



# Southern California Coastal Sage Scrub NCCP Conservation Guidelines

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August, 1993

*Published by:*

California Department of Fish & Game  
and  
California Resources Agency  
1416 9th Street  
Sacramento, CA 95814

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# 1. Introduction

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This document presents Conservation Guidelines for the Coastal Sage Scrub (CSS) Natural Community Conservation Planning (NCCP) process. The guidelines are published by the California Department of Fish and Game. The guidelines were prepared in coordination among the Department, the U.S. Fish and Wildlife Service, and the Scientific Review Panel (SRP), and are based on technical review by and recommendations from the SRP. These guidelines are intended to be used along with the NCCP Process Guidelines also published by the California Department of Fish and Game.

The SRP was commissioned by the Department and the Service to review available scientific information to assist in preparation of the Conservation Guidelines. The review addresses information available as of March 1993 and is described in "Scientific Review Panel Conservation Guidelines and Documentation," which is available from the Department.

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## Premises on CSS Ecology

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1. CSS vegetation is dominated by a characteristic suite of shrub species in southern California. The composition of coastal sage scrub vegetational subcommunities may vary substantially depending on physical circumstances and the successional status of the habitat. An explicit definition of CSS and a description of its constituent species has been prepared by the SRP. (See Special Report No. 2, March 1992.) A generalized map of CSS and a summary description is included in [Attachment A](#)
  2. While a variety of species are characteristic of CSS, no single animal or plant species readily serves as a consistent and entirely reliable indicator of CSS conditions across the entirety of the distribution of the habitat in southern California. Rather, many species dependent on CSS are found in only certain subsets of the community, and, conversely, many nominal CSS species are widely distributed in non-CSS habitats. Nonetheless, a suite of "target" species has been identified by the SRP that is useful as a surrogate for planning purposes. Species other than target species that have been identified as deserving special consideration on account of possible rarity or endangerment are referred to as species of concern. These are state or federal candidates for listing. (See SRP Survey Guidelines, February 1992.)
  3. Target species are three vertebrates that are among the community's most visible imperiled organisms: California gnatcatcher, cactus wren, and orange-throated whiptail lizard. Their distributions embrace the majority of the geographic range of southern California CSS.
  4. Many species that depend on coastal sage scrub exhibit transitory habitat occupancy, along with short lifetimes, high potential rates of reproduction, limited home ranges, dramatic population fluctuations, and great susceptibility to local extirpation.
  5. Because of population fluctuations and routine local extirpation and recolonization events, a single point-in-time appraisal of the presence or absence of a species on an individual parcel of land does not reliably indicate the parcel's long-term potential value or importance as habitat.
  6. CSS may convert to chaparral or grassland, depending on slope, aspect, climate, Fire history, and other physical factors and biological phenomena; conversely, chaparral or grassland areas may convert to CSS.
  7. CSS is a naturally patchy vegetation community. Over a scale of several miles, it is found in diverse habitat mosaics with other ecological communities. While there are species dependent on coastal sage scrub, these species do not always exhibit a clear tendency to occupy areas of continuous coastal sage scrub. Rather, vegetation components of coastal scrub habitat in mosaics with other habitat types may provide habitat for target species and other species of concern.
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## Premises on the conservation challenge

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1. The southern California CSS planning region has been severely degraded by past urbanization and agricultural land conversion. Certain subhabitats, such as those at low elevation, those close to the coast, and those with lesser slope, have been disproportionately affected and many have experienced local losses of some species.
2. Threats to CSS habitat are more than losses of total habitat area alone. Threats also include losses of distinct CSS subtypes and losses of the special conditions needed to maintain the broad suite of CSS-resident species. ([Attachment A.](#))
3. Conversion of natural land has also severed connections among remnant habitat patches resulting in their increased isolation. Connections among habitat patches are critical to the long-term survival of CSS species.
4. Because CSS is found naturally admixed with other vegetation communities, the best conservation strategy for CSS is to protect large areas of native vegetation that include biologically significant patches of CSS.
5. Under present conditions, few CSS-dominated lands are of sufficient extent to be self-sustaining. A status quo strategy of "benign neglect" management likely will result in substantial further losses of CSS biodiversity. Habitat areas large enough to be self-sustaining should not be significantly reduced in size and they should be actively managed in ways responsive to pertinent new information as it accrues.
6. The CSS community is inherently dynamic and should be managed to retain its capacity to support the broad range of CSS species over the long term. Under an adaptive management regime that provides for natural successional dynamics, a reserve system that consists of smaller habitat areas that are appropriately managed could have a greater likelihood of maintaining CSS biodiversity than a system of larger habitat areas that are unmanaged. The techniques associated with such a management regime, however, have not been fully developed.
7. CSS conservation will require appropriate levels of participation by public agencies responsible for publicly owned land that contains CSS or that serves as linkages between reserves. State and local government can participate through the NCCP process and federal agency land owners can participate through federal programs coordinated with NCCPs. Although important to the integrity of regional conservation efforts, not enough CSS exists in public ownership for public land to be the sole basis of a reserve network.
8. Within the southern California region as a whole, roughly a dozen biologically defined subregions, designed around extensive habitat areas can be identified based on geography, the ecological characteristics of CSS species, and patterns of past land use. Each subregion exhibits distinct local conditions that will affect the conservation approach to be used.
9. Each subregion will need to meet explicit conservation objectives to promote ecosystem stability at both subregional and regional levels. Each subregion will need to provide for conservation of the three target species.

10. Despite the extent of current threats, the majority of the species inhabiting the CSS do not appear to be in imminent danger of regional extinction. Some small amount of short-term habitat loss can be tolerated as long as it is ultimately counter-balanced by adequate long-term enhancement efforts.
  11. A few, small-scale efforts at CSS restoration and enhancement have been attempted; these examples indicate that net enhancement of habitat quality may be attainable. Furthermore, ecological studies of CSS show natural recovery from disturbance suggesting that active restorative projects may be successful.
  12. Information available to the SRP supports a conservative estimate of 5% habitat quality enhancement potential for existing CSS habitat. This potential for mitigation leads to a corresponding estimate of 5% short-term habitat loss that can be tolerated in any subregion. A level of enhancement beyond 5% may be possible and with adequate scientific information, improved prospects for enhancement can be the basis for allowing a greater than 5% loss of habitat.
  13. Land of high priority for inclusion in a reserve system can be identified based on a combination of size, location, and quality criteria. The impact of an overall 5% loss of CSS habitat area can be further reduced by avoiding losses of higher priority habitat.
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## Premises on timing

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1. The southern California planning region is too large to be planned as a single unit. For conservation planning purposes, the region needs to be divided into subregions that are based on both biological and political considerations. The scale and focus of the subregions has been defined by the SRP (Subregional Planning Document, May 1992, revised August 1992). The focus area map is included as [Attachment B](#).
  2. Subregional conservation planning will progress at different rates due to different local economic conditions. Some subregions are ready to initiate NCCP planning now; others may not participate for several years. Some subregions may need to subdivide into subareas for planning purposes. Where appropriate, the CDFG and USFWS can accept the delineation and planning of subareas within subregions, provided subareas continue to participate in the subregional planning effort and adhere to the subregional goals and objectives. Planning on a subarea basis may proceed prior to final approval of the subregional plan provided the subarea plan integrates its preserve design with adjacent subareas, is consistent with the overall design of the subregional plan, and describes how it will mesh with and augment the subregional plan.
  3. Scientific information available to the SRP does not support a conservation plan that would lead to significant losses of CSS habitat. Despite recent efforts to address this data shortfall, there is still a lack of scientific information on important aspects of CSS biology that may be necessary to formulate and implement a long-term plan.
  4. Land owners and local governments should initiate the subregional planning process and identify and begin to fill information needs specific to that subregion. The extent of additional information needed, hence the time and effort needed, depends on the extent of projected habitat losses within a subregion. The amount of additional data necessary for decision-making will be minimal where subregional habitat losses are expected to be minimal or where adequate mitigation for losses can be demonstrated conclusively. Conversely, where greater habitat loss is proposed or where mitigation entails unproven technologies, data needs will be greater.
  5. Subregions are encouraged to formulate NCCPs for approval by CDFG and USFWS as early as possible. One element of a NCCP must be an assessment of the status of scientific information in the subregion. A NCCP can be approved for implementation in phases despite a need for scientific information. Implementation of each phase of the plan must be adequately supported by scientific information.
  6. Short-term habitat conversion should not foreclose future long-term conservation planning options.
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## The interim strategy

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- Short-term losses of habitat should be minimized so as to not foreclose future conservation planning options until such time as an NCCP has been completed and long-term enhancement and management programs are formulated.
  - Total interim loss should be limited to 5% of CSS habitat in any individual subregion.
  - To the maximum degree practicable, the 5% loss should be limited to areas with smaller populations of target species.
  - To the maximum degree practicable, the 5% loss should not disproportionately impact specific subunits of the environmental gradient in each subregion (as defined by vegetation subcommunity, latitude, elevation, distance from coast, slope, aspect or soil type).
  - During the interim period, subregional and subarea planning should strive to protect areas of higher long-term conservation value -- defined by extent of CSS habitat, proximity of that habitat to other habitat, value as landscape linkages or corridors, or presence of target species or other species of concern -- until a subregional plan can be put in place.
  - Development pressure should be directed toward areas that have lower long-term conservation value. Such habitat areas are smaller in extent, are more isolated, have limited value as landscape linkages, and support comparatively fewer individuals of target species.
  - Planning should ensure that all interim habitat losses are adequately mitigated and should contribute to the interim subregional mitigation program that will be subsumed in the long-term subregional NCCP as specified in the Process Guidelines.
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## The research agenda

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The following research program can resolve unanswered questions that bear on the conservation of target species that inhabit coastal sage scrub and the biodiversity associated with that community. The SRP recommends six interactive research tasks.

1. **Biogeography and inventory of CSS.** The basic extent and distribution of CSS vegetation and its constituent species should be adequately mapped for the region and each subregion. This information will be required to support any subregional plan. The comprehensive literature review of CSS initiated by the SRP should be expanded and kept current.

For the southern California region, maps of the planning region should be provided at a scale of 1:100,000, with minimum mapping units of 100 ha (250 acres) and a minimum resolution of 100 m (330 feet). Ideally these maps would be GIS-based. Data layers should include vegetation, urban and agricultural land use, land ownership, topography, climate, distribution of target species, and available information on species of concern.

For each subregion, GIS-based maps (or accurate manually drawn maps based on similar data) should be provided at a scale of 1:24,000 with minimum mapping units of 10 ha (25 acres) and minimum resolution of 30 m (100 feet). Data layers should include those required for regional planning as well as specific conditions relevant to the subregion, with great emphasis on ground-truthing and verification of data.

2. **Trends in biodiversity.** It is the intent of the NCCP to preserve a substantial representation of the biodiversity associated with CSS. Better information on the effect of reserve size and adjoining land uses on biodiversity would help planning decisions. Monitoring of select taxa is necessary to assess the ongoing success of CSS community conservation efforts. Indicator taxa (such as CSS dependent birds, small mammals, and butterflies) should be employed due to time and funding constraints. The relationships between species richness/composition and habitat patch area and the effects of isolation should be investigated in sampling programs. These sampling programs will entail surveys for species richness and composition within a carefully selected series of CSS patches in each subregion.
3. **Dispersal characteristics and landscape corridor use.** More information about dispersal limitations of CSS species would help planning for adequate linkages between reserves and reveal trade-offs between increasing reserve size and improving corridors. Dispersal information adequate to allow tests of sensitivity of metapopulation models to connectivity are required. Data from several locations within the planning region during both breeding and non-breeding seasons should be gathered on target species, mountain lions, coyotes, and representative small mammals and invertebrates.

4. **Demography and population viability analysis.** One test of the potential effectiveness of reserve systems is population viability analysis. Time-series data on the two target species of birds should be gathered in at least half the subregions and from representative physical circumstances that span those found across the regional distributions of the species. Data should include territory size, time budgets, reproductive success, survivorship, emigration and immigration, with separate data obtained both for males and females where possible. Population viability analyses should be carried out for sample populations and metapopulations, and should consider connectivity and environmental effects.
  5. **Surveys and autecological studies of sensitive animals and plants.** Basic information on the location, abundance, distribution, and natural history of vertebrate and invertebrate candidate species for federal protection and CSS-associated plant species of special concern should be gathered from select sites throughout the planning region. Each subregional planning exercise should contribute to this regional effort.
  6. **Genetic Studies.** The maintenance of genetic variation is critical to the long-term viability of species inhabiting CSS and will be an important aspect of monitoring populations under a NCCP. Declining genetic variation will be one symptom of inadequate linkages between reserves and can signal a need for changes in reserve management. Baseline data for comparison with future conditions should be gathered at the earliest possible opportunity. Target species and several invertebrates should be sampled from several locations in each subregion. Most genetic data can be obtained with non-destructive sampling techniques in conjunction with other studies that require handling of individual animals.
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## Management and restoration

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Management and restoration practices should be addressed as part of a well-coordinated research program. Management and restoration research will be valuable to subregional NCCP planning. Even after a NCCP is adopted, ongoing restoration research will be essential to adaptive management of coastal sage scrub habitat. The California Department of Fish and Game in collaboration with the U.S. Fish and Wildlife Service will convene a committee of experienced practitioners in the management and restoration of coastal sage scrub habitats to develop guidelines for such activities. This committee should review pertinent documents and address the current state of knowledge in the following areas key to the management of coastal sage scrub:

- Exotic species control, including both animals (in particular, cowbirds and feral and domestic mesopredators such as house cats and introduced red foxes) and plants (weedy species, especially annual species of old world origin).
- Recreational use of coastal sage scrub and other open space reserve areas, including identification of suitable low impact recreational pursuits consistent with preservation goals.
- The role of fire in natural ecosystem dynamics and processes, including the application of control burns and the control of ignitions of accidental and vandal origin.

Restoration considerations to be addressed in well-designed field experiments include:

- Identification of restoration unit sizes, including identification of maximum areas that are restorable using current techniques. A focus on patch enlargement techniques is advised.
- Identification of coastal sage scrub responses to soil conditions in restoration efforts, with focus on soil structure, soil nutrient levels, organic matter content, water holding capacity, and soil compaction.
- Identification of appropriate seeding, outplanting, and irrigation techniques with focuses on proper mixes of seeds, seeding techniques, and timing of applications of seed and irrigation.
- Identification of techniques to encourage native herbaceous species and to discourage the establishment of exotic species.
- Establishment of realistic success criteria to evaluate restoration considering sage species diversity and cover, and use by target species.

The management and restoration committee will be expected to design multifactorial field experiments at appropriate spatial scales using explicit and repeatable scientific method to aid in differentiating among alternative techniques. Since treatments will in all likelihood vary with physical circumstances, local vegetation composition and structure, and other unique conditions, each subregional planning unit will be expected to contribute to the regional management and restoration research effort.

## Application to subregional planning

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The biogeography research task will provide mapping of physical features, land uses, and vegetation to portray the options for the design of a subregional reserve and corridor network. The other research tasks will assist planners in evaluating conservation planning options by documenting species distributions and relative abundances within each subregion, by identifying the sizes and configurations of habitat patches necessary to sustain stable demographic units of target species, and by assessing the physical characteristics of landscape corridor linkages required to facilitate dispersal, gene flow, and recolonization by species inhabiting the coastal sage scrub community.

Based on this information, subregional NCCPs will designate a system of interconnected reserves designed to: 1) promote biodiversity, 2) provide for high likelihoods for persistence of target species in the subregion, and 3) provide for no net loss of habitat value from the present, taking into account management and enhancement. No net loss of habitat value means no net reduction in the ability of the subregion to maintain viable populations of target species over the long-term.

The NCCP will need to establish a wide range of habitat management and enhancement tools and incorporate a monitoring program to provide guidance for ongoing management. With improved techniques for management and restoration, the goal of no net loss of habitat value may be attainable even if there is a net loss of habitat acreage.

Several basic tenets of reserve design should be applied to each subregion:

1. **Conserve target species throughout the planning area:** Species that are well-distributed across their native ranges are less susceptible to extinction than are species confined to small portions of their ranges.
2. **Larger reserves are better:** Large blocks of habitat containing large populations of the target species are superior to small blocks of habitat containing small populations.
3. **Keep reserve areas close:** Blocks of habitat that are close to one another are better than blocks of habitat far apart.
4. **Keep habitat contiguous:** Habitat that occurs in less fragmented, contiguous blocks is preferable to habitat that is fragmented or isolated by urban lands.
5. **Link reserves with corridors:** Interconnected blocks of habitat serve conservation purposes better than do isolated blocks of habitat. Corridors or linkages function better when the habitat within them resembles habitat that is preferred by target species.
6. **Reserves should be diverse:** Blocks of habitat should contain a diverse representation of physical and environmental conditions.
7. **Protect reserves from encroachment:** Blocks of habitat that are roadless or otherwise inaccessible to human disturbance serve to better conserve target species than do accessible habitat blocks.

## 4. Implementing Interim Strategy

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The interim strategy should be implemented as specified in the Process Guidelines. An annotated summary of the various tasks is included below.

- **Establish a NCCP planning group and identify a lead or coordinating agency for each subregion according to process guidelines.**

The subregional lead or coordinating agency is responsible for working with local governments, landowners, and other interested parties in establishing the NCCP planning process. The subregional lead or coordinating agency is also responsible for coordinating with local jurisdictions and/or subarea authorities to accomplish the tasks listed below:

- **Designate subregions.**

Focus areas have been designated by the SRP. Local jurisdictions are to draw the actual boundaries between focus areas to designate subregions for NCCP planning. Ideally, there should be one subregion for each focus area. However, subregional boundaries can be drawn for planning purposes according to convenient jurisdictional boundaries. Divisions along county boundaries are appropriate, and there is value to coordinating planning on a large scale. Additionally some subregions may need to subdivide into subareas for NCCP planning purposes. However, the 5% interim area loss cap will apply to each biologically defined subregion. Recognizing that large subregions must meet the objective of limiting short-term CSS losses on a biologically valid scale, some further subdivision of a large planning subregion into appropriately sized biological subareas for the purpose of accounting for interim habitat loss may be necessary.

- **Inventory CSS habitat and species in subregion.**

As of winter 1993, basic inventory work on vegetation mapping has been completed. Species surveys, however, are largely incomplete, but comprehensive species surveys are not critical to interim effort. The Planning Agreement establishing a subregion will specify what other species, if any, in addition to the target species will be explicitly addressed in planning for that subregion. Individual parcels that are considered for development will need to be surveyed for those species.

- **Determine long-term conservation value of lands in subregion.**

See evaluation process and evaluation methodology, below. All CSS habitat in the subregion is to be evaluated and mapped.

- **Calculate CSS habitat area and compute 5% interim loss cap for each subregion.**

All CSS habitat in the subregion is to be counted to compute the basis for the 5% interim loss, including all publicly and privately owned land. The most inclusive definition of CSS should be used. There is no minimum parcel size threshold for consideration. Where a planning subregion has been drawn on a scale larger than the focus areas identified by the SRP, the subregion may need to be divided into smaller subareas that are adequate to account for interim CSS losses. The baseline should reflect the extent of CSS as of March 25, 1993, the time the SRP conservation strategy recommendation was made and the USFWS listing of the California gnatcatcher was published. Only those projects approved by CDFG and USFWS prior to March 25, 1993, and

explicitly meeting the requirements of the Endangered Species Act should be excluded from the baseline. The baseline calculation and designation of subareas for accounting must be verified by the U.S. Fish and Wildlife Service and the California Department of Fish and Game.

- **Identify an entity to serve as a central clearing house to account for cumulative habitat loss in each subregion.**

That entity will advise local land use jurisdictions to insure that the 5% interim loss guideline is not exceeded. The entity could be the lead or coordinating agency, a council of governments, or a wildlife agency. Some provision will need to be made to coordinate and to account for state projects, or for utility or transportation projects that cross subregional boundaries.

- **Identify interim mitigation requirements guidelines for all development on CSS habitat loss.**

Mitigation guidelines for interim habitat loss must be developed for the subregion and must be established in a subregional planning agreement or another written document requiring concurrence of the U.S. Fish and Wildlife Service and the California Department of Fish and Game. The provisions for interim mitigation measures will need to be applied by local jurisdictions and may include a requirement that the landowner receiving approval for interim CSS habitat loss will make an appropriate commitment to continue to participate in the overall subregional NCCP program. It is recognized that full mitigation may not be practical during the interim period because reserve acquisition programs and enhancement techniques have not been established. However, an approved subregional NCCP will eventually mitigate interim losses. In the interim phase, adequate mitigation for losses of lower value habitat may range from payment of a fee to purchase or to set aside higher value habitat. Management and restoration efforts undertaken as mitigation during the interim program will add to the overall ability of these conservation tools to be employed more successfully in the future.

- **Identify and fill scientific information needs for long-term planning.**

Appropriate scientific research tasks will vary from subregion to subregion depending on the amount of information available, the amount of habitat conversion proposed, and the conservation strategies being considered. Scientific research must be coordinated with region-wide efforts. The timing and funding for subregional research may need to be phased with staged implementation of a plan.

- **Complete and implement subregional NCCP according to process guidelines.**
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## Ranking land for interim protection

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CSS and some associated non-CSS natural lands need to be evaluated and ranked for interim protection. Interim protection should be afforded to lands that are likely to be important to long-term conservation planning options due to CSS patch size and density, location, and biologic components.

1. **Higher potential value:** To determine areas of potential long-term conservation value, large, relatively dense areas of CSS must be identified. These are termed Higher Value Districts and are possible core areas for a reserve system. They need to be identified early in the planning process and protected from habitat loss and fragmentation while planning is under way. The methodology described below places 50% of the CSS in a subregion in the higher potential value category.
2. **Intermediate potential value:** Lands that probably can not be managed as independent reserves, but which by virtue of high quality, or proximity or linkage to the Higher Value Districts should be treated as potentially significant for subregional conservation planning.
3. **Lower potential value:** Land considered to have lower potential long-term conservation value will be that remaining after the higher potential value districts and the intermediate value areas have been identified. Small, isolated CSS patches (especially those surrounded by urban lands) with relatively small populations should be considered of low long-term potential value. Development of these lands could result in a take of small numbers of individuals of target species and would probably not affect the long-term viability of target species or other species of concern.

Overall, an estimated 10% to 25% of the CSS in a subregion would fall into the lower potential value category. For the ranking approach to interim habitat loss to function, it is important that a significant amount of land be classed as lower value. The criteria for identifying higher and intermediate value land should be adapted to local conditions.

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## Evaluation process

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Each subregion needs to show interim protection for higher potential value lands on a map. The step-down evaluation process is outlined here. Large, dense areas of CSS are the Higher potential value lands. Natural lands that occur in linkages, that are close to possible core CSS areas, or that have high species richness are considered Intermediate potential value lands. Remaining CSS is considered to have Lower potential value. The guideline policy for local government treatment of the Higher, Intermediate, and Lower potential value lands during the interim period is given in section 6. A flow chart illustrating the logic is included as [Attachment C](#).

1. **Natural Land:** Is natural vegetation present?

Yes: Check CSS presence (#2)

No: Not relevant for reserve planning.

2. **CSS:** Is CSS present?

Yes: Check large size (#3)

No: Check landscape linkages (#5)

3. **Large Size:** Is CSS the most dense CSS in subregion?

Yes: Land forms a Higher Value District

No: Check proximity (#4)

4. **Proximity:** Is land close to Higher Value District?

Yes: Land is Intermediate Value

No: Check landscape linkages (#5)

5. **Landscape Linkages:** Is land located in corridor between Higher Value Districts?

Yes: Land is Intermediate Value

No: Check species presence (#6)

6. **Species Presence:** Does land support high density of target species? Does land support significant populations of highly endemic species or rare sub-habitat types?

Yes: Land is Intermediate Value

No: Land is Lower Value

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## Evaluation methods

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### 1. Natural Land:

Natural land is land with a significant cover of natural vegetation. Natural vegetation in this context includes all native California natural communities and includes forestlands, shrublands, native and non-native grasslands, non-irrigated land, grazed land, and vacant or disturbed natural land. Natural land excludes lands subject to intensive agriculture and urban uses. Disturbed land or land recently cleared may still be restorable and should be included in the evaluation. The California Department of Conservation Farmlands Mapping and Monitoring Program is one way to identify natural lands: natural lands are areas classified as "grazing" or "other." Generally, land not mapped by the Department of Conservation can be assumed to be natural in eastern portions of the study area and urban in western portions.

### 2. Coastal Sage Scrub:

CSS includes landscape areas supporting primary or secondary cover of characteristic CSS plant species dominants as defined by the SRP, Special Report No. 2, March 1992. A generalized map of CSS and a summary description is attached as [Attachment A](#).

### 3. Large Size:

The largest CSS patches in the subregion should be considered as possible core areas for future reserves. Because CSS distribution is naturally patchy, patch size needs to represent presence of CSS habitat at an intermediate spatial scale and needs to integrate over minor fragmentation and differences in vegetation mapping methodologies. Habitat patches should not be discounted as "too small" merely because they are mixed with other natural vegetation types. It is, however, appropriate to exclude landscape areas that are highly urbanized.

The objective of the evaluation process is to identify larger patches of CSS in the subregion. These are the Higher Value Districts. The method of finding the larger patches can be adjusted to conditions present in each subregion. The SRP recommends determining the percent of CSS cover in a neighborhood around individual CSS patches. When the entire subregion is evaluated, those patches of CSS habitat with the highest percent CSS cover in the neighborhood, cumulatively representing 50% or more of all CSS cover within a subregion can be identified. Neighborhoods should have a radius of 1/2 to 1 mile. This spatial scale for planning reflects biological characteristics of CSS species and the need for agglomerations of CSS on a scale potentially suitable for incorporation into a reserve networks. The determination of the "core 50%" also takes into account the presence of urban and non-CSS natural land.

### 4. Proximity:

CSS patches close to a core can be identified by measuring direct, straight-line distances. Appropriate spatial scale must be determined for each subregion and should be on the order of one-quarter to one-half mile.

### **5. Landscape Linkages:**

Natural lands, and even lands in intensive agriculture, may contribute to reserve network connectivity. Corridors must be drawn such that each Higher Value District is connected to the closest adjacent districts. A geometric corridor between Higher Value Districts is defined by drawing two straight lines tangent to each district. Boundaries can be adjusted as necessary to reflect natural features such as riparian areas that may curve outside of a defined geometric corridor.

### **6. Species Presence:**

A test must identify areas 1) that need special protection in the interim to reduce the likelihood of take of species and 2) that may have long-term value due to special conditions that support significant populations of highly endemic species, rare sub-habitat types, or vegetation subcommunities.

What constitutes significant populations must be determined for each subregion. For target species, the SRP considers habitat that supports a portion of a local population with five or more pairs of gnatcatcher or cactus wrens to be significant. For other species of plants or animals (including those species listed or candidates for listing), the SRP considers habitat that supports a portion of a local population representing more than 20% of the known population of the subregion to be significant.

The species presence test specifically means that each parcel under consideration for development will be subject to a species clearance: a survey for target species and other rare plants and animals. The survey should use techniques specified by the SRP or equivalent methods. (See SRP Survey Guidelines.)

Species presence during a one-time survey is not a reliable measure of habitat value. Moreover, species survey work is also expensive and time consuming. For this reason, the basic methodology to identify potential reserves relies most heavily on less variant aspects of the landscape.

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## Pending approval of subregional NCCP

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When formal planning is underway, the conservative interim strategy seeks to minimize short-term loss of habitat and CSS species and to prevent foreclosure of options for long-term conservation planning by deferring development decisions on lands that may be important components of a final CSS community conservation plan.

Potential Long-term Conservation Value	Policy
Higher Value	Defer development decisions where possible. Determine actual conservation suitability in NCCP. Allow development only where it can be proven that the loss will not foreclose reserve planning options. Special mitigation will be required.
Intermediate Value	Case-by-case decisions
Lower Value	Allow development with adequate mitigation

Cumulative CSS loss in any subregion or any subarea of a large subregion is limited to 5% during the interim period.

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## **With approved subregional NCCP**

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An approved subregional NCCP plan will supersede the interim designation of potential long-term conservation value and the interim 5% CSS loss limit will no longer apply. Implementation of an explicit subregional plan will allow long-term economic interests to be served. Inherent in the NCCP is resolution of technical and implementation issues to allow specification of long-term conservation programs. The final subregional NCCP may provide for development of lands initially designated as having potential long-term conservation value if it is later determined that actual long-term conservation value is lower. Conversely, lands originally thought to be of lower value may be determined to be valuable in final conservation plans. This consideration is one of many that support a conservative interim loss ceiling.

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## **In the absence of a subregional NCCP**

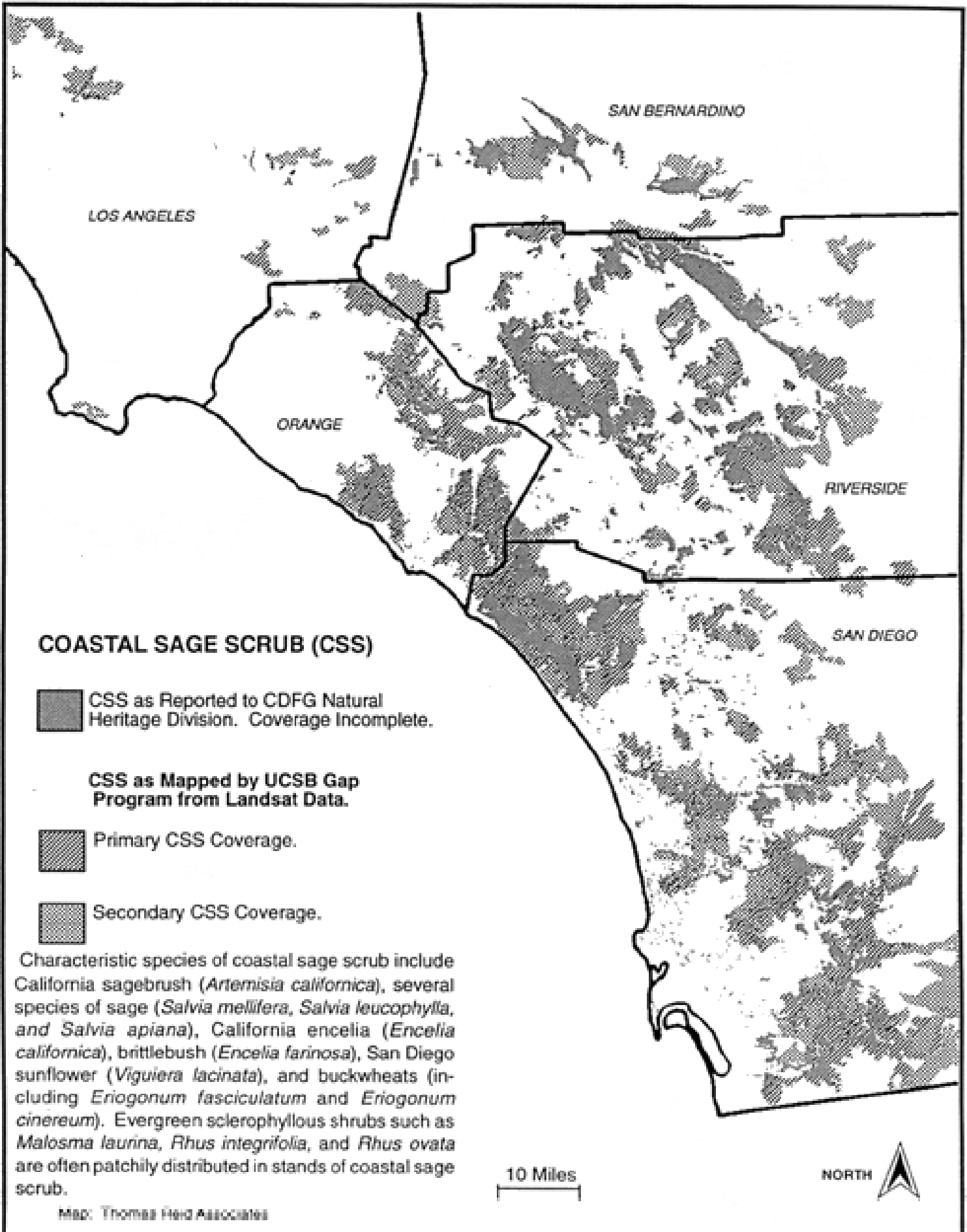
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A subregional NCCP is intended, among other things, to provide long-term mitigation for project impacts which occur within the subregion. However, if for any reason the subregional NCCP fails to be completed, and provided the total cumulative loss of CSS habitat area is kept below 5%, public agencies should be able to undertake restoration independently of private lands to compensate for any portion of the 5% habitat area loss that was not directly mitigated by measures imposed on approvals on private land during the interim process.

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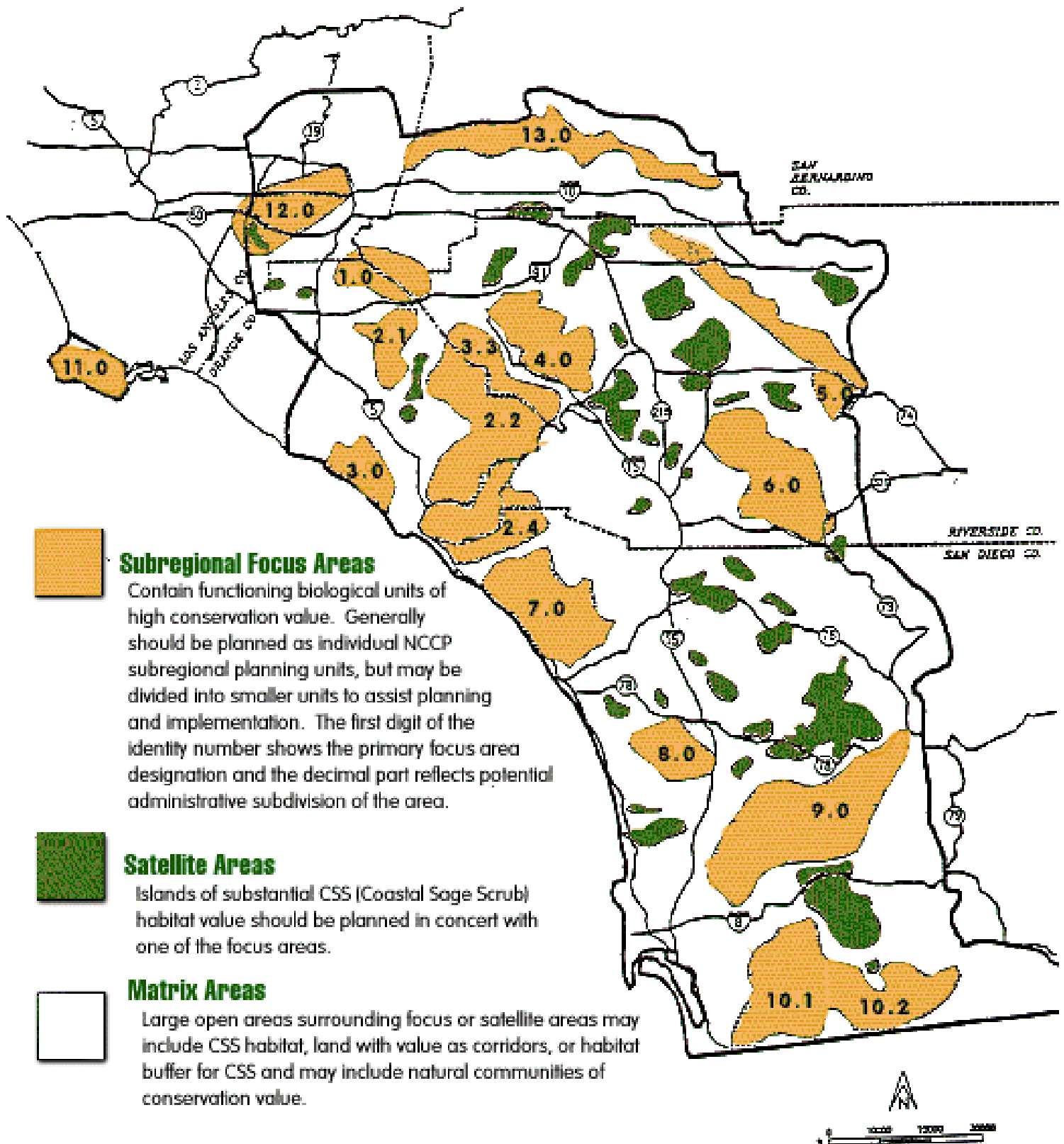
# Attachment A. Generalized Map of Coastal Sage Scrub Habitat

H:\FH3 (07-21-93) gray CSS map



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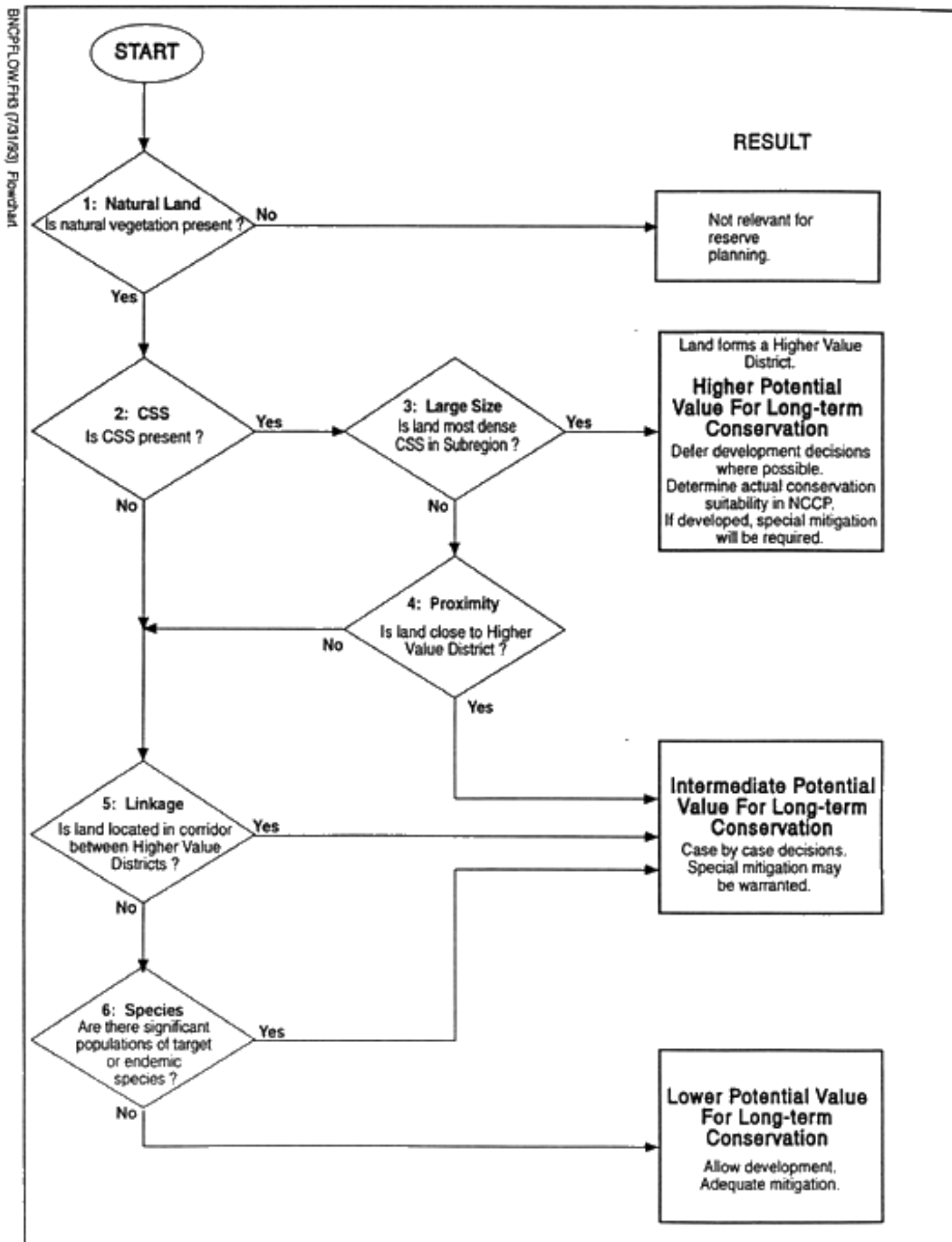
# Subregional Coastal Sage Scrub NCCP Planning Unit Focus Map



**NOTE:** The focus and satellite areas are based on evaluation of coastal sage scrub

# Attachment C. Evaluation Logic Flow Chart

Refer to text section 5.c. Evaluation Methods for definitions.



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