



CNPS MANUAL
ON THE
HCP-NCCP PROCESS

DAVID H. CHIPPING
V.P. CONSERVATION
and many reviewers

Public Release Edition 2.0
July 1999

TABLE OF CONTENTS

PART 1 PROCESS

CHAPTER 1: INTRODUCTION

1.1 How to use this manual, general contents, CNPS position	1-1
1.2 Habitat Conservation Plan (HCP)	1-1
1.3 Low Effect HCP	1-1
1.4 Natural Community Conservation Planning (NCCP)	1-5
1.4.1 In general	1-5
1.4.2 Current NCCP projects In southern California	1-5
1.4.3 Rule 4(d) as applied to NCCP projects	1-6
1.5 The NCEAS-AIBS Study To Identify Problems With The HCP Process	1-6

CHAPTER 2: SUMMARY OF FEDERAL HCP HANDBOOK

2.1 Introduction	2-1
2.2 Summary Of contents	2-1
2.2.1 Legal basis for incidental take	2-1
2.2.2 Congressional intent	2-1
2.2.3 When is a permit needed?	2-1
2.2.4 Phases of the process, and comment periods	2-1
2.2.5 NEPA review.	2-2
2.2.6 Section 7 Consultation	2-2
2.2.7 Processing times and public review	2-2
2.2.8 Low-effect HCPs and relationship to multiple species conservation plans	2-2
2.2.9 The FWS HCP Handbook's "Helpful Hints" to FWS biologists	2-2
2.2.10 Goals and Objectives	2-3
2.2.11 Independence of section 10 permitting and section 7 consultation	2-3
2.2.12 Suggestions for steering committees	2-3
2.2.13 1999 Revisions to Handbook (5-Point Policy Guidance)	2-3

CHAPTER 3: NCCP GUIDELINES

3.1 Introduction	3-1
3.2 Characteristics of an NCCP	3-1
3.3 Components of an NCCP	3-2
3.4 Relationship to other guidelines	3-5
3.5. Adoption and effective date	3-5

CHAPTER 4: ROLE OF ESA AND CESA IN HCP-NCCP PROCESS

4.1 Fundamental weakness of HCP-NCCP in species protection	4-1
4.2 Legal decisions under ESA that should limit actions under an HCP	4-1
4.3 Six Supreme Court decisions on regulatory takings	4-2
4.4 Apparent violations of species protection under HCP-NCCP	4-2
4.5 Is ESA so economically disruptive that WE need HCPs?	4-4

CHAPTER 5: UNDERSTANDING NEPA AND CEQA

5.1	When and why NEPA and CEQA are used	5-1
5.2	The steps in NEPA and CEQA analysis	5-1
5.2.1	NEPA	5-1
5.2.2	CEQA	5-1
5.3	Lead agency selection	5-1
5.4	Categorical exemptions	5-1
5.5	Environmental assessment in NEPA: FONSI or EIS	5-2
5.6	Public availability of EAs v. FONSIs	5-2
5.7	FONSIs and Low-Impact HCPs	5-2
5.8	Mitigation measures imposed in EAs and FONSIs	5-2
5.9	Negative Declarations, Mitigated Negative Declaration, and EIRs under CEQA	5-3
5.10	EIS and EIR scoping	5-3
5.11	Contractor selection	5-5
5.12	Combining NEPA-CEQA analysis with HCP-NCCP analysis	5-6
5.13	Rule 4(d)	5-6
5.14	Comments on the Draft EIS Or Final EA	5-6
5.15	Comment on the final document	5-6

PART 2 SCIENTIFIC ISSUES AND PARTICIPATION IN THE PROCESS

CHAPTER 6: OPPORTUNITIES FOR CNPS TO COMMENT, INFLUENCE AND MODIFY THE PROCESS

6.1	Introduction	6-1
6.2	Committment of time and resources	6-1
6.3	Front door intervention	6-1
6.4	Back door intervention	6-2
6.5	Influence on lead agency selection	6-3
6.6	Challenge of environmental assessments resulting in a FONSI or Negative Declaration	6-3
6.7	Challenge issuance of EA when mitigation insufficiently reduces impacts.	6-3
6.8	Input to the EIR/EIS Process	6-4
6.8.1	Scoping	6-4
6.8.2	Projects lacking scoping	6-5
6.8.3	Comments on Draft EIR Or EIS	6-5
6.8.4	Comments on final documents	6-5
6.8.5	Certification of EIS or EIR	6-6
6.9	HCP And NCCP technical, steering and advisory committees	6-6
6.10	Independent pressure on lead agency	6-7
6.11	Violation of other laws	6-7
6.12	Court challenges	6-7
6.13	CNPS as advocate, scientist?	6-7

CHAPTER 7: PRINCIPLES UNDERLYING INTERVENTION: CNPS STATEMENT OF CONCERN REGARDING HCP'S AND NCCP'S 7-1

CHAPTER 8: SUFFICIENCY OF DATA ON COVERED SPECIES

8.1	Habitat-based and species-based projects	8-1
8.2	"Minimize and mitigate" and lack of recovery standards	8-1
8.3	Compatibility with species recovery plans	8-1
8.4	Obligatory vs. optional consideration of 'covered' species	8-2
8.5	Counting numbers of species and populations	8-3
8.6	Age of data	8-3
8.7	Field validation by CNPS and others	8-3

JUNE 1999 SECOND PUBLIC DISTRIBUTION

8.8 Challenges on quality of collected data	8-3
8.9 Challenges based on inadequacy of research resources	8-4
8.10 GIS, GAP Analysis and field validation	8-4
8.11 Review of Section 7 findings from FWS	8-4
8.12 CEQA-NEPA plan review	8-5
8.13 Coordination with other reviewers	8-5
8.14 Interim take	8-5
8.15 Prelisting Agreements and proposed Candidate Conservation Agreements	8-5
8.16 Science and "Low-effect" HCPs	8-6
8.17 Scientific review panels: Front-loading science into a plan	8-7
8.18 Peer review and rear-loading the science, and consultant bias	8-7
8.19 Alternative projects and their impacts on species	8-8
8.20 Poor project design and species triage	8-8

CHAPTER 9: SUFFICIENCY OF MITIGATION

9.1 What does mitigation mean?	9-1
9.2 Patch size and other ecological considerations	9-1
9.3 Restorability	9-1
9.3.1 Time frames	9-2
9.3.2 Role of fire	9-2
9.3.3 Climatic and edaphic factors	9-2
9.3.4 State of knowledge	9-2
9.4 Costs, funding and management requirements	9-2
9.5 Mitigation ratios and habitat quality	9-3
9.6 Exotics control	9-3
9.7 Certainty	9-3
9.8 Mitigation (Conservation) banks	9-4
9.9 Use of public lands as mitigation	9-4
9.10 Large projects such as MSCP as tiered projects	9-4
9.11 The Natomas Basin HCP as a multijurisdictional failure of process	9-5
9.12 Monitoring	9-5

CHAPTER 10 CUMULATIVE IMPACT

10.1 Definition	10-1
10.2 Use of Council of Environmental Quality Handbook	10-1
10.3 Authority under CEQA	10-1
10.4 Inclusion of cumulative impacts in the scoping process	10-1
10.5 Geographical breadth and multiple jurisdictions	10-2
10.6 Too many EAs, not enough EISs	10-2
10.7 Past, present and future	10-2
10.8 Time frame for an impact to become evident	10-3
10.9 Impacts of successive actions	10-3
10.10 Management of non-covered species and cumulative impact	10-3
10.11 Synergistic effects	10-3
10.12 Issues and tools for analysis	10-4

CHAPTER 11: ADAPTIVE MANAGEMENT AND "NO SURPRISES"

11.1 Adaptive Management as a compliment or conflict with No Surprises	11-1
11.2 Critique of "No Surprises"	11-2
11.3 Advantage of Adaptive Management for Management-Centered HCPs	11-3
11.4 Alternatives analysis in the context of Adaptive Management	11-4
11.5 Addition of covered species and No Surprises	11-4
11.6 The Stanford letter on No Surprises	11-4

CHAPTER 12: NCCP CORE GROUP FINDINGS

12.1 Role of NCCP Core Group as it relates to southern California NCCP programs	12-1
12.2 Core Group Members	12-1
12.3 Information needs	12-1
12.4 Broad research gaps	12-2
12.5 Fire	12-2
12.6 Inventory and monitoring	12-2
12.7 Species persistence, demographics, and genetics	12-3
12.8 Administration, socioeconomic considerations, and implementation	12-3
12.9. Exotic plant and animal species, invasives, and other problem species	12-4
12.10 Public use	12-4
12.11 Biophysical processes/ecosystem function	12-5
12.12 Reserve design/biogeography/landscape processes	12-5
12.13 Restoration and enhancement	12-6
12.14 General species, program-wide, and regional concerns	12-6
12.15 Historic and adjacent land uses	12-7
12.16 Habitat management practices	12-7

CHAPTER 13: SAFE HARBORS 13-1

CHAPTER 14: THE TANGLED SKEIN OF THE LARGE FOREST HCP

14.1 Sustained Yield Pland and Timber Harvesting Plans	14-1
14.2 The Clean Water Act and the forest HCP	14-3
14.3 Issues raised in the EPIC-Sierra Club suit against PALCO and state agencies	14-3

REFERENCES REF-1

RESOURCES REF-2

APPENDIX A: NATURAL COMMUNITIES CONSERVATION ACT A-1

APPENDIX B: SECTIONS 7 AND 10 OF THE ENDANGERED SPECIES ACT B-1

APPENDIX C: A TO Z ON THE HCP: A CHECKLIST OF POSSIBLE CHAPTER ACTIONS C-1

APPENDIX D: ESA FROM THE DEVELOPER'S SIDE OF THE TABLE D-1

PART ONE: PROCESS

CHAPTER 1: INTRODUCTION

1.1 HOW TO USE THIS MANUAL, GENERAL CONTENTS, CNPS POSITION

According to the U.S. Fish and Wildlife Service (1997), 18.5 million acres of private land were to be covered by HCP's by September 1997, including both preserve lands and those that will be actively managed for conservation or developed. As of June 1997, 212 HCPs have been approved and at least 200 more are under preparation. The justification for the Federal Habitat Conservation Plan (HCP) and California's Natural Community Conservation Plan (NCCP) arises from:

(1) the position of some in the conservation community that existing mitigation for individual projects based on requirements of the Federal Endangered Species Act (ESA) and the California Endangered Species Act, as implemented through the California Environmental Quality Act (CEQA), were sometimes not successful for long term protection of species, and

(2) a desire from the development community that a method be found that would produce some certainty about where projects could or could not take place, and that would allow certain projects to move faster through the approval process.

CNPS is concerned that, as presently implemented, the HCP-NCCP processes can result in ill -considered mitigation, with insufficient guarantees of success, and with lack of public access to the process. These concerns are covered in this Manual, together with recommendations on how CNPS might influence and alter the process toward better project design regarding the protection of species and natural vegetation. Throughout the document, particularly in Part 2, detailed action that should be considered in CNPS input and reaction to an HCP-NCCP project have been highlighted.

It should be noted that CNPS supports the concept behind HCP and NCCP, but is extremely concerned about plant conservation in these plans.

1.2 HABITAT CONSERVATION PLAN (HCP)

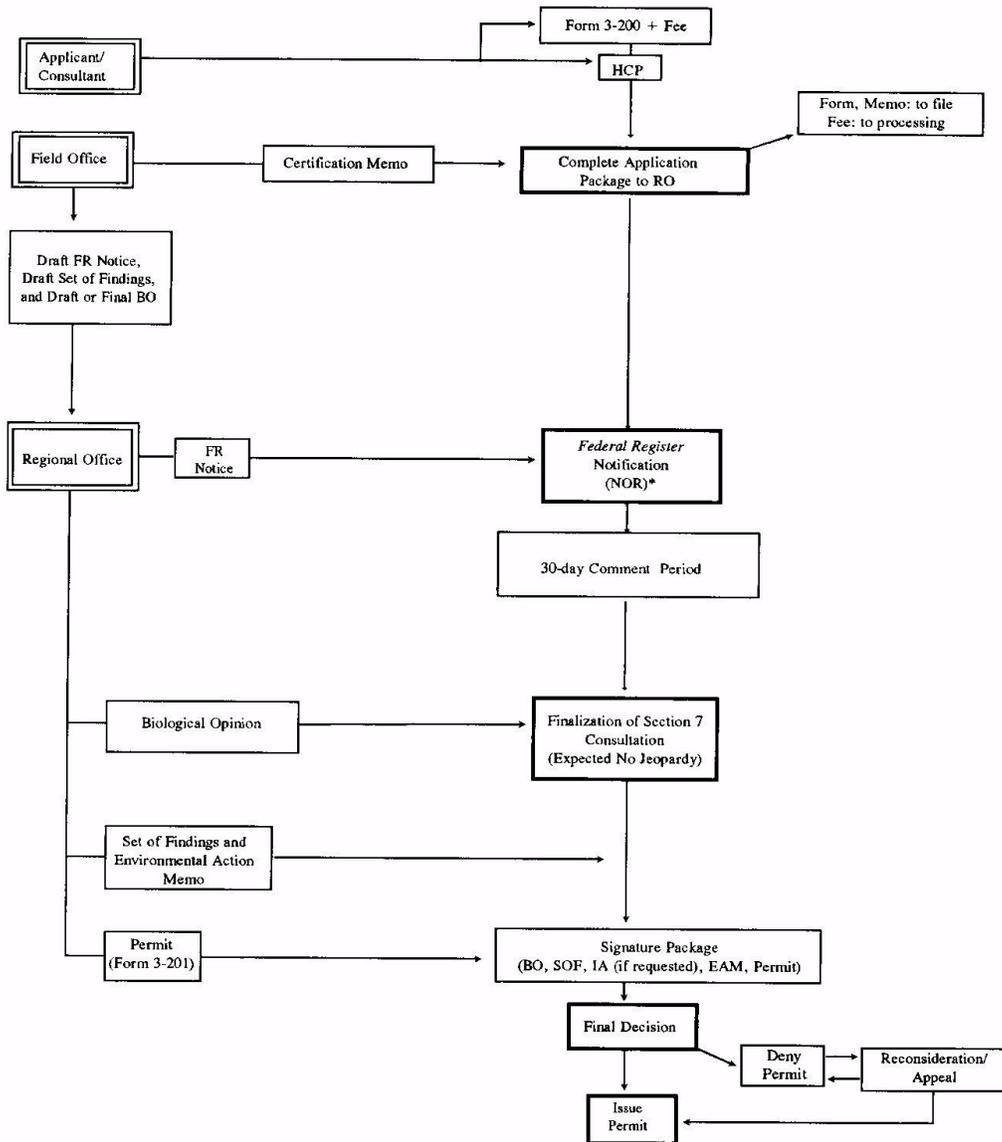
An applicant, usually a property owner, works with staff from FWS to develop the plan. The HCP process has authority from Section 10(a)(1)(B) of the Federal Endangered Species Act. The purpose is to authorize the incidental take of threatened or endangered species, and does not function to authorize the underlying activities that result in take. The original 1973 Endangered Species Act (ESA) prohibited take under Section 9 of the Act, where take is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct". Section 10 allows issuance of a permit for "incidental take" that is "incidental to, and not the purpose of, the carrying out of an otherwise lawful activity." The take permit is provisional upon the requirement that the activity not "appreciably reduce the likelihood of the survival and recovery of the species in the wild." "Take" under Section 10 of ESA is subject to analysis by Environmental Assessment (EA) or Environmental Impact Statement (EIS) through the National Environmental Policy Act (NEPA). Processing steps for the development of a Section 10 permit requiring an EA are given in **Figure 1**, and those requiring an EIS are given in **Figure 2**.

1.3 LOW-EFFECT-HCP

Low-Effect HCPs can be applied when there are (1) minor or negligible effects on Federally listed, proposed, or candidate species and their habitats covered under the HCP; (2) minor or negligible effects on other environmental values or resources. Low-Effect HCPs are categorically exempts from NEPA requirements, which means there is no opportunity to review the projects through the E.I.S. process. Processing steps for the Low-Effect HCP are given in **Figure 3**.

Figure 1: Processing Steps for Developing a Section 10 Permit Subject to Analysis by Environmental Assessment (taken from HCP Handbook)

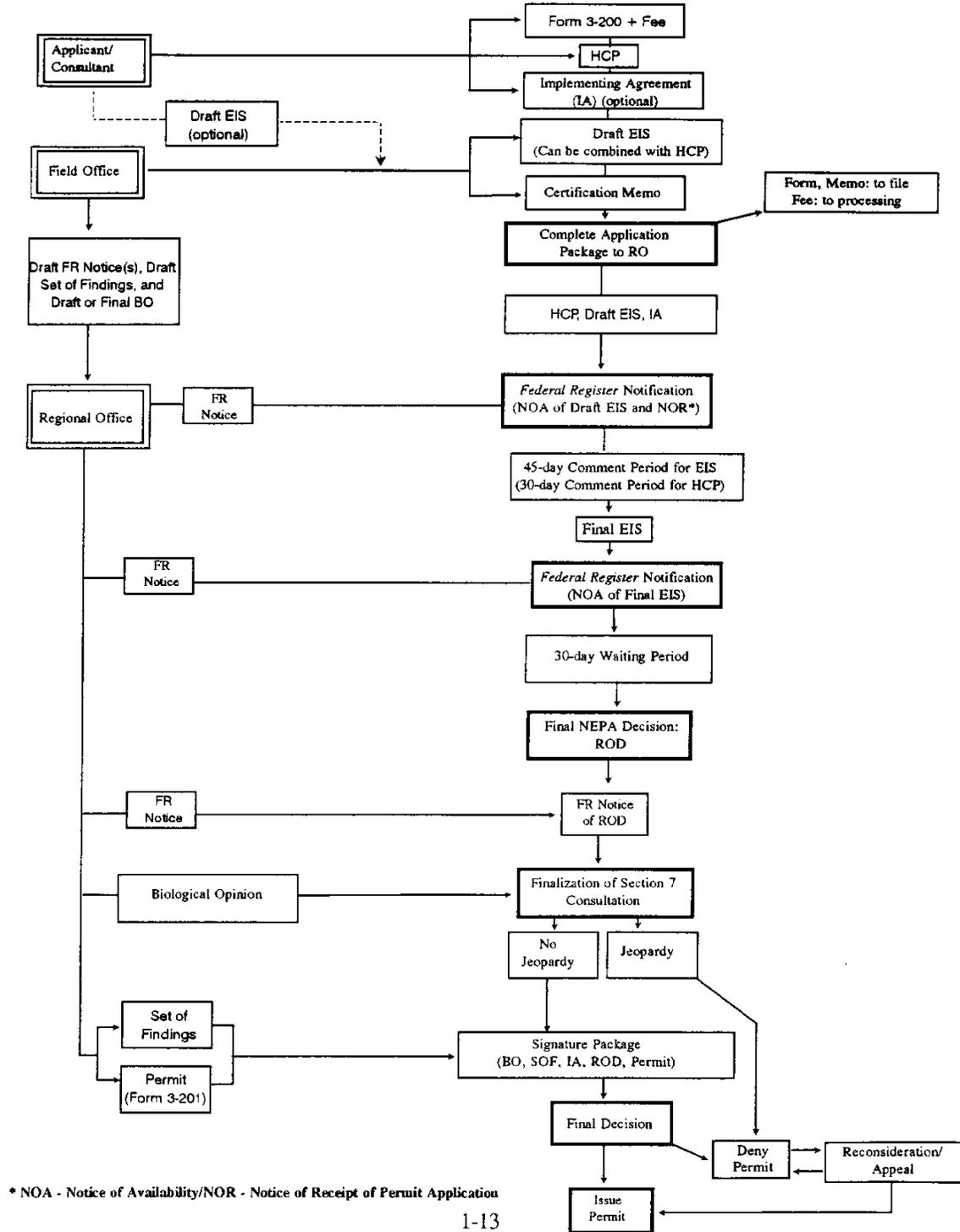
Figure 1: Typical Processing Steps for Low-effect Section 10(a)(1)(B) Incidental Take Permit Applications



* NOR - Notice of Receipt of Permit Application

Figure 3: Processing Steps for Developing a Low-Effect HCP (From HCP Handbook)

**Figure 3: Typical Processing Steps for Section 10(a)(1)(B)
Incidental Take Permit Applications Requiring an EIS**



1.4 NATURAL COMMUNITY CONSERVATION PLANNING (NCCP)

1.4.1 IN GENERAL

California introduced a program that can meet the requirements of the Federal HCP program through the Natural Community Conservation Planning Act (NCCPA) of 1991 (see Appendix A). It allows the Department of Fish and Game to enter into agreements that would allow incidental take of species, and allows both listed and unlisted species to be considered for "coverage". The NCCP process allows take of a covered species provided that the species' future survival is not jeopardized, and attempts to protect species in advance of listing. The stated goal is to "conserve long-term viable populations of California's native animal and plant species and their habitats in areas large enough to ensure their continued existence" while enabling "economic development". An NCCP can be prepared by a local, state or Federal agency independently or in cooperation with other persons or jurisdictions. An NCCP may protect plants, animals, related ecological communities and their habitats. The NCCP process is open to review under CEQA and may require an EIR, but there is no standardization of public access in the design of the plan.

The Natural Resources Defense Council (NRDC) (Natural Resources Defense Council, May 1997), in an analysis of NCCP, states:

"The NCCP differs from the Endangered Species Act in several important respects. For one thing, it is broader in scope, eschewing the ESA's conservative species-by-species, project-by-project approach for an open-ended process that in theory could encompass hundreds of species and thousands of landowners. And it is intended to avert the need for last-ditch ESA measures, to preserve declining species before they reach the point of endangerment. Land developers, conservationists, and municipal officials would meet under the aegis of the California Department of Fish and Game (DFG) and together develop a wildlife reserve for their region—a process wholly unlike that of the reactive ESA. Unfortunately, where the ESA is rigorous and mandatory, the NCCP is vague and elective, failing to set even minimal standards for an appropriate reserve design, or, of more immediate concern, to give landowners sufficient incentive to participate."

The NCCP legislation does not offer much in the way of guidelines on how a plan should proceed, performance standards, or even the contents of an NCCP. Senator Tom Hayden (Los Angeles) attempted to develop legislation in this regard, but failed. DFG is responsible for entering into agreements "for the development and implementation of natural community conservation plans". The Scientific Review Panel for the gnatcatcher-driven multiple species conservation plans developed "Conservation Guidelines for Southern California Coastal Sage Scrub" and these are becoming a de-facto guideline for other NCCP plans. The outlines are broad and unspecified, were intended to be followed by more detailed local treatments by local government lead agencies. Herein lies a major problem with the NCCP process, in that performance and compliance standards are poorly defined for these local agencies.

Once the several documents of an NCCP project are approved, it is subject to "No Surprises" policy in which any additional lands that might be needed for conservation purposes can only be obtained at the expense of the public, and only if the owner is a willing participant.

1.4.2 CURRENT NCCP PROJECTS IN SOUTHERN CALIFORNIA

Although the Coastal Sage Scrub Scientific Review Panel had suggested that more regions be used, there are effectively four major plans covering four counties. Two cover 340,000 acres of coastal Orange County as the Central Coastal NCCP and the Southern Orange County NCCP, and two cover coastal San Diego County as the San Diego Multiple Species Conservation Plan (City of San Diego and central coastal area, 580,000 acres) and the San Diego Multiple Habitat Conservation Plan (northwestern county, 610,000 acres). Another plan, mostly involving public lands, is being developed in the eastern portion of San Diego County, and will develop corridors between conservation areas of the coastal plans. Within these are a number of sub-area plans, usually constructed around the urban limits of a city or jurisdiction such as Poway in San Diego County. The quality of these plans is patchy, and some bear little resemblance to the conservation requirements that would have been desired by the Scientific Review Panel. Other management programs related to NCCP and the goals of preserving coastal sage scrub exist in Los Angeles, Riverside, and San Bernardino counties.

1.4.3 RULE 4(d) AS APPLIED TO NCCP PROJECTS

When NCCP was first put into operation in Southern California, with the specific reason of conserving Coastal Sage Scrub habitat for the California gnatcatcher, there was little interest. As NRDC note in their excellent analysis:

"With the gnatcatcher listing decision pending in Washington, the NCCP's pilot program was directed at Southern California's beleaguered coastal sage scrub. In San Diego County, agreements were signed to integrate two large-scale planning areas, one in the county's northwest quadrant and one in the southwest, into the program. In Orange County, three planning areas were founded, each concentrating on the holdings of a major player; in Riverside County, a multi-species conservation plan was contemplated. Yet the NCCP's flaws were evident. Within each planning area, relatively few acres were actually "enrolled"—only 14 to 15 percent overall (with a much higher percentage in Orange County, whose participating developers held greater stakes). Predictably, many of the enrollments that were made had more to do with economic expediency than biological significance. With so few of the essential parties at the table, planning a scientifically sound reserve was, in some cases, impracticable. All the while, development on unenrolled lands continued unabated. In Orange and San Diego counties alone over 7,600 acres of coastal sage scrub were razed during the program's inaugural years, hardly a mark off the preceding period, with most of the clearing done below 300 meters, where the gnatcatcher usually nests. A bill to amend the California Environmental Quality Act (CEQA), then circulating around the legislature, would have required developers to submit a detailed Environmental Impact Report prior to modifying any unenrolled scrub land. But this proposal satisfied no one. Developers argued that the NCCP rendered any additional measures superfluous; conservationists perceived that the CEQA, for all its procedural requirements, was a weak substitute for the substantive restrictions of the ESA.[24] Without a strong incentive to bring developers to the table, the NCCP was doomed to fail....

..... On March 30, 1993, over a year and a half after it proposed adding the gnatcatcher to the endangered species list, the Service released its final decision, designating the bird a threatened species instead. Ordinarily, threatened species are entitled to essentially the same protections that Congress prescribed for endangered species. In the gnatcatcher's case, however, a "special Rule" was proposed, deviating from practice to accommodate California's NCCP and its more "holistic" approach to conservation. Had the gnatcatcher been deemed endangered, the Service would have had far less discretion.

The special Rule 4(d) modified the ESA's requirements in several significant ways. First, it expanded the bounds of the "incidental take" exemption, from one targeted at individual development projects to one broad enough to cover all the acres, jurisdictions, and landholders implicated in an NCCP plan. Since no plan could be implemented—no habitat freed for development—without its final approval, the Service had with this one stroke established itself within the planning process, taking up a supervisory position alongside the California Department of Fish and Game. Second, the Service retained the ESA's prohibition against take for developers who elected not to participate in the process; the separate costs of applying directly to the agency for a permit, it was hoped, would persuade landowners and jurisdictions to sign themselves up. Finally, the Service withdrew itself from the business of issuing permits during the interim period, while plans were in the works; it effectively delegated that task to the municipalities by pre-approving an undeclared amount of "incidental take" consistent with NCCP guidelines, reserving for itself a kind of veto power over individual projects.

There were reasons to believe that this unexpected special Rule diluted the uncompromising language of the Endangered Species Act. Under the ESA's permitting process, commercial considerations intrude only in cases of economic hardship; under the NCCP, commercial interests take a principal role in plan design. Under the ESA, the Service negotiates the terms of every exemption; under the NCCP, it must rely for the most part on the good faith of municipalities, which, unfortunately, are more exposed to local economic pressures. And while, under the ESA, developers seeking a permit must adhere to defined standards—minimizing impacts on habitat and guaranteeing funds for conservation—under the NCCP, their responsibilities are often unclear." (Natural Resources Defense Council. May 1997)

1.5 THE NCEAS-AIBS STUDY TO IDENTIFY PROBLEMS WITH THE HCP PROCESS

The National Center for Ecological Analysis and Synthesis, and the American Institute of Biological Sciences jointly issued a 1999 report "Using Science in Habitat Conservation Plans". In an analysis of 208 HCPs involving the take of 73 listed species, it was clear that scientific data on the current status of a covered species was frequently absent, that mitigation methods lacked sufficient scientific underpinning, and that half of the plans

lacked a clearly outlined monitoring program. Only 56% of plans attempted to quantify species 'take', and a only 25% assessed the impacts of the allowable 'take'. Analysis of the species indicates that, at the time of the HCP, 74% were in decline, 21% were stable and only 5% were improving. Analysis of the habitat for each species shows that 63% was in decline, 37% was stable, and none was improving at the time of the HCP.

CHAPTER 2: SUMMARY OF FEDERAL HCP HANDBOOK

2.1 INTRODUCTION

The HCP Handbook was prepared to aid U.S. Fish and Wildlife Service (FWS) staff understand and implement the process. It was published in 1996, and is available from FWS Regional and Field offices. While it is recommended that CNPS members concerned with an HCP read the latest edition of the whole Handbook, the main points are summarized below.

2.2 SUMMARY OF CONTENTS

The Handbook covers the relationship between ESA and Incidental take Permits, and includes an overview of FWS responsibilities, the development of an HCP through coordination, treatment of unlisted species, environmental analysis and documentation, application requirements and processing procedures, issuance criteria for incidental take permits, and a definitions section.

2.2.1 LEGAL BASIS FOR INCIDENTAL TAKE

The Handbook establishes the legal framework, and notes the difference between incidental take in the HCP process (Sec 10 (a)(1)(B) of ESA) to take for other purposes (Sec 10 (a)(1)(A) of ESA). HCP's are only concerned with take under Sec 10 (a)(1)(B). Sec. 10(a)(2)(A) requires that the take permit only be issued after the applicant has submitted a "conservation plan" that specifies likely impacts and proposed mitigations. Statutory criteria for the issuance of a permit are defined in Sec 10 (a)(2)(B). FWS regulations for Section 10 implementation were published in the Federal Register on 9/30/85 (50 CFR 39681-39691). The actual actions within the plan that govern both species take and the mitigation for that take are the Implementation Agreement, a crucial document that defines what will and will not be acceptable action within the Plan.

Pertinent Federal Code (Section 10 of ESA) regarding the HCP process is included as an Appendix B to this document.

2.2.2 CONGRESSIONAL INTENT

An HCP is described as a "creative partnership" with the intent, according to the 97th Congress, of reducing conflicts over listed species. An HCP may also address and include candidate, proposed and non-listed species. The Handbook states that this ensures that the terms of an HCP will not change with subsequent species listings, provided they were "covered". (This is the intent of "No Surprises" language that will be discussed below.)

2.2.3 WHEN IS A PERMIT NEEDED?

The Section 10(a)(1)(B) HCP process will start when species take is likely for a non-Federal activity or project. If the project or activity receives Federal funding, requires a Federal permit or is a Federal activity or action, incidental take can be authorized after Section 7 consultation with FWS. The HCP itself, while prepared under the Section 10 process, is later reviewed under a Section 7 consultation. An activity to be considered for Section 10 must be lawful. Safe Harbors agreements are covered under Section 10(a)(1)(A) of ESA and therefore do not trigger an HCP (see Chapter 13). The FWS may suggest actions to the developer that would avoid both take and the need for an HCP. Section 10 has economic as well as species-conservation considerations.

2.2.4 PHASES OF THE PROCESS AND COMMENT PERIODS

Section 10 involves the development phase, the processing phase and the post-issuance phase. The development phase under Section 10 has FWS help the applicant complete the application process, which consists of the HCP plus the proper forms, fees (currently \$25), a draft NEPA document if needed, and an Implementing Agreement. During this phase the public may be involved if there is an EIS being prepared, as NEPA allows for input on scoping all of the issues to be addressed in the EIS. Section 10 requires FWS to publish a notice in the Federal Register of any application for an Incidental Take Permit. Public scoping does not usually take place if the FWS utilizes an EA rather than an EIS, as will typically happen when a Low-effect HCP is being prepared. In the processing phase the HCP is reviewed, is announced in the Federal Register, and the NEPA analysis is open for

public review and comment. In some HCPs the HCP and NEPA analysis are combined in a single document. As of March 1999, FWS was intending to increase public comment to 60 days for most HCPs, including those developed by FWS, as part of a "5 Point Plan", except for Low Effect HCP's which would remain at 30 days (Federal Register March 9, 1999). Regional and multi-species HCPs would have 90 day comment periods, increased from 45 day periods. In most cases the comment periods start after the posting in the Federal Register. The project undergoes a Section 7 consultation, and when the HCP is declared to be statutorily complete, a permit is issued. The post-issuance phase is the implementation of the HCP and the associated monitoring and funding programs. The issuance of the permit is noted in the Federal Register.

2.2.5 NEPA REVIEW.

The NEPA review may cover some of the same ground as the HCP regarding the evaluation of impacts to species, but also introduces an evaluation of other environmental factors. NEPA may not be used where there is a categorical exclusion, but is usually in the form of an EA or an EIS. An EA is used when impacts are unclear and need further study, and will result in either an EIS or a Finding of No Significant Impact (FONSI).

2.2.6 SECTION 7 CONSULTATION

The take permit developed under Section 10 is reviewed to validate that the take "is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification" of critical habitat. Section 7 looks at some factors not considered under Section 10, such as indirect effects, effects on Federally listed plants, and effects on critical habitat.

2.2.7 PROCESSING TIMES AND PUBLIC REVIEW

The processing time between the receipt of a permit application and the issuance of a permit should be no longer than 12 months for an HCP with an EIS, less than 4-6 months for an HCP with an EA, and less than 3 months for a Low-effect HCP. The language in the HCP Handbook implies that these are regarded as the upper limits of allowable processing time. It is clear that independent field validation or peer review of the Section 10 take and mitigation elements might be very difficult with these time constraints, although they are improved from those of 1998. Comment period durations under NEPA are described in Section 2.2.4 above. Note that there is no requirement for public input to the HCP document itself, to the Implementation Agreement, or to the negotiations that precede the final definition of the project. As of March 1999, FWS' 5 Point Plan was proposing to increase public comment period to 60 days on all but Low Effect HCPs.

2.2.8 LOW-EFFECT HCPs AND RELATIONSHIP TO MULTIPLE SPECIES CONSERVATION PLANS

FWS notes that it will not allow a potential multiple species conservation plan to be broken into a series of chained Low-effect HCP's. The Handbook appears to promote the use of an multiple species conservation plan to obtain greater flexibility, spread costs and impacts, reduce decision making, and produce long term assurance for developers.

2.2.9 THE FWS HCP HANDBOOK'S "HELPFUL HINTS" TO FWS BIOLOGISTS.

Chapter 1, Part G of the FWS HCP Handbook provides "hints" to biologists. Biologists are advised to be "flexible and creative". Biologists are encouraged but not mandated to have HCP's contribute to recovery, and should review recovery plans. When recovery plans are not available, contact team members and other species experts. Biologists should understand all associated legal requirements, and notify the applicant in writing if the project is deficient. They should try to get other species to be included by the applicant, citing "No Surprises" and protection from impacts of future listings, and all the issues should be on the table at the outset. They should make sure that mitigation and monitoring plans will work. Coordination between field offices and Service Regional Offices is considered important and should be consistent. All Section 7 considerations should be introduced at the outset of the process. The biologist must make sure that the project is consistent with any other laws, such as the California Coastal Act.

2.2.10 GOALS AND OBJECTIVES

In the Five Point Plan of 1999, FWS stated “In the future, every HCP will include specific biological goals and measurable objectives..... the Services will work with the applicant to derive the biological goals and objectives by examining the applicant's proposed action and the overall conservation needs of the covered species and/or its habitat.” Goals are the rationale behind the minimization and mitigation strategies. Goals can vary greatly in their complexity and may take the form of an adaptive management strategy or a series of incremental steps to be taken within an agreed upon range of management adjustments. The biological goals and objectives may be either habitat or species based. More complex multispecies and/or regional HCPs may need an integration of habitat and species-specific goals and objectives.

2.2.11 INDEPENDENCE OF SECTION 10 PERMITTING AND SECTION 7 CONSULTATION

The Handbook notes the possible bias of having the same people do both consultations, and therefore recommends that different staff be used, or if that is not possible, that there is independent review of the Section 7 findings.

2.2.12 SUGGESTIONS FOR STEERING COMMITTEES.

Steering committees consist of a group of persons who represent affected interests in a broad scale HCP, but they are not required by law and are not required by FWS. They advise the applicant, and do not advise the Service. HCP developers may object to “outside” interests, but Service biologists are told to suggest that a developer make some contact with outside experts. Committees may advise on the species coverage, geographical scale, mitigation, and public disclosure. The Handbook suggests that steering committee meetings be open to the public, “to allow people to monitor progress and generally feel they are part of the process.”

2.2.13 1999 REVISIONS TO HANDBOOK - (5-POINT POLICY GUIDANCE)

In response to criticism of the HCP process, particularly regarding lack of consistency between plans, FWS and NMFS published in the Federal Register (March 9, 1999, v.64, no. 45, p. 11485-11490) a draft addendum to the HCP Handbook.

Changes include mandatory statement of the specific biological goals and objectives of the plan, although these are to be determined on the basis of the relative impact of the HCP and will vary from plan to plan. The operating conservation plan and the associated implementation agreement will include “measurable actions that, when implemented, are anticipated to meet the biological objectives.”

The second point in the 5-point plan stresses the use of adaptive management, stressing that it is not in conflict with ‘no surprises’ policy or “assurances” to landowners. To accomplish this, a number of variations and possibilities for land management would be built into the HCP’s implementation agreement. The 5-point plan gives an example that betrays the weakness of an attempt to reconcile ‘no surprises’ and ‘adaptive management’ in the Natomas HCP, north of Sacramento. While stating that adaptive management built into that HCP would allow modification of habitat set-asides to maximize the protection of giant garter snake, the document fails to mention a lawsuit brought against FWS on the basis that the Natomas HCP was allowing ‘take’ of the snake while it had actually failed to produce sufficient set-aside to mitigate the ‘take’. The developers had their assurances, while the snake’s future not only had no assurances, but no space into which adaptive management would apply. It is clear that balance between assurances and adaptive management can be reached provided that property owners are not given their assurances prior to determining the range and amount of adaptability need for the plan to function.

The third of the 5 points calls for a higher degree of monitoring, both for compliance and for biological success. No standards are given, but a welcome suggestion is the formation of oversight committees for regional HCPs. Funding has to be “adequate”, and the degree of monitoring can vary from a single report for a low-effect HCP to a program that could last many years.

The fourth point discusses permit duration that should be determined by the type of project, ranging from the time needed to build a housing tract to the time needed to complete a timber harvest rotation.

The last point encourages public participation by lengthening the NEPA review period, but does not allow public input into the design phase of an HCP, which remains a negotiation between the landowner and FWS. FWS promises more public input only in the design of regional HCPs.

CHAPTER 3: NCCP GUIDELINES (APPROVED BY DFG ON 22/1/98)

These guidelines are given in their entirety, as posted on the CERES server at <http://ceres.ca.gov/CRA/NCCP/doc.htm>. Section numbering has been changed to conform to this Manual.

3.1 INTRODUCTION

A. What is an NCCP? A Natural Community Conservation Plan (NCCP or "plan") is a plan for the conservation of natural communities that takes an ecosystem approach and encourages cooperation between private and government interests. The plan identifies and provides for the regional or areawide protection and perpetuation of plants, animals, and their habitats, while allowing compatible land use and economic activity. An NCCP seeks to anticipate and prevent the controversies caused by species' listings by focusing on the long-term stability of natural communities.

B. Legal Authority. NCCPs are authorized by the NCCP Act of 1991, codified as Chapter 10 of Division 3 of the California Fish and Game Code (2800 et. seq.). Approved NCCPs provide the basis for issuance of state authorizations for the take of species specifically identified in the plan, whether or not a species is listed as threatened or endangered, and may provide the basis for issuance of federal endangered species permits.

An NCCP will be approved by the Department for implementation upon meeting the statutory standards for natural community conservation (Fish and Game Code 2820 et. seq.) and other applicable laws and regulations. It is important to note that the NCCP process must ensure consistency with the federal and state Endangered Species Acts.

C. Purpose of the Guidelines. These guidelines, adopted pursuant to 2825 of the Fish and Game Code for the general application of the NCCP Act, are designed to help planners provide for regional protection and perpetuation of biological diversity, meet NCCP regulatory requirements and to allow for flexibility in plan development. Further guidelines may be adopted in the future for the application of the NCCP Act to specific ecosystems or regions of the state.

3.2 CHARACTERISTICS OF AN NCCP

An NCCP is defined by the following characteristics and these combined characteristics may distinguish an NCCP from other types of conservation planning efforts.

A. Scope. The scope of the plan is regional or area wide (Fish and Game Code 2805). Within the planning region, effective NCCP "subregional planning units" may be delineated to reflect both biological and administrative boundaries. An NCCP is based on a scientific and procedural framework that can effectively address cumulative impact concerns and integrate them with multi-jurisdictional or subregional planning efforts.

B. Ecosystem Conservation. The plan promotes wildlife diversity through conservation of habitat on an ecosystem level. "Wildlife" means and includes all wild animals, birds, plants, fish, amphibians, and related ecological communities, including the habitat upon which wildlife depend for their continued viability (Fish and Game Code 711.2).

C. Science. The plan provides a conservation strategy that is based on recognized principles of conservation biology, as well as the best available scientific information about species and habitats.

D. Coordination. The plan promotes coordination and cooperation among public agencies, landowners, other private interests, and members of the public, and includes a mechanism by which private interests can participate in the planning process.

E. Economic Activity. The plan allows compatible economic activity including resource utilization and development.

3.3 COMPONENTS OF AN NCCP.

A. Planning Agreement

1. The Department of Fish and Game (Department) may enter into agreements with any person for the purpose of preparing and implementing an NCCP. A planning agreement identifies the scope of the plan to be prepared and the participating parties. More specifically, the planning agreement:

- a. shall be entered into by, and binding upon, all parties, including, but not limited to, the department, other participating federal, state, or local agencies, and participating private landowners;
- b. shall identify those natural communities, and the endangered, threatened, proposed, candidate, or other species known, or reasonably expected to be found in those communities, which will be the focus of the plan;
- c. should establish a process for the identification of target species, which may include listed species, and which shall collectively serve as indicators of the natural communities which are the focus of the plan;
- d. shall establish a process for the collection of data, information, and independent input necessary to meet scientifically sound principles for the conservation of species coverage in the plan;
- e. shall establish a process for public participation throughout plan development and review;
- f. should establish an interim process (during plan development) for project review, by wherein projects which potentially conflict with goals of the plan are discussed with the Department prior to formal processing by the jurisdiction.
- g. shall provide that draft documents associated with a natural community conservation plan shall be available for public review and comment for at least 45 days prior to adoption. The review period specified in this paragraph may run concurrent with the review period provided for the California Environmental Quality Act (CEQA) document associated with the natural community conservation plan, however, nothing in this paragraph limits the discretion of a city or county to revise any draft documents at a public hearing.

2. The Department may also enter into a Memorandum of Understanding (MOU) with the appropriate federal and state agencies to set up a joint program by which state and federal participation in the development and implementation of one or more NCCPs may be coordinated. Pursuant to 2095 of the Fish and Game Code, the Department encourages consistent and compatible findings between state and federal agencies on biological opinions.

B. Planning Document.

The plan should be tailored to meet the resource needs of a particular region or subregion. The plan must specify a strategy for achieving the required objectives of natural community conservation and compatible land use and economic activity. The strategy might include such techniques as reserve assembly or watershed management. Planning considerations and key plan elements should include, but are not limited to, the following:

1. Planning Considerations

- a. Research. Take into account, and coordinate with, ongoing scientific research that will be helpful in future management adaptations.
- b. Agricultural Land Protection. Consider the impact of the plan on the use of existing agricultural lands and on conversion of agricultural land to non-agricultural purposes. The conservation value of the types of agriculture in the plan area should be recognized in the plan. NCCPs should distinguish between areas that are intended to remain in agriculture in perpetuity, areas expected to be converted to urban development, and areas to be restored to a natural state when current commitments have expired. An NCCP may be developed in connection with, or to aid in, an agricultural program created under Article 3.5 of Chapter 1.5 of the Fish and Game Code.

c. Aquatic Ecosystem Responsibilities. Consider methods by which the Department's responsibilities under Chapter 6 of Division 2 of the Fish and Game Code (1600 et. seq.) can be integrated with future NCCP planning processes and with the responsibilities of various federal agencies for regulation of waterways and wetlands.

2. Key Plan Elements

a. Scope. Describe the natural communities and geographic area of the plan. Also identify the conservation goals for the plan area.

b. Covered Species. Identify those species to be conserved and managed within the plan area and may therefore be authorized for taking pursuant to Section 2835 and summarize how the ecological needs of those species are met by the plan.

c. Anticipated Activities. Describe the activities or categories of activities anticipated to be authorized by plan participants, which will result in the taking of species pursuant to Section 2835 within the plan area. Activities shall be described in sufficient detail to allow the department to evaluate the impact of such activities on the ecosystems, natural communities, and species identified in the plan. The combined effect of these activities must not negate the conservation benefits of the plan for any covered species.

d. Principles of Conservation Biology. Delineate the scientifically sound principles of conservation biology used in formulating those provisions of the plan to protect, restore, or enhance the ecosystems, natural communities and habitat types within the plan area. Demonstrate accepted principles of conservation biology for species covered have been used in formulating the plan.

e. Conservation Strategy

+ Conservation Measures. Identify those actions to be undertaken to protect, restore or enhance the natural communities within the plan area.

+ Compatible Uses. Identify appropriate activities, and any restrictions on activities, within the conserved areas.

+ Schedule. Set forth a schedule for the implementation of conservation measures.

+ Measurable Goals. Set forth objective, measurable goals to ensure that the conservation measures identified in the plan are carried out in accordance with the schedule and goals set forth in the plan.

f. Monitoring. The plan must include a monitoring program that provides periodic evaluations of monitoring results and other new information to be used to:

+ evaluate compliance with plan implementation mechanisms;

+ evaluate biological performance of the plan; and

+ determine whether management objectives remain appropriate and whether new or different techniques could be utilized to better achieve management goals.

g. Adaptive Management. Each plan will develop a management plan which will provide for adaptive management. The plan will provide for the implementation of an adaptive management program which establishes a flexible, iterative approach to long-term management of natural communities, habitat types, and species within the plan area. Management will be refined and improved over time based upon the results of ongoing monitoring activities and other relevant information. Elements of a management plan subject to adaptive management may include, but are not limited to, habitat management and enhancement, fire management, management of human impacts, and exotic species control.

h. Funding. Set forth an adequate funding source or sources to ensure that the conservation actions identified in the plan are carried out in accordance with the schedule and goals set forth in the plan.

i. Assurances. An NCCP may include, in both the plan and in a separate implementing agreement, assurances that provide for the long-term reconciliation of new land development in the planning area and the conservation and protection of endangered species. Departmental assurances will be determined for individual plans according to the level of conservation each plan affords. If warranted, the Department will provide its assurance that the NCCP provides measures sufficient to conserve the species addressed in the plan and that no further land dedications, land use restrictions, water use commitments, or financial compensation will be required by the Department of plan participants, except in defined extraordinary circumstances.

C. Implementation Agreement.

NCCP participants commit to implementing the NCCP by preparing and signing an Implementation Agreement. The Implementation Agreement:

- defines the obligations of the signatories and other parties;
- provides legally binding and enforceable assurances that the plan will be implemented and adequately funded; and
- provides a process for amendment of the plan.

The Implementation Agreement may provide that a separate management plan or plans will be adopted in the future or at periodic intervals provided that the management plan(s) meets criteria set forth in the NCCP. Where appropriate, the Department may require additional memoranda of understanding that the Department believes would assist in the implementation of the plan.

D. Take Authorization

1. Section 2835. Section 2835 of the Fish and Game Code allows the Department to authorize incidental take in an NCCP. Take may be authorized for any identified species whose conservation and management is provided for in the plan, whether or not the species is listed as threatened or endangered under the federal or state Endangered Species Acts.

a. Identified species that are not listed shall be treated as if listed pursuant to the California Endangered Species Act (CESA) either by addressing the species themselves or by addressing species whose habitat and survival needs are demonstrably similar to those of the identified species.

b. Within the area subject to the plan, should demonstrate that it contributes to the recovery of listed species authorized for take.

2. Section 2081 Compliance. To ensure compliance with CESA, authorization for taking of species identified in the plan shall also meet the following conditions required by 2081(b) of the Fish and Game Code:

a. The taking is incidental to an otherwise lawful activity.

b. The impacts of the authorized take shall be minimized and fully mitigated. Impacts of taking include all impacts on the identified species that result from any act that would cause the proposed taking.

+ The measures required to meet this obligation shall be roughly proportional in extent to the impact of the authorized taking on the species.

+ Where various measures are available to meet this obligation, the measures required shall maintain the applicant's objectives to the greatest extent possible.

+ All required measures shall be capable of successful implementation.

c. The authorization is consistent with any regulations adopted pursuant to Sections 2112 and 2114 of the Fish and Game Code (Recovery Strategies).

d. The applicant shall ensure adequate funding to implement the measures required and for monitoring with, and effectiveness of, those measures.

E. Environmental Documentation.

NCCPs shall provide for appropriate compliance with CEQA as required by 2825(b) of the Fish and Game Code and, to the extent applicable, with the National Environmental Policy Act (NEPA). The CEQA document for the plan shall include a specific mitigation and implementation monitoring program, consistent with the requirements of Division 13 (commencing with Section 21000) of the Public Resources Code. Ordinarily, the Department will act as a CEQA responsible agency for the purpose of approving an NCCP. In certain circumstances, the Department may act as a CEQA lead agency. In either case, CEQA review of NCCPs must be coordinated with the Department.

3.4 RELATIONSHIP TO OTHER GUIDELINES

A. Coastal Sage Scrub Guidelines. The Department has previously adopted both process guidelines and conservation guidelines for the Southern California Coastal Sage Scrub (CSS) NCCP pilot project. Those guidelines remain in effect. NCCPs within the CSS planning region, that incorporate CSS habitat, will comply with those guidelines.

B. Further Guidelines. Further guidelines may be adopted in the future for specific plans being developed under the NCCP Act or for the application of the NCCP Act to specific ecosystems or regions of the state. Such guidelines will be consistent with these general guidelines. Such guidelines will be circulated for appropriate public review before their adoption by the Department.

3.5 ADOPTION AND EFFECTIVE DATE

These guidelines are adopted by the Department of Fish and Game this 22nd day of January, 1998. These guidelines are effective immediately and apply to all NCCPs hereafter approved by the Department.

CHAPTER 4: THE ROLE OF ESA AND CESA IN HCP-NCCP PROCESS

4.1 FUNDAMENTAL WEAKNESS OF HCP-NCCP IN SPECIES PROTECTION

ESA has a critical role in the HCP-NCCP process, as it really provides the only "stick" to bring landowners to the table, who are then offered a "carrot" in terms of the one-time settlement of endangered species issues for their lands following participation. To quote NRDC on this issue [Natural Resources Defense Council. May 1997]:

"The NCCP, standing alone, provides no protection for ecosystems or species; it merely authorizes a collaborative, voluntary process to provide some protection through agreements among regulatory agencies, landowners, and local governments. To bring developers to the table, a strong incentive is indispensable; recent attempts by legislators to weaken the Federal Endangered Species Act threaten to weaken the NCCP. For example, in the last Congress, even the so-called "moderate" reform proposal (H.R. 2375) would have diluted the Act with cost-benefit language that might well have kept the gnatcatcher, with its penchant for pricey real estate, off the threatened species list. And without the listing, the NCCP would have continued to languish. During the program's first two years, landowners enrolled little of their property and land "conversions" continued unabated; it took the gnatcatcher listing in 1993 to turn matters around. One cannot overemphasize that without the Endangered Species Act and the supervisory authority of the Fish and Wildlife Service, the NCCP would surely fail."

Without HCPs and NCCPs there still remains some species and habitat protection through ESA and CESA, but without ESA and CESA it is unlikely that there would be an NCCP or HCP process.

The land use changes developed in an HCP or NCCP cannot violate other laws. Developers have maintained that HCPs and NCCPs provide sufficient protection of species and that other laws can be set aside or modified. There have been suggestions to change the California Environmental Quality Act, the Federal Water Pollution Control Act, and the Migratory Bird Treaty Act.

CNPS should strongly resist any attempt to weaken existing environmental laws on the basis that there is sufficient protection in the HCP-NCCP process. The process is guided by those laws, and would be weakened or even useless without them.

4.2 LEGAL DECISIONS ON SPECIES PROTECTION UNDER ESA THAT SHOULD LIMIT ACTIONS UNDER AN HCP

Scale of Plan and Precision of Defined Mitigation and Actions

In recent comment on the proposed HCP for the Bay-Delta Program (known as CALFED), Earthjustice Legal Defense Fund (ELDF) notes that the protection and restoration of threatened and endangered species is a "highest priority" of ESA (*Tennessee Valley Authority v. Hill*, 437 U.S. 153, 194 (1978)), and agency implementation must be based on the "best scientific and commercial data available." 16 U.S.C. §§ 1533(b)(1)(A), 1536(c)(1). Reviewing courts do not assume the agency implementation of adequate science, but insist that agencies "set forth clearly the grounds" on which they acted. (*Northern Spotted Owl v. Hodel*, 716 F.Supp. 479, 482 (W.D.Wash. 1989); *Fund for Animals v. Babbitt*, 903 F.Supp. 96, 105 (D.D.C. 1995).

Thus any incidental take permit issued under Section 10 of ESA must show that the requisite conservation plan specifies:

- "the impact which will likely result from such taking," and
- "steps the applicant will take to minimize and mitigate such impacts, and the funding that will be available to implement such steps", and
- "what alternative actions to such taking the applicant considered and the reasons why such alternatives are not being utilized", and
- "such other measures that the Secretary may require as being necessary or appropriate for purposes of the plan". 16 U.S.C. § 1539(a)(2)(A)

An HCP cannot be approved unless the:

- "the taking will be incidental", and
- "the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such takings", and
- "the applicant will ensure that adequate funding of the plan will be provided", and
- "the taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild", and
- any additional measures required by the Secretary "will be met". 16 U.S.C. § 1539(a)(2)(B); 50 C.F.R. § 17.22(b)(1)

Designation of Critical Habitat

In the case of the southwestern willow flycatcher (*Empidonax traillii extimus*), Southwest Center for Biodiversity required FWS to define critical habitat. In the notice of Designation of Critical Habitat (50 CFR Part 17 RIN 1018-AB97), the intersection of the areas of critical habitat and the conservation areas of the San Diego MSCP was discussed, but it was noted that the designation process was rushed and that more critical habitat might be defined later.

In the case of coastal California gnatcatcher, 9th Circuit overturned a lower court's failure to designate critical habitat for the bird. This has been one of the most important routes by which lands have been conserved within four large NCCP projects in southern California, and has provided the mechanism for the conservation of a plant community at a regional spatial scale.

In 1998 and 1999 numerous suits were filed against FWS regarding critical habitat designation. In reaction, FWS published a Notice of Intent To Clarify the Role of Critical Habitat in Endangered Species Conservation (Federal Register, June 14, 1999 (Volume 64, No. 113, Page 31871-31874)). FWS main point is that the process of designation is costly in FWS resources, quoting from a 1995 National Research Council research committee finding that "...because of public concern over economic consequences, the designation of critical habitat is often controversial and arduous, delaying or preventing the protection it was intended to afford" (National Research Committee 1995). FWS also claims that protection afforded a species that has designated critical habitat through the adverse modification standard is equivalent to the jeopardy standard for species without designated habitat. To simplify but not eliminate the designation process, FWS is suggesting that "multispecies/geographic species groupings to reduce or eliminate administrative redundancy should be more common". CNPS notes with some dismay that this approach was used in the Plum Creek Timber HCP, which "covered" 285 species over 68,000 hectares, but split the species into only nine "habitat types" for which there was no scientific agreement concerning validity. Of particular concern to CNPS is that critical habitat for animals will drive the process in multiple species HCPs, with plant species habitat requirements being forced into uncomfortable fits with those designed for the animals.

4.3 SIX SUPREME COURT DECISIONS ON REGULATORY TAKINGS

The regulatory protection of land and limitation of land use for conservation purposes is considered a regulatory 'taking', and the amount of allowable 'taking' is defined in several Supreme Court decisions. Noss and others (1997) consider the following cases. In *Keystone Bituminous Coal Association v. De Benedictis* 480 U.S. 470 (1987), the court ruled that land use regulation that restricts use is allowable provided some economic use of the land is possible, and the 'taking' advances a legitimate state interest. However a limit on the amount of 'taking' was set in *First Evangelical Lutheran Church of Glendale v. City of Los Angeles* 482 U.S. 304 (1987), in which the church was awarded damages for 'takings' that went too far. In the case of *Nollan v. California Coastal Commission* 483 U.S. 825 (1987), the court rules that a nexus must exist between a required mitigation and the impacts of the project. In *Lucas v. South Carolina Coastal Commission* 112 S. Ct. 2886 (1992), the court rules that if regulation removes all possibilities of economic or productive use of the land, then the 'taking' is excessive, unless it took place under a state mandated nuisance law. Unfortunately, in combination with the *Keystone Bituminous Coal Association* decision, the court has not defined the level of economic return that would allow or prevent 'taking'. In *Dolan v. City of Tigard* (1994) the findings in the *Nollan* case were better defined as to the degree of connection needed to establish a nexus between mitigation and project impact. This may require a 'taking' under ESA to prove that a particular action will have an effect on the species under consideration, which could be difficult in view of the uncertainty in the scientific process. The consideration of habitat conservation, by definition so critical to the HCP process, has been protested by those that wished to limit the use of ESA to the actual 'taking' of the species. The court, in

Babbitt v. Sweet Home Chapter of Communities for a Greater Oregon 115 S.Ct. (1995), upheld that 'take' of habitat constituted "harm" to protected species by "significantly impairing essential behaviour patterns".

4.4 APPARENT VIOLATIONS OF ESA PROTECTION UNDER HCP-NCCP

Plan Scale and Certainty Issues regarding No Surprises and Project Design.(CALFED)

In the case of the proposed CALFED Bay-Delta Program HCP/NCCP, three alternative project designs involving dredging, pumping operations, channel widening, and new water conveyance facilities are under consideration. The scientific information base is not site specific in many particulars, and the HCP/NCCP expresses protection in terms of intent without discussion of specific actions that should be required under the scientific requirements needed for a Section 10 take permit. Earthjustice Legal Defense Fund (ELDF) maintains that the requirements of 16 U.S.C. § 1539(a)(2)(B) have not been met, and there is a mismatch in scale between the extremely large areas proposed for coverage under CALFED, and the detailed knowledge needed to implement projects at the local scale. ELDF note that the level of uncertainty generated by the compounded actions covered under the permit produce "political and economic uncertainties regarding the efficacy of the specific implementation and mitigation measures under review."

ELDF in comments on the CALFED "No Surprises" policy states:

"Your proposed "no surprises" policy against increased water export restrictions regardless of the plight of the species ostensibly protected by the HCP/NCCP poses a fundamental conflict with the objectives of the federal and state Endangered Species Acts. Congress did not intend, by its adoption of the HCP mechanism in 1982, to depart from its primary focus on sound science and effective species preservation. To the contrary, Congress made clear its intent that long-term HCPs "will contain a procedure" to address "unforeseen circumstances." H.R. Rep. 97-835, 97th Cong., 2nd Sess. 31-32 (1982), U.S. Code & Admin. News 1982, pp. 2807, 2872-73. For this reason, the governing regulations require that HCP applicants must "insure that adequate funding for ...procedures to deal with unforeseen circumstances will be provided." 50 C.F.R. § 17.22(b)(2). Because your HCP would prohibit "additional land, funds or restrictions" to protect listed species "in the event of unforeseen circumstances affecting those species", it conflicts fundamentally with ESA itself." (Letter from Stephan Volker (ELDF) to Lester Snow 10/20/97 in comment to proposed HCP and NCCP).

Arbitrary and Capricious Biological Opinion in Section 7 Consultation (Leading to Issuance of Section 10 Permits)

In the case of Otay tarplant (*Hemizonia congugens*) the FWS failed to publish a final regulation on the listing status of the plant under ESA within one year. FWS made an arbitrary and capricious decision that "take" impact under the San Diego MSCP was judged on point localities of plant populations rather than the number of individuals to be lost, thus misrepresenting the level of jeopardy, and improperly issuing a "take" permit under Section 10 of ESA. The MSCP does not address the recovery of the species (see Violation of Section 4(f) below), and violates the intent of ESA and CESA. Both apply in this case, as the plant is state-listed as Endangered, and therefore is afforded protection on private lands by ESA. The failure to find reasonable and prudent alternatives to minimize or eliminate the project's impacts is a violation of ESA (16 U.S.C. § 1536(b)(3)(A); 50 C.F.R. § 402.14(h)). (source: 60-Day Notice of Intent to Sue for Violations of the U.S. Endangered Species Act, Environmental Law Center on behalf of CNPS, 10/8/97).

It appears that the poor science and record of action applied by the FWS was deliberate, and was intended to facilitate the the MSCP, which in its present and apparently final form cannot adequately protect Otay tarplant.

In a similar issue, the Southwest Center for Biological Diversity and Earthlaw filed a 60-day notice against FWS, Bruce Babbitt, and the Mayor of the City of San Diego on 9/2/97. The case address 10 wetland species "covered" by MSCP with Section 10 permits. Two Section 7 issues were raised:

- One is similar to the Otay tarplant issue in regard to a violation of Section 7(a)(2) requirement that "each federal agency shall...insure that any action authorized, funded, or carried out by such agency...is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary.... to be critical".

- The other issue is based on violation of Section 7(a)(1) on the basis of insufficient "review (of) other programs administered by him (Babbitt) and utilize (of) such programs in furtherance of the purposes of this chapter" 16. U.S.C. § 1536 (a)(1); in this case the Migratory Bird Treaty Act.

The Alabama Beach Mouse Decision

The Federal District Court for the Southern District of Alabama has issued an opinion invalidating the Incidental Take Permits (ITPs) for two coastal HCPs. (Sierra Club v. Babbitt, No. 97-0691-CB-C (S.D. Ala. Aug. 4, 1998)). The lawsuit challenged the U.S. Fish and Wildlife Service's decision to steamroll over the pleas of its biologists and allow resort and condominium development smack in the middle of endangered species habitat on the fragile dunes along Alabama's Gulf Coast. The court rules that the HCPs were "devoid of science". The HCPs would have continued to allow take of an already severely depleted habitat, the "mitigation" being that they would not take all of the habitat. The HCPs violated the mitigation requirements of Section 10, and clearly placed the mouse in jeopardy.

The North Natomas Basin HCP suit

An active law suit (1999) is filed by a group of environmental organizations, including National Wildlife Federation, Mountain Lion Foundation, Planning and Conservation League, and the Sierra Club against FWS, claiming it has violated the ESA with respect to 26 animal and plant species by issuing an incidental take permit. Before issuing an ITP, FWS must ensure that the ITP application and the associated HCP satisfy the approval criteria of Section 10. See 16 U.S.C. § 1539 (a)(2).³ Specifically the suit claims that FWS does not know if critical habitat parcels will or will not be protected, but has issued an ITP, the HCP exempts agricultural uses (rice farming) from performing mitigation against take, the habitat mitigation ratios of loss: mitigation is 2:1, much of which is out of the basin and therefore allows most of the habitat within the area of the HCP to be destroyed, the HCP has not secured funding, the HCP considers largely voluntary measures to minimize takings to be a mitigation, and FWS has failed to act on 'take' violations that have already taken place.

Violations of Section 9(a) prohibition of "take" if Section 7 Findings are Flawed .

If Section 7 findings are flawed, the issuance of Section 10 permits cannot be justified, and the only allowable "take" would be defined under Section 9(a) of ESA. "Take" for the facilitation of development is not allowable under Section 9(a).

Section 9's Specific Protection of Plants and Lack of Exemption under Section (10)

Southwest Center's 60-Day Notice, mentioned above, notes that Section 9(a)(2)(B) prohibits certain actions in the taking of plants and prohibits removing or damaging plants in violation of state law. The Section 10(a)(1)(B) allowance of "take" applies to fish and wildlife species and not to plants, and the exceptions under Section 7(o)(2) also do not apply to plants. One suspects that this "hole" that could sink the HCP process will not remain unplugged for long, but Southwest Center has challenged the statutory authority of FWS in view of the fact that the plants were also protected under Section 404 of the Clean Water Act.

Violation of Section 4(f)

In the Otay tarplant case, and in several others being litigated by Southwest Center in regard to the San Diego MSCP, it is charged that FWS has failed to develop recovery plans for listed species in a timely manner (required under Section 4(f)).

4.5 IS ESA SO ECONOMICALLY DISRUPTIVE THAT WE NEED HCP'S?

One of the most frequently heard justifications of the HCP process is that ESA was too restrictive and had a disruptive effect on the economy. Between 1987 and 1995, 195,000 Federal Activities were reviewed for potential Section 7 consultation, 5,594 were determined to affect listed species and triggered consultation, and 607 resulted in jeopardy opinions. Only 100 projects were stopped, 87 of which were timber sales in the Pacific Northwest (Jost 1996). These figures can be interpreted in different ways. It would appear that ESA, in stopping 13 non-timber projects in 8 years, was not a significant impact on the economy, but it may also be seen as evidence of failure of the Section 7 consultation process, in which too many projects are approved that will have a detrimental effect on species. Similarly, the actual listing of a species is frequently delayed long after FWS biologists have finished their

analyses. The median total population of a plant taxa at the time of listing is 119.5 individuals (Wilcove and others, 1993). The insertion of politics and economics into the Section 7 process may be revealed through analysis of species recovery plans developed through the process. About 28-37 percent of threatened and endangered species are being "managed to extinction", and many recovery plans set species population goals at levels lower than populations existing at the time of listing. (Tear and others, 1993). It is important to balance both the failings and the advantages when comparing species protection under ESA and species protection under an HCP

CHAPTER 5: UNDERSTANDING NEPA AND CEQA

5.1 WHEN AND WHY NEPA AND CEQA ARE USED

An HCP that allows "take" of an endangered species requires a permit to be issued, and the permit is subject to evaluation of the project under the National Environmental Protection Act (NEPA) if ESA is involved, the project is on Federal lands, or if the project receives Federal funding. The California Environmental Quality Act (CEQA) applies to actions on private or state lands in California, and is California's implementation of NEPA. NEPA analysis may not be triggered when the project "takes" a Federally listed plant on non-Federal lands, although "take" of a listed animal will nearly always start the process. If a Federal or Federally funded program "takes" a plant listed by the state or protected by any other law of the state, the NEPA process will be also be initiated. In cases where the NEPA and CEQA processes are both triggered, a common document suiting the needs of both processes may be produced.

5.2 THE STEPS IN NEPA AND CEQA ANALYSIS

5.2.1 NEPA

The NEPA analysis for an HCP or NCCP probably affords the best avenue for introducing CNPS concerns. The NEPA process involves:

- (1) Project Definition and Selection of Lead Agency. In the case of an HCP, the HCP take permits and configuration of land use under the proposed HCP, together with alternative land uses and a no-HCP alternative would be compared and evaluated.
- (2) Environmental determination regarding categorical exemptions and development of an EA or an EIS. This is followed by the decision through an EA to either develop an EIS or declare a FONSI (Finding Of No Significant Impact)

If an EIS is to be developed there is (3) Scoping, (4) Selection of Contractor for the EIS, if it is not to be prepared by Lead Agency. (5) Preparation of the Draft EIS (6) Acceptance of Public Comment on the Draft EIS (7) Preparation of Final EIS, responding to comments on Draft EIS (8) Acceptance of Public Comment on Final EIS and (9) Certification and Approval.

5.2.2 CEQA

In the CEQA process there is a similar path to that of NEPA. The Lead Agency will make a preliminary determination of impact, and may either declare as a Negative Declaration that the project has no significant environmental impact, declare a Mitigated Negative Declaration after consultation between the applicant and Lead Agency has achieved the required mitigation, or ask that an EIR be completed. There follows Scoping, when CNPS can respond to the Notice of Project (NOP), Selection of a Contractor, Preparation of a Draft EIR, Acceptance of Public Comment on the Draft EIR, preparation of a Final EIR responding to comments on the Draft EIR, publication of the Final EIR, and the acceptance of comments by the Lead Agency on that final document.

5.3 LEAD AGENCY SELECTION

In complex HCP's and NCCPs involving several jurisdictions or subarea plans, there may be a number of potential Lead Agencies, with different attitudes toward conservation.

5.4 CATEGORICAL EXEMPTIONS

Each Lead Agency has a series of categorical exemptions to NEPA and CEQA that have been granted by Congress, or by Article 19, Sections 15300 - 15329 of CEQA Guidelines. NEPANet on the Web maintains a list of NEPA exemptions for different Lead Agencies, and can be reached from the CNPS Links web page [<http://ceq.eh.doe.gov/nepa/nepanet.htm>]. Thus certain actions that would take a species within a project may not require a Section 10 take permit, and may be exempt from any management provisions of the HCP-NCCP process.

5.5 ENVIRONMENTAL ASSESSMENT IN NEPA: FONSI OR EIS?

The President's Council on Environmental Quality (CEQ) states:

"The National Environmental Policy Act and the CEQ regulations are concerned primarily with those "major Federal actions significantly affecting the quality of the human environment" (42 U.S.C. 4332). Accordingly, agency procedures, resources, and efforts should focus on determining whether the proposed Federal action is a major Federal action significantly affecting the quality of the human environment. If the answer to this question is yes, an environmental impact statement must be prepared. If there is insufficient information to answer the question, an environmental assessment is needed to assist the agency in determining if the environmental impacts are significant and require an EIS. If the assessment shows that the impacts are not significant, the agency must prepare a finding of no significant impact (FONSI). Further stages of this Federal action may be excluded from requirements to prepare NEPA documents." [NEPA's 40 Most Asked Questions "<http://ceq.eh.doe.gov/nepa/regs/40/40p3.htm>"]

5.6 PUBLIC AVAILABILITY OF EA'S V. FONSI'S.

The document cited above states:

"Section 1506.6 requires agencies to involve the public in implementing their NEPA procedures, and this includes public involvement in the preparation of EAs and FONSI's. These are public "environmental documents" under Section 1506.6(b), and, therefore, agencies must give public notice of their availability. A combination of methods may be used to give notice, and the methods should be tailored to the needs of particular cases. Thus, a Federal Register notice of availability of the documents, coupled with notices in national publications and mailed to interested national groups might be appropriate for proposals that are national in scope. Local newspaper notices may be more appropriate for regional or site-specific proposals. **The objective, however, is to notify all interested or affected parties. If this is not being achieved, then the methods should be reevaluated and changed. Repeated failure to reach the interested or affected public would be interpreted as a violation of the regulations.**" [NEPA's 40 Most Asked Questions "<http://ceq.eh.doe.gov/nepa/regs/40/40p3.htm>"]

5.7 FONSI'S AND LOW-IMPACT HCP'S

A Finding of No Significant Impact (FONSI) may be the result of poor analysis in a fast-tracked Low-Impact HCP. The FONSI is a document in which the agency briefly explains the reasons why an action will not have a significant effect. The finding itself need not be detailed, but must succinctly state the reasons for deciding that the action will have no significant environmental effects, and, if relevant, must show which factors were weighted most heavily in the determination. In addition to this statement, the FONSI must include, summarize, or attach and incorporate by reference, the environmental assessment. Public review of a FONSI is necessary, for example, (a) if the proposal is a borderline case, i.e., when there is a reasonable argument for preparation of an EIS; (b) if it is an unusual case, a new kind of action, or a precedent setting case such as a first intrusion of even a minor development into a pristine area; (c) when there is either scientific or public controversy over the proposal; or (d) when it involves a proposal which is or is closely similar to one which normally requires preparation of an EIS.

CNPS should explore the above requirements to determine if the issuance of a FONSI is justified. This appeal is usually reviewed within the Lead Agency, and frequently denied, but the reasons for denial must be explicit and thus may open the decision to legal challenge.

5.8 MITIGATION MEASURES IMPOSED IN EA'S AND FONSI'S

In cases where an environmental assessment is the appropriate environmental document, there still may be mitigation measures or alternatives that would be desirable to consider and adopt even though the impacts of the proposal will not be "significant." In such cases, the EA should include a discussion of these measures or alternatives to "assist [46 FR 18038] agency planning and decision making" and to "aid an agency's compliance with [NEPA] when no environmental impact statement is necessary." (Section 1501.3(b), 1508.9(a)(2)). The appropriate mitigation measures can be imposed as enforceable permit conditions, or adopted as part of the agency final decision in the same manner mitigation measures are adopted in the formal Record of Decision that is required in EIS cases.

If an environmental assessment indicates that the environmental effects of a proposal are significant but that, with mitigation, those effects may be reduced to less than significant levels, the agency may make a finding of no significant impact rather than prepare an EIS. CEQ does not recommended this action, but notes that there are some differences in interpretation of court actions.

CEQ states that mitigation measures may be relied upon to make a finding of no significant impact only if they are imposed by statute or regulation, or submitted by an applicant or agency as part of the original proposal. As a general rule, the regulations contemplate that agencies should use a broad approach in defining significance and should not rely on the possibility of mitigation as an excuse to avoid the EIS requirement. (NEPA Sections 1508.8, 1508.27.)

[NEPA's 40 Most Asked Questions "<http://ceq.eh.doe.gov/nepa/regs/40/40p3.htm>"]

If a proposal appears to have adverse effects which would be significant, and certain mitigation measures are then developed during the scoping or EA stages, the existence of such possible mitigation does not obviate the need for an EIS. Therefore, if scoping or the EA identifies certain mitigation possibilities without altering the nature of the overall proposal itself, the agency should continue the EIS process and submit the proposal, and the potential mitigation, for public and agency review and comment. This is essential to ensure that the final decision is based on all the relevant factors and that the full NEPA process will result in enforceable mitigation measures through the Record of Decision.

In some instances, where the proposal itself so integrates mitigation from the beginning that it is impossible to define the proposal without including the mitigation, the agency may then rely on the mitigation measures in determining that the overall effects would not be significant .

Similarly, scoping may result in a redefinition of the entire project, as a result of mitigation proposals. In that case, the agency may alter its previous decision to do an EIS, as long as the agency or applicant resubmits the entire proposal and the EA and FONSI are available for 30 days of review and comment. One example of this would be where the size and location of a proposed industrial park are changed to avoid affecting a nearby wetland area.

5.9 NEGATIVE DECLARATIONS, MITIGATED NEGATIVE DECLARATIONS, AND EIR'S UNDER CEQA

Just as the CEQA process provides an EIR as the equivalent of NEPA's EIS, there are equivalent "lesser" levels of environmental study. The equivalents of a FONSI and the EA are the Negative Declaration and the Mitigated Negative Declaration. Usually the take of an endangered species would void the use of a simple Negative Declaration, but if the mitigation is required to minimize a very small probability of take, the mitigated negative declaration might be used. **A draft Negative Declaration has a 21-30 day public review period, and the Declaration is adopted within 105 days after acceptance of the completed application. The Lead Agency must make a decision on the project within 180 days.**

5.10 EIS AND EIR SCOPING

The NEPA and CEQA scoping phase is probably one of the best places for CNPS concerns to be introduced for consideration. The process is similar for both the NEPA and CEQA processes, although the NEPA process stresses cumulative impact processes to a somewhat larger degree. The CEQ comments on scoping are also applicable to CEQA processes, and are given below [General Counsel Scoping Guidance, Executive Office of the President, 1997 "<http://ceq.eh.doe.gov/nepa/regs/scope/scoping.htm>"]. It is here that CNPS can establish a legal interest in the material to be covered, as items not covered in the final scoping may not be easily challenged later in the process. The elements of CNPS "good science" policy and other elements taken from Part 2 of this work should be used in framing the scoping input from CNPS.

CEQ states:

"The Council on Environmental Quality (CEQ) regulations direct Federal agencies which have made a decision to prepare an environmental impact statement to engage in a public scoping process. Public hearings or meetings, although often held, are not required; instead the manner in which public input will be sought is left to the discretion of the agency.

The purpose of this process is to determine the scope of the EIS so that preparation of the document can be effectively managed. Scoping is intended to ensure that problems are identified early and properly studied, that issues of little significance do not consume time and effort, that the draft EIS is thorough and balanced, and that delays occasioned by an inadequate draft EIS are avoided. The scoping process should identify the public and agency concerns; clearly define the environmental issues and alternatives to be examined in the EIS including the elimination of non significant issues; identify related issues which originate from separate legislation, regulation, or Executive Order (e.g. historic preservation or endangered species concerns); and identify state and local agency requirements which must be addressed. An effective scoping process can help reduce unnecessary paperwork and time delays in preparing and processing the EIS by clearly identifying all relevant procedural requirements.

The concept of lead agency (§1508.16) and cooperating agency (§1508.5) can be used effectively to help manage the scoping process and prepare the environmental impact statement. The lead agency should identify the potential cooperating agencies. It is incumbent upon the lead agency to identify any agency which may ultimately be involved in the proposed action, including any subsequent permitting [48 FR 34264]a actions. Once cooperating agencies have been identified they have specific responsibility under the NEPA regulations (40 CFR 1501.6). Among other things cooperating agencies have responsibilities to participate in the scoping process and to help identify issues which are germane to any subsequent action it must take on the proposed action. The ultimate goal of this combined agency effort is to produce an EIS which in addition to fulfilling the basic intent of NEPA, also encompasses to the maximum extent possible all the environmental and public involvement requirements of state and Federal laws, Executive Orders, and administrative policies of the involved agencies. Examples of these requirements include the Fish and Wildlife Coordination Act, the Clean Air Act, the Endangered Species Act, the National Historic Preservation Act, the Wild and Scenic Rivers Act, the Farmland Protection Policy Act, Executive Order 11990 (Protection of Wetlands), and Executive Order 11998 (Floodplain Management).

It is emphasized that cooperating agencies have the responsibility and obligation under the CEQ regulations to participate in the scoping process. Early involvement leads to early identification of significant issues, better decision making, and avoidance of possible legal challenges. Agencies with "jurisdiction by law" must accept designation as a cooperating agency if requested (40 CFR 1501.6).

One of the functions of scoping is to identify the public involvement/public hearing procedures of all appropriate state and Federal agencies that will ultimately act upon the proposed action. To the maximum extent possible, such procedures should be integrated into the EIS process so that joint public meetings and hearings can be conducted. Conducting joint meetings and hearings eliminates duplication and should significantly reduce the time and cost of processing an EIS and any subsequent approvals. The end result will be a more informed public cognizant of all facets of the proposed action.

It is important that the lead agency establish a process to properly manage scoping. In appropriate situations the lead agency should consider designating a project coordinator and forming an interagency project review team. The project coordinator would be the key person in monitoring time schedules and responding to any problems which may arise in both scoping and preparing the EIS. The project review team would be established early in scoping and maintained throughout the process of preparing the EIS. This review team would include state and local agency representatives. The review team would meet periodically to ensure that the EIS is complete, concise, and prepared in a timely manner.

A project review team has been used effectively on many projects. Some of the more important functions this review team can serve include: (1) A source of information, (2) a coordination mechanism, and (3) a professional review group. As an information source, the review team can identify all Federal, state, and local environmental requirements, agency public meeting and hearing procedures, concerned citizen groups, data needs and sources of existing information, and the significant issues and reasonable alternatives for detailed analysis, excluding the non-significant issues. As a coordination mechanism, the team can ensure the rapid distribution of appropriate information or environmental studies, and can reduce the time required for formal consultation on a number of issues (e.g., endangered species or historic preservation). As a professional review group the team can assist in establishing and monitoring a tight time schedule for preparing the EIS by identifying critical points in the process, discussing and recommending solutions to the lead agency as problems arise, advising whether a requested analysis or information item is relevant to the issues under consideration, and providing timely and substantive review comments on any preliminary reports or analyses that may be prepared during the process.

The presence of professionals from all scientific disciplines which have a significant role in the proposed action could greatly enhance the value of the team.

The Council (CEQ) recognizes that there may be some problems with the review team concept such as limited agency travel funds and the amount of work necessary to coordinate and prepare for the periodic team meetings. However, the potential benefits of the team concept are significant and the Council encourages agencies to consider utilizing interdisciplinary project review teams to aid in EIS preparation. A regularly scheduled meeting time and location should reduce coordination problems. In some instances, meetings can be arranged so that many projects are discussed at each session. The benefits of the concept are obvious: timely and effective preparation of the EIS, early identification and resolution of any problems which may arise, and elimination, or at least reduction of, the need for additional environmental studies subsequent to the approval of the EIS.

Since the key purpose of scoping is to identify the issues and alternatives for consideration, the scoping process should "end" once the issues and alternatives to be addressed in the EIS have been clearly identified. Normally this would occur during the final stages of preparing the draft EIS and before it is officially circulated for public and agency review.

The Council (CEQ) encourages the lead agency to notify the public of the results of the scoping process to ensure that all issues have been identified. The lead agency should document the results of the scoping process in its administrative record." [General Counsel Scoping Guidance, Executive Office of the President, 1997 "<http://ceq.eh.doe.gov/nepa/regs/scope/scoping.htm>"]

The NEPA regulations place a new and significant responsibility on agencies and the public alike during the scoping process to identify all significant issues and reasonable alternatives to be addressed in the EIS. Most significantly, the Council has found that scoping is an extremely valuable aid to better decision making. Thorough scoping may also have the effect of reducing the frequency with which proposed actions are challenged in court on the basis of an inadequate EIS. Through the techniques identified in this guidance, the lead agency will be able to document that an open public involvement process was conducted, that all reasonable alternatives were identified, that significant issues were identified and non-significant issues eliminated, and that the environmental public involvement requirements of all agencies were met, to the extent possible, in a single "one-stop" process. [General Counsel Scoping Guidance, Executive Office of the President, 1997 "<http://ceq.eh.doe.gov/nepa/regs/scope/scoping.htm>"]

5.11 CONTRACTOR SELECTION

CEQ states:

"Section 1506.5(c) of the NEPA regulations contains the basic rules for agencies which choose to have an environmental impact statement prepared by a contractor. That Section requires the lead or cooperating agency to select the contractor, to furnish guidance and to participate in the preparation of the environmental impact statement. The regulation requires contractors who are employed to prepare an environmental impact statement to sign a disclosure statement stating that they have no financial or other interest in the outcome of the project. The responsible Federal official must independently evaluate the statement prior to its approval and take responsibility for its scope and contents.

During the recent evaluation of comments regarding agency implementation of the NEPA process, the Council (CEQ) became aware of confusion and criticism about the provisions of Section 1506.5(c). It appears that a great deal of misunderstanding exists regarding the interpretation of the conflict of interest provision. There is also some feeling that the conflict of interest provision should be completely eliminated. This should be of concern to CNPS, who should be prepared to protest any suspicious actions in regard to conflict-of-interest" [General Counsel Scoping Guidance, Executive Office of the President, 1997 "<http://ceq.eh.doe.gov/nepa/regs/scope/scoping.htm>"]

In the CEQA process the contract for the EIR is frequently put out to bid by the Lead Agency, and rarely it is possible to be included in a Lead Agency advisory team to choose the contractor. Frequently the applicant has hired a similar company to produce the planned HCP or NCCP documents, in consultation with FWS and DFG, and there is a conflict of interest in their being allowed to produce the EIR that will evaluate their own work. This conflict of interest is apparently not recognized when a Lead Agency produces its own environmental documents to support an HCP-NCCP project for its own actions(see below).

5.12 COMBINING NEPA-CEQA ANALYSIS WITH HCP-NCCP ANALYSIS

CEQ regulations allow NEPA documents to be combined into a document titled "Proposed HCP and Environmental Assessment for the <HCP Document>". The apparent conflict of interest with FWS performing the Section 10 analysis and then commenting on its own actions under Section 7 analysis are compounded by having the same agency prepare the NEPA document. It is this last, however, that must take public comment as a matter of law, whereas the HCP need not seek such comment.

CEQA Analysis is less likely to be done in-house to the same degree, and will involve the Department of Fish and Game as well as Federal agencies. Combined NEPA-CEQA documents prove useful in large area HCP-NCCP projects such as the San Diego MSCP.

5.13 RULE 4(d)

In March 1993, the Federal government officially listed the California Gnatcatcher as a threatened species. This listing asserted Federal jurisdiction over the bird, its habitat, and activities that would harm either the bird or its habitat. The prohibitions and protections of the Federal ESA then were triggered. In December 1994, Secretary Babbitt announced the Department of Interior's adoption of Rule 4(d), which creates an exemption to ESA for Southern California landowners who have enrolled CESA-affected lands and are participating in the NCCP program. The exemption will permit participating landowners to develop certain CESA-affected lands without violating ESA so long as (1) they comply with the NCCP program's planning and conservation guidelines (which are incorporated into Rule 4 (d), and which currently restrict development to 5 percent of Southern California's CESA-affected lands), and (2) the program continues to meet with Federal approval. Developers who do not participate in the NCCP program are fully subject to ESA.

5.14 COMMENTS ON THE DRAFT EIS OR EIR, OR ON FINAL EA

The Draft EIS or EIR, or the Final EA may be the first time CNPS will get to view the project, and is probably the most critical place for review. **Here CNPS should look through the entire document, and review its contents with a view to the degree of plant species take, the probability of jeopardy, the rigor of the science used, and other factors that are listed elsewhere in this document. It is here, as well as in the scoping for the document, that CNPS would establish the grounds for future court challenge if the analysis and comments in the Final document are unresponsive or inaccurate. Here CNPS will establish interest and legal standing regarding all issues on which comment is made.**

5.15 COMMENT ON THE FINAL DOCUMENT

The Final EIR or Final EIS is published, and comments are then accepted by the Lead Agency. If the Agency decides that the Final document was responsive to comments on the Draft, then it will "certify" the document. Both the Final document and its certification can be challenged in court if, for example, they ignore major flaws in project design.

PART 2 SCIENTIFIC ISSUES AND PARTICIPATION IN THE PROCESS

CHAPTER 6: OPPORTUNITIES FOR CNPS TO COMMENT, INFLUENCE AND MODIFY THE PROCESS

6.1 INTRODUCTION

An HCP is developed by FWS personnel working with private parties or parties to develop the HCP document. This is a Section 10 consultation, with no guarantee of public input. While FWS "encourages" public participation, it is explicitly not required. The development of a large regional HCP usually will have some scoping meetings, but smaller HCPs and the newer Low-Effect HCPs are unlikely to seek public comment. Larger HCPs may also elect to have technical steering committees, although they are again not required and serve at the pleasure of the private parties developing the plans. Thus there may be "front door" opportunities to give input (Section 6.2 below), and there may also be "back door" (Section 6.3 below) opportunities that arise when CNPS can influence either the property owners, the FWS participants or local government outside the direct HCP process.

6.2 COMMITMENT OF TIME AND RESOURCES

Before getting involved in this process, a CNPS chapter or individuals should evaluate the amount of time that can be committed to the process. A small HCP may take no more time than any other project under CEQA, but a large area multiple species project may require months or years. If CNPS has gained representation on committees, it is critical that the seat be filled and that interaction with others at the table be as cordial as possible. Poor attendance, or other indications of lack of commitment may result in CNPS being by-passed in future projects, or its comments being disregarded as unimportant.

6.3 FRONT DOOR INTERVENTION

If possible have CNPS representatives on scoping committees, or participating in scoping meetings. Provide written comment at these meetings, with copies to local and regional government and other conservation organizations. Maintain good working relationships with DFG and FWS staff, and, if possible, with the landowners. Use the scoping checklist, and refer to Chapters 6-12 of this Manual. It is critical that, in making any dealings with committees, agencies, or other interests, CNPS should always stress the science, and NEVER "deal in personalities" or impugn the integrity or motives of the others in the process. This may be hard, and others in the process will not be so kind, but failure to follow this rule generally will not be productive.

If possible have CNPS represented on steering committees, or communicate scientific concerns and provide data to the committee members.

If an EA or EIS is being prepared under NEPA, provide written input to the scoping document that expresses CNPS concerns. Input should be specific as possible to the project, but should also reflect concerns regarding cumulative impacts and lack of knowledge on biological issues. A critique of the process or comments not relevant to plant issues will not be productive for CNPS purposes.

If an EA is being prepared, CNPS should be prepared to challenge a lead agency where a FONSI is not justified. If the FONSI is dependent on certain mitigations taking place, or in the case of a CEQA review a Negative Declaration or Mitigated Negative Declaration is issued, CNPS should be prepared to challenge on specific grounds. If a FONSI is challenged, the lead agency will review its own actions, and may agree with the challenger. In most cases the further pursuit of the issue will have to be through litigation.

If an EIS is developed under NEPA, or an EIR under CEQA, the next front door input will come with CNPS comments on the Draft EIS/EIR. These should be specific to issues and grounded in substantial data. Be alert for language that is ambiguous or which obscures issues. As a possible legal appeal may be in the non-responsiveness of the EIS/EIR Final

document regarding issues clearly of concern and pertinent to the conservation of species, the manner in which presentation of fact and the definition of missing information is critical. If apparent violations of the intent of the conservation-directed portions of both the project HCP-NCCP and the NEPA-CEQA review are evident, these should be spelled out in detail. Such issues as untried restoration practices defined as mitigation, poorly designed conservation set-asides and habitat linkage, and other like issues should be discussed. Discuss these concerns with other conservation organizations and individuals, so that CNPS concerns are restated and perhaps supported by others. In this way CNPS input is more likely to be judged important.

The last opportunity to react under the EIS/EIR process is comment on the Final EIS/EIR. If there are substantial issues unresolved in this document, a full evaluation should be supplied to the Lead Agency and to all of the individuals who would vote to certify the document. If a Lead Agency certifies a document that contains erroneous or inaccurate data, or bases its decisions on speculation rather than fact, it will be open to legal challenge. If CNPS sees in advance of certification that it would be prepared to sue, it should prepare the legal groundwork before the Lead Agency decision is final. It may be of advantage to notify the Lead Agency of the intent to sue if they approve a defective document, pointing out in detail the nature of the defects and the points of law upon which challenge may be made. This may cause the Lead Agency to "think twice" before giving certification.

CNPS should also be careful of any prior conditions that may be imposed as a condition of participation by the developer of an HCP, or by FWS involved in Section 10 consultation.

6.4 BACK DOOR INTERVENTION

In the event that CNPS has no opportunities for directly influencing the process:

Provide a CNPS "white paper" to the Lead Agency, with a large cc.-list, that would spell out all CNPS concerns. Make those concerns as widely known as possible.

Try to make direct contact with FWS or DFG personnel involved in the process. It is critical that CNPS presents data to them as fellow scientists and colleagues.

Try to make contact with landowners involved in the process. This will require extreme diplomacy and probably some preliminary research on their approachability. Remember that they will probably have no idea about what CNPS is, or what it does. Remember it is their money, their land, and their futures that are at stake, and those will be as important to them as the conservation of plants is to CNPS. Write letters to local papers, have special meetings to raise public awareness (besides those that might be developed in the scoping of an HCP-NCCP which provide "front-door" access).

Ask influential biologists and land use experts to support the CNPS position, and have them write letters. Seek input from scientists known to support the general concept of HCP-NCCP (this includes CNPS) but who are opposed to the specific failures of a particular program. Locate, if possible, a scientist from the NCCP Core Group, or the steering committee from another HCP who might be able to add the weight of their experience and credentials to support a CNPS position.

Get friendly local politicians involved.

Get local government staff involved by finding friendly contacts, but do not ask or expect them to take career-threatening actions.

6.5 INFLUENCE ON LEAD AGENCY SELECTION

In complex HCP's and NCCPs involving several jurisdictions, such as the San Diego MSCP, there may be a number of potential Lead Agencies. Some may be better than others in regard to their attitudes toward conservation, and it would be in the interests of CNPS to influence the political process as much as possible. At this stage letters should be written to local, state and national politicians to try to influence the process in cases where it would seem that the Lead agency might be a problem. Unless CNPS knows people on the "inside", it is likely that Agency selection would be made before CNPS could influence the process. It helps to know someone who might inform CNPS of issues in the public interest such as these.

6.6 CHALLENGE OF EA'S RESULTING IN A FONSI OR NEGATIVE DECLARATION

The NEPA process may result in a "Finding of No Significant Impact" (FONSI) after a preliminary Environmental Assessment. On a similar path, the CEQA process may declare that a project has been given a "Negative Declaration", meaning it does not have a significant environmental impact. This may be open to CNPS challenge.

An EA or FONSI can be used to impose enforceable mitigation measures, monitoring programs, or other requirements, even though there is no requirement in the regulations in such cases for a formal Record of Decision.

See that the document meets Council on Environmental Quality (CEQ) standards:

The CEQ states:

"In cases where an environmental assessment is the appropriate environmental document, there still may be mitigation measures or alternatives that would be desirable to consider and adopt even though the impacts of the proposal will not be "significant." In such cases, the EA should include a discussion of these measures or alternatives to "assist [46 FR 18038] agency planning and decision making" and to "aid an agency's compliance with [NEPA] when no environmental impact statement is necessary." Section 1501.3(b), 1508.9(a)(2). The appropriate mitigation measures can be imposed as enforceable permit conditions, or adopted as part of the agency final decision in the same manner mitigation measures are adopted in the formal Record of Decision that is required in EIS cases." [NEPA's 40 Most Asked Questions "<http://ceq.eh.doe.gov/nepa/regs/40/40p3.htm>"]

6.7 CHALLENGE ISSUANCE OF EA WHEN MITIGATION INSUFFICIENTLY REDUCES IMPACTS.

If an environmental assessment indicates that the environmental effects of a proposal are significant but that, with mitigation, those effects may be reduced to less than significant levels, was the agency justified in making a finding of no significant impact rather than preparing an EIS? Is that a legitimate function of an EA and scoping? This may provide an avenue for challenge.

CEQ states that there have been judicial differences of opinion on CEQ's guidance on this issue, and that CEQ might offer additional guidance in the future. CEQ's guidance states that:

"Mitigation measures may be relied upon to make a finding of no significant impact only if they are imposed by statute or regulation, or submitted by an applicant or agency as part of the original proposal. As a general rule, the regulations contemplate that agencies should use a broad approach in defining significance and should not rely on the possibility of mitigation as an excuse to avoid the EIS requirement. Sections 1508.8, 1508.27.

If a proposal appears to have adverse effects which would be significant, and certain mitigation measures are then developed during the scoping or EA stages, the existence of such possible mitigation does not obviate the need for an EIS. Therefore, if scoping or the EA identifies certain mitigation possibilities without altering the nature of the overall proposal itself, the agency should continue the EIS process and submit the proposal, and the potential mitigation, for public and agency review and comment. This is essential to ensure that the final decision is based on all the relevant factors and that the full NEPA process will result in enforceable mitigation measures through the Record of Decision.

In some instances, where the proposal itself so integrates mitigation from the beginning that it is impossible to define the proposal without including the mitigation, the agency may then rely on the mitigation measures in determining that the overall effects would not be significant (e.g., where an application for a permit for a small hydro dam is based on a binding commitment to build fish ladders, to permit adequate down stream flow, and to replace any lost wetlands, wildlife habitat and recreational potential). In those instances, agencies should make the FONSI and EA available for 30 days of public comment before taking action. Section 1501.4(e)(2).

Similarly, scoping may result in a redefinition of the entire project, as a result of mitigation proposals. In that case, the agency may alter its previous decision to do an EIS, as long as the agency or applicant resubmits the entire proposal and the EA and FONSI are available for 30 days of review and comment. One example of this would be where the size and location of a proposed industrial park are changed to avoid affecting a nearby wetland area. " [NEPA's 40 Most Asked Questions "<http://ceq.eh.doe.gov/nepa/regs/40/40p3.htm>"]

6.8 INPUT TO THE EIR/EIS PROCESS

6.8.1 SCOPING

Review this document for scientific issues that can be raised. Here we offer a brief checklist of items for consideration in the scoping process. Projects initiated by public agencies usually allow public participation in open scoping meetings, and in project planning and design meetings. CNPS has been involved in such meetings both in the San Diego MSCP (an NCCP) and in the Kern County HCP.

(a) Supply Lists of Species and Communities of Concern to CNPS

CNPS should provide, at the minimum (a) a known species list for consideration: (b) prepare a probably-present list, (c) prepare a list of existing and possible threats to species of concern to CNPS (d) identify any plant communities of concern to CNPS. Provide some information as to the amount of validation that would be needed to accurately determine the conditions of these species or communities.

(b) Propose Alternative Projects for Consideration

If it is apparent that the goals of the project could be carried out with a minimal amount of damage to plant species and communities, a "biologically preferred" alternative should be described for inclusion under alternatives analysis.

(c) Cumulative Impacts.

If CNPS considers that the project may, in combination with other projects, have serious cumulative impacts on a species, then list the other projects and the type of impact CNPS anticipates. Ask that these facts be considered in the analysis of alternative projects.

(d) Land Use Analysis

Prepare lists of land uses that might take place under possible alternative projects, and request that they be assessed relative to their likely impacts on plants and plant communities.

(e) Mitigation

Prepare a list of potential problems regarding proposed mitigation, asking that they be addressed in the evaluation of the value of mitigation. The checklist might include items such as the probability of disturbance, fire management, exotics risk, validation tools, and monitoring methods. Chapters 14 & 17 of this document may be useful sources of information.

f) Selection of a Contractor for an EIS and Evaluation for Conflict-of-Interest

An EIS can be prepared by either the Lead Agency or by an independent contractor. There is an inherent danger of conflict-of-interest for an Agency to evaluate its own proposed program, and the Council on Environmental Quality notes this fact. CNPS should evaluate the proposed project, alternative projects, and the "preferred" alternative project to see if there is a systematic bias in the evaluation of impacts to justify the agency's goals. **Any doubts about the scientific quality of evaluation, or the systematic ignoring of alternatives considered valid by CNPS should be fully laid out in a commentary letter for use during later legal challenge.**

The Council on Environmental Quality (CEQ) states

"Section 1506.5(c) of the NEPA regulations contains the basic rules for agencies which choose to have an environmental impact statement prepared by a contractor. That section requires the lead or cooperating agency to select the contractor, to furnish guidance and to participate in the preparation of the environmental impact statement. The regulation requires contractors who are employed to prepare an environmental impact statement to sign a disclosure statement stating that they have no financial or other interest in the outcome of the project. The responsible Federal official must independently evaluate the statement prior to its approval and take responsibility for its scope and contents.

During the recent evaluation of comments regarding agency implementation of the NEPA process, the Council became aware of confusion and criticism about the provisions of Section 1506.5(c). It appears that a great deal of misunderstanding exists regarding the interpretation of the conflict of interest provision. There is also some feeling that the conflict of interest provision should be completely eliminated. This should be of concern to CNPS, who should be prepared to protest any suspicious actions in regard to conflict-of-interest ."

Regrettably the above CEQ provisions do not eliminate conflicts when the Lead Agency prepares its own documents, such as the potential conflict between biological review by FWS in both the Section 7 consultation and Section 10 permitting.

6.8.2 PROJECTS LACKING SCOPING

Note that a small HCP, especially a so-called Low-Effect HCP will not be scoped. **If you get wind of one of these try to contact the resource agencies and local officials and voice your concerns. The failure to scope an HCP can result in a failure to consider reasonable alternatives to species take, and thus may be an avenue for later legal challenge. Where possible, drive the process toward an scoped EIS, as NEPA review will broaden public comment and the consideration of alternatives.**

6.8.3 COMMENTS ON DRAFT EIR OR EIS

At the current time there is very little opportunity for public comment directly to the HCP or NCCP process, but there is an opportunity to comment through the NEPA and CEQA analysis of the project. Here CNPS should consider all of the biological issues raised throughout this document, and also the requirement of the NEPA and CEQA process to consider alternative project design. Comments may be extensive, and may include comments on items not in the report but mentioned earlier by CNPS in scoping. Failure to address an issue in the scoping phase may make moot further comment on the issue if it is missing from the Draft, but CNPS should address the issue in any case to establish a record. This would not be the best place to discuss broad philosophical issues concerning the HCP-NCCP project, but should be concise commentary on the issues raised in the draft or in the scoping process on the adequacy and quality of data.

6.8.4 COMMENTS ON FINAL DOCUMENTS

CNPS evaluation of a Final EIS or EIR should consider the degree of responsiveness to issues raised in the comments on the Draft by CNPS and others. If the document is unresponsive, inaccurate, or otherwise scientifically flawed, the Lead Agency should be

contacted with a letter asking that the document not be certified, and carefully spelling out the issues. This will be the possible core document that CNPS might use in a suit against the Lead Agency for a violation of NEPA or CEQA in the certification of the document.

6.8.5 CERTIFICATION OF EIS or EIR

An EIR or EIS has no standing unless it is certified, and can be revised in quality and scope until all significant environmental issues are covered. Failure to cover such issues is a violation of the intent of NEPA and CEQA. Note that the Lead Agency must choose an environmentally superior alternative, or explain in detail why it chose another. The real problem in the process is that the same agency that would be key in the evaluation of the botanic impacts would also be producing its own NEPA or CEQA documents, and there are some very real conflict of interests or possibilities that the economic interests that guided HCP-NCCP design may be overly considered in the biological review.

6.9 HCP AND NCCP TECHNICAL, STEERING AND ADVISORY COMMITTEES

CNPS is unlikely to be included on an HCP committee, unless the project was initiated by a public agency. Committees in a typical property-owner generated HCP usually consist of a group of persons that represent affected interests in a broad scale HCP, but it is not required by law and is not required by FWS. **Legally a conservation organization cannot claim an interest through their desire to protect an animal or plant, as only humans have legal standing.** The committee has the function of advising the applicant, and does not advise the Service. HCP developers may object to "outside" interests, but Service biologists are told to suggest that a developer make some contact with outside experts. Committees may advise on the species coverage, geographical scale, mitigation, and public disclosure. If CNPS has a good track record with local government of giving honest appraisals while understanding the economic interests of the applicant, it is possible that CNPS would be asked to the table, but that might be the very reason that CNPS is not invited. It may be worthwhile looking at who is on the committees, as they might have been chosen by the applicant to reflect a particular bias. **If any of the committee are approachable, CNPS considerations might find voice through that person.**

CNPS has a greater chance to be represented in the NCCP process, but the chances vary from program to program. Public input is recommended but not required in regulatory guidelines, and the question of who gets to sit on committees is frequently up to the local jurisdiction. **CNPS may be able to be represented in a "Working Group"**. The four large NCCP projects in southern California all have policy boards called Working Groups. Those in Orange County were closed to the public, while those in San Diego County were very open. The Orange County Working Groups served only to critique but not design the NCCP, and their decisions were frequently ignored. The San Diego County Working Groups created policy papers that were implemented in the design of the NCCP, but only at a broad regional level. The San Diego Working Groups were not advisory to the more local plans and land use decisions that implement NCCP at the local government level, and hence recommendations could be ignored.

NRDC notes:

"Because its participation was mandated by neither the legislature nor the Department of Fish and Game, the environmental community has sometimes had to assert itself just to remain in the room. Consider, for example, its near omission from the Planning Agreement of the Central-Coastal subregion, which established a procedure for reserve design. Under an early draft of the Agreement, conservation groups and the general public would have been limited to "informational presentations" during the planning process and to commenting once a plan was prepared; the county's major landowner [Irvine Company], on the other hand, would have taken charge of drafting the plan and assessing its environmental impact. A number of groups objected and the Agreement was revised, giving the County primary responsibility for the plan, and entitling "conservation representatives" to "regular discussions" with the design team.

Even in the final stages of the process, a seat at the table is not guaranteed. As originally planned, there was to be no direct public representation on the Board of the NCCP Non-Profit Corporation, the body entrusted with managing the Central-Coastal reserve. The Board was to be composed exclusively of landowners, municipal officials, and representatives of the wildlife agencies. Three public positions were added only after conservationists and citizens criticized the scheme." [Natural Resources Defense Council. May 1997]

6.10 INDEPENDENT PRESSURE ON LEAD AGENCY

In cases where the evaluation of biological data and the design of the HCP-NCCP has almost completely locked out input from CNPS, it may be possible to reach county supervisors, scientists in agencies and others to push for certain actions from the agency. CNPS must always emphasize to agencies that concerns are based on science. If CNPS is trying to educate a non-scientist on scientific issues, it should avoid unnecessarily technical language while being precise and accurate.

6.11 VIOLATION OF OTHER LAWS

The Southwest Center for Biodiversity recently used NAFTA to challenge an overgrazing case on Arizona's San Pedro River. There are laws such as the Clean Water Act, Corps Nationwide Permit requirements, and others that must be considered in the acceptance of any change in land use. The Clean Water Act was used as a challenge to an Oregon timberland-based HCP that prepared a pattern of forestry deemed sufficient for the protection of a land species, but which were then shown to be harmful to water quality. CNPS should carefully evaluate a project in this light. Indeed, the effect of logging on water quality and therefore critical habitat for salmonids has become a critical issue in forest products related HCP's involving take of listed fish species.

6.12 COURT CHALLENGES

This is the very last resort, but may be and has been needed. **Remember that CNPS must have participated at all levels of the NEPA-CEQA process, and should be able to demonstrate scientific flaws in the HCP-NCCP design. Demonstrated participation is usually required to show a court that CNPS has 'standing', and is not simply obstructing a process.** This will usually involve challenges to the proposed mitigation against take for a species, and to project design and assumptions about mitigation.

6.13 CNPS AS ADVOCATE AND/OR SCIENTIST

CNPS should represent itself as a scientific organization. A 1993 survey conducted on behalf of Defenders of Wildlife shows that the general public trusts scientists more than environmental groups, government (EPA), politicians, reporters, business leaders, or the President. Noss and others (1997) note that being a scientist does not mean that one cannot be an advocate, but it does mean that one cannot present fraudulent data, or fail to consider alternative models in a reasoned manner. However Noss and others suggest that scientists should not advocate a Plan design until the scientific facts of all alternatives has been considered. As scientists, CNPS should be able to understand the scientific arguments used by scientists defending animals and animal habitat, and to understand the ecological interdependencies between animals and plants.

CHAPTER 7: PRINCIPLES UNDERLYING INTERVENTION: CNPS STATEMENT OF CONCERN REGARDING HCP'S AND NCCP'S

Scientific issues should form the backbone of any interaction between CNPS and the HCP-NCCP processes. While other issues such as water availability for a project, traffic impacts, and overcrowded schools may be very pertinent, they should not be included in CNPS comments unless they can be directly linked to species conservation and cumulative impacts. Scientific issues are discussed elsewhere in this document, but most of our general concerns are described in Jan Scow's White Paper concerning Science and HCP's. This is included below:

It is recommended that this "Statement of Concern" be used in cases where CNPS cannot make a fuller and more case-specific presentation, and where the overall scoping of a project is being considered. It should also serve as a checklist of issues to be discussed in a longer response. The document also is an excellent tool for use where CNPS is attempting to make structural changes via legislative means to the failing parts of the process. It would be used in advance of using a highly detailed analysis that may be prompted through deliberation of the remainder of this document.

CNPS believes that without adequate scientific input and guidance, HCPs and NCCPs can actually imperil the species they are meant to protect.

In order for any plant species to be included as "covered" , the following are considered to be essential elements. CNPS opposes any plan which fails to adequately include these elements:

1. Plans should be based on good baseline data. This should include:
 - (a) a thorough knowledge and awareness of all existing documentation on each species of concern, including NDDB files, RareFind, CNPS' Inventory, scientific literature, and previous EIRs and environmental documents;
 - (b) carefully planned focused rare plant surveys for each species of concern;
 - (c) aerial surveys with adequate ground truthing to identify and accurately map all plant communities;
 - (d) ecological requirements for each species being evaluated, including studies to determine their minimum survival needs and recovery thresholds of each population.
2. Reserve design should be based on accepted scientific theory, and should:
 - (a) optimize and protect reserve edge-to-area ratio;
 - (b) optimize and protect reserve size;
 - (c) optimize and protect reserve buffers;
 - (d) optimize and protect connectivity within and between reserves;
 - (e) optimize and protect a representative geographical scope of included habitats;
 - (f) minimize edge effects from permitted adjacent uses;
 - (g) minimize non-compatible adjacent uses which lead to disturbance and invasion of reserve areas;
 - (h) minimize internal development "bubbles".
3. Mitigation strategies should be field tested and judged against relevant past research and experience; such that:
 - (a) avoidance and minimization of impacts should be the first option considered to limit impacts to rare plants and plant communities;

(b) transplanting of plant populations should not be relied on as a mitigation unless ample scientific evidence exists that the plant population can survive transplantation and recover, and that the transplant location is ecologically suitable to the plant population and to the area receiving the transplants;

(c) funding necessary for testing of mitigation strategies should not deplete funding for the final mitigation action.

4. Reserve/species management plans should be truly “adaptive”:

(a) management plans should be developed concurrently with the plan, and approval of the plan should be contingent upon an acceptable management plan being in place;

(b) management plans should be designed to respond in a timely fashion to species' needs, as illustrated by comprehensive scientific monitoring;

(c) plans should be crafted so as to be easily modified as species needs become apparent;

(d) funding for monitoring activities should be assured and independent of other aspects of the plan.

5. Scientific monitoring should be the basis of ongoing management decisions:

(a) adaptive management strategies should have scientific monitoring to gather data on species' response to management techniques;

(b) data collection related to life history, ecological niche, response to stress, reproduction, and dispersal should be available to assess the long term needs for species survival and recovery;

(c) a “library” system for storing and retrieving all scientific data relevant to a given plan should be available to help ensure maximum utilization of all possible data;

(d) monitoring is funded, independent of other aspects of the plan.

6. Plans should be subject to independent scientific review at critical stages:

(a) an independent scientific review panel is established early in the planning process;

(b) experts on the species and on local conditions should be invited to participate;

(c) baseline studies should be reviewed on completion for accuracy, thoroughness, and comprehensiveness;

(d) reserve design should be reviewed prior to plan approval to ensure that it adheres to sound scientific principles to the maximum extent possible;

(e) mitigation strategies, monitoring plans and management plans should be reviewed prior to their final approval;

(f) funding should be assured and is independent of other aspects of the plan.

7. Plans which focus on maintaining species populations at or near their condition at the time of listing are not scientifically defensible. Plans should be focused on improving the lot of listed species, i. e. “recovery” of listed species, not simply survival.

CHAPTER 8: SUFFICIENCY OF DATA ON COVERED SPECIES

8.1 HABITAT-BASED AND SPECIES-BASED PROJECTS

There are two types of HCP being developed. The earliest, such as the San Bruno Mountain HCP, were specific toward a particular species, but many later plans are designed to include several or many species, and stress 'habitat' which acts as a surrogate for species that occur within the habitat. A clear example is an HCP that protects late-seral forest reserves that would be a surrogate for Northern spotted owl and Marbled murrelet. San Diego MSCP evolved from a regional program designed to protect a single species into a program based on habitat protection of coastal sage scrub, which was a surrogate for a large number of species of interest to CNPS. The Plum Creek Timber HCP "covered" 285 species over 68,000 hectares, but split the species into only nine "habitat types" for which there was no scientific agreement concerning validity. Problems arise when different participants have different visions of the intent of a program, and particularly when the potential effects of species "coverage" in a habitat based program are poorly understood. For this reason, it is critical that CNPS review the state goals of the plan. Each plan must have "explicit goals and measurable objectives" (FWS 5 Point Plan, 1999). Conservation organizations interested in reptiles may have a different view of the success of a plan than those interested in birds, or those interested in plants. There is a growing tendency of multiple species HCPs and NCCPs to rely on large scale aerial photographs or satellite images where one or two indicators of the surrogate habitat can be visually discriminated, and to allow these to be used to represent the habitat and the species for which it was the surrogate. CNPS must consider in each case if this high level of abstraction can address the needs of each plant species of concern.

8.2 "MINIMIZE AND MITIGATE" AND LACK OF RECOVERY STANDARDS

The HCP process does not require a plan to contribute to the recovery of a listed species. The HCP Handbook states "at a minimum, an HCP should not preclude recovery". Recent 1997 changes to CESA limit the mitigation associated with permitted take to be roughly proportional to the impacts of the take. Thus at both the Federal and state levels there is no legal obligation to manage a species toward its net improvement. This is at odds with species recovery plans, which should be directing actions toward recovery, and may put an HCP's EIS or EA (or an associated CEQA document) in a difficult position when cumulative impacts are considered. CNPS should seek project alternatives that provide net gain to the species, and should question science that might over-value particular mitigation.

CNPS should always consider the cumulative impacts of a project, which, when combined with the effects of other projects, might produce a net loss that could remain undetected if the EA/EIS/EIR is directed only to the specific project.

CNPS should, when given the opportunity to contribute to the scoping or design of an plan, request an analysis of both project impacts and cumulative project impacts on covered species. Alternatives that produce net gains for those species should be developed. In making these contributions, CNPS should also evaluate the cumulative impacts on more common species.

Claims that mitigation of a certain type will be adequate and proportional to the take should be analysed.

8.3 COMPATIBILITY WITH SPECIES RECOVERY PLANS

ESA requires that a recovery plan with specific requirements be developed for each listed species. Regrettably, the HCP process may result in one or several projects covering the entire range of a species, with HCP mitigations becoming the de-facto recovery plan for the species. HCP requirements to "minimize and mitigate" species take violate the intent of a recovery plan.

CNPS should discover and challenge any conflicts with species recovery plan goals. This is particularly important, as HCP land use agreements limit further land use planning that might favor the species.

CNPS should be concerned about species with significant populations outside the HCP-NCCP planning area, or in the proposed build-out area of the plans. Agencies may allow

unacceptably large takes of these species, in clear violation of their recovery plans, in order to simplify design of a multiple species conservation strategy that would favor most, but not all, of the species.

CNPS should object to allowing take of a newly listed species in an HCP-NCCP where recovery plans for the species under ESA-CESA are not yet defined, unless it is clear that there would not be a violation of the intent of a recovery plan.

CNPS should protest any attempt to make mitigation under an HCP-NCCP the substance of a species recovery plan. Species recovery plans should be independent scientific documents, developed by scientific experts working in association with DFG and FWS.

CNPS should insist that HCP-NCCP design and associated mitigation for take provide measurable milestones for the success of those actions, and for cumulative impacts. This will require the establishment of baseline standards and the definition of triggers for certain actions. This is a point where “adaptive management” is clearly of advantage over “no surprises” and its pre-defined and therefore limited management options. (See also Chapter 11 of this Manual.)

CNPS should evaluate the types of activities permitted under a plan in regard to their contribution to species recovery, as defined by a species recovery plan. This evaluation should extend to the agencies that would regulate these activities, their record of success in controlling undesirable activities, and their general attitude toward species recovery.

CNPS should insist that the evaluation of a single HCP-NCCP project on species recovery include a full cumulative impact analysis of past, present and future projects. (See Chapter 10 for more on cumulative impact analysis)

8.4 OBLIGATORY VS. OPTIONAL CONSIDERATION OF “COVERED” SPECIES

An HCP has an obligation only to listed species, and has only a weak obligation to Federally listed plants that are not protected by state law. HCP guidelines suggest that an HCP be more inclusive, as it might prevent a crisis arising from the listing of a species. If the HCP were to include consideration of an unlisted species, it would be “covered” and treated in the same manner as listed species.

CNPS should ask an HCP or NCCP to cover all species that are likely to become rare or uncommon in the next half century, due to cumulative impacts. However CNPS should not accept coverage that does not produce adequate protection within the framework of the existing HCP-NCCP. If it is evident that a Lead Agency is “covering” species to remove them from future protective management actions due to “No Surprises” policy, and is therefore allowing unacceptably high take and insufficient on-project mitigation, then either this action should be challenged, or CNPS should ask that species be removed from “coverage”.

CNPS should provide a known species list for consideration:

CNPS should review all Natural Diversity Database records for the area for all listed plants, particularly List 1 and 2 plants, and all CESA-ESA listed plants. Herbarium records should be sought out, as species may have been collected in the past. Do not trespass to obtain data. If there are challenges to anything in the processing of the HCP-NCCP, evidence obtained illegally may be rejected by the court or agency.

CNPS should prepare a potentially-present list:

Based on known soil conditions, slope, aspect and other factors, list all plants of concern that might be present and should be included in field searches. Obtain Soil Maps of the area from NRCS. Are soils present that are likely to support any plants of concern to CNPS that are substrate specific? From topographic maps, or from aerial photographs or photographs taken at the property line, check for slope, aspect and other environmental indicators of a plant of concern.

CNPS should independently prepare a list of existing and possible threats to target species.

Besides the more obvious effects of land conversion, a plant population can be impacted by exotic pest plants, or even by changed conditions that might result in a weedy native species obliterating the habitat of a rarer species. The presence of weeds, the ability to perform fire management, increased foot or ORV traffic, changed hydrology or sun-shade considerations should be included for consideration in any discussion of mitigation measures.

CNPS should be able to provide a preliminary estimate of the quality and adequacy of data available to the Lead Agency and to CNPS.

If data appears to be old, poorly substantiated, and there is no evidence of the current status of plant populations, these facts should be made public emphasizing the necessity of obtaining and updating the information.

8.5 COUNTING NUMBERS OF SPECIES AND POPULATIONS

CNPS should evaluate the methods by which plant populations were assessed. In some surveys plants are counted as individuals, and in others as populations. If impacts are described in terms of a percentage of population points, CNPS should make sure that the relative numbers of plants and the stability of each population is known. Clearly the preservation of one very large and robust population may be worth more than three populations with few individuals and at risk from weeds.

CNPS should also consider if population "counts" were performed at the right time of year, were developed artificially by GIS synthesis of environmental associates, were overly dependent on older data, were confined to RareFind output, or were subject to potential taxonomic confusion. These issues may bring into question the true evaluation of species impacts within the project.

8.6 AGE OF DATA

CNPS experience has shown that databases such as RareFind may contain outdated information. CNPS should understand which data cited in the distribution information on a species were actually validated in the field.

8.7 FIELD VALIDATION BY CNPS AND OTHERS

In cases where CNPS believes that undescribed populations may exist, or where there is some doubt about consultant-generated data, it would be useful to perform field surveys. CNPS should be careful of trespass, and be aware that data gathered under trespass may not be accepted in a court challenge. At the very least CNPS should send written (and preferably certified) notification to DFG, FWS, property owners and known consultants and call attention to the issue. In this and other communications, use an extensive cc.-list to avoid a later claim of ignorance on the part of any party.

8.8 CHALLENGES ON QUALITY OF COLLECTED DATA

Challenges to data quality may be successful when there are clearly deficits in one or several of the following issues (a) time of year for surveys (b) weather conditions of the survey year (c) significant age of field surveys (d) evidence of highly invasive exotic plants or animals in the area (e) recent changes in land use such as a change in grazing regimen (f) evidence that most data was not collected on the ground, but from aerial photographs (g) documented errors (h) insufficient field time for surveys (i) evidence of an "unlikely" plant in a plant list (j) failure to recognize taxa known to be in the area (k) lack of verification of methods or data.

8.9 CHALLENGES BASED ON INADEQUACY OF RESEARCH RESOURCES

While the number of HCP projects has increased from 7 in 1990, 11 in 1991, 131 in 1995 and 197 in 1996, overall staffing levels at FWS have scarcely increased, and there was an actual drop in budget between FY1995 and FY1997. There is a serious question about the quality of science that can be applied to Section 10 consultation and Section 7 review when agency resources are so limited. Actual research is usually done by consultants, and some have better eyes than others for seeing rare species. Agency oversight is critical, but may be increasingly compromised if staffing levels are not increased. If it can be shown that agency staff time was inadequate to evaluate the resources, then an HCP may be open to legal challenge.

8.10 GIS, GAP ANALYSIS, AND FIELD VALIDATION

Many of the vegetation surveys in large southern California HCP-NCCP projects were performed at the scale of a plant community, such as coastal sage scrub. Much of the landscape was "mapped" in a GIS lab, with boundaries developed from contrasts in the colors and shades of vegetation seen in the photos or satellite images. These are then field validated with spot surveys, but the method has a high error rate, and attaining 70% correct in the field validation is considered a high quality product.

CNPS should evaluate the degree to which the GIS process and aerial photograph interpretation has been used in project design, and protect land use decisions based on plant community recognition thresholds that are insensitive to the presence of rare plant populations, or which have sufficiently high error rates that land use impacts cannot be determined with accuracy.

Many of the larger projects employ a relatively new tool called GAP analysis (Scott and others, 1993). Known as a "Geographic Approach to Protection of Biological Diversity", it identifies areas of high biological richness which remain as unprotected "gaps" in the landscape. Vegetation is mapped from LANDSAT data into a GIS system, distribution maps for individual species are overlain to identify those areas with the largest concentrations of species, and then a prioritization for acquisition and protection is developed. While this is an excellent tool for relatively rapid analysis of the landscape when applied to HCP-NCCP reserve design, rare species that occur in areas of low species richness could be systematically excluded. When used correctly, the analysis is meant to be a "coarse filter" for landscape attributes that would protect 85-90% of the species, but requires a "fine filter" to identify narrow endemics. The 'values' ascribed to a biological attribute of the landscape may depend to some degree on the biases of scientists involved in the creation of the model, and to some degree on the underlying value 'paradigms' of the scientific community and society-at-large at the time of the analysis. Although there may be drawbacks with this form of analysis, it has proved useful in large area analysis such as the Sierra Nevada Ecosystem project, and has been used by the Nature Conservancy in their land protection programs.

CNPS should determine that, if GAP "coarse filter" analysis was used in reserve design, the analysis did not exclude species of concern to CNPS due to lack of "fine filter" analysis. If GAP analysis is producing an unsuitable reserve design, CNPS should question the basic assumptions and internal value systems within the model, preferably after a discussion with the model's scientific team.

8.11 REVIEW OF SECTION 7 FINDINGS FROM FWS

In the HCP process, the HCP and its ESA Section 10 take permits are subject to consultation under Section 7 of ESA. These are meant to be done as independent review, but due to lack of staff are dependent on the same scientists who guide the Section 10 process in the HCP design. This conflict of interest may be thinly disguised by having different signatures on the reports, but the conflicts may be very real and might become evident when the project is under review. Note, however, that this conflict is not explicitly forbidden.

If a lead agency is unresponsive to queries, or scientific evaluations are questionable, the possibility of conflict of interest should be explored by CNPS. Consider if the analysis of facts lacked peer review and failed to recognize alternative actions.

8.12 CEQA-NEPA PLAN REVIEW

As the HCP-NCCP is reviewed under NEPA or CEQA, the quality of those documents should be examined. They will address the same scientific issues regarding covered species, but will also introduce other environmental factors. Low-Effect HCP's have a categorical exemption from NEPA, and a full consideration of the issues that "should have been covered" may be sufficient to invalidate the decision to use the Low-Effect HCP as a land use tool.

8.13 COORDINATION WITH OTHER REVIEWERS

CNPS may wish to change an HCP-NCCP for our botanic purposes, Audubon might have a prime interest in birds, and Sierra Club in open space and views. If conservation organizations respond with recommendations that are based only on a narrow interest, they are more likely to conflict with the recommendations of others. If there are confusing signals from interested parties, it is easier for the Lead Agency to ignore them. **Therefore CNPS should consult with other conservation organizations and coordinate comments and the presentation of data. There has been a depressing fragmentation of conservation groups, with some "inside" the process and others "outside" the process. Both positions can have value, but it is vital that those on the "outside" do not demean and weaken the position of those on the "inside", and that those on the "inside" reflect the views of those on the "outside" to the greatest extent possible. To attain this end, CNPS should take the lead in bringing organizations with interests in a particular project together, to try to organize an ad-hoc coalition where all work toward a larger, common goal.**

8.14 INTERIM TAKE

As the NCCP process can involve many landowners and local jurisdictions, it may take several years for the project to be designed. Rather than terminate all activities, the State and Federal agencies may allow "interim take" to take place, allowing local governments to permit destruction of species and habitat under interim take permits.

CNPS should challenge Interim Take permits if the status of the species is unknown and therefore the effect of the take permit cannot be assessed. On the other hand, such permits might keep developers at the HCP-table, which might be better than having them follow a separate development strategy with the Lead Agency.

8.15 PRELISTING AGREEMENTS AND PROPOSED CANDIDATE CONSERVATION AGREEMENTS

PRELISTING AGREEMENTS

Prelisting agreements have been used as leverage to bring landowners to the table in the NCCP-HCP process. The argument is basically "cooperate to aid the species or we will list the species" or "we will defer much needed protection of ESA or CESA just so you will come to the table". The scientific test is that the actions taken to protect the species on the landowners land would be sufficient to prevent the species from reaching the level of jeopardy that would require listing. Regrettably, science may be compromised in order to make the overall goals of a Plan "more-or-less" workable.

CNPS should review any Prelisting Agreement for the validity of the underlying science. CNPS should review the content of the Stanford Letter, (following).

THE STANFORD LETTER ON PRE-LISTING AGREEMENTS

A well circulated letter to Bruce Babbitt, "A Statement on Proposed Private Lands Initiatives and Reauthorization of the Endangered Species Act from the Meeting of Scientists at Stanford University" contains a section on pre-listing agreements:

"Under a prelisting agreement, a landowner would take actions to benefit an unlisted rare or declining species before it is listed. This has the potential to benefit species conservation because a species is afforded no protection on private land under the Endangered Species Act until it is listed. Nevertheless, prelisting agreements must not become an easy substitute for necessary listings.

Prelisting agreements often will be negotiated in the face of significant levels of scientific uncertainty -- we know little about many of our listed species, less yet about many unlisted species. Because prelisting agreements should benefit species, we recommend an enhanced level of attention and critical review of the biological circumstances under consideration in proposed prelisting agreements. The Federal government will have to deal with an inevitable shortfall of information; that situation can be partially corrected by

1. developing the most complete database possible to inform the decision, 2. clearly articulating how the prelisting agreement will benefit the targeted species, and 3. applying the necessary concomitants of the "No Surprises" policy. The latter should include an ability to amend agreements, the availability of funding to support amendments, adaptive management with effective program monitoring, sufficient consideration of the regional planning context, and independent scientific review."

CANDIDATE CONSERVATION AGREEMENTS

FWS recently issued a final regulation for Candidate Conservation Agreements (CCAs). Federal Register: June 17, 1999 (Volume 64, Number 116) [Notices] [Page 32705-32716]. The earlier Notice of Proposed Regulation (Federal Register: June 12, 1997 (Volume 62, Number 113) [Notices] [Page 32183-32188] states that:

" By addressing the conservation of proposed and candidate species, and species likely to become candidates in the near future, the Services and other Federal and non-Federal entities retain management flexibility, while ensuring measurable conservation actions are implemented for these species before their long-term existence is compromised."

" it is of critical importance to establish voluntary programs that encourage non-Federal landowners to implement proactive conservation measures for these declining species. By deferring implementation of conservation activities for these species until they are listed, the ecological integrity of their habitats is compromised, thus in some cases severely limiting recovery options available."

" In exchange for proactive conservation management activities benefiting candidate and proposed species, the Services would provide regulatory certainty and assurances to the participating property owner in case the covered species is subsequently listed."

The Final Regulation addresses both CCAs and Safe Harbors Agreements and the Assurances (No Surprises) given property owners. This is further discussed in Chapter 13.

CNPS notes that FWS is aware that the agency is going to be limited by funding in the implementation of this proposed rule. CCAs will share a similar problem with "Safe Harbors", in violating the intent of ESA to use the best scientific and commercial data available when a species becomes listed, as CCAs will constrain future actions.(see Chapter 13, this Manual)

8.16 SCIENCE AND "LOW-EFFECT" HCPS

Where FWS perceives that there is not going to be a very significant impact on a species, usually in the context of a small property, the so-called "Low-Effect" HCP is fast-tracked. The fast-track is considered a "Small-parcel landowner initiative", and has received comment in the letter to Bruce Babbitt "A Statement on Proposed Private Lands Initiatives and Reauthorization of the Endangered Species Act from the Meeting of Scientists at Stanford University".

"Considering the cost, complexity, and time required to complete Habitat Conservation Plans and implement them, the idea of expediting the permitting process for small landowners is attractive. But we note that in many areas with imperiled species, private land holdings consist almost entirely of small parcels. In addition, when both large and small parcels are interspersed, the small parcels may contain most of the key habitat. Either way, the cumulative impacts of many small projects on imperiled species may be substantial. In addition, the relative impacts of small landowner activities vary greatly depending upon which endangered or threatened species live on their land. The loss of but five acres of remnant habitat could doom to extinction more than a few listed species.

We are concerned that expediting the permitting process could come at a significant cost to species persistence. Our group believes that any policy that allows for expedited HCPs should also require that such agreements not compromise the viability of targeted species within the planning region, and should explicitly consider and limit cumulative deleterious effects from incremental habitat losses. If a recovery plan exists, expedited HCPs must be consistent with the plan. Otherwise, to ensure coordination of existing and future HCPs, a regional analysis of species status should be required before any expedited HCPs or exemptions are considered."

8.17 SCIENTIFIC REVIEW PANELS: FRONT-LOADING SCIENCE INTO A PLAN

The FWS HCP Handbook nowhere requires that there be independent review of HCP design, or peer review for scientific rationale behind land use decisions. The review comes only from the Section 7 consultation and review of work done by the same agency under Section 10 of ESA, and thus has a narrow base. Input does exist through the NEPA-CEQA process in the form of comment, but it is indirect. Noss and others (1997) believe that "front-loading" science through a scientific review panel that is involved in plan design, and is independent of any special interests, should be a requirement of every plan. The Stanford letter "A Statement on Proposed Private Lands Initiatives and Reauthorization of the Endangered Species Act from the Meeting of Scientists at Stanford University" addresses this issue:

"While Habitat Conservation Plans and other conservation agreements that we have discussed above may offer promise for improved species protection on private and other non-Federal lands, serious questions remain about their effectiveness for long-term species conservation and recovery. Because many recovery plans and HCPs lack scientific validity, because the private lands proposals discussed above remain largely untested, and because endangered species protection and recovery must be based on the best available science, we believe that independent scientific review must become an essential step in the implementation of the Endangered Species Act. Such review should be carried out by scientists with no economic or other vested interests in the agreement. It is critical to start the review process early in the project, including the design phase."

The NCCP process is somewhat more open, and recommends that scientific panels called "working groups" be set up to deliberate upon the issues. However there is no programmatic opportunity for peer review, and critiques would again be confined to the CEQA-NEPA process. Some panels may be well noticed and open to the public, but others are not.

When the NCCP process started in southern California in 1991, the state also set up a Scientific Review Panel of five scientists to "develop scientifically credible planning area recommendations, field survey techniques, and biological conservation guidelines." The Panel made broad ecological recommendations regarding contiguity of habitat, and conservation of target species, but left project designers at the local level to implement a plan that would satisfy the requirements. DFG disbanded the Panel in 1993, possibly because it was recommending ecological principles that were likely to be compromised in the local plans. DFG then ended exterior reviews, but in 1994 another ad-hoc group was formed to give advice to those making the local plans.

Lack of scientific review was evident in the Orange County's Central-Coastal plan of Irvine Company lands. The scientific input came only from the scientists paid by Irvine Company or from DFG and FWS staff, and there was no peer review from independent biologists. The plan allowed the siting of three eight-lane toll roads through prime sage scrub habitat, and made poor provision for the protection of an endangered mouse. (In the case of the mouse, one of three colonies was addressed in the Dana Point Headlands HCP in the form of an eight year temporary halt to development, during which relocation of the colony could be attempted. If such relocation failed, the property would either be purchased with undefined funds or would be developed. This could be tantamount to zero mitigation, the only cost to the developer being the costs of delay and half of the costs of the relocation studies.)

CNPS should push for formation of, and inclusion in, a Scientific Advisory Panel developed for the purposes of providing good science to an HCP or NCCP project. If not included on a panel, CNPS should make sure that members of the panel are provided with a detailed account of concerns and best available data.

8.18 PEER REVIEW, REAR-LOADING THE SCIENCE, AND CONSULTANT BIAS

There is no provision in either the NCCP or the HCP process for the peer review of data provided about covered species by the developer's consultant or by government scientists. NRDC has proposed that some sort of

independent scientific oversight committee be set up for each subregion of an NCCP, and that full public participation be encouraged in the review of information. The use of biological consultant firms who tend to color their findings on behalf of the private property owners, and hence get a lot of work, should require peer review as a matter of ethics. Unfortunately, bias is difficult to prove, and could cause a lawsuit to be filed against the accuser. Noss and others (1997) question the value of peer review compared to having impartial scientists on the Plan's design team or scientific advisory panel. They state "... this role as post-hoc judge has very little effect other than to increase public controversy of the plan", and "When scientific scrutiny comes only as "peer review" of what many participants already consider a final plan, opportunities for improvement are minimal".

CNPS should encourage either peer review of the science in HCP or NCCP design, (particularly in cases where there is insufficient involvement of independent scientists in project design), or a panel of independent and qualified scientists in the scientific advisory committee to ensure a sufficiently broad and impartial scientific review.

CNPS should watch for bias in the findings of consultant firms. Acting on this bias might require legal counsel before taking action, and may be difficult to prove.

8.19 ALTERNATIVE PROJECTS AND THEIR IMPACTS ON SPECIES

The design of an HCP or NCCP is a project under NEPA and CEQA, which demand that alternative project designs be presented. CNPS should review all presented alternatives, and should suggest others if needed.

8.20 POOR PROJECT DESIGN AND SPECIES TRIAGE

In spite of the very best efforts of CNPS, a combination of politics and economics may result in a final project design that is likely to result in jeopardy for one or more species. As the compromises are made regarding the many species that are "covered" in a plan, there will finally be a line drawn on a map that might leave the best populations of a plant destined for extirpation. CNPS should, of course, attempt at every step of the process to prevent this from happening, but the scattered distributions of plants could result in questionable protection for some species. It is unlikely that an HCP or NCCP document will admit to potential species jeopardy, as that would not be permitted under ESA and CESA, but it may be obvious that, if legal challenges fail, one or another of the plants will be in jeopardy. It is also likely that some conservation organizations will not join CNPS in a vigorous protest if their goals of attaining open space or securing habitat for a bird are met.

Thus it is possible that no project design with a chance of approval would serve the needs of all of the plants, but that different designs might save "species A" in one configuration, and "species B" in another configuration. This will present CNPS with a choice that will jeopardize one of the two species. While it is outside the scope of this document to define the decision matrix that will be needed in the application of "species triage", the possibility of having to make judgments on the relative "value" of species does exist. Consideration of this dilemma may result in considerable friction within CNPS, and while it is clearly against every CNPS policy to support a program that could result in species extinction, it may be a pragmatic necessity when all else, including legal action, has failed.

It is imperative that debate on the "relative value" of species be private within CNPS, lest the debate be misinterpreted as condoning the potential jeopardy of the "lesser ranked" species. A chapter should consult with the CNPS Rare Plant Botanist, with CNPS' Rare Plant Scientific Advisory Committee (RPSAC), and with botanic experts. Release of CNPS ranking criteria will be dangerous, as any policy statement from CNPS that stated a preference of, for example, "species over sub-species" could taken by agencies for making blanket strategies for the conservation of the state flora, and could be very harmful. In public, CNPS should never state that it is giving up on the conservation of a species because it was "less worthy" than others.

CHAPTER 9: CNPS REVIEW OF PROPOSED MITIGATION

9.1 WHAT DOES MITIGATION MEAN?

Mitigation can take the form of avoidance, minimization of impact, compensation for the impact on or off site, and restoration that will reduce impact at a later date. In all cases it must be supported by biological data, and implemented "to the Maximum Extent Practicable". This last standard should depend on the availability of technology and knowledge, but may be degraded by the unwillingness of the land owner to fund state-of-the-art mitigation. The maximization of profit should not be a reason to perform inadequate mitigation, and full mitigation is required as a condition for the issuance of an Incidental Take Permit.

9.2 PATCH SIZE AND OTHER ECOLOGICAL CONSIDERATIONS

CNPS should review the following tenets as yardsticks for judging the design of a plan.

Basic Tenets of Reserve Design (Source: Southern California Coastal Sage Scrub Natural Community Conservation Planning: Conservation Guidelines (Nov. 1993, p.9)), prepared by the Scientific Review Panel.

- 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.**

Note that these "basic tenets" might be used against CNPS interests in the conservation of isolated patches of a narrowly endemic plant, which might require small and widely scattered preserves. Schwartz and van Mantgem (1997) note that small preserves have great value when the landscape is highly fragmented, and large reserve opportunities no longer exist. These studies in Illinois might apply to circumstances in the Central Valley of California, the Palos Verdes Peninsula, and elsewhere in California.

9.3 RESTORABILITY

In cases where relatively low quality habitat, or supposedly restorable habitat, is set aside as mitigation against take, CNPS should offer a critique of the substituted land's restoration potential.

The San Bruno Mountain HCP, the first of the type, made assumptions on the restorability of butterfly habitat that were far too optimistic about the realities of ridding the site of invasive plant species. Even if the native plants were fully restored to the site, the susceptibility of the site to re-invasion must be considered.

9.3.1 TIME FRAMES

Plant and animal communities are dynamic. A representative landscape may have communities in different seral stages, and may depend on a disturbance such as fire to re-establish early seral stages. The time scale over which a restored community will remain in the restored form, or will advance into a more mature seral stage must be considered in the framework of community restoration.

If a community or plant population requires intensive management to become established as a result of mitigation against take elsewhere, the time frames and costs must be understood, and the implications of not investing fully in those costs should be known.

9.3.2 ROLE OF FIRE

Many California plant communities require fire for renewal. If project design places nearby structures at risk from fire, and would result in fire suppression or preventative vegetation clearance damaging to the ecological needs of the plant community, then those so-called mitigations would be of low value for long term establishment of the community.

CNPS should evaluate if mitigation measures for plants needing fire can be implemented to allow fire to be used as a management tool.

9.3.3 CLIMATIC AND EDAPHIC FACTORS

CNPS should examine the environmental needs of plants “covered” or affected by the HCP-NCCP process. By knowing the soil, slope, aspect, temperature, rainfall, competition and other factors of the plant's distribution, CNPS can gauge the probability of maintaining existing, or establishing new, populations. If the factors are unknown, CNPS should critique any assumption that mitigation will be successful in the absence of this potentially critical knowledge.

9.3.4 STATE OF KNOWLEDGE

CNPS should perform as broad a literature and herbarium search as possible concerning any species “covered” by the HCP-NCCP process. This should be augmented by field observation (see Chapter 8 above).

9.4 COSTS, FUNDING AND MANAGEMENT REQUIREMENTS

The HCP program states "the applicant will ensure that adequate funding for the plan will be provided" (United States Code (1996): § 1539(a)(2)(B)(iii)) The mitigation measures, including land purchase, weed control, fire management and other issues are required to ensure that “protected” habitat is viable habitat. The NCCP legislation makes no mention of funding beyond compensation for agency costs. In the case of the Orange County Central-Coastal subregion, for example, a large portion of its budget relies on uncertain year-by-year unsecured Federal and state appropriations, which are likely to be cut during times of fiscal crisis. Thus while “certainty” is given the developer under "No Surprises", no such guarantee exists for the ecosystem. Funding in existing NCCP plans does not address the recovery of species.

NRDC notes that "The Central-Coastal plan will cost Orange County more than \$50 million over its first twenty years; the price tag of the MSCP for southwest San Diego County, which has far more land to acquire, has been estimated at \$300 million. Adequate sources of funding for these plans have neither been secured nor identified." [Natural Resources Defense Council. May 1997]

Mitigation banking is a potential source of funding, but developer-friendly government has been assigning very small compensation amounts to individual lots being constructed in rare habitat, far too little to purchase land elsewhere. Riverside County has a \$500 per lot payment into a mitigation bank within an active HCP, while the cost of an equivalent lot may be \$20,000-\$40,000.

FWS has used Section 6 of ESA to provide funds directly to state conservation programs that are used for species recovery in HCP's. This is formally called the Habitat Conservation Planning Land Acquisition Program, and in 1997 Orange County received the only funds in California....\$500,000. With southern California land prices, this does not go far.

The Federal Land and Water Conservation Fund should be considered as a source of funds, but the monies are often misappropriated by Congress for other purposes.

CNPS should review the budget and the likely management costs of a plan, and should criticize any "take" where mitigation steps could be jeopardized by funding problems, such as underfunded mitigation banks.

CNPS should encourage use of Federal Land and Water Conservation Fund monies and urge that the funds not be misappropriated.

CNPS should argue for reasonable fee transfers in mitigation banks to allow mitigation lands to be purchased.

CNPS should argue that mitigation banks must be funded throughout their lives, or as defined by the biological requirements of the bank.

9.5 MITIGATION RATIOS AND HABITAT QUALITY

CNPS should determine, if possible, the success rates on reestablishing populations of a specific plant, or augmenting others. The appropriate mitigation ratios may be chosen that will not result in the decline of the species. Management with or without funding should be compared to obtain a realistic estimate of mitigation success.

Shilling (1997) has criticized planned mitigation ratios of 1:1 in the Yolo County HCP which were underfunded by a development fee of \$2,640 per acre. This was " (i) enough to buy one-fourth of an acre of good agricultural land, (ii) at the low end of income to farmers per acre-year, and (iii) represents 1-3% of the profits to be made in developing the acre."

Habitat quality should be reflected in the development of a mitigation ratio. NCEAS's 1999 study of many HCPs showed that general habitat quality within HCPs was lower than the "global" habitat quality existing outside of the area of the HCPs, suggestive of habitat degradation in the face of advancing development.

9.6 EXOTICS CONTROL

One of the great hindrances in the restoration of habitat, and in the security of existing plant populations, is the rising tide of invasive exotic plants. This has proven a stumbling block in the choice of restoration spaces and the estimation of restoration potential in the San Diego MSCP.

CNPS should review all conserved sites and mitigation sites for invasive weed threats. CNPS should consult the body of expertise represented by CNPS, CalEPPC, and University Extension.

9.7 CERTAINTY

The foregoing portions of this chapter list many uncertainties regarding the potential success of mitigation and restorability of sites. As multiple probabilities of success are applied to the various aspects of a project, the cumulative probability of success is produced by multiplying the aspect probabilities together.

CNPS should attempt to perform a probability analysis on the likely success of mitigation, and should challenge any project design that accepts low -value mitigation or overvalues a particular mitigation potential.

CNPS should consider this analysis as part of a challenge to the "No Surprises" concept when mitigation design has uncertain outcome, resulting in potential species jeopardy.

9.8 MITIGATION (CONSERVATION) BANKS

Mitigation banks (also called conservation banks) accept fees that are paid by developers as a mitigation for destroying species or habitat, where the fees support acquisition and protection of a substitute habitat in the bank. The bank is composed of similar habitat that is placed under conservation easements 'bought' by the fee, or may involve the actual creation of a suitable habitat through restoration. The value of a bank is determined by the success with which it can truly duplicate lost habitat for a species, the degree to which land uses in the bank can be controlled and managed for long term species conservation, the exterior threats to the long term stability of the site such as weed invasion or trespass, the degree to which the bank is funded, and the standards of inspection and agency access. Mitigation banks may offer a way in which a relatively cash-poor organization can fund a conservation area, as it could use mitigation fees to repay loans used to acquire the property. If a commercial entity holds a mitigation bank and runs into financial distress, possibly due to a cessation or slowing of the receipt of mitigation funds, successful mitigation could be severely jeopardized. Banks have been used for wetlands, most notably in California for the conservation of vernal pools.

CNPS should review all mitigation banks for their biological integrity and for their long term financial security.

In cases where a mitigation bank is driven by the presence of a single species, such as a fairy shrimp species in a vernal pool conservation bank, CNPS should ensure that the other values of the "taken" habitat are adequately protected in the bank.

CNPS should examine mitigation ratios between the "taken" habitat and the bank habitat.

CNPS should not support "out-of-type" mitigation. For example, four major vernal pool classes are recognized on the basis of substrate, and banking should always mitigate losses from the same substrate type.

CNPS should evaluate the ecological stability of a bank, including its edge to area ratio, similarity of climate, and fire regime.

Any CNPS chapter reviewing mitigation banks should be aware of FWS and DFG publications that discuss all aspects of setting up these banks (see references).

9.9 USE OF PUBLIC LANDS AS MITIGATION

An HCP cannot accept adjoining public lands as conservation areas to mitigate "take" on adjoining private lands unless the pertinent public agency agrees to the action. Several, such as California State Parks, have an explicit policy against acting as a mitigation dumping ground, but several unsuccessful attempts at legislation would have mandated that mitigation be directed, where possible, onto existing public lands. There is a very real risk to using public lands as mitigation, as the use of the public lands is open to congressional or state government action such as the Timber Salvage Rider that might negate the mitigation function. As the duration of an HCP could be a century, the collective memory of the mitigation function of the land can fade with time.

CNPS should protest any mitigation strategy for an HCP or NCCP that is based on land ownership rather than ecological value.

9.10 LARGE PROJECTS AS TIERED PROJECTS

The large area NCCP projects occur at several planning levels, similar to those that might be considered in a tiered EIR. The main planning is done for a region, and at this level the broad framework of preserve design is developed. More detailed plans, usually based around a single city, may follow the large plan, or may develop concurrently. It is critical that the general conservation strategies developed at the level of the regional plan are reflected in the local plans, and that scientific issues are treated rigorously at all levels. Vegetation may be mapped as highly generalized

units in the creation of a regional HCP, with the clear intent that more detailed analysis should be associated with the more detailed allocation of land use under the development of a subsidiary, more local plan.

In the case of San Diego's MSCP, all the preserve design criteria and biological studies were performed during the development of the "large area" plan, and the more localized subsequent plans were considered implementations of the larger plan, and required no further biological studies.

It is likely that political interests and the sources of political influence will vary from jurisdiction to jurisdiction within the framework of a regional HCP-NCCP, and that some deliberate attempts to minimize conservation set-asides agreed upon at the larger regional level may take place at the more local level.

CNPS must review local plans for consistency with regional conservation strategies, and that the level of botanic analysis be proportional to the scale of development.

9.11 THE NATOMAS BASIN HCP AS A MULTIJURISDICTIONAL FAILURE OF PROCESS

As noted in 9.10 above, multiple jurisdictions can produce major failures in mitigation. The National Wildlife Federation, Planning and Conservation League and other organizations have filed suit regarding mitigation standards in the Natomas Basin HCP (filed 1998). Jurisdictions include the City of Sacramento, Sacramento County, Sutter County, SAFCA (the local flood control agency), and Reclamation District 1000 (the local irrigation district). The ITPs would allow them to engage in incidental take of 26 listed and unlisted species, including the giant garter snake and the Swainson's hawk, over a period of 50 years. Under the plan any developer can obtain a 'certificate of inclusion' in the form of a mitigation fee of sufficient value to enable a half acre of land to be protected for each one that is developed. With the certificate in hand, developers began to 'take' species, even though no replacement habitat had been purchased. The agricultural community was given a blanket 'take' permit for rice farming, but with no mitigation required. Thus with no limit on take from agriculture, and a 1/2-to-1 mitigation ratio on non-agricultural land, much of which was allowed to be out of the basin, the continued existence of the 'covered' species within the basin could not be guaranteed. Further more, while ITPs were issued to the City of Sacramento and 'take' had started, the other jurisdictions had not applied or given any indication of where and how they would develop mitigation, thereby degrading any holistic planning in the Basin. The law suit charges that mitigation is speculative, and violates both Section 7 and 10 of ESA.

9.12 PLAN MONITORING

There is no distinction made between compliance monitoring and effectiveness monitoring by FWS. NCEAS (1999) found that in only 22 out of 43 plans was there a clear description of a effectiveness monitoring program and in only 7 out of 43 plans was the effectiveness monitoring programs of adequate design to measure the success of the program. Most plans had come form of compliance monitoring. Perhaps in response to the criticism, the "5-point policy guidance" draft (1999) from FWS does distinguish both forms of monitoring, and encourage both.

CNPS must review monitoring plans for both plan compliance and plan effectiveness.

For a Forest-based HCP, such as that of Headwaters Forest, CNPS should follow the Timber Harvesting Plans that are submitted. If the company is significantly out of compliance, and has a history of non-compliance, the entire HCP should be challenged and any ITP withdrawn until deficiencies are eliminated.

CHAPTER 10 CUMULATIVE IMPACT

10.1 DEFINITION

NEPA defines cumulative impact in Sec. 1508.7:

"Cumulative impact" is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

10.2 USE OF COUNCIL ON ENVIRONMENTAL QUALITY (CEQ) HANDBOOK

In January 1997 CEQ published "Considering Cumulative Impacts Under the National Environmental Policy Act." It will probably become the reference for consideration of these issues. It is available on-line from NEPANet at "<http://ceq.eh.doe.gov/nepa/ccenepa/ccenepa.htm>".

Much of the following is drawn from the CEQ Handbook.

10.3 AUTHORITY UNDER CEQA

CEQA addresses cumulative impacts under Sec. 15130 of CEQA Guidelines. This states that they should be discussed if they are significant (15130(a)). It also states that:

" The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided of the effects attributable to the project alone"

CEQA requires the following elements for an "adequate" discussion.

"Either: (A) A list of past, present and reasonably anticipated future projects producing related or cumulative impacts, including those projects out of control of the agency, **or**
(B) a summary of projections contained in an adopted general plan or related planning document which is designed to evaluate regional or areawide conditions."

The expected environmental effects of all of the considered projects, together with reference to the source of that information, is used to make a "reasonable analysis of the cumulative impacts of the relevant projects. The project EIR must therefore consider these projects in the light of possible mitigations, which may be beyond the reach of the project under consideration. The CEQA section continues:

"With some projects, the only feasible mitigation for cumulative impacts may involve the adoption of ordinances or regulations rather than the imposition of conditions on a project-by-project basis."

10.4 INCLUSION OF CUMULATIVE IMPACTS IN THE SCOPING PROCESS

HCPs and NCCPs may cover a large area where many actions by different agencies may be happening, and where similar large scale planning efforts may be planned for an adjoining county.

CNPS should endeavor to list all possible cumulative impacts in the scoping process for any NEPA or CEQA analysis, and in the framing or design phase for an HCP or NCCP if the opportunity arises.

Low Impact HCPs, when taken together, may have a large impact. Past EAs in an area may have systematically ignored cumulative impacts (as was found in a CEQ analysis of a number of EA's. The remainder of this chapter will discuss possible items for either the scoping phase, or for possible challenge regarding the adequacy of an EIS.

Even a series of small regular HCPs, each of which went through the proper procedures, may cumulatively result in a fragmentation of habitat due to the failure to integrate their conservation areas, and due to the distribution of landowners who chose not to participate in the process. The HCPs in this case may be little better, or possibly worse than current land use controls under CEQA-required consideration of endangered species, which would not allow permit Section 10 "take" of species. Noss and others (1997) state "'Section 10(a) has become more of a permitting process than a mechanism for ambitious, proactive, regional conservation planning".

10.5 GEOGRAPHICAL BREADTH AND MULTIPLE JURISDICTIONS

Impacts may take place at different spatial and temporal scales on the landscape, and many small actions may have a large cumulative effect. It is important to analyze all land uses that might result in impacts to a species, and to consider the time of year when the actions take place. The larger the area involved, the more agencies are likely to be involved. Some agencies may be more prone to examine projects as they come, while others would look at the larger picture.

CNPS should gather information on all agencies that operate in the planning area for an HCP or NCCP, and in the surrounding areas. CNPS should consider which agencies view the region broadly (such as a non-point source pollution program from EPA or a Regional Water Quality Control Board) or narrowly such as a Department of Sanitation. List actions by these agencies that could either directly or indirectly impact a species of concern to CNPS.

Similar actions two different agencies might have different effects due to different attitudes toward environmental damage and goals. An impact might not become significant until the environment in which that action takes place is altered by another agency. Be prepared to find a lot of agencies. Activities in San Francisco Bay were affected by decisions from more than 400 Federal, state, and local agencies. Decisions at one geographic scale may have environmental effects on a much larger scale.

CNPS should ensure that a cumulative impact analysis is defined geographically to address concerns over plant populations.

10.6 TOO MANY EA'S, NOT ENOUGH EIS'S

CEQ has shown that the increased use of EAs rather than EISs has produced insufficient analysis of cumulative impacts. Nationally each year about 45,000 EAs are prepared compared to 450 EISs, but an EA is usually considered low cost, fast track, usually lacks full analysis of non site-specific issues, and is highly focused on a single action and its mitigations. In an analysis in 1992, only 39% of a selected group of EAs mentioned cumulative impacts, and only half of those offered scientific analysis to support conclusions of the EA.

CNPS should examine the environmental documents from earlier projects and evaluate the degree to which cumulative impacts are addressed, and also should "mine" those documents for pertinent information.

10.7 PAST, PRESENT AND FUTURE

Cumulative Impacts accumulate from past actions and from the failure of mitigation for the actions. They multiply through many actions at different spatial scales currently taking place, and can be projected into the future using trends analysis, analysis of long term build outs from General Plans, and other methods such as Population Viability Analysis.

CNPS should document past, present and future trends that may be harmful or might benefit species. Successful and failed mitigation, if any, must be documented as evidence in making reasonable projections for a cumulative impact analysis. Note that the NCEAS study of over 200 HCPs showed that the amount of habitat needed to ensure the viability of 25 covered species was simply not known, and only 33% of the HCPs knew the percentage of the global population that would be impacted by the plan for the covered species (NCEAS 1999).

The CEQ notes that analysis of future actions in EAs and EISs is commonly flawed by consideration only of planned projects by the lead agency, and not of projects by other agencies.

CNPS should check to see if analysis of future actions was sufficiently inclusive, and that the analysis of issues would be generally acceptable in the scientific community.

10.8 TIME FRAME FOR AN IMPACT TO BECOME EVIDENT

Some impacts, such as the lack of regeneration of oak trees, might not be evident while oaks remain on the site and will become obvious only when the landscape becomes increasingly treeless many decades into the future. Such changes may be developed by a change in grazing practices, which would not immediately result in a perceived impact to the trees. A foot trail planned to be near but not immediately through a rare plant population might be expected to widen over time as use increases, eventually bringing people close to the plants and acting as an avenue for weed introduction. Thus a new housing development that increases foot traffic may have a cumulative impact on the plant population.

CNPS should evaluate indirect impacts or seemingly small impacts, and attempt to model their effect over time. This is particularly important where a plant population is represented by several small populations in somewhat different environments.

A population may serve as the genetic bank for the species at times when the other populations are decimated by drought or other factors, but the importance of this effect may not be evident until the stressful event takes place.

10.9 IMPACTS OF SUCCESSIVE ACTIONS

When a species is impacted by development, the cumulative impact may not be evident when an otherwise common species is "taken", and early takings may not put the species anywhere close to jeopardy. As the habitat becomes more fragmented, genetic isolation, edge effects and other factors become increasingly more destructive until at some point the populations are unable to sustain themselves.

CNPS must analyze the amount of take that would put a species in jeopardy, and recognize the point where species viability is threatened. The nature of the threats should be documented with examples of the effects of earlier takings. NCEAS (1999) recommended that 'take' and 'impact' are different issues, and that although take was predicted in 73% of the studied plans, it was not quantified in 49% of HCPs.

10.10 MANAGEMENT OF NON-COVERED SPECIES AND CUMULATIVE IMPACT

An HCP or NCCP project may cover a large area, but only consider the rarer species. While CNPS will usually consider plants on CNPS lists of greater priority than unlisted plants, the implications of large scale habitat destruction for otherwise common species is of concern. For example, coastal sage scrub was an abundant vegetation type a few decades ago, and now is the signature community of several large scale NCCPs. The systematic lack of consideration of the common plants might render them first uncommon, and then threatened. The effect of a very large project, or a series of such projects, may have an extremely large cumulative impact on currently common species.

CNPS must insist that the general impacts of an HCP on plant communities and on plants not "covered" due to a presumed abundance and lack of threat be addressed in an HCP or NCCP, so that cumulative impacts can be assessed. For this reason CNPS should consider the entire plant inventory when examining the impacts of an NCCP or HCP, and not just the rarer elements on the CNPS list. There has been no systematic collection of case examples of the progression of a formerly common species to a condition of scarcity, and it is recommended that CNPS initiate and maintain a case file.

10.11 SYNERGISTIC EFFECTS

CNPS should consider actions which, while on their own would have little impact, in concert with other actions might produce environmental harm.

Such synergistic effects might be a softening of the market for beef cattle and a rise in the price of wine, both of which could threaten vernal pools as ranches convert grazing lands to vineyards. Thus mitigations that depend on grazing as a dominant land use may fail when agricultural commodity pricing changes.

10.12 TOOLS FOR ANALYSIS

The following can be useful in cumulative impact analysis:

- **ecological modeling and principles to determine if habitat fragmentation, edge effects, invasion by exotic plants and other issues are likely to reach unacceptable thresholds relative to a particular project or one of its successors.**
- **trends analysis based on past and current actions and land use changes, to project most probable future actions. This could include success rates of mitigation, rates of weed invasion, trends for associated wildlife species richness and other factors.**
- **identification and sources of data used in analysis and assessment of cases where projections of impact rely more on conjecture than on adequate data and experience.**
- **GIS and large scale aerial analysis, and critique of arguments based solely on such data and lacking field validation.**
- **EPA's Environmental Monitoring and Assessment Program (EMAP), which sets up rigorous standards for sampling ecological effects and offers an avenue for quantification of cumulative impacts.**

Data for cumulative impact analysis may be portrayed in a number of ways. CEQ suggests checklists, matrices, system diagrams, models, trends analysis, map over-lays and GIS maps as useful.

CHAPTER 11 ADAPTIVE MANAGEMENT AND "NO SURPRISES"

11.1 ADAPTIVE MANAGEMENT AS COMPLIMENT OR CONFLICT WITH NO SURPRISES

In 1994 the "No Surprises" policy was developed as an integral part of the HCP process, and a similar policy operates within the NCCP process. The idea was to encourage landowner participation in the process by giving assurance that, once land management agreements are in place, they cannot be renegotiated at a cost to the landowner if new species listings take place, or that the condition of a species changes. In 1997, partly as a result of settlement of *Spirit of the Sage Council, et al. v. Bruce Babbitt, Secretary of the Interior, et al.*, there was a review of "No Surprises" policy, and new language for inclusion for ESA was published for public comment. These new regulations were published as "No Surprises" assurances (February 23, 1998, 63 FR 8859).

"Adaptive Management" is addressed by The President's Council on Environmental Quality (CEQ) 1997 Report "The National Environmental Protection Act, A Study of its Effectiveness after 25 Years", which calls for us to "predict, mitigate, monitor, and adapt". "No Surprises" negates "adapt".

While government was at the same time pushing "adaptive management" policies, the FWS was adopting an oppositely directed freeze on future management opportunities. The "No Surprises" policy would be applied over the entire life on an HCP or NCCP agreement, which could last a century. All of us expect a surprise or two in that much time. NCEAS (1999) reviewed the duration of 192 HCPs, finding 7 designed for 99 years, but 60% of HCPs had life spans of 20 years or less, and there was a very poor correlation between acreage and duration. FWS (1999) in the "5 Point Plan" noted that pending HCPs average 30 years, and operating HCPs average 25 years. A significant number lasted for less than 5 years, and would presumably be linked to such projects as road building and utility corridor construction. While "No Surprises" might seem reasonable for these shorter lived projects, it should not be applied to those of great duration.

In response to increasing criticism, FWS made Adaptive Management one of the "Points" in the 1999 "5 Point Plan", which claims there is no conflict with "No Surprises". While it is clear that a range of options can be agreed upon within an Implementation Agreement, and agreements should include "milestones" where the species condition can be reviewed, analysis of the "5 Point Plan" reveals that potential conflict remains.

The 5 Point Plan (1999) provides some examples of "Adaptive Management" such as the Natomas Basin HCP in California. This HCP, currently under legal challenge, has an adaptive management strategy that incorporates ongoing research by the U.S. Geological Survey's Biological Resources Division to determine the giant garter snake's population biology and habitat use. To use this example is troubling to CNPS, as it implies that FWS will issue an ITP that cannot be justified on the basis of science or a full knowledge of the impact to the snake. **It appears that, in this case, adaptive management really means "we'll fix it later, we hope".**

FWS goes on to say "If additional information from the study suggests a different approach is appropriate to meet the conservation needs of the (snake), the preserve location(s) could be modified and the habitat type emphasized in the restoration could be changed within the terms of the adaptive management strategy of the HCP's operating conservation program. If the full range of effects of a proposed project is unknown at the time of HCP negotiation, a monitoring program combined with an adaptive management strategy could determine the actual extent of effects and then allow for agreed upon shifts in management strategies. "... For example, a study to determine the specific effects of grazing on a butterfly, based on a range of possible grazing pressures, could help establish a long-term management strategy. The HCP's adaptive management strategy could outline the potential range of grazing management regimes, but since the extent of the butterfly's tolerance of grazing may be initially unknown, the operating conservation program could start with a more cautious grazing regime and be subject to subsequent relaxation, if appropriate. "

CNPS should review very carefully any Adaptive Management strategies associated with an HCP or its IA that appear to be acting as 'cover' for general ignorance of the impacts of the covered activity or land use. In particular the intersection of non-alterable portions of the plan, protected under No Surprises Policy, may offer too few options for project redesign under Adaptive Management.

FWS should not issue an ITP unless it is sure that it can "fully mitigate" the species take. If the degree of uncertainty is large as to what, if any, mitigation would work, any large scale

or significant 'take' should be prevented until mitigation can be proved to work. On the presumption that the first management plans would have been deemed the best of a selection of alternatives, different management options allowable under Adaptive Management are less likely to prove successful, and so the mere presence of an adaptive management policy may not fulfill the requirements of the Endangered Species Act.

CNPS should challenge the quality of science and any apparent constraints on Adaptive Management that results from application of "No Surprises" policy at every opportunity. "No Surprises" gives certainty only to the landowner, and not to the species.

11.2 CRITIQUE OF "NO SURPRISES"

CNPS should realize that "No Surprises" does not mean that FWS cannot act to change management strategies on developable HCP lands, but that costs would be borne by the public, and changes made by the holder of the Section 10 permit are voluntary. **The degree to which the future of a species may be determined by voluntary and not mandatory actions is of concern to CNPS.**

CNPS should challenge quality of science and the failure to address adaptive management in the "No Surprises" policy at every opportunity, although it has not yet been overturned in court action and clearly will remain in place in some form to attract landowner participation in the process.

CNPS should critique the manner in which data is gathered, the amount of field validation, the degree to which mitigation success has been more an act of speculation than something proved successful over the long term, the funding of monitoring and management, the knowledge about species "covered" by the plan or otherwise impacted by the plan, and other scientific issues that would collectively add to uncertainty on the outcome of a project.

CNPS must make planners aware of the difficulty of predicting the path of an existing ecosystem, or of a modified ecosystem created in part to mitigate species and habitat take. Prediction uncertainty will increase with the geographic size and the number of species that are encompassed. The views of experts may be directed only to certain elements in the system and not the performance of the whole, and even among those experts there will be a divergence of opinion that may not be reflected in the recommendations of a single scientist.

CNPS should publish at any opportunity the conflict between an assumption of underlying stability implicit in "No Surprises" policy, and the fluctuating and interacting forces of a multicomponent ecological system.

The presumption in "No Surprises" policy that all future land use renegotiation costs be borne solely by the public will not be in the interest of species protection. If there is no further obligation to the landowner, sloppy mitigation against impacts to species within an HCP-NCCP may occur, as the costs of future crises and species jeopardy will not be their responsibility. Where species protection costs must be borne by the public because of insufficient protection provided as mitigation for development, those costs should be considered a public subsidy of that development.

"No Surprises" policy cannot function if there is no guarantee of mitigation and management funding in the HCP-NCCP. Mitigation funding and contingency funding for unanticipated surprises should be funded "up front" from contributions from affected landowners and from the public sector, and funding should not be dependent on year-by-year appropriations from state and Federal government. In cases where mitigation banks are used, the continued funding of those banks must be a certainty.

"No Surprises" policy is especially egregious when combined with an HCP policy that does not stress species recovery, and relies on "minimize and mitigate". In managing in this manner, it may be difficult to implement the species recovery functions of ESA as new

evidence on recovery strategies becomes available. ESA's purpose is to use "all methods and procedures which are necessary" to recover a species [16 U.S.C. §1531(b); §1532 (3)].

CNPS has observed that reserve designs are usually smaller and of different shape than those which most favor the biological requirements, and can be compromised by toll road construction and other "necessities" of the development community. If reserves have insufficient range of ecological type, even in cases where they represent the "best" of a habitat, they may fail if environmental conditions change. In these cases, unaffected areas outside the reserve may be of critical importance for the survival of a species.

CNPS recognizes that long term biological monitoring is necessary for the successful implementation of species conservation goals within an HCP-NCCP. Monitoring should be a tool that works with adaptive management to fulfill the conservation goals of an HCP-NCCP, (but may be meaningless in cases where "No Surprises" policy is in place).

CNPS should insist that where a "No Surprises" policy is in place, scientists would have to be certain that the overall conservation strategies will be successful. "No Surprises" policy should be used in a limited way or not used at all when there is much uncertainty regarding the likely success of mitigation measures.

CNPS is concerned that the inclusion of non-listed species under "No Surprises" policy will result in land use decisions based on poor knowledge of the species, due to the lack of funding directed to study of plants not protected by law or subject to recovery plans. In these cases, the inability to apply adaptive management could quickly drive species to jeopardy. Thus "No Surprises" policy should only be applied if sufficient knowledge exists on the non-listed species and when data collection and expansion of knowledge is allowed to continue after land use decisions are made.

CNPS should be aware of the proposal by FWS to link "No Surprises" to a newly proposed Candidate Conservation Agreement (CCA) Program, in which landowners can develop the essentials of an HCP for lands that do not contain FWS listed species, but may contain species that would be potentially listed in the future. Just as these species can be included in an HCP along with the listed species that drive the HCP process, a CCA would develop conservation measures for non-listed species, and then cover those landowners with a "No Surprises" protection. CNPS concerns in regard to CCAs are the same as those discussed for including non-listed species in an HCP and then applying "No Surprises" to them.

CNPS should protest the use of "No Surprises" if the basic "Conservation Guidelines" of the Scientific Review Panel on reserve design have not been met in the development of the plan.

11.3 ADVANTAGE OF ADAPTIVE MANAGEMENT FOR MANAGEMENT-CENTERED HCPS

Some HCPS are associated with the permanent destruction of habitat, as in any case involving development. Some are associated mainly with the management of the land, as in the case of the Headwaters HCP, Plum Creek HCP and other timber-related plans. In these plans the age structure of forest, connectivity and edge effects of different aged stands, nature of fire and beetle control and other issues are judged against their impact on species such as spotted owl. For a large area the land owner may have many parallel options that would enable economic goals to be met, and it is clear that an agreement to map them out in an IA would be of great advantage. The ability to adapt and change lessens with diminished acreage.

American Lands Alliance (1998) believes that the burden of proof should be on the landowner, rather than the public, to show that the plan protects listed or covered species

11.4 ALTERNATIVES ANALYSIS IN THE CONTEXT OF ADAPTIVE MANAGEMENT

Generally speaking, the larger the area that is covered by an HCP and its Incidental Take Permits, the more versatile the plan can become. For this reason the Plan, and the accompanying CESA-NEPA documents, should examine a number of options for the long term management of the land. Each should be examined in terms of minimizing 'take' for all covered species. For forest HCPs, this will involve taking a very long term analysis of the landscape, and where old growth forest and late seral stands are concerned, this may require analysis for periods longer than a century. Tools such as Population Viability Analysis should be used in making landscape-level analyses of impacts. Failure to recognize and discuss a meaningful number of alternatives became a major stumbling block in the design of the Headwaters HCP, although in that case economics and politics began to play a larger role than biology in the selection of alternatives.

11.5 ADDITION OF COVERED SPECIES AND NO SURPRISES

"No Surprises" was designed to give the landowner the security the "a deal was a deal", and that any additional listings of species would not affect the Implementation Agreement (IA). This if a species is newly listed, and would be 'taken' by the activities agreed to in the IA, FWS will allow 'take' to occur. While such issues may have been covered in a Candidate Conservation Agreement (see 11.2 above), the HCP should be sufficiently adaptable to allow some alteration of the IA.

11.6 THE STANFORD LETTER ON NO SURPRISES

"A Statement on Proposed Private Lands Initiatives and Reauthorization of the Endangered Species Act from the Meeting of Scientists at Stanford University" contains a section on "No Surprises"

"More aptly labeled "fair assurances" to landowners, no surprises policy promises that if private landowners protect targeted species under a Habitat Conservation Plan or the equivalent, they then will not have to underwrite future conservation requirements that may develop due to new information or changed circumstances. Should the species require further conservation efforts, the costs would be largely borne by the public rather than the landowners.

A no surprises policy is troubling to scientists because it runs counter to the natural world, which is full of surprises. Nature frequently produces surprises such as new diseases, droughts, storms, floods, and fire. The inherent dynamic complexity of natural biological systems precludes accurate, specific prediction in most situations; and human activities greatly add to and compound this complexity. Surprises will occur in the future; it is only the nature and timing of surprises that are unpredictable. Furthermore, scientific research produces surprises in the form of new information regarding species, habitats, and natural processes. Habitat Conservation Plans, therefore, are inevitably developed and authorized under conditions of substantial uncertainty and may ultimately prove inadequate. Unless conservation plans can be amended, habitats and species certainly will be lost.

We appreciate that no surprises policy is not a guarantee that conservation plans will not change, but a contractual commitment to shift some of the financial burden of future changes in agreements to the public. In that light, the following features should constitute minimum standards for HCPs with no surprises assurances.

- First, it must be possible to amend HCPs based on new information, and it should not require extraordinary circumstances to do so.
- Second, to underwrite program changes when parties other than the landowner request and justify them, there must be a source of adequate, assured funding that is not subject to the vagaries of the normal appropriation processes. We expect that the costs of fixing inadequate HCPs may be substantial.
- Third, mechanisms to ensure that long-term conservation plans will be monitored adequately are essential. Monitoring habitat changes or ecosystem functions cannot substitute for the monitoring of target species. Moreover, new scientific information from monitoring should be incorporated into management as that information becomes available.
- Fourth, HCPs must clearly articulate measurable biological goals and demonstrate how those goals will be attained under the plans. Plans should not undermine the recovery of listed or vulnerable species.
- Fifth, assurances to landowners should only be extended for those targeted species for which the plan articulates species-specific goals that further conservation in a regional context, rather than in a local, piece-meal fashion."

The scientists who signed the letter which contains the quotation above are held in high regard, and selective quotation from the letter may be useful in support of CNPS arguments. Another excellent source of arguments against "No Surprises" was made by Dr. Shawn Smallwood in a White Paper for Spirit of the Sage Council (reference 12). It covers much of the ground in the Stanford Letter, but also offers an excellent discussion of the inherent nature of science's acceptance of surprises, and the violation of good science that is therefore demonstrated by the "No Surprises" policy.

Michael Soulé, conservation biologist from U.C. Santa Cruz sums up the discussion in this chapter:

" When there's no science behind the HCP and, when on top of that, you add no surprises,..... I believe that, in many cases, HCPs do more harm than good."

CHAPTER 12: NCCP CORE GROUP FINDINGS

12.1 ROLE OF NCCP CORE GROUP AS IT RELATES TO SOUTHERN CALIFORNIA NCCP PROGRAMS

The NCCP Core Group is a state funded group of scientists that was convened to evaluate the scientific processes underlying the NCCP process. It works in ecological generalities rather than refereeing a particular project, but its recommendations and findings provide a useful checklist for CNPS review of a particular project. Consulting one or more of the members of the core group in regard to policy issues may be useful. Their report provides information for scoping a project, for evaluating the facts and assumptions underlying decisions in the project, and evaluating the project under the NEPA-CEQA process.

Note that much of this chapter, which is copied directly from Core Group's Web page "Research Guidance to Address the Needs of Land Managers" at "<http://ceres.ca.gov/cra/NCCP/rg1.htm>", poses questions for which there are, as yet, no clear answers. This can be used to challenge any statements of certainty concerning the design of a project.

12.2 CORE GROUP MEMBERS

Ed Almanza: The Superpark Project

Mike O'Connell: The Nature Conservancy

Jon Atwood: Manomet Observatory for Conservation Sciences:

Tom Oberbauer: Department of Planning and Land Use: County of San Diego

Peter Bowler: Department of Ecology and Evolutionary Ecology: University of California at Irvine

John Rotenberry: Department of Biology: University of California Riverside

Ted Case: Department of Biology: University of California at San Diego

Jerre Stallcup: Ogden Environmental and Energy Services

Larry Eng: California Department of Fish and Game

Peter Stine: California Science Center: Biological Resources Division: U.S. Geological Survey

Gail Kobetich: U.S. Fish and Wildlife Service

Mike Stroud: Natural Resources Branch: Department of the Navy

Rod Meade: R.J. Meade Consulting

Sherry Teresa: Center for Natural Lands Management

Patrick Mock: Ogden Environmental and Energy Services

Facilitators: Chris Bernabo: Tom Carter: Science & Policy Associates, Inc.

12.3 INFORMATION NEEDS

The Core Group reorganized managers' information needs into a taxonomy to relate the needs of natural resource managers with categories familiar to research funders and managers. The group developed the following list of categories of managers' research needs. The resource managers in the group assigned broad priorities to the categories using two considerations: urgency (short-term requirements) and importance (requirements related to issues with great potential impact). The rankings for each, with 1 signifying the highest priority and 3 the lowest, appear in Table 1 below.

In Table 1, the categories of management information needs, the specific information needs, and the priorities assigned to them should be considered only in the context of the following qualifiers:

1. They are the result of consensus generalizations by a diverse group. For specific sites or issues, priorities may vary.
2. They represent a range of required research commitment. Some could be addressed by a single one-year study, while others could take decades.
3. They are stated broadly so that they can be tailored to specific situations.
4. The information needs and associated priorities will change over time as gaps are filled, needs refined, and new gaps identified.

TABLE 1

Category of Information Need	Urgency	Importance
A. Fire	1	1
B. Inventory and Monitoring	1	1
C. Species Persistence/Demographics/Genetics	1	1
D. Administration, Socioeconomic Considerations, and Implementation	1	1
E. Exotics and Invasives	2	1
F. Public Use	2	1
G. Biophysical Processes/Ecosystem Function	3	1
H. Reserve Design/Biogeography/Landscape Processes	2	2
I. Restoration and Enhancement	2	2
J. General Species, Program-Wide, and Regional Concerns	3	2
K. Historical Land Use/Succession	3	2
L. Habitat Management Practices	3	2
M. Influence of Adjacent Land Uses	3	2

12.4 BROAD RESEARCH GAPS

Past and ongoing research may only partially address a small percentage of the managers' questions identified by the Core Group and others. **Few, if any, managers' needs will be fully addressed by current and planned research.** For some of the broad areas listed above there may be no research activities specifically related to the managers' needs.

Based on the priorities assigned to the categories of information needs and the lack of relevant research activities, the most significant information gaps are:

- * Inventory and Monitoring
- * Administration, Socioeconomic Considerations, and Implementation
- * Species Persistence/Demographics/Genetics
- * Fire

12.5 FIRE

For the last two decades, there has been a great deal of controversy among researchers regarding the role of fire. This controversy involves those who feel that fires under natural conditions would have occurred with frequent regularity versus those who feel that fire was a more irregular event. Research to substantiate positions on either side has involved reproductive success in burned areas for Tecate Cypress and other chaparral plants. It has also involved the examination of ecosystems in northern Baja California where uncontrolled fire is theorized to occur with a more natural frequency than in southern California. Judging from available research, the ramifications of managing for the wrong frequency of fire could be serious enough to significantly alter the vegetation that occurs in an area, including the elimination of key species of plants and animals. Since the habitats that will remain in preserve systems that result from the Natural Community Conservation Planning will be only a portion of the natural landscape that previously existed, there will be little room for error when planning for fire. Furthermore, with larger human populations adjacent to the preserve systems, there will be continually more opportunity for unnatural fire starts. In addition, there is a necessity for land and fire managers to decide when it is important to risk lives to stop the spread of a fire through a preserve area in order to save particular natural resources. Therefore, it is imperative to understand the response of individual species and vegetation communities to fire conditions, frequency as well as seasonal temporality, in order to manage preserve systems in a manner that will perpetuate the species.

12.6 INVENTORY AND MONITORING

In southern California land managers and planners are faced with difficult land use decisions over an increasingly limited resource base. Large investments have been made to support the reserve systems being established there, and

long-term management is anticipated to fulfill the expectations of the reserve network. Managers should be warned of significant changes in the environment at the earliest opportunity, when options for addressing the problems are greatest. Moreover, land managers should be equipped with information and tools to detect and interpret ongoing changes in coastal sage scrub, both positive (e.g., restoration activities) and negative (e.g., declining populations).

Well designed strategies could help managers distinguish unacceptable levels of change in the system--often anthropogenic--from inherent changes due to stochastic variation, successional changes following disturbance, and cyclical fluctuations. Managers should be able to identify the vital signs of the ecosystem that will allow efficient means of detecting these significant kinds of change. Regional monitoring strategies should enable managers to identify thresholds of change that would, in turn, trigger a management response. Individual monitoring programs should be able to contribute to an understanding of conditions throughout the range of a species of an ecological community. All efforts should establish a feedback mechanism that will support adaptive management shared by all federal, state, local, and private concerns in the NCCP planning area.

In addition, it is important to recognize that inventory and monitoring -- if thoughtfully designed and coordinated-- can provide the best possible means of obtaining data to address all of the major topics important to land managers. NCCP preserves are ideal opportunities for in situ hypothesis testing. Routine inventories and monitoring, supplemented with focused data collection of specific variables relevant to ecological processes and interactions, can be a cornerstone in the strategy to cost-effectively meet land managers' information needs.

12.7 SPECIES PERSISTENCE, DEMOGRAPHICS, AND GENETICS

Individual species, particularly listed species and/or certain species deemed to be targets for natural community conservation efforts, continue to be focal issues for conservation programs. In order to manage for the long-term conservation of these species, managers need to understand the population demographics and ecological relationships of these species. This understanding applies to a given species and its ecological relationships at the landscape level, the intrinsic demographic variation of the species, and the genetic diversity among and within populations of the species. Depending on the species and its role in the conservation of a natural community, any of these issues may be relevant.

12.8 ADMINISTRATION, SOCIOECONOMIC CONSIDERATIONS, AND IMPLEMENTATION

The Core Group identified several considerations to guide implementation of the framework list of information needs. Most of these relate to overall coordination of on-going and future research. Recognition of the need to enhance coordination among the many research efforts related to coastal ecosystems arises from two sources: (1) The desire--which the Group felt to be broadly held among the community of researchers and managers--to maximize the collection of valuable data, ensuring that field activities serve as many management-oriented research needs as feasibly possible; and (2) Regional management issues that require collation of geographically diverse data sets and some degree of macro-management of research.

These major concerns speak directly to an ever-present issue--the need to stretch management-supportive research budgets as far as possible to benefit coastal sage scrub management throughout southern California. Rather than introduce an additional layer of bureaucratic difficulties, the role of research coordination at the regional scale is conceived of as a means of seeking out opportunities to maximize efficiency of multiple, simultaneous research efforts. The key administrative information needs are described below.

1. There is a need to establish and maintain a regularly updated data base of information valuable to preserve managers. The data base should include major findings from past, ongoing, and future studies on the management-oriented topics identified in this framework. Information should be presented in a format that is user-friendly to managers. It should: 1) present findings on relevant topics, 2) assess the information (e.g., its applicability to one or more geographic subregions, and the relative certainty of its findings), 3) cross-reference similar studies and their findings, 4) synthesize findings with other findings, and 5) refer to other ongoing or planned research in the subject area. Findings should be presented in a manner that facilitates their application to making and implementing management decisions. The data base should include reference maps, ideally in GIS format, that identify research study sites, planning areas, and areas managed by specific entities, to facilitate coordination among managers and interpretation of research results. Maintenance of the data base should include mechanisms to update and incorporate feedback frequently from managers on the applicability of research results.

2. In addition to management needs, the body of information generated by research should be made readily available to inform decisions related to preserve planning and establishment. This may require additional formatting or organization of the data base to facilitate extraction of information useful to front-end planning and preserve design.

3. The benefits of research should be synthesized, to the degree possible, to guide the decisions of managers and planners. Many questions posed by managers do not necessarily require new research but can be addressed by a synthesis of existing information. Synthesized information should inform an ongoing process of analysis that seeks to establish criteria for successful habitat management through interactive dialogue among researchers, managers, and administrators.

12.9 EXOTIC PLANT AND ANIMAL SPECIES, INVASIVES, AND OTHER PROBLEM SPECIES

Invasive exotic plant and animal species pose threats to the ecological integrity of natural reserves. Within NCCP reserves there are large areas dominated by black mustard, globe artichoke, non-native grasses, and other exotic plant species. Over seventeen percent of the California flora is comprised of non-native species, and within the coastal sage scrub community many stands are composed of over a third introduced taxa. In wetlands exotic presence often exceeds that of upland communities, ranging to above fifty percent non-native plant species, though not all are ecological problems.

Among the research challenges with non-native plants are questions such as:

- Can communities created through restoration or mitigation actions resist and reverse the presence of exotics in heavily infested sites?
- Can existing stands be "recovered" to sustainable, non-deteriorating patches?
- What is the role of nutrient alteration in changing the competitive interactions and colonization rates of exotic and native plant species?
- What is the role of parasites, pathogens, nematodes, and other soil invertebrates on the population biology of specific plant and animal species?

Some exotic plant species compete for nutrients, light, and water with sensitive native species, ultimately excluding them. Exotic animals such as Argentine ants, which displace native ants, cowbirds are significant nest parasites of several native passerines, and starlings may compete for tree hole nest sites with woodpeckers may have a large effect on the native flora by affecting seed dispersal. Identifying the circumstances that cause some species in some situations to become pests in southern California biomes is an important research area, particularly since the reserve edge length around reserve fragments is so extensive and is occupied by exotic species which could be invasive. These artificial habitats are not the natural "edges" and serve as corridors and extended entryways for non-native species.

Feral species and human generated dominance of urban tolerant mesopredators is a concern in an edge-rich reserves. Some native species, such as raccoons, striped skunks, and coyotes, thrive in urban/suburban situations and may become problematic. Though among the native bird fauna only around a fourth are able to inhabit "urban forests," some native species such as ravens reach large numbers in urban/suburban settings. The effect that the higher abundances of these edge-thriving urban forest species may have on predator-prey dynamics and competition with more restricted and sensitive non-edge species is not known. A change in the balance of animal life while have an effect on the rest of the ecosystem.

A significant problem lies in understanding the kinds of invasives that could lead to cascading community effects at higher trophic levels. The warning signs must be recognized in monitoring programs so that they are detected rapidly and early in the invasion cycle. It is important to recognize that "edges" are not just reserve boundaries, but include roads, trails, firebreaks, and riparian and alluvial areas within reserves. Further study is needed to develop chemical and mechanical control methods for exotic plants within coastal sage scrub mosaics in reserves.

12.10 PUBLIC USE

The process for creating open space preserves involves a high level of public input. If the preserve was created through the necessity for mitigation of one or many development projects, it involves the nearby community groups

as well as the public entity that ultimately approved the project. If the preserve was created through the use of publicly generated funds, it may have involved a positive vote in the ballot box by thousands of individuals. All of those involved in the creation of open space preserves have a feeling of ownership and a vision for what is appropriate for the preserve. In most cases, this translates into some form of demand for public use. Public uses which may be requested within a preserve include a diversity of activities which range from observation points for viewing wildlife, to off-highway vehicle trails and hang-gliding landing and takeoff points. Furthermore, there are often requests for utility infrastructure within preserve areas. However, natural communities and ecosystems which are intended to be protected within the preserve may be extremely sensitive to some forms of public use and the associated disturbance.

In order to fully understand the implications of particular uses within the preserve, there needs to be research which evaluates the various types of uses and the level at which they create unacceptable impacts. This type of research is critical because decision-makers are currently deciding the types of public uses to be allowed within a preserve. This type of research information is necessary to provide information to those decision makers so that uses that are harmful for the resources can be avoided or at least redirected to areas where they will be less damaging.

12.11 BIOPHYSICAL PROCESSES AND ECOSYSTEM FUNCTION

Although much of the emphasis on conservation management relates to maintenance or manipulation of biotic components (i.e., individual plant and animal species populations or communities), management also needs information on non-biological aspects of the local ecosystem to be fully effective. Although many ecosystem and associated physical processes may be beyond the ability of managers to manipulate, these processes set the context in which the biotic components respond (or not) to management efforts. For example, the interaction of precipitation with topography (two physical attributes of an ecosystem) determines the potential for soil movement or erosion, which in turn is both influenced by and influences local vegetation composition. Likewise, the apparently trivial observation that water moves down slopes has potential management implications. For example, sheet flow along surfaces can move propagules (e.g., seeds); if one is attempting to eradicate an invasive plant over a period of time, it makes more sense to work from the top of a slope down, so that recently cleared spaces do not become reinfested by input from above.

Nutrient cycling is one important feature that can also control ecosystem structure. In southern California, nitrogen cycles (which may strongly influence plant community composition and productivity) may be altered due to the greatly enhanced input of atmospheric nitrogen from air pollution. Plant species formerly limited by low nitrogen soils may now achieve much higher abundances, and thus in turn negatively impact species with which they may compete.

The two examples given above also illustrate how understanding ecosystem and physical processes is interrelated with other information needs. Adjacent land uses, for example, can affect precipitation runoff (either increasing or decreasing it). Uses may also affect the potential for chemical contamination. Perhaps one of the most significant short term ecosystem processes is fire (both its frequency and intensity); this process is important enough to rate a category of its own.

Land managers are charged with sustaining more or less natural ecosystems. Emerging theory relating to ecosystem sustainability focuses on interactions among climate, soil resources, major functional groups of organisms, and disturbance. Feedbacks among these components within ecosystems damp major oscillations that might otherwise lead to ecosystem instability. Thus it is imperative that we understand how these components relate to each other in each of the systems we wish to preserve, so that we can make changes (e.g., alter present disturbance regime by changing fire management practices) that promote the long-term persistence of the ecosystem structure we desire.

12.12 RESERVE DESIGN, BIOGEOGRAPHY, & LANDSCAPE PROCESSES

A landscape assessment, across an entire ecoregion or other regional context, provides a unique perspective that enables an evaluation of entire systems and their component species. Only from this perspective can a manager understand the consequences of any single management action upon an entire species or an entire community. In this era of ecosystem management and multi-species or multi-habitat conservation strategies a regional perspective is needed. This perspective becomes imperative if managers are to succeed in sustaining a network of natural reserves within a matrix of urban and agricultural lands, as will exist with the coastal sage scrub lands in southern California.

Managers must be equipped with this knowledge so they are aware of the implications of their actions to species and ecological communities that span the network of wildlands within the NCCP planning area.

The fragmented nature of the reserve system in southern California requires a landscape perspective. Ecological systems have inherent gradients across the landscape as changes in climate, soil, elevation, and other physical environmental factors are manifested in the biological communities. These gradients are typically gradual under natural conditions and plant or animal species evolved in response to such gradients. What managers face today, particularly in the southern California environment, is the challenge of maintaining self-sustaining systems on lands that adjoin radically different land uses (e.g., housing, industry, agriculture) where gradients are abrupt and these adjoining uses pose threats to the ecological integrity of the natural lands. The emerging system of reserves in southern California will inescapably exemplify this phenomena.

Several other factors suggest a high priority for landscape analysis. Self-sustaining populations of plant and animal species depend on a variety of ecological factors under which these species have evolved. Dispersal capabilities, resiliency to natural perturbations, and environmental and demographic fluctuations are among the ecological factors that influence the ability of a species to persist. To adequately understand how these factors affect species persistence requires a comprehension of the regional implications of local actions. Remote sensing techniques, GIS technology, and regional monitoring strategies are among the methods now used to provide this perspective.

12.13 RESTORATION AND ENHANCEMENT

Since major new land acquisitions to supplement the NCCP reserve in southern California are unlikely, a major potential for expanding habitat lies with the new field of restoration ecology. This field has the promise of providing corridors linking fragments and expanding natural stands of coastal sage scrub and other diminished natural habitats. Ecological restoration focuses upon whole community establishment and is distinct from reclamation, enhancement, rehabilitation and mitigation, as usually implemented. It is based upon emulation of an historic, indigenous habitat model. This approach to whole community recreation employs a monitored control site. The restoration site would be an accurate reflection of local natural species assemblages, condition, and function. Inevitably, since long-term processes like fire cycles have great impact on condition and function, this process will require many decades of monitoring and study.

Research challenges include producing habitat rapidly to sustain and provide alternative areas for sensitive taxa; instituting long-term successional and fire-resiliency functions in created habitats; and establishing enduring understory diversity and successional relationships. Other questions include:

- What are the precise habitat preferences for target taxa?
- What will be the impacts of managing fire succession to sustain target taxa populations and habitat and non-target species?
- How can target and non-target species be monitored in the long term?
- How can site selection further the potential for colonization and other goals?
- How can restoration and mitigation projects be designed to maximize "new habitat" potential?
- How can large-scale salvage of coastal sage scrub assist in producing more viable habitats?
- To what extent can natural coastal sage scrub stands be transplanted?
- What is the viability of transplanted material?
- How can this approach most effectively supplement other conventional and larger-scale techniques, such as hydroseeding?

12.14 GENERAL SPECIES, PROGRAM-WIDE, AND REGIONAL CONCERNS

Reserve systems in NCCP are built within the constraints of fragmentation, urbanization and other local limitations. The effects of these parameters on the sustainability of reserves and viability of target species is important and have been identified as information needs in other sections. Information needed by managers of NCCP reserves at the program scale takes two forms: natural process issues and species/habitat issues.

There are some crucial broad-scale effects of natural processes on persistence of NCCP reserves that should be identified and addressed. These include but are not limited to system-wide effects such as nitrogen deposition and the hydrologic cycle. At an even broader scale, challenges such as the effects of global climate change on species

distribution and abundance and persistence of habitat-types are important to identify and reconcile with the disjunct, urban nature of the preserve system.

In addition to processes in effect at a regional and program scale, there are program-wide issues for individual species and habitat-types that should be identified and researched to provide information useful to managers. These include resolution of taxonomic inconsistencies, describing ranges of variation within and among habitat-types that make up a natural community complex, and the interfaces between habitat types and how they affect persistence of species. Other examples of regional, program and species-wide concerns will be identified through broad-range analyses intended to uncover common issues for all the subregions implementing NCCP plans.

12.15 HISTORIC AND ADJACENT LAND USES

Former land uses can significantly alter potential for restoration, succession trajectories in plant and animal communities, and long-term preservation. The central research questions deal with the lingering effects of past agricultural practices, grazing by sheep and cattle, non-agricultural land disturbance, roads, and various recreational uses.

Similarly, adjacent land uses can have substantive and diverse influences upon reserve lands. Suburban/agricultural developments are potential sources for exotic plants and feral animals; they can lead to nighttime light pollution potentially interfering with the foraging activities of nocturnal foragers and the reproductive behavior of pollinating insects. Pollutant discharges and water run-off from agricultural/suburban neighbors can lead to contamination and erosion of soil and siltation of aquatic habitats.

Research dealing with the following subjects is needed:

- Direct and indirect intrusive impacts by light, noise, recreation, and pollution on neighboring natural lands;
- The use of agricultural/developed areas as corridors and reservoirs for exotic and invasive animals and plants that may move into natural reserves;
- Community changes in reserves due to human-requested "management" practices, such as to lessen fire threats;
- The width and type of buffer zones that are necessary to moderate or eliminate the above threats.

Adjacent land use can potentially alter microclimate by changing albedo, natural airflow patterns, humidity, runoff from hardscaped environments (more water flowing rapidly through watersheds, with associated microclimate changes), dominance by exotics in wetlands, and the composition of insect communities, perhaps including pollinators.

12.16 HABITAT MANAGEMENT PRACTICES

Stewardship involves primarily the mimicking of natural processes we have altered through decades or centuries of human land uses. Prescribed burns replace the wildfires we can no longer afford and now suppress. Grazing replaces the native herbivores that in many cases are no longer present. Exotics removal is an attempt to undo damage by organisms that we introduced. Restoration brings back habitat in an attempt to recreate self-sustaining ecosystems. Fences keep out off road vehicles, dogs or cattle; signs inform and educate.

Recognizing that we do not always know what is best for any system, we can, however, state with certainty that management of mitigation and conservation areas will be best when provided in a context of landscapes with interrelated habitats large enough to encompass and still allow a semblance of natural processes: predator-prey relationships, such natural disturbances as fire and floods, vegetation and associated wildlife changes as communities progress through various successional stages and begin the cycle again.

The goal is to establish and maintain NCCP reserves that allow for natural disturbance processes (or a management-created surrogate) to continue. Disturbances, especially those that initiate ecological succession, are often critical in maintaining the natural structure and function of ecosystems.

Environmental constraints may be imposed by the physical or biological limits of a site, such as water availability, the presence of hazardous waste, or even the size and configuration of the preserve. For example, preserves of very small size (less than 50 acres) and with proximity to urban land uses can limit the ability of a manager to implement certain management strategies, such as grazing or burning. In this case, it may not be financially feasible for a lessee to graze such a small area, short of paying for the service. Alternatively, controlled burning is infeasible near residential areas because of effects on air quality as well as the risk of damage to property in the case of a wildfire.

Preserve management goals are characterized as measurable objectives to be determined by the purpose, characteristics and needs of the site. Ecological objectives are primary with respect to programmatic objectives.

1. Maintenance of genetic variability within and among populations
2. Arresting or preventing species decline
3. Prevention of species extirpation/extinction
4. Maintenance/restoration of functioning ecosystems
5. Preservation, restoration or maintenance of natural or evolutionary processes
6. Implementing management solutions at the landscape level
7. Increasing scientific knowledge to improve management/understanding of natural systems

Management strategies describe in detail the heart of the management program by enumerating the actions that must be taken to achieve the management objectives and the overall preserve management goal. In some cases, management strategies will consist primarily of obtaining sufficient information (through research, surveys, or monitoring) to determine the appropriate management action.

In any given case, it is likely that one management strategy will help to achieve more than one management objective and each objective will require several strategies to succeed. For example, control of invasive annual grasses in a preserve through the use of prescribed burning may (1) help arrest and prevent species decline, (2) prevent species extinction if rare plants are present, (3) control invasive exotic annual grasses, and (4) restore a natural process. Likewise, a management strategy of controlled grazing could be implemented to diminish seed set of invasive exotic annual grasses and prevent buildup of thatch that inhibits germination of native forbs.

Properly designed habitat management practices should be structured to feed into an adaptive management strategy. Adaptive management is a process whereby results of management actions are regularly assessed by evaluating monitoring results to determine whether management objectives or defined "measures of success" are being achieved. If not, management practices are changed or modified as needed. Scientific research is indicated in some cases when information gaps are severely limiting management effectiveness or options. Scientific research and experiments in natural areas will usually be oriented toward answering specific management-related questions at the site, although in some cases sites may prove to be important resources for conducting basic research that contributes to our overall understanding of ecology.

CHAPTER 13 : SAFE HARBORS

A Safe Harbors Agreements (SHA) encourages a landowner to maintain or modify habitat that would support rare species or species "covered" by an HCP-NCCP, but allows the landowner to "take" those species if the land use is changed. **An SHA is considered a "programmatic HCP" where "take" is authorized under a Section 10 permit.** The idea was to maintain habitat that would otherwise be destroyed by farmers fearing that occupation by a species would deny them use of the land. This usually involves allowing agricultural lands to revert to a temporary natural state, which may be of advantage to animals but not usually to plants. Usually the new pioneers on such land are weedy and common, but there may be exceptions. If the property has a "baseline" population of a listed species, the landowner is expected to maintain that population following termination of the agreement.

CNPS should protest any SHA permit given in conjunction with an HCP-NCCP Incidental Take Permit, as an SHA should not be considered mitigation against take due to the impermanent protection afforded by the agreement.

CNPS should ensure that otherwise natural habitat is not enrolled in the inventory of land under an SHA, and that it is only recently disturbed land that is included. There have been attempts to claim that if land was ever farmed, even in the 19th century, the land would qualify for SHA coverage, and thus expose plant populations to destruction.

CNPS should review the process by which baseline populations were evaluated, and ensure that if the landowner acted to reduce the baseline population prior to entering into negotiations for a SHA, the SHA should be denied.

CNPS should ensure that if landowners drop out of an SHA, an equivalent amount of land is added, especially if the sum area of all SHA's is considered a mitigation against take.

CNPS should evaluate the possibility that an SHA might become a biological sink. The concept of biological sink does not usually apply to plants, which are not attracted from one place to another by the appearance of more favorable habitat. However plants may be dependent on pollinators and the balances in the trophic web that may be affected.

CNPS should encourage alternative forms of land conservation to SHA's which do not rely on a weakening of ESA-CESA. These would include the Conservation Reserve Program (CRP) and Williamson Act.

THE STANFORD LETTER ON SAFE HARBORS AGREEMENTS

"A Statement on Proposed Private Lands Initiatives and Reauthorization of the Endangered Species Act from the Meeting of Scientists at Stanford University" contains a section on "Safe Harbors".

"Safe harbor initiatives encourage private landowners to increase the amount of habitat available to endangered species. In the past, many landowners have been reluctant to restore or enhance habitat for fear of incurring added regulatory burdens that will curtail future use of their property. Under safe harbor policy, the landowner is obligated to maintain only the baseline utilization of the property by the species prior to habitat improvements, which means that the landowner will be free to undo those improvements at a later date. Most of our group believes that deleterious consequences to protected species from safe harbor initiatives will be infrequent and that safe harbors could prove to be an important inducement to overcoming landowner unwillingness to take actions beneficial to imperiled species.

Nonetheless, two concerns should be addressed in safe harbor agreements.

- First, the concepts of "baseline population and utilization" require a clear definition. Sources of scientific uncertainty should be addressed in defining the baseline status of species, just as for the no surprises policy. The determination of the safe harbor baseline depends on reliable survey techniques and scientific interpretation.

- Second, some species may be better candidates for safe harbor agreements than others as a result of their distribution, resource needs, and habitat area requirements. Species are distributed across diverse landscapes with habitat areas of varying quality.

In addition, species vary widely in their ability to move from one area of habitat to a neighboring one. Thus, we believe that the value of safe harbor agreements must be evaluated on a species-by-species basis. In the absence of scientifically credible recovery plans, safe harbor agreements should document their potential contributions to the conservation or recovery of target species within an entire region rather than on a single piece of private property."

CHAPTER 14 : THE TANGLED SKEIN OF THE LARGE FOREST HCP

14.1 SUSTAINED YIELD PLANS AND TIMBER HARVESTING PLANS

Perhaps the most controversial HCP of the late 1990's has been the Pacific Lumber Company (PALCO) in the Headwaters Forest area. In this and similar cases, Incidental Take Permits (ITPs) have been issued by CDFG for 'take' of species such as marbled murrelet. The complicating factor in forest HCPs that are typically developed by industrial timberland owners is that the Implementation Agreement portion of the HCP is composed of elements that would otherwise be under the administration of the California Department of Forestry (CDF). In the case of the PALCO HCP, the long term management of the land would be described under a Sustained Yield Plan (SYP) for the company's timber holdings. SYPs normally describe the manner in which a company will produce a sustained yield of timber from the land, and although they are designed to prevent long term denudation and degradation of the resource, may not require any particular age structure and species composition mix to be maintained on the land. Indeed, under the policies of CDF, type conversion to higher economic value trees, and the elimination of old growth wood is actually encouraged. Under an SYP, a general set of conditions is set down that govern the sequence, size and type of timber cuts that are encompassed by the HCP's geographic bounds and time-lines. Each cut must have a Timber Harvesting Plan (THP) filed and approved by CDF, but the approval process is speeded up and environmental review is reduced if the plan is covered by a SYP.

The following quotes from the California Forest Practices Rules (CFPR) illustrate the essential conflicts between planning with the intent of fully mitigating 'take' of species, which is required under the Section 10 rules, and the intent of an SYP in the view of CDF. CFPR states:

" The SYP establishes the flow of forest products from managed timberlands, and shall demonstrate the achievement of maximum sustained production." (our emphasis).

Both THPs and SYPs are meant to bring CDF's attention to potential losses of late successional stands, but in the framework of removing those stands. CFPR states:

" When late succession forest stands are proposed for harvesting and such harvest will significantly reduce the amount and distribution of late succession forest stands or their functional wildlife habitat value so that it constitutes a significant adverse impact on the environment as defined in Section 895.1, the Registered Professional Forester (RPF) shall provide habitat structure information for such stands. A statement of objectives over time shall be included for late succession forest stands on the ownership. The THP, SYP, or NTMP shall include a discussion of how the proposed harvesting will affect the existing functional wildlife habitat for species primarily associated with late succession forest stands in the plan or the planning watershed, as appropriate, including impacts on vegetation structure, connectivity, and fragmentation. The information needed to address this subsection shall include, but is not limited to:

- (1) - A map(s) showing: A) late succession forest stands within the planning watershed and any other stands that provide functional wildlife habitat for species primarily associated with late succession forest stands that are on the ownership, B) those stands which are currently proposed to be harvested, and C) known stands on other ownerships.
- (2) - A list of fish, wildlife and listed species known to be primarily associated with the late succession forest stands in the planning watershed(s) compiled by the RPF using the "California Wildlife Habitat Relationships System" (WHR), the California Natural Diversity Database, and local knowledge of the planning watershed.
- (3) - Description of functional wildlife habitat elements that are important for fish, wildlife and listed species primarily associated with late succession forest stands within the planning watershed(s).
- (4) - A description of the structural characteristics for each late succession forest stand and any other stands that provide functional wildlife habitat for species primarily associated with late succession forest stands within the planning watershed including a discussion of important functional wildlife habitat elements identified in (3). Methods used to develop the description, which may be an ocular estimate, shall also be described.
- (5) - A description of the functional wildlife habitat objectives, such as anticipated long-term landscape patterns, stand structure for late succession forest stands and any other stands that provide functional wildlife habitat for

species primarily associated with late succession forest stands, and a discussion of anticipated recruitment procedures for important functional wildlife habitat elements. Coordination of functional wildlife habitat objectives on landscape features among ownerships within mixed-ownership planning watersheds is encouraged.

(6) - An analysis of the long-term significant adverse effects on fish, wildlife, and listed species known to be primarily associated with late succession forests.

(b) Where timber operations will result in long-term significant adverse effects on fish, wildlife, and listed species known to be primarily associated with late succession forests in a THP, SYP, NTMP or planning watershed, feasible mitigation measures to mitigate or avoid such long-term significant adverse effects shall be described and incorporated in the THP, SYP or NTMP. Where long-term significant adverse effects cannot be avoided or mitigated, the THP, SYP, or NTMP shall identify the measures that will be taken to reduce those remaining effects and provide reasons for overriding concerns pursuant to 14 CCR Section 898.1 (g), including a discussion of the alternatives and mitigation considered.

(c) A THP, SYP, or NTMP submitter may request that the Director waive subsection (a) above. The Director, after conferring with review team agencies with jurisdiction, may waive subsection (a) above when substantial evidence is presented that would support a determination that post-harvest late succession forest stands or functional wildlife habitat will continually provide adequate structure and connectivity to avoid or mitigate long-term significant adverse effects on fish, wildlife, and listed plant species known to be primarily associated with late succession forest stands within the planning watersheds."

The form of notification listed above was meant to give full notice to CDFG and FWS regarding the proposed 'take' of habitat, with the assessments being made by the employees of those who would cut the trees. The plan is reviewed by the wildlife agencies. The Little Hoover Commission's evaluation of the THP process describes it as large on process, and very poor on actual scientific review, so that it ends of costing the property owner while doing little to protect the environment. (Little Hoover Commission, Timber Harvest Plans: A Flawed Effort to Balance Economic and Environmental Needs. Report #126, June 1994). The Commission reports:

"The intra-agency process for reviewing Timber Harvest Plans is complex, lengthy and costly, resulting in inconsistency and inequity. How a plan is treated is largely dependant on whether, by chance or design, it falls into the 20 percent of plans reviewed by the Department of Fish and Game -- a department that apparently has different standards, goals and priorities than the Department of Forestry and Fire Protection, which is ultimately responsible for approving the plans."

The Little Hoover Commission did recommend that large scale regional planning be used in the management of private forests, so to some extent the rise of the HCP process is heading in a desirable direction. When CDF was sued in 1985 to investigate the cumulative impacts of THPs, it added "Technical Rule Addendum Number 2, Cumulative Impact Assessment" to CFPR to examine cumulative impacts on:

- o Watershed Resources -- sediment, water temperature, organic debris, chemical contamination and peak flow.
- o Soil Productivity -- organic matter loss, surface soil loss, soil compaction and growing space loss.
- o Biological Resources -- habitat, including snags, woody debris, cover and road density.

However, under each of the sections, the rules state, " No actual measurements are intended." The result is that cumulative assessments are merely guesswork that neither accurately define an existing baseline of information nor credibly predict the outcome after harvesting. The Little Hoover Commission also quotes the State Water Resources Control Board, which notes that the typical RPF would not have the requisite expertise to do these assessments, and that they should be done by qualified agencies.

So the questions to be asked are:

- In using the HCP process, was sufficient scientific information available to perform watershed level analysis that would be meaningful in achieving full mitigation to losses of habitat?

- Is the SYP a realistic tool for achieving mitigation?
- Is date collection being deferred to the individual THPs under the SYP, with a vague promise that mitigation will be developed at that later time?

14.2 THE CLEAN WATER ACT AND THE FOREST HCP

One of the greatest problems of industrial forestry in the Pacific Northwest and Sierra Nevada has been the degradation of fish habitat due to increased erosion from forest roads and exposed soil. Anadromous fish runs and species are listed under ESA and administered by NMFS, and therefore impacts to stream water quality from logging will simultaneously draw the attention of EPA and the California Water Quality Control Board through violations of the Clean Water Act, and NMFS through the degradation of habitat.

An action that will result in increased sedimentation, such as a timber harvest, requires a permit from EPA called a NPDES permit. The issuance is a federal action and is subject to Section 7 consultation by FWS. The consultation process has been formalized in a Memorandum of Agreement between EPA, NMFS and USFS (Federal Register: January 15, 1999 (v.64, no.10, pages 2741-2757). Critics have suggested that this puts too much power in the hands of EPA, but others note that it encourages EPA to examine potential impacts to species. While the states will still maintain their own water quality standards, it is clear that a degradation in water quality and a diminution of other economic uses of waters will produce an avenue by which an HCP can be challenged.

14.3 ISSUES RAISED IN THE EPIC-SIERRA CLUB SUIT AGAINST PALCO AND STATE AGENCIES

The Environmental Protection Information Association and the Sierra Club (EPIC-SC) have sued Pacific Lumber Company (PALCO) and both CDFG and CDF. EPIC-SC have challenged certification of the HCP's EIR by the state agencies on the basis of there being insufficient consideration of past and ongoing timber operations and their effects, insufficient consideration of existing scientific information, insufficient description of the landscape condition, insufficient consideration of cumulative impacts, insufficient analysis of the changes in stand structure generated by heavy cutting of old growth in the early years of the SYP, insufficient discussion of PALCO's past failure to comply with the law, incomplete assessment of impacts of quarries and haul roads on species within conservation areas, incomplete analysis of mitigation, particularly of how mitigation will reduce impacts to a level of insignificance and defers the magnitude of specific mitigation measures such as the width of streamside buffers, and inadequate analysis of alternatives. (and that is the short list!).

The suit against CDFG maintains that the HCP's ITP violates Section 2081(b) of CESA by failing to accept conditions that "minimize and fully mitigate" take of marbled murrelet and its habitat. Supportive facts of the suit include authorization of take of a large portion of the available habitat without evidence of effects, and the illegal consideration of the impact relative to the entire species range, as compared to the CESA requirement that only the impact relative to the California range be considered. The suit also charges that CDFG illegally issued a take permit for unlisted species, and that the "regulatory assurances" to PALCO from CDFG illegally restrain CDFG from fulfilling its obligation to "conserve, protect, restore, and enhance" species as required by CESA. These actions are claimed in the suit to be a violation of CDFG's public trust obligations.

Streambed alteration agreements are also under the regulatory control of CDFG under Section 1603 of Fish and Game Code. These are almost always performed on a case by case basis, but the suit asks the court to rule that a blanket agreement for the area of the HCP is a violation of Section 1603, due to the inability to provide the "specific and detailed" information that is required.

The suit charges CDF with approving an SYP with inadequate assessment of the harvest rate and long term economy, too little justification for the timber volume calculations, inadequate and inaccurate description of existing standing volume of timber, inadequate analysis of impacts to species, inadequate discussion of mitigation, poor watershed assessment, and the failure of the SYP to assure that there would be a maximum sustained production of high quality wood products (due to early liquidation of the old growth within the time frame of the HCP).

The problems in the PALCO HCP were probably created by the politics and emotions surrounding the purchase of the Headwaters Forest, in which good science and planning principles were laid aside or became bargaining chips in the quest to purchase old growth forest. American Lands Alliance (1998) list a number of HCPs from the Northwest

which have accepted adequate stream buffers, have restricted cuts on steep slopes, and incorporated similar conservation driven measures.

REFERENCES

- Anon. 1997. General Counsel Scoping Guidance, Executive Office of the President. "<http://ceq.eh.doe.gov/nepa/regs/scope/scoping.htm>".
- California Department of Forestry, 1999, California Forest Practice Rules. Sacramento, CA
- Hewitt, Hugh. 1996. Plain Talk on Endangered Species. Environmental Law News v.5, no.4, Winter p.14-17.
- Jost, K. 1996. Protecting Endangered Species. The CQ Researcher v.6 no.15, p. 337-360. Congressional Quarterly. Washington D.C.
- Murphy, D. et al. 1996. A Statement On Proposed Private Lands Initiatives And Reauthorization Of The Endangered Species Act From the Meeting Of Scientists At Stanford University. (Unpublished).
- National Center for Ecological Analysis and Synthesis. 1999. Using Science in Habitat Conservation Plans, Santa Barbara, CA. (available at <http://www.nceas.ucsb.edu/projects/hcp/>)
- National Research Council. 1995. Science and the Endangered Species Act. National Academy Press, Washington, D.C. 271pp
- Natural Resources Defense Council. May 1997. Leap of Faith: Southern California's Experiment in Natural Community Conservation Planning.
- Noss, Reed F., Michael A. O'Connell, and Dennis D. Murphy. (1997). The Science of Conservation Planning. Island Press. Washington D.C.
- President's Council on Environmental Quality. 1997. Considering Cumulative Effects Under the National Environmental Policy Act. Council of Environmental Quality. ("<http://ceq.eh.doe.gov/nepa/ccenepa/ccenepa.htm>").
- President's Council on Environmental Quality. 1997. NEPA's 40 Most Asked Questions "<http://ceq.eh.doe.gov/nepa/regs/40/40p3.htm>".
- Schilling, Fraser. 1997. Do Habitat Conservation Plans Protect Endangered Species? Science v.276, p.1662-1663.
- Scott, J. Michael, Frank Davis, Blair Csuti, Reed Noss, Bart Butterfield, Craig Groves, Hal Anderson, Steve Caicco, Frank D'Erchia, Thomas C. Edwards, Jr., Joe Ulliman, and R. Gerald Wright. 1993. GAP Analysis: A Geographic Approach to Protection of Biological Diversity. Wildlife Monographs, No 123. The Wildlife Society.
- Schwartz, Mark W., and Phillip J. van Mantgem. 1997. The Value of Small Preserves in Chronically Fragmented Landscapes, in Conservation in Highly Fragmented Landscapes, Mark W. Schwartz (editor). Chapman and Hall, New York.
- Smallwood, Shawn K., 1997. Science Missing in the "No Surprises" Policy. Study commissioned by Sprit of the Sage Council, Pasadena, in association with California National Endangered Species Network, Sacramento, California.
- Tear, T.H., J. M. Scott, P. H. Hayward, and B. Griffith. 1993. Status and Prospects for Success of the Endangered Species Act: A Look at Recovery Plans. Science v.262, p.976-977.
- Wilcove, D.S., M. McMillan, and K.C. Winston. 1993. What Exactly is an Endangered Species?: An Analysis of the U.S. Endangered Species List: 1985-1991. Conservation Biology v.7, p.87-93.

RESOURCES

OTHER REFERENCE WORKS

American Lands Alliance, 1998, Checklist for Addressing Endangered Species Exemptions/ "Habitat Conservation Plans" for Forestlands. Portland OR

Beatley, Timothy. 1994. Habitat Conservation Planning: Endangered Species and Urban Growth. University of Texas Press, Austin.

California Dept. Fish and Game. (undated) Conservation Banking- A Technical Report (brochure prepared by Toyon Associates).

California Dept. Fish and Game. August 1995. Natural Community Conservation Planning: Innovation in Multi-Species Protection in the Coastal Sage Scrub Habitat of Southern California. Report To The Legislature.

Kaiser, Jocelyn. 1997. When a Habitat is not a Home. Science v.276, p.1636-1638.

National Audubon Society. August 1997. A Citizen's Guide to Habitat Conservation Plans.

National Audubon Society. 1997. A Report Of The National Audubon Society Task Force On Habitat Conservation Plans.

U.S. Fish and Wildlife Service. 1997. Habitat Conservation Plans: The Quiet Revolution.

U.S. Fish and Wildlife Service. June 1997. Making the ESA Work Better: Implementing the 10 Point Plan and Beyond. FWS Division of Endangered Species, NMFS Office of Protected Resources.

U.S. General Accounting Office Report to Congress Requesters. December 1994. Endangered Species Act: Information on Species Protection on Nonfederal Lands. GAO/RCED-95-16.

WORLD WIDE WEB

ESA Full Text from FWS: "<http://www.fws.gov/~r9endspp/esa.html>".

ESA Summary from FWS: "<http://www.fws.gov/laws/federal/summaries/esa.html>".

HCP Program from FWS: "<http://www.fws.gov/~r9endspp/hcpapp.html>".

NCCP Program from California Dept. Resources: "<http://ceres.ca.gov/cra/NCCP/>".

NCCP Core Group Research Guidance to Address the Needs of Land Managers:

"<http://ceres.ca.gov/cra/NCCP/rg1.htm>".

NEPA Information: NEPANet "<http://ceq.eh.doe.gov/nepa/nepanet.htm>".

APPENDIX A
NATURAL COMMUNITY CONSERVATION PLANNING ACT.
FISH AND GAME CODE SECTION 2800-2840

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

2805. The definitions in this section govern the construction of this chapter. (a) "Natural community conservation plan" means the plan prepared pursuant to an agreement entered into in accordance with subdivision (a) of Section 2810. The plan identifies and provides for the regional or areawide protection and perpetuation of natural wildlife diversity, while allowing compatible and appropriate development and growth. (b) "Wildlife" has the same meaning as defined in Section 711.2. (c) "Person" has the same meaning as defined in Section 711.2.

2810. The department may enter into agreements 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, including, but not limited to, those species listed pursuant to Article 2 (commencing with Section 2070) of Chapter 1.5. The agreement shall include cost reimbursement provisions pursuant to Section 2840.

2820. Natural community conservation planning may be undertaken by local, state, and federal agencies independently or in cooperation with other persons. The plan shall be consistent with the agreement entered into pursuant to Section 2810 and shall be approved by the department for implementation upon meeting the standards established by the department for natural community conservation.

2825. (a) The department may prepare nonregulatory guidelines for the development and implementation of natural community conservation plans. The guidelines are exempt from Chapter 3.5 (commencing with Section 11340) of Division 3 of Title 2 of the Government Code. The guidelines may include, but are not limited to, all of the following:

(1) Defining the scope of a conservation planning area. (2) Determining conservation standards, guidelines, and objectives for the planning area. (3) Appointing one or more advisory committees to review and make recommendations regarding the preparation and implementation of natural community conservation plans. The advisory committee membership may include representation from the local community near the plan area. (4) Coordinating with local, state, and federal agencies, including the Trade and Commerce Agency. (5) Incorporating public input. (6) Ensuring compatibility with the federal Endangered Species Act (16 U.S.C. Sec. 1531 et seq.). (7) Obtaining approval of the natural community conservation plan by the department. (8) Provisions for implementation of the plan. (9) Monitoring and reporting on plan implementation. (10) Amending the plan consistent with the initial intent of the plan. (b) Nothing in this chapter exempts projects proposed in a natural community conservation planning area from the requirements of the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code). (c) Natural community conservation plans, as appropriate, shall be implemented pursuant to Section 2081. (d) 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.

2830. Upon recommendation of the department, the commission may authorize, pursuant to Section 2084, the taking of any candidate species whose conservation, protection, restoration, and enhancement is provided for in a department approved natural community conservation plan consistent with paragraph (6) of subdivision (a) of Section 2825.

2835. The department may permit the taking, as provided in this code, of any identified species whose conservation and management is provided for in a department approved natural communities conservation plan.

2840. (a) The department shall 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 shall be compensated for those expenses identified in subdivision (a) according to a schedule in the agreement authorized by Section 2810.

APPENDIX B
SECTIONS 7 AND 10 OF THE ENDANGERED SPECIES ACT

SECTION 7

(a) **FEDERAL AGENCY ACTIONS AND CONSULTATIONS.**- (1) The Secretary shall review other programs administered by him and utilize such programs in furtherance of the purposes of this Act. All other Federal agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of endangered species and threatened species listed pursuant to section 4 of this Act. (2) Each Federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an "agency action") is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with affected States, to be critical, unless such agency has been granted an exemption for such action by the Committee pursuant to subsection (h) of this section. In fulfilling the requirements of this paragraph each agency shall use the best scientific and commercial data available. (3) Subject to such guidelines as the Secretary may establish, a Federal agency shall consult with the Secretary on any prospective agency action at the request of, and in cooperation with, the prospective permit or license applicant if the applicant has reason to believe that an endangered species or a threatened species may be present in the area affected by his project and that implementation of such action will likely affect such species. (4) Each Federal agency shall confer with the Secretary on any agency action which is likely to jeopardize the continued existence of any species proposed to be listed under section 4 or result in the destruction or adverse modification of critical habitat proposed to be designated for such species. This paragraph does not require a limitation on the commitment of resources as described in subsection (d).

(b) **OPINION OF SECRETARY.**- (1)(A) Consultation under subsection (a)(2) with respect to any agency action shall be concluded within the 90-day period beginning on the date on which initiated or, subject to subparagraph (B), within such other period of time as is mutually agreeable to the Secretary and the Federal agency; (B) in the case of an agency action involving a permit or license applicant, the Secretary and the Federal agency may not mutually agree to conclude consultation within a period exceeding 90 days unless the Secretary, before the close of the 90th day referred to in subparagraph (A)- (i) if the consultation period proposed to be agreed to will end before the 150th day after the date on which consultation was initiated, submits to the applicant a written statement setting forth- (I) the reasons why a longer period is required; (II) the information that is required to complete the consultation; and (III) the estimated date on which consultation will be completed; or (ii) if the consultation period proposed to be agreed to will end 150 or more days after the date on which consultation was initiated, obtains the consent of the applicant to such period. The Secretary and the Federal agency may mutually agree to extend a consultation period established under the preceding sentence if the Secretary, before the close of such period, obtains the consent of the applicant to the extension. (2) Consultation under subsection (a)(3) shall be concluded within such period as is agreeable to the Secretary, the Federal agency, and the applicant concerned. (3)(A) Promptly after conclusion of consultation under paragraph (2) or (3) of subsection (a), the Secretary shall provide to the Federal agency and the applicant, if any, a written statement setting forth the Secretary's opinion, and a summary of the information on which the opinion is based, detailing how the agency action affects the species or its critical habitat. If jeopardy or adverse modification is found, the Secretary shall suggest those reasonable and prudent alternatives which he believes would not violate subsection (a)(2) and can be taken by the Federal agency or applicant in implementing the agency action. (B) Consultation under subsection (a)(3), and an opinion based by the Secretary incident to such consultation, regarding an agency action shall be treated respectively as a consultation under subsection (a)(2), and as an opinion issued after consultation under such subsection, regarding that action if the Secretary reviews the action before it is commenced by the Federal agency and finds, and notifies such agency, that no significant changes have been made with respect to the action and that no significant change has occurred regarding the information used during the initial consultation. (4) If after consultation under subsection (a)(2) of this section, the Secretary concludes that- (A) the agency action will not violate such subsection, or offers reasonable and prudent alternatives which the Secretary believes would not violate such subsection; (B) the taking of an endangered species or a threatened species incidental to the agency action will not violate such subsection; and (C) if an endangered species or threatened species of a marine mammal is involved, the taking is authorized pursuant to section 1371(a)(5) of this title; the Secretary shall provide the Federal agency and the applicant concerned, if any, with a written statement that- (i) specifies the impact of such incidental taking on the species, (ii) specifies those reasonable and prudent measures that the Secretary considers necessary or appropriate to minimize such impact, (iii) in the case of marine mammals, specifies those measures that are

necessary to comply with section 1371(a)(5) of this title with regard to such taking, and (iv) sets forth the terms and conditions (including, but not limited to, reporting requirements) that must be complied with by the Federal agency or applicant (if any), or both, to implement the measures specified under clauses (ii) and (iii).

(c) **BIOLOGICAL ASSESSMENT.**- (1) To facilitate compliance with the requirements of subsection (a)(2) each Federal agency shall, with respect to any agency action of such agency for which no contract for construction has been entered into and for which no construction has begun on the date of enactment of the Endangered Species Act Amendments of 1978, request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action. If the Secretary advises, based on the best scientific and commercial data available, that such species may be present, such agency shall conduct a biological assessment for the purpose of identifying any endangered species or threatened species which is likely to be affected by such action. Such assessment shall be completed within 180 days after the date on which initiated (or within such other period as is mutually agreed to by the Secretary and such agency, except that if a permit or license applicant is involved, the 180-day period may not be extended unless such agency provides the applicant, before the close of such period, with a written statement setting forth the estimated length of the proposed extension and the reasons therefor) and, before any contract for construction is entered into and before construction is begun with respect to such action. Such assessment may be undertaken as part of a Federal agency's compliance with the requirements of section 102 of the National Environmental Policy Act of 1969 (42 U.S.C. 4332). (2) Any person who may wish to apply for an exemption under subsection (g) of this section for that action may conduct a biological assessment to identify any endangered species or threatened species which is likely to be affected by such action. Any such biological assessment must, however, be conducted in cooperation with the Secretary and under the supervision of the appropriate Federal agency.

(d) **LIMITATION ON COMMITMENT OF RESOURCES.**-After initiation of consultation required under subsection (a)(2), the Federal agency and the permit or license applicant shall not make any irreversible or irretrievable commitment of resources with respect to the agency action which has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures which would not violate subsection (a)(2).

(e)(1) **ESTABLISHMENT OF COMMITTEE.**-There is established a committee to be known as the Endangered Species Committee (hereinafter in this section referred to as the "Committee"). (2) The Committee shall review any application submitted to it pursuant to this section and determine in accordance with subsection (h) of this section whether or not to grant an exemption from the requirements of subsection (a)(2) of this action for the action set forth in such application. (3) The Committee shall be composed of seven members as follows: (A) The Secretary of Agriculture. (B) The Secretary of the Army. (C) The Chairman of the Council of Economic Advisors. (D) The Administrator of the Environmental Protection Agency. (E) The Secretary of the Interior. (F) The Administrator of the National Oceanic and Atmospheric Administration. (G) The President, after consideration of any recommendations received pursuant to subsection (g)(2)(B) shall appoint one individual from each affected State, as determined by the Secretary, to be a member of the Committee for the consideration of the application for exemption for an agency action with respect to which such recommendations are made, not later than 30 days after an application is submitted pursuant to this section. (4)(A) Members of the Committee shall receive no additional pay on account of their service on the Committee. (B) While away from their homes or regular places of business in the performance of services for the Committee, members of the Committee shall be allowed travel expenses, including per diem in lieu of subsistence, in the same manner as persons employed intermittently in the Government service are allowed expenses under section 5703 of title 5 of the United States Code. (5)(A) Five members of the Committee or their representatives shall constitute a quorum for the transaction of any function of the Committee, except that, in no case shall any representative be considered in determining the existence of a quorum for the transaction of any function of the Committee if that function involves a vote by the Committee on any matter before the Committee. (B) The Secretary of the Interior shall be the Chairman of the Committee. (C) The Committee shall meet at the call of the Chairman or five of its members. (D) All meetings and records of the Committee shall be open to the public. (6) Upon request of the Committee, the head of any Federal agency is authorized to detail, on a nonreimbursable basis, any of the personnel of such agency to the Committee to assist it in carrying out its duties under this section. (7)(A) The Committee may for the purpose of carrying out its duties under this section hold such hearings, sit and act at such times and places, take such testimony, and receive such evidence, as the Committee deems advisable. (B) When so authorized by the Committee, any member or agent of the Committee may take any action which the Committee is authorized to take by this paragraph. (C) Subject to the Privacy Act, the Committee may secure directly from any Federal agency information necessary to enable it to carry out its duties under this section. Upon request of the Chairman of the Committee, the head of such Federal agency shall furnish such information to the Committee. (D) The Committee may use the United States mails in the same manner and upon the same conditions

as a Federal agency. (E) The Administrator of General Services shall provide to the Committee on a reimbursable basis such administrative support services as the Committee may request. (8) In carrying out its duties under this section, the Committee may promulgate and amend such rules, regulations, and procedures, and issue and amend such orders as it deems necessary. (9) For the purpose of obtaining information necessary for the consideration of an application for an exemption under this section the Committee may issue subpoenas for the attendance and testimony of witnesses and the production of relevant papers, books, and documents. (10) In no case shall any representative, including a representative of a member designated pursuant to paragraph (3)(G) of this subsection, be eligible to cast a vote on behalf of any member.

(f) REGULATIONS.-Not later than 90 days after the date of enactment of the Endangered Species Act Amendments of 1978, the Secretary shall promulgate regulations which set forth the form and manner in which applications for exemption shall be submitted to the Secretary and the information to be contained in such applications. Such regulations shall require that information submitted in an application by the head of any Federal agency with respect to any agency action include but not be limited to- (1) a description of the consultation process carried out pursuant to subsection (a)(2) of this section between the head of the Federal agency and the Secretary; and (2) a statement describing why such action cannot be altered or modified to conform with the requirements of subsection (a)(2) of this section.

(g) APPLICATION FOR EXEMPTION AND REPORT TO THE COMMITTEE.- (1) A Federal agency, the Governor of the State in which an agency action will occur, if any, or a permit or license applicant may apply to the Secretary for an exemption for an agency action of such agency if, after consultation under subsection (a)(2), the Secretary's opinion under subsection (b) indicates that the agency action would violate subsection (a)(2). An application for an exemption shall be considered initially by the Secretary in the manner provided for in this subsection, and shall be considered by the Committee for a final determination under subsection (h) after a report is made pursuant to paragraph (5). The applicant for an exemption shall be referred to as the "exemption applicant" in this section. (2)(A) An exemption applicant shall submit a written application to the Secretary, in a form prescribed under subsection (f), not later than 90 days after the completion of the consultation process; except that, in the case of any agency action involving a permit or license applicant, such application shall be submitted not later than 90 days after the date on which the Federal agency concerned takes final agency action with respect to the issuance of the permit or license. For purposes of the preceding sentence, the term "final agency action" means (i) a disposition by an agency with respect to the issuance of a permit or license that is subject to administrative review, whether or not such disposition is subject to judicial review; or (ii) if administrative review is sought with respect to such disposition, the decision resulting after such review. Such application shall set forth the reasons why the exemption applicant considers that the agency action meets the requirements for an exemption under this subsection. (B) Upon receipt of an application for exemption for an agency action under paragraph (1), the Secretary shall promptly (i) notify the Governor of each affected State, if any, as determined by the Secretary, and request the Governors so notified to recommend individuals to be appointed to the Endangered Species Committee for consideration of such application; and (ii) publish notice of receipt of the application in the Federal Register, including a summary of the information contained in the application and a description of the agency action with respect to which the application for exemption has been filed. (3) The Secretary shall within 20 days after the receipt of an application for exemption, or within such other period of time as is mutually agreeable to the exemption applicant and the Secretary (A) determine that the Federal agency concerned and the exemption applicant have- (i) carried out the consultation responsibilities described in subsection (a) in good faith and made a reasonable and responsible effort to develop and fairly consider modifications or reasonable and prudent alternatives to the proposed agency action which would not violate subsection (a)(2); (ii) conducted any biological assessment required by subsection (c); and (iii) to the extent determinable within the time provided herein, refrained from making any irreversible or irretrievable commitment of resources prohibited by subsection (d); or (B) deny the application for exemption because the Federal agency concerned or the exemption applicant have not met the requirements set forth in subparagraph (A) (i), (ii), and (iii). The denial of an application under subparagraph (B) shall be considered final agency action for purposes of chapter 7 of title 5, United States Code. (4) If the Secretary determines that the Federal agency concerned and the exemption applicant have met the requirements set forth in paragraph (3)(A) (i), (ii) and (iii) he shall, in consultation with the Members of the Committee, hold a hearing on the application for exemption in accordance with sections 554, 555, and 556 (other than subsection (b) (1) and (2) thereof) of title 5, United States Code, and prepare the report to be submitted pursuant to paragraph (5). (5) Within 140 days after making the determinations under paragraph (3) or within such other period of time as is mutually agreeable to the exemption applicant and the Secretary, the Secretary shall submit to the Committee a report discussing- (A) the availability of reasonable and prudent alternatives to the agency action, and the nature and extent of the benefits of the agency action and of alternative courses of action consistent with conserving the species of the critical habitat; (B) a summary of the evidence concerning whether or

not the agency action is in the public interest and is of national or regional significance; (C) appropriate reasonable mitigation and enhancement measures which should be considered by the Committee; and (D) whether the Federal agency concerned and the exemption applicant refrained from making any irreversible or irretrievable commitment of resources prohibited by subsection (d). (6) To the extent practicable within the time required for action under subsection (g) of this section, and except to the extent inconsistent with the requirements of this section, the consideration of any application for an exemption under this section and the conduct of any hearing under this subsection shall be in accordance with sections 554, 555, and 556 (other than subsection (b)(3) of section 556) of title 5, United States Code. (7) Upon request of the Secretary, the head of any Federal agency is authorized to detail, on a nonreimbursable basis, any of the personnel of such agency to the Secretary to assist him in carrying out his duties under this section. (8) All meetings and records resulting from activities pursuant to this subsection shall be open to the public.

(h) EXEMPTION.- (1) The Committee shall make a final determination whether or not to grant an exemption within 30 days after receiving the report of the Secretary pursuant to subsection (g)(5). The Committee shall grant an exemption from the requirements of subsection (a)(2) for an agency action if, by a vote of not less than five of its members voting in person- (A) it determines on the record, based on the report of the Secretary, the record of the hearing held under subsection (g)(4), and on such other testimony or evidence as it may receive, that- (i) there are no reasonable and prudent alternatives to the agency action; (ii) the benefits of such action clearly outweigh the benefits of alternative courses of action consistent with conserving the species or its critical habitat, and such action is in the public interest; (iii) the action is of regional or national significance; and (iv) neither the Federal agency concerned nor the exemption applicant made any irreversible or irretrievable commitment of resources prohibited by subsection (d); and (B) it establishes such reasonable mitigation and enhancement measures, including, but not limited to, live propagation, transplantation, and habitat acquisition and improvement, as are necessary and appropriate to minimize the adverse effects of the agency action upon the endangered species, threatened species, or critical habitat concerned. Any final determination by Committee under this subsection shall be considered final agency action for purposes of chapter 7 of title 5 of the United States Code. (2)(A) Except as provided in subparagraph (B), an exemption for an agency action granted under paragraph (1) shall constitute a permanent exemption with respect to all endangered or threatened species for the purposes of completing such agency action- (i) regardless whether the species was identified in the biological assessment; and (ii) only if a biological assessment has been conducted under subsection (c) with respect to such agency action. (B) An exemption shall be permanent under subparagraph (A) unless- (i) the Secretary finds, based on the best scientific and commercial data available, that such exemption would result in the extinction of a species that was not the subject of consultation under subsection (a)(2) or was not identified in any biological assessment conducted under subsection (c), and (ii) the Committee determines within 60 days after the date of the Secretary's finding that the exemption should not be permanent. If the Secretary makes a finding described in clause (i), the Committee shall meet with respect to the matter within 30 days after the date of the finding.

(i) REVIEW BY SECRETARY OF STATE.-Notwithstanding any other provision of this Act, the Committee shall be prohibited from considering for exemption any application made to it, if the Secretary of State, after a review of the proposed agency action and its potential implications, and after hearing, certifies, in writing, to the Committee within 60 days of any application made under this section that the granting of any such exemption and the carrying out of such action would be in violation of an international treaty obligation or other international obligation of the United States. The Secretary of State shall, at the time of such certification, publish a copy thereof in the Federal Register.

(j) Notwithstanding any other provision of this Act, the Committee shall grant an exemption for any agency action if the Secretary of Defense finds that such exemption is necessary for reasons of national security.

(k) SPECIAL PROVISIONS.-An exemption decision by the Committee under this section shall not be a major Federal action for purposes of the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.): Provided, That an environmental impact statement which discusses the impacts upon endangered species or threatened species or their critical habitats shall have been previously prepared with respect to any agency action exempted by such order.

(l) COMMITTEE ORDERS.- (1) If the Committee determines under subsection (h) that an exemption should be granted with respect to any agency action, the Committee shall issue an order granting the exemption and specifying the mitigation and enhancement measures established pursuant to subsection (h) which shall be carried out and paid for by the exemption applicant in implementing the agency action. All necessary mitigation and enhancement measures shall be authorized prior to the implementing of the agency action and funded concurrently with all other

project features. (2) The applicant receiving such exemption shall include the costs of such mitigation and enhancement measures within the overall costs of continuing the proposed action. Notwithstanding the preceding sentence the costs of such measures shall not be treated as project costs for the purpose of computing benefit-cost or other ratios for the proposed action. Any applicant may request the Secretary to carry out such mitigation and enhancement measures. The costs incurred by the Secretary in carrying out any such measures shall be paid by the applicant receiving the exemption. No later than one year after the granting of an exemption, the exemption applicant shall submit to the Council on Environmental Quality a report describing its compliance with the mitigation and enhancement measures prescribed by this section. Such report shall be submitted annually until all such mitigation and enhancement measures have been completed. Notice of the public availability of such reports shall be published in the Federal Register by the Council on Environmental Quality.

(m) NOTICE.-The 60-day notice requirement of section 11(g) of this Act shall not apply with respect to review of any final determination of the Committee under subsection (h) of this section granting an exemption from the requirements of subsection (a)(2) of this section.

(n) JUDICIAL REVIEW.-Any person, as defined by section 3(13) of this Act, may obtain judicial review, under chapter 7 of title 5 of the United States Code, of any decision of the Endangered Species Committee under subsection (h) in the United States Court of Appeals for (1) any circuit wherein the agency action concerned will be, or is being, carried out, or (2) in any case in which the agency action will be, or is being, carried out outside of any circuit, the District of Columbia, by filing in such court within 90 days after the date of issuance of the decision, a written petition for review. A copy of such petition shall be transmitted by the clerk of the court to the Committee and the Committee shall file in the court the record in the proceeding, as provided in section 2112, of title 28, United States Code. Attorneys designated by the Endangered Species Committee may appear for, and represent the Committee in any action for review under this subsection.

(o) EXEMPTION AS PROVIDING EXCEPTION ON TAKING OF ENDANGERED SPECIES.-Notwithstanding sections 1533(d) and 1538(a)(1)(B) and (C) of this title, sections 1371 and 1372 of this title, or any regulation promulgated to implement any such section- (1) any action for which an exemption is granted under subsection (h) of this section shall not be considered to be a taking of any endangered species or threatened species with respect to any activity which is necessary to carry out such action; and (2) any taking that is in compliance with the terms and conditions specified in a written statement provided under subsection (b)(4)(iv) of this section shall not be considered to be a prohibited taking of the species concerned.

(p) EXEMPTIONS IN PRESIDENTIALLY DECLARED DISASTER AREAS.
(NOT PERTINENT TO HCP)

SECTION 10

SEC. 10. (a) PERMITS.- (1) The Secretary may permit, under such terms and conditions as he shall prescribe- (A) any act otherwise prohibited by section 9 for scientific purposes or to enhance the propagation or survival of the affected species, including, but not limited to, acts necessary for the establishment and maintenance of experimental populations pursuant subsection (j); or **(B) any taking otherwise prohibited by section 9(a)(1)(B) if such taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.** (2)(A) No permit may be issued by the Secretary authorizing any taking referred to in paragraph (1)(B) unless the applicant therefor submits to the Secretary a conservation plan that specifies- (i) the impact which will likely result from such taking; (ii) what steps the applicant will take to minimize and mitigate such impacts, and the funding that will be available to implement such steps; (iii) what alternative actions to such taking the applicant considered and the reasons why such alternatives are not being utilized; and (iv) such other measures that the Secretary may require as being necessary or appropriate for purposes of the plan. (B) If the Secretary finds, after opportunity for public comment, with respect to a permit application and the related conservation plan that- (i) the taking will be incidental; (ii) the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking; (iii) the applicant will ensure that adequate funding for the plan will be provided; (iv) the taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild; and (v) the measures, if any, required under subparagraph (A)(iv) will be met; and he has received such other assurances as he may require that the plan will be implemented, the Secretary shall issue the permit. The permit shall contain such terms and conditions as the Secretary deems necessary or appropriate to carry out the purposes of this paragraph,

including, but not limited to, such reporting requirements as the Secretary deems necessary for determining whether such terms and conditions are being complied with. (C) The Secretary shall revoke a permit issued under this paragraph if he finds that the permittee is not complying with the terms and conditions of the permit.

(b) **HARDSHIP EXEMPTIONS.**- (1) If any person enters into a contract with respect to a species of fish or wildlife or plant before the date of the publication in the Federal Register of notice of consideration of that species as an endangered species and the subsequent listing of that species as an endangered species pursuant to section 4 of this Act will cause undue hardship to such person under the contract, the Secretary, in order to minimize such hardship, may exempt such person from the application of section 9(a) of this Act to the extent the Secretary deems appropriate if such person applies to him for such exemption and includes with such application such information as the Secretary may require to prove such hardship; except that (A) no such exemption shall be for a duration of more than one year from the date of publication in the Federal Register of notice of consideration of the species concerned, or shall apply to a quantity of fish or wildlife or plants in excess of that specified by the Secretary; (B) the one-year period for those species of fish or wildlife listed by the Secretary as endangered prior to the effective date of this Act shall expire in accordance with the terms of section 3 of the Act of December 5, 1969 (83 Stat. 275); and (C) no such exemption may be granted for the importation or exportation of a specimen listed in Appendix I of the Convention which is to be used in a commercial activity. (2) As used in this subsection, the term "undue economic hardship" shall include, but not be limited to: (A) substantial economic loss resulting from inability caused by this Act to perform contracts with respect to species of fish and wildlife entered into prior to the date of publication in the Federal Register of a notice of consideration of such species as an endangered species; (B) substantial economic loss to persons who, for the year prior to the notice of consideration of such species as an endangered species, derived a substantial portion of their income from the lawful taking of any listed species, which taking would be made unlawful under this Act; or (C) curtailment of subsistence taking made unlawful under this Act by persons (i) not reasonably able to secure other sources of subsistence; and (ii) dependent to a substantial extent upon hunting and fishing for subsistence; and (iii) who must engage in such curtailed taking for subsistence purposes. (3) The Secretary may make further requirements for a showing of undue economic hardship as he deems fit. Exceptions granted under this section may be limited by the Secretary in his discretion as to time, area, or other factor of applicability.

(c) **NOTICE AND REVIEW.**-The Secretary shall publish notice in the Federal Register of each application for an exemption or permit which is made under this section. Each notice shall invite the submission from interested parties, within thirty days after the date of the notice, of written data, views, or arguments with respect to the application; except that such thirty-day period may be waived by the Secretary in an emergency situation where the health or life of an endangered animal is threatened and no reasonable alternative is available to the applicant, but notice of any such waiver shall be published by the Secretary in the Federal Register within ten days following the issuance of the exemption or permit. Information received by the Secretary as part of any application shall be available to the public as a matter of public record at every stage of the proceeding.

(d) **PERMIT AND EXEMPTION POLICY.**-The Secretary may grant exceptions under subsections (a)(1)(A) and (b) of this section only if he finds and publishes his finding in the Federal Register that (1) such exceptions were applied for in good faith, (2) if granted and exercised will not operate to the disadvantage of such endangered species, and (3) will be consistent with the purposes and policy set forth in section 2 of this Act.

(e) **ALASKA NATIVES.**- (NOT APPLICABLE TO HCP)

(f) "Pre-Act endangered species part" is defined (NOT APPLICABLE TO HCP)

(g) In connection with any action alleging a violation of section 9, any person claiming the benefit of any exemption or permit under this Act shall have the burden of proving that the exemption or permit is applicable, has been granted, and was valid and in force at the time of the alleged violation.

(h) **CERTAIN ANTIQUE ARTICLES.**-(NOT APPLICABLE TO HCP)

(i) **NONCOMMERCIAL TRANSSHIPMENTS.**(NOT APPLICABLE TO HCP)

(j) **EXPERIMENTAL POPULATIONS.**- (1) For purposes of this subsection, the term "experimental population" means any population (including any offspring arising solely therefrom) authorized by the Secretary for release under paragraph (2), but only when, and at such times as, the population is wholly separate geographically from

nonexperimental populations of the same species. (2)(A) The Secretary may authorize the release (and the related transportation) of any population (including eggs, propagules, or individuals) of an endangered species or a threatened species outside the current range of such species if the Secretary determines that such release will further the conservation of such species. (B) Before authorizing the release of any population under subparagraph (A), the Secretary shall by regulation identify the population and determine, on the basis of the best available information, whether or not such population is essential to the continued existence of an endangered species or a threatened species. (C) For the purposes of this Act, each member of an experimental population shall be treated as a threatened species; except that- (i) solely for purposes of section 7 (other than subsection (a)(1) thereof), an experimental population determined under subparagraph (B) to be not essential to the continued existence of a species shall be treated, except when it occurs in an area within the National Wildlife Refuge System or the National Park System, as a species proposed to be listed under section 4; and (ii) critical habitat shall not be designated under this Act for any experimental population determined under subparagraph (B) to be not essential to the continued existence of a species. (3) The Secretary, with respect to populations of endangered species or threatened species that the Secretary authorized, before the date of the enactment of this subsection, for release in geographical areas separate from the other populations of such species, shall determine by regulation which of such populations are an experimental population for the purposes of this subsection and whether or not each is essential to the continued existence of an endangered species or a threatened species.

APPENDIX C
A TO Z ON THE HCP: A CHECKLIST OF POSSIBLE CHAPTER ACTIONS

1) ON HEARING OF THE PROJECT AND BEFORE THE PROJECT DESIGN PHASE IS COMPLETED

- a. Where is project located, or is geographic scope still to be decided? Letters expressing CNPS preliminary concerns list to be sent out to agencies. Request that CNPS be involved. If an HCP, research the property owners and their approachability regarding advisory participation.
- b. Determine the Lead Agency, and if Chapter have any contacts?
- c. HCP, or NCCP? Will there be scoping input from public? Check Part 1 of Manual to familiarize chapter review team with timelines and due dates. Contact other conservation organizations and develop a working group outside of the process that will share ideas and information, and will attempt to set common goals.
- d. If a "Low-Effect" HCP, is it correctly classified? Be prepared to challenge both the HCP and the NEPA documents, which are likely to be an EA or FONSI. If CNPS concerns are not being addressed, try to move the project toward a full HCP and EIS.
- d. If there is scoping for an HCP or NCCP, request to sit on scoping committee, or prepare a letter of concern.
- e. Consult the CNPS HCP Manual, and at the very least the Chapter 7 list of concerns.. Make a list of all issues of concern including a list of all plants and plant communities of interest to CNPS. Communicate these concerns to the Lead Agency as part of scoping. If there is no formal scoping, send a letter expressing CNPS concerns, and copy the letter to local politicians and planners. If
- f. If there is a Scientific Review Panel, can CNPS either join or influence the panel?

2) DATA COLLECTION FOR CONTRIBUTION TO THE DESIGN PHASE, AND FOR CHALLENGE ON PROJECT DESIGN

- g. Consult chapter botanic records, and perform a search of RareFind, NDDDB files, CNPS' Inventory, scientific literature, and previous EIRs and environmental documents. Search for specific locations of interest, and attempt to visit those locations.
- h. Complete an evaluation of habitat needs for species of concern.
- i. Complete an inventory of cumulative impacts of past projects in the area, and prepare a reasonable projection of future projects.
- j. Prepare a detailed analysis of the data, and prepare to send it to the Lead Agency, FWS, DFG. and local government.

3) EVALUATE THE PLAN

- k. Are plant populations and communities of concern to CNPS protected?
- l. What is the age and quality of data being used, and how is it validated? Are plants being mapped, or is distribution being computed from a surrogate such as presence of a vegetation type?
- m. Will there be net losses to listed species, and are ESA/CESA recovery requirements being violated?
- n. If interim take is allowed, are impacts tolerable?
- o. If pre-listing agreements are used, are they valid regarding impacts to species, and would they be sufficient to delay or prevent listing?
- p. How are non-listed species being protected, and are CCAs being used?
- q. Are the qualities and defensibilities of each population being correctly weighed?
- r. For plant populations to be "taken", will their losses place species in probable jeopardy?
- s. What is the quality of the mitigation, and what are the long term guarantees for the security of the mitigation? Does the project over-rely on public lands for mitigation? Is mitigation banking involved, and, if so, is it "in-kind"? Read Chapter 9 for discussion of issues.
- t. What is the cumulative impact of the project? Read Chapter 10.
- u. Are there valid project alternatives?. Has the full power of NEPA amd CEQA been utilized by the Chapter, and has it established an interest at all stages of the project?
- v. Is there conflict of interest between Section 7 and Section 10 consultation?
- w. What are the implications of any "no surprises" or "safe harbors" agreements?

4) COORDINATION

- x. Are goals and arguments of CNPS being supported or opposed by other conservation groups?

y. Is there any peer review, and if not, can CNPS coordinate a review?

5) LITIGATION AND APPEAL

z. Is the chapter sure enough of the facts and the science, and vested enough in the process to be able to appeal the plan, if needed? Both the Lead Agency approval of the plan and the NEPA-CEQA review may be grounds for legal challenge. Consider all existing land use and environmental laws and not just CESA and ESA.

**APPENDIX D
ESA FROM THE DEVELOPER'S SIDE OF THE TABLE**

The following will give some insight into the process as seen from the developer's side. The ideas here are drawn from an article by lawyer Hugh Hewitt, who represents landowners in ESA-CESA issues. (Plain Talk on Endangered Species: Environmental Law News v.5, no.4, Winter 1996 p.14-17).

- 1) Consult a lawyer who knows ESA-CESA law.
- 2) Hire a biologist. Hewitt says "Some of them are highly partisan participants in various species conflicts who have taken positions that compel them to accept methodologies designed to produce serviceable results". Enough said. However Hewitt points out that they must have the respect of the agencies.
- 3) Get a confidentiality clause and a conflicts clause in the contract with the biologist.
- 4) The biologist should agree to answer 'presence' or 'absence' determinations and will avoid non answers. Hewitt considers this is the "crux of the issue". States that biologists are loathe to rule out the possibility of a species, but should be responsible for issuing a best scientific opinion. Hewitt points out that is allowable to remove coastal sage scrub in the absence of the gnatcatcher.
- 5) The biologist should not make recommendations on mitigation measures, as these are also issues of land use entitlement law or real estate development.
- 6) Mitigation is a negotiation, not a formula.
- 7) Do not invite the resources agencies to your site, and refuse entry until an approach is agreed upon.
- 8) Do not ask local government for help, as their solutions may be overly expensive or time consuming.
- 9) Do not seek a consensus solution that will please all parties, as there is no obligation to please.
- 10) There are no stakeholders except for the landowner on private lands.
- 11) If an agency brought the species issue to the property owner's attention, reject offers of a collaborative approach.
- 12) Urge any local agency to stay out of what is a resource agency-landowner issue. This will not apply if there is a CEQA process underway.
- 13) Do not allow a resource agency to achieve mitigation ends that cannot be obtained through ESA or CESA. A landowner will not have to agree to suggested mitigation for any habitat that was unoccupied, and Hewitt suggests that attempts to hold a private party hostage to mitigation through withholding of local permits could be challenged, but might be attempted due to reluctance of the local agency to oppose the resource agency's desires.
- 14) If no endangered species or occupied habitat is taken, developers can probably move forward with a project in spite of requests for mitigation as no law has been broken.
- 15) You may have to litigate or call upon friendly Members of Congress to beat unneeded mitigation.
- 16) There are some ideologues in agencies, but most are not and you will always have some project as it would be a taking, and the agency will try to avoid any court rulings in this regard.
- 17) Document every meeting with agencies and send summary letters of your understanding of the meeting.
- 18) Be careful of becoming a mitigation bank, and consider using other existing banks to mitigate your project.
- 19) Species conflicts are only resolved when it is in the interest of the government to do so.
- 20) "Because the public thinks of eagles and grizzlies when they hear 'endangered species' and not flies and rats, the prospective of genuine legislative reform is remote."