Balancing long-term conservation with the future of the University

Stanford University is working with the U.S. Fish and Wildlife Service and the National Oceanic and Atmospheric Administration (NOAA Fisheries) to finalize a Habitat Conservation Plan (HCP). The HCP is designed to benefit federally protected species, such as the California red-legged frog, California tiger salamander and steelhead. The primary goals of the plan are to stabilize and increase the populations of these species on Stanford lands and to enhance and protect their habitat, including riparian vegetation, creeks and grassland and seasonal wetlands. The HCP contributes to regional efforts to maintain native diversity, supports Stanford’s mission as a research and teaching institution and provides a 50-year framework to promote conservation and plan for future land use.

What is a Habitat Conservation Plan?

A Habitat Conservation Plan is part of a process outlined by Section 10 of the federal Endangered Species Act (ESA) that involves cooperation between the federal government and a private landowner in the interest of species and habitat conservation. This HCP outlines what Stanford, as the landowner, will do to minimize or mitigate the impact of its activities on federally protected species. In turn, the Fish and Wildlife Service and NOAA Fisheries will each issue an incidental take permit. “Taking” occurs when an animal is killed or when its habitat is destroyed. An incidental take permit is required by the ESA when private activities will result in “take” of federally protected wildlife; an HCP must accompany an application for an incidental take permit. An HCP does not replace the legal requirements for California Environmental Quality Act (CEQA) environmental review or approval of any development projects.

Administering the HCP

Stanford University’s Board of Trustees is responsible for administering the Habitat Conservation Plan. Once the HCP is approved by the federal agencies, the University will appoint a conservation program manager to oversee the HCP’s day-to-day implementation. A separate, non-profit land trust organization will be formed to hold the conservation easements and monitor implementation of the HCP.
The HCP Conservation Program

Overview

The Stanford HCP is designed to support increases in the populations of covered species by removing threats and improving conditions where they live. Stanford’s HCP provides immediate protection for key habitat areas and long-term commitments to management and restoration. These programs will also enhance connections between habitat areas and provide benefits to a wide range of native species.

Program Strategies

Stanford’s new HCP program is based on a suite of conservation strategies:

1) concentrating efforts in areas of high value to the species,
2) protecting and managing habitat over the long term,
3) implementing new protection and restoration measures in riparian areas,
4) establishing a credit system to replace lost habitat,
5) monitoring the effectiveness of conservation efforts.

Many habitat conservation programs spread out mitigation throughout the life of the incidental take permit (e.g., 50 years). The Stanford Conservation Program, however, is a “pay up front” program, meaning that the University will immediately establish conservation easements and no-build zones to provide long-term habitat protection. Stanford may also earn conservation “credit” for expanding or enhancing habitat (e.g., removing in-stream barriers to improve fish passage, using bioengineering to stabilize creek banks, creating new breeding ponds).

Species Covered Under the HCP

**California red-legged frog** *(Rana aurora draytonii)*
At up to 4.5 inches, California red-legged frogs are the largest native frogs to California. They live in still fresh water such as ponds, lakes, and marshes, or in slow-flowing sections of creeks and streams. At Stanford, they are primarily found along Matadero, Deer and San Francisquito creeks. Due to loss of habitat, nonnative species, biocides and fertilizers, and the spread of pathogens, they have been listed as a threatened species since 1996.

**California tiger salamander** *(Ambystoma californiense)*
California tiger salamanders require a complex mix of habitats, consisting of seasonally filled pools located in or near grasslands. The California tiger salamanders on the Stanford campus are believed to be the last remaining population on the San Francisco Peninsula. Their numbers have declined primarily as a result of destruction of habitat and they were listed as a threatened species in 2004.

**Steelhead** *(Oncorhynchus mykiss)*
Central California coastal steelhead, the anadromous form of the rainbow trout, have been listed as threatened since 1997. “Anadromous” refers to fish that live in the ocean but reproduce in freshwater streams and rivers. At Stanford, steelhead are found in Los Trancos Creek and parts of San Francisquito and Bear creeks. Their decline is primarily attributed to the degradation of spawning streams, including migration barriers, removal of riparian vegetation, decreased water quality and quantity, non-native fish and pollution.

**Western pond turtle** *(Clemmys marmorata)*
The western pond turtle is threatened by habitat loss, fragmentation, and predation. Its habitat includes calm streams or pools with vegetated banks and logs or rocks for basking in the sun. The western pond turtle is the only native turtle found on the San Francisco Peninsula. Their numbers have declined since 1997. “Anadromous” refers to fish that live in the ocean but reproduce in freshwater streams and rivers. At Stanford, steelhead are found in Los Trancos Creek and parts of San Francisquito and Bear creeks. Their decline is primarily attributed to the degradation of spawning streams, including migration barriers, removal of riparian vegetation, decreased water quality and quantity, non-native fish and pollution.

**San Francisco garter snake** *(Thamnophis sirtalis tetrataenia)*
The garter snakes found at Stanford are actually an intergrade form between two subspecies of the common garter snake found on the San Francisco Peninsula: the San Francisco garter snake and the red-sided garter snake. These “intergrade” individuals at Stanford exhibit color patterns more characteristic of red-sided garter snakes than the San Francisco garter snake. Found in a range of environments, the snakes are typically associated with ponds or creeks surrounded by vegetation and are concentrated around Laguna.
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Activities Covered Under the HCP

The majority of the activities covered by the HCP are related to Stanford’s day-to-day operations, maintenance, academic and recreational activities.

**Campus operations and infrastructure**
Some of Stanford’s academic buildings and campus housing are located near important habitat areas. Operation and maintenance of these facilities are covered by the HCP. In addition, the HCP covers activities necessary to keep Stanford running, including the maintenance of the water system, utilities, creeks, roadways and bridges, as well as fire control activities and landscaping.

**Field activities**
Stanford lands serve as field laboratories for undergraduate and graduate students in areas such as archaeology, biology, geology and geophysics. These academic activities and Stanford’s conservation activities for the HCP including species monitoring surveys, construction of fences and new wetlands, water quality monitoring and revegetation are also covered under the HCP.

**Recreation**
Use and maintenance of Stanford’s recreational paths, golf course, athletic fields and campus open space areas are covered by the HCP.

**Leaseholder operations**
Stanford leases its lands not needed for current academic uses to a variety of agricultural, institutional, residential and commercial tenants. Stanford is working with its tenants to ensure that these activities are covered by the HCP.

**Future campus facilities**
Stanford is not proposing to build new facilities in sensitive habitat areas. However, the Habitat Conservation Plan assumed a potential loss of 1-3 acres of habitat per year for 50 years for purposes of analysis, in addition to approximately 30 acres of habitat that could be lost under the Santa Clara County General Use Permit. The Conservation Programs in the HCP are designed to cover a potential habitat loss of up to 180 acres, or 4% of the habitat acres covered by the HCP.

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Managing Stanford Lands Covered by the HCP

Program Implementation

The Conservation Program designates Management Zones based on habitat areas for the covered species. The most valuable habitat areas are in Zone 1 and the least valuable are in Zone 4. Restoration efforts will be focused on enhancing habitat in Zones 1 and 2. Construction of new facilities in Zone 3 would require mitigation. Conservation efforts in Zone 4 are directed towards rescue and relocation of individuals who become lost and isolated in built-up areas of the campus. For more information, see the Draft Stanford University Habitat Conservation Plan at http://hcp.stanford.edu.
Plan Status and Next Steps

The Stanford University Habitat Conservation Plan is subject to environmental review in accordance with the National Environmental Policy Act (NEPA). A Draft Environmental Impact Statement (EIS) has been published for public review. Public comments will be accepted during a 90-day period ending on July 15, 2010.