CALIFORNIA NORTH COAST ECOREGIONAL PLAN

June 2001

King Range National Conservation Area

The Nature Conservancy

CALIFORNIA

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SUMMARY

This assessment of the California North Coast Ecoregion was prepared by The Nature Conservancy of California (TNC). Its goal is to identify a "portfolio" of conservation areas that, with proper management, will ensure the long-term persistence of the ecoregion's biological diversity, including native aquatic and terrestrial systems, rare and common species, and the ecological processes needed to maintain them. This plan emphasizes ecological systems as conservation targets, functional landscapes as conservation areas, and builds on the results of a recent assessment of redwood forests in the region conducted by Save-the-Redwoods League.

The California North Coast Ecoregion includes all coastal watersheds from the Russian River north to the Chetco River in Oregon as well as the upper watersheds of Cache and Putah Creeks in the interior. It is a landscape of some 3,284,559 hectares (8,112,860 acres) ranging from cool coastal redwood forests, through foothill oak woodlands and grasslands, to montane coniferous forests.

Only 10% of the North Coast Ecoregion is protected as conservation land such as wilderness areas, national parks, wildlife refuges, or private reserves. Twenty-two percent of the ecoregion is managed as public use land by agiencies such as the Forest Service and the Bureau of Land Management. Industrial timber companies own 16% of the ecoregion and numerous other private owners hold the remaining 52%.

For a relatively small ecoregion, the North Coast supports a surprising amount of biological diversity. This ecoregional plan evaluated a total of 215 conservation targets including 49 terrestrial systems, 19 aquatic systems, 21 vertebrate species, 10 invertebrate species, and 116 plants. Our conservation goals were stratified across three terrestrial subregions and four aquatic subregions to capture the geographic variation of the conservation targets.

Data sources included the California Natural Diversity Data Base (NDDB), USDA Calveg vegetation data, published literature, TNC files, and interviews with more than 90 resource experts. Watershed units averaging 10,000 hectares (26,000 acres) were used to identify potential conservation areas for coarse-scale targets while smaller landscape units were used as areas for intermediate and local-scale targets missed by the coarse filter. Buffered stream reaches and water bodies supporting aquatic targets were used as potential aquatic conservation areas. A total of 220 terrestrial and 67 aquatic areas were identified and evaluated as part of this analysis.

All potential conservation areas were ranked according to the number and diversity of targets as well as the degree of suitability. Indicators of suitability included road density, percentage of converted habitat, and percentage of protected land. Portfolio conservation areas were selected form the highest ranking areas to meet goals.

A total of 168 portfolio conservation areas were selected in the North Coast representing approximately 1.4 million hectares (3.5 million acres) or 47% of the ecoregion. Nineteen portfolio conservation areas (11%) are already well-protected on public conservation lands, forty-one (24%) are managed as public use lands, thirty-six (21%) are largely on private industrial timber land, and seventy-two (43%) are on other private lands.

Selection of action areas focused on 90 portfolio conservation areas ranked as highly or moderately threatened. These conservation areas were aggregated into five potential action areas based on spatial proximity and threat similarity. The potential action areas are: Smith River – lower Klamath River, Humboldt Bay – Mattole River, Eel River, Mendocino Coast, and Sonoma, Napa, and Lake Counties. Five-year objectives were then formulated using a combination of site and multi-site strategies.

INTRODUCTION

Background and Purpose

The mission of The Nature Conservancy (TNC) is to preserve the plants, animals, and natural communities that represent the diversity of life on earth by protecting the land and waters they need to survive. In response to the need to plan and work at larger geographic scales to conserve biological diversity, TNC has adopted ecoregions as a conservation planning unit. Ecoregions are relatively large land areas determined by factors such as geology, topography, climate and vegetation. They are big enough to encompass natural processes and many representative communities or species, yet small enough to serve as a platform for conservation action. The North Coast is the 9th ecoregion the Conservancy has completed plans for in California (Figure 1). With this plan, the Conservancy and our private and public partners can be confident that site by site conservation activities in the North Coast are not isolated but part of a larger, coherent design.

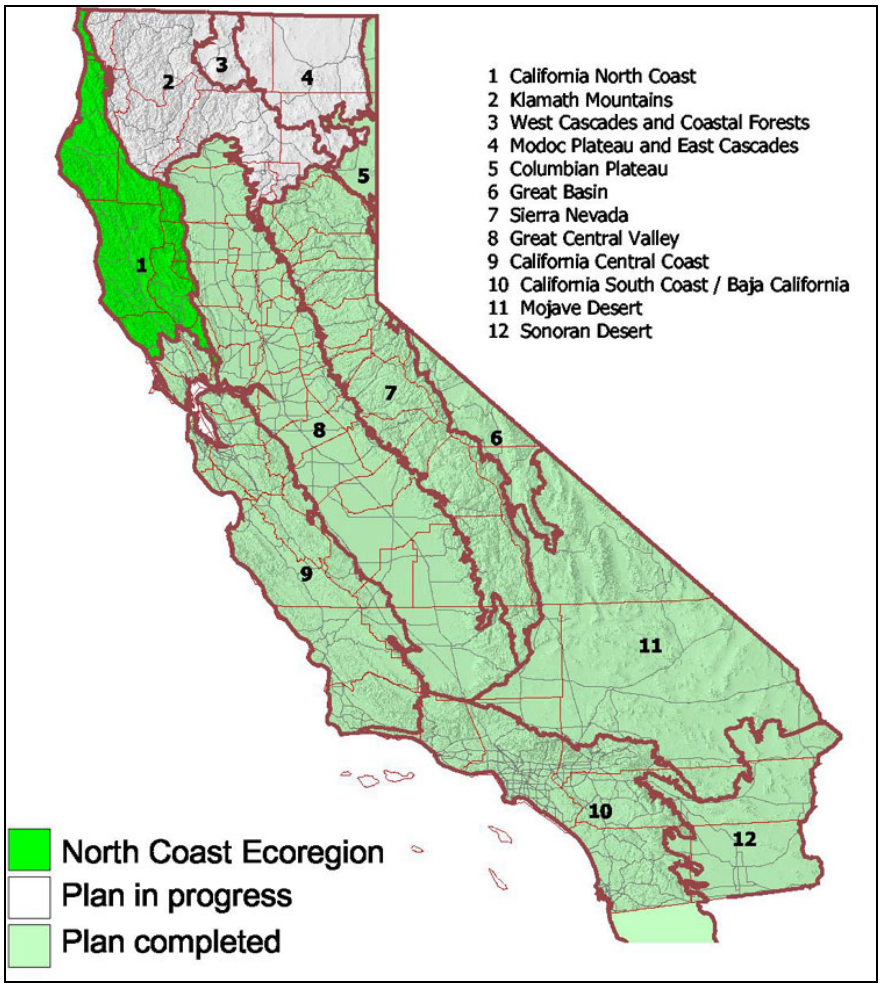

Figure 1 Ecoregional Planning in California

The goal of ecoregional planning is to identify a "portfolio" of interconnected areas of conservation importance that contain multiple, viable (or feasibly restorable) examples of all native plants, animals, and ecological systems across important environmental gradients.

This plan used a new rapid ecoregional planning (REP) template that evolved from a series of meetings by TNC scientists and planners looking for ways to streamline ecoregional planning and, at the same time, maintain the scientific integrity of the process as outlined in Designing a Geography of Hope (TNC 2000). Ambitious 20-year conservation goals combined with urgent threats and immediate opportunities are factors favoring a rapid ecoregional planning process in the California North Coast Ecoregion.

A core team of three TNC staff, Craig Mayer, Pam Weiant, and Larry Serpa, completed the North Coast Ecoregional Plan. An advisory team comprised of Greg Low – Director of U.S. Conservation HO, Karen Poiani – Director of Landscape Ecology HO, Robin Cox – Director of Conservation Planning CAFO, and Sanjayan Muttulingam – Director of Conservation Science CAFO participated in the development of a REP Decision Support Tool. Development of the tool and the completion of the plan took about nine months with about six months devoted to the ecoregional plan itself. The decision support tool used in this plan as well as several other alternatives are currently under review by a Conservancy team headed by Wayne Ostlie – Senior Ecoregional Conservation Advisor WRO.

The REP methodology has five key attributes:

1. Special emphasis is placed on a list of ecological systems derived from mapped data as conservation targets
2. The results of other science-based plans are reviewed and incorporated
3. Suitability of conservation areas is used as a proxy for viability of conservation targets
4. Functional landscapes are the building blocks of the portfolio with functional sites added until goals are met
5. Occurrences of target species not within functional landscapes or sites are deferred to a provisional portfolio

The North Coast Environment

The North Coast ecoregion is a landscape of some 3,284,559 hectares (8,112,860 acres) encompassing all coastal watersheds from the Russian River north to the Chetco River in extreme southwestern Oregon. The southeastern portion of the ecoregion also includes the volcanic highlands

around Clear Lake – one of the oldest lakes in North America – that drain toward the Central Valley by way of Cache and Putah Creeks.

Much of the ecoregion is characterized by a series of mountain ranges that parallel the coast with each range becoming successively higher inland. Elevations range from sea level along the coast to over 2,100 meters (7,000 feet) on the crest of the Yolla Bolly Mountains. Between the mountain ranges are long, narrow valleys through which some of the ecoregion's major rivers flow before reaching the coast. Numerous smaller streams originate in the first coastal mountain range and flow directly to the ocean.

Climate in the North Coast Ecoregion is dominated by the marine influence of the Pacific Ocean. Along the coast, temperatures average between 40 to 60F and summers are characterized by fog and cool breezes. Inland, the marine influence is greatly diminished resulting in hotter summers and colder winters. Precipitation, as much as 120 inches, falls primarily in the winter months as rain, with snow in the higher elevations.

The California North Coast Ecoregion was identified by Ricketts et. al. (1999) as a globally outstanding ecoregion. It is the southern extension of the temperate rain forests of the Pacific Northwest. Coastal ecological systems include grasslands such as bald hills and coastal terrace prairies, dunes, saltmarsh, and closed-cone pine forests. Lowland areas near the coast are dominated by redwood and Douglas fir-tan oak forests. These redwood groves are among the most ancient and tallest conifers in the world, many are older than 2,000 years and reach heights over 200 feet. Inland, the ecoregion is dominated by Douglas fir-tan oak forest, Oregon oak woodland, annual grasslands, and mixed evergreen forests. Higher elevations contain montane mixed coniferous forests (white fir, ponderosa pine, and Douglas fir). The interior southeastern portion of the ecoregion is characterized by mixed chaparral, foothill pine, and blue oak.

Figure 2 North Coast Ecoregion

Characteristic large mammals include black-tailed deer, black bear, mountain lion, coyote, bobcat and ringtail. Roosevelt elk are found in the northern part of the ecoregion while tule elk and mule deer are found in the southern part. Species of concern include marbled murrelet, northern spotted owl, Aleutian Canada goose, Humboldt marten, Pacific fisher, Point Arena mountain beaver, lotus blue butterfly, Del Norte salamander,

coho salmon, chinook salmon, steelhead trout, and more than 100 rare plants.

Human Context

Six counties make up the North Coast Ecoregion: the northern portions of Napa and Sonoma Counties as well as Mendocino, Lake, Humboldt, and Del Norte Counties. Despite the size of the ecoregion, the human population is only about 368,000 or 1% of California's population. The largest towns are Eureka, Windsor, Arcata, Ukiah, and Clearlake. Population growth in the North Coast Ecoregion has averaged 10% over the last decade, slightly below the State's overall growth rate of 14%, with Napa and Sonoma Counties experiencing the most growth. The economy of the region is diverse including forestry, viticulture, tourism, recreation, and fishing.

Only 10% of the North Coast Ecoregion is protected on conservation lands such as wilderness areas, national parks, wildlife refuges, or private reserves. Twenty-two percent of the ecoregion is managed as public use land by agencies such as the National Forest Service or the Bureau of Land Management. Large industrial timber companies own sixteen percent of the ecoregion. The remaining 52% of the ecoregion is held by various private land owners (see Table 1 and Figure 3).

Table 1 Land Management by Owner

OWNER	HECTARES	ACRES	PERCENT
Other Private	1650612.38	4077012.58	51.69
National Forests	649010.38	1603055.63	20.32
Industrial Timber	523515.34	1293082.89	16.39
Bureau of Land Management	195051.08	481776.18	6.11
State Parks	53160.25	131305.82	1.66
National Park Service	31523.49	77863.02	0.99
Bureau of Indian Affairs	31275.31	77250.02	0.98
California Department of Forestry	22041.76	54443.14	0.69
Other Federal	18261.53	45105.97	0.57
Other State	10188.91	25166.60	0.32
California Department of Fish and Game	5686.80	14046.40	0.18
Private Conservation	1752.63	4328.99	0.05
Military	590.41	1458.32	0.02
County or Regional Park	497.00	1227.59	0.02
U.S. Fish and Wildlife Service	37.14	91.73	0.00
Total	3193204.40	7887214.87	100.00

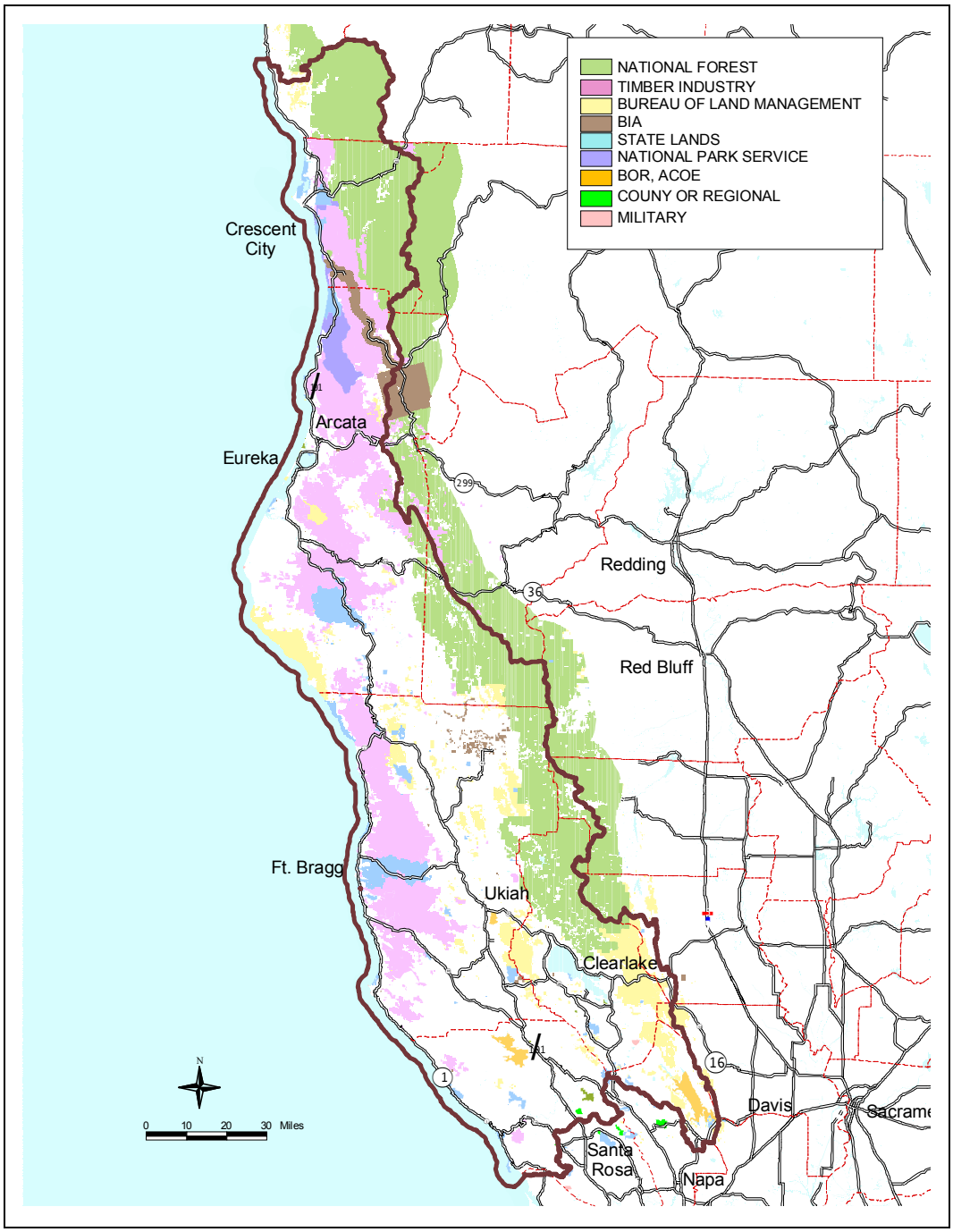

Figure 3 Land Management of North Coast Ecoregion

Threats

Since the 1800s, the forests of the North Coast Ecoregion have been harvested to provide lumber for California's fast growing cities. According to a recent report on terrestrial ecoregions published by the World Wildlife Fund (Ricketts et al. 1999), timber harvest continues to be the most serious threat to the biological diversity of the North Coast Ecoregion

followed by exotic species, and urban or agricultural expansion. In addition, several fungal diseases may pose a serious threat to some tree species in the North Coast.

Timber harvest

Less than 4% of old growth redwood forest remains and only half of this is protected. A century of intensive logging has resulted in deforestation, fragmentation, and soil erosion. The shortage of large redwood and Douglas fir trees has resulted in a market for small trees and less desirable species in products such as fiberboard, particle board, and pulp. Declines in many species including southern torrent salamander, marbled murrelet, and coho salmon have all been tied to impacts resulting from timber harvest practices.

Exotic species

According to Ricketts et al. (1999), the native flora of the North Coast Ecoregion competes with the highest percentage (34%) of introduced plant species for any ecoregion in North America. European beachgrass and other exotic species have had a particularly severe impact on some coastal dune and wetland systems in the North Coast.

Urban and agricultural expansion

Increased regulation of timber harvest combined with a depleted supply of trees has pressured some timber landowners to sell forestland for rural subdivisions. In the southern portion of the ecoregion, Napa and Sonoma Counties are experiencing a population boom as urban areas spread north from the San Francisco Bay Area. In addition, many natural areas in these counties are also being converted to vineyards.

Disease

Two major fungal diseases infect trees within the North Coast Ecoregion: Port Orford Cedar Root Disease and Sudden Oak Death Syndrome. Port Orford Cedar Root Disease is caused by a root fungus *(Phytopthora lateralis)* that infects Port Orford cedar *(Chamaecyparis lawsoniana),* a largely riparian tree native only to southwestern Oregon and northwestern California. Introduced from Asia, the soil-borne fungus is rapidly spread by runoff water, stream flow, cattle, and vehicles. First confirmed in California in 1979, control measures have been difficult. Once a tree becomes infected, all trees downstream become susceptible.

Sudden Oak Death Syndrome or SODS was first observed in 1995 and now has spread throughout the Central Coast Ecoregion and the southern portions of the North Coast Ecoregion. Caused by a new form of the fungus *Phytopthora*, it affects several species of oak including coast live

oak, tanoak, and black oak. Apparently spread by soil and water, it leaves infected trees susceptible to insects and other pathogens. Once symptoms of infection appear, such as wilted shoots, brown foliage, and burgundy-red sap, death may take only 6 to 8 weeks. Severe die-off, as high as 40%, has been noted in some areas raising concerns of altered forest ecology, loss of wildlife habitat, and increased fire risk.

CONSERVATION TARGETS

According to Ricketts, et. al. (1999) the North Coast Ecoregion is home to at least 17 species of amphibians, 214 birds, 123 butterflies, 16 conifers, 63 mammals, 1,212 plants, 19 reptiles, 35 snails, and 57 other tree species. Because it is impractical to plan for all elements of biological diversity, we selected a subset of targets at different spatial scales and levels of biological organization to represent all biological diversity. Conservation targets were selected from three biological levels: species, communities, and ecological systems; and from four spatial scales: local, intermediate, coarse, and regional. In total, this plan evaluated 215 conservation targets including 49 terrestrial systems, 19 aquatic systems, 21 vertebrate species, 10 invertebrate species, and 116 rare plants (see Appendix I).

Target Systems

Our working hypothesis assumes that conservation of multiple, viable examples of all ecological systems will also conserve the majority of species. Ecological systems are dynamic spatial assemblages of natural communities that 1) occur together on the landscape; 2) are shaped by similar ecological processes, underlying environmental features, or environmental gradients; and 3) form a robust, cohesive, and distinguishable unit on the ground.

Identification of terrestrial ecological system targets in the North Coast Ecoregion utilized the best available vegetation maps for the area and the Holland (1986) classification system. Vegetation data based on 30 meter satellite imagery and calibrated using forest service plot data was available from the USDA Calveg Geobook (2000). These maps identified 74 types of vegetation in the North Coast Ecoregion using a classification system based on Matyas and Parker (1980). We crosswalked these into 50 Holland (1986) types to conform with the California Natural Diversity Data Base (CNDDB) and the California GAP Analysis Program. In the process, we found an additional 18 types mapped by CNDDB and 4 types mapped by GAP resulting in a total of 72 vegetation types for the ecoregion. To streamline planning we combined co-occurring, ecologically related systems. For example, northern mixed chaparral includes blue brush, buck brush, chamise, and manzanita chaparral types (see Table 2). As a result, our final list of terrestrial ecological systems was reduced to 49 (see Appendix I).

Table 2: Example of Ecological System Aggregations

TARGET SYSTEM	MAPPED TYPE(S)	RANK*	SCALE**	SOURCE
Northern maritime chaparral	Mendocino manzanita	?	L	Calveg
	Northern maritime chaparral	G1	L	CNDDB
Northern mixed chaparral	Blue brush chaparral	G4	C	GAP
	Buck brush chaparral	G4	C	GAP
	Chamise chaparral	G4	C	GAP, Calveg
	Manzanita chaparral	G4	C	GAP, Calveg
	Mesic north slope chaparral	G3	C	GAP
	Northern Mixed Chaparral	G4	C	GAP, Calveg
	Wedgeleaf ceanothus	?	C	Calveg
	Whiteleaf manzanita	?	C	Calveg

*See Appendix I for explanation of ranks
** L= local, I= intermediate, C= coarse

For aquatic systems, we identified 34 freshwater habitat types in the North Coast Ecoregion according to Moyle and Ellison (1991). These habitat types range from low order mountain streams to higher order lowland rivers and include large lake systems to small unusual springs. To streamline planning, we combined co-occurring ecologically related systems. For example, Steelhead Stream includes the following four types: fall run steelhead, fall/winter run steelhead, coastal steelhead sculpin, and summer steelhead streams. As a result, our final list of aquatic ecological systems was reduced to 19 (See Appendix I).

Target Species

Twenty target species were selected from CNDDB and other sources and include all G1-G3 and T1 or T2 species (see Appendix I for explanation of ranks). Ten additional species of concern were also selected as conservation targets due to declining status (See Appendix I). Target species include both terrestrial and aquatic species as well as keystone and wide-ranging species.

DATA SOURCES

This plan built on the results of a comprehensive assessment of redwood forests in California sponsored by Save-the-Redwoods League and conducted by the Conservation Biology Institute (Strittholt, Heilman, and Noss 1999). Strittholt et. al. developed a GIS-based model that identified focal areas throughout the range of redwood forests that offer the best opportunities for long-term maintenance of a complete redwood ecosystem. We accepted the focal areas ranked "Very High" and "High" by the model as portfolio conservation areas for redwood forests.

Other key sources of information for this plan included the California Department of Fish and Game Natural Diversity Data Base (CNDDB); the USDA Calveg Geobook of existing vegetation; the California Gap Analysis Program; a fisher habitat model for the Klamath Region (Carroll, Zielinski, and Noss 1999); TNC files; published literature; and numerous expert interviews.

More than 90 people were interviewed during the course of this plan and included representatives from public and private conservation partners (see Appendix IV). The expert interviews were most helpful in identifying the best examples of target species or local-scale ecological systems that were missing from other datasets. In addition, the expert interviews provided threats and opportunities information that was later used to prioritize action areas.

Compilation, evaluation, and management of information was facilitated by the use of ArcView 3.2, a geographic information system (GIS). Many data sets were available in GIS form including CNDDB, Calveg, and GAP. Information collected from expert interviews and literature regarding conservation areas, targets, viability, and source was compiled in Access tables that were linked to the GIS.

The Access data base was comprised of two tables linked with a common field (see Figure 4). One table captured conservation area information such as area name or code; Suitability (H,M,L); number and diversity of targets (H,M,L); and urgency of threat (H,M,L). The second table recorded information on specific targets at each conservation area such as target name; spatial scale (regional, coarse, intermediate, local, species); global rank; viability (size, condition, context); and source of information. The two tables were linked using a common field called "Site_code" that was a unique numeric value assigned to each potential conservation area.

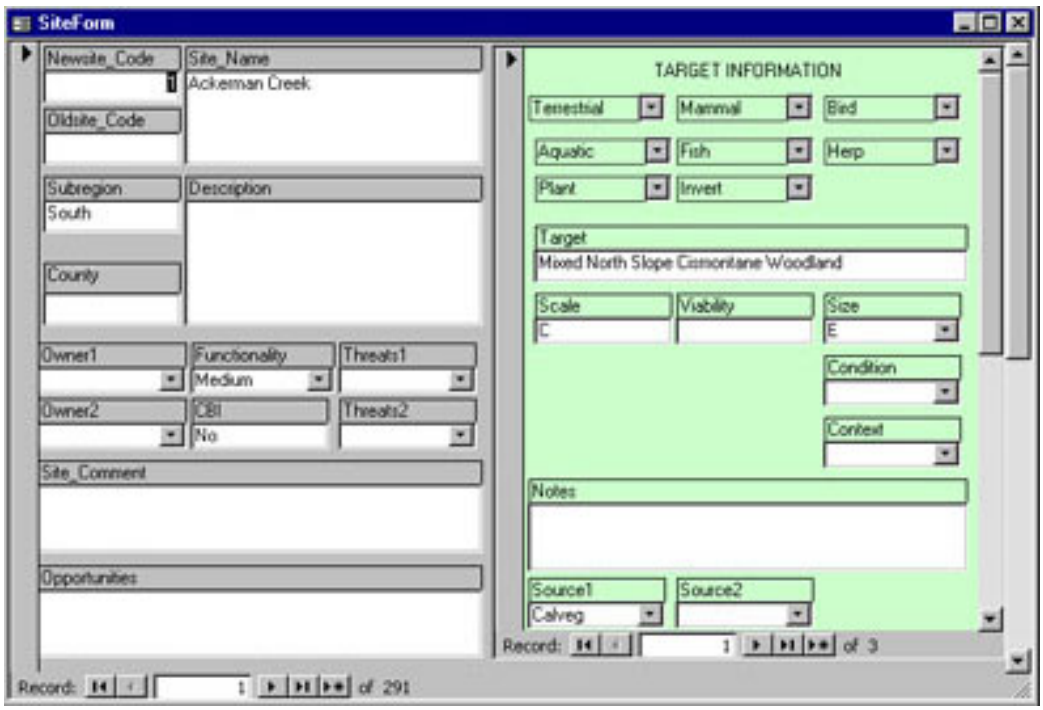

Figure 4: Sample Data Base Form

CONSERVATION GOALS

Conservation goals set both the number and geographic distribution of conservation targets required for long-term viability. They are an estimate of the number of viable examples required to sustain the target for at least 100 years and include both the number of populations or examples and how they should be stratified across the ecoregion. Conservation of multiple viable examples of each target, stratified across its geographic and ecological range, is necessary to capture the variability of the target and to provide sufficient replication to ensure persistence in the face of environmental changes.

Stratification

Conservation goals for the north Coast Ecoregion were stratified across three terrestrial subregions or four aquatic subregions (see Figure 5). The northern and southern terrestrial subregions were based on studies showing distinct genetic variation between populations of redwoods in the northern portion of the ecoregion versus those in the south (Noss 2000). The interior terrestrial subregion lacks redwoods and was based on Jepson's (1989) Inner North Coast Ranges floristic subdivision of California.

Although the ecoregion is part of two native fish provinces, the Sacramento and the Klamath, we further divided the ecoregion into four aquatic subregions based on major watersheds and shared aquatic species. The Sacramento Native Fish Province was divided into three subregions: the Eel River, Russian River – Clear Lake, and the Mendocino Coast. The Eel River watershed is a large cohesive unit that represents about 30% of the ecoregion and historically marked the southern limit of large populations of salmonids. Historically, the Russian River and Clear Lake drainages have been linked and share many fish species associated with the Central Valley. The Mendocino Coast is an area of smaller, relatively short, low elevation streams. The northern portions of the ecoregion in the Klamath Native Fish Province, became the fourth aquatic subregion. It is generally an area of mid-sized coastal rivers with critical habitat for salmonids.

For all target ecological systems, our minimum goal was at least two viable examples per stratification unit. For species, our goal was a minimum of two viable populations per stratification unit with a minimum of 10 viable populations range wide.

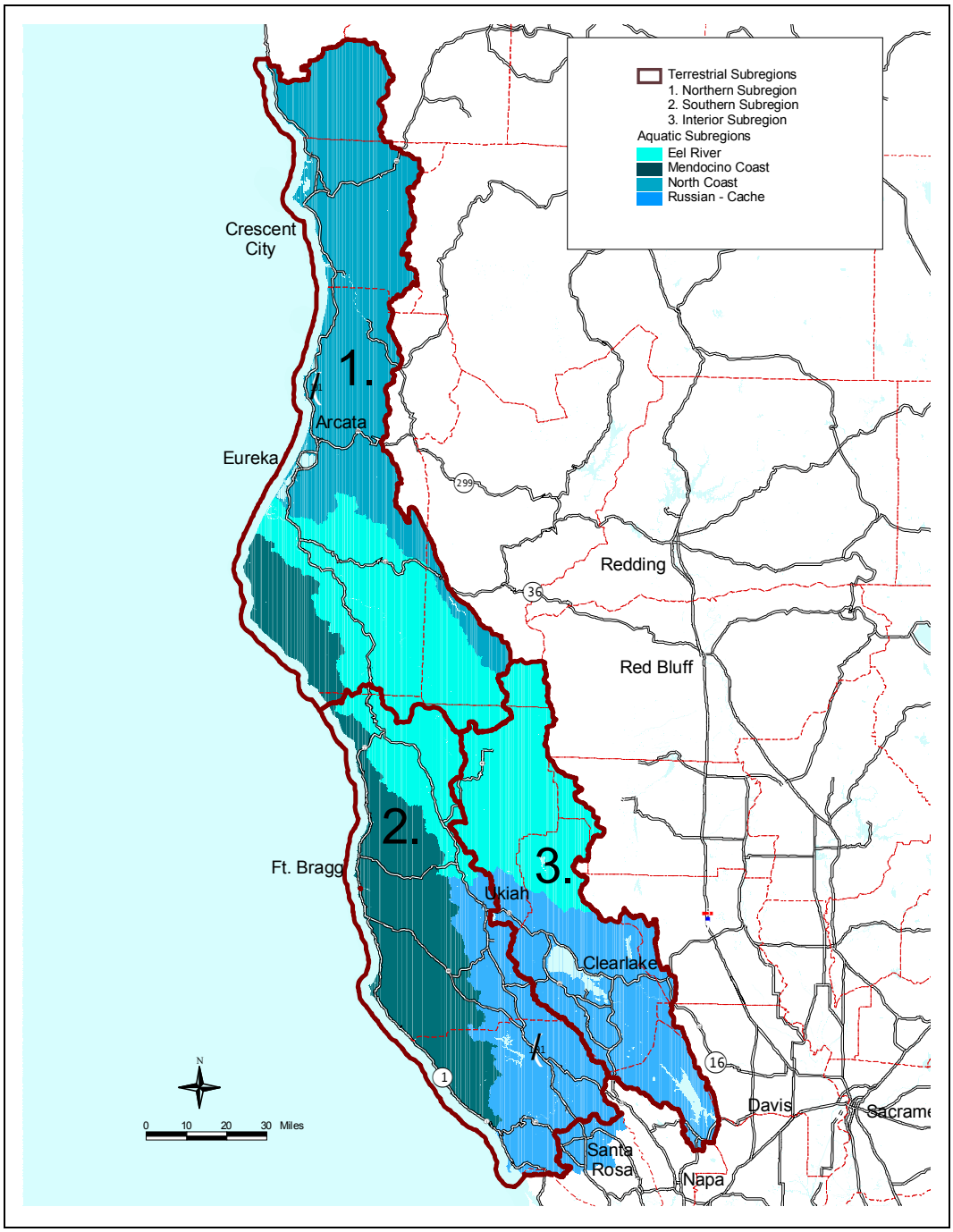

Figure 5: Terrestrial and Aquatic Stratification Units

POTENTIAL CONSERVATION AREAS

Identification of potential terrestrial conservation areas was based on standardized watershed units with large examples of coarse-scale systems. Potential aquatic conservation areas were based on buffered stream reaches and water bodies supporting aquatic targets.

For terrestrial systems, the ecoregion was divided into watershed units using "Super Planning Watersheds" from the Calwater 2.0 database. These watershed units are ecologically based, physically recognizable, and in this ecoregion, relatively uniform in size and shape with an average area of 10,000 ha (26,000 acres)[1]. Because size is an important criterion in determining the viability of an ecological system, the area of all ten coarse-scale systems was calculated for each watershed. Assuming the current distribution and pattern of these systems more or less reflect the historic conditions, we selected watersheds with the greatest amount of each coarse-scale system (the 70th percentile) as potential conservation areas for that system. For example, a total of 187 watersheds have some amount of northern mixed chaparral ranging from 0.06 ha to 9,491 ha. Those watersheds with more than 630 ha (the 70th percentile) were selected as potential conservation areas for that system. In this example, 62 watersheds met that criterion.

A total of 209 watershed units were selected as potential conservation areas for at least one coarse-scale system (see Figure 6). Species, local, and intermediate-scale targets were then attributed to these potential conservation areas. Eighteen additional potential conservation areas were added for local and intermediate-scale systems missed by the coarse filter. These areas were delineated by the limits of the target systems rather than watershed units.

Potential conservation areas for aquatic systems were based on a 500-meter buffer around stream reaches or water bodies supporting aquatic targets. A total of 72 potential aquatic conservation areas were delineated.

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[1] An important aspect of a functional landscape is the notion of minimum dynamic area. This is an estimate of the size of a landscape required to accommodate maximum natural disturbance regimes. In the North Coast Ecoregion, fire is the primary terrestrial natural disturbance, particularly in areas away from the coast. Studies of fire frequency and size in some national forests of northern California, suggest that the annual maximum fire size for a return interval of 100 years is on the order of 25,000 ha (60,000 acres) (SNEP 1996). Therefore, a functional landscape would be comprised of some 3 contiguous watershed units.

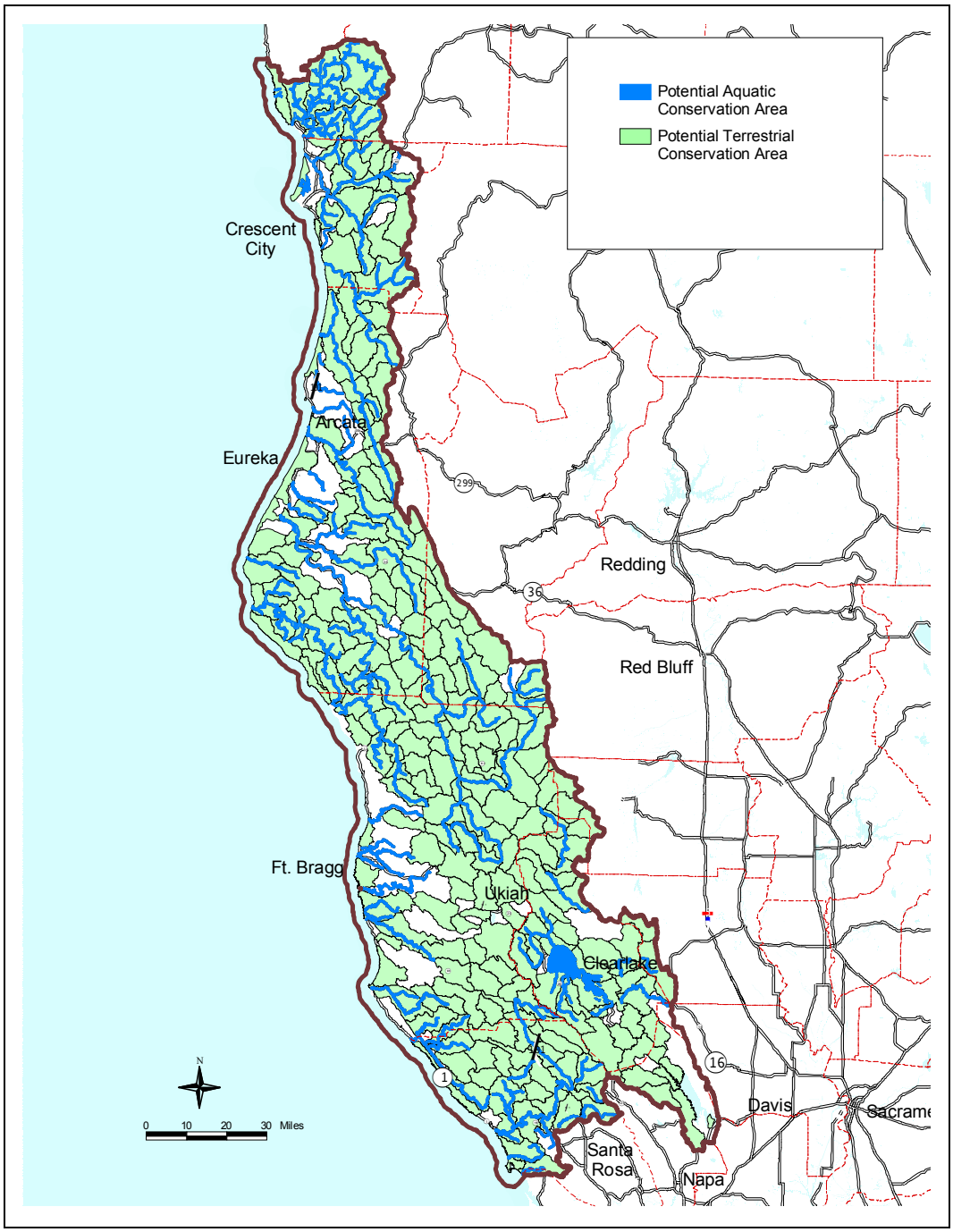


Figure 6 Potential Conservation Areas

PORTFOLIO ASSEMBLY

All potential conservation areas were ranked for the portfolio based on two key factors – suitability and the number and diversity of targets.

Suitability

Most species conservation targets do not have good viability assessments based on current EO specifications or current TNC viability assessment guidelines. Thoughtful species viability assessment typically is best done during site conservation planning. In ecoregional planning, emphasis is therefore placed on assessing the suitability of conservation areas as a proxy for individual target viability. Any targets that are embedded in a suitable landscape are assumed to be viable.

For terrestrial conservation areas, suitability was measured as a function of road density, percentage of converted habitat, and the percentage of protected land. Each of these factors was scored on a scale of 1-5 using the natural breaks function of ArcView. Suitability was classed into three categories (High, Medium, Low) based on the sum of these scores. Higher scores indicate greater suitability.

Road Density

The higher the road density, the less desirable the area is for conservation. Road density was calculated using the 1995 U.S. Census 1:24k Tiger road data. Scores were assigned on a scale of 1-5 using the same criteria as published by Noss (2000): 1 = >3km/km2, 2 = 2.0-3.0 km/km2, 3 = 1.0-2.0 km/km2, 4 = 0.5-1.0 km/km2, 5 = 0-0.5 km/km2 (see Figure 7).

Habitat Conversion

The higher the percentage of converted habitat, the less suitable the area is for conservation. Habitat conversion was calculated as the percentage of each watershed unit mapped as either "urban" or "agriculture" by USDA Calveg Geobook data. Scores were assigned on a scale of 1-5 using the natural breaks function as follows: 1 = >0.36, 2 = 0.22-0.36, 3 = 0.11-0.22, 4 = 0.03-0.11, 5 = 0.0-0.03 (see Figure 8).

Class 1 or 2 Lands

The higher the percentage of lands already managed for protection of biodiversity (GAP Class 1 or 2), the more likely or feasible the area is for conservation. The percentage of Class 1 or 2 lands for each watershed was calculated using GAP land management data. Scores were assigned

on a scale of 1-5 using the natural breaks function as follows: 1 = <0.04, 2 = 0.04-0.17, 3 = 0.17-0.43, 4 = 0.43-0.77, 5 = >0.77 (see Figure 9).

Scores were added for each criteria and ranged from 0 to 15. Scores were classified into three ranks using the natural breaks function: Low = 0-7, Medium = 8-10, and High = 11-15 (see Figure 10).

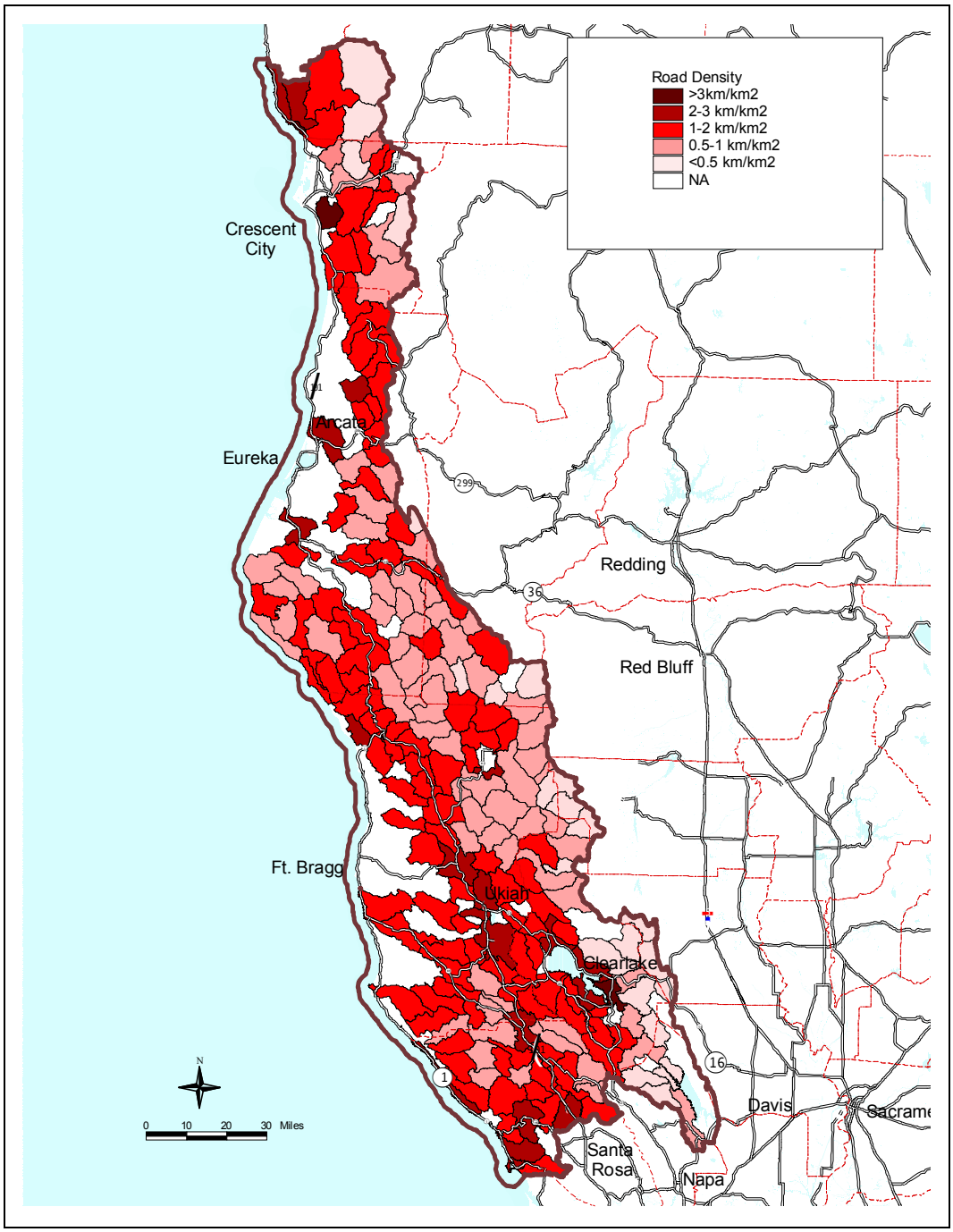


Figure 7 Road Density

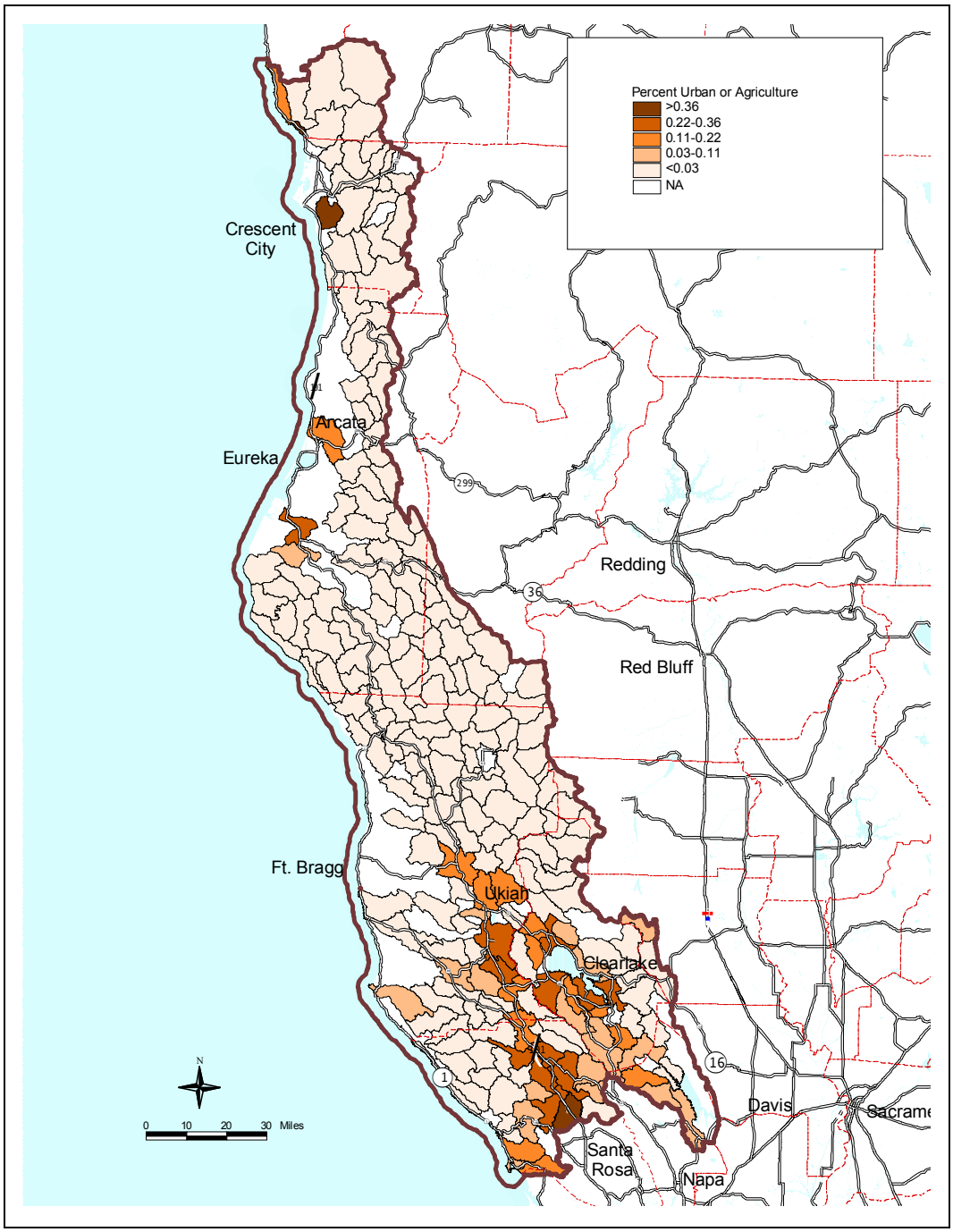


Figure 8 Habitat Conversion

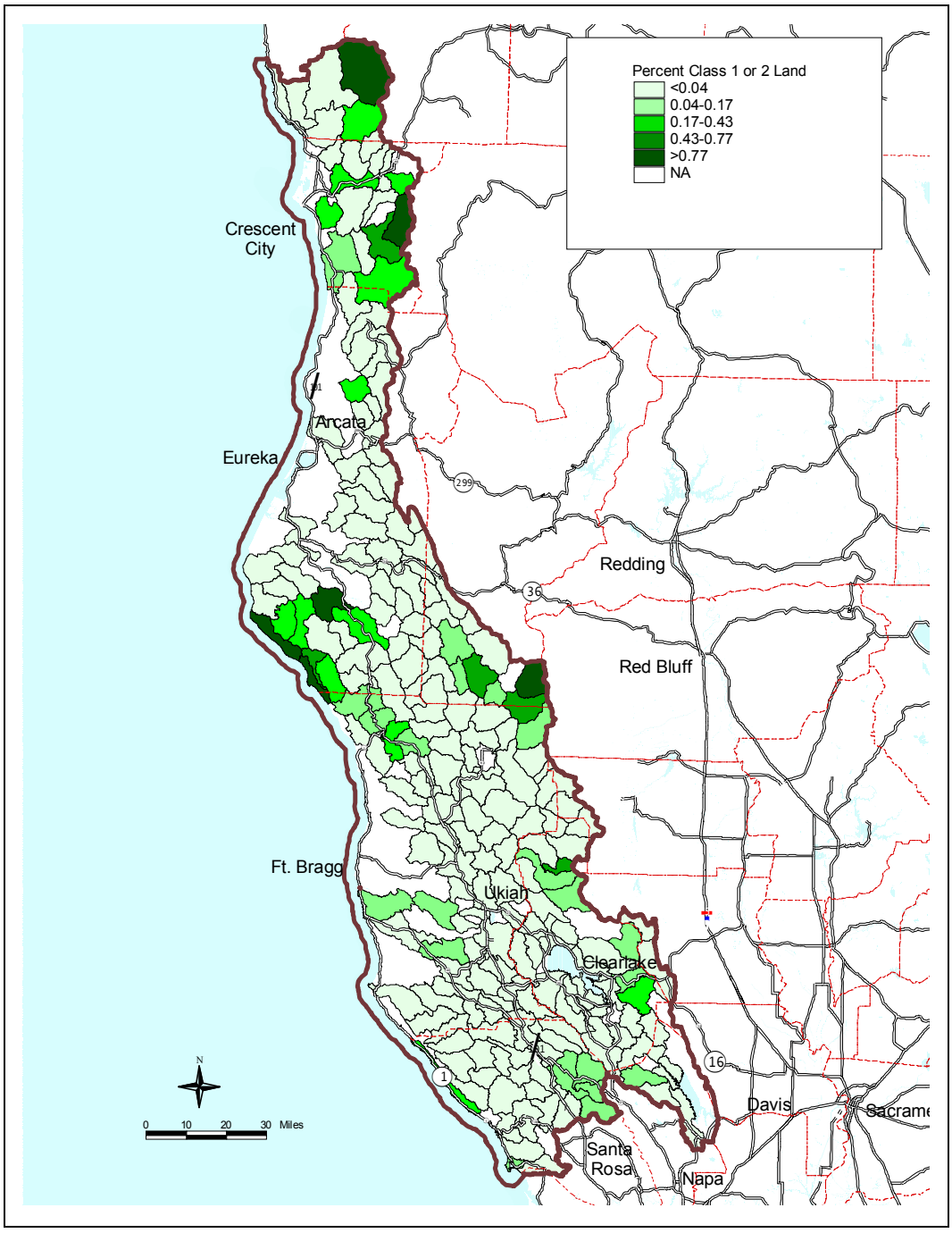


Figure 9 Percent Class 1 or 2 Land

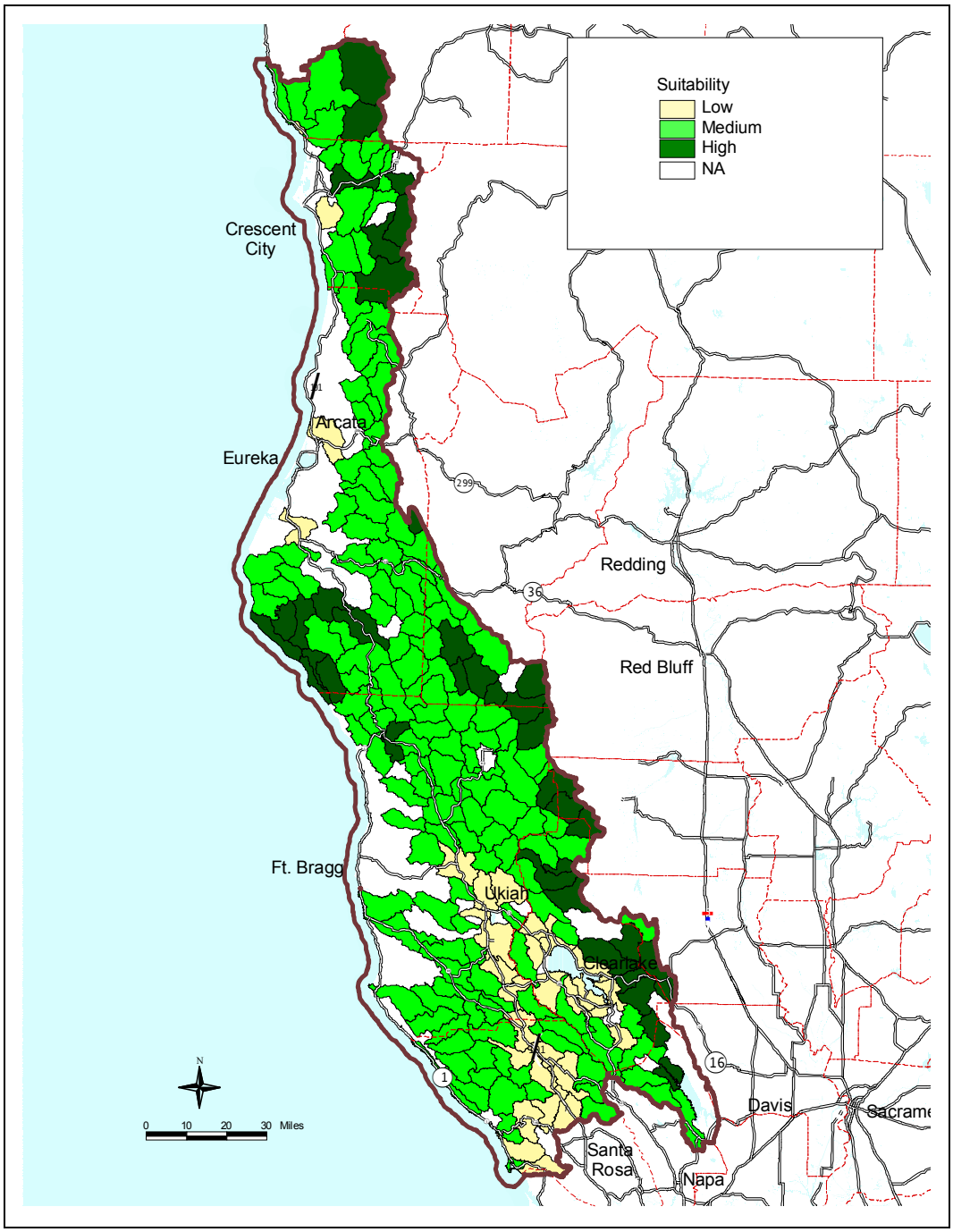


Figure 10 Suitability of Terrestrial Potential Conservation Areas

Suitability of potential aquatic conservation areas was based on the presence of target species and expert opinion of viability. High ranking aquatic conservation areas had three or more targets with good or very good viability. Medium ranking aquatic conservation areas had one or two target species with good or very good viability. Low ranking aquatic

conservation areas had no species identified with good or very good viability.

Number and Diversity of Targets

In addition to suitability, all potential conservation areas were ranked according to the number and diversity of targets present (see Table 3). High ranking terrestrial conservation areas had ecological system targets at all three spatial scales or a relatively high number of targets at any spatial scale (see Figure 11). Because all aquatic systems are considered intermediate-scale, ranking for those conservation areas was based solely on the number of targets.

Table 3 Ranking Criteria for Number and Diversity of Targets

High	• Coarse, intermediate AND local-scale ecological system targets • Coarse or intermediate-scale ecological system AND 7* or more targets at any scale • 8* or more aquatic conservation targets
Medium	• Coarse OR intermediate-scale ecological system and 1 other system scale • Coarse OR intermediate-scale ecological system and 4-6 other targets • 5-7 aquatic conservation targets
Low	All other potential conservation areas

*The number of targets used to determine rank was relative. The top third of potential conservation areas in the North Coast supported 7 or more terrestrial targets or at least 8 aquatic targets.

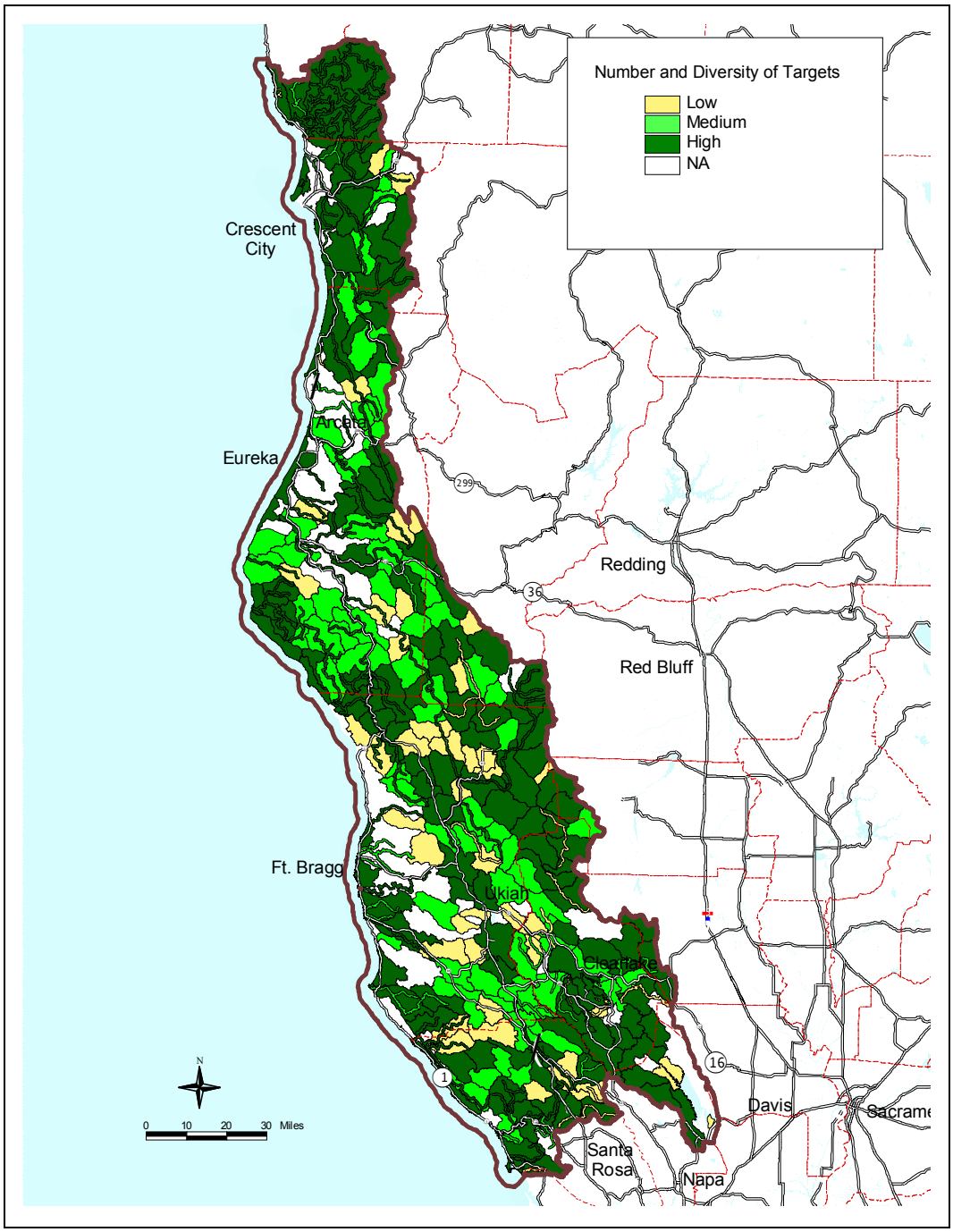


Figure 11 Number and Diversity of Targets

Portfolio Assembly Ranking

To assemble the portfolio, all potential conservation areas were ranked in three tiers based on suitability and number/diversity of targets. Potential conservation areas ranked as Tier 1 were considered the building blocks of the portfolio with Tier 2 and Tier 3 added as necessary to meet goals. All areas with low Suitability were ranked as Tier 3 (see Table 4).

Table 4: Portfolio Assembly Ranking Matrix

NUMBER AND DIVERSITY OF TARGETS	SUITABILITY		
	High	*Medium*	*Low*
High	Tier 1	Tier 1	Tier 3
Medium	Tier 1	Tier 2	Tier 3
Low	Tier 2	Tier 2	Tier 3

Results of the portfolio assembly ranking are as follows: 129 Tier 1, 87 Tier 2, and 81 Tier 3 (see Figure 12).

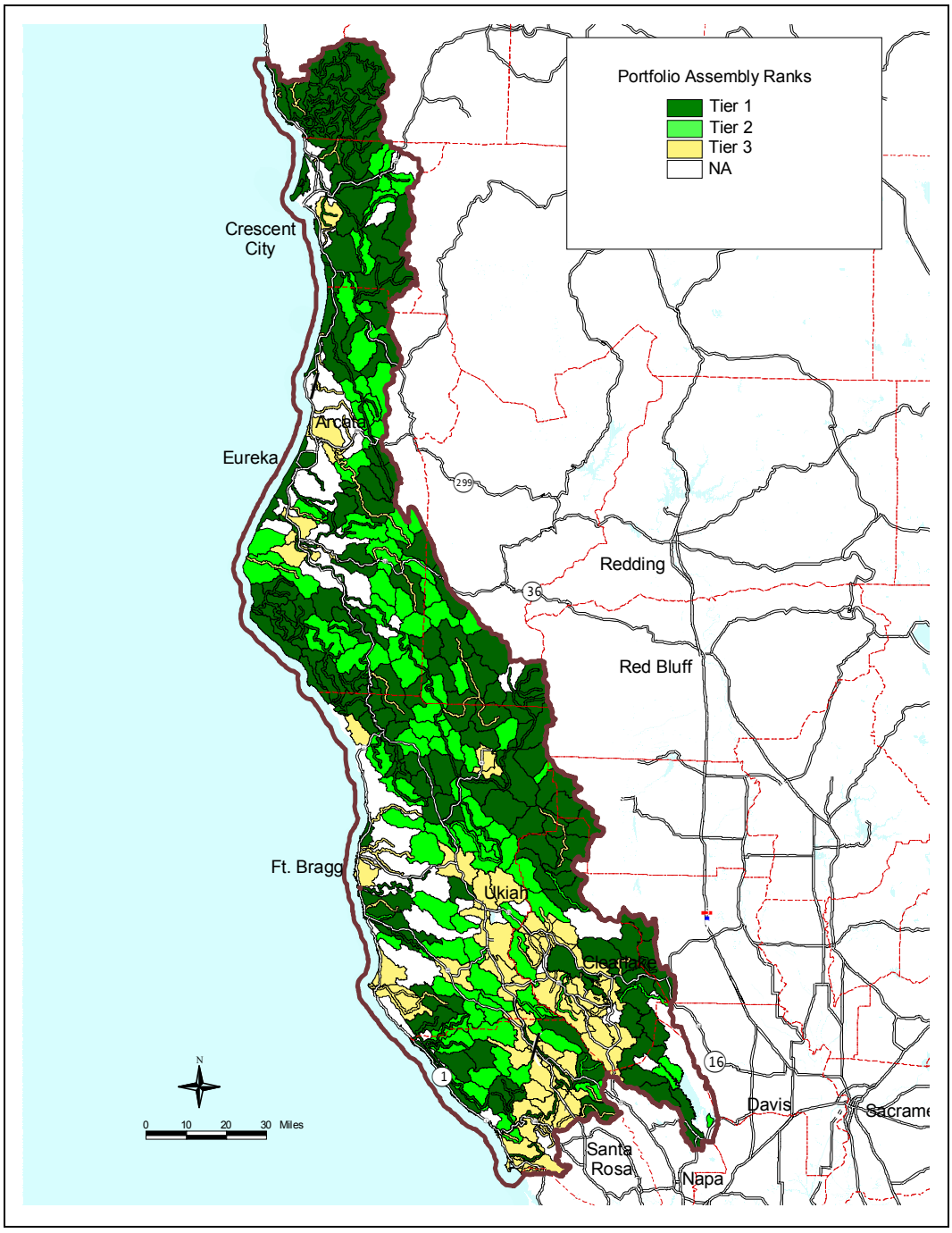


Figure 12 Portfolio Assembly Ranking

Sonoma County landscape

Clear Lake

RESULTS

The initial set of 129 Tier 1 conservation areas was evaluated according to the conservation goals. Eighteen areas appeared redundant and were dropped from the portfolio but could be considered as alternates. Twenty Tier 2 and twenty Tier 3 conservation areas were added as necessary to meet goals for ecological systems. The final composition of the portfolio included 150 conservation areas:

- 87 terrestrial and 24 aquatic Tier 1
- 13 terrestrial and 7 aquatic Tier 2 added to meet goals
- 10 terrestrial and 10 aquatic Tier 3 added to meet goals

The 150 conservation areas capture 39% of the ecoregion. An additional 18 areas were added based on the Save-the-Redwoods League study, five of which overlap at least partially with the conservation areas identified in this analysis. The resulting portfolio consists of 168 conservation areas representing 47% of the ecoregion (see Figure 13).

Conservation goals were met for all but two ecological systems: North Coast black cottonwood riparian forest and northern maritime chaparral. Each of these had less than three examples ecoregion-wide in our data base suggesting a need for inventory. While the majority of portfolio conservation areas were selected from Tier 1 to meet goals, a significant number of Tier 3 - areas with low suitability – were necessary to meet goals. Nearly half of these areas were in the southern subregion to represent systems such as coastal dunes, coastal wetlands, freshwater marsh, blue oak woodlands, and valley oak woodlands. This may indicate some viability or restoration concerns in these areas that need to be addressed in site conservation planning or future iterations of ecoregional planning.

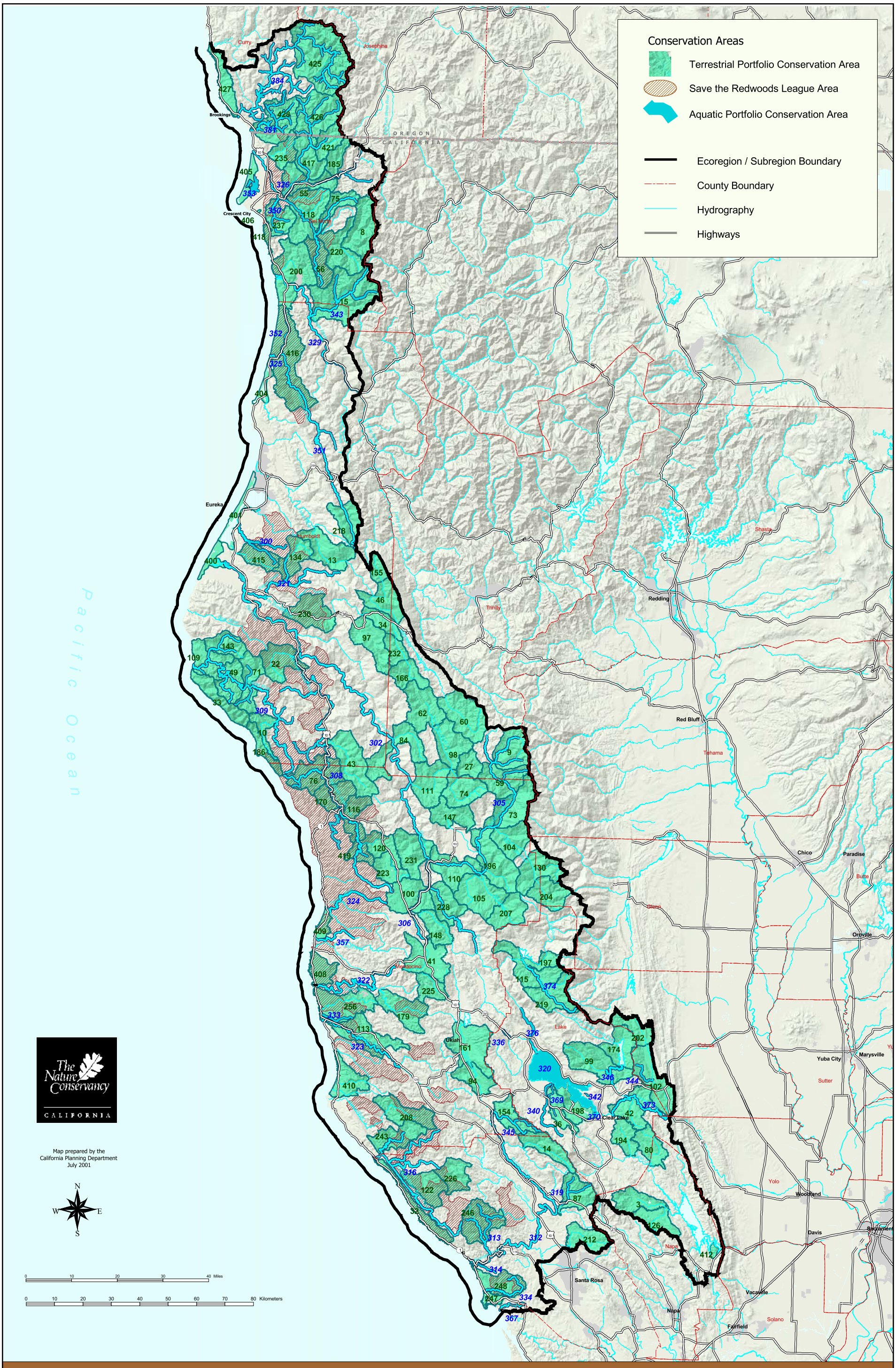
Despite the elimination of apparently redundant areas, several ecological systems are likely over-represented in the portfolio including annual grassland, coastal Douglas fir – western hemlock, mixed evergreen forest, mixed north-slope cismontane woodland, montane mixed chaparral, and redwood forest. Representation of redwood forest is particularly high, close to 50% of its distribution is within the portfolio, due largely to the inclusion of areas identified by Save-the-Redwoods League. These areas also significantly increase the area of the portfolio from 39% of the ecoregion to 47%.

Provisional Portfolio

Although conservation goals were met for most ecological systems, conservation goals for species were more difficult to assess. Forty percent

of target species have all known occurrences represented in the portfolio and fifty-two percent have more than ¾ of known occurrences in the portfolio. Only 19 species (14%) have no representation in the portfolio. Most of the under-represented species are rare plants associated with small wetlands or unusual soil types in the southern subregion or amphibians associated with well-inventoried timber harvest areas in the north (see Appendix II). In either case, the suitability of these areas was ranked low. The locations of these species were added to the portfolio as "provisional" but are not considered potential action areas at this time (See Figure 14).

North Coast Ecoregion *Portfolio Conservation Areas*



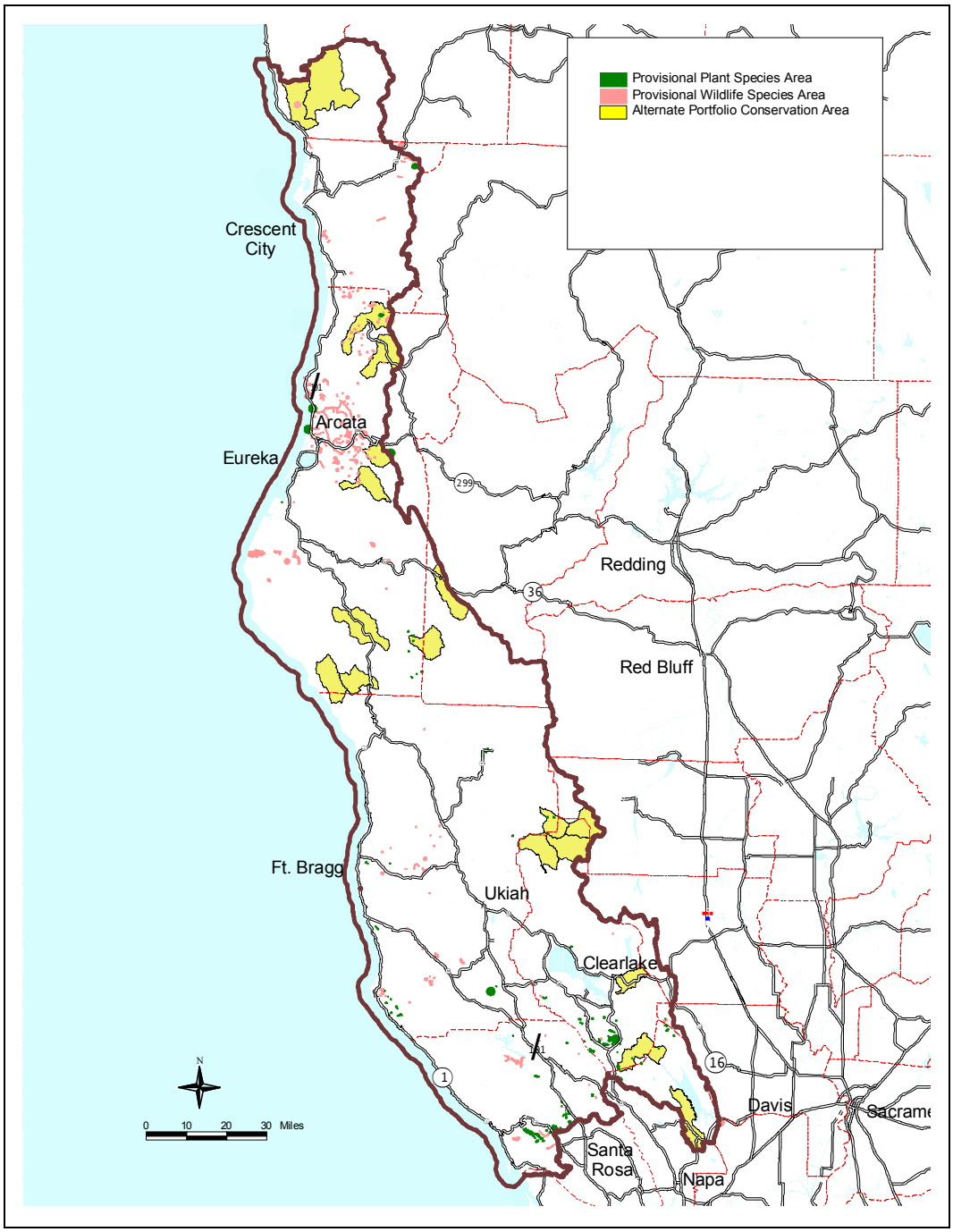


Figure14 Provisional Portfolio Areas

IMPLEMENTATION PLAN

The Nature Conservancy's goal is to ensure the protection of all portfolio conservation areas in the ecoregion by the year 2020. To achieve this goal, conservation areas were ranked based on their status – a measure of threats and opportunities – and grouped into potential action areas. Five-year objectives were then formulated using a combination of site and multi-site strategies.

Conservation Area Status

The 150 portfolio conservation areas identified through this ecoregional plan were classified into four conservation status categories based on a rapid assessment of ownership, threats, and opportunities (see Figure 15). The remaining 18 areas from Save-the-Redwoods League were not ranked for status.

Conservation areas were considered well protected if they are mostly within public or private conservation lands such as wilderness areas or national parks. Conservation areas managed by federal or state agencies as public use land such as some national forest or Bureau of Land Management lands were considered low threat. Conservation areas dominated by private lands were considered as medium threat unless there were specifically urgent threats or opportunities known, in which case they were ranked as highly threatened. The 150 conservation areas were ranked as follows:

29 Highly threatened
61 Moderately threatened
41 Least threatened (public use land)
19 Protected (public or private conservation land)

Potential Action Areas

Selection of action areas focused on the 90 conservation areas ranked as highly or moderately threatened. These areas were aggregated into five theaters of action based on spatial proximity and related threats or opportunities (see Figure 16). Potential action areas in the North Coast Ecoregion include:

1. Smith River – lower Klamath River
2. Humboldt Bay – Mattole River
3. Eel River
4. Mendocino Coast
5. Sonoma, Napa, and Lake Counties

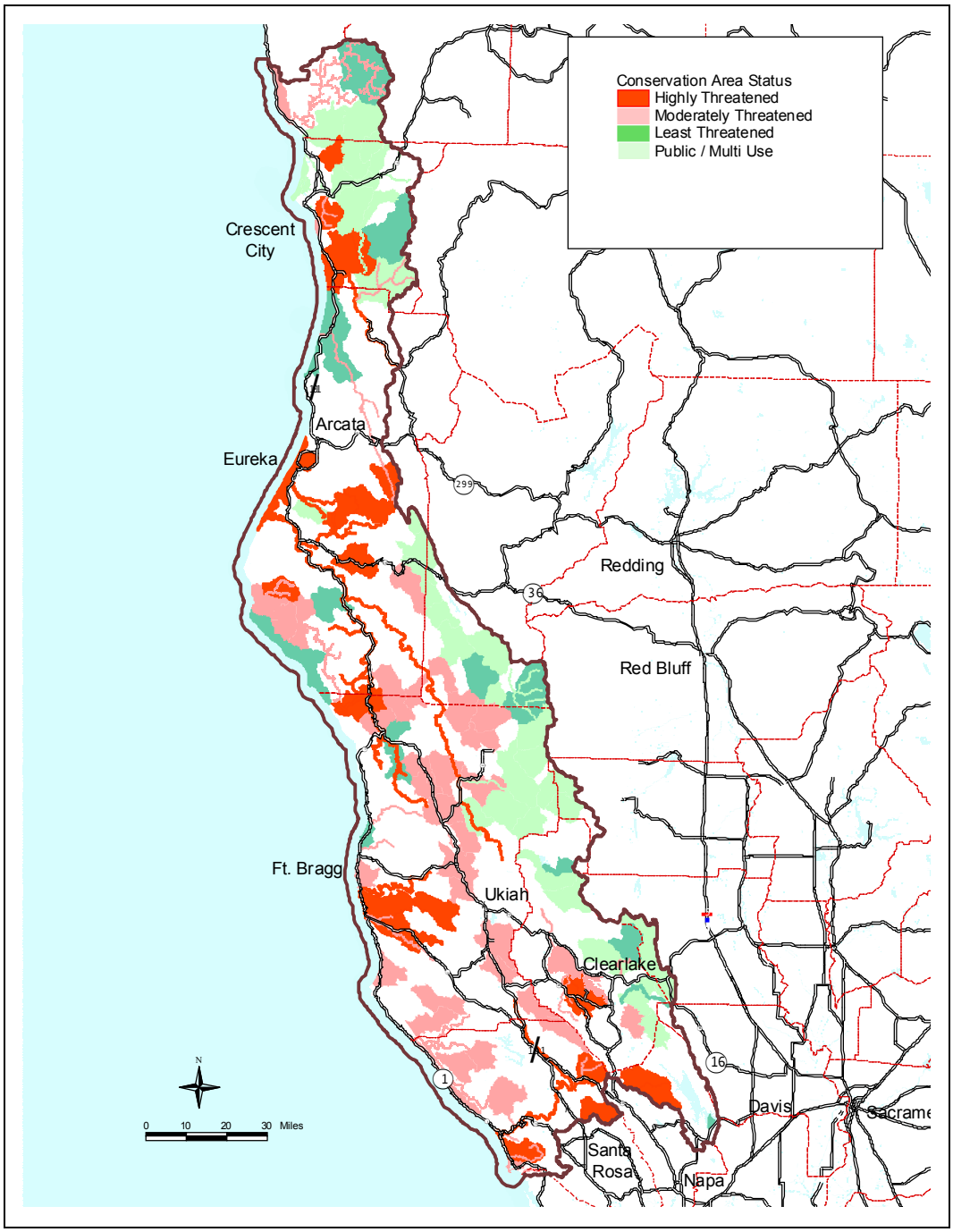


Figure 15 Conservation Area Status

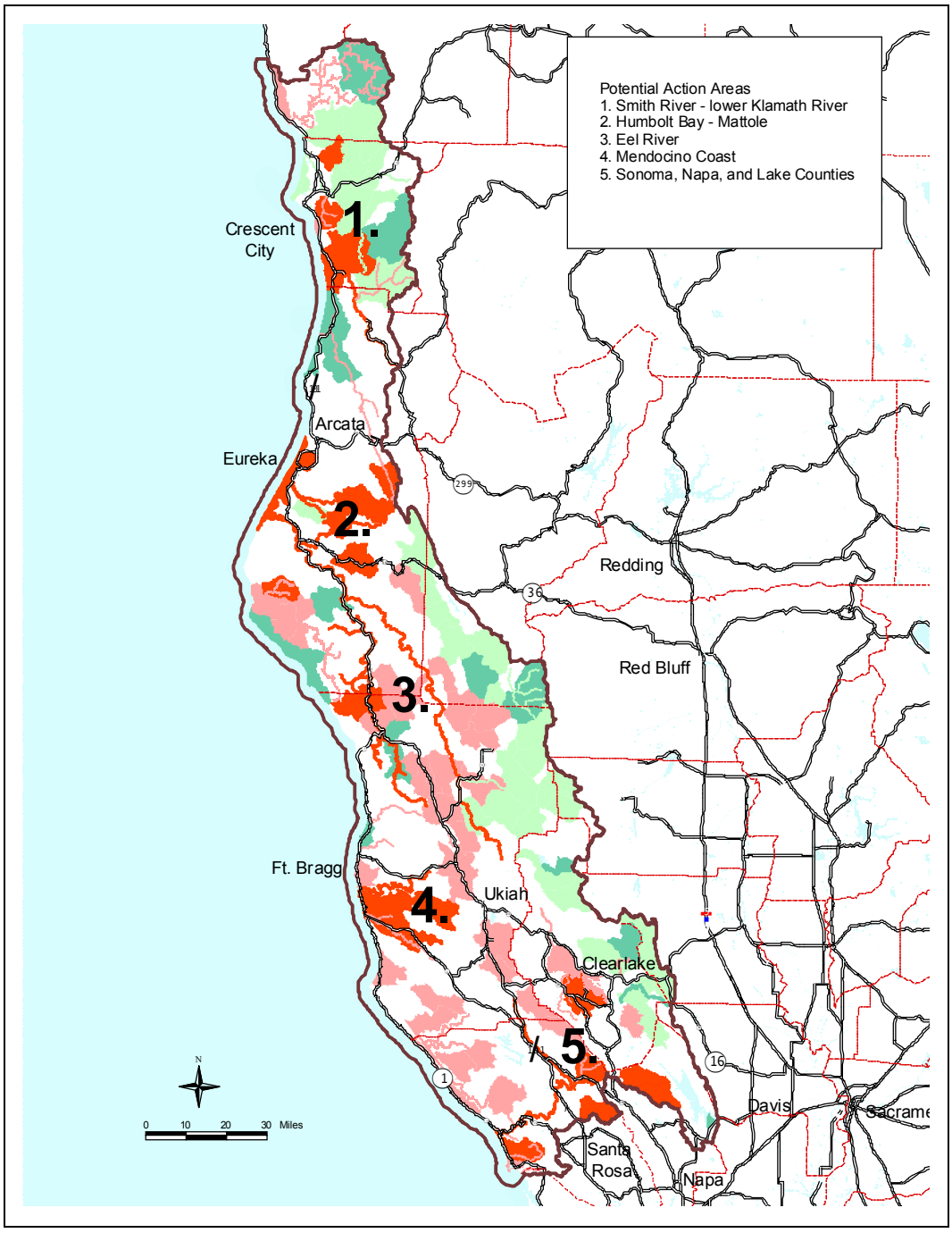


Figure 16 Potential Action Areas

A summary of the five potential action areas – listed north to south - with primary systems, key threats, partners, and potential strategies follows:

1. Smith River – lower Klamath River
- Primary Systems: coastal wetlands, anadromous fish, coastal forests, Port Orford cedar, serpentines
- Key Threats: Timber harvest, hydrologic modification
- Partners: Save-the-Redwoods League, California State Parks, California Department of Fish and Game, Coastal Conservancy, Six Rivers National Forest, California Wilderness Coalition, Simpson Timber Co.
- Potential Strategies: support Save-the-Redwoods League acquisition efforts on Mill Creek, work with California Wilderness Coalition and others on Roadless Area designations, study sustainable forestry

2. Humbolt Bay – Mattole River
- Primary Systems: Coastal wetlands, coastal dunes, coastal forests, anadromous fish
- Key Threats: Timber harvest, sedimentation, rural sprawl
- Partners: Save-the-Redwoods League, California State Parks, US Fish and Wildlife Service, Bureau of Land Management, Coastal Conservancy, Six Rivers National Forest, Pacific Lumber Co, Simpson Timber Co, Sierra Pacific Industries, North Coast Regional Land Trust
- Potential Strategies: support key acquisitions by partners, work with CWC on roadless area designations, study sustainable forestry

3. Eel River
- Primary Systems: Anadromous fish, mixed coniferous forest, mixed evergreen forest, oak woodlands, grasslands
- Key Threats: Timber harvest, rural sprawl, hydrologic modification
- Partners: Bureau of Land Management, Save-the-Redwoods League, Mendocino National Forest, CA State Parks, UC Natural Reserves, private
- Potential Strategies: work with CWC on roadless area designations, study sustainable forestry

4. Mendocino Coast
- Primary Systems: Coastal forests, coastal wetlands, coastal dunes, anadromous fish
- Key Threats: Timber harvest, rural sprawl
- Partners: Save-the-Redwoods League, California State Parks, California Department of Fish and Game, Coastal Conservancy, Mendocino Land Trust, Mendocino Redwoods Co, Georgia Pacific

Potential Strategies: support Save-the-Redwoods League and Mendocino Land Trust acquisition efforts on Big River, conduct an initial assessment, study sustainable forestry

5. Sonoma, Napa, and Lake Counties

- Primary Systems: oak woodland, annual grassland, mixed evergreen forest, vernal pools, serpentines
- Key Threats: Urban sprawl and vineyard conversion
- Partners: Sonoma County Agricultural Preservation and Open Space District, California State Parks, Bureau of Land Management, California Department of Fish and Game, Coastal Conservancy, UC Natural Reserves, Sonoma County Land Trust, Napa County Land Trust, Lake County Land Trust, Blue Ridge Berryessa Natural Area Partnership.
- Potential Strategies: Work with partners to conduct an initial assessment of the area.

Five-year Objectives

To achieve The Nature Conservancy's goal of protecting all highly and moderately threatened portfolio conservation areas by the year 2020, we must implement a combination of landscape-scale projects and multi-area strategies over the next five years.

Landscape-scale Projects

- Conduct a preliminary assessment of conservation areas in Sonoma, Napa, and Lake Counties. The Conservancy already has considerable experience in abating threats to these types of systems and there is good local capacity for conservation. In addition, this is the only potential action area in the ecoregion where timber harvest is not a key threat.
- The other potential action area likely to become a landscape-scale project in the next five years is the Mendocino Coast where local capacity is high and many systems are not forestry related.

Multi-Area Strategies

- Sponsor a workshop or commission a study to determine the role of private conservation in working forests of the North Coast. Four out of five potential action areas in the North Coast have significant forestry related threats. However, the systems, stresses, and sources of threat to these areas are complex and unfamiliar to the Conservancy. Likely partners in this endevour include Pacific Forest Trust and the Mendocino Redwood Company.
- Support Save-the-Redwoods League and other partners on key acquisitions in potential action areas. Two key acquisitions are

currently in negotiations in the Smith River – lower Klamath River area and the Mendocino Coast area.

- Work with the California Wilderness Coalition and others to protect inventoried roadless areas that overlap with portfolio conservation areas. Thirty-one North Coast portfolio conservation areas are part of unprotected roadless areas on Six Rivers and Mendocino National Forests (see Figure 17).

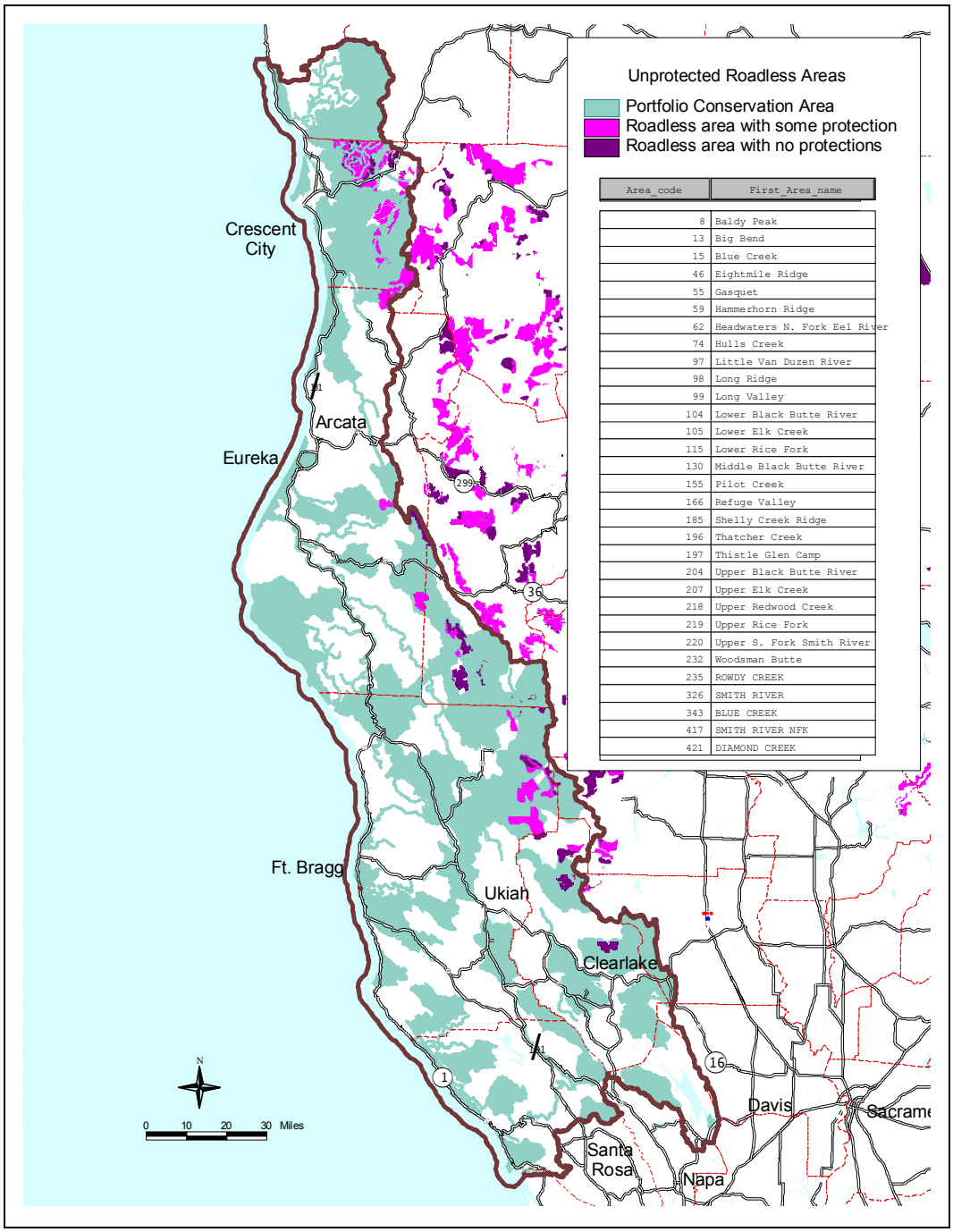


Figure 17 Unprotected Roadless Areas

APPENDIX I : CONSERVATION TARGETS

APPENDIX I. CONSERVATION TARGETS (in alphabetical order)

TERRESTRIAL ECOLOGICAL SYSTEMS

Target System	Mapped Type	Rank[1]	Scale[2]	Source
Annual Grassland	Annual Grass/Forb	G4	C	CALVEG/GAP
Bald Hills Prairie	Bald Hills Prairie	G2	L	Holland (*)
Beach/Shore Pine	Beach/Shore Pine	G4	L	CALVEG
Beaches and Coastal Dunes	Beaches and Coastal Dunes	G3	L	CALVEG/GAP
Bishop Pine	Bishop Pine	G2	L	CALVEG/GAP
Blue Oak Woodland	Blue Oak Woodland	G3	I	CALVEG/GAP
California Bay Forest	California Bay Forest		I	CALVEG/Sawyer
California Bay Woodland	California Bay Woodland		I	CALVEG
Coast Range Mixed Coniferous Forest	Coast Range Mixed Coniferous Forest	G4	C	GAP
	Coast Range Ponderosa Pine Forest	G3		GAP
	Douglas-Fir - Pine	G4?		CALVEG
	Ponderosa Pine	G3		CALVEG
Coastal and Valley Freshwater Marsh	Coastal and Valley Freshwater Marsh	G3	L	NDDB
	Tule - Cattail - Sedge			CALVEG
Coastal Brackish Marsh	Coastal Brackish Marsh	G2	L	GAP
	Pickleweed - Cord Grass			CALVEG
Coastal Douglas Fir - Western Hemlock Forest	Coastal Douglas Fir Western Hemlock Forest	G4	C	NDDB
	Douglas Fir – Tan Oak			Sawyer
	Douglas-Fir - Grand Fir			CALVEG
	Pacific Douglas-Fir			CALVEG
Coastal Terrace Prairie	Coastal Prairie	G2	L	GAP/NDDB
Dune Hollow or Swale	Dune Hollow or Swale		L	Pickart
Fen or Bog	Darlingtonia Seep	G4	L	NDDB
	Fen	G2		NDDB
	Sphagnum Bog	G3		NDDB
Foothill Pine-Oak Woodland	Foothill Pine-Oak Woodland	G4	I	GAP
	Gray Pine			CALVEG
	Non-Serpentine Foothill Pine Woodland	G3		GAP
	Open Foothill Pine Woodland	G4		GAP
Grand Fir/Sitka Spruce	Grand Fir	G1	I	CALVEG/NDDB
	Sitka Spruce	G1		CALVEG/NDDB
	Sitka Spruce - Grand Fir			CALVEG
Great Valley Mixed Riparian Forest	Great Valley Mixed Riparian Forest	G2	I	NDDB
Mendocino Pygmy Cypress Forest	Mendocino Pygmy Cypress Forest	G2	L	NDDB
	Pygmy Cypress			CALVEG
Mixed Evergreen Forest	Black Oak Forest	G4	C	CALVEG/GAP
	California Buckeye			CALVEG
	Canyon Live Oak Forest	G4		CALVEG/GAP
	Coast Live Oak Forest	G4		CALVEG/GAP
	Interior Live Oak Forest	G4		CALVEG/GAP
	Madrone (Black Oak)			CALVEG
	Mixed Evergreen Forest	G4		GAP

Target System	Mapped Type	Rank[1]	Scale[2]	Source
	Tanoak (Madrone)	G4		CALVEG/GAP
	Tree Chinquapin Forest			CALVEG
Mixed North Slope Cismontane Woodland	Black Oak Woodland	G3		CALVEG/GAP
	Canyon Live Oak Woodland	G4		CALVEG/GAP
	Coast Live Oak Woodland	G4		CALVEG/GAP
	Interior Live Oak Woodland	G3		CALVEG/GAP
	Mixed Hardwoods			CALVEG
	Mixed North Slope Cismontane Woodland	G3	C	GAP
	Tree Chinquapin Woodland			CALVEG
Montane Mixed Chaparral	Brewer Oak		C	CALVEG
	Huckleberry Oak	G3		CALVEG/GAP
	Montane Mixed Chaparral	G4		CALVEG/GAP
	Scrub Oak	G3		CALVEG
	Snowbrush			CALVEG
	Upper Montane Mixed Shrub			CALVEG
North Coast Black Cottonwood Riparian Forest	North Coast Black Cottonwood Riparian Forest	G1	L	Holland
North Coast Riparian Forest and Scrub	Bigleaf Maple (Dogwood)		I	CALVEG
	Fremont Cottonwood			CALVEG
	North Coast Riparian Scrub	G3		GAP
	Red Alder	G3		CALVEG/GAP
	White Alder	G4		CALVEG
	Willow			CALVEG
	Willow - Alder			CALVEG
Northern Coastal Bluff Scrub	Northern Coastal Bluff Scrub	G2	L	NDDB
Northern Coastal Salt Marsh	Northern Coastal Salt Marsh	G3	L	NDDB
Northern Coastal Scrub	Blueblossom Ceanothus		L	CALVEG
	Coyote Brush			CALVEG
	North Coastal Mixed Shrub			CALVEG
	Northern (Franciscan) Coastal Scrub	G3?		GAP
	Salal - California Huckleberry Shrub	G4		CALVEG
Northern Dune Scrub	Central Dune Scrub	G2	L	GAP
Northern Foredune Grassland	Northern Foredune Grassland	G1	L	NDDB
Northern Interior Cypress Forest	Knobcone Pine	G4	I	CALVEG/GAP
	McNab Cypress			CALVEG
	Northern Interior Cypress Forest	G2		NDDB
	Sargent Cypress			CALVEG
Northern Maritime Chaparral	Mendocino Manzanita		L	CALVEG
	Northern Maritime Chaparral	G1		
Northern Mixed Chaparral	Blue Brush Chaparral	G4	C	GAP
	Buck Brush Chaparral	G4		GAP
	Chamise	G4		CALVEG/GAP
	Manzanita Chaparral	G4		CALVEG/GAP
	Mesic North Slope Chaparral	G3		GAP

Target System	Mapped Type	Rank[1]	Scale[2]	Source
	Northern Mixed Chaparral	G4		CALVEG/GAP
	Wedgeleaf Ceanothus			CALVEG
	Whiteleaf Manzanita			CALVEG
Northern Vernal Pool	Northern Basalt Flow Vernal Pool	G3	L	NDDB
	Northern Hardpan Vernal Pool	G3		NDDB
	Northern Vernal Pool	G2		NDDB
	Northern Volcanic Ash Vernal Pool	G1		NDDB
Oregon Oak Woodland	Oregon White Oak Woodland	G3	C	CALVEG/GAP
Port Orford Cedar Forest	Port Orford Cedar		L	CALVEG
Red Fescue Grassland	Red Fescue Grassland		L	Sawyer
Red Fir Forest	Red Fir	G4	I	CALVEG/GAP
Redwood Forest	North Coast Alluvial Redwood Forest	G2	C	GAP
	Redwood			CALVEG
	Redwood - Douglas-Fir			CALVEG
	Sitka Spruce - Redwood			CALVEG
	Upland Redwood Forest	G3		GAP
Serpentine Bunchgrass	Serpentine Bunchgrass	G2	L	NDDB
Serpentine Chaparral	Mixed Serpentine Chaparral	G2	I	GAP
	Ultramafic Mixed Shrub			CALVEG
Serpentine Foothill Pine-Chaparral Woodland	Serpentine Foothill Pine-Chaparral Woodland	G3	I	GAP
Sierran Mixed Coniferous Forest	Douglas-Fir - White Fir	G4?	C	CALVEG
	Mixed Conifer - Fir			CALVEG
	Mixed Conifer - Pine			CALVEG
	Sierran Mixed Coniferous Forest	G4		GAP
	Western White Pine			CALVEG
	White Fir	G4		CALVEG/GAP
Siskiyou Enriched Coniferous Forest	Siskiyou Enriched Coniferous Forest	G1	L	GAP
Ultramafic Mixed Coniferous	Northern Ultramafic Jeffrey Pine Forest	G3	I	GAP
	Ultramafic Mixed Conifer	G4		CALVEG/GAP
Upland Douglas Fir Forest	Upland Douglas Fir Forest	G4	L	NDDB
Upper Montane Coniferous Forest	Jeffrey Pine	G4	L	CALVEG
	Jeffrey Pine-Fir Forest	G4		GAP
	Lodgepole Pine Forest	G4		GAP
Valley Needlegrass Grassland	Valley Needlegrass Grassland	G1	L	NDDB
Valley Oak Woodland	Valley Oak Woodland	G3	L	CALVEG/NDDB
Wet or Montane Meadow	Montane Meadow		L	GAP
	Wet Meadow			CALVEG
Wildflower Field	Wildflower Field	G2	L	NDDB

AQUATIC ECOLOGICAL SYSTEMS

Target System	Component Communities	Rank[1]	Source
California Roach Stream/River	California Roach Stickleback/Steelhead Stream		Moyle/Ellison
	California Roach Stream		Moyle/Ellison

Target System	Component Communities	Rank[1]	Source
	Sacramento Sucker/Roach River		Moyle/Ellison
Chinook Stream	Chinook Salmon Spawning Stream		Moyle/Ellison
	Fall/Winter Run Chinook River		Moyle/Ellison
Coastal Lagoon			Moyle/Ellison
Cutthroat Trout Stream	Cutthroat Trout Spawning Nursery Stream		Moyle/Ellison
	Cutthroat Trout Stream		Moyle/Ellison
Cutthroat/Coho River			Moyle/Ellison
Dune Lake			Moyle/Ellison
Eel River			Moyle/Ellison
Endemic Fish Lake	Blue Lakes		Moyle/Ellison
	Clear Lake		Moyle/Ellison
Eulachon/Sturgeon/Salmon Spawning River			Moyle/Ellison
Fishless Pond	Sag Pond		Moyle/Ellison
	Saline Ponds/Lakes		Moyle/Ellison
Fishless Stream	Conifer Forest Snowmelt Stream		Moyle/Ellison
	Fishless Low Order Stream		Moyle/Ellison
	Foothill Valley Ephemeral Stream		Moyle/Ellison
	Spring		Moyle/Ellison
Hardhead/Pike Minnow Stream			Moyle/Ellison
Hitch Stream			Moyle/Ellison
Lower Klamath Sculpin/Dace/Sucker Stream			Moyle/Ellison
Main Clear Lake Tributaries	Cyprinid/Catostomid Stream		Moyle/Ellison
	Seasonal Lakefish Spawning Stream		Moyle/Ellison
Rainbow Trout Streams	Rainbow Trout/Cyprinid Stream		Moyle/Ellison
	Resident Rainbow Trout Stream		Moyle/Ellison
Russian River Drainage	Lower Russian River Pikeminnow/Sucker Tributary		Moyle/Ellison
	Russian River		Moyle/Ellison
Short-Run Coho Spawning Stream			Moyle/Ellison
Steelhead Stream	Coastal Steelhead Sculpin Stream		Moyle/Ellison
	Fall Steelhead Only Stream		Moyle/Ellison
	Fall/Winter Run Steelhead Stream		Moyle/Ellison
	Summer Steelhead Stream		Moyle/Ellison

TARGET WILDLIFE SPECIES

Species	Rank[1]	Source
Aleutian Canada Goose	G5T2	NDDB
California Red-Legged Frog	G4T2T3	NDDB
Chinook Salmon (CA Coastal ESU)	G5	DFG
Chum Salmon	G5	DFG

Species	Rank[1]	Source
Clear Lake Hitch	G5T2	FSSC
Coast Cutthroat Trout	G4T4	NDDB
Coho Salmon (Central CA ESU, So. OR./No. CA ESU)	G5	DFG
Del Norte Salamander	G3	NDDB
Eulachon	G4	FSSC
Foothill Yellow-Legged Frog	G3	NDDB
Green Sturgeon	G4	FSSC
Gualala Roach	G5T1T2	NDDB
Hardhead	G3	FSSC
Longfin Smelt	G4	FSSC
Marbled Murrelet	G3	PIF
Northern Red-Legged Frog	G4T2?	NDDB
Northern Spotted Owl	G3T2	NDDB
Northwestern Pond Turtle	G4T4	NDDB
Pacific Fisher	G3G4	NDDB
Point Arena Mountain Beaver	G5T1	NDDB
Red Tree Vole	G4	NDDB
River Lamprey	G5S4	FSSC
Russian River Tule Perch	G5T2?	NDDB
Sacramento Perch	G3	FSSC
Southern Torrent Salamander	G4	NDDB
Steelhead (Central CA Coast ESU, Northern CA ESU)	G5T2	DFG
Tailed Frog	G3G4	NDDB
Tidewater Goby	G2G3	NDDB
Western Snowy Plover	G4T2	NDDB
White-Footed Vole	G4	NDDB

TARGET PLANT SPECIES

Scientific name	Common name	Rank[1]	Source
Abronia umbellata ssp breviflora	Pink sand-verbena	G5T2	NDDB
Agrostis blasdalei	Blasdale's bent grass	G2	NDDB
Agrostis clivicola var punta-reyesensis	Pt reyes bent grass	G3T1	NDDB
Alopecurus aequalis var sonomensis	Sonoma alopecurus	G5T1	NDDB
Arabis macdonaldiana	Mcdonald's rock cress	G2	NDDB
Arctostaphylos bakeri ssp bakeri	Baker's manzanita	G2T2	NDDB
Arctostaphylos bakeri ssp sublaevis	The cedars manzanita	G2T2	NDDB
Arctostaphylos canescens ssp sonomensis	Sonoma manzanita	G3T2	NDDB
Arctostaphylos densiflora	Vine hill manzanita	G1	NDDB
Arctostaphylos hispidula		G3	ORHERIT
Arctostaphylos mendocinoensis	Pygmy manzanita	G1	NDDB
Arctostaphylos stanfordiana ssp decumbens	Rincon manzanita	G3T1	NDDB
Arctostaphylos stanfordiana ssp raichei	Raiche's manzanita	G3T2?	NDDB
Aster lentus	Suisun marsh aster	G2	NDDB
Astragalus agnicidus	Humboldt milk-vetch	G1	NDDB
Astragalus clarianus	Clara hunt's milk-vetch	G1	NDDB
Astragalus rattanii var jepsonianus	Jepson's milk-vetch	G4T2	NDDB
Balsamorhiza macrolepis var macrolepis	Big-scale balsamroot	G3T2	NDDB
Bensoniella oregona	Bensoniella	G2	NDDB

Scientific name	Common name	Rank[1]	Source
Blennosperma bakeri	Sonoma sunshine	G1	NDDB
Blennosperma nanum var robustum	Point reyes blennosperma	G4T1	NDDB
Brodiaea coronaria ssp rosea	Indian valley brodiaea	G4T1	NDDB
Calochortus raichei	The cedars fairy-lantern	G1	NDDB
Campanula californica	Swamp harebell	G2	NDDB
Cardamine nuttallii var gemmata	Yellow-tubered toothwort	G5T2?	NDDB
Carex albida	White sedge	G1	NDDB
Carex gigas		G3?	ORHERIT
Castilleja ambigua ssp humboldtiensis	Humboldt bay owl's-clover	G4T2	NDDB
Castilleja mendocinensis	Mendocino coast indian paintbrush	G2	NDDB
Ceanothus confusus	Rincon ridge ceanothus	G5T2Q	NDDB
Ceanothus divergens	Calistoga ceanothus	G2	NDDB
Ceanothus foliosus var vineatus	Vine hill ceanothus	G3T1	NDDB
Chlorogalum pomeridianum var minus	Dwarf soaproot	G5T1	NDDB
Chorizanthe cuspidata var cuspidata	San francisco bay spineflower	G3T2	NDDB
Chorizanthe cuspidata var villosa	Woolly-headed spineflower	G3T1	NDDB
Chorizanthe howellii	Howell's spineflower	G1	NDDB
Chorizanthe valida	Sonoma spineflower	G1	NDDB
Clarkia imbricata	Vine hill clarkia	G1	NDDB
Collinsia corymbosa	Round-headed chinese houses	G1	NDDB
Cordylanthus maritimus ssp palustris	Point reyes bird's-beak	G3T2	NDDB
Cordylanthus tenuis ssp capillaris	Pennell's bird's-beak	G4T1	NDDB
Cupressus goveniana ssp pigmaea	Pygmy cypress	G2T1	NDDB
Delphinium bakeri	Baker's larkspur	G1	NDDB
Delphinium luteum	Yellow larkspur	G1	NDDB
Dichanthelium lanuginosum var thermale	Geysers dichanthelium	G5T1	NDDB
Dirca occidentalis	Western leatherwood	G2G3	NDDB
Draba carnosula	Mt. Eddy draba	G2	NDDB
Epilobium nivium	Snow mountain willowherb	G2	NDDB
Epilobium oreganum	Oregon fireweed	G2	NDDB
Erigeron angustatus	Narrow-leaved daisy	G2	NDDB
Erigeron cervinus		G3	ORHERIT
Erigeron serpentinus	Serpentine daisy	G1	NDDB
Erigeron supplex	Supple daisy	G1	NDDB
Eriogonum kelloggii	Kellogg's buckwheat	G1	NDDB
Eriogonum nervulosum	Snow mountain buckwheat	G2	NDDB
Eryngium constancei	Loch lomond button-celery	G1	NDDB
Erysimum menziesii ssp eurekense	Humboldt bay wallflower	G3T1	NDDB
Erysimum menziesii ssp menziesii	Menzies's wallflower	G3T2	NDDB
Fritillaria liliacea	Fragrant fritillary	G2	NDDB
Fritillaria pluriflora	Adobe-lily	G2	NDDB
Fritillaria roderickii	Roderick's fritillary	G1Q	NDDB
Gentiana setigera	Mendocino gentian	G2	NDDB
Hesperolinon adenophyllum	Glandular western flax	G2	NDDB
Hesperolinon bicarpellatum	Two-carpellate western flax	G2	NDDB
Hesperolinon breweri	Brewer's western flax	G2	NDDB
Hesperolinon didymocarpum	Lake county western flax	G1	NDDB
Hesperolinon drymarioides	Drymaria-like western flax	G1	NDDB
Hesperolinon sp nov "serpentinum"	Napa western flax	G1	NDDB
Horkelia bolanderi	Bolander's horkelia	G1	NDDB

Scientific name	Common name	Rank[1]	Source
Horkelia marinensis	Point reyes horkelia	G2	NDDB
Horkelia tenuiloba	Thin-lobed horkelia	G2	NDDB
Howellia aquatilis	Water howellia	G2	NDDB
Juglans hindsii	Northern california black walnut	G1	NDDB
Lasthenia burkei	Burke's goldfields	G1	NDDB
Lasthenia conjugens	Contra costa goldfields	G1	NDDB
Lasthenia macrantha ssp prisca		G3?	ORHERIT
Lathyrus biflorus	Two-flowered pea	G1	NDDB
Layia carnosa	Beach layia	G1	NDDB
Layia septentrionalis	Colusa layia	G2	NDDB
Legenere limosa	Legenere	G2	NDDB
Lessingia arachnoidea	Crystal springs lessingia	G1	NDDB
Lewisia cotyledon var purdyi		G4T?	ORHERIT
Lewisia stebbinsii	Stebbins's lewisia	G1	NDDB
Lilium maritimum	Coast lily	G2	NDDB
Lilium occidentale	Western lily	G1	NDDB
Lilium pardalinum ssp pitkinense	Pitkin marsh lily	G4T1	NDDB
Limnanthes bakeri	Baker's meadowfoam	G1	NDDB
Limnanthes vinculans	Sebastopol meadowfoam	G2	NDDB
Linanthus jepsonii	Jepson's linanthus	G1	NDDB
Lomatium engelmanii		G3	ORHERIT
Lupinus antoninus	Anthony peak lupine	G1	NDDB
Lupinus constancei	The lassics lupine	G1	NDDB
Lupinus milo-bakeri	Milo baker's lupine	G1Q	NDDB
Lupinus sericatus	Cobb mountain lupine	G2	NDDB
Lupinus tidestromii	Tidestrom's lupine	G2	NDDB
Madia hallii	Hall's madia	G2	NDDB
Minuartia decumbens	The lassics sandwort	G1	NDDB
Monardella villosa ssp globosa	Robust monardella	G5T1	NDDB
Montia howellii	Howell's montia	G2?	NDDB
Navarretia leucocephala ssp bakeri	Baker's navarretia	G3T2	NDDB
Navarretia leucocephala ssp pauciflora	Few-flowered navarretia	G3T1	NDDB
Navarretia leucocephala ssp plieantha	Many-flowered navarretia	G3T1	NDDB
Navarretia rosulata	Marin county navarretia	G2?	NDDB
Oenothera wolfii	Wolf's evening-primrose	G2	NDDB
Parvisedum leiocarpum	Lake county stonecrop	G1	NDDB
Penstemon newberryi var sonomensis	Sonoma beardtongue	G4T1	NDDB
Phacelia argentea	Sand dune phacelia	G2	NDDB
Phacelia insularis var continentis	North coast phacelia	G2T1	NDDB
Pinguicula vulgaris ssp macroceras	Horned butterwort	G5T2T3	NDDB
Pleuropogon hooverianus	North coast semaphore grass	G1	NDDB
Potamogeton foliosus var fibrillosus	Fibrous pondweed	G5T2T3	NDDB
Rhynchospora californica	California beaked-rush	G1	NDDB
Sedum eastwoodiae	Red mountain stonecrop	G1	NDDB
Sidalcea calycosa ssp rhizomata	Point reyes checkerbloom	G5T2	NDDB
Sidalcea hickmanii ssp viridis	Marin checkerbloom	G3T2	NDDB

Scientific name	Common name	Rank[1]	Source
Sidalcea malachroides	Maple-leaved checkerbloom	G2?	NDDB
Sidalcea malviflora ssp patula	Siskiyou checkerbloom	G5T1	NDDB
Sidalcea oregana ssp eximia	Coast checkerbloom	G5T1	NDDB
Sidalcea oregana ssp hydrophila	Marsh checkerbloom	G5T2	NDDB
Sidalcea oregana ssp valida	Kenwood marsh checkerbloom	G5T1	NDDB
Silene campanulata ssp campanulata	Red mountain catchfly	G5T1	NDDB
Smilax jamesii	English peak greenbriar	G2	NDDB
Streptanthus brachiatus ssp brachiatus	Socrates mine jewel-flower	G2T1	NDDB
Streptanthus brachiatus ssp hoffmanii	Freed's jewel-flower	G2T1	NDDB
Streptanthus glandulosus var hoffmanii	Secund jewel-flower	G4T1Q	NDDB
Streptanthus howellii	Howell's jewel-flower	G2	NDDB
Streptanthus morrisonii	See individual subspecies!	G2Q	NDDB
Thermopsis robusta	Robust false lupine	G2Q	NDDB
Thlaspi californicum	Kneeland prairie pennycress	G1	NDDB
Tracyina rostrata	Beaked tracyina	G1	NDDB
Trifolium amoenum	Showy indian clover	G1	NDDB
Trifolium buckwestiorum	Santa Cruz clover	G1	NDDB
Viola primulifolia ssp occidentalis	Western bog violet	G4T2	NDDB

[1] Rank reflects the overall condition (rarity and endangerment) of a target throughout its range. Ranks are defined by a global "G" rank and, if applicable, a subspecies "T" rank. CNDDB biology staff assign ranks as follows:
G1 or T1 = less than 6 known viable occurrences, 1,000 individuals, or 2,000 acres
G2 or T2 = 6-20 known occurrences, 1,000-3,000 individuals, or 2,000-10,000 acres
G3 or T3 = 21-100 known occurrences, 3,000-10,000 individuals, or 10,000-50,000 acres
G4 or T4 = Appearantly secure but factors exist to cause some concern such as threat or narrow distribution
G5 or T5 = Demonstrably secure due to wide distribution

[2] Scale refers to the spatial scale at which system targets can occur. L = local, typically small-patch communities restricted to less than ~2,000 acres; I = intermediate, large-patch communities or mosaics with dynamic boundaries determined by natural disturbances ranging in size from 2,000-50,000 acres; C = coarse, widespread matrix or dominant vegetation across landscape varying in size from 20,000-2,000,000 acres.

APPENDIX II: TARGET SPECIES IN PROVISIONAL PORTFOLIO

TARGET	NAME	GRANK	EO-COUNT	PORTFOLIO	PERCENT
APLODONTIA RUFA NIGRA	POINT ARENA MOUNTAIN BEAVER	G5T1	35	24	0.69
ARABIS KOEHLERI VAR STIPITATA	KOEHLER'S STIPITATE ROCK CRESS	G3T3	3	1	0.33
ARBORIMUS POMO	RED TREE VOLE	G4	180	122	0.68
ARCTOSTAPHYLOS BAKERI SSP BAKERI	BAKER'S MANZANITA	G2T2	7	1	0.14
ARCTOSTAPHYLOS CANESCENS SSP SONOMENSIS	SONOMA MANZANITA	G3T2	5	3	0.60
ARCTOSTAPHYLOS DENSIFLORA	VINE HILL MANZANITA	G1	3	1	0.33
ARCTOSTAPHYLOS STANFORDIANA SSP RAICHEI	RAICHE'S MANZANITA	G3T2?	2	1	0.50
ASCAPHUS TRUEI	TAILED FROG	G3G4	59	39	0.66
ASTRAGALUS AGNICIDUS	HUMBOLDT MILK-VETCH	G1	2	1	0.50
BLENNOSPERMA BAKERI	SONOMA SUNSHINE	G1	3	0	0.00
BLENNOSPERMA NANUM VAR ROBUSTUM	POINT REYES BLENNOSPERMA	G4T1	1	0	0.00
CAREX ALBIDA	WHITE SEDGE	G1	3	0	0.00
CEANOTHUS CONFUSUS	RINCON RIDGE CEANOTHUS	G5T2Q	12	8	0.67
CEANOTHUS DIVERGENS	CALISTOGA CEANOTHUS	G2	3	1	0.33
CEANOTHUS FOLIOSUS VAR VINEATUS	VINE HILL CEANOTHUS	G3T1	1	0	0.00
CHLOROGALUM POMERIDIANUM VAR MINUS	DWARF SOAPROOT	G5T1	1	0	0.00
CLARKIA IMBRICATA	VINE HILL CLARKIA	G1	3	0	0.00
CLEMMYS MARMORATA MARMORATA	NORTHWESTERN POND TURTLE	G4T4	25	17	0.68
CORDYLANTHUS TENUIS SSP CAPILLARIS	PENNELL'S BIRD'S-BEAK	G4T1	3	0	0.00
DESMOCERUS CALIFORNICUS DIMORPHUS	VALLEY ELDERBERRY LONGHORN BEETLE	G3T2	1	0	0.00
EPILOBIUM NIVIUM	SNOW MOUNTAIN WILLOWHERB	G2	3	1	0.33
ERIGERON ANGUSTATUS	NARROW-LEAVED DAISY	G2	1	0	0.00
ERYNGIUM CONSTANCEI	LOCH LOMOND BUTTON-CELERY	G1	3	2	0.67
ERYSIMUM MENZIESII SSP MENZIESII	MENZIES'S WALLFLOWER	G3T2	3	2	0.67
FRITILLARIA LILIACEA	FRAGRANT FRITILLARY	G2	1	0	0.00
FRITILLARIA RODERICKII	RODERICK'S FRITILLARY	G1Q	7	1	0.14

TARGET	NAME	GRANK	EO-COUNT	PORTFOLIO	PERCENT
HESPEROLINON ADENOPHYLLUM	GLANDULAR WESTERN FLAX	G2	4	2	0.50
HESPEROLINON BICARPELLATUM	TWO-CARPELLATE WESTERN FLAX	G2	6	1	0.17
HESPEROLINON BREWERI	BREWER'S WESTERN FLAX	G2	1	0	0.00
HESPEROLINON DIDYMOCARPUM	LAKE COUNTY WESTERN FLAX	G1	6	0	0.00
HORKELIA BOLANDERI	BOLANDER'S HORKELIA	G1	8	5	0.63
HORKELIA TENUILOBA	THIN-LOBED HORKELIA	G2	3	2	0.67
HYSTEROCARPUS TRASKI POMO	RUSSIAN RIVER TULE PERCH	G5T2?	3	2	0.67
LASTHENIA BURKEI	BURKE'S GOLDFIELDS	G1	17	3	0.18
LAYIA SEPTENTRIONALIS	COLUSA LAYIA	G2	7	5	0.71
LEGENERE LIMOSA	LEGENERE	G2	3	2	0.67
LESSINGIA ARACHNOIDEA	CRYSTAL SPRINGS LESSINGIA	G1	1	0	0.00
LILIUM MARITIMUM	COAST LILY	G2	42	25	0.60
LILIUM OCCIDENTALE	WESTERN LILY	G1	11	6	0.55
LILIUM PARDALINUM SSP PITKINENSE	PITKIN MARSH LILY	G4T1	1	0	0.00
LIMNANTHES VINCULANS	SEBASTOPOL MEADOWFOAM	G2	3	2	0.67
LINDERIELLA OCCIDENTALIS	CALIFORNIA LINDERIELLA	G2G3	1	0	0.00
LUPINUS ANTONINUS	ANTHONY PEAK LUPINE	G1	3	2	0.67
LUPINUS MILO-BAKERI	MILO BAKER'S LUPINE	G1Q	16	3	0.19
LUPINUS SERICATUS	COBB MOUNTAIN LUPINE	G2	13	7	0.54
MADIA HALLII	HALL'S MADIA	G2	8	5	0.63
MARTES PENNANTI PACIFICA	PACIFIC FISHER	G3G4	25	12	0.48
NAVARRETIA LEUCOCEPHALA SSP BAKERI	BAKER'S NAVARRETIA	G3T2	5	2	0.40
NAVARRETIA LEUCOCEPHALA SSP PLIEANTHA	MANY-FLOWERED NAVARRETIA	G3T1	7	5	0.71
NAVARRETIA MYERSII SSP DEMINUTA		G1T1	1	0	0.00
ONCORHYNCHUS CLARKI CLARKI	COAST CUTTHROAT TROUT	G4T4	24	16	0.67
PARVISEDUM LEIOCARPUM	LAKE COUNTY STONECROP	G1	4	2	0.50
PENSTEMON NEWBERRYI VAR SONOMENSIS	SONOMA BEARDTONGUE	G4T1	2	1	0.50
PLETHODON ELONGATUS	DEL NORTE SALAMANDER	G3	72	34	0.47

TARGET	NAME	GRANK	EO-COUNT	PORTFOLIO	PERCENT
PLEUROPOGON HOOVERIANUS	NORTH COAST SEMAPHORE GRASS	G1	2	1	0.50
RANA AURORA AURORA	NORTHERN RED-LEGGED FROG	G4T2?	29	13	0.45
RANA AURORA DRAYTONII	CALIFORNIA RED-LEGGED FROG	G4T2T3	3	2	0.67
RANA BOYLII	FOOTHILL YELLOW-LEGGED FROG	G3	61	44	0.72
RHYACOTRITON VARIEGATUS	SOUTHERN TORRENT (=SEEP) SALAMANDER	G4	112	58	0.52
RHYNCHOSPORA CALIFORNICA	CALIFORNIA BEAKED-RUSH	G1	1	0	0.00
SIDALCEA MALVIFLORA SSP PATULA	SISKIYOU CHECKERBLOOM	G5T1	1	0	0.00
SPEYERIA ZERENE HIPPOLYTA	OREGON SILVERSPOT BUTTERFLY	G5T1	3	2	0.67
STREPTANTHUS BRACHIATUS SSP BRACHIATUS	SOCRATES MINE JEWEL-FLOWER	G2T1	4	2	0.50
STREPTANTHUS BRACHIATUS SSP HOFFMANII	FREED'S JEWEL-FLOWER	G2T1	5	1	0.20
THERMOPSIS ROBUSTA	ROBUST FALSE LUPINE	G2Q	4	2	0.50
TRACYINA ROSTRATA	BEAKED TRACYINA	G1	7	0	0.00

APPENDIX III: PORTFOLIO CONSERVATION AREA PROFILES

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
3	1	Aetna Springs	ASTRAGALUS RATTANII VAR JEPSONIANUS	1- EOs	CNDDB	
			Blue Oak Woodland		CALVEG	
			CEANOTHUS CONFUSUS	1- EOs	CNDDB	
			HESPEROLINON BICARPELLATUM	1- EOs	CNDDB	
			HESPEROLINON SP NOV "SERPENTINUM"	2- EOs	CNDDB	
			Mixed North Slope Cismontane Woodland		Calveg	
			Northern Mixed Chaparral		Calveg	
			NORTHERN SPOTTED OWL	1- EOs	CNDDB	
			SERPENTINE BUNCHGRASS	1- EOs	CNDDB	
			STREPTANTHUS MORRISONII	2- EOs	CNDDB	
8	1	Baldy Peak	ARABIS KOEHLERI VAR STIPITATA	1- EOs	CNDDB	
			Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			DRABA CARNOSULA	1- EOs	CNDDB	
			Mixed Evergreen Forest		Calveg	
			Montane Mixed Chaparral		Calveg	
			NORTHERN SPOTTED OWL	7- EOs	CNDDB	
			Port Orford Cedar Forest	LARGEST STAND - AT YOUNG'S VALLEY (?)	Sawyer	
			Red Fir Forest		CALVEG	
			RUBUS NIVALIS	1- EOs	CNDDB	
			Sierran Mixed Coniferous Forest	ONLY EXAMPLE OF SUFFICIENT QUANTITY IN NORTHERN SUBREGION	Sawyer	Calveg
			Siskiyou Enriched Coniferous Forest		Six Rivers National Forest	Sawyer
			UPPER MONTANE CONIFEROUS FOREST	DEL NORTE RACE	Sawyer	
			Wet/Montane Meadow		CALVEG	
9	1	Balm of Gilead Creek	Coast Range Mixed Coniferous Forest		Calveg	
			LEWISIA STEBBINSII	1- EOs	CNDDB	
			Montane Mixed Chaparral		Calveg	
			NORTHERN SPOTTED OWL	6- Eos Excellent habitat	CNDDB	Dunk
			Red Fir Forest		CALVEG	
			Sierran Mixed Coniferous Forest		Calveg	
			Wet/Montane Meadow		CALVEG	
10	1	Bear Creek	Coastal and Valley Freshwater Marsh		Kolb	
			Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			NORTHERN SPOTTED OWL	2- EOs	CNDDB	
			PACIFIC FISHER	Predicted high suitability	Carroll	
13	1	Big Bend	Annual Grassland		Calveg	
			Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			Mixed Evergreen Forest		Calveg	
			Montane Mixed Chaparral		Calveg	
			NORTHERN SPOTTED OWL	4- Eos LSR	CNDDB	Six Rivers National Forest

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			PACIFIC FISHER	Predicted high suitability	Carroll	
			RED TREE VOLE	5- EOs	CNDDB	
			Sierran Mixed Coniferous Forest		Calveg	Walsh
			THLASPI CALIFORNICUM	1- EOs	CNDDB	
			UPLAND DOUGLAS FIR FOREST	1- EOs	CNDDB	
14	1	Big Sulpher Creek	CEANOTHUS DIVERGENS	1- EOs	CNDDB	
			DICHANTHELIUM LANUGINOSUM VAR THERMALE	7- EOs	CNDDB	
			ERIOGONUM NERVULOSUM	2- EOs	CNDDB	
			LAYIA SEPTENTRIONALIS	1- EOs	CNDDB	
			LUPINUS SERICATUS	2- EOs	CNDDB	
			Mixed Evergreen Forest		Calveg	
			Mixed North Slope Cismontane Woodland		Calveg	
			Northern Mixed Chaparral		Calveg	
			STREPTANTHUS BRACHIATUS SSP BRACHIATUS	2- EOs	CNDDB	
			STREPTANTHUS BRACHIATUS SSP HOFFMANII	1- EOs	CNDDB	
			STREPTANTHUS MORRISONII	1- EOs	CNDDB	
15	1	Blue Creek	BALD EAGLE	1- EOs	CNDDB	
			Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			EPILOBIUM OREGANUM	1- EOs	CNDDB	
			MARBLED MURRELET	ALSO ON BLUFF CREEK TO EAST	Six Rivers National Forest	
			Mixed Evergreen Forest		Calveg	
			Montane Mixed Chaparral		Calveg	
			NORTHERN SPOTTED OWL	10- Eos, LSR	CNDDB	Six Rivers National Forest
			PACIFIC FISHER	3- EOs, Predicted high suitability	CNDDB	
			Port Orford Cedar Forest	TARGET ELEMENT FOR RNA	Keeler-Wolf (199) RNA	Walsh
			Red Fir Forest	may be Abies procera	Sawyer	
			Sierran Mixed Coniferous Forest		Calveg	
			Siskiyou Enriched Coniferous Forest		Sawyer	
			SMILAX JAMESII	1- EOs	CNDDB	
			THERMOPSIS ROBUSTA	2- EOs	CNDDB	
			Ultramafic Mixed Conifer Forest		CALVEG	
			Upper Montane Coniferous Forest		CALVEG	
22	1	Bull Creek	Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			MARBLED MURRELET	1 OF 5 CRITICAL LOCATIONS	FWS-Arcata	
			Mixed Evergreen Forest		Calveg	
			OTHER	RARE PLANTS: HOWELL'S MONTIA, MAPLE-LEAVED CHECKERBLOOM, ROBUST	State Park (2000)	

AREA_ CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
				MONARDELLA	Humboldt Redwoods State	
			PACIFIC FISHER	Predicted high suitability	Carroll	
			Red Fescue Grassland	SOUTHERN LIMIT	Sawyer	
			RED TREE VOLE	1- EOs	CNDDB	
27	1	Casoose Creek	Coast Range Mixed Coniferous Forest		Calveg	
			Foothill Pine-Oak Woodland		CALVEG	
			Montane Mixed Chaparral		Calveg	
			NORTHERN SPOTTED OWL	3- EOs	CNDDB	
			Sierran Mixed Coniferous Forest		Calveg	
32	1	Coastside Gualala River	Annual Grassland		Calveg	
			BEACH/SHORE PINE	6,000 ACRES OF CLOSED CONE PINE	Flowers	
			Bishop Pine	6,000 ACRES OF CLOSED CONE PINE	Flowers	CALVEG
			CAMPANULA CALIFORNICA	2- EOs	CNDDB	
			CASTILLEJA MENDOCINENSIS	1- EOs	CNDDB	
			CHORIZANTHE VALIDA	1- EOs	CNDDB	
			COASTAL TERRACE PRAIRIE	3- EOs	CNDDB	
			CUPRESSUS GOVENIANA SSP PIGMAEA	1- EOs	CNDDB	
			ERIGERON SUPPLEX	3- EOs	CNDDB	
			Grand Fir/Sitka Spruce		Flowers	
			LILIUM MARITIMUM	5- EOs	CNDDB	
			MARBLED MURRELET		FWS-Arcata	
			MENDOCINO PYGMY CYPRESS FOREST	1- EOs	CNDDB	
			Northern Coastal Bluff Scrub		Flowers	
			Northern Coastal Scrub		Flowers	
			NORTHERN SPOTTED OWL	1- EOs, LSR	CNDDB	
			RED TREE VOLE	4- EOs	CNDDB	
			SIDALCEA CALYCOSA SSP RHIZOMATA	1- EOs	CNDDB	
			SIDALCEA MALACHROIDES	4- EOs	CNDDB	
			VAUX'S SWIFT	PROBABLY	FWS-Arcata	
33	1	Coastside King Range	Annual Grassland		Calveg	
			Bald Hills Prairie		Kolb	
			Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			Coastal Terrace Prairie	EXTENDS UP TO CAPE MENDOCINO. GRAZED (HISTORIC SHEEP GRAZING)	BLM-Arcata Field Office	
			Mixed Evergreen Forest		Calveg	
			Northern Coastal Bluff Scrub		Kolb	
			Northern Coastal Scrub		BLM-Arcata Field Office	
34	2	Cobbs	North Coast Black Cottonwood Riparian Forest		Six Rivers National Forest	

AREA_ CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			NORTHERN SPOTTED OWL	9- Eos, LSR	CNDDB	Six Rivers National Forest
			Oregon Oak Woodland		Calveg	
			RED TREE VOLE	1- EOs	CNDDB	
36	3	Cole Creek	CALIFORNIA LINDERIELLA	Very good population. Since the lake dries up periodiclly (not every year) fish predation is not significant. Occasionally someone puts in a few fish (Larry Serpa).	Serpa	
			Coast Range Mixed Coniferous Forest		Calveg	
			COASTAL AND INTERIOR WETLAND		Mangan	
			ERYNGIUM CONSTANCEI	1- EOs	CNDDB	
			HORKELIA BOLANDERI	2- EOs	CNDDB	
			LEGENERE LIMOSA	1- EOs	CNDDB	
			NAVARRETIA LEUCOCEPHALA SSP PAUCIFLORA	1- EOs	CNDDB	
			NAVARRETIA LEUCOCEPHALA SSP PLIEANTHA	3- EOs	CNDDB	
			Northern Mixed Chaparral		Calveg	
			Northern Vernal Pool	BOGGS LAKE UNUSUAL BECAUSE SET IN A DENSE MIXED CONIFER FOREST DOMINATED BY PONDEROSA PINE AND BLACK OAK. OTHER VP EAST OF MT. HANNA LODGE	TNC FILES	CNDDB
			OTHER	THE RETREATING SHORELINE SUPPORTS ONE OF THE GREATEST DIVERSITIES OF RARE AND ENDANGERED PLANTS IN THE STATE	TNC FILES	
			SERPENTINE CHAPARRAL		TNC FILES	
41	3	Davis Creek	Annual Grassland		Calveg	
			Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			LIMNANTHES BAKERI	10- EOs	CNDDB	
			Mixed Evergreen Forest		Calveg	
			NORTHERN SPOTTED OWL	1- EOs	CNDDB	
			Oregon Oak Woodland		Calveg	
			RED TREE VOLE	3- EOs	CNDDB	
			Valley Oak Woodland		CALVEG	
42	1	Deadman Canyon	ASTRAGALUS RATTANII VAR JEPSONIANUS	1- EOs	CNDDB	
			Blue Oak Woodland	AT PAYNE RANCH 75% NATIVE OAKS AND GRASSLAND. AT WILSON VALLEY, BLM ACQUIRED VALLEY OAKS IN BOTTOM, BOW IN RIPARIAN, ON DFG PURCHASE LAND, BOW ARE EVEN AGED, LOTS OF FIREWOOD CUTTING AND PAST GRAZING. EXTENSIVE REGENERATION.	Mangan	CALVEG
			FRITILLARIA PLURIFLORA	3- EOs	CNDDB	

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			Northern Interior Cypress Forest		Mangan	
			Northern Mixed Chaparral		Calveg	
			OTHER	TULE ELK, DEER, BLACK BEAR, FURBEARS (RIVER OTTERS, BEAVER), RAPTOR USE (HIGH USE/NESTING AT BLUE RIDGE)	Mangan	
			Serpentine Chaparral		Mangan	CALVEG
			Valley Needlegrass Grassland	NATIVE GRASSLAND AT PAYNE RANCH	Mangan	
			Valley Oak Woodland	AT PAYNE RANCH 75% NATIVE OAKS AND GRASSLAND. EXTENSIVE REGENERATION. HISTORICALLY OVERGRAZED. AT WILSON VALLEY, BLM ACQUIRED VALLEY OAKS IN BOTTOM, BOW IN RIPARIAN, ON DFG PURCHASE LAND, BO ARE EVEN AGED, AT PAYNE RANCH, LOTS OF FIREWOOD CUTTING	Mangan	
			Wet/Montane Meadow	ALKALINE PONDS/CREEK AT WILBUR SPRINGS. SALT CEDAR, ARRUNDO, TAMARISK	Mangan	
43	1	E. Branch S. Fork Eel Riv	Annual Grassland		Calveg	
			ARABIS MACDONALDIANA	1- EOs	CNDDB	
			ARCTOSTAPHYLOS CANESCENS SSP SONOMENSIS	1- EOs	CNDDB	
			Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			ERIOGONUM KELLOGGII	3- EOs	CNDDB	
			GENTIANA SETIGERA	1- EOs	CNDDB	
			Mixed Evergreen Forest		Calveg	
			NORTHERN INTERIOR CYPRESS FOREST	1- EOs	CNDDB	
			Oregon Oak Woodland		Calveg	
			RED TREE VOLE	1- EOs	CNDDB	
			SEDUM EASTWOODIAE	2- EOs	CNDDB	
			SILENE CAMPANULATA SSP CAMPANULATA	3- EOs	CNDDB	
46	1	Eightmile Ridge	Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			NORTHERN SPOTTED OWL	9- Eos, Excellent habitat	CNDDB	Dunk
			Oregon Oak Woodland		Calveg	
			Red Fir Forest		CALVEG	
			Sierran Mixed Coniferous Forest		Calveg	
49	1	Everts Ridge	Annual Grassland		Calveg	
			Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			Mixed Evergreen Forest		Calveg	
			NORTHERN SPOTTED OWL	1- EOs	CNDDB	
			PACIFIC FISHER	Predicted high suitability	Carroll	
55	1	Gasquet	ASPLENIUM TRICHOMANES SSP TRICHOMANES	1- EOs	CNDDB	
			BLACK SWIFT	1- EOs	CNDDB	

AREA_ CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			BOSCHNIAKIA HOOKERI	1- EOs	CNDDB	
			CARDAMINE NUTTALLII VAR GEMMATA	1- EOs	CNDDB	
			Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			LEWISIA OPPOSITIFOLIA	3- EOs	CNDDB	
			NORTHERN SPOTTED OWL	5- EOs	CNDDB	
			PINGUICULA VULGARIS SSP MACROCERAS	1- EOs	CNDDB	
			Ultramafic Mixed Conifer Forest		CALVEG	
			VIOLA PRIMULIFOLIA SSP OCCIDENTALIS	5- EOs	CNDDB	
56	2	Goose Creek	Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			Mixed Evergreen Forest		Calveg	
			North Coast Riparian Forest and Scrub		Keeler-Wolf (1990)	
			NORTHERN SPOTTED OWL	2- Eos, LSR	CNDDB	Six Rivers National Forest
			Port Orford Cedar Forest	Riparian areas characterized by very large indv of poc, douglas fir and western hemlock. Ages of largest poc may exceed 1000 yrs. Threat: root rot	Keeler-Wolf (1990)	
			Ultramafic Mixed Conifer Forest		CALVEG	
59	1	Hammerhorn Ridge	Coast Range Mixed Coniferous Forest		Calveg	
			EPILOBIUM OREGANUM	1- EOs	CNDDB	
			HOWELLIA AQUATILIS	3- EOs	CNDDB	
			LEWISIA STEBBINSII	1- EOs	CNDDB	
			LUPINUS ANTONINUS	1- EOs	CNDDB	
			Montane Mixed Chaparral		Calveg	
			NORTHERN SPOTTED OWL	8- Eos, Excellent habitat	CNDDB	Dunk
			Red Fir Forest		CALVEG	
			Sierran Mixed Coniferous Forest		Calveg	
			Wet/Montane Meadow		CALVEG	
60	1	Headwaters Mad River	Coast Range Mixed Coniferous Forest		Calveg	
			Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			Mixed North Slope Cismontane Woodland		Calveg	
			Montane Mixed Chaparral		Calveg	
			Northern Mixed Chaparral		Calveg	
			NORTHERN SPOTTED OWL	15- Eos, Small LSR, Excellent habitat	CNDDB	Dunk
			Oregon Oak Woodland		Calveg	
			Sierran Mixed Coniferous Forest		Calveg	
62	1	Headwaters N. Fork Eel R.	Coast Range Mixed Coniferous Forest		Calveg	
			Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			Mixed Evergreen Forest		Calveg	
			Montane Mixed Chaparral		Calveg	
			Northern Mixed Chaparral		Calveg	

AREA_ CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			NORTHERN SPOTTED OWL	6- Eos, LSR	CNDDB	Six Rivers
						National Forest
			Oregon Oak Woodland		Calveg	
71	1	Honeydew	Annual Grassland		Calveg	
			Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			Mixed Evergreen Forest		Calveg	
			NORTHERN SPOTTED OWL	2- EOs	CNDDB	
			PACIFIC FISHER	Predicted high suitability	Carroll	
			RED TREE VOLE	1- EOs	CNDDB	
73	1	Howard Lake	Blue Oak Woodland		CALVEG	
			Coast Range Mixed Coniferous Forest		Calveg	
			EPILOBIUM OREGANUM	1- EOs	CNDDB	
			HOWELLIA AQUATILIS	2- EOs	CNDDB	
			LUPINUS ANTONINUS	1- EOs	CNDDB	
			Montane Mixed Chaparral		Calveg	
			NORTHERN SPOTTED OWL	15- EOs	CNDDB	
			Red Fir Forest		CALVEG	
			Sierran Mixed Coniferous Forest		Calveg	
74	1	Hulls Creek	Annual Grassland		Calveg	
			Coast Range Mixed Coniferous Forest		Calveg	
			Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			LIMNANTHES BAKERI	2- EOs	CNDDB	
			Mixed Evergreen Forest		Calveg	
			Mixed North Slope Cismontane Woodland		Calveg	
			Montane Mixed Chaparral		Calveg	
			NORTHERN SPOTTED OWL	6- EOs	CNDDB	
			Oregon Oak Woodland		Calveg	
			UPLAND DOUGLAS FIR FOREST	1- EOs	CNDDB	
75	2	Hurdygurdy Creek	CAREX LEPTALEA	1- EOs	CNDDB	
			Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			LEWISIA OPPOSITIFOLIA	1- EOs	CNDDB	
			Mixed Evergreen Forest		Calveg	
			NORTHERN SPOTTED OWL	6- Eos, LSR	CNDDB	Six Rivers
						National Forest
			Ultramafic Mixed Conifer Forest		CALVEG	
76	1	Indian Creek	Annual Grassland		Calveg	
			Coastal Douglas Fir	SCATTERED	Mangan	
			Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			Mixed Evergreen Forest		Calveg	
			Mixed North Slope Cismontane Woodland		Calveg	
			NORTHERN SPOTTED OWL	7- EOs	CNDDB	Mangan
			RED TREE VOLE	6- EOs	CNDDB	
80	1	Jericho Canyon	Annual Grassland		Calveg	

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			ASTRAGALUS RATTANII VAR JEPSONIANUS	1- EOs	CNDDB	
			Blue Oak Woodland		Mangan	CALVEG
			FRITILLARIA PLURIFLORA	6- EOs	CNDDB	
			HESPEROLINON DRYMARIOIDES	3- EOs	CNDDB	
			MADIA HALLII	2- EOs	CNDDB	
			Montane Mixed Chaparral		Calveg	
			NORTHERN INTERIOR CYPRESS FOREST	5- EOs	CNDDB	CALVEG
			Northern Mixed Chaparral		Calveg	
			SERPENTINE BUNCHGRASS	1- EOs	CNDDB	
			SERPENTINE CHAPARRAL	ALSO SERPENTINE BARRENS, NO OHV	Mangan	CALVEG
			Serpentine Chaparral		CALVEG	
			STREPTANTHUS MORRISONII	6- EOs	CNDDB	
84	1	Kekawaka Creek	Annual Grassland		Calveg	
			Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			Mixed Evergreen Forest		Calveg	
			NORTHERN SPOTTED OWL	3- EOs	CNDDB	
			Oregon Oak Woodland		Calveg	
			RED TREE VOLE	3- EOs	CNDDB	
			UPLAND DOUGLAS FIR FOREST	1- EOs	CNDDB	
			Wet or Montane Meadows		CALVEG	
87	1	Knights Valley	Annual Grassland		Calveg	
			CEANOTHUS CONFUSUS	1- EOs	CNDDB	
			LIMNANTHES VINCULANS	1- EOs	CNDDB	
			LUPINUS SERICATUS	1- EOs	CNDDB	
			Mixed North Slope Cismontane Woodland		Calveg	
			Northern Mixed Chaparral		Calveg	
			NORTHERN SPOTTED OWL	2- EOs	CNDDB	
			PENSTEMON NEWBERRYI VAR SONOMENSIS	1- EOs	CNDDB	
			SIDALCEA OREGANA SSP HYDROPHILA	1- EOs	CNDDB	
			SIDALCEA OREGANA SSP VALIDA	1- EOs	CNDDB	
94	3	Largo	Annual Grassland		Calveg	
			Blue Oak Woodland		BLM-Ukiah Field Office	CALVEG
			LAYIA SEPTENTRIONALIS	1- EOs	CNDDB	
			Mixed North Slope Cismontane Woodland		Calveg	
			Oregon Oak Woodland		Calveg	
97	1	Little Van Duzen River	Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			EPILOBIUM OREGANUM	1- EOs	CNDDB	
			LATHYRUS BIFLORUS	1- EOs	CNDDB	
			LUPINUS CONSTANCEI	1- EOs	CNDDB	
			Mixed Evergreen Forest		Calveg	

AREA_ CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			NORTHERN SPOTTED OWL	6- Eos, LSR	CNDDB	Six Rivers National Forest
			Oregon Oak Woodland		Calveg	
			PACIFIC FISHER	Predicted high suitability	Carroll	
			Sierran Mixed Coniferous Forest		Calveg	
			UPLAND DOUGLAS FIR FOREST	1- EOs	CNDDB	
			Upper Montane Coniferous Forest		CALVEG	
98	1	Long Ridge	Coast Range Mixed Coniferous Forest		Calveg	
			Mixed North Slope Cismontane Woodland		Calveg	
			Montane Mixed Chaparral		Calveg	
			Northern Mixed Chaparral		Calveg	
			NORTHERN SPOTTED OWL	6- EOs	CNDDB	
			Oregon Oak Woodland		Calveg	
99	1	Long Valley	Annual Grassland		Calveg	
			Blue Oak Woodland		CALVEG	
			Coast Range Mixed Coniferous Forest		Calveg	
			Foothill Pine - Oak Woodland		CALVEG	
			FRITILLARIA PLURIFLORA	1- EOs	CNDDB	
			Mixed North Slope Cismontane Woodland		Calveg	
			Montane Mixed Chaparral		Calveg	
			Northern Mixed Chaparral		Calveg	
			NORTHERN SPOTTED OWL	2- EOs	CNDDB	
100	1	Longvale	Annual Grassland		Calveg	
			Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			Mixed Evergreen Forest		Calveg	
			Mixed North Slope Cismontane Woodland		Calveg	
			NORTHERN SPOTTED OWL	1- EOs	CNDDB	
			Oregon Oak Woodland		Calveg	
			PLEUROPOGON HOOVERIANUS	1- EOs	CNDDB	
102	1	Lower Bear Valley	Annual Grassland		Calveg	
			ASTRAGALUS RATTANII VAR JEPSONIANUS	2- EOs	CNDDB	
			BALSAMORHIZA MACROLEPIS VAR MACROLEPIS	1- EOs	CNDDB	
			Blue Oak Woodland		CALVEG	
			BRODIAEA CORONARIA SSP ROSEA	1- EOs	CNDDB	
			FRITILLARIA PLURIFLORA	14- EOs	CNDDB	
			LAYIA SEPTENTRIONALIS	1- EOs	CNDDB	
			LUPINUS MILO-BAKERI	1- EOs	CNDDB	
			Northern Interior Cypress Forest		Mangan	
			Northern Mixed Chaparral		Calveg	
			OTHER	RARE PLANTS: INDIAN VALLEY BRODIAEA - MAJOR POPULATION, ADOBE-LILY	Mangan	
			SERPENTINE BARRENS	LARGE NUMBER OF SERPENTINE ENDEMICS	Mangan	

AREA_ CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			Serpentine Chaparral	PART OF LARGE OUTCROP WITH HIGH DIVERSITY	Mangan	
			Serpentine Foothill Pine-Chaparral Woodland		Sawyer	
			Wilflower Field		Sawyer	
104	1	Lower Black Butte River	Blue Oak Woodland		CALVEG	
			Coast Range Mixed Coniferous Forest		Calveg	
			LUPINUS ANTONINUS	1- EOs	CNDDB	
			Mixed Evergreen Forest		Calveg	
			Mixed North Slope Cismontane Woodland		Calveg	
			Montane Mixed Chaparral		Calveg	
			NORTHERN SPOTTED OWL	4- EOs	CNDDB	
			Oregon Oak Woodland		Calveg	
			Red Fir Forest		CALVEG	
105	1	Lower Elk Creek	Annual Grassland		Calveg	
			ARCTOSTAPHYLOS CANESCENS SSP SONOMENSIS	1- EOs	CNDDB	
			Coast Range Mixed Coniferous Forest		Calveg	
			Montane Mixed Chaparral		Calveg	
			Northern Interior Cypress Forest	Sargent Cypress- 70' tall - unique. LARGEST STAND. MOST EXTENSIVE STAND OF SARGENT	BLM-Arcata Field Office	Sawyer
			Northern Mixed Chaparral		Calveg	
			NORTHERN SPOTTED OWL	3- EOs	CNDDB	
			Oregon Oak Woodland		Calveg	
			SERPENTINE CHAPARRAL		BLM-Arcata Field Office	CALVEG
			Valley Oak Woodland		CALVEG	
			Wet/Montane Meadow		CALVEG	
109	1	Lower Mattole River	Annual Grassland		Calveg	
			Beaches and Coastal Dunes	NORTHERN END RECENTLY PLANTED WITH EURO BEACH GRASS	Pickart	Zuckerman
			COASTAL DOUGLAS FIR WESTERN HEMLOCK FOREST	1- EOs	CNDDB	Calveg
			Coastal Wetland		FWS-Arcata	
			Grand Fir/Sitka Spruce		CALVEG	
			LAYIA CARNOSA	1- EOs	CNDDB	
			Mixed Evergreen Forest		Calveg	
			Northern Coastal Scrub		CALVEG	
			NORTHERN SPOTTED OWL	1- EOs	CNDDB	
			PACIFIC FISHER	Predicted high suitability	Carroll	
			SIDALCEA MALACHROIDES	1- EOs	CNDDB	
			WESTERN SNOWY PLOVER	WINTERING AREA - ONE OF 5 KEY LOCATIONS CITED BY USFWS	FWS-Arcata	

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
110	1	Lower Middle Fork Eel	Annual Grassland		Calveg	
			Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			Mixed North Slope Cismontane Woodland		Calveg	
			Northern Interior Cypress Forest	sargent cypress	BLM-Arcata Field Office	CALVEG
			Oregon Oak Woodland		Calveg	
			SERPENTINE CHAPARRAL		BLM-Arcata Field Office	CALVEG
			UPLAND DOUGLAS FIR FOREST	1- EOs	CNDDB	
111	1	Lower N. Fork Eel River	Annual Grassland		Calveg	
			Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			Mixed Evergreen Forest		Calveg	
			Mixed North Slope Cismontane Woodland		Calveg	
			NORTHERN SPOTTED OWL	2- EOs	CNDDB	
			Oregon Oak Woodland		Calveg	
			RED TREE VOLE	1- EOs	CNDDB	
113	1	Lower Navarro River	Annual Grassland		Calveg	
			GRAND FIR FOREST	1- EOs	CNDDB	
			LILIUM MARITIMUM	1- EOs	CNDDB	
			MARBLED MURRELET	MAYBE	FWS-Arcata	
			Mixed Evergreen Forest		Calveg	
			Northern Coastal Scrub		Calveg	
			Northern Maritime Chaparral		CALVEG	
			NORTHERN SPOTTED OWL		Flowers	
			RED TREE VOLE	3- EOs	CNDDB	
115	1	Lower Rice Fork	Coast Range Mixed Coniferous Forest		Calveg	
			HESPEROLINON ADENOPHYLLUM	1- EOs	CNDDB	
			HESPEROLINON DRYMARIOIDES	2- EOs	CNDDB	
			Mixed Evergreen Forest		Calveg	
			Mixed North Slope Cismontane Woodland		Calveg	
			Montane Mixed Chaparral		Calveg	
			Northern Mixed Chaparral		Calveg	
			NORTHERN SPOTTED OWL	3- EOs	CNDDB	
			SIDALCEA OREGANA SSP HYDROPHILA	1- EOs	CNDDB	
116	1	Lower S. Fork Eel River	ARABIS MACDONALDIANA	2- EOs	CNDDB	
			ARCTOSTAPHYLOS CANESCENS SSP SONOMENSIS	1- EOs	CNDDB	
			Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			ERIOGONUM KELLOGGII	2- EOs	CNDDB	
			NORTHERN INTERIOR CYPRESS FOREST	1- EOs	CNDDB	

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			NORTHERN SPOTTED OWL	4- EOs	CNDDB	
			PACIFIC FISHER	Predicted high suitability	Carroll	
			SEDUM EASTWOODIAE	2- EOs	CNDDB	
			SILENE CAMPANULATA SSP CAMPANULATA	4- EOs	CNDDB	
			UPLAND DOUGLAS FIR FOREST	2- EOs	CNDDB	
118	1	Lower S. Fork Smith River	BLACK SWIFT	1- EOs	CNDDB	
			Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			LEWISIA OPPOSITIFOLIA	3- EOs	CNDDB	
			Mixed Evergreen Forest		Calveg	
			NORTHERN SPOTTED OWL	6- Eos, LSR	CNDDB	
			SAXIFRAGA NUTTALLII	1- EOs	CNDDB	
			Ultramafic Mixed Conifer Forest		CALVEG	
120	1	Lower Ten Mile Creek	Annual Grassland		Calveg	
			LIMNANTHES BAKERI	1- EOs	CNDDB	
			Mixed Evergreen Forest		Calveg	
			NORTHERN SPOTTED OWL	2- EOs	CNDDB	
			RED TREE VOLE	1- EOs	CNDDB	
			UPLAND DOUGLAS FIR FOREST	1- EOs	CNDDB	
122	1	Lower Wheatfield Fork	Annual Grassland		Calveg	
			Mixed Evergreen Forest		Calveg	
			NORTHERN SPOTTED OWL	10- EOs	CNDDB	
			RED TREE VOLE	3- EOs	CNDDB	
126	1	Maxwell Creek	Annual Grassland		Calveg	
			Blue Oak Woodland	ON PRIVATE LANDS SURROUNDING BLM LAND	Mangan	CALVEG
			LINANTHUS JEPSONII	1- EOs	CNDDB	
			LUPINUS SERICATUS	2- EOs	CNDDB	
			Mixed North Slope Cismontane Woodland		Calveg	
			NAVARRETIA LEUCOCEPHALA SSP BAKERI	1- EOs	CNDDB	
			NAVARRETIA ROSULATA	1- EOs	CNDDB	
			Northern Interior Cypress Forest	3K ACRES - LARGEST GENETICALLY PURE STAND - BOTANICALLY UNIQUE	Mangan	
			Northern Mixed Chaparral		Calveg	
			NORTHERN SPOTTED OWL	1- EOs	CNDDB	
			Northern Vernal Pool		CNDDB	
			Serpentine Chaparral	INCL LEATHER OAK AND WHITE MANZANITA, ETC	Mangan	
			SIDALCEA OREGANA SSP HYDROPHILA	1- EOs	CNDDB	
			Valley Oak Woodland		CALVEG	
130	1	Middle Black Butte River	Coast Range Mixed Coniferous Forest		Calveg	

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			GREAT GRAY OWL	1- EOs	CNDDB	
			LEWISIA STEBBINSII	4- EOs	CNDDB	
			Montane Mixed Chaparral		Calveg	
			NORTHERN SPOTTED OWL	13- EOs	CNDDB	
			Red Fir Forest		CALVEG	
			SIDALCEA OREGANA SSP HYDROPHILA	4- EOs	CNDDB	
			Sierran Mixed Coniferous Forest		Calveg	
			VALLEY NEEDLEGRASS GRASSLAND	1- EOs	CNDDB	
			Wet or Montane Meadows		CALVEG	
134	1	Middle Yager creek	MCDONALD'S ROCK CRESS		FWS-Arcata	
			Mixed Evergreen Forest		Calveg	
			NORTHERN SPOTTED OWL		BLM-Arcata Field Office	
			NORTHERN SPOTTED OWL	3- EOs	CNDDB	
			PACIFIC FISHER	Predicted high suitability	Carroll	
			RED TREE VOLE	2- EOs	CNDDB	
			THLASPI CALIFORNICUM	1- EOs	CNDDB	
			Upland Douglas Fir Forest	LSR - DOUGLAS FIR/MIXED EVERGREEN. GOOD WATER SOURCE	BLM-Arcata Field Office	CNDDB
143	1	N. Fork Mattole	Annual Grassland		Calveg	
			Bald Hills Prairie		Evenson	Walsh
			Coastal Douglas Fir - Western Hemlock Forest	Rainbow Ridge is largest old growth lowland douglas fir. Owned by Palco	Walsh	Evenson
			NORTHERN SPOTTED OWL	1- EOs	CNDDB	
			PACIFIC FISHER	Predicted high suitability	Carroll	
			RED TREE VOLE	1- EOs	CNDDB	Evenson
147	1	North of Round Valley	Annual Grassland		Calveg	
			Coast Range Mixed Coniferous Forest		Calveg	
			LIMNANTHES BAKERI	3- EOs	CNDDB	
			LUPINUS MILO-BAKERI	1- EOs	CNDDB	
			NORTHERN SPOTTED OWL	1- EOs	CNDDB	
			Oregon Oak Woodland		Calveg	
			Ultramafic Mixed Conifererous Forest		CALVEG	
148	2	Oat Ridge	Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			LIMNANTHES BAKERI	1- EOs	CNDDB	
			NAVARRETIA LEUCOCEPHALA SSP BAKERI	1- EOs	CNDDB	
			Northern Mixed Chaparral		Calveg	
			Oregon Oak Woodland		Calveg	
154	2	Pieta Creek	LAYIA SEPTENTRIONALIS	2- EOs	CNDDB	
			Mixed North Slope Cismontane Woodland		Calveg	
			Montane Mixed Chaparral		Calveg	
			Northern Mixed Chaparral		Calveg	

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
155	2	Pilot Creek	NORTHERN SPOTTED OWL	5- Eos, Excellent habitat	CNDDB	Dunk
			Red Fir Forest		CALVEG	
			Sierran Mixed Coniferous Forest		Calveg	
161	3	Presswood	ARCTOSTAPHYLOS CANESCENS SSP SONOMENSIS	1- EOs	CNDDB	
			ARCTOSTAPHYLOS STANFORDIANA SSP RAICHEI	1- EOs	CNDDB	
			Blue Oak Woodland		BLM-Ukiah Field Office	CALVEG
			CEANOTHUS CONFUSUS	1- EOs	CNDDB	
			HORKELIA BOLANDERI	1- EOs	CNDDB	
			LASTHENIA BURKEI	1- EOs	CNDDB	
			LIMNANTHES BAKERI	1- EOs	CNDDB	
			Mixed North Slope Cismontane Woodland		Calveg	
			Montane Mixed Chaparral		Calveg	
			NORTHERN INTERIOR CYPRESS FOREST	1- EOs	CNDDB	CALVEG
			Northern Mixed Chaparral		Calveg	
			Oregon Oak Woodland		Calveg	
			SERPENTINE BUNCHGRASS	1- EOs	CNDDB	
			Serpentine Chaparral		BLM-Ukiah Field Office	CALVEG
166	2	Refuge Valley	EPILOBIUM OREGANUM	1- EOs	CNDDB	
			Mixed Evergreen Forest		Calveg	
			Montane Mixed Chaparral		Calveg	
			NORTHERN SPOTTED OWL	7- Eos, LSR	CNDDB	Six Rivers National Forest
			Sierran Mixed Coniferous Forest		Calveg	
170	1	Riverdale	ARABIS MACDONALDIANA	2- EOs	CNDDB	
			ARCTOSTAPHYLOS CANESCENS SSP SONOMENSIS	1- EOs	CNDDB	
			Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			ERIOGONUM KELLOGGII	1- EOs	CNDDB	
			Mixed Evergreen Forest		Calveg	
			NORTHERN INTERIOR CYPRESS FOREST	1- EOs	CNDDB	
			NORTHERN SPOTTED OWL	4- EOs	CNDDB	
			PACIFIC FISHER	Predicted high suitability	Carroll	
			SEDUM EASTWOODIAE	1- EOs	CNDDB	
			SILENE CAMPANULATA SSP CAMPANULATA	2- EOs	CNDDB	
			UPLAND DOUGLAS FIR FOREST	1- EOs	CNDDB	
174	1	Rocky Ridge	ASTRAGALUS RATTANII VAR JEPSONIANUS	2- EOs	CNDDB	
			BALSAMORHIZA MACROLEPIS VAR MACROLEPIS	1- EOs	CNDDB	
			BRODIAEA CORONARIA SSP ROSEA	5- EOs	CNDDB	

AREA_ CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			ERIOGONUM NERVULOSUM	1- EOs	CNDDB	
			FRITILLARIA PLURIFLORA	3- EOs	CNDDB	
			HESPEROLINON DRYMARIOIDES	3- EOs	CNDDB	
			LAYIA SEPTENTRIONALIS	1- EOs	CNDDB	
			MADIA HALLII	3- EOs	CNDDB	
			Montane Mixed Chaparral		Calveg	
			Northern Interior Cypress Forest		Mangan	
			Northern Mixed Chaparral		Calveg	
			OTHER	RARE PLANTS: INDIAN VALLEY BRODIAEA - MAJOR POPULATION, ADOBE-LILY	Mangan	
			SAN JOAQUIN POCKET MOUSE	1- EOs	CNDDB	
			SERPENTINE BARRENS	LARGE NUMBER OF SERPENTINE ENDEMICS	Mangan	
			Serpentine Chaparral	PART OF LARGE BLOCK/ HIGH DIVERSITY	Mangan	
			Serpentine Foothill Pine-Chaparral Woodland		Sawyer	
			STREPTANTHUS MORRISONII	1- EOs	CNDDB	
179	2	S. Fork Big River	Mixed Evergreen Forest		Calveg	
			NORTHERN SPOTTED OWL	8- EOs	CNDDB	
			Serpentine Barrens		BLM-Arcata	
185	2	Shelly Creek Ridge	ARABIS ACULEOLATA	1- EOs	CNDDB	
			Montane Mixed Chaparral		Calveg	
			NORTHERN SPOTTED OWL	3- Eos, LSR	CNDDB	Six Rivers National Forest
186	1	Shelter Cove	Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			LATHYRUS PALUSTRIS	1- EOs	CNDDB	
			Northern Coastal Bluff Scrub		Kolb	
			Northern Coastal Scrub		BLM-Arcata Field Office	
			Northern Interior Cypress Forest		CALVEG	
			Northern Maritime Chaparral	ALONG COAST AND WEST SLOPE OF PARADISE CANYON, CHAMISE MTN AND SOUTH OF SHELTER COVE	BLM-Arcata Field Office	
			NORTHERN SPOTTED OWL	1- EOs	CNDDB	
			PACIFIC FISHER	Predicted high suitability	Carroll	
			RED TREE VOLE	1- EOs	CNDDB	
194	1	Stienhart Lakes	Blue Oak Woodland		Mangan	CALVEG
			Foothill Pine - Oak Woodland		CALVEG	
			HESPEROLINON SP NOV "SERPENTINUM"	2- EOs	CNDDB	
			LEGENERE LIMOSA	1- EOs	CNDDB	
			Montane Mixed Chaparral		Calveg	
			NAVARRETIA LEUCOCEPHALA SSP PLIEANTHA	1- EOs	CNDDB	
			Northern Mixed Chaparral		Calveg	

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			Northern Vernal Pool	NORTHERN ASH FALL VERNAL POOLS, RESTRICTED TO PLEISTOCENE CLEAR LAKE VOLCANIC DEPOSITS	TNC FILES	CNDDB
			OTHER	RARE PLANTS	TNC FILES	
			Wilflower Field		TNC FILES	
196	1	Thatcher Creek	Annual Grassland		Calveg	
			Coast Range Mixed Coniferous Forest		Calveg	
			LEWISIA STEBBINSII	1- EOs	CNDDB	
			Mixed North Slope Cismontane Woodland		Calveg	
			Northern Mixed Chaparral		Calveg	
			NORTHERN SPOTTED OWL	3- Eos, LSR	CNDDB	Dunk
			Oregon Oak Woodland		Calveg	
			Sierran Mixed Coniferous Forest		Calveg	
			Valley Oak Woodland		CALVEG	
197	1	Thistle Glen Camp	Coast Range Mixed Coniferous Forest		Calveg	
			Northern Mixed Chaparral		Calveg	
			NORTHERN SPOTTED OWL	1- EOs	CNDDB	
			OTHER	RARE PLANTS	TNC FILES	
			Red Fir Forest	Snow Mtn. is southern limit in North Coast Ranges	Sawyer	
			SIDALCEA OREGANA SSP HYDROPHILA	1- EOs	CNDDB	
			Siskiyou Enriched Coniferous Forest	southern limit	Sawyer	
198	3	Thurston Lake	Coastal and Valley Freshwater Marsh		CALVEG	
			HORKELIA BOLANDERI	1- EOs	CNDDB	
			LASTHENIA BURKEI	1- EOs	CNDDB	
			Montane Mixed Chaparral		Calveg	
			NAVARRETIA LEUCOCEPHALA SSP PAUCIFLORA	3- EOs	CNDDB	
			Northern Mixed Chaparral		Calveg	
			Northern Vernal Pool	ONCE A VERNAL LAKE, NOW DEGRADED	TNC FILES	
			OTHER	RARE PLANTS INCLUDE BURKE'S GOLDFIELDS, LAKE COUNTY STONECROP, FEW-FLOWERED NAVARRETIA, BOLANDERS HORKELIA	TNC FILES	
			PARVISEDUM LEIOCARPUM	2- EOs	CNDDB	
			Wilflower Field		TNC FILES	
200	1	Turwar Creek	ABRONIA UMBELLATA SSP BREVIFLORA	3- EOs	CNDDB	
			Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			Grand Fir - Sitka Spruce Forest		CALVEG	
			Mixed Evergreen Forest		Calveg	
			Northern Coastal Scrub		CALVEG	
			NORTHERN SPOTTED OWL	5- EOs	CNDDB	
			OENOTHERA WOLFII	1- EOs	CNDDB	
			PACIFIC FISHER	1- EOs	CNDDB	
			Port Orford Cedar Forest	POC IS SUBDOMINANT TO RED ALDER	Keeler-Wolf	

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
					(1990)	
202	1	Upper Bear Valley	Blue Oak Woodland		CALVEG	
			BRODIAEA CORONARIA SSP ROSEA	1- EOs	CNDDB	
			FRITILLARIA PLURIFLORA	1- EOs	CNDDB	
			MADIA HALLII	1- EOs	CNDDB	
			Montane Mixed Chaparral		Calveg	
			Northern Interior Cypress Forest		Mangan	
			Northern Mixed Chaparral		Calveg	
			OTHER	RARE PLANTS: INDIAN VALLEY BRODIAEA - MAJOR POPULATION, ADOBE-LILY	Mangan	
			SERPENTINE BARRENS	LARGE NUMBER OF SERPENTINE ENDEMICS	Mangan	
			Serpentine Chaparral	PART OF LARGE BLOCK/ HIGH DIVERSITY	Mangan	
			Serpentine Foothill Pine-Chaparral Woodland		Sawyer	
			Wilflower Field		Sawyer	
204	1	Upper Black Butte River	Coast Range Mixed Coniferous Forest		Calveg	
			LEWISIA STEBBINSII	5- EOs	CNDDB	
			Montane Mixed Chaparral		Calveg	
			NORTHERN SPOTTED OWL	11- EOs	CNDDB	
			SIDALCEA OREGANA SSP HYDROPHILA	2- EOs	CNDDB	
			Sierran Mixed Coniferous Forest		Calveg	
207	1	Upper Elk Creek	ARCTOSTAPHYLOS CANESCENS SSP SONOMENSIS	1- EOs	CNDDB	
			Coast Range Mixed Coniferous Forest		Calveg	
			Montane Mixed Chaparral		Calveg	
			Northern Mixed Chaparral		Calveg	
			NORTHERN SPOTTED OWL	3- EOs	CNDDB	
			SIDALCEA OREGANA SSP HYDROPHILA	4- EOs	CNDDB	
			Sierran Mixed Coniferous Forest		Calveg	
208	1	Upper Garcia River	Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			Mixed North Slope Cismontane Woodland		Calveg	
			NORTHERN SPOTTED OWL	4- EOs	CNDDB	
			RED TREE VOLE	2- EOs	CNDDB	
212	1	Upper Mark West Creek	Annual Grassland		Calveg	
			ASTRAGALUS CLARIANUS	1- EOs	CNDDB	
			CEANOTHUS CONFUSUS	2- EOs	CNDDB	
			ERYNGIUM CONSTANCEI	1- EOs	CNDDB	
			LINANTHUS JEPSONII	1- EOs	CNDDB	
			LUPINUS SERICATUS	1- EOs	CNDDB	
			Mixed North Slope Cismontane Woodland		Calveg	
			NAVARRETIA LEUCOCEPHALA SSP PLIEANTHA	1- EOs	CNDDB	

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			NORTHERN SPOTTED OWL	4- EOs	CNDDB	
218	1	Upper Redwood Creek	BENSONIELLA OREGONA	4- EOs	CNDDB	
			Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			Mixed Evergreen Forest		Calveg	
			Montane Mixed Chaparral		Calveg	
			NORTHERN SPOTTED OWL	10- EOs	CNDDB	
			PACIFIC FISHER	3- EOs, Predicted high suitability	CNDDB	Carroll
			Sierran Mixed Coniferous Forest		Calveg	
			Wet/Montane Meadow		Six Rivers National Forest	
219	1	Upper Rice Fork	Coast Range Mixed Coniferous Forest		Calveg	
			EPILOBIUM NIVIUM	1- EOs	CNDDB	
			HORKELIA BOLANDERI	1- EOs	CNDDB	
			Mixed Evergreen Forest		Calveg	
			Montane Mixed Chaparral		Calveg	
			Northern Interior Cypress Forest	sargent cypress	CALVEG	Keeler-Wolf
			Northern Mixed Chaparral		Calveg	
			NORTHERN SPOTTED OWL	6- EOs	CNDDB	
220	1	Upper S. Fork Smith River	Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			Mixed Evergreen Forest		Calveg	
			Montane Mixed Chaparral		Calveg	
			NORTHERN SPOTTED OWL	6- Eos, LSR	CNDDB	Six Rivers National Forest
			Sierran Mixed Coniferous Forest		Calveg	
			SMILAX JAMESII	1- EOs	CNDDB	
			VIOLA PRIMULIFOLIA SSP OCCIDENTALIS	1- EOs	CNDDB	
223	1	Upper Ten Mile Creek	Annual Grassland		Calveg	
			Coast Range Mixed Coniferous Forest		Calveg	
			LIMNANTHES BAKERI	1- EOs	CNDDB	
			Mixed Evergreen Forest		Calveg	
			Oregon Oak Woodland		Calveg	
			POTAMOGETON EPIHYDRUS SSP NUTTALLII	1- EOs	CNDDB	
			UPLAND DOUGLAS FIR FOREST	1- EOs	CNDDB	
			Valley Oak Woodland		CALVEG	
225	1	Walker Lake	Annual Grassland		Calveg	
			Mixed Evergreen Forest		Calveg	
			NORTHERN SPOTTED OWL	1- EOs	CNDDB	BLM-Arcata
			Oregon Oak Woodland		Calveg	
			SERPENTINE BARRENS		BLM-Arcata	

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
226	1	Walters Ridge	Annual Grassland		Calveg	
			LUPINUS SERICATUS	1- EOs	CNDDB	
			Mixed North Slope Cismontane Woodland		Calveg	
			NORTHERN SPOTTED OWL	1- EOs	CNDDB	
			Oregon Oak Woodland		Calveg	
			RED TREE VOLE	1- EOs	CNDDB	
228	2	Willis Ridge	Mixed North Slope Cismontane Woodland		Calveg	
			NORTHERN SPOTTED OWL		BLM-Arcata Field Office	
			Oregon Oak Woodland		Calveg	
			Upland Douglas Fir Forest		BLM-Arcata Field Office	
230	1	Woenne Flat	Annual Grassland		Calveg	
			Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			MARBLED MURRELET		FWS-Arcata	
			NORTHERN SPOTTED OWL	4- EOs	CNDDB	
			PACIFIC FISHER	Predicted high suitability	Carroll	
			RED TREE VOLE	1- EOs	CNDDB	
231	1	Woodman	Annual Grassland		Calveg	
			Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			Mixed Evergreen Forest		Calveg	
			Mixed North Slope Cismontane Woodland		Calveg	
			NORTHERN SPOTTED OWL	2- EOs	CNDDB	
			Oregon Oak Woodland		Calveg	
232	2	Woodsman Butte	EPILOBIUM OREGANUM	1- EOs	CNDDB	
			LUPINUS CONSTANCEI	1- EOs	CNDDB	
			Mixed Evergreen Forest		Calveg	
			Montane Mixed Chaparral		Calveg	
			NORTHERN SPOTTED OWL	6- Eos, LSR	CNDDB	Six Rivers National Forest
235	1	Rowdy Creek	ARABIS MACDONALDIANA	3- EOs	CNDDB	
			ARABIS MACDONALDIANA	3 - EO's	OREGON HERITAGE	
			BOSCHNIAKIA HOOKERI	1- EOs	CNDDB	
			Boshniaka hookeri	1 - EO's	CNDDB	
			CARDAMINE NUTTALLII VAR GEMMATA	2 - EO's	CNDDB	OREGON HERITAGE
			Coast Range Mixed Coniferous Forest		OREGON GAP	
			Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			Grand Fir / Sitka Spruce		OREGON GAP	
			Lewisia oppositifolia	1 - EO's	CNDDB	
			MARBLED MURRELET		Six Rivers National Forest	

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			Marbled Murrelet		Six Rivers National Forest	
			NORTHERN SPOTTED OWL	13 - EO's , LSR	CNDDB & OREGON HERITAGE	Six Rivers National Forest
			Redwood Forest		OREGON GAP	
			STREPTANTHUS HOWELLII	2 - EO's	CNDDB	OREGON HERITAGE
			Ultramafic Mixed Coniferous Forest		OREGON GAP	
237	3	Mill Creek - Smith	Bald Hills Prairie	"CLASSIC" REQUIRES DISTURBANCE - BURNING OR GRAZING. LOOK FOR WESTERN LILY EOS	Sawyer	
			California Bay Forest		State Parks Website	
			Coastal Terrace Prairie		State Parks Website	
			Grand Fir/Sitka Spruce		State Parks Website	
			MARBLED MURRELET	ONE OF 5 CRITICAL LOCATIONS, LARGEST DENSITY	State Parks Website	FWS-Arcata
			Mixed Evergreen Forest		Calveg	
			Northern Interior Cypress Forest	TYPICALLY INLAND SPECIES, HERE OCCURRING RELATIVELY CLOSE TO THE COAST LINE		
			NORTHERN SPOTTED OWL	3- EOs	CNDDB	
			Port Orford Cedar Forest	SOUTHERN LIMIT AT PRIARIE CREEK STATE PARK	State Parks Website	Prairie Creek Redwood State Park
243	1	Gualala River North Fork	LILIUM MARITIMUM	1- EOs	CNDDB	
			Mixed North Slope Cismontane Woodland		Calveg	
			NORTHERN SPOTTED OWL	3- EOs	CNDDB	
			RED TREE VOLE	5- EOs	CNDDB	
246	1	Austin Creek	Annual Grassland		Calveg	
			ARCTOSTAPHYLOS BAKERI SSP SUBLAEVIS	3- EOs	CNDDB	
			CALOCHORTUS RAICHEI	5- EOs	CNDDB	
			Coastal Douglas Fir - Western Hemlock Forest		Calveg	
			ERIGERON SERPENTINUS	1- EOs	CNDDB	
			Mixed Evergreen Forest		Calveg	
			Northern Interior Cypress Forest	BOASTS ON OF THE MOST CONTINUOUS AND WELL-DEVELOPED SARGENT CYPRESS FOREST COVERS, POSSIBLY MORE EXTENSIVE	Mangan	TNC FILES

AREA_ CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
				THAN CEDAR ROUGHS.		
			NORTHERN SPOTTED OWL	5- EOs	CNDDB	
			RED TREE VOLE	1- EOs	CNDDB	
			SERPENTINE BARRENS	LARGE EXAMPLE, RARE PLANTS	TNC FILES	
			STREPTANTHUS MORRISONII	4- EOs	CNDDB	
			TRIFOLIUM BUCKWESTIORUM	1- EOs	CNDDB	
247	3	Bodega Bay	ABRONIA UMBELLATA SSP BREVIFLORA	3- EOs	CNDDB	
			Annual Grassland		Calveg	
			Coastal Wetland		Pickart	
			CORDYLANTHUS MARITIMUS SSP PALUSTRIS	3- EOs	CNDDB	
			DELPHINIUM LUTEUM	3- EOs	CNDDB	
			Northern Coastal Scrub	STABLE ONLY NEAR COAST WEEDY IN CLEAR CUTS	Sawyer	CALVEG
			Northern Dune Scrub		Pickart	
			NORTHERN SPOTTED OWL	1- EOs	CNDDB	
248	3	Salmon Creek - Bodega Bay	ALOPECURUS AEQUALIS VAR SONOMENSIS	1- EOs	CNDDB	
			Annual Grassland		Calveg	
			ARCTOSTAPHYLOS BAKERI SSP BAKERI	1- EOs	CNDDB	
			COASTAL TERRACE PRAIRIE	1- EOs	CNDDB	
			DIRCA OCCIDENTALIS	1- EOs	CNDDB	
			Northern Coastal Bluff Scrub		Pickart	
			Northern Coastal Scrub	STABLE ONLY NEAR COAST WEEDY IN CLEAR CUTS	Sawyer	CALVEG
			NORTHERN SPOTTED OWL	6- EOs	CNDDB	
			RED TREE VOLE	1- EOs	CNDDB	
			TRIFOLIUM AMOENUM	1- EOs	CNDDB	
			Wet or Montane Meadows		CALVEG	
256	1	Albion River	ABRONIA UMBELLATA SSP BREVIFLORA	1- EOs	CNDDB	
			Annual Grassland		Calveg	
			BEACH/SHORE PINE		Flowers	TNC FILES
			Bishop Pine		Flowers	
			BOG/FEN	NEAR AIRPORT	CNDDB	
			CAMPANULA CALIFORNICA	1- EOs	CNDDB	
			CAREX CALIFORNICA	11- EOs	CNDDB	
			CASTILLEJA MENDOCINENSIS	1- EOs	CNDDB	
			Coastal Douglas Fir		Flowers	
			CUPRESSUS GOVENIANA SSP PIGMAEA	10- EOs	CNDDB	
			GRAND FIR/SITKA SPRUCE	2- EOs	CALVEG	
			LILIUM MARITIMUM	4- EOs	CNDDB	
			MENDOCINO PYGMY CYPRESS FOREST	10- EOs	CNDDB	FWS-Arcata

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			Northern Coastal Bluff Scrub		Flowers	
			NORTHERN COASTAL SCRUB		CALVEG	
			Northern Maritime Chaparral		CALVEG	
			NORTHERN SPOTTED OWL	7- EOs	CNDDB	
			Northern Vernal Pool	On Middle Ridge btwn Big Salmon and Little Salmon Creeks	Flowers	
			RED TREE VOLE	9- EOs	CNDDB	
300	1	ELK RIVER	COAST CUTTHROAT TROUT		CNDDB	
			COHO SALMON (CENTRAL CA, SO. OR./NO. CA ESU)	Best coho population in CA, 20% of population (GB). Was best coho stream in CA 10 to 15 years ago (TR)Palco logged just above breeding population - 8 FT sediment. In early 90's, 400-500 coho in one mile of habitat, now same # in combined North & South	Bryant	
			Fishless Stream	Determined from topo map.	Serpa	
			NORTHERN RED-LEGGED FROG			
			Rainbow trout stream	Determined from topo map.	Serpa	
			Short-Run Coho Spawning Stream	From community description.	Serpa	
			SOUTHERN TORRENT (=SEEP) SALAMANDER		Welsh	
			STEELHEAD (CENTRAL CA COAST, NORTHERN CA ESU)	Has summer steelhead (TR).	Roeloff	
			Steelhead Stream	From community description.	Serpa	
			TAILED FROG		Welsh	
302	1	EEL RIVER	Chinook Stream	From community description.	Serpa	
			COAST CUTTHROAT TROUT	Get to confluuence of North and South Fork, water diversion a big problem. There are sea run, resident, and potoandromous fish in the system.	Moss	
			COHO SALMON (CENTRAL CA, SO. OR./NO. CA ESU)	Floods fill in pools, causing water too hot for coho in summer.		
			Cutthroat Trout Stream	From community description.	Serpa	
			Eel River	Historically, this was a world class stream (RA). Much of water diverted to the Russian River. It would be best to get at least half of this back (GB). In summer Eel now only gets 12 cubic feet/sec, while 600 cubic feet/sec goes down tunnel to the Russi	Aramayo	Bryant
			Fishless Stream	Determined from topo map.	Serpa	
			FOOTHILL YELLOW-LEGGED FROG	Impacted by pikeminnows (exotic) that abound under current warmer conditions created by water withdrawal.	Welsh	
			North Coast Riparian Forest and Scrub	CARA substantial resource conditions	CALVEG	CARA
			NORTHERN RED-LEGGED FROG		CNDDB	
			Rainbow Trout Stream	Determined from topo map.	Serpa	

AREA_ CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			STEELHEAD (CENTRAL CA COAST, NORTHERN CA ESU)	Tributaries with summer steelhead are significant, and the ones that deserve the most help. Mostly in lower eel.		
			Steelhead Stream	From community description.	Serpa	
			TAILED FROG		CNDDB	
305	1	EEL RIVER MFK	CHINOOK SALMON (CA COASTAL ESU)	Fall run chinook, with a few spring run seen occasionally (PM).	Bryant	Moyle
			Chinook Stream	From community description.	Serpa	
			Eel River	In community description.	Moyle	
			Fishless Stream	Determined from topo map.	Serpa	
			NORTHWESTERN POND TURTLE			
			Rainbow Trout Stream	Determined from topo map.	Serpa	
			RIPARIAN	CARA outstanding resource conditions	CARA	
			STEELHEAD (CENTRAL CA COAST, NORTHERN CA ESU)	Best remaining habitat and southern limit of summer steelhead. Now <10% of steelhead population, used to be 30-40% of steelhead population. Still half of all summer steelhead in state (TR). The main channel is the principal holding area for summer stee	Bryant	Roeloff
			Steelhead Stream	A proposed aquatic diversity management area (PM).	Bryant	
306	1	OUTLET CREEK	CHINOOK SALMON (CA COASTAL ESU)	More chinook and winter steelhead than coho.		
			Chinook Stream	From community description.	Serpa	
			COHO SALMON (CENTRAL CA, SO. OR./NO. CA ESU)	Marine influence results in longest coho run on west coast. Still good numbers of coho, few dozen every couple of years (GB) but none in last four or five years (WJ)	Bryant	
			Fishless Stream	Determined from topo map.	Serpa	
			FOOTHILL YELLOW-LEGGED FROG		CNDDB	
			NORTHWESTERN POND TURTLE		CNDDB	
			Rainbow Trout Stream	Determined from topo map.	Serpa	
			RIPARIAN	OUTSTANDING RESOURCE CONDITIONS	CARA	
			STEELHEAD (CENTRAL CA COAST, NORTHERN CA ESU)	More chinook and winter steelhead than coho.		
			Steelhead Stream	From community description.	Serpa	
308	1	EEL RIVER SFK	CHINOOK SALMON (CA COASTAL ESU)			
			Chinook Stream	From community description.	Serpa	
			COHO SALMON (CENTRAL CA, SO. OR./NO. CA ESU)	Last remnant of long run coho (GB).	Bryant	
			Eel River	A proposed aquatic diversity management area. Main river generally low gradient with high gradient tributaries. Elder Creek is an especially pristine tributary, used as benchmark stream by USGS for comparison of flows with those of more disturbed	Moyle	

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
				stream		
			Fishless Stream	Determined from topo map.	Serpa	
			FOOTHILL YELLOW-LEGGED FROG		CNDDB	
			NORTHWESTERN POND TURTLE		CNDDB	
			Rainbow Trout Stream	Determined from topo map.	Serpa	
			RIPARIAN	OUTSTANDING RESOURCE CONDITIONS	CARA	
			Short-Run Coho Spawning Stream	From community description.	Serpa	
			SOUTHERN TORRENT (=SEEP) SALAMANDER		ARSSC	
			STEELHEAD (CENTRAL CA COAST, NORTHERN CA ESU)	Summer steelhead (SD).		
			Steelhead Stream	From community description.	Serpa	
			TAILED FROG			
309	1	MATTOLE RIVER	CHINOOK SALMON (CA COASTAL ESU)	Only a few chinook (TR).		
			Chinook Stream	From community description.	Serpa	
			COHO SALMON (CENTRAL CA, SO. OR./NO. CA ESU)	The tributaries in the upper Mattole are the best coho area, very important area. Classic coho stream - no high relief. 200-500 coho over last five years (FH) There are a few present (WJ).	Moss	
			Fishless Stream	Determined from topo map.	Serpa	
			FOOTHILL YELLOW-LEGGED FROG		CNDDB	
			Rainbow Trout Stream	Determined from topo map.	Serpa	
			Short-Run Coho Spawning Stream	From community description.	Serpa	
			SOUTHERN TORRENT (=SEEP) SALAMANDER	Need late seral forest, and low water temperature of 10 degrees C all summer, and lack of silt (HW).		
			STEELHEAD (CENTRAL CA COAST, NORTHERN CA ESU)	Important for steelhead.		
			Steelhead Stream	From community description.	Serpa	
			TAILED FROG	Need late seral forest, and low water temperature of 10 degrees C all summer, and lack of silt (HW).	CNDDB	
312	1	RUSSIAN RIVER	CALIFORNIA RED-LEGGED FROG	Northern limit?	CNDDB	
			CHINOOK SALMON (CA COASTAL ESU)	Often said that all chinook in system come from the hatchery. In 1999, about 300 chinook came up the river and none of them went to the hatchery, they went to the mainstem of the river and dry creek.	Coui	
			Chinook Stream	From community description.	Serpa	
			Coastal River - Russian	In community description.	Moyle	
			Coastal Wetland		CALVEG	

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			COHO SALMON (CENTRAL CA, SO. OR./NO. CA ESU)	Coho population much reduced. Not doing well anywhere in drainage now, <100. Even historically only used 20-30 of the 240 tributaries.	Coui	
			Fishless Stream	Determined from topo map.	Serpa	
			FOOTHILL YELLOW-LEGGED FROG		CNDDB	
			HARDHEAD	In summer of 1984, there were more hardhead than pikeminnow.. The same for the last two years (BCOX).	Cox	
			LONGFIN SMELT	Some in mouth of Sheephouse Creek.	Coui	
			Navarro Roach	Abundant in the river.	FSSC	
			NORTHWESTERN POND TURTLE		CNDDB	
			Rainbow trout stream	Determined from topo map.	Serpa	
			RIPARIAN	SUBSTANTIAL RESOURCE CONDITIONS	CARA	
			RUSSIAN RIVER TULE PERCH	They are in the main river and the lower portion of the major tributaries. There was never a huge population, but they seem to be doing well, as they are tolerant of today's conditions. They extend from at least Cloverdale to Guerneville, also in dry	Cox	
			STEELHEAD (CENTRAL CA COAST, NORTHERN CA ESU)	Distribution similar to that of twenties. They are in tributaries, not main river.	Coui	
313	1	AUSTIN CREEK	Coastal River - Russian	From community description.	Serpa	
			Fishless Stream	Determined from topo map.	Serpa	
			FOOTHILL YELLOW-LEGGED FROG		CNDDB	
			Rainbow trout stream	Determined from topo map.	Serpa	
			STEELHEAD (CENTRAL CA COAST, NORTHERN CA ESU)	One of the three best salmonid regugia in the Russian River system (BC).	Coui	
			Steelhead Stream	From community description.	Serpa	
			SYNCARIS PACIFICA	California freshwater shrimp. Good population in East Austin tributary, but there are also some shrimp in Big Austin (LS).	Serpa	
314	3	WILLOW CREEK	CHINOOK SALMON (CA COASTAL ESU)		Bryant	
			Chinook Stream	From community description.	Serpa	
			Coastal River - Russian			
			COHO SALMON (CENTRAL CA, SO. OR./NO. CA ESU)	Probably not present now, but could come back with watershed restoration.	Bryant	
			Fishless Stream	Determined from topo map.	Serpa	
			Rainbow trout stream	Determined from topo map.	Serpa	
			Short-Run Coho Spawning Stream	From community description.	Serpa	
			STEELHEAD (CENTRAL CA COAST, NORTHERN CA ESU)		Bryant	
			Steelhead Stream	From community description.	Serpa	
316	1	GUALALA RIVER	California Roach/Stream River	The entire drainage is a proposed aquatic diversity management area (PM).	Moyle	

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			COHO SALMON (CENTRAL CA, SO. OR./NO. CA ESU)	Coho pretty precarious now (Bcox)	Cox	
			Fishless Stream	Determined from topo map.	Serpa	
			FOOTHILL YELLOW-LEGGED FROG		ARSSC	
			GUALALA ROACH	The southern fork is the best location for the endemic Gualala roach (JJ).	Jones	CNDDB
			Rainbow trout stream	Determined from topo map.	Serpa	
			RIPARIAN	SUBSTANTIAL RESOURCE CONDITIONS	CARA	
			Short-Run Coho Spawning Stream	From community description.	Serpa	
			STEELHEAD (CENTRAL CA COAST, NORTHERN CA ESU)	Big steelhead (15 lbs), unheard of in Central Valley and Klamath.		
			Steelhead Stream	From community description.	Serpa	
319	2	BRIGGS CREEK	Coastal River - Russian			
			Fishless Stream	Determined from topo map.	Serpa	
			NORTHWESTERN POND TURTLE		CNDDB	
			STEELHEAD (CENTRAL CA COAST, NORTHERN CA ESU)	One of the three best salmonid refugia areas in the Russian River system.	Coui	
			Steelhead Stream		Serpa	
320	1	CLEAR LAKE	Brownish dubiraphian riffle beetle	Dubiraphia brunnescens is an aquatic beetle restricted to Clear Lake,and is found on willow roots (BS).	Shepard	
			Carinifex minor	Carinifex minor is a snail endemic to Clear and Blue Lakes, and is closely associated with tules (Dwight Taylor).	Taylor	
			CLEAR LAKE HITCH	They move from the lake to spawn in streams, as much as five to seven miles upstream. There is some evidence that they can spawn in the mouths of creeks if the streams ae unsuitable (SC).	Hopkirk	Canada
			Clear Lake Prickly Sculpin	Endemic to Clear Lake area. They are most common in Clear Lake, but also in tributary streams.	Hopkirk	
			Clear Lake Tule Perch	They are collected during the semiannual electrofish surveys.	Canada	
			Endemic Fish Lake	A center for endemic fish. Due to introduced exotic fish and other human disturbances two endemic fish species and one endemic snail now extinct, one other native fish species (now extinct) extirpated (JH). The lake is over 500,000 years old (Sims). Cou	Hopkirk	Canada
			Physa costata	Physa costata is snail endemic to Clear and Blue Lakes (Dwight Taylor).	Taylor	
			SACRAMENTO PERCH	Pprobably only natural remaining site for Sacramento Perch. Introduced to other areas (JH). Present but extremely rare, not seen for several years. Bluegill and crappie are probably predators	Hopkirk	

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
				on thei eggs (SC).		
			Valvata virens	Valvata virens is a brilliant green species that is apparently extinct due to carp predation (Dwight Taylor).	Taylor	
321	1	YAGER CREEK	CHINOOK SALMON (CA COASTAL ESU)	Found in middle and north forks, a good population (SD).	Bryant	
			Chinook Stream	From community description.	Serpa	
			COHO SALMON (CENTRAL CA, SO. OR./NO. CA ESU)	Not many now (SD). Fifty percent of the eele river coho used to spawn here, now it is almost a warmwater stream (GB).	Bryant	Walt Duffy
			Fishless Stream	Determined from topo map.	Serpa	
			Rainbow Trout Stream	Determined from topo map.	Serpa	
			Short-Run Coho Spawning Stream	This was the prime spawning area for coho, steelhead and chinook (GB). Now due to logging there are huge temperature and sediment problems (TR).	Bryant	
			SOUTHERN TORRENT (=SEEP) SALAMANDER		ARSSC	
			STEELHEAD (CENTRAL CA COAST, NORTHERN CA ESU)	Found in middle and north forks.	Bryant	
			Steelhead Stream	From community description.	Serpa	
322	1	BIG RIVER	COASTAL AND INTERIOR WETLAND		CALVEG	
			COHO SALMON (CENTRAL CA, SO. OR./NO. CA ESU)	North fork good coho, some tributaries 100% coho and no steelhead, opposite of what is usually seen. They are in the headwaters (WJ), Many thousands of coho fingerlings planted in upper south fork in 1978. Fry are found in estuary.	Bell	Jones
			DEL NORTE SALAMANDER	Southern limit.	CNDDB	
			EULACHON	Distributed throughout the estuary.	Warrick	
			Fishless Stream	Determined from topo map.	Serpa	
			FOOTHILL YELLOW-LEGGED FROG		CNDDB	
			NORTHERN RED-LEGGED FROG		Warrick	
			NORTHWESTERN POND TURTLE		Warrick	
			Rainbow trout stream	Determined from topo map.	Serpa	
			Short-Run Coho Spawning Stream	From community description.	Serpa	
			SOUTHERN TORRENT (=SEEP) SALAMANDER		CNDDB	
			STEELHEAD (CENTRAL CA COAST, NORTHERN CA ESU)	Steelhead farther downstream than coho, as main stream is more open and suitable for them. Fry are found in estuary.	Warrick	
			Steelhead Stream	From community description.	Serpa	

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
323	1	NAVARRO	California Roach Stream/River	From community description.	Serpa	
			CHINOOK SALMON (CA COASTAL ESU)			
			Chinook Stream	From community description.	Serpa	
			Coastal Wetland		FWS-Arcata	
			COHO SALMON (CENTRAL CA, SO. OR./NO. CA ESU)	Has coho in north fork and some tributaries, and Racheria Creek(WJ). It was really nice, now severely impacted and needs help (RA).	Jones	
			Fishless Stream	Determined from topo map.	Serpa	
			Navarro Roach	Abundant in the river, especially in warmer areas.	FSSC	
			North Coast Riparian Forest and Scrub	Some - especially on Indian Creek, CARA substantial resource conditions	FWS-Arcata	CARA
			Rainbow trout stream	Determined from topo map.	Serpa	
			Short-Run Coho Spawning Stream	From community description.	Serpa	
			STEELHEAD (CENTRAL CA COAST, NORTHERN CA ESU)	Almost no steelhead now, according to state park personnel. However, according to Nielsen they are in the Racheria creek tributary.	Nielsen	
			Steelhead Stream	From community description.	Serpa	
324	3	TEN MILE RIVER	CHINOOK SALMON (CA COASTAL ESU)	Southermost distribution of coastal chinook (GB).	Bryant	
			Chinook Stream	From community description.	Serpa	
			COHO SALMON (CENTRAL CA, SO. OR./NO. CA ESU)	One of few streams with coho along this part of coast (GB). Coho in north fork and some tributaries of south fork (WJ).	Bryant	Jones
			Fishless Stream	Determined from topo map.	Serpa	
			North Coast Riparian Forest and Scrub		Flowers	CALVEG
			Rainbow trout stream	Determined from topo map.	Serpa	
			Short-Run Coho Spawning Stream	From community description.	Serpa	
			SOUTHERN TORRENT (=SEEP) SALAMANDER		CNDDB	
			TAILED FROG		CNDDB	
			TIDEWATER GOBY	The lower four kilometers of Ten Mile River is proposed as an aquatic diversity management area.	Swift	
			Wet/Montane Meadow		CALVEG	
325	3	REDWOOD CREEK ESTUARY	CHINOOK SALMON (CA COASTAL ESU)			
			STEELHEAD (CENTRAL CA COAST, NORTHERN CA ESU)			
			TIDEWATER GOBY			
326	1	SMITH RIVER	Chace juga	Endemic to watershed.	Frest	
			Chinook Stream	From community description.	Serpa	
			CHUM SALMON	Mitch Farro said he has seen a dozen or so chum, so there might be a remnant run.	Farro	

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			COAST CUTTHROAT TROUT	47% of all all coastal cutthroat, most of rest in Klamath. Sea run anadromous cutthroat trout (GB) Finest run in state (TR). Abundant throughout the Smith River.	Roeloff	Bryant
			COHO SALMON (CENTRAL CA, SO. OR./NO. CA ESU)	Don't get very high in watershed, upper portions better for steelhead.	McKay	
			Cutthroat Coho River	Fewer numbers of fish than in other rivers, but the fish are larger (RA)		
			DEL NORTE SALAMANDER		CNDDB	
			Fishless Stream	Determined from topo map.	Serpa	
			FOOTHILL YELLOW-LEGGED FROG			
			NORTHERN RED-LEGGED FROG		ARSSC	
			Rainbow trout stream	Determined from topo map.	Serpa	
			RIPARIAN	SUBSTANTIAL	CARA	
			SOUTHERN TORRENT (=SEEP) SALAMANDER		CNDDB	
			STEELHEAD (CENTRAL CA COAST, NORTHERN CA ESU)	Finest run in state. It has summer steelhead, maybe 100 fish come into river. There might not be barriers to separate the summer and winter fish from breeding. In many other place, the summer fish can get over barriers that the winter fish can't. The si	Roeloff	
			TAILED FROG	Easy to find tadpoles (LS).	Welsh	
			TIDEWATER GOBY			
329	1	KLAMATH RIVER	Chinook Stream	From community description.	Serpa	
			Chum Salmon	Although the numbers are small, the only rivers in CA that still have spawning chum ae the Klamath, South Fork Trinity, and Smith.	FSSC	
			COAST CUTTHROAT TROUT			
			DEL NORTE SALAMANDER		CNDDB	
			EULACHON	Enter freshwater in spring and spawn iIn the lowest seven miles of the main river.		
			Eulachon/Sturgeon/Salmon Spawning River	In community description.	Moyle	
			Fishless Stream	Determined from topo map.	Serpa	
			FOOTHILL YELLOW-LEGGED FROG		ARSSC	
			GREEN STURGEON	The Klamath and Sacramento are the only rivers with confirmed spawning (deep pools) in recent years.	FSSC	Moyle
			Lower Klamath Sculpin/Dace/Sucker Stream	In community description.	Moyle	
			North Coast Riparian Forest and Scrub	CARA substantial resource conditions	CALVEG	CARA
			Rainbow trout stream	Determined from topo map.	Serpa	
			SOUTHERN TORRENT (=SEEP) SALAMANDER			
			STEELHEAD (CENTRAL CA COAST, NORTHERN CA ESU)		West	

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			Steelhead Stream	From community description.	Serpa	
			TAILED FROG		CNDDB	
			TIDEWATER GOBY		West	
333	2	BIG SALMON CREEK	COHO SALMON (CENTRAL CA, SO. OR./NO. CA ESU)	Exceptionally good stream for coho, 40 to 50 coho for every steelhead.		
			Fishless Stream	Determined from topo map.	Serpa	
			Rainbow trout stream	Determined from topo map.	Serpa	
			Short-Run Coho Spawning Stream	From community description.	Serpa	
			STEELHEAD (CENTRAL CA COAST, NORTHERN CA ESU)	40-50 coho for every steelhead.		
			Steelhead Stream	From community description.	Serpa	
			TAILED FROG	Southern limit?	CNDDB	
334	1	Salmon Creek (Sonoma)	Fishless Stream	Determined from topo map.	Serpa	
			NORTHERN RED-LEGGED FROG	Mentioned in brochure.	Serpa	
			NORTHWESTERN POND TURTLE	Mentioned in brochure.	Serpa	
			Rainbow Trout Stream	Determined from topo map.	Serpa	
			STEELHEAD (CENTRAL CA COAST, NORTHERN CA ESU)	Mentioned in brochure.	Serpa	
			SYNCARIS PACIFICA	Salmon Creek has the second largest population.	Serpa	
			TIDEWATER GOBY	The lower kilometer of Salmon Creek, including the lagoon at mouth, is proposed as an aquatic diversity management area.	Swift	
			Wet/Montane Meadow		CALVEG	
336	3	Blue Lakes	Carinifex minor	Carinifex minor is a snail endemic to Clear and Blue Lakes, and is closely associated with tules (Dwight Taylor).	Taylor	
			CLEAR LAKE HITCH	They might be extirpated.	Canada	
			Clear Lake Prickly Sculpin	Endemic to Clear Lake area.	Hopkirk	
			Clear Lake Tule Perch	A dead one was seen on beach within last few years, so a population probably persists.	Canada	
			Endemic Fish Lake	The fish fauna is similar to that of Clear Lake. Upper Blue Lake is deeper (80'), Lower Blue Lake is shallower and more like Clear Lake (JH). They do operate a put and take trout stocking operation.	Hopkirk	Anderson
			Physa costata	Physa costata is snail endemic to Clear and Blue Lakes (Dwight Taylor).	Taylor	
340	2	KELSEY CREEK	CLEAR LAKE HITCH	Historically, this was the stream most used for spawning. The runs diminished after a check dam was put in three miles upstream from lake fifteen years ago for groundwater recharge for agriculture in Big Valley (NA). Frost protection for grapes and pears	Anderson	Hopkirk

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			Clear Lake Prickly Sculpin	Endemic to Clear Lake area. They are most common in Clear Lake, but also in tributary streams.	Hopkirk	
			Clear Lake Tributaries	Close to lake it is state park land on one side and county land the other, private farther upstream. The state park redirected the course of the stream near mouth and put in a marina (SC).	CNDDB	Canada
			Fishless Stream	Determined from topo map.	Serpa	
342	3	Borax Lake	Fishless Pond	A borax lake, with highly fluctuating water levels (JH). It was fresh enough last year to support populations of silversides and mosquitofish, the latter species planted on purpose by mosquito abatement to control a biting gnat. The freshness depends on	Hopkirk	Anderson
343	1	BLUE CREEK	CHINOOK SALMON (CA COASTAL ESU)		Moss	Bryant
			Chinook Stream	Best lower elevation tributary in Klamath (GB). Strongest salmon runs of all ributaries, in better shape than others, and bigger than most (MF)		
			Chinook Stream	From community description.	Serpa	
			COAST CUTTHROAT TROUT		Moss	Bryant
			COHO SALMON (CENTRAL CA, SO. OR./NO. CA ESU)	Good coho run.	Moss	Bryant
			Fishless Stream	Determined from topo map.	Serpa	
			Lower Klamath Sculpin/Dace/Sucker Stream	In community description.	Moyle	
			Rainbow trout stream	Determined from topo map.	Serpa	
			Short-Run Coho Spawning Stream	From community description.	Serpa	
			SOUTHERN TORRENT (=SEEP) SALAMANDER		CNDDB	
			STEELHEAD (CENTRAL CA COAST, NORTHERN CA ESU)		Moss	Bryant
			Steelhead Stream	From community description.	Serpa	
344	1	SULPHUR CREEK	Fishless Stream	Spring system.	Serpa	
			FOOTHILL YELLOW-LEGGED FROG		CNDDB	
			WILBER SPRINGS SHORE FLY	Entirely limited to three springs within Sulphur Creek drainage, Wilbur Hot Springs, Blanck Spring, and Elgin Mine Spring.	Resh	
			WILBUR SPRINGS MINUTE MOSS BEETLE	Endemic to this one site.	Resh	
			WILBUR SPRINGS SHOREBUG	It also occurs in the Coyote Peak tributary of the adjacent Bear Creek. Generally only at the wet substrate of spring flows. Sluggish, occurs in high densities, and high thermal, salinity and lithium tolerances. Main prey is Wilbur Springs shore fly.	Resh	
345	2	PIETA CREEK	Coastal River - Russian	From community description.	Serpa	
			COHO SALMON (CENTRAL CA, SO. OR./NO.	North and south fork better, don't use east fork		

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			CA ESU)	much.		
			Fishless Stream	Determined from topo map.	Serpa	
			Rainbow trout stream	Determined from topo map.	Serpa	
			STEELHEAD (CENTRAL CA COAST, NORTHERN CA ESU)			
			Steelhead Stream		Serpa	
346	3	Cache Creek North Fk.	Fishless Stream	Spring system.		
			WILBUR SPRINGS SHOREBUG	Unlike Wilbur Hot Springs, other Saldula sp. shorebugs were also found here.	Resh	
350	1	MILL CREEK	CHINOOK SALMON (CA COASTAL ESU)	Three distinct runs	Moss	Weseloh
			Chinook Stream	From community description.	Serpa	
			CHUM SALMON	Might be present (MF).	Farro	Weseloh
			COAST CUTTHROAT TROUT		Moss	Weseloh
			COHO SALMON (CENTRAL CA, SO. OR./NO. CA ESU)	May be largest population in CA (MM) One of best coho sites on the Smith (TM). Relatively easy gradient, so good for coho (LM).	McKay	McCain
			Cutthroat Coho River	This is the most productive of the Smith River tributaries (LM).	McKay	
			Cutthroat Coho River	Fewer numbers of fish than in other rivers, but the fish are larger (RA)	Serpa	
			DEL NORTE SALAMANDER		CNDDB	
			Fishless Stream	Determined from topo map.	Serpa	
			Rainbow trout stream	Determined from topo map.	Serpa	
			SOUTHERN TORRENT (=SEEP) SALAMANDER		CNDDB	
			STEELHEAD (CENTRAL CA COAST, NORTHERN CA ESU)		Moss	Weseloh
			TAILED FROG		CNDDB	
351	1	REDWOOD CREEK	ALEUTIAN CANADA GOOSE		McKay	
			CHINOOK SALMON (CA COASTAL ESU)	Phenomenal # of juvenile chinook out of the upper part of creek, but not a single coho. Serious sediment and temperature problems.		
			Chinook Stream	From community description.	Serpa	
			COAST CUTTHROAT TROUT			
			Cutthroat Trout Stream	From community description.	Serpa	
			DEL NORTE SALAMANDER		CNDDB	
			Fishless Stream	Determined from topo map.	Serpa	
			FOOTHILL YELLOW-LEGGED FROG		ARSSC	
			NORTHERN RED-LEGGED FROG		CNDDB	
			Rainbow trout stream	Determined from topo map.	Serpa	
			Redwood juga	Endemic to Smith watershed.	Frest	
			SOUTHERN TORRENT (=SEEP)		CNDDB	

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			SALAMANDER			
			STEELHEAD (CENTRAL CA COAST, NORTHERN CA ESU)	Maybe 50 to 60 summer steelhead in run	Roeloff	
			Steelhead Stream	From community description.	Serpa	
			TAILED FROG		CNDDB	
			TIDEWATER GOBY	Entire drainage proposed as an aquatic diversity management area (Swift).	Swift	
352	1	PRAIRIE CREEK	COHO SALMON (CENTRAL CA, SO. OR./NO. CA ESU)			
			Fishless Stream	Determined from topo map.	Serpa	
			Redwood juga	Endemic to Redwood Creek area.	Frest	
			Short-Run Coho Spawning Stream		Serpa	
			SOUTHERN TORRENT (=SEEP) SALAMANDER		CNDDB	
			STEELHEAD (CENTRAL CA COAST, NORTHERN CA ESU)			
			Steelhead Stream		Serpa	
			TAILED FROG			
353	1	LAKE EARL	ALEUTIAN CANADA GOOSE	The birds forage in the pasture areas around the lake. They require short grass, so cattle grazing is important.	Pierce	
			COAST CUTTHROAT TROUT	One of better populations in CA. One of few places with sea run anadromous cutthroat. The species was not listed because the rare sea run was lumped with much more common four to six inch resident cutthroat (Tom Weseloh).	Moss	Weseloh
			Coastal Wetland	Largest coastal lagoon in California. Seven miles long by two to three miles wide (Moss). Proposed as an aquatic diversity management area (Swift)..	Moss	McKay
			COHO SALMON (CENTRAL CA, SO. OR./NO. CA ESU)	They go up into Jordan Creek to breed (Herb Pierce).	Moss	Weseloh
			NORTHERN RED-LEGGED FROG			
			OREGON SILVERSPOT BUTTERFLY	Only population in California, and they are on state park property.	Pierce	
			STEELHEAD (CENTRAL CA COAST, NORTHERN CA ESU)	They go up Jordan Creek to breed.	Pierce	Weseloh
			TIDEWATER GOBY	Probably the largest population in California. When they would breach the barrier, tens of thousands would be stranded (Herb Pierce).	Pierce	Weseloh
357	3	PUDDING CREEK	COHO SALMON (CENTRAL CA, SO. OR./NO. CA ESU)	There is agood population (WJ).	Jones	
			Fishless Stream	Determined from topo map.	Serpa	
			Rainbow trout stream	Determined from topo map.	Serpa	

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			Short-Run Coho Spawning Stream Steelhead Stream TIDEWATER GOBY	From community description. From community description. Pudding Creek Lagoon from the reservoir about 100 yards upstream of Highway 1 to mouth in ocean is proposed as an aquatic diversity management area (CS).	Serpa Serpa CNDDB	 Swift
367	3	ESTERO AMERICANO	TIDEWATER GOBY	The upper one half mile, including the fresh-salt water intervace proposed as an aquatic diversity management area	CNDDB	Swift
369	2	COLE CREEK	Clear Lake Tributaries Fishless Stream Rainbow Trout Stream	Only population of three-spine stickleback in Clear Lake drainage. Determined from topo map. Cold springwater provides only rainbow trout stream in Clear Lake drainage	CNDDB Serpa CNDDB	
370	3	ANDERSON MARSH	Coastal and Valley Freshwater Marsh Valley Oak Woodland	 riparian	CNDDB Sawyer	 CNDDB
373	2	CACHE CREEK	Fishless Stream Hardhead/Pikeminnow Stream RIPARIAN	Determined from topo map. From community description. SUBSTANTIAL RESOURCE CONDITIONS	Serpa Hopkirk CARA	 Serpa
374	2	RICE FORK EEL RIVER	Fishless Stream NORTHWESTERN POND TURTLE Rainbow trout stream RIPARIAN	Determined from topo map. From community description. Determined from topo map. OUTSTANDING RESOURCE CONDITIONS	Serpa Serpa CARA	
376	3	MIDDLE CREEK	CLEAR LAKE HITCH Clear Lake Prickly Sculpin Clear Lake Tributaries Fishless Stream	They move from the lake to spawn in streams, as much as five to seven miles upstream. One of three best spawning streams. Endemic to Clear Lake area. They are most common in Clear Lake, but also in tributary streams. 	Hopkirk Hopkirk Hopkirk Serpa	Canada
381	1	WINCHUCK RIVER	CHINOOK SALMON - SOUTHERN OREGON/NORTHERN CA CHINOOK STREAM COHO SALMON SOUTHERN OREGON/NORTHERN CA FOOTHILL YELLOW-LEGGED FROG NORTHERN RED-LEGGED FROG SHORT-RUN COHO SALMON SPAWNING STREAM	2 - EO's FROM DESCRIPTION 15 - EO's 4 - EO's 2 - EO's FROM DESCRIPTION	OREGON HERITAGE SERPA OREGON HERITAGE OREGON HERITAGE OREGON HERITAGE SERPA	

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			STEELHEAD - KLAMATH MOUNTAINS WINTER RUN	18 - EO's	OREGON HERITAGE	
			STEELHEAD STREAM	FROM DESCRIPTION	SERPA	
			TAILED FROG	5 - EO's	OREGON HERITAGE	
384	1	CHETCO RIVER	CHINOOK SALMON - SOUTHERN OREGON/NORTHERN CA	1 - EO's	OREGON HERITAGE	
			CHINOOK STREAM	FROM DESCRIPTION	SERPA	
			COHO SALMON SOUTHERN OREGON/NORTHERN CA	29 - EO's	OREGON HERITAGE	
			FOOTHILL YELLOW-LEGGED FROG	5 - EO's	OREGON HERITAGE	
			SHORT-RUN COHO SALMON SPAWNING STREAM	FROM DESCRIPTION	SERPA	
			STEELHEAD - KLAMATH MOUNTAINS WINTER RUN	81 - EO's	OREGON HERITAGE	
			STEELHEAD STREAM	FROM DESCRIPTION	SERPA	
			TAILED FROG	1 - EO's	OREGON HERITAGE	
400	1	LOWER EEL RIVER	BEACH LAYIA		FWS-Arcata	
			Beaches and Coastal Dunes	Pretty impacted. Dunes continue south to Huntington Beach - little hollows and dune scrub but mostly exotics.	Pickart	
			Coastal and Valley Freshwater Marsh	freshwater marsh. Agricultural lands also serve as seasonal freshwater lands.	FWS-Arcata	Pickart
			Coastal Terrace Prairie	Around the edges	FWS-Arcata	
			Coastal Wetland		FWS-Arcata	CALVEG
			Dune Hollow or Swale		FWS-Arcata	Pickart
			Grand Fir/Sitka Spruce	On private land.	FWS-Arcata	
			MENZIES'S WALLFLOWER		FWS-Arcata	
			North Coast Riparian Forest and Scrub		CALVEG	FWS-Arcata
			Northern Coastal Bluff Scrub		FWS-Arcata	
			WESTERN LILY	on Table Bluff	FWS-Arcata	
			WESTERN SNOWY PLOVER	3rd largest nesting sites for Snowy plover - supporting half of nesting in recovery plan. Largest population in North Coast. Unique nesting behavior on gravel bar.	FWS-Arcata	
401	1	HUMBOLT BAY	BEACH LAYIA		TNC FILES	
			BEACH/SHORE PINE		CALVEG	
			Beaches and Coastal Dunes	LARGE DUNES	FWS-Arcata	BLM-Arcata Field Office
			Coastal and Valley Freshwater Marsh		BLM-Arcata Field Office	

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			Coastal Wetland	MAD RIVER ESTUARY - SALT MARSH AND FRESHWATER MARSH ARE HIGH ELEVATION/MORE DIVERSE THAN OTHER MARSHES.	BLM-Arcata Field Office	Pickart
			Dune Hollow or Swale	ELK RIVER SPIT- PRETTY GOOD. LANPHERE - BEST EXAMPLE	Pickart	BLM-Arcata Field Office
			Grand Fir/Sitka Spruce		CALVEG	
			MENZIES'S WALLFLOWER		TNC FILES	
			Northern Dune Scrub	ELK RIVER SPIT- PRETTY GOOD. LANPHERE - BEST EXAMPLE	BLM-Arcata Field Office	Pickart
			Northern Foredune Grassland		TNC FILES	
			OTHER	HIGH SHORE BIRD DENSITY		
			WESTERN LILY	AT TABLE BLUFF	Pickart	
			WESTERN SNOWY PLOVER	ACC'D FWS- EX-PLOVER HABITAT; ACC'D PICKART- RECENT SITING AT NORTHERN EDGE NEAR MAD RIVER SPIT (OHV NOT ALLOWED)	FWS-Arcata	Pickart
404	1	BIG LAGOON	ABRONIA UMBELLATA SSP BREVIFLORA	2- EOs	CNDDB	
			Bald Hills Prairie			
			Bishop Pine	Possible northern limit (Griffin and Critchfield)	CALVEG	
			Coastal and Valley Freshwater Marsh	280 ACRE		
			Coastal Wetland	BETWEEN ALL OF THE LAGOONS - GOOD MIX. THE FRESHWATER AND DRY LAGOON CREATES A COMPLETE MOSAIC. FRESHWATER LAGOON IS CLOSED TO VEHICLES. HEAVY USE AT BIG LAGOON - FEW EXOTICS. IN GOOD SHAPE	FWS-Arcata	Duffy
			Fen/Bog	SIGNIFICANT (ESPECIALLY AT BIG LAGOON)	FWS-Arcata	
			Grand Fir/Sitka Spruce		FWS-Arcata	
			North Coast Riparian Forest and Scrub	GOOD EXAMPLE OF RED ALDER	State Parks (1986) Humboldt Lagoons Plan	Sawyer
			Northern Coastal Scrub		CALVEG	
			Northern Dune Scrub		FWS-Arcata	
			Northern Foredune Grassland	SMALL PATCHES. AT FRESHWATER LAGOON.	FWS-Arcata	
			PACIFIC FISHER	Predicted high suitability	Carroll	
			SITKA SPRUCE FOREST	1- EOs	CNDDB	
			WESTERN SNOWY PLOVER	WINTERING/CRITICAL HABITAT. ESPECIALLY AT BIG LAGOON. ONE OF 5 KEY LOCATIONS IDED BY FWS	FWS-Arcata	
405	1	PELICAN BAY	ALEUTIAN CANADA GOOSE		FWS-Arcata	TNC FILES
			BANK SWALLOW	1- EOs	CNDDB	
			Beach/Shore Pine		FWS-Arcata	

AREA_ CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			Beaches and Coastal Dunes	EXTEND DOWN TO LAKE GEORGE. ACCORDING TO PICKART, FRAGMETNED DUNE SYSTEM. DISTINCT TRANSITION BETWEEN LANPHERE AND THESE DUNES	FWS-Arcata	Pickart
			Coastal Wetland	BROADER PLAIN/BIGGER THAN EEL OR KLAMATH. FRESHWATER MARSH TO COASTAL BRACKISH MARSH. NO SALT MARSH.	FWS-Arcata	
			Dune Hollow or Swale		Pickart	
			EMPETRUM NIGRUM SSP HERMAPHRODITUM	2- EOs	CNDDB	
			Grand Fir/Sitka Spruce		Pickart	
			LATHYRUS PALUSTRIS	1- EOs	CNDDB	
			LILIUM OCCIDENTALE	2- EOs	CNDDB	
			MENZIES'S WALLFLOWER		Pickart	
			Northern Dune Scrub	SAND VERBENA BEACH SAGE	Pickart	
			Northern Foredune Grassland	VERY LITTLE/MAYBE	Pickart	
			OREGON SILVERSPOT BUTTERFLY	2- EOs	CNDDB	
			OTHER	DENTED PENINSULA SNAIL	TNC FILES	
			PHACELIA ARGENTEA	1- EOs	CNDDB	
			Red Fescue Grassland	SOUTHERN LIMIT	Sawyer	
			SAND DUNE PHACELIA	SOUTHERN MOST EXTENT	Pickart	
			STELLER (=NORTHERN) SEA LION	1- EOs	CNDDB	
			TRIENTALIS ARCTICA	1- EOs	CNDDB	
			VIOLA LANGSDORFII	1- EOs	CNDDB	
			WESTERN LILY		FWS-Arcata	
			WESTERN SNOWY PLOVER	WINTERING, ONE OF 5 KEY LOCATIONS		
406	1	CRESCENT CITY	Coastal Wetland		FWS-Arcata	
			Grand Fir/Sitka Spruce	ALDER-SITKA - UNIQUE PLACE	Six Rivers National Forest	
			LATHYRUS PALUSTRIS	1- EOs	CNDDB	
			LILIUM OCCIDENTALE	2- EOs	CNDDB	
			North Coast Riparian Forest and Scrub	ALDER-SITKA-- NOT CERTAIN IF MEANS RIPARIAN	Six Rivers National Forest	
			WESTERN LILY	OTHER RARE PLANTS	Six Rivers National Forest	
408	3	MENDOCINO COAST	ABRONIA UMBELLATA SSP BREVIFLORA	1- EOs	CNDDB	
			Bishop Pine		CALVEG	
			CAMPANULA CALIFORNICA	4- EOs	CNDDB	
			CAREX CALIFORNICA	11- EOs	CNDDB	
			CASTILLEJA MENDOCINENSIS	6- EOs	CNDDB	
			CUPRESSUS GOVENIANA SSP PIGMAEA	9- EOs	CNDDB	
			Grand Fir/Sitka Spruce		CALVEG	

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			LILIUM MARITIMUM	8- EOs	CNDDB	
			LOTIS BLUE BUTTERFLY	1- EOs	CNDDB	
			MENDOCINO PYGMY CYPRESS FOREST	10- EOs	CNDDB	
			Northern Coastal Scrub		CALVEG	
			NORTHERN SPOTTED OWL	1- EOs	CNDDB	
			OTHER	LOTUS BLUE BUTTERFLY - LIKELY EXTIRPATED	CNDDB	
			RED TREE VOLE	2- EOs	CNDDB	
409	1	MACKERRICHER	ABRONIA UMBELLATA SSP BREVIFLORA	2- EOs	CNDDB	
			Beaches and Coastal Dunes		CALVEG	
			Bishop Pine		Pickart	CALVEG
			CALAMAGROSTIS CRASSIGLUMIS	1- EOs	CNDDB	
			CALIFORNIA RED-LEGGED FROG		Flowers	
			CAMPANULA CALIFORNICA	1- EOs	CNDDB	
			CASTILLEJA MENDOCINENSIS	3- EOs	CNDDB	
			CHORIZANTHE HOWELLII	6- EOs	CNDDB	
			Coastal Terrace Prairie		Pickart	
			COLLINSIA CORYMBOSA	2- EOs	CNDDB	
			Dune Hollow or Swale		Flowers	Pickart
			ERYSIMUM MENZIESII SSP MENZIESII	2- EOs	CNDDB	
			Fen/Bog	Inglenook Fen - one of the best on north coast	FWS-Arcata	Flowers
			FOOTHILL YELLOW-LEGGED FROG		Flowers	
			GRAND FIR FOREST	1- EOs	CNDDB	CALVEG
			LILIUM MARITIMUM	3- EOs	CNDDB	
			Northern Coastal Bluff Scrub		Pickart	
			Northern Coastal Scrub		CALVEG	
			Northern Dune Scrub		Pickart	
			Northern Foredune Grassland		Pickart	
			NORTHERN RED-LEGGED FROG		Flowers	
			Northern Vernal Pool	Located in coastal prairie	Flowers	
			OTHER	Lotus butterfly - may be extirpated		
			OTHER	Rare plants: Howel's spineflower, Menzie's wallflower, Point reyes horkelia, north coast phacelia, mendocino coast indian paintbrush, swamp harebell		
			PHACELIA INSULARIS VAR CONTINENTIS	2- EOs	CNDDB	
			SIDALCEA MALACHROIDES	1- EOs	CNDDB	
			TIDEWATER GOBY		CNDDB	FWS-Arcata
			WESTERN SNOWY PLOVER		FWS-Arcata	
410	3	POINT ARENA	ABRONIA UMBELLATA SSP BREVIFLORA	1- EOs	CNDDB	
			AGROSTIS BLASDALEI	1- EOs	CNDDB	
			Beaches and Coastal Dunes	coastal dunes trashed	Pickart	
			Bishop Pine		CALVEG	
			Coastal and Valley Freshwater Marsh	freshwater marsh. Also freshwater lake, pvt	Pickart	

AREA_ CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
				ownership at end of Manchester SP		
			Coastal Wetland	Wetlands - 2 big ones; excellent estuary habitat; coastal brackish water - Garcia River and Brush Crk (CNDDB) Northern coastal salt marsh at Alder Ck, Lake Davis, and Lagoon Lake	Pickart	Flowers
			GRAND FIR FOREST	2- EOs	CNDDB	
			LASTHENIA CONJUGENS	1- EOs	CNDDB	
			LILIUM MARITIMUM	2- EOs	CNDDB	
			MARBLED MURRELET	at Alder Creek!	FWS-Arcata	
			Northern Coastal Bluff Scrub		Pickart	
			NORTHERN SPOTTED OWL	6- EOs	CNDDB	
			OTHER	Behren's silverspot		
			POINT ARENA MOUNTAIN BEAVER	ENDEMIC TO AREA	CNDDB	
			RED TREE VOLE	7- EOs	CNDDB	
			TIDEWATER GOBY		CNDDB	
			WESTERN SNOWY PLOVER	very poor habitat/cutover		
412	2	QUAIL RIDGE	Foothill Pine-Oak Woodland		UC Reserve website	
			Valley Needlegrass Grassland	NATIVE BUNCHGRASSES -PRISTINE	Mangan	
415	2	HEADWATERS GROVE	MARBLED MURRELET	LARGEST POPULATION ONE OF 5 CRITICAL LOCATIONS	BLM-Arcata Field Office	FWS-Arcata
			NORTHERN SPOTTED OWL	11- EOs	CNDDB	
			PACIFIC FISHER	Predicted high suitability	Carroll	
			RED TREE VOLE	4- EOs	CNDDB	
416	1	REDWOOD NP	ABRONIA UMBELLATA SSP BREVIFLORA	5- EOs	CNDDB	
			Bald Hills Prairie	May require burning to maintain	Sawyer	
			California Bay Forest			
			Coastal and Valley Freshwater Marsh		Prairie Creek Redwodd State Park Plan	
			Coastal Douglas Fir			
			Coastal Terrace Prairie			
			Coastal Wetland		Prairie Creek Redwodd State Park Plan	
			Grand Fir/Sitka Spruce			
			MARBLED MURRELET	WINTERING. ONE OF 5 KEY LOCATIONS	FWS-Arcata	
			Northern Coastal Scrub		Prairie Creek Redwodd State Park Plan	
			Northern Interior Cypress Forest			
			NORTHERN SPOTTED OWL	10- EOs	CNDDB	
			PACIFIC FISHER	Predicted high suitability	Carroll	

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			Port Orford Cedar Forest			
			SITKA SPRUCE FOREST	2- EOs	CNDDB	
			Upper Montane Coniferous Forests	TYPICALLY INLAND SPECIES, HERE OCCURRING RELATIVELY CLOSE TO THE COAST LINE	Prairie Creek Redwood State Park Plan	
417	1	SMITH RIVER NFK	ARABIS ACULEOLATA	2- EOs	CNDDB	
			ARABIS MACDONALDIANA	17- EOs	CNDDB	
			BOSCHNIAKIA HOOKERI	1- EOs	CNDDB	
			CARDAMINE NUTTALLII VAR GEMMATA	1- EOs	CNDDB	
			Coast Range Mixed Coniferous Forest		OREGON GAP	
			ERIOGONUM PENDULUM	1- EOs	CNDDB	
			Fen/Bog	LARGEST IN THE WORLD! EXTENSIVE BOGS IN NORTHERN PORTION OF THE AREA REPRESENTS THE BEST DEVELOPED DARLINGTONIA BOG HABITAT IN CA RNA SYSTEM. SENSE AGREGGATION OF DARLINGTONIA CALIFORNICA IN BOG FOREST	Six Rivers National Forest	Sawyer
			GENTIANA SETIGERA	1- EOs	CNDDB	
			LEWISIA OPPOSITIFOLIA	3- EOs	CNDDB	
			Northern Interior Cypress Forest			
			NORTHERN SPOTTED OWL	1 - EO's	OREGON HERITAGE	
			OTHER	DWARF FOREST (NO HOLLAND EQUIVALENT)	Keeler-Wolf (199) RNA	
			PINGUICULA VULGARIS SSP MACROCERAS	5- EOs	CNDDB	
			Port Orford Cedar Forest	NOT DENSE. NOT INFESTED WITH ROOT ROT	Keeler-Wolf (199) RNA	Sawyer
			PYGMY MANZANITA		Sawyer	
			SERPENTINE BARRENS		Sawyer	
			Serpentine Chaparral	RARE MANZANITA CHAPARRAL - USE SERPENTINE TO CAPTURE	Sawyer	
			Sierran Mixed Coniferous Forest	SMALL PORTION OF THE UPPER ELEVATION NEAR STONE CORRAL SUPPORTS AN OPEN WOODLAND OF JEFFREY PINE. LOW ELEVATION - UNUSUAL FOR ECOREGION. POOR QUALITY BUT REMAINING HABITAT IS IMPORTANT	Sawyer	
			STREPTANTHUS HOWELLII	2- EOs	CNDDB	
			Ultramafic Mixed Conifererous Forest		CALVEG	
			Upper Montane Coniferous Forests	JEFFREY PINE - BEST/LARGEST STAND JEFFREY PINE-FIR FOREST - HIT HARD; LODGEPOLE - DIFFERENT FROM THAT ON COAST - EXTENSIVE HERE RARE IN ECOREGION. USUALLY FOUND AT HIGH	Sawyer	

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
				ELEVATION, I.E. IN SISKYOU MTNS		
			VIOLA PRIMULIFOLIA SSP OCCIDENTALIS	9- EOs	CNDDB	
418	1	DEL NORTE COAST	Bald Hills Prairie	"CLASSIC" REQUIRES DISTURBANCE - BURNING OR GRAZING. LOOK FOR WESTERN LILY EOS	Sawyer	
			California Bay Forest		State Parks Website	
			Coastal Terrace Prairie		State Parks Website	
			Grand Fir/Sitka Spruce		State Parks Website	
			MARBLED MURRELET	ONE OF 5 CRITICAL LOCATIONS, LARGEST DENSITY.	State Parks Website	FWS-Arcata
			Northern Coastal Scrub		CALVEG	
			Northern Interior Cypress Forest	TYPICALLY INLAND SPECIES, HERE OCCURRING RELATIVELY CLOSE TO THE COAST LINE		
			NORTHERN SPOTTED OWL		State Parks Website	
			OENOTHERA WOLFII	1- EOs	CNDDB	
			Port Orford Cedar Forest	SOUTHERN LIMIT AT PRIARIE CREEK STATE PARK	State Parks Website	Prairie Creek Redwood State Par
			RED TREE VOLE	2- EOs	CNDDB	
419	1	ELKHORN RIDGE	Northern Interior Cypress Forest		TNC FILES	
			NORTHERN SPOTTED OWL		TNC FILES	CNDDB
			PACIFIC FISHER	Predicted suitable habitat	Dunk	
			RED TREE VOLE		CNDDB	
			Upland Douglas Fir Forest	large stand of Old-growth	TNC FILES	
421	1	DIAMOND CREEK	ARABIS MACDONALDIANA	6 - EO's	OREGON HERITAGE	
			ARCTOSTAPHYLOS HISPIDULA	1 - EO's	OREGON HERITAGE	
			CAREX GIGAS	1 - EO's	OREGON HERITAGE	
			FOOTHILL YELLOW-LEGGED FROG	1 - EO's	OREGON HERITAGE	
			North Coast Riparian Forest and Scrub		OREGON GAP	
			NORTHERN SPOTTED OWL	1 - EO's	OREGON HERITAGE	
			PINGUICULA VULGARIS SSP MACROCERAS	1 - EO's	OREGON	

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
					HERITAGE	
			Ultramafic Mixed Coniferous Forest		OREGON GAP	
			Upland Douglas-Fir Forest		OREGON GAP	
			Upper Montane Coniferous Forest		OREGON GAP	
			VIOLA PRIMULIFOLIA SSP OCCIDENTALIS	3 - EO's	OREGON HERITAGE	
425	1	UPPER CHETCO RIVER	CLOUDED SALAMANDER	1 - EO's	OREGON HERITAGE	
			Coastal Douglas Fir - Western Hemlock Forest		OREGON GAP	
			DEL NORTE SALAMANDER	2 - EO's	OREGON HERITAGE	
			DRABA HOWELLII	1 - EO's	OREGON HERITAGE	
			ERIGERON CERVINUS	4 - EO's	OREGON HERITAGE	
			FRITILLARIA GLAUCA	3 - EO's	OREGON HERITAGE	
			GENTIANA SETIGERA	2 - EO's	OREGON HERITAGE	
			LEWISIA COTYLEDON VAR PURDYI	1 - EO's	OREGON HERITAGE	
			LOMATIUM ENGELMANNII	2 - EO's	OREGON HERITAGE	
			LUPINUS TRACYI	3 - EO's	OREGON HERITAGE	
			NORTHERN SPOTTED OWL	5 - EO's	OREGON HERITAGE	
			SALIX DELNORTENSIS	8 - EO's	OREGON HERITAGE	
			SAXIFRAGOPSIS FRAGARIOIDES	1 - EO's	OREGON HERITAGE	
			Serpentine Chaparral		OREGON GAP	
			STREPTANTHUS HOWELLII	5 - EO's	OREGON HERITAGE	
			Ultramafic Mixed Coniferous Forest		OREGON GAP	
			Upper Montane Coniferous Forest		OREGON GAP	
426	1	UPPER SMITH RIVER NFK	ARABIS MACDONALDIANA	2 - EO's	OREGON HERITAGE	
			CALOCHORTUS HOWELLII	2 - EO's	OREGON HERITAGE	
			CAREX GIGAS	4 - EO's	OREGON HERITAGE	
			Coastal Douglas Fir - Western Hemlock Forest		OREGON GAP	

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
			DEL NORTE SALAMANDER	1 - EO's	OREGON HERITAGE	
			GENTIANA SETIGERA	1 - EO's	OREGON HERITAGE	
			LUPINUS TRACYI	6 - EO's	OREGON HERITAGE	
			MONARDELLA PURPUREA	6 - EO's	OREGON HERITAGE	
			North Coast Riparian Forest and Scrub		OREGON GAP	
			NORTHERN SPOTTED OWL	4 - EO's	OREGON HERITAGE	
			POA PIPERI	3 - EO's	OREGON HERITAGE	
			Serpentine Chaparral		OREGON GAP	
			STREPTANTHUS HOWELLII	3 - EO's	OREGON HERITAGE	
			Ultramafic Mixed Coniferous Forest		OREGON GAP	
			Upper Montane Coniferous Forest		OREGON GAP	
			VIOLA PRIMULIFOLIA SSP OCCIDENTALIS	2 - EO's	OREGON HERITAGE	
427	1	WHALESHEAD CREEK	ABRONIA UMBELLATA SSP BREVIFLORA	4 - EO's	OREGON HERITAGE	
			ARTEMISIA PYCNOCEPHALA	1 - EO's	OREGON HERITAGE	
			Coastal Dunes		OREGON GAP	
			Grand Fir / Sitka Spruce		OREGON GAP	
			LASTHENIA MACRANTHA SSP PRISCA	1 - EO's	OREGON HERITAGE	
			LILIUM OCCIDENTALE	5 - EO's	OREGON HERITAGE	
			MARBLED MURRELET	1 - EO's	OREGON HERITAGE	
			Mixed North Slope Cismontane Woodland		OREGON GAP	
			PHACELIA ARGENTEA	2 - EO's	OREGON HERITAGE	
			POA UNILATERALIS	1 - EO's	OREGON HERITAGE	
			RHYNCHOSPORA CAPITELLATA	1 - EO's	OREGON HERITAGE	
			Wet or Montane Meadow		OREGON GAP	
428	1	WINCHUCK RIVER	ARCTOSTAPHYLOS HISPIDULA	2 - EO's	OREGON HERITAGE	
			CLOUDED SALAMANDER	1 - EO's	OREGON	

AREA_CODE	TIER	AREA_NAME	TARGET	NOTES	SOURCE1	SOURCE2
					HERITAGE	
			Coastal Douglas Fir - Western Hemlock Forest		OREGON GAP	
			DEL NORTE SALAMANDER	2 - EO's	OREGON HERITAGE	
			FRINGED BAT	1 - EO's	OREGON HERITAGE	
			Grand Fir / Sitka Spruce		OREGON GAP	
			MARBLED MURRELET	11 - EO's	OREGON HERITAGE	
			Mixed North Slope Cismontane Woodland		OREGON GAP	
			North Coast Riparian Forest and Scrub		OREGON GAP	
			NORTHERN SPOTTED OWL	20 - EO's	OREGON HERITAGE	
			NORTHWESTERN POND TURTLE	1 - EO's	OREGON HERITAGE	
			PACIFIC FISHER	1 - EO's	OREGON HERITAGE	
			PHACELIA ARGENTEA	1 - EO's	OREGON HERITAGE	
			Redwood Forest		OREGON GAP	
			Wet or Montane Meadow		OREGON GAP	

APPENDIX IV: CONTACTS LIST

APPENDIX IV: CONTACTS

LAST	FIRST	AFFILIATION	SPECIALTY	PHONE	MAIL/EMAIL
Ambrose	Anthony	NMFS	Biologist	(707) 822-1343	
Anderton	Kate	Save-the-Redwoods League	Exec. Dir	(415) 362-2352	114 Sansome St, Rm 1200, SF, CA 94104 www.savetheredwoods.org
Andrew	Greg	Marin Municipal Water District	Fisheries	(415)927-4953	
Aramayo	Robert	GANDA	Fisheries,consultant	(415)789-9242	
Arguello	Leonell	Redwood National Park	botanist	707.822.7611x5281	
Averill	Daniel	BLM - Arcata	Supervisory Resource Management Specialist	(707) 825-2310	BLM - Arcata Field Office 1695 Heindon Rd, Arcata CA 95521-4573
Bell	Craig	Salmonid Restoration Federation	Salmonids	(707) 629-3342	
Bowers	Michael	NMFS	Fisheries	(415)435-3149	
Bryant	Greg	NMFS	Salmonids, listing	(707)825-5162	
Budge	Nancy	Mendocino Redwood Company	Stewardship Director	(707) 962-2807	nancybudge@mendoco.com
Caferratta	Pete	CDFG	Forest Hydrology; Geomorphology	(916)653-9455	
Coui	Bob	CDFG	Fisheries, Russian R.	(707)744-8704	
Cox	Bill	CDFG	Fisheries	(707)823-1001	
Diller	Lowell	Simpson Timber Co.	Amphibian expert	(707) 668-4428	Redwood Division, 900 Riverside Rd POB 68 Korbel, CA 95550-0068
Downie	Scott	CDFG	Fisheries:Eel, Mattole	(707)725-1070	
Duffy	Walt	Humboldt State University	Fisheries	(707)826-3268	
Dunk	Jeff	USFS Redwood Sciences Lab	spotted owl model	707 825-2979	jdunk@fs.fed.us
Eckman	Emil	Mendocino National Forest	Biologist	(916)934-3316	
Eicher	Anne	CNPS - North Coast, Humbolt CO. public works	Conservation Committee	(707) 839-4856 or 445-7741	ale7001@axe.humboldt.edu
Erman	Nancy	UC Davis	Caddisflies		naerman@ucdavis.edu
Farro	Mitch	Pacific Coast Restoration	Salmonids	(707)839-5664	
Fellers	Gary	Point Reyes National Seashore	Amphibians	(415)663-8522	
Fenwood	Jim	Mendocino National Forest	Supervisor	530-934-3316	825 N. Humbolt Ave.Willows, CA, 95988
Flowers	Jennifer	State Parks - Russian River/Mendocino District	Ecologist	(707) 937-5804 x122	25381 Steelhead Blvd, POBox 123 Duncan Mills, CA 95430 flowers@mcn.org
Fuller	Dave	BLM	Fisheries	(707)825-2301	1695 Heindon Road Arcata, CA 95521-4573
Gale	Dan	Yurok National Reserves Program	Fisheries	(707)482-2841	
Ganzales	Armand	DFG		(707) 441-5669	
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APPENDIX V: REFERENCES

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