Agenda for East County MSCP Steering Committee Meeting
County Administration Center (CAC) Tower 7 (7th Floor)
1600 Pacific Coast Highway, San Diego, CA June 25, 2008 1:00 pm – 3:00 pm

1:00 p.m. **Introductions (Bryan Woods, Steering Committee Facilitator)**

1:05 p.m. **Steering Committee Meeting Minutes**

1:15 p.m. **Overview of NCCP Planning Agreement**

1:20 p.m. **Synthesis of Key Issues & Steering Committee Comments (Bryan Woods)**

1. **Farming/Working Landscapes**
2. **Preserve Design Tools/Strategies**
3. **Draft Planning Units**
4. **Wildfire Issue Paper**
5. **Hardline Policy**

2:30 p.m. **Opportunity for Public Input (Bryan Woods)**

2:50 p.m. **Next Steps/ Upcoming Meetings (Bryan Woods)**

Steering Committee Meeting # 6 Topic: TBD	**September 10, 2008 (Wed.)** **1:00 pm – 3:00 pm** County Admin. Center 1600 Pacific Coast Hwy. Tower 7 (7th Floor)

3:00 p.m. **Closing Comments (Bryan Woods)**

Attachments:

1. NCCP Planning Agreement Notice
2. Draft Steering Committee Minutes
   2.1 Meeting # 2 (held on February 6, 2008)
   2.2 Meeting # 3 (held on March 13, 2008)
   2.3 Meeting # 4 (held on May 28, 2008)
3. Steering Committee Member List
4. East County MSCP & Farming FAQs for ECMSCP and Crop Statistics
5. HCP Handbook weblinks:
   - Addendum to (Executive Summary) http://www.fws.gov/endangered/pdfs/HCP/Executive_Summary.pdf
   - Addendum to HCP Handbook (Questions and Answers) http://www.fws.gov/endangered/pdfs/HCP/Final_Addendum_QandA.pdf
   - Five Point Policy http://www.fws.gov/endangered/pdfs/HCP/final_notice.pdf
6. Draft Planning Units & Eco-Region Map
7. Power Point Presentation Meeting # 5 (June 25, 2008)

Notice of Public Availability

From: Libby Lucas
California Department of Fish & Game
South Coast Region
4949 Viewridge Avenue
San Diego, CA 92123

Subject: Notice of Public Availability of Proposed Planning Agreement

The California Department of Fish and Game (CDFG) is considering the entry into a Planning Agreement under the Natural Community Conservation Planning Act (NCCPA) (as amended in 2002 by SB107 and SB2052) with the County of San Diego (County) and the United States Fish and Wildlife Service (USFWS). This notice announces the availability of the proposed Planning Agreement for public review and comment for twenty-one (21) days, pursuant to Section 2810, subdivision (d) of the NCCPA as revised by SB107.

The NCCPA encourages broad-based planning to protect and conserve the state's wildlife heritage while allowing appropriate development and growth. CDFG is authorized to approve natural community conservation plans (NCCPs) pursuant to the NCCPA, and to enter into agreements with other public agencies or private entities for the conservation of species and habitats.

The County proposes to prepare two regional conservation plans, one each for the unincorporated areas of north and east San Diego County (specifically, the private and County-owned land over which the County has land use jurisdiction). Each plan will be both a NCCP and a Habitat Conservation Plan (HCP) pursuant Section 10 of the federal Endangered Species Act. The County desires to design and implement NCCP/HCPs that describe the measures to conserve biological resources while allowing for urban growth and public infrastructure projects.

The primary purpose of the Planning Agreement is to define the goals and obligations in the development of the NCCP/HCPs for the unincorporated areas of north and east San Diego County. Among other things, it also provides a preliminary list of the natural communities, and the endangered, threatened, candidate, or other species that are found, or may be found, in those communities, to provide an initial focus of the NCCP/HCPs. The execution of the Planning Agreement is not an approval of the NCCP/HCPs, but rather an agreement among CDFG, USFWS, and the County to a process for the development of the proposed NCCP/HCPs.

CDFG invites the public to review and comment on the proposed Planning Agreement. The document can be viewed on the internet at CDFG's website at http://www.CDFG.ca.gov/habcon/nccp/status.html or the County's website at www.mscp-sandiego.org. Upon request, a paper copy also can be sent by mail or facsimile by contacting Cindy Hailey at 858 467-4269 or picked up in person at the South Coast Regional Office of CDFG at the address at the top of this Notice.

All comments should be sent to the address listed at the top of this Notice. The period for public review and comment will close twenty-one (21) days after the date of this Notice. Comments received on or before July 11, 2008 will be reviewed.

Date: June 20, 2008

Signature Libby Lucas
Printed name: Libby Lucas
Title Staff Environmental Scientist
Telephone 858 467-4230

East County MSCP Steering Committee List

Steering Committee (22)

1. Bryan Woods, Steering Committee Facilitator and County Planning Commissioner
2. Matthew Adams, Building Industry Advisory Group
3. Eric Anderson, Farm Bureau
4. Jeff Barfield, RBF Consulting, Inc.
5. Craig Benedetto, Benedetto & Danon Public Relations, Inc.
6. Bev Esry, Lake Morena-Campo CPG
7. Cherry Diesenbach, Pine Valley CPG
8. Judy Halderman, Borrego CSG (Co-Chair)
9. David Hogan, Southwest Center for Biological Diversity
10. Abby King, Borrego CSG (Co-Chair)
11. Eric Larson, San Diego County Farm Bureau
12. Rikki Schroeder, Consultant
13. Dan Silver, Endangered Habitat League
14. Donna Tisdale, Boulevard CPG
15. Jim Whalen, Alliance for Habitat Conservation
16. Kathy Viatella, The Nature Conservancy
17. California Native Plant Society (TBD)
18. San Diego-Imperial California Cattelmen's Association (TBD)
19. U.S. Fish and Wildlife Service
20. CA Dept. of Fish and Game

East County MSCP and Farming

Questions & Answers

1. How does the Multiple Species Conservation Program (MSCP) relate to farming?

The East County MSCP is the third of three parts of the County's MSCP. The County Board of Supervisors approved the South County MSCP Subarea Plan for the southwestern portion of the County in October 1997. The North County MSCP Plan was the next step in this comprehensive planning program for the unincorporated portions of San Diego County, while the East County MSCP Plan is in the planning stage. This Plan will serve as a multiple species Habitat Conservation Plan (HCP) pursuant to section 10(a)(1)(B) of the federal Endangered Species Act (ESA), as well as a Natural Community Conservation Plan (NCCP) under the California NCCP Act and California Endangered Species Act (CESA).

In San Diego County, there are numerous species listed as endangered or threatened under the state or federal Endangered Species Act and more species may be listed in the future. Listed species can be impacted by existing agriculture operations, or during the expansion of agriculture. Where impacts occur, take permits are required. Obtaining take permits is an extremely arduous process for individual landowners. The goal of the Multiple Species Conservation Program plan is that impacts to listed species by conforming agricultural activities will be allowed. By obtaining a programmatic take permit for the entire East County MSCP Planning Area, the process for receiving take permits will be eased for landowners. The goal is that through implementation of the East County MSCP, landowners on an individual basis will not be required to undergo the take permitting process that would otherwise be required by federal and state wildlife agencies.

It is intended that the East County MSCP plan will deal with sensitive species in a practical, science-based conservation approach while providing for continued economic growth and prosperity for land owners, farmers, businesses, and residents. It is intended to do this through mitigation for land development projects, acquisition of important habitat areas and recognizing the value of existing agricultural uses for wildlife. The plan that is being developed involves a cooperative effort between the County, state and federal wildlife agencies, and a variety of stakeholders.

2. What role does agriculture play in the conservation of the County's wildlife?

Farms and ranches in San Diego County support a wide variety of native wildlife. This relationship can be helpful (such as bats eating unwanted insect pests), destructive (such as ground squirrels eating crop plants), or neutral (such as bobcats passing through a field). While the majority of wildlife depends on natural habitats, farmlands may play a valuable role in the lives of many wildlife species by providing food and shelter (habitat). Wildlife species benefiting from farming operations include insect-eating birds, hawks,

deer, coyotes, and rabbits. In some cases, relatively rare species, such as Stephens' kangaroo rat and Arroyo toad may have a beneficial relationship with rangeland farming.

3. How does the County define agriculture?

For the purposes of regulating land use, the County defines agriculture as routine and ongoing commercial operations associated with farm, grove, dairy, or other agricultural business, and includes: (1) The cultivation and tillage of soil; crop rotation; fallowing for agricultural purposes; production, cultivation, growing, replanting, and harvesting of any agricultural commodity, including viticulture, vermiculture, apiculture, or horticulture; (2) The raising of livestock, fur bearing animals, fish, poultry, and dairying; (3) Any practices performed by a farmer on a farm incidental to or in conjunction with those farming or grove operations, including preparation for market, delivery to storage, market, or carriers for transportation to market; and (4) Ordinary pasture maintenance and renovation consistent with rangeland management and soil disturbance activities. All such activities must be consistent with the economics of commercial agricultural operations and other similar agricultural activities.

4. What is considered habitat under this program?

In the broadest sense, habitat is any area that supports species. However, this program focuses on natural habitat and habitat supporting sensitive, native species. Agricultural lands, by their nature, support many native plants and animals other than the domesticated plants and animals being farmed. Therefore, agricultural lands provide a valuable resource for native plants and animals that occur in San Diego County's natural habitat. From a regulatory sense, land supporting sensitive species or land in a largely natural state is considered habitat and requires environmental review in order to change its use (for example, clearing the natural habitat or building houses on vacant land).

5. What are the existing environmental regulations for agriculture?

In general, ongoing agricultural operations are mainly regulated with respect to stormwater run-off and pesticide application though an impact by an existing operation to a species listed as endangered or threatened by the state or federal government would also be regulated. Expansion of agriculture onto natural lands, depending on the scope, may require environmental review, grading permits, clearing permits for clearing of habitat, administrative permits, and mitigation for impacts to habitat (especially if the land contains sensitive habitat types, such as coastal sage scrub vegetation). The MSCP is intended to deal with state and federal regulations in order to reduce the need for individual farmers to interface directly with federal and state wildlife agencies. The San Diego County Farming Program website also provides additional information and links (www.sdcounty.ca.gov/awm/farmingprogram).

6. What is “mitigation”?

Mitigation consists of actions to help offset the severity of a project's impact on the environment. Examples include preserving habitat by open space easement, purchasing mitigation credits in a mitigation bank, restoring natural areas, or other means. Existing federal and state regulations require reduction of impacts through mitigation.

7. How will the East County MSCP change environmental regulations for agriculture?

One of the aspects of this program is an attempt to create a process so that it is easier for farmers to address environmental regulations as they relate to sensitive plants and animals. This program will potentially offer:

- A specified amount of agricultural expansion onto natural lands without a mitigation requirement;
- Fixed, and generally lower, mitigation ratios for impacts to natural lands;
- A simplified farm protection program (similar to Safe Harbor) to give regulatory assurances to farmers whose normal farming operations may provide potential habitat for endangered, threatened, or sensitive species (e.g., maintaining a detention basin that created wetlands, while following stormwater requirements); and
- Allow impacts to species listed under the state or federal Endangered Species Acts to occur as a result of ongoing agriculture activities will be permitted under the East County MSCP Plan.

These changes are accomplished by setting up a coordinated system for conservation of natural lands throughout East County as part of the MSCP.

8. Will I still be able to expand my agricultural operation?

Under the Multiple Species Conservation Program, the intent is that agricultural expansion would be no more difficult than what currently exists and in fact make it easier than the current situation for agricultural expansion in areas that are considered to be of lower habitat value.

9. Why can’t mitigation for impacts to natural lands be waived for all agricultural expansion?

The intent is to allow a waiver of mitigation requirements for expansion of agriculture into lands with low habitat value and low potential for rare and endangered species. However, existing federal and state regulations require that impacts to habitat for sensitive species be addressed. This program intends to balance land development and conservation of natural areas in East County. Too much development or too many exemptions from mitigation (which offsets development) would impair our ability to

adequately conserve plants and animals. It is the conservation of critical natural areas which allows impacts to other natural areas.

10. How will this program affect my existing operation, such as my ability to change crops?

This program does not propose any new regulations for existing agricultural operations. Existing best management practices will continue to be encouraged and/or regulated as they currently are with respect to pesticide use, stormwater, runoff, and other agricultural practices.

11. How does the plan identify high value habitat areas?

The Multiple Species Conservation Program plan identifies areas of land considered to be of high value for sensitive species. In the North County MSCP Plan and the South County MSCP plan, these lands have been identified as Pre-Approved Mitigation Areas (PAMA). Since this East County Plan may involve implementation through a combination of factors, there may be some land with an actual conservation designation and other lands simply identified as having important habitat values. Conservation efforts will be focused there, either through development mitigation or acquisition from willing sellers. If a developer impacts habitat, mitigation within an area identified as high value will reduce the amount of required mitigation. The protection of land within the high value habitat areas is important in meeting the goals of the County's conservation program. This is necessary to obtain permits that allow for the loss of some habitat areas by fulfilling state and federal regulations. Some agricultural lands may be identified as high value habitat lands because they either have potential habitat value for key sensitive wildlife species or provide a buffer to important natural habitat lands. The goal for these areas would be to retain them in agricultural production.

12. How could existing agricultural operations be affected within an area that has been identified as having high value habitat?

The identification of lands with high habitat value will not have any effect on existing agricultural operations. They only have an effect on land when a land development and associated land use change is proposed. Areas identified as having higher habitat value are where a program often focuses conservation efforts. These conservation efforts apply primarily to natural areas, but also to agricultural areas within areas identified to have high habitat value. We anticipate that the final network of conserved lands will include many natural areas and some working landscapes (active farms and ranches that provide habitat value). This plan process coupled with the County Farming Program may ultimately provide opportunities for voluntary conservation of farmlands that are potentially coupled with economic incentives, such as the purchase of agricultural conservation easements.

13. Could there be an effect on agricultural expansion within an area that is identified to have high habitat value?

Areas identified as of high habitat value in the plan contain natural areas that are important for the long-term survival of endangered, threatened, and sensitive wildlife. In order to obtain the benefits of the plan for streamlining development permit processing and conservation of habitats, it is most important that these areas be conserved in their natural state. If they cannot be conserved, their development needs to be adequately mitigated by conserving some natural areas on site or elsewhere. Under existing regulations, agricultural expansion is subject to the grading and clearing ordinance. Under this plan, expansion of agriculture onto natural areas identified as having high value habitat would need to be mitigated in a process similar to existing requirements. This mitigation may involve by preserving natural land elsewhere within the areas identified as higher value habitat.

14. How will this program affect conversion of agriculture?

This program is intended to assist in the conservation of habitats for endangered and threatened species. Existing agriculture that provides identified habitat values and occurs in key habitat areas would be encouraged to be maintained as agriculture rather than be converted to developed land uses. As such, it may help retain agriculture in some areas by conserving working landscapes that are included in an open space network that benefits wildlife in San Diego County and the region. This program can also compliment the San Diego County Farming Program which has the goal of helping farms and ranches continue their operations.

15. How can I provide input on the East County MSCP?

The County values your comments and input. There are several ways to get involved in the East County MSCP planning process. To be added to our distribution list for planning updates and meeting announcements, please contact Kimberly Zuppiger at 858-694-3499 (or by email at kimberly.zuppiger@sdcounty.ca.gov).

For more information on the East County MSCP and related topics, please visit our website at www.sdcounty.ca.gov/dplu/mscp/ec.html.

What Makes San Diego County Agriculture Unique?

- San Diego County is the most southwestern county in the United States. San Diego County has a geographic area of 4,200 square miles, approximately the size of Connecticut, with a population of 2.9 million.
- San Diego County has the sixth highest urban population among counties in the United States, and the 12th largest agricultural economy.
- The U.S. Weather Bureau describes the San Diego climate as the most nearly perfect in America. The San Diego weather can be characterized as Mediterranean, with warm winters and cool summers.
- San Diego County's varied topography creates a wide fluctuation of microclimates resulting in nearly 30 different types of vegetation communities. This diversity allows for San Diego to grow over 200 different agricultural commodities - from strawberries and tomatoes along the coast, to apples in the mountain areas, to citrus in the desert.
- Agriculture in San Diego County covers 266,434 acres and ranks 5th as a component of San Diego County's economy.
- San Diego County has 5,255 farms, the third highest number of farms when comparing all counties within the United States.
- 63% of San Diego County farms are 1-9 acres, 37% are greater than 10 acres. The Median sized farm is 5 acres. In San Diego 92% of the farms are family owned with 77% of farmers living on their land.

- San Diego County ranks number one in both California and the nation in the production value of nursery, floriculture, and sod.

- The high cost of water (more than $600/acre foot) and land make farming in San Diego County expensive and encourages growers to raise products with a high dollar value per acre.
- San Diego County is also ranked number one in California and the nation in the production value of avocados.
- Statewide, San Diego County is in the top five in the production of chickens, fresh market tomatoes, lemons, mushrooms, grapefruit, tangerines, cucumbers, and squash.
- San Diego County produces the most dollar value per acre ($5606/A) of any county in California.

County of San Diego, Department of Agriculture, Weights and Measures
5555 Overland Ave. Ste 3101 San Diego, CA 92123 858.694.2739 www.sdcawm.org

County of San Diego

2005 Agricultural Overview

Agriculture continues to be a vibrant component of the economy in San Diego County. In 2005 agriculture increased in both value and acreage. The total reported value for all agricultural commodities produced in the County for 2005 was $1,531,541,236, a 5% increase from 2004. This is the highest crop value ever reported for San Diego County. 2005 is the 13th consecutive year of growth in value for the San Diego County agricultural industry. Acreage dedicated to agriculture in San Diego County also grew by 3%.

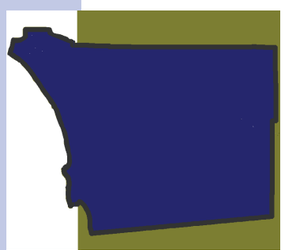
San Diego County's unique topography creates a wide variety of microclimates resulting in nearly 30 different types of vegetation communities. This diversity allows for San Diego to grow over 200 different agricultural commodities—from strawberries and tomatoes along the coast, to palm trees in the desert.

San Diego County continues to be at the forefront of organic farming. The County boasts more than 300 registered organic growers, more than any county in the nation. Last year, San Diego organic growers produced over 140 different crops on 6,400 acres with gross sales topping $28.6 million.

Additionally in 2005, 8445 shipments of San Diego County crops were exported to 62 foreign countries, ranging from Aruba to United Arab Emirates.

2005 Agricultural Crop Highlights

Total Value	**$1,531,541,236**
Estimated Economic Impact	**$5,360,394,326**
Change in Value from 2004	**$69,423,495**
Percent of Change	**+5%**
Total Acreage	**273,176**
Change in Acreage from 2004	**6,742**
Percent of Change	**+3%**
#1 Crop	**Indoor Flowering & Foliage Plants**
Crop with the Highest Value Per Acre	**Indoor Flowering & Foliage Plants**
Dollar Value Per Acre	**$603,981**
Crop with the Lowest Value Per Acre	**Oat Grain**
Dollar Value Per Acre	**$3.62**



San Diego County Agriculture

The Top Ten Crops of 2005

Indoor Flowering & Foliage Plants
$311,050,300

Ornamental Trees and Shrubs
$287,586,060

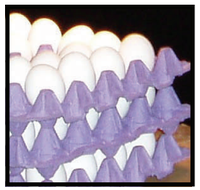
Avocados
$251,452,135

Bedding Plants
$215,366,320

Cut Flowers and Foliage
$76,432,320

Tomatoes
$59,729,263

Poinsettia
$38,127,200

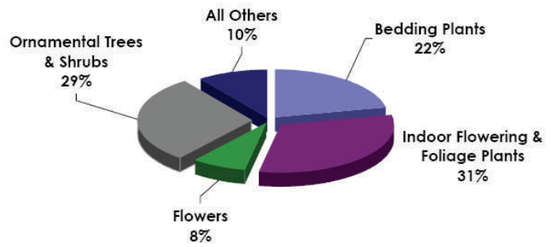


Eggs
$34,213,600

Strawberries
$27,409,785

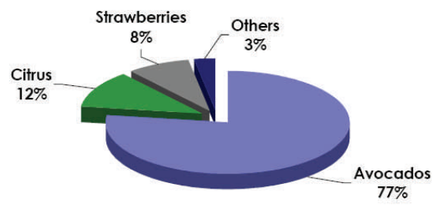
Herbaceous Perennials
$19,869,200

Nursery and Flower Crops



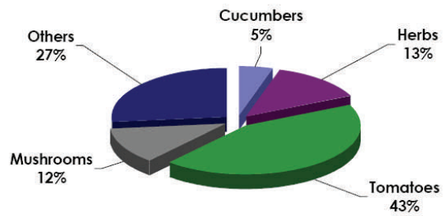
Indoor Flowering and Foliage Plants remains the number one crop with a value of $311,050,300. This crop has been the top commodity in San Diego County for over two decades. Although the acreage and value of Indoor Flowering and Foliage Plants remained relatively constant from 2004, Ornamental Trees and Shrubs continued to increase in both acreage (4%) and value (5%) for a dollar value of $287,586,060. While Cut Christmas Tree acreage remained constant, the value increased by 10%. Total nursery and flower production increased only slightly this year in acreage (1%) and value (2%).

Fruit and Nut Crops



Fruit and Nut Crops increased 29% in 2005 even though acreage decreased slightly. Favorable climatic conditions in late 2004 and early 2005 contributed to the significant increase in production of tree crops. The greatest gains were in apples, which rose in value 42%, and Hass avocados, which increased in value by 45%.

Vegetable Crops



In Vegetable and Vine Fruits, melons, mushrooms, oriental vegetables, and potatoes showed the greatest gains in total value. Melons increased in acreage 61% and total value 46%. While mushroom acreage remained constant, mushroom production increase by 29%, and the value increased by 32% in 2005. Oriental vegetables increased significantly in both acreage (24%) and value (23%). Potato acreage continued a two year gain increasing by 38% in 2005. The value of the potato crop also increased in 2005, by 29%.

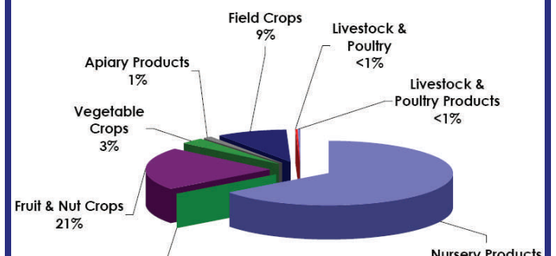
Livestock and Poultry

Livestock and Poultry values decreased in 2005, as well as the value from Livestock and Poultry products. Much of this decrease can be attributed to livestock and poultry facilities continuing to either close or migrate out of San Diego County to the Central Valley in California. The number of chickens produced decreased by 23% and the number of head of cattle by 14% in 2005. Correspondingly, milk production was down 25% and value decreased 28% from 2004. Chicken eggs continued a downward trend with a reduction in dozens of eggs produced (4%) and total value (27%). The value of a dozen eggs was $.50 compared with $.49 in 1986.

Specialty Crops

Timber and firewood continued a multi-year upward trend with value of timber increasing by 34% and the value of firewood by 30%. This upward trend is a result of dead and dying trees being removed in the aftermath of the 2003 fires.

Summary All Crops 2005



CROP	ACRES	VALUE
Nursery Products & Flower	10,221	$990,900,400
Fruit & Nut Crops	42,815	$325,988,273
Vegetable Crops	7,044	$137,990,797
Livestock & Poultry		$47,631,604
Livestock & Poultry Products		$18,596,610
Field Crops	213,096	$6,154,802
Apiary Products		$3,323,750
Specialty Crops		$955,000
TOTALS	**273,176**	**$1,530,586,236**

Information is from the 2005 Crop Statistics and Annual Report, Department of Agriculture, Weights and Measures. A complete copy is available on-line at http://www.sdcounty.ca.gov/awm/docs/

County of San Diego, Department of
Agriculture, Weights and Measures
5555 Overland Ave. Ste 3101
San Diego, CA 92123
858.694.2739 www.sdcawm.org

San Diego AWM Agriculture, Weights & Measures

What Makes San Diego County Agriculture Unique?

- San Diego County is the most southwestern county in the United States with a geographic area of 4,200 square miles, approximately the size of Connecticut, and a population of 2.9 million.
- The U.S. Weather Bureau describes the San Diego climate as the most nearly perfect in America, characterized as Mediterranean, with warm winters and cool summers.
- San Diego County's varied topography creates a wide fluctuation of microclimates resulting in nearly 30 different types of vegetation communities. This diversity allows for San Diego to grow over 200 different agricultural commodities - strawberries along the coast, apples in the mountains, and grapefruit in the desert.
- San Diego County has the sixth highest urban population among counties in the United States, but the County also has the 12th largest agricultural economy.
- Agriculture in San Diego County covers 315,000 acres and ranks 5th as a component of San Diego County's economy.
- San Diego County has 5,255 farms, the second highest number of farms of all counties in the United States.
- 63% of San Diego County farms are 1-9 acres, 37% are greater than 10 acres. Median size farm in San Diego is 5 acres.

- In San Diego 92% of the farms are family owned. 77% of the farmers live on their land. Native Americans hold 22% of the farmland in San Diego County.
- The high cost of water (more than $600/acre foot) and land make farming in San Diego County expensive and encourages growers to raise products with a high dollar value per acre.
- San Diego County ranks number one in both California and the nation in the production value of nursery, floriculture, sod and avocados.
- Statewide, San Diego County is in the top five in the production of chickens, fresh market tomatoes, eggs, mushrooms, grapefruit, tangerines, and honey.

Information is from the 2006 Crop Statistics and Annual Report, Department of Agriculture, Weights and Measures. A complete copy is available on-line at www.sdcawm.org/crop_statistics.html

County of San Diego, Department of Agriculture, Weights and Measures
5555 Overland Ave, Ste. 3101
San Diego, CA 92123
858-694-2739 www.sdcawm.org

County of San Diego

Agricultural Overview 2006

In 2006, the Agricultural Commissioner system celebrated its 125th anniversary. In 1881, the San Diego County Board of Supervisors established a three member Board of Horticulture. In 1911, the board was consolidated into a single Horticultural Commissioner, and in 1929, the title was officially changed to "Agricultural Commissioner."

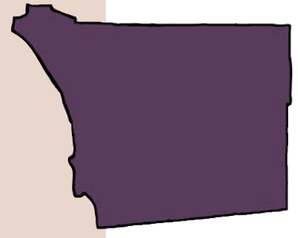
Historically, one of the duties of the Agricultural Commissioner is to report on the state of agriculture in this county. For many decades, the Agricultural Commissioner has tallied information gathered from local farmers and compiled an annual crop report.

All the values for 2006 have been tabulated and the total value of San Diego County's agriculture was $1,461,665,261. Although this is slightly lower (-4.6%) than the 2005 value, it is apparent that agriculture still thrives and flourishes in our County, with over 47 crops worth at least $1 million.

In 2006, the value of **Nursery and Flower** crops was 69% of the total value of agriculture in San Diego County. Indoor Flowering and Foliage Plants remains the number one crop and has been the top commodity in San Diego County for over two decades.

2006 Agricultural Crop Highlights

Total Value	$1,461,665,261
Agricultural Value State Ranking	8th
Change in Value from 2005	$69,875,975
Percent of Change	-4.6%
Total Acreage	315,296
#1 Crop	Indoor Flowering & Foliage Plants
Crop with the Highest Value Per Acre	Indoor Flowering & Foliage Plants
Dollar Value Per Acre	$623,121
Crop with the Lowest Value Per Acre	Oat Grain
Dollar Value Per Acre	$15.15



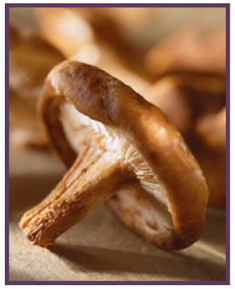
County of San Diego,
Department of Agriculture,
Weights and Measures
5555 Overland Avenue Suite 3101
San Diego, CA 92123 858-694-2739
www.sdcawm.org

San Diego County Agriculture

2006 Agricultural Overview

For the past several years, value and acreage of Ornamental Trees and Shrubs has increased rapidly. In 2006, these crops showed a slight decrease in acreage (-4.4%) and a slight increase in value (0.2%) to $287,586,060. Overall acreage for all nurseries and cut flowers decreased in 2006 (-3.4%) while the total value remained essentially the same (0.0%).

Gains in the 2005 value (29%) of **Fruit and Nut Crops** declined (-32%) in 2006. Avocados remain the largest fruit crop, although the value decreased significantly (-45%), due to a drop in price and improved data gathering. Citrus decreased in both acreage (-9%) and value (-10%). Navel Oranges contributed to this decrease due to a significant drop in production.

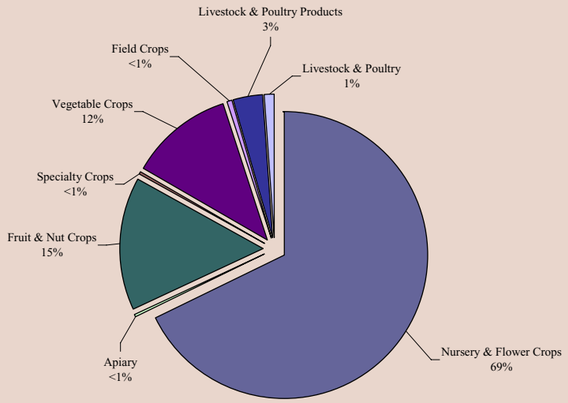


Vegetables and Vine Fruits value grew (25%) while acreage decreased slightly (-3.8%). The biggest gains were in tomatoes, increasing in both production and price. Mushrooms also showed significant gains in value (43%) while acreage stayed the same. Some of this increase is attributed to shifting towards more lucrative varieties of mushrooms.

The value of **Livestock and Poultry** decreased (-13%) with losses in all categories as livestock and poultry facilities continue to either close or migrate out of San Diego County. The number of head of cattle continues to decrease (-10%) following a trend since 2003. Correspondingly, milk production decreased (-19%). The overall value of Livestock and Poultry Products increased (4%) due to increased value of ratite products such as emu oil.

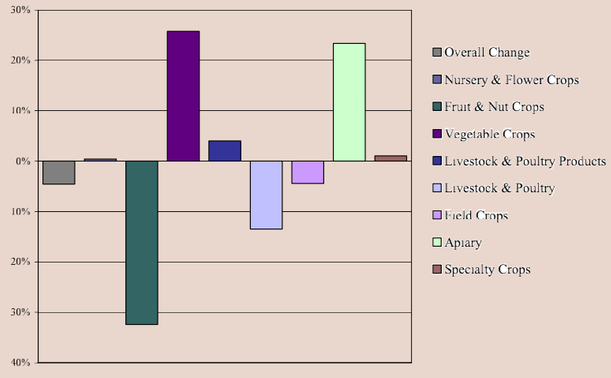
Field Crops which includes grains, rangeland and irrigated pasture, decreased in value (-4%) while bee products increased (23%). The largest increase was due to the rise in pollination value.

Major Agricultural Categories

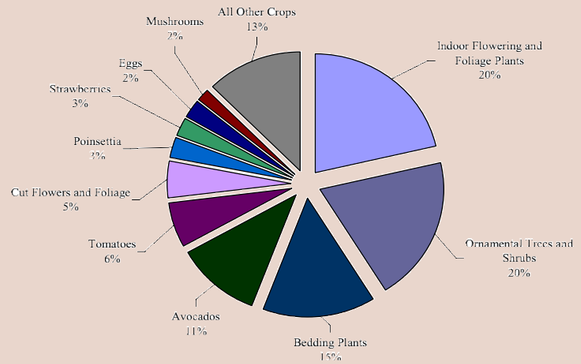


	ACRES	VALUE
Nursery & Flower Crops	9,872	$991,254,764
Fruit & Nut Crops	44,028	$220,325,305
Vegetable Crops	6,777	$173,506,449
Livestock & Poultry Products		$49,543,392
Livestock & Poultry		$16,087,533
Field Crops	254,619	$5,882,609
Apiary		$4,100,209
Specialty Crops		$965,000
Total Value of Agriculture	**315,296**	**$1,461,665,261**

Percent Change in Major Crops

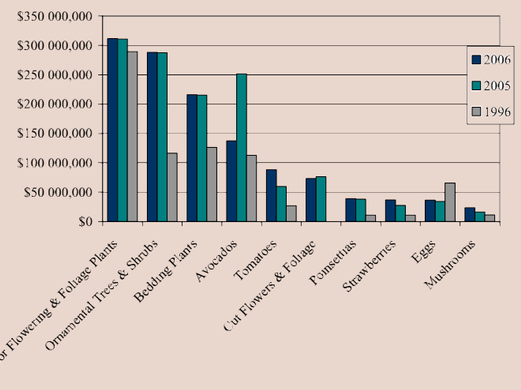


Top Ten Crops



Crop	2006	2005	1996
Indoor Flowering & Foliage Plants	$311,560,400	$311,050,300	$289,448,520
Ornamental Trees & Shrubs	$288,020,450	$287,586,060	$116,232,545
Bedding Plants	$216,042,250	$215,366,320	$126,339,313
Avocados	$137,305,800	$251,452,135	$112,860,416
Tomatoes	$88,378,386	$59,729,263	$27,107,326
Cut Flowers & Foliage	$73,279,195	$76,432,320	
Poinsettias	$39,092,881	$38,127,200	$10,999,585
Strawberries	$36,800,756	$27,409,785	$10,990,514
Eggs	$36,396,428	$34,213,600	$65,641,919
Mushrooms	$23,609,334	$16,512,288	$11,147,745

Two and Ten Year Comparisons



Of course, these figures do not reflect cost of production, or the countless hours of hard work by farmers. It is estimated that for every dollar value of an agricultural product, a multiplying factor (3.5) may be applied, yielding an estimated economic impact of $5.1 billion to San Diego County.

This past year, farmers from San Diego County shipped 8,255 shipments of agricultural products to 67 different countries. Most shipments were destined to Mexico (6,369) followed by Japan (603) and Canada (520).

San Diego County has 317 registered organic growers, more than any other county in the nation. In 2006, San Diego organic growers produced over 140 different crops ranging from avocados to jujubes.

This past year, AWM fought to eradicate infestations of Diaprepes, Chrysanthemum White Rust, and various weeds, including Spotted Knapweed, Perennial Pepperweed and Yellow Star thistle.

Last year inspectors found 380 pests of significant economic importance (A rated) or of unknown economic importance (Q rated). Examples of finds are Giant African, Apple, and Cuban snails; diseases such as Chrysanthemum White and Gladiolus Rusts and first-time finds of Bamboo mealy bug and Bougainvillea looper.

Just as the Horticultural Commissioner 125 years ago, today's Agricultural Commissioner is commited to protecting and promoting the valuable agricultural resources of this county. Additional crop production information can be found at: www.sdcounty.ca.gov/awm/crop_statistics.html.

U.S. Fish & Wildlife Service / National Oceanic & Atmospheric Administration

Addendum to the HCP Handbook

Executive Summary

The joint Fish and Wildlife Service/National Marine Fisheries Service addendum to the HCP handbook (the "5-point policy") focuses on the expanded use and integration of five components of the Habitat Conservation Planning program, namely (1) biological goals, (2) adaptive management, (3) monitoring, (4) permit duration, and (5) public participation. The purpose of this addendum is to promote nationwide efficiency, effectiveness, and consistency within and between the Services, and to enhance the HCP program nationwide. These new initiatives are based on curent operating conservation programs (i.e., habitat conservation measures) the Services and permittees are incorporating into HCPs, lessons learned, recommendations received, and methods the Services are using to strengthen the HCP process to help ensure species conservation. The Services' new guidance was published in the Federal Register on June 1, 2000.

Biological Goals and Objectives

The Services will work with the applicant to derive biological goals that are commensurate with the scope of the proposed action to ensure that they are consistent with conservation actions needed. Biological goals are the broad guiding principles for the operating conservation program; they are the rationale behind the minimization and mitigation strategies. Specific biological objectives are the measurable targets for achieving the biological goals.

The Services believe that HCPs will be strengthened if they have biological goals and objectives integrated into the operating conservation program. The practice of defining biological goals for HCPs facilitates the development of conservation strategies that ensure that the implementation of the HCP will succeed. These goals and objectives must be based on the best scientific information available and reflect the conservation needs of the covered species for an operating conservation program.

Young northern spotted owls. USFWS photo

Adaptive Management

Adaptive management is an integrated method for addressing uncertainty. It can be used to examine alternative strategies for meeting the biological goals and objectives of an HCP. The Services are already incorporating adaptive management provisions into the operating conservation plans of many HCPs (See the Services' HCP Handbook, Chapter 3). In an HCP, adaptive management will include mutually agreed upon boundaries for its application.

Not all HCPs or all species covered in an incidental take permit need an adaptive management strategy. However, an adaptive management strategy is essential for HCPs that would otherwise pose a significant risk to the species due to significant data or information gaps. Possible significant data gaps that could lead to the development of an adaptive management strategy include, but are not limited to, significant biological uncertainty about specific information about the ecology of the species or its habitat (e.g., food preferences, relative importance of predators, territory size), habitat or species management techniques, or the degree of potential effects of the activity on the species covered in the incidental take permit.

Monitoring

Monitoring serves not only to ensure compliance and gauge the effect and effectiveness of HCPs, it also informs choices under adaptive management provisions, assists in redefining biological goals, and provides the Services with an important part of the information used to conduct range-wide assessments of species status and baseline conditions.

There are at least two types of HCP monitoring: (1) compliance monitoring, which monitors the permittee's implementation of the requirements of the HCP, permit, and/or Implementation Agreement; and (2) effects and effectiveness monitoring, which investigates the impacts of the authorized take and the operating conservation program implemented to verify progress toward the biological goals and objectives. A monitoring program should incorporate both types in order to examine effectively all aspects of an HCP, and ensure the ultimate success of the HCP.

Monitoring measures should be commensurate with the scope and duration of the project and the biological significance of its effects. The monitoring program should be flexible so that it can be modified, if necessary, based on the need for additional information. In order to obtain meaningful information, the applicant and the Services should structure monitoring methods and standards so that the results from one reporting period and area to another are comparable, and the monitoring protocol responds to the question(s) asked. Credible monitored units should reflect the biological objective's measurable units (e.g., if the biological objective is in terms of numbers of individuals, the monitoring program should measure the number of individuals). The monitoring program must be based on sound science and standard survey or other protocols previously established should be used.

Permit Duration

To date, the Services have issued more than 300 permits, with varying lengths in permit duration. Having a range of permit durations is important, as it takes into account both the biological impacts resulting from the proposed land use (e.g., variations in the length of timber rotations and treatments) and economic developmental differences (e.g., housing development HCPs versus forestry-related HCPs).

Both FWS and NMFS regulations for incidental take permits outline factors to consider when determining incidental take permit duration (50 CFR §§17.32 and 222.307). These factors include duration of the applicant's proposed activities and the expected positive and negative effects on covered species associated with the proposed duration including the extent to which the operating conservation program will increase the survivability of the listed species and/or enhance its habitat. In determining the duration of an incidental take permit, the Services will also consider the extent of scientific and commercial data underlying the proposed operating conservation program for the HCP, the length of time necessary to implement and achieve the benefits of the operating conservation program, and the extent to which the program incorporates adaptive management strategies.

Gopher tortoise. USFWS photo by Harold Waalquist

Public Participation

The Services intend to expand public participation in the HCP process in order to provide the public with a greater opportunity to assess, review, and critique plans as they are being developed. The Services currently require a 30-day public comment period for all formal HCP applications, however, the Services recognize the concern of the general public regarding the length of the public comment period, especially for large-scale HCPs. The Services will provide a 60-day public comment period for most HCPs. The exceptions to a 60-day comment period would be those for low-effect HCPs and large scale regional, or exceptionally complex HCPs. The Services believe the current 30-day public comment period provides enough time to review amendments and low-effect HCPs. In some cases, individual permits under a programmatic HCP may not need additional public review since the larger, programmatic HCP would have undergone more extensive review. In addition, the minimum comment period for these HCPs is proposed to be 90 days, unless significant public participation occurs during HCP development.

In addition to extending the public comment period, the Services will also seek to announce the availability of HCPs in local newspapers of general circulation and in electronic format on an increased basis. The Services also intend to expand the use of informational meetings to provide a forum for answering questions that members of the public may have regarding HCPs that are large-scale regional plans and/or may be controversial. Although the development of an HCP is the applicant's responsibility, the Services will encourage applicants for most large-scale, regional HCP efforts to provide extensive opportunities for public involvement during the planning and implementation process.

Copies of the addendum may be viewed and printed from the HCP website at *http://endangered.fws.gov/hcp/.* Copies may also be obtained by calling the FWS Division of Endangered Species at 703/358 2171 or the NMFS Office of Protected Resources at 301/713 1401.

U.S. Fish & Wildlife Service
National Oceanic & Atmospheric Administration

May 2000

U.S. Fish & Wildlife Service / National Oceanic & Atmospheric Administration

Addendum to the HCP Handbook

Questions and Answers

What is the addendum to the HCP Handbook?

The Fish and Wildlife Service and National Marine Fisheries Service have finalized an addendum to the *Handbook for Habitat Conservation Planning and Incidental Take Permitting Process*. This addendum, also known as the "5-point policy," provides additional guidance on HCPs. Some of this guidance is derived from approaches we currently apply to the HCP process. In particular, we will use this guidance (1) to establish biological goals for HCPs, (2) to clarify and expand the use of adaptive management, (3) to clarify the use of monitoring, (4) to provide criteria to be considered by the Services in determining incidental take permit duration, and (5) to expand the use of public participation.

Why was the addendum developed?

The Habitat Conservation Planning process was designed to provide the Services flexibility in resolving conflicts between economic development and species conservation. The Services continue to learn as we implement the HCP program, resulting in better HCPs and species conservation. In response to comments received from the public through a variety of circumstances (workshops, meetings, training sessions, scientific studies, participation in the development and implementation of HCPs, and during comment periods on various ESA regulations and policies) as well as deliberations within the Services, on March 9, 1999, we provided the draft 5-point policy initiative for public review and comment.

How will identifying biological goals and objectives affect the HCP development process?

A concern frequently expressed by applicants is that there is little guidance to assist them in determining what actions should be taken to provide the necessary species conservation. Developing biological goals and objectives for HCPs will help to provide applicants with a clear concept of what an operating conservation program is trying to accomplish.

The Wisconsin Statewide HCP contains an adaptive management strategy for the conservation of the endangered Karner blue butterfly. Photo by Joel Trick.

This will not only assist applicants by providing information regarding species conservation needs, but also in understanding why these actions are necessary.

How will the development of biological goals and objectives affect species conservation?

Developing biological goals and objectives for individual HCPs, will help to focus the conservation programs of HCPs on cumulatively achieving landscape-level conservation. Applicants will better be able to tailor their conservation programs to take advantage of the activities of other programs, such as recovery activities and on-going research. This should increase the effectiveness of individual HCPs' operating conservation program by ensuring that conservation activities are implemented in a more coordinated manner.

How will biological goals and objectives be developed?

How the Services and applicants will develop biological goals and objectives will be dependent on: the biology of the species; the threats to the species; the effect of the proposed activity; and the scope of the HCP. For example, a proposed action may increase a species' vulnerability to predation. A biological goal for an HCP developed for that proposed action would be to reduce the predation of the affected population. The mitigation or minimization measures would be designed to achieve that goal. Although a landowner may not be able to remove the threat of predation for the entire species, his/her HCP may contribute to that conservation need. Biological goals and objectives can be described in terms of habitat or the species.

When is it appropriate to use adaptive management?
Adaptive management is an essential component of HCPs that would otherwise pose a significant risk to the species due to significant data or information gaps. Note that this is not limited simply to biological information, but also can include uncertainty in the mitigation or management techniques, effects of the action, or any other information gap that poses a significant risk.

How can adaptive management assist the HCP development process?
Rather than delay the process while sufficient information is gathered to predict the outcome accurately, the Services and applicants jointly develop the adaptive management strategy. Thus, all parties are assured of a suitable outcome. However, adaptive management should not replace crafting and implementing appropriate conservation measures up-front.

What incentives are there for HCP applicants to incorporate adaptive management into HCPs?
Adaptive management allows for flexibility over time during the implementation of the HCP. Additionally, it provides applicants and the Services another conservation tool to use to improve HCPs, thereby increasing the applicant's ability to meet the criteria for obtaining an incidental take permit.

Do biological goals and adaptive management conflict with "No Surprises" assurances?
No; the premise of adaptive management is that in the face of uncertainty, the applicant and the Services will jointly identify the range of possible outcomes and the appropriate changes in the HCP. The principle behind the "No Surprises" assurances is that the permittee will be provided with long-term predictability regarding the actions that will be needed to fulfill their permit responsibilities. By implementing adaptive management and identifying the range of potential actions that may be expected, the applicant is provided with the assurance that actions outside the scope of those agreed upon will not be required of them.

With or without adaptive management, as long as the permittee is properly implementing the HCP, intended to meet biological goals, no additional mitigation would be required. If there is significant uncertainty that the operating conservation program will meet the biological goals and objectives, then an adaptive management strategy would be devised up-front to increase the likelihood of meeting the biological goals and objectives.

How extensive does a monitoring program need to be?
Monitoring is a mandatory element of all HCPs and is part of the permittee's implementation obligation. The scope of a monitoring plan is directly related to the significance of the biological impacts. For instance, an HCP that will impact a relatively small amount of habitat for a wide-ranging species may require no more monitoring than to ensure that any agreed upon habitat protection and/or restoration activities are successfully implemented. However, a regional HCP that affects a large amount of habitat or a significant portion of a species' range may require more extensive monitoring that examines the species' status (e.g., population levels, reproductive rates, etc.). Applicants should work with the Services to determine the level of monitoring appropriate for their specific HCP.

What factors should be included in a monitoring plan?
The factors that should be monitored are dependent on information needed to determine compliance, the biological goals and objectives, and the needs of any adaptive management implemented as part of the HCP. For example, an HCP requiring habitat restoration should incorporate monitoring that sets and examines restoration success criteria; an HCP requiring the maintenance of a certain population level within the HCP area should incorporate population counts. If an adaptive management strategy is incorporated into the HCP, then the monitoring program must include the feedback loops of that strategy.

How do the Services determine the duration of the incidental take permit?
Factors that the Services consider when determining permit duration include the duration of the applicant's proposed activities and the duration of expected positive or negative effects on the covered species. For instance, if the permittee's action or the effects to the species occur over a long period of time, such as timber harvest, the permit would need to encompass that time period.

The Services also will consider the extent of information underlying the HCP, the length of time necessary to implement and achieve the benefits of the operating conservation program, and the extent to which the program incorporates adaptive management strategies. Significant biological uncertainty may necessitate an adaptive management strategy. The gathering of new information through the monitoring program requires the appropriate period of time for interpretation of new information and subsequent changes in management; this could necessitate a permit with a longer duration. However, if an adaptive management strategy that significantly reduces the risk of the HCP to that species cannot be devised and implemented, then a shorter duration may be appropriate.

How has the public comment period changed?
The ESA requires that all HCPs have a minimum 30 day public comment period. Because of the concern that this does not provide enough time for members of the public to review and provide meaningful comments, the Services extended the minimum comment period for most HCPs to 60 days. Low effect HCPs and amendments will continue to have a 30-day comment period, while large HCPs will have a 90-day minimum comment period, unless there has been significant public involvement during development.

What other means of public participation exists in the HCP process?
The Services are committed to providing opportunities for increased public involvement wherever possible. When practicable, the Services will seek to announce the availability of HCPs in local newspapers of general circulation and in electronic format. Additionally, we will provide assistance to the applicants in developing options for including the public in development of their HCPs, such as holding informational meetings and establishing steering committees.

What are the incentives to applicants to include the public in the development of their HCPs?
Overall, up-front public involvement provides opportunities for education and input in the development of the HCP, leading to less controversy for the permittee and more partnerships in the implementation of the HCP. By informing and involving the public during HCP development, the applicant is more likely to receive educated and meaningful input during the public comment period, thereby improving their HCPs.

For more information, visit the U. S. Fish and Wildlife Service HCP web site: http://endangered.fws.gov/hcp

U.S. Fish & Wildlife Service
National Oceanic & Atmospheric Administration

May 2000

Federal Register

Thursday,
June 1, 2000

Part IV

Department of the Interior

Fish and Wildlife Service

Department of Commerce

National Oceanic and Atmospheric Administration

Availability of a Final Addendum to the Handbook for Habitat Conservation Planning and Incidental Take Permitting Process; Notice

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[Docket No. 981208299–0049–02]

RIN:1018–AG06, 0648–XA14

Notice of Availability of a Final Addendum to the Handbook for Habitat Conservation Planning and Incidental Take Permitting Process

AGENCIES: Fish and Wildlife Service, Interior, and National Marine Fisheries Service, National Oceanic and Atmospheric Administration, Commerce.

ACTION: Notice of final policy.

SUMMARY: The Fish and Wildlife Service and the National Marine Fisheries Service (the Services) are publishing a final addendum to the Handbook for Habitat Conservation Planning and Incidental Take Permitting Process (HCP Handbook). This addendum, which is also known as the five-point policy guidance, is printed entirely within this notice. Like the HCP Handbook, the addendum provides clarifying guidance for the Services in conducting the incidental take permit program and for those applying for an incidental take permit under section 10(a)(1)(B) of the Endangered Species Act (ESA). This guidance will promote efficiency and nationwide consistency within and between the Services and improve the Habitat Conservation Planning program.

DATES: This policy is effective July 3, 2000.

ADDRESSES: Chief, Division of Endangered Species, U.S. Fish and Wildlife Service, 4401 North Fairfax Drive, Room 420, Arlington, Virginia 22203 (facsimile 703/358–1735); or Chief, Endangered Species Division, Office of Protected Resources, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, Maryland 20910 (facsimile 301/713–0376).

FOR FURTHER INFORMATION CONTACT: Nancy Gloman, Chief, Division of Endangered Species, U.S. Fish and Wildlife Service (telephone 703/358–2171, facsimile 703/358–1735), or Wanda Cain, Chief, Endangered Species Division, National Marine Fisheries Service (telephone 301/713–1401, facsimile 301/713–0376) at the above addresses.

SUPPLEMENTARY INFORMATION:

Background

The Endangered Species Act (ESA) was amended in 1982 to allow the Secretaries to authorize the taking of listed species incidentally to an otherwise lawful activity by non-Federal entities such as states, counties, local governments, and private landowners (section 10(a)(1)(B)). To receive a permit, the applicant submits a conservation plan (also referred to as an HCP) that meets the criteria included in the ESA and its implementing regulations (50 CFR parts 17 and 222).

The section 10 incidental take permitting process (or HCP process) provides additional flexibility for landowners by including planning for unlisted species, which enables the process to embrace an ecosystem and landscape-level approach. This proactive approach can reduce future conflicts and may even preclude listing of species, furthering the purposes of the ESA. As the Services have made many refinements to the process, we have also experienced tremendous growth in the demand for Habitat Conservation Plans (HCPs) in recent years. In 1992, 14 HCPs had been approved. As of today, we have more than 260 HCP permits covering more than twenty million acres of land, providing conservation for approximately 200 listed species. More than 200 HCPs are under some stage of development. The HCP process provides an opportunity to develop strong partnerships with local governments and the private sector.

Based on the Services' experience in developing HCPs and lessons learned since 1983, the Services developed comprehensive guidance on conducting the incidental take permit program. This guidance was developed into the HCP Handbook, which was made available for public review and comment on December 21, 1994 (59 FR 65782). It was issued in final form on December 2, 1996 (61 FR 63854).

With the 1982 amendments, Congress envisioned and allowed the Federal government to provide regulatory assurances to non-Federal property owners through the section 10 incidental take permit process. We decided that a clearer policy associated with the permit regulations in 50 CFR 17.22, 17.32, and 222.307 regarding the assurances provided to landowners entering into an HCP was needed. This prompted us to develop the ''No Surprises'' policy, which was based on the 1982 Congressional Report language and a decade of working with private landowners during the development and implementation of HCPs. The Services believed that non-Federal property owners should be provided economic and regulatory certainty regarding the overall cost of species conservation and mitigation, provided that the affected species were adequately covered, and the permittee was properly implementing the HCP and complying with the terms and conditions of the HCP, permit, and Implementing Agreement (IA), if used. The Services codified the ''No Surprises'' policy into a final rule, 50 CFR 17.22(b)(5), 17.32(b)(5) and 222.307(g), on February 23, 1998 (63 FR 8859). It was at this time that the Services announced our intent to revise the HCP Handbook, both to reflect the final No Surprises rule and to further enhance the effectiveness of the HCP process in general through expanded use of five concepts, including permit duration, public participation, adaptive management, monitoring provisions, and biological goals.

On March 9, 1999, the Services published the draft five-point policy (64 FR 11485) for public review and comment. This notice establishes the five-point policy as a final addendum to the HCP Handbook. The addendum supplements the HCP Handbook and No Surprises final rule and will be applied within the context of the existing statute and regulations. This final addendum is considered agency policy, and the Services are fully committed to its implementation. The concepts and definitions of terms used in the addendum are found in the ESA, implementing regulations, and HCP Handbook. Further information about HCPs may be obtained from the FWS webpage at http://www.fws.gov/r9endspp/hcp/hcp.html.

Summary of Comments Received

The Services received more than 200 letters of comment on the draft addendum from individuals, conservation groups, trade associations, local governments, Federal and State agencies, businesses and corporations, and private organizations. Because most of these letters included similar comments (many were form letters) we grouped the comments according to issues. We further divided these issues into two sets. The issues in the first set deal with the policy as a whole and HCPs in general. The issues in the second set pertain to the individual sections of the policy and are organized accordingly. The following is a summary of the relevant comments and the Services' responses.

General Five-Point Policy or HCP Issues

Issue 1: Many commenters were concerned that the policy would not be complied with unless it was regulatory in nature and, therefore, suggested codifying the policy into regulation rather than issuing the addendum as policy.

Response 1: We believe that publishing the addendum as policy at this time is appropriate, because, like the HCP Handbook itself, the addendum provides specific guidance for implementation of the statute and regulations. The intent of the addendum is to clarify the concepts identified in existing policy and regulations and ensure consistency in their use. The Services will follow the guidance in the HCP Handbook including this addendum.

Issue 2: Many commenters stated that HCPs should incorporate recovery goals. The comments were primarily referring to the biological goals of the HCP, but also requested the incorporation of recovery goals into adaptive management and monitoring. Other comments included the suggestion of minimum scientific standards for the five points addressed in the addendum or for HCPs in general. Conversely, one commenter stated that biological goals and objectives should simply be that the HCP ''not appreciably reduce the likelihood of survival and recovery,'' which is one of the statutory criteria for permit issuance. Other suggested methods of incorporating recovery into HCPs include developing an overall strategy of recovery that includes HCPs, or tying adaptive management back into the recovery goals of a species.

Response 2: The HCP program standards are contained within the statutory and regulatory criteria. Two of the statutory criteria for obtaining an incidental take permit are that the proposed activity, along with the HCP, does not appreciably reduce the likelihood of survival and recovery of the species, and that the HCP minimizes and mitigates the impact of the taking to the maximum extent practicable. The Services believe that guidance is necessary for identifying biological goals and objectives that translate these statutory and regulatory criteria or standards into meaningful biological measures, specific to a particular HCP situation and in a manner that will facilitate monitoring.

The Services also agree that the biological goals and objectives should be consistent with recovery but in a manner that is commensurate with the scope of the HCP. Under section 10 of the ESA, we do not explicitly require an HCP to recover listed species or contribute to the recovery objectives outlined in a recovery plan, but do not intend to permit activities that preclude recovery. This approach reflects the intent of the section 10(a)(1)(B) incidental take permit process to provide for authorization of incidental take, not to mandate recovery. However, the extent to which an HCP may contribute to recovery is an important consideration in any HCP effort, and applicants should be encouraged to develop HCPs that produce a net positive effect on a species. The Services can use recovery goals to frame the biological goals and objectives. Recovery plans are also used as sources for possible minimization and mitigation measures for the HCP.

If a recovery plan is not available, we must rely upon other available sources of biological information to encourage the development of HCPs that would aid in a species' recovery. If a recovery plan is available, the Services and applicants should refer to it for information on uncertainty associated with the species' biology and/or its conservation in order to determine if an adaptive management strategy is necessary.

By defining what adaptive management means for HCPs in the addendum, we established a standard for its use. An adaptive management strategy is used to address significant uncertainty associated with a particular HCP, but it is not practicable (or possible) to require that all adaptive management strategies impose an elaborate experimental design. However, an adaptive management strategy must be tied to the biological goals and objectives of the HCP and based on the best scientific information available. We may also obtain strategies to deal with the uncertainty from recovery plans that can be incorporated into an HCP's adaptive management program.

Similarly, a monitoring program's standard for HCPs is based on the best scientific information available, but an HCP's monitoring program also is scaled to the particular HCP. The Services should be aware of the types of monitoring programs that are ongoing in order to coordinate efforts between HCPs. It may be more economical for smaller HCPs to participate in larger monitoring programs by contributing to or incorporating those programs.

Issue 3: Many comments referred to the No Surprises policy, requesting either an increase or decrease in the amount of assurances associated with incidental take permits.

Response 3: The Services published the final rule on the No Surprises policy on February 23, 1998 (63 FR 8859). The final rule codified into 50 CFR parts 17 and 222 the nature of the assurances provided to incidental take permittees. All permits issued after March 25, 1998, under section 10(a)(1)(B) of the ESA receive No Surprises assurances as specified in 50 CFR 17.22(b)(5), 17.32(b)(5), 222.307(g), and 222.307(h). This policy addendum does not alter the assurances provided to permittees by regulation.

The No Surprises assurances apply only to incidental take permits issued in accordance with the requirements of the Services' regulations where the HCP is properly implemented. The assurances extend only to those species adequately covered by the HCP. The term ''No Surprises'' refers to regulatory assurances, *not* biological assurances, and applies only to the extent of mitigation required by the incidental take permit in response to unforeseen circumstances or changed circumstances not provided for in the HCP. Specifically, permittees, who are properly implementing their HCP, will not be required to provide additional conservation and mitigation measures involving the commitment of additional land, water or financial compensation or additional restrictions on the use of land, water, or other natural resources without their consent.

The No Surprises assurances encourage contingency planning. Changes in circumstances that can be reasonably anticipated during the implementation of an HCP can be planned for in the HCP. Such HCPs should describe the modifications in the project or activity that will be implemented if these circumstances occur. Precisely because nature is so dynamic, planning for changed circumstances and adopting adaptive management strategies within the HCP, permit, or IA, if used, will better serve both the needs of permittees and endangered species conservation.

Issue 4: Based largely on a study on HCPs supported by the American Institute of Biological Sciences and National Center for Ecological Analysis and Synthesis, several commenters raised questions about biological uncertainty in decisions to issue incidental take permits. Some commenters requested a moratorium on issuing 10(a)(1)(B) incidental take permits, stating that there is not enough known about the species to lock in long-term conservation actions provided by HCPs and the assurances given with these permits. One commenter specifically stated that incidental take permits should not be issued if there is any uncertainty. Instead, efforts should

be spent on filling those data gaps before issuing permits.

Response 4: The Services believe that covered species, both listed and unlisted, will be afforded more protection because of the conservation measures gained through the HCP process. Permitting incidental take that includes carefully constructed conservation actions will benefit most covered species. Part of the careful construction of an HCP is incorporation of contingency plans, whether it is through planning for changed circumstances or developing and implementing an adaptive management strategy.

A moratorium on incidental take permits would not serve species or the public well and would not be in accordance with the ESA. Section 10(a)(2)(B) of the ESA states that an incidental take permit that meets the issuance criteria shall be issued. The partnerships this program encourages are needed to promote endangered and threatened species conservation on non-Federal lands.

The Services appreciate the suggestions provided in the study sponsored by the American Institute of Biological Sciences and the National Center for Ecological Analysis and Synthesis. Nevertheless, we believe, and the study confirmed, that the HCPs currently in place are based on the best available scientific and commercial information. If we lack critical information regarding the biological needs of a species proposed to be covered under an HCP, we will not issue the permit until such information is obtained or an acceptable adaptive management strategy is incorporated into the HCP to address the uncertainty.

Issue 5: Some comments stated that the addendum should allow citizen suits to ensure that permittees are properly implementing their HCPs.

Response 5: The addendum does not in any way alter the ability of citizens to bring lawsuits using the citizen suit provision of the ESA.

Issue 6: One commenter stated that the addendum should provide for compensation for loss of Tribal resources due to implementation of HCPs.

Response 6: The Secretarial Order regarding American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act was issued on June 5, 1997, by the Secretaries of the Interior and of Commerce pursuant to the ESA, the Federal-Tribal trust relationship, and other Federal law. This Order clarifies the responsibilities of the Services when ESA actions affect, or may affect, Indian lands, tribal trust resources, or the exercise of American Indian tribal rights. The order does not require HCP applicants to include the tribes in actual negotiations or require compensation for loss of Tribal resources.

Issue 7: One comment stated that the draft addendum did not adhere to the policy on the use of plain English in Government documents.

Response 7: The final addendum is written to incorporate the principles of plain English. However, most of the concepts within this addendum and within the HCP Program are biological or otherwise technical in nature. Therefore, we must use certain terminology that is associated with those concepts.

Issue 8: One commenter suggested that all five points addressed by the addendum should be proportional to the scale of the HCP.

Response 8: The Services agree that application of each of the 5 points (*i.e.,* the biological goals and objectives, an adaptive management strategy, the monitoring program of an HCP, the determination of the duration of an incidental take permit, and the scope of public involvement) should be commensurate with the scope of the HCP. Each individual section within the addendum discusses the relationship between each of the five points and the scope of the HCP.

Biological Goals Issues

Issue 9: There were comments about who should determine the biological goals and objectives of an HCP. One commenter suggested that the person(s) with the most experience with the species should determine the biological goals and objectives of an HCP. Additional comments suggested that we confer with State agencies in determining biological goals and objectives. Another commenter stated that the Services should provide applicants assistance in developing the biological goals and objectives.

Response 9: In addition to the applicants, the Services play an integral role in determining the biological goals and objectives. We agree that species experts should be consulted during development of an HCP, including determining the biological goals and objectives. We have revised the biological goals and objectives section to articulate the methods available for their development. Service biologists frequently confer informally with species experts or other specialty experts (*e.g.,* population modeling, habitat assessment, restoration).

The Services also agree that State agencies should be involved with HCPs, including HCPs that cover non-listed species, and we encourage applicants to include the State wildlife agencies during the development of their HCPs. The addendum reflects this commitment.

Issue 10: There were comments about whether species would benefit more from habitat-based biological goals versus goals specific to the number of individuals or populations. Some suggested that habitat-based goals would be sufficient. Others stated that there should only be species-based goals and that they should account for all life stages of that species and any natural fluctuations in population levels.

Response 10: As discussed in the draft addendum, an appropriate HCP biological goal for a species will depend upon the particular species, the nature of the impact, the nature of the conservation measures in the HCP, and to what extent the populations or other ecological factors fluctuate. The addendum states the following:

> The biological goals and objectives may be either habitat or species based. Habitat-based goals are expressed in terms of amount and/or quality of habitat to be achieved. Species-based goals are expressed in terms specific to individuals or populations of that species. Complex multispecies or regional HCPs may use combination of habitat- and species-specific goals and objectives. However, according to 50 CFR 17.22, 17.32, 222.102, and 222.307, each covered species must be addressed as if it were listed and named on the permit. Although the goals and objectives may be stated in habitat terms, each covered species that falls under that goal or objective must be accounted for individually.

The Services chose to broadly define the application of biological goals and objectives, not only in terms of whether they should be habitat-based or species-based, but also how the goals and objectives should be measured (*e.g.,* numbers, life history stages, acres). This broad definition allows for flexibility in determining appropriate biological goals and objectives. The Services and applicants must determine the appropriate unit of measure such as numbers of individuals at a particular life stage, all lifestages, or quantity or quality of habitat for each individual HCP. The Services and applicants should also consult with appropriate experts to determine those goals (see above discussion).

Regardless of the type of goal used, at some point, all HCPs must undergo a species by species analysis. If an HCP is planned on a habitat basis, a species-by-species analysis must be made to determine if the HCP adequately covers the species. The relationship of habitat goals to specific species will help the

Services and applicant determine if a species is adequately covered by an HCP. Also, this consideration of individual species provides a safety net for those species that may not neatly fit into a purely habitat-based plan. For example, populations of a narrow endemic species that occur within a wider ranging habitat type may not be adequately covered by an HCP that depends solely on amount of habitat conserved in a broad general area and does not specify particular locations where the habitat for that species is conserved.

Issue 11: Some commenters addressed quantifying take within an HCP and during its implementation. Some stated that quantifying take should not be required, and others stated that it should always be required.

Response 11: Although identifying the amount or extent of take within an HCP and the permit does not directly refer to development of biological goals and objectives, it is related and will be addressed here. Section 10(a)(2)(A) requires that an HCP specify the impact which will likely result from the take to be permitted. Both Services require applicants to include certain information about the species to be covered by an HCP. FWS permit application criteria require identification of the number, age, and sex of such species, if known (50 CFR 17.22, 17.32). NMFS application criteria require a description of the anticipated impact, including amount, extent, and type of anticipated taking (50 CFR 222.307). While evaluating an HCP, we use the amount of incidental take as a main indicator of the impact the proposed project will likely have on the species. Identifying the amount of incidental take contributes to the analysis of whether the proposed incidental take permit will appreciably reduce the likelihood of survival and recovery of the species.

There are situations where precisely quantifying the number of individuals that are anticipated to be taken is a less effective method than estimating the amount or extent of take in terms of the amount of habitat altered. What is most important is that we are able to assess the impact of the anticipated take on the species. Regardless of how the incidental take is quantified, it must be indicated in the biological opinion the Services complete for the issuance of the permit and on the permit itself.

Adaptive Management Issues

Issue 12: Many commenters raised the issue as to the correct definition, and, therefore, correct application of adaptive management. Additionally, these commenters stated that under the ''scientific definition'' of adaptive management, true adaptive management is impossible under No Surprises.

Response 12: The Services recognize the use of the term within the scientific literature. However, the phrase ''adaptive management'' is used in many other disciplines and contexts and has different meanings to different people. The scientific definition typically follows Holling (1978) and Walters (1986) (see also Walters and Holling, 1990; McLain and Lee, 1996; Walters 1997). This definition is described as a process that tackles the uncertainty in management of natural resources through experimentation. Most frequently, this involves modeling to determine a course of action for on-the-ground implementation with monitoring to test the model's predictions. Walters (1986) breaks down categories of learning through implementation as ''active'' and ''passive'' adaptive management. Passive adaptation is where information obtained is used to determine a single best course of action. Active adaptation is developing and testing a range of alternative strategies (Walters and Holling 1990). For the purposes of the HCP program, we are defining adaptive management as a method for examining alternative strategies for meeting measurable biological goals and objectives, and then, if necessary, adjusting future conservation management actions according to what is learned.

The Services are incorporating a broad perspective of adaptive management, with the key components that make an adaptive process in HCPs meaningful. These components include careful planning through identification of uncertainty, incorporating a range of alternatives, implementing a sufficient monitoring program to determine success of the alternatives, and a feedback loop from the results of the monitoring program that allows for change in the management strategies. Because the Services and applicant provide these elements up front in the HCP, they are consistent with No Surprises.

The addendum makes a distinction between adaptive management that would have a more experimental approach versus contingency planning for the implementation of measures in the event of changed circumstances where there is little uncertainty. An HCP can provide provisions for changed circumstances that does not involve adaptive management.

Issue 13: One commenter stated that all HCPs should contain adaptive management.

Response 13: As stated in the addendum, the Services will incorporate adaptive management strategies when appropriate. Adaptive management is necessary for those plans ''that would otherwise pose a significant risk to the species at the time the permit is issued due to significant data or information gaps.'' Not all HCPs warrant adaptive management, although any HCP may incorporate an adaptive management strategy if agreed upon by the applicant and the Services.

In addition, the ability for applicants and the Services to build contingency measures into an HCP's operating conservation strategy does not depend solely on the use of adaptive management. For instance, the No Surprises final rule provides for planning for changed circumstances. This planning involves providing alternative actions for possible events that may alter the ability of an HCP to meet its biological goals and objectives. An adaptive management strategy would not be necessary if there were no significant uncertainty associated with identifying appropriate responses to potential changed circumstances.

Issue 14: One commenter stated that adaptive management not only increases the complexity of an HCP (and, therefore, the time and effort involved in its development and implementation), but the uncertainty poses an economic risk to permittees.

Response 14: We agree that adaptive management may increase the complexity of an HCP. However, adaptive management strategies should be commensurate with the scope of the HCP (*e.g.*, the smaller the scope or impacts, the less complex the HCP and any adaptive management if warranted). Additionally, all HCPs must meet statutory and regulatory issuance criteria prior to approval and issuance of a permit. Adaptive management is one tool available to applicants and the Services that can be used to meet the issuance criteria. It is also a means for increasing the flexibility of an HCP. A results-oriented implementation program lets a permittee apply a number of different methods for achieving a certain goal, rather than adhering to an inflexible list of prescriptions. A results-oriented program actually provides some certainty to the permittee by establishing a framework to modify the operating conservation strategy. Results are periodically assessed, and, if shortcomings are evident, previously agreed-upon alternative strategies are implemented, thereby streamlining

additional discussions between the Services and permittee.

Setting the sideboards and structure during development of the HCP provides applicants certainty in the extent of requirements for implementing an adaptive management strategy. As stated in the No Surprises final rule, we will not require a permittee to make additional mitigation commitments, including any adaptive management provisions, beyond what was agreed to in the HCP, permit, and IA, if used.

Issue 15: One commenter stated that adaptive management should not replace good, up-front conservation measures.

Response 15: The Services agree that adaptive management should not be used in place of developing good up-front conservation measures or to postpone addressing difficult issues. However, adaptive management may be necessary to craft a framework for addressing uncertainty in the operating conservation program to ensure that the measures fulfill the biological goals and objectives of an HCP.

Monitoring Issues

Issue 16: Several commenters stated that the Services should establish minimum standards or require scientific standards for the monitoring program within an HCP.

Response 16: The implementing regulations for an HCP (50 CFR 17.22, 17.32, and 222.307) require a monitoring component. The HCP Handbook includes guidance on what the monitoring component of an HCP should look like. However, we have refined that guidance and have incorporated it into the addendum. The Services agree that any methodology and techniques involved in biological aspects of monitoring should be based on science. The addendum does state that ''The monitoring program will be based on sound science. Standard survey or other previously-established monitoring protocols should be used. Although the specific methods used to gather necessary data may differ depending on the species and habitat types, monitoring programs should use a multispecies approach when appropriate.'' Monitoring approaches that are consistent with the Handbook and addendum should be adequate for assessing whether the HCP is achieving its biological goals and objectives.

Issue 17: Some commenters stated that it was difficult to distinguish between compliance monitoring and effects and effectiveness monitoring.

Response 17: The Services recognize that it may be difficult to distinguish between the two types of monitoring particularly when the actual monitoring actions may overlap. One way to distinguish between the two types is that compliance monitoring verifies that the permittee is carrying out the terms of the HCP, permit, and IA (if one is used) while effects and effectiveness monitoring evaluates the biological effects of the permitted action and determines whether the effectiveness of the operating conservation program of the HCP is consistent with the assumptions and predictions made when the HCP was developed and approved. The permittee is primarily responsible for ensuring that their HCP is working as planned and the Services are primarily responsible for monitoring whether the permittee is complying with permit requirements.

Issue 18: A few commenters suggested that the Services identify, in the addendum, minimum qualifications for personnel conducting monitoring.

Response 18: The addendum does state that the personnel conducting the monitoring should be qualified. However, the necessary qualifications depend upon what is being monitored. Since HCPs are highly variable, the addendum is flexible about the minimum qualifications of personnel conducting the monitoring, and the Services' staff will determine whether the person or company conducting the monitoring is qualified.

Issue 19: One commenter suggested the Services require all monitoring programs to include population counts.

Response 19: Population monitoring may not be appropriate for all HCPs. The scope of any HCP monitoring program should be in proportion to the scope of that HCP. If an HCP affects only a portion of a population, the permittee should not be responsible for monitoring the entire population. In addition, it may or may not be appropriate for a particular HCP to include counting of populations or individuals. The appropriate unit of measure in a monitoring program depends upon the specific impacts and operating conservation program within an HCP and the biological goals and objectives of the HCP. The unit of measure also depends on how the species uses the habitat to be affected. However, the Services should coordinate monitoring programs to obtain a larger picture of the status of a population.

Issue 20: Some commenters suggested that self-reporting should not be used as a means to demonstrate that the permittee is in compliance with the terms of an HCP.

Response 20: We are not limited to self-reporting for compliance monitoring. However, the limited resources available to the Services to conduct monitoring necessitates our reliance on the working relationships between us and the permittees to verify compliance. As discussed in the addendum, where appropriate, we may conduct our own evaluation, including site visits. The Services should be able to use the periodic reports made by permittees as one method in determining whether the permittee is in compliance. Periodic reports may be our first source of information about the implementation of an HCP. From these reports, we may catch discrepancies that alert us to possible implementation problems. Also, the information obtained to determine effects and effectiveness may be the same information needed to determine compliance. We do not want to use limited resources on duplicative monitoring efforts.

Permit Duration Issues

Issue 21: One commenter suggested that the Services link the duration of the permit to recovery of the species covered by an HCP.

Response 21: We assume that this comment refers to linking duration of the permit to completion of recovery goals where HCPs have a ''recovery standard.'' We discuss the relationship of the HCP program and recovery in the above responses.

Issue 22: Some commenters stated that we should not place time limits on mitigation measures.

Response 22: This comment seems to reflect a misunderstanding regarding the duration of an incidental take permit. Permit duration is the length of time during which the permittee has incidental take authorization. HCPs may be designed such that mitigation measures are in effect for longer periods of time, including in perpetuity, than the time the incidental take permit is in effect.

Public Participation Issues

Issue 23: Many comments pertained to whether the Services or the applicant decides who participates in the development of HCPs. Most commenters stated that the applicant should not decide who participates, and offered alternatives including mandatory stakeholder or interested party participation, and leaving the decision up to the Services.

Response 23: The experience of the Services shows that the more public participation in the development phase of an HCP, the more likely it will be accepted by the public. However, we maintain that the inclusion of other

interested parties in the development of an HCP is ultimately the decision of the applicant. The ESA and its implementing regulations do not mandate public participation before an applicant submits a permit application; only a public comment period after it is submitted and published in the **Federal Register**. We strongly encourage applicants to include more public participation at all stages of development.

Issue 24: Some commenters suggested that scientists should be involved in the development of HCPs. Another commenter stated that all HCPs should be subject to peer review.

Response 24: During consideration of whether to issue an incidental take permit, the Services are required to use the best available scientific and commercial information. Such data come from a variety of sources: scientific literature and peer-reviewed publications, in-house expertise, other State or Federal agencies, academia, and non-governmental organizations, to name a few. For listed species, the Services can draw upon a number of existing information sources, all of which have gone through peer and public review. ESA listing packages are used to gain further species-specific biological information, and where possible, the Services will draw upon recovery plans to identify conservation and monitoring measures and objectives for listed species. The addendum encourages applicants to use scientific advisory committees during the development and implementation of an HCP, especially large-scale ones.

The applicant's integration of a scientific advisory committee and perhaps other stakeholders improves the development and implementation of any adaptive management strategy. Advisory committees can assist the Services and applicants in identifying key components of uncertainty and determine alternative strategies for addressing that uncertainty. We also encourage the use of peer-review for an HCP. An applicant, with guidance from the Services, may seek independent scientific review of specific sections of an HCP and its operating conservation strategy to ensure the use of the best scientific information for HCP development.

Issue 25: One commenter requested that the public comment period under the National Environmental Policy Act (NEPA) for HCPs not be extended. Another comment suggested that the Services process incidental take permits with Environmental Impact Statements within nine months, and, if that deadline is not met, we would be required to issue the permit within 30 days.

Response 25: The addendum contains changes to the existing HCP public comment period but does not change any public input required by the Council on Environmental Quality regulations for implementing the procedural provisions of NEPA (40 CFR 1500–1508).

The intent of the addendum is to ensure the public has sufficient opportunity to review and provide comment on all HCPs, regardless of the public review requirements of NEPA. To accomplish this, the addendum lays out the various public review requirements for HCPs with different levels of impact. For example, low-effect HCPs, which are categorically excluded from the NEPA process, will have a minimum 30-day public review and comment period. The public review period for large, complex HCPs is 90 days, unless there is significant public involvement during development. All other HCPs (including large complex HCPs with significant public involvement) will be made available for review and comment for a minimum of 60 days.

The addendum contains target time frames for us to process an incidental take permit application. The target processing time frame for an HCP that includes an Environmental Impact Statement (EIS) is up to one year, including the 90-day comment period (or 60-days if significant public participation has occurred). However, we cannot issue a permit until we have determined that it meets the issuance criteria under section 10(a)(2)(B) of the ESA. Because of the complexity associated with an HCP that has an EIS, we need the target processing time frame of one year to determine whether to issue the permit. One method to reduce the amount of time needed to process a permit application is for an applicant to include up-front public participation during HCP development.

Required Determinations

Regulatory Planning and Review, Regulatory Flexibility Act, and Small Business Regulatory Enforcement Fairness Act

This final policy was subject to Office of Management and Budget (OMB) review under Executive Order 12866.

a. This policy will not have an annual economic effect of $100 million or adversely affect an economic sector, productivity, jobs, the environment, or other units of government. A cost-benefit and economic analysis is not required. The primary purpose of the addendum is to incorporate the 5-point policy, which was published in draft form on March 9, 1999, into the final Handbook for Habitat Conservation Planning and Incidental Take Permitting Process. This HCP Handbook addendum provides additional guidance on five concepts that, although treated only briefly in the handbook, are in widespread use in existing and developing HCPs. The main purpose of this addendum is to provide a consistent approach to these concepts for future HCPs. The five concepts addressed in this addendum include biological goals and objectives, adaptive management, monitoring, permit duration, and public participation.

The HCP program and the associated section 10 permits have been in place for approximately 17 years. The 1982 amendments to the ESA created a statutory framework for the HCP program that was built primarily around four permit application criteria and four permit issuance criteria. We promulgated regulations in 1985 in order to implement the Congressionally created HCP program. The statutory and regulatory framework for HCPs has remained unchanged since it was first put into place. The five concepts addressed in this addendum are an outgrowth of the statute and regulations. This addendum does not create these concepts, nor does it change the current regulations or general application of the concepts in practice.

In order to analyze the economic effect of this addendum, we reviewed the potential of this policy to have an effect on HCPs in three different areas: the cost of HCP development, the cost of HCP minimization and mitigation, and The cost of HCP implementation. Past and current experience with the HCP program leads us to predict that we will complete and approve approximately 35 new HCPs each year into the foreseeable future. We expect that the size and complexity of the expected 35 HCPs per year will continue to vary from the extremely small, single-species HCP to multi-species HCPs covering more than a million-acre planning area (see Table 1). Based on past and current experience, we predict that 20 of the expected 35 HCPs per year will be relatively small and simple HCPs covering one or a few listed species (of which 8 may be deemed ''low effect''). The HCPs of medium size and complexity are expected to account for another 12 of the 35 HCPs, and the remaining three HCPs are expected to be large, complex HCPs.

TABLE 1.—SIZE DISTRIBUTION OF HCPS ACCORDING TO PLANNING AREA, AS OF DECEMBER 31, 1999

[Some plans have both short-term and long-term HCPs, where the total amount of area addressed in the short-term HCP is included within the total area of the subsequent long-term HCP. Therefore, the numbers of HCPs accounted for above will not total the number of HCPs that have been issued. A few HCPs were not included in this tally because they addressed the planning areas in linear miles instead of acres.]

Size of HCPs	Number of HCPs
Less than 1 acre	44
Between 1–10 acres	64
Between 10–100 acres	56
Between 100–500 acres	37
Between 500–1,000 acres	11
Between 1,000–10,000 acres	17
Between 10,000–100,000 acres	14
Between 100,000–500,000 acres	10
Between 500,000–1,000,000 acres	4
Greater than 1,000,000 acres	2

The Effect of Additional Policy Guidance on Biological Goals and Objectives

This addendum emphasizes the benefit of explicitly articulating why the minimization and mitigation efforts in an HCP are being provided and what they are expected to accomplish. The thrust of this concept is aimed at the HCP preparation phase. We have no reason to believe it will have any effect on an HCP's minimization and mitigation or on HCP implementation. From the very beginning of the HCP program, biological goals and objectives have been incorporated into HCPs, sometimes in an explicit manner and in other cases in an implicit manner. For example, in the first HCP, which was used by Congress as a model for the 1982 amendments to the ESA, the HCP states that the ''purpose of the [HCP] is to provide for the indefinite perpetuation of the Mission Blue and Callippe Silverspot butterflies on San Bruno Mountain, as well as to conserve * * * the value * * * as a remnant ecosystem. * * * The more pervasive goal is to simultaneously provide for the perpetuation and enhancement of the grassland habitat which supports the butterflies. * * * The focus of preservation is on the grassland because this is thought * * * to be the ancestral native habitat. * * *'' [*San Bruno Mountain Area Habitat Conservation Plan,* Final 1991]. A more recent example from an HCP developed in Texas states ''the main goal of the HCP is to * * * minimize and mitigate the impacts. * * * This main goal is achieved by onsite conservation measures * * * and the acquisition and dedication of preserve lands for the warbler adjacent to an existing habitat preserve and within the same warbler recovery unit as the proposed development.'' [*Environmental Assessment and Habitat Conservation Plan, Issuance of an Endangered Species Section 10(a) Permit for the Incidental Take of the Golden-cheeked Warbler (Dendroica chrysoparia) during construction and Operation of the Approximate 24-acre Single Family Residential Development, Canyon Ridge, Phase A, Section 3, Austin, Travis County, Texas,* December, 1994].

The second issuance criterion in section 10 of the ESA requires a finding that the applicant ''will, to the maximum extent practicable, minimize and mitigate the impacts. * * *'' This criterion inherently requires a discussion of the minimization and mitigation efforts and their relationship to the project impact and the desired outcome of the HCP. We believe that the decision documents examining this criterion are of higher quality when biological goals and objectives are made explicit. This addendum is directed towards agency personnel and does not seek to alter the permit application criteria or otherwise require anything new of permit applicants. We already encourage HCP applicants to provide an explicit discussion of biological goals and objectives, but this addendum will not mandate such a discussion in the HCP. Instead, this addendum will ensure that the agency decision documents that analyze the HCP contain an explicit discussion of biological goals and objectives.

We do not expect that policy guidance requiring an explicit articulation of biological goals and objectives that already exist in some form in the HCP will require any significant additional time or effort. The incorporation of this addendum into the handbook reflects support for existing practice more than it does a new policy development. As such, and given the relative ease of explaining the goals of conservation measures, we believe that this policy will have little to no economic effect on small entities or any other entity. In addition, we have determined that providing a numerical or quantitative description of this deminimus effect is not practical and we have, therefore, provided a narrative analysis instead.

The Effect of Additional Policy Guidance on Adaptive Management

The HCP Handbook already provides policy guidance on adaptive management, and thus this addendum merely provides additional refinement. The concept of adaptive management has been both broadly and narrowly defined by the disciplines that use the concept. We are embracing a somewhat broad definition of the term as supported by the scientific literature, and one of the reasons for additional policy guidance on this concept is to explain our application of the concept of adaptive management compared to the narrower definition favored in some academic circles.

Adaptive management has been widely used in the HCP program from the very beginning. The first HCP, San Bruno Mountain, utilized the concept, stating: ''notwithstanding the considerable knowledge gained through the biological study, the Habitat Conservation Plan, in concept and in implementation, is novel and in many ways, experimental. There are many biological uncertainties which inescapably remain at the outset of such an ambitious undertaking which can only be resolved through an ongoing program of applied research designed specifically to direct Plan implementation.'' [*San Bruno Mountain Area Habitat Conservation Plan,* Final 1991, emphasis in original]. Since the San Bruno plan, many HCPs, especially the larger and more complex HCPs, have utilized adaptive management concepts in one form or another. Examples include the Washington County HCP in Utah and the Plum Creek Timber Company I–90 Corridor HCP in Washington. Arguably some of the measures in these HCPs that can be categorized as adaptive management were included in an attempt to meet regulatory requirements concerning unforeseen and changed circumstances. The section 10 regulations require that permit applicants develop procedures to address unforeseen circumstances (50 CFR 17.22(b)(1)(iii)(B), 17.32(b)(1)(iii)(B) for FWS and 50 CFR 222.307(g) for NMFS) and make the existence of these procedures a precondition to permit issuance. See 50 CFR 17.22(b)(2)(iii) and 17.32(b)(2)(iii) for FWS and 50 CFR 222.307(g) for NMFS. The No Surprises rulemaking expanded on the contingency planning aspects of the HCP program by requiring contingency planning for changed circumstances that are foreseeable [See 63 FR 8859 (February 23, 1998)]. This addendum on adaptive management does not mandate the contingency planning identified above, even if some of the procedures adopted fall under the heading of adaptive management.

The addendum states that adaptive management will be used for HCPs that are faced with significant data gaps. We believe that an HCP that fails to address

significant data gaps will not meet the issuance criteria of the ESA. It is, therefore, not the addendum itself that mandates the use of adaptive management in cases of significant data gaps, but is instead the applicant's need to overcome data gaps and still meet the permit issuance criteria established in the ESA. Current practice on the ground is to rely on adaptive management to overcome data gaps. This addendum provides policy support for this existing practice, but does not change the status quo. We, therefore, determine that the addendum's coverage of adaptive management will not effect small entities to any measurable degree.

The Effect of Additional Policy Guidance on HCP Monitoring

This addendum does not impose any new monitoring requirements. Monitoring is already required by the section 10 regulations. In the preamble to the final rule promulgating the section 10 regulations, we agreed with a commenter that the Service should monitor the implementation of a conservation plan and accordingly finalized revisions to sections 17.22(b)(1)(iii)(B), 17.22(b)(3), 17.32(b)(1)(iii)(B) and 17.32(b)(3) to require that conservation plans specify the monitoring measures to be used and to authorize imposition of necessary monitoring as a condition of each permit.'' 50 FR 39681, 39684 (September 30, 1985). NMFS also included a monitoring requirement in their section 10 regulations (50 CFR 307 (d)).

This addendum seeks to refine existing monitoring policy by organizing the types of monitoring being conducted into categories, including compliance monitoring, effect monitoring, and effectiveness monitoring. The addendum also seeks greater compatibility of monitoring data across HCPs. Neither of these policy additions is expected to have any economic impact. Current practice entails the HCP applicant and the Services working together to arrive at a monitoring program that, based on the specifics of the HCP and the species involved, is robust enough to provide the information the parties feel will be needed. This addendum does not alter current practice and instead reiterates the regulatory requirement and provides policy recognition and support for the current practice.

The Effect of Policy Guidance on Permit Duration

The section 10 regulations provide factors that the Director should consider in determining permit duration. The Handbook did not provide any treatment of the issue of permit duration. This addendum would add a short provision to the Handbook that essentially repeats verbatim the regulatory language on permit duration. Even though the addendum does not expand on the regulations' treatment of permit duration, we believe that the Handbook should provide coverage of all aspects of the program and it will thus be beneficial to include this provision in the Handbook. The policy guidance on permit duration will not affect the current approach to determining permit duration and will, therefore, not have any effect.

The Effect of Additional Policy Guidance on Public Participation

In the area of public participation, this addendum signals a departure from the current practice in the Handbook by increasing the length of the public comment period for many HCPs by thirty days. The ESA requires a minimum of a thirty day public comment period, but does not prohibit longer public comment periods. This addendum provides that ''low effect'' HCPs will, as a general matter, continue to be provided to the public for a thirty day comment period. The addendum thus does not change the current approach for low effect HCPs, which we expect will comprise eight of the predicted thirty-five new HCPs per year. The addendum indicates most other HCPs will be provided to the public for a sixty day comment period. Finally the addendum states that large, complex HCPs will need to have a ninety day public comment period unless the applicant has taken steps to involve the public earlier in the HCP process, in which case the HCP will qualify for the sixty day comment period.

This policy guidance on public participation has the potential to affect twenty-seven HCPs per year. The large, complex HCPs, predicted to account for three of the new HCPs per year, have historically been associated with extensive public notice and involvement, often through the EIS process under NEPA. This type of public involvement would qualify these HCPs for the sixty day comment period. The parallel NEPA process will typically require significant comment time periods, often matching or exceeding the time periods established by this addendum. We have also observed that the large HCPs of the past were noticed for more than the minimum thirty days required by section 10 simply because of their size and complexity and in response to requests for extensions from the public. We have, therefore, determined that this addendum will not alter the current practice with regard to the length of public comment periods and large HCPs. Based on this determination, we conclude that this policy guidance on public participation will not have an economic effect.

Of the remaining twenty-four expected HCPs per year, we expect at least four of those HCPs would have longer than the minimum public comment period because of reasonable public requests for extensions. There are, therefore, twenty HCPs per year that could potentially be effected by the policy guidance on public participation. Of these twenty HCPs, only a small number are expected to actually have all local approvals in hand and be ready to proceed before the conclusion of HCP processing, including the public comment period. Unless an HCP applicant is otherwise ready to begin project implementation, we do not believe an additional thirty days of public comment will have any economic effect. For the small number of HCPs that may be waiting for the HCP process to be completed, the economic effect of a thirty day extension to the process will depend tremendously on the scale and type of project. In addition, many projects will be able to proceed in part prior to permit issuance, providing there is no incidental take of species or a preclusion of the development of reasonable and prudent alternatives. See 16 U.S.C. 1536(d). HCP applicants will be fully aware of the addendum's public participation time lines and will, therefore, be able to factor the additional public comment period into their HCP planning early. This early recognition of the time lines may prove beneficial compared to planning on a thirty day comment period only to find near the end of that period that the Services has decided sound grounds exist for an extension. Based on this narrative analysis, we conclude that an increase in public comment periods will have a negligible economic effect.

In summary, the 5 Point HCP addendum provides recognition and policy support for existing practices in each of the five concept areas discussed above. The addendum does not change the current statutory or regulatory framework and merely provides refinements to existing policy. As a result, the addendum will not have a significant economic effect.

b. This addendum will not create inconsistencies with other agencies' actions. The addendum to the HCP Handbook does change the existing requirements for a HCP. The addendum

is intended to assist Government employees and as such may also assist the public. The only change to the HCP Handbook included in the addendum is to provide adequate time for public comment when developing HCPs.

c. This policy will not materially affect entitlements, grants, user fees, loan programs, or the rights and obligations of their recipients. The addendum to the HCP Handbook was developed solely to provide consistency to the HCP program and is intended as guidance for the Government.

d. This policy will not raise novel legal or policy issues. The addendum to the HCP Handbook was developed to provide clarification for the HCP process and does not change regulations or significantly change existing policy.

The Departments of Interior and Commerce certify that this policy will not have a significant economic effect on a substantial number of small entities as defined under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*). There are more than 248 existing HCPs of which 106 are for small entities and 142 are for corporations or other large entities. The addendum does not change the ability of small entities to develop HCPs in the future. The Services expect small entities will have the same proportion of future HCPs.

This policy is not a major rule under 5 U.S.C. 804(2), the Small Business Regulatory Enforcement Fairness Act. This policy:

1. Does not have an annual effect on the economy of $100 million or more.

2. Will not cause a major increase in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions.

3. Does not have significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of U.S.-based enterprises to compete with foreign-based enterprises. The purpose of the addendum is to provide Federal employees the guidance required for the consistent application of the Handbook for developing HCPs. The addendum will provide some simplification to the HCP Program due to clarification of processes.

Unfunded Mandates Reform Act

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 *et seq.*):

a. This addendum will not ''significantly or uniquely'' affect small governments. A Small Government Agency Plan is not required. The HCP Handbook provides guidance to Federal employees involved in reviewing and approving incidental take permits that include habitat conservation plans. The HCPs and permits generally are coordinated with appropriate State and local governments to include their views on the activities covered by the permit (in many cases, the activities also require State or local government authorization). In some instances, the applicant is the local government seeking incidental take permits for activities planned and conducted within its area of jurisdiction. The addendum does not change this process by encouraging applicants to coordinate with State agencies. As with all other applications, this addendum will not have an effect on small governments.

b. This policy will not produce a Federal mandate of $100 million or greater in any year, *i.e.*, it is not a ''significant regulatory action'' under the Unfunded Mandates Reform Act. See discussion in the section titled ''Regulatory Planning and Review, Regulatory Flexibility Act, and Small Business Regulatory Enforcement Fairness Act.''

Takings Implication Assessment

In accordance with Executive Order 12630, the policy does not have significant takings implications. A takings implication assessment is not required. The addendum guides employees in the evaluation and approval of applications for incidental take permits under existing law.

Federalism Assessment

In accordance with Executive Order 13132, the policy does not have sufficient Federalism implications to warrant preparation of a Federalism assessment. This addendum does not change the relationship between the Services and applicants, nor does it alter the Services' relationship with State and local governments within the HCP Program.

Civil Justice Reform

In accordance with Executive Order 12988, the Office of the Solicitor has determined that the policy does not unduly burden the judicial system and meets the requirements of sections 3(a) and 3(b)(2) of the Order.

Paperwork Reduction Act.

This addendum does not require an information collection under the Paperwork Reduction Act. A related information collection associated with incidental take permits is covered by existing OMB approvals (#1018–0094 for FWS #0648–0230 for NMFS).

National Environmental Policy Act

The Department of the Interior has determined that the issuance of the policy is categorically excluded under the Department's National Environmental Policy Act procedures in 516 DM 2, Appendix 1.10. The National Oceanic and Atmospheric Administration (NOAA) has determined that the issuance of this guidance qualifies for a categorical exclusion as defined by the NOAA 216–6 Administrative Order, Environmental Review Procedure.

Section 7 Consultation

The Services do not need to complete a section 7 consultation on this final policy. An intra-Service consultation is completed prior to issuing incidental take permits under 10(a)(1)(B) of the Endangered Species Act associated with individual HCPs.

Authority

The authority for this action is the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Addendum to The HCP Handbook

The five sections (or five-points) of the final addendum are contained entirely within this notice. The Services will adhere to the guidance provided in the addendum. Nothing in this guidance is intended to supersede or alter any aspect of Federal law or regulation pertaining to the conservation of threatened or endangered species.

Biological Goals And Objectives

What Are an HCP's Biological Goals and Objectives?

HCPs have always been designed to achieve a biological purpose, yet they may not have specifically stated those biological goals. In the future, the Services and HCP applicants will clearly and consistently define the expected outcome, *i.e.,* biological goal(s). This rather simple concept will facilitate communication among the scientific community, the agencies, and the applicants by providing direction for the development of HCPs.

The HCP Handbook discusses identifying biological goals and objectives (Chapter 3). Since biological goals and objectives are inherent to the HCP process, HCPs have had implied biological goals and objectives, and many recent HCPs include explicit biological goals or objectives. Explicit biological goals and objectives clarify the purpose and direction of an HCP's operating conservation program. They create parameters and benchmarks for developing conservation measures,

provide the rationale behind the HCP's terms and conditions, promote an effective monitoring program, and, where appropriate, help determine the focus of an adaptive management strategy.

What Are Biological Goals and Objectives in HCPs?

In the context of HCPs, biological goals are the broad, guiding principles for the operating conservation program of the HCP. They are the rationale behind the minimization and mitigation strategies. For more complex HCPs, biological objectives can be used to step down the biological goals into manageable, and, therefore, more understandable units. Multiple species HCPs may categorize goals by species or by habitat, depending on the structure of the operating conservation program. HCPs that are smaller in scope would have simpler biological goals that may not need to be stepped down into objectives. It should be noted that the biological goals of an individual HCP are not necessarily equivalent to the range-wide recovery goals and conservation of the species. However, if viewed collectively, the biological goals and objectives of HCPs covering the same species should support the recovery goals and conservation.

The biological goals and objectives of an HCP are commensurate with the specific impacts and duration of the applicant's proposed action. For example, low-effect HCPs generally have simple measurable biological goals, such as contributing to a regional preserve design through a mitigation bank or avoiding breeding habitat of a particular species.

How Do I Incorporate Biological Goals and Ojectives Into an HCP?

Determination of the biological goals and objectives is integral to the development of the operating conservation program. Conservation measures identified in an HCP, its accompanying incidental take permit, and/or IA, if used, provide the means for achieving the biological goals and objectives. We will work with the applicant to develop the biological goals and objectives by examining the applicant's proposed action and the overall conservation needs of the covered species and/or its habitat.

The biological goals and objectives are refined as the operating conservation program takes shape. Initial biological goals and objectives of an HCP begin by articulating the rationale behind the operating conservation program. The Services and applicant improve the initial biological goals by compiling the known information of the species, estimating the anticipated effects to the species, and stating any assumptions made. If the operating conservation program is relatively complex, the biological goal is divided into manageable and measurable objectives. Biological objectives are the different components needed to achieve the biological goal such as preserving sufficient habitat, managing the habitat to meet certain criteria, or ensuring the persistence of a specific minimum number of individuals. The specifics of the operating conservation program are the actions anticipated to obtain the biological objectives; therefore, we can use these objectives to strengthen the initial operating conservation program.

Elzinga *et al.* (1998) provide guidance for developing measurable objectives for rare plant monitoring that can be used for other species. Biological objectives should include the following: species or habitat indicator, location, action, quantity/state, and timeframe needed to meet the objective. They can be described as a condition to be met or as a change to be achieved relative to the existing condition. Biological objectives may be addressed in parallel. Conversely, achieving the biological objectives may need to occur in sequence. For instance, parallel objectives may be (1) maintaining the preserve site free of nonnative weeds and (2) enhancing the population from 4 individuals to 7 individuals. Sequential objectives may be (1) restoring of an area of habitat and then (2) reintroducing the species.

The Services and applicants have many resources to draw upon when determining the biological goals and objectives of an HCP. Both can use the available literature, State conservation strategies, candidate conservation plans, draft or final recovery plans or outlines, and other sources of relevant scientific and commercial information as guides in setting biological goals and objectives. Both can consult with species experts, State wildlife agencies, recovery teams, and/or scientific advisory committees.

What Is the Difference Between a Habitat-Based Goal and a Species-Based Goal?

The biological goals and objectives may be either habitat or species based. Habitat-based goals are expressed in terms of amount and/or quality of habitat. Species-based goals are expressed in terms specific to individuals or populations of that species. Complex multispecies or regional HCPs may use a combination of habitat- and species-specific goals and objectives. However, according to 50 CFR 17.22, 17.32, 222.102, and 222.307, each covered species must be addressed as if it were listed and named on the permit. Although the goals and objectives may be stated in habitat terms, each covered species that falls under that goal or objective must be accounted for individually as it relates to that habitat.

Are Permittees Required To Achieve the Biological Goals and Objectives of the HCP?

How the biological goals fit with the implementation of an HCP may be framed as a series of prescriptive measures to be carried out (a prescription-based HCP) or the ability to use any number of measures that achieve certain results (a results-based HCP). A prescription-based HCP outlines a series of tasks that are designed to meet the biological goals and objectives. This type of HCP may be most appropriate for smaller permits where the permittee would not have an ongoing management responsibility. A results-based HCP has flexibility in its management so that the permittee may institute the actions that are necessary as long as they achieve the intended result (*i.e.*, the biological goals and objectives), especially if they have a long-term commitment to the conservation program of the HCP. HCPs can also be a mix of the two strategies.

The Services and the applicant should determine the range of acceptable and anticipated management adjustments necessary to respond to new information. This process will enable the applicant to assess the potential economic impacts of adjustments before agreeing to the HCP while allowing for flexibility in the implementation of the HCP in order to meet the biological goals.

Regardless of the type of goals and objectives used and how they fit within implementation of the HCP, the Services will ensure that the biological goals are consistent with conservation actions needed to adequately minimize and mitigate impacts to the covered species to the maximum extent practicable. Whether the HCP is based on prescriptions, results, or both, the permittee's obligation for meeting the biological goals and objectives is proper implementation of the operating conservation program of the HCP. In other words, under the No Surprises assurances, a permittee is required only to implement the HCP, IA, if used, and terms and conditions of the permit. Implementation may include provisions for ongoing changes in actions in order

to achieve results or due to results from an adaptive management strategy.

Adaptive Management

What Is Adaptive Management?

Adaptive management is an integrated method for addressing uncertainty in natural resource management (Holling 1978, Walters 1986, Gundersen 1999). It also refers to a structured process for learning by doing. The concept is used in a number of different contexts, including the social science aspects of learning and change in natural resource management. The term adaptive management was adopted by Holling (1978) for natural resource management, who described adaptive management as an interactive process that not only reduces, but benefits from, uncertainty. Additionally, Walters (1986) breaks down categories of learning through implementation as ''active'' and ''passive'' adaptive management. Passive adaptation is where information obtained is used to determine a single best course of action. Active adaptation is developing and testing a range of alternative strategies (Walters and Holling 1990). The Services believe that both of these types of adaptive management are appropriate to consider when developing a strategy to address uncertainty. Therefore, we are defining adaptive management broadly as a method for examining alternative strategies for meeting measurable biological goals and objectives, and then, if necessary, adjusting future conservation management actions according to what is learned.

Implementation of adaptive strategies has been criticized for failing to resolve uncertainty or effectively implementing good experimental design (Walters 1997; Lee 1999). These failures are typically attributed to agency or stakeholder unwillingness to accept the risk involved in experimentation. The Services do have certain constraints in the HCP Program that may inhibit experimental design. For instance, stakeholder involvement in the development of many HCPs, including the adaptive management design, is largely at the discretion of the applicant.

Another restriction we face collectively (Services, applicants, other stakeholders) is the possible risks to species that may arise with using an experimental design. Many adaptive management processes with public/stakeholder involvement address large-scale management issues (*e.g.*, Florida Everglades, Grand Canyon). This type of process is complicated and involved, but appropriate for the scale of the issue. Similarly, more active and involved approaches to adaptive management are appropriate for large-scale HCPs. However, an active approach may pose too much of a risk to the species; therefore, a more passive approach may be the best course of action. An active approach may also be too cumbersome for the scope of the HCP and, therefore, a passive approach may be more appropriate.

Despite the potential obstacles to incorporating a comprehensive adaptive management strategy in an HCP, the Services incorporate adaptive management strategies when appropriate. We believe it is important that small- to medium-sized HCPs incorporate the flexibility to change implementation strategies after permit issuance. The HCP Program is flexible enough to develop adaptive management strategies that will facilitate and improve the decision-making process for the operating conservation program of a given HCP as well as provide for informative decision-making.

When Should Adaptive Management Be Incorporated Into an HCP?

The Services will consider adaptive management as a tool to address uncertainty in the conservation of a species covered by an HCP. Whenever an adaptive management strategy is used, the approved HCP must outline the agreed-upon future changes to the operating conservation program. Not all HCPs or all species covered in an incidental take permit need an adaptive management strategy. However, an adaptive management strategy is essential for HCPs that would otherwise pose a significant risk to the species at the time the permit is issued due to significant data or information gaps. Possible significant data gaps that may require an adaptive management strategy include, but are not limited to, a significant lack of specific information about the ecology of the species or its habitat (*e.g.*, food preferences, relative importance of predators, territory size), uncertainty in the effectiveness of habitat or species management techniques, or lack of knowledge on the degree of potential effects of the activity on the species covered in the incidental take permit.

Often, a direct relationship exists between the level of biological uncertainty for a covered species and the degree of risk that an incidental take permit could pose for that species. Therefore, the operating conservation program may need to be relatively cautious initially and adjusted later based on new information, even though a cautious approach may limit the number of alternative strategies that may be tested. A practical adaptive management strategy within the operating conservation program of a long-term incidental take permit will include milestones that are reviewed at scheduled intervals during the lifetime of the incidental take permit and permitted action. If a relatively high degree of risk exists, milestones and adjustments may need to occur early and often.

Adaptive management should not be a catchall for every uncertainty or a means to address issues that could not be resolved during negotiations of the HCP. There may be some circumstances with such a high degree of uncertainty and potential significant effects that a species should not receive coverage in an incidental take permit at all until additional research is conducted.

What Are the Elements of an Adaptive Management Strategy in HCPs?

In an HCP, adaptive management strategies can assist the Services and the applicant in developing an adequate operating conservation program and improving its effectiveness. An adaptive management strategy should (1) identify the uncertainty and the questions that need to be addressed to resolve the uncertainty; (2) develop alternative strategies and determine which experimental strategies to implement; (3) integrate a monitoring program that is able to detect the necessary information for strategy evaluation; and (4) incorporate feedback loops that link implementation and monitoring to a decision-making process (which may be similar to a dispute-resolution process) that result in appropriate changes in management. If you are developing adaptive management strategies, we encourage you to review the scientific literature that discusses adaptive management (for a starting point see literature cited at the end of the addendum).

Identifying the uncertainty to be addressed is the foundation of the adaptive management strategy. Other components include a description of the goal of the operating conservation program (*i.e.*, the biological goals and objectives of the HCP) and the identification of the parameters that potentially affect that goal. This requires communication between the applicant and the Services to identify expectations for the adaptive management strategy and may also involve assistance from scientists. After this step, we (the Services, applicants, and any other participants) will develop the range of possible ''experimental'' strategies which may involve some type of

modeling (which can be as simple as a written description of the expected outcomes or as complex as a mathematical model demonstrating expected outcomes) of the resource in question. If modeling is involved, we must clearly articulate the assumptions and limitations of the model used. Many factors may influence the type of alternatives to explore, including, but not limited to, economics, policies and regulations, and amount of risk to the species. This stage may be an appropriate time to involve other stakeholders to help identify the alternative strategies.

Next, a monitoring program needs to be designed that will adequately detect the results of the adaptive management strategy. Integration of the HCP's monitoring program into the adaptive management strategy is essential. The monitoring program plays an essential role of determining whether the chosen strategy(ies) is providing the desired outcome (*i.e.*, achieving the biological goals of the HCP). If a scientific advisory committee is being used, this may be an appropriate item for their review. An applicant may also submit a monitoring program for independent peer review.

Finally, an adaptive management strategy must define the feedback process that will be used to ensure that the new information gained from the monitoring program results in effective change in management of the resource.

How Does Adaptive Management Affect No Surprises Assurances?

HCP assurances (No Surprises) and the use of adaptive management strategies are compatible. The assurances apply once all appropriate HCP provisions have been mutually crafted and agreed upon and approved by the Services and the applicant. Adaptive management strategies, if used, are part of those provisions, and their implementation becomes part of a properly implemented conservation plan. When an HCP, permit, and IA, if used, incorporate an adaptive management strategy, it should clearly state the range of possible operating conservation program adjustments due to significant new information, risk, or uncertainty. This range defines the limits of what resource commitments may be required of the permittee. This process will enable the applicant to assess the potential economic impacts of adjustments before agreeing to the HCP.

Is Adaptive Management the Only Method for Changing the Operating Conservation Program of an HCP?

HCPs may be designed to provide flexibility other than through the use of adaptive management. The No Surprises final rule lays a foundation for contingency planning in HCPs that may or may not include adaptive management. This contingency planning is addressed largely under the topic of ''changed circumstances.'' Changed circumstances are circumstances that can be reasonably anticipated, and the HCP can incorporate measures to be implemented if the circumstances occur. The permittee or another responsible party may need the flexibility provided by the ''changed circumstances'' regulation to employ alternative methods or strategies within the operating conservation program to achieve the biological goals and objectives. This flexibility also allows previously agreed upon management and/or mitigation actions to be implemented or discontinued, as needed, in response to changed circumstances. These actions are not necessarily adaptive management and may be a process for implementing change to the operating program or simply a different conservation measure. The HCP, incidental take permit, and IA, if any, must describe the agreed upon range of management and/or mitigation actions and the process by which the management and funding decisions are made and implemented.

How Can an HCP Use Adaptive Management Without a Large and Expensive Experimental Design?

Adaptive management has traditionally been viewed and designed for large-scale systems. However, in some situations we may want to retain the flexibility of addressing uncertainty through an adaptive management strategy at a smaller scale. In such situations, an adaptive management strategy could take many forms including creating a simple feedback loop so that management changes could be implemented based on results of the HCP's monitoring program. Similarly, the agreed-upon strategy may be integration of an HCP with any ongoing research, recovery planning, and conservation planning by Federal, State, and local agencies. This integration is an efficient way to address uncertainty and provide the information needed to guide changes in small to medium sized HCPs. We can also view smaller, yet similar HCPs collectively across a landscape in order to adapt our approaches in future HCPs (Johnson 1999). This approach will require us to coordinate information among similar HCPs, including communication with the individual applicants regarding their role in such a landscape approach.

Monitoring

What Is Monitoring in the HCP Program?

Monitoring is a mandatory element of all HCPs (See 50 CFR 17.22, 17.32, and 222.307). When properly designed and implemented, monitoring programs for HCPs should provide the information necessary to assess compliance and project impacts, and verify progress toward the biological goals and objectives. Monitoring also provides the scientific data necessary to evaluate the success of the HCP's operating conservation programs with respect to the possible use of those strategies in future HCPs or other programs that contribute to the conservation of species and their habitat. The HCP Handbook already provides guidance for developing monitoring measures (Chapter 3, section B.4.) and discusses reporting requirements (Chapter 6, section E.4.). The following information further clarifies and provides additional guidance for the monitoring component of an HCP, permit, or IA.

What Are the Types of Monitoring That Can Be Incorporated Into HCPs?

The Services and the applicant must ensure that the monitoring program of an HCP provides information to: (1) Evaluate compliance; (2) determine if biological goals and objectives are being met; and (3) provide feedback information for an adaptive management strategy, if one is used. HCP monitoring is divided into two types. *Compliance Monitoring* is verifying that the permittee is carrying out the terms of the HCP, permit, and IA, if one is used. *Effects and Effectiveness Monitoring* evaluates the effects of the permitted action and determines whether the effectiveness of the operating conservation program of the HCP are consistent with the assumptions and predictions made when the HCP was developed and approved; in other words, is the HCP achieving the biological goals and objectives.

Scientific literature discussing monitoring uses similar terms as the addendum but the terms may have different meanings. For instance, the term ''validation monitoring'' is the same concept as the addendum's term ''effectiveness monitoring.'' However, ''effectiveness monitoring'' in the scientific literature simply means measuring the status of species. ''Implementation monitoring'' is roughly equivalent to the addendum's term ''compliance monitoring'' with the added regulatory nature of the involvement of a permit.

What Determines the Extent of a Monitoring Program?

The scope of the monitoring program should be commensurate with the scope and duration of the operating conservation program and the project impacts. Biological goals and objectives provide a framework for developing a monitoring program that measures progress toward meeting those goals and objectives. If an HCP, permit, and/or IA has an adaptive management strategy, integrating the monitoring program into this strategy is crucial in order to guide any necessary changes in management.

Monitoring programs for large-scale or regional planning efforts may be elaborate and track more than one component of the HCP (*e.g.,* habitat quality or collection of mitigation fees). Conversely, monitoring programs for HCPs with smaller impacts of short duration might only need to file simple reports that document whether the HCP has been implemented as described. For example, if an HCP affects only a portion of a population, the permittee should not generally be responsible for monitoring the entire population. In addition, it may not be appropriate for a monitoring program to involve counting of populations or individuals or making an assessment of habitat. The appropriate unit of measure in a monitoring program depends upon the specific impacts and operating conservation program within an HCP. The Services are responsible for ensuring that the appropriate units of measure and protocols are used and should coordinate monitoring programs to obtain a larger view of the status of a population. The applicant and the Services should also design the monitoring program to reflect the structure of the biological goals and objectives.

The monitoring program should reflect the measurable biological goals and objectives. The following components are essential for most monitoring protocols (the size and scope of the HCP will dictate the actual level of detail in each item): (1) Assess the implementation and effectiveness of the HCP terms and conditions (*e.g.,* financial responsibilities and obligations, management responsibilities, and other aspects of the incidental take permit, HCP, and the IA, if applicable); (2) determine the level of incidental take of the covered species; (3) determine the biological conditions resulting from the operating conservation program (*e.g.,* change in the species' status or a change in the habitat conditions); and (4) provide any information needed to implement an adaptive management strategy, if utilized. An effective monitoring program is flexible enough to allow modifications, if necessary, to obtain the appropriate information.

Monitoring programs will vary based on whether they are for low-effect or for regional, multispecies HCPs; however, the general elements of each program are similar. Post-activity or post-construction monitoring, along with a single report at the end of the monitoring period, will often satisfy the monitoring requirements for low-effect HCPs. For other HCPs, monitoring programs will be more comprehensive and may include milestones, timelines, and/or trigger points for change.

Effects and effectiveness monitoring includes, but is not limited to, the following:

1. Periodic accounting of incidental take that occurred in conjunction with the permitted activity;

2. Surveys to determine species status, appropriately measured for the particular operating conservation program (*e.g.,* presence, density, or reproductive rates);

3. Assessments of habitat condition;

4. Progress reports on fulfillment of the operating conservation program (*e.g.,* habitat acres acquired and/or restored); and

5. Evaluations of the operating conservation program and its progress toward its intended biological goals.

What Units Should Be Monitored in an HCP?

Each HCP's monitoring program should be customized to reflect the biological goals, the scope, and the particular implementation tasks of the HCP. In order to obtain meaningful information, the applicant and the Services should structure the monitoring methods and standards so that we can compare the results from one reporting period to another period or compare different areas, and the monitoring protocol responds to the question(s) asked. Monitored units should reflect the biological objective's measurable units (*e.g.,* if the biological objective is in terms of numbers of individuals, the monitoring program should measure the number of individuals). The monitoring program will be based on sound science. Standard survey or other previously-established monitoring protocols should be used. Although the specific methods used to gather necessary data may differ depending on the species and habitat types, monitoring programs should use a multispecies approach when appropriate.

What Role Do the Services Have in Monitoring?

Both the Services and the permittee are responsible for monitoring the implementation of the HCP. The Services' primary monitoring responsibilities (with the assistance of the permittee) are ensuring compliance with the permit's terms and conditions, including proper implementation of the HCP by the permittee. Permittee assistance with compliance monitoring includes monitoring the implementation and reporting their findings/results. The permittee, with the assistance of the Services, is responsible for verifying the effects and effectiveness of the HCP. To monitor all aspects of an HCP effectively, and to ensure its ultimate success, the entire monitoring program should incorporate both types of monitoring. The Services and the applicant should coordinate the two aspects of monitoring, and the monitoring program should also clearly designate who is responsible for the various aspects of monitoring.

The Services are responsible for ensuring that the permittee is meeting the terms and conditions of the HCP, its accompanying incidental take permit, and IA, if any (*i.e.,* compliance monitoring). The Services should verify adherence to the terms and conditions of the incidental take permit, HCP, IA, and any other related agreements and should ensure that incidental take of the covered species does not exceed the level authorized under the incidental take permit. Regulations at 50 CFR §§ 13.45 and 222.301, provide the authority for the Services to require periodic reports unless otherwise specified by the incidental take permit. Also, the Services will ensure that the reporting requirements are tailored for documenting compliance with the incidental take permit (*e.g.,* documentation of habitat acquisition, use of photographs). These reports help determine whether the permittee is properly implementing the terms and conditions of the HCP, its incidental take permit, and any IA, and will provide a long-term administrative record documenting progress made under the incidental take permit.

In addition to reviewing reports submitted by the permittee, it is important for the Services to make field visits to verify the accuracy of monitoring data submitted by the permittees. These visits allow the Services to check for information, identify unanticipated deficiencies or benefits, develop closer cooperative ties with the permittee, prevent accidental violations of the incidental take permit's

terms and conditions, and assist the permittee and Services in developing corrective actions when necessary.

For large-scale or regional HCPs, oversight committees, made up of representatives from significantly affected entities (*e.g.,* State Fish and Wildlife agencies), are often used to ensure proper and periodic review of the monitoring program and to ensure that each program properly implements the terms and conditions of the incidental take permit. For example, the Wisconsin Statewide HCP for the Karner blue butterfly includes an auditing approach to ensure incidental take permit compliance. The lead permittee, Wisconsin Department of Natural Resources (Wisconsin DNR), will initially conduct annual on-site audits of each partner. FWS will audit the Wisconsin DNR in a similar fashion. In addition, FWS will accompany the Wisconsin DNR on the partner audits as appropriate to understand partner compliance levels. Over time, if performance levels are acceptable, Wisconsin DNR will conduct the audits less frequently. Each partner will provide an annual monitoring report and will submit these along with their audit report to FWS.

For large-scale or regional HCPs, oversight committees should periodically evaluate the permittee's implementation of the HCP, its incidental take permit, and IA and the success of the operating conservation program in reaching its identified biological goals and objectives. Such committees usually include species experts and representatives of the permittee, the Services, and other affected agencies and entities. Submitting the committee's findings to recognized experts in pertinent fields (*e.g.,* conservation biologists or restoration specialists) for review or having technical experts conduct field investigations to assess implementation of the terms and conditions would also be beneficial. Because the formation of these committees may be subject to the Federal Advisory Committee Act, the role of the participants and the purpose of the meetings must be clearly identified. Oversight committees should meet at least annually and review implementation of the monitoring program and filing of reports as defined in the HCP, permit, and/or IA, if one is used.

What Role Does the Permittee Have in Monitoring?

Not only do permittees provide regular implementation reports, they are also involved in effects and effectiveness monitoring. Effects monitoring determines the extent of impacts from the permitted activity. Effectiveness monitoring, in the HCP program, assesses progress toward the biological goals and objectives of the HCP (*e.g.,* if the conservation strategies are producing the desired habitat conditions or population numbers). Effects and effectiveness monitoring may also involve assessing threats and population trends of the covered species related to the permitted activities, as well as monitoring the development of targeted habitat conditions. Permittees, with assistance from the Services, should ensure that the HCP includes provisions for monitoring the effects and effectiveness of the HCP. The Services and the HCP permittee will cooperatively develop the effects and effectiveness monitoring program and determine responsibility for its various components. In multi-party HCPs, different parties may monitor different aspects of the HCP. The Services must periodically review any monitoring program to confirm that it is conducted according to their standards.

What Should Be Included in Monitoring Reports?

The Services will streamline the reporting requirements for monitoring programs by requesting all reports in a single document. The HCP, permit, or IA should specifically state the level of detail and quantification needed in the monitoring report and tailor report due dates to the activities conducted under the incidental take permit (*e.g.,* due at the end of a particular stage of the project or the anniversary date of incidental take permit issuance). Most monitoring programs require reports annually, usually due on the anniversary date of incidental take permit issuance. Wherever possible, the Services will coordinate the due dates with other reporting requirements (*e.g.,* State reports), so the permittee can satisfy more than one reporting requirement with a single report. The following list represents the information generally needed in a monitoring report:

1. Biological goals and objectives of the HCP (which may need to be reported only once);
2. Objectives for the monitoring program (which may need to be reported only once);
3. Effects on the covered species or habitat;
4. Location of sampling sites;
5. Methods for data collection and variables measured;
6. Frequency, timing, and duration of sampling for the variables;
7. Description of the data analysis and who conducted the analyses; and
8. Evaluation of progress toward achieving measurable biological goals and objectives and other terms and conditions as required by the incidental take permit or IA.

These elements may be simplified for periods of no activity or low-effect HCPs. If a required report is not submitted by the date specified in the HCP or incidental take permit terms and conditions, or is inadequate, the Services will notify the permittee. The Services have discretion to offer the permittee an extension of time to demonstrate compliance. The Services have examined this reporting guidance under the Paperwork Reduction Act of 1995 and found that it does not contain requests for additional information or an increase in the collection requirements other than those already approved for incidental take permits (OMB approval for FWS, # 1018–0094; for NMFS, # 0648–0230).

How Are Monitoring Programs Funded?

The ESA and the implementing regulations (50 CFR 17 and 222) require that HCPs specify the measures the permittee will adopt to ensure adequate funding for the HCP. The Services should not approve an HCP that does not contain an adequate funding commitment from the applicant/permittee to support an acceptable monitoring program unless the HCP establishes alternative funding mechanisms. The Services and the applicant should work together to develop the monitoring program and determine who will be responsible for monitoring the various components of the HCP. Specific monitoring tasks may be assigned to entities other than the permittee (*e.g.*, State or Tribal agencies) as long as the Services and parties responsible for implementing the HCP approve of the monitoring assignment. The terms of the HCP, incidental take permit, and IA may contain funding mechanisms that provide for a public (*e.g.*, local, State, or Federal) or a private entity to conduct all or portions of the monitoring. This funding mechanism must be agreed upon by the Services and the parties responsible for implementing the HCP.

Permit Duration

How Do We Decide the Length of Time for Which the Permit Is in Place?

Both FWS and NMFS regulations for incidental take permits outline factors to consider when determining incidental take permit duration (50 CFR 17.32 and 222.307). These factors include duration of the applicant's proposed activities and the expected positive and negative

effects on covered species associated with the proposed duration, including the extent to which the operating conservation program will increase the long-term survivability of the listed species and/or enhance its habitat. For instance, if the permittee's action or the implementation of the conservation measures continually occur over a long period of time, such as with timber harvest management, the permit would need to encompass that time period.

The Services will also consider the extent of information underlying the HCP, the length of time necessary to implement and achieve the benefits of the operating conservation program, and the extent to which the program incorporates adaptive management strategies. Significant biological uncertainty may necessitate an adaptive management strategy. The gathering of new information through the monitoring program requires an appropriate period of time for meaningful interpretation of new information into changes in management; this analysis could necessitate a permit with a longer duration. However, if an adaptive management strategy that significantly reduces the risk of the HCP to that species cannot be devised and implemented, then, if the issuance criteria are met, a shorter duration may be appropriate.

The varying biological impacts resulting from the proposed activity (*e.g.,* variations in the length of timber rotations and treatments versus a real estate subdivision buildout) and the nature or scope of the permitted activity and conservation program in the HCP (*e.g.,* housing or commercial developments versus long-term sustainable forestry; conservation easements) account for variation in permit duration. Longer permits may be necessary to ensure long-term active commitments to the HCP and typically include up-front contingency planning for changed circumstances to allow appropriate changes in the conservation measures.

Public Participation

What Is the Public Participation Requirement for HCPs?

As stated in the HCP Handbook in Chapter 6.B, we currently require a minimum 30-day public comment period for all HCP applications. This comment period is required by section 10(c) of the ESA and the implementing regulations at 50 CFR 17 and 222. The Services recognize the concern of the public regarding an inadequate time for the public comment period, especially for large-scale HCPs. With a few exceptions, we are extending the minimum comment period to 60 days for most HCPs. The exceptions to a 60-day comment period would be for low-effect HCPs, individual permits under a programmatic HCP, and large-scale, regional, or exceptionally complex HCPs.

The Services believe the current 30-day public comment period provides enough time for interested parties to review major HCP amendments and low-effect HCPs. Low-effect HCPs have a categorical exclusion from NEPA and, therefore, do not have a NEPA public participation requirement. Similarly, in some cases, individual permits issued under a programmatic HCP may not need additional public review since the larger, programmatic HCP would have undergone more extensive review.

However, for large-scale, regional, or exceptionally complex HCPs, the Services are increasingly encouraging applicants to use informational meetings and/or advisory committees. In addition, the minimum comment period for these HCPs is now 90 days, unless significant public participation occurs during HCP development. With the extension of the public comment periods, the recommended timeline targets for processing incidental take permits are extended accordingly: The target timeline from receipt of a complete application to the issuance of a permit for low-effect HCPs will remain up to 3 months, HCPs with an Environmental Assessment (EA) will be 4 to 6 months, and HCPs with a 90-day comment period and/or an Environmental Impact Statement (EIS) may be up to 12 months.

How Do the Services Let Interested Parties Know About the HCP's Comment Period?

During the public comment period, any member of the public may review and comment on the HCP and the accompanying NEPA document, if applicable. If an EIS is required, the public can also participate during the scoping process. We announce all complete applications received in the **Federal Register**. When practicable, the Services will announce the availability of HCPs in electronic format and in local newspapers of general circulation.

How Do the Services or Applicants Incorporate Public Participation During the Development of an HCP?

The Services will strongly encourage potential applicants to allow for public participation during the development of an HCP, particularly if non-Federal public agencies (*e.g.,* State Fish and Wildlife agencies) are involved. Although the development of an HCP is the applicant's responsibility, the Services will encourage applicants for most large-scale, regional HCP efforts to provide extensive opportunities for public involvement during the planning and implementation process.

The Services encourage the use of scientific advisory committees during the development and implementation of an HCP. The integration of a scientific advisory committee and perhaps other stakeholders improves the development and implementation of any adaptive management strategy. Advisory committees can assist the Services and applicants in identifying key components of uncertainty and determining alternative strategies for addressing that uncertainty. We also encourage the use of peer review for an HCP. An applicant, with guidance from the Services, may seek independent scientific review of specific sections of an HCP and its operating conservation strategy to ensure the use of the best scientific information.

How Do the Services Consider Tribal Interest in an HCP?

We recommend that applicants include participation by affected Native American tribes during the development of the HCP. If an applicant chooses not to consult with Tribes, under the Secretarial Order on Federal-Tribal Trust Responsibilities and ESA, the Services will consult with the affected Tribes to evaluate the effects of the proposed HCP on tribal trust resources. We will also provide the information gained from the consulted tribal government to the HCP applicant prior to the submission of the draft HCP for public comment and will advocate the incorporation of measures that will conserve, restore, or enhance Tribal trust resources. After consultation with the tribal government and the applicant and after careful consideration of the Tribe's concerns, we will clearly state the rationale for the recommended final decision and explain how the decision relates to the Services' trust responsibility.

Literature Cited

Dovers, S. R. and C. D. Mobbs. 1997. An alluring prospect? Ecology and the requirements of adaptive management. Klomp, N. I. & Lunt, I. D. (eds.). *Frontiers in Ecology: Building the Links.* Elsevier Science, Oxford.

Elzinga, C. L., Salzer, D. W., and J. W. Willoughby. 1998. *Measuring and monitoring plant populations.* BLM Technical Reference 1730–1. BLM, Denver, CO.

Gunderson, L. 1999. Resilience, flexibility and adaptive management—antidotes for

spurious certitude? *Conservation Ecology.* 3(1): 7 [online] URL: http://www.consecol.org/vol3/iss1/art7.

Holling, C. S. (ed). 1978. *Adaptive Environmental Management and Assessment* Wiley, Chichester.

Johnson, B. L. 1999. Introduction to the special feature: adaptive management—scientifically sound, socially challenged? *Conservation Ecology* 3(1):10 [online] URL: http://www.consecol.org/vol3/iss1/art10.

Johnson, B. L. 1999. The role of adaptive management as an operational approach for resource management agencies. *Conservation Ecology* 3(2): 8 [online] URL: http://www.consecol.org/vol3/iss2/art8.

Lee, K. N. 1999. Appraising adaptive management. *Conservation Ecology* 3(2): 3 [online] URL: http://www.consecol.org/vol3/iss2/art3.

McLain, R. J. & Lee, R. G. 1996. Adaptive management: promises and pitfalls, *Environmental Management,* 20: 437–448.

Rogers, K. 1998. Managing science/management partnerships: a challenge of adaptive management. *Conservation Ecology* [online] 2(2): Response 1 [online] URL: http://www.consecol.org/vol2/iss2/resp1.

Shindler, B., B. Steel, and P. List. 1996. Public judgements of adaptive management. *Journal of Forestry* 94: 5.

Walters, C. 1986. *Adaptive Management of Renewable Resources* Macmillan, New York.

Walters, C. 1997. Challenges in adaptive management of riparian and coastal ecosystems. *Conservation Ecology* 1(2):1 [online] URL: http://www.consecol.org/vol1/iss2/art1.

Walters, C. J. and C. S. Holling. 1990. Large-scale management experiments and learning by doing. *Ecology* 71: 2060.

Dated: April 4, 2000.

Jamie Rappaport Clark,

Director, Fish and Wildlife Service.

Dated: May 19, 2000.

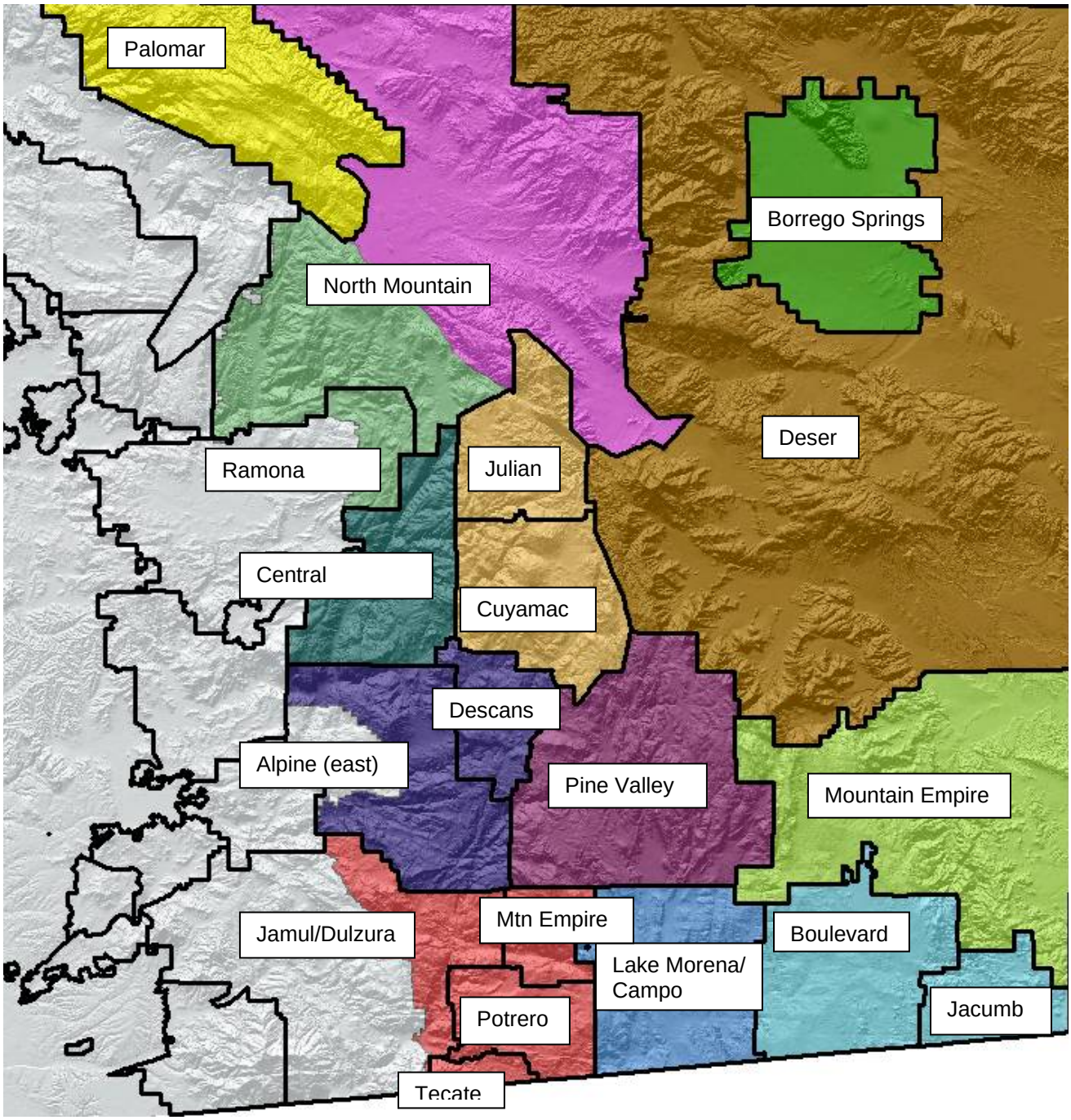
Penelope D. Dalton,

Assistant Administrator for Fisheries, National Marine Fisheries Service.

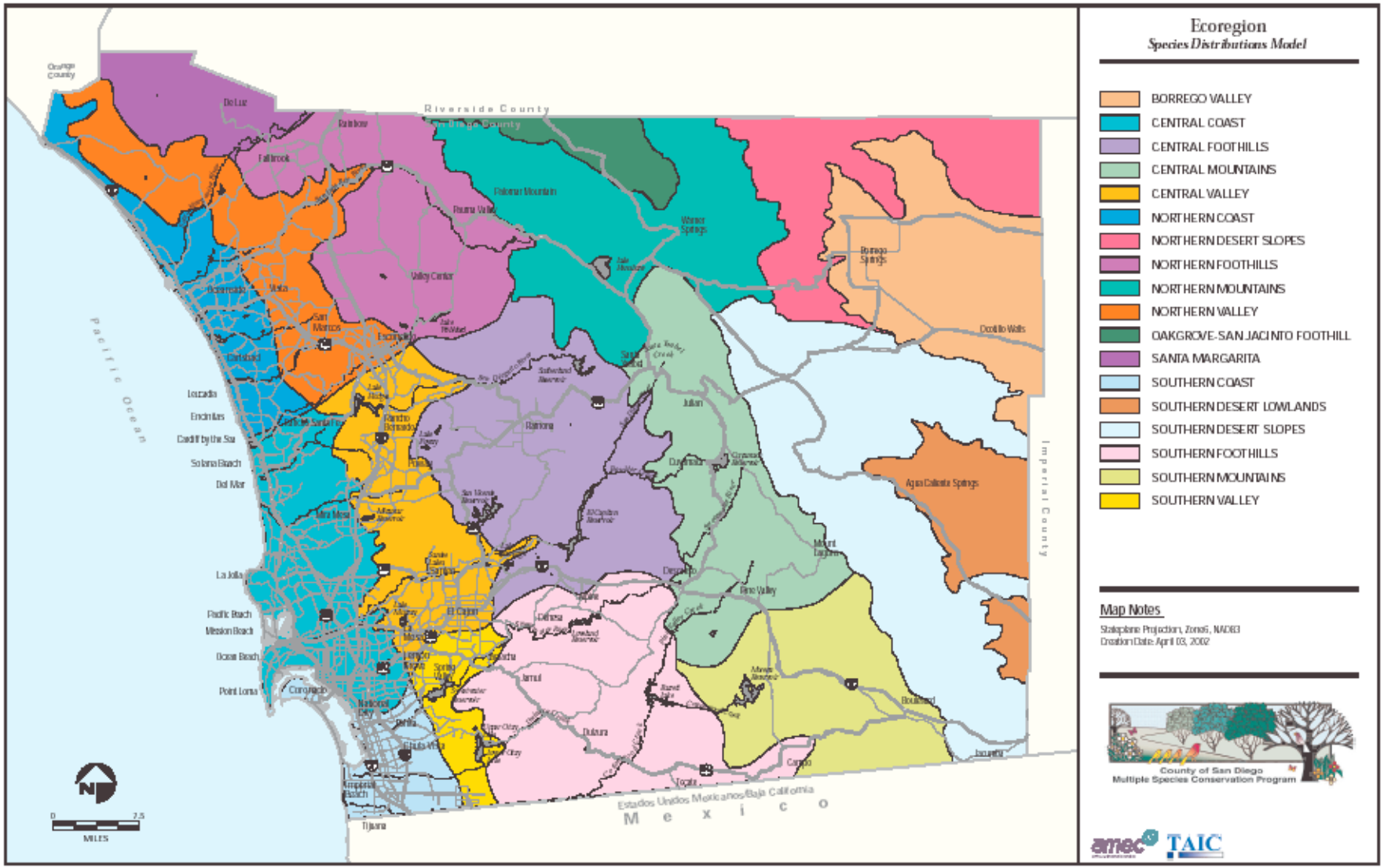
[FR Doc. 00–13553 Filed 5–31–00; 8:45 am]

BILLING CODE 4310–55–P; 3510–22–P

EAST COUNTY MSCP DRAFT PLANNING SEGMENTS



ATTACHMENT 7


Ecoregion
Species Distributions Model
BORREGO VALLEY
CENTRAL COAST
CENTRAL FOOTHILLS
CENTRAL MOUNTAINS
CENTRAL VALLEY
NORTHERN COAST
NORTHERN DESERT SLOPES
NORTHERN FOOTHILLS
NORTHERN MOUNTAINS
NORTHERN VALLEY
OAKGROVE-SAN JACINTO FOOTHILL
SANTA MARGARITA
SOUTHERN COAST
SOUTHERN DESERT LOWLANDS
SOUTHERN DESERT SLOPES
SOUTHERN FOOTHILLS
SOUTHERN MOUNTAINS
SOUTHERN VALLEY
Map Notes
Stateplane Projection, Zone6, NAD83
Creation Date: April 03, 2002
County of San Diego
Multiple Species Conservation Program
Riverside County
Imperial County
Pacific Ocean
Estados Unidos Mexicanos/Baja California
M e x i c o
Tijuana
MILES

EAST COUNTY MSCP STEERING COMMITTEE MEETING # 5

June 25, 2008
1:00 pm – 3:00 pm
Tower 7 (7th Floor)
1600 Pacific Coast Hwy

MEETING MINUTES

NCCP PLANNING AGREEMENT

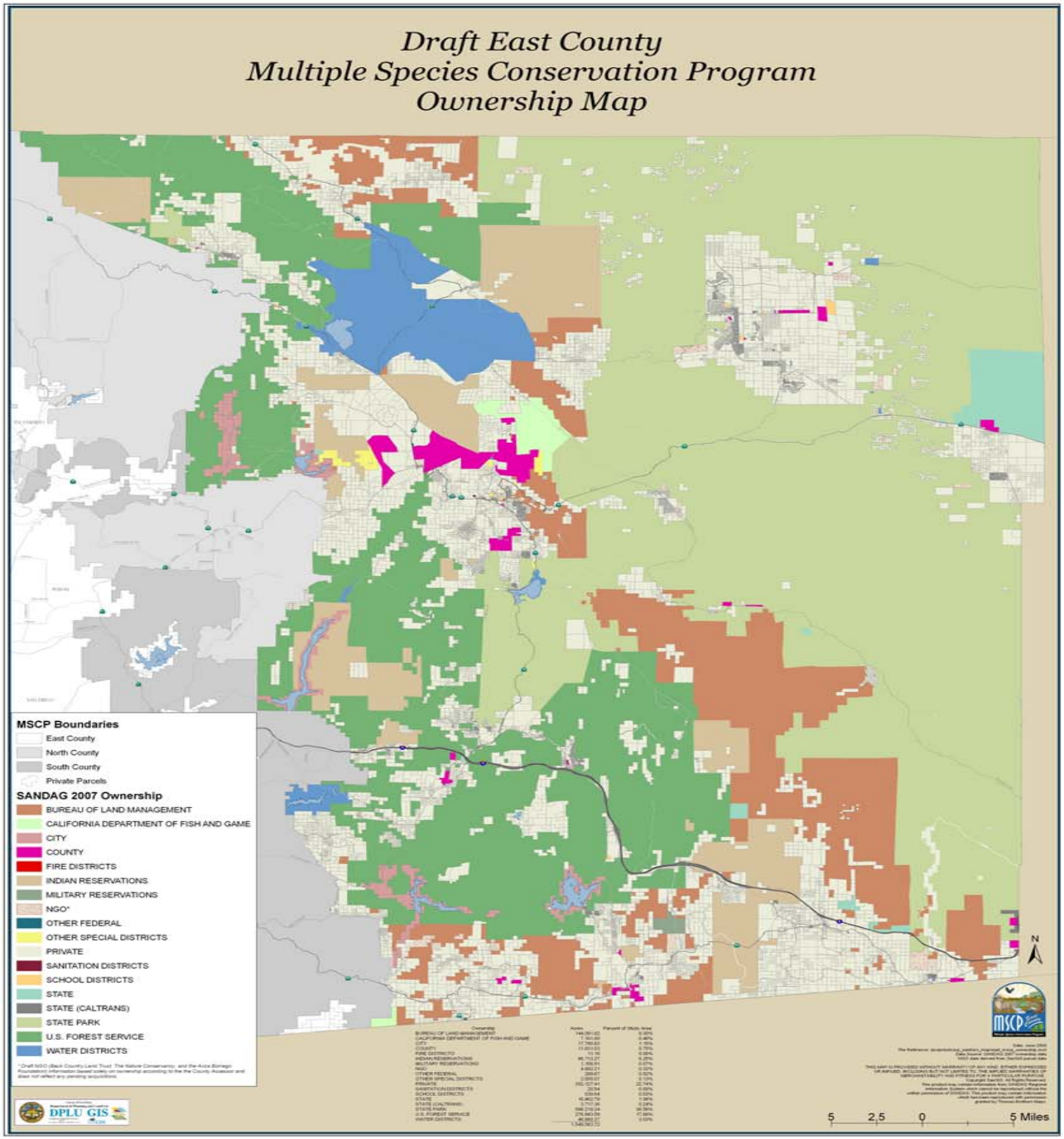
FOLLOW UP ITEMS

- **Discretionary projects in ECMSCP**
- **US Fish and Wildlife Service Habitat Conservation Plan Handbook Information**
  - FAQs
  - 5 Point Policy
- **Ownership Map**
  - Breakdown of Pubic, Private, NGOs Acreage & Percentages
- **Farming Maps for East County MSCP Project Area**
  - Statistics and Percentages of Agriculture from various sources
  - ECMSCP & Farming FAQs
  - Crop Statistics

EAST COUNTY LAND OWNERSHIP

Ownership	Acres	Percent of Study Area
BUREAU OF LAND MANAGEMENT	144,091.82	9.30%
CALIFORNIA DEPARTMENT OF FISH AND GAME	7,181.80	0.46%
CITY	17,780.83	1.15%
COUNTY	11,631.03	0.75%
FIRE DISTRICTS	11.16	0.00%
INDIAN RESERVATIONS	96,713.27	6.25%
MILITARY RESERVATIONS	1,156.91	0.07%
NGO	4,882.21	0.32%
OTHER FEDERAL	289.67	0.02%
OTHER SPECIAL DISTRICTS	2,055.07	0.13%
PRIVATE	352,127.41	22.74%
SANITATION DISTRICTS	20.54	0.00%
SCHOOL DISTRICTS	539.64	0.03%
STATE	16,462.79	1.06%
STATE (CALTRANS)	3,717.36	0.24%
STATE PARK	566,218.24	36.56%
U.S. FOREST SERVICE	276,843.59	17.88%
WATER DISTRICTS	46,860.37	3.03%
	1,548,583.72	

Draft East County Multiple Species Conservation Program Ownership Map



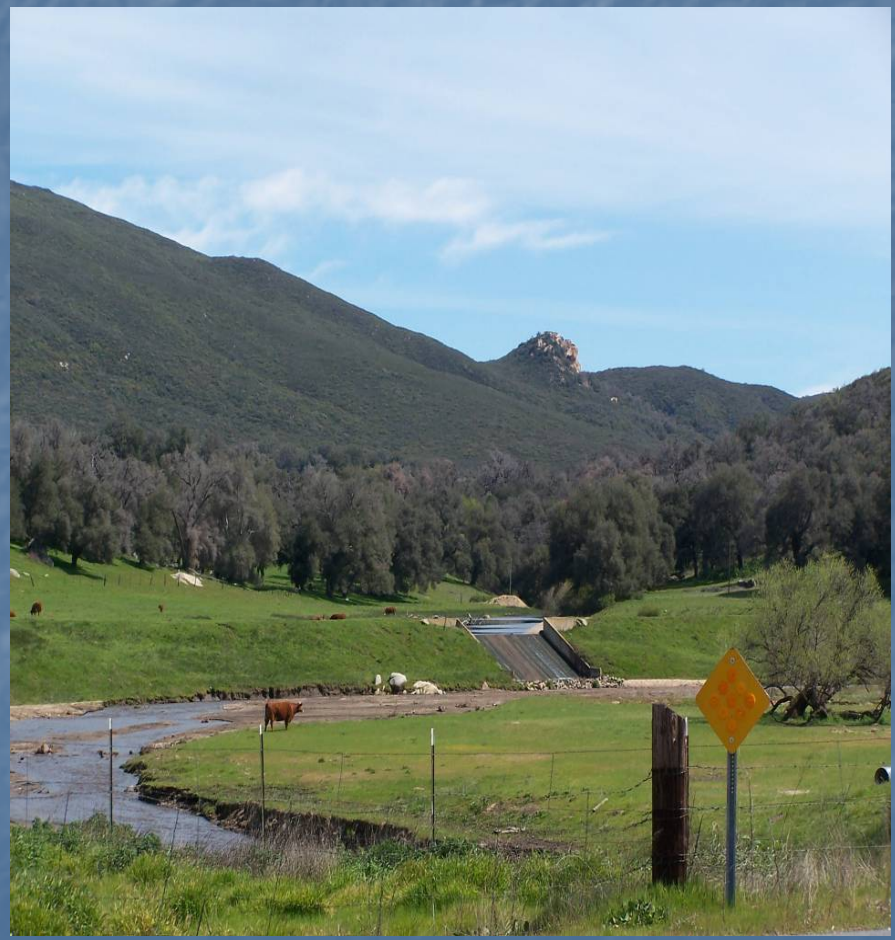
REVIEW OF KEY ISSUES

FARMING/WORKING LANDSCAPES

FARMING WITHIN ECMSCP

The East County MSCP Study Area is characterized by:

- Grazing
- Citrus in the desert region
- Orchards & vineyards
- Scattered farms producing livestock, and
- Nursery crops



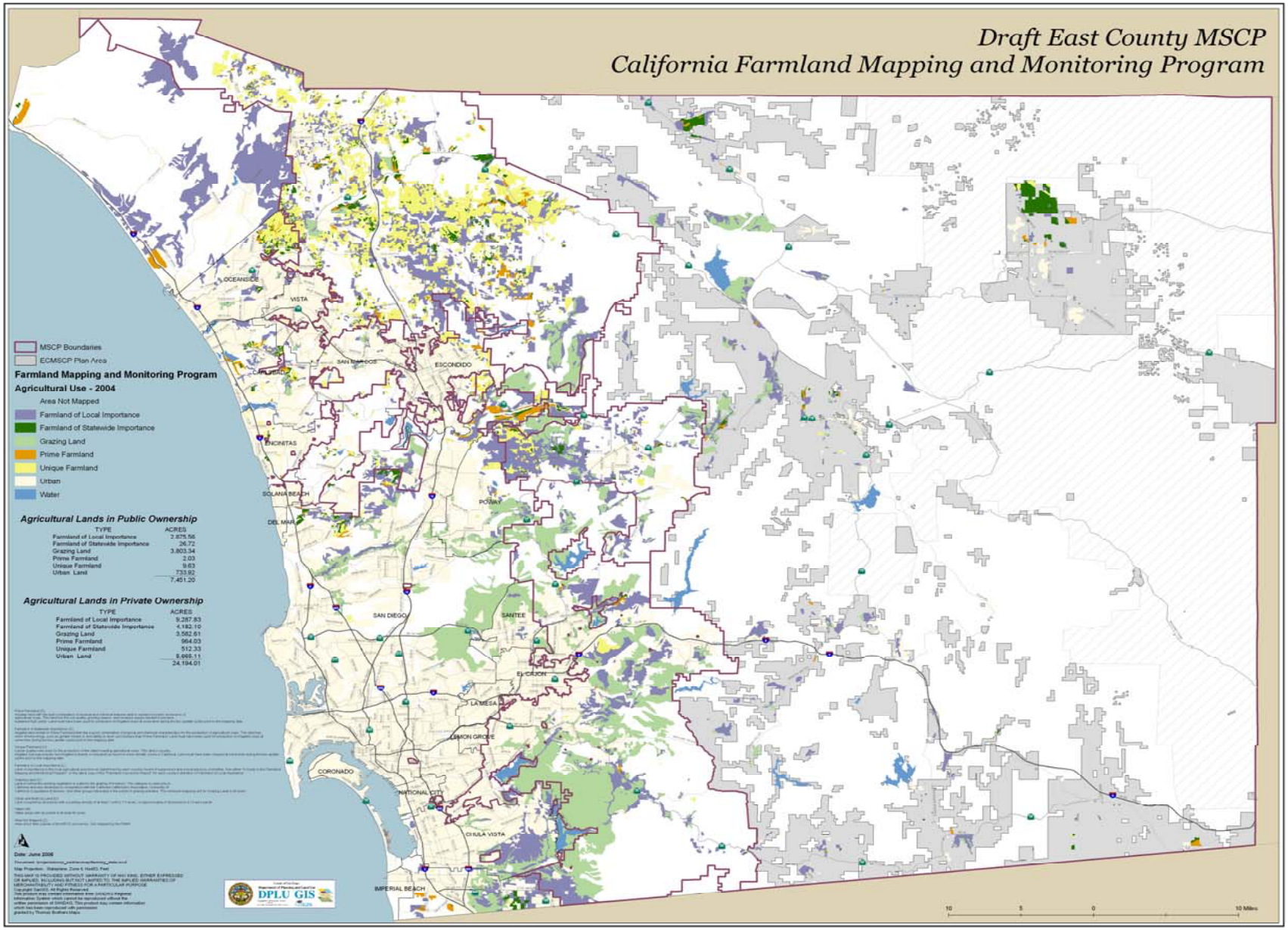
MSCP GOALS FOR FARMING

- Protection from ESA for existing operations
- Maintain agricultural production
- Reduce regulatory burdens and complexity for agriculture
- Maintain crop flexibility
- Encourage conservation of farming
- Recognize habitat values of working landscapes

FARMING ON PUBLIC/PRIVATE LAND

Public			
	Field Crops	3,251.24	
	Intensive Agriculture	0.01	
	Orchard or Vineyard	0.01	
		3,251.26	10.35%
Private			
	Field Crops	23,291.98	
	Intensive Agriculture	1,162.62	
	Orchard or Vineyard	3,716.99	
		28,171.58	89.65%
	Total Ag =	31,422.84	

Draft East County MSCP
California Farmland Mapping and Monitoring Program



Agricultural Lands in Public Ownership

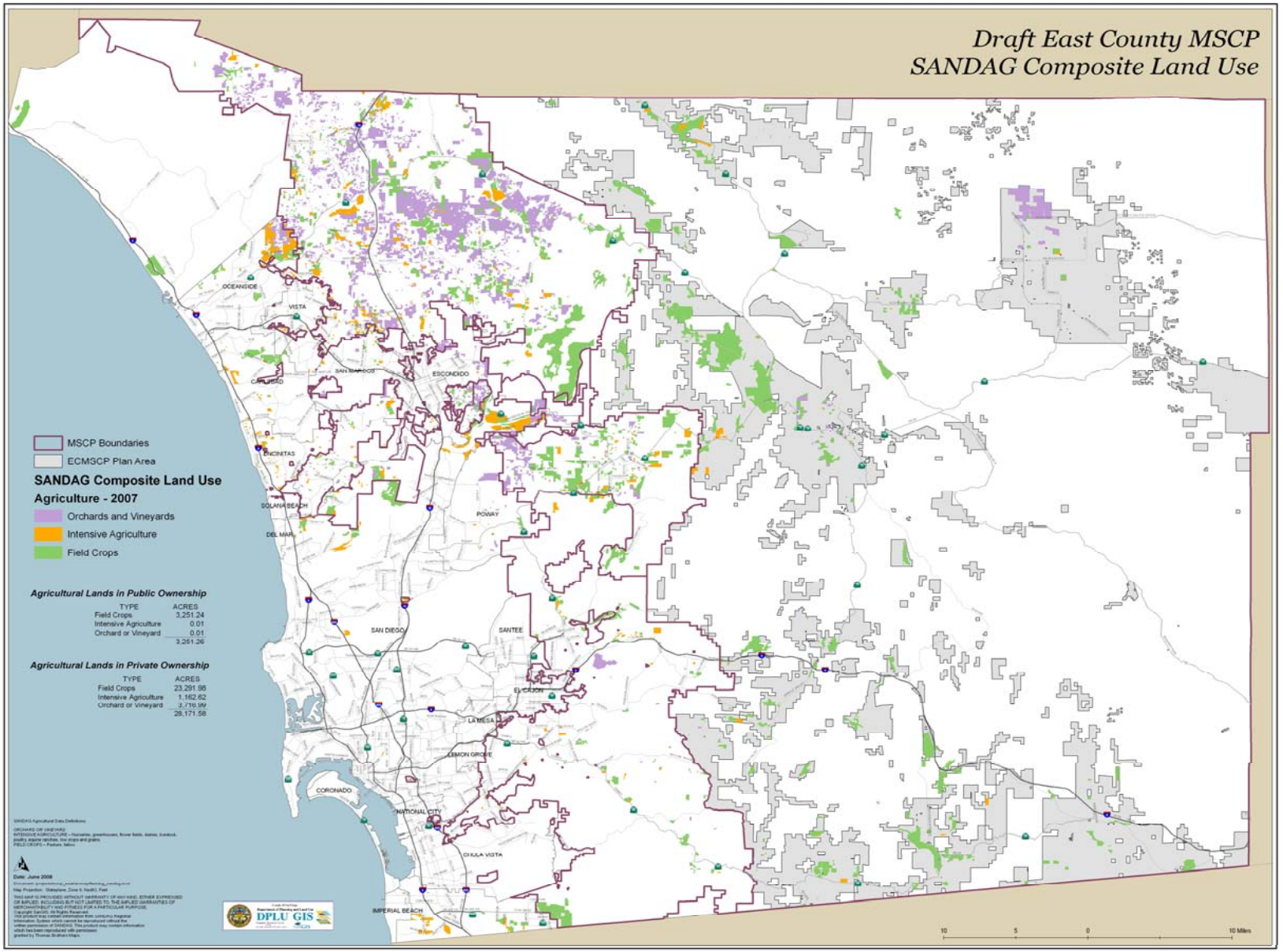
TYPE	ACRES
Farmland of Local Importance	2,875.56
Farmland of Statewide Importance	26.72
Grazing Land	3,803.34
Prime Farmland	2.03
Unique Farmland	9.63
Urban Land	733.92
	7,451.20

Agricultural Lands in Private Ownership

TYPE	ACRES
Farmland of Local Importance	9,287.83
Farmland of Statewide Importance	4,182.10
Grazing Land	3,582.61
Prime Farmland	964.03
Unique Farmland	512.33
Urban Land	5,665.11
	24,194.01

Date: June 2006

Draft East County MSCP
SANDAG Composite Land Use



Agricultural Lands in Public Ownership

TYPE	ACRES
Field Crops	3,251.24
Intensive Agriculture	0.01
Orchard or Vineyard	0.01
	3,251.26

Agricultural Lands in Private Ownership

TYPE	ACRES
Field Crops	23,291.96
Intensive Agriculture	1,162.62
Orchard or Vineyard	3,716.99
	28,171.58

SANDAG Agricultural Data Definitions

ORCHARD OR VINEYARD

INTENSIVE AGRICULTURE – Nurseries, greenhouses, flower fields, dairies, livestock, poultry, equine ranches, row crops and grains.

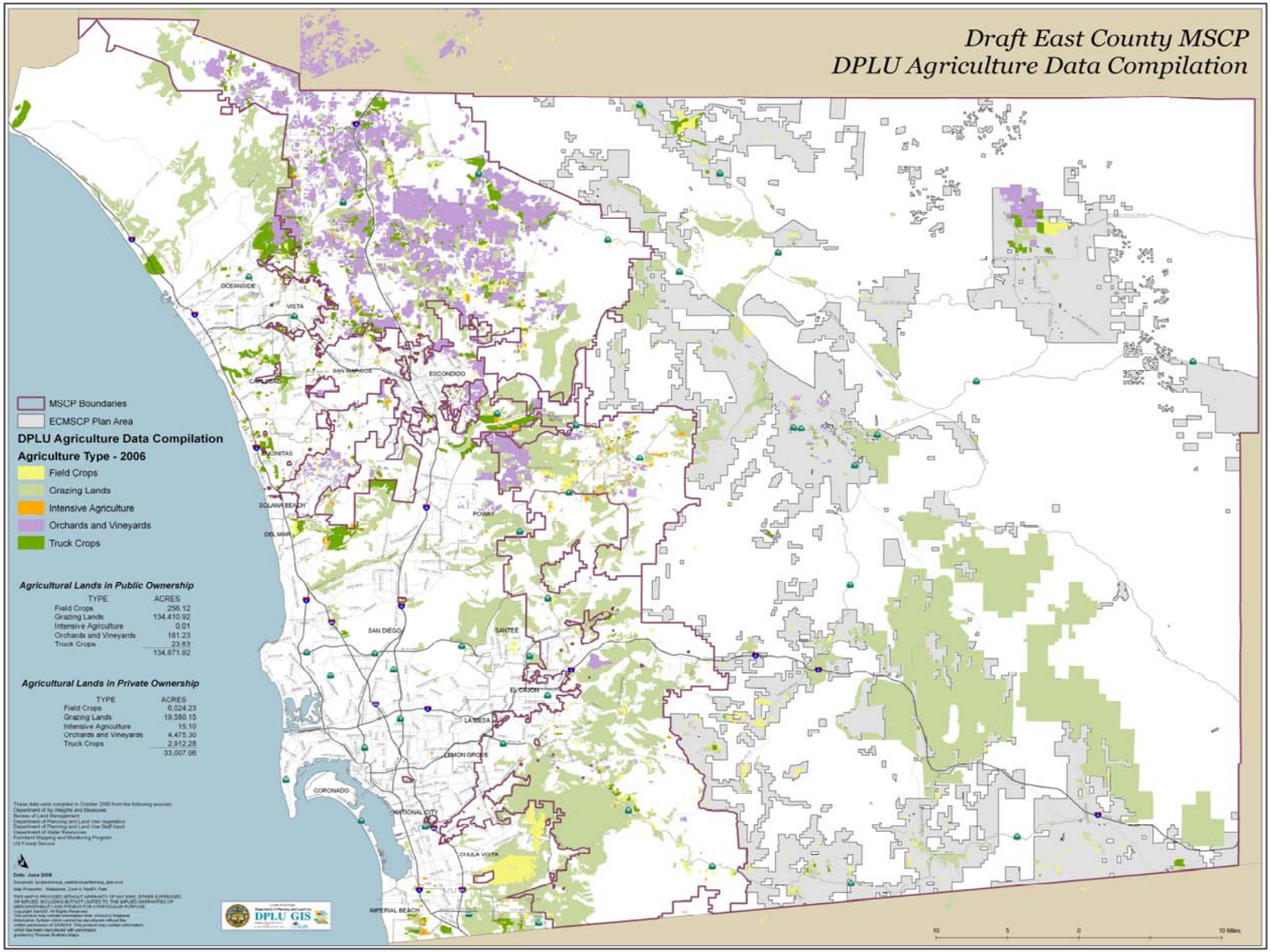
FIELD CROPS – Pasture, fallow.

Date: June 2008

Map Projection: Stateplane, Zone 6, NAD83, Feet

DPLU GIS

Draft East County MSCP
DPLU Agriculture Data Compilation



Agricultural Lands in Public Ownership

TYPE	ACRES
Field Crops	256.12
Grazing Lands	134,410.92
Intensive Agriculture	0.01
Orchards and Vineyards	181.23
Truck Crops	23.63
	134,871.92

Agricultural Lands in Private Ownership

TYPE	ACRES
Field Crops	6,024.23
Grazing Lands	19,580.15
Intensive Agriculture	15.10
Orchards and Vineyards	4,475.30
Truck Crops	2,912.28
	33,007.06

These data were compiled in October 2006 from the following sources:
Department of Ag Weights and Measures
Bureau of Land Management
Department of Planning and Land Use Vegetation
Department of Planning and Land Use Staff Input
Department of Water Resources
Farmland Mapping and Monitoring Program
US Forest Service

Date: June 2008

DPLU GIS

PRESERVE DESIGN TOOLS / STRATEGIES

DEFINITIONS

- The “Study Area” means all lands in the project boundary of the East County MSCP Study Areas (i.e., private land and public lands) with the exception of Tribal lands.

- The “Planning Area” means the unincorporated lands in the project boundary of East County MSCP Areas over which the County of San Diego has land use jurisdiction (i.e., private parcels and County-owned land).

PLANNING APPROACH

- Divide the Planning Area into segments.
- Identify likely impacts and conservation needs.
- Develop goals for conservation, development, and agriculture.
- Develop appropriate policies that will achieve the goals.

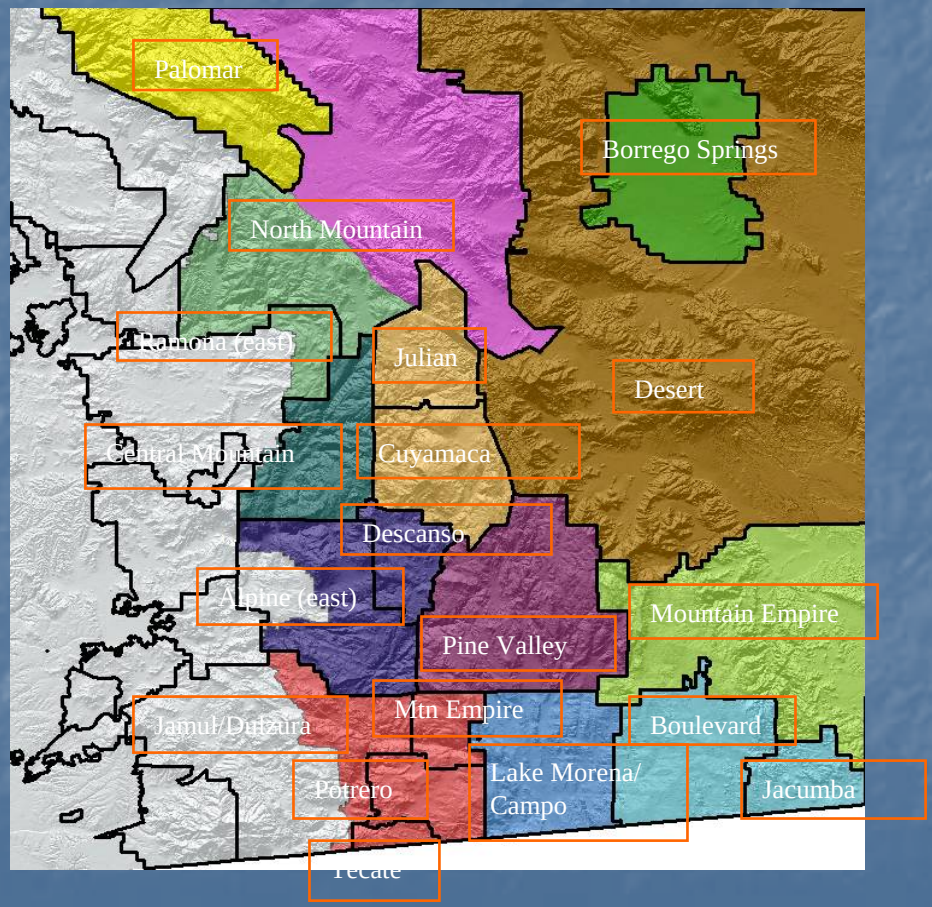
PRESERVE DESIGN TOOLS

Tools that may be utilized to achieve a draft preserve design map include the following:

- **Identify conservation areas with high value habitat**
- **Hardlines**
- **Project design criteria**
- **Species-specific policies**
- **Purchase of easements**
- **Incentives for best management practices (BMPs)**

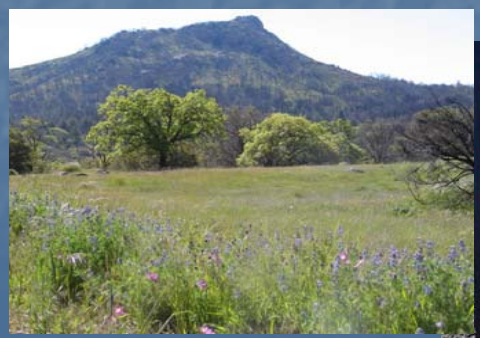
DRAFT PLANNING UNITS

DRAFT PLANNING SEGMENTS



WILDFIRE

- Wildfire is a natural event that benefits many species.
- Severe/repeat fire may threaten sensitive habitat and species.
- Fuel modification programs and coordination between landowners and stakeholders are essential.
- Further analysis of the history and effects of wildfire is needed.
- Wildfire issues will be addressed by ECMSCP through the preserves, management, and monitoring.



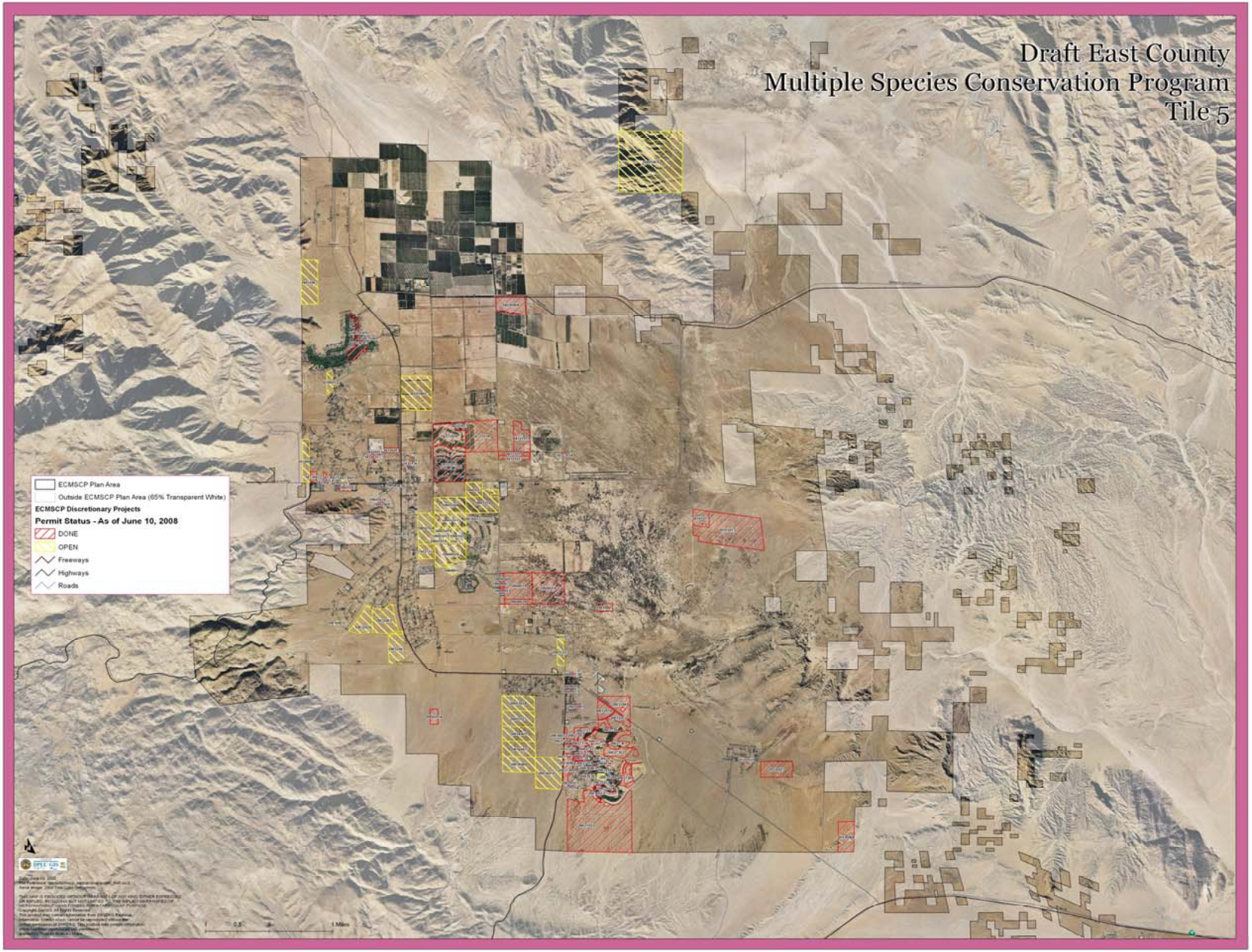

HARDLINE POLICY

HARDLINE CRITERIA POLICY OVERVIEW

- Discretionary permit application must have already been submitted and be on file with DPLU.
- Biology reports must be completed by December 19, 2008.
- The hardline concept must be accepted by Wildlife Agencies by February 27, 2009.
- Public review of CEQA documents must begin by July 22, 2009.

DISCRETIONARY PERMIT REVIEW

Draft East County Multiple Species Conservation Program Tile 5



PUBLIC COMMENTS

NEXT STEPS

NEXT MEETING

Steering Committee Meeting # 6

September 10, 2008

1:00 pm – 3:00 pm

Tower 7 (7th Floor)

County Administration Center

1600 Pacific Coast Hwy

East County Plan Steering Committee Meeting Minutes
County Administration Center (CAC), Tower 7
1600 Pacific Coast Highway, San Diego, CA
June 25, 2008

Introductions (Bryan Woods, Steering Committee Facilitator)

This is the fifth Steering Committee meeting for the East County Plan. Introductions were made for members of the Steering Committee, County staff, and public present.

Review Minutes of Steering Committee Meetings # 2, 3, and 4 (Bryan Woods)

The Steering Committee had been asked to review the February 6, 2008, March 19, 2008, and May 28, 2008 meeting minutes provided in the packet, which were also e-mailed to Steering Committee members prior to this meeting. At present, there are 11 members of the Steering Committee; 10 members are needed for a quorum in order to approve the minutes. Although a quorum of Steering Committee members was not initially present to vote on the minutes, additional members arrived, creating a quorum. Following some clarifications, there was a motion to approve the February 6, 2008; March 19, 2008; and May 28, 2008 minutes, seconded by Eric Larson and Dan Silver.

Overview of the NCCP Planning Agreement (Bryan Woods)

1. NCCP Planning Agreement (Kim Zuppiger)

A general overview of the draft NCCP Planning Agreement was given. It is posted on the County's MSCP website and a copy of the notice is included in the meeting packet. The comment period for this document is 21 days, which began on June 20, 2008 and will end on July 11.

1.1 What changes did the County make from the standard format? (Jim Whalen)
1.2 The Wildlife Agencies made some changes. The County did not make any major changes to the format (Tom Oberbauer)
1.3 Was the same language used? What changes were made? (Rikki Schroeder)
1.4 There was some language added on the treatment of interim projects. (Libby Lucas)

Follow up Items (Kim Zuppiger)

County staff is reviewing discretionary projects in the East County Plan region. An aerial map of the Borrego Springs area with discretionary permits pending review is posted on the wall for review. Similar maps and review will be done for all regions of the East County. In the meeting materials, there is a handout on "Frequently Asked Questions" regarding farming and the East County Plan. In addition, as requested at the previous meeting, references to the US Fish and Wildlife Service's Habitat Conservation Plan Handbook are also in the handouts, along with the USFS Five Point policy. An East County land ownership, including non-government organizations (NGOs) map and three farming maps for the East County Plan project area are also posted on the wall for review. (Kim Zuppiger)

Overview/Discussion of Key Issues with Steering Committee (Bryan Woods)

Today we want to conclude discussion of the major topics we have been reviewing thus far, so we can move forward to the next steps of the project, including mapping of focused preserve areas.

At our last meeting, information was requested on several issues related to agriculture across the County. Some information was available countywide and Kim will go over that in her presentation but where we needed to do analysis to create the information, we focused on the lands within our East County Study Area. (LeAnn Carmichael)

The topics to be reviewed today include: 1) Farming/Working Landscapes, 2) Preserve Design Tools/Strategies, 3) Draft Planning Units, 4) Wildfire Issue Paper, and 5) Hardline Policy.

1. **Review of Farming/Working Landscapes (Kim Zuppiger)**

   PowerPoint presentation given that provides a general overview of farming and working landscapes in San Diego County, including the East County region. The three maps (one from State data, one from SANDAG data, and one from a compilation of data created by the DPLU) were also reviewed.

   1.1 Are there any questions or comments regarding this issue? It is nice to see the follow up data on the table. The County staff accomplished all requests. (Bryan Woods)
   1.2 The DPLU agriculture data compilation map uses BLM data, but it is not necessarily BLM land. (Eric Larson)
   1.3 That is correct. (Kim Zuppiger)
   1.4 It seems that there is more grazing around Campo than what is shown on the maps. (Larry Johnson)
   1.5 The County recognizes that these maps are tools, but do not represent a complete set of data. (Tom Oberbauer)
   1.6 Can information be submitted to the County to be included in the maps? (Larry Johnson)
   1.7 If you would like information to be included, please contact MSCP staff. (Kim Zuppiger)
   1.8 It seems that one map shows one region as field crops while another shows the same as grazing. The BLM may have more recent data that could be used for the mapping. (Donna Tisdale)
   1.9 The County will get the updated data from BLM on grazing. (Kim Zuppiger)
   1.10 It is very important to get the mapping done right upfront and not later on. This is essential. (Jim Whalen)
   1.11 All of the maps are different. Will the East County Plan create an accurate map and inventory of land? The State map does not have good data; greenhouses show up as commercial buildings. (Eric Larson)
   1.12 Will there be an accurate, updated map produced in this process? (Rikki Schroeder)
   1.13 We are not planning to create an agriculture map. And we have experience that some property owners don't want their properties mapped for various reasons. (Tom Oberbauer)

1.14 Our focus is different. We will end up with a good biological map for the East County Plan. For example, grazing land may be reflected as non-native grasslands on the maps. Biological habitat is the focus. (LeAnn Carmichael)

1.15 It will be very important to address how agriculture will be treated in the written portion of the plan if the maps of agriculture are not accurate. You should be able to turn to the text to find agriculture, if you can not find it on the map. (Eric Larson)

1.16 Will there be a map that shows an accurate extent of the natural habitat, which is the focus of the plan? You need to know the extent of natural and disturbed vegetation. (Rikki Schroeder)

1.17 We will use the best information available to identify vegetation and develop maps for this plan. We have a number of discretionary permits in process and we would also like to revise the vegetation maps to show those changes in vegetation as they get approved. (Tom Oberbauer)

2. <u>Preserve Design Tools/Strategies (Kim Zuppiger)</u>

PowerPoint presentation given that provides a general overview of the East County Plan preserve design tools and strategies. The draft planning units are available in the packet (Attachment 6). These planning units follow the general eco-region boundaries.

2.1 The goal is to develop criteria for each area that is tailored for that area's needs. (Tom Oberbauer)

2.2 Will this be the same process as under the North County Plan for creating the criteria? It would be helpful if you could identify how balancing will be performed, determine where there may be disturbance, and cast the language of the plan to provide more guidance. (Rikki Schroeder)

2.3 I look at the plan as an overlay of the General Plan. The General Plan determines where to focus development. The MSCP shows where there should be conservation and overlays for preservation, but is not a land use plan. (Dan Silver)

2.4 Good point. (Bryan Woods)

2.5 In the North and South County Plans, we have focused on PAMA. But, in the East County, there is a lot of public land and land that may not be developed until further in the future. There may be more criteria for development and the proposal is for the plan to identify areas that are likely to be developed and apply something like a PAMA. (Tom Oberbauer)

2.6 These plans are not intended to be a conservation overlay of the General Plan. Projects under the General Plan must go through biological review. (Craig Benedetto)

2.7 The concept is for this plan to show where development should be located to result in the lowest amount of impact and include criteria. (Tom Oberbauer)

2.8 This should be in all plans. There should be a "users' guide." Right now, the plans only show where should be avoided, but no one can build anything with this language. (Rikki Schroeder)

2.9 Start with the General Plan and then use the MSCP to direct where the impacts will be. (Dan Silver)

2.10 The County's ordinances and BMO are not consistent. (Jim Whalen)

2.11 As we go through the process of the East County Plan, we would like to make the ordinances consistent. (Kim Zuppiger)

2.12 We would like to get all of the Biological Mitigation Ordinances (BMOs) to be consistent, but the East County will have its own BMO, which should be consistent with the General Plan, but may differ from the North or South County Plans. (Tom Oberbauer)
2.13 Development today has some sort of clustering due to the requirements for mitigation. (Bryan Woods)
2.14 Clustering will be allowed under the General Plan Update. (Bryan Woods)
2.15 Conservation easements are the best tool we have, but they must be deed restricted so that they cannot be vacated. (Bryan Woods)
2.16 How would DFG know that this has happened as third party beneficiaries? (Libby Lucas)
2.17 As third party beneficiaries, DFG would have to sign off on this. (Tom Oberbauer)
2.18 I want to clarify that EHL agrees with the concept of clustering. The East County Plan can be a vehicle to make sure open space is permanently protected, especially if it is to meet the conditions of a permit. (Dan Silver)

3. Wildfire (Kim Zuppiger)

PowerPoint presentation given that provides a general overview of wildfire issues.

3.1 Do you anticipate a change in the maximum buffer? (Jim Whalen)
3.2 We have not explored that yet. (Kim Zuppiger)
3.3 We are trying to get people to obey the 100 foot buffer. (LeAnn Carmichael)
3.4 The widening is arbitrary. There is no fire science to support this. With northeast winds in Santa Ana conditions, the most that would be needed is 103 feet. (Jim Whalen)
3.5 Development on Merriam Mountains had steep slopes and modeling showed that that area needed 200 foot buffer. It should take into account the best scientific information Available. (Tom Oberbauer)
3.6 This is not based on solid fire science. This will be a future issue for discussion. (Jim Whalen)
3.7 This is an issue that has been raised by Supervisor Horn before the Board of Supervisors. There will be a report on how the County will accomplish vegetation management over the next several months. (Tom Oberbauer)

4. Hardline Policy (Kim Zuppiger)

PowerPoint presentation given that provides a general overview of hardline criteria policy.

4.1 Why was the deadline so soon? What is the benefit of forcing a discretionary application? Why not allow more time for hardlines, which will put more security into the preserve design? What is the reasoning? (Jim Whalen)
4.2 The hardline process takes a very long time. It has added a few years to the process on the prior plans and we are not sure of the benefits of the projects are always carried through. (Tom Oberbauer)
4.3 You may be missing out on valuable habitat that is a critical link you do not know about from those who may not be able to afford a biological study and who may not let you on their land, such as ranchers. Without hardlines, it makes it impossible for a farmer or rancher. (Jim Whalen)

4.4 Boundary adjustments are not difficult if new issues arise after projects are hardlined. Hardline always give a better outcome because you always know what you are saving. (Rikki Schroeder)

4.5 The development community is not in support of this. I see this as the County taking a shift away from hardlines and it should be taken before the Supervisors because the Plan was supposed to be based on hardlines. The whole premise is to bring keystone properties to the MSCP preserve. This seems like an arbitrary decision by staff. Developers do not support PAMA, since overlays in a broad pattern make it difficult for landowners. (Craig Benedetto)

4.6 North County Plan hardlines have held up the plan for two years. Do not let hardlines interfere with plan development. The Plan needs to get done and projects can come in later. (Dan Silver)

4.7 In the North County, hardlines are fragmented and do not support the preserve and have interfered with plan development. It is better to get the plans done and avoid the hardlines. (Dan Silver)

4.8 If a system to determine hardlines is worked into the process, this would be beneficial. In North County, however, the process was haphazard. Hardlines will always give a better outcome because you know what you are saving.

4.9 Was there the same amount of interfacing by the Wildlife Agencies on the North County plan as the South County plan? (Jim Whalen)

4.10 They have provided input on both. (Tom Oberbauer)

4.11 The Wildlife Agencies' letter seems to say that they are not pleased with hardlines. The South County plan had too little Wildlife Agency staff involvement and the North County has too much. (Jim Whalen)

4.12 In the North County process, there was no compromise, as there was in the South County Plan. (Rikki Schroeder)

4.13 Comments? How far would you want to see the hardline deadline extended until? (Bryan Woods)

4.14 At some point, you do need a deadline. (Jim Whalen)

4.15 There must be some finality. (Rikki Schroeder)

4.16 Is there a draft map that shows the hardlines? (Larry Johnson)

4.17 At this point, no projects have asked for hardline status. (Tom Oberbauer)

4.18 What is the advantage of hardlines for landowners? (Larry Johnson)

4.19 It can give more certainty, for the building location or development footprint. (Tom Oberbauer)

4.20 Being considered a hardline can also establish a higher value for the property. (Bryan Woods)

4.21 It is not land use planning. You are not guaranteed that you can build the project, only where development may be located and what are must be conserved. (Rikki Schroeder)

5. Discretionary Permit Review (Kim Zuppiger)

A PowerPoint presentation given that provides an overview of the discretionary permit review process. County staff is reviewing the projects in process so that we know what is pending as we develop the preserve design for the East County Plan.

5.1 There will probably be at least 13 aerial maps. One has already been done for the Borrego Springs area, as an example. There will be more information and a summary by the next Steering Committee meeting. (Kim Zuppiger)

5.2 County staff has completed a lot of work in a short time. (Bryan Woods)

6. Opportunity for Public Input (Bryan Woods)

6.1 Do minutes need to be accurate for public input? (Pam Nelson)
6.2 Yes, we would like them to be. (Tom Oberbauer)
6.3 The minutes from the last meeting referred to the "Lilac area," but this should have been the Oak Grove (on page six). Also, the minutes state on that page that this area is being used for agricultural equipment storage, but it should say that it is being used for off-road track use and heavy equipment storage. Will the missing linkages for wildlife corridors be included in the plan? (Pam Nelson)
6.4 Why are we merging the North and East County plans together? (John Elliot)
6.5 We are not planning on merging them. When the North County Plan was started, it was part of the MHCP. When the North County was taken out of the MHCP, it had to have a separate NCCP done. Since a separate agreement had to be done for the East County Plan, they were done together. The two plans are being processed at the same time, but they are separate projects. (Tom Oberbauer)
6.6 So, the North County Plan will not be held up for two more years? (John Elliot)
6.7 No. They are separate plans. (Tom Oberbauer)
6.8 Why are you using political boundaries and not biological boundaries? (John Elliot)
6.9 When we looked at the Community Planning Group and Community Sponsor Group boundary lines, it matched fairly closely to the eco-region lines. So, as much as possible, we are trying to follow those lines. We are trying to address both together. (Tom Oberbauer)
6.10 There are three representatives from three Community Planning Groups. Will there be a point in time when all Community Planning Groups will be on the Steering Committee? (John Elliot)
6.11 Those with the largest area are represented here. (Tom Oberbauer)
6.12 It seems like biological issues should be addressed before the General Plan Update. (John Elliot)
6.13 The information that goes into the General Plan revision has early stage biological information to help identify patterns of land use. But, the General Plan is looking at a whole series of factors and the MSCP is looking strictly at biology. MSCP is more of a refinement of biological issues. (Tom Oberbauer)
6.14 What about 4(d) permits? Couldn't the timing be closer to connect the General Plan and MSCP together? (John Elliot)
6.15 The MSCP will work with the Wildlife Agencies in addressing long term issues. (Tom Oberbauer)
6.16 Is it possible to use vegetation types and soils to see where it is most suitable for grazing and put that into the grazing maps? (John Elliot)
6.17 The main focus of our analysis is the existing vegetation. (Tom Oberbauer)
6.18 There is a lack of management of vegetation and preserves, which is responsible for destroying homes in the wildfires. Homes and scores of lives were lost. We need to come up with better management. (John Elliot)
6.19 The goal of the plan being considered by the Board of Supervisors is to address these issues for private land and vegetation. But, fires were started in lands that are not MSCP preserves. (Tom Oberbauer)
6.20 How closely is this linked to Watershed Management Plans? (Larry Johnson)
6.21 They are related. Fire management will be based on watershed and MSCP. The goal is to make all of these ideas fit together. (Tom Oberbauer)

6.22 The Sunrise Powerlink used "firesheds" for planning areas. Maybe this could also be used here. (John Elliot)

6.23 Please stay involved and your input will be considered. The public is welcome to attend all Steering Committee meetings. (Bryan Woods)

Upcoming Meetings (Bryan Woods)

The Steering Committee was asked to review their calendars for the upcoming meeting, below.

Steering Committee Meeting #6 Topic: Draft Preserve Map	**September 10, 2008 (Wed.)** **1:00 pm – 3:00 pm** County Admin. Center 1600 Pacific Coast Hwy. Tower 7 (7th Floor)

Closing Comments (Bryan Woods)

Bryan Woods thanked the Steering Committee and attendees for their participation and input and adjourned the meeting, as there were no more questions or comments.