

Kelly Ranch
Habitat Conservation Area
(CNLM No: S024)
(USFWS: 2006B0005)

Annual Work Plan
October 2010 - September 2011

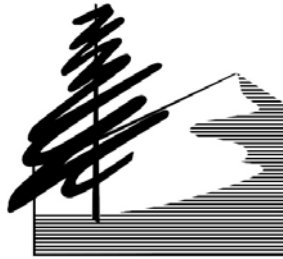
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I. Introduction and Summary

This work plan has been developed from the guidelines for goals and objectives set forth in the Kelly Ranch Habitat Conservation Area (HCA) Management Plan dated April 2008 (CNLM 2008). The Management Plan includes management requirements as agreed to by the United States Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG), and additional management activities that the Center for Natural Lands Management (CNLM) feels is appropriate to protect and maintain the natural resources in perpetuity. CNLM holds a conservation easement (since February 2002) on the Kelly Ranch Habitat Conservation Area (HCA) and performs or oversees the tasks identified in the management plan.

The purpose of this work plan is to identify the tasks and budget required to complete the management activities for the upcoming fiscal year that will begin on October 1, 2010 and end on September 30, 2011. Unless otherwise stated, all tasks will be performed by Preserve Manager Patrick McConnell.

Summary of Tasks and Goals for the Fiscal Year:

- Replace, relocate (and install) signs and fix fencing as necessary
- Note all sensitive animal species observed
- Perform habitat assessment and continue population studies on Orcutt's hazardia (*Hazardia orcuttii*)
- Perform habitat assessments on wart-stem lilac (*Ceanothus verucossus*) populations
- Map sensitive annual plant species
- Update the vegetation map for the HCA
- Remove natal grass (*Melinis repens*), Veldt grass (*Ehrharta* sp.), Saharan mustard (*Brassica tournefortii*), Nasturtium (*Tropaeolum majus*) and Pampas grass (*Cortaderia selloana*).
- Follow progress of restoration activities with Planning Systems, Inc.
- Patrol and conduct site enforcement on a regular basis
- Report conservation easement for compliance to conservation values
- Report and describe data collected and management actions taken on the HCA to the wildlife agencies
- Provide an accounting of funds to be spent in the fiscal year

Appendix 1 (*2010-2011 Task Schedule*) identifies the approximate schedule of tasks for the upcoming fiscal year. The location of the HCA is shown in Appendix 2.

II. Management Activities

The following sections identify and describe the activities to be performed during this fiscal year. Based upon the Property Analysis Record (PAR) developed by CNLM to outline long-term management tasks and costs, management activities for the HCA can be broken down into seven tasks: Capital Improvements, Biological Surveys, Habitat Restoration, Public Services, Reporting, Office Maintenance, and Operations. Each of these categories will be discussed below.

A. Capital Improvements

1. **Kiosks.** We will update two kiosks with fresh maps, brochures, and public interest materials during this fiscal year.
2. **Signing.** CNLM signs have been posted at all of the major access points and along most of the perimeter to the HCA and a few other notable locations. Many were re-located and updated with more appropriate signage during the 2009-2010 management year. More signs will be replaced or moved to more appropriate locations this management year also. Each sign explains that the HCA is a dedicated open space, and that OHV activity, mountain biking, dumping and shooting are prohibited.

B. Biological Monitoring

Monitoring activities at the HCA will continue over the next fiscal year (Table 1). See Kelly Ranch HCA Management Plan (CNLM 2008) for details of habitat assessment methods. Monitoring during the next year will mostly include habitat assessments on habitat containing wart-stem lilac and Orcutt's hazardia. We will map any occurrences of small-flower microseris encountered, and re-map the boundaries of Palmer's grapplinghook populations. All data on location and counts will be entered or stored in a Geographic Information System (GIS) database. A brief description of monitoring activities outlined by taxa is provided below:

1. **Sensitive Plant Species Surveys.** Rare plant locations are mostly known, with the exception of small-flower microseris, which is thought to occur in one general location near the intersection of Cannon Rd. and Hemingway. We will search for and map any occurrences of this species. We will also re-map the boundaries of Palmer's grapplinghook populations. We will visit the cliff spurge localities and re-census these individuals.

Table 1. Sensitive Plant List, Schedule of Surveys 2010-2011

Name and Sensitivity	1998 (Merkel & Associates)	2003	2004-2008	2009-2010	2010-2011
Del Mar manzanita (<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i>) FE, CNPS List 1B.1, MHCP.	29 (probably spp. <i>zacaensis</i>)	<50 located in dense habitat and difficult to count	Likely present	Very likely present	Awaiting determinations from SDNHM, and John Keeley (USGS) ¹
Wart-stem lilac (<i>Ceanothus verrucosus</i>) CNPS List 2.2, MHCP	“in the hundreds”	9		Most locations mapped, for a count of 618 individuals	Habitat assessment 2011
Small-flowered microseris (<i>Microseris douglasi</i> var. <i>platycarpa</i>) CNPS List 4.2	20	not found, probably impacted by development	Not found	Not surveyed as planned	Next survey in 2011
Western dichondra (<i>Dichondra occidentalis</i>) CNPS List 4.2	unknown	common	Several populations found	Several found and mapped	Map where located
Palmer’s grapplinghook (<i>Harpagonella palmeri</i>) CNPS List 4.2	???	Approximately 400	Over 100 individuals 2006 Two areas found Censused and mapped 1203 counted, an additional 550 estimated 2008		Re-mapping 2011
Orcutt’s hazardia (<i>Hazardia orcuttii</i>) CT, CNPS list 1B.1 MHCP	none	20 (transplanted from the Manchester HCA)	100 planted in 2004, Approximately 100 censused 2005 106 adults, 3 seedlings 2007 100 adults, 17 seedlings, 1 juvenile 2008	104 adults, 15 juveniles, 53 seedlings August 2010 104 adults, 4 juveniles, 110 seedlings August 2009 14 seedlings were likely survivors from 2008	Census & Habitat assessment 2011
Nuttall’s scrub oak (<i>Quercus dumosa</i>) MHCP, CNPS List 1B.1	?? (“lightly scattered”)	common	11 mapped 2008	13 mapped	
Cliff spurge (<i>Euphorbia misera</i>) MHCP, CNPS List 2.2	“one thicket”	3	Approximately 16 censused & mapped 2008		Census 2011
California boxthorn (<i>Lycium californicum</i>) CNPS List 4.2			Two stands found & mapped 2008		

FE= Federally listed endangered; CT= California threatened; MHCP= Multiple Habitat Conservation Program Covered Species; CNPS= California Native Plant Society listing criteria; ???= no initial count made during planning process.

¹ SDNHM is the San Diego Natural History Museum. Vouchers were given to SDNHM in May 2009, and these have not been verified to date. Keeley et al. (2007) published the most recent systematic treatment for *Arctostaphylos glandulosa*

2. **Habitat Assessments** Included in this fiscal year will be habitat assessments for sensitive species known to occur on the HCA (Table 1).

Wart-stem lilac Suitable locations for at least two long-term monitoring sites will be determined, and scientifically sound methodology will be used in monitoring the count, cover, species richness, and health of wart-stem lilac stands (see CNLM 2008).

Orcutt's hazardia Surveys will continue to include assessments of the transplanted Orcutt's hazardia, and will encompass counts of adult transplants as well as recruitment studies (see below). See CNLM 2009 for more information on counts and pattern for Orcutt's hazardia measures. We will continue to gather point-intercept data for cover by species and for edaphic cover conditions. We will move forward on bringing agencies and local experts together to discuss and plan future directions in research for gaining a better understanding of the biology of this species.

Orcutt's hazardia population studies. Transplanted hazardia will continue to be censused. Seedlings will be counted and a size class category will be applied to each. Size classes are: seedling (no branching), juvenile (branching, no flowering), or adult (flowering). Demography measures may aid in producing a population viability model at some future time. Seed viability studies (Typically a component of population viability matrices) are not currently plausible, due to a limited annual budget.

3. **Del Mar Manzanita.** Voucher sampling has occurred, and voucher samples are still awaiting identification at the San Diego Natural History Museum Botany Department, as well as from John Keeley of the US Geological Survey. Although we are confident based on Keeley's treatment that we have several Del Mar manzanita on the HCA, no voucher identification by a regionally recognized expert has taken place. There has been discussion between CNLM and Thomas Oberbauer of San Diego County Environmental Services about this determination, and we may visit this and/or other sites thought to house those individuals with characteristics that align with the Keeley et al. description. Mr. Oberbauer has read Keeley et al., but believes all manzanita in coastal north San Diego County are Del Mar manzanita.
4. **Vegetation Mapping.** CNLM will re-map all vegetation assemblages on the HCA, and ascribe vegetation polygons using the updated vegetation community descriptions (Oberbauer et al. 2008) as a guide. Minimum mapping unit size will be ¼ acre.

No other biological monitoring activities are planned for the fiscal year, aside from incidental wildlife mapping while carrying out other tasks.

C. Habitat Restoration and Maintenance

Most of the HCA's habitat is good quality, with little disturbance from nonnative species. Small patches of disturbed area exist scattered throughout the HCA. Shea Homes (developer) was responsible for the enhancement in many of these disturbed areas and has almost completed an enhancement plan that began in 2005 (Planning Systems, 2001). CNLM will continue to follow the progress of the enhancement and restoration activities.

This fiscal year, as with last year, our primary objectives will be the eradication of Natal grass and Saharan mustard. Natal grass was found growing densely in open coastal sage scrub in the center of the HCA in 2006. Yearly control efforts have been ongoing. The species is currently of limited spatial extent, probably totaling less than a quarter acre, but is cryptic and appears to germinate even during the late spring. The goal will be to hand pull and apply grass-specific herbicide where appropriate, before the grasses flower. Garden nasturtium has increased coverage in a shallow ravine just downhill from the upper reach of Hemmingway Drive. Chemical control of nasturtium will be attempted during the spring of 2011. Although not on the CalIPC list of invasive exotic species, this weed has been observed virtually smothering other shaded coastal locations in San Diego County.

The weed that has become the most serious threat to the vegetative structure of the HCA is Saharan mustard, and any emergent infestations of this weed will be promptly hand removed prior to seed-set. We have a list of potential volunteers who will be contacted in an attempt to increase removal rates of Saharan mustard from the western margins of the HCA. We have budgeted for a full weed treatment crew to aid in removal. During the spring of 2010, a small infestation was found in the center of the HCA that had already set fruit, and this will be dealt with after spring rains begin during early 2011. Any Pampas grass will be found and killed during the late summer months, as they make themselves more apparent by flowering. A few Veldt grass (*Ehrharta calycina*) have been found in the area surrounding cliff spurge, and we will attempt to find and eradicate all Veldt grass. The priority weeds for removal will remain those mentioned above, as they pose a much more imminent threat to the viability of the HCA than weeds like tree tobacco. Our ultimate goal for all those listed above is eradication.

D. Public Services

Public service activities include the patrolling of the HCA, consulting with neighbors and the Home Owners Association (HOA) about perimeter landscaping and responding to emergencies. However, other opportunities for public service may be forthcoming during the year with local groups and individuals interested in volunteering labor for HCA projects (as mentioned in the previous section), and class field trips from local schools. CNLM will try to accommodate these activities whenever possible.

- 1. Patrols** Patrols will be performed approximately two to four times per month. Biological surveys, weed removal and other HCA activities tend to reveal emerging issues as effectively as patrol activities. Most time spent on patrol is during the dry season, after weeds and vegetation surveys have been accomplished. Routine trash removal, fence and sign repair are the main tasks during patrol. Observations of sensitive species, and new human impacts will be noted during patrols.
- 2. Emergency Response** Staff time has been allocated from the current budget for response to emergencies on the HCA. Such emergencies could include response to wildfires, wildlife problems reported by neighbors and illegal trespass.

Table 2. Sensitive plants present and threats 2010-2011

Name	Threats	Actions Planned
Del Mar manzanita (<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i>) FE, CNPS List 1B.1, MHCP.	Natal grass Veldt grass Human disturbance	*Grass control will take place throughout HCA Frequent patrol
Wart-stem lilac (<i>Ceanothus verrucosus</i>) CNPS List 2.2, MHCP	Fire Human disturbance	Frequent patrol
Small-flowered microseris (<i>Microseris douglasii</i> var. <i>platycarpa</i>) CNPS List 4.2	Saharan mustard Human disturbance	All Saharan mustard found will be hand- pulled, Frequent patrol
Western dichondra (<i>Dichondra occidentalis</i>) CNPS List 4.2	Saharan mustard Human disturbance	All Saharan mustard found will be hand- pulled, Frequent patrol
Palmer's grapplinghook (<i>Harpagonella palmeri</i>) CNPS List 4.2	Saharan mustard Human disturbance	All Saharan mustard found will be hand- pulled, Frequent patrol
Orcutt's hazardia (<i>Hazardia orcuttii</i>) CT, CNPS list 1B.1 MHCP	Saharan mustard Other shrubs Human disturbance	Any threats deemed to decrease recruitment will be controlled
Nuttall's scrub oak (<i>Quercus dumosa</i>) MHCP, CNPS List 1B.1	Human disturbance	Frequent patrol
Cliff spurge (<i>Euphorbia misera</i>) MHCP, CNPS List 2.2	Fire Natal grass Veldt grass Human disturbance	Frequent patrol Grass control will take place throughout HCA
California boxthorn (<i>Lycium californicum</i>) CNPS List 4.2	Fire Natal grass Veldt grass Human disturbance	Frequent patrol Grass control will take place throughout HCA

*Grass refers to the two species of South African origin presently on HCA: Natal and Veldt grass

E. Reporting

Reporting requirements include the management of the HCA's database/GIS system, the photo-documentation stations, and the production of various status reports to the USFWS, CDFG and CNLM administration.

- 1. Database/GIS Management** Data derived from routine patrols and photo-documentation will be entered into and maintained in the HCA's existing database/GIS system. Additional databases will be established for the various biotic monitoring programs including the production of historical and current vegetation maps.
- 2. Reports**
Year-End/Agency Reports By the end of December 2011, a year-end report will be prepared by the HCA manager detailing the results of the year's management activities. This report will include recommendations for the continuation of various activities for the following fiscal year and will be submitted to the USFWS and CDFG as required under permit reporting conditions.

Annual Work Plan The work plan for the 2011-2012 fiscal year will be formulated by the end of the 2010-2011 fiscal year and will be based upon experiences during previous years' operations. This work plan will be submitted to the USFWS and CDFG.

3. Conservation Easement (CE) Compliance

The HCA Manager will monitor compliance of all areas of the Conservation Easement to ensure the conservation values are maintained in perpetuity. Center practices for monitoring and reporting on CEs is derived from the CE agreement, CNLM's CE enforcement policy, and Land Trust Alliance standards (through which CNLM is an accredited land trust). A baseline report is prepared on a preserve, or on the portion where the CE exists, and then annual monitoring (or as often as stipulated in the CE) occurs to document any changes in the baseline condition. This process insures CE's are being managed appropriately, and ensures continuity of process. Compliance visits are to be carried out during the later portion of the management year, and will be appended to each year's annual report.

- 4. Position Paper Preparation** The Center is conducting rare plant and animal monitoring and research on our HCA system. Data are being collected and compiled on these plants and animals. The Center has allocated funds to begin preparation of position papers for certain City of Carlsbad's Covered Species (plants). These papers will summarize what is known and not known about each species and will provide recommendations on what research and/or management actions are needed for conservation and perpetual management of each species.

F. Office Maintenance

HCA management will maintain offices in an organized manner to facilitate maximum efficiency. This section of the budget includes funds for general office work, utilities, and telephones, among other items/tasks.

G. Operations

Operations include the training and professional growth of CNLM personnel, and inspection of the HCA by CNLM administration. Funds have been allocated in the current budget for the HCA Managers to attend classes or seminars during the 2010-2011 year. Also included within this category of activity is the conduction of employee reviews.

III. Workloads and Budgets

1. Supervision and Staffing

The Area Manager will be supervised by CNLM's Director of Science, Dr. Deborah Rogers. Tasks and priorities will be coordinated by the Area Manager and approved by Dr Rogers. The Area Manager, Markus Spiegelberg will supervise the HCA Managers, Patrick McConnell and Jessica Vinje. Additionally, Dr. Rogers will assist with document review and scientific research conducted on CNLM preserves.

2. Budgeting

A total budget of \$12,871 has been allocated for this fiscal year and is included here as Appendix 2. Every effort will be made by the Center to allocate time and expenses according to this estimated budget.

IV. References

CNLM. 2009. Kelly Ranch Habitat Conservation Area Annual Report. December, 2009.
CNLM. 2008. Habitat Management Plan for the Kelly Ranch Habitat Conservation Area. April, 2008.

Planning Systems. 2001. Revised Open Space Natural Habitat Restoration and Revegetation Program, Kelly Ranch "Core Area." Planning Systems #980738.

Keeley, J. E., M. C. Vasey, and V. T. Parker. 2007. Subspecific variation in the widespread burl-forming *Arctostaphylos glandulosa*. *Madrono*. 54(1) 42-62.

Oberbauer, T. Kelly, M., and J. Buegge. March 2008. Draft Vegetation Communities of San Diego County. Based on "Preliminary Descriptions of the Terrestrial Natural Communities of California." Robert F. Holland. October 1986.

APPENDICES

Appendix 1. Task Schedule

Task	October- December 2010	January-March 2011	April to June 2011	July to September 2011
Nonnative Plant Removal	X	X	X	X
Sensitive Plant Surveys		X	X	X
Habitat Assessments		X	X	
Vegetation mapping			X	
Orcut's Hazardia Population Studies				X
Del Mar manzanita sampling			X	
GIS/Database	X		X	
Fencing/Signage	X			X
Patrolling	X	X	X	X
Reports				X
Public Outreach	X	X	X	

Appendix 2. HCA Location Maps

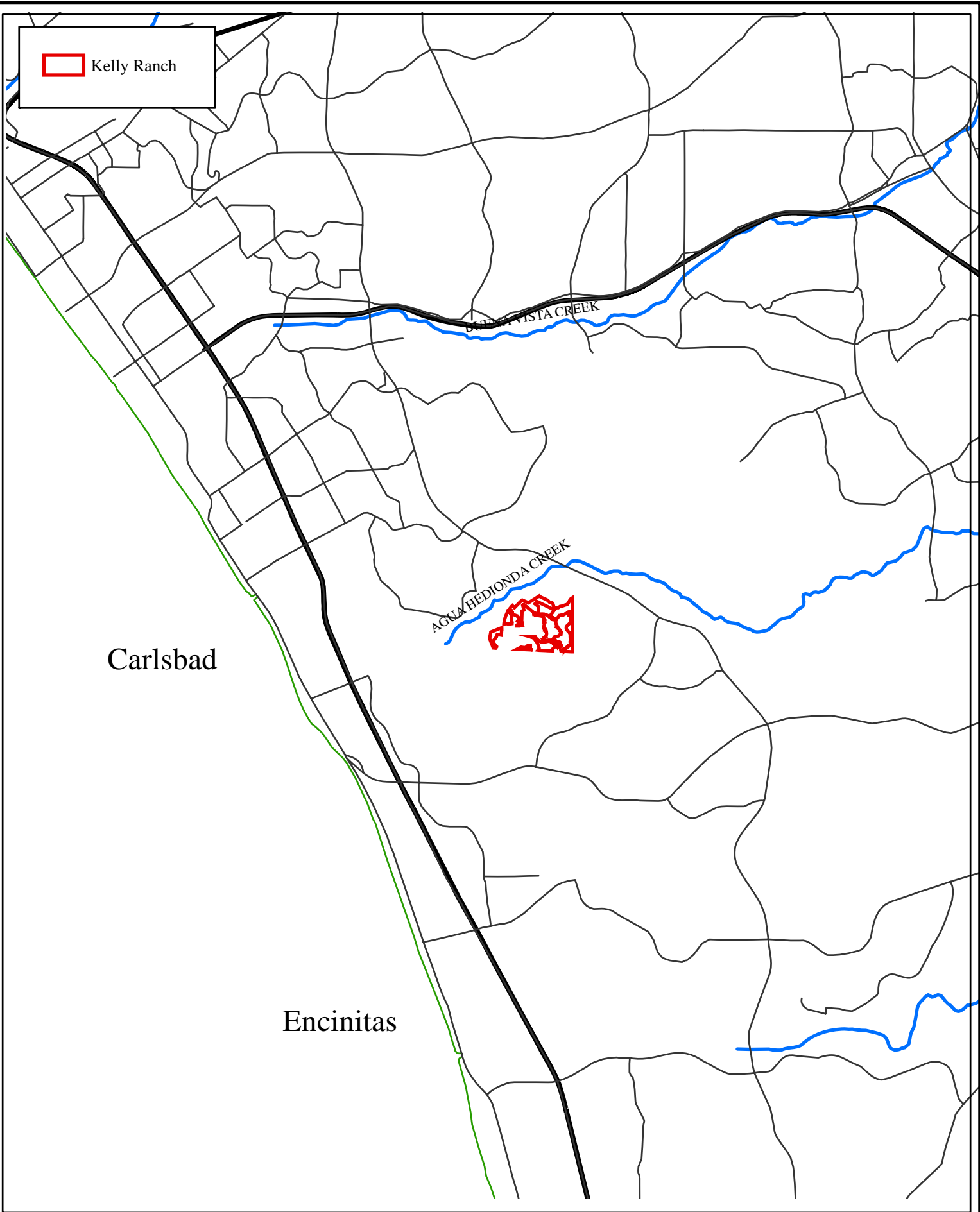


Figure 1
Preserve Vicinity
Kelly Ranch Habitat Conservation Area - Carlsbad, CA





Figure 2
Preserve Location
Kelly Ranch Habitat Conservation Area - Carlsbad, CA