IN THE UNITED STATES DISTRICT COURT

FOR THE EASTERN DISTRICT OF CALIFORNIA

NATIONAL WILDLIFE FEDERATION, et al.

Plaintiffs,

v.

BRUCE BABBITT, in his official capacity as Secretary of the United States Department of the Interior,

Defendant.

Civ. S-99-274 DFL JFM

MEMORANDUM OF OPINION AND ORDER

Plaintiffs challenge the United States Fish and Wildlife Service's issuance of an incidental take permit to allow development in the Natomas Basin, a 53,000 acre tract of largely undeveloped land stretching to the North of the City of Sacramento. The Natomas Basin contains habitat of the Giant Garter Snake, a threatened species under the federal Endangered Species Act, and the Swainson's hawk, a threatened species under the California Endangered Species Act. The parties now bring

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cross-motions for summary judgment.

I. Background and Procedural History

A. The Natomas Basin

The Natomas Basin ("Basin") is a low-lying region of predominately agricultural lands in the Sacramento Valley consisting of approximately 53,000 acres. The Basin is part of a larger flood plain known as the American Basin, and is situated at the northern end of the City of Sacramento ("City"). Approximately 22% of the area of the Basin is within the City limits, with the remainder to the north, in the jurisdiction of Sacramento and Sutter Counties. Because the area was subject until recently to frequent flooding, the Basin has remained relatively immune from development despite its proximity to a growing metropolitan region. The Basin provides habitat or potential habitat for a number of species listed as endangered or threatened under federal or state law. (See Administrative Record (hereinafter "AR") 6:886 at 48-50.) Of the 11,387 acres of the Basin that lie within the City, approximately 30% has been developed, while roughly 55% is in crop land and 15% is vacant or in its natural state. (See AR 10:1657 at III-5.) The land containing natural vegetation is primarily located along irrigation canals, drainage ditches, pastures, and uncultivated fields. (See Def.'s Mem. P. & A. at 11.)

In 1986, heavy spring rains caused significant flood damage in the Sacramento area. In response, the Army Corps of Engineers ("Corps") undertook a study of proposals to improve flood control

measures. This study culminated in the Corps' issuance, in 1991, of the "American River Watershed Investigation Feasibility Report" ("Feasibility Report"). The Feasibility Report proposed to provide 200 year flood protection through construction of the Auburn Dam and a series of levee improvements. (See Def.'s Mem. P. & A. at 12.)

The United States Fish and Wildlife Service ("the Service") reacted to the Corps' proposal with concern, noting the importance of the Basin to waterfowl using the Pacific Flyway for migration and to certain native species listed as endangered or threatened under federal or state law. (See AR 6:886.) The Service issued a report in 1991, the "American River Watershed Investigation, Natomas Area," (AR 6:886) ("1991 Report"), that examined the "indirect impacts" from development likely to result from flood control in the Basin. The 1991 Report considered a 41,000 acre subarea of the Basin that provided upland or wetland habitat and concluded that nearly the entire area -- 39,200 acres -- would be developed if a 200 year flood control plan were implemented. (See id. at 60-65 & Tbls. 5-7.) The 1991 Report found that the biological effects of this degree of urbanization in the Basin would be a dramatic loss of wildlife habitat. (Id. at 64.)

The 1991 Report contained an extensive discussion of potential means of mitigating for the urbanization that would follow upon flood control. The 1991 Report recommended that an area totaling 17,650 acres in the Natomas Area be acquired and

managed as a wetland/upland complex, to offset the expected loss of 22,717 acres of such habitat. Excluding acquisition costs, the 1991 Report anticipated the nonrecurring cost for development of acquired lands into habitat at approximately $171,675,000 - over $9700 per acre. In addition, the Report estimated annual management costs of $8,825,000, or $500 per acre.

In 1991, the Sacramento Area Flood Control Authority ("SAFCA") began the process of applying for an incidental take permit ("ITP") under § 10 of the Endangered Species Act ("ESA"), 16 U.S.C. §§ 1531 et seq. The ITP application was intended to permit implementation of the Corps' proposed 200-year flood control project, consistent with the requirements of the federal and state statutes protecting endangered species. In 1992, however, after Congress discontinued funding for study of the proposed Auburn Dam project -- an integral part of the Corps' 200-year flood protection plan -- SAFCA redirected its energies toward a more modest flood control project, designed to achieve 100-year flood protection in the Natomas area. In order to implement the flood control project, SAFCA applied to the Corps for a permit under § 404 of the Clean Water Act, 33 U.S.C. §§ 1251 et seq., to permit the discharge of fill material into certain wetlands and waterways in the basin. In reviewing this request, the Corps considered the direct effects of the proposed discharges, but initially declined to consider the indirect effects of the flood control project, namely, the urbanization likely to ensue. However, as a result of the Fish and Wildlife

Service's insistence on this issue, the Corps agreed, in November 1993, to require SAFCA to address the urban development that would occur as a result of the requested § 404 permit.

In 1993, the Service listed the Giant Garter Snake ("GGS") as a threatened species under the ESA. The listing notice identified 13 distinct populations of the GGS, of which the American Basin population was one of the largest. See 58 Fed. Reg. 54053 (Oct. 20, 1993). The Natomas Basin population is a subpopulation of the American Basin population of the GGS. After the listing of the GGS, "interest renewed . . . in developing a habitat conservation plan." (Def.'s Mem. P. & A. at 15.) In January 1994, the Natomas Basin Habitat Conservation Plan Working Group ("Working Group") was formed, and began development of a habitat conservation plan ("Plan," or "HCP"),[1] as required to qualify for an ITP. The Working Group was comprised of "representatives of land owners of a large proportion of the affected area." (AR 23:03931.)

In March 1994, the Service issued a Biological Opinion

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[1] Section 10 of the ESA allows the Secretary to issue an incidental take permit ("ITP"), authorizing its holder to take some members of protected species when such taking is incidental to carrying out an otherwise lawful activity. See 16 U.S.C. § 1539(a). To obtain an ITP, an applicant must develop and submit an HCP, which specifies (1) the likely impact from the proposed takings; (2) the steps the applicant will take to minimize and mitigate such impacts and the funding available for such mitigation; (3) alternative actions considered, and the reasons for not selecting them; and (4) such other measures as the Secretary may require as necessary or appropriate for the purposes of the plan. See 16 U.S.C. § 1539(a)(2)(A); see also Part II.A, infra.

("1994 Biological Opinion") regarding SAFCA's proposed flood control project.[2] (See AR 1:227.) The 1994 Biological Opinion noted that "nine of the twelve other extant populations [of the GGS are] on the verge of extinction," and expressed the Service's opinion that, given "the severe, declining trends in habitat suitability/availability and population levels throughout 75 percent of the range of the species," the American Basin population of GGS was "vital to the survival of the species." (Id. at 231.) In addition, the 1994 Biological Opinion noted that, absent measures to mitigate the expected urbanization of existing GGS habitat, "this flood control project and consequent urban development could extirpate the giant garter snake from the American Basin." (Id. at 230.) The 1994 Biological Opinion nevertheless concluded that the project would not likely "reduce appreciably the likelihood of the survival and recovery of the giant garter snake by adversely affecting reproduction, numbers and distribution of the species." (Id. at 231.) This conclusion was premised on five conditions proposed by the Corps as limitations on any permit to be issued to SAFCA: (i) preconstruction surveys for the GGS; (ii) the use of measures to

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[2] Under § 7 of the ESA, the Service may not undertake action that may affect a listed species unless it first finds that the action "is not likely to jeopardize the continued existence of" a protected species, or result in the destruction or adverse modification of critical habitat. 16 U.S.C. § 1536(a)(2); see also 50 C.F.R. § 402.01(b). This finding is typically made in a "biological opinion," which addresses whether jeopardy is likely to occur for any protected species, and if so, whether "reasonable and prudent alternatives" exist to avoid jeopardy. See Part II.A, infra.

minimize incidental take; (iii) compensation for any direct losses of GGS habitat; (iv) completion of a habitat management plan that ensures the conservation needs of the GGS; and (v) execution of an agreement by the City, Sacramento and Sutter Counties, and the Service, to guarantee implementation of the plan. (See id. at 228, 231.) Most important among these conditions were numbers (iv) and (v), which the 1994 Biological Opinion characterized as

> a special permit condition that would establish a multispecies habitat conservation plan for the 55,000-acre lower American Basin, scheduled for completion prior to the start of construction of the proposed pumping station. An element of this habitat management plan would include an agreement among local governments and the Service that guarantees the conservation needs of the giant garter snake.

(Id. at 231.)

In May 1994, landowners in the Working Group responded to the 1994 Biological Opinion by commissioning a team of consultants to begin preparing a draft HCP and an accompanying application for an ITP under ESA § 10. SAFCA subsequently released a draft HCP for public comment in March 1995. (See AR 24:4190.) Extensive public comments were received, and the Working Group released summaries of the comments, including explanations of which comments were being addressed by revision of relevant documents. The Service also provided comments in response to the 1995 draft HCP, and expressed concern over certain provisions of the Plan. The Service did, however, accept certain significant provisions of the Plan, including its proposed mitigation ratio of 0.5:1, whereby one-half acre of land

would be acquired and conserved for each acre that was developed, and the Plan's estimate that only 17,500 acres in the basin would be developed over the 50 year life of the Plan.

In October 1995, and again in June 1996, SAFCA published revised HCPs, incorporating some of the comments rendered on earlier drafts. (See AR 21:3680; 19:3440.) Subsequently, the City of Sacramento took over for SAFCA as the prospective permittee, and in December 1996, the City submitted its application for an ITP, consisting of a draft HCP, draft Implementation Agreement and other supporting documents. Upon receipt of this application, the Service prepared a draft Environmental Assessment ("EA"), and the permit package was released for public comment in January 1997. See 62 Fed. Reg. 2174 (Jan. 15, 1997). The Service considered the extensive public comments it received and proposed changes to the Plan and the Implementation Agreement based on the comments. (See AR 39:6347-6355.) In November 1997, the City issued another amended version of the permit application, including a revised HCP and a revised Implementation Agreement. (See AR 10:1657.) The Service reviewed the revised documents, and on November 21, 1997, requested minor changes aimed at harmonizing the Implementation Agreement with the HCP and otherwise clarifying the intent of the parties. (See AR 9:1640, 1641.) In December, the Service prepared and released a new Environmental Assessment ("EA"), (see AR 9:1638), and on December 8, 1997, the City executed the Implementation Agreement. On December 17, 1997, the Fish and

Wildlife Service issued a new Biological Opinion ("1997 Biological Opinion") which concluded that issuance of the ITP would not jeopardize the continued existence of any covered species. (See AR 9:1563.) Finally, on December 31, 1997, the Service executed the Implementation Agreement and issued the permit to the City. (See AR 9:1508.) On the same day, the Service issued Findings and Recommendations regarding its decision to issue the permit, which included a response to comments and a summary of changes made in the final version of the HCP. (See AR 9:1513 at 1530-38.)

B. The Final HCP

The Natomas Basin HCP is intended "to promote biological conservation along with economic development and the continuation of agriculture within the Natomas Basin." (AR 10:1657 at I-1.) The HCP lists 26 species that are "potentially subject to take," (id. at I-6), and which are to "be included in the state and federal permits issued in accordance with the Plan."[3] (Id.) The proposed permit authorizes incidental take resulting from urban development, as well as any incidental take that may occur through rice-farming or result from management of the Plan's reserve lands. The HCP was developed as a regional conservation plan for the entire Natomas Basin, and was intended for use in

[3] The Plan seeks permit coverage for a number of species that are not now protected under the ESA, to protect the City's interests in the event any of those species acquire statutory protection during the term of the ITP. The Plan also seeks permit coverage for certain species whose presence in the Basin is unconfirmed, to protect the City's interests in the event those species are later found to exist in the Basin.

connection with ITP applications for each of the municipalities and water companies with interests in the Basin:

> [t]he following agencies or jurisdictions will be seeking, or are expected to seek, Section 10(a)(1)(B) and [California Fish and Game Code] Section 2081 permits for their activities under this Plan: (1) the City of Sacramento; (2) Sacramento County; (3) Sutter County; (4) Reclamation District No. 1000; and (5) the Natomas Central Mutual Water Company. . . . These agencies will be seeking their respective permits for any incidental take that may occur as a result of their activities (e.g. maintenance and public works), or, in the case of the local land use authorities, for any incidental take that may result from actions by third parties acting under existing zoning regulations or future land use permits.

(Id. at I-2.)[4]

The Plan is administered by the Natomas Basin Conservancy ("NBC") which has the responsibility to establish and oversee "a concerted Basin-wide program for acquiring and managing mitigation lands on behalf of the permittees. Specifically, the NBC will be responsible for collecting and managing mitigation fees required by the City and Counties, for using the fees to establish mitigation lands, and for managing the mitigation lands for the benefit of the covered species." (AR 10:1657 at IV-6.) The Plan provides for a Technical Advisory Committee ("TAC"), comprised of representatives from the Service, the California Department of Fish and Game, and any permittee, as well as

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[4] The Plan left some room for variation, noting that, although the HCP to be submitted with each permit application was expected to be "in substance . . . similar when submitted by each affected jurisdiction or agency," (AR 10:1657 at I-5), "Implementing Agreements developed by each jurisdiction or agency may vary to some extent based on their activities or the specific circumstances within their respective jurisdictions and permit areas." (Id.)

outside experts, "to advise the NBC in implementing" the HCP. (AR 10:1657 at IV-7.) The TAC's role is:

> to advise the NBC in making technical and biological decisions with respect to reserve land selection, enhancement, and management; monitoring programs and needs; species relocation or reintroduction plans; and other issues pertaining to technical implementation of the Plan.

(Id.)

The Plan calls upon the NBC to assemble connected 400 acre blocks of reserve lands -- with one block of at least 2500 acres -- for the benefit of the Giant Garter Snake and to protect Swainson's hawk habitat and nesting areas. The HCP states that "to the maximum extent practicable, the [Natomas Basin] HCP will ensure that habitat acquisition will be provided in advance of habitat conversion resulting from urban development in the Natomas Basin." (Id. at IV-50 (emphasis added).) Funding for land acquisition, however, is derived from the collection of mitigation fees for development. Thus, with regard to the phasing of land acquisition, the HCP actually requires only that, after an initial acquisition of 400 acres, which is to be made "as soon as possible," (id. at IV-50), "no more than one year shall elapse between receipt of a fee and expenditure of that fee in the purchase or other acquisition of mitigation land." (Id. at IV-51.)[5]

[5] After the initial 400 acres have been acquired, the NBC is permitted to defer further land acquisition "until fees have been collected for 1,500 acres of development." (Id. at IV-50.) At that point, the provision requiring expenditure of funds within one year of their collection becomes effective.

The Plan is based on certain key principles and assumptions. First, the Plan assumes that only 17,500 acres of Basin land will be developed over the 50 year life of the permit, and that a substantial proportion of the undeveloped land will remain in agriculture, particularly rice, which is believed to have unique value as habitat for the GGS. The Plan's conclusion that a ratio of .5 acres of reserve lands for each 1 acre of developed land will ensure the biological needs of the protected species is based on the assumption that a considerable portion of the undeveloped and agricultural lands in the Basin will remain undeveloped, thereby augmenting the habitat value of the reserve lands.

Second, the Plan pursues a regional approach to conservation. Whereas without the Plan, individual landowners could pursue separate permit applications, or develop their land without securing an ITP,[6] the HCP is intended to provide a consolidated approach under which resources may be pooled and conservation lands may be purchased throughout the Basin. Third, the HCP treats all Basin lands as fungible, as equally valuable habitat. Thus, the HCP requires developers to "mitigate" for the anticipated take of individuals or habitat by payment of a fee for each acre developed. Rather than differentiating among lands

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[6] An ITP is not a prerequisite for development, but simply insulates its holder from a § 9 suit in the event that incidental take results from development activities. See Part II.A, infra. The HCP provides local governments and water districts with umbrella permits such that these jurisdictions may in turn authorize particular development projects on Basin lands within their boundaries under the overall protection of the ITP.

according to their value as habitat for protected species, the HCP requires all landowners within the Permit area to pay a mitigation fee for developing their land, regardless of whether any particular parcel has or lacks habitat value. Depending on one's point of view, this uniform treatment is either a strength or a weakness of the Plan. It is a strength because mitigation fees are to be collected on all acreage and are used "to set aside 0.5 acres of habitat land for each 1.0 acres of gross development that occurs in the Basin." (AR 10:1657 at IV-6.)[7] It is a potential weakness because the Plan does not attempt to identify, prior to intensified development under the ITP, particular parcels for acquisition as reserves, based upon the importance of those parcels as habitat, but simply specifies acquisition criteria, and leaves specific reserve acquisition to the future decisionmaking of the NBC.

Finally, the Plan is based upon what it calls "adaptive management." The Plan recognizes that the current state of knowledge as to the conservation needs of protected species is imperfect, and that its assumptions as to the amount, location,

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[7] The initial base fee was set at $2240 per acre developed, of which $1829 was allocated for acquisition of land, $142 for restoration, enhancement and monitoring, $150 for administration of operation and monitoring, $75 for an operations and monitoring endowment, and $44 for administration of fee collection. (See id. at IV-54.) Because these figures represent the amount collected for each acre developed, the amount available for each acre of mitigation land is twice the given figures. For example, the HCP assumes that land can be acquired for $1829 x 2, or $3658 per acre, and sets aside $142 x 2, or $284 per acre for restoration, enhancement, and monitoring. (See id. at IV-54 to IV-55.)

and pace of development in the Basin and as to the adequacy of the mitigation fee to accommodate increased expenses may prove inaccurate. The Plan addresses these uncertainties through its "adaptive management" provisions, which permit the Plan's conservation strategy to be adjusted based on new information. (See id. at IV-43.) The HCP's conservation program can be modified under the adaptive management provisions if: (1) new information results from ongoing research on the GGS or other covered species; (2) recovery strategies under Fish and Wildlife Service recovery plans for the GGS or the Swainson's hawk differ from the measures contemplated by the HCP; (3) certain of the HCP's mitigation measures are shown through monitoring to require modification; or (4) the HCP's required minimum block sizes for reserve lands are shown to require revision. (Id. at IV-43.) The Plan anticipates that the NBC will make discretionary decisions in future years based upon new information. The NBC will decide, for example, which lands to purchase, depending on a variety of future considerations difficult now to predict, and whether to change the mix of in and out of Basin reserve lands and agricultural as opposed to marsh reserve lands.

The Plan provides for two distinct types of monitoring to assess its continuing effectiveness at meeting its conservation goals. First, periodic multi-species inventories across the Plan's entire system of reserve lands "shall be conducted throughout the [Natomas Basin] HCP plan area a minimum of once every five years." (Id. at IV-45.) Second, "when necessary, as

determined by the NBC and its Technical Advisory Committee (TAC), focused monitoring efforts [will be conducted] to assess the effectiveness of specific management and enhancement programs." (Id.) The results of these monitoring efforts will "form an important component of the Adaptive Management" program. (Id.)

Apart from the ongoing monitoring and adaptive management programs, the Plan addresses the "variety of uncertainties [that] exist in the Plan," including, among other things, the actual level of development that will occur in the basin, and the "extent, location and effectiveness of the habitat reserve system as it is developed under the Plan," by providing for "a comprehensive program review designed to evaluate the performance and effectiveness of the Plan." (Id. at IV-59.) The program review is to be conducted at roughly the halfway point of the Plan, "when and if urban development [of currently undeveloped land] within the basin reaches a total of 9,000 acres." (Id.) This program review is to be conducted by the NBC, the permittees, the Fish and Wildlife Service, and the California Department of Fish and Game ("CDFG"), and is to address whether the HCP is meeting its original goals with respect to four principal issues: (1) the status of the covered species; (2) the status and effectiveness of the reserve system; (3) the status and effectiveness of the Plan's funding mechanism; and, (4) the distribution of developed and reserve lands within the Basin. During the program review, no more than an additional 3,000 acres may be developed, so that, assuming that all Basin development

proceeds under the auspices of the HCP, no more than 12,000 acres in total will have been developed in the Basin before the program review is completed.

C. The 1997 Biological Opinion

As required by § 7(a)(2) of the ESA, the Service issued a Biological Opinion, ("1997 Biological Opinion") (AR 9:1563), in which it concludes that the issuance of the ITP is not likely to jeopardize the continued existence of any species covered by the Permit. In the 1997 Biological Opinion, the Service provides an account of the then current state of knowledge with respect to the "status and environmental baseline" of each covered species, including distribution and population. (See id. at 1574-79.) With regard to the Giant Garter Snake, the 1997 Biological Opinion emphasizes the benefits of the wetland habitat portion of the reserve system, which is to consist of "a network of reserves a minimum of 400 acres in size and connected by a network of canals," and "at least one parcel a minimum of 2500 acres in size." (Id. at 1567.) The 1997 Biological Opinion notes that "habitat enhancements on the reserve lands are expected to increase the amount and quality of habitat available to the giant garter snake through time as the [Natomas Basin] HCP is implemented." (Id.)

The 1997 Biological Opinion concedes that a certain amount of uncertainty exists with respect to factors that "could have significant consequences for [the success of the] conservation program." (Id. at 1583.) The Service explains, however, that

these uncertainties are "inherent in the land use realities within the [Natomas Basin] HCP plan area and difficult to fully avoid." The 1997 Biological Opinion concludes that the monitoring, adaptive management, and program review provisions of the HCP will enable the NBC to respond appropriately as new information is developed:

> The [Natomas Basin] HCP recognizes these potential difficulties and incorporates a wide array of adaptive and corrective features designed to respond to such future uncertainties, to changing circumstances, and to new information throughout the term of the permit. These include: (1) its Adaptive Management program . . .; (2) its biological monitoring program . . .; (3)provisions for incorporating a giant garter snake recovery plan when one is developed and approved . . .; and (4) a comprehensive program review to occur when urban development in the Natomas Basin reaches 9,000 acres.

(Id.) On the basis of these provisions, the 1997 Biological Opinion concludes that "provided that reserve management decisions are appropriately adjusted through time based on results of monitoring and that the corrective features of the Adaptive Management and other programs described above are implemented, the proposed action will not appreciably reduce the likelihood of the survival and recovery of the giant garter snake in the wild." (Id.)

With regard to the Swainson's hawk, the 1997 Biological Opinion notes that

> Under the Plan's 0.5-to-1.0 mitigation ratio it is theoretically possible that up to two thirds of [the Swainson's hawk] zone could be lost to urbanization, since no other explicit limits on development in this area are required. Considering the importance of this area to Swainson's hawks nesting within the Basin, such a loss would impose unacceptable impacts to the species and could result

in loss of all or a significant part of the Basin's nesting population of this species.

(Id. at 1584.) However, the Service agrees with the HCP "that development in the Swainson's hawk zone will be much more limited than the theoretical two-thirds," (id. at 1584), because the areas within the hawk zone are not now zoned for urban development, and because the plan requires the NBC to monitor urban development in the zone and to acquire or protect sufficient land to prevent the potential adverse consequences. (See id.) Ultimately, as with the giant garter snake, the 1997 Biological Opinion concludes that "provided that reserve management decisions are adjusted through time based on results of monitoring and that the corrective features of the Adaptive Management and other programs described above are implemented, the proposed action will not appreciably reduce the likelihood of the survival and recovery of the Swainson's hawk in the wild." (Id. at 1586.)

With respect to the other covered species, the 1997 Biological Opinion generally concurs with the HCP's conclusions that the remaining covered species would not be significantly affected by the Plan and might in fact benefit from the reserve system created under the Plan. (See id. at 1586-91, 1595.)

The 1997 Biological Opinion briefly addresses the tension between the regional nature of the Plan and the local nature of the ITP. The Service acknowledges that, although the HCP is a regional plan that assumes permit applications from each of the

three land use agencies and the two irrigation districts with interests in the Basin, complete participation is not assured, and "a lack of participation by Sacramento or Sutter County, could compromise the NBC's ability to assemble the required contiguous 400-acre and 2500-acre habitat blocks for the mitigation reserve system." (Id. at 1580.) The 1997 Biological Opinion ultimately brushes off these concerns, stating that mitigation "will keep pace with, and contribute to an overall balance between, habitat converted and habitat protected," (id. at 1581), and concluding that "the Plan would be self-sufficient within each permit area, to the extent that each permittee must mitigate for impacts to covered species that occur as a result of development within its respective jurisdiction . . . and the mitigation must meet the Plan's basic biological standards." (Id. at 1580.)

D. The 1997 Findings and Recommendations

On December 31, 1997, the Service's Regional Director signed the "Findings and Recommendations Regarding Issuance of an Incidental Take Permit to the City of Sacramento" ("F&Rs"), which summarizes the provisions of the HCP, and discusses the 1997 Biological Opinion's analysis of the likely effect on covered species of the issuance of the permit. (AR 9:1513.) The F&Rs make each of the findings required under 16 U.S.C. § 1539(a)(2)(B), namely that: (1) the permitted taking will be incidental to otherwise lawful activity; (2) under the HCP, the City will, to the maximum extent practicable, minimize and

mitigate the impacts of the taking; (3) the City will ensure that adequate funding for the HCP and procedures to deal with unforeseen circumstances would be provided; (4) the taking will not appreciably reduce the likelihood of the survival and recovery of the covered species in the wild; (5) any and all other measures required by the Service have been met; and (6) the Service has received the necessary assurances that the Plan will be implemented. (See id. at 1522-25.) Finally, the F&Rs summarize the HCP's analysis of the three alternatives considered by the City. (See id. at 1525.)[8]

E. Procedural History

On February 12, 1999, plaintiffs filed suit in this court to challenge the Secretary's decision to issue the ITP to the City of Sacramento. Plaintiffs assert the following claims in their

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[8] The HCP identifies three alternatives to the proposed issuance of the ITP. The first, the "no action" alternative, was rejected because urbanization in the Natomas Basin was expected to proceed with or without the HCP, and "urbanization without the [Natomas Basin] HCP would likely result in the cumulative, unmitigated destruction of giant garter snake habitat and ultimately extirpation of the species from the area." (AR 10:1657 at V-14.) Second, the "alternative resource management" alternative, which would not allow hunting or rice farming on reserve lands, "was rejected as financially unacceptable." (Id.) Third, the "alternate proportions of marsh and in-basin land" alternative, was rejected for similar reasons. The Plan allows 75% of reserve lands to be used for rice farming, and 20% of reserves to be acquired outside the Natomas Basin. The Plan notes that these proportions "may not be biologically optimal," but adopts them for financial reasons, and other reasons related to "local acceptability." (Id. at V-15.) The Plan notes that the HCP "can adapt to meet changing biological circumstances," if it is later demonstrated that greater or lesser proportions of marsh and out of Basin reserves are "biologically necessary." (Id.)

complaint: (1) The Service violated ESA § 10(a)(2)(A) and APA § 706(2)(A), by failing to ensure that the HCP satisfied the minimum criteria of 16 U.S.C. § 1539(a)(2)(A); (2) The Service violated ESA § 10(a)(2)(B)(iv) and APA § 706(2)(A) by failing to consider relevant factors in reaching its conclusion that the HCP "will not appreciably reduce the likelihood of survival and recovery" of covered species in the wild; (3) The Service violated ESA § 7(a)(2) and APA § 706(2)(A) by failing to consider relevant factors in reaching its "no jeopardy" conclusion, and by failing to use the best available scientific information; (4) The Service violated ESA § 10(a)(2)(B)(ii) and APA § 706(2)(A) by arbitrarily finding that the applicant will minimize and mitigate the impact of permitted takings "to the maximum extent practicable" without undertaking consideration of greater minimization or mitigation measures; (5) The Service violated ESA § 10(a)(2)(B)(iii) and APA § 706(2)(A) by arbitrarily finding that the applicant will ensure adequate funding for the plan, despite evidence that funding is inadequate and the City's professed inability to ensure funding; (6) The Service violated ESA § 7(a)(2) and 10(a)(2) and APA § 706(2)(A) by arbitrarily providing a "no-surprises" assurance regarding future changes in the HCP, Implementation Agreement, and ITP; (7) The Service violated ESA § 10(a)(2)(C) and APA § 706(1) by failing to revoke the City's permit despite having found that the City has violated Permit terms and conditions; (8) The Service violated ESA § 7(a)(2), 50 C.F.R. § 402.16, and APA § 706(1) by failing to

reinitiate consultation despite the discovery of new information warranting reinitiation; and (9) The Service violated NEPA § 4332(C) and APA § 706(2)(A) by arbitrarily making a finding of no significant impact ("FONSI") and failing to conduct a required EIS.

On August 13, 1999, plaintiffs moved for partial summary judgment as to their first through fifth and ninth claims. On September 28, 1999, the court granted the motion to intervene of two real estate developers with landholdings in the Natomas Basin, Kaufman and Broad of Sacramento, Inc., and Kern Schumacher. On October 29, 1999, the Secretary filed his brief in opposition to plaintiffs' motion, and also moved for summary judgment on all claims. Oral argument was heard on February 25, 2000 and on March 3, 2000. The City and intervenors join in the Secretary's motion and in his opposition to plaintiffs' motion.

II. Legal Background

Plaintiffs challenge the HCP and the Secretary's issuance of the ITP as in violation of the Endangered Species Act ("ESA"). The court reviews the Secretary's compliance with the ESA under the Administrative Procedure Act ("APA"), 5 U.S.C. § 701 et seq. See, e.g., Bennett v. Spear, 520 U.S. 154, 176-77, 154 S. Ct. 1154, 1166-67 (1997).

A. The Endangered Species Act

The ESA requires the Secretary to determine whether a given species qualifies for protection as endangered or threatened, and

confers significant protection on species so listed. Section 9 of the ESA makes it unlawful for any person subject to the jurisdiction of the United States to "take" any member of any endangered or threatened species.[9] See 16 U.S.C. § 1538(a)(1). The ESA defines "take" as "to harass, harm, pursue, hunt, wound, kill, trap, capture, or collect." 16 U.S.C. §1532(19). "Harm" is further defined by regulation to include killing or injuring a protected species through "significant habitat modification or degradation" that impairs "essential behavioral patterns, including breeding, feeding, or sheltering." 50 C.F.R. § 17.3.

Section 9's broad prohibition on take is limited by several exceptions identified in § 10. Most importantly for present purposes, § 10 allows the Secretary to issue an incidental take permit ("ITP"), which authorizes its holder to take some members of protected species when the taking is incidental to carrying out an otherwise lawful activity. See 16 U.S.C. § 1539(a). The permittee under an ITP is not liable for any taking that falls within the scope of the permit.

To obtain an ITP, an applicant must develop and submit a habitat conservation plan ("HCP"), which specifies (1) the likely

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[9] Of the species covered by the ITP, only the Giant Garter Snake and certain vernal pool species are currently listed under the federal ESA. (See AR 10:1657 at II-6.) The Swainson's hawk is listed under the California ESA, and is covered by an ITP issued under the Plan by the California Department of Fish and Game, as well as by the federal ITP. (See id. at I-1.) The Permit also covers -- that is, provides incidental take authority with respect to -- a number of species not currently listed under either federal or state law on the theory that they could be listed at some point during the fifty year life of the Permit. (See id. at II-6.)

impact from the proposed takings; (2) the steps the applicant will take to minimize and mitigate such impacts and the funding available for such mitigation; (3) alternative actions considered, and the reasons for not selecting them; and (4) such other measures as the Secretary may require as necessary or appropriate for the purposes of the plan. See 16 U.S.C. § 1539(a)(2)(A). Upon submission of a permit application and related conservation plan, "the Secretary shall issue the permit," if he finds, after opportunity for public comment, 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) other measures required by the Secretary will be met.

16 U.S.C. § 1539(a)(2)(B). The permit "shall contain such terms and conditions as the Secretary deems necessary or appropriate to carry out the purposes of this paragraph, including . . . such reporting requirements as the Secretary deems necessary for determining whether such terms and conditions are being complied with." Id. If the Secretary finds that a permittee is not complying with the terms and conditions of the permit, he "shall revoke" the permit. 16 U.S.C. § 1539(a)(2)(C).

In addition to his responsibility to review the permit application for compliance with the dictates of ESA § 10, the Secretary must insure that issuance of the permit is consistent with ESA § 7(a)(2). See 16 U.S.C. § 1536(a)(2). Section 7

requires each federal agency to "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 [critical habitat]." Id. To comply with § 7(a)(2), an agency considering action that may affect a protected species is required to engage in a consultation process with the Service. When the action agency is the Service itself, as when the Service is considering whether to issue an ITP, it must engage in internal consultation under § 7, and may issue the permit only upon a finding that it "is not likely to jeopardize the continued existence of" a protected species, or result in the destruction or adverse modification of critical habitat. Id.; 50 C.F.R. § 402.01(b). During the consultation process, the agency must consider direct, indirect,[10] and cumulative[11] effects. Any action that "may affect" listed species or critical habitat triggers the action agency's obligation to formally consult with the Service. See 50 C.F.R. 402.14; 51 Fed. Reg. 19926, 19949-50. Formal consultation typically culminates in the issuance of a biological opinion by the Service, which addresses whether jeopardy is likely to occur for any protected species, and if so, whether "reasonable and prudent alternatives" exist to avoid

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[10] "Indirect effects" are those that are reasonably certain to occur later in time, as a result of the proposed action. See 50 C.F.R. 402.02.

[11] "Cumulative effects" are the effects of actions of third parties, whether state or private entities, "that are reasonably certain to occur within the action area." 50 C.F.R. § 402.02.

jeopardy. The Service must use "the best scientific and commercial data available" in making the required "no jeopardy" finding. 16 U.S.C. § 1536(a)(2). In every respect except for this "best scientific and commercial data" requirement, the no jeopardy finding required by ESA § 7(a)(2) is identical to the survival finding required under § 10(a)(2)(B)(iv). Where the "available data" is imperfect, the Service is not obligated to supplement it or to defer issuance of its biological opinion until better information is available. Rather, "the Service must develop its biological opinion based upon the best scientific and commercial data available regardless of the 'sufficiency' of that data." See 51 Fed. Reg. 19926, 19951 (final rulemaking with respect to 50 C.F.R. 402).

Under ESA regulations, certain conditions may trigger an agency's obligation to consult again on the same project. "Reinitiation of consultation" is required "where discretionary Federal involvement or control over the action has been retained or is authorized by law," and one of the following conditions occurs: (a) the extent of taking specified in the ITP is exceeded; (b) new information reveals that the action may affect the species or critical habitat in a manner or to an extent not previously considered; (c) the action is subsequently modified in a manner that causes an effect to the species or critical habitat that was not considered in the original biological opinion; or (d) a new species is listed or critical habitat designated that may be affected. See 50 C.F.R. § 402.16.

B. The National Environmental Policy Act

The National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4321 et seq., requires the preparation of an Environmental Impact Statement ("EIS") for all "major Federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C); see also Morongo Band of Mission Indians v. Federal Aviation Administration, 161 F.3d 569, 575 (9th Cir. 1998). An EIS is a "detailed statement" examining in depth the environmental impact of the proposed action and alternatives to the proposed action. 42 U.S.C. § 4332(C). NEPA sets forth "action-forcing" procedures designed to fully inform agency decisionmakers of the environmental impact of their decisions. The reason for the EIS requirement is that "decisions that are based on understanding of the environmental consequences" will "protect, restore and enhance the environment." 40 C.F.R. § 1500.1(c). "NEPA exists to ensure a process, not a result." Morongo Band of Mission Indians, 161 F.3d at 575. Thus, NEPA does not forbid harm to the environment but requires government decisionmakers to evaluate that harm and explain why the action is justified despite the harm:

> NEPA is not designed to prevent all possible harm to the environment; it foresees that decisionmakers may choose to inflict such harm, for perfectly good reasons. Rather, NEPA is designed to influence the decisionmaking process; its aim is to make government officials notice environmental considerations and take them into account.

Massachusetts v. Watt, 716 F.2d 946, 952 (1st Cir. 1983).

By regulation, an agency considering whether an action would

require preparation of an EIS must prepare a brief, preliminary evaluation, called an environmental assessment ("EA"). EAs are intended to be concise documents that "briefly provide sufficient evidence and analysis for determining whether to prepare an EIS or a 'finding of no significant impact' ("FONSI")." 40 C.F.R. § 1508.9. NEPA requires that an EIS be prepared before taking action that may significantly affect the quality of the human environment. See 42 U.S.C. § 4332. An EIS must be prepared if "substantial questions are raised as to whether a project . . . may cause significant degradation of some human environmental factor." Greenpeace Action v. Franklin, 14 F.3d 1324, 1332 (9th Cir. 1992) (emphasis in original). "The plaintiff need not show that significant effects will in fact occur, but if the plaintiff raises substantial questions whether a project may have a significant effect, an EIS must be prepared." Id. (emphasis in original).[12]

In assessing the significance of a project's impact, NEPA regulations require the agency to consider a variety of factors,

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[12] The regulations provide that:

> "Human Environment" shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment. This means that economic or social effects are not intended by themselves to require preparation of an environmental impact statement. When an environmental impact statement is prepared and economic or social and natural or physical environmental effects are interrelated, then the environmental impact statement will discuss all of these effects on the human environment.

40 C.F.R. § 1508.14.

which are set out in two categories, labeled "context" and "intensity." The regulations enumerate a number of relevant considerations, including the scope of the affected area and region, the severity of the impact, whether public health may be affected, whether unique resources may be affected, the degree to which the effects are likely to be controversial or uncertain, the precedential nature of the action, the impact of other related actions, the degree to which the action may affect an endangered or threatened species or critical habitat, and whether the action threatens a violation of federal, state, or local law.[13]

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[13] The regulations provide that the following factors should be considered:

(a) Context. This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.

(b) Intensity. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following should be considered in evaluating intensity:

(1) Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.

(2) The degree to which the proposed action affects public health or safety.

(3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

(4) The degree to which the effects on the quality of the human environment are likely to be highly controversial.

(5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

After conducting a preliminary environmental assessment, if the agency makes a Finding of No Significant Impact, then no EIS is required. An agency's decision to issue a FONSI, and not to prepare an EIS, is reviewable under the arbitrary and capricious standard. See Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 109 S. Ct. 1851 (1989); Morongo Band, 161 F.3d at 573; Oregon Natural Resources Council v. Lowe, 109 F.3d 521, 527-28 (9th Cir. 1997).

C. The Administrative Procedure Act

Judicial review of final administrative action is governed by § 706 of the APA. See Pyramid Lake Paiute Tribe of Indians v. U.S. Dept. of Navy, 898 F.2d 1410, 1414 (9th Cir. 1990). The APA

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(6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.
(7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.
(8) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.
(9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.
(10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

40 C.F.R. § 1508.27.

authorizes the court to set aside agency action found to be "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law," 5 U.S.C. §706(2)(A), or to compel agency action "unlawfully withheld or unreasonably delayed." 5 U.S.C. § 706(1). The scope of review under the APA's "arbitrary and capricious" standard is "searching and careful," but "narrow." Marsh v. Oregon Natural Resources Counsel, 490 U.S. at 378, 109 S. Ct. at 1861-62. A court is not to substitute its judgment for that of the agency. Id. Rather, the court's task is to determine whether the agency's decision is "within the bounds of reasoned decision making." Baltimore Gas & Elec. Co. v. Natural Resources Defense Counsel, 462 U.S. 87, 105-06, 103 S. Ct. 2246, 2256-57 (1983). To do this, the court must determine whether the agency has considered the relevant factors and articulated a rational connection between the facts found and the choice made. See Bowman Transportation, Inc., v. Arkansas-Best Freight Sys., 419 U.S. 281, 285-86, 95 S. Ct. 438, 442 (1974). A corollary to the limited nature of APA review is that the court is limited to the administrative record relied upon by the agency in reaching its decision, and is not to engage in fact-finding based on extra-record material. See Oregon Natural Resources Counsel v. Lowe, 109 F.3d 521, 526 (9th Cir. 1997). However, in NEPA cases, the court may extend its review beyond the administrative record and permit the introduction of new evidence where the plaintiff alleges that the agency has neglected to take account of a serious environmental consequence, failed adequately to discuss

some reasonable alternative, or otherwise swept 'stubborn problems or serious criticism . . . under the rug.' Id. (citing Animal Defense Council v. Hodel, 840 F.2d 1432, 1436-38 (9th Cir. 1988), amended by 867 F.2d 1244 (9th Cir. 1989)). In the context of NEPA, a reviewing court "must ensure that the agency has taken a 'hard look' at the environmental consequences of its proposed action." Lowe, 109 F.3d at 526.

D. Summary judgment standard

Rule 56 of the Federal Rules of Civil Procedure provides for summary judgment if "there is no genuine issue as to any material fact and . . . the moving party is entitled to judgment as a matter of law." Fed. Rule Civ. P. 56(c). Summary judgment is frequently appropriate in cases involving judicial review of administrative action where, as here, review is based upon a "voluminous and complete" administrative record. See, e.g., Friends of Endangered Species v. Jantzen, 589 F. Supp. 113, 118 (N.D. Cal. 1984).

III. Standing

The Secretary initially challenges plaintiffs' standing to challenge the ITP, asserting that plaintiffs have not submitted "a single affidavit from members of the plaintiff organizations to support a claim of standing." (Def.'s Mem. at 34.) In fact, plaintiffs have submitted declarations that are adequate to establish their standing. (See Pls.' Exhibits 13, 17-22.) The Supreme Court has articulated the constitutionally-imposed

requirements for associational standing. In Warth v. Seldin, 422 U.S. 490, 511, 95 S. Ct. 2197, 2212 (1975), the court held that:

> Even in the absence of injury to itself, an association may have standing solely as the representative of its members. . . . The association must allege that its members, or any one of them, are suffering immediate or threatened injury as a result of the challenged action of the sort that would make out a justiciable case had the members themselves brought suit. . . . So long as this can be established, and so long as the nature of the claim and of the relief sought does not make the individual participation of each injured party indispensable to proper resolution of the cause, the association may be an appropriate representative of its members, entitled to invoke the court's jurisdiction.

Id.; see also Hunt v. Washington State Apple Advertising Comm'n, 432 U.S. 333, 343, 97 S. Ct. 2434, 2441 (1977) (holding that injury claimed must be germane to purpose of plaintiff organization). The Secretary does not contend that the relief sought makes the individual members of plaintiff organizations indispensable to the proper resolution of this case. Thus, the standing of plaintiff organizations depends on whether individual members would have standing to sue in their own right, and on whether the claimed injury is germane to the purpose of the organizations.

Plaintiff organizations have submitted affidavits from members of each organization, stating, in substance, that they have visited and regularly do visit the Natomas Basin to see species covered by the Permit, and that they intend to continue visiting the Basin, and that their enjoyment of the species in the Basin would be affected by the takings authorized by the ITP. (See Pl.'s Exh. 13 (Sierra Club, Planning and Conservation League

("PCL"), and National Wildlife Federation ("NWF")); Pl.'s Exh. 17 (NWF); Pl.'s Exh. 18 (Environmental Council of Sacramento ("ECOS"), Friends of the Swainson's Hawk ("FOSH")); Pl.'s Exh. 19 (ECOS, PCL, and NWF); Pl.'s Exh. 20 (Mountain Lion Foundation ("MLF")); Pl.'s Exh. 21 (Sierra Club, ECOS, and FOSH); Pl.'s Exh. 22 (PCL, ECOS, and FOSH). These declarations establish the standing of those individuals to challenge the ITP. See Resources Ltd., Inc. v. Robertson, 35 F.3d 1300, 1303 (9th Cir. 1993). Although vague expressions of intent to visit an area "'some day' -- without any description of concrete plans, or . . . specification of when the some day will be -- do not support a finding of . . . 'actual or imminent' injury," Lujan v. Defenders of Wildlife, 504 U.S. 555, 564, 112 S. Ct. 2130, 2138 (1992), the affidavits submitted by plaintiffs sufficiently detail the affiants' ongoing use of the Natomas Basin for purposes of enjoyment of covered species to satisfy the requirements of Article III. "The desire to use or observe an animal species, even for purely esthetic purposes, is undeniably a cognizable interest for purposes of standing." Lujan, 504 U.S. at 562-63, 112 S. Ct. at 2167. Plaintiffs' affidavits also make the required assertions with respect to the purpose of each plaintiff organization. Thus, plaintiffs' affidavits fulfill each of Article III's requirements for associational standing.

IV. Endangered Species Act Claims

The nub of plaintiffs' challenge to the HCP concerns its

strategy of adaptive management. Plaintiffs object that in the face of incomplete information as to a number of important issues -- including the conservation needs of the covered species, the likely location and pace of development in the Basin, and the preferred location and availability of reserves -- the Plan does not undertake studies to develop better information, but simply creates a structure and describes a process for reaching and adjusting decisions in the future based on developing information. Plaintiffs contend that many of the Service's findings are arbitrary because of the uncertainty inherent in the HCP's deferred decisionmaking scheme. As will be discussed below in greater detail, however, inconclusive data alone does not render the Service's findings arbitrary. See Part IV.D, infra.

With miscellaneous exceptions,[14] plaintiffs' ESA claims fall into two categories. First, plaintiffs challenge as arbitrary the Service's findings as to the adequacy of the Plan's provisions, particularly those related to funding and mitigation; second, plaintiffs contend that the Service's findings regarding the biological effects of the Plan on covered species are arbitrary and capricious. As explained below, under the APA's deferential standard of review, the Service's findings largely pass muster with respect to the Plan as a whole;[15] however, with

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[14] See nn. 22, 31, infra (discussing plaintiffs' sixth, seventh, and eighth causes of action).

[15] The sole exception is the Service's finding, under § 1539(a)(2)(B)(ii), that the Plan minimizes and mitigates take to the maximum extent practicable. See Part IV.B, infra.

respect to the City's Permit, the Service's findings do not. Many of the provisions of the HCP are based on the assumption that all of the land-use agencies with jurisdiction over parts of the Basin will become permittees. Similarly, the Service's findings are plainly geared toward the regional nature of the HCP, and do not adequately reckon with the local nature of the Permit or analyze what would happen if the City's lands were developed under the HCP, while the lands outside the City limits were developed piecemeal, by individual landowners, outside the HCP and the protections provided by the HCP. The importance of this point is most obvious with respect to the funding mechanism, which relies on future fee increases to fund current increases in land acquisition costs. Because reserve land acquisition lags behind the development that funds it, the funding mechanism must play catch up, passing increased costs on to the next developer. The Plan can cope with increased expenses for mitigation, monitoring, and the like, only so long as there exists a ready supply of land to be developed under the HCP. The biological findings, too, are based on inadequate consideration of the tension between the regional Plan and the local Permit. The record contains no particularized analysis of the importance of the City's lands as habitat, and no consideration of how the species will fare if the City's lands are developed under the Plan and the some or all of the remainder of the Basin is fully developed outside the HCP. Similarly, although the 1997 Biological Opinion concedes that large blocks of reserve lands

may not be possible if only the City is a permittee, there is no analysis of the consequences - particularly for the GGS -- of abandoning the goal of large connected blocks of reserve lands.

A. ESA § 10(a)(2)(A) -- minimum criteria for a habitat conservation plan

Plaintiffs argue that the Service's approval of the HCP is improper because the HCP does not adequately disclose its impacts on covered species and their habitat. ESA § 10(a)(2)(A) states that no incidental take permit may be issued unless the applicant submits an HCP that meets certain requirements. See 16 U.S.C. § 1539(a)(2)(A). One such requirement is that the HCP specify "the impact which will likely result from such taking." Id. As noted above, the HCP does discuss the impact that will likely result from development activities, rice farming, and operation of water conveyance systems in the Natomas Basin. While the Plan and associated supporting documents do not make specific quantitative estimates of take, they do make general assessments of the effect of development under the Plan as to the various species affected, particularly the GGS and the Swainson's hawk. Plaintiffs argue, however, that the ESA requires precise quantitative measures of take. According to plaintiffs, the HCP must estimate the number of individual members of a species within the Permit area and must then estimate the number of members of the species that will be taken. Plaintiffs cite no authority for this interpretation of the ESA. The Secretary's contrary interpretation of the statute is entitled to deference. See Chevron, Inc. v. National Resources Defense Council, 467 U.S. 837, 844, 104 S. Ct. 2778,

2782 (1984). The court finds that the HCP meets the minimum requirements for a habitat conservation plan.

B. ESA § 10(a)(2)(B)(ii) -- minimize and mitigate the impact of permitted takings "to the maximum extent practicable"

Plaintiffs argue that the Service's (B)(ii) finding, that the Plan will minimize and mitigate takings to the maximum extent practicable, is arbitrary and capricious because the Service failed to consider any alternatives involving greater mitigation measures. "Normally, an agency rule would be arbitrary and capricious if the agency has . . . entirely failed to consider an important aspect of the problem." Motor Vehicle Manufs. Ass'n v. State Farm Automobile Ins. Co., 463 U.S. 29, 43, 103 S. Ct. 2856, 2867 (1983). As authority for the proposition that discussion of additional mitigation measures that are deemed impracticable is "an important aspect" of a (B)(ii) finding, plaintiffs cite the Service's HCP Handbook, which states that:

> [P]articularly where adequacy of mitigation is a close call, the record must contain some basis to conclude that the proposed program is the maximum that can be reasonably required by that applicant. This may require weighing the benefits and costs of implementing additional mitigation, the amount of mitigation provided by other applicants in similar situations, and the abilities of that particular applicant.

(Pls.' Exh. 6 at 7-3.) As discussed above, the HCP, the 1997 Biological Opinion, and the F&Rs discuss three alternative HCP strategies, none of which involves additional mitigation.. (See n.8, supra.)

The Secretary argues that the HCP Handbook is not legally

binding. There is room for argument on this point,[16] but assuming the Secretary is correct, the most reasonable reading of the statutory phrase "maximum extent practicable" nonetheless requires the Service to consider an alternative involving greater mitigation. See Sierra Club v. Babbitt, 15 F. Supp. 2d 1274, 1279-81 (S.D. Ala. 1998). "The Administrative Record must contain some analysis of why the level or amount selected is appropriate for the particular project at issue." Id. at 1282. The linchpin of the HCP is the .5 to 1 preserved to developed acre ratio and the mitigation fee that is based on this ratio. Thus, to consider an alternative providing greater mitigation, in the context of this HCP, the record should provide some basis for concluding, not just that the chosen mitigation fee and land preservation ratio are practicable, but that a higher fee and ratio would be impracticable.

The Secretary does not appear to disagree with the above analysis but rather argues that the record does adequately demonstrate that the HCP provides for the maximum practicable

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[16] The "abrupt reversal" rule relied upon by plaintiffs does not appear to apply where the earlier, allegedly inconsistent, interpretation is contained in an agency manual, which lacks the force of law. The Supreme Court has contrasted such internal "interpretations" with those that are:

> arrived at after, for example, a formal adjudication or notice-and-comment rulemaking. Interpretations such as those in opinion letters -- like interpretations contained in policy statements, agency manuals, and enforcement guidelines, all of which lack the force of law -- do not warrant Chevron-style deference.

Christensen v. Harris County, -- U.S. --, 120 S. Ct. 1655, 1662 (2000).

mitigation fee and reserve land ratio. However, the record is nearly non-existent on this matter. There are conclusory statements in the record to the effect that "the common and local wisdom is that a fee in the range from $2000 to $2500 per acre is practicable," (AR 23:03888, 03891; AR 23:03904, 03906), but the record is devoid of evidence that the Service subjected this assumption to any examination or attempted to determine if a higher base fee would also be practicable. There is no economic analysis,[17] discussion of mitigation fees in similar plans and circumstances, or even representations from particular landowners. The Secretary insists that "there was evidence provided by SAFCA's consultant" showing that a fee in the range of $2000 to $2500 per acre was the maximum practicable amount. But the sources cited simply state the conclusion, based on "local wisdom," without argument or analysis. (See Def.'s Mem. Points and Authorities at 27-28, citing AR 23:03891; AR 23:03931.) The June 23, 1995 Memorandum from SAFCA's consultant to the Service refers to a "substantial financial analysis" showing that a fee in that range is practicable. (See AR 23:03931.) For the inverse proposition, however, the Memorandum relies on no such analysis, but states simply that "some of the working group members can explain why exceeding that projected habitat fee would have significant adverse economic impacts."

[17] At oral argument, counsel for the Secretary pointed to the economic analysis attached as an exhibit to the Plan; however, this analysis does not examine whether a higher fee would be feasible.

(See id.) The plain language of the statutory provision requiring that the Plan minimize and mitigate its effects "to the maximum extent practicable" is not satisfied by a fee set, as here, at the minimum amount necessary to meet the minimum biological necessities of the covered species. The record lacks adequate evidence and analysis of whether a fee higher than that initially proposed by the working group would be economically practicable.

The Secretary finds support for the (B)(ii) finding in part in the Plan's provision allowing increases in the mitigation fee as necessary to cover increased costs. But increases over the life of the Plan are capped at 50% of the initial base fee for most, although not all, types of expenditures.[18] Moreover, because fee increases are not applied retroactively, the Plan's provisions for fee increases can be expected to produce revenue only if and to the extent that future developers are willing to participate in the HCP. The problem that this mitigation structure presents is particularly acute for the City's Permit, given the relatively small portion of the Basin within the City and the pace at which development of the City's land is expected. Thus, it is possible, even likely, that City developers will avoid the future substantial increases in the mitigation fee that will be borne by out of City developers. While this structure may make sense, at least without analysis and explanation, it is

[18] Most significantly, the cap does not apply to fee increases necessitated by increased land acquisition costs.

not obvious how the Secretary concluded that City developers would pay a fee that is the maximum practicable, particularly when later developers are expected to pay a much larger fee. In short, the Secretary's conclusion that $2240 per acre is the maximum practicable initial base mitigation fee is unsupported by substantial evidence in the record, and therefore is arbitrary and capricious.

One additional aspect of the Plan renders the (B)(ii) finding vulnerable. The Plan provides for, and the ITP authorizes, any take "that is incidental to normal rice farming activities." (AR 10:1657 at IV-6.) The Plan does not require even that rice farmers use "best management practices." The ostensible rationale for this decision is to encourage rice farming in the Basin, which is believed to provide important habitat for the GGS. (See id.) The record reveals no basis, however, for the Service's apparent conclusion that the Plan's failure to require best management practices of Basin rice farmers as a condition of coverage under the ITP is, on balance, beneficial to the GGS, or for a conclusion that further minimization of take by requiring best management practices would be impracticable or would discourage rice farmers from continuing to farm.

For these reasons, the Service's (B)(ii) finding is arbitrary and capricious considering the HCP as a whole and the City's Permit in particular.

C. ESA § 10(a)(2)(B)(iii) -- adequate funding

Plaintiffs argue that the Service's finding that the City would "ensure" adequate funding for the Plan is arbitrary, for two reasons. First, plaintiffs contend that the initial mitigation fee, even in light of the Plan's provisions for fee increases, is inadequate to cover the costs of the various components of the mitigation program. The record, however, provides an adequate basis for the Secretary's conclusion to the contrary. The initial fee was set based on the estimated needs of the NBC prepared by experts retained by SAFCA. (See AR 10:1657 at IV-54.) Although plaintiffs point to evidence in the record suggesting that the fee was deemed inadequate by some, the Service's decision to rely on SAFCA's analysis is entitled to deference.[19] See Marsh, 490 U.S. at 378, 109 S. Ct. at 1861 (agency has discretion to select among competing expert opinions).

Second, plaintiffs argue that the (B)(iii) finding was arbitrary and capricious with respect to the City's permit, in light of the City's explicit refusal to "ensure" funding in the event of a shortfall. This argument has merit. Plaintiffs argue that nothing in the record supports the HCP's assertion, endorsed in the F&Rs, that:

> The [Natomas Basin] HCP can be implemented independently by some individual permittees, but not by others, without

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[19] Plaintiffs argue that the assumption made by SAFCA's expert that land could be acquired for agricultural values was arbitrary in light of evidence that speculation concerning development is already driving prices up. But the Secretary's reliance on the Plan provision permitting fee increases as needed to account for increased land prices is not unreasonable.

> adversely affecting the conservation program as a whole. This is because each land use agency is responsible under the Plan for mitigating the effects of urban development occurring within its respective permit area, regardless of the actions of other agencies.

(AR 10:1657 at I-5; see also AR 9:1513 at 1520-21.) Indeed, the record suggests a much more complicated picture than the Plan depicts concerning the consequences of nonparticipation by the other land-use agencies with jurisdiction over parts of the Basin. Given that the Plan does not permit retroactive fee increases, increases in the mitigation fee will be applied only to land developed after the need for a greater fee becomes apparent and the fee increase is approved. Thus, the Plan's funding mechanism depends on continual infusions of new developable land to provide funding for mitigation necessitated by previous development. Regardless of the City's incentives, if most or all of the City's land has been developed by the time the need for additional mitigation funding becomes apparent -- a likelihood if the City lands are rapidly developed under the current fee -- there may simply be no land left to which an increased fee could be applied. Given the Plan's acknowledgment that it is uncertain whether land-use agencies other than the City will submit applications, the statement that "each land use agency is responsible under the Plan for mitigating the effects of urban development occurring within its respective permit area," (AR 10:1657 at I-5), is not accurate with respect to the City, which refused to "ensure" funding for the mitigation necessitated by development under its permit.

The ESA requires that, before issuing an ITP, the Secretary must find, among other things, "that the applicant will ensure that adequate funding for the plan will be provided." 16 U.S.C. § 1539(a)(2)(B)(iii). The record reflects that the Service initially sought to require the City to ensure that funding would be available for necessary mitigation, rather than creating a funding scheme that was projected to be adequate. (See AR 11:01712; id., attachment, at 40.) The City rejected the Service's proposed change, "because it broadly imposes liability on the City to 'ensure' the plan." (See AR 11:01712.)[20] The Service relented on the point and issued the permit, despite the possibility that, should funding under the City's Permit prove inadequate, no entity will be responsible for making up the funding shortfall, and there may not be any future permittee to whom increased costs may be shifted. This seems to frustrate the statutory requirement that funding for mitigation be ensured.[21]

It is not clear that a funding mechanism that is not backed

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[20] The question whether the City's stated reason was valid is not before the court. Even assuming that the City's explanation -- that it was without authority under the California Constitution to "ensure" funding -- is meritorious, and that the City could not purchase private insurance with funds from a higher mitigation fee, § 10(a)(2)(B)(iii) makes no exception for applicants who are legally incapacitated from fulfilling the requirements of the ESA.

[21] Indeed, the Secretary concedes, in his briefing on this motion, that the ESA requires "that the Service must ensure mitigation will occur," before permitting development that will destroy habitat. (See Fed. Defendants' Reply at 19, n.20 (emphasis in original); see also id. at 8 ("for every acre of land developed . . . the City must ensure that half an acre of land is purchased, specifically restored and managed for wildlife values, and protected in perpetuity") (emphasis added).)

by the applicant's guarantee could ever satisfy the requirement of § 1539(a)(2)(B)(iii) that the applicant "ensure" funding for the Plan. Assuming, however, that a cost shifting mechanism "ensures" funding within the meaning of § 1539(a)(2)(B)(iii), in these circumstances, where the adequacy of funding depends on whether third parties decide to participate in the Plan, the statute requires the applicant's guarantee. Cf. Sierra Club v. Babbitt, 15 F. Supp. 2d 1274, 1282 (reliance on speculation as to funding from third parties is arbitrary and capricious); Sierra Club v. Marsh, 816 F.2d 1376 (9th Cir. 1987) (action agency cannot "insure" project will not jeopardize species based on promise of future mitigation measures).

The City contends that the threat of permit revocation provides "the strongest protection possible," and thus satisfies the ESA's requirement that the applicant "ensure" funding. (City's Mem. Points and Authorities at 31.) The Service's discretion to revoke a permit for violation of a condition, however, does not seem to satisfy the statute's requirement that the applicant ensure the adequacy of funding. See 16 U.S.C. § 1539(a)(2)(B)(iii).

In the face of the City's refusal to "ensure" funding, the Secretary's (B)(iii) finding with respect to the City's ITP is either at odds with the evidence in the record or is based on the City's untenable reading of the statute. In either case, while the Service's (B)(iii) finding is not arbitrary with respect to the Plan as a whole, it is arbitrary and capricious with respect

to the City's Permit.[22]

D. ESA § 10(a)(2)(B)(iv) -- Survival and Recovery, and § 7(a)(2) -- No Jeopardy

Plaintiffs argue that in making the findings required by ESA §§ 10(a)(2)(B)(iv) and 7(a)(2) (collectively, the "no jeopardy" findings), the Service failed adequately to explain how habitat loss authorized by the HCP would avoid jeopardizing the continued survival of the Giant Garter Snake, Swainson's hawk, and other covered species.[23] Failure by the Service to articulate a "rational connection" between the no jeopardy findings and the available facts may render the findings arbitrary and capricious. See Friends of Endangered Species v. Jantzen, 760 F.2d at 982. The no jeopardy findings, like the (B)(ii) and (B)(iii) findings,

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[22] Plaintiffs' sixth cause of action also relates to the adequacy of the Plan's provisions for funding mitigation. The sixth cause of action alleges that the Secretary improperly provided a "no surprises" assurance to the City, whereby the Service agreed not to seek additional commitment of resources for mitigation in the event that unforeseen circumstances required greater mitigation than expected. Defendants observe, however, that it is undisputed that the "no surprises" provision of the HCP is presently without effect, and seek dismissal of this cause of action on ripeness grounds. Plaintiffs allege that the Secretary intends to reinstate the provision. In the event that the Secretary takes final agency action to effectuate the "no surprises" provision, however, plaintiffs may challenge the action at that time. At this point the sixth cause of action is properly dismissed as unripe, without prejudice to later refiling. See Lujan v. National Wildlife Federation, 497 U.S. 871, 873, 110 S. Ct. 3177, 3181 (1990).

[23] In most respects, as plaintiff concedes, the finding required by § 7(a)(2) is identical to that required by § 10(a)(2)(B)(iv). Section 7(a)(2) contains one additional requirement, however. In preparing a finding under that section, the agency must use the "best scientific and commercial data available." 16 U.S.C. § 1536(a)(2). See Part IV.D.3, infra.

are undermined by the administrative record's focus on the regional HCP. Although the no jeopardy findings are adequately supported by the record if the Service's assumption that Sacramento and Sutter Counties will seek ITPs under the Plan is valid, the Service failed adequately to consider whether the findings could be made with respect to the issuance of an ITP to the City alone. In short, while the no jeopardy findings are not arbitrary with respect to the Plan, they are arbitrary with respect to the Permit.

(1) The Plan

Plaintiffs argue that the Service's no jeopardy findings are arbitrary and capricious for five reasons: (1) The Service "failed to articulate a rational connection between [the findings] and the fact that tens of thousands of acres of habitat will be destroyed and degraded under the HCP"; (2) the Service failed to explain its change in policy position on the habitat protections needed by covered species; (3) the Service "improperly ignored, and failed to explain its departure from, uncontradicted expert evidence regarding the survival and recovery needs of the imperiled species"; (4) the Service's no jeopardy findings are based on improper speculation; and (5) the Service failed to articulate a rational connection between the no jeopardy findings and the "admitted fact that the HCP's initial conservation strategy is highly uncertain to succeed." (Pls.' Mem. Points and Authorities at ii-iii.)

As to plaintiffs' first argument, plaintiffs' principal

contention is that the Service's reliance on the HCP's forecast of 17,500 acres of development over the 50 year term of the ITP is arbitrary. Plaintiffs argue that "up to 32,000 acres of habitat in the Natomas Basin" will be destroyed under the HCP. (Pls.' Mem. Points and Authorities at 21.) Plaintiffs have not established, however, that the Service's reliance on the 17,500 acre figure is unreasonable, and the Service adequately articulated its basis for the estimate.[24] (See AR 9:1563 at 1566; AR 9:1638 at 2.) Moreover, there are two important safeguards that justify reliance on the 17,500 acre figure. First, the HCP calls for a review at 9,000 acres, with a moratorium on development past 12,000 acres pending completion of the review. If the pace of development at that point exceeds expectations, various modifications may be requested or required, including a revocation of the permit. And second, because the 17,500 acre assumption is so central to the HCP, any significant departure from that figure would require reinitiation of consultation, again possibly leading to revocation or substantial modification of the permit. Based on the forecast of 17,500 acres, and using the 1:.5 development to preservation ratio, the Service concurred with the HCP's estimate that 8750 acres of reserve land would be protected under the Plan, and that most of the remainder of the Basin would be in agricultural lands, which

[24] The 1997 Biological Opinion explains that the 17,500 acre figure is a prediction based on the City's and Counties' General Plans, which the Service deemed to provide "a reasonable basis for predicting the extent and location of future urban development." (AR 9:1563 at 1566.)

frequently provide excellent habitat. The Service concluded that the reserve lands, together with undeveloped land kept in agriculture, would suffice to maintain, and in some cases increase, the Basin's populations of covered species. (See AR 9:1563 at 1581 (giant garter snake); id. at 1583 (Swainson's hawk); id. at 1586 (vernal pool species); id. at 1588 (other covered species).)

Plaintiffs argue, in addition, that the Service's failure to include "basic information," such as the baseline condition and conservation needs of the species, and the effects of the HCP, undermines the "rational connection" between the no jeopardy findings and the record. In fact, the 1997 Biological Opinion addresses each of these issues in detail. (See AR 9:1563 at 1573-79 (baseline); id. at 1579-91 (conservation needs and effects).) Plaintiffs' contention appears to be that the ESA requires detailed quantitative information as to each of these factors prior to the issuance of a permit, but plaintiffs cite no authority for such a requirement,[25] and such a requirement would not be reasonable. For the Giant Garter Snake, for example, a reclusive species, it would be extraordinarily difficult to count the number of individual snakes, determine their habitat and

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[25] Plaintiffs' reliance on the Service's HCP Handbook for this proposition is misplaced. First, as discussed at n.16, supra, the Handbook is not binding on the Service. Second, the Handbook recognizes that "all information may not be available for all species." (See Federal Defs.' Mem. Points and Authorities at 60, n.37.) Moreover, the Service is required to work with the evidence available to it. See 51 Fed. Reg. 19926 at 19951.

habits, and reach conclusions as to their genetic makeup and variability. Instead, the 1997 Biological Opinion makes certain assumptions about the species based upon potential loss of habitat, which is a reasonable approach. Moreover, the Plan overprotects by assuming that any acre lost to development is potential habitat requiring the 1:.5 mitigation.

Plaintiffs' second major contention is that the Service retreated from earlier policy positions without providing a "reasoned analysis." The "earlier policy positions" identified by plaintiffs, however, involved mitigation proposals for a different, and larger, project -- the Army Corps of Engineers' proposed 200 year flood control project for the Basin. The Service documents cited by plaintiffs discuss the potential impact on wildlife in the Basin of development of a projected 22,000 to 31,000 acres -- up to 75% more than the level anticipated under the Plan. (See AR 2:00536; AR 6:00886.) The only statement identified by plaintiffs as to which the Service's later opinions arguably constitute a change is the following statement, in a 1993 memorandum from the Service's Division of Ecological Services to the Regional Director:

> any significant adverse effects to the giant garter snake population in the Natomas basin would reduce the likelihood for survival and recovery of this species . . . current development plans . . . do not contain adequate mitigation for the loss of snake habitat.

(AR 2:00536.) This document, however, is premised on projected development of 31,000 acres, and concludes that even that level of development could be mitigated. The 1993 memorandum,

therefore, is in no way inconsistent with the Service's later, more detailed finding that the final HCP, if implemented, provides adequate mitigation for projected development under the Plan.[26]

Third, plaintiffs contend that the Service improperly ignored, and failed to explain its disregard of, "uncontradicted expert evidence" regarding the inadequacies of the Plan. Many of the expert comments identified by plaintiffs, however, concerned earlier drafts of the HCP, and the record is replete with documentation of the Service's consideration of those comments and either its reasoned rejection of the comments or incorporation of them into suggested Plan amendments. (See, e.g., AR 9:01513 (attachment).) Moreover, many of the comments considered by the Service -- indeed, many of the comments relied upon by plaintiffs -- are inconsistent with one another. (See, e.g., Pls.' Mem. Points and Authorities at 35 & n.41 (detailing disagreement between Carrier, Hansen, and Wylie as to importance of rice fields as giant garter snake habitat). "When specialists express conflicting views, an agency must have discretion to rely

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[26] Plaintiffs' argue that there is evidence in the record suggesting that the Service may have been influenced by political pressure. Even were this the case, it would not require invalidation of the ITP. First, the evidence cited does not establish that the Service's motivations were other than scientific. Second, under the ESA, so long as the Secretary's decision is scientifically valid, he is not required "to justify his decision based solely on apolitical factors." Southwest Center for Biological Diversity v. U.S. Bureau of Reclamation, 143 F.3d 515, 523 & n.5 (9th Cir. 1998). It would be odd if in a democratic system of government those most affected by the Secretary's decisions were unable to contact their representatives to enlist their assistance.

on the reasonable opinions of its own qualified experts." Marsh v. Oregon Natural Resources Council, 490 U.S. at 378, 109 S. Ct. at 1861.

With respect to the Swainson's hawk, however, plaintiffs assert that the Service's own experts "essentially acknowledged the legitimacy" of hawk expert Samuel Estep's concerns regarding (1) the HCP's failure to adequately address its effects on the hawk; (2) the Plan's failure to adequately mitigate the loss of foraging habitat; and (3) the Plan's failure to describe habitat enhancement or preservation measures for the hawk. (See Pls.' Mem. Points and Authorities at 36 n.43, citing Pls.' Compendium of Exhibits, Exh. 3.) In fact, the document in question, a staff summary of public comments and the Service recommendations in response thereto, notes that "there appears to be some disagreement" about the "substance and seriousness of these concerns." (See Pls.' Compendium of Exhibits, Exh. 3.)

Plaintiffs' fourth contention is that the Service improperly speculated as to the likely success of the Plan's conservation measures. The subjects of "speculation" that plaintiffs identify include: (1) that habitat areas will be available for acquisition; (2) that local governments and landowners will cooperate in the NBC's efforts to acquire reserve lands; (3) that development under the plan will not exceed 17,500 acres; (4) that waterways and rice farms outside the reserves will be managed for the benefit of covered species; and (5) that reserve lands will have an adequate water supply.

The uncertainties to which plaintiffs object do not undermine the "rational connection" between the no jeopardy findings and the evidence in the record. Plaintiffs' first, second, and fifth charges of "speculation" are concerned with the uncertainties inherent in the market-based mitigation mechanism employed by the HCP. The NBC is given funds and acquisition criteria, and permitted to compete in the marketplace for land and for water rights.[27] In the absence of any identified "critical habitat" in the Basin, or substantial evidence in the record that the market for land and water rights will not function -- that is, that land and water rights will be unavailable to the NBC even if the Plan provides adequate funding -- the adoption of such a market-based mitigation structure is not an arbitrary or otherwise impermissible exercise of the Secretary's discretion. As to the 17,500 acre estimate, as noted above, the Secretary's adoption of this forecast is not arbitrary or capricious. Plaintiffs' fourth charge of speculation concerning management of waterways and rice farms is equally meritless. Plaintiffs offer no evidence that any such "assumption" is necessary for the Secretary's conclusion that the Plan will achieve its conservation goals. Moreover, the Secretary is powerless to control activities on private land other than by a § 9 suit. The Secretary is entitled to assume that under the Plan, as before it, the prospect of a § 9 suit

[27] The Plan includes "an adequate water supply and adequate water rights" among the criteria for wetland reserve acquisition. (See AR 10:1657 at IV-9 to IV-10.)

will deter unpermitted take and that citizens generally obey the law.

As to plaintiffs' final challenge to the no jeopardy findings, which concerns the allegedly uncertain success of the HCP's initial conservation strategy, plaintiffs appear to contend that, in the face of incomplete data as to species' recovery needs and uncertainty as to the efficacy of the HCP, the Service's issuance of the ITP is arbitrary and capricious. Plaintiffs provide no authority for the duty they seek to impose on the Secretary, the resolution of all uncertainties before proceeding with a Plan, nor is any such duty apparent from the text of the ESA or case law. A certain degree of what plaintiffs label "speculation" and "uncertainty" is inevitable in any decisionmaking process, particularly one as complicated as that which led to the issuance of the ITP. The law does not require that the Secretary achieve certainty before acting. See Greenpeace Action v. Franklin, 14 F.3d 1324, 1336 (9th Cir. 1993).

(2) The Permit

Although the Service's no jeopardy findings are not arbitrary and capricious with respect to the Plan as a whole -- that is, assuming that Sacramento and Sutter Counties will seek permits under the Plan -- the record is startlingly devoid of support for the findings with respect to the possibility that only the City would participate in the Plan. This is understandable, perhaps, given the regional approach of the HCP

which is its greatest strength. But the court does not have before it what the drafters of the Plan apparently envisioned, a permit or permits for all of the jurisdictions within the Basin; rather, the court has for review only a permit for the City, and may not assume that other jurisdictions will also join in the HCP.

The Service's expert analysis of the likely impacts of the Plan assumes that all Basin development occurs under the HCP subject to the mitigation fee. As discussed above, the record provides insufficient consideration by the Service of whether funding for mitigation would be adequate if only the City's lands were developed under the Plan. Moreover, the record contains little or no analysis of the effect on the species of the City's permit considered on its own. Thus, there is no analysis of the importance of the City's lands as habitat for covered species. At oral argument, counsel for the Secretary asserted that the court could assume that the City's lands were less valuable habitat than other Basin lands, but the court cannot so assume; it must rely on the considered judgment of the Service and the record. Here, the Service did not assess the importance of the City's lands and made no analysis of the effects of the development of the City's lands were the protective features of the HCP not in place in the rest of the Basin. It cannot be assumed that if valuable habitat lands in the City are developed, equally valuable habitat lands may be protected elsewhere in the Basin because those lands may be developed outside of the HCP and

may not be protected.

Furthermore, there is little discussion of the effect on the GGS if the Plan's goal of large connected blocks of reserve lands cannot be met because only the City participates in the Plan. Such a fundamental change in the Plan's conservation strategy requires discussion. Yet the Service merely acknowledges the problem without explaining how the reserves set aside by the City's development will be adequate to protect the GGS and the other affected species.

The problem of the reserve lands is just an example of a larger problem when the Plan is applied only to the City's Basin lands. The Secretary concedes that the ITP will result in take of threatened species, including between 14 and 37% of the Basin population of the GGS, but relies on certain features of the Plan, including the monitoring, adaptive management, and 9,000 acre review provisions, to adequately mitigate the impact of the take. The Secretary's emphasis on these provisions, however, only underscores the tension between the HCP's regional nature and the local focus of the ITP and the Service's biological findings. Based on the projected development in City's area of the Basin, the midcourse review will come too late to result in any change with respect to the City's permit. The record shows that the portion of the Basin with approved development plans, most of which is in the City, is expected to be developed quickly, (see AR 39:06331 at 3 ("these acres will go fast.")), while the pace of development in the Counties is largely unknown.

(See AR 9:1513 at 1514.) Thus, the halfway point moratorium and opportunity for mid-course correction, so important to the HCP, are irrelevant to the City's permit, which contains no analogous features for correction and reconsideration.[28] Similarly, the record does not suggest that the Service considered whether the monitoring and adaptive management provisions of the regional Plan could be effective if the City is the sole permittee. Given the evidence that the City's lands will be developed quite quickly, the Service's failure to consider whether the survival of the species will be put at risk by the City's permit, if the regional mitigation approach of the HCP is not available, is arbitrary and capricious.

(3) Best Scientific Data Requirement

As noted above, the Service's § 7(a)(2) finding is subject to one additional statutory requirement to applicable to a finding under § 10(a)(2)(B)(iv). Under § 7(a)(2), the agency must use the "best scientific and commercial data available." 16 U.S.C. § 1536(a)(2). Plaintiffs argue that the "best scientific and commercial data" requirement should be interpreted to require the Service to refuse to issue a permit where the available data is incomplete. Plaintiffs' statutory interpretation is unpersuasive. On its face, § 7(a)(2)'s requirement that the

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[28] The record reflects acknowledgment of this flaw by at least one Fish and Wildlife Service expert. (See AR 39:06331 (DeWeese Memorandum, recommending that the Service retain "the option to evaluate the recovery efforts every 5,000 acres.").) There is no indication in the record why this recommendation was disregarded.

Service use the "best available" data does not require perfect data. The most reasonable reading of the statute permits the Service to take action based on imperfect data, so long as the data is the best available. See Greenpeace Action v. Franklin, 982 F.2d at 1355 ("When an agency relies on the analysis and opinion of experts and employs the best evidence available, the fact that the evidence is . . . not dispositive, does not render the agency's determination 'arbitrary and capricious'"); see also Greenpeace v. National Marine Fisheries Service, 55 F. Supp. 2d 1248, 1262 (W.D. Wash. 1999) (Section 1536(a)(2) "requires 'far less' than conclusive proof."). The best scientific evidence requirement does not alter the general rule that "an agency must have discretion to rely on the reasonable opinions of its own qualified experts even if, as an original matter, a court might find contrary views more persuasive." Aluminum Company of America v. Administrator, Bonneville Power Administration, 175 F.3d 1156, 1162 (9th Cir. 1999). The Service's § 7(a)(2) finding is not rendered arbitrary and capricious by the data gaps identified by plaintiffs.

Plaintiffs contend, however, that the Service has previously interpreted § 7(a)(2) to require the Service, when it encounters significant data gaps in the process of a § 7 consultation, to either postpone completion of the biological opinion or "give the benefit of the doubt to the species." (Pls.' Mem. Points and Authorities, at 58-59.) Plaintiffs argue that the Service's decision to issue the ITP constitutes an abrupt reversal of that

policy, and is thus entitled to less deference than would typically be applied. See State of Idaho, Dep't of Finance v. Federal Reserve System, 994 F.2d 1441, 1445 (9th Cir. 1993) (holding that an agency interpretation which conflicts with the agency's earlier interpretation is entitled less deference that a consistently maintained agency interpretation). The "abrupt reversal" rule generally does not apply to internal agency manuals, however,[29] nor is it clear that the agency manual relied upon by plaintiffs is inconsistent with the Secretary's current position.[30] Moreover, the Service's position does not appear to be inconsistent with existing regulations. The Service is obligated by regulation to "develop its biological opinion based upon the best scientific and commercial data available regardless of the 'sufficiency' of that data." See 51 Fed. Reg. 19926, 19951 (final rulemaking with respect to 50 C.F.R. § 402).[31]

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[29] See n.16, supra.

[30] The Secretary contends that even if the Consultation Handbook were legally binding on it, the Handbook actually supports the § 7(a)(2) finding by stating that impact to a single population of a species will not normally be found to jeopardize the continued existence of the entire species. (See Def.'s Mem. Points and Authorities at 47.) The Consultation handbook also states that jeopardy analysis may be appropriate based on impacts to distinct populations which "are documented as necessary to both the survival and recovery of the species in a final recovery plan." (Consultation Handbook, J.A. 2:56 at 4-38.) As noted above, the HCP's adaptive management provisions permit the incorporation of changes in mitigation strategy based on final recovery plans for the giant garter snake and Swainson's hawk.

[31] Plaintiffs' seventh and eighth causes of action concern alleged failures by the Service to enforce permit conditions by revoking the permit in the fact of alleged violations, or reinitiating consultation based on new information. Plaintiffs do not seek summary judgment on these causes of action, and move

V. Plaintiffs' NEPA Claim

Plaintiffs' ninth cause of action alleges that the Service violated the National Environmental Policy Act ("NEPA") by failing to prepare an environmental impact statement ("EIS") with respect to the HCP, although one was clearly called for. The court's review of the Service's decision not to prepare an EIS is designed to "ensure that an agency has taken the requisite hard look at the environmental consequences of its proposed action." Greenpeace Action v. Franklin, 14 F.3d 1324, 1332 (9th Cir. 1993). Failure to address "certain crucial factors, consideration of which was essential to a truly informed decision whether or not to prepare an EIS," renders an agency's conclusion that no EIS was necessary arbitrary and capricious. See Foundation for North American Wild Sheep v. United States Dept. of Agriculture , 681 F.2d 1172, 1178 (9th Cir 1982) (applying reasonableness standard); see also Greenpeace Action v. Franklin, 14 F.3d at 1333.

In light of the factors enumerated in 40 C.F.R. § 1508.27, the court is inclined to agree with plaintiffs, although it appears that the Service did much or most of what would have been

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under Rule 56(f) for denial without prejudice of defendants' motion for summary judgment as to these causes of action. The declaration of John Kostyack indicates that the parties had previously agreed that plaintiffs' intention to seek discovery or supplementation of the record on these issues would be deferred until after the court's resolution of initial motions for partial summary judgment on the causes of action related to the issuance of the ITP. (See Pls' Exh. 23 at ¶ 3.) The Kostyack declaration establishes good cause for plaintiffs' inability to respond to defendants' motion for summary judgment at this juncture. Thus, denial without prejudice appears appropriate.

required by an EIS as part of the EA process. Many of the factors identified by the regulations point toward preparation of an EIS. For instance, the unique geographical characteristics of the Basin, namely its proximity to the City of Sacramento, prime farmlands, wetlands, and the confluence of the Sacramento and American rivers counsel in favor of an EIS. See 40 C.F.R. § 1508.27(3). Similarly, the controversy concerning the likely effects of the Permit, and the degree to which the possible effects are uncertain implicate the very purpose of conducting an EIS. See 40 C.F.R. § 1508.27(4), (5). The record reflects not merely a post hoc assertion of scientific controversy by plaintiffs' own experts, as in Greenpeace Action, 14 F.3d at 1334, but substantial controversy, and a degree of uncertainty conceded by the Service's own experts during the planning process. (See AR 39:06331; 39:06335; 39:06352); cf. Wild Sheep, 681 F.2d at 1182. The record establishes not merely "the existence of opposition" to the ITP, but a "substantial dispute . . . as to the size, nature or effect of the major Federal action." Wild Sheep, 681 F.2d at 1182. Two other factors enumerated in the regulation also suggest the appropriateness of an EIS in this case. First, the precedential value of the Permit is significant, both in terms of the HCP's "reduction of a population deemed [by the Service] 'essential' for the recovery of a listed species," (see AR 14:02384), and its regional approach and effects. See 40 C.F.R. § 1508.27(6). Second, the "degree to which the [HCP] may affect an endangered or threatened

species," here the GGS and Swainson's hawk, counsels in favor of preparing an EIS. See 40 C.F.R. § 1508.27(9).

Although the Service properly considered the Plan's mitigation measures in determining whether to prepare an EIS, see Friends of Endangered Species v. Jantzen, 760 F.2d 976, 987 (9th Cir. 1985) ("So long as significant measures are undertaken to mitigate the project's effects, they need not completely compensate for adverse environmental impacts"), the uncertainty regarding the likely success of those mitigation measures suggests the need for an EIS. In Jantzen, there was no contention that the plan's impacts were uncertain. In fact, the court found that "the mitigation measures at the heart of the plan seem to . . . completely compensate for any possible adverse environmental impacts."[32] Id. Here, in contrast, the record discloses substantial controversy as to the efficacy of the mitigation measures contemplated by the HCP. While the uncertain success of the Plan's mitigation measures does not, as discussed above, render the Service's findings under the ESA arbitrary, NEPA's approach to such uncertainty is to require an EIS. See Wild Sheep, 681 F.2d at 1181 (Where "substantial questions [regarding the efficacy of mitigation measures] are raised, an EIS must be prepared."). The record discloses, "substantial questions . . . regarding whether the proposed action may have a

[32] The Jantzen court noted that complete compensation was not essential to support a FONSI, but did not suggest that a FONSI is appropriate even in the face of substantial uncertainty as to plan effects. See id. at 987.

significant effect upon the human environment," see Save the Yaak Committee v. Block, 840 F.2d 715, 717 (9th Cir. 1988). In these circumstances, involving a complex 50 year plan for a large region of important habitat and development lands extending beyond the jurisdiction of any one local government unit, the court concludes that the Service's determination that no EIS is required is arbitrary and capricious.

VI. Conclusion

The record does not support the Service's finding under 16 U.S.C. § 1539(a)(2)(B)(ii), and it does not support the Service's findings under 16 U.S.C. §§ 1536(a)(2), and 1539(a)(2)(B)(iii) and (iv), as applied to the City's Permit. Plaintiffs' motion for summary judgment on their second, third, fourth, fifth, and ninth causes of action is GRANTED. Defendants' motion for summary judgment on those causes of action is DENIED. Defendants' motion for summary judgment is GRANTED as to Plaintiffs' first cause of action, and DENIED, without prejudice, as to plaintiffs' seventh and eighth causes of action. Defendants' motion to dismiss the sixth cause of action as unripe is GRANTED.

IT IS SO ORDERED.

Dated: August 15, 2000.

DAVID F. LEVI
United States District Judge