2.0 PURPOSE AND NEED

The Services have received applications from Stanford for ITPs under the ESA to take certain federally protected species incidental to otherwise lawful activities. This DEIS addresses the potential environmental consequences of the proposed and alternative actions. The USFWS and NMFS are co-lead agencies under NEPA.

2.1 INTRODUCTION

The Services received applications from Stanford for ITPs pursuant to Section 10(a)(1)(B) of the ESA. The ITPs would authorize incidental take of ESA listed species on Stanford's lands. As part of the ITP application process, Stanford prepared an HCP that also includes protection measures for one non-listed species. Collectively, the listed and non-listed species are known as Covered Species. The HCP specifies, among other things: (i) the impacts likely to result from the taking of the Covered Species and the measures Stanford will undertake to avoid, minimize, and mitigate such impacts; (ii) how the HCP would be funded; and (iii) alternatives to the proposed HCP. The Services will determine whether the HCP meets issuance criteria, prepare an EIS and a Record of Decision, and decide whether to issue the requested ITPs.

Stanford is a private entity that owns more than 8,000 contiguous acres in southern San Mateo County and northern Santa Clara County, California, along the southeastern base of the Santa Cruz Mountains on the San Francisco Peninsula (Figure 2-1, Project Location). Stanford's property lies in the Matadero/Deer Creek and San Francisquito/Los Trancos Creek watersheds (Figure 2-2, Primary Watershed Basins).

Approximately 40 percent of Stanford's property has been intensively developed with urban facilities such as academic buildings, student and faculty housing, administrative buildings, commercial and retail buildings, roads, sidewalks, and a variety of recreational amenities such as playing fields, equestrian facilities, a golf course and golf driving range. In contrast, other portions of the property are currently undeveloped or have only minor development (Figure 2-3, Land Use).

The ITP applications request authorization for the incidental take of four federally listed species and for one currently unlisted species that may become listed within the 50-year permit period (Table 2-1). Table 2-1 identifies the "Covered Species" that would be covered under the Federal ITPs, their listing status and the agency that has, or would have, jurisdiction.

Table 2-1. Species That Would Be Covered Under Federal Incidental Take Permits

Covered Species Common Name (*Scientific Name*)	**Jurisdiction**	**Listing Status**
California red-legged frog (*Rana aurora draytonii*)	USFWS	Threatened
California tiger salamander (Central California DPS) (*Ambystoma californiense*)	USFWS	Threatened
San Francisco garter snake (*Thamnophis sirtalis tetrataenia*)	USFWS	Endangered

Table 2-1. Species That Would Be Covered Under Federal Incidental Take Permits		
Covered Species Common Name (*Scientific Name*)	**Jurisdiction**	**Listing Status**
Steelhead (Central California Coast DPS) (*Oncorhynchus mykiss*)	NMFS	Threatened
Western pond turtle (*Actinemys marmorata*)	USFWS	None

2.2 PURPOSE AND NEED FOR THE FEDERAL ACTION

Certain areas of Stanford's property are occupied by or provide suitable habitat for species that are presently listed as threatened and endangered under the ESA or may become listed under the ESA (see the Figures in Chapter 4 for the location of these species). Normal, otherwise lawful operation of Stanford could result in take of the Covered Species, and Stanford needs a long-term, comprehensive solution that assures compliance with the ESA.

The Services need to ensure compliance with the ESA and continue to conserve the Covered Species and their habitats at Stanford within a comprehensive conservation program that improves habitat functions and connectivity. Specifically, as the Stanford tiger salamander population is the last remaining population on the San Francisco Peninsula, USFWS has a desire to conserve salamanders at Stanford for its potential conservation value.

The purpose of the proposed federal action is to enable the permit applicant (Stanford) to continue academic activities, building construction, and operations and maintenance activities that are consistent with its long-term academic mission that provides protection and conservation of the Covered Species and allows some take of listed Species, as provided for under Section 10(a)(1)(B) of ESA.

The applicant's needs and goals for preparing an HCP, as summarized from Section 1.5 of the HCP (Institutional and Biological Goals), are to: (1) provide cost effective measures to avoid, minimize and mitigate the incidental take of listed and unlisted species that may occur during the present and future operation of Stanford University; (2) utilize Stanford's natural resources in a manner that preserves their utility for future generations; (3) build on past efforts to conserve Stanford's tiger salamander population and steelhead populations; (4) support Stanford's academic mission, maintain land use flexibility, and incorporate sustainable land use practices; and (5) obtain long-term assurances from the Services that Stanford is in compliance with the ESA.

2.3 REGULATORY CONTEXT

2.3.1 National Environmental Policy Act (NEPA)

The National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 et seq.), requires that all Federal agencies proposing major actions with potential significant effects on the quality of the human environment prepare a detailed statement of environmental effects. The Services have concluded that an environmental impact statement review is appropriate for this proposed action.

2.3.2 The Endangered Species Act (ESA)

Section 9 of the ESA prohibits "take" of species that are listed as endangered, and Section 4 provides the Services with the discretion to extend all or some of those protections deemed necessary and advisable to provide for the conservation of threatened species. Take includes harassment, harm, pursuit, hunting, shooting, wounding, killing, trapping, capturing, or collecting a listed species, or attempting to engage in any such conduct. (16 USC §1538(19)) Harm is further defined in ESA implementing regulations as an act which actually kills or injures fish or wildlife, including significant habitat modification or degradation which actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including, breeding, spawning, rearing, migrating, feeding or sheltering. (50 C.F.R. §17.3, and §222.102)

Under Section 10 of the ESA, non-federal entities can apply for an "incidental take permit" (ITP) exempting them from the "take" prohibition for scientific purposes to aid the species' survival, or for an "incidental take" authorization when the project or activity does not involve a federal action and the take is incidental to, and not the purpose of, an otherwise lawful activity. (16 USC §1539(a)(1)(A-B)) Section 10 and the Services' implementing regulations then define under what circumstances the Services will issue an ITP.

Under Section 10(a)(2)(A)(i-iv), no permit may be issued by the Services authorizing incidental take of listed species unless the applicant submits a conservation plan that specifies:

- the impact that will likely result from such taking;
- what steps the applicant will take to minimize and mitigate such impacts, and the funding that will be available to implement such steps;
- what alternative actions to such taking the applicant considered and the reasons why such alternatives are not being utilized; and
- such other measures that the Services may require as being necessary or appropriate for purposes of the plan.

Section 10(a)(2)(B), provides that the Services shall issue an ITP if the Services find, after opportunity for public comment, that:

- the taking will be incidental;
- the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking;
- the applicant will ensure that adequate funding for the plan will be provided;
- the taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild;
- the measures, if any, required by the Services as being necessary or appropriate for purposes of the plan will be met; and

- the Services have received such other assurances as may be required that the plan will be implemented.

In 2000, the Services adopted a five-point policy designed to clarify certain elements of an HCP. 65 FR 35242-35257 (June 1, 2000). The five-point policy recommends that:

- an HCP include specific, measurable biological goals and objectives based on the best available scientific information;

- an HCP include an adaptive management provision;

- an HCP include a monitoring program to gauge the effectiveness of the plan in meeting the biological goals and objectives and the permittees compliance with the plan;

- the Services consider several factors to determine the appropriate duration of an ITP, including the duration of the covered activities and the expected effects on the covered species; and

- the Services expand public participation by providing a 60-day comment period for most HCPs.

The ESA's implementing regulations provide "no surprises" assurances. (50 CFR Part 17.22(b)(5), 17.32(b)(5); 50 CFR 222.307(g)). The no surprises rule assures private landowners that if "unforeseen circumstances" arise, the Services will not require the commitment of additional land, water or financial compensation or additional restrictions on the use of land, water, or other natural resources beyond what is required by the ITP and associated HCP and Implementing Agreement without the permittee's consent. The government will honor these assurances as long as a permittee is implementing the terms and conditions of the HCP, permit, and other associated documents.

2.4 SCOPE OF DEIS ANALYSIS

This DEIS analyzes the potential direct, indirect and cumulative environmental effects of authorizing "take" of the Covered Species through issuance of the requested ITPs and applicant implementation of the proposed HCP. Direct effects are caused by the action and occur at the same time and place. Indirect effects are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. The DEIS considers the physical, biological and socioeconomic effects of the Proposed Action and the alternatives in a study area that includes Stanford lands and immediately adjoining areas. The analysis of cumulative effects uses a broader study area, depending on the resource being assessed.

The DEIS addresses three alternatives: the Proposed Action, No Action, and an HCP for CTS Only. The resource areas analyzed for each alternative are associated with the physical environment (Geology and Seismicity, Cultural and Historical Resources, Hydrology and Water Quality, Air Quality, Noise, Traffic, Hazardous Materials/Waste, Public Services, and Land Use), the biological environment, and the socioeconomic environment. The resource areas of environmental justice and Indian Trust assets were not analyzed in depth because the preliminary analysis indicated these resources are not in the study area and would not be affected.

2.5 SCOPING AND PUBLIC PARTICIPATION

2.5.1 Notice of Intent

The Services published a Notice of Intent (NOI) in the Federal Register on September 11, 2006 (71 FR 53466) to provide notice of the preparation of an environmental document, announce the initiation of a public scoping period, obtain information to assist the Services in determining whether to prepare an EIS or Environmental Assessment (EA), and to obtain suggestions on the scope and issues to be included in the environmental document. The NOI provided information on the background and purpose of the Proposed Action and provided details for the public scoping meeting, and comment period.

2.5.2 EIS Scoping and Public Participation

In addition to the publication of the NOI, meeting notifications via email and regular mail were sent to 24 local entities and public officials, and the scoping meeting was advertised in the September 15, 2006 issue of the Palo Alto Weekly newspaper.

The Services held a public scoping meeting on September 21, 2006, at the Stanford campus, Jordan Hall, 450 Serra Mall, Building 420, Room 040, Stanford, California. Members of the public were given an opportunity to provide oral comments. Eight oral comments were received.

The scoping period began with publication of the NOI on September 11, 2006, and officially ended on October 11, 2006; however comments were accepted through October 31, 2006. A total of 11 separate comment letters were received from public agencies, organizations, and individuals.

Comments regarding the environmental document included general comments regarding the contents, including information regarding future development and the relationship between the proposed HCP and other local plans that were being developed; recommendations to prepare an EIS rather than an EA; recommendations to expand the scope of the impact analysis; and the scope of the alternatives. A copy of the Scoping Report, which includes copies of the comment letters, is attached as Appendix A.

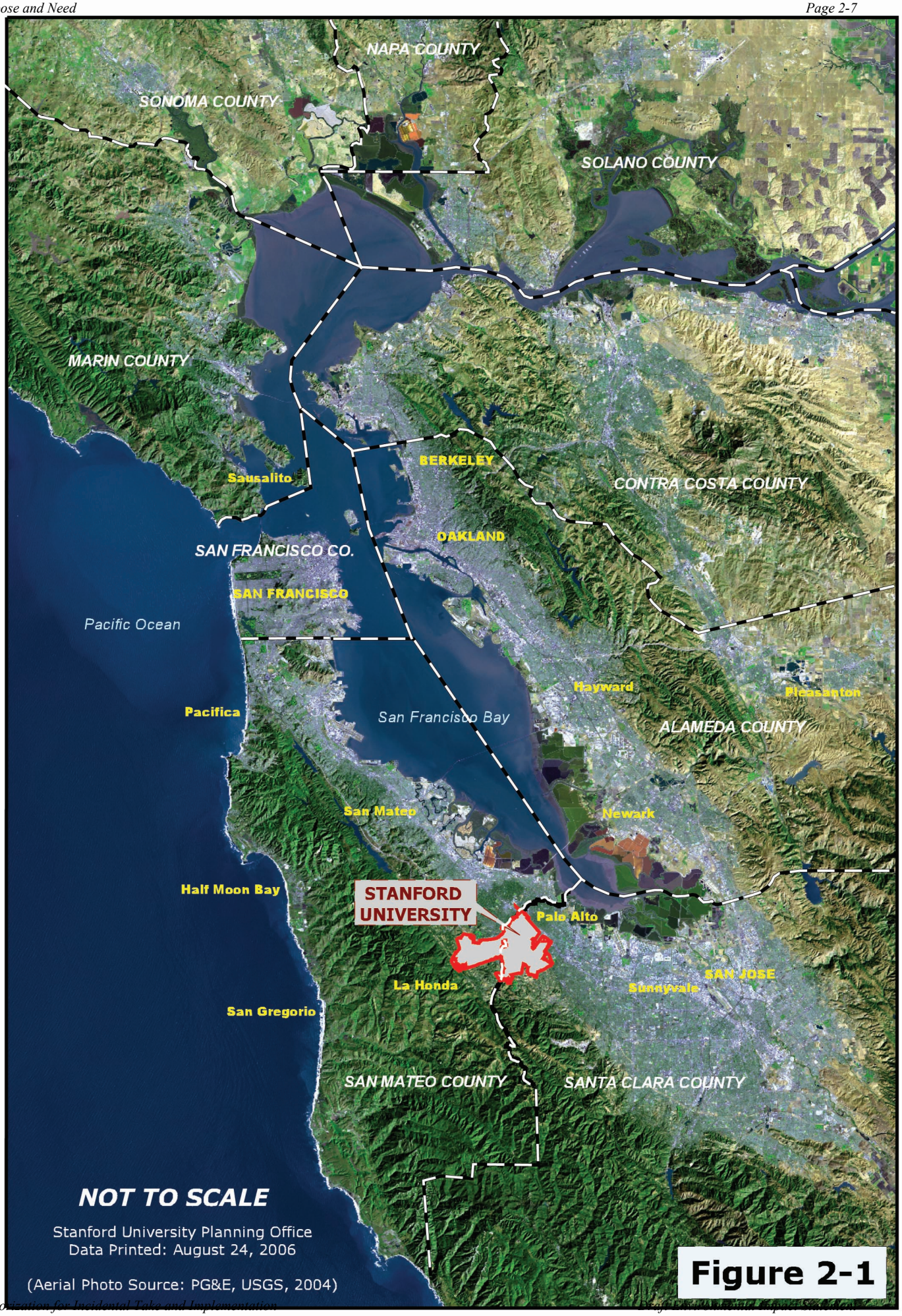
An issue identified during the NEPA scoping process involved the "Flood Damage Reduction and Ecosystem Restoration Project" being pursued by the San Francisquito Creek Joint Powers Authority (JPA) and U.S. Army Corps of Engineer (Corps). The Corps, JPA, and local entities that are members of the JPA or which may benefit from the flood control project asked that the HCP not prevent or limit the consideration by the JPA and Corps of specific flood control solutions involving Stanford lands, including the construction of detention facilities on Stanford lands or modifications to Searsville Dam or Reservoir for flood control purposes. Some commenters requested that the HCP's Covered Activities include consideration of future flood reduction facilities. Stanford is not currently considering flood reduction facilities on Stanford lands. While the JPA and the Corps are conducting multi-disciplinary regional studies for flood reduction, it was determined that sufficient information is not currently available to include flood reduction as a Covered Activity. Moreover, Stanford has not requested coverage for flood

reduction facilities under the HCP. The HCP does not preclude the development of flood reduction facilities under a separate permitting action in the future.

Another issue raised by commenters, concerned with steelhead, asked that modifications to Searsville Dam or Reservoir for habitat purposes and fish passage be considered in the HCP. Searsville Dam and Reservoir are located on San Francisquito Creek. The dam was built in 1892 and has trapped a significant amount of silt, reducing its flood control capacity. Other than on-going operation and maintenance, no other Covered Activities are proposed for Searsville Dam. However, Stanford has committed in the HCP (Section 4.2.1) to allocate $100,000 to study the technical feasibility of fish passage alternatives at Searsville Dam, and the results of this study will be incorporated into any proposed future dam modification project.

2.5.3 Draft EIS Public Review

In accordance with NEPA, the Draft EIS has been circulated for public review and comment. The public review period was initiated with the publication of a Notice of Availability (NOA) in the Federal Register, and will run for 90 days from publication of the NOA. During the public review period, a public meeting will be conducted. The review period will provide the public and Federal, state, and local agencies with an opportunity to comment on the Draft EIS. Comments will be responded to in the Final EIS.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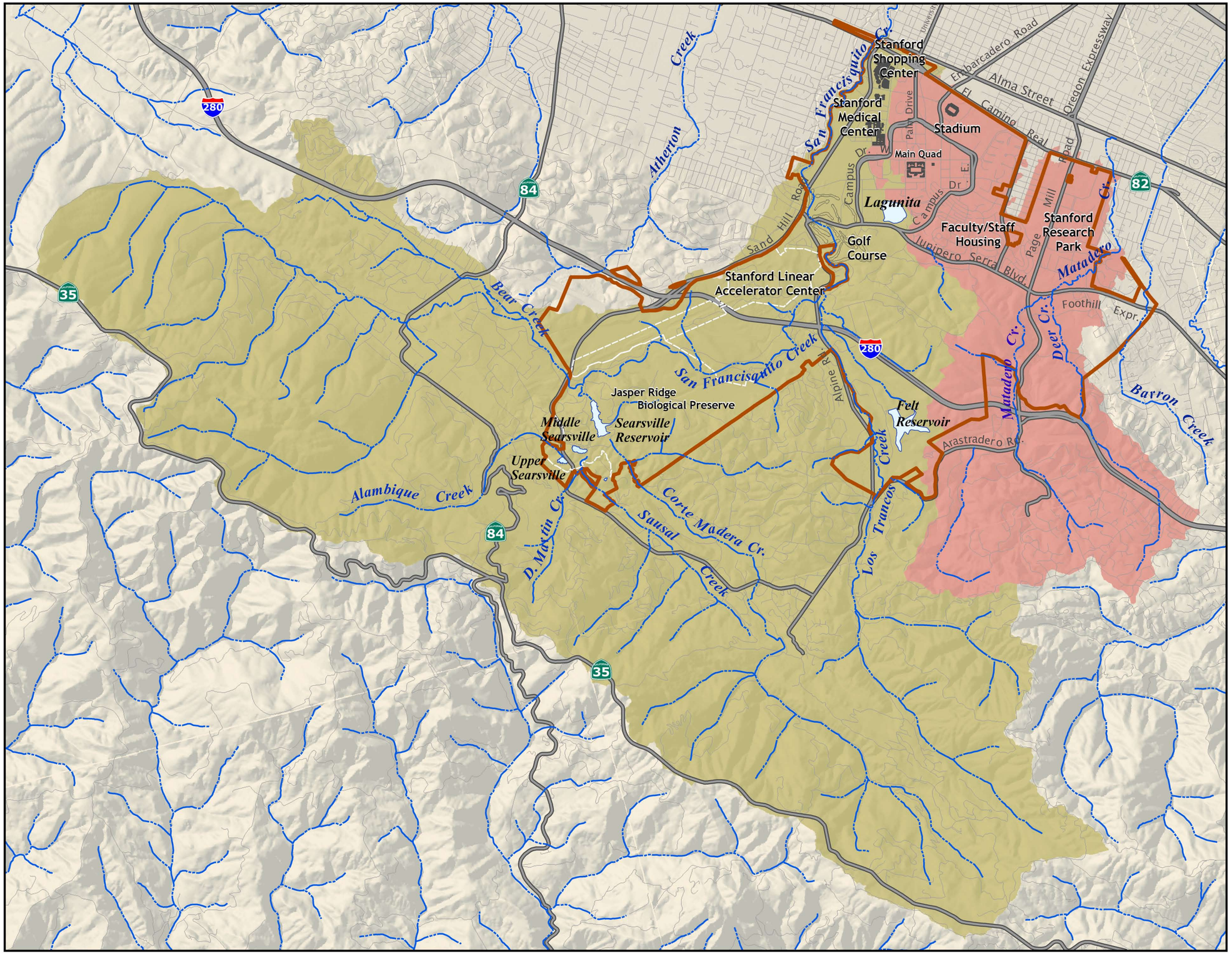
SONOMA COUNTY
SOLANO COUNTY
MARIN COUNTY
BERKELEY
Sausalito
CONTRA COSTA COUNTY
OAKLAND
SAN FRANCISCO CO.
SAN FRANCISCO
Pacific Ocean
Hayward
Pleasanton
Pacifica
San Francisco Bay
ALAMEDA COUNTY
San Mateo
Newark
Half Moon Bay
STANFORD UNIVERSITY
Palo Alto
SAN JOSE
La Honda
Sunnyvale
San Gregorio
SAN MATEO COUNTY
SANTA CLARA COUNTY
NOT TO SCALE
Stanford University Planning Office
Data Printed: August 24, 2006
(Aerial Photo Source: PG&E, USGS, 2004)

Figure 2-1



Stanford University HCP Environmental Impact Statement

Primary Watershed Basins

- Stanford Boundary
- Matadero Creek
- San Francisquito Creek

Note:
Complete stream basins not shown. Depicted are those primary basin areas that are adjacent to, within or upstream of Stanford University lands.

Sources:
Watershed: USGS, 1991, Nolte, 1999, SU/PO, 2004
Additional S.F. Creek drainage: Nolte, 1999
Creeks: US Geological Survey, 1991

Disclaimer:
This map was produced by the SU Planning Office. While generally accurate, this map may not be completely free of error. The information is derived from a variety of sources deemed reliable, but subject to recurrent change and Stanford does not warrant the accuracy and completeness of these data.

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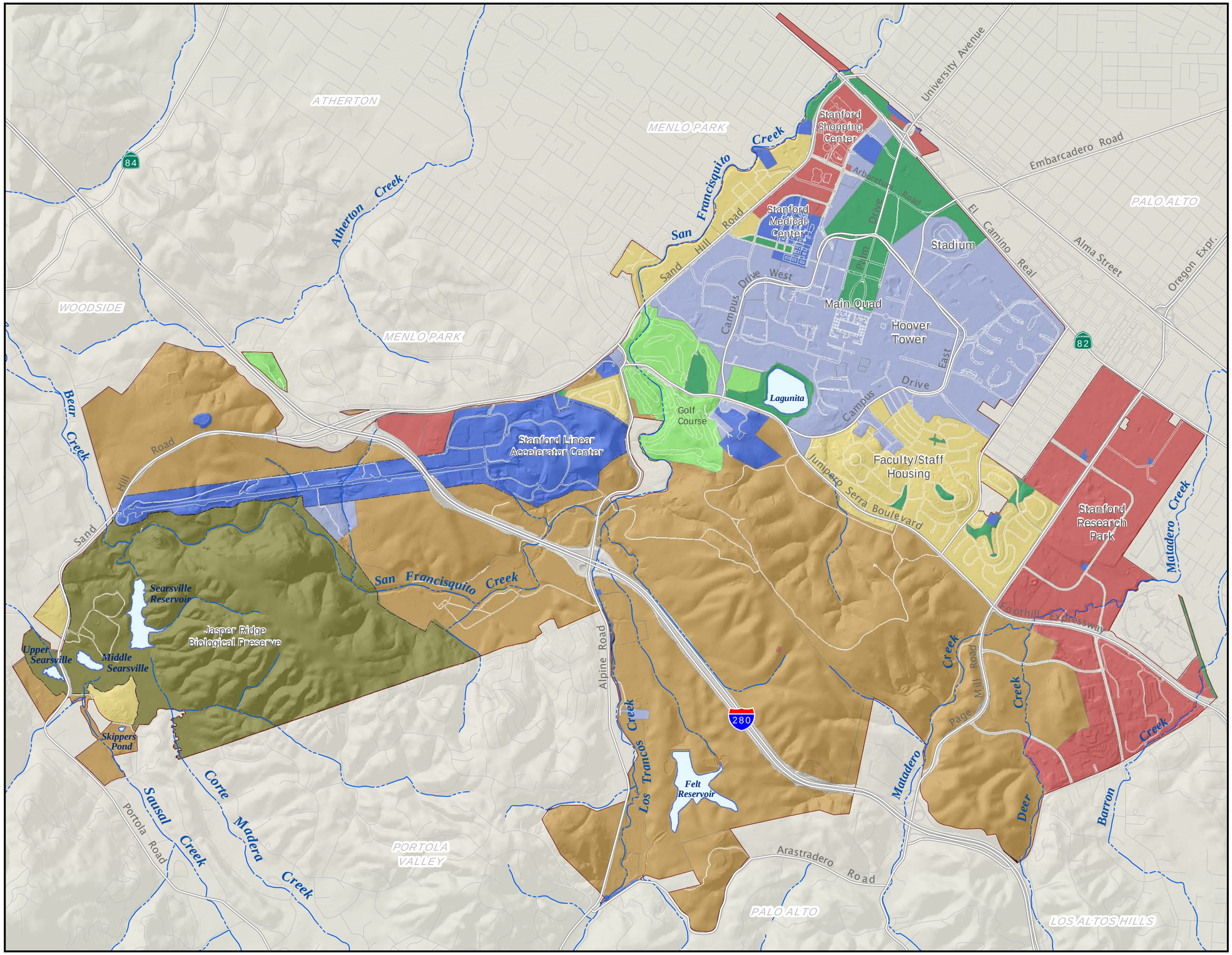
Stanford University Land Use & Env. Planning
Date Printed: March 14, 2007

Figure 2-2



Stanford University HCP Environmental Impact Statement

Land Use

- Academic
- Academic Reserve
- Biological Preserve
- Commercial
- Institutional
- Open Space
- Recreation
- Residential

hectare

100
25
4
acres

Sources:
Land Use: Stanford University Planning Office, 2006
Creeks: US Geological Survey, 1991

Disclaimer:
This map was produced by the SU Planning Office. While generally accurate, this map may not be completely free of error. The information is derived from a variety of sources deemed reliable, but subject to recurrent change and Stanford does not warrant the accuracy and completeness of these data.

Graphic Scale
1 Inch = 0.5 Miles

0 0.25 0.5 0.75 1
Miles

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Figure 2-3