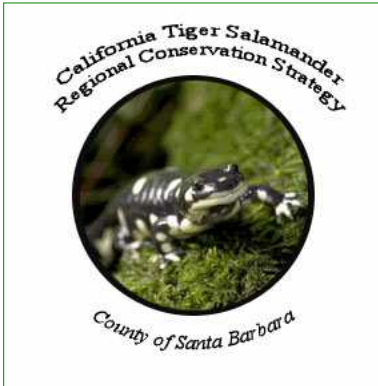


Overview of the Conservation Program RCS Project Area



November 28, 2007



INTRODUCTION

- The Conservation Program is a critical component of a conservation plan
- Specifies measures to “minimize and mitigate impacts of take to the maximum extent practicable” (ESA requirement)
- This information is the culmination of research done on other jurisdictions' plans and is intended to provide information on what is required and potential tools that may assist the development of a plan for Santa Barbara



BIOLOGICAL GOALS & OBJECTIVES

- HCPs require defining broad conservation **Goals** and specific **Objectives**; these are then achieved by the Conservation Measures
- Biological goals are not meant to be a repeat of conservation measures, but rather what the conservation measures are established to achieve.
- Goal:** *Enhance ecological function of ponds*
- Objective:** *Reduce sediment deposition*
- Conservation Measure:** *Prepare and implement management plans for cultivated agricultural lands*



Conservation Measure Organization

Example Goal, Objective and corresponding Conservation Measure:

- Goal:** *Preserve ponds in plan area*
- Objective:** *Acquire ponds at a ratio of 2:1 and protect as part of the preserve system.*
- Conservation Measure:** *Acquire lands for pond preserve system.*



Conservation Measures

Conservation Measures:

- **Avoidance and Minimization**
 - (BMPs, education, timing restrictions, pre-activity surveys, prohibition on pets, etc.)
- **Habitat Enhancement, Restoration, & Creation**
- **Land Acquisition**



Two Approaches to Land Acquisition

Process-based HCP

- No boundaries drawn on map
- Fees assessed on development
- Land purchased from willing sellers
- Based on economic incentives and disincentives
- Allows the market and plan parameters to decide the final location of development and conservation areas

Map-based HCP

- Identifies specific development areas and conservation areas on a map
- Parcel designation determines application of regulations, fees, land acquisition, conservation easements, mitigation required, etc.

(Jones and Stokes, 2006)



Hybrid Approach to Land Acquisition

- **Hybrid Approach:** combination of process-based and map-based approaches
- Maps may be applied only to development areas or to habitat areas
- Maps may designate zones, each with a conservation target
- Maps may designate zones with different mitigation requirements/credit
- Sliding mitigation requirements based on habitat quality

(Jones and Stokes, 2006)



Preserve Design Principles

- Maximize size & minimize fragmentation
- Preserve highest quality habitat
- Establish connectivity
- Buffer urban impacts
- Minimize edge effects
- Maximize habitat heterogeneity
- Consider watersheds
- Consider full ecological diversity within communities
- Consider management needs



Preserve Design Principles

Goal	Effect	Poor	Good	Example
Minimize Fragmentation	Fragmentation disrupts movement and lowers species diversity			Roads bisecting preserves can prevent movement between preserves
Minimize Edge Effects	Non-compatible uses adjacent to preserves lowers the habitat values and species abundance/diversity.			Feral cats from residential development dramatically reduce song bird populations
Establish Connectivity	Linking preserves allows for increased movement amongst interacting landscapes			A corridor between grasslands and a lake allows species to utilize both habitats
Establish Buffers	Buffers help reduce edge effects to protect preserve integrity			A vegetative buffer absorb pollutants to protect waterways
Maximize Heterogeneity	Preserves with a greater mix of habitats tend to support greater biodiversity			An oak preserve with a stream may support greater biodiversity than an oak preserve without a stream
Protect Watersheds	Preserving watersheds helps maintain hydrologic stability and water quality			Nutrients from landscaping upstream flows into the preserve and harms species
Maximize Population	Larger populations are less vulnerable to disease and local disturbances			If 10% of a population is resistant to a disease, 10 individuals will not persist, but 20 may.
Maintain Distribution	Allows species to repopulate after disturbances, protects metapopulations and genetic variation.			Individuals in one preserve are able to repopulate another after a fire.



How is Preserve Area Acquired?

Reasons for Acquisition:

- Development
- Ag Intensification
- Other

Methods of Acquisition:

- Purchase of mitigation credits
- Mitigation/habitat banks
- Conservation Easements
- Public lands (minor source)
- Federal and State grants (minor source)
- Other methods



Land Acquisition Methods

1. Habitat/Mitigation Banks
2. Mitigation Funds
3. Conservation Easements



What is a Mitigation Bank?

- 1. Habitat/Mitigation Banks**
 - Willing land-owner sells a mitigation easement, fee title, or credits to the permittee
 - Larger area, better for species
 - Managed by “banker”
 - Used by projects that must mitigate
 - More efficient to manage larger contiguous habitat
 - Conservation banking is proactive rather than piecemeal
 - Use conservation plans to identify the most ecologically valuable lands for banking
 - Site conservation banks strategically



What is a Mitigation Fund?

2. Mitigation Funds

- Permittee pays a cash amount to mitigate for impacts as determined by the HCP
- This money is placed in a pool and is used for habitat acquisition



What is a Conservation Easement?

3. Conservation Easements

- A conservation easement is a voluntary, legally binding agreement that limits certain types of uses or prevents development from taking place on the easement.
- Effective at time of purchase and into the future and protects the property's ecological and/or open-space values.
- Benefits include charitable deductions on income tax, reduced estate values for estate planning, and in some cases, property taxes may be lowered.



Best Management Practices

Main Points of the Watershed Management Plan (L. Hunt)

3 Standard Recommendations:

1. Take type of grazing (cattle, sheep, horses, etc.) into account when establishing a management plan
2. Manage grazing intensity. Control grazing distribution by reducing livestock dependence on CTS breeding sites by offering alternative water source.
3. Decrease vegetation around pools when it is dry and will not affect CTS in order to decrease the amount of vegetation that is edible in the following spring



Best Management Practices

Additional Best Management Practice Recommendations:

- Control Sediment Input and Removal:
 - Eliminate sediment input into water bodies rather than mitigate for its presence after the fact.
 - Locate roads far from ponds, pave roads, construct water bars to divert sediment runoff.
- Berms:
 - Repair and maintenance should be timed in dry season (July 15th-November 1st)
- Mowing:
 - Utilize above ground mowers with 6 in of clearance, and rubber tired tractors/mowers; avoid margins of pool bed and areas below the high water mark.
 - Timing should be in dry season



Best Management Practices

- **Livestock Feeds and Supplements:**

- Salt licks & nutritional supplements and livestock pens should be placed at least 1,000 ft from any ponds.
- Dip tanks and other chemical facilities should be placed outside of pool watersheds

- **Fencing:**

- Complete livestock exclusion from CTS ponds is a last resort and should be done after consulting managers and biologists.
- Man-made ponds used for water pumping and frost protection should be fenced and withdrawal of water should occur only during the dry season



Best Management Practices

- **Rodenticides & Ag Chemicals:**

- Rodent control should be restricted to 2,200 ft from known/potential CTS ponds
- Chemical use should be avoided in the topographic watershed of the CTS ponds
- Existing ag operations using chemicals should consult with FWS to develop a chemical use plan.

- **Natural & Enhanced Water Features:**

- Water should not be pumped from natural pools or ponds. The landowner should consider constructing a pond reservoir. NRCS and the Farm Bureau can help defray the cost.



Best Management Practices

- **New Water Features:**
 - Should not be constructed within 2,200 ft of existing potential/known ponds; this applies to adjacent parcels
 - All ponds and reservoirs constructed within the CTS range should be fenced with rigid plastic sheeting or aluminum flashing a minimum of 18 inches into the ground and 12 inches above to prevent CTS access