

HCPA East Contra Costa County Habitat Conservation Plan Association

DATE: September 6, 2002
TO: HCPA Science Advisory Panel (SAP)
FROM: John Kopchik, Staff Coordinator for the HCPA
SUBJECT: First Set of Background Materials of September 20 Meeting of the Science Advisory Panel

As Erica Fleishman indicated in her earlier email to the Panel, background materials for the Science Advisory Panel meeting on September 20 will be sent to you in two installments. This is the first installment.

Attached please find the following documents (all except the text of NCCP Act were prepared by Jones and Stokes, lead project consultants for the HCPA):

- Responses to Science Panel's May 29 Report
- "No-Take" species memo
- Application of Conservation Biology Principles to the ECCC HCP/NCCP
- Map-Based vs. Process-Based Plan memo
- Text of NCCP Act, as modified in 2002

I have also sent these documents to you in electronic form in case you prefer to review them in that fashion or wished to add comments to the text. The second installment of background materials will be sent in one week and will include the draft habitat distribution models for covered species and the draft biological goals.

Please feel free to contact me at the Contra Costa County Community Development Department at (925)335-1227(email: jkopc@cd.co.contra-costa.ca.us) with any questions on these background materials.

cc: Erica Fleishman

Attachments.

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Memorandum

Date: August 23, 2002

To: East Contra Costa County HCPA c/o John Kopchik, and Science Advisory Panel

From: David Zippin and Ed West

Subject: **Responses to Science Panel May 29 Meeting Report**

This memo summarizes the key points raised in the report of the Science Advisory Panel (Panel) at their first meeting on May 29, 2002. Each issue is addressed along with our recommendation and any cost implications. Issues are listed in the order in which they appear in the report, along with a reference number for each one. *This memo is the same as the one dated July 8, 2002 except for revisions to issues 14, 15, and 25.*

Ref. #	Issue Raised by Panel	Response	Recommendation	Cost Implications
1	Land-cover types should be linked to covered species	We will add information in Chapter 3 that clarifies the link between land-cover types and covered species, including a matrix that illustrates which land-cover types provide habitat for each covered species. This is the basis for the species distribution models.	Distribute draft example models at next HCPA Coordination Group meeting (July 18) and at next Panel meeting (mid-Sept) as planned; incorporate species distribution models into all species profiles for Admin. Draft HCP/NCCP	None
2	The definition of oak savanna should be clarified	We agree that more clarification is needed regarding our definition of savanna (tree cover <10%). The Panel provided a reference in which California oak savannah is defined as tree canopy cover <30% (Allen-Diaz et al. 1999). One's distinction between woodland and savanna is somewhat arbitrary. In Australia, some define savannas as having a tree cover of less than 10% (Huntley and Walker 1982). In South America, they are defined as having <15% tree cover (Saramiento 1983). In fact, the word "savanna" was originally applied to treeless grasslands in South America (Archibold 1995). We chose 10% in order to distinguish areas of low tree density from surrounding pure grassland. We believe areas with low oak density are especially important for conservation because they are the transition zone between	We will clarify the definition of oak savanna in the admin. Draft HCP/NCCP.	None

Ref. #	Issue Raised by Panel	Response	Recommendation	Cost Implications
		grassland and true oak woodland. This classification helps to satisfy the requirement of the NCCP Act to conserve areas of “high habitat diversity.”		
3	The treatment of native grassland should be clarified	Native grasslands will be added to Chapter 3 as a unique land-cover type but it will be made clear that it could not be mapped given the data limitations.	Incorporate recommended changes into Admin. Draft HCP/NCCP	None
4	Maps and/or definitions should identify land-cover types that require continued maintenance to persist	We cannot determine from air photos which ponds are natural and which are artificial and would therefore require continued maintenance. Even natural ponds may require “maintenance” to ensure their functioning for covered species (e.g., removing bull frogs or exotic fish to provide habitat for CA red-legged frog).	Expand the discussion of ponds and other aquatic land-cover types to clarify which types may require continued maintenance to persist. Incorporate into the Admin. Draft HCP/NCCP	None
5	Consider discriminating among types of agriculture land-cover types	We were able to distinguish between 4 types of agriculture: pasture, cropland, orchard, and vineyard. It is not possible to distinguish different types of cropland, orchards, or pasture from aerial photography without extensive ground truthing. The only reliable method would be to survey agricultural lands (approximately 34,000 acres), mapping on topographic maps or air photos. Agricultural land-cover types provide habitat for only 3 covered species: giant garter snake, Swainson’s hawk, and Western burrowing owl. The benefit of collecting these data is that agricultural lands would be more accurately mapped and current (crops have changed on some sites since the air photos were taken in 2000). However, the cost to gather these data must be weighed against the overall benefit to the plan. The higher resolution of agricultural land cover types is not likely to result in significant changes in covered species models.	We recommend no change to the current agricultural data.	The cost to gather, process, and digitize these data would be approximately \$17,000
6	Discriminate between perennial and ephemeral streams	We agree that perennial streams are particularly important in the inventory area.	We will add a discussion of the perennial streams in the inventory and distinguish them on figures 3-4 and 3-6 based on available data.	None
7	Identify as	We agree that small-scale features such as	At a minimum, we will	No cost to

Ref. #	Issue Raised by Panel	Response	Recommendation	Cost Implications
	points important small-scale features that could not be mapped, even if this can only be done by non-systematically mapping past field observations	springs, seeps, small rock outcrops, caves, serpentine areas, and vernal pools are important to covered species. Maps of these features within the inventory area, particularly within the areas of impact, would greatly strengthen the HCP/NCCP. (Regarding rock outcrops, caves, and serpentine areas, we may have additional point location data from the Biodiversity effort that could augment the land cover data records for rock outcrop.) Complete mapping of these features would require extensive ground surveys (these features are not distinguishable or identifiable on air photos) and access to private lands. Even with additional funding, we would not likely receive authorization to completely survey private lands. An alternative is to conduct surveys from publicly-accessible roads and vantage points to survey the area of impact. These data could be supplemented with new survey data from Antioch FUA 1 when it becomes available. Mapping in a non-systematic way from past field observations could be helpful for evaluating model assumptions and further validating the model results but, in our view, due to the limited, opportunistic nature of the data, it would not provide a cost-effective, repeatable, or useful addition to the dataset. Past field surveys occurred in protected areas, not in the potential areas of impact.	incorporate into the admin. draft HCP/NCCP a description of these small-scale features, their functions, and areas of known concentrations based on available data. Biodiversity data on rock outcrops, caves, and serpentine areas will also be evaluated and potentially included. We could also conduct surveys for small-scale features within the area of impact at an additional cost. If these surveys are not conducted, they could be required of applicants in order to quantify habitat impacts. Similarly, they could be required prior to land acquisition to verify the reserve's habitat types and quality.	update HCP/NCCP with descriptions; cost to conduct surveys of small-scale features in impact area = approximately \$15,000
8	No need to distinguish mixed evergreen forest	We agree that distinguishing between mixed evergreen forest and oak woodland is not necessary to identify impacts or develop conservation strategies. However, the distinction between these two vegetation types should be clarified in Chapter 3.	Add a new mixed evergreen forest land-cover type to Chapter 3 and clarify that it could not be distinguished on air photos. Incorporate into Admin. Draft HCP/NCCP	None
9	Expand discussion of how the inability to map land-cover types smaller than one acre is relevant to covered species	We agree that the discussion of how the mapping limitations affects the analysis of covered species should be expanded.	An expanded discussion of this topic will be added to the admin. draft HCP/NCCP	None

Ref. #	Issue Raised by Panel	Response	Recommendation	Cost Implications
10	Explain how the mapping limitations vary by taxonomic groups	We agree that the mapping limitations vary by taxonomic group. The limitations are more serious for plants, invertebrates, and some amphibians than for other groups. (See response to #7 for a suggested way to reduce these limitations).	An expanded discussion of this topic will be added to the admin. draft HCP/NCCP	None
11	Tie the species profiles more closely to the species' ecology, status, and threats in the inventory area	We agree that the species profiles would be improved by more closely tying them to the situation within the inventory area. However, in most cases, data specifically within the inventory area are lacking.	Observational data (e.g., Los Vaqueros surveys) and data generated by this project (e.g., species distribution models) will be added to the profiles in the admin. draft HCP/NCCP	None
12	Expand the profiles to address the criteria used to determine its covered status, particularly regarding data adequacy	We agree that the notes in Table 3-8 could be expanded to further explain the rationale behind which species were chosen as covered species.	A new section will be added to each species profile in the admin. draft HCP/NCCP expanding on the notes in Table 3-8.	None
<i>Consider adding the following species to the covered species list:</i>				
13	Peregrine falcon	This species meets all of the criteria, except impact. However, impact to the species is dependent on which activities are covered in the HCP/NCCP. The greatest potential impact to this species within the inventory area would come from wind farm expansion and recreational activities within existing or future preserves.	Do not include wind farms as a covered activity to avoid complicated impact analysis. Meet with FWS and EBRPD to discuss the potential for recreational activities to harm or harass peregrines under the ESA. If take may occur and coverage is needed in existing or future parks, include as a covered species.	\$7,500 if species is covered by HCP/NCCP
14	Bald eagle	The Bald Eagle is currently a rare winter visitor in Contra Costa County. Proposed expansion of Los Vaqueros Reservoir could result in an increase of the number of birds using this area. However, impacts of activities associated with Los Vaqueros Reservoir will not be included in this HCP/NCCP. The greatest potential impact to this species within the inventory area would come from wind farm expansion but this activity	If wind farms are not included as a covered activity, do not include as a covered species.	None

Ref. #	Issue Raised by Panel	Response	Recommendation	Cost Implications
		is not likely to be covered in the HCP/NCCP. USFWS and CDFG have recommended bald eagle not be included as a covered species.		
15	Short-eared owl	This species meets all 4 criteria for coverage listing but was classified as a 2 nd priority Bird Species of Special Concern by the BSSC Technical Advisory Committee. For this reason it was originally placed on our Priority 2 list. However, re-evaluation of available information showed that this species has shown marked population declines in the grasslands and northern marshes of the inventory area. Additionally, widespread declines in this species suggest it could be listed in the next 30 years. CDFG recommends this species be covered.	Because the species meets all four criteria, and would likely be affected by covered activities, we recommend that it be included in the HCP/NCCP as a covered species.	\$7,500 if species is covered by HCP/NCCP
16	Ferris' milk vetch	Although not known to occur in Contra Costa County, suitable habitat exists on alkaline soils; if populations were found, they would have to be preserved.	Incorporate as a "no take" species in the HCP/NCCP (see memo dated 6-28-02)	None
17	Alkali milk vetch	This species is presumed extirpated from the inventory area. If any populations were found, they would be highly significant and should be preserved. Therefore, no impacts should be allowed on this species.	Incorporate as a "no take" species in the HCP/NCCP (see memo dated 6-28-02)	None
18	Mount Diablo buckwheat	This species is presumed extinct but historically occurred in the inventory area. If any populations were found, they would be highly significant and should be preserved. Therefore, no impacts should be allowed on this species.	Incorporate as a "no take" species in the HCP/NCCP (see memo dated 6-28-02)	None
19	Rayless ragwort	This species is on CNPS List 2. There are many records of the species in California, but many are historic. Only one record of this species exists in the inventory area, a collection from the 1930's from Black Diamond Mines Regional Park. The species meets the range criteria but does not meet the impact, status, or data criteria.	Because of a lack of data on this species and because the only known record is within a protected area, we do not recommend including it as a covered species or a "no take" species.	None
20	Caper-fruited troidocarpum	This species is presumed extinct but historically occurred in the inventory area. If any populations were found, they would be highly significant and should be preserved. Therefore, no impacts should be allowed on this species. See the memo regarding additional evaluation species for more details.	Incorporate as a "no take" species in the HCP/NCCP (see memo dated 6-28-02)	None
21	Round-leaved filaree (<i>Erodium</i>	This species meets the criteria for range, impact, and data. Because of its widespread distribution in the Western United States, it is unlikely to be	Because the species meets all four criteria, we recommend that it be	Cost to add as a covered species: \$3,000

Ref. #	Issue Raised by Panel	Response	Recommendation	Cost Implications
	<i>macrophyllum</i>)	listed by the federal government. However, there is a potential for the species to be listed under the California Endangered Species Act during the term of the permit. Therefore, it also meets the status criteria. See the memo regarding additional evaluation species for more details.	included in the HCP/NCCP as a covered species.	
22	Western pond turtle	This species meets all 4 criteria for coverage status and is declining throughout its range. It was petitioned for listing in 1992, but denied due to its widespread distribution in the western states. However, many populations in California, Oregon and Washington are significantly declining and threatened with extirpation. The species would be affected by covered activities. There is a good possibility that this species could be listed within 30 years.	We recommend that this species be included in the HCP/NCCP as a covered species.	\$7,500 if species is covered by HCP/NCCP
23	Western spadefoot toad	This species meets all 4 criteria for coverage status. It has sustained significant population reductions in the Central Valley over the last 15-20 years. Covered activities could potentially impact this species. Continued loss of habitat throughout its range suggests that this species could be petitioned for listing within 30 years.	Because the species meets all four criteria, and could possibly benefit from coverage, we recommend that it be included in the HCP/NCCP as a covered species.	\$7,500 if species is covered by HCP/NCCP
24	California black rail	California black rail occur in coastal salt marsh, diked salt marsh, and brackish and freshwater marsh along the fringes of San Francisco Bay. These habitats are not included within the inventory area.	No change	None
25	California horned lizard	This species meets all 4 criteria for coverage status, although status and data availability are not well known. It is believed to have disappeared from approximately 35% or its range in central and northern California. Continued habitat loss, fragmentation and disturbance may result in this species being listed within 30 years. Experts disagree as to the probability of listing.	We believe the probability of this species being listed is low. However, other experts disagree. We do not recommend including it as a covered species.	\$7,500 if species is covered by HCP/NCCP
<i>Return to normal table format</i>				
26	Assign lower priority to species that occur upslope or within protected areas	The proportion of a species' habitat that is currently protected will be taken into account when developing conservation strategies, not in assigning priority for coverage. Species that are mostly already protected may need few conservation measures to offset impacts. However, they still need to be included as	No change	None

Ref. #	Issue Raised by Panel	Response	Recommendation	Cost Implications
		covered species because they may be listed in the future and take may occur. (Species that are 100% protected are not proposed to be covered because there would be no impacts to these species.) If limits are placed on the number of covered species, then this can be considered as a factor.		
27	Prioritize species on the basis of the proportion of their range within the inventory area	See response to #26. The same rationale applies to the proportion of a species' range within the inventory area.	No change	None
28	Expand the section on species evaluation to address gradients of risk and acknowledge that formal risk assessments were not performed	We agree that formal, rigorous risk assessments are beyond the scope of this HCP/NCCP in determining covered species. However, we believe that the additional criteria suggested by the Panel were either taken into account or not relevant to determining covered species. In determining whether a special-status species would be affected by covered activities (the "impact" criteria), we did consider the species' range inside and outside protected areas. We also considered the likelihood of impact from future development (although not using models or a formalized procedure). As discussed in response #26, we do not believe that the proportion of a species' range inside or outside the inventory area should be a consideration in the selection of covered species unless limits are placed on the number of species that can be covered (it is, however, very relevant in developing conservation measures).	We will acknowledge in the admin. draft HCP/NCCP that we did not conduct a formal, rigorous risk assessment in selecting covered species.	None
29	Address rare species that may occur in the inventory area but have not been recorded or described	We concur that rare species currently unknown from the inventory may be discovered or described as new taxa during the permit term. Because these species will be very rare, no take should be allowed. Therefore, they should not be included as covered species.	Create new category of "no take" species in the Admin. Draft HCP/NCCP (see memo dated 6-28-02)	None

Literature Cited

Allen-Diaz , B., J. W. Bartolome, and M. P. McClaran. California oak savanna. Pp. 322-339 In: R. J.

August 23, 2002
Page 8

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Huntley, B. J., and B. H. Walker. 1982. Introduction. Pp. 1-2 In: B. J. Huntley and B.H. Walker, eds. Ecology of Tropical Savannas. Springer, Berlin, Germany.

Saramiento, G. 1983. The savannas of tropical America. Pp. 245-288 In: F. Bourliere, ed. Ecosystems of the World Volume 13. Tropical Savannas. Elsevier, Amsterdam, Netherlands.



Memorandum

Date: July 8, 2002

To: East Contra Costa County HCP Association
c/o John Kopchik

cc:

From: David Zippin, Jones & Stokes

Subject: **"No Take" Species**

This memorandum describes our proposed approach to "no take" species, or those species for which the HCP/NCCP should not allow any take.

Background

The final take permits from the U.S. Fish and Wildlife Service (FWS) and the California Department of Fish and Game (DFG) will list the species for which "take" is authorized under the federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA). The permits will allow some impacts to the species on the permits in exchange for implementation of the overall conservation strategy in the HCP/NCCP.

In our evaluation of special-status species that occur or may occur in the inventory area, several species were encountered that are extremely rare. This includes species that are presumed extinct (they could be rediscovered and would therefore be extremely rare). Questions have come up in the Scientific Advisory Panel and the HCPA Coordination Group as to how we would address these extremely rare species, or whether we would address them at all in the HCP/NCCP.

Extremely rare species cannot be listed as covered species in the HCP/NCCP because any take of the species would likely jeopardize their continued existence. The ESA prohibits FWS from issuing a permit for an HCP if the HCP would jeopardize the continued existence of a federally-listed species. In the analysis of project impacts for the EIR/EIS, we must consider the impacts of the agencies issuance of the take permits on all species, not just those covered by the HCP/NCCP. In this analysis, it must be clear to the agencies that the HCP/NCCP will not jeopardize the continued existence of any species that is currently listed or has the potential to be listed during the permit term.

Recommendation

To address concerns raised by the Science Panel and others, and to ensure that the HCP/NCCP meets regulatory requirements, we propose to add a new category of “no take species” to the HCP/NCCP. No take species would be included in the HCP/NCCP in a new section of Chapter 3 and described only in general terms. No species profiles would be developed for no take species. Avoidance measures would be developed for no take species and described in Chapter 6. Measures would be developed to ensure that covered projects and activities did not take any of these species within the inventory area.

This approach has benefits to the plan beyond permit processing and into implementation. Applicants wishing to participate in the HCP/NCCP would be able to see clearly that although take of many species is allowed, take of certain species is prohibited (take of these species would likely be prohibited in all circumstances, so this requirement would not be a deterrent for potential plan participants). To ensure compliance with the HCP/NCCP, applicants would therefore have to demonstrate through biological surveys that the no take species were absent from their property or avoided during and after project construction.

Cost Implications

There would be no cost implications to this modification of the HCP/NCCP. All changes to the document would be made within our existing budget.

No Take Species

Table 1 lists the 7 species that we propose to be included in the HCP/NCCP as no take species. Two of these species are currently covered species, the golden eagle and the diamond-petalled poppy. We propose to add the golden eagle to the no take list because this species is fully protected under the state Fish and Game Code, which does not allow for take (though “take” is defined more narrowly there than in the Endangered Species Act—for this reason we propose leaving golden eagle on the covered species list as well). The diamond-petalled poppy is so rare throughout its range that any populations found in the inventory area would have to be preserved (currently, no populations are known to occur in Contra Costa County). Although unlikely, we may recommend moving other covered species to the no take list as we learn more about them. As with the covered species list, this list is preliminary and may change as the project moves forward.

Other Species Recommended for Further Evaluation

The Science Panel also recommended that we more closely evaluate 5 species for inclusion in the covered species list: Bald eagle, Short-eared owl, Peregrine falcon, rayless ragwort, and round-leaf filaree. These evaluations are presented in the memo responding to comments from

the Science Panel at their first meeting.

Table 1. Proposed No Take Species.

Common Name	Scientific name	Status ¹		Rationale
		State	Federal	
Plants				
Large-flowered fiddleneck	<i>Amsinckia grandiflora</i>	SE	FE	No natural populations occur in the inventory area; if one were discovered, it would be highly significant and should be preserved.
Alkali milkvetch	<i>Astragalus tener</i> ssp. <i>tener</i>	1B	–	Thought to be extirpated from Contra Costa County; suitable habitat may be present in the inventory area; if any populations are found, they would have to be preserved.
Mount Diablo buckwheat	<i>Eriogonum truncatum</i>	1A	–	Presumed extinct; if any populations were discovered in the inventory area, they would have to be preserved.
Diamond-petaled poppy	<i>Eschscholzia rhombipetala</i>	1B	–	Known from only 2 populations in the world; not seen in the inventory area since 1889. Any populations found in the inventory area would be highly significant.
Contra Costa goldfields	<i>Lasthenia conjugens</i>	1B	FE	All known populations in inventory area have been extirpated; if new populations are discovered, they would have to be preserved.
Caper-fruited tropidocarpum	<i>Tropidocarpum capparideum</i>	1A	–	Presumed extinct; historic occurrences in the inventory area; if discovered, population would have to be preserved
Birds				
Golden eagle*	<i>Aquila chrysaetos</i>	FP	BGPA	No take is allowed because species is fully protected

¹ **Status:**

Federal

FE Federally Endangered
 FT Federally Threatened
 FSC Federal Special Concern Species
 BGPA Bald Eagle and Golden Eagle Protection Act

State

SE State Listed as Endangered
 ST State Listed as Threatened
 CSC California Special Concern Species
 SR State Rare (plants)
 FP Fully Protected

California Native Plant Society

1A Presumed Extinct
 1B Rare or Endangered in California and Elsewhere

* Golden eagle is recommended as both a No-Take species and a Covered Species, because the definition of “take” in the Fish and Game Code differs from the definitions in the state and federal endangered species acts. Take of golden eagle habitat will be requested under the state and federal endangered species acts, but take of individual birds is not allowed under the Fish and Game Code.



Memorandum

Date: September 9, 2002

To: East Contra Costa County HCPA c/o John Kopchik

cc:

From: David Zippin, Jones & Stokes

Subject: **Application of Conservation Biology Principles to the ECCC
HCP/NCCP**

Introduction

A fundamental component of the conservation strategy for the East Contra Costa County (ECCC) HCP/NCCP is a preserve system composed of land purchased through fee title or conservation easements. This land will then be managed for the benefit of the covered species and natural communities in the HCP/NCCP, as well as for overall biodiversity, ecosystem functions, and any other complimentary goals identified in the planning process such as recreation, grazing, or agriculture. In order to maximize the benefits to these resources and uses with limited funds, the protected areas must be selected carefully. Selection will be based on a variety of biological, economic, and other factors. A partial list of these factors is presented at the end of this memo for context (these factors will be discussed at a later meeting).

This memorandum summarizes how principles of conservation biology will be applied to the ECCC HCP/NCCP to help guide the creation of a high-quality preserve system. This memo is a revision of the August 8 memo based on comments from the HCPA Coordination Group.

Background and Purpose

One of the primary benefits of a regional HCP or an NCCP (by definition, NCCPs are regional) over a project-by-project approach is the ability to assemble multiple parcels of preserved land into a preserve system. If designed properly, this preserve system can function in a manner greater than the sum of its parts (individual preserves). Proper design of a preserve system depends on proper application of the scientific principles of conservation biology. In addition, to be successful a preserve system must be designed considering multiple spatial scales. For example, at a small scale, a preserve system must contain the microhabitats necessary for target species (e.g., covered species) to survive. At a medium scale, habitat patches must be large enough to support populations or important portions of populations of covered species and seasonal movement of species (e.g., aquatic habitat for winter breeding of amphibians and upland habitat for summer aestivation (hibernation)). At a larger scale, preserves must be linked

to allow movement of wide-ranging species, for genetic exchange, and for recolonization following a local extinction. At the largest scale (landscape or regional scale), preserves must be able to support ecological functions (e.g., watershed functions) within a matrix of urban development, agricultural land, and other land use features. Small- and medium-scale considerations will be driven by the needs of covered species and natural communities. Larger-scale issues will be guided by the conservation principles for reserve design, large-scale ecological functions, biological goals for natural communities, and biological goals for wide-ranging covered species. Proposed biological goals for natural communities and covered species are presented in a separate memo.

Principles of Conservation Biology

We propose the following principles of conservation biology be used to guide the design and assembly of the preserve system for the ECCC HCP/NCCP. These principles are taken from major texts on conservation biology (Soule and Wilcox 1980; Soule 1986; Primack 1993; Meffe and Carroll 1997; Noss et al. 1997). They also incorporate important regulatory requirements that will affect the preserve design of this HCP/NCCP.

The principles of conservation biology on which the preserve system will be based will include but not be limited to the following.

- **Maximize Size.** The preserve system should be as large as possible within funding and management limits. The preserve system must be large enough to mitigate for impacts of covered activities and to contribute to the recovery of covered species. A large preserve system is important to ensure viable populations or portion of populations of covered species, to maximize protection of species sensitive to disturbances from adjacent land use, and to maximize the protection of biodiversity. Large preserves tend to support more species for longer periods of time than small preserves.
- **Minimize the Number of Preserve Units.** The preserve system should have as few units (individual preserve “islands” separated by non-preserve land) as possible to reduce management costs and increase habitat integrity and connectivity while balancing the need to link preserves (see below) and maximizing preservation of covered species and natural communities. A single large preserve is generally better than several small preserves of equal area at maintaining viable populations of species. In some cases, however, small and isolated preserves are necessary to protect isolated features or populations with high biological importance (e.g., covered plant species populations, unique or especially diverse land cover types such as alkali wetlands and serpentine grassland/scrub).
- **Link Preserves.** The system should link existing and proposed preserves inside and outside the inventory area to maximize the ability of organisms to move between

preserves; ensure the exchange of genetic material, species migrations, dispersal, colonization; and increase the integrity of the network of preserve systems (e.g., reduces preserve edge with adjacent land uses).

- **Include Urban Buffer.** The preserve system should include urban buffers: undeveloped lands at the urban edge to ensure a fixed and adequate buffer between urban development and natural communities. The size of the buffer will depend on the intensity of urban development, the natural community being buffered from the development, and whether covered species may be present near this buffer.
- **Minimize Edge.** The preserve system should have the minimum amount of edge with non-preserve land, especially urban development (i.e., maximize the preserve area-perimeter ratio) to minimize the indirect effects of adjacent land uses on the preserve resources and to minimize management costs. For example, preserves should be more round or square in shape rather than long and narrow to minimize edge. In some cases, preserves with low area-perimeter ratios may be appropriate to preserve linear features with high biological value such as streams or riparian woodland.
- **Maximize Environmental Gradients.** The preserve system should include a range of environmental gradients (e.g., topography, soil types, slopes, and aspects) to allow for shifting species distributions in response to catastrophic events (e.g., fire, prolonged drought) or anthropogenic change such as global warming.
- **Consider Watersheds.** The preserve system should include, when possible, entire watersheds, subwatersheds, or headwater streams not already in public ownership in order to maintain ecosystem function and aquatic habitat diversity.
- **Consider Full Ecological Range of Communities.** The preserve system should include the full ecological range of natural communities in the inventory area in order to maintain sufficient habitat diversity, species and population interactions, and natural disturbance regimes such as fire.

I encourage the HCPA and the Science Advisory Panel to suggest additional conservation biology principles on which to base the preserve design.

Other Factors

As stated above, the final preserve design will be based on a variety of biological, economic, and other factors in selecting lands to purchase in fee title or through conservation easements. Below is a partial list of these factors to provide context for the principles of conservation biology. We will discuss these other factors in more detail later in the process. Sites will be chosen based on, in part:

- whether the site supports covered species or can support these species (based on the species distribution models, records of species locations, and knowledge of the habitat quality of the area);
- whether the site supports covered natural communities (based on the land-cover mapping);
- the ability of the site to help achieve the biological goals and objectives for covered natural communities and covered species;
- the ability of the site and its resources to adequately mitigate for cumulative project impacts (i.e., impacts of multiple projects covered by the HCP/NCCP);
- land or easement cost and value;
- seller willingness to include land in preserve system; and
- whether compatible uses such as recreation, grazing, or agriculture occur on the site. Other uses such as wind farms may be compatible with the preserve system.
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Memorandum

Date: July 8, 2002

To: East Contra Costa County HCP Association
C/o John Kopchik

cc:

From: David Zippin

Subject: **Map-Based vs. Process-Based Plan**

One of the key decisions to be made in this process is how to structure the HCP/NCCP. One of the most fundamental choices faced by applicants is whether to develop a map-based plan or a process-based plan. This memorandum explains these two types of plans and outlines the benefits and drawbacks of each approach.

BACKGROUND

Pure Map-Based Approach: A map-based plan is the easiest to understand but often the hardest to develop. In such a plan, the preserves to be created are drawn clearly on map. The map designations determine the application of regulations, fees, land acquisition, restoration, or other elements of the plan. Because all landowners must agree to the designation placed on their lands, purely map-based plans (otherwise known as “hard boundary” plans) are difficult to develop on a large scale and are usually used for HCPs with a single property owner.

“Fuzzy” Map Approach (Hybrid Approach A): Another option is to designate on a map broad areas in which preserves are to be assembled. Land within this area is purchased in fee title or as conservation easements from willing sellers. Because not all of the land within the mapped preserve areas can be purchased (i.e., not every landowner will want to sell), the preserves zones are drawn to be larger than required to mitigate for project impacts. In order for the preserves to adequately mitigate project impacts, minimum requirements are set regarding elements such as total preserve size, configuration, and habitat composition. Such plans have components of both map-based and process-based HCPs, because lines are drawn on a map but there is flexibility in how the preserves are assembled. Examples of hybrid HCPs are the San Diego County Multi-Species Conservation Plan (both an HCP and NCCP), and the Natomas Basin HCP in Sacramento and Sutter Counties.

“Relative Value” Map Approach (Hybrid Approach B): HCPs can alternatively include a map that broadly categorizes areas for mitigation or land acquisition by their conservation value. This approach has less geographic specificity than Hybrid Approach A. A variety of policies

may be established in the plan relating to this map. For instance, mitigation fees or ratios for an area may vary depending on map categories. The number of conservation credits available to sell per acre can also be related to the map. A map could also identify areas with specific mitigation requirements (e.g., pre-construction surveys). The Kern County Valley Floor HCP (still in progress) proposed such a generalized map-based approach. In that plan, areas would be scored high, medium, and low for conservation value and assigned conservation credits accordingly (i.e., high value areas would receive more conservation credits per acre than low value areas). To receive a permit in the HCP, the project proponent would need to provide or fund the purchase of conservation credits in an amount proportional to amount of credits their project would destroy. Sellers of conservation credits would receive more per acre if their property was high value and less per acre if their property was low value.

The Balcones Canyonlands Conservation Plan in central Texas (a regional HCP) took a similar approach by designating zones on a map of either known occupied habitat of a key covered species (based on field surveys), possible habitat (no surveys conducted but habitat was suitable), or areas not considered to be habitat. Mitigation fees were determined based on the proportion of a parcel within each zone.

Process-Based Approach: A purely process-based plan (otherwise known as a policy-based plan) has no map of where preserves will be established or other mitigation accomplished. Instead, the plan outlines a detailed process by which reserves are assembled according to clear criteria. The amount of flexibility in a process-based plan depends on the flexibility of the preserve assembly criteria. For example, criteria could be developed that essentially mandate the acquisition of certain areas within the plan area because of their critical function or unique biological resources. In this way, a process-based plan can provide a degree of certainty in the outcome close to that of a map-based plan without the controversy associated with lines on a map. Alternatively, criteria could be included that specify the general area in which preserves should be assembled (e.g., “grassland habitat north of Hwy X and east of Y City Limits”). An example of a purely process-based HCP is the San Joaquin County Multi-Species Open Space and Conservation Plan.

There are many ways to apply the principles of map-based and process-based approaches to an HCP. For example, maps could be applied to habitat areas or development areas or both. Alternatively, maps could be applied in preserve areas where acquiring certain habitat is critical to the success of the plan, but not in other areas. In other areas there may be more flexibility in meeting the HCP goals. As mentioned previously, maps may also designate zones within an HCP area in which different mitigation ratios, fees, credits, or criteria apply.

Benefits and Drawbacks

Jones & Stokes will be developing up to four alternative conservation strategies for review by the HCPA. One of these strategies will be the “no take” alternative, as required by the U.S. Fish

and Wildlife Service. The other three alternatives will differ in terms of their level of conservation, or they could differ in terms of the structure of the conservation strategy (e.g., map-based or process-based). A purely map-based HCP is probably not practical for this project because of its large scale. However, it would be appropriate for the plan to be either purely process-based or a combination of process-based and map-based. **We are requesting direction from the HCPA as to their preference of a hybrid approach (i.e., contains some map components) versus a purely process-based approach.** If there is no preference, we will develop alternative conservation strategies with a hybrid approach because choosing one approach is more cost effective. A hybrid approach can be more easily converted to a purely policy-based approach than vice-versa. The benefits and drawbacks of each approach are presented in Table 1.

Table 1. Benefits and Drawbacks to Hybrid HCP vs. Process-Only HCPs

Type of HCP	Benefits	Drawbacks
Hybrid HCP (some maps)	<ul style="list-style-type: none"> • Greater certainty for all concerned in terms of how the plan will be implemented • May have to provide less mitigation overall due to higher certainty of locations • Potential for fewer pre-construction survey requirements 	<ul style="list-style-type: none"> • May inflate land prices within designated preserve areas if not enough “extra” land is available • Some landowners may see this as added regulation (even though plan is voluntary) or unfair manipulation of land prices • May require higher level of HCP baseline data within preserve boundaries to demonstrate they meet the biological goals of the HCP • Less flexibility to respond to changed circumstances, be these biological or economic¹ • Some stakeholders may not accept this approach for political reasons
Process-only HCP	<ul style="list-style-type: none"> • Avoids controversy associated with lines on a map • Typically requires lower level of HCP baseline data in preserve areas up front because preserve lands can be assessed in detail as they are purchased from willing sellers • More flexibility in implementing HCP 	<ul style="list-style-type: none"> • May have to provide additional mitigation to offset uncertainty in location of final preserve system • Potential for greater pre-construction survey requirements • Less certainty in the outcome of the plan

Participants in the HCPA process can no doubt suggest other advantages and disadvantages and are invited to do so.

¹ It would be more difficult to implement such a plan on purely “pay-as-you-go basis” if less development occurred than was predicted; matching available funding to acquisition commitments could be more challenging. The Kern County approach is an exception, allowing market forces to play a role, though guiding that market with incentives.

Senate Bill No. 107

Passed the Senate January 22, 2002

Secretary of the Senate

Passed the Assembly September 15, 2001

Chief Clerk of the Assembly

This bill was received by the Governor this _____ day of
_____, 2002, at _____ o'clock __M.

Private Secretary of the Governor



CHAPTER _____

An act to repeal and add Chapter 10 (commencing with Section 2800) of Division 3 of the Fish and Game Code, relating to natural community conservation planning, and making an appropriation therefor.

LEGISLATIVE COUNSEL'S DIGEST

SB 107, Sher. Natural community conservation planning.

(1) The existing Natural Community Conservation Planning Act authorizes the Department of Fish and Game to enter into an agreement with any person for the purpose of preparing and implementing a natural community conservation plan to provide comprehensive management and conservation of multiple wildlife species.

This bill would repeal that act and would enact a new Natural Community Conservation Planning Act. The bill would authorize the department to enter into agreements, which would be required to meet specified conditions, with any person or public entity for the purpose of preparing a natural community conservation plan to provide comprehensive management and conservation of multiple wildlife species. The bill would require the agreement to meet specified conditions.

The bill would require the department to establish a process for public participation throughout plan development and review to ensure that interested persons have an adequate opportunity to provide input in the process.

The bill would require each natural community conservation plan to include an implementation agreement governing specified matters.

The bill would authorize the department to be compensated for the actual costs incurred in participating in the preparation and implementation of natural community conservation plans.

(2) Existing law continuously appropriates the money in the Fish and Game Preservation Fund to the department and the Fish and Game Commission to carry out the Fish and Game Code.

Because this bill would impose duties on the department, the bill would make an appropriation.

Appropriation: yes.



The people of the State of California do enact as follows:

SECTION 1. Chapter 10 (commencing with Section 2800) of Division 3 of the Fish and Game Code is repealed.

SEC. 2. Chapter 10 (commencing with Section 2800) is added to Division 3 of the Fish and Game Code, to read:

CHAPTER 10. NATURAL COMMUNITY CONSERVATION PLANNING
ACT

2800. This chapter shall be known, and may be cited, as the Natural Community Conservation Planning Act.

2801. The Legislature finds and declares all of the following:

(a) The continuing population growth in California will result in increasing demands for dwindling natural resources and result in the continuing decline of the state's wildlife.

(b) There is a need for broad-based planning to provide for effective protection and conservation of the state's wildlife heritage while continuing to allow appropriate development and growth.

(c) Natural community conservation planning is an effective tool in protecting California's natural diversity while reducing conflicts between protection of the state's wildlife heritage and reasonable use of natural resources for economic development.

(d) Natural community conservation planning promotes coordination and cooperation among public agencies, landowners, and other private interests, provides a mechanism by which landowners and development proponents can effectively address cumulative impact concerns, promotes conservation of unfragmented habitat areas, promotes multispecies and multihabitat management and conservation, provides one option for identifying and ensuring appropriate mitigation that is roughly proportional to impacts on fish and wildlife, and promotes the conservation of broad-based natural communities and species diversity.

(e) Natural community conservation planning can provide for efficient use and protection of natural and economic resources while promoting greater sensitivity to important elements of the state's critical natural diversity.



(f) Natural community conservation planning is a voluntary and effective planning process that can facilitate early coordination to protect the interests of the state, the federal government, and local public agencies, landowners, and other private parties.

(g) Natural community conservation planning is a mechanism that can provide an early planning framework for proposed development projects within the planning area in order to avoid, minimize, and compensate for project impacts to wildlife.

(h) Natural community conservation planning is consistent with, and will support, the fish and wildlife management activities of the department in its role as the trustee for fish and wildlife within the state.

(i) The purpose of natural community conservation planning is to sustain and restore those species and their habitat identified by the department that are necessary to maintain the continued viability of those biological communities impacted by human changes to the landscape,

(j) Natural community conservation planning is a cooperative process that often involves local, state, and federal agencies and the public, including landowners within the plan area. The process should encourage the active participation and support of landowners and others in the conservation and stewardship of natural resources in the plan area during plan development using appropriate measures, including incentives.

2802. The Legislature further finds and declares that it is the policy of the state to conserve, protect, restore, and enhance natural communities. It is the intent of the Legislature to acquire a fee or less than fee interest in lands consistent with approved natural community conservation plans and to provide assistance with the implementation of those plans.

2805. The definitions in this section govern the construction of this chapter:

(a) “Adaptive management” means to use the results of new information gathered through the monitoring program of the plan and from other sources to adjust management strategies and practices to assist in providing for the conservation of covered species.



(b) “Changed circumstances” are reasonably foreseeable circumstances that could affect a covered species or geographic area covered by the plan.

(c) “Conserve,” “conserving,” and “conservation” mean to use, and the use of, methods and procedures within the plan area that are necessary to bring any covered species to the point at which the measures provided pursuant to Chapter 1.5 (commencing with Section 2050) are not necessary, and for covered species that are not listed pursuant to Chapter 1.5 (commencing with Section 2050), to maintain or enhance the condition of a species so that listing pursuant to Chapter 1.5 (commencing with Section 2050) will not become necessary.

(d) “Covered species” means those species, both listed pursuant to Chapter 1.5 (commencing with Section 2050) and nonlisted, conserved and managed under an approved natural community conservation plan and that may be authorized for take.

(e) “Department assurance” means the department’s commitment pursuant to subdivision (f) of Section 2820.

(f) “Monitoring program” means a program within an approved natural community conservation plan that provides periodic evaluations of monitoring results to assess the adequacy of the mitigation and conservation strategies or activities and to provide information to direct the adaptive management program. The monitoring program shall, to the extent practicable, also be used to meet the monitoring requirements of Section 21081.6 of the Public Resources Code. A monitoring program includes all of the following:

(1) Surveys to determine the status of biological resources addressed by the plan, including covered species.

(2) Periodic accountings and assessment of authorized take.

(3) Progress reports on all of the following matters:

(A) Establishment of habitat reserves or other measures that provide equivalent conservation of covered species and providing funding where applicable.

(B) Compliance with the plan and the implementation agreement by the wildlife agencies, local governments, and landowners who have responsibilities under the plan.

(C) Measurements to determine if mitigation and conservation measures are being implemented roughly proportional in time and



extent to the impact on habitat or covered species authorized under the plan.

(D) Evaluation of the effectiveness of the plan in meeting the conservation objectives of the plan.

(E) Maps of land use changes in the plan area that may affect habitat values or covered species.

(4) A schedule for conducting monitoring activities.

(g) “Natural community conservation plan” or “plan” means the plan prepared pursuant to a planning agreement entered into in accordance with subdivision (a) of Section 2810. The plan shall identify and provide for those measures necessary to conserve and manage natural biological diversity within the plan area while allowing compatible and appropriate economic development, growth, and other human uses.

(h) “Person” has the same meaning as defined in Section 711.2.

(i) “Plan participant,” prior to approval of a natural community conservation plan and execution of an implementation agreement, means a signatory to the planning agreement. Upon approval of a natural community conservation plan and execution of an implementation agreement, plan participants and any local agency that is a signatory to the implementing agreement are the permittees.

(j) “Unforeseen circumstances” means changes affecting one or more species, habitat, natural community, or the geographic area covered by a conservation plan that could not reasonably have been anticipated at the time of plan development, and that result in a substantial adverse change in the status of one or more covered species.

(k) “Wildlife” has the same meaning as defined in Section 711.2.

(l) “Wildlife agencies” means the department and one or both of the following:

(1) United States Fish and Wildlife Service.

(2) National Marine Fisheries Service.

2809. Any person, or any local, state, or federal agency, independently, or in cooperation with other persons, may undertake natural community conservation planning.

2810. (a) The department may enter into an agreement with any person or public entity for the purpose of preparing a natural



community conservation plan, in cooperation with a local agency that has land use permit authority over the activities proposed to be addressed in the plan, to provide comprehensive management and conservation of multiple wildlife species, including, but not limited to, those species listed pursuant to Article 2 (commencing with Section 2070) of Chapter 1.5. The agreement shall include a provision specifying the amount of compensation, if any, payable to the department pursuant to Section 2829.

(b) The agreement shall meet all of the following conditions:

(1) The agreement shall be binding upon the department, other participating federal, state, and local agencies, and participating private landowners.

(2) The agreement shall define the geographic scope of the conservation planning area.

(3) The agreement shall identify a preliminary list of those natural communities, and the endangered, threatened, candidate, or other species known, or reasonably expected to be found, in those communities, that are intended to be the initial focus of the plan.

(4) The agreement shall identify preliminary conservation objectives for the planning area.

(5) The agreement shall establish a process for the inclusion of independent scientific input to assist the department and plan participants, and to do all of the following:

(A) Recommend scientifically sound conservation strategies for species and natural communities proposed to be covered by the plan.

(B) Recommend a set of reserve design principles that addresses the needs of species, landscapes, ecosystems, and ecological processes in the planning area proposed to be addressed by the plan.

(C) Recommend management principles and conservation goals that can be used in developing a framework for the monitoring and adaptive management component of the plan.

(D) Identify data gaps and uncertainties so that risk factors can be evaluated.

(6) The agreement shall require coordination with federal wildlife agencies with respect to the federal Endangered Species Act (16 U.S.C. Sec. 1531 et seq.).



(7) The agreement shall encourage concurrent planning for wetlands and waters of the United States.

(8) The agreement shall establish an interim process during plan development for project review wherein discretionary projects within the plan area subject to Division 13 (commencing with Section 21000) of the Public Resources Code that potentially conflict with the preliminary conservation objectives in the planning agreement are reviewed by the department prior to, or as soon as possible after the project application is deemed complete pursuant to Section 65943 of the Government Code and the department recommends mitigation measures or project alternatives that would help achieve the preliminary conservation objectives. As part of this process, information developed pursuant to paragraph (5) of subdivision (b) of Section 2810 shall be taken into consideration by the department and plan participants. Any take of candidate, threatened, or endangered species that occurs during this interim period shall be included in the analysis of take to be authorized under an approved plan. Nothing in this paragraph is intended to authorize take of candidate, protected, or endangered species.

(9) The agreement shall establish a process for public participation throughout the plan development and review pursuant to Section 2815.

(c) The approval of the planning agreement is not a project pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code.

(d) Prior to department approval of the planning agreement, the public shall have 21 calendar days to review and comment on the proposed planning agreement.

2815. The department shall establish, in cooperation with the parties to the planning agreement, a process for public participation throughout plan development and review to ensure that interested persons, including landowners, have an adequate opportunity to provide input to lead agencies, state and federal wildlife agencies, and others involved in preparing the plan. The public participation objectives of this section may be achieved through public working groups or advisory committees, established early in the process. This process shall include all of the following:



(a) A requirement that draft documents associated with a natural community conservation plan that are being considered for adoption by the plan lead agency shall be available for public review and comment for at least 60 days prior to the adoption of that draft document. Preliminary public review documents shall be made available by the plan lead agency at least 10 working days prior to any public hearing addressing these documents. The review period specified in this subdivision may run concurrently with the review period provided for any document required by the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) that is associated with the natural community conservation plan. This subdivision shall not be construed to limit the discretion of a public agency to revise any draft documents at a public hearing.

(b) A requirement to make available in a reasonable and timely manner all draft plans, memoranda of understanding, maps, conservation guidelines, species coverage lists, and other planning documents associated with a natural community conservation plan that are subject to public review.

(c) A requirement that all public hearings held during plan preparation or review for approval are complementary to, or integrated with, those hearings otherwise provided by law.

(d) An outreach program to provide access to information for persons interested in the plan, including landowners, with an emphasis on obtaining input from a balanced variety of affected public and private interests, including state and local governments, county agricultural commissioners, agricultural organizations, landowners, conservation organizations, and the general public.

2820. (a) The department shall approve a natural community conservation plan for implementation after making the following findings, based upon substantial evidence in the record:

(1) The plan has been developed consistent with the process identified in the planning agreement entered into pursuant to Section 2810.

(2) The plan integrates adaptive management strategies that are periodically evaluated and modified based on the information from the monitoring program and other sources, which will assist in providing for the conservation of covered species and ecosystems within the plan area.



(3) The plan provides for the protection of habitat, natural communities, and species diversity on a landscape or ecosystem level through the creation and long-term management of habitat reserves or other measures that provide equivalent conservation of covered species appropriate for land, aquatic, and marine habitats within the plan area.

(4) The development of reserve systems and conservation measures in the plan area provides, as needed for the conservation of species, all of the following:

(A) Conserving, restoring, and managing representative natural and seminatural landscapes to maintain the ecological integrity of large habitat blocks, ecosystem function, and biological diversity.

(B) Establishing one or more reserves or other measures that provide equivalent conservation of covered species within the plan area and linkages between them and adjacent habitat areas outside of the plan area.

(C) Protecting and maintaining habitat areas that are large enough to support sustainable populations of covered species.

(D) Incorporating a range of environmental gradients (such as slope, elevation, aspect, and coastal or inland characteristics) and high habitat diversity to provide for shifting species distributions due to changed circumstances.

(E) Sustaining the effective movement and interchange of organisms between habitat areas in a manner that maintains the ecological integrity of the habitat areas within the plan area.

(5) The plan identifies activities, and any restrictions on those activities, allowed within reserve areas that are compatible with the conservation of species, habitats, natural communities, and their associated ecological functions.

(6) The plan contains specific conservation measures that meet the biological needs of covered species and that are based upon the best available scientific information regarding the status of covered species and the impacts of permitted activities on those species.

(7) The plan contains a monitoring program.

(8) The plan contains an adaptive management program.

(9) The plan includes the estimated timeframe and process by which the reserves or other conservation measures are to be implemented, including obligations of landowners and plan



signatories and consequences of the failure to acquire lands in a timely manner.

(10) The plan contains provisions that ensure adequate funding to carry out the conservation actions identified in the plan.

(b) A natural community conservation plan approved pursuant to this section shall include an implementation agreement that contains all of the following:

(1) Provisions defining species coverage, including any conditions of coverage.

(2) Provisions for establishing the long-term protection of any habitat reserve or other measures that provide equivalent conservation of covered species.

(3) Specific terms and conditions, which, if violated, would result in the suspension or revocation of the permit, in whole or in part. The department shall include a provision requiring notification to the plan participant of a specified period of time to cure any default prior to suspension or revocation of the permit in whole or in part. These terms and conditions shall address, but are not limited to, provisions specifying the actions the department shall take under all of the following circumstances:

(A) If the plan participant fails to provide adequate funding.

(B) If the plan participant fails to maintain the rough proportionality between impacts on habitat or covered species and conservation measures.

(C) If the plan participant adopts, amends, or approves any plan or project without the concurrence of the wildlife agencies that is inconsistent with the objectives and requirements of the approved plan.

(D) If the level of take exceeds that authorized by the permit.

(4) Provisions specifying procedures for amendment of the plan and the implementation agreement.

(5) Provisions ensuring implementation of the monitoring program and adaptive management program.

(6) Provisions for oversight of plan implementation for purposes of assessing mitigation performance, funding, and habitat protection measures.

(7) Provisions for periodic reporting to the wildlife agencies and the public for purposes of information and evaluation of plan progress.



(8) Mechanisms to ensure adequate funding to carry out the conservation actions identified in the plan.

(9) Provisions to ensure that implementation of mitigation and conservation measures on a plan basis is roughly proportional in time and extent to the impact on habitat or covered species authorized under the plan. These provisions shall identify the conservation measures, including assembly of reserves where appropriate and implementation of monitoring and management activities, that will be maintained or carried out in rough proportion to the impact on habitat or covered species and the measurements that will be used to determine if this is occurring.

(c) If a plan participant does not maintain the proportionality between take and conservation measures specified in the implementation agreement and does not either cure the default within 45 days or enter into an agreement with the department within 45 days to expeditiously cure the default, the department shall suspend or revoke the permit, in whole or in part.

(d) Any data and reports associated with the monitoring program required by this section shall be available for public review. The entity managing the plan shall also conduct public workshops on an annual basis to provide information and evaluate progress toward attaining the conservation objectives of the plan.

(e) To the extent provided pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code and any guidelines adopted pursuant thereto, if the impacts on one or more covered species and its habitat are analyzed and mitigated pursuant to a program environmental impact report for a plan adopted pursuant to this chapter, a plan participant that is a lead agency or a responsible agency under that division shall incorporate in the review of any subsequent project in the plan area the feasible mitigation measures and alternatives related to the biological impacts on covered species and their habitat developed in the program environmental impact report.

(f) The department may provide assurances for plan participants commensurate with long-term conservation assurances and associated implementation measures pursuant to the approved plan.

(1) When providing assurances pursuant to this subdivision, the department's determination of the level of assurances and the time limits specified in the implementation agreement for



assurances may be based on localized conditions and shall consider all of the following:

(A) The level of knowledge of the status of the covered species and natural communities.

(B) The adequacy of analysis of the impact of take on covered species.

(C) The use of the best available science to make assessments about the impacts of take, the reliability of mitigation strategies, and the appropriateness of monitoring techniques.

(D) The appropriateness of the size and duration of the plan with respect to quality and amount of data.

(E) The sufficiency of mechanisms for long-term funding of all components of the plan and contingencies.

(F) The degree of coordination and accessibility of centralized data for analysis and evaluation of the effectiveness of the plan.

(G) The degree to which a thorough range of foreseeable circumstances are considered and provided for under the adaptive management program.

(H) The size and duration of the plan.

(2) If there are unforeseen circumstances, additional land, water, or financial compensation or additional restrictions on the use of land, water, or other natural resources shall not be required without the consent of plan participants for a period of time specified in the implementation agreement, unless the department determines that the plan is not being implemented consistent with the substantive terms of the implementation agreement.

2821. Concurrent with the approval by the department of a final natural community conservation plan, the department shall do both of the following:

(a) Establish a list of species that are authorized for take pursuant to Section 2835 and the department shall make specific findings to support coverage pursuant to Section 2820. For purposes of determining whether a species should receive coverage under a plan, the department shall use, in addition to the standards required for the adoption of a plan, one or more of the following criteria:

(1) Coverage is warranted based upon regional or landscape level consideration, such as healthy population levels, widespread distribution throughout the plan area, and life history



characteristics that respond to habitat-scale conservation and management actions.

(2) Coverage is warranted based on regional or landscape level considerations with site specific conservation and management requirements that are clearly identified in the plan for species that are generally well-distributed, but that have core habitats that must be conserved.

(3) Coverage is warranted based upon site specific considerations and the identification of specific conservation and management conditions for species within a narrowly defined habitat or limited geographic area within the plan area.

(b) Find that the mitigation measures specified in the plan and imposed by the plan participants are consistent with subdivision (d) of Section 2801.

2822. The department may seek injunctive relief against any plan participant, person, or entity to enforce this chapter.

2823. The department shall suspend or revoke any permit, in whole or in part, issued for the take of a species subject to Section 2835 if the continued take of the species would result in jeopardizing the continued existence of the species.

2825. The department may adopt regulations for the development and implementation of natural community conservation plans consistent with this chapter.

2826. Nothing in this chapter exempts a project proposed in a natural community conservation planning area from Division 13 (commencing with Section 21000) of the Public Resources Code or otherwise alters or affects the applicability of that division.

2827. To the extent practicable, implementation of natural community conservation plans shall use the services of either the California Conservation Corps or local community conservation corps.

2828. Nothing in this chapter prohibits a local government from exercising any power or authority granted to it pursuant to state law to acquire land or water to implement a plan.

2829. (a) The department may be compensated for the actual costs incurred in participating in the preparation and implementation of natural community conservation plans. These costs may include consultation with other parties to agreements authorized by Section 2810, providing and compiling wildlife and wildlife habitat data, reviewing and approving the final plan,



monitoring implementation of the plan, and other activities necessary to the preparation and implementation of a plan.

(b) The department may be compensated for those expenses identified in subdivision (a) according to a schedule in the agreement authorized by Section 2810.

2830. Nothing in this chapter prohibits the taking or the incidental take of any identified species if the taking is authorized by the department pursuant to any of the following:

(a) A natural community conservation plan or amended plan approved by the department prior to January 1, 2002. Any permits, plans, implementation agreements, and amendments to those permits, plans, or implementation agreements described in this section are deemed to be in full force and effect as of the date approved or entered into by the parties insofar as they authorize the take of identified species pursuant to an approved natural community conservation plan and shall be governed solely by former Chapter 10 (commencing with Section 2800) as it read on December 31, 2001.

(b) Any natural community conservation plan, or subarea plan, approved, or amended on or after January 1, 2002, for which a planning or enrollment agreement meets any of the following criteria, which shall be solely governed in accordance with former Chapter 10 (commencing with Section 2800) as it read on December 31, 2001:

(1) The natural community conservation plan was entered into between the department and plan participants prior to January 1, 2001, and is carried out pursuant to Rule 4(d) for the California Gnatcatcher (Federal Register Volume 58, December 10, 1993), including the southern subregion of Orange County.

(2) The natural community conservation plan was prepared pursuant to the planning agreement for the San Diego Multiple Species Conservation Plan.

(3) The natural community conservation plan was prepared pursuant to the planning agreement for the San Diego Multiple Habitat Conservation Plan .

(c) Any programmatic natural community conservation plan approved by the department on or before January 1, 2002.

(d) Any natural community conservation plan developed pursuant to a planning or enrollment agreement executed on or before January 1, 2001, and for which the department finds that the



plan has been developed using a public participation and scientific analysis process substantially in conformance with the intent of paragraph (5) of subdivision (b) of Section 2810 and Section 2815.

(e) Any natural community conservation plan developed pursuant to a planning agreement executed on or before January 1, 2002, and which the department finds is in substantial compliance with Section 2820.

2835. At the time of plan approval, the department may authorize by permit the taking of any covered species whose conservation and management is provided for in a natural community conservation plan approved by the department.



Approved _____, 2002

Governor

