

INVENTORY OF BIOLOGICAL SURVEY, RESEARCH, AND MONITORING EFFORTS IN WESTERN SAN DIEGO COUNTY

The Conservation Biology Institute is working with the wildlife agencies and jurisdictions in San Diego County to coordinate the biological monitoring efforts required for the State of California Natural Community Conservation Planning program (NCCP). The NCCP monitoring efforts are not comprehensive; therefore we want to know what other ongoing biological data collection efforts may provide information that would help in evaluating trends in regional population size and distribution for as many of the target and non-target species as possible.

As part of this effort, we are compiling a summary of recent and ongoing biological monitoring and survey efforts in western San Diego County. We are generally focusing on ongoing surveys and research conducted within the past 10 years, within the area west of the U.S. Forest Service lands to the Pacific Ocean. The purpose of the summary is to assess the breadth of biological monitoring across the region and determine where there may be gaps in geographic areas or resources being monitored. This will assist in refining NCCP monitoring protocols and targets for the region. Although some lands, including military installations, are not formally enrolled in the NCCP program, we would like to include information from these areas to have a comprehensive database.

As this point we are not requesting detailed information, but rather a list that includes the following:

- Agency or group conducting the project, and contact person
- Name of the project
- Resources being monitored
- Location
- Method (e.g., transects, point counts, census, trapping, etc.)
- Time period of the monitoring (when did it begin and how long will it continue)

Please review the attached inventory for accuracy and completeness. Where information was not readily available, the cell was left blank. Please update the inventory with your corrections and additions, and provide this information to Jerre Stallcup at the Conservation Biology Institute (jastallcup@consbio.org). Thank you for your assistance.

FINDINGS OF BIOLOGICAL SURVEY, RESEARCH, AND MONITORING EFFORTS IN WESTERN SAN DIEGO COUNTY

The Conservation Biology Institute circulated a request for recent and ongoing biological monitoring and survey efforts in western San Diego County, generally focusing on ongoing surveys and research conducted within the past 10 years, within the area west of the U.S. Forest Service lands to the Pacific Ocean. The purpose was to assess the breadth of biological monitoring across the region and determine where there may be gaps in geographic areas or resources being monitored.

We requested the following information:

- Agency or group conducting the project, and contact person
- Name of the project
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Following is a summary of the findings of this effort:

1. With the exception of the SDSU Field Stations, federal and state agencies and academic institutions were generally unresponsive to our request for information; thus, this inventory is incomplete.
2. There are several monitoring efforts that relate to MSCP covered species being conducted on a volunteer basis, e.g., Scott McMillan plant surveys, Friends of Low Penasquitos Canyon plant surveys and corridor tracking, Wildlife Research Institute raptor monitoring, tri-colored blackbird censusing.
3. The geographically most comprehensive efforts represented in our inventory are for the upland herpetofauna community (Robert Fisher's work). This work will not continue indefinitely at the same level or in all the same locations; future monitoring will be determined based on data analyses being conducted this summer.
4. The City of San Diego and others are generally conducting baseline surveys of all the first priority plant species in the City, with the exception of *Cordylanthus maritimus* and *Cordylanthus orcuttianus*. These species are currently not being monitored.
5. Movement of large mammals is being monitored in localized areas, primarily in the central and northern portions of the MSCP area. This monitoring is being

conducted both under a Local Assistance Grant to the City of Poway and on a volunteer basis by the San Diego Tracking Team.

6. There is very little monitoring of riparian birds, amphibians, and aquatic species in the MSCP area.
7. Gnatcatchers and cactus wrens are being monitored only at the refuge, City of San Diego MSCP lands, a couple of County MSCP locations, and at the CNLM mitigation banks.
8. There is very little monitoring of shoreline bird species, raptors, and other grassland bird species.
9. There is no formal monitoring of vernal pool species, except for work being conducted by Marie Simovich on fairy shrimp and Scott McMillan's volunteer work. The City of San Diego is currently mapping vernal pool locations within the City of San Diego. Some project-related restoration work is being conducted.
10. Geographically, there are some gaps where little or no monitoring is being conducted.
 - South County, Chula Vista, and Santee for the MSCP (all resources)
 - MHCP area, except mitigation banks and San Luis Rey/Pilgrim Creek
 - Area east of MSCP/MHCP to the Forest Service lands

SURVEY, RESEARCH, AND MONITORING EFFORTS
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AGENCY	CONTACT	PROJECT	RESOURCES	LOCATION	METHOD	TIMEFRAME
VEGETATION COMMUNITIES						
Center for Natural Lands Mgmt	m. spiegelberg	CSS/grassland restoration	CSS, grassland	Whelan, Oceanside	line intercept	2000-ongoing
Center for Natural Lands Mgmt	m. spiegelberg	CSS restoration, exotics removal	coastal sage scrub	Woodridge (near L.Jennings)	counts, transects	2000-ongoing
Center for Natural Lands Mgmt	m. spiegelberg	Change detection	coastal sage scrub, so. maritime chaparral	Manchester mitigation bank	line intercept	2000-ongoing
City of SD MSCP	keith greer	Vernal pool mapping	vernal pools	City of San Diego	Mapping/gap analysis	2000-2001
County of SD MSCP	bob asher	Habitat value monitoring		Lusardi Creek, Santa Fe Valley	ADAR, transects	2001-2002
PERL - SDSU	sharook madon	Tijuana Estuary monitoring	estuarine vegetation	Tijuana Estuary	transects, quadrats	1985-ongoing
PERL - SDSU	greg williams	Physical, chemical, and biological monitoring	saltmarsh vegetation	Los Penasquitos Lagoon	transects, quadrats	1986-ongoing?
SDSU	d. stow, j. o'leary	Habitat value pilot project	coastal sage scrub	Crestridge Mitigation Bank	ADAR, transects	1999-2001
SDSU	d. stow, j. o'leary	Habitat value pilot project	coastal sage scrub	Mission Trails Park	ADAR, transects	1999-2001
Sweetwater Authority	pete famolaro	Compliance monitoring	riparian willow habitat	upper Sweetwater Reservoir, upstream to Hwy 94		1987-ongoing
USFS	j. beyers/b. wirtz	CSS post-fire recovery	coastal sage scrub	Camp Pendleton	composition, cover	
USFS	j. beyers/b. wirtz	CSS post-fire recovery	coastal sage scrub	El Capitan/Eagle Peak	composition, cover	
USFS	j. beyers/b. wirtz	CSS post-fire recovery	coastal sage scrub	Upper San Dieguito R. Valley	composition, cover	
USFS	j. beyers/b. wirtz	CSS post-fire recovery	coastal sage scrub	Wild Animal Park	composition, cover	
USFWS Refuge	clark winchell	Vernal pool mapping	vernal pools	vernal pool refuge	GPS	2002-2003
Merkel&Assoc.	d.mayer	Vernal pool restoration	vernal pools	Stuart Mesa		
Merkel&Assoc.	d.mayer	Vernal pool restoration	vernal pools	Poinsettia Station		
PLANTS						
Scott McMillan	scott mcmillan	Sensitive plant surveys	<i>Acanthomintha</i>	most MSCP populations	census	1995-2000
Center for Natural Lands Mgmt	m. spiegelberg	Preserve management	<i>Acanthomintha ilicifolia</i>	Manchester Mitigation Bank	counts, seed collection, restoration	2000-ongoing
Friends-Los Penasquitos Cyn	mike kelly	Plant monitoring	<i>Acanthomintha ilicifolia</i>	Penasquitos Cyn	census; weed control	1993-2000

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Friends-Los Penasquitos Cyn	mike kelly	Plant monitoring	<i>Acanthomintha ilicifolia</i>	Lusardi Creek (Blk Mtn Rnch)	census; weed control	1996-2000
City of SD MSCP	keith greer	Priority plant monitoring	<i>Ambrosia pumila</i>	Mission Trails Park	MSCP monitoring plan	1999-2000
USFWS refuge	clark winchell	Long-term monitoring	<i>Ambrosia pumila</i>	Rancho San Diego	transects, counts	2000-ongoing
Center for Natural Lands Mgmt	m. spiegelberg	Preserve management	<i>Arctostaphylos glandulosa</i>	Manchester Mitigation Bank	counts, seed collection, restoration	2000-ongoing
Scott McMillan	scott mcmillan	Sensitive plant surveys	<i>Brodiaea filifolia</i>	some populations	census	1995-2000
SDSU	adrienne russell	Morphology, phenology, distribution	<i>Chorizanthe orcuttiana</i>	Oak Crest Park	census	1996-2000
SDSU	adrienne russell	Morphology, phenology, distribution	<i>Chorizanthe orcuttiana</i>	Pt. Loma	census	1996-2000
SDSU	ellen bauder	Chorizanthe surveys	<i>Chorizanthe orcuttiana</i>			
Scott McMillan	scott mcmillan	Sensitive plant surveys	<i>Dudleya blochmaniae</i>	all populations	census	1995-2000
City of SD MSCP	keith greer	Priority plant monitoring	<i>Dudleya brevifolia</i>	Carmel Mtn	MSCP monitoring plan	1999-2001
City of SD MSCP	keith greer	Priority plant monitoring	<i>Dudleya brevifolia</i>	Crest Canyon, Del Mar	MSCP monitoring plan	1999-2001
City of SD MSCP	keith greer	Priority plant monitoring	<i>Dudleya brevifolia</i>	Del Mar Heights Rd	MSCP monitoring plan	1999-2001
City of SD MSCP	keith greer	Priority plant monitoring	<i>Dudleya brevifolia</i>	Torrey Pines Res. extension	MSCP monitoring plan	1999-2001
City of SD MSCP	keith greer	Priority plant monitoring	<i>Dudleya brevifolia</i>	Torrey Pines Reserve	MSCP monitoring plan	1999-2001
Otay Water District	d.mayer	Mitigation bank monitoring	<i>Dudleya variagata</i>	San Miguel HMA	census	1994-ongoing
Friends-Los Penasquitos Cyn	mike kelly	Plant monitoring	<i>Dudleya variegata</i>	Black Mountain Ranch	census; weed control	
Scott McMillan	scott mcmillan	Sensitive plant surveys	<i>Dudleya variegata</i>	all populations	census	1995-2000
USFWS refuge	ron huffman	Exotic plant monitoring	exotic plants	Rancho San Diego	area search	1999-ongoing
Friends-Los Penasquitos Cyn	mike kelly	Plant monitoring	exotic weeds	Penasquitos, Black Mtn, Sabre Springs	weed control	
SDSU	ellen bauder	Otay tarplant ecology/mgmt	<i>Hemizonia conjugens</i>	Otay Mesa	Distribution relative to soils	1999-2001
PERL - SDSU	greg williams	Physical, chemical, and biological monitoring	<i>Lasthenia glabrata coultelri</i>	Los Penasquitos Lagoon	census (GPS)	1986-ongoing?
City of SD MSCP	keith greer	Priority plant monitoring	<i>Lotus nuttallianus</i>	Mission Bay Park	MSCP monitoring plan	1999-2000
CNPS	rod dossey		<i>Monardella linoides</i>			
City of SD MSCP	keith greer	Priority plant monitoring	<i>Monardella linoides viminea</i>	Lopez Canyon	MSCP monitoring plan	1999-2000

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City of SD MSCP	keith greer	Priority plant monitoring	<i>Monardella linoides viminea</i>	Otay Lakes	MSCP monitoring plan	1999-2000
City of SD MSCP	keith greer	Priority plant monitoring	<i>Monardella linoides viminea</i>	Upper Sycamore	MSCP monitoring plan	1999-2000
Friends-Los Penasquitos Cyn	mike kelly	Plant monitoring	<i>Monardella linoides viminea</i>	Lopez Canyon	census; weed control	1992-2000
Friends-Los Penasquitos Cyn	mike kelly	Plant monitoring	<i>Monardella linoides viminea</i>	Sycamore Canyon/Goodan	census	1999-2000
County of SD MSCP	tom oberbauer	Rare plant baseline surveys	MSCP species	Lake Hodges segment	MSCP monitoring plan	2001
County of SD MSCP	tom oberbauer	Rare plant baseline surveys	MSCP species	McGinty Mtn	MSCP monitoring plan	2001
County of SD MSCP	tom oberbauer	Rare plant baseline surveys	MSCP species	Otay Ranch segment	MSCP monitoring plan	2001
Otay Water District	d.mayer	Mitigation bank monitoring	<i>Muilla clevelandii</i>	San Miguel HMA	census	1994-ongoing
Scott McMillan	scott mcmillan	Vernal pools surveys	plants	Vernal pools	visual pop'n estimates	informal
SDSU	mike simpson	Plant species inventory	plants	Fortuna Mountain	plant lists	1999-2000
SDSU	mike simpson	Plant species inventory	plants	Santa Margarita Reserve	plant lists	1999-2000
Scott McMillan	scott mcmillan	<i>Pogogyne census</i>	<i>Pogogyne nudiuscula</i>	Vernal pools	visual pop'n estimates	1992-2000
Center for Natural Lands Mgmt	m. spiegelberg	Preserve management	SMC plants	Manchester Mitigation Bank	counts, transects	2000-ongoing
City of SD MSCP	keith greer	Priority plant monitoring			MSCP monitoring plan	2000-2002
SD Natural History Museum	jon rebman			Miramar		
INVERTEBRATES						
Dartmouth College	doug bolger	Argentine/native ant distribution/interactions	ants	San Diego NWR	colony surveys	2000-ongoing
UC Riverside	rotenberry/price	Autecological studies	Arthropods			1995-1997
PERL - SDSU	greg williams	Physical, chemical, and biological monitoring	benthic invertebrates	Los Penasquitos Lagoon	core sampling	1986-ongoing?
PERL - SDSU	sharook madon	Tijuana Estuary monitoring	benthic invertebrates	Tijuana Estuary	core sampling	1985-ongoing

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AGENCY	CONTACT	PROJECT	RESOURCES	LOCATION	METHOD	TIMEFRAME
SD Water Utilities	david gibson	Stream monitoring	Benthic invertebrates	multiple locations	Rapid Bioassessment Protocols	2000-?
Back Country Land Trust/CBI	mike klein	Docent surveys	Insects	Crestridge Mitigation Bank	census adults	2000-2001
Merkel&Assoc.	d. mayer	Batiquitos Lagoon restoration	invertebrates	Batiquitos Lagoon		1997-2007
Univ. San Diego and DOD	m. simovich	Vernal pool surveys	invertebrates and vertebrates	MCAS Miramar	dip net	1998-2003
Univ. San Diego and EPA	m. simovich	Draft hydrogeomorphic model	invertebrates and vertebrates	vernal pools, San Diego County	dip net	2001-2002
SD Natural History Museum	david faulkner	USFS	Laguna Mtn. Skipper	Laguna Mountains		
SD Natural History Museum	phil unitt		Lepidoptera	Miramar		1996-1999
UC Riverside	gordon pratt	Quino surveys	Quino and host plants	Marron Valley	census larvae, adults	1998-1999
UC Riverside	gordon pratt	Quino surveys	Quino and host plants	Santa Margarita Reserve	census larvae, adults	1999
City of SD MSCP	keith greer	Quino surveys	Quino checkerspot	Barrett Lake	census adults	1999-2000
City of SD MSCP	keith greer	Quino surveys	Quino checkerspot	Lake Hodges	census adults	1999-2001
SD Natural History Museum	david faulkner	Quino surveys	Quino checkerspot	Marron Valley	census adults	2000-2001
USFWS refuge	ron huffman	Quino checkerspot	Quino checkerspot	San Diego NWR	area search	1998-ongoing
SDSU	marshal hedin	Spider surveys	Spiders	Santa Margarita Reserve	census	2000-?
SDSU	marshal hedin	Arthropod survey	Terrestrial arthropods	Mission Trails RP/Fortuna Mountain RR	time-based: nets, sheets, grnd search	2000-
FISH						
PERL - SDSU	sharook madon	Tijuana Estuary monitoring	composition, no., size - adult and juvenile fish	Tijuana Estuary	beach seines	1986-ongoing
PERL - SDSU	greg williams	Physical, chemical, and biological monitoring	composition, no., size - adult and juvenile fish	Los Penasquitos Lagoon	blocking nets and seine	1986-ongoing?
USGS	robert fisher			Fortuna Mountain		
USGS	robert fisher			Santa Margarita Reserve		
USGS	robert fisher			Tijuana Estuarine Reserve		
Merkel&Assoc.	d.mayer	Batiquitos Lagoon restoration	fish	Batiquitos Lagoon		1997-2007

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AGENCY	CONTACT	PROJECT	RESOURCES	LOCATION	METHOD	TIMEFRAME
AMPHIBIANS & REPTILES						
USGS	robert fisher	NCCP CSS monitoring	amphibians, reptiles	Camp Pendleton	herp arrays, pitfall traps	1995-2000?
USGS	robert fisher	NCCP CSS monitoring	amphibians, reptiles	Carmel Mountain	herp arrays, pitfall traps	2001-2002
USGS	robert fisher	NCCP CSS monitoring	amphibians, reptiles	Chula Vista 1	herp arrays, pitfall traps	1995-2000?
USGS	robert fisher	NCCP CSS monitoring	amphibians, reptiles	Chula Vista 2	herp arrays, pitfall traps	1995-2000?
USGS	robert fisher	NCCP CSS monitoring	amphibians, reptiles	Del Mar Mesa	herp arrays, pitfall traps	2001-2002
USGS	robert fisher	NCCP CSS monitoring	amphibians, reptiles	East Elliott	herp arrays, pitfall traps	1995-2000?
USGS	robert fisher	NCCP CSS monitoring	amphibians, reptiles	Fortuna Mountain	herp arrays, pitfall traps	1995-2000?
USGS	robert fisher	NCCP CSS monitoring	amphibians, reptiles	Japatul	herp arrays, pitfall traps	1995-2000?
USGS	robert fisher	NCCP CSS monitoring	amphibians, reptiles	Little Cedar	herp arrays, pitfall traps	1995-2000?
USGS	robert fisher	NCCP CSS monitoring	amphibians, reptiles	Marron Valley	herp arrays, pitfall traps	1995-2000?
USGS	robert fisher	NCCP CSS monitoring	amphibians, reptiles	Otay Mountain	herp arrays, pitfall traps	1995-2000?
USGS	robert fisher	NCCP CSS monitoring	amphibians, reptiles	Palomar Mtn	herp arrays, pitfall traps	1995-2000?
USGS	robert fisher	NCCP CSS monitoring	amphibians, reptiles	Point Loma	herp arrays, pitfall traps	1995-2000?
USGS	robert fisher	NCCP CSS monitoring	amphibians, reptiles	San Diego Wildlife Refuge	herp arrays, pitfall traps	1995-2000?
USGS	robert fisher	NCCP CSS monitoring	amphibians, reptiles	Santa Margarita Reserve	herp arrays, pitfall traps	1995-2000?
USGS	robert fisher	NCCP CSS monitoring	amphibians, reptiles	Tijuana Estuarine Reserve	herp arrays, pitfall traps	1995-2000?
USGS	robert fisher	NCCP CSS monitoring	amphibians, reptiles	Torrey Pines	herp arrays, pitfall traps	1995-2000?
USGS	robert fisher	NCCP CSS monitoring	amphibians, reptiles	Wild Animal Park	herp arrays, pitfall traps	1995-2000?
SD Natural History Museum	phil unitt	Long-term monitoring	amphibians, reptiles	Miramar	period trapping	1996-1999?
USGS, Helix Water District	robert fisher	Effects of water releases	arroyo toad	Boulder Creek	census eggs, larvae, adults	2000-2005
USGS, Helix Water District	robert fisher	Effects of water releases	arroyo toad	Cedar Creek	census eggs, larvae, adults	2000-2005
USFWS refuge	huffman, famolaro	Arroyo toad	arroyo toad	San Diego NWR	area search	1998-ongoing
USGS, Helix Water District	robert fisher	Effects of water releases	coastal newt	Boulder Creek	census eggs, larvae, adults	2000-2005
USGS, Helix Water District	robert fisher	Effects of water releases	coastal newt	Cedar Creek	census eggs, larvae, adults	2000-2005

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AGENCY	CONTACT	PROJECT	RESOURCES	LOCATION	METHOD	TIMEFRAME
BIRDS						
Back Country Land Trust/CBI	claudio edwards	Docent surveys	Birds	Crestridge	census	2000-2001
Merkel&Assoc.	d.mayer	Batiquitos Lagoon restoration	birds	Batiquitos Lagoon		1997-2007
SD Audubon Society	claudio edwards	Christmas bird counts	birds	San Diego County	census; trends analysis	ongoing
SD Natural History Museum	phil unitt	Long-term monitoring	birds	Miramar	point counts	1999-
SD Natural History Museum	phil unitt	Long-term monitoring	birds	Miramar	MAPS	
SD Natural History Museum	phil unitt	Miramar MAPS station	birds	Miramar	MAPS	
SD Natural History Museum	phil unitt	Bird Atlas	birds	SD County	grid inventories	1997-2002
USFWS refuge	ron huffman	avian surveys	birds	San Diego NWR	point counts	1998-ongoing
USFWS refuge	ron huffman	avian surveys	birds	Tijuana Slough NWR	point counts	1998-ongoing
USFWS refuge	ron huffman	avian surveys	birds	Vernal pools stewardship	point counts	1998-ongoing
Otay Water District	d.mayer	Mitigation Bank monitoring	burrowing owls	San Miguel HMA	monitor use of artifical burrows	1994-ongoing
USFWS refuge	clark winchell	Long-term monitoring	clapper rails	Tijuana Slough	bird censusing	ongoing
UC Riverside	rotenberry/price	Autecological studies	CSS birds	Black Canyon (N. County)	bird censusing	1995-1997
UC Riverside	rotenberry/price	Autecological studies	CSS birds	Camp Pendleton	bird censusing	1995-1997
UC Riverside	rotenberry/price	Autecological studies	CSS birds	Miramar	bird censusing	1995-1997
UC Riverside	rotenberry/price	Autecological studies	CSS birds	Pamo Valley	bird censusing	1995-1997
UC Riverside	rotenberry/price	Autecological studies	CSS birds	Rancho San Diego	bird censusing	1995-1997
UC Riverside	rotenberry/price	Autecological studies	CSS birds	Wild Animal Park	bird censusing	1995-1997
USFWS refuge	ron huffman	MSCP CSS monitoring	gnatcatcher, wren	San Diego NWR	spot mapping	1999-ongoing
City of SD MSCP	keith greer	CSS wildlife species	gnatcatchers	MSCP preserve lands in city	MSCP monitoring plan	2000-2001
Otay Water District	d.mayer	Mitigation Bank monitoring	gnatcatchers	San Miguel HMA	census	1994-ongoing
USFWS refuge	clark winchell	Long-term monitoring	gnatcatchers	Otay-Sweetwater	spot mapping	1999-
Center for Natural Lands Mgmt	m. spiegelberg	Preserve management	gnatcatchers, birds	Manchester Conserv'n Area	point counts	2000-ongoing

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Center for Natural Lands Mgmt	m. spiegelberg	Preserve management	gnatcatchers, birds	Whelan, Oceanside	wandering transects	2000-ongoing
Center for Natural Lands Mgmt	m. spiegelberg	Preserve management	gnatcatchers, c.wrens	Woodridge near L.Jennings	wandering transects	2000-ongoing
County of SD MSCP	mark webb	Gnatcatcher monitoring, Lakeside	gnatcatchers, CSS birds	Lakeside archipelago	MSCP monitoring plan	2000-2001
Wildlife Research Institute	dave bittner	Golden eagle nest site monitoring	Golden eagles, raptors	San Diego County	Weekly nest visits; helicopter	1987-present
Sweetwater Authority	pete famolaro	Compliance monitoring	Least Bell's vireo	upper Sweetwater Reservoir, upstream to Hwy 94	abundance, breeding, distribution	1987-ongoing
USGS	barbara kus	Population structure and demography	Least Bell's vireo	Pilgrim Creek	color banding	
USGS	barbara kus	Population structure and demography	Least Bell's vireo	San Luis Rey	color banding	
USFWS refuge	ron huffman	Least Bell's vireo	least Bell's vireo	San Diego NWR	spot mapping	1998-ongoing
Calif. Dept. Fish & Game	kim mckee	Least tern surveys	least terns	Buena Vista Lagoon	census	1985-ongoing
Calif. Dept. Fish & Game	kim mckee	Least tern surveys	least terns	Batiquitos Lagoon (8 sites)	census	1985-ongoing
Calif. Dept. Fish & Game	kim mckee	Least tern surveys	least terns	San Eliio Lagoon	census	1985-ongoing
Calif. Dept. Fish & Game	kim mckee	Least tern surveys	least terns	San Dieguito Lagoon	census	1985-ongoing
Calif. Dept. Fish & Game	jennifer price	Least tern surveys	least terns	FAA Island	census, predator control	1985-ongoing
Calif. Dept. Fish & Game	virginia johnson	Least tern surveys	least terns	Mariners Point	census, predator control	1985-ongoing
Calif. Dept. Fish & Game	virginia johnson	Least tern surveys	least terns	North Fiesta Island	census, predator control	1985-ongoing
USFWS refuge	clark winchell	Long-term monitoring	least terns	Sweetwater Marsh	bird censusing	ongoing
USGS	barbara kus	Avian productivity and survival	Neotropical migrants	Case Springs	MAPS	1995-2005

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USGS	barbara kus	Avian productivity and survival	Neotropical migrants	De Luz Creek	MAPS	1995-2005
USGS	barbara kus	Avian productivity and survival	Neotropical migrants	Santa Margarita Reserve	MAPS	1995-2005
USGS	barbara kus	Restoration site monitoring	Neotropical migrants	Fortuna Mountain		
City of SD MSCP	keith greer	Raptors	raptors	MSCP preserve lands in city	MSCP monitoring plan	2001-2002
Dartmouth College	scott morrison	Edge effects and productivity	Rufous-crowned sparrow	San Diego NWR	census, nest monitoring	1997-2000
USFWS refuge	clark winchell	Long-term monitoring	shorebirds	South SD Bay	bird censusing	ongoing
USFWS refuge		Shorebird monitoring	shorebirds	Tijuana NWR		
USGS	barbara kus	Population structure and demography	SW willow flycatcher	Pilgrim Creek	color banding	
USGS	barbara kus	Population structure and demography	SW willow flycatcher	San Luis Rey	color banding	
USGS	barbara kus	Population structure and demography	SW willow flycatcher	San Pasqual Valley	color banding	
UC Davis	bill hamilton	Tri-colored blackbird day	tri-colored blackbird	San Diego County	census	annual
USGS	barbara kus			Tijuana Estuarine Reserve		
MAMMALS						
Calif. Dept. Fish & Game	dodd/mcclenaghan	Pacific pocket mouse	Pacific pocket mouse	Dana Point	Trapping	1998-2001
Center for Natural Lands Mgmt	m. spiegelberg	Preserve management	mammals	Manchester Conserv'n Area	trapping, scent stations	2000-ongoing
Center for Natural Lands Mgmt	m. spiegelberg	Preserve management	mammals	Woodridge near L.Jennings	trapping, scent stations	2000-ongoing
Center for Natural Lands Mgmt	m. spiegelberg	Preserve management	small mammals	Whelan, Oceanside	trapping	2000-ongoing
City of Poway/CBI	kevin crooks	wildlife corridor tracking	large mammals	Beeler Canyon	track transects, scent stations, camera	2000
City of Poway/CBI	kevin crooks	wildlife corridor tracking	large mammals	Carmel Valley	track transects, scent stations, camera	2000
City of Poway/CBI	kevin crooks	wildlife corridor tracking	large mammals	McGonigle Canyon	track transects, scent stations, camera	2000

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City of Poway/CBI	kevin crooks	wildlife corridor tracking	large mammals	Penasquitos Canyon	track transects, scent stations, camera	2000
City of Poway/CBI	kevin crooks	wildlife corridor tracking	large mammals	Shaw Valley	track transects, scent stations, camera	2000
City of Poway/CBI	kevin crooks	wildlife corridor tracking	large mammals	Sycamore Canyon	track transects, scent stations, camera	2000
Kevin Crooks	kevin crooks	NCCP linkages	large mammals			
SD Natural History Museum	phil unitt	Long-term monitoring	small mammals	Miramar	period trapping	1999-
SD Tracking Team	chris bader	wildlife corridor tracking	large mammals	Iron Mountain trail	track and scat transects	ongoing
SD Tracking Team	chris bader	wildlife corridor tracking	large mammals	Iron Mountain @ Elli Lane	track and scat transects	ongoing
SD Tracking Team	chris bader	wildlife corridor tracking	large mammals	Lake Sutherland	track and scat transects	2000-ongoing
SD Tracking Team	chris bader	wildlife corridor tracking	large mammals	Mt. Woodson watertank east	track and scat transects	2000-ongoing
SD Tracking Team	chris bader	wildlife corridor tracking	large mammals	Crest	track and scat transects	2000-ongoing
SD Tracking Team	barry martin	wildlife corridor tracking	large mammals	Mission Trails RP tunnel	track and scat transects	ongoing
SD Tracking Team	barry martin	wildlife corridor tracking	large mammals	Mission Trails - Spring Cyn	track and scat transects	ongoing
SD Tracking Team	barry martin	wildlife corridor tracking	large mammals	Mission Trails - Oak Canyon	track and scat transects	ongoing
SD Tracking Team	barry martin	wildlife corridor tracking	large mammals	Scripps Poway Pkwy tunnel	track and scat transects	ongoing
SD Tracking Team	barry martin	wildlife corridor tracking	large mammals	E. Penasquitos Canyon	track and scat transects	1995-ongoing
SD Tracking Team	barry martin	wildlife corridor tracking	large mammals	W. Penasquitos Canyon	track and scat transects	1995-ongoing
SD Tracking Team	barry martin	wildlife corridor tracking	large mammals	Carson's Crossing to waterfall	track and scat transects	1995-ongoing
SD Tracking Team	barry martin	wildlife corridor tracking	large mammals	Penasquitos Creek south	track and scat transects	1995-ongoing
SD Tracking Team	barry martin	wildlife corridor tracking	large mammals	Penasquitos Creek north	track and scat transects	1995-ongoing
SD Tracking Team	barry martin	wildlife corridor tracking	large mammals	Sycamore Cyn County Pk	track and scat transects	1995-ongoing
SD Tracking Team	barry martin	wildlife corridor tracking	large mammals	Lake Hodges - Sycamore Ck	track and scat transects	1995-ongoing
SD Tracking Team	barry martin	wildlife corridor tracking	large mammals	Torrey Pines State Reserve, east side of lagoon	track and scat transects	1995-ongoing
SD Tracking Team	barry martin	wildlife corridor tracking	large mammals	Lopez Ridge	track and scat transects	1995-ongoing
SD Tracking Team	barry martin	wildlife corridor tracking	large mammals	Lopez Canyon	track and scat transects	ongoing
SD Tracking Team	barry martin	wildlife corridor tracking	large mammals	5/805 merge	track and scat transects	ongoing
SD Tracking Team	barry martin	wildlife corridor tracking	large mammals	North-central Penasquitos to McGonigle Canyon	track and scat transects	ongoing
UC Riverside	rotenberry/price	Autecological studies	small mammals (CSS)	Black Canyon (N. County)	trapping	1995-1997
UC Riverside	rotenberry/price	Autecological studies	small mammals (CSS)	Camp Pendleton	trapping	1995-1997
UC Riverside	rotenberry/price	Autecological studies	small mammals (CSS)	Miramar	trapping	1995-1997

SURVEY, RESEARCH, AND MONITORING EFFORTS
WESTERN SAN DIEGO COUNTY

AGENCY	CONTACT	PROJECT	RESOURCES	LOCATION	METHOD	TIMEFRAME
UC Riverside	rotenberry/price	Autecological studies	small mammals (CSS)	Pamo Valley	trapping	1995-1997
UC Riverside	rotenberry/price	Autecological studies	small mammals (CSS)	SD Wild Animal Park	trapping	1995-1997
UC Riverside	rotenberry/price	Autecological studies	small mammals (CSS)	Sweetwater River	trapping	1995-1997
USGS	drew stokes	bat monitoring	bats	San Diego NWR	sonograms, spot lighting, mist netting, roost searches	2000-2001
OTHER						
PERL - SDSU	sharook madon	Tijuana Estuary monitoring	water quality	Tijuana Estuary	data loggers	1985-ongoing
PERL - SDSU	sharook madon	Los Penasquitos Estuary monitoring	water quality	Los Penasquitos Estuary	data loggers	1995?-ongoing
RWQCB	linda pardy			Santa Margarita Reserve		1998-2000
SD Water Utilities	david gibson	Stream monitoring	water quality, flows	multiple locations		2000-?
SDSU	walt oechel	Global change research		Sky Oaks Field Station		
NO DATA YET						
ACOE						
BLM - Otay Mountain	joel schultz					
Calif. State Parks	mike wells					
Caltrans						
Coastal Conservancy	marc beyler					
CWA						
DOD-Fallbrook						
DOD-Miramar						
DOD-Pendleton						
DOD-Point Loma						
Environmental Trust	don hunsaker					
UCSD Reserves	isabelle kay	Dawson Los Monos				

SURVEY, RESEARCH, AND MONITORING EFFORTS
WESTERN SAN DIEGO COUNTY

AGENCY	CONTACT	PROJECT	RESOURCES	LOCATION	METHOD	TIMEFRAME

San Diego Wildlife Track and Sign Survey

SPRING 2000 SURVEY SCHEDULE

orted by transect

Date	Day	Time	Leader	Transect #	Name	Location/Notes
26-Apr-00	Wed	6:30 AM	Barry	1&2	Sabre Springs to Mercy Property	Eastern Penasquitos Canyon/Sabre Springs
27-Apr-00	Thu	6:30 AM	Barry	3&4	La Tortola Creek Crossing East to Big Bend South & Mystery Tree Loop	Eastern Penasquitos Canyon
6-May-00	Sat	6:30 AM	Uli	5	Black Mountain Bridge West to 1 Mile Marker	Eastern Penasquitos Canyon
2-May-00	Tue	6:30 AM	Rick	6	South Side PQ 1 Mile to 2.5 Mile Marker	Eastern/Central PQ, South Side of creek
28-Apr-00	Fri	6:30 AM	Lee	7	Carson's Crossing to Waterfall	Eastern/Central PQ Canyon, South Side of Creek
2-May-00	Tue	6:30 AM	Uli	8	North Side PQ Waterfall East to 1.5 Mile Marker	Central Penasquitos Canyon, North Side of creek
6-May-00	Sat	6:30 AM	Gretchen	9	North Side PQ 1.5 Mile Marker East to Ranch House	Eastern/Central Penasquitos Canyon, North Side of creek
28-Apr-00	Fri	6:00 AM	Dean	10	South Side PQ 2.5 Mile Marker East to Waterfall	Western/Central Penasquitos Canyon, South Side of creek.
8-May-00	Mon	6:30 AM	Uli	11	South Side PQ 1.5 Mile Marker East to 2.5 Mile Marker	Western Penasquitos Canyon, South Side of creek
26-Apr-00	Wed	6:30 AM	Uli	12	El Cuervo Adobe East to 1.5 Mile Marker	Western Penasquitos Canyon, South Side of Creek
6-May-00	Sat	6:30 AM	Rick	13	North Side PQ 2.5 Mile Marker to Waterfall	Central Penasquitos Canyon, North Side of creek
29-Apr-00	Sat	6:30 AM	Rick	14	North Side PQ 1.5 to 2.5 Mile Marker	Western Penasquitos Canyon, North Side of creek
29-Apr-00	Sat	6:30 AM	Doug	15	North Side La Cantina Secret Crossing East to Wagon Wheel Crossing	Western Penasquitos Canyon, North Side of Creek (Will need to wade creek twice)
27-Apr-00	Thu	6:30 AM	Uli	16	West End Parking Lot Over Knoll	Western Penasquitos Canyon
13-May-00	Sat	7:00 AM	Barry	17	La Cantina Under the Merge Loop	5/805 Merge - Western Penasquitos Canyon
30-Apr-00	Sun	7:00 AM	Chris	18	Wildlife Tunnel - Lopez Ridge	Lopez Ridge (West End)
TBD	TBD	7:00 AM	Barry	21	Limited participation - Bike Transect	North-Central Penasquitos Cyn to McGonigle Cyn
1-May-00	Mon	7:00 AM	Barry	22	Peñasquitos Lagoon to Peñasquitos Creek	Torrey Pines State Park, East side of Lagoon
30-Apr-00	Sun	7:00 AM	Dean	23	Wildlife Tunnel - Scripps Poway Parkway	Near Intersection with Hwy 67
6-May-00	Sat	6:30 AM	Chris	24	Crest - East on Interstate 8	East San Diego County
20-Apr-00	Thu	8:00 AM	Lee	25	Lake Hodges - Sycamore Creek	I15 to Pomerado Road at Lake Hodges
27-Apr-00	Thu	6:30 AM	Ann	26	North Woodson Watertank East	Mt Woodson - Hwy 67
7-May-00	Sun	6:30 AM	Ann	27	North Woodson Watertank West	Mt Woodson - Hwy 67
3-May-00	Wed	7:00 AM	Julie	28	Elli Lane Trail	Iron Mountain - Hwy 67 @ Elli Lane Rd.
26-Apr-00	Wed	7:00 AM	Julie	29	Iron Mtn Trail	Iron Mountain - Hwy 67 @ Poway Rd.
29-Apr-00	Sat	10:00 AM	Dean	30	Wildlife Tunnel - MTRP @ Hwy 52	Mission Trails RP - Highway 52 & Mast
13-May-00	Sat	6:30 AM	Dean	31	Mission Trails, Oak Canyon	Mission Trails RP - Highway 52 & Mast
6-May-00	Sat	6:30 AM	Dean	32	Mission Trails, Spring Canyon	Mission Trails RP - Father Juniper Road
12-May-00	Fri	8:00 AM	Phoenix	33	Sycamore Canyon - Hwy 67	Sycamore Canyon Open Space West of Hwy 67
29-Apr-00	Sat	6:30 AM	Chris	19&20	Lopez Canyon Kiosk Trail and Cobble Trail	Lopez Canyon (West End)

* confirmed

schedule as of 11/4/2010

