

FINDINGS AND RECOMMENDATIONS FOR THE
ISSUANCE OF A SECTION 10 (a)(1)(B) INCIDENTAL TAKE
PERMIT (TE 182827) ASSOCIATED WITH THE STANFORD UNIVERSITY
HABITAT CONSERVATION PLAN

I. DESCRIPTION OF THE PROPOSED ACTION

The U.S. Fish and Wildlife Service (Service) proposes to issue an Incidental Take Permit (Permit) to The Board of Trustees of Leland Stanford Junior University (Stanford or Permittee) under the authority of Section 10(a)(1)(B) and section 10(a)(2) of the Endangered Species Act of 1973, as amended (Act) for a period of 50 years (Permit Term).

Stanford originally submitted applications for Permits to the Service and the National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS). The Draft Stanford Habitat Conservation Plan (Draft HCP) covered 8,180 contiguous acres of land in northern Santa Clara and southern San Mateo counties on the southeastern portion of the San Francisco Peninsula owned by Stanford. The application requested authorization for incidental take of the endangered San Francisco garter snake (*Thamnophis sirtalis tetrataenia*)(garter snake), threatened California red-legged frog (*Rana draytonii*)(red-legged frog) and threatened Central Distinct Population Segment of the California tiger salamander (*Ambystoma californiense*)(tiger salamander) while conducting specific activities described in Chapter 3 of HCP, collectively referred to as Covered Activities. The Permit application also requested authorization for the incidental take of the unlisted western pond turtle (*Clemmys marmorata*)(pond turtle), if it became listed during the Permit Term. Stanford submitted a Permit application concurrently to NMFS requesting coverage for Central California Coast steelhead (*Oncorhynchus mykiss*)(CCC steelhead).

In response to the Permit requests, the Service and NMFS (collectively the “Services”) published a Notice of Availability (NOA) of the Draft Environmental Impact Statement (DEIS) and Draft HCP in the Federal Register (75 FR 18482) on April 12, 2010, and the official public comment period began. The public comment period was to end on July 12, 2010. On May 25, 2010, the Services held a public meeting on the Stanford campus regarding the DEIS. At the request of the public, the Services published a notice in the Federal Register (75 FR 41157) extending the public comment period an additional 45 days to August 30, 2010. During the comment period the Services received 30 comment letters from Federal and local agencies, environmental organizations, and the general public. In addition, during the public comment period the Services received over 3,000 form electronic messages. The majority of the comments related to the impacts of Searsville Dam and Reservoir, water diversions from Searsville Reservoir, (collectively referred to as Searsville-related activities) on the threatened CCC steelhead, water quality and hydrology, and requesting that the Searsville Dam be removed.

On November 23, 2012, the Services published a Notice of Availability in the Federal Register (77 FR 70147) for the Final Environmental Impact Statement (FEIS) and Final HCP. Subsequently on December 6, 2012, Stanford submitted a letter to the Services requesting that the Services temporarily suspend the processing of the Section 10(a)(1)(B) permit application for the San Francisquito/Los Trancos Basin portion of the HCP. As the CCC steelhead would only be affected by Covered Activities within the San Francisquito/Los Tranco Basin, NMFS will

not be issuing a Permit at this time. On March 26, 2013, Stanford submitted a revised HCP to the Service for only the CTS Basin, the Matadero/Deer Creek Basin, and the central campus areas. The revised HCP removed the Covered Activities and the portion of the conservation program associated with the San Francisquito/Los Trancos Basin from coverage. Stanford also requested the pond turtle be removed as a Covered Species. Stanford submitted final revisions and clarifications to the HCP to the Service on August 1, 2013. The revised HCP is a subset of the Final HCP (and Draft HCP) which the Service had already made available for public review. The Service, therefore, determined that under the National Environmental Policy Act (NEPA) and the Act it was not necessary to revise the FEIS nor recirculate the revised HCP for public inspection as the proposed impacts were less than those originally analyzed.

Documents used in the preparation of this statement of Findings and Recommendation include: the Final Stanford University Habitat Conservation Plan (revised August 2013) (HCP) and FEIS (Service 2012); the March 2013 Implementing Agreement (IA); and the Intra-Service Biological Opinion on the Permit application (Service 2013). These documents are incorporated by reference. The Service reviewed the above-described documents, as well as other available biological information and other documentation, in accordance with 16 U.S.C. 1539(a), 50 C.F.R. 17.22(b), 17.32(b), and other applicable laws and regulations.

Under the proposed Permit, Stanford would receive incidental take authorization for Covered Activities identified in the revised HCP. Covered Activities may be carried out by Stanford or those under Stanford's direct control (i.e., lease holders and utility providers). In all cases, compliance with the revised HCP is required for take authorization to remain in effect, including compliance with incidental take limits (described in Chapter 5 of the HCP), and applicable avoidance, minimization, and mitigation measures (described in Chapter 4 of the HCP).

Covered Species

The following three animal species are proposed for coverage under the HCP: the endangered San Francisco garter snake, threatened California red-legged frog, and threatened Central Distinct Population Segment of the California tiger salamander (collectively, Covered Species). Assurances provided under the "No Surprises" rule at 50 C.F.R. 17.3, 17.22(b)(5) would extend to all Covered Species.

Permit Area

Stanford owns more than 8,180 contiguous acres of land in northern Santa Clara and southern San Mateo Counties in the southeastern portion of the San Francisco Peninsula. The Permit Area is the area in which the Applicants are requesting incidental take authorization of Covered Species. The Permit Area covers 4,372 acres of Stanford's lands within unincorporated Santa Clara County and the City of Palo Alto (HCP Figure 1-2).

Permit Term

The proposed Permit term is 50 years. Section 6.0 of the IA describes provisions for revocation, suspension, or termination by the Service of the Permit and is consistent with permit revocation and suspension requirements at 50 C.F.R. 13.27, 17.22(b)(8), 17.32(b)(8). Under these provisions,

should Stanford request early termination of its Permit, Stanford would be required to fulfill its mitigation obligations for all Covered Activities. Mitigation obligations will be in accordance with the HCP and the IA for all Covered Activities approved, authorized, or carried out. The Service may suspend or revoke a Permit because of a violation of the Permit and/or pursuant to any applicable Federal laws or regulations. If the Permit is revoked or suspended, the Permittee remains obligated to fulfill all of its responsibilities under the Permit for any permitted activity approved, authorized, or carried out by the Permittee between the effective date of the Permit and date of the Permit suspension or revocation.

Covered Activities

If issued, the proposed Permit would authorize the incidental take of Covered Species associated with the Covered Activities described in Chapter 3 of the HCP and in the Biological Opinion (Service 2013) and summarized below.

The following categories of activities are covered under the HCP:

1. Ongoing operations of Stanford, including maintaining, renewing and necessary development of the campus (e.g., landscape; facility maintenance; civil, energy; and communications infrastructure; fire suppression),
2. Academic activities (e.g., archeological digs; stream monitoring; water sampling; and geological sampling),
3. Recreational activities, and
4. Future development associated with the Santa Clara County 2000 General Use Permit and other development which may occur under future permits from Santa Clara County and the City of Palo Alto.
5. Implementation of the HCP

The proposed Permit would also cover incidental take associated with activities carried out by utility providers (such as PG&E) and Stanford lessees under their direct control through the issuance of Certificates of Inclusion. These activities include:

6. Equestrian facilities,
7. Agricultural activities,
8. Commercial and institutional activities, and
9. Operation of civil, energy, and communications infrastructure.

Conservation Strategy

The purpose of the HCP is to promote biological conservation on Stanford's lands while allowing Stanford to carry out operations and maintenance activities necessary to sustain Stanford University and allow a maximum of 130 acres of development of potential habitat within the Permit Area as described in Chapters 3 and 5 the HCP. Additional permanent loss of habitat associated with Covered Activities other than development, such as maintenance of existing utilities will occur. The HCP provides for a multi-species mitigation program for the protection and conservation of Covered Species and their habitats in the Permit Area. The HCP establishes a conservation program to minimize and mitigate the incidental take of Covered Species associated with the expected loss of habitat and the impacts this loss would have on the Covered Species. Chapter 4 of the HCP describes in detail the conservation program that has been developed to avoid, minimize, and mitigate impacts to Covered Species.

The Conservation Strategy divided the Permit Area into four management zones based on their relative use and expected value to Covered Species. The management zones are described below:

Zone 1. Zone 1 (approximately 623 acres) supports one or more of the Covered Species or provides important resources for a Covered Species. Areas currently degraded by the presence of a temporary land use are included in Zone 1, if they are deemed important for the long-term persistence of a Covered Species. Development in Zone 1 will be avoided to the maximum extent feasible. Despite best efforts to avoid development activities in Zone 1, up to 28 acres of habitat may be lost and will be mitigated for in accordance with Table 4-1 of the HCP. Some areas in Zone 1 will be subject to extensive restoration and enhancement.

Zone 2. Zone 2 (approximately 517 acres) provide some of the resources used by the Covered Species. These areas generally do not support Covered Species on a year-round basis, but provide indirect benefits by providing a buffer between Zone 1 areas and areas that are impacted by urban and other uses. Zone 2 does not include any known breeding habitat for Covered Species. Under the proposed Conservation Program, most of these areas will be maintained in a manner that will preserve their habitat values, and some portions of Zone 2 may be enhanced to improve the habitat for Covered Species. When feasible, land in Zone 2 will not be developed; however, similar to Zone 1 some habitat loss may occur; therefore, the HCP included up to 40 acres of habitat loss in Zone 3 that would be mitigated for in accordance with Table 4-1 of the HCP.

Zone 3. Zone 3 (approximately 688 acres) is generally undeveloped open space lands that have some biological value, but provide only limited and indirect benefit to the Covered Species. Under the proposed Conservation Program, these areas will be operated and developed in a manner that minimizes impacts to Covered Species, but these lands provide limited habitat values compared to Zones 1 or 2. Up to 62 acres of habitat loss is expected in Zone 3 and will be mitigated for in accordance with Table 4-1 of the HCP.

Zone 4. Zone 4 (approximately 2,544 acres) includes urbanized areas that have been developed by Stanford or its ground lessees and those areas that are completely surrounded by urban

development and/or roads, or are otherwise isolated from areas that support Covered Species in greater numbers. Zone 4 includes small, but highly developed facilities, such as the radio telescope which are located in areas that otherwise support Covered Species. Minimization measures will reduce the likelihood that a Covered Species would be taken as a result of Covered Activities in Zone 4. Incidental take of California tiger salamanders, California red-legged frogs, and San Francisco garter snakes associated with the relocation of individuals from Zone 4 into appropriate habitat will be limited to 5 individuals of each species per year for the permit term. Relocation will be performed by a biologist approved by U.S. Fish and Wildlife Service. Habitat loss in Zone 4 is not expected.

Habitat areas for the Covered Species have been divided into two geographical areas; the Matadero/Deer Creek Basin and the California Tiger Salamander Basin. Stanford will establish two corresponding areas to preserve large areas of biologically sensitive habitat within each of the basins: The 90-acre Matadero/Deer Creek Easement Area (HCP Figure 4-3), and the 315-acre CTS Reserve and Central Campus CTS Management Area (HCP Figure 4-4). Stanford will implement a “mitigation account system” that will (1) establish mitigation lands (and associated mitigation credits) at the outset of HCP implementation; and (2) continuously track the utilization of such mitigation credits over time. Each acre of preserved habitat within the Matadero/Deer Creek Easement Area will provide 90 credits for mitigation accounting purposes. Within the CTS Reserve Stanford will earn 1 credit for every upland acre preserved and 25 credits for every acre of ponds that meet the definition of “breeding habitat” (HCP page 4-17) and meet both short term and long term success criteria. Stanford will offset the loss of habitat before it is lost by withdrawing credits from the appropriate mitigation account thereby ensuring that mitigation will always stay ahead of development. Lands will be managed in accordance with Habitat Monitoring and Management Plans (HCP Chapter 4).

Additional credits may be earned in the Matadero/Deer Riparian Account by permanently preserving additional habitat and by enhancing and/or creating additional habitat. One credit per 200 feet of creek banks may also be earned by repairing and stabilizing creek banks using bioengineered stabilization methods to proactively remediate erosion and bank stabilization problems. However, these actions will not receive credits if associated with a project or if conducted to protect existing Stanford infrastructure. One credit per 200 feet of creek bank may be earned from the restoration of natural geomorphology of stream channels without replacement of existing hardscape with bio-engineered stabilization methods. One credit may be earned for the installation of additional water quality monitoring stations along the creeks if they are operated for 5 years.

Credits may be earned by permanently conserving habitat in the CTS Reserve and held in the CTS Account. Stanford earns 1 credit for each additional acre of riparian habitat or upland tiger salamander/garter snake habitat that it permanently preserves, and 25 credits for each acre of permanently preserved tiger salamander breeding habitat.

To address impacts to tiger salamanders and garter snakes, Stanford will create a California Tiger Salamander Account (CTS Account). Stanford will not initially earn mitigation credits for these Reserve lands, but will earn credits when it permanently preserves Reserve lands through

recording of conservation easements. An area of the central campus will be managed for the benefit of tiger salamanders and garter snakes, as described in Section 4.3.2.4 of the HCP.

The amount of credits in the mitigation accounts may be increased by enhancing habitat and using the credits at a later date. The Enhancement Options described in Table 4-2 of the HCP allow Stanford to earn credits for performing habitat enhancements that are likely to benefit the Covered Species. If other enhancements are identified during the Permit Term, Stanford may earn credits for those enhancements that are consistent with the allocation of credits presented in Table 4-2 of the HCP.

Credits earned through additional permanent preservation and habitat enhancements will be credited according to the location of the preserved or enhanced habitat. Permanent land preservation within the Matadero/Deer Basin will be credited within that account. Permanent land preservation within the CTS Reserve will be credited towards the CTS Account. Stanford may enhance tiger salamander habitat at any time. However, no credits will be awarded for these enhancements until a permanent conservation easement is recorded over the habitat or until any required success criteria are met.

Prior to performing any restoration or enhancements, Stanford will prepare a plan that describes the proposed enhancement and/or restoration, minimum and long-term success criteria, monitoring plan, and number of credits to be awarded. The plan will describe when, and under what circumstances, mitigation credits will be awarded. Credits or partial credits are awarded when the minimum success criteria are achieved. This plan will be reviewed and subject to approval by the Service.

USE OF MITIGATION ACCOUNT CREDITS

Every acre of Zone 1 habitat that is permanently converted will require three mitigation credits, every acre of Zone 2 habitat will require two mitigation credits, and every acre of Zone 3 land will require a 0.5 mitigation credit (Table 1).

Table 1. Mitigation Ratios for each Habitat Management Zone

Management Zone	Credits Required Per Acre Of Converted Habitat
Zone 1	3
Zone 2	2
Zone 3	0.5
Zone 4	0

Development in Zone 4 will not result in take of Covered Species, because Zone 4 does not provide suitable habitat for the Covered Species. The Service expects take of Covered Species in Zone 4 to be minimal; however, some take associated with minimization measures (such as

relocation of individual animals) may occur. While no specific mitigation (in the form of land preservation) is identified in the HCP for Zone 4, primarily because it is highly urbanized and no loss of habitat is expected, implementation of the conservation strategy as a whole is expected to mitigate the take of any take in this zone

Matadero/Deer Riparian Account

Within 1 year of issuance of the Permit, Stanford, will fund the Matadero/Deer Riparian Account by recording a permanent conservation easement over 90 acres of the most biologically sensitive portions of Matadero and Deer creeks and adjacent riparian lands (see HCP Figure 4-3). The 90-acre Matadero/Deer Easement includes the riparian zone, which is all of the undeveloped land within 150 feet of the top of the creek bank, the creek channels, and a portion of small tributary of Matadero Creek that originates in an abandoned quarry. The Matadero Creek watershed, which includes Deer Creek, is relatively small; approximately 7.25 square miles. Matadero and Deer creeks are part of a single watershed and display similar characteristics. The Matadero/Deer Easement will be managed in perpetuity for the benefit of the red-legged frog and garter snake in accordance with Matadero/Deer Monitoring and Management Plan.

Incidental Take Avoidance and Minimization Measures

Chapter 4 of the HCP and the Service's Intra-Biological Opinion (Service 2013) discuss in detail specific avoidance and minimization measures designed to minimize the likelihood of actual mortality or injury of individuals of Covered Species. Required avoidance and minimization measures include, but are not limited to: (1) specific conditions on Covered Activities (HCP Section 4.2); (2) development and implementation of a worker education program by the Conservation Manager; (3) bioengineered structures for creek bank stabilization; (4) a Conservation Manager to oversee compliance of the HCP (HCP Section 6.3.2); (5) land preservation according to Zones (HCP Section 4.3); and (6) restoration or enhancements (HCP Section 4.3). In rare instances, certain avoidance and minimization measures identified in Chapter 4 of the HCP may not be able to be implemented. In those cases, and if there is a short-term disruption of habitat or a permanent loss of habitat, mitigation will be provided in accordance with Section 4.4 of the HCP and will be described in the Annual Report in accordance with Sections 6.4 and 6.4.1 of the HCP.

Establishment and Management of Preserves in Perpetuity

Stanford will form a non-profit organization that is qualified under Section 815 of the California Civil Code to hold the conservation easements that are established under the HCP. Stanford is responsible for HCP implementation, including the implementation of the Matadero/Deer Easement Monitoring and Management Plan, CTS Reserve Monitoring and Management Plan, and the Central Campus CTS Monitoring and Management Plan, and any subsequent perpetual monitoring and management plans. During the Permit term the Service will have the primary responsibility for determining Stanford's compliance with the terms of the HCP and conservation easements. Following the expiration of the Permit the non-profit organization will have the primary responsibility for enforcing the terms of the conservation easements and associated long-term monitoring land management plan and the non-profit organization will have the authority to

legally enforce the terms of the conservation easement deeds. The Service will be a third-party beneficiary of the conservations easement.

Monitoring and Reporting Plan

Stanford will submit an “Annual Report” to the Service documenting permit compliance. The Annual Report will include the amount of impact, land preservation and enhancement and studies, management actions, monitoring results, and any changed or unforeseen circumstances that occurred. The Annual Report will describe any enhancements planned for the upcoming year, plans to withdraw credits or preserve additional land during the upcoming year, and anticipated changes in management techniques including an explanation of why those changes are needed, confirmation that funding has been committed for the next year, and disclose any difficulties encountered in implementing the HCP.

The Annual Report is due on October 1, or the first business day in October if the first day of the month falls on a non-business day, each calendar year, or portion of a calendar year, during which the Permit is in effect. If Stanford cannot provide the Annual Report by the first business day in October, it may request an extension. The Service will provide Stanford with comments on the Annual Report within 60 days of receipt of the report. If the Service cannot respond within the 60-day period, it may request an extension.

Every 5 years Stanford will prepare an overview report that describes trends in species’ distribution and abundance, and habitat quality. The 5-year report will synthesize data provided in the previous Annual Reports (and any relevant data from the previous biological monitoring results that was not specifically included in an Annual Report) and include data about regional changes, such as climate change, flood control activities, urban development, major wildfires, floods, and droughts that have affected the Covered Species.

Biological Goals and Objectives

Biological goals and objectives were based upon the species needs within the Permit Area. Biological goals and objectives can be found in Attachment 1.

Adaptive Management Plan

Adaptive management actions will be made consistent with Section 4.5 of the HCP. The data provided through the monitoring program and new scientific or technical information will provide the basis for any changes within the Conservation Program. Changes in management that are substantial and are beyond the scope of the Adaptive Management program will require an amendment of the Permit, and additional review and approval under the Act. Stanford will document any changes made to the Conservation Program resulting from the Adaptive Management program in the Annual Report.

Changed and Unforeseen Circumstances

Changed and unforeseen circumstances are described in Section 6.6 of the HCP and Section 9.0 of the IA. Stanford provided planned responses to the changed circumstances in accordance with the Service's "No Surprises" rule at 50 C.F.R. 17.22(b)(5) and 17.32(b)(5). Stanford, in consultation with the Service, identified eight changed circumstances. Five of the changed circumstances apply to types of environmental events: fire; flood, drought, invasion by non-native species, and disease. In the event of the changed circumstances identified above, Stanford shall assess the damage and with the concurrence of the Service, prepare a report, and recommend remedial measures. Funding will be provided as described in Section 6.5 of the HCP. Three other changed circumstances address the release of toxic substances and illegal dumping, listing of new species, and incidental take of an existing listed species that may become established at Stanford, such as the Bay checkerspot butterfly (*Euphydryas editha bayensis*) if the species returns to Jasper Ridge.

II. PUBLIC COMMENT

The Services published a NOA for the DEIS and Draft HCP in the Federal Register (75 FR 18482) on April 12, 2010, initiating a 90 day public review period. On May 25, 2010, the Services held a public meeting on the Stanford campus regarding the DEIS. Based on public comments, the Services extended the public comment period an additional 45 days to August 30, 2010 (75 FR 41157). During the comment period the Services received 30 comment letters from Federal and local agencies, environmental organizations, and the general public. The Services received over 3,000 form electronic messages regarding impacts from Searsville-related activities on CCC steelhead, water quality and hydrology, and requesting that the Searsville Dam be removed.

The Services published a NOA for the FEIS and Final HCP in the Federal Register (77 FR 70147) on November 23, 2012, initiating a 30 day public review. Subsequently on December 6, 2012, Stanford submitted a letter to the Services requesting that the Services temporarily suspend the processing of the Section 10(a)(1)(B) permit application for the San Francisquito/Los Trancos Basin portion of the HCP. As the CCC steelhead would only be affected by Covered Activities within the San Francisquito/Los Trancos Basin, NMFS will not be issuing a Permit at this time. A revised HCP was submitted to the Service on March 26, 2013, and subsequent revisions and clarifications on August 1, 2013, for only the CTS Basin, the Matadero/Deer Creek Basin, and the central campus areas. The revised HCP removed the Covered Activities and the portion of the conservation program associated with the San Francisquito/Los Trancos Basin from coverage. Stanford also requested the pond turtle be removed as a Covered Species. Stanford submitted final revisions and clarifications to the HCP to the Service on August 1, 2013. The revised HCP is a subset of the Final HCP (and Draft HCP) which the Service had already made available for public review. The Service, therefore, determined that under the National Environmental Policy Act (NEPA) and the Act it was not necessary to neither revise the FEIS nor recirculate the revised HCP for public inspection as the proposed impacts were less than those originally analyzed.

The issues of greatest concern raised in the comments to date are listed below. These issue areas and their resolution as it relates to the Stanford HCP and EIS are discussed in responses to comments in Volume II, Chapter 3 of the FEIS. Key issues and concerns include the following: Future disposition of Searsville Dam and Reservoir; Past, present, and future impacts of

Searsville Dam, Reservoir, Diversion, and other Searsville-related activities on the human environment; Relationship between Searsville Dam and other components of Stanford's local water system; Inclusion of modifications to Searsville Dam and Reservoir in the HCP for the benefit of CCC steelhead; Potential future flood reduction activities by non-Stanford entities and the HCP; Best available data and analysis regarding CCC steelhead populations and habitat conditions in the San Francisquito Creek watershed; Stanford's State of California water rights; and Interrelated and interdependent activities, and cumulative effects (Service 2012).

III. INCIDENTAL TAKE PERMIT CRITERIA-ANALYSIS AND FINDINGS

1. The taking will be incidental.

The Service finds that take of Covered Species will be incidental to otherwise lawful activities. The activities for which incidental take coverage are sought under the Permit include on-going operation of the University including maintaining, renewing and necessary development of the campus; academic activities; utility installation and maintenance, bridge and road maintenance, grounds maintenance and fire control, agricultural and equestrian operations by leaseholders; recreational activities associated with up to 130 acres of future development associated with the Santa Clara County 2000 GUP and other development which may occur under future permits from Santa Clara County and the City of Palo Alto on Stanford lands within the Permit area. Stanford would also receive incidental take coverage for activities related to conservation actions such as species monitoring, species removal from central campus/urbanized areas, construction areas, and habitat restoration locations. Additional covered activities that would be carried out by Stanford lessees and utility providers under Certificates of Inclusion include equestrian facilities; agricultural activities; commercial and institutional activities, and operation and civil, energy and communication infrastructure. Any take resulting from the broad range of Covered Activities will be incidental to, not the purpose of, these otherwise lawful activities.

2. The Permittee will, to the maximum extent practicable, minimize and mitigate the impacts of taking covered animal species and the effects to other Covered Species that may occur within the Permit Area.

The Service finds that the Permittee will minimize and mitigate the impacts of take of the Covered Species to the maximum extent practicable. The Permittee has developed the HCP, its associated conservation strategy, and IA pursuant to the incidental take permit requirements at 50 CFR 17.22(b)(2) and 50 CFR 17.32(b)(2), which require measures to minimize and mitigate the effects of issuing permits. The HCP also complies with the Services' 5-Point Policy (65 FR 35241). Under the provisions of the HCP, the impacts of the take will be minimized, mitigated, and monitored in accordance with the requirements of the Permit through the measures identified above in the Conservation Strategy section and Section 4 (Conservation Program) of the HCP. Under these provisions, the impacts of take will be minimized, mitigated, and monitored in accordance with the Permit requirements of Permit Number TE 182827 through the following measures:

- (1) Implementation of incidental take minimization measures to minimize impacts to Covered Species.

(2) Enhancement and active management of 90 acres of the most biologically sensitive portions and adjacent riparian areas along Matadero and Deer creeks. These acres will be placed under a conservation easement in perpetuity within one year of permit issuance. Credits created by the placement of these conservation easements will be withdrawn as described in Section 4.4 of the HCP. Stanford will create a 315 acre CTS Reserve within one year of permit issuance and will implement a CTS Reserve Monitoring and Management Plan. Lands within the CTS Reserve will be placed under a conservation easement as lands within Zone 1, 2, or 3 that are within the California Tiger Salamander Basin are impacted in accordance with the ratios described in Section 4.4 of the HCP. In addition, Stanford will implement a Central Campus CTS Monitoring and Management Plan that will govern the management of Lagunita and approximately 95 acres of tiger salamander and garter snake habitat within Zones 1 and 2 north of Junipero Serra Boulevard (JSB) (HCP Figure 4-4).

(3) Establishment of a monitoring and reporting plan to gauge the anticipated biological success and effectiveness of preserving Covered Species and associated habitat, and subsequently provide information for Adaptive Management.

(4) Stanford is responsible for ongoing habitat conservation, monitoring and management as described in Sections 4.3 and 4.6 of the HCP. As part of the HCP's implementation, conservation easements will be created pursuant to Section 815 of the California Civil Code, and Stanford will form a qualified non-profit to hold the Matadero/Deer Easement and any subsequent conservation easements granted in accordance with Section 4.3 of the HCP. Under the Civil Code, only tax exempt non-profit entities whose primary purpose is the preservation, protection, or enhancement of land are eligible to hold conservation easements. The Service will be a third-party beneficiary of the conservation easements with the right to enforce the terms of the conservation easements.

Stanford will relinquish any future rights to develop the conservation easement areas and alterations to the topography of the easement areas are generally restricted unless it is for the benefit of the Covered Species. Stanford will be allowed to continue to access existing improvements through the easement areas or to operate and maintain any utilities or other improvements that are within the conservation easements, but new improvements will generally be prohibited.

To make the finding that the conservation measures minimize and mitigate the impacts of take to the maximum extent practicable, the Service must first evaluate whether the conservation measures are rationally related to the level of take anticipated under the HCP. In effect, the minimization and mitigation measures need to address the biological needs of the Covered Species in a manner commensurate with the impacts to the species allowed under the HCP. The Service believes the level of minimization and mitigation provided for in the HCP compensates for the impacts of take of each Covered Species that will or could potentially occur under the Plan. Take of each of the Covered Species anticipated under the HCP will be in primarily in the form of harm and harassment resulting from up to 130 acres of habitat loss, but limited mortality may occur. There is no anticipated mortality of garter snakes.

The Service evaluated the effects to Covered Species from 130 acres of habitat loss resulting from Covered Activities, as described above. The Service concludes that with respect to all of the Covered Species, the impacts of take will be effectively mitigated by the conservation actions described below. The Service made this conclusion because (1) Stanford constitutes a small portion of most of the species' ranges; (2) for the red-legged frog and garter snake, habitat remains available both within and outside of the Permit Area to satisfy the species' essential behavioral needs; (3) Lagunita will continue to be managed for the benefit of the only known tiger salamander population remaining on the San Francisco peninsula for the Permit Term; and (4) the habitat value of the managed conserved lands to the species is greater than the value of the various habitat types that will be converted to urban development. The Service concludes that for each of the Covered Species, the level of take will be low, and the loss of habitat resulting from the HCP implementation is not expected to significantly impair the essential behavior patterns of these species resulting in their injury or death.

California Tiger Salamander

Stanford has the last known population of tiger salamanders on the San Francisco peninsula. In accordance with the HCP, Stanford will implement a Central Campus CTS Monitoring and Management Plan that will cover the management of approximately 95 acres in Zones 1 and 2 including the CTS Basin. Further, Stanford will create a 315 acre CTS Reserve south of JSB and implement a CTS Reserve Monitoring and Management Plan. The CTS Reserve contains eight constructed breeding ponds, three of which have documented breeding. However, because it is unknown when, or if, Stanford will develop any habitat within the CTS Basin, Stanford will not place conservation easements on the 315 CTS Reserve until such time as a loss of habitat is identified. Easements would first be recorded in areas that contain breeding ponds and immediately adjacent upland habitat. Subsequent recorded easements would expand outward from there. All the conservation easements would be contiguous and would be subject to review and approval by the Service. Mitigation credits would be established and withdrawn as identified in Table 4-2 of the HCP and subject to review and approval by the Service.

San Francisco garter snake

The taxonomic status of the garter snake at Stanford is uncertain; however, it is believed that Stanford represents an intergrade zone between the San Francisco garter snake and the California red-sided garter snake (*Thamnophis sirtalis infernalis*). For the purposes of the HCP, Stanford is considering all garter snakes as the San Francisco garter snake. At Stanford, garter snakes are rarely encountered, but snakes have been observed regularly at Lagunita. Because San Francisco garter snakes are considered ranid frog specialists, but they also eat other amphibians, conservation actions that benefit the red-legged frogs and tiger salamander will be beneficial for San Francisco garter snakes.

California Red-legged Frog

Since 1997, annual red-legged frog monitoring has documented two distinct frog populations, one along Matadero and Deer creeks, and one along San Francisquito Creek (HCP Figure 2-2);

however only the Matadero and Deer creek red-legged frog population is covered under the HCP.

Within one year of the issuance of this Permit, Stanford will record a permanent conservation easement of 90 acres of the most biologically sensitive portions of Matadero and Deer creeks and adjacent riparian lands. The easement will cover the creeks and all the undeveloped land within 150 feet of the top of the creek bank, the creek channels and a portion of a small tributary of Matadero Creek that originates in an abandoned quarry. Stanford will also implement management and monitoring activities for red-legged frogs within the Matadero/Deer Creek easement. These actions include monitoring for non-native plants and animals; construction of two breeding ponds; a hydrologic study to determine the feasibility of enhancing the quarry pond to improve red-legged frog reproduction; installation of water monitoring stations in the creeks; revegetation activities; erecting livestock fencing where necessary, bank stabilization; prohibition of feral cat feeding stations; prohibition of new permanent structures unless necessary for Covered Species or human safety; and long term monitoring management plan that will survive the Permit expiration.

3. The applicant(s) will ensure that adequate funding for the plan and procedures to deal with unforeseen circumstances will be provided.

The Service finds that the Permittee will ensure funding adequate to carry out the HCP and provide funding for the restoration, management, and monitoring of the conservation lands. Stanford owns all the lands they are providing as mitigation and will not need to purchase off-site mitigation. Stanford anticipates that implementation costs for these areas and additional habitat enhancements for the Covered Species are estimated to be \$300,000 - \$500,000 per year. These estimates were derived from a review of current open space and habitat management expenditures in other comparable areas and include: salary for the Conservation Program Manager and other support staff; field work staff, including graduate students and consultants; support equipment such as vehicles and storage facilities; enhancement projects such as new ponds or restoration, with budgets likely accrued annually and conducted periodically; ongoing management of the Matadero/Deer Creek easements, CTS Central Campus Monitoring and Management Plan and the CTS Reserve; species monitoring; and preparation of annual reports.

Stanford is financially solid and derives income from rents, financial investments, tuitions and private contributions. By resolution Stanford's Board of Trustees will approve the HCP and the IA binding Stanford to carrying out the terms and conditions and funding requirements of the HCP. Stanford will commit a line item for HCP implementation into its annual operating budget. That budget item will be sufficient for all aspects of the HCP implementation.

Stanford will prepare long-term monitoring and management plans for the habitat that is protected through a conservation easement deed. These monitoring and management plans will be subject to review and approval by the Service and will survive the expiration of the Permit and the HCP. Stanford will be responsible for ensuring that the long-term easement-related management and monitoring actions are funded after the Permit expires. Funding for these future monitoring and management actions will be addressed in the long-term management plans.

Unforeseen Circumstances

The Service finds that the HCP includes adequate procedures to address Unforeseen Circumstances. The HCP and IA include procedures for determining the occurrence of, and responses to, both changed and unforeseen circumstances. The Permittee has identified, described, and provided responses in the HCP for eight changed circumstances that may affect Covered Species and their habitat, and can reasonably be anticipated and planned for in the HCP.

Changed circumstances identified in the HCP are: fire; floods; drought; non-native invasive species; disease; toxic substance release and illegal dumping; listing of new species; and take of additional listed species. The HCP uses the Adaptive Management strategy and funding to respond to the specified changed circumstances. In accordance with the Service's "No Surprises" regulations at 50 CFR 17.22(b)(5) and 17.32(b)(5), in the event of an unforeseen circumstance, and assuming the Plan is being properly implemented, the Permittees may be required to make modifications within the conserved lands or to the HCP's conservation strategy, but only if such modification will not involve the commitment of additional land, water, or other natural resources beyond the level agreed to under the HCP, unless the Permittee consents to such additional mitigation.

4. The taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild.

The Service finds that the authorized taking will not appreciably reduce the likelihood of the survival and recovery of the federally listed Covered Species in the wild. The Act's legislative history establishes the intent of Congress that this issuance criterion be identical to a finding of "no jeopardy" pursuant to Section 7(a)(2) of the Act and the implementing regulations pertaining thereto (50 C.F.R. 402.02). As a result, the Service has reviewed the HCP under section 7 of the Act. In the Intra-Biological Opinion (Service 2013), the Service reviewed the current status of the Covered Species; the environmental baseline for each of the Covered Species in the action area; and the direct, indirect and cumulative effects of the proposed action, including the adverse effects and conservation. As indicated in the Service's Intra-Biological Opinion (Service 2013), the Service concludes that issuance of an incidental take permit for the HCP is not likely to jeopardize the continued existence of the three Covered Species. Critical habitat for the three Covered Species does not occur within the Permit area; therefore none will be affected. The rationale for these conclusions is discussed in detail in the Service's Intra-Biological Opinion (Service 2013).

5. Other measures, as required by the Director of the Fish and Wildlife Service, as necessary or appropriate for the purposes of the plan will be met.

The Service finds that all additional measures required by the Service as necessary or appropriate for the HCP are included in the HCP, IA, and/or the Permit.

6. The Service has received the necessary assurances that the plan will be implemented.

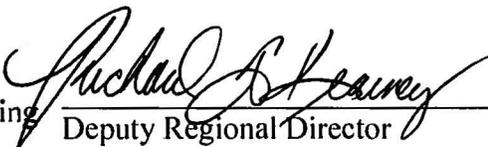
The Service finds that the HCP and IA provide the necessary assurances that the HCP will be carried out by Stanford. By accepting the Permit, Stanford is bound to implement fully the provisions of the HCP in accordance with the Permit.

V. GENERAL CRITERIA AND DISQUALIFYING FACTORS – FINDINGS

The Service has no evidence that the Permit application should be denied on the basis of the criteria and conditions set forth in 50 C.F.R. 13.21(b) – (c).

VI. RECOMMENDATION ON PERMIT ISSUANCE

Based on the foregoing findings with respect to the proposed action, I recommend approval of the issuance of Permit Number TE 182827 in accordance with the Stanford HCP and its supporting IA.

Acting 
Deputy Regional Director
Pacific Southwest Region
U.S. Fish and Wildlife Service

Date 8/13/2013

LITERATURE CITED

- U. S. Fish and Wildlife Service. 2012 Final Environmental Impact Statement for Authorization for Incidental Take and Implementation of the Stanford University Habitat Conservation Plan. Vol. I and II. Prepared by TRA Environmental Sciences, Inc.
- _____. 2013a. Intra-Service Biological Opinion on Issuance of a Section 10(a)(1)(B) Incidental Take Permit for the Stanford University Habitat Conservation Plan, San Mateo and Santa Clara Counties, California.

Attachment 1

Biological Goals and Objectives

Goal #1. Maintain and enhance natural communities so that they benefit the Covered Species.

Objective 1.1. Protect 3.5 contiguous miles of riparian vegetation and creek along Matadero Creek (2 miles), and Deer Creek (1.5 miles).

Objective 1.2. Protect no less than 90 acres along Matadero and Deer creeks within 1 year of issuance of an incidental take permit by the Service. Width of easement should range between 75 feet and 600 feet, averaging approximately 225 feet. Dedication of a conservation easement that permanently protect high-quality habitat from urban encroachment should allow the populations of red-legged frogs and garter snakes to increase naturally, and prevent mortalities associated with urban land uses.

Objective 1.3. Implement site-specific management and monitoring plans for the permanent riparian conservation easement area that would prohibit new structures, support revegetation and restoration activities, survey for Covered and non-native species, and control non-native species.

Objective 1.4. Protect 300 acres of grassland and seasonal ponds by establishing a no-build zone south of Junipero Serra Boulevard.

Objective 1.5. Implement a site-specific management and monitoring plan for the protected land to survey for Covered and non-native species, limit recreational activities, and provide vegetation management.

Objective 1.6. Move temporary structures and roads to areas more than 150 feet from the top of the creek bank, and revegetate vacated areas.

Objective 1.7. Restore 10 acres of riparian habitat and adjacent upland habitat.

Goal #2: California tiger salamander: Stabilize the local California tiger salamander population and increase its chance of long-term persistence at Stanford.

Objective 2.1. Protect, enhance, and expand prime habitat for the California tiger salamander, including both upland and aquatic habitat, in areas relatively distant from existing population sinks, by setting aside and prohibiting development for 50 years on no less than 300 acres in the foothills south of Junipero Serra Boulevard within 1 year of issuance of an incidental take permit by the Service.

Objective 2.2. When California tiger salamander habitat in less desirable areas is permanently impacted, permanently protect habitat for California tiger salamander through the dedication of permanent conservation easements within the 300 acres.

Objective 2.3. Eliminate or reduce non-native plant and animal species that are impairing California tiger salamander reproduction or survival.

Objective 2.4. Facilitate California tiger salamander movement between developed areas that provide at least some marginal habitat and protected high-quality California tiger salamander habitat by maintaining at least three amphibian tunnels across Junipero Serra Boulevard.

Objective 2.5. Continue to supply water to Lagunita to allow metamorphosis of larval CTS.

Goal #3: California tiger salamander ponds: Maintain ponds to promote California tiger salamander reproduction in the Foothills.

Objective 3.1. Reduce the California tiger salamanders' reliance on Lagunita by constructing and maintaining a complex of a minimum of 10 seasonal ponds in the foothills to provide additional breeding location opportunities, and achieve California tiger salamander reproductive success in no less than 75% of the ponds.

Objective 3.2. Provide an appropriate environment for CTS, including an appropriate pH, a minimum depth of 12 inches, and an adequate invertebrate food source while CTS and larvae are present.

Objective 3.3. Within the first 3 years, construct five additional cover piles within 150 feet of the existing ponds to promote occupancy of the area by ground squirrels.

Objective 3.4. Any new ponds will have a minimum of three cover piles associated with them.

Objective 3.5. Manage grass height appropriate for ground squirrels and CTS around CTS ponds to an approximate distance of 500 feet from the ponds.

Objective 3.6. Modify or eliminate constructed ponds that the annual monitoring shows are not ponding during years of average or above average rainfall for a sufficient period of time to support California tiger salamander reproduction, or that are otherwise not adequately supporting tiger salamander reproduction.

Goal #4: California red-legged frog: Increase the local California red-legged frog population and increase its chance of long-term persistence at Stanford.

Objective 4.1. Protect riparian and adjacent upland areas for the benefit of California red-legged frog by dedicating a conservation easement along Matadero and Deer creeks that permanently protect no less than 90 acres of high-quality California red-legged frog habitat within 1 year of issuance of an incidental take permit by the Service.

Objective 4.2. Eliminate or reduce non-native species that are impairing California red-legged frog reproduction or survival.

Objective 4.3. Create additional areas suitable for California red-legged frog reproduction, including off-channel ponds and side channels, by designing and building a minimum of two new breeding sites located off any of the main creek channels.

Goal #5: San Francisco garter snake: Maintain or improve habitat that could support the San Francisco garter snake and continue to contribute to the body of information about garter snakes at Stanford.

Objective 5.1. Protect riparian and adjacent upland areas for the benefit of San Francisco garter snake by dedicating a conservation easement along Matadero and Deer creeks that permanently protect no less than 90 acres of potential high quality San Francisco garter snake habitat within 1 year of issuance of an incidental take permit by the Service.

Objective 5.2. Continue to supply water to Lagunita to promote a prey base for San Francisco garter snake.

Objective 5.3. Eliminate or reduce non-native species that could impair San Francisco garter snake reproduction or survival.