitat in tributary water courses and along lakeshore.

Potential Impacts: The accomplishment of this goal should improve overall water quality.

Mitigation: None necessary.

C. OAK WOODLAND ELEMENT: Valley Oak Woodland

Valley oak woodland varies from savanna-like to forest-like stands with partially closed canopies, comprised mostly of deciduous oak species predominated by valley oak. The shrub layer is best developed along natural drainages becoming insignificant in the uplands where open stands of oaks exist. Currently, most of the oaks on the east side of Lake Berryessa are older aged mature trees occurring as lone trees or in scattered small groups. Increasing the number of oaks and adding age class diversity was mentioned in the public scoping sessions and is considered an important component of this wildlife area management plan.

C1 Goal: Enhance/Revegetate Oak Woodland habitats

C1a Objective: Increase the extent of valley oak and blue oak trees in the existing grassland and oak woodland

C1a(1) Task: Evaluate wildlife area for appropriate sites to plant oaks.

C1a(2) Task: Collect acorns from the area

C1a(3) Task: Start oak nursery for replanting.

C1a(4) Task: Based on the literature, plant test plots with acorns, seedling, and larger oaks to determine best method for increasing oak plantings and natural structural diversity.

C1A(5) Task: Develop and maintain protection for new plantings from rodent, deer, and livestock damage.

C1A(6) Task: Implement plantings

Potential Impact: Oak regeneration would increase habitat values for wildlife

Mitigation: None required.

D. SENSITIVE SPECIES ELEMENT: Rare, Threatened, or Endangered Species

D1 Goal: Maintain or increase existing populations of threatened and endangered species and public appreciation and awareness/ethic on the wildlife area.

D1a Objective: Maintain or increase use by threatened and endangered species.

D1a(1) Task: Initiate annual surveys to determine level, areas, and type of use on the wildlife area by these listed species.

D1a(2) Task: Maintain snags and roosting sites for American Bald Eagles.

D1a(3) Task: Maintain open areas along the shoreline and provide for grass growth for sensitive species.

D1a(4) Task: Monitor listed species and develop a recommended program if appropriate.

D1b(5) Task: Minimize human disturbance of listed species by developing a non-intrusive access program.

D1b Objective: Enhance habitat for the threatened and endangered species.

D1b(1) Task: Evaluate and/or install roosting poles for eagles.

D1b(2) Task: Evaluate nesting platforms and developing nesting islands where practical.

D1b(3) Task: Evaluate various grass species as food plants for sensitive species and cultivate if appropriate.

D1b(4) Task: Develop various habitat improvement projects and implement as advantageous for other sensitive species.

Potential Impact: Habitat values would be increased for sensitive species.

Mitigation: None required.

E. AVIAN ELEMENT: Waterfowl, Shorebird, and Wading Bird Nesting

E1 Goal: Enhance habitat and encourage nesting by waterfowl, shorebirds, and wading birds.

E1a Objective: Enhance overall habitat value

E1a(1)Task: Determine the current and/or historic species nesting and level of nesting activity on the wildlife area.

E1a(2) Task: Create brood and rearing ponds for waterfowl, where practical.

E1a(3) Task: Create appropriate escape and nesting cover for waterfowl and shorebirds.

E1a Objective: Encourage nesting

E1a(1) Task: Evaluate impacts of predators and determine appropriate course of action.

E1a(2) Task: Evaluate the value of nesting islands, nest platforms, unvegetated areas for shorebirds, and develop if appropriate.

Potential Impact: Habitat values for a wide variety of avian species would be increased.

Mitigation: Site specific mitigation measure would be implemented to eliminate or minimize any adverse affects associated with creating and enhancing habitat as necessary.

F. UNDERSTORY ELEMENT: Understory Vegetation and Cover

A diverse wildlife habitat incorporates several components to provide for the basic needs of a wide variety of species. Cover for protection from predators, rearing of young, thermal protection, concealment, and nesting is necessary for many bird, small mammal, reptile, and amphibian species to maintain stable populations through time. A primary purpose of this management plan is to restore and protect fish and wildlife resources along the east side of Lake Berryessa. The inclusion of understory and vegetative components in the plan is necessary to fully realize this purpose.

F1 Goal: Create/increase the diversity and amount of native understory cover.

F1a Objective: Provide habitat for small mammals and ground nesting birds.

F1a(1) Task: Evaluate shrub and other cover enhancements and protection opportunities and techniques.

F1a(2) Task: Create brush piles on the wildlife area adjacent to several habitats.

F1a(3) Task: Plant native shrubs among oaks and within grasslands. Protect new plantings from rodent, deer, and livestock damage.

F1a(4) Task: Create rock outcroppings in the upland and fluctuation zone.

F1a(5) Task: Evaluate potential predator impacts on ground nesting bird species and monitor if a problem is discovered.

Potential Impact: Increasing understory vegetation will increase diversity and provide escape cover for nesting birds, small mammals, and other ground dwelling animals.

Mitigation: None necessary.

G. GRASSLAND ELEMENT: Perennial Native Grasslands

Native grasslands have been replace by introduced Mediterranean annual grasses with only remnant native grasslands remaining. Perennial grassland serves as optimum habitat for several species. The establishment of even small pilot areas of perennial native grassland would provide a habitat type generally absent from the wildlife area.

Perennial grassland habitat typically occurs on ridges and south-facing slopes. It usually occurs at elevation below 1,000 meters (3,280 feet) and within 100 km (62.1 miles) of the coast (Kie 1988). The east side of Lake Berryessa is at the eastern limit of the perennial grasslands belt and is well below 1,000 meters. The replacement of non-native grasslands with native habitats is an important component of this management plan and will require considerable effort and possibly experimentation in the early years to establish a self-sustaining plant community.

G1 Goal: Re-establish Perennial Native Grasses

G1a Objective: Establish perennial grasses along the eastside road and dispersed through the wildlife area

G1a(1)Task Evaluate costs and methods to re-establish and maintain native grasses.

G1a(2) Task: Evaluate methods for protection of perennial grasses from invasive species.

G1a(3) Task: Maintain perennial plant composition by discing, burning, and grazing, where appropriate.

G1a(4) Task: Develop and implement techniques to establish, maintain, and protect native grasses.

Potential Impact: Encouraging re-establishment of native perennial grassland is considered beneficial.

Mitigation: None required.

H. DATA MANAGEMENT ELEMENT:

The proper gathering, use, and maintaining of data collected out in the field is important for natural resource and recreation management decision making and monitoring. The use of accepted industry standards for collection and maintaining data will be implemented on habitat enhancement projects and resource inventory in the wildlife area.

H1 Goal: Collect data for use in evaluating and monitoring habitat enhancements and provide data to other resource agencies and the public.

H1a Objective: Incorporate Geographical Information System (GIS) and Geographical Positioning System (GPS) methods in gathering data on resource values in the wildlife area.

H1a(1) Task: Develop and maintain enhancement project data (methods, photo points, success and failures) necessary for LBWA evaluation, interpretation, education, and research programs.

Potential Impact: None

Mitigation: None

PUBLIC USE ELEMENTS: GOALS, OBJECTIVES, AND ENVIRONMENTAL IMPACTS

As addressed under "Purpose and History of the East Side of Lake Berryessa Management Plan," this area has been primarily managed for grazing. A single access road services the eastside landowners and northern half of the wildlife area. Access to the southern half of the area is by boat with no public access roads. We want to encourage public recreational opportunities that are compatible with fish and wildlife resource values, practical administration, and other existing use within the area.

During the public scoping sessions, there was a great deal of interest in the future public use of the wildlife area. The eastside landowners and eastside area residents are concerned about increased public use relative to trespass, parking, increased fire hazard, public safety, road maintenance, continued cattle ranching operations, and impacts to habitat restoration efforts and wildlife use of the east side of the lake. Individuals representing various sectors of the general public expressed interest in keeping the eastside road open for public access, providing for viewing points, turnouts, and trails for hiking and bird watching. There was a general consensus of opinion that some controls on public access would be necessary to provide for public access without interfering with the primary wildlife area goal of fish and wildlife habitat development. Area school groups have expressed interest in classroom access to the wildlife area as well as local Audubon Society members for bird counts and recreational bird watching. Local sportsmen's clubs are interested in fishing access and hunting opportunities.

The physical setting of the wildlife area (i.e., a very long and narrow stretch of upland), precludes the development of an extensive trail system within the wildlife area. To accomplish the proposed wildlife habitat enhancement goals (e.g., oak regeneration sites and ponds/riparian corridors) may require fencing during the development stages. Hence, trails could not be accommodated through these areas. The eastside road itself is a dirt/gravel road that was designed for lower volumes of traffic. Considering the primary objective of the area is fish and wildlife resource enhancement and the overall interests of the public and eastside landowners, the following goals and objectives for public use on the Lake Berryessa Wildlife Area were developed.

A. TRAIL ELEMENT: Recreational Trail Use

Throughout the winter migration, several species of shorebirds, wading birds, waterfowl, raptors, and neo-tropical migrants utilize the east shore of Lake Berryessa for staging areas and wintering habitat. During the spring and summer months, breeding and nesting activity occurs on a limited basis. The proposed habitat enhancements are designed to encourage increased breeding activity. Because of the sensitivity of some

wildlife species to disturbance during the breeding season and the high potential for off-trail use, it is recommended that bicycles be excluded from the Lake Berryessa Wildlife Area. It is also recommended that the area be closed to general public use from sundown to sunrise to provide for wildlife needs as well as reduce the potential for human accidents and emergency situations. The area would also be closed to overnight camping.

A1 Goal: Provide opportunities for public use, learning and enjoyment of the natural resources on the east shore of Lake Berryessa while minimizing impacts to resources and adjacent property owners.

A1a Objective: Develop public access to areas which are not disruptive to fish and wildlife resources and adjacent property owners.

A1a(1) Task: Evaluate and develop a designated general public access parking area, viewing and interpretive area and loop trail(s) on the northern portion of the wildlife area to serve as a self-guided nature trail.

A1a(2) Task: Develop a wildlife compatible fence line or barrier system on the west side of the gravel road to the Gunn Grazing easement that would preclude unauthorized vehicle access into the wildlife area.

A1a(3) Task: Evaluate potential parking areas, observation points and overlooks along the new wildlife compatible fence line or barrier system on the west side of the gravel road.

A1a(4) Task: Develop appropriate signing at the entrance to the LBWA and at the public parking area setting forth the rules and regulations for public use of the area, and the conditions in which the wildlife area may be closed to public use at certain designated times.

A1a(5) Task: Identify and close existing non-designated trails within the wildlife area and post to discourage continued use.

A1a(6) Task: Rehabilitate closed trails by revegetation and/or physical blockage to prevent continued use.

Potential Impact: Excessive or inappropriate public use could result in damage to native plant communities, disrupt use by migratory bird species, disrupt use of the area by endangered bald eagle, and become a

problem for adjacent landowners.

Mitigation: Trail siting and design will incorporate all available data on plant communities, preferred use areas for wintering waterfowl, an roost trees used by bald eagles. The proposed tasks above will be implemented only if adverse impacts to bald eagles can be avoided. An interpretive program will be developed to educate the public to the sensitive nature of the site. The trail will be monitored to detect evidence of resource damage or inappropriate use and will be closed if necessary to protect resource values.

A2 Goal: Fishing Access.

A2a Objective: Evaluate appropriate fishing access for all anglers.

A2a(1) Task: Develop access for persons with disabilities.

A2a(2) Task: Develop bank fishing opportunities where possible.

A2a(3) Task: Provide fishing access trails designed to minimize adverse impacts on fish, wildlife, and habitat.

Potential Impacts: Use of fishing access trails could adversely impact wildlife.

Mitigation: Close specific trails or areas at specific times of the year.

B. INTERPRETATION ELEMENT: Resource Interpretation

B1 Goal: Develop LBWA Information and Interpretation Program

B1a Objective: Develop and maintain interpretation material for wildlife area visitors

B1a(1) Task: Develop a trail guide keyed to the trail resources and habitat enhancement projects being implemented.

B1a(2) Task: Develop an informative leaflet on the sensitive resources of the wildlife area.

B1a(3) Task: Develop interpretative displays at parking areas and other appropriate areas.

Potential Impact: Increased public use could adversely affect resource values.

Mitigation: Public access will be controlled, when and where appropriate.

C. EDUCATION ELEMENT: Research and Education

The relative isolation of and limited access to the wildlife area provides an opportunity to evaluate the evolution and success of the habitat development projects proposed for the area. Interest in the development of a long-term environmental education program for local school children has been expressed by different organizations and will be considered to the extent wildlife values are not degraded. Opportunities for research are also enhanced and could provide additional information for improved enhancement, educational data and interpretive materials.

C1 Goal: Promote educational use of the wildlife area.

C1a Objective: Encourage scientific research and educational programs on species, populations, communities and enhancement techniques that will not harm sensitive biological resources on the fish and wildlife area.

C1a(1) Task: Coordinate with and provide opportunities for universities for research opportunities and project support consultation.

C1a(2) Task: Provide updated information on the wildlife area to various agencies, universities, conservation groups and the public, as requested.

C1a(3) Task: Coordinate with Federal and State programs designed to enhance environmental values and with non-profit organizations to establish educational programs on the wildlife area.

C1a(4) Task: Coordinate with local schools to develop environmental education opportunities and programs.

Potential Impacts: Inappropriate or excessive use could harm sensitive resource values.

Mitigation: All use will be coordinated with and cleared through the BOR and the CDFG Regional Manager. Written proposals for studies and activities will be required and all activities will be reviewed and approved before they begin. Harmful activities will not be permitted unless they can be modified to avoid impacts or unless the overall resource benefits outweigh minor negative impacts.

D. Hunting Element: Hunting on the Wildlife Area

Regulated hunting is used by CDFG as a tool to manage wildlife populations and provide recreational opportunities for the general public. Through their license and tag fees, hunters contribute to broad-based habitat and species management efforts as well as foster a conservation ethic. Currently, private hunting clubs exist on the private lands to the east of the LBWA. Situations may develop where habitat degradation or competition between species may be occurring and hunting may serve as an important management tool. A managed public hunting program would be developed that is compatible with the objectives of the LBWA. Hunts on the lands north of the Gunn Ranch may be limited entry for a specific time frame to address a specific management situation or hunting opportunity. Hunting on the southern portion of the LBWA may be open to hunting without the need for permits.

D1 Goal: Develop a hunting program compatible with the other uses on the LBWA

D1a Objective: Evaluate current habitat and status of game populations on the LBWA

D1a(1) Task: Initiate trend counts and species surveys.

D1a(2) Task: Determine species use patterns.

D1a(3) Task: Develop hunting program for selected species.

D1a(4) Task: Implement after review and approval

Potential Impacts: Due to the configuration of the LBWA, uncontrolled hunting activity could adversely impact nesting activity, disturb sensitive areas, or displace species from certain areas

Mitigation: Limiting the number of hunters on the area at any one time, restricting the duration and days of the week hunting is allowed, and restricting hunting to only selected species.

FACILITY MAINTENANCE ELEMENTS: GOALS, OBJECTIVES, AND ENVIRONMENTAL IMPACTS

A. BOUNDARY ELEMENT: Wildlife Area Boundaries

A1 Goal: Manage access

A1a Objective: Establish clear, well-marked boundaries where possible.

A1a(1) Task: Install additional fencing along west side of road (road exclusion).

A1a(2) Task: Post boundaries at critical road and shoreline access points.

A1a(3) Task: Maintain fencing and posting.

A1a(4) Task: Increase Wildlife Protection patrol presence in wildlife area.

A1a(5) Task: Provide maps - rules and regulations.

Potential Impacts: None.

Mitigation: None required.

B. EXOTIC VEGETATION ELEMENT: Non-native vegetation.

B1 Goal: Reduce non-native plant species and protect native plant communities against noxious non-native species.

B1a Objective: Control noxious non-native vegetation.

B1a(1) Task: Evaluate and implement methods for reducing weeding vegetation while promoting native grasses and shrub species.

B1a(2) Task: Develop regular schedule of monitoring of the yellow star thistle (*Centaurea solstitialis*) populations.

Potential Impact: None

Mitigation: None required

C. FIRE ELEMENT: Wildfire Control

During the public scoping sessions the eastside landowners expressed concerns that decreased grazing and habitat development within the wildlife area could increase fire danger.

C1 Goal: Minimize wildfire threat.

C1a Objective: Establish fire management plans and prescriptions that minimize fire danger to the LBWA and adjacent lands.

C1a(1) Task: Develop a fire control and prescription burn plan with input from California Department of Forestry and Fire Protection that reduces fire danger, while providing habitat values compatible with surrounding plant communities.

C1a(2) Task: Implement as appropriate, including consideration of other Tasks.

Potential Impact: Beneficial.

Mitigation: Coordinate with appropriate Air Quality Management Districts.

V. OPERATIONS AND MAINTENANCE SUMMARY

A. Existing Staff and Additional Needs Summary

Currently the DFG has an associate wildlife biologist, the North Bay unit manager, and a fish habitat supervisor that will co-manage the LBWA. In addition, the fish habitat supervisor will utilize CCC crews and other volunteer groups to complete the fisheries portion of the management plan. There is a Wildlife Habitat Supervisor II available with temporary help in the form of seasonal and scientific aides available to run heavy equipment, supervise volunteer and contract help, install fencing, and assist with habitat development projects on the area. The area is currently routinely patrolled by Wildlife Protection personnel.

In addition to DFG personnel, BOR rangers will patrol all of their lands around Lake Berryessa. Staff from the Berryessa Office will be involved with recreational uses, public awareness, and interpretive programs and will assist, as appropriate, with project implementation on the wildlife area.

It is not anticipated that additional staff will be necessary to implement the management plan recommendations above that which is already available in DFG and BOR. Funding for several proposals in the management plan have already been obtained from funding sources within the BOR. In addition to BOR funding, outside funding sources will be pursued to complete many of the management plan recommendations. DFG and BOR will provide personnel to complete the goals and objectives identified in this plan. A number of sportsmen and conservation organizations such as Ducks Unlimited, Cal Trout, BASS, Sportsmen for Equal Access, and Quail Unlimited participate in fish and wildlife habitat enhancement projects and will be sought to extend DFG and BOR capabilities.

B. Operations and Maintenance Summary

Table 1 presents a summary of the goals and objectives identified above for biological, public Use, and facilities maintenance elements. Associated costs represent estimates of the personnel, contract, and material resources needed to meet these goals and objectives. Personnel costs for DFG personnel are based on per-hour wage and salary costs plus the overhead costs of benefits Materials costs are included in the identified costs. BOR staff and equipment will be utilized, as appropriate, to meet resource management goals and objectives.

Table 1. Operations and Maintenance Summary

Goals and Objectives	Priority	Labor	Personnel Class	On-going Cost	One-time Cost
1 Estab. riparian veg. A. Identify drainages B. Devel. planting areas C. Begin plantings	1	0.02	W/L Bio. FHS I Aides BOR		$ 2,000
2. Increase streamflow A. Evaluate B. Implement	2	0.01	W/L Bio	$500	$ 2,500
3. Extend riparian A. Evaluate B Fence C. Implement	2	0.06	W/L Bio FHS I Aides BOR		$ 2,000
4. Create ponds A Evaluate B. Develop plans C. Implement D. Vegetate	1	0.10	W/L Bio Aides FHI Contract BOR		$35,000
5. Warmwater fish A. Place substrate B. Vegetate C. Install shelters D. Upslope channels E. Plant coves F. Protect bank G. Construct ponds H. Catfish structures I. Escape cover J. Nursery propagation	1	0.25	FHS II Aides BOR	$800	$ 3,000
6. Coldwater fish A. Continue stocking	1	0.01	FWA I	$500	
7 Improve water quality A. Install berms	2	0. 01	FHS II Aides BOR	$500	$1,000

Goals and Objectives	Priority	Labor	Personnel Class	On-going Cost	One-time Cost
8. Enhance oak woodland A. Evaluate B. Collect acorns C. Start nursery D. Initiate plantings E. Protect plantings	1	0.15	W/L Bio WHS II Aides BOR		$200*
9 Sensitive species A. Survey annually B. Monitor use C. Install poles	1	0.02	WIL Bio		$ 500
10 Enhance avian value A. Provide esc. cover B. Control predators C. Create nest islands	2	0.04	WHS II Aides	$ 500	$ 1,500
11. Increase understory A. Create brush piles B. Create rock piles C. Control predators	2	0.02	WHS II Aides BOR	$ 500	$ 1,500
12 Establish nat. grasses A. Purchase seed* B. Control non-natives C. Prepare & plant	2	0.01	WHS II Aides	$ 200	$ 750*
13. Data Management	1	0.25	DFG/BOR	$ 2,000*	$ 5,000*
14. Provide public access A. Develop entry sign B. Develop parking areas C. Develop trails D. Fence east boundary E. Devel. disabled access F. Devel fishing access G. Devel. Bank fishing	1	0.25	WHS II Aides FHS II BOR	$ 1,500	$ 35,000* $ 5.000
15 Provide visitor info A. Develop trail guide B. Develop leaflets C. Develop displays	2	0.05	W/L Bio BOR	S 200	$ 1 000

Goals and Objectives	Priority	Labor	Personnel Class	On-going Cost	One-time Cost
16. Promote educational use A. Coordinate with Univ. B. Work with local schools C. Work with Americorps	1	0.03	W/L Bio BOR		
17. Develop hunting prog A. Initiate trend counts B. Develop program	2	0.03	W/L Bio		
18. Manage access A. Post boundaries B. Maintain fencing C. Patrol area D. Provide rules and regs.	1	0.05	FWA I BOR	$ 250	$ 500
19. Reduce exotic veg.	1	0.02	FWA I BOR	$ 500	$ 1,500
20. Minimize fire threat A. Develop fire mgt plan B. Establish control burns C. Maintain fire break	1	0.01	W/L Bio BOR		
Totals		1.39		$ 7,950	$ 97,950

* funding sources outside DFG
** task completed

Priority 1 - Tasks which will be started during the first year after adoption of the management plan.

Priority 2 - Tasks which will be evaluated before proceeding or which will be started after priority 1 tasks are initiated.

V. REFERENCES

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VII. APPENDICES

Appendix A. Department of Fish and Game Mission Statement

Appendix B. Bureau of Reclamation Mission Statement

Appendix C. MOU between USBR and CDFG

Appendix D. CEQA Environmental Checklist

Appendix E. Negative Declaration

Appendix F. NEPA Document

Appendix G. Public Involvement

Appendix H. Results of public scoping sessions

Appendix I. Action Plan

Appendix J. Rarefind Analysis and CDFG Natural Diversity Database

Appendix K. Endangered, threatened, and rare species occurring at Lake Berryessa

Appendix L. Plant species found at Lake Berryessa

Appendix M. Animal species found at Lake Berryessa

Appendix N. Law Enforcement Regulations

Appendix A

DEPARTMENT OF FISH AND GAME MISSION STATEMENT

State of California
The Resource Agency
California Department of Fish and Game

The mission of the Department of Fish and game is to manage California's diverse fish, wildlife, and plant resources, and habitats upon which they depend, for their ecological values and for their use and enjoyment by the public.

Appendix B

BUREAU OF RECLAMATION MISSION STATEMENT

Bureau of Reclamation Mission

To manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Reclamations' Stewardship and Trust Responsibility

The Bureau of Reclamation will ensure that proper stewardship is practiced on all lands and waters under its jurisdiction. Reclamation and its partners, through management agreements, will ensure that these lands and waters are managed to provide a balance of resource development, recreational use, and protection of natural and cultural resources and environmental values. Project purposes, as described in the authorizing legislation, will be protected.

Authorizing Legislation - Project Purpose: Solano Project - Lake Berryessa

THE RECLAMATION DEVELOPMENT ACT OF 1974, PUBLIC LAW 93-493, OCTOBER 27, 1974, TITLE VI

Solano Project Recreational Facilities, California

§ 601. In order to provide for the protection, use, and enjoyment of the aesthetic and the recreational values inherent in the Federal lands and waters at Lake Berryessa, Solano Project, California, the Secretary of the Interior is hereby authorized to develop, operate, and maintain such short-term recreational facilities as he deems necessary for the safety, health, protection, and outdoor recreational use of the visiting public; to undertake a thorough and detailed review of all existing development and uses on Federal lands to determine their compatibility with preservation of environmental values and their effectiveness in providing needed public services; to implement corrective procedures when necessary; and to otherwise administer the Federal land and water areas associated with said Lake Berryessa in such a manner that, in his opinion, will best provide the public recreational use and enjoyment thereof, all to such an extent that said use is not incompatible with other authorized functions of the Solano Project.

Appendix C

MOU BETWEEN USBR AND CDFG

MEMORANDUM OF UNDERSTANDING

between

THE U.S. BUREAU OF RECLAMATION

and

THE CALIFORNIA DEPARTMENT OF FISH AND GAME

I. PURPOSE

The intent of this Memorandum of Understanding is to establish a cooperative relationship between the U.S. Bureau of Reclamation, herein called "Reclamation"; and the California Department of Fish and Game, herein called "Department" for the establishment and management of the Lake Berryessa Wildlife Area on Federal land (including the fluctuation zone and appropriate open water area) on the east side of Lake Berryessa, extending from Eticuera Creek to the Monticello Dam, excluding the existing grazing easement (Gunn Ranch - see Exhibits A and B).

The primary purpose of the Lake Berryessa Wildlife Area is to restore, enhance and protect the natural ecological integrity, by securing the long-term health and viability of natural communities and by re-establishing links among communities. This will be accomplished by creating new wetlands, protecting and enhancing emerging riparian vegetation, restoring oak woodlands, and enhancing and conserving habitat for diverse populations of fish and wildlife species including threatened and endangered species, such as the Federally listed Bald Eagle, Peregrine Falcon, and Aleutian Canada Goose. Secondarily, to increase compatible outdoor recreational opportunities for the public.

II. AUTHORITY

The 1993 Record of Decision for the Lake Berryessa Reservoir Area Management Plan, Environmental Impact Statement, Preferred Action 13 provides that Reclamation enter into an agreement with the Department for planning and establishing a fish and wildlife management area on the east shore of Lake Berryessa.

The Endangered Species Act of 1973, 16 U.S.C. § 1531 et seg. as amended requires all Federal departments and agencies to utilize their authorities and take positive steps to conserve species and subspecies or populations of plants and animals officially listed by the Secretary of the Interior or Secretary of Commerce as threatened or endangered.

III. BACKGROUND

Federal land on the east side of Lake Berryessa totals approximately 2,000 acres of undeveloped annual grassland and California oak woodland. However, due to reservoir fluctuations the actual acreage of available land varies. The area has been primarily managed for cattle grazing and non-intensive recreational uses. The management of fish and wildlife resources in this area has been minimal, with nominal success. The area has considerable potential for increasing fish and

wildlife habitat values, which could be achieved through enhancement and restoration techniques. Vehicle access to the northern half of the land is by a government maintained gravel surface road constructed to serve those landowners whose previous access routes were inundated by the Lake. General access to the southern steeply sloped east side land is by boat with no public roads serving most of the area.

In addition to the Aleutian Canada Goose, a variety of waterfowl and aquatic birds use the east side as a wintering and resting area. Bald Eagles are regular winter visitors to the northern and eastern sides of the lake. Peregrine Falcons have been sighted infrequently around the reservoir. In addition to the two Federally listed species, a number of raptors (Falconiformes) occur at the reservoir including Golden Eagles, Red-tailed Hawks, Ospreys, Prairie Falcons, American Kestrels, Northern Harriers, and Black-shouldered Kites. Additionally, a variety of resident and migratory songbirds, mammals, reptiles, amphibians, and invertebrates are located around the reservoir.

Lake Berryessa supports both warmwater and coldwater fish populations. Currently, Largemouth Bass, Smallmouth Bass, Black Crappie, White Crappie, White Catfish, Channel Catfish, and Bluegill are the principal warmwater sportfishes at Lake Berryessa. Each of these species is a self-sustaining population (not stocked). The current coldwater fisheries management consists of annually stocked Rainbow Trout. Approximately, 100,000 trout are planted each spring by the Department. Half of this allotment consist of rainbows of the Coleman Kamloops strain and the remainder are the Eagle Lake strain. In previous years, Kokanee Salmon, Silver Salmon, and Brown Trout were planted by the Department. However, these species have not been reported in several years.

One significant factor limiting warmwater fish production at Lake Berryessa is the lack of cover, especially for juvenile fish. Initial removal of brush and trees from the reservoir basin eliminated valuable fish habitat. Successful reproduction of warmwater fishes has been restricted because juvenile fish have no escape cover and are easily captured by predators, often such nongame species as squawfish. Previous fish habitat enhancement projects include, the placement of brush shelters and catfish spawning structures along portions of the shoreline, reduced boat speeds in narrow cove areas, and planting willows in numerous coves and on Big Island. Implementing the above enhancement techniques, and others, on the east side will not only substantially elevate warmwater sportfish populations, but will enhance the Lake Berryessa ecosystem.

Another important factor limiting warmwater sportfish populations at Lake Berryessa is reservoir fluctuation during the spring bass spawning period. Water withdrawal from the reservoir normally commence in the late spring during the period that Largemouth Bass and Smallmouth Bass are spawning. Consequently, the drawdown may interrupt spawning and nesting activities resulting in nest abandonment, dewatering of nests and altered environmental conditions for eggs and fry. The conditions listed above all contribute to reduced nesting success and diminished survivability of eggs and recently hatched fish. Specific habitat enhancement and development projects on the east side will decrease the adverse affects caused by reservoir fluctuation in the spring, thereby reducing the mortality of warmwater fish embryos and fry.

IV. TERM

This agreement is for a 30 year period beginning on the date it is executed by both parties, provided that the ending date of the period shall be automatically extended an additional year on each anniversary of said date unless, prior to a given anniversary date either party notifies the other in writing that the agreement shall not be so extended. In any event, the agreement shall terminate on December 31, 2043.

V. ACTIONS

In order to establish the Lake Berryessa Wildlife Area and assure that it is managed according to the mutual needs and desires of both parties;

A. Reclamation agrees to:

1. Assist the Department in planning, preparing, and implementing the fish and wildlife management plan for the Lake Berryessa Wildlife Area.

2. Review and consult with the Department regarding any proposed activities applicable to the Lake Berryessa Wildlife Area.

3. Assist the Department in the management of all Federal and state endangered, threatened, rare and candidate species, and other fish and wildlife habitats in the Lake Berryessa Wildlife Area. This effort could include monitoring, inventory, site specific restoration and enhancement projects, and funding, contingent on the appropriation and allocation of funds.

4. Administer grazing permits within the Lake Berryessa Wildlife Area under the provisions and parameters to be established in the fish and wildlife management plan referred to above. In the interim, prior to the completion of such management plan, Reclamation will consult annually with the Department to determine a mutually acceptable grazing plan for the following year.

5. Maintain the road on the east side of the Lake Berryessa to current standards, contingent on the appropriation and allocation of funds.

B. Department agrees to:

1. Plan, prepare and implement a fish and wildlife management plan for the Lake Berryessa Wildlife Area.

2. Review and consult with Reclamation regarding any proposed activities applicable to the Lake Berryessa Wildlife Area.

3. By each first day of December, submit to Reclamation for review an annual work plan of proposed projects and specific management objectives for the Lake Berryessa Wildlife Area for the following year.

4. Administer the Lake Berryessa Wildlife Area, pursuant to Section 550 of the California Code of Regulations, Title 14.

C. Reclamation and Department mutually agree to:

1. Manage the Lake Berryessa Wildlife Area under the provisions of the Lake Berryessa Wildlife Area fish and wildlife management plan and other applicable Federal and state policies, regulations and laws.

2. Conduct public meetings and prepare site specific environmental documents required under the National Environmental Policy Act, and the California Environmental Quality Act for the Lake Berryessa Wildlife Area fish and wildlife management plan.

3. Coordinate and consult, as appropriate, with the US Fish And Wildlife Service for the management of Federally listed threatened, endangered and candidate species for the Lake Berryessa Wildlife Area.

4. Cooperate in patrolling the Lake Berryessa Wildlife Area to enforce any pertinent regulations, including Fish and Game Code violations, various trespasses and other unauthorized uses. Any unauthorized uses will be brought to the attention of each agency and rectified.

5. Exchange all ecological, fisheries and wildlife management data from studies conducted in the Lake Berryessa Wildlife Area.

APPROVED:

COPY Original signed by

Rodger K. Paterson
Regional Director
US Bureau of Reclamation
Mid-Pacific Region

April 28, 1995
Date

APPROVED:

B. Curtis for Boyd Gibbons
Regional Manager
California Department of Fish & Game
Region 3

March 22, 1995
Date

James E. Turner
Assistant Regional Solicitor DOI

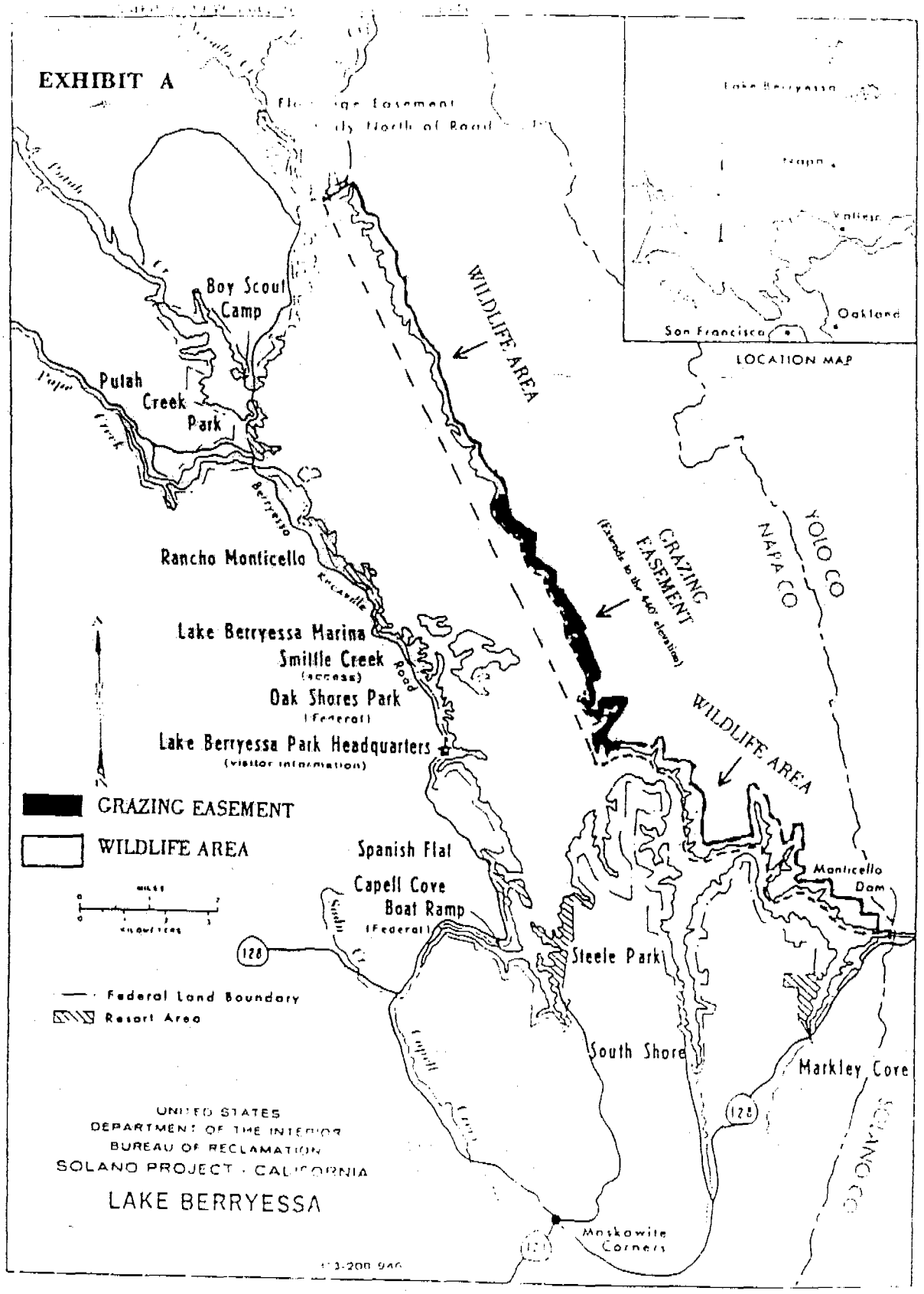
EXHIBIT A
Boy Scout Camp
Putah Creek Park
Rancho Monticello
Lake Berryessa Marina
Smittle Creek (access)
Oak Shores Park (Federal)
Lake Berryessa Park Headquarters (visitor information)
GRAZING EASEMENT
WILDLIFE AREA
Spanish Flat
Capell Cove Boat Ramp (Federal)
Steele Park
South Shore
Markley Cove
Monticello Dam
Moskowite Corners
WILDLIFE AREA
GRAZING EASEMENT
YOLO CO
NAPA CO
SOLANO CO
LOCATION MAP
San Francisco
Oakland
Federal Land Boundary
Resort Area
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
SOLANO PROJECT · CALIFORNIA
LAKE BERRYESSA

Appendix D

CEQA ENVIRONMENTAL CHECKLIST

ENVIRONMENTAL CHECKLIST FORM

1. **Project Title:** Land Management Plan for the Lake Berryessa Wildlife Area

2. **Lead Agency Name and Address:** California Department of Fish and Game,
   P.O. Box 47
   Yountville, California 94599

3. **Contact Person and Telephone Number:** Mr. Jim Swanson
   (707) 944-5528

4. **Project Location:** East side of Lake Berryessa, Napa County, California

5. **Project Sponsors Name and Address:** California Department of Fish and Game
   P.O. Box 47
   Yountville, California 94599

6. **Description of Project**: The primary purpose of the Lake Berryessa wildlife area management plan is to restore, enhance, and protect the fish and wildlife resources along the east side of Lake Berryessa, by securing the long-term health and viability of habitats and by re-establishing links among habitats. The plan itself proposes a number of habitat improvement projects such as creating new wetlands; protecting and enhancing riparian vegetation, and oak trees; and enhancing and conserving habitat for diverse populations of fish and wildlife species, including threatened and endangered species. In addition to the fisheries and wildlife enhancement projects the plan proposes measures to manage outdoor recreational opportunities for the public. A parking lot and walking trails with informative stations are proposed to provide public access to the area. Access will be controlled to achieve management goals with compatible access permitted. Hunting and fishing opportunities will be provided when and where appropriate.

7. **Surrounding Land Uses and Setting:** The lands to the east of the wildlife area are privately owned and used primarily for cattle grazing in the northen area south to the Gunn ranch. South of the Gunn ranch the land use is primarily recreational although extensive use is limited by the steep terrain and lack of public access. There is a hunting club that leases lands on the east side, primarily for deer hunting.

8. **Other agencies whose approval is required:** No formal approvals or permits are required to implement the management plan. The U. S. Bureau of Reclamation administers the land which is owned by the Federal Government and a 1993 Record of Decision for the Lake Berryessa Reservoir Management Plan, EIS provides for a cooperative relationship for the management of the lands on the east side of Lake Berryessa. For this reason concurrence of this plan will be sought with the U. S. Bureau of Reclamation, U S. Fish and Wildlife Service, Napa County government, and local citizens.

Environmental Factors Potentially Affected:

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

■ Land Use and Planning	☐ Transportation/circulation	■ Public Services
☐ Population and Housing	■ Biological Resources	☐ Utilities and Service Systems
☐ Geological Problems	☐ Energy and Mineral Resources	☐ Aesthetics
☐ Water	■ Hazards	☐ Cultural Resources
☐ Air Quality	☐ Noise	☐ Recreation
	☐ Mandatory Findings of Significance	

Determination:

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. ☐

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A NEGATIVE DECLARATION will be prepared. ■

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT (EIR) is required. ☐

I find that the project MAY have a significant effect(s) on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets, if the effect is a "potentially significant impact" or "potentially significant unless mitigated." An EIR is required, but it must analyze only the effects that remain to be addressed. ☐

I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because all potentially significant effects (1) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (2) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project

COPY: Original signed by

Carl G. Wilcox — 04/01/97

Signature — Date

Carl G. Wilcox

Printed Name — For

ISSUES (AND SUPPORTING INFORMATION SOURCES)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact or Positive Impact
I. **LAND USE AND PLANNING.** Would the proposal:	☐	☐	☐	■
a. Conflict with general plan designation or zoning	☐	☐	☐	■
b. Conflict with applicable environmental plans or policies adopted by agencies with jurisdiction over the project?	☐	■	☐	☐
c. Be incompatible with existing land use in the vicinity?	☐	■	☐	☐
d. Affect agricultural resources or operations (c.g., impacts to soils or farmlands, or impacts from incompatible land uses)?	☐	☐	☐	■
e. Disrupt or divide the physical arrangement of an established community (including a low-income or minority community)?	☐	☐	☐	■
II. **POPULATION AND HOUSING.** Would the proposal:				
a. Cumulatively exceed official regional or local population projections?	☐	☐	☐	■
b. Induce substantial growth inn an area either directly or in-directly (e.g., through projects in an undeveloped area or extension of major infrastructure)?	☐	☐	☐	■
c. Displace existing housing, especially affordable housing?	☐	☐	☐	■
III. GEOLOGIC PROBLEMS.				
a. Fault rupture?	☐	☐	☐	■
b. Seismic ground shaking?	☐	☐	☐	■
c. Seismic ground failure, including liquefaction?	☐	☐	☐	■
d. Seiche, tsunami, or volcanic hazard?	☐	☐	☐	■
e. Landslides or mudflows?	☐	☐	☐	■
f. Erosion, changes in topography, or unstable soil conditions from excavation, grading, or till?	☐	☐	☐	■
g. Subsidence of the land?	☐	☐	☐	■
h. Expansive soils?	☐	☐	☐	■
i. Unique geologic or physical features?	☐	☐	☐	■

ISSUES (AND SUPPORTING INFORMATION SOURCES)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact or Pos Impact
IV. WATER. Would the proposal result in:				
a. Changes in absorption rates, drainage patterns. or the rate and amount of surface runoff?	☐	☐	☐	■
b. Exposure of people or property to water related hazards, such as flooding?	☐	☐	☐	■
c. Discharge into surface waters or other alteration of surface water quality (e.g, temperature, dissolved oxygen, or turbidity)?	☐	☐	☐	■
d. Changes in the amount of surface water in any water body?	☐	☐	☐	■
e. Changes in currents, or the course or direction of water movements?	☐	☐	■	☐
f. Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations, or through substantial loss of ground-water recharge capability?	☐	☐	☐	■
g. Altered direction or rate of flow of groundwater?	☐	☐	☐	■
h. Impacts to groundwater quality?	☐	☐	☐	■
i. Substantial reduction in the amount of groundwater otherwise available for public water supplies?	☐	☐	☐	■
V. AIR QUALITY. Would the proposal:				
a. Violate any aor quality standard or contribute to an existing or projected air quality violation?	☐	☐	☐	■
b. Expose sensitive receptors to pollutants?	☐	☐	☐	■
c. Alter air movement moisture, or temperature, or cause any change in climate?	☐	☐	☐	■
d. Create objectionable odors?	☐	☐	☐	■
VI. TRANSPORTATION/CIRCULATION.				
a. Increased vehicle trips or traffic congestion?	☐	☐	■	☐
b. Hazards to safety from design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	☐	☐	☐	■

ISSUES (AND SUPPORTING INFORMATION SOURCES)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact or Positive Impact
c. Inadequate emergency access or access to nearby uses?	❑	❑	❑	■
d. Insufficient parking capacity on-site or off-site?	❑	❑	■	❑
e. Hazards or barriers for pedestrians or bicyclists?	❑	❑	❑	■
f. Conflicts with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	❑	❑	❑	■
g. Rail, waterborne, or air traffic impacts?	❑	❑	❑	■
VII. BIOLOGICAL RESOURCES. Would the proposal result in impacts to:				
a. Endangered, threatened, or rare species or their habitats (including but not limited to plants, fish, insects, animals, and birds)?	❑	■	❑	❑
b. Locally designated species (e g., heritage trees)?	❑	❑	❑	■
c. Locally designated natural communities (e.g., oak forest coastal habitat etc.)?	❑	❑	❑	■
d. Wetland habitat (e.g., marsh, riparian, and vernal pool)?	❑	❑	❑	■
e. Wildlife dispersal or migration corridors?	❑	❑	❑	■
VIII. ENERGY AND MINERAL RESOURCES. Would the proposal:				
a. Conflict with adopted energy conservation plans?	❑	❑	❑	■
b. Use non-renewable resources in a wasteful and inefficient manner?	❑	❑	❑	■
c. Result in the loss of availability of a known mineral resource that would be of true value to the region and the residents of the State?	❑	❑	❑	■
IX. HAZARDS. Would the proposal involve:				
a. A risk of accidental explosion or release of hazardous substances (including but not limited to: oil. pesticides, chemical, or radiation)?	❑	❑	❑	■
b. Possible interference with an emergency response plan or emergency evacuation plan?	❑	❑	■	❑

ISSUES (AND SUPPORTING INFORMATION SOURCES)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact or Pos: Impact
c. The creation of any health hazard or potential health hazard?	☐	☐	☐	■
d. Exposure of people to existing sources of potential health hazards?	☐	☐	☐	■
e. Increased fire hazard in areas with flammable brush, grass, or trees?	☐	■	☐	☐
X. NOISE. Would the proposal result in:				
a. Increases in existing noise levels?	☐	☐	■	☐
b. Exposure of people to severe noise levels?	☐	☐	☐	■
XI. PUBLIC SERVICES. Would the proposal have an effect upon. Or result in a need for new or altered government services in any of the following areas:				
a. Fire protection?	☐	☐	■	☐
b. Police protection?	☐	☐	■	☐
c. Schools?	☐	☐	☐	■
d. Maintenance of public facilities, including roads?	☐	☐	■	☐
e. Other governmental services?	☐	■	☐	☐
XII. UTILITIES AND SERVICE SYSTEMS. Would the proposal result in a need for new systems or supplies, or substantial alterations to the following utilities:				
a. Power or natural gas?	☐	☐	☐	■
b. Communications systems?	☐	☐	☐	■
c. Local or regional water treatment or distribution facilities?	☐	☐	☐	■
d. Sewer or septic tanks?	☐	☐	☐	■
e. Storm water drainage?	☐	☐	☐	■
f. Solid waste disposal?	☐	☐	■	☐
g. Local or regional water supplies?	☐	☐	☐	■

ISSUES (AND SUPPORTING INFORMATION SOURCES)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact or Positive Impact
XIII. AESTHETICS. Would the proposal:				
a. Affect a scenic vista or scenic highway?	❑	❑	❑	■
b. Have a demonstrable negative aesthetic effect?	❑	❑	❑	■
c. Create light or glare?	❑	❑	❑	■
XIV. CULTURAL RESOURCES. Would the proposal:				
a. Disturb paleontological resources?	❑	❑	❑	■
b. Disturb archaeological resources?	❑	❑	❑	■
c. Affect historical resources?	❑	❑	❑	■
d. Have the potential to cause a physical change which would affect unique ethnic cultural values?	❑	❑	❑	■
e. Restrict existing religious or sacred uses within the potential impact area?	❑	❑	❑	■
XV. RECREATION. Would the proposal:				
a. Increase the demand for neighborhood or regional parks or other recreational facilities?	❑	❑	❑	■
b. Affect existing recreational opportunities?	❑	❑	❑	■
XVI. MANDATORY FINDINGS OF SIGNIFICANCE.				
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish and wildlife species, cause a fish or wildlife population to drop below self sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	❑	❑	❑	■
b. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	❑	❑	❑	■

ISSUES (AND SUPPORTING INFORMATION SOURCES)	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact or Pos Impact
c. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☐	☐	■
d. Does the project have environmental effects which will cause substantial adverse effects on human beings either directly or indirectly?	☐	☐	☐	■

Appendix E

CEQA NEGATIVE DECLARATION

Negative Declaration

The California Department of Fish and Game has determined that the following project would not have a significant effect on the environment subject to mitigation measures. Documentation supporting this determination is on file for public inspection at the California Department of Fish and Game Region 3 Office, 7329 Silverado Trail, Yountville, CA 94599. For additional information, call (707) 944-5500.

Lake Berryessa Wildlife Area Management Plan

The Lake Berryessa Wildlife Area Management plan proposes a number of habitat improvement projects such as creating new wetlands; protecting and enhancing riparian vegetation, and oak trees; and enhancing and conserving habitat for diverse populations of fish and wildlife species, including threatened and endangered species. in addition to the fisheries and wildlife enhancement projects the plan proposes measures to manage outdoor recreational opportunities for the public. A parking lot and walking trails with informative stations are proposed to provide public access to the area Access will be controlled to achieve management goals with compatible public access permitted. Hunting and fishing opportunities will be provided when and where appropriate for management needs and public enjoyment.

Mitigation Measures

Land Use and Planning

1. Be incompatible with existing land use in the vicinity

The present uses of the lands on the east side of Lake Berryessa are for livestock grazing. Under the provisions of the wildlife area management plan, grazing would be discontinued initially until an evaluation of the east side vegetation can be completed Grazing maybe utilized in the future on a limited bases to control exotic vegetation and/or manage vegetation for wildlife habitat We will continue to work with the eastside landowners to reduce the impacts of not being able to graze these lands

2. Affect agricultural resources or operations

The elimination/reduction in grazing on the lands on the east side of Berryessa will have an effect on livestock operations for eastside landowners We will work with eastside landowners to reduce these impacts and provide water above the take line of Lake Berryessa.

Biological Resources

3. Endangered, threatened, or rare species or their habitats

Habitat work on the lands on the east side of Lake Berryessa could have impacts on the bald

eagle and other sensitive plant or animal species. The management plan recognizes this possibility and proposes to initially survey and census for sensitive species utilizing the wildlife area. Based upon this information specific proposals will be developed that first do nothing to harm existing special status species utilization, The plan encourages habitat enhancement and creation for special status species currently utilizing the wildlife area. In addition, habitat improvement projects to attract special status species not presently utilizing the wildlife area are proposed

Hazards

4. Increased fire hazard in areas with flammable brush, grass, or trees.

The reduction in grazing practices and habitat enhancement practices has the potential to increase fire hazard by increasing the amount of dried grasses and vegetation on the wildlife area. To reduce this potential hazard discussions with the California Department of Forestry (CDF) have resulted in changes to the plan to reduce fire danger. A minimum 30 foot wide fire break will be maintained between the wildlife area and private lands east of the access road. The fire break will include the road and an adjacent strip of land to the west which can be maintained, as necessary, to insure a safety zone. The planting of native grasses will reduce the hazard by replacing some of the dry annual grasses In conjunction with CDF a number of controlled burns will be initiated on a yearly basis or as necessary to provide training for firefighting personnel and reduce fire hazard on the area.

Public Services

5. Would the plan result in a need for new or altered government services?

Due to the potential for increased public use on the east side of Lake Berryessa increased maintenance, public safety patrol, and facilities may be necessary to insure minimum impact on resource values The management plan provides for the development of parking and interpretive facilities which will reduce impacts and facilitate management of the area. Increased patrol is also proposed to insure compliance.

Public Notice

A public hearing will be held to consider initial public testimony for this project. At that time any interested person is welcome to attend and be heard on this matter. The public comment period on this management plan and negative declaration shall continue through July 4, 1997. Final action will not be taken on the project until the public comment period is complete.

The public is invited to submit written comments on this Plan and Negative Declaration to the Department of Fish and Game, Attention Fred Botti, Wildlife Biologist, Post Office Box 47, Yountville, California 94599; or telephone (707) 944-5500.

Brian Hunter
Regional Manager
Date 04/04/97

Appendix F

NEPA DOCUMENTATION

BOR NEPA Requirements

The Record of Decision for the Environmental Impact Statement, Lake Berryessa Reservoir Area Management Plan (RAMP) February 1993, Preferred Action #13 outlined the development of a Fish and Wildlife Area in cooperation with the California Department of Fish and Game. Under the RAMP actions such as cattle enclosures and or restrictions, waterfowl nesting habitats, development of roosting and nesting sites for raptors and other species, native plant establishment, seeding to provide waterfowl food, establishment of riparian water courses, and fishery related and other habitat development projects may be implemented.

Since the Lake Berryessa Wildlife Area (LBWA) Management Plan is a general planning document and does not contain specific actions and the EIS-RAMP authorizes the area as a wildlife area, a separate NEPA document for the LBWA Management Plan will not be completed. However, separate NEPA documents will be completed and the necessary public involvement initiated for any specific projects implemented within the LBWA.

Appendix G

PUBLIC INVOLVEMENT

1. PUBLIC COMMENTS/INPUT

a. Public meetings were held on March 23, 1998 at Reclamation Administration Complex and on March 24, 1998 at the Napa County Works Building across from the Department of Fish and Game Headquarters in Yountville. The meetings were scheduled to provide the public a means to communicate their thoughts and concerns on the Draft Lake Berryessa Management Plan of September 1997. A press release was issued for the meeting dates and eastside landowners, Lake Berryessa concessioners, and other interested stakeholders were notified of the meeting.

Below is listed an outline of the comments received by the public on the plan.

b. Public Concerns LBWA 03/23/98 BOR Complex Lake Berryessa

Interpretive Areas
- use area adjacent to Eticuera Creek for parking area not along eastside road

Fire hazard
- use cattle to graze area to reduce fire hazard
- control burns might get out of control and burn adjacent land/property

Oak Regeneration problems
- deer are causing problems and eating young oaks/acorns, should look at deer problem before increasing populations.

Public access
- should be controlled
- by permit only
- lifestyles and property of landowners should be considered before allowing public access.

Protect Private Lands
- Lifestyles of landowners should be considered before allowing access to area
- economic viability of landowners should be considered (having to lock to prevent public access to private lands.

Hunting
- proximity of landowners and houses to wildlife area
- do not have uncontrolled hunts and access
- make sure public is involved before hunts are allowed

Fencing
- up-grade existing (take-line) fence and not have secondary fence.
- no need for second fence, aesthetic value
- waste of funds

Use of Eastside Road
- not a public thoroughfare
- designed as a fire/farm access only, not for extensive public use.

c. Public Concerns LBWA 03/24/98 Yountville

Fire Hazard
- extensive growth this season
- use grazing
- consider expense of other types of control

Grazing
- wasting valuable renewable resource by not grazing
- use best and cheapest means to benefit wildlife

Public use
- encouraging use of the area and possible trespass
- impact on T&E species

Hunting
- landowner proximity
- long narrow strip of land
- danger to T&E species
- harm to boaters, cattle, landowners, public from possible accidental shooting
- enforcement access to narrows
- lead poisoning

Eastside Road
- not a public road
- twice the maintenance
- enforcement BOR has no law enforcement authority

Fence
- preserve open space, aesthetics
- existing BOR fence is cattle fence and is all that is needed
- trespass cattle issue can be resolved through other means (legal action)
- too costly
- creates ally and more maintenance on roadway

Recommended Solutions (by public)

- Schedule public use to the area
- parking area away from eastside road, use Eticuera/Knoxville access point
- provide some type of boat access
- develop fire control plan

2. ACTIONS TAKEN AS A RESULT OF THE PUBLIC MEETINGS

Several actions and management strategies have been adopted as a result of the public meetings. They are as follows:

1. Interpretive Area
   The main interpretive area will be located off of Berryessa/Knoxville Road near Eticuera Creek. A parking area, interpretive signs/displays and trail will be developed at this site. By using this site the public will be able to see examples of habitat project developments without having to access the area from the Eastside gravel road.

2. Public Access
   Until facilities are developed (parking, restroom, trails, signage), public use of the area along the Eastside Road will not be encouraged. Use of the area will be by special tours or limited use.

3. Fire Hazard
   Reclamation, DFG, and CDF will develop a Fire Management Plan outlining management strategies and action plans regarding the prevention and suppression of wildfires.

4. Hunting
   Hunting will only be allowed as part of special DFG/BOR designated hunts as part of an educational experience for younger hunters. General hunting will not be allowed.

Appendix H

RESULTS OF PUBLIC SCOPING SESSIONS

Results of Public Scoping Sessions

The public, including adjacent landowners, special interest groups, and other agencies, were asked for their thoughts and concerns over the Lake Berryessa Wildlife Area and or Management Plan.

The comments and ideas were recorded and placed into four categories. These categories were:

1) Access Issues
2) Wildlife Issues
3) Fisheries Issues
4) Other Issues

Participants were asked to rate the ideas on a scale of one to five (except for "other issues" which was rated on a scale of one to ten). The results of this exercise are presented as they were voted on and placed in the order of importance as selected by the group.

These comments and ideas were evaluated and were incorporated into the development of the LBWA Management Plan.

Each of the above categories are addressed within public use and facility maintenance elements.

ACCESS ISSUES

# Votes Received	
69	Define objectives for access and make consistent with objectives
63	Review legal record for landowner agreements and improvements with USBR and legal obligation for public access.
37	Limit public Use to view points, turn outs. Control public access. Avoid general public access to areas being restored for habitat.
33	Maintain eastside road open for public access. Now open to large portion of public. Does need control, however, parking, hours, specific locations for viewpoints.
27	Keep eastside as a farm access closed to the public. Road never designed for public use.
22	Need to plan for pedestrian access. hikers, birders, low impact uses.
16	What are Bureau of Reclamations (BOR's) plans for maintenance of eastside road (use of eastside key issue).
11	Consider card key access.
7	Concern over road hunting--should the road be open to the public because of long, narrow nature of the upland wildlife area.
6	Setting of homes adjacent to the road. Impacts of traffic and access. Encourages public to go on private land.
4	Point access—not through access or continuous access.
4	Limit hours of public access (night access can be a problem) - catfish anglers will want to be out at night.
1	Develop handicap access

WILDLIFE ISSUES

# Votes Received	
41	Habitat linkages for more ecosystem based planning. Connect wildlife restoration areas to existing habitat areas or natural features. Connect fish habitat and wildlife habitat restoration projects.
33	Maintain a grazing program.
32	Define zones for management. Specific areas which may be appropriate for various uses.
30	Should be managed grazing systems to promote native plant community development, native grasses, nutrient cycling, water infiltration, and water pollution.
26	Develop water sources for wildlife (in addition to the lake).
23	Oak regeneration should be emphasized.
21	No grazing in Fish and Wildlife management zone-extensive oak planting is not compatible with grazing.
21	Emphasize riparian revegetation along drainage coming out of hills. Riverine riparian above 440.
19	If grazing reduced, address public safety issues-particularly with increased public access, fire is an increasing concern.
18	Address habitat for neotropical birds, raptors, threatened and endangered species, and species of special concern.
17	Investigate *Cryptosporidium*, *Giardia*, etc., as it relates to wildlife and water quality.
11	Use native species for revegetation, i.e., native grasses (species native to specific site).
7	Re-establish tule elk with cooperation of eastside landowners.
5	If no grazing, then fuel will build up and will endanger oaks with fire.
0	If introductions of tule elk or other wildlife are planned, discuss the transmission of disease to livestock or people.

FISHERIES ISSUES

#Votes Received	
52	Creation of fish habitat in the lake fluctuation zone (<440').
47	Fish habitat program should emphasize living vegetation over dead brush (willows, etc.).
43	Discuss water quality issues (mercury, toxins. heavy metals) for the lake in general as it may affect the eastside.
33	If eastside road open to the public. there should be no foot or vehicle access to the shore from the road.
27	Close the eastside to shore fishing.
25	Planting of grass below 440 (test plots) to develop habitat for wildlife.
20	Discuss high-speed boating impacts on fish habitat.
17	Identify sources of mercury input to the lake. Identify means of control. Include any other "toxic" materials.
13	Develop site-specific angling regulations.
6	Viewpoint boat access only.

OTHER ISSUES

# Votes Received	
117	Consider cost-benefit as it relates to management decisions.
78	Promote biodiversity of plants in management of eastside instead of single species management Look at total ecology of the east- side. Sustainable ecosystem management.
71	Discuss general issue of fencing and how it relates to management objectives.
69	Address law enforcement aspects of opening the eastside. If certain activities are prohibited or restricted, enforceable statutes are required. Address law enforcement needs/capabilities of DFG, Napa County Sheriff's Office, USBR.
53	There is a need for baseline information on fish and wildlife habitat values.
48	Need for a sophisticated monitoring plan for "ecosystem". Plants, fish, wildlife, erosion, and water quality should all be included.
45	Consider the formation of a coordinated management group on both the wildlife management area and surrounding private lands to promote better grazing strategies and restoration of native grasslands and other habitats. Explore funding options.
44	Discuss issues of fencing on 440 and how to make adjustments that could simplify fencing and livestock management (site specific).
41	Important to maintain adequate Fish and Game law enforcement presence in area.
40	Develop alterative water sources for eastside ranchers.
40	Plan should include a maintenance/operational plan.
39	Need a specific mitigation plan for fire danger.
39	Funding sources need to be identified for the restoration plans.
37	Consider water availability along the eastside for cattle on both private

and BOR land and water for riparian habitat. This is a serious problem for eastside ranchers. What happens if 440 line is fenced?

# Votes Received	
36	Consider budget. How much will it cost? Where will the money be spent?
31	Make an effort to bring the Napa County Board of Supervisors into the planning process.
27	Need to include an interpretative program (or basis for one) for educational connection to lake management program.
24	Make this a showcase project to get the most public relations value
24	Public agencies need to coordinate with ranchers to teach them monitoring techniques for native grasses and riparian habitat.
24	There is a need for a resident conservation officer (warden/biologist) for the Lake Berryessa area.
21	Discuss public safety issues.
19	Consider water rights issues with Solano County Water Agency and SWRCB.
18	Be aware that this area has been a wildlife refuge for years because of efforts of ranchers and the lack of access. Ranchers need credit for what they have already done.
16	Include in the management plan a mechanism to help local planners to evaluate future project impacts and land use practices on the resources developed around Lake Berryessa.
10	If there is public access, address sanitation and water availability.
7	Solano County Water Agency supportive of our efforts.
7	Once ranchers are "certified" for monitoring of habitats. then they (ranchers) would be given more control of management.
6	When doing baseline studies, determine how grazing benefits geese.

Appendix I

ACTION PLAN

LBWA ACTION PLAN OUTLINE

(Tasks requiring additional project development and/or environmental documentation are underlined and italicized)

I. BIOLOGICAL ELEMENTS - GOAL - Objective - Task

A. RIPARIAN ELEMENT

1. ESTABLISH ON DRAINAGES
   a. Vegetate
      (1) Prioritize benefits by drainage
      (2) Evaluate species
      (3) Evaluate planting and protection procedures
      (4) Develop experimental areas for planting
      (5) Implement plantings.
   b. Extend Water Flows in Drainages
      (1) Evaluate methods (costs, maintenance, & reliability)
      (2) Implement as advantageous
   c. Extend Riparian Above Reclamation Takeline
      (1) Landowner discussion/evaluation
      (2) Evaluate costs, impacts, location and other ramification
      (3) Evaluate riparian protection opportunities
      (4) Evaluate water/habitat exchanges with Landowners
      (5) Implement as advantageous

B. LACUSTRINE HABITAT ELEMENT

1. Establish temporary and permanent water above and within lake fluctuation zone
   a. Create ponds and manage flows
      (1) Prioritize benefits by drainage
      (2) Seasonal pond plan
      (3) Implement as advantageous
2. Enhance warm water fish spawning, survival & recruitment
   a. Enhance bass and sunfish spawning habitat.
      (1) Place substrates
      (2) Plant flood-tolerant plants
      (3) Install shelter/cover
      (4) Evaluate and develop plan to excavate channels
      (5) Plant grasses
      (6) Coordinate with water agency on water release schedules during spring
      (7) Evaluate and install reefs and erosion controls
      (8) Plan and construct warmwater sport fish brood ponds.
      (9) Monitor fish populations.
      (10) Establish fish/wildlife habitat boating speed protection
   b. Enhance catfish spawning
      (1)Install structures
      (2)Install spawning structures and micro habitats
      (3)Maintain Cold Water Fishery
3. Maintain Cold Water Fishery
   a. Maintain trout fishery.
      (1) Stock trout per fish management plan/policy

4. Maximize aquatic and terrestrial bio-diversity.
   a. Manage for native species.
      (1)Plant & maintain native vegetation where possible
5. Improve Water Quality.
   a. Reduce erosion in the lake fluctuation zone.
      (1) Install berms or other setbacks
      (2) Plant native vegetation
      (3) Develop riparian habitat in tributaries

C. WOODLAND ELEMENT:

1. Enhance Oak Woodlands
   a. Increase valley oak and blue oak regeneration
      (1) Evaluate oak planting sites
      (2) Collect acorns from local sources
      (3) Start oak nursery
      (4) test procedures for oak planting (trial sites)
      (5) Develop protection
      (6) Implement plantings

D. SENSITIVE SPECIES ELEMENT:

1. Maintain or increase species and public appreciation/awareness
   a. Maintain or increase use by threatened and endangered species.
      (1) Survey use and behavior
      (2) Maintain and protect roosting sites.
      (3) Maintain waterfowl foraging sites
      (4) Monitor predators and develop predator control program
      (5) Develop non-intrusive access program
   b. Enhance habitat for the T&E species.
      (1) Evaluate roosting poles and other habitat for raptors
      (2) Evaluate nesting platforms and nesting islands
      (3) Evaluate grass species for waterfowl.
      (4) Implement as advantageous.

E. AVIAN ELEMENT

1. Enhance habitat and encourage nesting by waterfowl, shorebirds, and wading birds
   a. Enhance overall habitat value
      (1) Determine the current/historic species nesting and level of nesting activity
      (2) Create brood and rearing ponds for waterfowl, where practical.
      (3) Create appropriate escape and nesting cover for waterfowl and shorebirds.
   b. Encourage nesting
      (1) Evaluate impacts of predators and determine appropriate course of action.
      (2) Evaluate/develop nesting islands, platforms, unvegetated areas for shorebirds.

F. UNDERSTORY ELEMENT

1. Create/increase the diversity and amount of native understory cover.
   a. Provide habitat for small mammals and ground nesting birds.
      (1) Evaluate shrub and cover enhancements and protection techniques.
      (2) Create brush piles on the wildlife area adjacent to several habitats.

(3) Plant native shrubs among oaks and within grasslands.
(4) Create rock outcroppings in the upland and fluctuation zone.
(5) Evaluate potential predator impacts on ground nesting bird species and Implement predator controls if a problem is discovered.

G. GRASSLAND ELEMENT

1. Re-establish Perennial Native Grasses
   a. Establish perennial grasses dispersed through-out the LBWA
      (1) Evaluate costs/methods to re-establish and maintain native grasses.
      (2) Evaluate methods for protection of perennial grasses from invasive species.
      (3) Maintain perennial plant composition by discing, burning, and grazing.
      (4) Develop/implement techniques to establish, maintain, and protect native grasses.

II. PUBLIC USE ELEMENTS: GOALS, OBJECTIVES, Tasks

A. RECREATIONAL TRAIL ELEMENT

1. Provide for public use while minimizing resource and landowner impacts
   a. Controlled public access
      (1) Evaluate/develop parking, viewing and interpretive area and loop trail(s) on the northern portion of the wildlife area.
      (2) Develop a wildlife compatible fence line or barrier system on the west side of the gravel road
      (3) Evaluate potential parking areas along the new fence line
      (4) Develop appropriate signing for the area
      (5) Identify and close existing non-designated trails within the wildlife area and post to discourage continued use.
      (6) Rehabilitate closed trails by revegetation and/or physical blockage to prevent continued use.
2. Fishing Access
   a. *Develop primitive fishing access for all anglers*
      (1) Develop access for persons with disabilities.
      (2) Develop bank fishing opportunities where possible.
      (3) Provide fishing access trails designed to minimize adverse impacts on fish and wildlife.

B. RESOURCE INTERPRETATION ELEMENT

1. LBWA Enhancement interpretation project
   a. Develop and maintain enhancement data and interpretation material
      (1) Develop and maintain enhancement project data necessary for LBWA interpretation, education, and research programs.
      (2) Develop a trail guide keyed to the trail resources and habitat enhancement projects being implemented.
      (3) Develop an informative leaflet on the sensitive resources of the wildlife area.
      (4) Develop interpretative displays at parking areas.

C. RESEARCH AND EDUCATION ELEMENT

1. Promote educational use of the wildlife area.
   a. Encourage scientific research and educational programs on species, populations, communities and enhancement techniques
      (1) Coordinate with universities about research opportunities and project support consultation
      (2) Provide updated information on the wildlife area to various agencies, universities, conservation groups and the public, as requested.
      (3) Coordinate with non-profit organizations to establish educational programs on the wildlife area.
      (4) Coordinate with local schools

D. Hunting Element

1. Develop a hunting program compatible with the other uses on the LBWA
   a. Evaluate current habitat and status of game populations on the LBWA
      (1) Initiate trend counts and species surveys.
      (2) Determine species use patterns and population limiting factors.
      (3) Develop hunting program for selected species.
      (4) Implement after review and approval

III. FACILITY MAINTENANCE ELEMENTS: GOALS, OBJECTIVES, Tasks

A. LBWA BOUNDARY ELEMENT

1. Manage access
   a. Establish clear, well-marked boundaries.
      (1) Install additional fencing along west side of road (road exclusion).
      (2) Post boundaries at critical road and shoreline access points.
      (3) Maintain fencing and posting.
      (4) Increase Wildlife Protection patrol presence in wildlife area.
      (5) Provide maps - rules and regulations.

B. EXOTIC VEGETATION ELEMENT

1. Reduce non-native plant species and protect native plant communities against noxious non-native species.
   a. Control noxious non-native vegetation.
      (1) Evaluate and implement methods for reducing weeding vegetation while promoting native grasses and shrub species.
      (2) Develop regular schedule of monitoring of noxious weed populations.

C. FIRE ELEMENT

1. Minimize wildfire threat.
   a. Establish fire management plans and prescriptions that minimize fire danger to the LBWA and adjacent lands.
      (1) Develop a fire-control and prescription burn plan with CDF.
      (2) Implement as appropriate, including consideration of other tasks.

GENERAL ACTION PLAN OUTLINE

Action Plan Outline												
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Proposed Project Submittal BOR/DFG												■
Habitat Enhancements	■	■	■							■	■	■
Perennial Grass Seeding		■	■	■					■	■		
Roadside Mowing				■	■	■						
Tree Planting	■	■									■	■
Use/Hazard Monitoring	■	■	■	■	■	■	■	■	■	■	■	■
Risk Evaluation		■	■	■	■							
Herbicide Application		■	■	■								
Pond Development									■	■	■	■
Lacustrine Habitat Development	■	■	■	■						■	■	■
Trail Development	■	■	■	■						■	■	■
Prescribed Fire Use	■	■	■								■	■

Appendix J

RAREFIND ANALYSIS

California Department of Fish and Game
Natural Diversity Data Base
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Species/Community Location Summary Report

RANA BOYLII ID: AAABH01050
Foothill Yellow-legged Frog

---------Status--------	NDDB Element Ranks	-------Other Lists-------
Federal: Category 2	Global: G3	CDFG: Special Concern
State: None	State: S2S3	Audubon:
		CNPS List:
		CNPS RED Code:

Occurrence Number: 117
Quality: Unknown
Type: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

--Dates Last Seen--
Element: 1956/04/XX
Site: 1956/04/XX

Quad Summary: Aetna Springs (3812264), Walter Springs (3812263)
County(ies): Napa
Location: **SOUTHWEST OF LAKE BERRYESSA; SPANISH VALLEY.**

Lat/Long: 38d 40m 46s / 122d 23m 06s	Township: 10N
UTM: Zone-10 N4281206 E553473	Range: 05W
Mapping Precision: NON-SPECIFIC (3/5 Mile)	Section: 26 SW Qt
Symbol Type: POINT	Meridian: M
Map Index Numbers - Group:	Acres: 0
Detail: 32346	Elevation: 720 ft

California Department of Fish and Game
Natural Diversity Data Base
---===[*]===---
Species/Community Location Summary Report

AQUILA CHRYSAETOS ID:ABNKC22010
Golden Eagle

---------Status--------	NDDB Element Ranks	-------Other Lists-------
Federal: None	Global: G4	CDFG: Special Concern
State: None	State: S3	Audubon:
		CNPS List:
		CNPS RED Code:

Occurrence Number: 45
Quality: Good
Type: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Quad Summary: Lake Berryssa (3812252)
County(ies): Napa

--Dates Last Seen--
Element: 1992/05/03
Site: 1992/05/03

Location: **HILLTOP OF THE LARGEST ISLAND IN LAKE BERRYESSA; ABOUT 2 MILES ESE OF THE BERRYESSA MARINA.**

Lat/Long:38d 34m 24s / 122d 12m 52s
UTM: Zone-10 N4269528 E56842
Mapping Precision: SPECIFIC (80m Mile)
Symbol Type: POINT
Map Index Numbers - Group:
Detail: 21520

Township:08N
Range:03W
Section: UN XX Qt
Meridian: M
Acres: 0
Elevation: 619 ft

Occurrence Number: 46
Quality: Excellent
Type: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Quad Summary:Walter Springs (3812263)
County(ies): Napa

--Dates Last Seen--
Element: 1992/05/03
Site: 1992/05/03

Location: TOP OF THE RIDGE ON THE SOUTHEAST SIDE OF MOORE FLAT, JUST EAST OF THE ETICUERA CREEK ARM OF LAKE BERRYESSA.

Lat/Long: 38d 41m 40s / 122d 16m 23s
UTM: Zone-10 N4282928 E563227
Mapping Precision: NON-SPECIFIC (1/5 Mile)
Symbol Type: POINT
Map Index Numbers - Group:
Detail: 21517

Township: 10N
Range: 04W
Section: UN XX Qt
Meridian: M
Acres: 0
Elevation: 1130 ft

California Department of Fish and Game
Natural Diversity Data Base
---===[*]===---
Species/Community Location Summary Report

FALCO MEXICANUS
Prairie Falcon

ID: ABNKD06090

--------Status-------
Federal: None
State: None

NDDB Element Ranks
Global: G3
State: S3

-------Other Lists-------
CDFG: Special Concern
Audubon:
CNPS List:
CNPS RED Code:

Occurrence Number: 444
Quality: Unknown
Type: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Quad Summary: Walter Springs (3812263)
County(ies): Napa

--Dates Last Seen--
Element: 1992/05/24
Site: 1992/05/24

Location: **AT THE NORTH END OF LAKE BERRYESSA, 0.5 MILE WEST OF THE ETICURA CREEK CONFLUENCE, 12 MILES SOUTH OF KNOXVILLE.**

* SENSITIVE*

Lat/Long: 38d 40m 46s / 122d 23m 06s
UTM: Zone-10 N4281206 E553473
Mapping Precision: SPECIFIC (1/5 Mile)
Symbol Type: POINT
Map Index Numbers - Group:
Detail: 24517

Township: 10N
Range: 04W
Section: 27 NW Qt
Meridian: M
Acres: 0
Elevation: 840 ft

California Department of Fish and Game
Natural Diversity Data Base
---===[*]===---
Species/Community Location Summary Report

RIPARIA RIPARIA
Bank Swallow

ID: ABPAAUO801O

---------Status--------
Federal: None
State: Threatened

NDDB Element Ranks
Global: G5
State: S2S3

-------Other Lists-------
DFG: No
Audubon:
CNPS List:
CNPS RED Code:

Occurrence Number: 141
Quality: Unknown
Type: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

--Dates Last Seen--
Element: 1987/07/03
Site: 1987/07/03

Quad Summary: Esparto (3812261), Brooks (3812262)
County(ies): Napa
Location: **CACHE CREEK, LEFT AND RIGHT BANKS, APPROX 3 MI U/S FROM CAPAY DAM, 6 MI NW OF ESPARTO.**
Lat/Long: 38d 44m 20s / 122d 07m 26s
UTM: Zone-10 N4287958 E76144
Mapping Precision: NON-SPECIFIC (1/5 Mile)
Symbol Type: POINT
Map Index Numbers - Group:09617
Detail: 09617

Township: 10N
Range: 02W
Section: 06 SE Qt
Meridian: M
Acres: 0
Elevation: 280 ft

California Department of Fish and Game
Natural Diversity Data Base
---===[*]===---
Species/Community Location Summary Report

CLEMMYS MARMORATA MARMORATA ID: ARAAD02031
Northwestern Pond Turtle

--------Status-------
Federal: Sp of Concern (C2)
State: None

NDDB Element Ranks
Global: G4T4
State: S3

-------Other Lists------
CDFG: Special Concern
Audubon:
CNPS List:
CNPS RED Code:

Occurrence Number: 53
Quality: Unknown
Type: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

--Dates Last Seen--
Element: XXXX/XX/XX
Site: XXXX/XX/XX

Quad Summary: Walter Springs (3812263), Knoxville (3812273)
County(ies): Napa
Location: **NORTH OF LAKE BERRYESSA; ETICUERA CREEK.**
Lat/Long: 38d 44m 45s / 122d 16m 43s
UTM: Zone-10 N4281206 E553473
Mapping Precision: SPECIFIC (0 Mile)
Symbol Type: POINT
Map Index Numbers - Group:
Detail: 32831

Township: 10N
Range: 04W
Section: UN XX Qt
Meridian: M
Acres: 788.9
Elevation: 675 ft

California Department of Fish and Game
Natural Diversity Data Base
---===[*]===---
Species/Community Location Summary Report

NORTHERN VERNAL POOL ID: ARAAD02031
Northern Vernal Pool

--------Status--------
Federal: None
State: None

NDDB Element Ranks
Global: G2
State: S2.1

-------Other Lists-------
CDFG: No
Audubon:
CNPS List:
CNPS RED Code:

Occurrence Number: 14
Quality: Unknown
Type: Natural/Native occurrence
Presence: Presumed Extant
Trend: Stable

--Dates Last Seen--
Element: 1989/01/07
Site: 1989/01/07

Quad Summary: Walter Springs (3812263), Chiles Valley (3812253)
County(ies): Napa
Location: **MID POPE VALLEY, W OF POPE CK AND POPE CYN RD, APPROX 0.8 MI SE ALONG POPE CK FROM JCT W/MAXWELL CK. SEC17**
Lat/Long: 38d 37m 38s / 122d 19m 41s
UTM: Zone-10 N4281206 E553473
Mapping Precision: NON-SPECIFIC (1/5 Mile)
Symbol Type: POINT
Map Index Numbers - Group: 17046
Detail: 17046

Township: 09N
Range: 04W
Section: 17 SW Qt
Meridian: M
Acres: 0
Elevation: 560 ft

California Department of Fish and Game
Natural Diversity Data Base
---===[*]===---
Species/Community Location Summary Report

DESMOCERUS CALIFORNICUS DIMORPHUS ID: IICOL48011
Valley Elderberry Longhorn Beetle

---------Status--------	NDDB Element Ranks	-------Other Lists-------
Federal: Threatened	Global: G3T2	DFG: No
State: None	State: S2	Audubon:
		CNPS List:
		CNPS RED Code:

Occurrence Number: 3
Quality: Unknown
Type: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

--Dates Last Seen--
Element: 1991/07/26
Site: 1991/07/26

Quad Summary: Monticello Dam (3812251), Mt. Vaca (3812241)
County(ies): Solano, Yolo, Napa
Location: PUTAH CREEK, FROM MONTICELLO DAM 6 MILES EAST TO THE PUTAH DIVERSION CREEK DAM, SOLANO LAKE, ~ 3 MILES SW OF WINTERS.

Lat/Long: 38d 30m 32s / 122d 20m 49s	Township: 08N
UTM: Zone-10 N4262494 E583097	Range: 02W
Mapping Precision: NON-SPECIFIC (0 Mile)	Section: 26 NW Qt
Symbol Type: POLYGON	Meridian: M
Map Index Numbers - Group: 09785	Acres: 500.2
Detail: 09785	Elevation: 150 ft

California Department of Fish and Game
Natural Diversity Data Base
---===[*]===---
Species/Community Location Summary Report

LAYIA SEPTENTRIONALIS ID: PDAST5N0F0
Colusa Layia

---------Status--------	NDDB Element Ranks	-------Other Lists-------
Federal: None	Global: G2C	DFG: No
State: None	State: S2.2	Audubon:
		CNPS List: 1B
		CNPS RED Code: 2-2-3

Occurrence Number: 6

	--Dates Last Seen--
Quality: Unknown	Element: 1977/04/19
Type: Natural/Native occurrence	Site: 1977/04/19
Presence: Presumed Extant	
Trend: Unknown	

Quad Summary: Walter Springs (3812263)
County(ies): Napa
Location: ABOVE DRAINAGE RUNNING NE FROM ADAMS CREEK. (MAPPED AT NW 1/4 OF NW 1/4 OF SECTION 6, AS LISTED ON HERB. LABEL.)

Lat/Long: 38d 44m 52s / 122d 20m 58s	Township: 10N
UTM: Zone-10 N4288799 E556519	Range: 04W
Mapping Precision: NON-SPECIFIC (0 Mile)	Section: 06 NW Qt
Symbol Type: POLYGON	Meridian: M
Map Index Numbers - Group:	Acres: 53
Detail: 24319	Elevation: 1500 ft

Appendix K

ENDANGERED, THREATENED, AND RARE SPECIES OCCURRING AT LAKE BERRYESSA

SENSITIVE ANIMAL SPECIES IN THE LAKE BERRYESSA AREA

Listed and proposed Rare, Threatened, and Endangered species and candidate animal species that may or do occur in the area of Lake Berryessa Reservoir.

BIRDS

American White Pelican	(*Pelecanus erythrorhynchos*) (CSC-1)
Double-Crested Cormorant	(*Phalacrocorax auritus*) (CSC-2)
Aleutian Canada Goose	(*Branta canadensis leucopareia*) (FE)
Barrow's Goldeneye	(*Bucephala islandica*) (CSC-3)
Northern Goshawk	(*Accipiter gentilis*) (CSC-3)
Cooper's Hawk	(*Accipiter cooperii*) (CSC-3)
Sharp-Shinned Hawk	(*Accipiter striatus*) (CSC-3)
Northern Harrier	(*Circus cyaneus*) (CSC-3)
Ferruginous Hawk	(*Buteo regalis*) (F2)
Swainson's Hawk	(*Buteo swainsoni*) (F2,CT)
Golden Eagle	(*Aquila chrysaetos*) (CSC-3,CP)
Bald Eagle	(*Haliaeetus leucocephalus*) (FE,CE,CP)
Osprey	(*Pandion haliaetus*) (CSC-2)
Prairie Falcon	(*Falco mexicanus*) (CSC-3)
Peregrine Falcon	(*Falco peregrinus*) (FE,CE,CP)
Merlin	(*Falco columbarius*) (CSC-1)
Burrowing Owl	(*Athene cunicularia*) (CSC-2)
Sandhill Crane	(*Grus canadensis*) (CP,CSC-3)
Black Swift	(*Cypseloides niger*) (CSC-3)
Yellow Warbler	(*Dendroica petechia*) (CSC-2)

Reptiles/Amphibians

Northwestern Pond Turtle	(*Clemmys marmorata marmorata*)

Plants

Northern Vernal Pool Colusa Layia	(*Layia septentrionalis*)

Sensitive Species Status Codes:

FE - Federal Endangered.	An endangered species is one that is in danger of extinction throughout all or a significant portion of its range.
FT - Federal Threatened.	A threatened species is one that is likely to become endangered in the foreseeable future.
F1 - Fed. Candidate Species, Category 1	This category includes species for which the U.S. Fish and Wildlife Service presently has substantial

	information regarding a species' vulnerability. Proposals to list them as endangered or threatened may be delayed due to needs for further research and limited staffing for the large numbers under review.
F2 - Fed. Candidate Species, Category 2	This category includes species for which the U.S. Fish and Wildlife Service has information indicating a species may warrant listing, but for which substantial biological information is lacking.
CE - California Endangered. CT - California Threatened. CP - California Protected.	Protected by the regulations of the California Department of Fish and Game. A fully protected species may not be possessed or taken.

California Department of Fish and Game's Species of Special Concern:

CSC-1 - Highest Priority. These species face immediate extirpation of their entire California breeding population if current trends continue.

CSC-2 - Second Priority. These species are definitely on the decline in a large portion of their range in California, but their populations are still sufficiently substantial that danger is not immediate.

CSC-3 - Third Priority. These species are not in any present danger or extirpation and they do not appear to be declining seriously; however, simply by virtue of their small populations in California, they are vulnerable to extirpation should a threat materialize.

Appendix L

PLANT SPECIES FOUND IN THE LAKE BERRYESSA AREA

U.S. DEPARTMENT OF THE INTERIOR - BUREAU OF RECLAMATION

CHECKLIST OF VASCULAR PLANTS OF LAKE BERRYESSA
NAPA COUNTY, CALIFORNIA

FERNS AND FERN ALLIES

Equisetum arvense.	Common horsetail.
Adiantum jordanii.	Maidenhair fern.
Pellaea andromedifolia.	Coffee fern.
Pellaea mucronata.	Bird's foot fern.
Pityrogramma triangularis.	Goldback fern.
Pteridium aquilinum.	Braken fern.

GYMNOSPERMAE

Cupressus sargentii.	Sargent cypress.
Pinus sabiniana.	Gray pine.
Pseudotsuga menziesii.	Douglas fir.

ANGIOSPERMAE

Acer macrophyllum.	Big leaf maple.
Allium sp..	Wild onion.
Brodiaea bridgesii.	Bridges brodiaea.
Brodiaea coronaria.	Blue dicks.
Brodiaea hyacinthina.	
Brodiaea laxa.	Grass nut.
Brodiaea multiflora.	
Brodiaea volubilis.	Twining brodiaea.
Rhus trilobata.	Squawbush.
Toxicodendron diversiloba	Poison oak.
Lomatium californicum.	California rock parsnip.
Lomatium utriculatum.	Wild parsley.
Sanicula bipinnatifida.	Purple sanicle.
Aristolochia californica.	Dutchman's pipe.
Asclepias californica.	Milkweed.
Alnus rhombifolia.	White alder.
Amsinckia intermedia.	Fiddleneck.
Cynoglossum grande.	Grand hound's tongue.
Plagiobothrys nothofolvus.	Popcorn flower
Calycanthus occidentalis.	Spicebush.
Lonicera interrupta.	Chaparral honeysuckle.
Sambucus mexicana.	Blue elderberry.
Symphoricarpos mollis.	Trailing snowberry.
Agrostemma sp..	Corn-cockle.
Silene gallica.	Common catchfly.
Stellaria media.	Common chickweed.
Achillea millifolium.	Common yarrow.
Achyracheana mollis.	Blow-wives.
Agoseris sp.	
Artemesia douglasiana.	Mugwort.
Baccharis pilularis ssp.	Coyote brush.
Carduus pycnocephalus.	
Centaurea solstitialis.	Yellow star-thistle.
Cirsium californicum.	Bigelow thistle.
Eriophyllum lanatum.	Common wooly sunflower.
Filago californica.	
Haplopappus racemosus	Golden fleece.
Helianthus sp..	Common sunflower.
Helenium puberulum.	
Hemizonia luzulaefolia	Tarweed.
Hypochoeris glabra.	
Lagophylla ramosissima	Common hareleaf.
Lasthenia chrysostoma.	Goldfields.
Madia elegans.	Common madia.
Micropus californicus.	Q-tips.
Silybum marianum.	Milk-thistle.
Wyethia glabra.	
Xanthium strumarium spp.	Cockle-burr.
Calystegia aridus.	Morning glory.
Dudleya cymosa.	Dudleya.
Parvisedum pentandum.	Parvisedum.
Arabis sp..	Rock-cress.
Brassica kaber.	Black field mustard.
Capsella bursa-pastoris	Shepard's purse.
Cardamine oligosperma.	
Dentaria californica.	
Erysimum capitatum.	Western wall flower.
Rhaphanus sitivus.	Wild radish.
Rorippa nausturium-aquaticum	Water-cress.
Thysanocarpus curvipes spp.	Lace pod.
Marah watsonii.	Manroot.
Cuscuta californica.	Dodder.
Carex nudata.	
Scirpus sp.	
Arbutus menziesii.	Madrone.
Arctostaphylos glandulosa.	Eastwood manzanita.
Arctostaphylos manzanita.	Parry manzanita.
Eremocarpus setigerus.	Dove weed.
Quercus agrifolia.	Coast live oak.
Quercus chrysolepis.	Golden-cup oak.
Quercus douglassii.	Blue oak.
Quercus dumosa.	Scrub oak.
Quercus durata.	Leather oak.
Quercus kellogii.	California black oak.
Quercus lobata.	Valley oak.
Quercus morehus.	
Quercus wislizenii.	Interior live oak.
Erodium botrys.	Long-leaved filaree.
Erodium cicutarium.	Fern-leaved filaree.
Geranium molle.	
Aesculus californica.	California buckeye.
Eriodictyon californicum.	Yerba Santa.
Nemophila heterophylla.	Canyon nemophila.
Nemophila maculata.	Fivespot.
Nemophila menziesii.	Baby blue-eyes.
Phacelia imbricata.	
Iris macrosiphon.	Long-tubed iris.
Sisrinchium bellum.	Blue-eyed grass.
Juglans hindsii.	Black walnut.
Juncus sp..	Rush grass.
Lepechinia calycina.	Pitcher sage.
Marrubium vulgare.	Hoarhound.
Monardella villosa.	Coyote mint.
Prunella vulgaris.	Selfheal.
Salvia columbariae.	Chia.
Umbellularia californica.	California bay.
Astragalus gambelianus.	
Cercis occidentalis.	Western redbud.
Lotus scoparius.	
Lotus subpinnatus.	Bird's-foot trefoil.
Lupinus albifrons.	Bush lupine.
Lupinus benthammii.	
Lupinus bicolor.	Two-colored lupine.
Lupinus densiflora.	Two-seeded lupine.
Lupinus nanus.	

Pickeringia montana.	Chaparral-pea.
Trifolium tridentatum.	Tom-cat clover.
Vicia americana.	Common vetch.
Calochortus amabilis.	Golden fairy lanterns.
Calochortus luteus.	Golden nuggets.
Chlorogalum pomeridianum.	Indian soap-root.
Fritillaria lanceolata.	
Zigadenus fremontii.	
Mentzelia laevicaulis.	Blazing-stars.
Arceothobium campylopodum.	Pine mistletoe.
Phoradendron flavescens.	Mistletoe.
Malva parviflora.	Cheese-weed.
Sidalcea diploscypha.	Fringed sidalcea
Fraxinus dipetala.	Flowering ash.
Clarkia affinis.	
Clarkia purpurea.	Farewell-to-spring.
Clarkia unguiculata.	Elegant Clarkia.
Epilobium paniculatum.	Willow-herb.
Zauschneria californica.	California fuchsia.
Habenaria elegans.	Rein-orchids.
Eschscholtzia caespitosa.	Mexican poppy.
Eschscholtzia californica.	California poppy.
Eschscholtzia lobbii.	Frying-pan poppy.
Meconella linearis.	
Platystemon californicus.	Cream-cups.
Plantago hookeriana.	
Platanus racemosa.	Native sycamore.
Agropyron trachycaulum.	Slender wheatgrass.
Agrostis exerata var. pacifica.	Pacific bent grass.
Aira caryophyllea.	Silver hair-grass.
Avena barbata.	Slender wild oats.
Avena fatua.	Wild oats.
Briza maxima.	Big rattlesnake grass.
Briza minor.	Little rattlesnake grass.
Bromus carinatus.	California brome.
Bromus diandrus.	Rip-gut brome.
Bromus laevipes.	Smooth-stemmed brome.
Bromus madritensis.	
Bromus mollis.	Soft-chess.
Bromus rubens.	Red brome.
Dactylis glomerata.	Orchard grass.
Danthonia pilosa.	
Elymus caput-madusae.	Madusa head.
Elymus glaucus.	Western wild rye.
Festuca arundinacea.	Tall fescue.
Festuca bromoides.	Brome fescue.
Festuca californica.	
Festuca eastwoodae.	
Festuca idahoensis.	
Festuca megulura.	Mouse-tail fescue.
Festuca microstachys.	Stiff annual fescue.
Festuca reflexa.	
Gastridium ventricosum.	Nitgrass.
Hordeum jubatum.	Foxtail grass.
Hordeum vulgare.	Common barley.
Koeleria cristata.	Prairie junegrass.
Lolium multiflorum.	Italian ryegrass.
Lolium perenne.	Perennial ryegrass.
Melica californica.	Onion grass.
Melica torreyana.	Small-flowered melic grass.
Poa annua.	Annual bluegrass.
Poa scabrella.	Malpais bluegrass.
Polypodium californicum.	
Polypogon monspeliensis.	Beard grass.
Sitanion jubatum.	
Stipa lepida.	Chaparral speargrass.
Stipa pulchra.	Needlegrass.
Gilia capitata.	Blue-headed gilia.
Gilia tricolor.	Bird's eye gilia.
Linanthus androsaceus.	False baby stars.
Linanthus bicolor.	Baker's linanthus.
Linanthus grandiflora.	Mustang-clover.
Navarretia jepsonii.	Navarretia.
Navarretia pubescens.	
Eriogonum latifolium.	Wild buckwheat.
Pterostegia drymarioides.	
Rumex crispus.	Curley dock.
Calandrinia ciliata spp.	Red maids.
Montia perfoliata.	Miner's lettuce.
Dodecatheon hendersonii.	Shooting stars.
Clematis ligusticifolia.	Virgin's bower.
Delphinium hesperium.	Foothill delphinium
Delphinium nudicaule.	Canyon delphinium.
Ranunculus occidentalis.	Butter-cups.
Ceanothus cuneatus.	Buck brush.
Ceanothus sorediatus.	Jim brush.
Rhamnus californica.	Coffee berry.
Rhamnus crocea.	Redberry.
Adenostoma fasciculatum.	Chamise.
Amelanchier alnifolia.	Service berry.
Cercocarpus betuliodes.	Mountain mahogany.
Heteromeles arbutifolia.	Toyon.
Holodicus discolor.	Cream bush.
Rosa californica.	Wild rose.
Rubus ursinus.	California blackberry.
Galium aperine.	Bedstraw.
Galium sp..	
Populus fremontii.	Cottonwood.
Salix sp..	
Salix hindsiana.	Sandbar willow.
Lithophragma heterophylla.	Woodland star.
Ribes malvaceum.	Chaparral currant.
Saxifraga californica.	
Castilleja sp..	Indian paintbrush.
Collinsia heterophylla.	Chinese houses.
Collinsia sparsiflora.	
Diplacus aurantiacus.	Bush monkey flower.
Mimulus cardinalis.	
Mimulus guttatus.	Common monkey flower.
Orthocarpus attenuatus.	Narrow-leaved owl's clover.
Orthocarpus densiflorus.	Owl's clover.
Orthocarpus purpurascens.	Purple owl's clover.
Pedicularis densiflorus.	Indian warrior.
Penstemon heterophyllus.	Foothill penstemon.
Alianthus glandulosa.	Chinese tree of heaven.
Datura metaloides.	Jimsom weed.
Nicotiana acuminata.	Wild tobacco.
Nicotiana glauca.	Wild tobacco.
Solanum parishii.	Common nightshade.
Fremontodendron californicum.	Fremont's flannel bush.
Tamarix sp..	Tamarisk.
Typha angustfolia.	Slender cat-tail.
Angelica tomentosa.	
Apiastrum angustifolium.	Wild celery.
Daucus pusillus.	Rattlesnake weed.
Foeniculum vulgare.	Sweetfennel.
Plectritis ciliosa.	Long-spurred plectritis.
Viola sp..	Wild violet.
Vitis californica.	Wild grape.

Appendix M

ANIMAL SPECIES FOUND IN THE LAKE BERRYESSA AREA

WILDLIFE OCCURRING IN THE LAKE BERRYESSA AREA

Mammals

Pallid Bat (*Antrozous pallidus*)
Coyote (*Canis latrans*)
Opossum (*Didelphis marsupialis*)
Herman Kangaroo Rat (*Dipodomys heermanni*)
Big Brown Bat (*Eptesicus fuscus*)
Mountain Lion (*Felis concolors*)
Red Bat (*Lasiurus borealis*)
Hoary Bat (*L. cinereus*)
Black-tail jackrabbit (*Lepus californicus*)
River Otter (*Lutra canadensis*)
Bobcat (*Lynx rufus*)
Striped Skunk (*Mephitis mephitis*)
California Meadow Mouse (*Microtus californicus*)
California Myotis (*Myotis californicus*)
Little Brown Myotis (*M. lucifugus*)
Fringed Myotis (*M. thysanodes*)
Dusky-footed Wood Rat (*Neotoma fuscipes*)
Black-tail Deer (*Odocoileus hemionus columbianus*)
Muskrat (*Ondatra zibethica*)
Deer Mouse (*Peromyscus maniculatus*)
Raccoon (*Procyon lotor*)
Western Harvest Mouse (*Reithrodontomys megalotis*)
Broad-handed mole (*Scapanus latimanus*)
Western Gray Squirrel (*Sciurus griseus*)
Ornate Shrew (*Sorex ornatus*)
Beechy Ground Squirrel (*Spermophilus beecheyi*)
Spotted Skunk (*Spilogale putorius*)
Wild Pig (*Sus scrofa*)
Audubon Cottontail Rabbit (*Sylvilagus auduboni*)
Brazilian Free-tailed Bat (*Tadarida brasiliensis*)
Sonoma Chipmonk (*Tamias sonomae*)
Botta Pocket Gopher (*Thomomys bottae*)
Gray Fox (*Urocyon cinereoargenteus*)

Reptiles

Western Pond Turtle (*Clemmys maramorata*)
Western Rattlesnake (*Cortalus viridis*)
Western Skink (*Eumeces skiltonianus*)
Northern Alligator Lizard (*Gerrhonotus coeruleus*)
California Mountain Kingsnake (*Lampropeltis zonatay*)
Striped Racer (*Masticophis lateralis*)
Western Fence Lizard (*Sceloporus occidentalis*)
Common Garter Snake (*Thamnophis sirtalis*)

Birds

Pied-billed Grebe
Western Grebe
Clark's Grebe
Double-crested Cormorant
Great Blue Heron
Great Egret
Snowy Egret
Green Heron
Sandhill Crane
Canada Goose
Wood Duck
Mallard
Northern Pintail
Bufflehead
Common Golden-Eye
American Widgeon
Gadwall
Lesser Scaup
Common Merganser
Hooded Merganser
Turkey Vulture
Osprey
Red-Shouldered Hawk
Rough-Legged Hawk
White-tailed Kite
Northern Harrier
Sharp-shinned Hawk
Cooper's Hawk
Red-tailed Hawk
Golden Eagle
Bald Eagle
American Kestrel
Peregrine Falcon
Prairie Falcon
Ring-necked Pheasant
Wild Turkey
California Quail
Mountain Quail
American Coot
Killdeer
Common Snipe
Spotted Sandpiper
Herring Gull
Bonaparte's Gull
Caspian Tern
Rock Dove
Band-tailed Pigeon
Mourning Dove
Greater Roadrunner

Common Barn-Owl
Western Screech-Owl
Great Horned Owl
Northern Pygmy-Owl
Burrowing Owl
Spotted Owl
Short Eared Owl
Common Poorwill
White-throated Swift
Anna's Hummingbird
Allen's Hummingbird
Rufous Hummingbird
Belted Kingfisher
Acorn Woodpecker
Nuttall's Woodpecker
Downy Woodpecker
Hairy Woodpecker
Northern Flicker
Pileated Woodpecker
Lewis Woodpecker
Yellow-billed Sapsucker
Olive-sided Flycatcher
Black Phoebe
Say's Phoebe
Ash-throated Flycatcher
Western Kingbird
Horned Lark
Tree Swallow
Violet-green Swallow
N. Rough-winged Swallow
Cliff Swallow
Barn Swallow
Stellar's Jay
Scrub Jay
Yellow-billed Magpie
American Crow
Common Raven
Chestnut-back. Chickadee
Plain Titmouse
Bushtit
Red-breasted Nuthatch
White-breasted Nuthatch
Brown Creeper
Rock Wren
Bewick's Wren
House Wren
Canyon Wren
American Dipper
Western Bluebird
Hermit Thrush
American Robin
Varied Thrush
Wrentit
Northern Mockingbird
California Thrasher
Loggerheaded Shrike
European Starling
Solitary Vireo
Hutton's Vireo
Warbling Vireo
Orange-crowned Warbler
Yellow-crowned Warbler
Yellow Warbler
Yellow-rumped Warbler
Black-throat. Gray Warbler
Common YellowThroat
Western Tanager
Black-headed Grosbeak
Lazuli Bunting
Rufous-sided Towhee
California Towhee
Rufous-crowned Sparrow
Chipping Sparrow
Lark Sparrow
Sage Sparrow
Savannah Sparrow
Song Sparrow
Dark-eyed Junco
Red-winged Blackbird
Western Meadowlark
Brewer's Blackbird
Brown-headed Cowbird
Northern Oriole
Purple Finch
House Finch
Lesser Goldfinch
Lawrence's Goldfinch
American Goldfinch
House Sparrow

Amphibians

Pacific Tree Frog (*Hyla regilla*)
Foothill yellow-legged frog (*Rana boylei*)
Bullfrog (*Rana catesbeiana*)
Western Toad (*Bufo boreas*)
Arboreal salamander (*Aneides lugubris*)
California Slender Salamander (*Batrachoseps attenuatus*)
Ensatina (*Ensatina escholtz*)
California Newt (*Traicha torosa*)
Rough-Skinned Newt (*T. granulosa*)

Fish

Large Mouth Bass (Micropterus salmoides)

Smallmouth Bass (M. dolomieui)
Channel Catfish (Ictalurus punctatus)
White (I. catus)
Black crappie (Pomoxis nigromaculatus)
Bluegill (Lepomis macrochirus)
Carp (Cyprinus carpio) (linnaeus)
Golden Shiner (Notemigonus crysoleucas)
Silver Salmon (Oncorhynchus kisutch)
Squawfish (Ptychocheilus grandis) (ayres)
Threadfin shad (Dorosoma petenense)
Brown Trout (Salmo trutta)
Rainbow Trout (S. gairdnerii)

Appendix N

CDFG ENFORCEMENT REGULATIONS

Lake Berryessa Wildlife Area
Central Coast Region
California Department of Fish and Game Section 550 Code
Type C Area Regulations:

(1) **Regional Manager's Authority:** The regional manager shall have the authority to regulate public use of State wildlife areas where such use is not provided for in these regulations or in sections 551 and 552 of this title.

(2) **Entry Restrictions.** The department may limit the number of persons entering any area listed in section 550 or 551 of this title during any period for safety reasons, to reduce crowding, to provide for the limited take of a species, or may close portions of areas or close areas entirely to public entry or to specific activities

(3) **Procedures for Issuing Entry Permits.** In the event that the department elects to limit the number of hunters, trappers, or other users, entry permits will be issued on a first-come, first-served basis, or by a drawing to be held at a designated department office. The department shall inform the commission in writing and the public via the news media of any implementation of the provisions of this subsection, when limits imposed under this subsection differ substantially for a specific area from the prior year. Such notification shall include: the State wildlife area affected, the time period, the reason for the limitation or closure, the number of entry permits to be issued, and the method of issuance.

(4) **Permit Requirements**. No person shall enter 15 any State wildlife area or portion thereof where the department has limited public entry without a valid entry permit in their immediate possession. [See subsections 551(f), (g), and (h) for regulations regarding general requirements and costs for individual entry permits. See subsection 551 (q) for entry permit requirements for specific areas.]

(5) **Use Permits for Organized Events.** Any person organizing an event or gathering to be conducted on a State wildlife area shall obtain a use permit from the appropriate regional manager. Such events or gatherings shall be compatible with wildlife area objectives.

(6) **Motor Driven Vehicles.**

(A) No person shall drive, operate, leave, place, or stop any motor driven vehicle on any State wildlife area except on public or established roads or on designated jeep trails and such other areas as designated by the Department.

(B) No person shall drive a vehicle carelessly in willful disregard of the rights or safety of others, or without due caution or at a speed or in a manner likely to endanger any person, property, or wildlife.

(7) **Traffic and Road Closures.**

(A) Drivers of motor driven vehicles operated within the wildlife areas shall comply with the directions of traffic signs posted in the area by the department.

(B) No person shall break down, remove, or destroy any barrier, sign, or signboard erected or placed on any road, jeep trail, or unimproved road.

(8) **Boats.**

(A) The department may restrict the use and operation of boats on State wildlife areas, department administered national wildlife refuges, and State recreation areas to protect natural resources or provide for the orderly operation of hunting and fishing programs on these areas. Boating restrictions may include, but not be limited to, limiting boat~ speeds, limiting motor size and type, or prohibiting the use of motors. During the times waterfowl are present, the provisions of Section 251 of this Title will also apply.

(B) Except as prohibited in subsection 551(q), boats may be used under the following regulations on State wildlife areas, department administered national wildlife refuges, and State recreation areas.

1. When launch sites are designated by the department,'all boats must be launched and removed from those sites.
2. All persons shall remove their boats from the waters when. instructed to do so by an employee of the department.
3. The use of boats may be restricted to certain zones designated by the department.
4. Boat speed shall not exceed five miles per hour.

(9) **Vandalism and Litter.**

(A) No person shall tamper with, damage, or remove any property not his own when such property is located within a State wildlife area.

(B) No person shall leave, deposit, drop, bury, or scatter bottles, broken glass, feathers, hides, wastepaper, cans, sewage, or other rubbish in any State wildlife area except in a receptacle or area designated for that purpose, and no person shall import and deposit any rubbish or toxic substance into State wildlife areas from other places. Where no designated receptacles are provided, any refuse resulting from a person's use of the area must be removed from the area by such person.

(10) **Trees and Minerals.**

(A) No person shall dig up, cut, damage, or remove from a wildlife area any trees, shrubs, vines plants or wood, except that vegetation may be cu and used for the purpose of building blinds, unless otherwise directed by the area manager.

(B) No person shall dig up or remove any humus, soil, sand, gravel, or rock.

(11) **Bottle and Artifact Collecting.** No person shall collect or remove bottles or artifacts, or dig or otherwise disturb the soil to locate or remove bottles or artifacts, from any Wildlife Area.

(12) **Camping and Unattended Personal Property**. No person shall camp in any part of a State Wildlife area except in areas designated by the department.(See subsection 551(q) for additional camping restrictions on specific areas). Camping on wildlife areas shall be limited to not more than seven consecutive days, and not more than 14 days total in any calendar year, except by written permission of the Regional Manager. Personal property may not be left on State wildlife

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areas for camping or other purposes, except at authorized locations. Decoys may not be left in the field overnight, except as provided in subsection 551 (q). Any hunting blinds on wildlife areas shall be available on a first-come, first-served basis.

(13) **Fires.** From April 30 through October 30 on Type C areas, and during the entire year on Type A and B areas, no person shall build or maintain fires except in portable gas stoves or in fireplaces at sites developed by the department. No fire shall be left unattended and all fires shall be extinguished with water before leaving. (See subsection 551(q) for additional fire restrictions.)

(14) **Use of Dogs and Field Trials.** The department may prohibit or restrict the use of dogs on any State wildlife area [see subsection 551(q)]. Except as further prohibited in subsection 551 (q3, dogs are allowed only for hunting or when under immediate control. Dogs must be leashed at designated campsites and check station areas. Special permits are required for field trials. Dog training is allowed only in areas designated by the department.

(15) **Pesticides Use.** No person, other than authorized federal, state, or local employees conducting a pest control program approved by the department, shall apply any pesticide in any State wildlife area.

(16) **Livestock.** No person shall permit livestock, including but not limited to cattle, horses, sheep, goats, and hogs, to browse, graze, bed, cross, or otherwise trespass on any State wildlife area except under an authorized grazing permit issued by the department. The recreational use of horses is allowed, except as designated in subsection 551(q). Persons who fail to remove their livestock from any State wildlife area within 48 hours after receiving of official notice of trespass by the regional manager through certified mail, shall be in violation of this section.

(17) **Fish and Frogs.** Frogs may not be taken for commercial purposes [see subsection 551(q) for specific area regulations].

(18) **Hunting and Trapping.** Hunting and trapping shall be allowed on State wildlife areas during the regular open seasons subject to subsections 550(b)(19), 551(b), and 551(q), and such other area use regulations as specified by the regional manager.

(19) **Special Restrictions (Areas where hunting and possession of firearms and archery equipment is prohibited).** No person, except authorized personnel, shall possess or discharge a firearm, bow and arrow, air or gas gun, spear gun, or other propulsive device of any kind in the following areas: Battle Creek, Crescent City Marsh, Elk Creek Wetlands, and ll Slough wildlife areas; Cordelia Slough and Montezuma Slough management units of Grizzly Island Wildlife Area; and White Slough Unit of Napa-Sonoma Marshes Wildlife Area.

(20) **Ejection**. The department may eject any person from a State wildlife area for violation of any of these rules or regulations or for disorderly conduct, intoxication, or when a department employee determines that the general safety or welfare of the area or persons thereon is endangered. The decision, in such respect, of any department employee assigned management or

enforcement responsibilities for the area shall be final.

(21) **User Responsibility for Knowing Regulations**. All wildlife area users shall be responsible for area-specific regulations listed under subsection 551(q). Failure to comply with any of the area specific regulations shall be a violation of this subsection.

Special Regulations: Lake Berryessa Wildlife Area (U.S. Bureau of Reclamation Lands) Type C area 2,000 acres

Location and Access: Located on the eastside of Lake Berryessa 14 miles north of Bureau of Reclamation Headquarters on Berryessa/Knoxville Road. Public access and parking is located approximately 1/4 mile north of Eticuera Creek.

(A) Method of Take Restrictions: As authorized during special hunts.
(B) Hunt Days: As authorized for special hunts.
(C) Camping and Trailers: Not Allowed
(D) Day Use Permit Requirement for Vehicle Access: Public access to the area is allowed by foot or boat only, vehicle access is by permit only. Permits can be obtained at the Bureau of Reclamation Headquarters at 5520 Knoxville Road Napa, CA 94558 or the Region 3 Department of Fish & Game Headquarters.
(E) Special Restrictions: No person, except by special authorization of the Department of Fish and Game or the Bureau of Reclamation, shall enter that portion of the Lake Berryessa Wildlife Area marked by signs as "Critical Habitat" during the period of February 1 through August 1. Dogs are not allowed between February 15 and July 15. Open fires are prohibited. Night bank fishing is not allowed. Area may be closed during specific periods of the year for wildlife concerns.