

# ***2003 So. Cal. Fires***

## **Burned Area Rehabilitation Plan**

**U.S. Fish and Wildlife Service**

### **REVIEW AND CONCURRENCE**

#### **Burned Area Rehabilitation Concurrence**

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Therese O'Rourke, Project Leader, Carlsbad Fish and Wildlife Office, FWS

Date

#### **Burned Area Rehabilitation Approval**

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Steve Thompson, Manager, California Nevada Operations, FWS

Date

#### **Post-Rehabilitation Restoration Funding Approval**

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Steve Thompson, Manager, California Nevada Operations, FWS

Date

## INTERAGENCY BURNED AREA REHABILITATION PLAN

### BACKGROUND/JUSTIFICATION

The below specification is very similar, and has the same intent as the T& E species monitoring specification on page 89 of the 2003 So. Cal. Fires Burned Area Emergency Stabilization and rehabilitation Plan (IBAERT 2003). We have written a new specification because;

- 1) We understand that the original proposal was not approved in part because it was classified as an “emergency stabilization” action, and should have been classified as a “rehabilitation” action (Jack Hamby, BLM, pers. comm. 2004),

and

- 2) We would like to modify and further explain some aspects of the proposal that may have been misunderstood and thus caused concern, or otherwise needed clarification.

### PART F – SPECIFICATION

<b>SPECIFICATION TITLE:</b>	<b>T&amp; E SPECIES MONITORING</b>	<b>JURISDICTIONS:</b>	<b>FWS BLM</b>
<b>PART E: LINE ITEM:</b>	<b>WL-1 T&amp;E SPECIES MONITORING</b>	<b>FISCAL YEAR:</b>	<b>FY 04</b>
<b>ESR REFERENCE #:</b>	<b>6.3.8 Threatened and Endangered Species</b>	<b>SPECIFICATION TYPE:</b>	<b>R</b>

### I. WORK TO BE DONE

#### A. General Description:

Identify fire-caused mortality of Quino checkerspot butterflies and any subsequent loss of population resilience in critical occurrences that could jeopardize the species.

#### B. Location (Suitable) Sites:

Bureau of Land Management (BLM) and U.S. Fish and Wildlife Service (USFWS) managed lands in the Southwestern San Diego Recovery Unit within the Otay Fire perimeter that are known to have been recently occupied by the Quino checkerspot butterfly.

#### C. Design/Construction Specifications:

The Quino checkerspot butterfly flight season is projected to begin in late February based on current USFWS monitoring at unaffected sites (Carlsbad Fish and Wildlife Office public website). Surveys must begin in March to be effective. Initial monitoring may be done by USFWS staff (we currently have \$3,700 funded by the USFWS through the original BAER plan) and permitted volunteers, however effective monitoring requires more funding/year for

several years.

Sites to be surveyed/monitored are locations where Quino have been observed since 1990 within mapped Occurrence Complexes. Surveys will occur at 6 sites within 200 meters of reported butterfly observations (map attached). Monitoring of Quino checkerspot butterflies and associated habitat will be conducted in accordance with the established protocol (2003 So. Cal. Emergency Stabilization and Rehabilitation Plan, p. 90).

#### **D. Purpose of Treatment Specification:**

The Otay Fire affected 53% of all Quino checkerspot butterfly observations reported within the Southwest San Diego Recovery Unit (attached map). 2.5 of the three core Occurrence Complexes (putative population distributions based on butterfly observation locations) were within the high severity area burned by the fire (BAER Map Volume, **8d**). These occurrences represent the majority of butterfly observations in the recovery unit (i.e. occurrence locations outside the fire encompass far fewer total butterfly observations). It is possible that the butterflies (caterpillar diapause stage) were killed by the fire. Because this is a federally listed Endangered species, it is critical to determine mortality and possible loss of population resiliency. If decreased butterfly numbers reduce population resiliency and the population is not expected to recover without assistance, the next step would be to initiate butterfly ranching and habitat enhancement (population augmentation within an occurrence complex or metapopulation) to prevent loss of the species. The Quino checkerspot butterfly is endemic to San Diego and Riverside Counties, and Baja California Norte, Mexico. Due to drought and habitat loss, populations are severely reduced in abundance and distribution from historic levels. The populations and habitat affected by the fire represent a significant portion of the remaining distribution and designated critical habitat. More information can be found in the BAER Wildlife Assessment and the Recovery Plan for the Quino Checkerspot Butterfly (*Euphydryas editha quino*) (USFWS 2003).

#### **E. Treatment effectiveness monitoring**

Presence-absence monitoring of unaffected sites will be conducted per the existing USFWS program (CFWO website) to confirm presence of a recruitment source. After three years of monitoring, if fewer average Quino checkerspot butterflies are observed/visit in burned sites than were previously recorded on-site, butterfly ranching and/or habitat enhancement will be undertaken to increase recruitment and augment the population. Funding already exists for ranching and habitat enhancement through mitigation funds for a CalTrans project (State Route 125 South). If total annual January and February rainfall during any of the monitoring years is not within one standard deviation of the average total for those months over the past 30 years, presence-absence data will be substituted for the abundance threshold above when determining the need for ranching or habitat enhancement.

Butterfly ranching is defined as habitat enhancement above and beyond natural suitability and on-site captive rearing of locally collected larvae. Adults recruit naturally to the surrounding habitat where they were collected as immature individuals. Ranching is undertaken strictly to augment a decimated population using local stock, and does not involve captive propagation or

translocation of stock from other populations. Unaffected Quino locations within all affected Occurrence Complexes should provide sources of local recruitment to burned habitat. Host plant surveys in 2004 of occupied habitat within the Otay Fire footprint (see attached map) also revealed portions of larval host plant patches that were not burned (A. Anderson and J. Digregoria pers. observ. 2004), another potential source of recruitment. Therefore, ranching and/or habitat enhancement should successfully restore population resilience if applied.

## II. LABOR, EQUIPMENT, MATERIALS, AND OTHER COSTS

<b>PERSONNEL SERVICES</b> (Grade @cost/Hours X # HoursX fiscal Years = Cost/Item. <b>Do not include contract personnel costs here (see contractor services below).</b>	<b>COST/ITEM</b>
GS-11 (FWS Entomologist) @30/hour X 60 hours X 2 FY	\$5400.00
<b>TOTAL PERSONNEL SERVICES COST</b>	\$5400.00
<b>EQUIPMENT PURCHASE, LEASE, OR RENTAL</b> (Item @ Cost/Hours or Cost/Day or # days X # Fiscal Years = Cost/Item) Note: Purchase requires written justification that demonstrates cost/item benefits over lease or rental.	<b>COST/ITEM</b>
None	
<b>TOTAL EQUIPMANT PURCHASE, LEASE, OR RENTAL COST</b>	
<b>MATERIAL AND SUPPLIES</b> (Item @ Cost/each X Quantity X Fiscal Years = Cost/item)	<b>COST/ITEM</b>
None	
<b>TOTAL MATERIAL AND SUPPLIES COST</b>	
<b>TRAVEL</b> (Personnel or Equipment @rate X Round Trips X # Fiscal Years = Cost/Item)	<b>COST/ITEM</b>
None	
<b>TOTAL TRAVEL COST</b>	
<b>CONTRACTS</b> (labor or equipment @Cost/Hour x # Hours X Fiscal Years = Cost/Item)	<b>COST/ITEM</b>
Survey 1 location per day X 6 sites X 5 visits per site X 3 years = 90 days @ 8 hours per day (includes OH) X \$85 per hour (high cost reflects need for contractor to have high skill level and be permitted by FWS to conduct surveys) = \$61,200	\$61,200
<b>TOTAL CONTRACTS COSTS</b>	\$61,200

FISCAL YEAR	UNIT	UNIT COST	# OF UNITS	COST	FUNDING SOURCE	METHOD
2004	FY	\$22,200	1	\$22,200	R	P C
2005	FY	\$22,200	1	\$22,200	R	P C
2006	FY	\$22,200	1	\$22,200	R	P C

<b>TOTAL</b>		<b>\$66,600</b>	<b>3</b>	<b>\$66,600</b>		
<b>FUNDING SOURCES</b>		<b>SPECIFICATION TYPE</b>		<b>METHOD OF COMPLETION</b>		
F = Fire suppression		ES = Emergency Stabilization		P = Agency Personnel Services		
ESR = Emergency Stabilization and Rehab		R= Rehabilitation		C = Contract		
OP/O = Agency Operating Fund		FS = Fire Suppression		EFC = Emergency Fire Contract		
EWP = Emergency Watershed Program				FC = Crew Labor Assigned to Fire		

**SOURCE OF COST ESTIMATES**

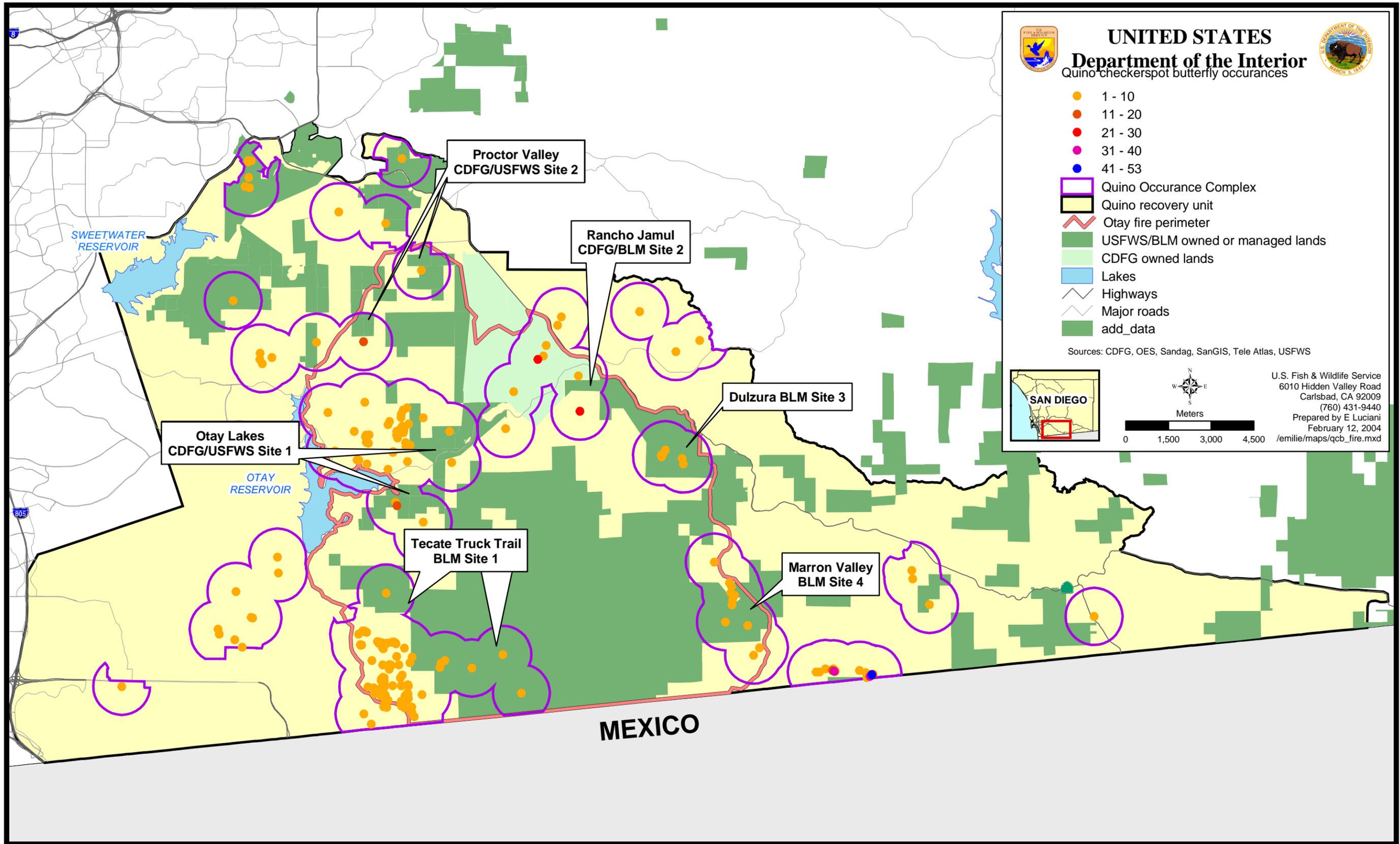
<b>Put Letter (P, M, C, or F) Next to Appropriate Cost Estimate Source (1-5) Below</b>	
1. Estimate obtained from 2-3 independent contractual sources.	
2. Document cost figures from similar project work obtained by agency sources.	P C
3. Estimate supported by cost guides from independent sources or other federal agencies.	
4. Estimates based on government wages rates and material cost.	P
5. No cost estimate required – cost charged to Fire Suppression Account (not tracked in plan).	
<b>P=Personnel Services M=Materials/Supplies T=Travel C=Contract F=Suppression</b>	

**III. RELEVANT DETAILS, MAPS, AND DOCUMENTATION INCLUDED IN THIS REPORT**

<b>List Relevant Documentation and Cross-References within ESR Plan</b>
Wildlife BAER assessment, Emergency Consultation Package, attached survey protocol, attached updated survey location map and BAER Map Volume, <b>8d</b> .

**IV. SPECIFICATION COST TOTALS**

<b>TOTALS BY JURISDICTION BY FIRE BY UNIT</b>	<b>UNITS TREATED</b>	<b>COST</b>
BLM- Otay	4 survey sites	\$44,400
FWS -Otay	2 survey sites	\$22,200
<b>TOTALS BY JURISDICTION BY FIRE</b>		
BLM -Otay	4 survey sites	\$44,400
FWS -Otay	2 survey sites	\$22,200
<b>GRAND TOTALS BY JURISDICTION (ALL FIRES AND UNITS)</b>		
<b>BLM</b>	4 survey sites	\$44,400
<b>FWS</b>	2 survey sites	\$22,200
<b>GRAND TOTALS</b>		<b>\$66,600</b>

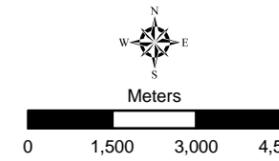


**UNITED STATES**  
**Department of the Interior**  
 Quino checkerspot butterfly occurrences



- 1 - 10
- 11 - 20
- 21 - 30
- 31 - 40
- 41 - 53
- Quino Occurance Complex
- Quino recovery unit
- Otay fire perimeter
- USFWS/BLM owned or managed lands
- CDFG owned lands
- Lakes
- Highways
- Major roads
- add\_data

Sources: CDFG, OES, Sandag, SanGIS, Tele Atlas, USFWS



U.S. Fish & Wildlife Service  
 6010 Hidden Valley Road  
 Carlsbad, CA 92009  
 (760) 431-9440  
 Prepared by E Luciani  
 February 12, 2004  
 /emilie/maps/qcb\_fire.mxd

**MEXICO**

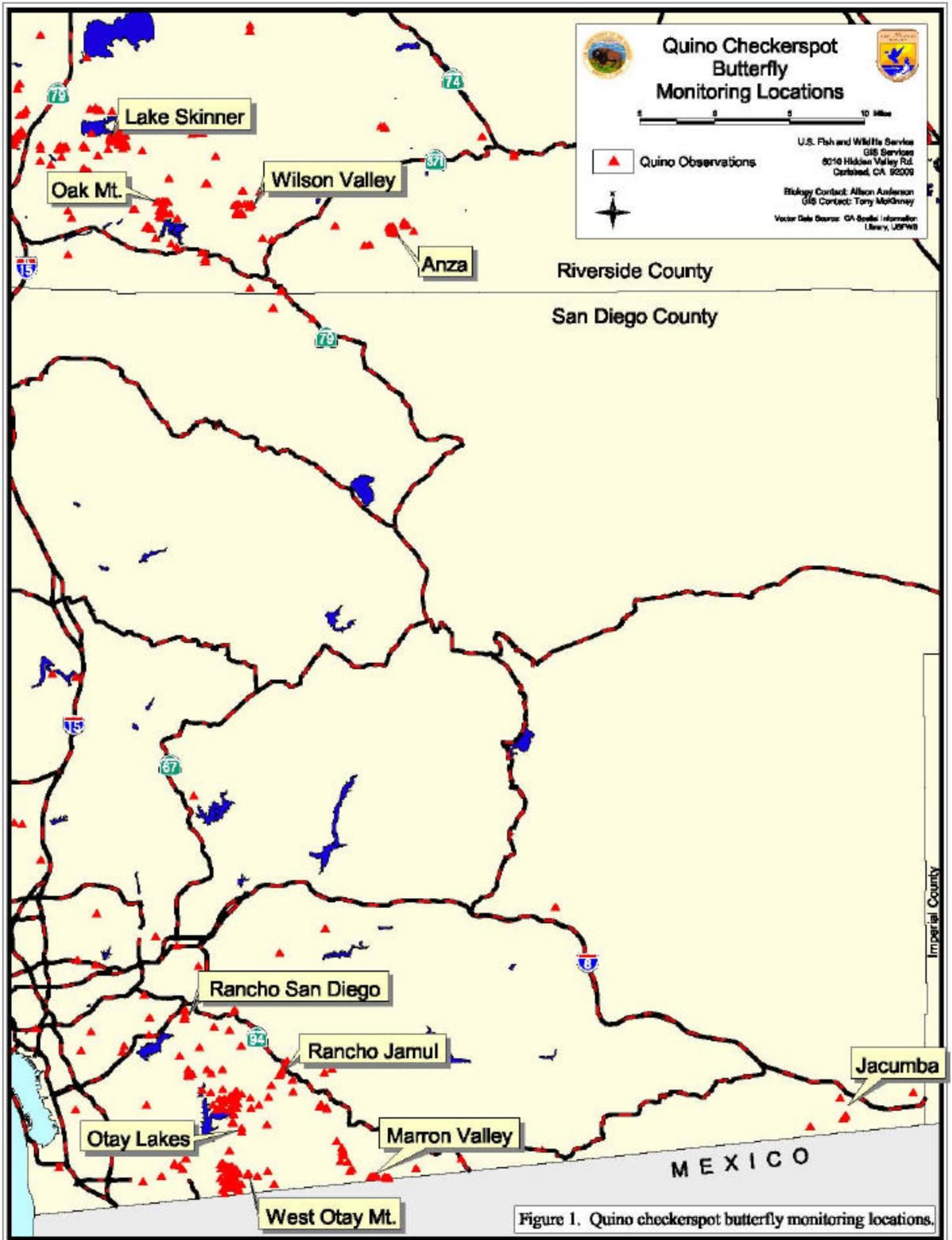


Figure 1. Quino checkerspot butterfly monitoring locations.