DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 226

[Docket No. 041123329–4329–01; I.D. No. 110904F]

RIN 0648–AO04

Endangered and Threatened Species; Designation of Critical Habitat for Seven Evolutionarily Significant Units of Pacific Salmon (*Oncorhynchus tshawytscha*) and Steelhead (*O. mykiss*) in California

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration, Commerce.

ACTION: Proposed rule; request for comments.

SUMMARY: The National Marine Fisheries Service (NMFS) proposes to designate critical habitat for two Evolutionarily Significant Units (ESUs) of chinook salmon (*Oncorhynchus tshawytscha*) and five ESUs of *O. mykiss* (inclusive of anadromous steelhead and resident rainbow trout) listed under the Endangered Species Act of 1973, as amended (ESA). The specific areas proposed for designation in the rule text set out below include approximately 11,668 miles (18,669 km) of riverine habitat and 947 mi^2 (2,444 km^2) of bay/estuarine habitat (primarily in San Francisco-San Pablo-Suisun Bays) in California. Some of the proposed areas, however, are occupied by two or more ESUs. However, as explained below, we are also considering excluding many of these areas from the final designation based on existing land management plans and policies, voluntary conservation efforts and other factors that could substantially reduce the scope of the final designations. The net economic impacts of ESA section 7 associated with designating the areas described in the proposed rule are estimated to be approximately $83,511,186, but we believe the additional exclusions under review could reduce this impact by up to 57 percent or more. We solicit information and comments from the public on all aspects of the proposal, including information on the economic, national security, and other relevant impacts of the proposed designation. We may revise this proposal and solicit additional comments prior to final designation to address new information received during the comment period.

DATES: Comments on this proposed rule must be received by 5 p.m. P.s.t. on February 8, 2005. Requests for public hearings must be made in writing by January 24, 2005.

ADDRESSES: You may submit comments, identified by docket number [041123329–4329–01] and RIN number [0648–AO04], by any of the following methods:

- E-mail: *critical.habitat.swr@noaa.gov*. Include docket number [041123329–4329–01] and RIN number [0648–AO04] in the subject line of the message.
- Federal e-Rulemaking Portal: *http://www.regulations.gov*. Follow the instructions for submitting comments.
- Agency Web site: *http://ocio.nmfs.noaa.gov/ibrm-ssi/index.shtml*. Follow the instructions for submitting comments at *http://ocio.nmfs.noaa.gov/ibrm-ssi/process.shtml*.
- Mail: Submit written comments and information to: Assistant Regional Administrator, Protected Resources Division, NMFS, 501 W. Ocean Blvd., Suite 4200, Long Beach, CA 90802–4213. You may hand-deliver written comments to our office during normal business hours at the address given above.
- Fax: 562–980–4027

FOR FURTHER INFORMATION CONTACT: Craig Wingert at the above address, at 562–980–4021, or by facsimile at 562–980–4027; or Marta Nammack at 301–713–1401. The proposed rule, maps, and other materials relating to this proposal can be found on our Web site at *http://swr.nmfs.noaa.gov*.

SUPPLEMENTARY INFORMATION:

Background

NMFS is responsible for determining whether species, subspecies, or distinct population segments of Pacific salmon and *O. mykiss* (inclusive of anadromous steelhead and some populations of resident rainbow trout) are threatened or endangered, and for designating constitute critical habitat for them under the ESA (16 U.S.C. 1531 *et seq*). To be considered for ESA listing, a group of organisms must constitute a ''species.'' Section 3 of the ESA defines a species as ''any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature.'' Since 1991, NMFS has identified distinct population segments of Pacific salmon and *O. mykiss* by dividing the U.S. populations of each species into evolutionarily significant units (ESUs) which it determines are substantially reproductively isolated and represent an important component in the evolutionary legacy of the biological species (56 FR 58612; November 20, 1991). Using this approach, every Pacific salmon and *O. mykiss* population in the U.S. is part of a distinct population segment that is eligible for listing as a threatened or endangered species under the ESU. In ESA listing determinations for Pacific salmon and *O. mykiss* since 1991 we have identified 52 ESUs in Washington, Oregon, Idaho and California. Presently, 25 ESUs are listed as threatened or endangered. One additional ESU (Oregon Coast coho salmon) was listed as threatened from 1998 to 2004 when it was removed from the list of threatened or endangered species as a result of a Court Order.

In a **Federal Register** document published on June 14, 2004 (69 FR 33101), we proposed to list 27 ESUs as threatened or endangered. The ESUs proposed for listing include 25 that are currently listed, but in most cases the ESUs are being redefined in either of two significant ways: By including hatchery fish that are no more than moderately divergent genetically from naturally spawning fish within the ESU, and in the case of *O. mykiss* species, by including some resident trout populations in the ESUs. We have also proposed to list the previously-listed Oregon Coast coho salmon population which is redefined to include some fish reared in hatcheries, and are proposing to list one new ESU (Lower Columbia River *O. mykiss*, was previously thought to be extinct in the wild). In this document, *O. mykiss* ESUs refer to ESUs that include populations of both anadromous steelhead and resident rainbow trout. Also, references to ''salmon'' in this notice generally include all members of the genus *Oncorhynchus*, including *O. mykiss*.

This **Federal Register** document describes proposed critical habitat designations for the following seven ESUs of Pacific salmon and *O. mykiss* in California: (1) California Coastal chinook salmon; (2) Northern California *O. mykiss*; (3) Central California Coast *O. mykiss*; (4) South-Central California Coast *O. mykiss*; (5) Southern California *O. mykiss*; (6) Central Valley spring run chinook salmon; and (7) Central Valley *O. mykiss*.

Section 3 of the ESA defines critical habitat as ''the specific areas within the geographical area occupied by the species, at the time it is listed, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and

specific areas outside the geographical area occupied by the species at the time it is listed that are determined by the Secretary to be essential for the conservation of the species.'' Section 3 of the ESA (16 U.S.C. 1532(3)) also defines the terms ''conserve,'' ''conserving,'' and ''conservation'' to mean ''to use, and the use of, all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary.'' Section 4 of the ESA requires that before designating critical habitat, we must consider economic impacts, impacts on national security and other relevant impacts of specifying any particular area as critical habitat, and the Secretary may exclude any area from critical habitat if the benefits of exclusion outweigh the benefits of inclusion, unless excluding an area from critical habitat will result in the extinction of the species concerned. Once critical habitat for a salmon or *O. mykiss* ESU is designated, section 7(a)(2) of the ESA requires that each Federal agency shall, in consultation with and with the assistance of NMFS, ensure that any action authorized, funded or carried out by such agency is not likely to result in the destruction or adverse modification of critical habitat.

Previous Federal Action and Related Litigation

Many Pacific salmon and *O. mykiss* ESUs in California and the Pacific Northwest have suffered broad declines over the past hundred years. We have conducted several ESA status reviews and status review updates for Pacific salmon and *O. mykiss* in California, Oregon, Washington, and Idaho. The most recent ESA status review and proposed listing determinations were published on June 14, 2004 (69 FR 33101). Six of the currently listed ESUs have final critical habitat designations. Table 1 summarizes the NMFS scientific reviews of West Coast salmon and *O. mykiss* and the ESA listing determinations and critical habitat designations made to date.

TABLE 1.—SUMMARY OF PREVIOUS ESA LISTING ACTIONS AND CRITICAL HABITAT DESIGNATIONS FOR WEST COAST SALMON AND *O. Mykiss*

Evolutionarily significant unit (ESU)	Current endangered species Act (ESA) status	Year listed	Previous ESA listing determinations and critical habitat designations—**Federal Register** citations	Previous scientific viability reviews and updates
Snake River sockeye ESU	Endangered	1991	*Listing Determinations* 69 FR 33102; 06/14/04 (Proposed rule) 56 FR 58619; 11/20/1991 (Final rule) 56 FR 14055; 04/05/1991 (Proposed rule) *Critical Habitat Designations* 58 FR 68543; 12/28/1993 (Final rule) 57 FR 57051; 12/02/1992 (Proposed rule)	NMES 1991a.
Ozette Lake sockeye ESU	Threatened	1999	*Listing Determinations* 69 FR 33102; 06/14/04 (Proposed rule) 64 FR 14528; 03/25/1999 (Final rule) 63 FR 11750; 03/10/1998 (Proposed rule) *Critical Habitat Designations* 68 FR 55900; 09/29/2003 (removal) 65 FR 7764; 02/16/2000 (Final rule) 63 FR 11750; 03/10/1998 (Proposed rule)	NMFS 1998d. NMFS 1997f.
Sacramento River winter-run chinook ESU	Endangered	1994	*Listing Determinations* 69 FR 33102; 06/14/04 (Proposed rule) 59 FR 440; 01/01/1994 (Final rule) 57 FR 27416; 06/19/1992 (Proposed rule) 55 FR 49623; 11/30/1990 (Final rule) 55 FR 12831, 04/06/1990 (Emergency rule) 55 FR 102260; 03/20/1990 (Proposed rule) 54 FR 10260; 08/04/1989 (Emergency rule) 52 FR 6041; 02/27/1987 (Final rule) *Critical Habitat Designations*. 68 FR 55900; 09/29/2003 (removal) 65 FR 7764; 02/16/2000 (Final rule) 63 FR 11482; 03/09/1998 (Proposed rule)	
Central Valley spring-run chinook ESU	Threatened	1999	*Listing Determinations* 69 FR 33102; 06/14/04 (Proposed rule) 64 FR 50394; 09/16/1999 (Final rule) 63 FR 11482; 03/09/1998 (Proposed rule) *Critical Habitat Designations* 68 FR 55900; 09/29/2003 (removal) 65 FR 7764; 02/16/2000 (Final rule) 63 FR 11482; 03/09/1998 (Proposed rule)	NMFS 1998b. NMFS 1999d.
			Listing Determinations 69 FR 33102; 06/14/04 (Proposed rule) 64 FR 50394; 09/16/1999 (Final rule) 63 FR 11482; 03/09/1998 (Proposed rule) *Critical Habitat Designations* 68 FR 55900; 09/29/2003 (removal)	

TABLE 1.—SUMMARY OF PREVIOUS ESA LISTING ACTIONS AND CRITICAL HABITAT DESIGNATIONS FOR WEST COAST SALMON AND *O. Mykiss*—Continued

Evolutionarily significant unit (ESU)	Current endangered species Act (ESA) status	Year listed	Previous ESA listing determinations and critical habitat designations—**Federal Register** citations	Previous scientific viability reviews and updates
			65 FR 7764; 02/16/2000 (Final rule)	NMFS 1998b.
California Coastal chinook ESU	Threatened	1999	63 FR 11482; 03/09/1998 (Proposed rule)	NMFS 1999d.
			Listing Determinations	
			69 FR 33102; 06/14/04 (Proposed rule)	
			64 FR 14308; 03/24/99 (Final rule)	
			63 FR 11482; 03/09/1998 (Proposed rule)	
			Critical Habitat Designations	
			68 FR 55900; 09/29/2003 (removal)	NMFS 1998b.
			65 FR 7764; 02/16/2000 (Final rule)	NMFS 1998e.
Upper Willamette River chinook ESU	Threatened	1999	63 FR 11482; 03/09/1998 (Proposed rule)	NMFS 1999c.
			Listing Determinations	NMFS 1998e.
Lower Columbia River chinook ESU	Threatened	1999	69 FR 33102; 06/14/04 (Proposed rule)	NMFS 1999c.
			64 FR 14308; 03/24/99 (Final rule)	
			63 FR 11482; 03/09/1998 (Proposed rule)	
			Critical Habitat Designations	
			68 FR 55900; 09/29/2003 (removal)	
			65 FR 7764; 02/16/2000 (Final rule)	
			63 FR 11482; 03/09/1998 (Proposed rule)	
			Listing Determinations	
			69 FR 33102; 06/14/04 (Proposed rule)	
			64 FR 14308; 03/24/99 (Final rule)	
			63 FR 11482; 03/09/1998 (Proposed rule)	
			Critical Habitat Designations	
			68 FR 55900; 09/29/2003 (removal)	NMFS 1998b.
			65 FR 7764; 02/16/2000 (Final rule)	NMFS 1998e.
Upper Columbia River spring-run chinook ESU.	Endangered.	1999	63 FR 11482; 03/09/1998 (Proposed rule)	NMFS 1998c.
			Listing Determinations	
			69 FR 33102; 06/14/04 (Proposed NMFS 1999c rule)	
			64 FR 14308; 03/24/99 (Final rule)	
			63 FR 11482; 03/09/1998 (Proposed rule)	
			Critical Habitat Designations	
			68 FR 55900; 09/29/2003 (removal)	NMFS 1998b.
			65 FR 7764; 02/16/2000 (Final rule)	NMFS 1998e.
Puget Sound chinook ESU	Threatened.	1999	63 FR 11482; 03/09/1998 (Proposed rule)	NMFS 1999c.
			Listing Determinations	
			69 FR 33102; 06/14/04 (Proposed rule)	
			63 FR 1807; 0/12/1998 (Proposal withdrawn)	
			59 FR 66784; 12/28/1994 (Proposed rule)	
			59 FR 42529; 08/18/1994 (Emergency rule)	
			57 FR 23458; 06/03/1992 (Correction)	
			57 FR 14653; 04/22/1992 (Final rule)	
			56 FR 29547; 06/27/1991 (Proposed rule)	NMFS 1991c.
Snake River fall-run chinook ESU	Threatened	1992	*Critical Habitat Designations*	NMFS 1999d.
			58 FR 68543; 12/28/1993 (Final rule)	
			57 FR 57051; 12/02/1992 (Proposed rule)	
			Listing Determinations	
			69 FR 33102; 06/14/04 (Proposed rule)	
			63 FR 1807; 0/12/1998 (Proposal withdrawn)	
			59 FR 66784; 12/28/1994 (Proposed rule)	
			59 FR 42529; 08/18/1994 (Emergency rule)	
			57 FR 23458; 06/03/1992 (Correction)	
			57 FR 34639; 04/22/92 (Final rule)	
			56 FR 29542; 06/27/1991 (Proposed rule)	
			Critical Habitat Designations	
			58 FR 68543; 12/28/1993 (Final rule)	NMFS 1991b.
Snake River spring/summer-run chinook ESU.	Threatened	1992	57 FR 57051; 12/02/1992 (Proposed rule)	NMFS 1998b.
			Listing Determinations	
			69 FR 33102; 06/14/04 (Proposed rule)	
			61 FR 56138;–10/31/1996 (Final rule)	
			60 FR 38011; 07/25/1995 (Proposed rule)	
			Critical Habitat Designations	
			64 FR 24049; 05/05/1999 (Final rule)	Bryant 1994.
Central California Coast coho ESU	Threatened	1996	62 FR 62791; 11/25/1997 (Proposed rule)	NMFS 1995a.

TABLE 1.—SUMMARY OF PREVIOUS ESA LISTING ACTIONS AND CRITICAL HABITAT DESIGNATIONS FOR WEST COAST SALMON AND *O. Mykiss*—Continued

Evolutionarily significant unit (ESU)	Current endangered species Act (ESA) status	Year listed	Previous ESA listing determinations and critical habitat designations—**Federal Register** citations	Previous scientific viability reviews and updates
			Listing Determinations	
			69 FR 33102; 06/14/04 (Proposed rule)	
			62 FR 24588; 05/06/1997 (Final rule)	
			60 FR 38011; 07/25/1995 (Proposed rule)	NMFS 1997a.
			Critical Habitat Designations	NMFS1996c.
			64 FR 24049; 05/05/1999 (Final rule)	NMFS 1996e.
Southern Oregon/Northern California Coast	Threatened	1997	62 FR 62791; 11/25/1997 (Proposed rule)	NMFS 1995a.
				NMFS 1997a.
	Proposed			NMFS 1996b.
Oregon Coast coho ESU	Threatened*	1998	*Listing Determinations*	NMFS 1996d.
			69 FR 33102; 06/14/04 (Proposed rule)	
			69 FR 19975; 04/15/2004 (Candidate list)	
			63 FR 42587; 08/10/1998 (Final rule)	
			62 FR 24588; 05/06/1997 (Proposal withdrawn)	
			61 FR 56138;10/31/1996 (6 mo. extension)	
			60 FR 38011; 07/25/1995 (Proposed rule)	
			Critical Habitat Designations	
			68 FR 55900; 09/29/2003 (removal)	
			65 FR 7764; 02/16/2000 (Final rule)	
			64 FR 24998; 0510/1999 (Proposed rule)	NMFS 1995a.
			Listing Determinations	
			69 FR 33102; 06/14/04 (Proposed rule)	
			69 FR 19975; 04/15/2004 (Candidate list)	
	Proposed		60 FR 38011; 07/25/1995 (Not warranted)	NMFS 1996e.
			Critical Habitat Designations	NMFS 1995a.
Lower Columbia River coho ESU	Threatened	1995	n/a	BNFS 1991a.
			Listing Determinations	
			69 FR 33102; 06/14/04 (Proposed rule)	
			64 FR 14508; 03/25/1999 (Final rule)	
			63 FR 11774; 03/10/1998 (Proposed rule)	
			Critical Habitat Designations	
			68 FR 55900; 09/29/2003 (removal)	NMFS 1997e.
			65 FR 7764; 02/16/2000 (Final rule)	NMFS 1999b.
Columbia River chum ESU	Threatened	1999	63 FR 11774; 03/10/1998 (Proposed rule)	NMFS 1999c.
			Listing Determinations	
			69 FR 33102; 06/14/04 (Proposed rule)	
			64 FR 14508; 03/25/1999 (Final rule)	
			63 FR 11774; 03/10/1998 (Proposed rule)	
			Critical Habitat Designations	NMFS 1996d.
			68 FR 55900; 09/29/2003 (removal)	NMFS 1997e.
			65 FR 7764; 02/16/2000 (Final rule)	NMFS 1999b.
Hood Canal summer-run chum ESU	Threatened	1999	63 FR 11774; 03/10/1998 (Proposed rule)	NMFS 1999c.
			Listing Determinations	
			69 FR 33102; 06/14/04 (Proposed rule)	
			67 FR 21568; 05/01/2002 (Redefinition of ESU)	
			62 FR 43937; 08/18/1997 (Final rule)	
			61 FR 41541; 08/09/1996 (Proposed rule)	
			Critical Habitat Designations	
			68 FR 55900; 09/29/2003 (removal)	
			65 FR 7764; 02/16/2000 (Final rule)	NMFS 1996b
Southern California *O. mykiss*+ ESU	Endangered	1997	64 FR 5740; 03/10/1999 (Proposed rule)	NMFS 1997b.
			Listing Determinations	
			69 FR 33102; 06/14/04 (Proposed rule)	
			62 FR 43937; 08/18/1997 (Final rule)	
			61 FR 41541; 08/09/1996 (Proposed rule)	
			Critical Habitat Designations	
			68 FR 55900; 09/29/2003 (removal)	
			65 FR 7764; 02/16/2000 (Final rule)	NMFS 1996b.
South-Central California Coast *O. mykiss* ESU	Threatened	1997	64 FR 5740; 03/10/1999 (Proposed rule)	NMFS 1997b.
			Listing Determinations	
			69 FR 33102; 06/14/04 (Proposed rule)	
			62 FR 43937; 08/18/1997 (Final rule)	
			61 FR 41541; 08/09/1996 (Proposed rule)	
			Critical Habitat Designations	
			68FR 55900; 09/29/2003 (removal)	

TABLE 1.—SUMMARY OF PREVIOUS ESA LISTING ACTIONS AND CRITICAL HABITAT DESIGNATIONS FOR WEST COAST SALMON AND *O. Mykiss*—Continued

Evolutionarily significant unit (ESU)	Current endangered species Act (ESA) status	Year listed	Previous ESA listing determinations and critical habitat designations—**Federal Register** citations	Previous scientific viability reviews and updates
			65 FR 7764; 02/16/2000 (Final rule)	NMFS 1996b.
Central California Coast *O. mykiss* ESU	Threatened	1997	64 FR 5740; 03/10/1999 (Proposed rule) ..	NMFS 1997b.
			Listing Determinations	
			69 FR 33102; 6/14/04 (Proposed rule)	NMFS 1996b.
			63 FR 13347; 03/19/1998 (Final rule)	NMFS 1997b.
			62 FR 43974; 08/18/1997 (6 mo. extension).	NMFS 1997c.
			61 FR 41541; 08/09/1996 (Proposed rule)	NMFS 1997d.
California Central Valley *O. mykiss* ESU	Threatened	1998	*Critical Habitat Designations*	NMFS 1998a.
			68 FR 55900; 09/29/2003 (removal)	
			65 FR 7764; 02/16/2000 (Final rule)	
			64 FR 5740; 03/10/1999 (Proposed rule)	
			Listing Determinations	
			69 FR 33102; 06/14/04 (Proposed rule)	
			65 FR 36074; 06/07/2000 (Final rule)	
			65 FR 6960; 02/11/2000 (Proposed rule)	
			63 FR 13347; 03/19/1998 (Not Warranted)	
			62 FR 43974; 08/18/1997 (6 mo. extension)	NMFS 1996b.
			61 FR 41541; 08/09/1996 (Proposed rule)	NMFS 1997c.
			Critical Habitat Designations	NMFS 1998a.
Northern California *O. mykiss* ESU	Threatened	2000	n/a	NMFS 2000
			Listing Determinations	
			69 FR 33102; 06/14/04 (Proposed rule)	
			64 FR 14517; 03/25/1999 (Final rule)	
			63 FR 11798; 03/10/1998 (Proposed rule)	
			62 FR 43974; 08/18/1997 (6 mo. extension)	
			61 FR 41541; 08/09/1996 (Proposed rule)	
			Critical Habitat Designation	NMFS 1996b.
			68 FR 55900; 09/29/2003 (removal)	NMFS 1997d.
			65 FR 7764; 02/16/2000 (Final rule)	NMFS 1999a.
Upper Willamette River *O. mykiss* ESU	Threatened	1999	64 FR 5740; 03/10/1999 (Proposed rule) ..	NMFS 1999c.
			Listing Determinations	
			69 FR 33102; 06/14/04 (Proposed rule)	
			63 FR 13347; 03/19/1998 (Final rule)	
			62 FR 43974; 08/18/1997 (6 mo. extension)	
			61 FR 41541; 08/09/1996 (Proposed rule)	
			Critical Habitat Designations	NMFS 1996b.
			68 FR 55900; 09/29/2003 (removal)	NMFS 1997c.
			65 FR 7764; 02/16/2000 (Final rule)	NMFS 1997d.
Lower Columbia River *O. mykiss* ESU	Threatened	1998	64 FR 5740; 03/10/1999 (Proposed rule) ..	NMFS 1998a.
			Listing Determinations	
			69 FR 33102; 06/14/04 (Proposed rule)	
			64 FR 14517; 03/25/1999 (Final rule)	
			63 FR 11798; 03/10/1998 (Proposed rule)	
			62 FR 43974; 08/18/1997 (6 mo. extension)	
			61 FR 41541; 08/09/1996 (Proposed rule)	
			Critical Habitat Designations	NMFS 1996b.
			68 FR 55900; 09/29/2003 (removal	NMFS 1997d.
			65 FR 7764; 02/16/2000 (Final rule)	NMFS 1999a.
Middle Columbia River *O. mykiss* ESU	Threatened	1999	64 FR 5740; 03/10/1999 (proposed rule) ...	NMFS 1999c.
			Listing Determinations	
			69 FR 33102; 06/14/04 (Proposed rule)	
			62 FR 43974; 08/18/1997 (Final rule)	
			61 FR 41541; 08/09/1996 (Proposed rule)	
			Critical Habitat Designations	
			68 FR 55900; 09/29/2003 (removal)	
			65 FR 7764; 02/16/2000 (Final rule)	NMFS 1996b.
Upper Columbia River *O. mykiss* ESU	Endangered	1997	64 FR 5740; 03/10/1999 (Proposed rule) ..	NMFS 1997b.
			Listing Determinations	
			69 FR 33102; 06/14/04 (Proposed rule)	
			62 FR 43937; 08/18/1997 (Final rule)	
			61 FR 41541; 08/09/1996 (Proposed rule)	
			Critical Habitat Designations	
			68 FR 55900; 09/29/2003 (removal)	

TABLE 1.—SUMMARY OF PREVIOUS ESA LISTING ACTIONS AND CRITICAL HABITAT DESIGNATIONS FOR WEST COAST SALMON AND *O. Mykiss*—Continued

Evolutionarily significant unit (ESU)	Current endangered species Act (ESA) status	Year listed	Previous ESA listing determinations and critical habitat designations—**Federal Register** citations	Previous scientific viability reviews and updates
Snake River Basin *O. mykiss* ESU	Threatened	1997	65 FR 7764; 02/16/2000 (Final rule) ..... 64 FR 5740; 03/10/1999 (Proposed rule) ..	NMFS 1996b. NMFS 1997b.

* Previously listed as a ''threatened'' species (63 FR 42587, August 10, 1998). Threatened listing set aside in *Alsea Valley Alliance* v. *Evans (Alsea Valley Alliance v. Evans,* 161 F.Supp.2d 1154 (D.Or.2001), *appeals dismissed* 358 F.3d 1181 (9th Cir. 2004).

+ *O. mykiss* ESUs include both anadromous ''steelhead'' and resident ''rainbow trout'' in certain areas (see 69 FR 33101; July 14, 2004).

On February 16, 2000, NMFS published final critical habitat designations for 19 ESUs, thereby completing designations for all 25 ESUs listed at the time (65 FR 7764). The 19 designations included more than 150 river subbasins in Washington, Oregon, Idaho, and California. Within each occupied subbasin, we designated as critical habitat those lakes and river reaches accessible to listed fish along with the associated riparian zone, except for reaches on Indian land. Areas considered inaccessible included areas above long-standing natural impassable barriers and areas above impassable dams, but not areas above ephemeral barriers such as failed culverts.

In considering the economic impact of the February 16, 2000, action, NMFS determined that the critical habitat designations would impose very little or no additional requirements on Federal agencies beyond those already associated with the listing of the ESUs themselves. NMFS reasoned that since it was designating only occupied habitat, there would be few or no actions that destroy or adversely modify critical habitat that did not also jeopardize the continued existence of the species. Therefore, the agency reasoned that there would be no economic impact as a result of the designations (65 FR 7764, 7765; February 16, 2000).

The National Association of Homebuilders (NAHB) challenged the designations in District Court in Washington, DC on the grounds that he agency did not adequately consider economic impacts of the critical habitat designations (*National Association of Homebuilders* v. *Evans*, 2002 WL 1205743 No. 00–CV–2799 (D.D.C.)). NAHB also challenged NMFS' designation of Essential Fish Habitat (EFH) (Pacific Coast Salmon Fishery Management Plan, 2000). While the NAHB litigation was pending, the Court of Appeals for the 10th Circuit issued its decision in *New Mexico Cattlegrowers' Association* v. *U.S. Fish and Wildlife Service*, 248 F.3d 1277 (10th Cir. 2001) (*NMCA*). In that case, the Court rejected the U.S. Fish and Wildlife Service (FWS) approach to economic analysis, which was similar to the approach taken by NMFS in the final rule designating critical habitat for 19 ESUs of West Coast salmon and *O. mykiss*. The Court ruled that ''Congress intended that the FWS conduct a full analysis of all of the economic impacts of a critical habitat designation, regardless of whether those impacts are attributable co-extensively to other causes.'' Subsequent to the 10th Circuit decision, we entered into and sought judicial approval of a consent decree resolving the NAHB litigation. That decree provided for the withdrawal of critical habitat designations for the 19 Pacific salmon and *O. mykiss* ESUs and dismissed NAHB's challenge to the EFH designations. The District Court approved the consent decree and vacated the critical habitat designations by Court order on April 30, 2002 (*National Ass'n of Homebuilders* v. *Evans*, 2002 WL 1205743 (D.D.C. 2002)).

Subsequently, in response to a complaint filed in the District of Columbia by the Pacific Coast Federation of Fishermen's Associations, Institute for Fisheries Resources, the Center for Biological Diversity, the Oregon Natural Resources Council, the Pacific Rivers Council, and the Environmental Protection Information Center (PCFFA *et al.*) alleging that NMFS had failed to timely designate critical habitat for the 19 ESUs for which critical habitat had been vacated (as well as the Northern California *O. mykiss* ESU), PCFFA and NMFS filed—and the court approved—an agreement resolving that litigation and establishing a schedule for designation of critical habitat. On July 13, 2004, the D.C. District Court approved an amendment to the Consent Decree and Stipulated Order of Dismissal providing for a revised schedule for the submission of proposed and final rules designating critical habitat for the 20 ESUs to the **Federal Register**. For those ESUs that are included on the list of threatened and endangered species as of September 30, 2004, and which fall under the responsibility of the Northwest Regional office of NMFS, proposed rules must be submitted to the **Federal Register** no later than September 30, 2004. For those ESUs that are included on the list of threatened and endangered species as of November 30, 2004, and which fall under the responsibility of NMFS's Southwest Regional office, proposed rules must be submitted to the **Federal Register** for publication no later than November 30, 2004. For those of the 20 ESUs addressed in the proposed rules and included on the lists of threatened and endangered species as of June 15, 2005, final rules must be submitted to the **Federal Register** for publication no later than June 15, 2005. On September 17, 2004, NMFS filed a motion with the Court seeking an additional 60-day extension of the deadline for submitting to the **Federal Register** a proposed rule for the 13 ESUs subject to the September 30, 2004, deadline. On October 7, 2004, the court granted the motion.

Past critical habitat designations have generated considerable public interest. Therefore, in an effort to engage the public early in this rulemaking process, we published an advance notice of proposed rulemaking (ANPR) on September 29, 2003 (68 FR 55926). The ANPR identified issues for consideration and evaluation, and solicited comments regarding these issues and information regarding the areas and species under consideration. We received numerous comments in response to the ANPR and considered them during development of this proposed rulemaking. Where applicable we have referenced these comments in this **Federal Register** document as well as in other documents supporting this proposed rule. We encourage those who submitted comments on the ANPR to review and comment on this proposed rule as well. We will address all comments in the final rule.

Methods and Criteria Used to Identify Proposed Critical Habitat

Salmon Life History

Pacific salmon are anadromous fish, meaning adults migrate from the ocean to spawn in freshwater lakes and streams where their offspring hatch and rear prior to migrating back to the ocean to forage until maturity. The migration and spawning times vary considerably across and within species and populations (Groot and Margolis, 1991). At spawning, adults pair to lay and fertilize thousands of eggs in freshwater gravel nests or ''redds'' excavated by females. Depending on lake/stream temperatures, eggs incubate for several weeks to months before hatching as ''alevins'' (a larval life stage dependent on food stored in a yolk sac). Following yolk sac absorption, alevins emerge from the gravel as young juveniles called ''fry'' and begin actively feeding. Depending on the species and location, juveniles may spend from a few hours to several years in freshwater areas before migrating to the ocean. The physiological and behavioral changes required for the transition to salt water result in a distinct ''smolt'' stage in most species. On their journey juveniles must migrate downstream through every riverine and estuarine corridor between their natal lake or stream and the ocean. For example, smolts from Idaho will travel as far as 900 miles from the inland spawning grounds. En route to the ocean the juveniles may spend from a few days to several weeks in the estuary, depending on the species. The highly productive estuarine environment is an important feeding and acclimation area for juveniles preparing to enter marine waters.

Juveniles and subadults typically spend from 1 to 5 years foraging over thousands of miles in the North Pacific Ocean before returning to spawn. Some species, such as coho and chinook salmon, have precocious life history types (primarily male fish known as ''jacks'') that mature and spawn after only several months in the ocean. Spawning migrations known as ''runs'' occur throughout the year, varying by species and location. Most adult fish return or ''home'' with great fidelity to spawn in their natal stream, although some do stray to non-natal streams. Salmon species die after spawning, while anadromous *O. mykiss* may return to the ocean and make repeat spawning migrations. This complex life cycle gives rise to complex habitat needs, particularly during the freshwater phase (see review by Spence *et al.*, 1996). Spawning gravels must be of a certain size and free of sediment to allow successful incubation of the eggs. Eggs also require cool, clean, and well-oxygenated waters for proper development. Juveniles need abundant food sources, including insects, crustaceans, and other small fish. They need places to hide from predators (mostly birds and bigger fish), such as under logs, root wads and boulders in the stream, and beneath overhanging vegetation. They also need places to seek refuge from periodic high flows (side channels and off channel areas) and from warm summer water temperatures (coldwater springs and deep pools). Returning adults generally do not feed in fresh water but instead rely on limited energy stores to migrate, mature, and spawn. Like juveniles, they also require cool water and places to rest and hide from predators. During all life stages salmon require cool water that is free of contaminants. They also require rearing and migration corridors with adequate passage conditions (water quality and quantity available at specific times) to allow access to the various habitats required to complete their life cycle.

The homing fidelity of salmon has created a meta-population structure with distinct populations distributed among watersheds (McElhany *et al.*, 2000). Low levels of straying result in regular genetic exchange among populations, creating genetic similarities among populations in adjacent watersheds. Maintenance of the meta-population structure requires a distribution of populations among watersheds where environmental risks (*e.g.*, from landslides or floods) are likely to vary. It also requires migratory connections among the watersheds to allow for periodic genetic exchange and alternate spawning sites in the case that natal streams are inaccessible due to natural events such as a drought or landslide.

Identifying the Geographical Area Occupied by the Species and Specific Areas within the Geographical Area

In past critical habitat designations, NMFS had concluded that the limited availability of species distribution data prevented mapping salmonid critical habitat at a scale finer than occupied river basins (65 FR 7764; February 16, 2000). Therefore, the 2000 designations defined the ''geographical area occupied by the species at the time of listing'' as all accessible river reaches within the current range of the listed species. Comments received on the ANPR expressed a range of opinions about the appropriate scale for defining occupied areas; many expressed concern that the 2000 designations were overly broad and inclusive and encouraged us to use a finer scale in designating critical habitat for salmon.

In the 2000 designations, NMFS relied on the U.S. Geological Survey's (USGS) identification of subbasins, which was the finest scale mapped by USGS at that time, to define the ''specific areas'' within the geographical area occupied by the species. The subbasin boundaries are based on an area's topography and hydrography, and USGS has developed a uniform framework for mapping and cataloging drainage basins using a unique hydrologic unit code (HUC) identifier (Seaber *et al.* 1986). The code contains separate two-digit identifier fields wherein the first two digits refer to a region comprising a relatively large drainage area (*e.g.*, Region 17 for the entire Pacific Northwest), while subsequent fields identify smaller nested drainages. Under this convention, fourth field hydrologic units contain eight digits and are commonly referred to as ''HUC4s'' or ''subbasins.'' In the 2000 designations, therefore, we identified as critical habitat all areas accessible to listed salmon within an occupied HUC4 subbasin. Since the critical habitat designations in 2000, additional scientific information in the Pacific Northwest has significantly improved our ability to identify freshwater and estuarine areas occupied by salmonids and to group the occupied stream reaches into finer scale ''specific areas'' in the states of Washington, Oregon, and Idaho.

In the Pacific Northwest, we can now be somewhat more precise about the ''geographical area occupied by the species'' because Federal, state, and tribal fishery biologists in the northwest have made progress mapping actual species distribution at the level of stream reaches. The current mapping identifies occupied stream reaches where the species has been observed. It also identifies stream reaches where the species is presumed to occur based on the professional judgement of biologists familiar with the watershed. However, such presumptions may not be sufficiently rigorous or consistent to support a critical habitat designation. Much of these data can now be accessed and analyzed using geographic information systems (GIS) to produce consistent and fine-scale maps. As a result, nearly all salmonid freshwater and estuarine habitats in Washington, Oregon, and Idaho are now mapped and available in GIS at a scale of 1:24,000. Previous distribution data were often compiled at a scale of 1:100,000 or greater.

In California, similar fine-scale species distribution mapping efforts have not been conducted by Federal, State or tribal co-managers on the scale that was needed for the critical habitat designation effort, and therefore, maps of species distribution were not available for the seven ESUs addressed in this rulemaking. Given the need to identify and map occupied habitat more precisely and the lack of fine-scale species distribution mapping in California, the Southwest Regional office embarked on a major effort to compile available information on species distribution, habitat use, and other parameters, and develop species distribution and habitat use maps for all seven ESUs. In order to make this effort manageable, data were compiled for stream hydrography at a scale of 1:100,000 rather than the 1:24,000 scale of data that were available in the Pacific Northwest. Fishery biologists in the Southwest Region were organized into a series of teams tasked with compiling and organizing information available in the literature, from Federal and state agencies, and personal knowledge, regarding the spatial distribution, habitat use (*i.e.* spawning, rearing, and/or migration) and habitat quality on a stream reach basis for each of the seven ESUs in California. This information was organized into a series of databases and then converted to GIS data layers for the analysis of data and generation of distribution maps. The current mapping identifies occupied stream reaches where the various ESUs have been observed, and also identifies stream reaches where the ESUs are presumed to occur based on the professional judgement of biologists familiar with the watersheds. As in the Northwest, such presumptions, however, may not be sufficiently rigorous or consistent to support a critical habitat designation, and we therefore solicit information as to which stream reaches are actually occupied by the various ESUs addressed in this rule. We made use of these finer scale data for the critical habitat designations for the seven California ESUs, and now believe they enable us to make a more accurate delineation of the ''geographical area occupied by the species'' referred to in the ESA definition of critical habitat. The final critical habitat designations will be based on the final listing decisions for these ESUs due by June 2005 and thus will reflect occupancy ''at the time of listing'' as the ESA requires.

NMFS is now able to also identify ''specific areas'' (section 3(5)(a)) and ''particular areas'(section 4(b)(2)) for ESUs in the Pacific Northwest (Oregon, Washington and Idaho) at a finer scale than in 2000. Since 2000, various Federal agencies in the Pacific Northwest have identified fifth field hydrologic units (referred to as ''HUC5s'' or hereafter ''watersheds'') throughout the Pacific Northwest using the USGS mapping conventions referred to above. This information is now generally available from these agencies and via the internet (California Spatial Information Library, 2004; Interior Columbia Basin Ecosystem Management Project, 2003; Regional Ecosystem Office, 2004). For ESUs in the Pacific Northwest, the agency used this information to organize critical habitat information systematically and at a scale that is relevant to the spatial distribution of salmon. Organizing information at this scale is especially relevant to salmonids, since their innate homing ability allows them to return to the watersheds where they were born. Such site fidelity results in spatial aggregations of salmonid populations that generally correspond to the area encompassed by subbasins or HUC5 watersheds (Washington Department of Fisheries *et al.*, 1992; Kostow, 1995; McElhany *et al.*, 2000).

In California, it was not possible to use the USGS's HUC5 watershed framework to organize the biological and other types of information since HUC5s have not been delineated for the entire geographical area occupied by the seven ESUs addressed in this rulemaking. The Southwest Region, therefore, used the State of California's CALWATER watershed classification system (version 2.2), which is similar to the USGS watershed classification system, to organize biological and other types of information. Under the CALWATER watershed classification system, geographic units range from hydrologic regions (the largest) to planning watersheds (the smallest). For the purposes of this critical habitat designation analysis, biological and other types of information were organized primarily by hydrologic subareas (HSAs) that generally correspond to major tributary watersheds and are roughly equivalent in size to USGS HUC5s. These smaller HSA watersheds were then aggregated into larger geographic units called hydrologic units that correspond to major watersheds or sub-regions for purposes of describing critical habitat for each of the seven ESUs in California. However, it must be recognized that even the CALWATER HSA watershed units used for the designations in California are very broad units, often containing several different populations of salmonids which may in fact be largely independent of each other.We therefore solicit information on ways to further improve the geographic precision of our habitat analyis.

Both the USGS and CALWATER systems map watershed units as polygons that bound a drainage area and encompass streams, riparian areas and uplands. Within the boundaries of any such watershed unit (HUC5 or HSA), there are stream reaches not occupied by the species. Land areas within the HUC5 or HSA boundaries are also generally not ''occupied'' by the species (though certain areas such as flood plains or side channels may be occupied at some times of some years). In California, we used the HSA watershed boundaries as a basis for aggregating occupied stream reaches and to delineate ''specific'' areas occupied by the species. This document generally refers to the occupied stream reaches within the watershed boundary as the ''habitat area'' to distinguish it from the entire area encompassed by the watershed boundary.

At the same time, the ESA requires that an area cannot be designated as critical habitat unless at the time of listing it contains physical or biological features essential to the conservation of the species. The ESA does not permit an area lacking such features to be designated as critical habitat in the hope that it may over time acquire such features and therefore aid in the conservation of the species.

The HSA watershed-scale aggregation of stream reaches also allowed us to analyze the impacts of designating a ''particular area,'' as required by ESA section 4(b)(2). As a result of watershed processes, many activities occurring in riparian or upland areas and in non-fish-bearing streams may affect the physical or biological features essential to conservation in the occupied stream reaches. The watershed boundary thus describes an area in which Federal activities have the potential to affect critical habitat (Spence *et al.* 1996). Using HSA watershed boundaries for the economic analysis ensured that all potential economic impacts were considered. Section 3(5) defines critical habitat in terms of ''specific areas,'' and section 4(b)(2) requires the agency to consider certain factors before designating ''particular areas.'' In the case of Pacific salmonids, the biology of the species, the characteristics of its habitat, the nature of the impacts and the limited information currently available at finer geographic scales made it appropriate to consider

''specific areas'' and ''particular areas'' as the same unit.

In addition, HSA watersheds are consistent with the scale of recovery efforts for West Coast salmon. In its review of the long-term sustainability of Pacific Northwest salmonids, the National Research Council's Committee on Protection and Management of Pacific Northwest Anadromous Salmonids concluded that ''habitat protection must be coordinated at landscape scales appropriate to salmon life histories' and that social structures and institutions ''must be able to operate at the scale of watersheds'' (National Research Council, 1996). Watershed-level analyses are now common throughout the West Coast (Forest Ecosystem Management Assessment Team, 1993; Montgomery *et al.*, 1995; Spence *et al.*, 1996). The recent recovery strategy developed for coho salmon in California by the California Department of Fish and Game (CDFG, 2004) organized its watershed assessment and recovery recommendations on the basis of CALWATER HSA watersheds. There are presently more than 400 watershed councils or groups in Washington, Oregon, and California alone (For the Sake of the Salmon, 2004). Many of these groups operate at a geographic scale of one to several watersheds and are integral parts of larger-scale salmon recovery strategies (Northwest Power Planning Council, 1999; Oregon Plan for Salmon and Watersheds, 2001; Puget Sound Shared Strategy, 2002; CALFED Bay-Delta Program, 2003). Aggregating stream reaches into watersheds allowed us to consider ''specific areas,'' within or outside the geographical area occupied by the species, at a scale that often corresponds well to salmonid population structure and ecological processes.

Occupied estuarine and marine areas were also considered with regard to the seven ESUs in California. In previous designations of salmonid critical habitat the agency did not designate marine areas outside of estuaries and Puget Sound. In the Pacific Ocean, we concluded that there may be essential habitat features, but that they did not require special management considerations or protection (see *Physical or Biological Features Essential to the Conservation of the Species* and *Special Management Considerations or Protection* sections below). Several commenters on that previous rule questioned the finding, and we stated that we would revisit the issue (65 FR 7764; February 16, 2000). Since that time we have considered the best available scientific information, and related agency actions, such as the designation of Essential Fish Habitat under the Magnuson-Stevens Fishery Conservation and Management Act.

We now conclude that it is possible to delineate some estuarine areas in California (*e.g.*, the San Francisco-San Pablo-Suisun Bay complex, Humboldt Bay, and Morro Bay) that are occupied and contain essential habitat features that may require special management considerations or protection. Such estuarine areas are crucial for juvenile salmonids, given their multiple functions as areas for rearing/feeding, freshwater-saltwater acclimation, and migration (Simenstad *et al.*, 1982; Marriott *et al.* 2002). In many areas, especially the San Francisco Bay estuary, these habitats are occupied by multiple ESUs. Accordingly, we are proposing to designate specific occupied estuarine areas as defined by a line connecting the furthest land points at the estuary mouth.

Nearshore coastal marine areas may provide important habitat for rearing/feeding and migrating salmonids in California; however, we were not able to identify essential habitat features or conclude that such areas require special management considerations or protection.

For salmonids in marine areas farther offshore, it becomes more difficult to identify specific areas where essential habitat can be found. Links between human activity, habitat conditions and impacts to listed salmonids are less direct in offshore marine areas. Perhaps the closest linkage exists for salmon prey species that are harvested commercially (*e.g.*, Pacific herring) and, therefore, may require special management considerations or protection. However, because salmonids are opportunistic feeders we could not identify ''specific areas'' beyond the nearshore marine zone where these or other essential features are found within this vast geographic area occupied by Pacific salmon. Moreover, prey species move or drift great distances throughout the ocean and would be difficult to link to any ''specific'' areas.

Unoccupied Areas

ESA section 3(5)(A)(ii) defines critical habitat to include ''specific areas outside the geographical area occupied'' if the areas are determined by the Secretary to be ''essential for the conservation of the species.'' NMFS regulations at 50 CFR 424.12(e) emphasize that we ''shall designate as critical habitat areas outside the geographical area presently occupied by a species only when a designation limited to its present range would be inadequate to ensure the conservation of the species.'' NMFS regulations at 50 CFR 424.12(e) emphasize that we ''shall designate as critical habitat areas outside the geographical area presently occupied by a species only when a designation limited to its present range would be inadequate to ensure the conservation of the species.'' We are not proposing to designate any areas not occupied at the time of listing; however, within the range of some ESUs, we have identified unoccupied areas which may be essential to their conservation, and we seek public comment on this issue.

Primary Constituent Elements and Physical or Biological Features Essential to the Conservation of the Species

In determining what areas are critical habitat, agency regulations at 50 CFR 424.12(b) require that we must ''consider those physical or biological features that are essential to the conservation of a given species including space for individual and population growth and for normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, and rearing of offspring; and habitats that are protected from disturbance or are representative of the historical geographical and ecological distribution of a species.'' The regulations further direct us to ''focus on the principal biological or physical constituent elements * * * that are essential to the conservation of the species,'' and specify that the ''known primary constituent elements shall be listed with the critical habitat description.'' The regulations identify primary constituent elements (PCE) as including, but not limited to: ''roost sites, nesting grounds, spawning sites, feeding sites, seasonal wetland or dryland, water quality or quantity, host species or plant pollinator, geological formation, vegetation type, tide, and specific soil types.'' An area must contain one or more PCEs at the time the species is listed to be eligible for designation as critical habitat; an area lacking a PCE may not be designated in the hope it will acquire one or more PCEs in the future.

NMFS biologists developed a list of PCEs specific to salmon for the ANPR (68 FR 55926; September 29, 2003), based on a decision matrix (NMFS, 1996) that describes general parameters and characteristics of most of the essential features under consideration in this critical habitat designation. As a result of biological assessments supporting this proposed rule (see Critical Habitat Analytical Review

Teams section), we are now proposing slightly revised PCEs.

The ESUs addressed in this proposed rulemaking share many of the same rivers and estuaries and have similar life history characteristics and, therefore, many of the same PCEs. These PCEs include sites essential to support one or more life stages of the ESU (sites for spawning, rearing, migration and foraging). These sites in turn contain physical or biological features essential to the conservation of the ESU (for example, spawning gravels, water quality and quantity, side channels, forage species). Specific types of sites and the features associated with them include:

1. Freshwater spawning sites with water quantity and quality conditions and substrate supporting spawning, incubation and larval development;

2. Freshwater rearing sites with water quantity and floodplain connectivity to form and maintain physical habitat conditions and support juvenile growth and mobility; water quality and forage supporting juvenile development; and natural cover such as shade, submerged and overhanging large wood, log jams and beaver dams, aquatic vegetation, large rocks and boulders, side channels, and undercut banks;

3. Freshwater migration corridors free of obstruction with water quantity and quality conditions and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels, and undercut banks supporting juvenile and adult mobility and survival;

4. Estuarine areas free of obstruction with water quality, water quantity, and salinity conditions supporting juvenile and adult physiological transitions between fresh- and saltwater; natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels; and juvenile and adult forage, including aquatic invertebrates and fishes, supporting growth and maturation.

5. Nearshore marine areas free of obstruction with water quality and quantity conditions and forage, including aquatic invertebrates and fishes, supporting growth and maturation; and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels.

6. Offshore marine areas with water quality conditions and forage, including aquatic invertebrates and fishes, supporting growth and maturation.

The habitat areas designated in this proposal currently contain PCEs within the acceptable range of values required to support the biological processes for which the ESUs use the habitat. It is important to note that the contribution of the PCEs to the habitat varies by site and biological function, illustrating the interdependence of the habitat elements such that the quality of the elements may vary within a range of acceptable conditions. An area in which a PCE no longer exists because it has been degraded to the point where it no longer functions as a PCE cannot be designated in the hope that its function may be restored in the future.

Special Management Considerations or Protection

An occupied area cannot be designated as critical habitat unless it contains physical and biological features that ''may require special management considerations or protection.'' Agency regulations at 424.02(j) define ''special management considerations or protection'' to mean ''any methods or procedures useful in protecting physical and biological features of the environment for the conservation of listed species.'' Many forms of human activity have the potential to affect the habitat of listed salmon ESUs including: (1) Forestry; (2) grazing and other associated rangeland activities; (3) agriculture and associated water withdrawals for agriculture; (4) road building/maintenance; (5) channel modifications/diking/stream bank stabilization; (6) urbanization; (7) sand and gravel mining; (8) mineral mining; (9) dams; (10) irrigation impoundments and water withdrawals; (11) wetland loss/removal; (12) exotic/invasive species introductions; and (13) impediments to fish passage. In addition to these, the harvest of salmonid prey species (*e.g.*, herring, anchovy, and sardines) may present another potential habitat-related management activity (Pacific Fishery Management Council, 1999). In recent years the Federal government and many non-Federal landowners have adopted many changes in land and water management practices that are contributing significantly to protecting and restoring the habitat of listed species. Thus, many of the available special management considerations or protections for these areas are already in place and the need for designating such areas as critical habitat is diminished accordingly. We request comment on the extent to which particular areas may require special management considerations or protection in light of existing management constraints. The contributions of these management measures are also relevant to the exclusion analysis under section 4(b)(2) of the ESA, and will be considered further in a later section of this notice.

Military Lands

The Sikes Act of 1997 (Sikes Act) (16 U.S.C. 670a) required each military installation that includes land and water suitable for the conservation and management of natural resources to complete, by November 17, 2001, an Integrated Natural Resource Management Plan (INRMP). An INRMP integrates implementation of the military mission of the installation with stewardship of the natural resources found on the installation. Each INRMP includes: an assessment of the ecological needs on the installation, including the need to provide for the conservation of listed species; a statement of goals and priorities; a detailed description of management actions to be implemented to provide for these ecological needs; and a monitoring and adaptive management plan. Among other things, each INRMP must, to the extent appropriate and applicable, provide for fish and wildlife management, fish and wildlife habitat enhancement or modification, wetland protection, enhancement, and restoration where necessary to support fish and wildlife and enforcement of applicable natural resource laws.

The recent National Defense Authorization Act for Fiscal Year 2004 (Public Law 108–136) amended the ESA to limit areas eligible for designation as critical habitat. Specifically, section 4(a)(3)(B)(I) of the ESA (16 U.S.C. 1533(a)(3)(B)(I)) now provides: ''The Secretary shall not designate as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an integrated natural resources management plan prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation.''

To address this new provision we contacted the Department of Defense (DOD) and requested information on all INRMPs that might benefit Pacific salmon. In response to the ANPR (68 FR 55926, September 29, 2003) we had already received a letter from the U.S. Marine Corps regarding this and other issues associated with a possible critical habitat designation on its facilities in the range of the Southern California *O. mykiss* ESU. In response to our request, the military services identified 25 installations in California with INRMPs in place or under development. Based on information provided by the military,

as well as GIS analysis of fish distributional information compiled by NMFS'' Southwest Region (NMFS, 2004a) and land use data, we determined that the following facilities with INRMPs overlap with habitat areas under consideration for critical habitat designation in California: (1) Camp Pendleton Marine Corps Base; (2) Vandenberg Air Force Base; (3) Camp San Luis Obispo; (4) Camp Roberts; and (5) Mare Island Army Reserve Center. Two additional facilities are adjacent to, but do not appear to overlap with, habitat areas under consideration for critical habitat in California: (1) Naval Weapons Station, Seal Beach/Concord Detachment; and (2) Point Mugu Naval Air Station. None of the remaining facilities with INRMPs in place overlapped with or were adjacent to habitat under consideration for critical habitat based on the information available to us. All of these INRMPs are final except for the Vandenberg Air Force Base INRMP, which is expected to be finalized in the near term.

We identified habitat of value to listed salmonids in each INRMP and reviewed these plans, as well as other information available regarding the management of these military lands. Our preliminary review indicates that each of these INRMPs addresses habitat for salmonids, and all contain measures that provide benefits to ESA-listed salmon and steelhead. Examples of the types of benefits include actions that control erosion, protect riparian zones, minimize stormwater and construction impacts, reduce contaminants, and monitor listed species and their habitats. Also, we have received some information from the DOD identifying national security impacts at certain sites including the Camp Pendleton Marine Corps Base and Vandenberg Air Force Base. On the basis of this information, therefore, we are not proposing to designate critical habitat in areas subject to the final INRMPs or the draft INRMP for Vandenberg Air Force Base at this time.

Critical Habitat Analytical Review Teams

To assist in the designation of critical habitat, we convened several Critical Habitat Analytical Review Teams (Teams) organized by major geographic areas that roughly correspond to salmon recovery planning domains in California. The Teams consisted of NMFS fishery biologists from the Southwest Region with demonstrated expertise regarding salmonid habitat within the domain. The Teams were tasked with compiling and assessing biological information pertaining to areas under consideration for designation as critical habitat. Each Team worked closely with GIS specialists to develop maps depicting the spatial distribution of habitat occupied by each ESU and the use of occupied habitat on stream hydrography at a scale of 1:100,000.

The Teams examined each habitat area within the watershed to determine whether the stream reaches occupied by the species contain the physical or biological features essential to conservation. The Teams also relied on their experience conducting section 7 consultations to determine whether there are management activities in the area that threaten the currently existing primary constituent elements identified for the species. Where such activities occur, the Teams concluded that there were ''any methods or procedures useful in protecting physical and biological features'' for the area (50 CFR 424.02(j)), and therefore, that the features ''may require special management considerations or protection.''

However, the Teams were not asked to evaluate the effects of existing management protections on the species, or analyze the usefulness of protective methods or procedures in addressing risks to PCEs. Thus, the Teams' evaluations do not reflect the extent to which an area will contribute to conservation of the species in the absence of a critical habitat designation.

In addition to occupied areas, the definition of critical habitat also includes unoccupied areas if we determine that area is essential for conservation of a species. Accordingly the Teams were next asked whether there were any unoccupied areas within the historical range of the ESUs that may be essential for conservation. For the seven ESUs addressed in this rulemaking, the Teams did not have information available that would allow them to conclude that specific unoccupied areas were essential for conservation; however, in many cases they were able to identify areas they believed may be determined essential through future recovery planning efforts. These are identified under the Species Descriptions and Area Assessments section, and we are specifically requesting information regarding such areas under Public Comments Solicited.

The Teams were next asked to determine the relative conservation value of each occupied area or watershed for each ESU. The Teams scored each habitat area based on several factors related to the quantity and quality of the physical and biological features. They next considered each area in relation to other areas and with respect to the population occupying that area. Based on a consideration of the raw scores for each area, and a consideration of that area's contribution to conservation in relation to other areas and in relation to the overall population structure of the ESU, the Teams rated each habitat area as having a ''high,'' ''medium'' or ''low'' conservation value.

The rating of habitat areas as having a high, medium, or low conservation value provided information useful for the discretionary balancing consideration in ESA section 4(b)(2). The higher the conservation value for an area, the greater may be the likely benefit of the ESA section 7 protections. The correlation is not perfect because the Teams did not take the additional step of separately considering two factors: how likely are section 7 consultations in an area (that is, how strong is the ''Federal nexus''), and how much protection would exist in the absence of a section 7 consultation (that is, how protective are existing management measures and would they likely continue in the absence of section 7 requirements). We considered the Team's ratings one useful measure of the ''benefit of designating a particular area as critical habitat'' as contemplated in section 4(b)(2). We are soliciting public comments on approaches that would better refine this assessment.

As discussed earlier, the scale chosen in California for the ''specific area'' referred to in the definition of critical habitat was an HSA watershed as delineated by the CALWATER classification system. This delineation required us to adapt the approach for some areas. In particular, a large stream or river might serve as a rearing and migration corridor to and from many watersheds, yet be embedded itself in a watershed. In any given watershed through which it passes, the stream may have a few or several tributaries. For rearing/migration corridors embedded in a watershed, the Teams were asked to rate the conservation value of the watershed based on the tributary habitat. We assigned the rearing/migration corridor the rating of the highest-rated watershed for which it served as a rearing/migration corridor. The reason for this treatment of migration corridors is the role they play in the salmon's life cycle. Salmon are anadromous—born in fresh water, migrating to salt water to feed and grow, and returning to fresh water to spawn. Without a rearing/migration corridor to and from the sea, salmon cannot complete their life cycle. It would be illogical to consider a spawning and

rearing area as having a particular conservation value and not consider the associated rearing/migration corridor as having a similar conservation value.

Preliminary ESU mapping results and some of the preliminary HSA watershed conservation assessments developed by the Teams were shared with the CDFG for review and comment. In some instances, their reviews and comments resulted in changes to the ESU distribution maps, and in some cases changes in the conservation assessments. Because of time constraints, however, this comanager review process was limited in duration and focused on identifying major discrepancies in the mapping products developed by the Teams. These revised preliminary assessments, along with this proposed rulemaking, will once again be made available to these comanagers, as well as the general public and peer reviewers, during the public comment period leading up to the final rule. The Teams will be reconvened to review the comments and any new information that might bear on their assessments before the agency publishes final critical habitat designations.

Lateral Extent of Critical Habitat

In past designations NMFS described the lateral extent of critical habitat in various ways ranging from fixed distances to ''functional'' zones defined by important riparian functions (65 FR 7764, February 16, 2000). Both approaches presented difficulties, and this was highlighted in several comments (most of which requested that we focus on aquatic areas only) received in response to the ANPR (68 FR 55926; September 29, 2003). Designating a set riparian zone width will (in some places) accurately reflect the distance from the stream on which PCEs might be found, but in other cases may over- or understate the distance. Designating a functional buffer avoids that problem, but makes it difficult for Federal agencies to know in advance what areas are critical habitat. To address these issues we are proposing to define the lateral extent of designated critical habitat as the width of the stream channel defined by the ordinary high-water line as defined by the U.S. Army Corps of Engineers (Corps) in 33 CFR 329.11. In areas for which the ordinary high-water line has not been defined pursuant 33 CFR 329.11, the width of the stream channel shall be defined by its bankfull elevation. Bankfull elevation is the level at which water begins to leave the channel and move into the floodplain (Rosgen, 1996) and is reached at a discharge which generally has a recurrence interval of 1 to 2 years on the annual flood series (Leopold *et al.*, 1992). Such an interval is commensurate with nearly all of the juvenile freshwater life phases of most salmon and *O. mykiss* ESUs. Therefore, it is reasonable to assert that for an occupied stream reach this lateral extent is regularly ''occupied.'' Moreover, the bankfull elevation can be readily discerned for a variety of stream reaches and stream types using recognizable water lines (*e.g.*, marks on rocks) or vegetation boundaries (Rosgen, 1996).

As underscored in previous critical habitat designations, the quality of aquatic habitat within stream channels is intrinsically related to the adjacent riparian zones and floodplain, to surrounding wetlands and uplands, and to non-fish-bearing streams above occupied stream reaches. Human activities that occur outside the stream can modify or destroy physical and biological features of the stream. In addition, human activities that occur within and adjacent to reaches upstream (*e.g.*, road failures) or downstream (*e.g.*, dams) of designated stream reaches can also have demonstrable effects on physical and biological features of designated reaches.

In estuarine areas we believe that mean extreme high water is the best descriptor of lateral extent. We are proposing the area inundated by extreme high tide because it encompasses habitat areas typically inundated and regularly occupied during the spring and summer when juvenile salmonids are migrating in nearshore estuarine areas. However, it may be more appropriate to use the ordinary high water level in estuarine nearshore areas and we request comment on this issue. As noted above for stream habitat areas, human activities that occur outside the area inundated by extreme or ordinary high water can modify or destroy physical and biological features of the nearshore habitat areas and Federal agencies must be aware of these important habitat linkages as well.

Species Descriptions and Area Assessments

This section provides descriptions of the seven Pacific salmon and *O. mykiss* ESUs addressed in this rulemaking and summarizes the Teams' assessment of habitat areas for each ESU. The Teams' assessments addressed PCEs in the habitat areas within occupied CALWATER HSA watersheds (as well as rearing/migration corridors for some ESUs). For ease of reporting and reference these HSA watersheds have been organized into ''units'' based on their associated subbasin or CALWATER Hydrologic Unit (HU).

California Coastal (CC) Chinook Salmon ESU

The CC chinook salmon ESU was listed as a threatened species in 1999 (64 FR 50394). The ESU includes all naturally spawned populations of chinook salmon from rivers and streams south of the Klamath River to and including the Russian River. Following completion of an updated status review (NMFS, 2003a) and review of hatchery populations located within the range of the ESU (NMFS, 2003b), NMFS recently proposed that the ESU remain listed as a threatened species and that seven hatchery populations be included as part of the ESU (69 FR 33102; June 14, 2004). Major watersheds occupied by naturally spawning fish in this ESU include Redwood Creek, Mad River, Eel River, several smaller coastal watersheds, and the Russian River. A Technical Recovery Team has been formed and is in the process of identifying the historical and extant population structure of this ESU; however, this is still in progress.

The Team's assessment for this ESU addressed habitat areas within 45 occupied watersheds or CALWATER HSAs that occur in 8 associated subbasins or CALWATER HUs (NMFS, 2004b). In addition to the 45 HSA watershed units, conservation assessments were also made for Humboldt Bay and the Eel River Estuary. As part of its assessment, the Team considered the conservation value of each habitat area in the context of the productivity, spatial distribution, and diversity of habitats across the range of the ESU. The Team evaluated the conservation value of habitat areas on the basis of the physical and biological habitat requirements of CC chinook salmon, consistent with the PCEs identified for Pacific salmon and *O. mykiss* described under Methods and Criteria Used to Identify Proposed Critical Habitat

Unit 1. Redwood Creek Subbasin (HU #1107)

The Redwood Creek HU is located in the northern portion of the ESU and includes the Redwood Creek drainage. The HU encompasses approximately 294 mi^2 (758 km^2) and includes three occupied HSA watersheds. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 107 miles (171 km) of occupied riverine and estuarine habitat in the occupied HSA watersheds (NMFS, 2004a). The Team concluded that all occupied areas contain one or

more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified several management activities that may affect the PCEs, including forestry, sand and gravel mining, agricultural water withdrawals and impoundments, grazing, and channelization. Of the three occupied HSA watersheds, two were rated as having high conservation value and one as having medium conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Unit 2. Trinidad Subbasin (HU #1108)

The Trinidad HU is located in the northern portion of the ESU and includes Big Lagoon and Little River. The HU encompasses approximately 131 mi^2 (338 km^2) and contains two HSA watersheds both of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 26 miles (42 km) of occupied riverine and estuarine habitat in the occupied HSAs (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.* spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including forestry, agriculture, non-agricultural and agricultural water withdrawals, and grazing. Of the two occupied HSA watersheds, one was rated as having low conservation value and one as having high conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential for conservation of the ESU.

Unit 3. Mad River Subbasin (HU #1109)

The Mad River HU is located in the northern portion of the ESU and includes the Mad River drainage. The HU encompasses approximately 499 mi^2 (1287 km^2) and includes four HSA watersheds, three of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 53 miles (85 km) of occupied riverine and estuarine habitat in the occupied HSA watersheds (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.* spawning, rearing, or migratory habitat) for this ESU and identified several management activities that may affect the PCEs, including forestry, agriculture, and grazing. All of the occupied HSA watersheds were rated as having high conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Unit 4. Eureka Plain Subbasin (HU #1110)

The Eureka Plain HU is located in the vicinity of Eureka and surrounds Humboldt Bay. The HU encompasses approximately 224 mi^2 (578 km^2) and contains a single HSA which is occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 74 miles (118 km) of occupied riverine and estuarine habitat in this HSA watershed (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified several management activities that may affect the PCEs, including urbanization, flood control channelization, and road building and maintenance. This single occupied HSA watershed was rated as having high conservation value to the ESU (NMFS, 2004b). The Team also evaluated Humboldt Bay into which most of these freshwater streams in this subbasin drain as a separate habitat unit. Humboldt Bay contains approximately 25 mi^2 (65 km^2) of estuarine habitat which the Team found contained PCEs for rearing and migration and was of high conservation value since it provides migratory connectivity for juveniles and adults between high value freshwater spawning and rearing habitat and the ocean. The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Unit 5. Eel River Subbasin (HU #1111)

The Eel River HU is located in the northern and central portion of the ESU and includes the Eel River and Van Duzen River drainages. This HU, which is the largest in the ESU, encompasses approximately 3,682 mi^2 (9,500 km^2) and contains 19 occupied HSA watersheds. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 841 miles (1,345 km) of occupied riverine and estuarine habitat in the occupied HSA watersheds (NMFS, 2004a). The Team concluded that these occupied habitat areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified several management activities that may affect the PCEs including agriculture, forestry, sand and gravel mining, grazing, exotic/invasive species, agricultural and non-agricultural water withdrawals, and urbanization. Of these occupied HSA watersheds, three were rated as having low conservation value, four were rated as having medium conservation value, and twelve were rated as having high conservation value to the ESU (NMFS, 2004b). The Team also evaluated the Eel River estuary as a separate habitat unit and concluded it contained PCEs for rearing and migration and is of high conservation value since it provides migratory connectivity for juveniles and adults between high value freshwater spawning and rearing habitat and the ocean. The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Unit 6. Cape Mendocino Subbasin (HU #1112)

The Cape Mendocino HU is located in the central portion of the ESU and includes the Bear River and Mattole River drainages. This HU encompasses approximately 499 mi^2 (1,287 km^2) and contains three HSA watersheds, two of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 173 miles (277 km) of occupied riverine and estuarine habitat in the occupied HSAs (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified several management activities that may affect the PCEs, including agriculture, grazing, forestry, and agricultural water withdrawals. Both occupied HSA watersheds were rated as having high conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Unit 7. Mendocino Coast Subbasin (HU #1113)

The Mendocino Coast HU is located in the southern portion of the ESU and includes several smaller coastal streams including the Ten Mile, Noyo, Albion, Navarro, and Garcia Rivers. This HU encompasses approximately 1,598 mi^2 (4,123 km^2) and contains eighteen HSA watersheds, seven of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 204 miles (326 km) of occupied riverine and estuarine habitat in the occupied HSAs (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.* spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including forestry, grazing, urbanization, agriculture, and agricultural and non-agricultural water withdrawals. Of the occupied HSA

watersheds, the Team rated two as low in conservation value, three as medium in conservation value, and two as high in conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Unit 8. Russian River Subbasin (HU #1114)

The Russian River HU is located in the southernmost portion of the ESU and includes the Russian River drainage and its tributaries. The HU encompasses approximately 1,482 mi^2 (3,824 km^2) and contains ten HSA watersheds within the range of the ESU, nine of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 133 miles (212 km) of occupied riverine and estuarine habitat in the occupied HSAs (NMFS, 2004a). The Team concluded these occupied HSA areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified several management activities that may affect the PCEs, including urbanization, agriculture, forestry, sand and gravel mining, grazing, flood control channelization, and agricultural water withdrawals. Of the occupied HSA watersheds, the Team rated three as low in conservation value, two as medium in conservation value, and four as having high conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Northern California (NC) *O. mykiss* ESU

The NC *O. mykiss* ESU was listed as a threatened species in 2000 (65 FR 36074; June 7, 2000). The ESU includes all naturally spawned populations of *O. mykiss* in coastal river basins from Redwood Creek south to and including the Gualala River. Major watersheds occupied by naturally spawning fish in this ESU include Redwood Creek, Mad River, Eel River, several smaller coastal watersheds on the coast south to the Gualala River. *O. mykiss* within this ESU include both winter and summer run types, including what is presently considered to be the southernmost population of summer run *O. mykiss* in the Middle Fork Eel River (NMFS, 1996). The half-pounder life history type also occurs in the ESU, specifically in the Mad and Eel Rivers. Based on an updated status review (NMFS, 2003a) and an assessment of hatchery populations located within the range of the ESU (NMFS, 2003b), NMFS recently proposed that the ESU remain listed as a threatened species and that resident *O. mykiss* co-occurring with anadromous populations below impassible barriers (both natural and man-made) as well as two artificial propagation programs (Yager Creek Hatchery and North Fork Gualala River Hatchery) also be included in the ESU (69 FR 33102; June 14, 2004). A Technical Recovery Team has been formed and is in the process of identifying the historical and extant independent population structure of this ESU and associated population viability parameters for each population.

The Team's assessment for this ESU addressed habitat areas within 50 occupied watersheds or CALWATER HSAs that occur in 7 associated subbasins or CALWATER HUs. In addition to the 50 HSA watershed units, conservation assessments were also made for Humboldt Bay and the Eel River Estuary. As part of its assessment, the Team considered the conservation value of each habitat area in the context of the productivity, spatial distribution, and diversity of habitats across the range of the ESU. The Team evaluated the conservation value of habitat areas on the basis of the physical and biological habitat requirements of NC *O. mykiss*, consistent with the PCEs identified for Pacific salmon and *O. mykiss* described under Methods and Criteria Used to Identify Proposed Critical Habitat.

Unit 1. Redwood Creek Subbasin (HU #1107)

The Redwood Creek HU is located in the northern portion of the ESU and includes the Redwood Creek drainage. The HU encompasses approximately 294 mi^2 (758km^2) and includes three HSA watersheds, all of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 138 (220 km) of occupied riverine and estuarine habitat in the three occupied HSAs (NMFS, 2004a). The Team concluded that these occupied HSA watersheds contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) and identified several management activities that may affect the PCEs, including forestry, sand and gravel mining, agricultural water withdrawals and impoundments, grazing and channelization. Of the three occupied HSA watersheds, one was rated as medium and two were rated as having high conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Unit 2. Trinidad Subbasin (HU #1108)

The Trinidad HU is located in the northern portion of the ESU and includes Big Lagoon and Little River. The HU encompasses approximately 131 mi^2 (338 km^2) and contains two HSA watersheds, both of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 66 miles (106 km) of occupied riverine and estuarine habitat in the occupied HSAs (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) and identified several management activities that may affect the PCEs, including forestry, agriculture, non-agricultural and agricultural water withdrawals and grazing. Of the two HSA watersheds, one was rated by the Team as having medium conservation value and one was rated as having high conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential for conservation of the ESU.

Unit 3. Mad River Subbasin (HU #1109)

The Mad River HU is located in the northern portion of the ESU and includes the Mad River drainage. The HU encompasses approximately 499 mi^2 (1,287 km^2) and contains four HSA watersheds, all of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 169 miles (270 km) of occupied riverine and estuarine habitat in these occupied habitat areas (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) and identified several management activities that may affect the PCEs, including forestry, agriculture, and grazing. Of these occupied HSA watersheds, one was rated as having low conservation value and three were rated by the Team as having high conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Unit 4. Eureka Plain Subbasin (HU #1110)

The Eureka Plain HU is located in the vicinity of Eureka and includes Humboldt Bay. The HU encompasses approximately 224 mi^2 (578 km^2) and contains a single HSA which is occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 122 miles (195 km) of occupied riverine and estuarine

habitat in the occupied HSA watersheds (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.* spawning, rearing, or migratory habitat) for this ESU and identified several management activities that may affect the PCEs, including urbanization, flood control channelization, and road building and maintenance. The single HSA watershed in the subbasin was rated by the Team as having high conservation value to the ESU. The Team also evaluated Humboldt Bay into which most of these freshwater streams in this subbasin drain as a separate habitat unit. Humboldt Bay contains approximately 25 mi^2 (65 km^2) of estuarine habitat which the Team found contained PCEs for rearing and migration and was of high conservation value since it provides migratory connectivity for juveniles and adults between high value freshwater spawning and rearing habitat and the ocean. The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Unit 5. Eel River Subbasin (HU #1111)

The Eel River HU is located in the north central portion of the ESU and includes the Eel River and Van Duzen River drainages. The HU encompasses approximately 3,682 mi^2 (9,500 km^2) and contains nineteen HSA watersheds, all of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 1,269 miles (2,030 km) of occupied riverine and estuarine habitat in the occupied HSA watersheds (NMFS, 2004a). The Team concluded that these occupied watershed areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified several management activities that may affect the PCEs, including agriculture, forestry, sand and gravel mining, grazing, exotic/invasive species, agricultural and non-agricultural water withdrawals, and urbanization. Of these nineteen occupied watersheds, nine were rated by the Team as medium in conservation value and ten were rated as high in conservation value to the ESU (NMFS, 2004b). The Team also evaluated the Eel River estuary as a separate habitat unit and concluded it contained PCEs for rearing and migration and is of high conservation value since it provides migratory connectivity for juveniles and adults between high conservation value freshwater spawning and rearing habitat and the ocean. The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Unit 6. Cape Mendocino Subbasin (HU #1112)

The Cape Mendocino HU is located in the central portion of the ESU and includes the Bear River and Mattole River drainages. This HU encompasses approximately 499 mi^2 (1,287 km^2) and contains three HSA watersheds which are all occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 342 miles (547 km) of occupied riverine and estuarine habitat in the occupied HSA watersheds (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified several management activities that may affect the PCEs, including agriculture, grazing, forestry, and agricultural water withdrawals. Of these watersheds, the Team rated two as having low conservation value and one as having high conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Unit 7. Mendocino Coast Subbasin (HU #1112)

The Mendocino Coast HU is located in the southern portion of the ESU and includes several smaller coastal streams such as Ten Mile, Noyo, Albion, Navarro, and Garcia Rivers. This HU encompasses approximately 1,598 mi^2 (4,123 km^2) and contains eighteen HSA watersheds that are all occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 1,022 miles (1,635 km) of occupied riverine and estuarine habitat in these watersheds (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified several management activities that may affect the PCEs, including forestry, grazing, urbanization, agriculture, and agricultural and non-agricultural water withdrawals. Of these occupied HSA watersheds, the Team rated five as low in conservation value, four as medium in conservation value, and nine as high in conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Central California Coast (CCC) O. mykiss ESU

The CCC *O. mykiss* ESU was listed as a threatened species in 1997 (62 FR 433937; August 18, 1997). The ESU includes all naturally spawned populations of *O. mykiss* in coastal river basins from the Russian River southward to and including Aptos Creek, as well as naturally spawned populations of *O. mykiss* in drainages of San Francisco and San Pablo Bay eastward to but excluding the Sacramento-San Joaquin Delta. Major coastal watersheds occupied by naturally spawning fish in this ESU include the Russian River, Lagunitas Creek, and San Lorenzo River. Important watersheds occupied by naturally spawning fish within the San Francisco Bay/San Pablo Bay area include Alameda Creek, Coyote Creek, Guadelupe Creek, Petaluma River, and the Napa River. Based on an updated status review (NMFS, 2003a) and an assessment of hatchery populations located within the range of the ESU (NMFS, 2003b), NMFS recently proposed that the ESU remain listed as a threatened species (69 FR 33102; June 14, 2004). In addition, NMFS proposed that: (1) Resident *O. mykiss* occurring with anadromous populations below impassable barriers (both natural and man made); (2) two artificially propagated populations (Don Clausen Fish Hatchery in the Russian River basin and the Kingfisher Flat Hatchery/Scott Creek hatchery in Scott Creek south of San Francisco); and (3) three resident *O. mykiss* sub-populations above Dam 1 on Alameda Creek also be included in the CCC *O. mykiss* ESU. For the purposes of this re-designation proposal, therefore, the watershed units occupied by resident *O. mykiss* in upper Alameda Creek were considered occupied. A Technical Recovery Team has been formed and is in the process of identifying the historical and extant independent population structure of this ESU as well as the associated viability criteria for these populations.

The Team's assessment for this ESU addressed habitat areas within 47 occupied watersheds or CALWATER HSAs that occur in 10 associated subbasins (or CALWATER HUs). Five of these HSAs encompass the San Francisco—San Pablo—Suisun Bay complex which constitutes migratory and rearing habitat for several Bay area tributary stream populations in this ESU. As part of this assessment, the Team considered the conservation value of each habitat area in the context of the productivity, spatial distribution, and diversity of habitats across the range of the ESU. The Team evaluated the conservation value of habitat areas on the basis of the physical and biological habitat requirements of the CCC *O. mykiss* ESU, consistent with the PCEs

identified for Pacific salmon and *O. mykiss* described under Methods and Criteria Used to Identify Proposed Critical Habitat.

Unit 1. Russian River Subbasin (HU #1114)

The Russian River HU is located in the northern portion of the ESU and includes the Russian River drainage and its tributaries. The HU encompasses approximately 1,482 mi^2 (3,824 km^2) and contains eleven HSA watersheds, ten of which are occupied. The unoccupied HSA does not contain fish because it is located above Coyote Dam, which is an impassable fish barrier used to facilitate water diversions from the Eel River and delivery downstream for agricultural and municipal purposes. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 713 miles (1,141 km) of occupied riverine and estuarine habitat in the 10 occupied HSA watersheds (NMFS, 2004a). The Team concluded that these occupied HSAs watersheds contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) and identified several management activities that may affect the PCEs, including urbanization, agriculture, grazing, flood control channelization, road building and maintenance, agricultural and non-agricultural water withdrawals, and non-hydro dams. Of the occupied HSA watersheds, the Team rated one as low in conservation value, two as medium in conservation value, and seven as high in conservation value to the ESU (NMFS, 2004b). The Team did not identify and unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Unit 2. Bodega Bay Subbasin (HU #1115)

The Bodega Bay HU is located in the north central portion of the ESU and includes several small streams as well as Bodega Harbor. The HU encompasses approximately 147 mi^2 (411 km^2) and contains four HSA watersheds, two of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 18 miles (29 km^2) of occupied riverine or estuarine habitat in the occupied HSAs (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) and identified management activities that may affect the PCEs, including grazing, urbanization, agriculture, and agricultural water withdrawals. The Team rated one occupied HSA watershed as low in conservation value and one as medium in conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Unit 3. Marin Coastal Subbasin (HU #2201)

The Marin Coastal HU is located in the central portion of the ESU along the coast and includes several small watersheds including Lagunitas Creek. The HU encompasses approximately 327 mi^2 (844 km^2) and contains five HSA watersheds, four of which are occupied. The unoccupied HSA lacks satisfactory habitat and is of high gradient. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 74 miles (118 km) of occupied riverine or estuarine habitat in the occupied HSAs (NMFS, 2004a). The Team concluded that these occupied habitat areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) and identified management activities that may affect the PCEs, including grazing, urbanization, forestry, agricultural and non-agricultural water withdrawals, and non-hydro dams. Of the occupied HSA watersheds, the Team rated two as low in conservation value, one as medium in conservation value, and one as high in conservation value to the ESU. The Team did not identify any unoccupied areas in this subbasin that may be essential to the conservation of the ESU.

Unit 4. San Mateo Subbasin (HU #2202)

The San Mateo HU is located on the coast immediately south of the Golden Gate Bridge and includes several small creeks including San Gregorio and Pescadero Creeks. The HU encompasses approximately 257 mi^2 (663 km^2) and contains six HSA watersheds, five of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 146 miles (234 km) of occupied riverine or estuarine habitat in the occupied watersheds (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including agriculture, agricultural and non-agricultural water withdrawals, urbanization, non-hydro dams, and road building and maintenance. Of these occupied HSA watersheds, one is low in conservation value, two are medium in value, and two are high in conservation value to the ESU (NMFS, 2004b). The Team did not identify and unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Unit 5. Bay Bridges Subbasin (HU #2203)

The Bay Bridges HU is located in the central portion of the ESU and includes portions of northern San Francisco Bay, San Pablo Bay, and some associated watersheds. The HU encompasses approximately 191 mi^2 (493 km^2) and contains four HSA watersheds, three of which are occupied. The San Francisco Bayside HSA is unoccupied by this ESU due to intense urbanization and lack of stream habitat. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 46 miles (74 km) of occupied riverine and estuarine habitat in the occupied HSA watersheds (NMFS, 2004a). One of the occupied HSAs (HSA #220312; Bay Waters) includes that portion of San Francisco Bay bounded by the Bay Bridge, the Golden Gate Bridge, and the Richmond Bridge, and encompasses an area of approximately 83 mi^2 (214 km^2). This occupied estuarine habitat area constitutes important migratory and rearing habitat and access to the ocean for some populations within this ESU. The Team concluded that these occupied habitat areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including urbanization, channel modification, flood control channelization, road building and maintenance, and wetland loss. Of the occupied watersheds, one each is rated low, medium and high, respectively, in conservation value to the ESU. The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Unit 6. South Bay Subbasin (HU #2204)

The South Bay HU is located in the southern portion of the ESU and includes South San Francisco Bay and associated tributaries such as Alamada Creek. This HU encompasses approximately 1,220 mi^2 (3.148 km^2) and contains four occupied HSA watersheds. One of these four watersheds (Upper Alameda Creek; HSA #220430) is not accessible to anadromous fish at this time, but is nonetheless considered occupied for the purposes of this critical habitat designation because genetic evidence indicates the resident O. mykiss that reside there are closely related to local anadromous steelhead (Nielsen 2003) and we have proposed to include these fish in the listed ESU (69 FR 33102; June 14, 2004). Fish distribution and

habitat use data compiled by NMFS biologists identify approximately 172 miles (275 km) of occupied riverine and estuarine habitat in the occupied watersheds (NMFS, 2004a), including the Upper Alameda Creek HSA (#220430). One of the occupied HSAs (Bay Channel; HSA #220410) includes that portion of San Francisco Bay south of the Bay Bridge to the Dumbarton Bridge, and encompasses an area of approximately 173 mi^2 (446 km^2). This occupied estuarine habitat area constitutes important migratory and rearing habitat and access to the ocean for some populations within this ESU. The Team concluded that these occupied habitat areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including urbanization, flood control channelization, non-hydro dams, channel modification, and non-agricultural water withdrawals. Of these occupied HSAs, the Team rated one as low in conservation value, one as medium in conservation value, and two as high in conservation value to the ESU. The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Unit 7. Santa Clara Subbasin (HU #2205)

The Santa Clara HU is located in the southern portion of the ESU and includes part of South San Francisco Bay and associated tributaries including Coyote Creek and the Guadalupe River. This HU encompasses approximately 840 mi^2 (2,167 km^2) and contains five HSA watersheds, four of which are occupied. The remaining HSA is unoccupied due to lack of stream habitat and intense urbanization. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 135 miles (216 km) of occupied riverine or estuarine habitat in the occupied watersheds (NMFS, 2004a). One of the occupied HSAs (Dumbarton South; HSA #220510) includes that portion of San Francisco Bay south of the Dumbarton Bridge, and encompasses an area of approximately 15 mi^2 (39 km^2). This occupied estuarine habitat area constitutes important migratory and rearing habitat and access to the ocean for some populations within this ESU. The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including road building and maintenance, urbanization, wetland loss, flood control channelization, non-hydro dams, and non-agricultural water withdrawals. Of the occupied watersheds, the Team rated one as low in conservation value, two as medium in conservation value, and one as high in conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Unit 8. San Pablo Subbasin (HU #2206)

The San Pablo HU is located in the central portion of the ESU and includes part of San Pablo Bay as well as several associated tributaries including the Petaluma River, Sonoma Creek, and the Napa River. This HU encompasses approximately 1,018 mi^2 (2,626 km^2) and contains six occupied HSA watersheds. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 392 miles (627 km) of occupied riverine and estuarine habitat in the occupied watersheds (NMFS, 2004a). One of the occupied HSAs (San Pablo Bay; HSA #220610) includes San Pablo Bay from the Richmond Bridge to the Carquinez Bridge, and encompasses an area of approximately 115 mi^2 (297 km^2). This occupied estuarine habitat area constitutes important migratory and rearing habitat and access to the ocean for some populations within this ESU. The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including urbanization, road building and maintenance, channel modification, flood control channelization, agriculture, wetland loss, and non-hydro dams. Of these occupied watersheds, the Team rated two as low, one as medium, and three as high in conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Unit 9. Suisun Bay Subbasin (HU #2207)

The Suisun Bay HU is located in the easternmost portion of the ESU and includes Suisun Bay and associated tributaries including Mount Diablo Creek and Suisun Creek. This HU encompasses approximately 653 mi^2 (1,684 km^2) and contains eight HSA watersheds, five of which are occupied. The remaining three HSA watersheds are unoccupied due to unsuitable habitat and/or barriers and urbanization. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 86 miles (138 km) of occupied riverine and estuarine habitat in these watersheds (NMFS, 2004a). One of the occupied HSAs (Suisun Bay; HSA #220710) includes Suisun Bay which encompasses an area of approximately 56 mi^2 (143 km^2). This occupied estuarine habitat area constitutes important migratory and rearing habitat and access to the ocean for some populations within this ESU. The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including urbanization, road building and maintenance, wetland loss, non-hydro dams, flood control channelization, and agricultural and non-agricultural water withdrawals. Of the occupied watersheds, the Team rated four as low and one as medium in conservation value for the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Unit 10. Big Basin Subbasin (HU #3304)

The Big Basin HU is located in the southernmost coastal portion of the ESU south of the Golden Gate Bridge and includes several small coastal streams such as Gazos Creek, Waddell Creek, Scott Creek, the San Lorenzo River, Soquel Creek and Aptos Creek. This HU encompasses approximately 367 mi^2 (947 km^2) and contains four occupied HSA watersheds. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 220 miles (352 km) of occupied riverine and estuarine habitat in these watersheds (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including road building and maintenance, forestry, agricultural and non-agricultural water withdrawals, and non-hydro dams. Of these occupied watersheds, the Team rated one as medium and three as high in conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

South-Central California Coast (SCCC) O. mykiss ESU

The SCCC *O. mykiss* ESU was listed as a threatened species in 1997 (62 FR 43937). The ESU includes all naturally spawned populations of *O. mykiss* in

coastal river basins from the Pajaro River southward to, but not including, the Santa Maria River. The major watersheds occupied by naturally spawning fish in this ESU include the Pajaro River, Salinas River, Carmel River, and numerous smaller rivers and streams along the Big Sur coast and southward. Most of the rivers in this ESU drain the Santa Lucia Range, the southernmost unit of the California Coast Range, and only winter steelhead are found in this ESU. The climate is drier and warmer than in the north, as reflected in vegetational changes from coniferous forest to chapparral and coastal scrub. The mouths of many rivers and streams in this ESU are seasonally closed by sand berms that form during periods of low flow in the summer. Based on an updated status review (NMFS, 2003a), NMFS recently proposed that the ESU remain listed as a threatened species and that resident *O. mykiss* co-occurring with anadromous populations below impassible barriers (both natural and man-made) be included in the ESU (69 FR 33102; June 14, 2004). A Technical Recovery Team has been formed and is in the process of identifying the historical and extant independent population structure of this ESU and associated population viability criteria. The time frame for completion of this work is uncertain.

The Team's assessment for this ESU addressed habitat areas within 30 occupied watersheds or CALWATER HSAs that occur in 8 associated subbasins (or CALWATER HUs). In addition to 29 HSA watershed units, a conservation assessment was also made for Morro Bay (a separate HSA unit) which provides rearing and migration PCEs for this ESU. As part of its conservation assessment, the Team considered the conservation value of each habitat area in the context of the productivity, spatial distribution, and diversity of habitat across the range of the ESU. The Team evaluated the conservation value of habitat areas on the basis of the physical and biological habitat requirements of the SCCC *O. mykiss* ESU, consistent with the PCEs identified for Pacific salmon and *O. mykiss* described under Methods and Criteria Used to Identify Proposed Critical Habitat.

Unit 1. Pajaro River Subbasin (HU #3305)

The Pajaro River HU is located in the northern part of the ESU and includes the Pajaro River and its tributaries. The HU encompasses approximately 1,311 mi^2 (3,382 km^2) and contains five occupied HSA watersheds, although a portion of one HSA is located outside the boundary of the ESU. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 296 miles (474 km) of occupied riverine and/or estuarine habitat in the occupied HSA watersheds (NMFS, 2004a). The Team concluded that these occupied HSAs contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) and identified several management activities that may affect the PCEs, including flood control channelization, agricultural and non-agricultural water withdrawals, road building and maintenance, and non-hydro dams. Of the five occupied watersheds, the Team rated three as medium in conservation value and two as high in conservation value to the ESU (NMFS, 2004b).

The Team also concluded that inaccessible habitat above Uvas Dam in Uvas Creek (a tributary to the Pajaro River) may be essential to the conservation of the ESU. The Team concluded that this unoccupied habitat area may be essential for conservation because: (1) It supports *O. mykiss* native to the Pajaro River watershed and contains habitat suitable for spawning and rearing; and (2) efforts are underway to implement a long-standing agreement between the South Santa Clara Valley Water Conservation District and the State of California to provide fish passage past this dam. We seek comment on whether this unoccupied area should be proposed as critical habitat.

Unit 2. Bolsa Neuva Subbasin (HU #3306)

The Bolsa Neuva HU is a small watershed unit located in the northern part of the ESU which includes Elkhorn Slough. The HU encompasses approximately 51 mi^2 (132 km^2) and contains one HSA watershed and approximately 63 miles of streams (at 1:100,000 hydrography). Fish distribution and habitat use data compiled by NMFS biologists indicate that this watershed is not occupied (NMFS, 2004a). The Team did not identify this unoccupied HSA as a habitat area that was essential for the conservation of the ESU. Because this HU did not contain occupied habitat or unoccupied habitat that the Team believed may be essential for the conservation of the ESU, it was not considered further in the designation process.

Unit 3. Carmel River Subbasin (HU #3307)

The Carmel River HU is located in the northwestern portion of the ESU and includes the Carmel River watershed. The HU encompasses approximately 256 mi^2 (660 km^2) and contains only one HSA which is occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 136 miles (218 km) of occupied riverine and estuarine habitat in this watershed (NMFS, 2004a). The Team concluded that this occupied watershed contained habitat areas with one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) and identified management activities that may affect the PCEs, including flood control channelization, non-hydro dams, and non-agricultural water withdrawals. The Team rated this watershed as having high conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential for conservation of the ESU.

Unit 4. Santa Lucia Subbasin (HU #3308)

The Santa Lucia HU is located along the Big Sur coastal area and includes the Big Sur River and Little Sur River watersheds. The HU encompasses approximately 302 mi^2 (779 km^2) and contains only a single HSA which is occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 102 miles (163 km) of occupied riverine and estuarine habitat in this watershed (NMFS, 2004a). The Team concluded that this occupied watershed contained one or more PCEs (*i.e.* spawning, rearing, or migratory habitat) and identified at least one management activity that may affect the PCEs, including road building and maintenance. The Team rated this watershed as having high conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Unit 5. Salinas River Subbasin (HU #3309)

The Salinas River HU is located in the north-central portion of the ESU and includes the Salinas River watershed which is the largest in the ESU. The Salinas River HU encompasses approximately 3,527 mi^2 (9,099km^2) and contains twelve HSA watersheds, seven of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 375 miles (600 km) of occupied riverine and estuarine habitat in the occupied HSA watersheds (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) and identified management activities

that may affect the PCEs, including agriculture, flood control channelization, wetland loss, road building and maintenance, non-hydro dams, and agricultural water withdrawals. Of the occupied watersheds, the Team rated four as having low conservation value, one as having medium conservation value, and two as having high conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Unit 6. Estero Bay (HU #3310)

The Estero Bay HU is located along the southern coast of the ESU and includes several relatively small coastal streams including Arroyo De La Cruz, San Simeon Creek, Santa Rosa Creek, Morro Creek, Chorro Creek, San Luis Obispo Creek, and Arroyo Grande Creek. The HU encompasses approximately 751 mi^2 (436 km^2) and contains seventeen HSA watersheds, sixteen of which are occupied. One of these occupied watersheds is Morro Bay into which the Morro Creek and Chorro Creek watersheds drain. Morro Bay proper encompasses an area of approximately 3 mi^2 (8 km^2) and is an important rearing and migratory habitat for populations that occupy the watersheds that drain into the Bay. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 352 miles (563 km) of occupied riverine habitat in the occupied watersheds (NMFS, 2004a). The Team concluded that these occupied habitat areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) and identified management activities that may affect the PCEs, including grazing, agriculture, urbanization, non-hydro dams, road building and maintenance, and agricultural water withdrawals. Of the occupied HSA watersheds, the Team rated two as low, seven as medium, and seven as high in conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Units 7 (Santa Maria HU #3312) and 8 (Estrella HU #3317)

Portions of the Santa Maria and Estrella HUs are within the geographic range of this ESU, but do not contain occupied riverine or estuarine habitat. The Santa Maria HU includes a single HSA (Guadalupe; 331210) which is divided by the ESU boundary. All occupied habitat within this HSA occurs within the range of the Southern California steelhead ESU. The Estrella HU contains a single HSA (Estrella River; 331700) which is unoccupied. The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU. Because these areas did not contain occupied habitat or unoccupied habitat that may be essential for the conservation of the ESU, they were not considered further in the designation process.

Southern California (SC) O. mykiss ESU

The SC *O. mykiss* ESU was listed as an endangered species in 1997 (62 FR 3937; August 18, 1997). In 2002, the status of the ESU was updated and its range extended based on new information indicating that anadromous *O. mykiss* had re-colonized watersheds from which it was thought to have been extirpated (67 FR 21586; May 1, 2002). The SC *O. mykiss* ESU includes all naturally spawned populations of *O. mykiss* in coastal river basins from the Santa Maria River in San Luis Obispo County southward to the U.S.—Mexican Border (67 FR 21586). Major coastal watersheds occupied by naturally spawning fish in this ESU include the Santa Maria, Santa Ynez, Ventura, and Santa Clara Rivers. Several smaller streams in Santa Barbara, Ventura and northern Los Angeles County also support naturally spawning steelhead, as do two watersheds (San Juan Creek and San Mateo Creek) in southern Orange County and northern San Diego County. These southernmost populations are disjunct in distribution and are separated from the northernmost populations by approximately 80 miles (128 km). Based on an updated status review (NMFS, 2003a), NMFS recently proposed that the ESU remain listed as an endangered species (69 FR 33102; June 14, 2004). In addition, NMFS proposed that resident *O. mykiss* occurring with anadromous populations below impassable barriers (both natural and man made) also be included in the ESU. A Technical Recovery Team has been formed for the South-Central coast of California and is in the process of identifying the historical and extant independent population structure of this ESU and the SCCC *O. mykiss* ESU, as well as the associated viability criteria for these populations.

The Team's assessment for this ESU addressed habitat areas within 37 occupied watersheds or CALWATER HSAs that occur in 8 associated subbasins or CALWATER HUs. As part of its assessment, the Team considered the conservation value of each habitat area (or HSA) in the context of the productivity, spatial distribution, and diversity of habitats across the range of the ESU. The Team evaluated the conservation value of habitat areas on the basis of the physical and biological habitat requirements of the SC *O. mykiss*, consistent with the PCEs identified for Pacific salmon and *O. mykiss* described under Methods and Criteria Used to Identify Proposed Critical Habitat.

Unit 1. Santa Maria River Subbasin (HU #3312)

The Santa Maria River HU is located in the northwestern portion of the ESU and includes the Santa Maria River and its upstream tributaries, the Sisquoc and Cuyama Rivers. The HU encompasses an area of approximately 704 mi^2 (1816 km^2) and contains three occupied HSA watersheds. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 219 miles (350 km) of occupied riverine and estuarine habitat in these watersheds (NMFS, 2004a). The Team concluded that these occupied HSA watersheds contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) and identified several management activities that may affect the PCEs, including non-hydro dams, water withdrawals, sand and gravel mining, and grazing. Of the occupied watersheds, the Team rated two as low and one as high in conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Unit 2. Santa Ynez River Subbasin (HU #3314)

The Santa Ynez River HU is located in the northwestern portion of the ESU and includes the Santa Ynez River watershed. The HU encompasses an area of approximately 485 mi^2 (1,251 km^2) and contains six HSA watersheds, five of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 138 miles (221 km) of occupied riverine and estuarine habitat in the occupied watersheds (NMFS, 2004a). The Team concluded that these occupied watersheds contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) and identified several management activities that may affect the PCEs, including grazing, water withdrawals, non-hydro dams, urbanization, barriers to migration, and road building and maintenance. Of these occupied watersheds, the Team rated one as low, two as medium, and two as high in conservation value to the ESU (NMFS, 2004b).

The Team also concluded that inaccessible reaches of the Santa Ynez River and its tributaries above Bradbury Dam may be essential to the conservation of this ESU. The Team reached this conclusion because historical records indicate that the upper portion of the Santa Ynez watershed above Bradbury Dam provided the principal spawning and rearing habitat for a historically large anadromous *O. mykiss* population within this river system prior to construction of the dam. In addition, most of these unoccupied river reaches are located on lands under public ownership and management, primarily the Los Padres National Forest. Because of the large size of the Santa Ynez river system, it is likely to have historically supported one or more independent populations which contributed to the resiliency of the ESU and served as a buffer against extinction. The currently occupied habitat areas within the range of the SC *O. mykiss* ESU are relatively small in number and size, and in many cases are isolated from other occupied habitats, thus the re-establishment of larger populations such as the one that historically occurred in the Santa Ynez River may be necessary to reduce the extinction probability of this ESU. We seek comment on whether unoccupied areas above Bradbury Dam should be proposed as critical habitat.

Unit 3. South Coast Subbasin (HU #3315)

The South Coast HU is located in the northwestern portion of the ESU and includes several small coastal streams such as Jalama Creek, Arroyo Hondo, Mission Creek, and Carpinteria Creek. The HU encompasses an area of approximately 375 mi^2 (968 km^2) and contains five occupied HSAs. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 152 miles (243 km) of occupied riverine and estuarine habitat in the occupied watersheds (NMFS, 2004a). The Team concluded that these occupied HSA watersheds contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) and identified several management activities that may affect the PCEs, including agriculture, migration barriers or impediments, water withdrawals, urbanization, road building and maintenance, and wetland loss. Of the occupied watersheds, the Team rated all five as high in conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Unit 4. Ventura River Subbasin (HU #4402)

The Ventura River HU is located in the northwestern portion of the ESU and includes the Ventura River and its associated tributaries. The HU encompasses an area of approximately 162 mi^2 (259 km^2) and contains four occupied HSA watersheds. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 68 miles (109 km) of occupied riverine and estuarine habitat in the occupied watersheds (NMFS, 2004a). The Team concluded that these occupied HSAs contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) and identified several management activities that may affect the PCEs, including urbanization, agriculture, water withdrawals, non-hydro dams, barriers or impediments, and exotic or invasive species. Of these occupied watersheds, the Team rated two as medium and two as high in conservation value (NMFS, 2004b).

The Team also concluded that inaccessible reaches of Matilija Creek and its tributaries above Matilija Dam and inaccessible reaches of Coyote and Santa Ana Creeks above Casitas Dam may be essential to the conservation of this ESU. The Team reached this conclusion because historical records indicate that the inaccessible habitat reaches above Matilija and Casitas Dams provided the principal spawning and rearing habitat for a historically large anadromous *O. mykiss* population within the Ventura River watershed prior to construction of the dams. In addition, most of these unoccupied river reaches are located on lands under public ownership and management, primarily the Los Padres National Forest. Because of the relatively large size of the Ventura River watershed, it is likely to have historically supported one or more independent populations prior to dam construction which contributed to the resiliency of the ESU and served as a buffer against extinction. The currently occupied habitat areas within the range of the SC *O. mykiss* ESU are relatively small in number and size, and in many cases are isolated from other occupied habitats. Thus the re-establishment of larger populations such as the ones that historically occurred in the Ventura River watershed may be necessary to reduce the extinction probability of this ESU. We seek comment on whether unoccupied areas above Matilija and Casitas Dams should be proposed as critical habitat.

Unit 5. Santa Clara—Calleguas Subbasin (HU #4403)

The Santa Clara—Calleguas HU is located in the northwestern portion of the range of the ESU and includes the Santa Clara River and its tributaries including Sespe Creek. That portion of the HU within the range of the ESU encompasses a large area of approximately 1,236 mi^2 (3,189 km^2) and contains 14 HSA watersheds, only 6 of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 182 miles (291 km) of occupied riverine and estuarine habitat in the occupied watersheds (NMFS, 2004a). The Team concluded that these occupied HSAs contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) and identified several management activities that may affect the PCEs, including agriculture, irrigation water withdrawals, barriers and impediments, dams, urbanization, and exotic/invasive species. Of these occupied watersheds, the Team rated one as medium and five as high in conservation value (NMFS, 2004b).

The Team also concluded that inaccessible reaches of Piru Creek and its tributaries above Santa Felicia Dam may be essential to the conservation of this ESU. The Team reached this conclusion because historical records indicate that the inaccessible habitat reaches above Santa Felicia Dam provided the principal spawning and rearing habitat for a historically large anadromous *O. mykiss* population within the Santa Clara River watershed prior to construction of the dam. In addition, most of these unoccupied river reaches are located on lands under public ownership and management, primarily the Los Padres National Forest. Because of the large size of the Santa Clara River watershed, it is likely to have historically supported one or more independent populations prior to dam construction which contributed to the resiliency of the ESU and served as a buffer against its extinction. The currently occupied habitat areas within the range of the SC *O. mykiss* ESU are relatively small in number and size, and in many cases are isolated from other occupied habitats, thus the re-establishment of larger populations such as the one that historically occurred in the Santa Clara River watershed may be necessary to reduce the extinction probability of this ESU. We seek comment on whether unoccupied areas above Santa Felicia Dam should be proposed as critical habitat.

Unit 6. Santa Monica Bay Subbasin (HU #4404)

The Santa Monica Bay HU is located in the northwestern portion of the ESU and includes Topanga Creek, Malibu Creek, and Arroyo Sequit. That portion of the HU within the ESU encompasses approximately 328 mi^2 (846 km^2) and includes 29 HSA watersheds, only 3 of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify only approximately 11 miles (18 km) of occupied riverine and estuarine habitat in the 3 occupied watersheds (NMFS, 2004a). The Team concluded that these occupied watersheds contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) and identified several management activities that may affect the PCEs, including road building and maintenance, urbanization, barriers and impediments, and flood control and other channel modifications. Of these occupied watersheds, the Team rated all three as high in conservation value to the ESU (NMFS, 2004b).

The Team also concluded that inaccessible reaches of Malibu Creek above Rindge Dam may be essential to the conservtion of this ESU. The Team reached this conclusion because historical records indicate that the inaccessible habitat reaches above Rindge Dam provided the principal spawning and rearing habitat for an important anadromous *O. mykiss* population within the Malibu River watershed prior to construction of the dam. Because of the size of this watershed, it is likely to have historically supported an independent population prior to dam construction which contributed to the resiliency of the ESU and served as a buffer against its extinction. The currently occupied habitat areas within the range of the SC *O. mykiss* ESU are relatively small in number and size, and in many cases are isolated from other occupied habitats, thus the re-establishment of larger populations such as the one that historically occurred in Malibu Creek may be necessary to reduce the extinction probability of this ESU. We seek comment on whether unoccupied areas above Rindge Dam should be proposed as critical habitat.

Unit 7. Calleguas Subbasin (HU #4408)

The Calleguas HU is located in the northwestern portion of the ESU and includes Calleguas Creek and estuary. That portion of the HU within the range of the ESU encompasses a large area of approximately 344 mi^2 (888 km^2) and 12 HSA watersheds, only 2 of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify only approximately 1 mile (1.6 km) of occupied freshwater and estuarine habitat in the occupied HSA watersheds (NMFS, 2004b). The Team concluded that the occupied watersheds contained one or more PCEs (*i.e.*, rearing and migratory habitat) and identified management activities that may affect the PCEs, including agriculture, channel modifications, and barriers or impediments. The Team also concluded that both watersheds have a low conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas that may be essential to the conservation of the ESU.

Unit 8. San Juan Subbasin (HU #4901)

The San Juan HU is located in the southern portion of the ESU and includes the San Juan Creek and San Mateo Creek watersheds which have recently been re-colonized by anadromous *O. mykiss*. That portion of the HU within the range of the ESU encompasses an area of approximately 496 mi^2 (1,280 km^2) and contains 18 HSA watersheds, 9 of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 66 miles (106 km) of occupied riverine and estuarine habitat in the occupied watersheds (NMFS, 2004a). The Team concluded that the occupied watersheds contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) and identified several management activities that may affect the PCEs, including urbanization, road building and maintenance, barriers and impediments, channel modifications or flood control structures, agriculture, agricultural and non-agricultural water withdrawals, and exotic/invasive species. Of these occupied watersheds, the Team rated one as low, one as medium, and seven as high in conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas that may be essential for the conservation of the ESU.

Within the range of the SC *O. mykiss* ESU, which extends from the Santa Maria River southward to the U.S.—Mexico border, there are a large number of HSA watersheds and their associated subbasins (or HUs) that are not occupied. These unoccupied subbasins include the San Gabriel River, Los Angeles River, Santa Ana River, Santa Margarita River, San Luis Rey River, San Dieguito River, San Diego River, Sweetwater River, Otay River and Tijuana River. Because these areas are unoccupied and were not considered essential for conservation of the ESU by the Team, they were not considered further in the designation process.

Central Valley (CV) Spring-Run Chinook ESU

The CV spring-run chinook ESU was listed as a threatened species in 1999 (64 FR 50394). The ESU includes all naturally spawned populations of spring-run chinook salmon in the Sacramento River and its tributaries. The agency recently conducted a review to update the ESU's status, taking into account new information and considering the net contribution of artificial propagation efforts in the ESU. A single artificially propagated spring-run chinook stock resides within the historical geographic range of the ESU (Feather River Hatchery spring-run chinook program), but it is not considered part of the ESU because of introgression with fall-run chinook salmon. NMFS has recently proposed that the CV spring-run chinook ESU remain listed as a threatened species (69 FR 33102; June 14, 2004). No artificial propagation programs were proposed for listing.

A Technical Recovery Team has been established for the Central Valley recovery planning domain, and it has identified historic and extant demographically independent populations of spring chinook (NMFS, 2004; NOAA Technical Memorandum NOAA–TM–NMFS–SWFSC–370). The TRT divided the range of the spring-run chinook ESU into four geographic groups. Geographic areas in each group inhabit similar environments based on a principle components analysis of environmental variables. The four geographic groups are the southern Cascades, northern Sierra, southern Sierra, and Coast Range. The TRT identified at least 18 historically demographically independent populations of spring-run chinook distributed among these four geographic areas, plus an additional seven likely dependent populations that may have been strongly influenced by adjacent independent population. Three of the 18 independent populations are extant (Mill, Deer and Butte Creek populations) and all occur in the Southern Cascade geographic area. Several extant dependent populations have intermittent runs of spring chinook including Big Chico, Antelope, and Beegum Creeks. Recovery planning will likely emphasize the need for having viable populations distributed across the range of the identified geographic areas (Ruckelshaus *et al.*, 2002; McElhany *et al.*, 2003). Recovery planning efforts are currently focused on working with the CalFed and Central

Valley Project Improvement Act programs to implement habitat restoration projects and other recovery related efforts in the Central Valley. The Team considered the TRT products in rating each watershed and also solicited input from the TRT on the distributional and habitat use information that was compiled as well as the conservation assessment of occupied HSAs.

The Team's assessment for this ESU addressed habitat areas within 37 occupied watersheds or CALWATER HSAs that occur in 15 associated subbasins or CALWATER HUs. This assessment also included four HSAs that encompass the San Francisco-San Pablo-Suisun Bay complex, which constitutes rearing and migration habitat for this ESU. This complex is treated as a separate unit in the following ESU description even though it is not a CALWATER HU. As part of its assessment, the Team considered the conservation value of each habitat area (or HSA) in the context of the productivity, spatial distribution, and diversity of habitats across the range of the ESU. The Team evaluated the conservation value of habitat areas on the basis of the physical and biological habitat requirements of the CV spring-run chinook, consistent with the PCEs identified for Pacific salmon and *O. mykiss* described under Methods and Criteria Used to Identify Proposed Critical Habitat.

Unit 1. Tehama Subbasin (HU #5504)

The Tehama HU is located in the north central portion of the ESU and includes portions of the mainstem Sacramento River, the lower portions of two westside tributaries (Thomes and Stony Creeks) and the lower portions of three eastside tributaries (Mill Creek, Deer Creek, and Pine Creek). The HU encompasses an area of approximately 1,119 square miles (2,887 km^2) and contains two HSA watersheds, both of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 250 miles (400 km) of occupied riverine habitat in the occupied watersheds (NMFS, 2004a). The Team concluded that these occupied watersheds contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) and identified several management activities that may affect the PCEs, including agricultural water withdrawals, fish passage impediments, stream bank stabilization for flood control, dam operations, urbanization, rangeland management, diking, and point and non-point source water pollution. Of these occupied watersheds, the Team rated one as medium and one as having high conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Unit 2. Whitmore Subbasin (HU #5507)

The Whitmore HU is located in the north eastern portion of the ESU and includes portions of upper Battle Creek (North and South Forks), upper Bear Creek, and the Cow Creek watershed. The HU encompasses an area approximately 913 mi^2 (2,355 km^2) and contains seven HSA watersheds, four of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 58 miles (93 km) of occupied riverine habitat in the occupied HSAs (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.,* spawning, rearing, or migratory habitat) and identified management activities that may affect the PCEs, including agricultural and no-agricultural water withdrawals, forestry, rangeland management, hydropower diversions, urbanization, and fish passage impediments. Of these watersheds, the Team rated three as having low conservation value and one as having high conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Unit 3. Redding Subbasin (HU #5508)

The Redding HU is located in the northernmost portion of the ESU and includes portions of the upper Sacramento River mainstem, westside tributaries including Cottonwood Creek (portions of both the Middle and South Forks) and Clear Creek, and the lower portions of several eastside tributaries (Cow Creek, Bear Creek, and lower Battle Creek). The HU encompasses an area of approximately 705 mi^2 (1,818 km^2) and contains two occupied HSA watersheds. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 159 miles (254 km) of occupied riverine habitat in these watersheds (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.,* spawning, rearing, or migratory habitat) and identified management activities that may affect the PCEs, including rangeland management, gravel mining, fish passage impediments, dam operations and flood control water storage, and agricultural water withdrawals. The Team rated both occupied watersheds as having high conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Unit 4. Eastern Tehama Subbasin (HU #5509)

The Eastern Tehama HU is located in the northeastern portion of the ESU and includes portions of several important populations including Mill Creek, Deer Creek, Antelope Creek, and the upper portion of Big Chico Creek. The HU encompasses an area of approximately 896 mi^2 (2,311 km^2) and contains ten HSA watersheds, four of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 117 miles (187 km) of occupied riverine habitat in the occupied watersheds (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.,* spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including forestry, rangeland management, fish passage impediments, road building and maintenance, and agricultural water withdrawals. Of the occupied watersheds, the Team rated them all high in conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin may be essential for the conservation of the ESU.

Unit 5. Sacramento Delta Subbasin (HU #5510)

The Sacramento Delta HU is located in the southern portion of the ESU and includes portions of the mainstem Sacramento River and the Deep Water Ship Channel. The HU encompasses an area of approximately 446 mi^2 (1,150 km^2) and contains a single HSA which is occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 180 miles (288 km) of occupied riverine habitat in this watershed (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.,* spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including agricultural water withdrawals, point and non-point water pollution, invasive/non-native species, diking, and streambank stabilization for flood control. The Team rated this watershed as high in conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied habitat areas in the subbasin that may be essential for conservation of the ESU.

Unit 6. Valley Putah-Cache Subbasin (HU #5511)

The Valley Putah-Cache HU is located in the southern portion of the ESU and includes portions of Putah and Cache Creeks. This HU encompasses an area of approximately 961 mi^2 (2,479 km^2) and contains two HSA watersheds within the range of the ESU, one of which is occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 16 miles (26 km) of occupied riverine habitat in this watershed (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.,* spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including urban development, agricultural water withdrawals, and impediments to fish passage. The Team rated the occupied watershed as high in conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied habitat areas in this subbasin that may be essential for the conservation of the ESU.

Unit 7. Marysville Subbasin (HU #5515)

The Marysville HU is located in the central portion of the ESU and includes portions of the lower Feather and Yuba Rivers. This HU encompasses an area of approximately 417 mi^2 (1,076 km^2) and contains three HSA watersheds, two of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify only 58 miles (93 km) of occupied riverine habitat in these occupied watersheds (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.,* spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including agricultural water withdrawals, hydroelectric and municipal water diversions, water storage for flood control, dam operations, streambank stabilization for flood control, diking, and fish passage impediments. The Team rated both occupied watersheds as high in conservation value to the ESU (NMFS, 2004b).

The Team did not identify any unoccupied habitat areas in this subbasin that may be essential for the conservation of the ESU; however, the Team did conclude that inaccessible stream reaches in the Upper Feather River above Oroville Dam in the adjacent subbasin (HU #5518) may be essential to the conservation of this ESU. Specifically, the Team identified the following stream reaches above Oroville Dam that may be essential for conservation of this ESU: from Oroville Dam upstream along the West Branch of the Feather River to the vicinity of Kimshew Falls; along the North Fork of the Feather River upstream of the location of Lake Almanor; along the East Branch of the NF Feather River including Indian Creek and Spanish Creek; the South Middle Fork of the Feather River, and the South Fork of the Feather River upstream to the first natural impassible barrier. Both spring-run chinook and steelhead historically occurred in the Upper Feather River prior to Pacific Gas and Electric's hydroelectric development in the North Fork watershed and the construction of Oroville Dam. Construction of Oroville Dam extirpated both the spring-run chinook and steelhead populations in this upper watershed. The Team concluded that spawning, rearing, and migratory habitat occurs above Oroville Dam in these inaccessible reaches, but it is in better condition for steelhead than spring-run chinook salmon. The feasibility of providing fish passage past Oroville Dam is currently being evaluated through the ongoing FERC relicensing process for this facility. The Team concluded this inaccessible habitat may be essential for the conservation of this ESU because the genetic integrity of spring-run chinook in the Lower Feather River has been compromised by Feather River Hatchery practices (*i.e.,* introgression of spring and fall runs in the hatchery), and providing access to the unoccupied habitat above the dam would allow for expansion of the population in this watershed. We seek comment on whether this unoccupied habitat should be proposed as critical habitat.

Unit 8. Yuba River Subbasin (HU #5517)

The Yuba River HU is located in the central and eastern portion of the ESU and includes part of the upper Yuba River watershed. This HU encompasses an area of approximately 1,436 mi^2 (3,704 km^2) and contains sixteen HSA watersheds, only four of which are occupied. Virtually all of these watersheds, however, are outside the previously identified boundary of the ESU. Fish distribution and habitat use data compiled by NMFS biologists identify only approximately 22 miles (35 km) of occupied riverine habitat in the occupied watersheds (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.,* spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including agricultural and non-agricultural water withdrawals, fish passage impediments, and dam operations. Of these occupied watersheds, the Team rated one as low, one as medium, and two as high in conservation value to the ESU (NMFS, 2004b).

The Team concluded that inaccessible stream reaches on the Upper Yuba River above Englebright Dam may be essential to the conservation of this ESU, including those upstream reaches on the North Yuba to New Bullards Bar Dam, on the Middle Yuba to Milton Dam, and on the South Yuba to Lake Spaulding. All three forks of the Upper Yuba River historically supported populations of spring chinook and steelhead (Yoshiyama *et al.,* 1995). The Team considered this area to be essential for conservation because it provides one of the largest areas of suitable habitat in the Central Valley that can be accessed by providing passage at one relatively small dam. The Lower Yuba is also considered to have a good ''seed'' population of both spring chinook and steelhead and both populations are considered relatively free of hatchery influence. A large, multi-million dollar study program is underway through the CALFED Ecological Restoration Program to evaluate the feasibility of restoring anadromous salmonid populations to the Upper Yuba River. We seek comment on whether this unoccupied habitat should be proposed as critical habitat.

Unit 9. Valley-American Subbasin (HU #5519)

The Valley-American HU is located in the south-central and eastern portion of the ESU and includes portions of the Lower American River, the mainstem Sacramento River, and the lower Feather River. This HU encompasses an area of approximately 958 mi^2 (2,471 km^2) and contains four HSA watersheds, only two of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify only approximately 61 miles (98 km) of occupied riverine habitat in these watersheds (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.,* spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including agricultural and municipal water withdrawals, point source and non-point source water pollution, streambank stabilization for flood control, fish passage impediments, water storage for flood control, dam operations, and urbanization. The Team rated one watershed as medium in conservation value and one as high in conservation value to the ESU (NMFS, 2004b). The Team did not identify any

unoccupied habitat areas in this subbasin that may be essential for the conservation of the ESU.

Unit 10. Colusa Basin Subbasin (HU #5520)

The Colusa Basin HU is located in the central portion of the ESU and includes portions of the mainstem Sacramento River, lower Butte Creek, and the Butte Creek-Sutter Bypass. This HU encompasses an area of approximately 2,767 mi^2 (7,139 km^2) and contains five HSA watersheds, four of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 230 miles of occupied riverine habitat, including the Butte Creek-Sutter Bypass, in these watersheds (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.,* spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including agricultural and municipal water withdrawals, fish passage impediments, point and non-point source pollution, diking, wildlife habitat management, flood control operations, and non-native/invasive species. The Team rated all four occupied watersheds as having high conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied habitat areas in this subbasin that may be essential for the conservation of the ESU.

Unit 11. Butte Creek Subbasin (HU #5521)

The Butte Creek HU is located in the northeastern portion of the ESU and includes portions of upper Butte Creek. This HU encompasses an area of approximately 207 mi^2 (534 km^2) and contains three HSA watersheds, only one of which is occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 15 miles (24 km) of occupied riverine habitat in the watershed (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.,* spawning, rearing, or migratory habitat) for this ESU and identified water diversions for hydroelectric power as the principal management activity that may affect the PCEs. The Team rated this occupied watershed as high in conservation value to the ESU (NMFS, 2004b).

The Team also concluded that inaccessible reaches of Upper Butte Creek above Centerville Dam upstream to Butte Meadow may be essential to the conservation of this ESU. It is uncertain whether this area was historically used by the ESU, but spawning, rearing, and migration is present in the inaccessible areas and is thought to be in good condition. The Team believed this area may be essential for conservation because current spring run chinook and steelhead spawning in this watershed is all below an elevation of 1,000 ft and other spring-run chinook populations within the ESU typically spawn above 2,000 ft. High water temperatures in the lower portion of Butte Creek have led to significant spring-run chinook pre-spawning mortalities in recent years, and the Team concluded that improved fish passage over the Centerville Diversion Dam would increase the range of this ESU and reduce the risk of adult losses in the lower stream reaches. The Team expects that feasibility of passage at the Centerville Diversion Dam will be evaluated through the upcoming FERC relicensing process for the facility. We seek comment on whether these unoccupied habitat areas should be proposed as critical habitat.

Unit 12. Ball Mountain Subbasin (HU #5523)

The Ball Mountain HU is located in the northwestern portion of the ESU and includes a portion of upper Thomes Creek. This HU encompasses an area of approximately 334 mi^2 (862 km^2) and contains three HSAs, only one of which is occupied primarily in the Thomes Creek watershed. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 15 miles (24 km) of occupied riverine habitat in the single occupied HSA watershed (NMFS, 2004a). The Team concluded that the occupied areas in this watershed contained one or more PCEs (*i.e.,* spawning, rearing, or migratory habitat) for this ESU and identified rangeland management as the principal activity that may affect the PCEs. The Team rated this single occupied watershed as low in conservation value to the ESU (NMFS, 2004b). The Team did not identify any occupied habitat areas in this subbasin that may be essential for the conservation of the ESU.

Unit 13. Shasta Bally Subbasin (HU #5524)

The Shasta Bally HU is located in the northwestern portion of the ESU and includes portions of South Fork Cottonwood Creek and Beegum Creek. This HU encompasses an area of approximately 905 mi^2 (2,335 km^2) and contains nine HSA watersheds, four of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 50 miles (80 km) of occupied riverine habitat in these watersheds (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including forestry, rangeland management, road building and maintenance, water diversion for hydroelectric power generation, water storage for flood control, dam operations, gravel mining, and fish passage impediments. The Team rated one watershed as low in conservation value and three as high in conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied habitat in this subbasin that is essential for the conservation of the ESU.

Unit 14. North Diablo Range Subbasin (HU #5543)

The North Diablo Range HU is located in the southernmost portion of the ESU near the Delta and includes only a small portion of the south-central Delta. This HU encompasses an area of approximately 315 mi^2 (812 km^2) and only a single HSA which is partially occupied. Fish distribution and habitat use data compiled by NMFS biologists identify only approximately 4 miles (6 km) of occupied riverine or estuarine habitat in this HSA (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, rearing and migratory habitat) for this ESU and identified management activities that may affect the PCEs, including agricultural and municipal water withdrawals, fish passage impediments, and invasive/non-native species. The Team rated this single watershed as medium in conservation value (NMFS, 2004b). The Team did not identify any unoccupied habitat areas in this subbasin that may be essential for the conservation of the ESU.

Unit 15. San Joaquin Delta Subbasin (HU #5544)

The San Joaquin Delta HU is located in the southernmost portion of the ESU and includes portions of the central and south Delta. This HU encompasses an area of approximately 628 mi^2 (1,620 km^2) and contains a single HSA watershed which is occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 142 miles (227 km) of occupied estuarine habitat in this HSA (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including agricultural and municipal water

withdrawals, fish passage impediments, invasive/non-native species, and entrainment and flow alterations. The Team rated this single watershed as low in conservation value (NMFS, 2004b). The Team did not identify any unoccupied habitat areas in this subbasin that may be essential for the conservation of the ESU.

Unit 16. Suisun Bay (HU #2207), San Pablo Bay (HU #2206) and San Francisco Bay (HU #s 2203 and 2204)

Portions of four HUs (2207, 2206, 2203, 2204) comprise the Suisun Bay-San Pablo-San Francisco Bay complex that is utilized by this ESU. These four HUs contain both estuarine habitat in the Bay complex as well as freshwater tributaries to the Bay complex, but only the 4 HSAs (HSAs: 220710, 220610, 220410, and 220312) that comprise the estuarine Bay complex are occupied by this ESU. These four HSAs encompass approximately 427 mi^2 (1,102 km^2) of estuarine habitat that serves as a rearing and migratory corridor providing connectivity between freshwater spawning, rearing, and migratory habitats for this ESU in the Sacramento-San Joaquin basin and the ocean. The Team concluded that these four HSAs were occupied and contained PCEs for migratory habitat that support this ESU, and identified management activities that may affect the PCEs, including agricultural and municipal water withdrawals, point and non-point source water pollution, diking, streambank stabilization activities, industrial development, invasive/non-native species, wetland/estuary management, and habitat restoration. Of these occupied HSAs, the Team rated one as having low conservation value (#220410) and three as having high conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in the San Francisco-San Pablo-Suisun Bay complex that may be essential for the conservation of this ESU.

Unoccupied Habitat Outside the ESU Range That May Be Essential to Conservation

The Team identified several unoccupied habitat areas in the Central Valley that are outside the current range of the CV spring-run chinook ESU, but that may be essential for its conservation. We seek comment on whether these unoccupied areas should be proposed as critical habitat. These areas are identified below:

(1) *Lower and Upper Mokelumne River.* The Team concluded that currently unoccupied portions of the Lower Mokelumne River from its confluence with the San Joaquin River upstream to Comanche Dam may be essential for the conservation of this ESU. In addition, the Team concluded that inaccessible reaches of the Upper Mokelumne River above Comanche Dam up to Bald Rock Falls (which is 7 miles above Electra Dam) may be essential to the conservation of this ESU. The Mokelumne River historically supported large runs of spring run chinook salmon (Yoshiyama *et al.*, 1995) which have been extirpated. The lower portion of the Mokelumne River would be essential as a migratory corridor for spring chinook access to the upper watershed above Comanche Dam. Suitable habitat exists above Comanche Dam, but it has been altered by Comanche and Pardee reservoirs. The Central Valley Technical Recovery Team identifies this as a historically independent population and indicates that multiple independent populations of this ESU distributed throughout the Central Valley may be required to recover this ESU.

(2) *Lower and Middle Stanislaus River.* The Team concluded that currently unoccupied reaches of the Lower Stanislaus River from its confluence with the San Joaquin River up to Goodwin Dam may be essential for the conservation of this ESU. The Team also concluded that inaccessible habitat reaches in the Middle Stanislaus River from Goodwin Dam to New Melones Dam may be essential to the conservation of this ESU. The Stanislaus River historically supported a large population of spring-run chinook salmon (McEwan 1996; Yoshiyama 1996) which was extirpated with the construction of Goodwin Dam. The lower portion of the Stanislaus River would be essential as a migratory corridor for spring chinook access to the upper watershed above Goodwin Dam. Depending upon dam operations and resulting instream water temperatures, rearing and spawning habitat might be available in this lower reach. Suitable habitat exists above Goodwin Dam and fish passage at the Dam is thought to be feasible. The Central Valley Technical Recovery Team identifies this as a historically independent population and indicates that multiple independent populations of this ESU distributed throughout the Central Valley may be required to recover this ESU.

(3) *Lower and Middle Tuolumne River.* The Team concluded that currently unoccupied reaches of the Lower Tuolumne River from its confluence with the San Joaquin River up to LaGrange Dam may be essential for the conservation of this ESU. The Team also concluded that inaccessible habitat reaches in the Middle Tuolumne River between LaGrange and New Don Pedro Dams may be essential to the conservation of this ESU. The Tuolumne River historically supported a large population of spring-run chinook salmon (McEwan 1996; Yoshiyama 1996) which was extirpated with the construction of LaGrange Dam. The lower portion of the Stanislaus River would be essential as a migratory corridor for spring chinook access to the upper watershed above LaGrange Dam. Depending upon dam operations and resulting instream water temperatures, rearing and spawning habitat might be available in this lower reach. Suitable habitat is thought to exist above LaGrange Dam for this ESU although feasibility of providing passage above the dam is uncertain. The Central Valley Technical Recovery Team identifies this as a historically independent population that is now extirpated and indicates that multiple independent populations of this ESU distributed throughout the Central Valley may be required to recover this ESU.

(4) *Lower and Middle Merced River.* The Team concluded that currently unoccupied reaches of the Lower Merced River from its confluence with the San Joaquin River up to Crocker-Huffman Dam may be essential for the conservation of this ESU. The Team also concluded that inaccessible habitat reaches in the Middle Merced River between Crocker-Huffman and Exchequer Dams may be essential to the conservation of this ESU. The Merced River historically supported a large population of spring-run chinook salmon (Yoshiyama 1996) which was extirpated with the construction of Crocker-Huffman Dam. The lower portion of the Merced River would be essential as a migratory corridor for spring-chinook access to the upper watershed above Crocker-Huffman Dam. Depending upon dam operations and resulting instream water temperatures, rearing and spawning habitat might be available in this lower reach. Suitable habitat is thought to exist above Crocker-Huffman Dam for this ESU although passage at the Dam is thought to be feasible because of its low height. The Central Valley Technical Recovery Team identifies this as a historically independent population that is now extirpated and indicates that multiple independent populations of this ESU distributed throughout the Central Valley may be required to recover this ESU.

Central Valley (CV) O. mykiss ESU

The CV *O. mykiss* ESU was listed as a threatened species in 1998 (63 FR

13347; March 19, 1998). The ESU includes all naturally spawned populations of *O. mykiss* in the Sacramento and San Joaquin Rivers and their tributaries, but excludes *O. mykiss* from San Francisco and San Pablo Bays and their tributaries. Based on an updated status review (NMFS 2003a) and an assessment of hatchery populations located within the range of the ESU (NMFS 2003b), NMFS recently proposed that the ESU remain listed as a threatened species (69 FR 33102; June 14, 2004). In addition, NMFS proposed that resident *O. mykiss* occurring with anadromous populations below impassable barriers (both natural and man made) and two artificially propagated populations (Coleman National Fish Hatchery on Battle Creek and Feather River Hatchery on the Feather River) also be included in the CV *O. mykiss* ESU. Two artificially propagated *O. mykiss* stocks reside within the historical geographic range of the ESU (Nimbus Fish Hatchery on the American River and Mokelumne River Hatchery on the Mokelumne River), but are not considered part of the ESU because they are derived from out-of-ESU broodstock (69 FR 33102; June 14, 2004). A Technical Recovery Team has been established for the Central Valley recovery planning domain and is in the process of identifying the historical and extant independent population structure of this ESU as well as the associated viability criteria for these populations.

The Team's assessment for the CV *O. mykiss* ESU addressed habitat areas within 67 occupied watersheds or CALWATER HSAs that occur in over 25 associated subbasins or CALWATER HUs. This assessment also included four HSAs that encompass the San Francisco-San Pablo-Suisun Bay complex which constitutes rearing and migration habitat for this ESU. This complex is treated as a separate unit in the following ESU description even though it is not a CALWATER HU. As part of its assessment, the Team considered the conservation value of each habitat area (or HSA) in the context of the productivity, spatial distribution, and diversity of habitat across the range of the ESU. The Team evaluated the conservation value of habitat areas on the basis of the physical and biological habitat requirements of the CV *O. mykiss* ESU, consistent with the PCEs identified for Pacific salmon and *O. mykiss* described under Methods and Criteria Used to Identify Proposed Critical Habitat.

Unit 1. Tehama Subbasin (HU #5504)

The Tehama HU is located in the north central portion of the ESU and includes portions of the mainstem Sacramento River, the lower portions of two westside tributaries (Thomes and Stony Creeks), and the lower portions of three eastside tributaries (Mill Creek, Deer Creek, and Pine Creek). The HU encompasses an area approximately 1,119 mi^2 (2,887 km^2) and contains two HSAs, both of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 228 miles (365 km) of occupied riverine habitat in the occupied watersheds (NMFS, 2004a). The Team concluded that these occupied HSA watersheds contained one or more PCEs (*i.e.*, spawning, rearing, and/or migratory habitat) and identified several management activities that may affect the PCEs, including agricultural and municipal water withdrawals, dam operations, diking activities, streambank stabilization for flood control, rangeland management, fish passage impediments, and urban development. Of the occupied HSA watersheds, the Team rated one as medium and one as high in conservation value (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Unit 2. Whitmore Subbasin (HU #5507)

The Whitmore HU is located in the north eastern portion of the ESU and includes portions of upper Battle Creek (North and South Forks), upper Bear Creek, and the Cow Creek watershed. The HU encompasses an area approximately 913 mi^2 (2,355km^2) and contains seven HSA watersheds, all of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 177 miles (283 km) of occupied riverine habitat in the occupied HSAs (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) and identified management activities that may affect the PCEs, including agricultural and municipal water withdrawals, forest management, rangeland management, fish passage impediments, urban development, and hydropower diversions. Of these seven occupied watersheds, the Team rated two as having low conservation value, two as medium in conservation value, and three as high in conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of this ESU.

Unit 3. Redding Subbasin (HU #5508)

The Redding HU is located in the northern most portion of the ESU and includes portions of the upper Sacramento River mainstem, westside tributaries including Cottonwood Creek (portions of both the Middle and South Forks) and Clear Creek, and the lower portions of several eastside tributaries (Cow Creek, Bear Creek, and lower Battle Creek). The HU encompasses an area of approximately 705 mi^2 (1,818 km^2) and contains two HSA watersheds, both of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 233 miles (373 km) of occupied riverine habitat in these watersheds (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) and identified management activities that may affect the PCEs, including dam operations and water storage for flood control, fish passage impediments, point and non-point source water pollution, gravel mining, agricultural water withdrawals, and rangeland management. The Team rated both occupied watersheds as having high conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of this ESU.

Unit 4. Eastern Tehama Subbasin (HU #5509)

The Eastern Tehama HU is located in the northeastern portion of the ESU and includes portions of several important watersheds including Mill Creek, Deer Creek, Antelope Creek, and the upper portion of Big Chico Creek. The HU encompasses an area of approximately 896 mi^2 (2,311 km^2) and contains ten HSA watersheds, six of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 151 miles (242 km) of occupied riverine habitat in the occupied HSAs (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including forest management, rangeland management, fish passage impediments, road building and maintenance, and agricultural water withdrawals. Of the six occupied watersheds, the Team rated one as low, one as medium, and four as high in conservation value to the ESU (NMFS, 2004b).

The Team also concluded that inaccessible stream reaches in Upper

Deer Creek above Upper Deer Creek Falls may be essential for the conservation of this ESU. Historically, *O. mykiss* (steelhead) had access to this area when conditions allowed fish to pass the falls. A ladder was constructed in the late 1940s but it provides poor attraction and passage conditions and has been closed since 2001. Deer Creek currently supports a population of steelhead and improved passage conditions into this reach would increase the amount of spawning, rearing and migration habitat available to the ESU. We seek comment on whether this unoccupied habitat area should be proposed as critical habitat.

Unit 5. Sacramento Delta (HU #5510)

The Sacramento Delta HU is located in the central portion of the ESU and includes portion of the mainstem Sacramento River and the Deep Water Ship Channel. The HU encompasses an area of approximately 446 mi^2 (1,150km^2) and contains a single HSA which is occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 194 miles (310 km) of occupied riverine habitat in this HSA (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including agricultural water withdrawals, point and non-point source water pollution, invasive/non-native species, diking activities, and streambank stabilization for flood control. The Team rated this watershed as high in conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied habitat areas in this subbasin that may be essential to the conservation of the ESU.

Unit 6. Valley Putah-Cache Subbasin (HU #5511)

The Valley Putah-Cache HU is located in the southern portion of the Sacramento river basin includes a portion of the Yolo Bypass and portions of west side tributaries Putah, Ulatis, and Alamo Creeks. This HU encompasses an area of approximately 961 mi^2 (2,479 km^2) and contains three HSA watersheds, two of which are occupied. Portions of the occupied HSAs are outside the boundary of ESU and the unoccupied HSA is completely outside the ESU boundary. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 83 miles (133 km) of occupied riverine habitat in the occupied HSAs (NMFS, 2004a). The Team concluded that the occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including urban development, impediments to fish passage, and agricultural water withdrawals. The Team rated both occupied watersheds as having medium conservation value to the ESU (NMFS, 2004b).

Within this subbasin, the Team also concluded that unoccupied stream reaches in Middle Putah Creek from Solano Irrigation Dam to Monticello Dam may be essential to the conservation of this ESU. Steelhead are thought to have historically utilized the upper watershed above Monticello Dam. There is currently a very small opportunistic population of steelhead in Lower Putah Creek, but habitat conditions in this area are not suitable for spawning or rearing. The provision of fish passage past the Solano Irrigation Dam would provide access to suitable habitat for this ESU and efforts are currently underway to investigate the feasibility of providing passage beyond this dam. The Team concluded that this unoccupied area may be essential to conservation of the ESU because populations of steelhead in the Central Valley are constrained by the lack of accessible habitat and access to this area would provide cold water rearing and spawning habitat for this population. We seek comments on whether these unoccupied areas should be proposed as critical habitat.

Unit 7. American River Subbasin (HU #5514)

The American River HU is located in the eastern portion of the ESU and includes portions of upper Coon Creek, Doty Creek, and Auburn Ravine. This HU encompasses an area of approximately 1,642 mi^2 (4,236 km^2) and contains fifteen HSA watersheds, all of which are outside the range of the ESU, and only one of which is partially occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 20 miles of occupied riverine habitat in the occupied HSA (NMFS, 2004a). The Team concluded that the occupied watershed contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified urban development as the primary management activity that may affect the PCEs. The Team rated this occupied watershed as having medium conservation value (NMFS, 2004b) and did not identify any unoccupied habitat in this subbasin that may be essential for the conservation of the ESU.

Unit 8. Marysville Subbasin (HU #5515)

The Marysville HU is located in the central portion of the ESU and includes portions of the Feather and Yuba Rivers. This HU encompasses an area of approximately 417 mi^2 (1,076 km^2) and contains three HSA watersheds, all of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 75 miles (120 km) of occupied riverine habitat in these watersheds (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including agricultural and municipal water withdrawals, point and non-point water pollution, diking, streambank stabilization activities, dam operations and water storage for flood control, and fish passage impediments. The Team rated one occupied watershed as low in conservation value and two as having high conservation value to the ESU (NMFS, 2004b).

The Team did not identify any unoccupied habitat areas in this subbasin that may be essential for the conservation of the ESU. However, the Team did conclude that inaccessible stream reaches in the adjacent subbasin (in HU #5518) which contains the Upper Feather River above Oroville Dam may be essential to the conservation of this ESU. Specifically, the Team identified the following stream reaches above Oroville Dam that may be essential for conservation of this ESU: from Oroville Dam upstream along the West Branch of the Feather River to the vicinity of Kimshew Falls; along the North Fork of the Feather River upstream of the location of Lake Almanor; along the East Branch of the NF Feather River including Indian Creek and Spanish Creek; the South Middle Fork of the Feather River, and the South Fork of the Feather River upstream to the first natural impassible barrier. Both steelhead and spring-run chinook salmon historically occurred in the Upper Feather River prior to Pacific Gas and Electric's hydroelectric development in the North Fork watershed and the construction of Oroville Dam. Construction of Oroville Dam extirpated both the steelhead and spring-run chinook populations in this upper watershed. The Team concluded that spawning, rearing, an migratory habitat is available above Oroville Dam in these inaccessible stream reaches, but it is in better condition for steelhead than spring-run chinook salmon. The feasibility of providing fish passage past

Oroville Dam is currently being evaluated through the ongoing FERC relicensing process for this facility. The Team concluded this inaccessible habitat may be essential for the conservation of this ESU because the natural production of steelhead in the lower Feather River is limited by the substantial lack of suitable spawning and rearing habitat below Oroville Dam, and access to the unoccupied habitat above the dam would allow for expansion of the population in this watershed.

Unit 9. Yuba River Subbasin (HU #5517)

The Yuba River HU is located in the central and eastern portion of the ESU and includes part of the upper Yuba River watershed (Dry and Deer Creeks). This HU encompasses an area of approximately 1,436 mi^2 (3,704 km^2) and contains sixteen HSA watersheds, most of which are outside the recognized ESU boundary; however, four of these watersheds are partially occupied. Fish distribution and habitat use data compiled by NMFS biologists identify only approximately 22 miles (35 km) of occupied riverine habitat in these occupied watersheds (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including agricultural and municipal water withdrawals, fish passage impediments, and dam operations. The Team rated two of these watersheds as having low conservation value, and two as having high conservation value to the ESU (NMFS, 2004b).

The Team concluded that inaccessible stream reaches of the Upper Yuba River above Englebright Dam may be essential to the conservation of this ESU, including those upstream reaches on the North Yuba to New Bullards Bar Dam, on the Middle Yuba to Milton Dam, and on the South Yuba to Lake Spaulding. All three forks of the Upper Yuba River historically supported populations of spring chinook and steelhead (Yoshiyama *et al.*, 1995). The Team considered this area to be essential for conservation because it provides one of the largest areas of suitable habitat in the Central Valley that can be accessed by providing passage at one relatively small dam. The Lower Yuba is also considered to have a good ''seed'' population of both spring chinook and steelhead and both populations are considered relatively free of hatchery influence. A large, multi-million dollar study program is underway through the CALFED Ecological Restoration Program to evaluate the feasibility of restoring anadromous salmonid populations to the Upper Yuba River. We seek comment on whether this unoccupied habitat should be proposed as critical habitat.

Unit 10. Valley-American Subbasin (HU #5519)

The Valley-American HU is located in the central-eastern portion of the ESU and includes portions of the American River and lower Auburn Ravine. This HU encompasses an area of approximately 958 mi^2 (2,471 km^2) and contains four HSA watersheds, only two of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 190 miles (304 km) of occupied riverine habitat in these watersheds (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, agricultural and municipal water withdrawals, point and non-point source water pollution, streambank stabilization activities, fish passage impediments, diking, urban development, and dam operations and water storage for flood control. The Team rated both occupied watersheds as having high conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential to the conservation of the ESU.

Unit 11. Colusa Basin Subbasin (HU #5520)

The Colusa Basin HU is located in the central portion of the ESU and includes portions of the mainstem Sacramento River, lower Butte Creek, the Butte Creek-Sutter Bypass and Little Chico Creek. This HU encompasses an area of approximately 2,767 mi^2 (7,138 km^2) and contains five HSA watersheds, three of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 285 miles (456 km) of occupied riverine habitat, including the Sutter Bypass, in the occupied watersheds (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including agricultural water withdrawals, point and non-point water pollution, diking, fish passage impediments, streambank stabilization activities, wildlife habitat management, and invasive/non-native species management. The Team rated all three occupied watersheds as having high conservation value to the ESU (NMFS, 2004b) and did not identify any unoccupied habitat areas in this subbasin that may be essential to the conservation of the ESU.

Unit 12. Butte Creek Subbasin (HU #5521)

The Butte Creek HU is located in the northeastern portion of the ESU and contains portions of Butte Creek and Little Chico Creek. This HU encompasses an area of approximately 207 mi^2 (534 km^2) and contains three HSA watersheds all of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 38 miles (61 km) of occupied riverine habitat in the occupied watersheds (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including urban development, rangeland management, agricultural water withdrawals, and hydroelectric water diversions. The Team rated two of these watersheds as having low conservation value and one as having high conservation value to the ESU (NMFS, 2004b).

The Team also concluded that inaccessible reaches of Upper Butte Creek above Centerville Dam upstream to Butte Meadow may be essential to the conservation of this ESU. It is uncertain whether this area was historically used by the steelhead, but resident rainbow trout were historically present and still occur above Centerville Diversion Dam. Spawning, rearing, and migration is present and thought to be in good condition. The Team believed this area may be essential for conservation because current spring-run chinook and steelhead spawning in this watershed is all below an elevation of 1,000 ft. High water temperatures in the lower portion of Butte Creek has led to significant spring-run chinook pre-spawning mortalities in recent years, and the Team concluded that improved fish passage over the Centerville Diversion Dam would increase the range for both the spring run chinook and steelhead ESUs, as well as reduce the risk of adult losses in the lower stream reaches. The Team expects that feasibility of passage at the Centerville Diversion Dam will be evaluated through the upcoming FERC relicensing process for the facility. We seek comment on whether this unoccupied habitat area should be proposed as critical habitat.

Unit 13. Ball Mountain Subbasin (HU #5523)

The Ball Mountain HU is located in the northwestern portion of the ESU and includes a portion of upper Thomes Creek and associated tributaries. This HU encompasses an area of approximately 334 mi^2 (862 km^2) and contains three HSA watersheds, only one of which is occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 41 miles (66 km) of occupied riverine habitat in the single occupied watersheds (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including rangeland management, forestry management, agricultural water withdrawals, and municipal water withdrawals. The Team rated this single occupied watershed as having high conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in the subbasin that may be essential for conservation of the ESU.

Unit 14. Shasta Bally Subbasin (HU #5524)

The Shasta Bally HU is located in the northwestern corner of the ESU and includes portions of SF Cottonwood Creek and Beegum Creek among others. This HU encompasses an area of approximately 905 mi^2 (2,335 km^2) and contains nine HSA watersheds, five of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 122 miles (195 km) of occupied riverine habitat in the occupied watersheds (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including forestry management, rangeland management, road building and maintenance, hydroelectric power water diversions, water storage for flood control, dam operations, gravel mining, and fish passage impediments. Of the occupied watersheds, the Team rated three as having medium conservation value and two as having high conservation value for the ESU (NMFS, 2004b). The Team did not identify any unoccupied habitat areas in this subbasin that may be essential for the conservation of the ESU.

Unit 15. North Valley Floor Subbasin (HU #5531)

The North Valley Floor HU is located in the southeastern portion of the ESU and includes portions of the Calaveras, Mokelumne, and Cosumnes Rivers. This HU encompasses an area of approximately 1,378 mi^2 (3,555 km^2) and contains five HSA watersheds, three of which are occupied by the ESU. Fish distribution and habitat use data compiled by NMFS biologists identify about 190 miles (304 km) of occupied riverine habitat in these watersheds (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including agricultural and municipal water withdrawals, fish passage impediments, rangeland management, diking, channelization, streambank stabilization activities, and dam operations. Of these occupied watersheds, the Team rated one as low in conservation value, one as having medium conservation value, and one as having high conservation value to the ESU (NMFS, 2004b).

The Team also concluded that inaccessible stream reaches of the Upper Mokelumne River above Comanche Dam up to Bald Rock Falls (which is 7 miles above Electra Dam) may be essential to the conservation of this ESU, as well as spring-run chinook salmon. Portions of this inaccessible habitat area extend into the Middle Sierra Subbasin (HU #5532). The Upper Mokelumne historically supported large runs of spring-run chinook salmon (Yoshiyama *et al.*, 1995), and since steelhead and spring-run chinook use similar habitats it is assumed this area also supported large runs of steelhead. Suitable habitat exists above Comanche Dam, but it has been altered by Comanche and Pardee reservoirs. The Team concluded that this area may be essential for conservation of the ESU because steelhead have been extirpated from the area above the dam and recovery of this ESU may require the re-establishment of multiple independent populations of steelhead throughout the Central Valley. We seek comment on whether these unoccupied habitat areas should be proposed as critical habitat.

Unit 16. Middle Sierra Subbasin (HU #5532)

The Middle Sierra HU is located in the eastern portion of the ESU and contains portions of the upper Cosumnes River watershed. This HU encompasses an area of approximately 1,424 mi^2 (3,674 km^2) and contains six HSA watersheds, four of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify only about 70 miles (112 km) of occupied riverine habitat in the occupied watersheds (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including forestry management, agricultural water withdrawals, rangeland management, and urban development. Of these occupied watersheds, the Team rated all four as having low conservation value to the ESU (NMFS, 2004b). As discussed for Unit 15 (North Valley Floor Subbasin—HU #5531), inaccessible portions of the upper Mokelumne River which may be essential to the conservation of this ESU extend into this subbasin. The Team did not identify any other unoccupied areas in this subbasin that may be essential to the conservation of the ESU.

Unit 17. Upper Calavera Subbasin (HU #5533)

The Upper Calaveras HU is located in the eastern portion of the ESU and contains portions of the Calaveras River. This HU encompasses an area of approximately 362 mi^2 (934 km^2) and contains three HSA watersheds, only one of which is occupied by the ESU. Fish distribution and habitat use data compiled by NMFS biologists identify only about 6 miles of occupied riverine habitat in the HSA (NMFS, 2004a). The Team concluded that occupied areas in this HSA watershed contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including agricultural and municipal water withdrawals, gravel mining, and water storage for flood control. The Team rated this single occupied watershed as having high conservation value to the ESU (NMFS, 2004b) and did not identify any unoccupied areas in this subbasin that may be essential for conservation.

Unit 18. Stanislaus River Subbasin (HU #5534)

The Stanislaus River HU is located in the southeastern portion of the ESU and contains portions of the Stanislaus River. This HU encompasses an area of approximately 998 mi^2 (2,575 km^2 and contains eight HSA watersheds; however, only one is in the ESU and occupied. Fish distribution and habitat use data compiled by NMFS biologists identify only about 3 miles of occupied

riverine habitat in this HSA (NMFS, 2004a). The Team concluded that the occupied areas in this watershed contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including agricultural water withdrawals, fish passage impediments, dam operations, and water storage for flood control. The Team rated this single occupied watershed as having high conservation value to the ESU (NMFS, 2004b).

Within this subbasin, the Team also concluded that inaccessible stream reaches in the Middle Stanislaus River from Goodwin Dam to New Melones Dam may be essential to the conservation of this ESU. The Stanislaus River historically supported a large population of spring-run chinook salmon and because steelhead utilize similar habitats it is likely that this River system also supported a large population of steelhead. Construction of Goodwin Dam blocked access of steelhead to those portions of the Stanislaus River above the Dam and largely extirpated this population. Recently, however, dam operations have provided conditions that allowed a few steelhead to spawn below Goodwin Dam. Suitable habitat is thought to exist above Goodwin Dam for steelhead and fish passage is considered feasible because of its low height. Based on preliminary technical recovery planning for ESUs in the central valley, recovery of this ESU will likely require the establishment of multiple independent steelhead populations particularly in the San Joaquin portion of the central valley. We seek comment on whether these unoccupied areas should be proposed as critical habitat for this ESU.

Unit 19. San Joaquin Valley Floor Subbasin (HU #5535)

The San Joaquin Valley Floor HU is located in the southeastern portion of the ESU and contains portions of the Merced, Tuolumne, and Stanislaus Rivers. This HU encompasses an area of approximately 1,932 mi^2 (4,985 km^2) and contains nine HSA watersheds, several of which occur outside of or partially outside of the geographic boundary of the ESU. Of these watersheds, seven are occupied and fish distribution and habitat use data compiled by NMFS biologists identify about 159 miles (254 km) of occupied riverine habitat (NMFS, 2004a). The Team concluded that these occupied watersheds contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including agricultural and municipal water withdrawals, diking, fish passage impediments, streambank stabilization activities, and urban development. Of these occupied watersheds, the Team rated three as having medium conservation value and four as having high conservation value to the ESU (NMFS, 2004b).

Within this subbasin, the Team also concluded that inaccessible stream reaches in the Middle Tuolumne River (between LaGrange and New Don Pedro Dams) and the Middle Merced River (between Crocker-Huffman and Exchequer Dams) may be essential to the conservation of this ESU. Both rivers historically supported large populations of spring-run chinook salmon and because steelhead utilize similar habitat it is likely that these rivers also supported large populations of steelhead. Although current central valley steelhead populations are considered winter-run, habitat conditions in most San Joaquin basins, including the Tuolumne and Merced, may have historically supported summer steelhead (McEwan, 1996; Yoshiyama, 1996). With construction of LaGrange and Crocker-Huffman Dams, spring-chinook in both basins were extirpated, and most likely steelhead as well. Although steelhead cannot access the upper watersheds in the Tuolumne and Merced Rivers, dam operations in both watersheds have provided conditions allowing steelhead to spawn downstream of LaGrange and Crocker-Huffman Dams. The Team believes that suitable habitat conditions exist above LaGrange and Crocker-Huffman Dams and that there may be opportunities to provide fish passage at each facility. Based on preliminary technical recovery planning for ESUs in the central valley, it is likely that recovery of this ESU will require the establishment of multiple independent steelhead populations particularly in the San Joaquin portion of the central valley. We seek comment on whether these unoccupied areas should be proposed as critical habitat for this ESU.

Units 20 (Tuolumne River; HU #5536) and 21 (Merced River; HU #5537)

The Tuolumne River and Merced River HUs contain portions of the upper Tuolumne and Merced Rivers that are mostly or entirely outside the range of the ESU. These HUs contain eighteen HSA watersheds and over 2,800 miles (4,480 km) of streams (at 1:100,000 hydrography), but all are unoccupied by the ESU. The Team did not identify any areas in these subbasins that may be essential for the conservation of the ESU, and therefore, they were not considered further in the critical habitat designation process.

Unit 22. Delta-Mendota Canal Subbasin (HU #5541)

The Delta-Mendota Canal HU is located in the southernmost portion of the ESU and contains portions of the Delta-Mendota Canal. This HU encompasses an area of approximately 1,220 mi^2 (3,148 km^2) and contains two HSAs, both of which are occupied. Fish distribution and habitat use data compiled by NMFS biologists identify only about 50 miles of occupied riverine habitat in these HSA watersheds (NMFS, 2004a). The Team concluded that these occupied areas contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including agricultural and municipal water withdrawals, invasive/non-native species management, urban development, dredging, and point and non-point source water pollution. The Team rated these occupied watersheds as having medium and high conservation value, respectively, to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas in this subbasin that may be essential for the conservation of the ESU.

Unit 23. Middle West Side Subbasin (HU #5542)

The Middle West Side Subbasin is located in the southwestern portion of the ESU in the San Joaquin basin. The HU contains four HSAs and approximately 509 miles (814 km) of streams (at 1:100,000 hydrography), but all are unoccupied by the ESU. The Team did not identify any habitat areas in this subbasin that may be essential for the conservation of the ESU, and therefore, they were not considered further in the critical habitat designation process.

Unit 24. North Diablo Range (HU #5543)

The North Diablo Range HU is located in the southwestern portion of the ESU in the south Delta. This HU encompasses an area of approximately 315 mi^2 (812 km^2) and contains only a single HSA which is partially occupied. Fish distribution and habitat use data compiled by NMFS biologists identify only approximately 4 miles of occupied riverine/estuarine habitat in this HSA (NMFS, 2004a). The Team concluded the occupied areas in this HSA contained one or more PCEs (*i.e.* spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including agricultural and water

withdrawals, point and non-point source water pollution, and invasive/non-native species management. The Team rated this watershed as having medium conservation value to the ESU (NMFS, 2004b), and did not identify any unoccupied areas that may be essential to the conservation of the ESU.

Unit 25. San Joaquin Delta Subbasin (HU #5544)

The San Joaquin Delta HU is located in the southwestern portion of the ESU and includes portions of the south and central Delta channel complex. This HU encompasses an area of approximately 628 mi^2 (1,620 km^2) and contains a single HSA which is occupied. Fish distribution and habitat use data compiled by NMFS biologists identify approximately 276 miles (442 km) of occupied riverine and/or estuarine habitat in this HSA (NMFS, 2004a). The Team concluded that the occupied areas in this HSA contained one or more PCEs (*i.e.*, spawning, rearing, or migratory habitat) for this ESU and identified management activities that may affect the PCEs, including agricultural water and municipal water withdrawals, entrainment associated with water diversions, invasive/non-native species management, and point and non-point source water pollution. The Team rated this HSA as having high conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied habitat areas in this subbasin that may be essential for the conservation of this ESU.

Unit 26. Suisun Bay (HU #2207), San Pablo Bay (HU #2206) and San Francisco Bay (HU #s 2203 and 2204)

Portions of four HUs (2207, 2206, 2203, 2204) comprise the Suisun Bay-San Pablo-San Francisco Bay complex that is utilized by this ESU. These four HUs contain both estuarine habitat in the Bay complex as well as freshwater tributaries to the Bay complex, but only the 4 HSAs (HSAs: 220710, 220610, 220410, and 220312) that comprise the Bay complex are occupied by this ESU. These four HSAs encompass approximately 427 mi^2 (1,102 km^2) of estuarine habitat that serves as a rearing and migratory corridor providing connectivity between freshwater spawning, rearing, and migratory habitats for this ESU in the Sacramento-San Joaquin basin and the ocean. Collectively, these HSAs encompass an area of approximately 427 mi^2 (1,102 km^2). The Team concluded that these four HSAs were occupied and contained PCEs for migratory habitat that support this ESU, and identified management activities that may affect the PCEs, including agricultural and municipal water withdrawals, point and non-point source water pollution, diking, streambank stabilization activities, industrial development, invasive/non-native species, wetland/estuary management, and habitat restoration. Of these occupied HSAs, the Team rated one as having low conservation value (#220410) and three as having high conservation value to the ESU (NMFS, 2004b). The Team did not identify any unoccupied areas that may be essential for the conservation as critical habitat for this ESU.

Application of ESA Section 4(b)(2)

The foregoing discussion describes those areas that are eligible for designation as critical habitat—the specific areas that fall within the ESA section 3(5)(A) definition of critical habitat, minus those lands owned or controlled by the DOD, or designated for its use, that are covered by an INRMP that we have determined in writing provides a benefit to the species. The application of section 4(b)(2) was a major concern of those commenting on the ANPR (68 FR 55926; September 29, 2003). Many commenters requested that we describe the process used—in particular the economic analysis—as part of our proposed rulemaking.

Specific areas eligible for designation are not automatically designated as critical habitat. Section 4(b)(2) of the ESA requires that the Secretary first considers the economic impact, impact on national security, and any other relevant impact. The Secretary has the discretion to exclude an area from designation if he determines the benefits of exclusion (that is, avoiding the impact that would result from designation), outweigh the benefits of designation. The Secretary may not exclude an area from designation if exclusion will result in the extinction of the species. Because the authority to exclude is discretionary, exclusion is not required for any areas.

In this proposed rule, the Secretary has applied his statutory discretion to exclude areas from critical habitat for several different reasons. To be consistent, we used CALWATER HSAs or watersheds for ESUs in California as the unit for exclusion in each case. However, the agency is asking for public comment on whether considering exclusions on a stream-by-stream approach would be more appropriate.

Impacts to Tribes

We believe there is very little benefit to designating critical habitat on Indian lands. Although there is a broad array of activities on Indian lands that may trigger section 7 consultation, Indian lands comprise only a minor portion (substantially less than 1 percent) of the total habitat under consideration for these seven California ESUs. Specifically, occupied stream reaches on Indian lands only occur within the range of the California Coastal chinook, Northern California *O. mykiss,* and Central California Coast *O. mykiss* ESUs, and these areas represent less than 0.1 percent of the total occupied habitat under consideration for these three ESUs. Based on our analysis, the remaining four ESUs did not contain any Indian lands that overlapped with occupied stream habitat. These percentages are likely overestimates as they include all habitat area within reservation boundaries.

There are several benefits to excluding Indian lands. The longstanding and distinctive relationship between the Federal and tribal governments is defined by treaties, statutes, executive orders, judicial decisions, and agreements, which differentiate tribal governments from the other entities that deal with, or are affected by, the Federal government. This relationship has given rise to a special Federal trust responsibility involving the legal responsibilities and obligations of the United States toward Indian Tribes and the application of fiduciary standards of due care with respect to Indian lands, tribal trust resources, and the exercise of tribal rights. Pursuant to these authorities lands have been retained by Indian Tribes or have been set aside for tribal use. These lands are managed by Indian Tribes in accordance with tribal goals and objectives within the framework of applicable treaties and laws.

In addition to the distinctive trust relationship for Pacific salmon in California and in the Northwest, there is a unique partnership between the Federal government and Indian tribes regarding salmon management. Indian tribes in California and the Northwest are regarded as ''co-managers'' of the salmon resource, along with Federal and state managers. This co-management relationship evolved as a result of numerous court decisions clarifying the tribes' treaty right to take fish in their usual and accustomed places.

The benefits of excluding Indian lands from designation include: (1) The furtherance of established national policies, our Federal trust obligations and our deference to the tribes in management of natural resources on their lands; (2) the maintenance of effective long-term working relationships to promote the conservation of salmonids on an

ecosystem-wide basis; (3) the allowance for continued meaningful collaboration and cooperation in scientific work to learn more about the conservation needs of the species on an ecosystem-wide basis; and (4) continued respect for tribal sovereignty over management of natural resources on Indian lands through established tribal natural resource programs.

We believe that the current co-manager process addressing activities on an ecosystem-wide basis across three states is currently beneficial for the conservation of the salmonids. Because the co-manager process provides for coordinated ongoing focused action through a variety of forums, we find the benefits of this process to be greater than the benefits of applying ESA section 7 to Federal activities on Indian lands, which comprise much less than one percent of the total area under consideration for these ESUs. Additionally, we have determined that the exclusion of tribal lands will not result in the extinction of the species concerned. We also believe that maintenance of our current co-manager relationship consistent with existing policies is an important benefit to continuance of our tribal trust responsibilities and relationship. Based upon our consultation with the Round Valley Indian Tribes and the Bureau of Indian Affairs (BIA), we believe that designation of Indian lands as critical habitat would adversely impact our working relationship and the benefits resulting from this relationship.

Based upon these considerations, we have determined to exercise agency discretion under ESA section 4(b)(2) and propose to exclude Indian lands from the eligible critical habitat designation for these ESUs of salmonids. The Indian lands specifically excluded from critical habitat are those defined in the Secretarial Order, including: (1) Lands held in trust by the United States for the benefit of any Indian tribe; (2) land held in trust by the United States for any Indian Tribe or individual subject to restrictions by the United States against alienation; (3) fee lands, either within or outside the reservation boundaries, owned by the tribal government; and (4) fee lands within the reservation boundaries owned by individual Indians. The Indian tribes for which these exclusions apply in California include: Big Lagoon Reservation, Blue Lake Rancheria, Round Valley Indian Tribes, Laytonville Rancheria, Redwood Valley Rancheria, Coyote Valley Reservation, and Manchester—Point Arena Rancheria.

Impacts to National Security

As noted previously (see Military Lands section) the U.S. Marine Corps provided comments in response to the ANPR (68 FR 55926; September 29, 2003) regarding their INRMP for Camp Pendleton Marine Corps Base and potential impacts to national security for this facility, which is within the range of the southern California *O. mykiss* ESU. By letter, NMFS subsequently provided the DOD with information about the areas we were considering to designate as critical habitat for the seven ESUs in California (as well as the 13 ESUs in the Pacific Northwest) and, in addition to a request for information about DOD's INRMPs, requested information about potential impacts to national security as a result of any critical habitat designation. In response to the request concerning national security impacts, Camp Pendleton Marine Corps Base and the Vandenberg Air Force Base provided detailed information on such impacts. Both military agencies concluded that critical habitat designation at either of these sites would likely impact national security by diminishing military readiness. The possible impacts include: (1) Preventing, restricting, or delaying training or testing exercises or access to such sites; (2) restricting or delaying activities associated with space launches; (3) delaying response times for troop deployments and overall operations; and (4) creating uncertainties regarding ESA consultation (*e.g.*, reinitiation requirements) or imposing compliance conditions that would divert military resources. Also, both military agencies cited their ongoing and positive consultation history with NMFS and underscored cases where they are implementing best management practices to reduce impacts on listed salmonids.

The Teams assessing conservation values for the overlap areas of habitat and Camp Pendleton and Vandenberg AFB concluded that all of them were of high conservation value to the respective ESUs. The overlap areas, however, are a small percentage of the total area for the affected ESUs. Designating habitat on these two installations will likely reduce the readiness capability of the Marine Corps and the Air Force, both of which are actively engaged in training, maintaining, and deploying forces in the current war on terrorism. Therefore, we conclude that the benefits of exclusion outweigh the benefits of designation, and we are not proposing to designate these DoD sites as critical habitat.

We anticipate working with DOD to obtain and review any additional information regarding national security impacts to other military installations before issuing a final critical habitat designation for the seven ESUs that are the subject of this proposed rulemaking. We will analyze any information we receive and prepare findings that will be made available for public review and comment through a notice of availability in the **Federal Register**.

Other Potential Exclusions

As discussed above, in 2001 the Tenth Circuit issued a ruling in *NMCA*, which criticized the historic approach that FWS and NMFS had taken towards the economic analysis required in the critical habitat designation process. As a result of this ruling, both agencies engaged in a long-term process of reevaluating existing critical habitat designations consistent with the Tenth Circuit's ruling. NMFS's critical habitat designations for steelhead and salmon ESUs and FWS's designations for bull trout are the first to fully evaluate the economic impacts of the designations for aquatic species on a broad landscape scale. As a result, many of the critical issues faced by the two agencies are issues of first impression.

On October 6, 2004, the FWS issued a final rule designating critical habitat for the bull trout, a species in many respects co-extensive in distribution with listed salmon and steelhead ESUs in the Pacific Northwest. Necessarily, the FWS had to make determinations on many of these novel issues. The Secretary of the Interior found that a number of conservation measures designed to protect salmon and steelhead on Federal, state, tribal and private lands would also have significant beneficial impacts to bulltrout. Therefore, the Secretary of the Interior determined that the benefits of excluding those areas exceeded the benefits of including those areas as critical habitat.

The Secretary of Commerce has reviewed the bull trout rule and has recognized the merits of the approach taken by the Secretary of the Interior with these emerging issues. As a result, the Secretary of Commerce is considering the following exclusions because the benefits of exclusion may outweigh the benefits of inclusion and expects the final rule will include some or all of these exclusions. However, given the time constraints associated with this rule making and the broader geographic range of the potential salmon and steelhead designations in California and the Pacific Northwest, the Secretary of Commerce has not had an

opportunity to fully evaluate all of the potential exclusions, the geographical extent of such exclusions, or compare the benefits of these exclusions to the benefits of inclusion. As a result, the proposed designations included in this rule generally represent an upper bound to the area that the Secretary is considering designating as critical habitat and do not include the following additional exclusions that the Secretary is considering:

A set of exclusions based on existing land management plans adopted and currently implemented by Federal agencies within the relevant geographic area: These plans are the Northwest Forest Plan, PACFISH and INFISH which are implemented by the U.S. Forest Service (USFS) and the Bureau of Land Management (BLM) in parts of California and the Pacific Northwest. The Secretary is considering excluding from critical habitat all Federal lands subject to these plans. We may make these exclusions on a fifth field watershed basis or a stream-by-stream basis and we invite comment on the appropriate method. Each of these plans is designed to provide very substantial conservation benefits to salmonid species including areas occupied by each of the seven California ESUs, while permitting provision of other multiple uses on those Federal lands to the extent compatible with the provisions of the plan. Imposing an overlay of critical habitat in these areas could threaten the provision of the other multiple used contemplated by these plans and potentially impede vital land restoration activities while potentially offering a negligible conservation benefit in light of the other existing conservation measures provided by the plans. The threat to forest restoration activities (forest thinning and brush clearing to reduce catastrophic fire risks), economic activities (*e.g.* grazing and timber production) and recreational uses on public lands may outweigh the benefit of a critical habitat designation in these areas.

Federal land managed by the Forest Service and BLM constitutes a relatively lesser proportion of the land ownership within the range of the seven California ESUs (4–25 percent) compared with private land (71–88 percent). However, the estimated annualized economic impacts attributable to section 7 consultations on Federal land management activities comprise a disproportionately large portion of the total annual costs for several of the California ESUs. This relationship is most pronounced for the California Coastal chinook and Northern California *O. mykiss* ESUs. For example, Federal lands comprise only 16 percent of the land ownership within the California Coastal chinook ESU, but approximately 77 percent of the annualized section 7 economic impacts are attributable to Federal land management. Similarly, Federal lands comprise only 18 percent of the land ownership within the Northern California *O. mykiss* ESU, but approximately 87 percent of the annualized section 7 economic impacts are attributable to Federal land management. Section 7 related economic impacts associated with Federal land management also constitute a significant portion of the total annual economic impact for the South-Central California Coast *O. mykiss* (44 percent) and Southern California *O. mykiss* (69 percent) ESUs.

An exclusion of areas covered by conservation commitments by state and private landowners: Another set of exclusions is based on conservation commitments by state and private landowners reflected in habitat conservation plans (HCPs) and cooperative agreements approved by NMFS. In California, we have not identified any state conservation commitments that would apply, but seek public comment on this issue. With regard to private lands, however, the HCP adopted by the Pacific Lumber Company would constitute such a commitment. Lands managed under the existing Pacific Lumber Company HCP are relatively limited in comparison to the broad geographic area addressed in this rulemaking, but do occur within the geographic range of the California Coastal chinook and Northern California *O. mykiss* ESUs. Several other HCPs are under development in California, but they have not yet been adopted and therefore their conservation benefits are uncertain.

An exclusion for intermingled lands: If a large part of a watershed is determined to warrant exclusion, the Secretary is considering excluding the entire watershed. For example, if a large proportion of a watershed consists of Federal land to be excluded based on an existing management plan, the entire watershed could be excluded. There may be little policy justification for designating non-Federal lands as critical habitat in a watershed dominated by excluded Federal lands. As noted above, Federal lands do not constitute a large portion of the land ownership in any of the seven California ESUs under consideration. However, there are areas within the range of each of the ESUs where Federal lands are more concentrated and intermingled non-Federal lands occur to a limited extent. Such conditions occur mainly in specific watersheds within the range of the California Coastal chinook, Northern California *O. mykiss*, South-Central California Coast *O. mykiss*, and Southern California *O. mykiss* ESUs.

Accordingly, NMFS specifically asks for public comment on the categories of exclusions discussed above. Specifically, NMFS requests comment on the benefits of excluding:

(1) Other Federal lands subject to protective management provisions for salmonids (*e.g.*, the Aquatic Conservation Strategy of the Northwest Forest Plan, PACFISH, or INFISH);

(2) Other state, tribal, or private lands subject to (or planned to receive) other forms of protective management for salmonids (*e.g.*, private land HCPs, State of California Forest Practices Act lands); and

(3) Other state, tribal, or private lands within watersheds containing a large proportion of Federal, state, tribal or private lands already subject to protective management measures.

Exclusions Primarily Based on Economic Impacts

In this exercise of discretion, the first issue we must address is the scope of impacts relevant to the 4(b)(2) evaluation. As discussed in the Previous Federal Action section, we are re-designating critical habitat for these seven ESUs in California because the previous designations were vacated. (*National Association of Homebuilders* v. *Evans*, 2002 WL 1205743 No. 00–CV–2799 (D.D.C.) (*NAHB*)). The *NAHB* Court had agreed with the reasoning of the Court of Appeals for the Tenth Circuit in *New Mexico Cattle Growers Association* v. *U.S. Fish and Wildlife Service*, 248 F.3d 1277 (10th Cir. 2001). In that decision, the Tenth Circuit stated ''[t]he statutory language is plain in requiring some kind of consideration of economic impact in the critical habitat designation phase.'' The Tenth Circuit concluded that, given the FWS' failure to distinguish between ''adverse modification'' and ''jeopardy'' in its 4(b)(2) analysis, the FWS must analyze the full impacts of critical habitat designation, regardless of whether those impacts are co-extensive with other impacts (such as the impact of the jeopardy requirement).

In re-designating critical habitat for these seven salmon and *O. mykiss* ESUs, we have followed the Tenth Circuit Court's directive regarding the statutory requirement to consider the economic impact of designation. Areas designated as critical habitat are subject to ESA section 7 requirements, which provide that Federal agencies ensure that their actions are not likely to destroy or

adversely modify critical habitat. To evaluate the economic impact of critical habitat we first examined our voluminous section 7 consultation record for these as well as other ESUs of salmon. That record includes consultations on habitat-modifying Federal actions both where critical habitat has been designated and where it has not. We could not discern a distinction between the impacts of applying the jeopardy provision versus the adverse modification provision in occupied critical habitat. Given our inability to detect a measurable difference between the impacts of applying these two provisions, the only reasonable alternative was to follow the recommendation of the Tenth Circuit, approved by the *NAHB* court—to measure the co-extensive impacts; that is, measure the entire impact of applying the adverse modification provision of section 7, regardless of whether the jeopardy provision alone would result in the identical impact.

The Tenth Circuit's opinion only addressed ESA section 4(b)(2)'s requirement that economic impacts be considered. The Court did not address how ''other relevant impacts'' were to be considered, nor did it address the benefits of designation. Because section 4(b)(2) requires a consideration of other relevant impacts of designation, and the benefits of designation, and because our record did not support a distinction between impacts resulting from application of the adverse modification provision versus the jeopardy provision, we are uniformly considering coextensive impacts and coextensive benefits, without attempting to distinguish the benefit of a critical habitat consultation from the benefit that would otherwise result from a jeopardy consultation that would occur even if critical habitat were not designated. To do otherwise would distort the balancing test contemplated by section 4(b)(2).

The principal benefit of designating critical habitat is that Federal activities that may affect such habitat are subject to consultation pursuant to section 7 of the ESA. Such consultation requires every Federal agency to ensure that any action it authorizes, funds or carries out is not likely to result in the destruction or adverse modification of critical habitat. This complements the section 7 provision that Federal agencies ensure that their actions are not likely to jeopardize the continued existence of a listed species. Another benefit is that the designation of critical habitat can serve to educate the public regarding the potential conservation value of an area, and thereby, focus and contribute to conservation efforts by clearly delineating areas of high conservation value for certain species. It is unknown to what extent this process actually occurs and what the actual benefit is, as there are also concerns, noted above, that a critical habitat designation may discourage such conservation efforts.

The balancing test in section 4(b)(2) contemplates weighing benefits that are not directly comparable—the benefit to species conservation balanced against the economic benefit, benefit to national security, or other relevant benefit that results if an area is excluded from designation. Section 4(b)(2) does not specify a method for the weighing process. Agencies are frequently required to balance benefits of regulations against impacts; Executive Order 12866 established this requirement for Federal agency regulation. Ideally such a balancing would involve first translating the benefits and impacts into a common metric. Executive branch guidance from the Office of Management and Budget (OMB) suggests that benefits should first be monetized (*i.e.*, converted into dollars). Benefits that cannot be monetized should be quantified (for example, numbers of fish saved). Where benefits can neither be monetized nor quantified, agencies are to describe the expected benefits (OMB, Circular A–4, September 17, 2003 (OMB, 2003)).

It may be possible to monetize benefits of critical habitat designation for a threatened or endangered species in terms of willingness-to-pay (OMB, 2003). However, we are not aware of any available data that would support such an analysis for salmon. The short statutory time-frames, geographic scale of the designations under consideration, and the statute's requirement to use best ''available'' information suggests such a costly and time-consuming approach is not currently available. In addition, ESA section 4(b)(2) requires analysis of impacts other than economic impacts that are equally difficult to monetize, such as benefits to national security of excluding areas from critical habitat. In the case of salmon designations, impacts to Indian tribes are an ''other relevant impact'' that also may be difficult to monetize.

An alternative approach, approved by OMB, is to conduct a cost-effectiveness analysis. A cost-effectiveness analysis ideally first involves quantifying benefits, for example, percent reduction in extinction risk, percent increase in productivity, or increase in numbers of fish. Given the state of the science, it would be difficult to reliably quantify the benefits of including particular areas in the critical habitat designation. Although it is difficult to monetize or quantify benefits of critical habitat designation, it is possible to differentiate among habitat areas based on their relative contribution to conservation. For example, habitat areas can be rated as having a high, medium or low conservation value. The qualitative ordinal evaluations can then be combined with estimates of the economic costs of critical habitat designation in a framework that essentially adopts that of cost-effectiveness. Individual habitat areas can then be assessed using both their biological evaluation and economic cost, so that areas with high conservation value and lower economic cost might be considered to have a higher priority for designation while areas with a low conservation value and higher economic cost might have a higher priority for exclusion. While this approach can provide useful information to the decision-maker, there is not rigid formula through which this information translates into exclusion decisions. Every geographical area containing habitat eligible for designation is different, with a unique set of ''relevant impacts'' that may be considered in the exclusion process. Regardless of the analytical approach, section 4(b)(2) makes clear that what weight the agency gives various impacts and benefits, and whether the agency excludes areas from the designation, is discretionary.

Assessment of Economic Impacts

Assessment of economic impact generated considerable interest from commenters on the ANPR (68 FR 55926; September 29, 2003). A number of commenters requested that we make the economic analysis available as part of the proposed rulemaking, and some identified key considerations (*e.g.*, sector-specific impacts, direct and indirect costs, ecological services/benefits) that they believed must be taken into account. In a draft report, we have documented our conclusions regarding the economic impacts of designating each of the particular areas found to meet the definition of critical habitat for the seven ESUs addressed in this rulemaking (NMFS, 2004c). This report is available from NMFS (see **ADDRESSES**).

The first step was to identify existing legal and regulatory constraints on economic activity that are independent of critical habitat designation, such as Clean Water Act requirements. Coextensive impacts of the ESA section 7 requirement to avoid jeopardy were not considered part of the baseline. Given the uncertainty that existing

critical habitat designations in California (*i.e.*, Sacramento River winter run chinook salmon, Central California Coast coho salmon, and Southern Oregon/Northern California coho salmon ESUs) will remain in place in their current configuration, we decided not to consider them.

Next, from the consultation record, we identified Federal activities that might affect habitat and that might result in a section 7 consultation. (We did not consider Federal actions, such as the approval of a fishery, that might affect the species directly but not affect its habitat.) We identified nine types of activities including: hydropower dams; non-hydropower dams and other water supply structures; Federal lands management, including grazing (considered separately); transportation projects; utility line projects; in-stream activities, including dredging (considered separately); activities permitted under Environmental Protection Agency's (EPA) National Pollution Discharge Elimination System; sand & gravel mining; and residential and commercial development. Based on our consultation record and other available information, we determined the modifications each type of activity was likely to undergo as a result of section 7 consultation (regardless of whether the modification might be required by the jeopardy or the adverse modification provision). We developed an expected direct cost for each type of action and projected the likely occurrence of each type of project in each watershed, using existing spatial databases (*e.g.*, the Corps 404(d) permit database). Finally, we aggregated the costs from the various types of actions and estimated an annual impact, taking into account the probability of consultation occurring and the likely rate of occurrence of that project type.

This analysis allowed us to estimate the coextensive economic impact of designating each ''particular area'' that was occupied by each ESU (*i.e.* each occupied CALWATER HSA watershed). Expected economic impacts from this analysis ranged from zero to several million dollars per occupied habitat area within the range of the seven ESUs addressed in this rulemaking. Where a watershed included both tributaries and a migration corridor that served other watersheds, we attempted to estimate the separate impacts of designating the tributaries and the migration corridor. We did this by identifying those categories of activities most likely to affect tributaries and those most likely to affect larger migration corridors.

Because of the methods we selected and the data limitations, portions of our analysis both under- and over-estimate the co-extensive economic impact of section 7 requirements. For example, we lacked data on the likely impact on flows at non-Federal hydropower projects, which would increase economic impacts. We also did not have sufficient information currently available allowing us to estimate the likely economic impact of a judicially-imposed ban on pesticide use near salmon-bearing streams. The EPA was recently enjoined from authorizing the application of a set of pesticides within a certain distance of ''salmon supporting waters.'' We have completed a preliminary analysis of these impacts at the ESU level (NMFS, 2004c). Because of existing data limitations of the preliminary nature of the analysis, we determined not to use these estimates in the proposed designations. However, we believe the information presented in this preliminary consideration will aid public comment and assist in the development of a more complete examination of these impacts for the final rule. Finally, we did not have information about potential changes in irrigation flows associated with section 7 consultations. These impacts would increase the estimate of co-extensive costs. On the other hand, we estimated an impact on all activities occurring within the geographic boundaries of a watershed, even though in some cases activities would be far removed from occupied stream reaches and so might not require modification or even consultation. We intend to pursue information prior to issuing a final rule that will allow us to refine our estimates of economic impacts and better inform our analysis under section 4(b)(2).

In addition, we had no information on the costs of critical habitat designation that occur outside the section 7 consultation process, including costs resulting from state or local regulatory burdens imposed on developers and landowners as a result of a Federal critical habitat designation. We solicit information on these subjects during the public comment period.

Exclusion Process

In determining whether the economic benefit of excluding a habitat area (that is, an HSA watershed) might outweigh the benefit of designation to the species, we took into consideration a cost-effectiveness approach giving priority to excluding habitat areas with a relatively lower benefit of designation and a relatively higher economic impact. We believe it is reasonable at this stage of the analysis to assume that all areas containing physical or biological features essential to the conservation of the species are essential to the conservation of the species.

The circumstances of most listed ESUs can make a cost-effectiveness approach useful. Pacific salmon are wide-ranging species and occupy numerous habitat areas with thousands of stream miles. Not all occupied areas, however, are of equal importance to conserving an ESU. Within the currently occupied range there are areas that support highly productive populations, areas that support less productive populations, and areas that support production in only some years. Some populations within an ESU may be more important to long-term conservation of the ESU than other populations. Therefore, in many cases it may be possible to construct different scenarios for achieving conservation. Scenarios might have more or less certainty of achieving conservation, and more or less economic impact. Future applications of this methodology will strive to better distinguish the relative conservation value of habitat areas (*i.e.* HSA watersheds) eligible for designation, which should improve the utility of this approach.

We attempted to consider the effect of excluding areas, either alone or in combination with other areas, on the opportunities for conservation of the ESUs. We preferred exclusions in areas with a lower conservation value to those with a high conservation value. We also recognize that in practice a large proportion of all watersheds received a ''high'' conservation rating, making it difficult to establish priorities within that subgroup. In the second step of the process, we asked the Teams whether excluding any of the habitat areas identified in the first step would significantly impede conservation, recognizing that the breadth of available conservation measures makes such judgements necessarily subjective. The Teams considered this question in the context of all of the areas eligible for exclusion as well as the information they had developed in providing the initial conservation ratings. The following section describes the results of applying this process to each ESU. The results are discussed in greater detail in a separate report that is available for public review and comment (NMFS, 2004d). While the possible effect on conservation was useful information, it was not determinative in deciding whether to propose the exclusion of an area. The only determinative limitation is the statutory bar on excluding any area that ''will result in the extinction of the species concerned.''

Critical Habitat Designation

Not including any of the additional categories of potential exclusions identified above, we are proposing to designate approximately 11,668 mi (18,669 km) of riverine habitat and 947 mi² (2,444 km²) of estuarine habitat within the geographical areas presently occupied by the seven ESUs (Table 2). This proposal excludes approximately 1,109 mi (1,774 km) of occupied riverine habitat as a result of economic considerations, 36 mi (22 km) of occupied riverine habitat on Tribal lands, and 41 mi (66 km) of occupied riverine habitat on DOD lands. In addition, the proposal excludes approximately 229 mi² (591 km²) of estuarine habitat in San Francisco Bay. Some of these areas proposed for designation or exclusion overlap substantially with two or more ESUs. For example, the CC chinook and NC *O. mykiss* ESUs have similar geographic distributions in coastal watersheds north of San Francisco Bay, the CV spring-run chinook and CV *O. mykiss* ESUs have overlapping distributions in the Sacramento River watershed and Delta within the central valley, and the CV spring-run chinook, CV *O. mykiss*, and CCC *O. mykiss* ESUs have overlapping distributions in portions of the San Francisco-San Pablo-Suisun Bay estuarine complex. As described previously, NMFS is not proposing to designate Tribal lands with occupied habitat or DOD controlled lands with occupied habitat that are subject to INRMPs that benefit the listed ESUs. The net economic impacts (coextensive with ESA section 7) associated with the areas proposed for designation for all ESUs combined are estimated to be approximately $83,511,186. This estimate does not account for reductions that occur as a result of excluding Indian lands or military lands. Moreover, as discussed previously, we are soliciting comment on additional exclusions which, if adopted, would further reduce the estimate of coextensive costs.

The proposed designated habitat areas, summarized below by ESU, contain physical and biological features essential to the conservation of the species and that may require special management considerations or protection. Some of the areas proposed for designation are likely to be excluded in the final rule after consideration of the additional three categories of potential exclusions identified above.

TABLE 2.—APPROXIMATE QUANTITY OF PROPOSED CRITICAL HABITAT* AND OWNERSHIP WITHIN WATERSHEDS CONTAINING HABITAT AREAS PROPOSED FOR DESIGNATION

ESU	Streams (mi) (km)	Estuary habitat (sq mi) (sq km)	Federal	Tribal	State/local	Private
California Coastal Chinook	1,513	25	16.4	0.4	3.4	79.8
	2,421	65				
Northern California *O. mykiss*	2,989	25	18.8	0.5	3.7	77.1
	4,782	65				
Central California Coast *O. mykiss*	1,675	386	4.5	0.0	7.2	88.3
	2,680	996				
South-Central California *O. mykiss*	1,240	3	16.3	0.0	2.2	81.6
	1,984	8				
Southern California *O. mykiss*	784		25.0	1.0	2.4	71.6
	1,254					
Central Valley spring-run Chinook	1,150	254	12.1	0.0	3.3	84.5
	1,840	655				
Central Valley *O. mykiss*	2,317	254	8.6	0.0	3.1	88.3
	3,707	655				

*These estimates are the total amount proposed for each ESU. They do not account for overlapping areas proposed for multiple ESUs.

California Coastal Chinook Salmon ESU

There are 45 occupied HSA watersheds within the freshwater and estuarine range of this ESU. For ease of reference these watersheds have been aggregated into 8 larger subbasin units (or CALWATER HUs). Eight HSA watersheds received a low rating, 10 received a medium rating, and 27 received a high rating of conservation value to the ESU (NMFS, 2004b). Two estuarine habitat areas used for rearing and migration (Humboldt Bay and the Eel River Estuary) that are not CALWATER HSAs were also evaluated and received a high conservation value rating.

HSA watershed habitat areas in this ESU include approximately 1,638 mi (2,635 km) of occupied stream habitat and 25 mi² (65 km²) of occupied estuarine habitat (Humboldt Bay). Approximately 12 mi (19 km) of occupied stream habitat is within the boundaries of Indian reservations and proposed for exclusion. We have not calculated the potential reduction in estimated economic impact as a result of these Indian land exclusions, but expect it would be small given the small percentage of stream miles these exclusions represent (less than 0.1 percent of all occupied stream miles).

As a result of the balancing process for economic impacts described above, the Secretary is currently proposing to exclude from the designation, at a minimum, the habitat areas (or HSAs) shown in Table 3. Of the areas eligible for designation, no fewer than approximately 113 stream miles (180 km) are proposed for exclusion because the economic benefits of exclusion outweigh the benefits of designation. The total potential estimated economic impact, with no exclusions, would be $11,651,723. The exclusions set forth in Table 3 would reduce the total estimated economic impact to $7,586,559. However, as indicated above, the Secretary is considering a number of additional exclusions which may further reduce this economic impact by a substantial amount. For this ESU, a preliminary analysis of the economic impact of designating critical habitat after considering some of these additional exclusions (primarily the exclusion of watersheds with a large percentage of Federal lands) indicates cost impacts could be reduced to about $3,200,000.

TABLE 3.—HSA WATERSHEDS OCCUPIED BY THE CALIFORNIA COASTAL CHINOOK SALMON ESU AND PROPOSED FOR EXCLUSION FROM CRITICAL HABITAT

Subbasin/hydrologic unit	Watershed (HSA) code	Watershed (HSA) name	Area proposed for exclusion
Unit 1. Eel River HU	111122	Bridgeville	Entire watershed.
	111171	Eden Valley	Entire watershed.
	111173	Black Butte River	Entire watershed.
	111174	Wilderness	Entire watershed
Unit 8. Russian River HU	111422	Santa Rosa	Entire watershed.

Northern California O. mykiss ESU

There are 50 occupied HSA watersheds within the freshwater and estuarine range of this ESU. For ease of reference these watersheds have been aggregated into seven larger subbasin units (or CALWATER HUs) within which the HSA watersheds are nested. Nine watersheds received a low rating, 14 received a medium rating, and 27 received a high rating of conservation value to the ESU (NMFS, 2004b). Two estuarine habitat areas used for rearing and migration (Humboldt Bay and the Eel River Estuary) that are not CALWATER HSAs were also evaluated and received a high conservation value rating.

HSA watershed habitat areas in this ESU include approximately 3,128 mi (5,005 km) of occupied stream habitat and 25 mi^2 (65 km^2) of occupied estuarine habitat (Humboldt Bay). Approximately 23 mi (37 km) of stream habitat are within the boundaries of Indian reservations and are proposed for exclusion. We have not calculated the potential reduction in estimated economic impact as a result of these Indian land exclusions, but expect it would be small given the small percentage of stream miles these exclusions represent.

As a result of the balancing process for economic impacts described above, the Secretary is currently proposing to exclude from the designation, at a minimum, the habitat areas (or HSAs) shown in Table 4. Of the areas eligible for designation, no fewer than approximately 116 mi (185 km) are proposed for exclusion because the economic benefits of exclusion outweigh the benefits of designation. Total potential estimated economic impact, with no exclusions, is $10,842,357. The exclusions set forth in Table 4 would reduce the total estimated economic impact to $6,688,254. However, as indicated above, the Secretary is considering a number of additional exclusions which may further reduce this economic impact by a substantial amount. For this ESU, a preliminary analysis of the economic impact of designating critical habitat after considering some of these additional exclusions (primarily the exclusion of watersheds with a large percentage of Federal lands) indicates the cost impact could be reduced to about $1,900,000.

TABLE 4.—HSA WATERSHEDS OCCUPIED BY THE NORTHERN CALIFORNIA O. MYKISS ESU AND PROPOSED FOR EXCLUSION FROM CRITICAL HABITAT

Subbasin/unit	Watershed code	Watershed name	Area proposed for exclusion
Unit 3. Mad River HU	110940	Ruth	Entire watershed.
Unit 5. Eel River HU	111150	North Fork Eel	Entire watershed.
	111163	Lake Pillsbury	Entire watershed.

Central California Coast O. mykiss ESU

There are 47 occupied HSA occupied watersheds within the freshwater and estuarine range of this ESU, including the Upper Alameda Creek watershed which supports a resident *O. mykiss* population that is proposed for listing. For ease of reference these watersheds have been aggregated into10 larger subbasin units (or CALWATER Hus) within which the HSA watersheds are nested. Fourteen HSA watersheds received a low rating, 13 received a medium rating, and 20 received a high rating of conservation value to the ESU (NMFS, 2004b). Five of these HSA watershed units comprise portions of the San Francisco-San Pablo-Suisun Bay complex which constitutes rearing and migratory habitat for this ESU.

HSA watershed habitat areas in this ESU include approximately 2,002 miles (3,203 km) of occupied stream habitat and 442 mi^2 (1,140 km^2) of occupied estuarine habitat in the San Francisco Bay complex. Approximately 1.0 mi (2.0 km) of occupied stream habitat is within the boundaries of Indian reservations and proposed for exclusion. We have not calculated the potential reduction in estimated economic impact as a result of these Indian land exclusions, but expect it would be small given the small percentage of stream miles these exclusions represent.

As a result of the balancing process for economic impacts described above, the Secretary is currently proposing to exclude from the designation, at a minimum, the HSA habitat areas shown in Table 5. Of the areas eligible for designation, no fewer than approximately 326 mi (522 km) of stream habitat and 56 mi^2 (144 km^2) of estuarine habitat in Suisun Bay (HSA 220710) are proposed for exclusion because the economic benefits of exclusion outweigh the benefits of designation. The total potential estimated economic impact, with no exclusions, is $9,327,996. The exclusions set forth in Table 5 would reduce the total estimated economic impact to $5,452,712. However, as indicated above, the Secretary is considering a number of additional exclusions which may further reduce this economic impact. For this ESU, a preliminary analysis of the economic impact of designating critical habitat after considering some of these additional exclusions (primarily the exclusion of watersheds with a large percentage of Federal lands), indicates the cost impact could be reduced to approximately $5,000,000.

TABLE 5.—HSA WATERSHEDS OCCUPIED BY THE CENTRAL CALIFORNIA COAST O. MYKISS ESU AND PROPOSED FOR FULL OR PARTIAL EXCLUSION FROM CRITICAL HABITAT

Subbasin/hydrologic unit	Watershed (HSA) code	Watershed name	Area proposed for exclusion
Unit 1. Russian River HU	111422	Santa Rosa	Entire watershed.
	111431	Ukiah	Tributaries.
Unit 5. Bay Bridges HU	220330	San Rafael	Entire watershed.
Unit 6. South Bay HU	220440	San Mateo Bayside	Entire watershed.
	220420	Eastbay Cities	Tributaries.
Unit 7. Santa Clara HU	220540	Guadelupe River	Entire watershed.
Unit 8. San Pablo HU	220620	Novato	Entire watershed.
	220660	Pinole	Entire watershed.
Unit 9. Suisun HU	220710	Suisun Bay	Entire unit.
	220721	Benecia	Entire watershed.
	220731	Pittsburg	Entire watershed.
	220733	Martinez	Entire watershed.

Watersheds for which tributaries only are excluded contain rearing/migration corridors necessary for conservation.

South-Central California Coast O. mykiss ESU

There are 30 occupied HSA watersheds within the freshwater and estuarine range of this ESU. For ease of reference these watersheds have been organized into eight larger subbasin units (or CALWATER HUs) within which the HSA watersheds are nested. Six watersheds received a low conservation rating, 11 received a medium rating, and 13 received a high rating of conservation value to the ESU (NMFS, 2004b). One of these occupied watershed units is Morro Bay which is rearing and migratory habitat for those populations which spawn and rear in tributaries to the Bay. Of the 1,261 mi (2,018 km) of occupied riverine habitat and 3 mi^2 (8 km^2) of occupied estuarine habitat (Morro Bay) in the ESU, approximately 21 mi (34 km) are not proposed for designation because they are within lands controlled by the military (Camp San Luis Obispo and Camp Roberts) that have qualifying INRMPs.

As a result of the balancing process for economic impacts described above, the Secretary is not proposing to exclude any areas from the habitat that is eligible for designation. The total potential estimated economic impact of the designation, without exclusions, would be $10,084,293. However, as indicated above, the Secretary is considering a number of additional exclusions which may reduce this economic impact by a substantial amount. For this ESU, a preliminary analysis of the economic impact of designating critical habitat after considering some of these additional exclusions (primarily the exclusion of watersheds with a large percentage of Federal lands) indicates the cost impacts could be reduced to about $4,300,000.

Southern California O. mykiss ESU

There are 37 occupied HSA watersheds within the freshwater and estuarine range of this ESU. For ease of reference these watersheds have been aggregated into eight subbasin units (or CALWATER HUs) within which the HSA watersheds are nested. Six HSA watersheds received a low rating, 6 received a medium rating, and 25 received a high rating of conservation value to the ESU (NMFS, 2004b).

There are 837 mi (1,339 km) of occupied stream habitat in the 37 HSA watersheds comprising this ESU. Of these, approximately 20 mi (32 km) occupied stream miles (30.0 km) occur on Vandenberg AFB and Camp Pendleton Marine Corps Base which are not proposed for designation because they are within lands controlled by the military that have qualifying INRMPs.

As a result of the balancing process for economic impacts described above, the Secretary is currently proposing to exclude from the designation, at a minimum, the habitat areas shown in Table 6. Of the areas eligible for designation, no fewer than 33 mi (53km) are proposed for exclusion because the economic benefits of exclusion outweigh the benefits of designation. The total potential estimated economic impact, with no exclusions, would be $21,008,746. The exclusions set forth in Table 6 would reduce the total estimated economic impact to $12,716,386. However, as indicated above, the Secretary is considering a number of additional exclusions which may further reduce this economic impact by a substantial amount for this ESU. For this ESU, a preliminary analysis of the economic impact of designating critical habitat after considering some of these additional exclusions (primarily the exclusion of watersheds with a large percentage of Federal lands) indicates that impacts could be reduced to about $3,600,000.

TABLE 6.—HSA WATERSHEDS OCCUPIED BY THE SOUTHERN CALIFORNIA O. MYKISS ESU AND PROPOSED FOR EXCLUSION FROM CRITICAL HABITAT

Subbasin/hydrologic unit	Watershed code	HSA watershed name	Area proposed for exclusion
Unit 1. Santa Maria River HU	331210	Guadelupe	Tributaries only.
	331230	Cuyama Valley	Entire watershed.
Unit 2. Santa Ynez HU	331430	Buelton	Tributaries only.
	331451	Santa Cruz Creek	Entire watershed
Unit 7. Calleguas HU	440811	East of Oxnard	Entire watershed.

Central Valley Spring-Run Chinook Salmon ESU

There are 37 occupied HSA watersheds within the freshwater and estuarine range of this ESU. For ease of reference these watersheds have been aggregated into 15 subbasin units (or CALWATER HUs) within which the HSA watersheds are nested. Four of these HSA watershed units comprise the San Francisco-San Pablo-Suisun Bay complex through which this ESU migrates to and from the ocean, and these HSAs were aggregated into a separate unit for descriptive purposes. Eight HSA watersheds received a low rating, 4 received a medium rating, and 25 received a high rating of conservation value to the ESU (NMFS, 2004b). Occupied habitat areas or HSA watersheds for this ESU include approximately 1,381 mi (2,212 km) of riverine habitat, in addition to approximately 427 mi^2 (1,102 km^2) of estuarine habitat in the San Francisco-San Pablo-Suisun Bay complex.

As a result of the balancing process for economic impacts described above, the Secretary is currently proposing to exclude from the designation, at a minimum, the habitat areas (or HSAs) shown in Table 7. Of the areas eligible for designation, no fewer than approximately 231 mi (369 km) of stream habitat and 173 mi^2 (446 km^2) of estuarine habitat in San Francisco Bay are proposed for exclusion because the economic benefits of exclusion outweigh the benefits of designation. The total potential estimated economic impact, with no exclusions, is $23,577,391. The exclusions set forth in Table 7 would reduce the total estimated economic impact to 16,787,737. However, the Secretary is considering a number of additional exclusions which may further reduce this economic impact by a substantial amount. For this ESU, a preliminary analysis of the economic impact of designating critical habitat after considering some of these additional exclusions (primarily the exclusion of watersheds with a large percentage of Federal lands) indicates the cost impact could be reduced to about $12,900,000.

TABLE 7.—HSA WATERSHEDS OCCUPIED BY THE CENTRAL VALLEY SPRING-RUN CHINOOK SALMON ESU AND PROPOSED FOR EXCLUSION FROM CRITICAL HABITAT

Subbasin/hydrologic unit	Watershed code	HSA watershed name	Area proposed for exclusion
Unit 2. Whitmore HU	550731	South Cow Creek	Entire watershed.
Unit 5. Sacramento Delta HU	551000	Sacramento Delta	Partial.
Unit 8. Yuba River HU	551713	Mildred Lake	Entire watershed.
Unit 9. Valley American HU	551921	Lower American	Entire watershed.
Unit 12. Ball Mountain HU	552310	Thomes Creek	Entire watershed.
Unit 13. Shasta Bally HU	552433	South Fork	Entire watershed.
Unit 14. No. Diable Range HU	554300	No. Diablo Range	Entire watershed.
Unit 15. San Joaquin Delta HU	554400	San Joaquin Delta	Entire watershed.
Unit 16 South SF Bay HU	220410	South SF Bay	Entire unit.

Central Valley O. mykiss ESU

There are 67 occupied HSA watersheds within the freshwater and estuarine range of this ESU. For ease of reference these watersheds have been aggregated into 25 subbasin units (or CALWATER HUs) within which the HSA watersheds are nested. Four of these HSA watershed units comprise the San Francisco-San Pablo-Suisun Bay complex through which this ESU migrates to and from the ocean, and these HSAs were aggregated into a separate unit for descriptive purposes. Fourteen HSA watersheds received a low rating, 16 received a medium rating, and 37 received a high rating of conservation value to the ESU (NMFS, 2004b). Occupied habitat areas or HSA watersheds for this ESU include approximately 2,607 mi (4,171 km) of stream habitat, in addition to approximately 427 mi^2 (1,102 km^2) of estuarine habitat in the San Francisco-San Pablo-Suisun Bay complex.

As a result of the balancing process for economic impacts described above, the Secretary is proposing to exclude from the designation, at a minimum, the habitat areas (or HSAs) shown in Table 8. Of the areas eligible for designation, no fewer than approximately 290 mi (464 km) of stream and 173 mi^2 (446 km^2) of estuarine habitat in San Francisco Bay are proposed for exclusion because the economic benefits of exclusion outweigh the benefits of designation. The total potential estimated economic impact, with no exclusions, is $29,187,888. The exclusions set forth in Table 8 would reduce the total estimated economic impact to $24,195,245. However, as indicated above, the Secretary is considering a number of additional exclusions which may further reduce this economic impact by a substantial amount. For this ESU, a preliminary analysis of the economic impact of designating critical habitat after considering some of these additional exclusions (primarily the exclusion of watersheds with a large percentage of Federal lands) indicates that economic impacts could be reduced to about $18,500,000.

TABLE 8.—HSA WATERSHEDS OCCUPIED BY THE CENTRAL VALLEY O. MYKISS ESU AND PROPOSED FOR EXCLUSION FROM CRITICAL HABITAT

Subbasin/hydrologic unit	Watershed (HSA) code	Watershed name	Area proposed for exclusion
Unit 5. Sacramento Delta HU	551000	Sacramento Delta	Partial watershed.
Unit 6. Valley-Putah Cache HU	551110	Elmira	Entire watershed.
Unit 8. Marysville HU	551510	Lower Bear River	Entire watershed.
Unit 9. Yuba River HU	551713	Mildred Lake	Entire watershed.
	551720	Nevada City	Entire watershed.
Unit 12. Butte Creek HU	552110	Upper Dry Creek	Entire watershed.

TABLE 8.—HSA WATERSHEDS OCCUPIED BY THE CENTRAL VALLEY O. MYKISS ESU AND PROPOSED FOR EXCLUSION FROM CRITICAL HABITAT—Continued

Subbasin/hydrologic unit	Watershed (HSA) code	Watershed name	Area proposed for exclusion
Unit 15. North Valley Floor HU	553111	Herald	Entire watershed.
	553120	Lower Mokelumne	Partial watershed.
Unit 16. Middle Sierra	553221	Big Canyon Creek	Entire watershed.
	553223	NF Cosumnes	Entire watershed.
	553224	Omo Ranch	Entire watershed.
	553240	Sutter Creek	Entire watershed.
Unit 21. No. Diablo Range	554300	No. Diablo Range	Entire watershed.
Unit 23. So. SF Bay	220410	So. SF Bay	Entire unit.

Effects of Critical Habitat Designation

Section 7 Consultation

Section 7 of the ESA requires Federal agencies, including NMFS, to ensure that actions they fund, authorize, permit, or carry out do not destroy or adversely modify critical habitat. In agency regulations at 50 CFR 402.02, we define destruction or adverse modification as ''a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species. Such alterations include, but are not limited to: Alterations adversely modifying any of those physical or biological features that were the basis for determining the habitat to be critical.'' However, in a March 15, 2001, decision of the United States Court of Appeals for the Fifth Circuit (*Sierra Club* v. *U.S. Fish and Wildlife Service*, 243 F.3d 434 (5th Cir. 2001), and an August 9, 2004 decision of the United States Court of Appeals for the Ninth Circuit (*Gifford Pinchot Task Force* v. *U.S. Fish and Wildlife*, No. 03–35279, the courts have found the agencies' definition of destruction or adverse modification to be invalid. In response to this decision, we are reviewing this regulatory definition.

Section 7(a) of the ESA requires Federal agencies, including NMFS, to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is proposed or designated. Regulations implementing this provision of the ESA are codified at 50 CFR part 402. Section 7(a)(4) of the ESA requires Federal agencies to confer with us on any action that is likely to jeopardize the continued existence of a proposed species or result in the destruction or adverse modification of proposed critical habitat. Conference reports provide conservation recommendations to assist the agency in eliminating conflicts that may be caused by the proposed action. The conservation recommendations in a conference report are advisory.

We may issue a formal conference report if requested by a Federal agency. Formal conference reports include an opinion that is prepared according to 50 CFR 402.14, as if the species were listed or critical habitat designated. We may adopt the formal conference report as the biological opinion when the species is listed or critical habitat designated, if no substantial new information or changes in the action alter the content of the opinion (see 50 CFR 402.10(d)).

If a species is listed or critical habitat is designated, ESA section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency (action agency) must enter into consultation with us. Through this consultation, we would review actions to determine if they would destroy or adversely modify critical habitat.

If we issue a biological opinion concluding that a project is likely to result in the destruction or adverse modification of critical habitat, we will also provide reasonable and prudent alternatives to the project, if any are identifiable. Reasonable and prudent alternatives are defined at 50 CFR 402.02 as alternative actions identified during consultation that can be implemented in a manner consistent with the intended purpose of the action, that are consistent with the scope of the Federal agency's legal authority and jurisdiction, that are economically and technologically feasible, and that we believe would avoid destruction or adverse modification of critical habitat. Reasonable and prudent alternatives can vary from slight project modifications to extensive redesign or relocation of the project. Costs associated with implementing a reasonable and prudent alternative are similarly variable.

Regulations at 50 CFR 402.16 require Federal agencies to reinitiate consultation on previously reviewed actions in instances where critical habitat is subsequently designated and the Federal agency has retained discretionary involvement or control over the action or such discretionary involvement or control is authorized by law. Consequently, some Federal agencies may request reinitiation of consultation or conference with us on actions for which formal consultation has been completed, if those actions may affect designated critical habitat or adversely modify or destroy proposed critical habitat.

Activities on Federal lands that may affect these ESUs or their critical habitat will require ESA section 7 consultation. Activities on private or state lands requiring a permit from a Federal agency, such as a permit from the Corps under section 404 of the Clean Water Act, a section 10(a)(1)(B) permit from NMFS, or some other Federal action, including funding (*e.g.*, Federal Highway Administration (FHA) or Federal Emergency Management Agency (FEMA) funding), will also be subject to the section 7 consultation process. Federal actions not affecting listed species or critical habitat and actions on non-Federal and private lands that are not federally funded, authorized, or permitted do not require section 7 consultation.

Activities Affected by Critical Habitat Designation

Section 4(b)(8) of the ESA requires that we evaluate briefly and describe, in any proposed or final regulation that designates critical habitat, those activities involving a Federal action that may adversely modify such habitat or that may be affected by such designation. As noted in the *Special Management Considerations or Protection* section above, we received several comments on the ANPR (68 FR 55926; September 29, 2003) regarding

activities potentially affected by a critical habitat designation.

A wide variety of activities may affect critical habitat and, when carried out, funded, or authorized by a Federal agency, require that an ESA section 7 consultation be conducted. Such activities include, but are not limited to, those described in the Species Descriptions and Area Assessments section. Generally these include water and land management actions of Federal agencies (*e.g.*, USFS, BLM, Corps, U.S. Bureau of Reclamation (BOR), the FHA, Natural Resource Conservation Service (NRCS), National Park Service (NPS), BIA, and the Federal Energy Regulatory Commission (FERC)) and related or similar actions of other federally regulated projects and lands, including livestock grazing allotments by the USFS and BLM; hydropower sites licensed by the FERC; dams built or operated by the Corps or BOR; timber sales and other vegetation management activities conducted by the USFS, BLM, and BIA; irrigation diversions authorized by the USFS and BLM; road building and maintenance activities authorized by the FHA, USFS, BLM, NPS, and BIA; and mining and road building/maintenance activities authorized by the State of California. Other actions of concern include dredge and fill, mining, diking, and bank stabilization activities authorized or conducted by the Corps, habitat modifications authorized by the FEMA, and approval of water quality standards and pesticide labeling and use restrictions administered by the EPA.

The Federal agencies that will most likely be affected by this critical habitat designation include the USFS, BLM, BOR, Corps, FHA, NRCS, NPS, BIA, FEMA, EPA, and the FERC. This designation will provide these agencies, private entities, and the public with clear notification of critical habitat designated for listed salmonids and the boundaries of the habitat. This designation will also assist these agencies and others in evaluating the potential effects of their activities on listed salmon and their critical habitat and in determining if section 7 consultation with NMFS is needed.

As noted above, numerous private entities also may be affected by this critical habitat designation because of the direct and indirect linkages to an array of Federal actions, including Federal projects, permits, and funding. For example, private entities may harvest timber or graze livestock on Federal land or have special use permits to convey water or build access roads across Federal land; they may require Federal permits to armor stream banks, construct irrigation withdrawal facilities, or build or repair docks; they may obtain water from federally funded and operated irrigation projects; or they may apply pesticides that are only available with Federal agency approval. These activities will need to be analyzed with respect to their potential to destroy or adversely modify critical habitat. In some cases, proposed activities may require modifications that may result in decreases in activities such as timber harvest and livestock and crop production. The transportation and utilities sectors may need to modify the placement of culverts, bridges and utility conveyances (*e.g.*, water, sewer and power lines) to avoid barriers to fish migration. Developments occurring in or near salmon streams (*e.g.*, marinas, residential, or industrial facilities) that require Federal authorization or funding may need to be altered or built in a manner that ensures that critical habitat is not destroyed or adversely modified as a result of the construction, or subsequent operation, of the facility. These are just a few examples of potential impacts, but it is clear that the effects will encompass numerous sectors of private and public activities. If you have questions regarding whether specific activities will constitute destruction or adverse modification of critical habitat, contact NMFS (see **ADDRESSES** and **FOR FURTHER INFORMATION CONTACT**).

Public Comments Solicited

We intend that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, comments or suggestions from the public, other concerned governments and agencies, the scientific community, industry, or any other interested party concerning this proposed rule are hereby solicited. Comments particularly are sought concerning:

(1) Maps and specific information describing the amount, distribution, and use type (*e.g.*, spawning, rearing, or migration) of salmon habitat in each ESU, as well as any additional information on occupied and unoccupied habitat areas;

(2) The reasons why any habitat should or should not be determined to be critical habitat as provided by sections 3(5)(A) and 4(b)(2) of the ESA;

(3) Information regarding the benefits of excluding lands covered by HCPs (ESA section 10(a)(1)(B) permits), including the regulatory burden designation may impose on landowners and the likelihood that exclusion of areas covered by existing plans will serve as an incentive for other landowners to develop plans covering their lands;

(4) Information regarding the benefits of excluding Federal and other lands covered by habitat conservation strategies and plans (*e.g.*, Northwest Forest Plan, PACFISH, etc.), including the regulatory burden designation may impose on land managers and the likelihood that exclusion of areas covered by existing plans will serve as an incentive for land user to implement the conservation measures covering the lands subject to those plans;

(5) Information regarding the benefits of designating particular areas as critical habitat;

(6) Current or planned activities in the areas proposed for designation and their possible impacts on proposed critical habitat;

(7) Any foreseeable economic or other potential impacts resulting from the proposed designations, in particular, any impacts on small entities;

(8) Whether our approach to critical habitat designation could be improved or modified in any way to provide for greater public participation and understanding, or to assist us in accommodating public concern and comments; and

(9) Whether specific unoccupied areas (*e.g.*, dewatered stream reaches, areas behind dikes or dams, above dams, etc) not presently proposed for designation may be essential to provide additional spawning and rearing areas for an ESU. In particular we are seeking information regarding unoccupied areas that may be essential for the conservation of the SC and CV *O. mykiss* ESUs, and the CV spring-run chinook ESU (see ESU Descriptions for specific unoccupied areas that may be essential for conservation and for which comments are being solicited).

If you wish to comment on this proposal, you may submit your comments and materials concerning this proposal by any one of several methods (see **ADDRESSES** section). The proposed rule, maps, fact sheets, and other materials relating to this proposal can be found on our Web site at *http://swr.nmfs.noaa.gov.* We will consider all comments and information received during the comment period on this proposed rule as we prepare our final rulemaking. Accordingly, the final decision may differ from this proposal.

Public Hearings

Joint Commerce-Interior ESA implementing regulations state that the Secretary shall promptly hold at least one public hearing if any person requests one within 45 days of publication of a proposed regulation to

list a species or to designate critical habitat (see 50 CFR 424.16(c)(3)). Requests for public hearing must be made in writing (see **ADDRESSES**) by January 24, 2005. Details regarding the specific hearing locations and times will be posted on our Web site at *http://swr.nmfs.noaa.gov*. These hearings will provide the opportunity for interested individuals and parties to give comments, exchange information and opinions, and engage in a constructive dialogue concerning this proposed rule. We encourage the public's involvement in such ESA matters.

Peer Review

In accordance with an ESA policy published on July 1, 1994 (59 FR 34270), we will solicit the expert opinions of at least three appropriate independent specialists regarding this proposed rule. Given the varied considerations involved in making the proposed designations, we intend to solicit reviews from specialist(s) with biological expertise as well as specialist(s) with economic expertise in the geographic range of these ESUs. The purpose of such review is to ensure that the critical habitat designation is based on scientifically sound data, assumptions, and analyses. We will send these reviewers copies of this proposed rule immediately following publication in the **Federal Register**. We will invite them to comment, during the public comment period, on the specific assumptions and conclusions regarding the proposed designation of critical habitat.

In response to the ANPR (68 FR 55926; September 29, 2003) we received the names of two potential independent reviewers and will identify other candidates prior to or soon after publishing this proposed rule. We will announce the availability of comments received from these reviewers and the public and make them available via the internet as soon as practicable during or after the comment period but in advance of a final rule.

Required Determinations

Clarity of the Rule

Executive Order 12866 requires each agency to write regulations and notices that are easy to understand. We invite your comments on how to make this proposed rule easier to understand, including answers to questions such as the following: (1) Are the requirements in the proposed rule clearly stated? (2) Does the proposed rule contain technical jargon that interferes with its clarity? (3) Does the format of the proposed rule (grouping and order of the sections, use of headings, paragraphing, *etc.*) aid or reduce its clarity? (4) What else could we do to make this proposed rule easier to understand? You may send comments on how we could make this proposed rule easier to understand to one of the addresses identified in the **ADDRESSES** section or via e-mail to: *critical.habitat.swr@noaa.gov.*

Regulatory Planning and Review

In accordance with Executive Order 12866, this document is a significant rule and has been reviewed by the OMB. As noted above, we have prepared several reports to support the exclusion process under section 4(b)(2) of the ESA. The economic costs of the proposed critical habitat designations are described in our draft economic report (NMFS, 2004c). The benefits of the proposed designations are described in the Critical Habitat Analytical Review Team preliminary findings report (NMFS, 2004b). This document uses a biologically-based ranking system for gauging the benefits of applying section 7 of the ESA to particular watersheds. Because data are not available to express these benefits in monetary terms, we have adopted a cost-effectiveness framework, as outlined in our draft 4(b)(2) report (NMFS, 2004d). This approach is in accord with OMB's guidance on regulatory analysis (OMB Circular A–4, Regulatory Analysis, September 17, 2003). By taking this approach, we seek to designate sufficient critical habitat to meet the biological goal of the ESA while imposing the least burden on society, as called for by E.O. 12866.

In assessing the overall cost of critical habitat designation for the seven Pacific salmon and *O. mykiss* ESUs, the annual total impact figures given in the draft economic analysis (NMFS, 2004c) cannot be added together to obtain an aggregate annual impact. Because some watersheds are included in more than one ESU, a simple summation would entail duplication, resulting in an overestimate. Accounting for this duplication, the aggregate annual economic impact of the seven proposed critical habitat designations is $83,511,186 (in contrast to a $115,680,394 aggregate annual economic impact from designating *all* areas considered in the 4(b)(2) process for these ESUs). These amounts include impacts that are co-extensive with the implementation of the jeopardy standard of section 7 (NMFS, 2004c).

Regulatory Flexibility Act (5 U.S.C. 601 et seq.)

Under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*, as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effects of the rule on small entities (*i.e.*, small businesses, small organizations, and small government jurisdictions). We have prepared a draft regulatory flexibility analysis and this document (NMFS, 2004e) is available upon request (*see* **ADDRESSES**). This analysis estimates that the number of regulated small entities potentially affected by this proposed rulemaking ranges from 379 to 3,151, depending on the ESU. If the proposed areas are designated as critical habitat, the estimated co-extensive costs of section 7 consultation incurred by small entities are estimated to range from $1.6 million to $18.2 million depending on the ESU. As described in the analysis, we considered various alternatives for designating critical habitat for these seven ESUs. We considered and rejected the alternative of not designating critical habitat for any of the ESUs because such an approach did not meet the legal requirements of the ESA. We also examined and rejected an alternative in which all the potential critical habitat of the seven Pacific salmon and *O. mykiss* ESUs is proposed for designation (*i.e.*, no areas are excluded) because many of the areas considered to have a low conservation value also had relatively high economic impacts that might be mitigated by excluding those areas from designation. A third alternative we examined and rejected would exclude all habitat areas with a low or medium conservation value. While this alternative furthers the goal of reducing economic impacts, it is not sensitive to the fact that for most ESUs, eliminating all habitat areas with low and medium conservation value is likely to significantly impede conservation. Moreover, for some habitat areas the incremental economic benefit from excluding that area is relatively small. Therefore, after considering these alternatives in the context of the section 4(b)(2) process of weighing benefits of exclusion against benefits of designation, we determined that the current proposal for designating critical habitat (*i.e.*, designating some but not all areas with low or medium conservation value) provides an appropriate balance of conservation and economic

mitigation and that excluding the areas identified in this proposed rulemaking would not result in extinction of the ESUs. It is estimated that small entities could save from $650,000 to $4.3 million in compliance costs, depending on the ESU, if the areas proposed for exclusion in this proposed rule are excluded from the designation.

Executive Order 13211

On May 18, 2001, the President issued an Executive Order on regulations that significantly affect energy supply, distribution, and use. Executive Order 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. This proposed rule may be a significant regulatory action under Executive Order 12866. We have prepared a draft analysis of the energy effects of critical habitat designation and this document (NMFS, 2004e; see Appendix G) is available upon request (see **ADDRESSES**).

Approximately 90 hydropower projects exist within the area covered by the seven ESUs addressed in this rulemaking. The projects range from very small ones with installed capacities considerably less than 5 MW to much larger projects ranging up to 196 MW installed capacity. Within California, the majority of hydropower project are private or State-owned and licensed by FERC. A smaller percentage of all projects are owned and operated by the Corps or BOR. Consultations on hydropower projects represent a relatively small percentage of the total section 7 consultations concerning listed salmon, but cost of project modification may be higher that for other activities. According to the economic analysis performed for the proposed designation (NMFS, 2004e), costs to hydropower projects associated with salmon section 7 actions are anticipated to be approximately 23 percent of the annual costs of overall section 7 statewide. The primary modifications resulting from section 7 include construction or improvements to fish passage facilities and programs, research and monitoring of water quality and fish passage efficiency, and other offsite mitigation efforts.

Two threshold tests were considered to determine whether critical habitat designation would have a ''significant adverse effect on the supply, distribution, or use of energy'': Reductions in electricity production in excess of 1 billion kilowatt-hours per year or in excess of 500 megawattts of installed capacity; and increases in the cost of energy production in excess of one percent. For both thresholds of the energy impacts analysis, the assessment concludes that the total impacts of salmon conservation/mitigation measures for hydropower projects may exceed the thresholds for determining that an adverse energy effect is significant. However, the assessment also concludes based on the agency's section 7 consultation history, that the total impacts of such conservation or mitigation overestimate the incremental impacts of critical habitat designation alone because there is strong evidence that consultation based on the jeopardy standard alone is capable of imposing significant impacts on such projects. Based on the energy impacts analysis, NMFS believes that the designation of critical habitat will not have impacts that exceed the thresholds identified above.

Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)

In accordance with the Unfunded Mandates Reform Act, we make the following findings:

(a) This proposed rule will not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute or regulation that would impose an enforceable duty upon State, local, tribal governments, or the private sector and includes both ''Federal intergovernmental mandates'' and ''Federal private sector mandates.'' These terms are defined in 2 U.S.C. 658(5)–(7). ''Federal intergovernmental mandate'' includes a regulation that ''would impose an enforceable duty upon State, local, or tribal governments'' with two exceptions. It excludes ''a condition of Federal assistance.'' It also excludes ''a duty arising from participation in a voluntary Federal program,'' unless the regulation ''relates to a then-existing Federal program under which $500,000,000 or more is provided annually to State, local, and tribal governments under entitlement authority,'' if the provision would ''increase the stringency of conditions of assistance'' or ''place caps upon, or otherwise decrease, the Federal Government's responsibility to provide funding'' and the State, local, or tribal governments ''lack authority'' to adjust accordingly. (At the time of enactment, these entitlement programs were: Medicaid; AFDC work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support Enforcement.) ''Federal private sector mandate'' includes a regulation that ''would impose an enforceable duty upon the private sector, except (I) a condition of Federal assistance; or (ii) a duty arising from participation in a voluntary Federal program.'' The designation of critical habitat does not impose a legally binding duty on non-Federal government entities or private parties. Under the ESA, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities who receive Federal funding, assistance, permits or otherwise require approval or authorization from a Federal agency for an action may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply; nor would critical habitat shift the costs of the large entitlement programs listed above to State governments.

(b) Due to current public knowledge of salmon protection and the prohibition against take of these species both within and outside of the designated areas, we do not anticipate that this proposed rule will significantly or uniquely affect small governments. As such, a Small Government Agency Plan is not required.

Takings

In accordance with Executive Order 12630, the proposed rule does not have significant takings implications. A takings implication assessment is not required. The designation of critical habitat affects only Federal agency actions. The proposed rule will not increase or decrease the current restrictions on private property concerning take of salmon. As noted above, due to widespread public knowledge of salmon protection and the prohibition against take of the species both within and outside of the designated areas, we do not anticipate that property values will be affected by the proposed critical habitat designations. While real estate market values may temporarily decline following designation, due to the perception that critical habitat designation may impose additional regulatory burdens on land use, we expect any such impacts to be short term (NMFS, 2004c). Additionally, critical habitat designation does not preclude development of HCPs and issuance of incidental take permits. Owners of areas that are included in the

designated critical habitat will continue to have the opportunity to use their property in ways consistent with the survival of listed salmon.

Federalism

In accordance with Executive Order 13132, this proposed rule does not have significant federalism effects. A federalism assessment is not required. In keeping with Department of Commerce policies, we requested information from, and coordinated development of, this proposed critical habitat designation with appropriate state resource agencies in California. The proposed designation may have some benefit to the states and local resource agencies in that the areas essential to the conservation of the species are more clearly defined, and the primary constituent elements of the habitat necessary to the survival of the species are specifically identified. While making this definition and identification does not alter where and what federally sponsored activities may occur, it may assist local governments in long-range planning (rather than waiting for case-by-case section 7 consultations to occur).

Civil Justice Reform

In accordance with Executive Order 12988, the Department of the Commerce has determined that this proposed rule does not unduly burden the judicial system and meets the requirements of sections 3(a) and 3(b)(2) of the Order. We are proposing to designate critical habitat in accordance with the provisions of the ESA. This proposed rule uses standard property descriptions and identifies the primary constituent elements within the designated areas to assist the public in understanding the habitat needs of the seven salmon ESUs.

Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)

This proposed rule does not contain new or revised information collection for which OMB approval is required under the Paperwork Reduction Act. This rule will not impose recordkeeping or reporting requirements on State or local governments, individuals, businesses, or organizations. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

National Environmental Policy Act

We have determined that we need not prepare environmental analyses as provided for under the National Environmental Policy Act of 1969 for critical habitat designations made pursuant to the ESA. See *Douglas County* v. *Babbitt,* 48 F.3d 1495 (9th Cir. 1995), cert. denied, 116 S.Ct. 698 (1996).

Government-to-Government Relationship With Tribes

The longstanding and distinctive relationship between the Federal and tribal Governments is defined by treaties, statutes, executive orders, judicial decisions, and agreements, which differentiate tribal governments from the other entities that deal with, or are affected by, the Federal Government. This relationship has given rise to a special Federal trust responsibility involving the legal responsibilities and obligations of the United States toward Indian Tribes and the application of fiduciary standards of due care with respect to Indian lands, tribal trust resources, and the exercise of tribal rights. Pursuant to these authorities lands have been retained by Indian Tribes or have been set aside for tribal use. These lands are managed by Indian Tribes in accordance with tribal goals and objectives within the framework of applicable treaties and laws.

Administration policy contained in the Secretarial Order: ''American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act'' (June 5, 1997) (''Secretarial Order''); the President's Memorandum of April 29, 1994, ''Government-to-Government Relations with Native American Tribal Governments'' (50 FR 2291); Executive Order 13175; and Department of Commerce-American Indian and Alaska Native Policy (March 30, 1995) reflects and defines this unique relationship.

These policies also recognize the unique status of Indian lands. The Presidential Memorandum of April 29, 1994, provides that, to the maximum extent possible, tribes should be the governmental entities to manage their lands and tribal trust resources. The Secretarial Order provides that, ''Indian lands are not Federal public lands or part of the public domain, and are not subject to Federal public lands laws.''

In implementing these policies the Secretarial Order specifically seeks to harmonize this unique working relationship with the Federal Government's duties pursuant to the ESA. The order clarifies our responsibilities when carrying out authorities under the ESA and requires that we consult with and seek participation of, the affected Indian Tribes to the maximum extent practicable in the designation of critical habitat. Accordingly, we recognize that we must carry out our responsibilities under the ESA in a manner that harmonizes these duties with the Federal trust responsibility to the tribes and tribal sovereignty while striving to ensure that Indian Tribes do not bear a disproportionate burden for the conservation of species. Any decision to designate Indian land as critical habitat must be informed by the Federal laws and policies establishing our responsibility concerning Indian lands, treaties and trust resources, and by Department of Commerce policy establishing our responsibility for dealing with tribes when we implement the ESA.

Pursuant to the Secretarial Order we consulted with the affected Indian Tribes when considering the designation of critical habitat in an area that may impact tribal trust resources, tribally owned fee lands or the exercise of tribal rights. Additionally, one California Indian tribe and the BIA provided written comments that are a part of the administrative record for this proposed rulemaking.

We understand from the tribes and the BIA that there is general agreement that Indian lands should not be designated critical habitat. The Secretarial Order defines Indian lands as ''any lands title to which is either: (1) Held in trust by the United States for the benefit of any Indian tribe or (2) held by an Indian Tribe or individual subject to restrictions by the United States against alienation.'' In clarifying this definition with the tribes, we agree that (1) fee lands within the reservation boundaries and owned by the Tribe or individual Indian, and (2) fee lands outside the reservation boundaries and owned by the Tribe would be considered Indian lands for the purposes of this proposed rule. (Fee lands outside the reservation owned by individual Indians are not included within the definition of Indian lands for the purposes of this rule.)

In evaluating Indian lands for designation as critical habitat we look to section 4(b)(2) of the ESA. Section 4(b)(2) requires us to base critical habitat designations on the best scientific and commercial data available, after taking into consideration the economic impact, the impact on national security and any other relevant impact of specifying any particular area as critical habitat. The Secretary may exclude areas from a critical habitat designation when the benefits of exclusion outweigh the benefits of designation, provided the exclusion will not result in the extinction of the species. We find that a relevant impact for consideration is the degree to which the Federal designation of Indian lands would impact the longstanding unique

relationship between the tribes and the Federal Government and the corresponding effect on Pacific salmon protection and management (See Other Relevant Impacts and Critical Habitat Designation sections). This is consistent with recent case law addressing the designation of critical habitat on tribal lands. ''It is certainly reasonable to consider a positive working relationship relevant, particularly when the relationship results in the implementation of beneficial natural resource programs, including species preservation.'' *Center for Biological Diversity et al.* v. *Norton,* 240 F. Supp. 2d 1090, 1105); *Douglas County* v. *Babbitt,* 48 F3d 1495, 1507 (1995) (defining ''relevant'' as impacts consistent with the purposes of the ESA).

NMFS and many tribal governments in California currently have cooperative working relationships that have enabled us to implement natural resource programs of mutual interest for the benefit of threatened and endangered salmonids. Some tribes have existing natural resource programs that assist us on a regular basis in providing information relevant to salmonid protection throughout the region. Our consultation with the tribes and the BIA indicates that they view the designation of Indian lands as an unwanted intrusion into tribal self-governance, compromising the government-to-government relationship that is essential to achieving our mutual goal of conserving threatened and endangered salmonids.

At this time, for the general reasons described above, we anticipate that the ESA 4(b)(2) analysis will lead us to exclude all Indian lands with occupied habitat in our final designation for these seven ESUs of salmon and *O. mykiss.* Consistent with other proposed exclusions, any exclusion in the final rule will be made only after consideration of all comments received.

References Cited

A complete list of all references cited in this rulemaking can be found on our Web site at *http://swr.nmfs.noaa.gov* and is available upon request from the NMFS office in Long Beach, California (see **ADDRESSES** section).

List of Subjects in 50 CFR Part 226

Endangered and threatened species.

Dated: November 29, 2004.

William T. Hogarth,

Assistant Administrator for Fisheries, National Marine Fisheries Service.

For the reasons set out in the preamble, we propose to amend part 226, title 50 of the Code of Regulations as set forth below:

PART 226—[AMENDED]

1. The authority citation of part 226 continues to read as follows:

Authority: 16 U.S.C. 1533.

2. Add § 226.211 to read as follows:

§ 226.211 Critical habitat for seven Evolutionarily Significant Units (ESUs) of salmon (Oncorhynchus spp.) in California.

Critical habitat is designated in the following counties for the following ESUs as described in paragraph (a) of this section, and as further described in paragraphs (b) through (e) of this section. The textual descriptions of critical habitat for each ESU are included in paragraphs (f) through (l) of this section, and these descriptions are the definitive source for determining the critical habitat boundaries. General location maps are provided at the end of each ESU description (paragraphs (f) through (l) of this section) and are provided for general guidance purposes only, and not as a definitive source for determining critical habitat boundaries.

(a) Critical habitat is designated for the following ESUs in the following counties:

ESU	State—Counties
(1) California Coastal Chinook	*CA*—Humboldt, Trinity, Mendocino, Sonoma, Lake, Napa, Glenn, Colusa, and Tehama.
(2) Northern California *O. mykiss*	*CA*—Humboldt, Trinity, Mendocino, Sonoma, Lake, Glenn, Colusa, and Tehama.
(3) Central California Coast *O. mykiss*	*CA*—Lake, Mendocino, Sonoma, Napa, Marin, San Francisco, San Mateo, Santa Clara, Santa Cruz, Alameda, Contra Costa, and San Joaquin.
(4) South-Central Coast *O. mykiss*	*CA*—Monterey, San Benito, Santa Clara, Santa Cruz, San Luis Obispo.
(5) Southern California *O. mykiss*	*CA*—San Luis Obispo, Santa Barbara, Ventura, Los Angeles, Orange and San Diego.
(6) Central Valley spring-run Chinook	*CA*—Tehama, Butte, Glenn, Shasta, Yolo, Sacramento, Solano, Colusa, Yuba, Sutter, Trinity, Alameda, San Joaquin, and Contra Costa.
(7) Central Valley *O. mykiss*	*CA*—Tehama, Butte, Glenn, Shasta, Yolo, Sacramento, Solona, Yuba, Sutter, Placer, Calaveras, San Joaquin, Stanislaus, Tuolumne, Merced, Alameda, Contra Costa.

(b) *Critical habitat boundaries.* Critical habitat includes the stream channels within the proposed stream reaches, and includes a lateral extent as defined by the ordinary high-water line (33 CFR 329.11). In areas for which the ordinary high-water line has not been defined pursuant to 33 CFR 329.11, the lateral extent will be defined by the bankfull elevation. Bankfull elevation is the level at which water begins to leave the channel and move into the floodplain and is reached at a discharge which generally has a recurrence interval of 1 to 2 years on the annual flood series. Critical habitat in estuaries (e.g. San Francisco-San Pablo-Suisun Bay, Humboldt Bay, and Morro Bay) is defined by the perimeter of the water body as displayed on standard 1:24,000 scale topographic maps or the elevation of extreme high water, whichever is greater.

(c) *Primary constituent elements.* Within these areas, the primary constituent elements essential for the conservation of these ESUs are those sites and habitat components that support one or more life stages, including:

(1) Freshwater spawning sites with water quantity and quality conditions and substrate supporting spawning, incubation and larval development;

(2) Freshwater rearing sites with:

(i) Water quantity and floodplain connectivity to form and maintain physical habitat conditions and support juvenile growth and mobility;

(ii) Water quality and forage supporting juvenile development; and

(iii) Natural cover such as shade, submerged and overhanging large wood, log jams and beaver dams, aquatic

vegetation, large rocks and boulders, side channels, and undercut banks.

(3) Freshwater migration corridors free of obstruction and excessive predation with water quantity and quality conditions and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels, and undercut banks supporting juvenile and adult mobility and survival.

(4) Estuarine areas free of obstruction and excessive predation with:

(i) Water quality, water quantity, and salinity conditions supporting juvenile and adult physiological transitions between fresh- and saltwater;

(ii) Natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels; and

(iii) Juvenile and adult forage, including aquatic invertebrates and fishes, supporting growth and maturation.

(d) *Exclusion of Indian lands.* Critical habitat does not include occupied habitat areas on Indian lands. The Indian lands specifically excluded from critical habitat are those defined in the Secretarial Order, including:

(1) Lands held in trust by the United States for the benefit of any Indian tribe;

(2) Land held in trust by the United States for any Indian Tribe or individual subject to restrictions by the United States against alienation;

(3) Fee lands, either within or outside the reservation boundaries, owned by the tribal government; and

(4) Fee lands within the reservation boundaries owned by individual Indians.

(e) *Land owned or controlled by the Department of Defense.* Additionally, critical habitat does not include the following areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an integrated natural resources management plan prepared under section 101 of the Sikes Act (16 U.S.C. 670a):

(1) Camp Pendleton Marine Corps Base;

(2) Vandenberg Air Force Base;

(3) Camp San Luis Obispo;

(4) Camp Roberts; and

(5) Mare Island Army Reserve Center.

(f) California Coastal Chinook Salmon (Oncorhynchus tshawytscha). Critical habitat is proposed to include the areas defined in the following units:

(1) Redwood Creek Hydrologic Unit 1107—*(i) Orick Hydrologic Sub-area 110710.* Outlet(s) = Redwood Creek (Lat −41.2997, Long −124.0917) upstream to endpoint(s) in: Boyes Creek (41.3639, −123.9845); Bridge Creek (41.137, −124.0012); Brown Creek (41.3986, −124.0012); Emerald (Harry Weir) (41.2142, −123.9812); Godwood Creek (41.3889, −124.0312); Larry Dam Creek (41.3359, −124.003); Little Lost Man Creek (41.2944, −124.0014); Lost Man Creek (41.3133, −123.9854); May Creek (41.3547, −123.999); McArthur Creek (41.2705, −124.041); North Fork Lost Man Creek (41.3374, −123.9935); Prairie Creek (41.4239, −124.0367); Redwood Creek (41.1367, −123.9309); Redwood Creek (41.2997, −124.0499); Tom McDonald (41.1628, −124.0419).

(ii) Beaver Hydrologic Sub-area 110720. Outlet(s) = Redwood Creek (Lat 41.1367, Long −123.9309) upstream to endpoint(s): Lacks Creek (41.0334, −123.8124); Minor Creek (40.9706, −123.7899).

(iii) Lake Prairie Hydrologic Sub-area 110730. Outlet(s) = Redwood Creek (Lat 40.9070, Long −123.8170) upstream to endpoint(s) in: Redwood Creek (40.7432, −123.7206).

(2) Trinidad Hydrologic Unit 1108—*(i) Big Lagoon Hydrologic Sub-area 110810.* Outlet(s) = Maple Creek (Lat 41.1555, Long −124.1380) upstream to endpoint(s) in: North Fork Maple Creek (41.1294, −124.0771); Maple Creek (41.1223, −124.0995).

(ii) Little River Hydrologic Sub-area 110820. Outlet(s) = Little River (41.0277, −124.1112) upstream to endpoint(s) in: South Fork Little River (40.9961, −124.0435); Little River (41.0463, −123.9818); Railroad Creek (41.0474, −124.0453); Lower South Fork Little River (41.003, −124.0081); Upper South Fork Little River (41.0163, −123.9939).

(3) Mad River Hydrologic Unit 1109—*(i) Blue Lake Hydrologic Sub-area 110910.* Outlet(s) = Mad River (Lat 40.9139, Long −124.0642) upstream to endpoint(s) in: Lindsay Creek (40.983, −124.0326); Mill Creek (40.9008, −124.0086); North Fork Mad River (40.8687, −123.9649); Squaw Creek (40.9426, −124.0202); Warren Creek (40.8901, −124.0402).

(ii) North Fork Mad River 110920. Outlet(s) = North Fork Mad River (Lat 40.8687, Long −123.9649) upstream to endpoint(s) in: Sullivan Gulch (40.8557, −123.9487); North Fork Mad River (40.8837, −123.9436).

(iii) Butler Valley 110930. Outlet(s) = Mad River (Lat 40.8449, Long −123.9807) upstream to endpoint(s) in: Black Creek (40.7547, −123.9016); Black Dog Creek (40.8334, −123.9805); Canon Creek (40.8362, −123.9028); Mad River (40.7007, −123.8642); Maple Creek (40.7928, −123.8742).

(4) Eureka Plain Hydrologic Unit 1110—*(i) Eureka Plain Hydrologic Sub-area 111000.* Outlet(s) = Mad River (Lat 40.9560, Long −124.1278); Jacoby Creek (40.8435, −124.0815); Freshwater Creek (40.8088, −124.1442); Elk River (40.7568, −124.1948); Salmon Creek (40.6868, −124.2194) upstream to endpoint(s) in: Bridge Creek (40.6958, −124.0795); Dunlap Gulch (40.7101, −124.1155); Elk River (40.7025, −124.1522); Freshwater Creek (40.7389, −123.9944); Gannon Slough (40.8628, −124.0818); Jacoby Creek (40.7944, −124.0093); Little Freshwater Creek (40.7485, −124.0652); North Branch of the North Fork Elk River (40.6878, −124.0131); North Fork Elk River (40.6756, −124.0153); Ryan Creek (40.7835, −124.1198); Salmon Creek (40.6438, −124.1319); South Branch of the North Fork Elk River (40.6691, −124.0244); South Fork Elk River (40.6626, −124.061); South Fork Freshwater Creek (40.7097, −124.0277).

(5) Eel River Hydrologic Unit 1111—*(i) Ferndale Hydrologic Sub-area 111111.* Outlet(s) = Eel River (Lat 40.6282, Long −124.2838) upstream to endpoint(s) in: Atwell Creek (40.472, −124.1449); Howe Creek (40.4748, −124.1827); Price Creek (40.5028, −124.2035); Strongs Creek (40.5986, −124.1222); Van Duzen River (40.5337, −124.1262).

(ii) Scotia Hydrologic Sub-area 111112. Outlet(s) = Eel River (Lat 40.4918, Long −124.0998) upstream to endpoint(s) in: Bear Creek (40.391, −124.0156); Chadd Creek (40.3921, −123.9542); Jordan Creek (40.4324, −124.0428); Monument Creek (40.4676, −124.1133).

(iii) Larabee Creek Hydrologic Sub-area 111113. Outlet(s) = Larabee Creek (40.4090, Long −123.9334) upstream to endpoint(s) in: Carson Creek (40.4189, −123.8881); Larabee Creek (40.3950, −123.8138).

(iv) Hydesville Hydrologic Sub-area 111121. Outlet(s) = Van Duzen River (Lat 40.5337, Long −124.1262) upstream to endpoint(s) in: Cummings Creek (40.5258, −123.9896); Hely Creek (40.5042, −123.9703); Yager Creek (40.5383, −124.1121); Unnamed (40.5383, −124.1121).

(v) Yager Creek Hydrologic Sub-area 111123. Outlet(s) = Yager Creek (Lat 40.5583, Long −124.0577) upstream to endpoint(s) in: Corner Creek (40.6189, −123.9994); Fish Creek (40.6392, −124.0032); Lawrence Creek (40.6394, −123.9935); Middle Fork Yager Creek (40.5799, −123.9015); North Fork Yager Creek (40.6044, −123.9084); Owl Creek (40.5557, −123.9362); Shaw Creek (40.6245, −123.9518); Yager Creek (40.5673, −123.9403).

(vi) Weott Hydrologic Sub-area 111131. Outlet(s) = South Fork Eel River (Lat 40.3500, Long −213.9305)

upstream to endpoint(s) in: Bridge Creek (40.2929, −123.8569); Bull Creek (40.3148,−124.0343); Canoe Creek (40.2909, −123.922); Cow Creek (40.3583, −123.9626); Cuneo Creek (40.3377, −124.0385); Elk Creek (40.2837, −123.8365); Fish Creek (40.2316, −123.7915); Harper Creek (40.354, −123.9895); Mill Creek (40.3509, −124.0236); Salmon Creek (40.2214, −123.9059); South Fork Salmon River (40.1769, −123.8929); Squaw Creek (40.3401, −123.9997); Tostin Creek (40.1722, −123.8796).

(vii) Benbow Hydrologic Sub-area 111132. Outlet(s) = South Fork Eel River (Lat 40.1932, Long −123.7692) upstream to endpoint(s) in: Anderson Creek (39.9337, −123.8933); Bear Pen Creek (39.9125, −123.8108); Bear Wallow Creek (39.7296, −123.7172); Bond Creek (39.7856, −123.6937); Butler Creek (39.7439, −123.692); China Creek (40.1035, −123.9493); Connick Creek (40.0911, −123.8187); Cox Creek (40.0288, −123.8542); Cummings Creek (39.8431, −123.5752); Dean Creek (40.1383, −123.7625); Dinner Creek (40.0915, −123.937); East Branch South Fork Eel River (39.9433, −123.6278); Elk Creek (39.7986, −123.5981); Fish Creek (40.0565, −123.7768); Foster Creek (39.8455, −123.6185); Grapewine Creek (39.7991, −123.5186); Hartsook Creek (40.012, −123.7888); Hollow Tree Creek (39.7316, −123.6918); Huckleberry Creek (39.7315, −123.7253); Indian Creek (39.9464, −123.8993); Jones Creek (39.9977, −123.8378); Leggett Creek (40.1374, −123.8312); Little Sproul Creel (40.0897, −123.8585); Low Gap Creek (39993, −123.767); McCoy Creek (399598, −123.7542); Michael's Creek (397642, −123.7175); Miller Creek (40.1215, −123.916); Moody Creek (399531, −123.8819); Mud Creek (398232, −123.6107); Piercy Creek (399706, −123.8189); Pollock Creek (40.0822, −123.9184); Rattlesnake Creek (397974, −123.5426); Redwood Creek (397721, −123.7651); Redwood Creek (40.0974, −123.9104); Seely Creek (40.1494, −123.8825); Somerville Creek (40.0896, −123.8913); South Fork Redwood Creek (397663, −123.7579); Spoul Creek (40.0125, −123.8585); Standley Creek (399479, −123.8083); Tom Long Creek (40.0315, −123.6891); Twin Rocks Creek (398269, −123.5543); Warden Creek (40.0625, −123.8546); West Fork Sproul Creek (40.0386, −123.9015); Wildcat Creek (399049, −123.7739); Wilson Creek (39841, −123.6452); Unnamed Tributary (40.1136, −123.9359); Unnamed Tributary (40.0538, −123.8293).

(viii) Laytonville Hydrologic Sub-area 111133. Outlet(s) = South Fork Eel River (Lat 39.7665, Long −123.6484)) upstream to endpoint(s) in: Bear Creek (39.6413, −123.5797); Cahto Creek (39.6624, −123.5453); Dutch Charlie Creek (39.6892, −123.6818); Grub Creek (39.7777, −123.5809); Jack of Hearts Creek (39.7244, −123.6802); Kenny Creek (39.6733, −123.6082); Mud Creek (39.6561, −123.592); Redwood Creek (39.6738, −123.6631); Rock Creek (39.6931, −123.6204); South Fork Eel River (39.6271, −123.5389); Streeter Creek (39.7328, −123.5542); Ten Mile Creek (39.6651, −123.451).

(ix) Sequoia Hydrologic Sub-area 111141. Outlet(s) = South Fork Eel River (Lat 40.3558, Long −123.9194) upstream to endpoint(s) in: Brock Creek (40.2411, −123.7248); Dobbyn Creek (40.2216, −123.6029); Hoover Creek (40.2312, −123.5792); Line Gulch (40.1655, −123.4831); North Fork Dobbyn Creek (40.2669, −123.5467); South Fork Dobbyn Creek (40.1723, −123.5112); South Fork Eel River (40.35, −123.9305); Unnamed Tributary (40.3137, −123.8333); Unnamed Tributary (40.2715, −123.549).

(x) Spy Rock Hydrologic Sub-area 111142. Outlet(s) = Eel River (Lat 40.1736, Long −123.6043) upstream to endpoint(s) in: Bell Springs Creek (39.9399, −123.5144); Burger Creek (39.6943, −123.413); Chamise Creek (40.0563, −123.5479); Jewett Creek (40.1195, −123.6027); Kekawaka Creek (40.0686, −123.4087); North Fork Eel River (39.9567, −123.4375); Woodman Creek (39.7639, −123.4338).

(xi) North Fork Eel River Hydrologic Sub-area 111150. Outlet(s) = North Fork Eel River (Lat 39.9567, Long −123.4375) upstream to endpoint(s) in: North Fork Eel River (39.9370, −123.3758).

(xii) Outlet Creek Hydrologic Sub-area 111161. Outlet(s) = Outlet Creek (Lat 39.6263, Long −123.3453) upstream to endpoint(s) in: Baechtel Creek (39.3688, −123.4028); Berry Creek (39.4272, −123.2951); Bloody Run (39.5864, −123.3545); Broaddus Creek (39.3907, −123.4163); Davis Creek (39.3701, −123.3007); Dutch Henry Creek (39.5788, −123.4543); Haehl Creek (39.3795, −123.3393); Long Valley Creek (39.6091, −123.4577); Outlet Creek (39.4526, −123.3338); Ryan Creek (39.4803, −123.3642); Upp Creek (39.4276, −123.3578); Upp Creek (39.4276, −123.3578); Willits Creek (39.4315, −123.3794).

(xiii) Tomki Creek Hydrologic Sub-area 111162. Outlet(s) = Eel River (Lat 39.7138, Long −123.3531) upstream to endpoint(s) in: Cave Creek (39.3925, −123.2318); Long Branch Creek (39.4074, −123.1897); Middle Fork Eel River (39.7136, −123.353); Outlet Creek (39.6263, −123.3453); Rocktree Creek (39.4533, −123.3079); Salmon Creek (39.4461, −123.2104); Scott Creek (39.456, −123.2297); String Creek (39.4855, −123.2891); Tomki Creek (39.549, −123.3613); Wheelbarrow Creek (39.5029, −123.3287).

(xiv) Lake Pillsbury Hydrologic Sub-area 111163. Outlet(s) = Eel River (Lat 39.3860, Long −123.1163) upstream to endpoint(s) in: Eel River (39.4078, −122.958).

(xv) Round Valley Hydrologic Sub-area 111172. Outlet(s) = Mill Creek (Lat 39.7398, Long −123.1431); Williams (39.8147, −123.1335) upstream to endpoint(s) in: Mill Creek (39.8456, −123.2822); Murphy Creek (39.8804, −123.1636); Poor Mans Creek (39.8179, −123.1833); Short Creek (39.8645, −123.2242); Turner Creek (39.7238, −123.2191); Williams Creek (39.8596, −123.1341).

(6) Cape Mendocino Hydrologic Unit 1112—*(i) Capetown Hydrologic Sub-area 111220.* Outlet(s) = Bear River (Lat 40.4744, Long −124.3881) upstream to endpoint(s) in: Bear River (40.3591, −124.0536); South Fork Bear River (40.4271, −124.2873).

(ii) Mattole River Hydrologic Sub-area 111230. Outlet(s) = Mattole River (Lat 40.2942, Long −124.3536) upstream to endpoint(s) in: Bear Creek (40.1262, −124.0631); Blue Slide Creek (40.1286, −123.9579); Bridge Creek (40.0503, −123.9885); Conklin Creek (40.3169, −124.229); Dry Creek (40.2389, −124.0621); East Fork Honeydew Creek (40.1633, −124.0916); East Fork of the North Fork Mattole River (40.3489, −124.2244); Eubanks Creek (40.0893, −123.9743); Gilham Creek (40.2162, −124.0309); Grindstone Creek (40.1875, −124.0041); Honeydew Creek (40.1942, −124.1363); Mattole Canyon (40.1833, −123.9666); Mattole River (39.9735, −123.9548); McGinnis Creek (40.3013, −124.2146); McKee Creek (40.0674, −123.9608); Mill Creek (40.0169, −123.9656); North Fork Mattole River (40.3729, −124.2461); North Fork Bear Creek (40.1422, −124.0945); Oil Creek (40.3008, −124.1253); Rattlesnake Creek (40.2919, −124.1051); South Fork Bear Creek (40.0334, −124.0232); Squaw Creek (40.219, −124.1921); Thompson Creek (39.9969, −123.9638); Unnamed (40.1522, −124.0989); Upper North Fork Mattole River (40.2907, −124.1115); Westlund Creek (40.2333, −124.0336); Woods creek (40.2235, −124.1574); Yew Creek (40.0019, −123.9743).

(7) Mendocino Coast Hydrologic Unit 1113—*(i) Wages Creek Hydrologic Sub-area 111312.* Outlet(s) = Wages Creek (Lat 39.6513, Long −123.7851)

upstream to endpoint(s) in: Wages Creek (39.6393, −123.7146).

(ii) Ten Mile River Hydrologic Sub-area 111313. Outlet(s) = Ten Mile River (Lat 39.5529, Long −123.7658) upstream to endpoint(s) in: Middle Fork Ten Mile River (39.5397, −123.5523); Little North Fork Ten Mile River (39.6188, −123.7258); Ten Mile River (39.5721, −123.7098); South Fork Ten Mile River (39.4927, −123.6067); North Fork Ten Mile River (39.5804, −123.5735).

(iii) Noyo River Hydrologic Sub-area 111320. Outlet(s) = Noyo River (Lat 39.4274, Long −123.8096) upstream to endpoint(s) in: North Fork Noyo River (39.4541, −123.5331); Noyo River (39.431, −123.494); South Fork Noyo River (39.3549, −123.6136).

(iv) Big River Hydrologic Sub-area 111330. Outlet(s) = Big River (Lat 39.3030, Long −123.7957) upstream to endpoint(s) in: Big River (39.3095, −123.4454).

(v) Albion River Hydrologic Sub-area 111340. Outlet(s) = Albion River (Lat 39.2253, Long −123.7679) upstream to endpoint(s) in: Albion River (39.2644, −123.6072); North Fork Albion River (39.2827, −123.607).

(vi) Navarro River Hydrologic Sub-area 111350. Outlet(s) = Navarro River (Lat 39.1921, Long −123.7611) upstream to endpoint(s) in: Navarro River (39.0534); Rancheria Creek (38.9689, −123.4169).

(vii) Garcia River Hydrologic Sub-area 111370. Outlet(s) = Garcia River (Lat 38.9455, Long −123.7257) upstream to endpoint(s) in: Garcia River (38.9160, −123.4900).

(8) Russian River Hydrologic Unit 1114—*(i) Guerneville Hydrologic Sub-area 111411.* Outlet(s) = Russian River (Lat 38.4507, Long −123.1289) upstream to endpoint(s) in: Austin Creek (38.5099, −123.0681); Mark West Creek (38.4961, −122.8489).

(ii) Austin Creek Hydrologic Sub-area 111412. Outlet(s) = Austin Creek (Lat 38.5099, Long −123.0681) upstream to endpoint(s) in: Austin Creek (38.5326, −123.0844).

(iii) Mark West Hydrologic Sub-area 111423. Outlet(s) = Mark West Creek (Lat 38.4961, Long −122.8489) upstream to endpoint(s) in: Mark West Creek (38.4526, −122.8347).

(iv) Warm Springs Hydrologic Sub-area 111424. Outlet(s) = Dry Creek (Lat 38.5861, Long −122.8573) upstream to endpoint(s) in: Dry Creek (38.7179, −123.0075).

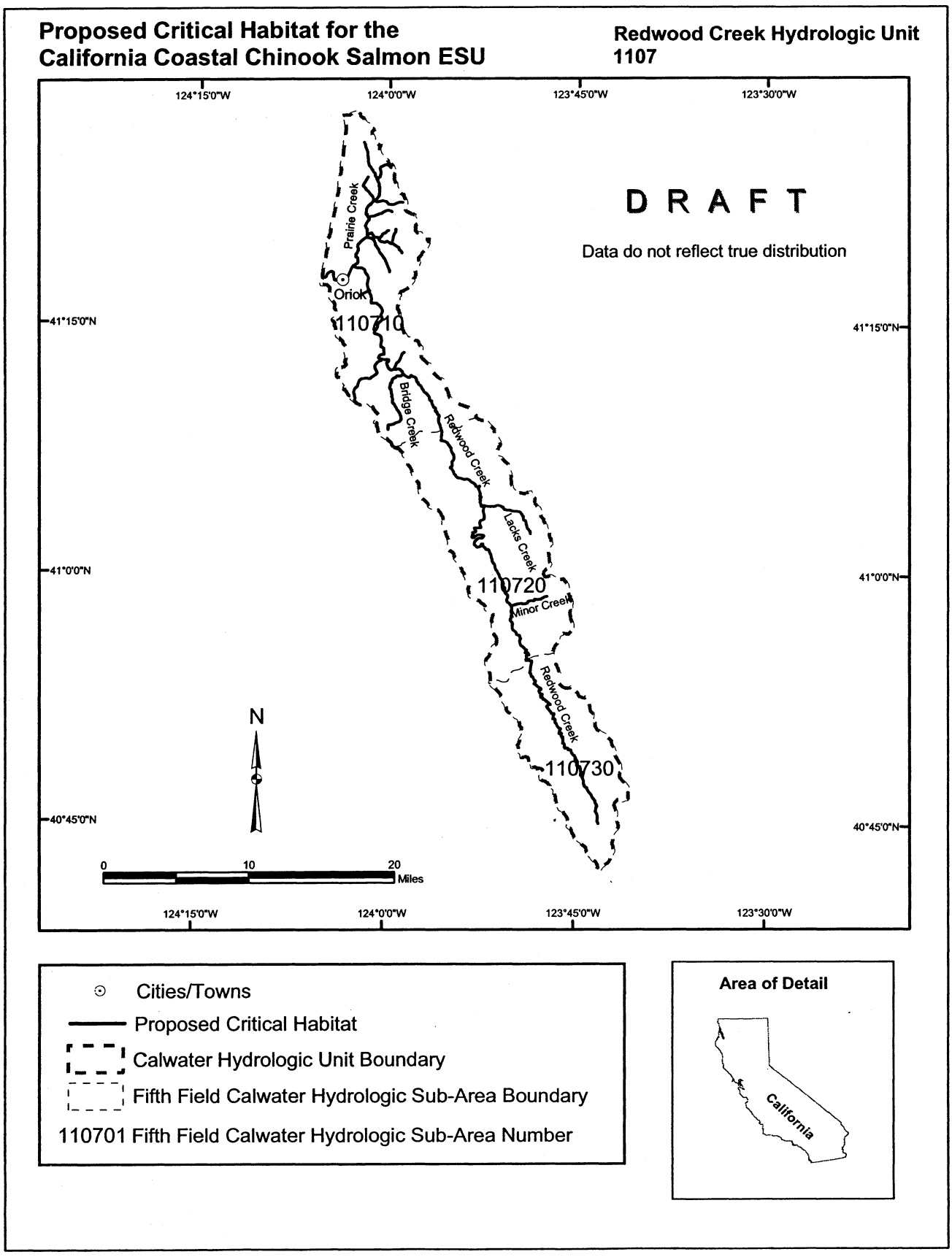
(v) Geyserville Hydrologic Sub-area 111425. Outlet(s) = Russian River (Lat 38.6132, Long −122.8321) upstream.

(vi) Ukiah Hydrologic Sub-area 111431. Outlet(s) = Russian River (Lat 38.8828, Long −123.0557) upstream to endpoint(s) in: Feliz Creek (38.9941, −123.1779).

(vii) Forsythe Creek Hydrologic Sub-area 111433. Outlet(s) = Russian River (Lat 39.2257, Long −123.2012) upstream to endpoint(s) in: Forsythe Creek (39.2780, −123.2608); Russian River (39.3599, −123.2326).

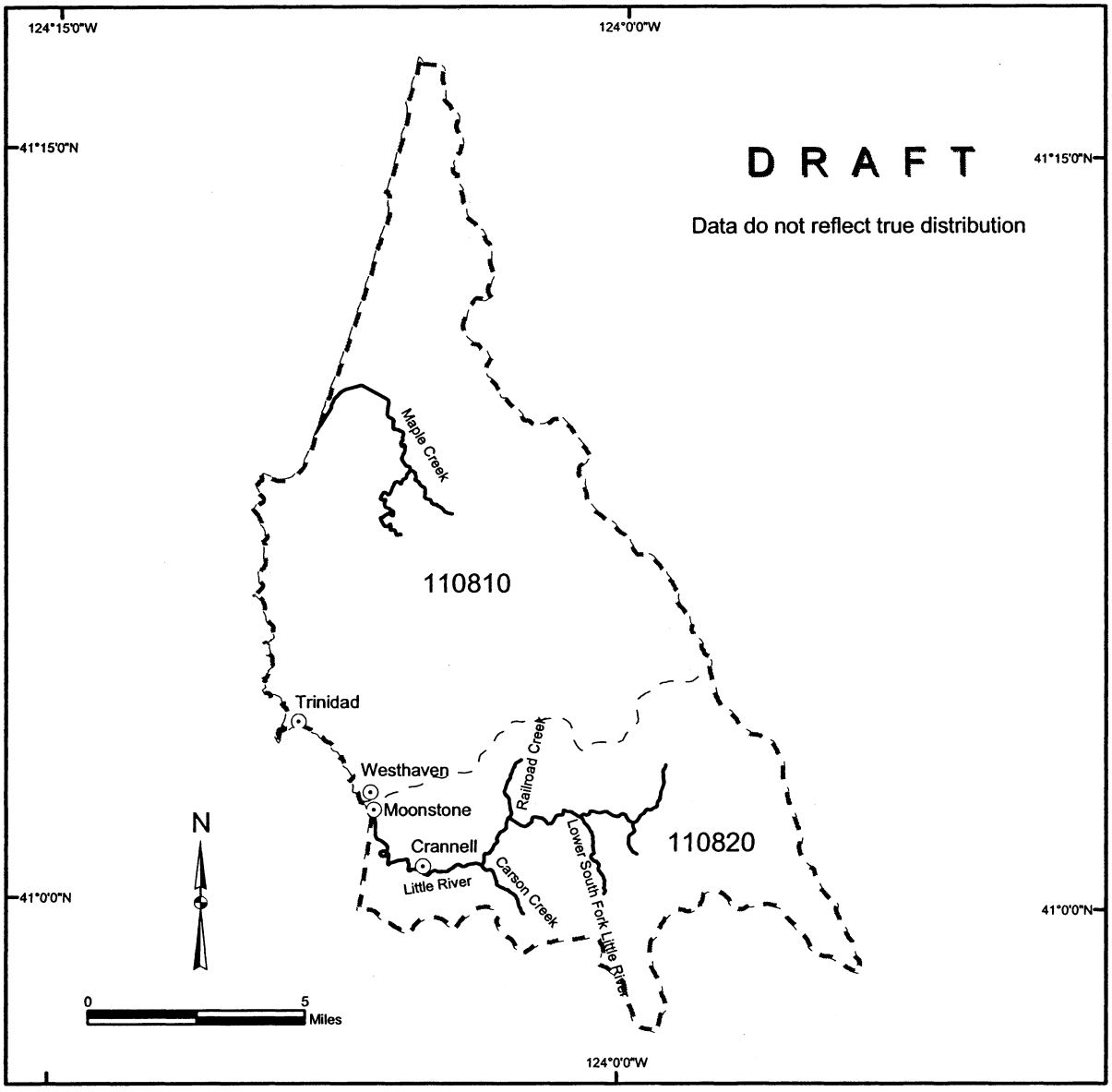
(9) Maps of proposed critical habitat for the California Coast chinook salmon ESU follow:

BILLING CODE 3510–22–P


Proposed Critical Habitat for the California Coastal Chinook Salmon ESU
Redwood Creek Hydrologic Unit 1107
124°15'0"W
124°0'0"W
123°45'0"W
123°30'0"W
41°15'0"N
41°0'0"N
40°45'0"N
DRAFT
Data do not reflect true distribution
Prairie Creek
Orick
110710
Bridge Creek
Redwood Creek
Lacks Creek
110720
Minor Creek
Redwood Creek
110730
N
0
10
20
Miles
Cities/Towns
Proposed Critical Habitat
Calwater Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California

Proposed Critical Habitat for the California Coastal Chinook Salmon ESU

Trinidad Hydrologic Unit 1108



⊙ Cities/Towns

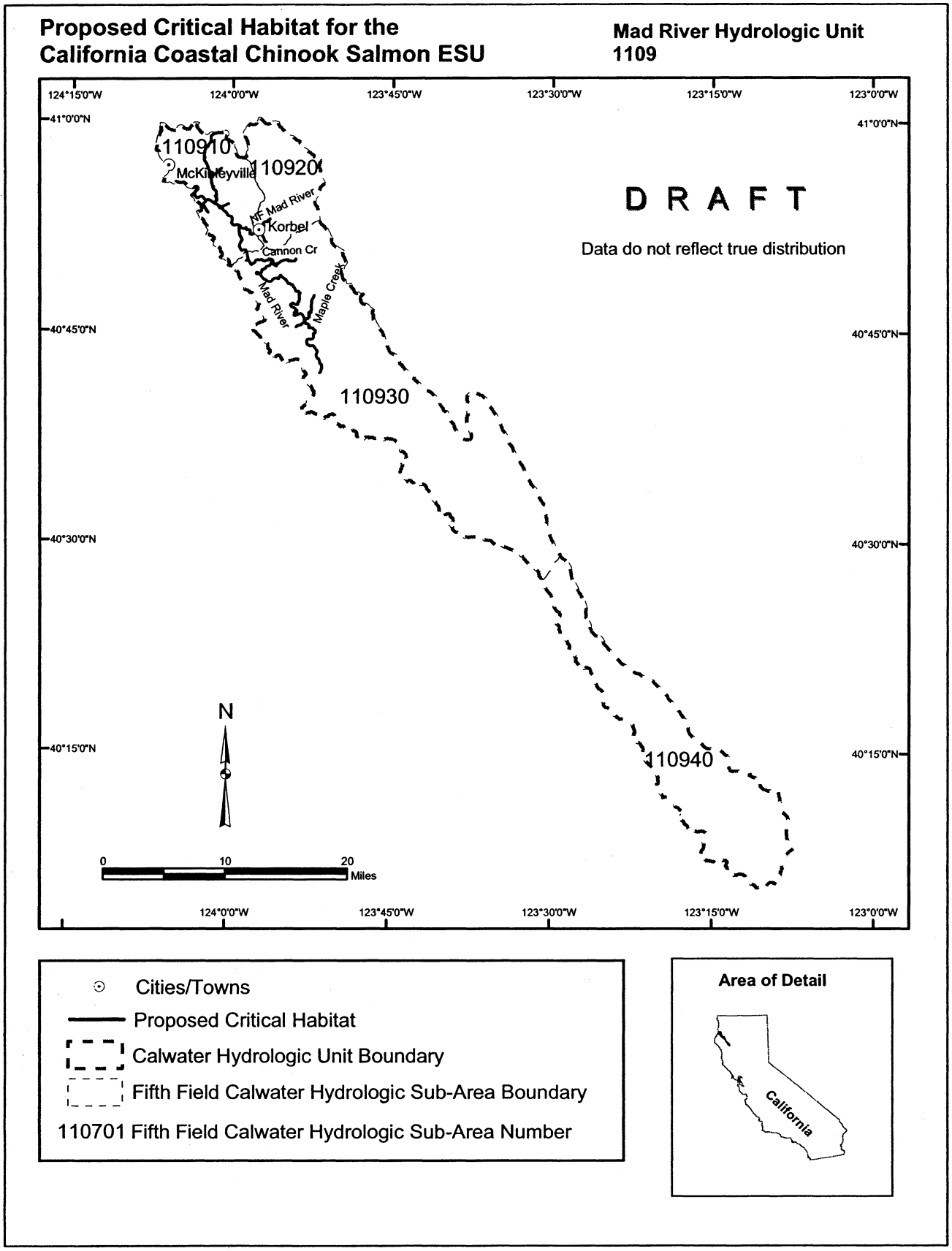
Proposed Critical Habitat

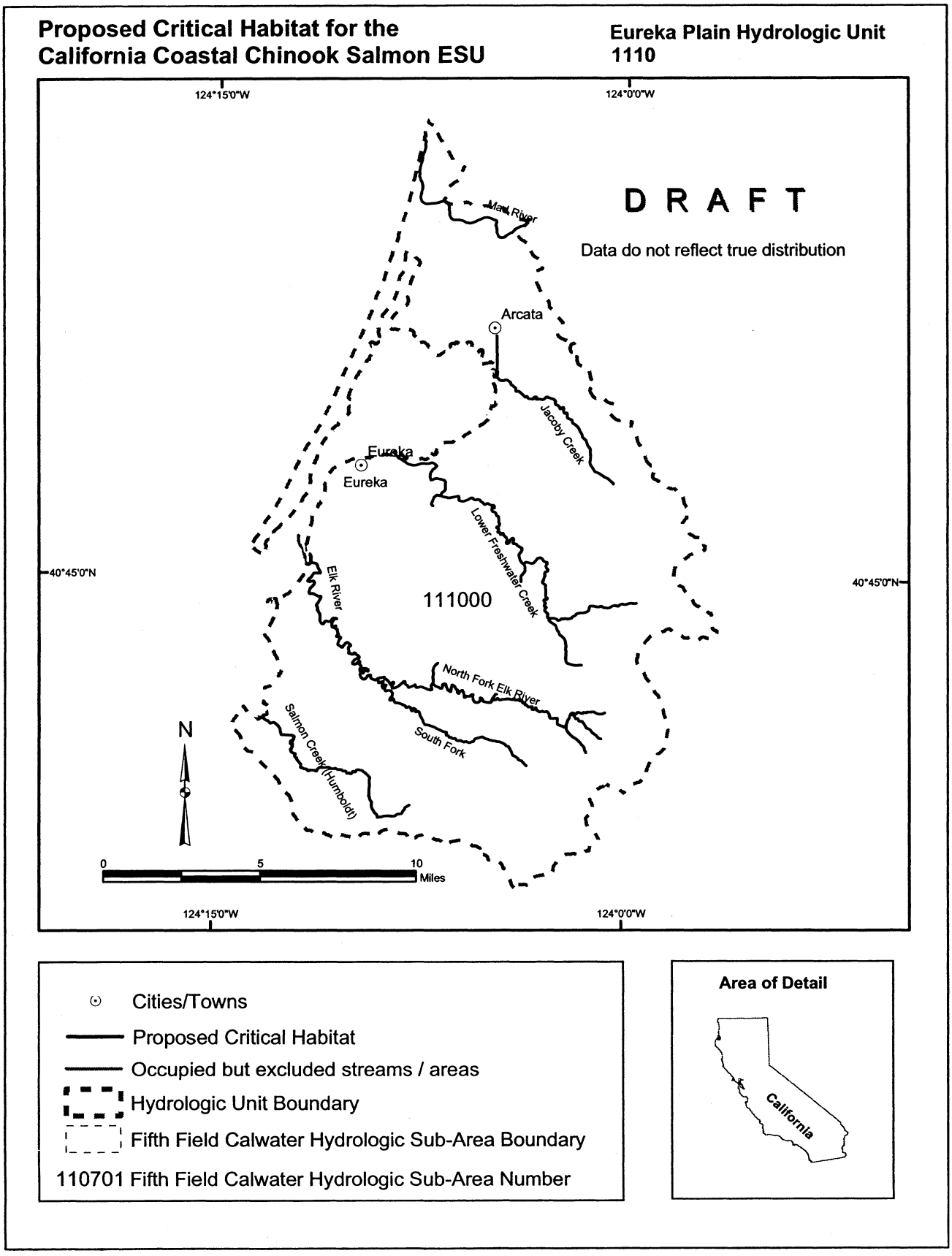
Calwater Hydrologic Unit Boundary

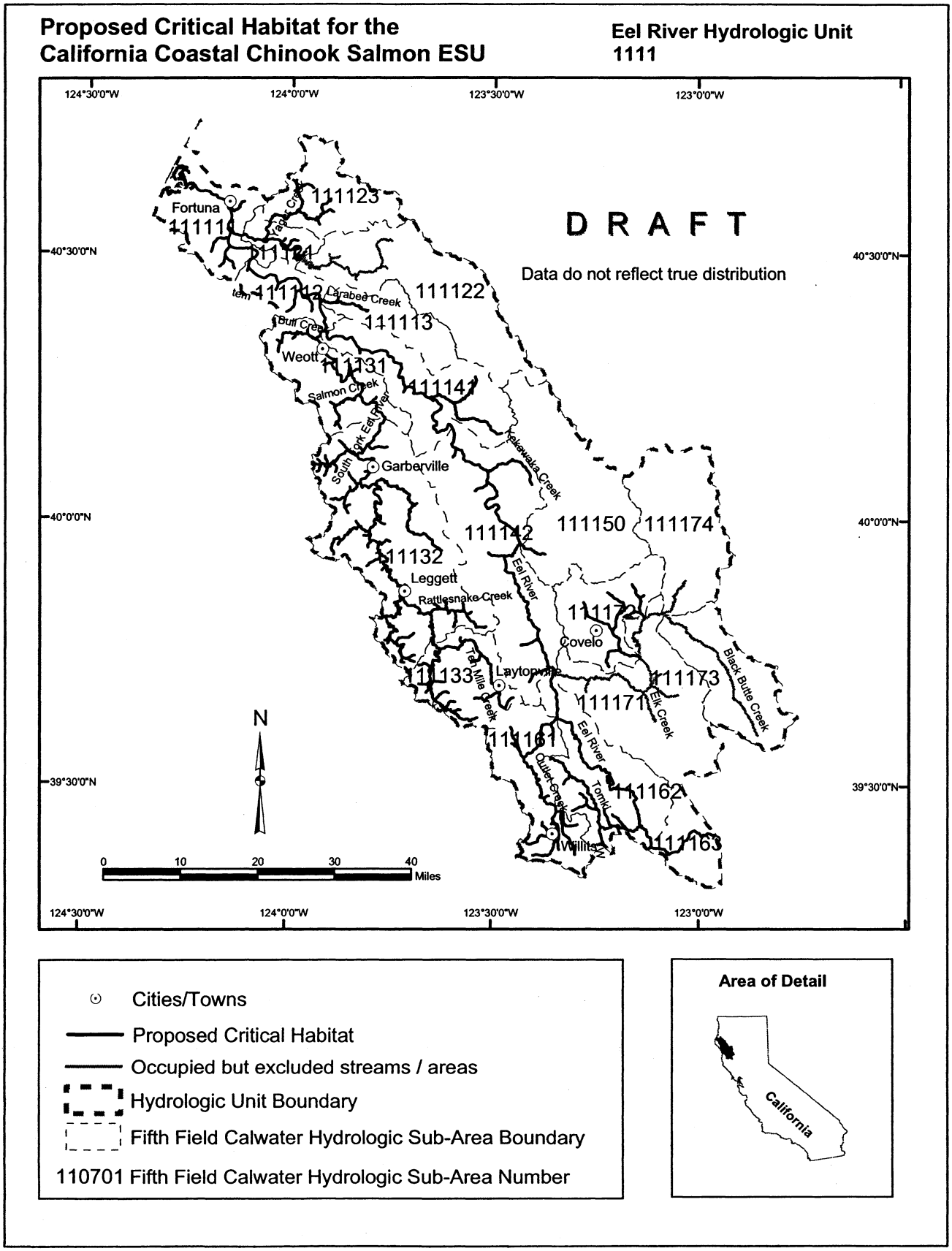
Fifth Field Calwater Hydrologic Sub-Area Boundary

110701 Fifth Field Calwater Hydrologic Sub-Area Number

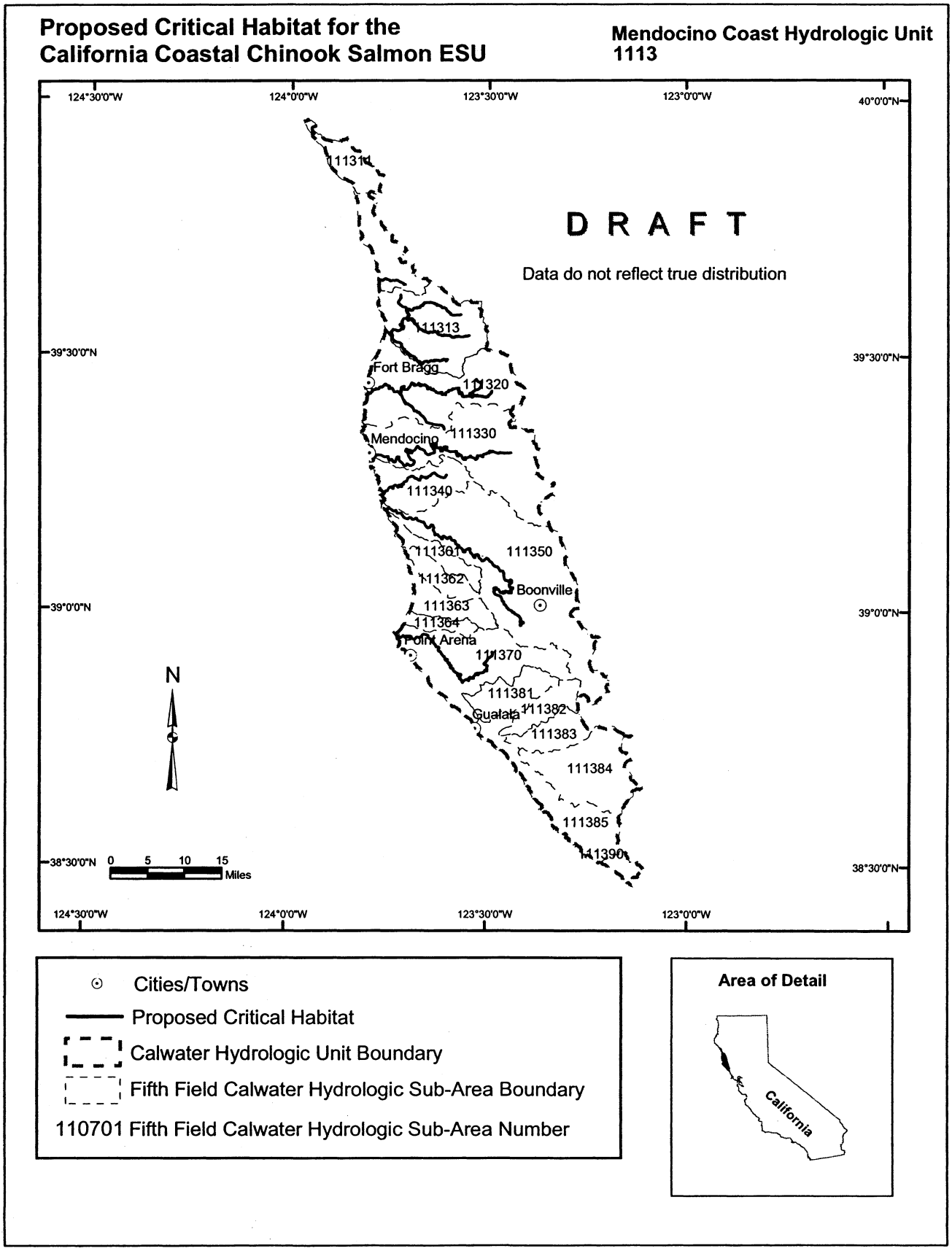
Area of Detail

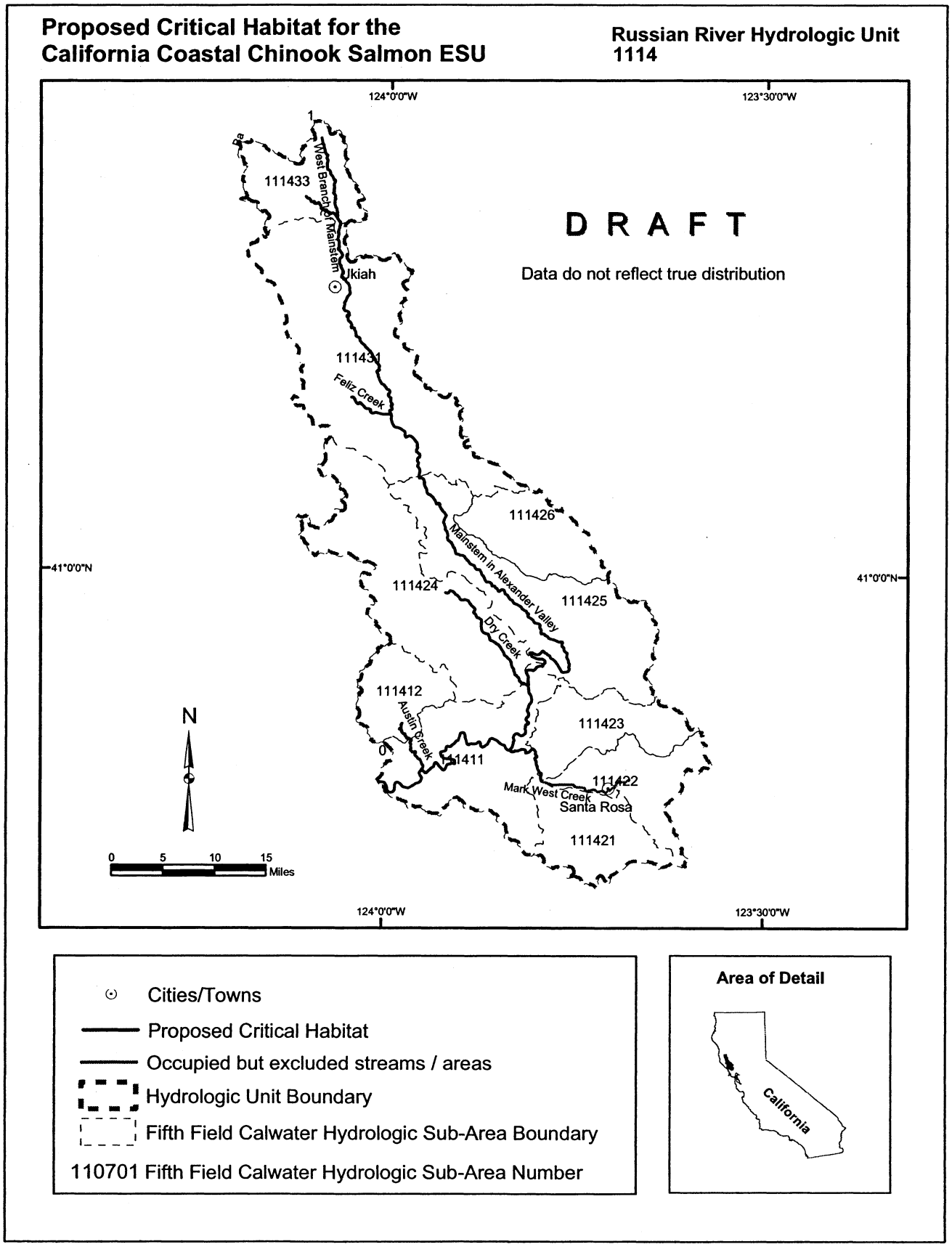

Proposed Critical Habitat for the California Coastal Chinook Salmon ESU
Mad River Hydrologic Unit 1109
124°15'0"W
124°0'0"W
123°45'0"W
123°30'0"W
123°15'0"W
123°0'0"W
41°0'0"N
40°45'0"N
40°30'0"N
40°15'0"N
110910
110920
110930
110940
McKinleyville
NF Mad River
Korbel
Cannon Cr
Mad River
Maple Creek
DRAFT
Data do not reflect true distribution
N
0
10
20
Miles
Cities/Towns
Proposed Critical Habitat
Calwater Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California


Proposed Critical Habitat for the California Coastal Chinook Salmon ESU
Eureka Plain Hydrologic Unit 1110
124°15'0"W
124°0'0"W
DRAFT
Data do not reflect true distribution
Mad River
Arcata
Jacoby Creek
Eureka
Eureka
Lower Freshwater Creek
40°45'0"N
Elk River
111000
North Fork Elk River
South Fork
Salmon Creek (Humboldt)
N
0
5
10
Miles
Cities/Towns
Proposed Critical Habitat
Occupied but excluded streams / areas
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California


Proposed Critical Habitat for the California Coastal Chinook Salmon ESU
Eel River Hydrologic Unit 1111
DRAFT
Data do not reflect true distribution
124°30'0"W
124°0'0"W
123°30'0"W
123°0'0"W
40°30'0"N
40°0'0"N
39°30'0"N
Fortuna
Garberville
Weott
Leggett
Laytonville
Covelo
Willits
111123
111111
111121
111122
111112
111113
111131
111141
111142
111150
111174
111132
111172
111133
111173
111171
111161
111162
111163
Eel River
Salmon Creek
South Fork Eel River
Rattlesnake Creek
Tan Mile Creek
Elk Creek
Black Butte Creek
Outlet Creek
Tomki
Larabee Creek
Buff Creek
Yakewalla Creek
N
0 10 20 30 40
Miles
Cities/Towns
Proposed Critical Habitat
Occupied but excluded streams / areas
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California


Proposed Critical Habitat for the California Coastal Chinook Salmon ESU
Cape Mendocino Hydrologic Unit 1112
124°30'0"W
124°0'0"W
40°30'0"N
40°0'0"N
111210
111220
111230
DRAFT
Data do not reflect true distribution
Bear River mainstem
North Fork
Petrolia
Mattole River
Honeydew
Squaw Creek
South Fork Bear Creek
Whitethorn
N
0 5 10 15 Miles
Cities/Towns
Proposed Critical Habitat
Calwater Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California


Proposed Critical Habitat for the California Coastal Chinook Salmon ESU
Mendocino Coast Hydrologic Unit 1113
124°30'0"W
124°0'0"W
123°30'0"W
123°0'0"W
40°0'0"N
39°30'0"N
39°0'0"N
38°30'0"N
DRAFT
Data do not reflect true distribution
111310
11313
Fort Bragg
111320
Mendocino
111330
111340
111361
111350
111362
Boonville
111363
111364
Point Arena
111370
111381
Gualala
111382
111383
111384
111385
111390
N
0 5 10 15
Miles
Cities/Towns
Proposed Critical Habitat
Calwater Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California



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(g) *Northern California O. mykiss (Oncorhynchus mykiss).* Critical habitat is proposed to include the areas defined in the following units:

(1) Redwood Creek Hydrologic Unit 1107—*(i) Orick Hydrologic Sub-area 110710.* Outlet(s) = Boat Creek (Lat 41.4059, Long —124.0675); Home Creek (41.4027, −124.0683); Redwood Creek (41.2923, −124.0917); Squashan Creek (41.389, −124.0703) upstream to endpoint(s) in: Boat Creek (41.4110, −124.0583); Bond Creek (41.2326, −124.0262); Boyes Creek (41.3701, −124.9891); Bridge Creek (41.1694, −123.9964); Brown Creek (41.3986, −124.0012); Cloquet Creek (41.2456, −124.0116); Cole Creek (41.2187, −124.0087); Copper Creek (41.1516, −123.9258); Dolason Creek (41.1969, −123.9667); Elam Creek (41.2613, −124.0321); Emerald Creek (41.2164, −123.9808); Forty Four Creek (41.2187, −124.0195); Gans South Creek (41.2617, −124.0157); Godwood Creek (41.3787, −124.0354); Hayes Creek (41.2889, −124.0295); Home Creek (41.3951, −124.0386); Larry Dam Creek (41.3441, −123.9966); Little Lost Man Creek (41.3078, −124.0084); Lost Man Creek (41.3187, −123.9892); May Creek (41.3521, −124.0164); McArthur Creek (41.2702, −124.0427); Miller Creek (41.2290, −124.0116); North Fork Lost Man Creek (41.3405, −123.9859); Oscar Larson Creek (41.2559, −123.9943); Prairie Creek (41.4440, −124.0411); Redwood Creek (41.1367, −123.9309); Skunk Cabbage Creek (41.3211, −124.0802); Slide Creek (41.1736, −123.9450); Squashan Creek (41.3739, −124.0440); Streelow Creek (41.3622, −124.0472); Tom McDonald Creek (41.1933, −124.0164); Unnamed Tributary (41.3619, −123.9967); Unnamed Tributary (41.3424, −124.0572).

(ii) Beaver Hydrologic Sub-area 110720. Outlet(s) = Redwood Creek (Lat 41.1367, Long —123.9309) upstream to endpoint(s) in: Beaver Creek (41.0208, −123.8608); Captain Creek (40.9199, −123.7944); Cashmere Creek (41.0132, −123.8862); Coyote Creek (41.1249, −123.8796); Devils Creek (41.1224, −123.9384); Garcia Creek (41.0180, −123.8923); Garrett Creek (41.0904, −123.8712); Karen Court Creek (41.0368, −123.8953); Lacks Creek (41.0306, −123.8096); Loin Creek (40.9465, −123.8454); Lupton Creek (40.9058, −123.8286); Mill Creek (41.0045, −123.8525); Minor Creek (40.9706, −123.7899); Molasses Creek (40.9986, −123.8490); Moon Creek (40.9807, −123.8368); Panther Creek (41.0732, −123.9275); Pilchuck Creek (41.9986, −123.8710); Roaring Gulch (41.0319, −123.8674); Santa Fe Creek (40.9368, −123.8397); Sweathouse Creek (40.9332, −123.8131); Toss-Up Creek (40.9845, −123.8656); Wiregrass Creek (40.9652, −123.8553).

(iii) Lake Prairie Hydrologic Sub-area 110730. Outlet(s) = Redwood Creek (Lat 40.9070, Long —123.8170) upstream to endpoint(s) in: Bradford Creek (40.7812, −123.7215); Cut-Off Meander (40.8507, −123.7729); Emmy Lou Creek (40.8655, −123.7771); Gunrack Creek (40.8391, −123.7650); High Prairie Creek (40.8191, −123.7723); Jena Creek (40.8742, −123.8065); Lake Prairie Creek (40.7984, −123.7558); Lupton Creek (40.9069, −123.8172); Minon Creek (40.8140, −123.7372); Noisy Creek (40.8613, −123.8044); Pardee Creek (40.7779, −123.7416); Redwood Creek (40.7432, −123.7206); Simion Creek (40.8241, −123.7560); Six Rivers Creek (40.8352, −123.7842); Smokehouse Creek (40.7405, −123.7278); Snowcamp Creek (40.7415, −123.7296); Squirrel Trail Creek (40.8692, −123.7844); Twin Lakes Creek (40.7369, −123.7214); Panther Creek (40.8019, −123.7094); Windy Creek (40.8866, −123.7956).

(2) Trinidad Hydrologic Unit 1108—*(i) Big Lagoon Hydrologic Sub-area 110810.* Outlet(s) = Maple Creek (Lat 41.1555, Long —124.1380); McDonald Creek (41.2521, −124.0919) upstream to endpoint(s) in: Beach Creek (41.0716, −124.0239); Clear Creek (41.1031, −124.0030); Diamond Creek (41.1571, −124.0926); Maple Creek (41.0836, −123.9790); McDonald Creek (41.1850, −124.0773); M-Line Creek (41.0752, −124.0787); North Fork McDonald Creek (41.2107, −124.0664); North Fork of Maple Creek (41.1254, −124.0539); Pitcher Creek (41.1521, −124.0897); South Fork Maple Creek (41.1003, −124.1119); Tom Creek (41.1773, −124.0966); Unnamed Tributary (41.1004, −124.0155); Unnamed Tributary (41.0780, −124.0676); Unnamed Tributary (41.1168, −124.0886); Unnamed Tributary (41.0851, −124.0966); Unnamed Tributary (41.1132, −124.0827); Unnamed Tributary (41.0749, −124.0889); Unnamed Tributary (41.1052, −124.0675); Unnamed Tributary (41.0714, −124.0611); Unnamed Tributary (41.0948, −124.0016).

(ii) Little River Hydrologic Sub-area 110820. Outlet(s) = Little River (Lat 41.0277, Long —124.1112) upstream to endpoint(s) in: South Fork Little River (40.9899, −124.0394); Freeman Creek (41.0283, −124.0585); Little River (41.0530, −123.9689); Lower South Fork Little River (40.9893, −124.0007); Railroad Creek (41.0468, −124.0466); Strawberry Creek (40.9963, −124.1155); Unnamed Tributary (41.0356, −123.9958); Unnamed Tributary (41.0407, −124.0598); Unnamed Tributary (41.0068, −123.9830); Unnamed Tributary (41.0365, −124.0361); Unnamed Tributary (41.0444, −124.0194); Unnamed Tributary (41.0431, −124.0125); Upper South Fork Little River (41.0131, −123.9852).

(3) Mad River Hydrologic Unit 1109—*(i) Blue Lake Hydrologic Sub-area 110910.* Outlet(s) = Mad River (Lat 40.9139, Long —124.0642); Strawberry Creek (40.9964, −124.1155); Widow White Creek (40.9635, −124.1253) upstream to endpoint(s) in: Boundary Creek (40.8395, −123.9920); Grassy Creek (40.9314, −124.0188); Hall Creek (40.9162, −124.0141); Kelly Creek (40.8656, −124.0260); Leggit Creek (40.8808, −124.0269); Lindsay Creek (40.9838, −124.0283); Mather Creek (40.9796, −124.0526); Mill Creek (40.9296, −124.1037); Mill Creek (40.8521, −123.9617); North Fork Mad River (40.8687, −123.9649); Norton Creek (40.9572, −124.1003); Palmer Creek (40.8633, −124.0193); Puter Creek (40.8474, −123.9966); Quarry Creek (40.8526, −124.0098); Squaw Creek (40.9426, −124.0202); Strawberry Creek (40.9761, −124.0630); Unnamed Tributary (40.9624, −124.0179); Unnamed Tibitary (40.9713, −124.0477); Unnamed Tributary (40.9549, -124.0554); Unnamed Tributary (40.9672, −124.0218); Warren Creek (40.8860, −124.0351); Widow White Creek (40.9522, −124.0784).

(ii) North Fork Mad River Hydrologic Sub-area 110920. Outlet(s) = North Fork Mad River (Lat 40.8687, Long −123.9649) upstream to endpoint(s) in: Bald Mountain Creek (40.8922, −123.9097); Denman Creek (40.9293, −123.9429); East Fork North Fork (40.9702, −123.9449); Gosinta Creek (40.9169, −123.9420); Hutchery Creek (40.8712, −123.9450); Jackson Creek (40.9388, −123.9462); Krueger Creek (40.9505, −123.9611); Long Prairie Creek (40.9235, −123.8945); Mule Creek (40.9416, −123.9309); North Fork Mad River (40.9918, −123.9610); Pine Creek (40.9299, −123.9114); Pollock Creek (40.9081, −123.9071); Sullivan Gulch (40.8512, −123.9401); Tyson Creek (40.9559, −123.9738); Unnamed Tributary (40.9879, −123.9511); Unnamed Tributary (40.9906, −123.9540); Unnamed Tributary (40.9294, −123.8842); Unnamed Tributary (40.9866, −123.9788); Unnamed Tributary (40.9927, −123.9736).

(iii) Butler Valley Hydrologic Sub-area 110930. Outlet(s) = Mad River (Lat 40.8449, Long −123.9807) upstream to endpoint(s) in: Bear Creek (40.5468, −123.6728); Black Creek (40.7521,

−123.9080); Black Dog Creek (40.8334, −123.9805); Blue Slide Creek (40.7333, −123.9225); Boulder Creek (40.7634, −123.8667); Bug Creek (40.6587, −123.7356); Cannon Creek (40.8535, −123.8850); Coyote Creek (40.6147, −123.6488); Devil Creek (40.8032, −123.9175); Dry Creek (40.8218, −123.9751); East Creek (40.5403, −123.5579); Maple Creek (40.7933, −123.8353); Pilot Creek (40.5950, −123.5888); Simpson Creek (40.8138, −123.9156); Unnamed Tributary (40.7306, −123.9019); Unnamed Tributary (40.7739, −123.9255); Unnamed Tributary (40.7744, −123.9137); Unnamed Tributary (40.8029, −123.8716); Unnamed Tributary (40.8038, −123.8691); Unnamed Tributary (40.8363, −123.8973).

(4) Eureka Plain Hydrologic Unit 1110—*(i) Eureka Plain Hydrologic Sub-area 111000.* Outlet(s) = Elk River (Lat 40.7568, Long −124.1948); Freshwater Creek (40.8088, −124.1442); Jacoby Creek (40.8436, −124.0834); Mad River (40.9560, −124.1278); Rocky Gulch (40.8309, −124.0813); Salmon Creek (40.6868, −124.2194); Washington Gulch (40.8317, −124.0805) upstream to endpoint(s) in: Bridge Creek (40.6958, −124.0805); Browns Gulch (40.7038, −124.1074); Clapp Gulch (40.6967, −124.1684); Cloney Gulch (40.7826, −124.0347); Doe Creek (40.6964, −124.0201); Dunlap Gulch (40.7076, −124.1182); Falls Gulch (40.7655, −124.0261); Fay Slough (40.8033, −124.0574); Freshwater Creek (40.7385, −124.0035); Golf Course Creek (40.8406, −124.0402); Graham Gulch (40.7540, −124.0228); Guptil Gulch (40.7530, −124.1202); Henderson Gulch (40.7357, −124.1394); Jacoby Creek (40.7951, −124.0087); Lake Creek (40.6848, −124.0831); Line Creek (40.6578, −124.0460); Little Freshwater Creek (40.7371, −124.0649); Little North Fork Elk River (40.6972, −124.0100); Little South Fork Elk River (40.6555, −124.0877); Martin Slough (40.7679, −124.1578); McCready Gulch (40.7824, −124.0441); McWinney Creek (40.6968, −124.0616); Morrison Gulch (40.8105, −124.0437); North Branch of the North Fork Elk River (40.6879, −124.0130); North Fork Elk River (40.6794−123.9834); Railroad Gulch (40.6955, −124.1545); Rocky Gulch (40.8079, −124.0528); Ryan Creek (40.7352, −124.0996); Salmon Creek (40.6438, −124.1318); South Branch of the North Fork Elk River (40.6700, −124.0251); South Fork Freshwater Creek (40.7110, −124.0367); South Fork Elk River (40.6437, −124.0388); Swain Slough (40.7524, −124.1825); Tom Gulch (40.6794, −124.1452); Unnamed Tributary (40.7850, −124.0561); Unnamed Tributary (40.7496, −124.1651); Unnamed Tributary (40.7785,—124.1081); Unnamed Tributary (40.7667, −124.1054); Unnamed Tributary (40.7559, −124.0870); Unnamed Tributary (40.7952, −124.0568); Unnamed Tributary (40.7408, −124.1118); Unnamed Tributary (40.7186, −124.1385); Unnamed Tributary (40.7224, −124.1038); Unnamed Tributary (40.8194, −124.0305); Unnamed Tributary (40.8106, −124.0083); Unnamed Tributary (40.7585, −124.1456); Unnamed Tributary (40.7457, −124.1138); Unnamed Tributary (40.8085, −124.0713); Unnamed Tributary (40.6634, −124.1193); Unnamed Tributary (40.7576, −124.1576); Washington Gulch (40.8116, −124.0491).

(5) Eel River Hydrologic Unit 1111—*(i) Ferndale Hydrologic Sub-area 111111.* Outlet(s) = Eel River (Lat 40.6275, Long −124.2520) upstream to endpoint(s) in: Atwell Creek (40.4824, −124.1498); Dean Creek (40.4847, −124.1217); Horse Creek (40.5198, −124.1702); House Creek (40.4654, −124.1916); Howe Creek (40.4956, −124.1690); Nanning Creek (40.4914, −124.0652); North Fork Strongs Creek (40.6077, −124.1047); Price Creek (40.5101, −124.2731); Rohner Creek (40.6151, −124.1408); Strongs Creek (40.5999, −124.0985); Sweet Creek (40.4900, −124.2007); Van Duzen River (40.5337, −124.1262).

(ii) Scotia Hydrologic Sub-area 111112. Outlet(s) = Eel River (Lat 40.4918, Long −124.0988) upstream to endpoint(s) in: Bear Creek (40.3942, −124.0262); Bridge Creek (40.4278, −123.9317); Chadd Creek (40.3919, −123.9540); Darnell Creek (40.4533, −123.9808); Dinner Creek (40.4406, −124.0855); Greenlaw Creek (40.4315, −124.0231); Jordan Creek (40.4171, −124.0517); Kiler Creek (40.4465, −124.0952); Larabee Creek (40.4089, −123.9331); Monument Creek (40.4371, −124.1165); Shively Creek (40.4454, −123.9539); South Fork Bear Creek (40.3856, −124.0182); South Fork Eel River (40.3558, −123.9194); Stitz Creek (40.4649, −124.0531); Twin Creek (40.4419, −124.0714); Unnamed Tributary (40.3933, −123.9984); Weber Creek (40.3767, −123.9094).

(iii) Larabee Creek Hydrologic Sub-area 111113. Outlet(s) = Larabee Creek (Lat 40.4089, Long -123.9331) upstream to endpoint(s) in: Arnold Creek (40.4006, -123.8583); Balcom Creek (40.4030, -123.8986); Bosworth Creek (40.3584, -123.7089); Boulder Flat Creek (40.3530, -123.6381); Burr Creek (40.4250, -123.7767); Carson Creek (40.4181, -123.8879); Chris Creek (40.4146, -123.9235); Cooper Creek (40.3123, -123.6463); Dauphiny Creek (40.4049, -123.8893); Frost Creek (40.3765, -123.7357); Hayfield Creek (40.3350, -123.6535); Knack Creek (40.3788, -123.7385); Larabee Creek (40.2807, -123.6445); Martin Creek (40.3730, -123.7060); Maxwell Creek (40.3959, -123.8049); McMahon Creek (40.3269, -123.6363); Mill Creek (40.3849, -123.7440); Mountain Creek (40.2955, -123.6378); Scott Creek (40.4020, -123.8738); Smith Creek (40.4194, -123.8568); Thurman Creek (40.3506, -123.6669); Unnamed Tributary (40.3842, -123.8062); Unnamed Tributary (40.3982, -123.7862); Unnamed Tributary (40.3806, -123.7564); Unnamed Tributary (40.3661, -123.7398); Unnamed Tributary (40.3524, -123.7330).

(iv) Hydesville Hydrologic Sub-area 111121. Outlet(s) = Van Duzen River (Lat 40.5337, Long -124.1262) upstream to endpoint(s) in: Cuddeback Creek (40.5421, -124.0263); Cummings Creek (40.5282, -123.9770); Fiedler Creek (40.5351, -124.0106); Hely Creek (40.5165, -123.9531); Yager Creek (40.5583, -124.0577); Unnamed Tributary (40.5718, -124.0946); Unnamed Tributary (40.4915, -124.0000).

(v) Bridgeville Hydrologic Sub-area 111122. Outlet(s) = Van Duzen River (Lat 40.4942, Long -123.9720) upstream to endpoint(s) in: Bear Creek (40.3455, -123.5763); Blanket Creek (40.3635, -123.5710); Browns Creek (40.4958, -123.8103); Butte Creek (40.4119, -123.7047); Dairy Creek (40.4174, -123.5981); Fish Creek (40.4525, -123.8434); Grizzly Creek (40.5193, -123.8470); Little Larabee Creek (40.4708, -123.7395); Little Van Duzen River (40.3021, -123.5540); North Fork Van Duzen (40.4881, -123.6411); Panther Creek (40.3921, -123.5866); Root Creek (40.4490, -123.9018); Stevens Creek (40.5062, -123.9073); Thompson Creek (40.4222, -123.6084); Van Duzen River (40.4820, -123.6629); Unnamed Tributary (40.4932, -123.9120); Unnamed Tributary (40.4724, -123.8836); Unnamed Tributary (40.4850, -123.8468); Unnamed Tributary (40.3994, -123.6821); Unnamed Tributary (40.3074, -123.5834).

(vi) Yager Creek Hydrologic Sub-area 111123. Outlet(s) = Yager Creek (Lat 40.5583, Long -124.0577) upstream to endpoint(s) in: Bell Creek (40.6809, -123.9685); Blanten Creek (40.5839, -124.0165); Booths Run (40.6584,

-123.9428); Corner Creek (40.6179, -124.0010); Fish Creek (40.6390, -124.0024); Yager Creek (40.5673, -123.9403); Lawrence Creek (40.6986, -123.9314); Middle Fork Yager Creek (40.5782, -123.9243); North Fork Yager Creek (40.6056, -123.9080); Shaw Creek (40.6231, -123.9509); South Fork Yager Creek (40.5451, -123.9409); Unnamed Tributary (40.5892, -123.9663); Unnamed Tributary (40.5891, -124.0608).

(vii) Weott Hydrologic Sub-area 111131. Outlet(s) = South Fork Eel River (Lat 40.3500, Long —123.9305) upstream to endpoint(s) in: Albee Creek (40.3592, -124.0088); Bridge Creek (40.2960, -123.8561); Bull Creek (40.3587, -123.9624); Burns Creek (40.3194, -124.0420); Butte Creek (40.1982, -123.8387); Canoe Creek (40.2669, -123.9556); Coon Creek (40.2702, -123.9013); Cow Creek (40.2664, -123.9838); Cuneo Creek (40.3401, -124.0494); Decker Creek (40.3312, -123.9501); Elk Creek (40.2609, -123.7957); Fish Creek (40.2459, -123.7729); Harper Creek (40.3591, -123.9930); Mill Creek (40.3568, -124.0333); Mowry Creek (40.2937, -123.8895); North Fork Cuneo Creek (40.3443, -124.0488); Ohman Creek (40.1924, -123.7648); Panther Creek (40.2775, -124.0289); Preacher Gulch (40.2944, -124.0047); Salmon Creek (40.2145, -123.8926); Slide Creek (40.3011, -124.0390); South Fork Salmon Creek (40.1769, -123.8929); Squaw Creek (40.3167, -123.9988); Unnamed Tributary (40.3065, -124.0074); Unnamed Tributary (40.2831, -124.0359).

(viii) Benbow Hydrologic Sub-area 111132. Outlet(s) = South Fork Eel River (Lat 40.1932, Long -123.7692) upstream to endpoint(s) in: Anderson Creek (39.9325, -123.8928); Bear Creek (39.7885, -123.7620); Bear Pen Creek (39.9201, -123.7986); Bear Wallow Creek (39.7270, -123.7140); Big Dan Creek (39.8430, -123.6992); Bond Creek (39.7778, -123.7060); Bridges Creek (39.9087, -123.7142); Buck Mountain Creek (40.0944, -123.7423); Butler Creek (39.7423, -123.6987); Cedar Creek (39.8834, -123.6216); China Creek (40.1035, -123.9493); Connick Creek (40.0912, -123.8154); Couborn Creek (39.9820, -123.8973); Cox Creek (40.0310, -123.8398); Cruso Cabin Creek (39.9281, -123.5842); Dean Creek (40.1342, -123.7363); Durphy Creek (40.0205, -123.8271); East Branch South Fork Eel River (39.9359, -123.6204); Elkhorn Creek (39.9272, -123.6279); Fish Creek (40.0390, -123.7630); Hartsook Creek (40.0081, -123.8113); Hollow Tree Creek (39.7250, -123.6924); Huckleberry Creek (39.7292, -123.7275); Indian Creek (39.9470, -123.9008); Islam John Creek (39.8062, -123.7363); Jones Creek (39.9958, -123.8374); Leggett Creek (40.1470, -123.8375); Little Sproul Creek (40.0890, -123.8577); Lost Man Creek (39.7983, -123.7287); Low Gap Creek (39.8029, -123.6803); Low Gap Creek (39.9933, -123.7601); McCoy Creek (39.9572, -123.7369); Michael's Creek (39.7665, -123.7035); Middle Creek (39.8052, -123.7691); Milk Ranch Creek (40.0102, -123.7514); Mill Creek (39.8673, -123.7605); Miller Creek (40.1319, -123.9302); Mitchell Creek (39.7350, -123.6862); Moody Creek (39.9471, -123.8827); Mule Creek (39.8169, -123.7745); North Fork Cedar Creek (39.8864, -123.6363); North Fork McCoy Creek (39.9723, -123.7496); North Fork Standley Creek (39.9442, -123.8330); Ohman Creek (40.1929, -123.7687); Piercy Creek (39.9597, -123.8442); Pollock Creek (40.0802, -123.9341); Rattlesnake Creek (39.7912, -123.5428); Red Mountain Creek (39.9363, -123.7203); Redwood Creek (39.7723, -123.7648); Redwood Creek (40.0974, -123.9104); Rock Creek (39.8962, -123.7065); Sebbas Creek (39.9934, -123.8903); Somerville Creek (40.1006, -123.8884); South Fork Mule Creek (39.8174, -123.7788); South Fork Redwood Creek (39.7662, -123.7579); Sproul Creek (40.0226, -123.8649); Squaw Creek (40.0760, -123.7257); Standly Creek (39.9327, -123.8309); Tom Long Creek (40.0175, -123.6551); Waldron Creek (39.7469, -123.7465); Walter's Creek (39.7921, -123.7250); Warden Creek (40.0629, -123.8551); West Fork Sproul Creek (40.0587, -123.9170); Wildcat Creek (39.8956, -123.7820); Wilson Creek (39.8362, -123.6345); Unnamed tributary (39.9927, -123.8807).

(ix) Laytonville Hydrologic Sub-area 111133. Outlet(s) = South Fork Eel River (Lat 39.7665, Long -123.6484) upstream to endpoint(s) in: Bear Creek (39.6446, -123.5766); Big Rick Creek (39.7117, -123.5512); Cahto Creek (39.6527, -123.5579); Dark Canyon Creek (39.7333, -123.6614); Dutch Charlie Creek (39.6843, -123.7023); Elder Creek (39.7234, -123.6192); Fox Creek (39.7441, -123.6142); Grub Creek (39.7777, -123.5809); Jack of Hearts Creek (39.7136, -123.6896); Kenny Creek (39.6838, -123.5929); Little Case Creek (39.6892, -123.5441); Mill Creek (39.6839, -123.5118); Mud Creek (39.6713, -123.5741); Mud Springs Creek (39.6929, -123.5629); Redwood Creek (39.6545, -123.6753); Rock Creek (39.6922, -123.6090); Section Four Creek (39.6137, -123.5297); South Fork Eel River (39.6242, -123.5468); Streeter Creek (39.7340, -123.5606); Ten Mile Creek (39.6652, -123.4486); Unnamed Tributary (39.7004, -123.5678).

(x) Sequoia Hydrologic Sub-area 111141. Outlet(s) = Eel River (Lat 40.3557, Long −123.9191) upstream to endpoint(s) in: Beatty Creek (40.3198, −123.7500); Brock Creek (40.2410, −123.7246); Cameron Creek (40.3313, −123.7707); Kapple Creek (40.3531, −123.8585); Dobbyn Creek (40.2216, −123.6029); Mud Creek (40.2078, −123.5143); North Fork Dobbyn Creek (40.2669, −123.5467); Sonoma Creek (40.2974, −123.7953); South Fork Dobbyn Creek (40.1723, −123.5112); Line Gulch Creek (40.1640, −123.4783); South Fork Eel River (40.3500, −123.9305); South Fork Thompson Creek (40.3447, −123.8334); Thompson Creek (40.3552, −123.8417); Unnamed Tributary (40.2745, −123.5487).

(xi) Spy Rock Hydrologic Sub-area 111142. Outlet(s) = Eel River (Lat 40.1736, Long −123.6043) upstream to endpoint(s) in: Bear Pen Canyon (39.6943, −123.4359); Bell Springs Creek (39.9457, −123.5313); Blue Rock Creek (39.8937, −123.5018); Burger Creek (39.6693, −123.4034); Chamise Creek (40.0035, −123.5945); Gill Creek (39.7879, −123.3465); Iron Creek (39.7993, −123.4747); Jewett Creek (40.1122, −123.6171); Kekawaka Creek (40.0686, −123.4087); Rock Creek (39.9347, −123.5187); Shell Rock Creek (39.8414, −123.4614); Unnamed Tributary (39.7579, −123.4709); White Rock Creek (39.7646, −123.4684); Woodman Creek (39.7612, −123.4364).

(xii) Outlet Creek Hydrologic Sub-area 111161. Outlet(s) = Outlet Creek (Lat 39.4248, Long −123.3453) upstream to endpoint(s) in: Baechtel Creek (39.3623, −123.4143); Berry Creek (39.4271, −123.2777); Bloody Run Creek (39.5864, −123.3545); Broaddus Creek (39.3869, −123.4282); Cherry Creek (39.6043, −123.4073); Conklin Creek (39.3756, −123.2570); Davis Creek (39.3354, −123.2945); Haehl Creek (39.3735, −123.3172); Long Valley Creek (39.6246, −123.4651); Mill Creek (39.4196, −123.3919); Outlet Creek (39.4526, −123.3338); Ryan Creek (39.4804, −123.3644); Unnamed Tributary (39.4956, −123.3591); Unnamed Tributary (39.4322, −123.3848); Unnamed Tributary (39.5793, −123.4546); Unnamed Tributary (39.3703, −123.3419); Upp Creek (39.4479, −123.3825); Willts Creek (39.4445, −123.3898).

(xiii) Tomki Creek Hydrologic Sub-area 111162. Outlet(s) = Eel River (Lat 39.7138, Long −123.3532) upstream to endpoint(s) in: Cave Creek (39.3842, −123.2148); Dean Creek (39.6924, −123.3727); Garcia Creek (39.5153, −123.1512); Little Cave Creek (39.3915,

−123.2462); Little Creek (39.4146, −123.2595); Long Branch Creek (39.4074, −123.1897); Outlet Creek (39.6263, −123.3453); Rocktree Creek (39.4534, −123.3053); Salmon Creek (39.4367, −123.1939); Scott Creek (39.4492, −123.2286); String Creek (39.4658, −123.3206); Tarter Creek (39.4715, −123.2976); Thomas Creek (39.4768, −123.1230); Tomki Creek (39.5483, −123.3687); Unnamed Tributary (39.5064, −123.3574); Whitney Creek (39.4399, −123.1084); Wheelbarrow Creek (39.4851, −123.3391).

(xiv) Eden Valley Hydrologic Sub-area 111171. Outlet(s) = Middle Fork Eel River (Lat 39.7136, Long −123.3530) upstream to endpoint(s) in: Black Butte River (39.8238, −123.0877); Crocker Creek (39.5559, −123.0409); Eden Creek (39.5992, −123.1746); Elk Creek (39.5371, −123.0101); Hayshed Creek (39.7082, −123.0967); Mill Creek (39.7398, −123.1431); Salt Creek (39.6765, −123.2740); Sportsmans Creek (39.5373, −123.0247); Sulper Springs (39.5536, −123.0365); Thatcher Creek (39.6686, −123.0639); Williams Creek (39.8147, −123.1335).

(xv) Round Valley Hydrologic Sub-area 111172. Outlet(s) = Mill Creek (Lat 39.7398, Long −123.1431); Williams Creek (39.8147, −123.1335) upstream to endpoint(s) in: Cold Creek (39.8714, −123.2991); Grist Creek (39.7640, −123.2883); Mill Creek (39.8481, −123.2896); Murphy Creek (39.8885, −123.1612); Short Creek (39.8703, −123.2352); Town Creek (39.7991, −123.2889); Turner Creek (39.7218, −123.2175); Williams Creek (39.8903, −123.1212); Unnamed Tributary (39.7428, −123.2757); Unnamed Tributary (39.7493, −123.2584).

(xvi) Black Butte River Hydrologic Sub-area 111173. Outlet(s) = Black Butte River (Lat 39.8234, Long −123.0862) upstream to endpoint(s) in: Black Butte River (39.5946, −122.8579); Buckhorn Creek (39.6563, −122.9225); Cold Creek (39.6960, −122.9063); Estell Creek (39.5966, −122.8224); Spanish Creek (39.6287, −122.8331).

(xvii) Wilderness Hydrologic Sub-area 111174. Outlet(s) = Middle Fork Eel River (Lat 39.8240, Long −123.0877) upstream to endpoint(s) in: Beaver Creek (39.9352, −122.9943); Fossil Creek (39.9447, −123.0403); Middle Fork Eel River (40.0780, −123.0442); North Fork Middle Fork Eel River (40.0727, −123.1364); Palm of Gileade Creek (40.0229, −123.0647); Pothole Creek (39.9347, −123.0440).

(6) Cape Mendocino Hydrologic Unit 1112—*(i) Oil Creek Hydrologic Sub-area 111210.* Outlet(s) = Guthrie Creek (Lat 40.5407, Long −124.3626); Oil Creek (40.5195, −124.3767) upstream to endpoint(s) in: Guthrie Creek (40.5320, −124.3128); Oil Creek (40.5061, −124.2875); Unnamed Tributary (40.4946, −124.3091); Unnamed Tributary (40.4982, −124.3549); Unnamed Tributary (40.5141, −124.3573); Unnamed Tributary (40.4992, −124.3070).

(ii) Capetown Hydrologic Sub-area 111220. Outlet(s) = Bear River (Lat 40.4744, Long −124.3881); Davis Creek (40.3850, −124.3691); Singley Creek (40.4311, −124.4034) upstream to endpoint(s) in: Antone Creek (40.4281, −124.2114); Bear River (40.3591, −124.0536); Beer Bottle Gulch (40.3949, −124.1410); Bonanza Gulch (40.4777, −124.2966); Brushy Creek (40.4102, −124.1050); Davis Creek (40.3945, −124.2912); Harmonica Creek (40.3775, −124.0735); Hollister Creek (40.4109, −124.2891); Nelson Creek (40.3536, −124.1154); Peaked Creek (40.4123, −124.1897); Pullen Creek (40.4057, −124.0814); Singley Creek (40.4177, −124.3305); South Fork Bear River (40.4047, −124.2631); Unnamed Tributary (40.4271, −124.3107); Unnamed Tributary (40.4814, −124.2741); Unnamed Tributary (40.3633, −124.0651); Unnamed Tributary (40.3785, −124.0599); Unnamed Tributary (40.4179, −124.2391); Unnamed Tributary (40.4040, −124.0923); Unnamed Tributary (40.3996, −124.3175); Unnamed Tributary (40.4045, −124.0745); Unnamed Tributary (40.4668, −124.2364); Unnamed Tributary (40.4389, −124.2350); Unnamed Tributary (40.4516, −124.2238); Unnamed Tributary (40.4136, −124.1594); Unnamed Tributary (40.4350, −124.1504); Unnamed Tributary (40.4394, −124.3745); West Side Creek (40.4751, −124.2432).

(iii) Mattole River Hydrologic Sub-area 111230. Outlet(s) = Big Creek (Lat 40.1567, Long −124.2114); Big Flat Creek (40.1275, −124.1764); Buck Creek (40.1086, −124.1218); Cooskie Creek (40.2192, −124.3105); Fourmile Creek (40.256, −124.3578); Gitchell Creek (40.0938, −124.1023); Horse Mountain Creek (40.0685, −124.0822); Kinsey Creek (40.1717, −124.2310); Mattole River (40.2942, −124.3536); McNutt Gulch (40.3541, −124.3619); Oat Creek (40.1785, −124.2445); Randall Creek (40.2004, −124.2831); Shipman Creek (40.1175, −124.1449); Spanish Creek (40.1835, −124.2569); Telegraph Creek (40.0473, −124.0798); Whale Gulch (39.9623, −123.9785) upstream to endpoint(s) in: Anderson Creek (40.0329, −123.9674); Baker Creek (40.0143, −123.9048); Bear Creek (40.1262, −124.0631); Bear Creek (40.2819, −124.3336); Bear Trap Creek (40.2157, −124.1422); Big Creek (40.1742, −124.1924); Big Finley Creek (40.0910, −124.0179); Big Flat Creek (40.1444, −124.1636); Blue Slide Creek (40.1562, −123.9283); Box Canyon Creek (40.1078, −123.9854); Bridge Creek (40.0447, −124.0118); Buck Creek (40.1166, −124.1142); Conklin Creek (40.3197, −124.2055); Cooskie Creek (40.2286, −124.2986); Devils Creek (40.3432, −124.1365); Dry Creek (40.2646, −124.0660); East Branch North Fork Mattole River (40.3333, −124.1490); East Fork Honeydew Creek (40.1625, −124.0929); Eubank Creek (40.0997, −123.9661); Fire Creek (40.1533, −123.9509); Fourmile Creek (40.2604, −124.3079); Fourmile Creek (40.1767, −124.0759); French Creek (40.1384, −124.0072); Gibson Creek (40.0304, −123.9279); Gilham Creek (40.2078, −124.0085); Gitchell Creek (40.1086, −124.0947); Green Ridge Creek (40.3254, −124.1258); Grindstone Creek (40.2019, −123.9890); Harris Creek (40.0381, −123.9304); Harrow Creek (40.1612, −124.0292); Helen Barnum Creek (40.0036, −123.9101); Honeydew Creek (40.1747, −124.1410); Horse Mountain Creek (40.0769, −124.0729); Indian Creek (40.2772, −124.2759); Jewett Creek (40.1465, −124.0414); Kinsey Creek (40.1765, −124.2220); Lost Man Creek (39.9754, −123.9179); Mattole Canyon (40.2021, −123.9570); Mattole River (39.9714, −123.9623); McGinnis Creek (40.3186, −124.1801); McKee Creek (40.0864, −123.9480); McNutt Gulch (40.3458, −124.3418); Middle Creek (40.2591, −124.0366); Mill Creek (40.0158, −123.9693); Mill Creek (40.3305, −124.2598); Mill Creek (40.2839, −124.2946); Nooning Creek (40.0616, −124.0050); North Fork Mattole River (40.3866, −124.1867); North Fork Bear Creek (40.1494, −124.1060); North Fork Fourmile Creek (40.2019, −124.0722); Oat Creek (40.1884, −124.2296); Oil Creek (40.3214, −124.1601); Painter Creek (40.0844, −123.9639); Prichett Creek (40.2892, −124.1704); Randall Creek (40.2092, −124.2668); Rattlesnake Creek (40.3250, −124.0981); Shipman Creek (40.1250, −124.1384); Sholes Creek (40.1603, −124.0619); South Branch West Fork Bridge Creek (40.0326, −123.9853); South Fork Bear Creek (40.0176, −124.0016); Spanish Creek (40.1965, −124.2429); Squaw Creek (40.1934, −124.2002); Stanley Creek (40.0273, −123.9166); Sulphur Creek (40.3647, −124.1586); Telegraph Creek (40.0439, −124.0640); Thompson Creek (39.9913, −123.9707); Unnamed Tributary

(40.3475, −124.1606); Unnamed Tributary (40.3522, −124.1533); Unnamed Tributary (40.0891, −123.9839); Unnamed Tributary (40.2223, −124.0172); Unnamed Tributary (40.1733, −123.9515); Unnamed Tributary (40.2899, −124.0955); Unnamed Tributary (40.2853, −124.3227); Unnamed Tributary (39.9969, −123.9071); Upper East Fork Honeydew Creek (40.1759, −124.1182); Upper North Fork Mattole River (40.2907, −124.1115); Vanauken Creek (40.0674, −123.9422); West Fork Bridge Creek (40.0343, −123.9990); West Fork Honeydew Creek (40.1870, −124.1614); Westlund Creek (40.2440, −124.0036); Whale Gulch (39.9747, −123.9812); Woods Creek (40.2119, −124.1611); Yew Creek (40.0018, −123.9762).

(7) Mendocino Coast Hydrologic Unit 1113—*(i) Usal Creek Hydrologic Sub-area 111311.* Outlet(s) = Jackass Creek (Lat 39.8806, Long −123.9155); Usal Creek (39.8316, −123.8507) upstream to endpoint(s) in: Bear Creek (39.8898, −123.8344); Jackass Creek (39.8901, −123.8928); Little Bear Creek (39.8782, −123.8250); Waterfall Gulch (39.8725, −123.8784); North Fork Jackass Creek (39.9095, −123.9101); North Fork Julias Creek (39.8634, −123.7967); Soldier Creek (39.8679, −123.8162); South Fork Usal Creek (39.8356, −123.7865); Julias Creek (39.8574, −123.7912); Unnamed Tributary (39.9279, −123.8666); Unnamed Tributary (39.8890, −123.8480); Usal Creek (39.9160, −123.8787).

(ii) Wages Creek Hydrologic Sub-area 111312. Outlet(s) = Cottaneva Creek (Lat 39.7360, Long −123.8293); Hardy Creek (39.7107, −123.8082); Howard Creek (39.6778, −123.7915); Juan Creek (39.7028, −123.8042); DeHaven Creek (39.6592, −123.7863); Wages Creek (39.6513, −123.7851) upstream to endpoint(s) in: Cottaneva Creek (39.7825, −123.8210); Dunn Creek (39.8103, −123.8320); Hardy Creek (39.7221, −123.7822); Howard Creek (39.6808, −123.7463); Juan Creek (39.7107, −123.7472); Kimball Gulch (39.7559, −123.7828); Little Juan Creek (39.7003, −123.7609); DeHaven Creek (39.6572, −123.7350); Middle Fork Cottaneva Creek (39.7738, −123.8058); North Fork Cottaneva Creek (39.8011, −123.8047); North Fork Dehaven Creek (39.6660, −123.7382); North Fork Wages Creek (39.6457, −123.7066); Rider Gulch (39.6348, −123.7621); Rockport Creek (39.7346, −123.8021); Slaughterhouse Gulch (39.7594, −123.7914); South Fork Cottaneva Creek (39.7447, −123.7773); South Fork Wages Creek (39.6297, −123.6862); Upper Wages Creek (39.6396, −123.6773).

(iii) Ten Mile River Hydrologic Sub-area 111313. Outlet(s) = Abalobadiah Creek (Lat 39.5654, Long −123.7672); Chadbourne Gulch (39.6133, −123.7822); Ten Mile River (39.5529, −123.7658); Seaside Creek (39.5592, −123.7655) upstream to endpoint(s) in: Abalobadiah Creek (39.5878, −123.7503); Bald Hill Creek (39.6278, −123.6461); Barlow Gulch (39.6044, −123.7501); Bear Pen Creek (39.5824, −123.6402); Booth Gulch (39.5598, −123.5908); Buckhorn Creek (39.6093, −123.6980); Campbell Creek (39.5053, −123.6610); Cavanough Gulch (39.6164, −123.6853); Chadbourne Gulch (39.6190, −123.7682); Clark Fork (39.5409, −123.5403); Curchman Creek (39.4789, −123.6398); Gulch 11 (39.4686, −123.5764); Gulch 19 (39.5993, −123.5730); Little Bear Haven Creek (39.5654, −123.6050); Little North Fork (39.6264, −123.7350); Mill Creek (39.5392, −123.7068); North Fork Ten Mile River (39.5870, −123.5480); O'Conner Gulch (39.6205, −123.6655); Patsy Creek (39.5714, −123.5669); Redwood Creek (39.5142, −123.5620); Seaside Creek (39.5612, −123.7501); Smith Creek (39.5251, −123.6499); South Fork Bear Haven Creek (39.5688, −123.6527); South Fork Ten Mile River (39.5083, −123.5395); Ten Mile River (39.5721, −123.7098); Unnamed Tributary (39.5234, −123.5893); Unnamed Tributary (39.5191, −123.6263); Unnamed Tributary (39.5558, −123.5450); Unnamed Tributary (39.5898, −123.7657); Unnamed Tributary (39.5813, −123.7526); Unnamed Tributary (39.6032, −123.5893).

(iv) Noyo River Hydrologic Sub-area 111320. Outlet(s) = Digger Creek (Lat 39.4088, Long −123.8164); Hare Creek (39.4171, −123.8128); Jug Handle Creek (39.3767, −123.8176); Mill Creek (39.4894, −123.7967); Mitchell Creek (39.3923, −123.8165); Noyo River (39.4274, −123.8096); Pudding Creek (39.4588, −123.8089); Virgin Creek (39.4714, −123.8045) upstream to endpoint(s) in: Bear Gulch (39.3881, −123.6614); Brandon Gulch (39.4191, −123.6645); Bunker Gulch (39.3969, −123.7153); Burbeck Creek (39.4354, −123.4235); Covington Gulch (39.4099, −123.7546); Digger Creek (39.4058, −123.8092); Duffy Gulch (39.4469, −123.6023); Gulch Creek (39.4441, −123.4684); Gulch Seven (39.4523, −123.5183); Hare Creek (39.3781, −123.6922); Hayworth Creek (39.4857, −123.4769); Hayshed Creek (39.4200, −123.7391); Jug Handle Creek (39.3647, −123.7523); Kass Creek (39.4273, −123.6797); Little North Fork (39.4532, −123.6636); Little Valley Creek (39.5026, −123.7277); Marble Gulch (39.4423, −123.5479); McMullen Creek (39.4383, −123.4488); Middle Fork North Fork (39.4924, −123.5231); Mill Creek (39.4843, −123.7575); Mitchell Creek (39.3813, −123.7734); North Fork Hayworth Creek (39.4891, −123.5026); North Fork Noyo (39.4974, −123.5405); North Fork Noyo (39.4765, −123.5535); North Fork South Fork Noyo River (39.3971, −123.6108); Noyo River (39.4242, −123.4356); Olds Creek (39.3964, −123.4448); Parlin Creek (39.3700, −123.6111); Pudding Creek (39.4591, −123.6516); Redwood Creek (39.4660, −123.4571); South Fork Hare Creek (39.3785, −123.7384); South Fork Noyo River (39.3620, −123.6188); Unnamed Tributary (39.4113, −123.5621); Unnamed Tributary (39.3918, −123.6425);Unnamed Tributary (39.4168, −123.4578); Unnamed Tributary (39.4653, −123.7549); Unnamed Tributary (39.4640, −123.7473); Unnamed Tributary (39.4931, −123.7371); Unnamed Tributary (39.4922, −123.7381); Unnamed Tributary (39.4939, −123.7184); Unnamed Tributary (39.4158, −123.6428); Unnamed Tributary (39.4002, −123.7347); Unnamed Tributary (39.3831, −123.6177); Unnamed Tributary (39.4926, −123.4764); Virgin Creek (39.4621, −123.7855);

(v) Big River Hydrologic Sub-area 111330. Outlet(s) = Big River (Lat 39.3030, Long −123.7957); Casper Creek (39.3617, −123.8169); Doyle Creek (39.3603, −123.8187); Jack Peters Creek (39.3193, −123.8006); Russian Gulch (39.3288, −123.8050) upstream to endpoint(s) in: Berry Gulch (39.3585, −123.6930); Big River (39.3166, −123.3733); Casper Creek (39.3462, −123.7556); Chamberlain Creek (39.4007, −123.5317); Daugherty Creek (39.1700, −123.3699); Doyle Creek (39.3517, −123.8007); East Branch Little North Fork Big River (39.3372, −123.6410); East Branch North Fork Big River (39.3354, −123.4652); Gates Creek (39.2083, −123.3944); Jack Peters Gulch (39.3225, −123.7850); James Creek (39.3922, −123.4747); Johnson Creek (39.1963, −123.3927); Johnson Creek (39.2556, −123.4485); Laguna Creek (39.2914, −123.6301); Little North Fork Big River (39.3497, −123.6242); Marten Creek (39.3290, −123.4279); Mettick Creek (39.2591, −123.5193); Middle Fork North Fork Casper Creek (39.3575, −123.7170); North Fork Big River (39.3762, −123.4591); North Fork Casper Creek (39.3610, −123.7356); North Fork James Creek (39.3980, −123.4939); North Fork Ramone Creek

(39.2760, −123.4846); Pig Pen Gulch (39.3226, −123.4609); Pruitt Creek (39.2592, −123.3812); Ramone Creek (39.2714, −123.4415); Rice Creek (39.2809, −123.3963); Russell Brook (39.2863, −123.4461); Russian Gulch (39.3237, −123.7650); Snuffins Creek (39.1836, −123.3854); Soda Creek (39.2230, −123.4239); South Fork Big River (39.2317, −123.3687); South Fork Casper Creek (39.3493, −123.7216); Two Log Creek (39.3484, −123.5781); Unnamed Tributary (39.3897, −123.5556); Unnamed Tributary (39.3637, −123.5464); Unnamed Tributary (39.3776, −123.5274); Unnamed Tributary (39.4029, −123.5771); Unnamed Tributary (39.3209, −123.5964); Valentine Creek (39.2694, −123.3957); Water Gulch (39.3608, −123.5916).

(vi) Albion River Hydrologic Sub-area 111340. Outlet(s) = Albion River (Lat 39.2253, Long −123.7679); Big Salmon Creek (39.2150, −123.7660); Buckhorn Creek (39.2593, −123.7839); Dark Gulch (39.2397, −123.7740); Little Salmon Creek (39.2150, −123.7660); Little River (39.2734, −123.7914) upstream to endpoint(s) in: Albion River (39.2613, −123.5766); Big Salmon Creek (39.2045, −123.6425); Buckhorn Creek (39.2513, −123.7595); Dark Gulch (39.2379, −123.7592); Duck Pond Gulch (39.2456, −123.6960); East Railroad Gulch (39.2604, −123.6381); Hazel Gulch (39.2141, −123.6418); Kaison Gulch (39.2733, −123.6803); Little North Fork South Fork Albion River (39.2350, −123.6431); Little River (39.2683, −123.7190); Little Salmon Creek (39.2168, −123.7515); Marsh Creek (39.2325, −123.5596); Nordon Gulch (39.2489, −123.6503); North Fork Albion River (39.2854, −123.5752); Pleasant Valley Gulch (39.2379, −123.6965); Railroad Gulch (39.2182, −123.6932); Soda Springs Creek (39.2943, −123.5944); South Fork Albion River (39.2474, −123.6107); Tom Bell Creek (39.2805, −123.6519); Unnamed Tributary (39.2279, −123.6972); Unnamed Tributary (39.2194, −123.7100); Unnamed Tributary (39.2744, −123.5889); Unnamed Tributary (39.2318, −123.6800).

(vii) Navarro River Hydrologic Sub-area 111350. Outlet(s) = Navarro River (Lat 39.1921, Long −123.7611) upstream to endpoint(s) in: Alder Creek (38.9830, −123.3946); Anderson Creek (38.9644, −123.2907); Bailey Creek (39.1733, −123.4804); Barton Gulch (39.1804, −123.6783); Bear Creek (39.1425, −123.4326); Bear Wallow Creek (39.0053, −123.4075); Beasley Creek (38.9366, −123.3265); Bottom Creek (39.2117, −123.4607); Camp 16 Gulch (39.1937, −123.6095); Camp Creek (38.9310, −123.3527); Cold Spring Creek (39.0376, −123.5027); Con Creek (39.0374, −123.3816); Cook Creek (39.1879, −123.5109); Cune Creek (39.1622, −123.6014); Dago Creek (39.0731, −123.5068); Dead Horse Gulch (39.1576, −123.6124); Dutch Henry Creek (39.2112, −123.5794); Floodgate Creek (39.1291, −123.5365); Fluem Gulch (39.1615, −123.6695); Flynn Creek (39.2099, −123.6032); German Creek (38.9452, −123.4269); Gut Creek (39.0803, −123.3312); Ham Canyon (39.0164, −123.4265); Horse Creek (39.0144, −123.4960); Hungry Hollow Creek (39.1327, −123.4488); Indian Creek (39.0708, −123.3301); Jimmy Creek (39.0117, −123.2888); John Smith Creek (39.2275, −123.5366); Little North Fork Navarro River (39.1941, −123.4553); Low Gap Creek (39.1590, −123.3783); Navarro River (39.0537, −123.4409); Marsh Gulch (39.1692, −123.7049); McCarvey Creek (39.1589, −123.4048); Mill Creek (39.1270, −123.4315); Minnie Creek (38.9751, −123.4529); Murray Gulch (39.1755, −123.6966); Mustard Gulch (39.1673, −123.6393); North Branch (39.2069, −123.5361); North Fork Indian Creek (39.1213, −123.3345); North Fork Navarro River (39.1708, −123.5606); Parkinson Gulch (39.0768, −123.4070); Perry Gulch (39.1342, −123.5707); Rancheria Creek (38.8626, −123.2417); Ray Gulch (39.1792, −123.6494); Robinson Creek (38.9845, −123.3513); Rose Creek (39.1358, −123.3672); Shingle Mill Creek (39.1671, −123.4223); Soda Creek (39.0238, −123.3149); Soda Creek (39.1531, −123.3734); South Branch (39.1534, −123.4173); Spooner Creek (39.2221, −123.4811); Tramway Gulch (39.1481, −123.5958); Yale Creek (38.8882, −123.2785).

(viii) Greenwood Creek Hydrologic Sub-area 111361. Outlet(s) = Greenwood Creek (Lat 39.1262, Long −123.7181) upstream to endpoint(s) in: Greenwood Creek (39.1245, −123.6474).

(ix) Elk Creek Hydrologic Sub-area 111362. Outlet(s) = Elk Creek (Lat 39.1024, Long −123.7080) upstream to endpoint(s) in: Elk Creek (39.0657, −123.6245).

(x) Alder Creek Hydrologic Sub-area 111363. Outlet(s) = Alder Creek (Lat 39.0044, Long −123.6969); Mallo Pass Creek (39.0341, −123.6896) upstream to endpoint(s) in: Alder Creek (338.9961, −123.6471); Mallo Pass Creek (39.0287, −123.6373).

(xi) Brush Creek Hydrologic Sub-area 111364. Outlet(s) = Brush Creek (Lat 38.9760, Long −123.7120) upstream to endpoint(s) in: Brush Creek (38.9730, −123.5563); Mill Creek (38.9678, −123.6515); Unnamed Tributary (38.9724, −123.6571).

(xii) Garcia River Hydrologic Sub-area 111370. Outlet(s) = Garcia River (Lat 38.9550, Long −123.7338); Point Arena Creek (38.9141, −123.7103); Schooner Gulch (38.8667, −123.6550) upstream to endpoint(s) in: Blue Water Hole Creek (38.9378, −123.5023); Flemming Creek (38.8384, −123.5361); Garcia River (38.8965, −123.3681); Hathaway Creek (38.9351, −123.7098); Inman Creek (38.8804, −123.4370); Larmour Creek (38.9419, −123.4469); Mill Creek (38.9078, −123.3143); North Fork Garcia River (38.9233, −123.5339); North Fork Schooner Gulch (38.8758, −123.6281); Pardaloe Creek (38.8895, −123.3423); Point Arena Creek (38.9069, −123.6838); Redwood Creek (38.9241, −123.3343); Rolling Brook (38.8965, −123.5716); Schooner Gulch (38.8677, −123.6198); South Fork Garcia River (38.8450, −123.5420); Stansburry Creek (38.9422, −123.4720); Signal Creek (38.8639, −123.4414); Unnamed Tributary (38.8758, −123.5692); Unnamed Tributary (38.8818, −123.5723); Whitlow Creek (38.9141, −123.4624).

(xiii) North Fork Gualala River Hydrologic Sub-area 111381. Outlet(s) = North Fork Gualala River (Lat 38.7784, Long −123.4992) upstream to endpoint(s) in: Bear Creek (38.8347, −123.3842); Billings Creek (38.8652, −123.3496); Doty Creek (38.8495, −123.5131); Dry Creek (38.8416, −123.4455); McGann Gulch (38.8026, −123.4458); North Fork Gualala River (38.8479, −123.4113); Robinson Creek (38.8416, −123.3725); Robinson Creek (38.8386, −123.4991); Stewart Creek (38.8109, −123.4157); Unnamed Tributary (38.8295, −123.5570); Unnamed Tributary (38.8353, −123.3760); Unnamed Tributary (38.8487, −123.3820).

(xiv) Rockpile Creek Hydrologic Sub-area 111382. Outlet(s) = Rockpile Creek (Lat 38.7507, Long −123.4706) upstream to endpoint(s) in: Rockpile Creek (38.7966, −123.3872).

(xv) Buckeye Creek Hydrologic Sub-area 111383. Outlet(s) = Buckeye Creek (Lat 38.7405, Long −123.4573) upstream to endpoint(s) in: Buckeye Creek (38.7400, −123.2697); Flat Ridge Creek (38.7616, −123.2400); Franchini Creek (38.7500, −123.3708); North Fork Buckeye (38.7991, −123.3166).

(xvi) Wheatfield Fork Hydrologic Sub-area 111384. Outlet(s) = Wheatfield Fork Gualala River (Lat 38.7014, Long −123.4154) upstream to endpoint(s) in: Danfield Creek (38.6369, −123.1431); Haupt Creek (38.6220, −123.2551); House Creek (38.6545, −123.1184);

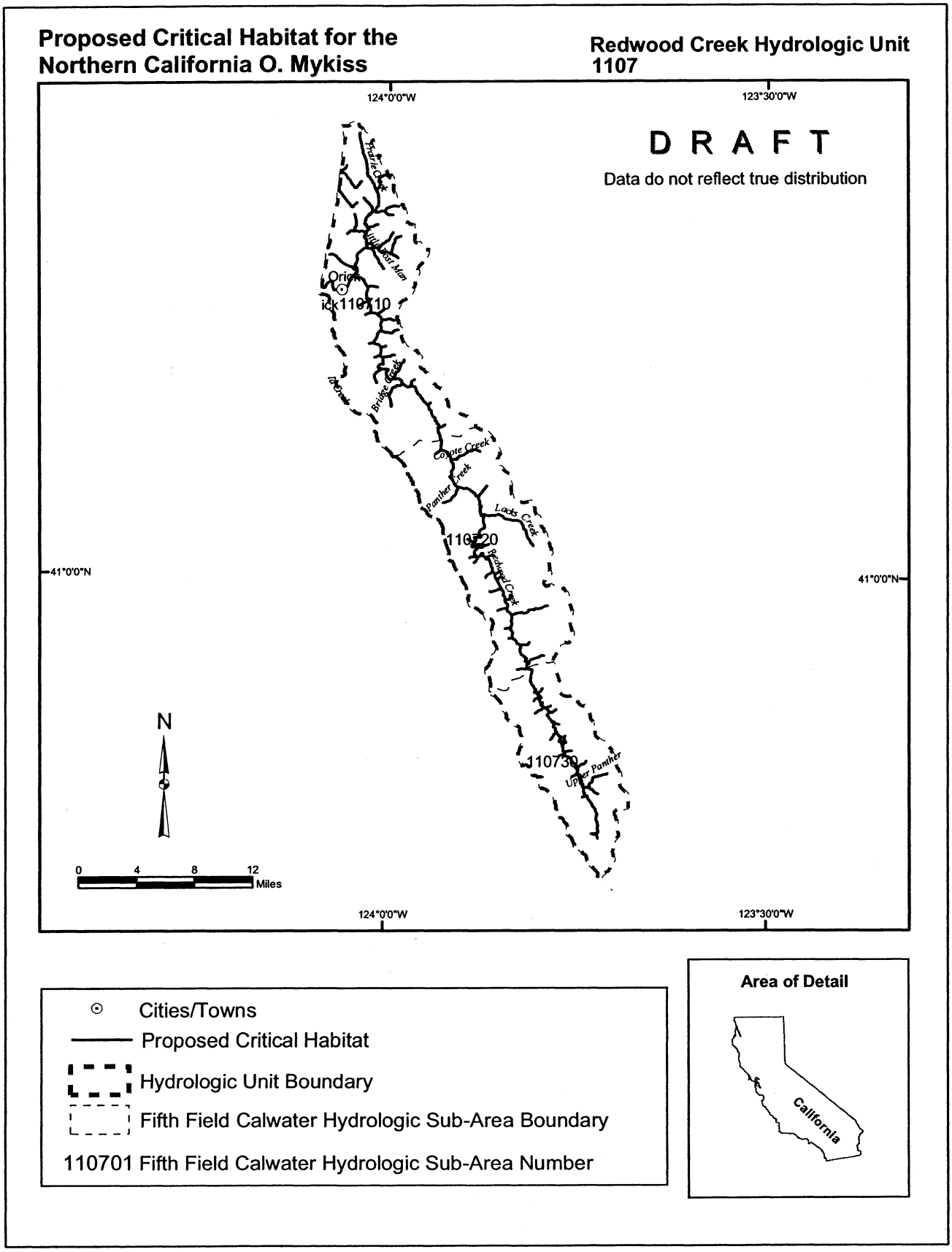
North Fork Fuller Creek (38.7252, −123.2968); Pepperwood Creek (38.6205, −123.1665); South Fork Fuller Creek (38.6973, −123.2860); Tombs Creek (38.6989, −123.1616); Unnamed Tributary (38.7175, −123.2744); Wheatfield Fork Gualala River (38.7497, −123.2215); Fuller Creek (38.7109, −123.3256).

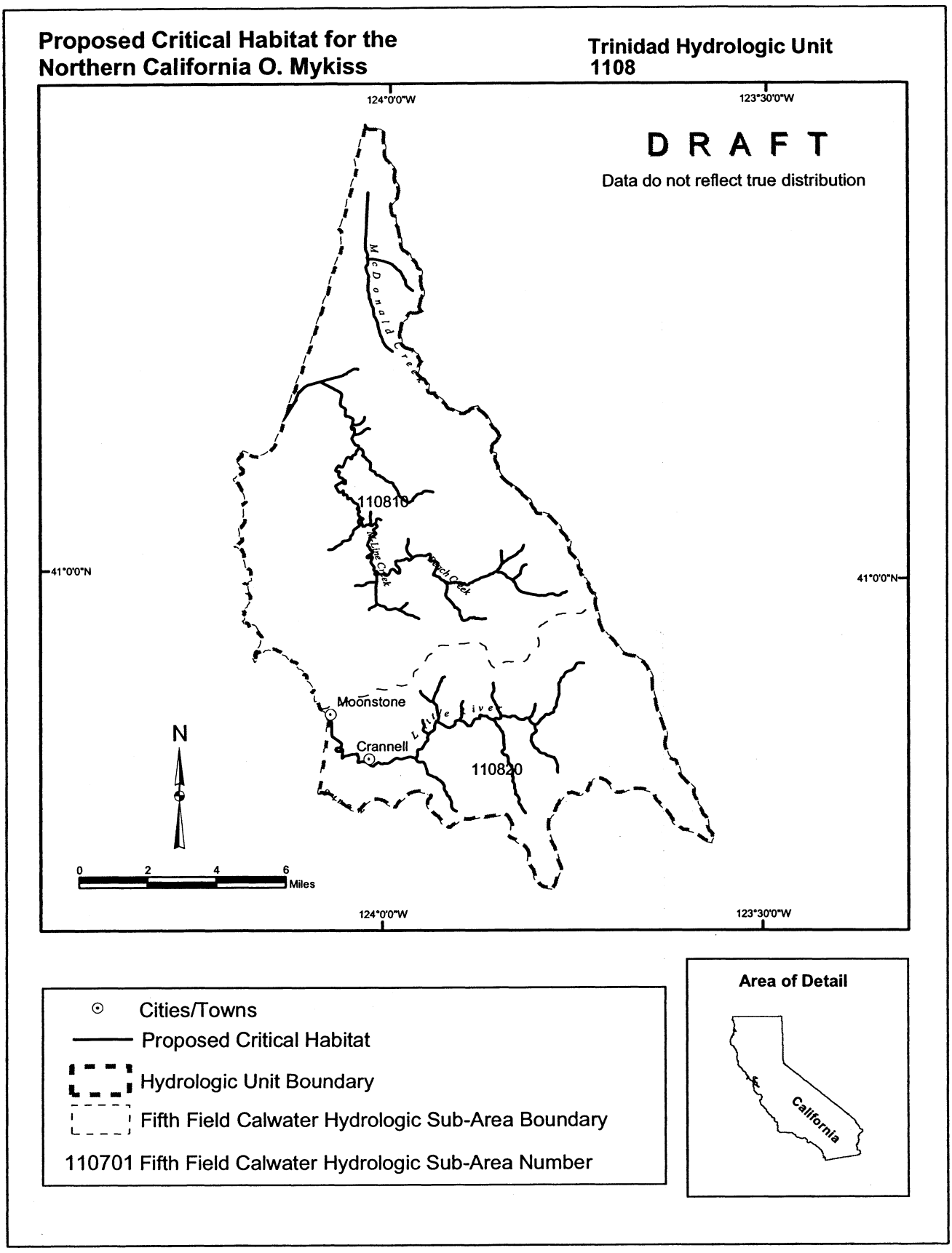
(xvii) Gualala Hydrologic Sub-area 111385. Outlet(s) = Fort Ross Creek (Lat 38.5119, Long −123.2436); Gualala River (38.7687, −123.5334); Kolmer Gulch (38.5238, −123.2646) upstream to endpoint(s) in: Big Pepperwood Creek (38.7951, −123.4638); Carson Creek (38.5653, −123.1906); Fort Ross Creek (38.5174, −123.2363); Groshong Gulch (38.7814, −123.4904); Gualala River (38.7780, −123.4991); Kolmer Gulch (38.5369, −123.2247); Little Pepperwood (38.7738, −123.4427); McKenzie Creek (38.5895, −123.1730); Palmer Canyon Creek (38.6002, −123.2167); Sproule Creek (38.6122, −123.2739); Unknown Tributary (38.5634, −123.2003); Turner Canyon (38.5294, −123.1672); South Fork Gualala River (38.5646, −123.1689); Marshall Creek (38.5647, −123.2058).

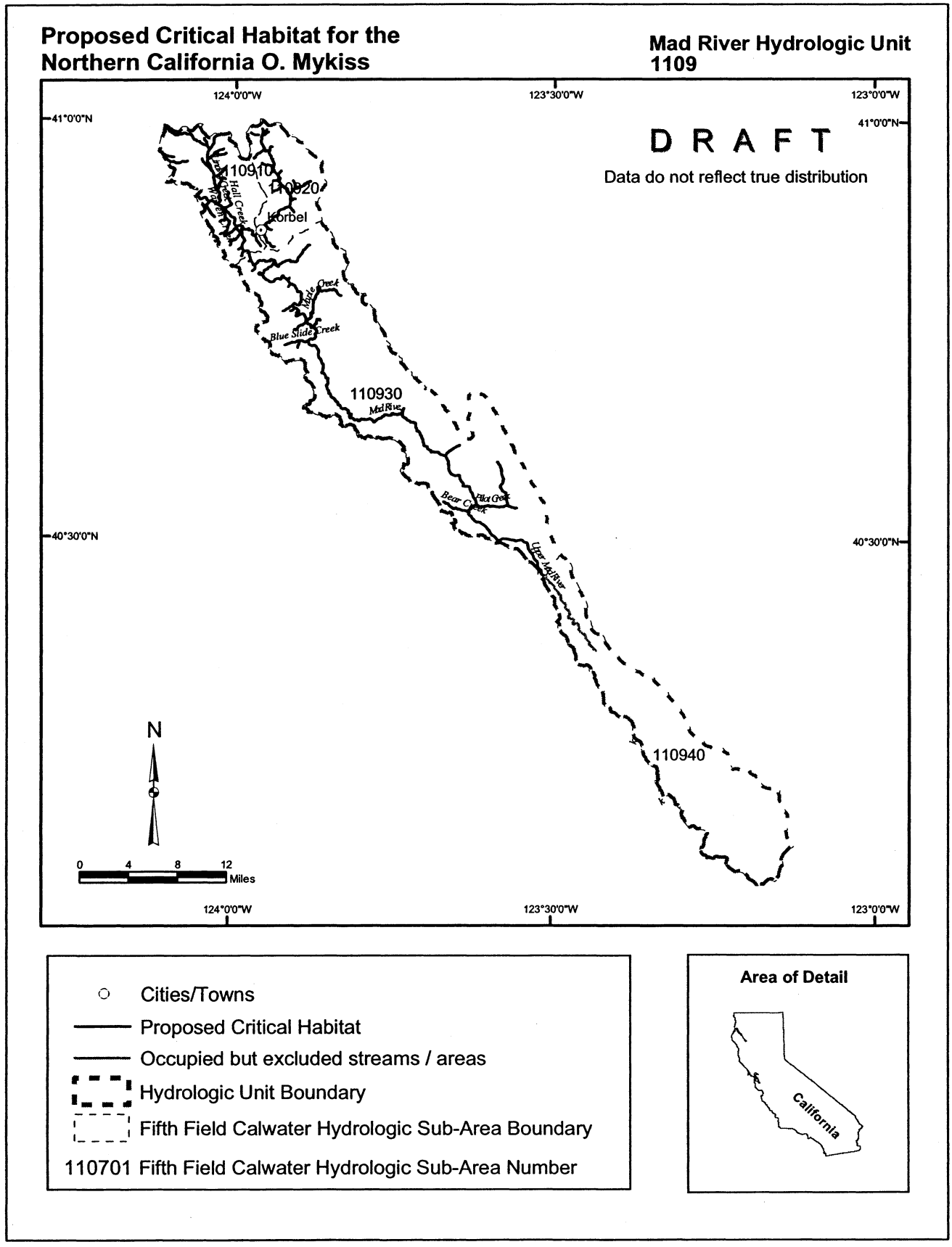
(xviii) Russian Gulch Hydrologic Sub-area 111390. Outlet(s) = Russian Gulch Creek (Lat 38.4669, Long −123.1569) upstream to endpoint(s) in: Russian Gulch Creek (38.4956, −123.1535); West Branch Russian Gulch Creek (38.4968, −123.1631).

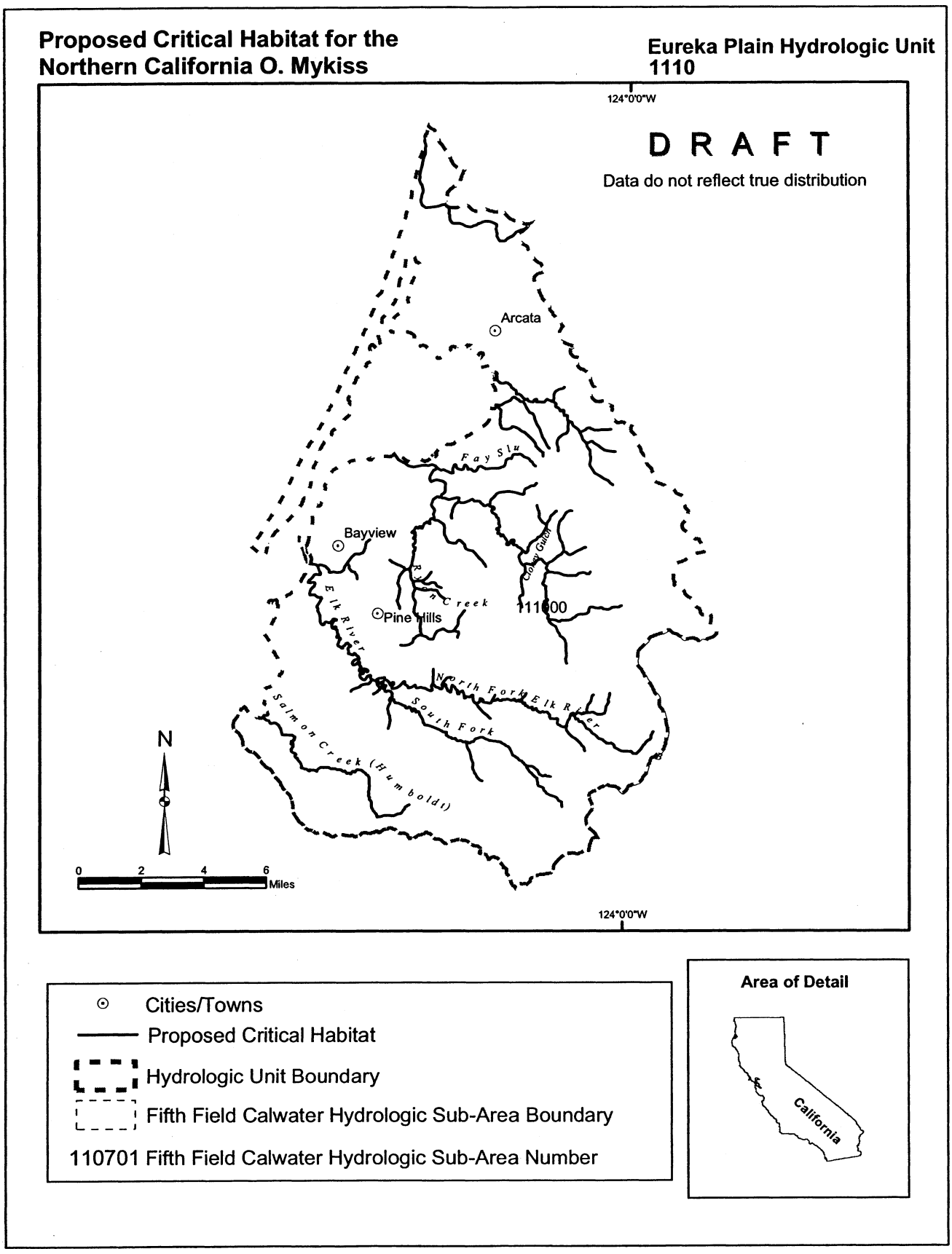
(8) Maps of proposed critical habitat for the Northern California *O. mykiss* ESU follow:

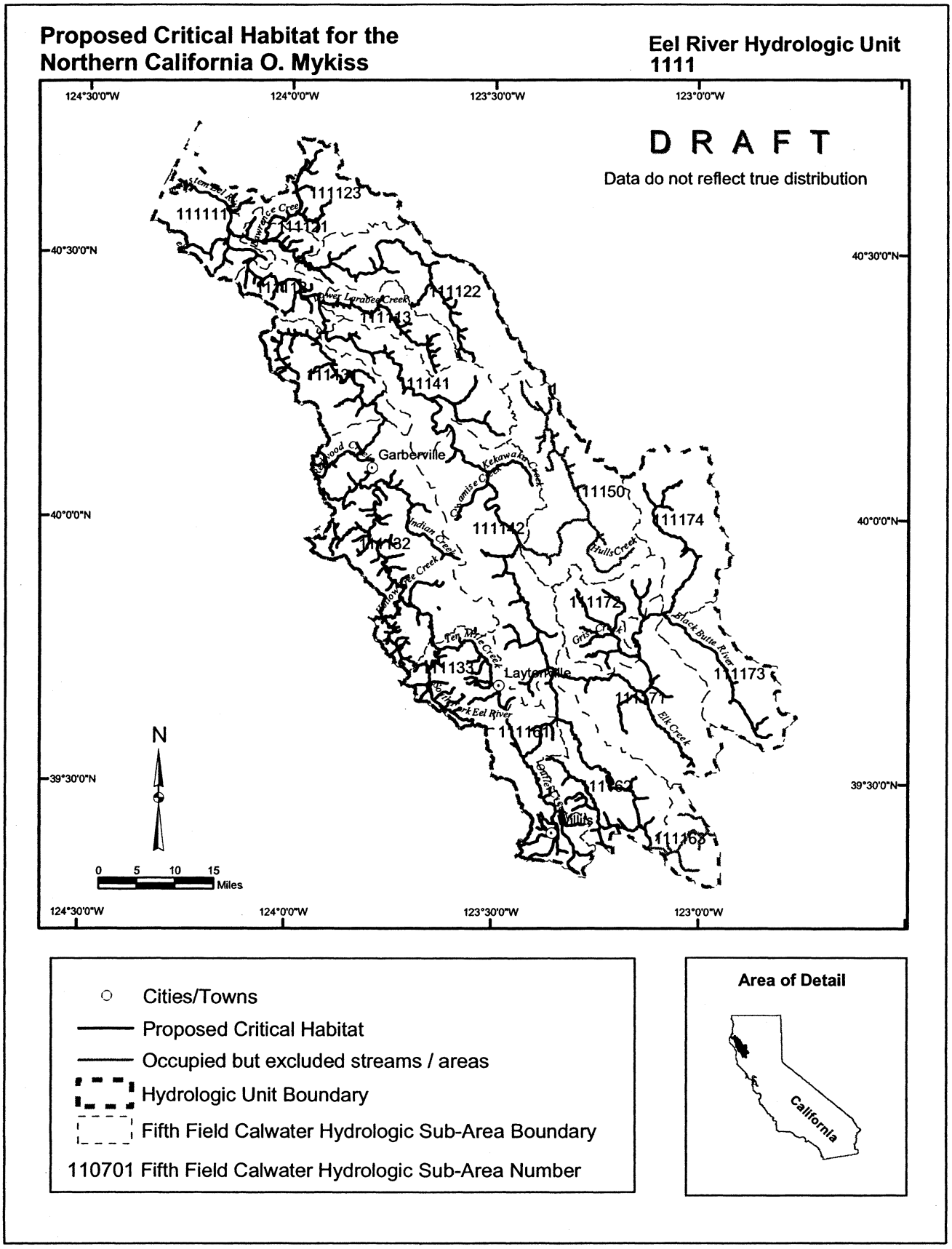
BILLING CODE 3510–22–P

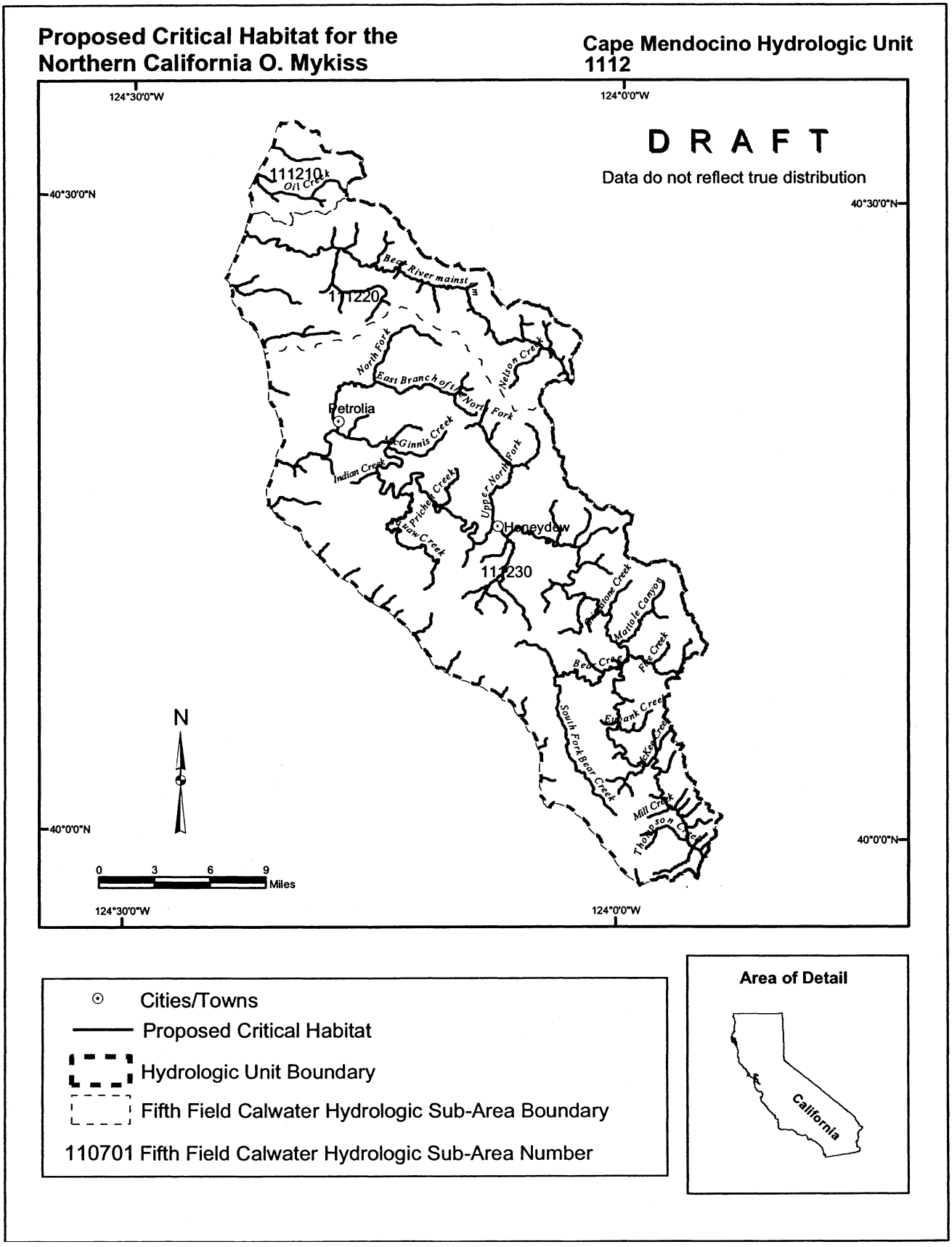

Proposed Critical Habitat for the Northern California O. Mykiss
Redwood Creek Hydrologic Unit 1107
124°0'0"W
123°30'0"W
DRAFT
Data do not reflect true distribution
Prairie Creek
Little East Man
Orick
110710
Bridge Creek
Coyote Creek
Panther Creek
Lacks Creek
110720
Redwood Creek
110730
Upper Panther
41°0'0"N
N
0 4 8 12
Miles
Cities/Towns
Proposed Critical Habitat
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California

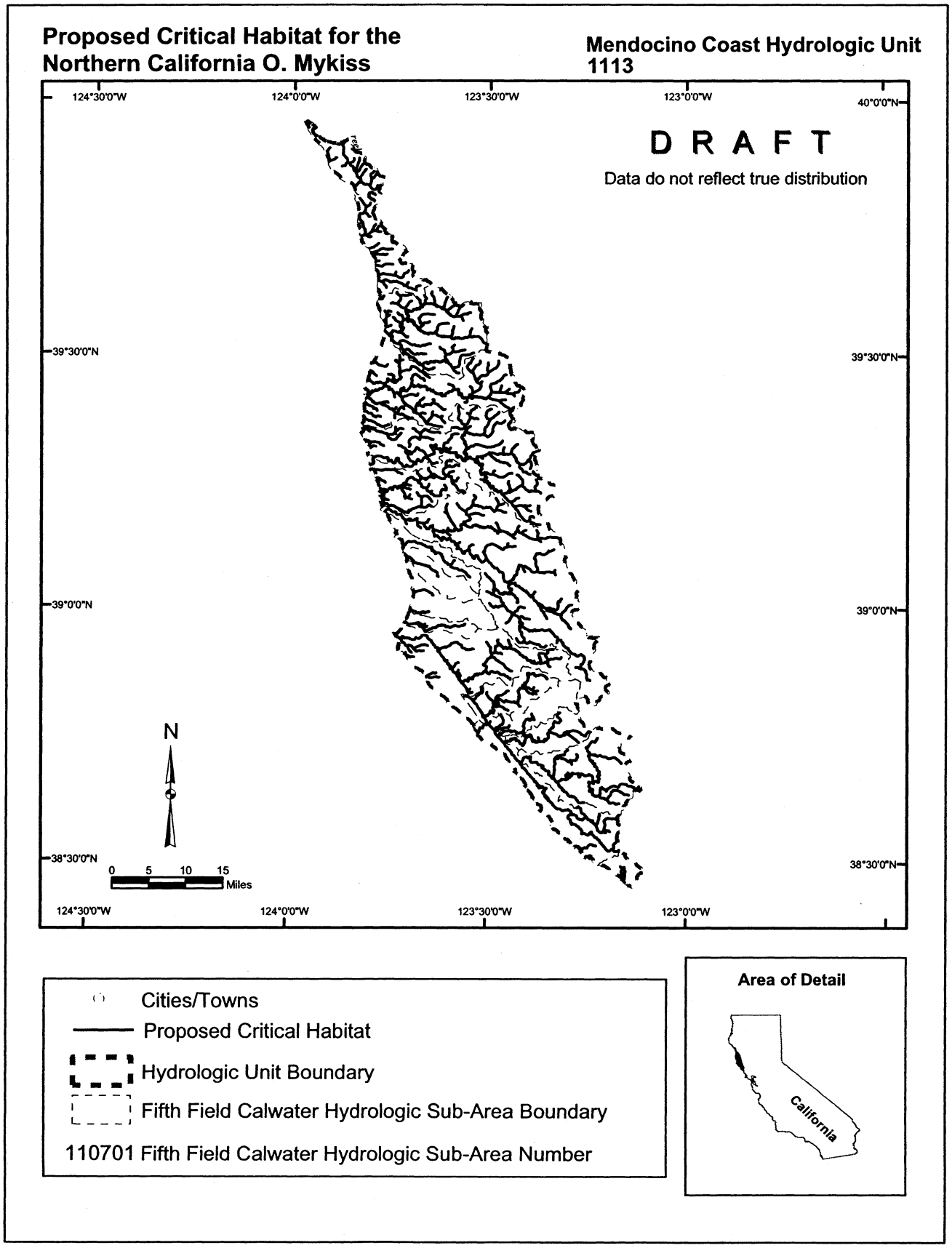

Proposed Critical Habitat for the Northern California O. Mykiss
Trinidad Hydrologic Unit 1108
124°0'0"W
123°30'0"W
DRAFT
Data do not reflect true distribution
McDonald Creek
110810
Mill Creek
Lindsay Creek
41°0'0"N
Moonstone
Crannell
Little River
110820
N
0 2 4 6 Miles
Cities/Towns
Proposed Critical Habitat
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California


Proposed Critical Habitat for the Northern California O. Mykiss
Mad River Hydrologic Unit 1109
124°0'0"W
123°30'0"W
123°0'0"W
41°0'0"N
40°30'0"N
D R A F T
Data do not reflect true distribution
110910
110920
Korbel
Hall Creek
Maple Creek
Blue Slide Creek
110930
Mad River
Bear Creek
Little Mad River
110940
N
0 4 8 12
Miles
Cities/Towns
Proposed Critical Habitat
Occupied but excluded streams / areas
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California


Proposed Critical Habitat for the Northern California O. Mykiss
Eureka Plain Hydrologic Unit 1110
124°0'0"W
DRAFT
Data do not reflect true distribution
Arcata
Fay Slu
Bayview
Clam Gulch
Elk River
Pine Hills
111600
North Fork Elk River
South Fork
Salmon Creek (Humboldt)
N
0 2 4 6
Miles
124°0'0"W
Cities/Towns
Proposed Critical Habitat
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California


Proposed Critical Habitat for the Northern California O. Mykiss
Eel River Hydrologic Unit 1111
DRAFT
Data do not reflect true distribution
124°30'0"W
124°0'0"W
123°30'0"W
123°0'0"W
40°30'0"N
40°0'0"N
39°30'0"N
111123
111111
111121
111122
111113
111131
111141
Garberville
Kekawaka Creek
Bull Creek
Indian Creek
111142
111182
11150
111174
Hulls Creek
111172
Grizzly Creek
Black Butte River
111173
Ten Mile Creek
111133
Laytonville
South Fork Eel River
111171
Elk Creek
111161
Outlet Creek
Willits
111163
N
0 5 10 15
Miles
Cities/Towns
Proposed Critical Habitat
Occupied but excluded streams / areas
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California


Proposed Critical Habitat for the Northern California O. Mykiss
Cape Mendocino Hydrologic Unit 1112
124°30'0"W
124°0'0"W
DRAFT
Data do not reflect true distribution
40°30'0"N
40°0'0"N
111210
Oil Cr.
Beat River mainstem
111220
North Fork
East Branch of the North Fork
Nelson Creek
Petrolia
McGinnis Creek
Indian Creek
Upper North Fork
Pritchett Creek
Honeydew
111230
Matole Canyon
Bear Creek
Fire Creek
Eubank Creek
McKee Creek
South Fork Bear Creek
Mill Creek
Thompson Creek
N
0 3 6 9
Miles
Cities/Towns
Proposed Critical Habitat
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California



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(h) *Central California Coast O. mykiss (Oncorhynchus mykiss).* Critical habitat is proposed to include the areas defined in the following units:

(1) Russian River Hydrologic Unit 1114—*(i) Guerneville Hydrologic Sub-area 111411.* Outlet(s) = Russian River (Lat 38.4507, Long −123.1289) upstream to endpoint(s) in: Atascadero Creek (38.3473, −122.8626); Austin Creek (38.5098, −123.0680); Baumert Springs (38.4195, −122.9658); Dutch Bill Creek (38.4132, −122.9508); Duvoul Creek (38.4527, −122.9525); Fife Creek (38.5584, −122.9922); Freezeout Creek (38.4405, −123.0360); Green Valley Creek, (38.4445, −122.9185); Grub Creek (38.4411, −122.9636); Hobson Creek (38.5334, −122.9401); Hulbert Creek (38.5548, −123.0362); Jenner Gulch (38.4869, −123.0996); Kidd Creek (38.5029, −123.0935); Lancel Creek (38.4247, −122.9322); Mark West Creek (38.4961, −122.8489); Mays Canyon (38.4800, −122.9715); North Fork Lancel Creek (38.4447, −122.9444); Pocket Canyon (38.4650, −122.9267); Porter Creek (38.5435, −122.9332); Purrington Creek (38.4083, −122.9307); Sheep House Creek (38.4820, −123.0921); Smith Creek (38.4622, −122.9585); Unnamed Tributary (38.4560, −123.0246); Unnamed Tributary (38.3976, −122.8994); Unnamed Tributary (38.3772, −122.8938); Willow Creek (38.4249, −123.0022).

(ii) Austin Creek Hydrologic Sub-area 111412. Outlet(s) = Austin Creek (Lat 38.5098, Long −123.0680) upstream to endpoint(s) in: Bear Pen Creek (38.5939, −123.1644); Big Oat Creek (38.5615, −123.1299); Blue Jay Creek (38.5618, −123.1399); Conshea Creek (38.5830, −123.0824); Devil Creek (38.6163, −123.0425); Black Rock Creek (38.5586, −123.0730); Thompson Creek (38.5747, −123.0300); Pole Mountain Creek (38.5122, −123.1168); Red Slide Creek (38.6039, −123.1141); Saint Elmo Creek (38.5130, −123.1125); Schoolhouse Creek (38.5595, −123.0175); Spring Creek (38.5041, −123.1364); Sulphur Creek (38.6187, −123.0553); Austin Creek (38.6262, −123.1347); East Austin Creek (38.6349, −123.1238); Gilliam Creek (38.5803, −123.0152); Gray Creek (38.6132, −123.0107); Ward Creek (38.5720, −123.1547).

(iii) Laguna Hydrologic Sub-area 111421. Outlet(s) = Laguna de Santa Rosa (Lat 38.4522, Long −122.8347) upstream to endpoint(s) in: Crane Creek (38.3521, −122.6022); Hinebaugh Creek (38.3509, −122.6913); Laguna de Santa Rosa (38.3431, −122.7229); Blucher Creek (38.3509, −122.8258); Copeland Creek (38.3371, −122.6038).

(iv) Mark West Hydrologic Sub-area 111423. Outlet(s) = Mark West Creek (Lat 38.4858, Long −122.8419) upstream to endpoint(s) in: Humbug Creek (38.5412, −122.6249); Laguna de Santa Rosa (38.4526, −122.8347); Mark West Creek (38.5187, −122.5995); Pool Creek (38.5486, −122.7641); Pruit Creek (38.5313, −122.7615); Windsor Creek (38.5484, −122.8101).

(v) Warm Springs Hydrologic Sub-area 111424. Outlet(s) = Dry Creek (Lat 38.5862, Long −122.8577) upstream to endpoint(s) in: Angel Creek (38.6101, −122.9833); Crane Creek (38.6434, −122.9451); Dry Creek (38.7181, −123.0091); Dutcher Creek (38.7223, −122.9770); Felta (38.5679, −122.9379); Foss Creek (38.6244, −122.8754); Grape Creek (38.6593, −122.9707); Mill Creek (38.5976, −122.9914); North Slough Creek (38.6392, −122.8888); Palmer Creek (38.5770, −122.9904); Redwood Log Creek (38.6705, −123.0725); Salt Creek (38.5543, −122.9133); Pena Creek (38.6384, −123.0743); Wallace Creek (38.6260, −122.9651); Wine Creek (38.6662, −122.9682); Woods Creek (38.6069, −123.0272).

(vi) Geyserville Hydrologic Sub-area 111425. Outlet(s) = Russian River (Lat 38.6132, Long −122.8321) upstream to endpoint(s) in: Ash Creek (38.8556, −123.0082); Bear Creek (38.7253, −122.7038); Bidwell Creek (38.6229, −122.6320); Big Sulphur Creek (38.8279, −122.9914); Bluegum Creek (38.6988, −122.7596); Briggs Creek (38.6845, −122.6811); Coon Creek (38.7105, −122.6957); Crocker Creek (38.7771, −122.9595); Edwards Creek (38.8592, −123.0758); Foss Creek (38.6373, −122.8753); Franz Creek (38.5726, −122.6343); Gill Creek (38.7552, −122.8840); Gird Creek (38.7055, −122.8311); Ingalls Creek (38.7344, −122.7192); Kellog Creek (38.6753, −122.6422); Little Briggs Creek (38.7082, −122.7014); Maacama Creek (38.6743, −122.7431); McDonnell Creek (38.7354, −122.7338); Mill Creek (38.7009, −122.6490); Miller Creek (38.7211, −122.8608); Oat Valley Creek (38.8461, −123.0712); Redwood Creek (38.6342, −122.6720); Foote Creek (38.6433, −122.6797); Sausal Creek (38.6924, −122.7930); South Fork Gill Creek (38.7420, −122.8760); Unnamed Tributary (38.7329, −122.8601); Yellowjacket Creek (38.6666, −122.6308).

(vii) Sulphur Creek Hydrologic Sub-area 111426. Outlet(s) = Big Sulphur Creek (Lat 38.8279, Long −122.9914) upstream to endpoint(s) in: Alder Creek (38.8503, −122.8953); Anna Belcher Creek (38.7537, −122.7586); Big Sulphur Creek (38.8243, −122.8774); Cobb Creek (38.7953, −122.7909); Frasier Creek (38.8439, −122.9341); Humming Bird Creek (38.8460, −122.8596); Lovers Gulch (38.7396, −122.8275); North Branch Little Sulphur Creek (38.7783, −122.8119); Squaw Creek (38.8199, −122.7945); Little Sulphur Creek (38.7469, −122.7425).

(viii) Ukiah Hydrologic Sub-area 111431. Outlet(s) = Russian River (Lat 38.8828, Long −123.0557) upstream to endpoint(s) in: Pieta Creek (38.8622, −122.9329).

(ix) Forsythe Creek Hydrologic Sub-area 111433. Outlet(s) = West Branch Russian River (Lat 39.2257, Long −123.2012) upstream to endpoint(s) in: Bakers Creek (39.2859, −123.2432); Eldridge Creek (39.2250, −123.3309); Forsythe Creek (39.2976, −123.2963); Jack Smith Creek (39.2754, −123.3421); Mariposa Creek (39.3472, −123.2625); Mill Creek (39.2969, −123.3360); Salt Hollow Creek (39.2585, −123.1881); Seward Creek (39.2606, −123.2646); West Branch Russian River (39.3642, −123.2334).

(2) Bodega Hydrologic Unit 1115—*(i) Salmon Creek Hydrologic Sub-area 111510.* Outlet(s) = Salmon Creek (Lat 38.3554, Long −123.0675) upstream to endpoint(s) in: Coleman Valley Creek (38.3956, −123.0097); Faye Creek (38.3749, −123.0000); Finley Creek (38.3707, −123.0258); Salmon Creek (38.3877, −122.9318); Tannery Creek (38.3660, −122.9808).

(ii) Estero Americano Hydrologic Sub-area 111530. Outlet(s) = Estero Americano (Lat 38.2939, Long −123.0011) upstream to endpoint(s) in: Estero Americano (38.3117, −122.9748); Ebabias Creek (38.3345, −122.9759).

(3) Marin Coastal Hydrologic Unit 2201—*(i) Walker Creek Hydrologic Sub-area 220112.* Outlet(s) = Walker Creek (Lat 38.2213, Long −122.9228); Millerton Gulch (38.1055, −122.8416) upstream to endpoint(s) in: Chileno Creek (38.2145, −122.8579); Frink Canyon (38.1761, −122.8405); Millerton Gulch (38.1376, −122.8052); Verde Canyon (38.1630, −122.8116); Unnamed Trib (38.1224, −122.8095); Walker Creek (38.1617, −122.7815).

(ii) Lagunitas Creek Hydrologic Sub-area 220113. Outlet(s) = Lagunitas Creek (Lat 38.0827, Long −122.8274) upstream to endpoint(s) in: Cheda Creek (38.0483, −122.7329); Devil's Gulch (38.0393, −122.7128); Giacomini Creek (38.0032, −122.7617); Horse Camp Gulch (38.0078, −122.7624); Lagunitas Creek (37.9974, −122.7045); Olema Creek (37.9719, −122.7125); Quarry Gulch (38.0345, −122.7639); San Geronimo Creek (38.0131, −122.6499); Unnamed Tributary (37.9893, −122.7328); Unnamed Tributary (37.9976, −122.7553).

(iii) Point Reyes Hydrologic Sub-area 220120. Outlet(s) = Creamery Bay Creek

(Lat 38.0809, Long −122.9561); East Schooner Creek (38.0913, −122.9293); Home Ranch (38.0705, −122.9119); Laguna Creek (38.0235, −122.8732); Muddy Hollow Creek (38.0329, −122.8842) upstream to endpoint(s) in: Creamery Bay Creek (38.0779, −122.9572); East Schooner Creek (38.0928, −122.9159); Home Ranch Creek (38.0784, −122.9038); Laguna Creek (38.0436, −122.8559); Muddy Hollow Creek (38.0549, −122.8666).

(iv) Bolinas Hydrologic Sub-area 220130. Outlet(s) = Easkoot Creek (Lat 37.9026, Long −122.6474); McKinnon Gulch (37.9126, −122.6639); Morse Gulch (37.9189, −122.6710); Pine Gulch Creek (37.9218, −122.6882); Redwood Creek (37.8595, −122.5787); Stinson Gulch (37.9068, −122.6517); Wilkins Creek (37.9343, −122.6967) upstream to endpoint(s) in: Easkoot Creek (37.8987, −122.6370); Kent Canyon (37.8866, −122.5800); McKinnon Gulch (37.9197, −122.6564); Morse Gulch (37.9240, −122.6618); Pine Gulch Creek (37.9557, −122.7197); Redwood Creek (37.9006, −122.5787); Stinson Gulch (37.9141, −122.6426); Wilkins Creek (37.9450, −122.6910).

(4) San Mateo Hydrologic Unit 2202—*(i) San Mateo Coastal Hydrologic Sub-area 220221.* Outlet(s) = Arroyo de en Medio (Lat 37.4929, Long −122.4606); Denniston Creek (37.5033, −122.4869); Frenchmans Creek (37.4804, −122.4518); San Pedro Creek (37.5964, −122.5057) upstream to endpoint(s) in: Arroyo De En Medio (37.5202, −122.4562); Denniston Creek (37.5184, −122.4896); Frenchmans Creek (37.5170, −122.4332); Middle Fork San Pedro Creek (37.5758, −122.4591); North Fork San Pedro Creek (37.5996, −122.4635); San Pedro Creek (37.5825, −122.4771).

(ii) Half Moon Bay Hydrologic Sub-area 220222. Outlet(s) = Arroyo Leon Creek (Lat 37.4758, Long −122.4493) upstream to endpoint(s) in: Apanolio Creek (37.5202, −122.4158); Arroyo Leon Creek (37.4560, −122.3442); Mills Creek (37.4629, −122.3721); Pilarcitos Creek (37.5259, −122.3980); Unnamed Tributary (37.4705, −122.3616).

(iii) Tunitas Creek Hydrologic Sub-area 220223. Outlet(s) = Lobitos Creek (Lat 37.3762, Long −122.4093); Tunitas Creek (37.3567, −122.3999) upstream to endpoint(s) in: East Fork Tunitas Creek (37.3981, −122.3404); Lobitos Creek (37.4246, −122.3586); Tunitas Creek (37.4086, −122.3502).

(iv) San Gregorio Creek Hydrologic Sub-area 220230. Outlet(s) = San Gregorio Creek (Lat 37.3215, Long −122.4030) upstream to endpoint(s) in: Alpine Creek (37.3062, −122.2003); Bogess Creek (37.3740, −122.3010); El Corte Madera Creek (37.3650, −122.3307); Harrington Creek (37.3811, −122.2936); La Honda Creek (37.3680, −122.2655); Langley Creek (37.3302, −122.2420); Mindego Creek (37.3204, −122.2239); San Gregorio Creek (37.3099, −122.2779); Woodruff Creek (37.3415, −122.2495).

(v) Pescadero Creek Hydrologic Sub-area 220240. Outlet(s) = Pescadero Creek (Lat 37.2669, Long −122.4122); Pomponio Creek (37.2979, −122.4061) upstream to endpoint(s) in: Bradley Creek (37.2819, −122.3802); Butano Creek (37.2419, −122.3165); Evans Creek (37.2659, −122.2163); Honsinger Creek (37.2828, −122.3316); Little Boulder Creek (37.2145, −122.1964); Little Butano Creek (37.2040, −122.3492); Oil Creek (37.2572, −122.1325); Pescadero Creek (37.2320, −122.1553); Lambert Creek (37.3014, −122.1789); Peters Creek (37.2883, −122.1694); Pomponio Creek (37.3030, −122.3805); Slate Creek (37.2530, −122.1935); Tarwater Creek (37.2731, −122.2387); Waterman Creek (37.2455, −122.1568).

(5) Bay Bridges Hydrologic Unit 2203—*San Rafael Hydrologic Sub-area 220320.* Outlet(s) = Corte Madera Creek (Lat 37.9425, Long −122.5059) upstream to endpoint(s) in: Cascade Creek (37.9867, −122.6287); Corte Madera Creek (37.9859, −122.5842); Larkspur Creek (37.9305, −122.5514); Ross Creek (37.9558, −122.5752); San Anselmo Creek (37.9825, −122.6420); Sleepy Hollow Creek (38.0074, −122.5794); Tamalpais Creek (37.9481, −122.5674).

(6) South Bay Hydrologic Unit 2204—*(i) Eastbay Cities Hydrologic Sub-area 220420.* Outlet(s) = Alameda Creek (Lat 37.5942, Long −122.1422) upstream.

(ii) Alameda Creek Hydrologic Sub-area 220430. Outlet(s) = Alameda Creek (Lat 37.5812, Long −121.9644) upstream to endpoint(s) in: Alameda Creek (37.4569, −121.6996); Arroyo Honda (37.3661, −121.6684); Arroyo Mocho (37.5572, −121.5807); Arroyo de Laguna (37.6771, −121.9124); Arroyo del Valle (37.6141, −121.7466); Arroyo las Positias (37.7029, −121.7594); Calveras Creek (37.4642, −121.7766); Colorado Creek (37.4301, −121.5092); Sinbad Creek (37.6509, −121.9353); Stoneybrook Creek (37.6377, −121.9608).

(7) Santa Clara Hydrologic Unit 2205—*(i) Freemont Bayside Hydrologic Sub-area 220520.* Outlet(s) = Alameda Creek (Lat 37.5777, Long −122.0251) upstream to endpoint(s) in: Alameda Creek (37.5812, −121.9644).

(ii) Coyote Creek Hydrologic Sub-area 220530. Outlet(s) = Coyote Creek (Lat 37.4629, Long −121.9894; 37.2275, −121.7514) upstream to endpoint(s) in: Arroyo Aguague (37.3907, −121.7836); Coyote Creek (37.2778, −121.8033); Coyote Creek (37.1677, −121.6301); Upper Penitencia Creek (37.3969, −121.7577).

(iii) Palo Alto Hydrologic Sub-area 220550. Outlet(s) = Guadalupe River (Lat 37.4614, Long −122.0240); San Francisquito Creek (37.4658, −122.1152); Stevens Creek (37.4456, −122.0641) upstream to endpoint(s) in: Bear Creek (37.4528, −122.3020); Guadalupe River (37.3499, −.121.9094); Los Trancos (37.3293, −122.1786); San Francisquito Creek (37.4098, −122.2389); Stevens Creek (37.2990, −122.0778).

(8) San Pablo Hydrologic Unit 2206—*(i) Petaluma River Hydrologic Sub-area 220630.* Outlet(s) = Petaluma River (Lat 38.1111, Long −122.4944) upstream to endpoint(s) in: Adobe Creek (38.2940, −122.5834); Lichau Creek (38.2848, −122.6654); Lynch Creek (38.2748, −122.6194); Petaluma River (38.3010, −122.7149); Schultz Slough (38.1892, −122.5953); San Antonio Creek (38.2049, −122.7408); Unnamed Tributary (38.3105, −122.6146); Willow Brook (38.3165, −122.6113).

(ii) Sonoma Creek Hydrologic Sub-area 220640. Outlet(s) = Sonoma Creek (Lat 38.1525, Long −122.4050) upstream to endpoint(s) in: Agua Caliente Creek (38.3368, −122.4518); Asbury Creek (38.3401, −122.5590); Bear Creek (38.4656, −122.5253); Calabazas Creek (38.4033, −122.4803); Carriger Creek (38.3031, −122.5336); Graham Creek (38.3474, −122.5607); Hooker Creek (38.3809, −122.4562); Mill Creek (38.3395, −122.5454); Nathanson Creek (38.3350, −122.4290); Rodgers Creek (38.2924, −122.5543); Schell Creek (38.2554, −122.4510); Sonoma Creek (38.4507, −122.4819); Stuart Creek (38.3936, −122.4708); Yulupa Creek (38.3986, −122.5934).

(iii) Napa River Hydrologic Sub-area 220650. Outlet(s) = Napa River (Lat 38.0786, Long −122.2468) upstream to endpoint(s) in: Bale Slough (38.4806, −122.4578); Bear Canyon Creek (38.4512, −122.4415); Bell Canyon Creek (38.5551, −122.4827); Brown's Valley Creek (38.3251, −122.3686); Carneros Creek (38.3108, −122.3914); Conn Creek (38.4843, −122.3824); Cyrus Creek (38.5776, −122.6032); Diamond Mountain Creek (38.5645, −122.5903); Dry Creek (38.4334, −122.4791); Dutch Henery Creek (38.6080, −122.5253); Garnett Creek (38.6236, −122.5860); Huichica Creek (38.2811, −122.3936); Jericho Canyon Creek (38.6219, −122.5933); Miliken Creek (38.3773, −122.2280); Mill Creek (38.5299, −122.5513); Murphy Creek

(38.3155, −122.2111); Napa Creek (38.3047, −122.3134); Napa River (38.6210, −122.6129); Pickle Canyon Creek (38.3672, −122.4071); Rector Creek (38.4410, −122.3451); Redwood Creek (38.3765, −122.4466); Ritchie Creek (38.5369, −122.5652); Sarco Creek (38.3567, −122.2071); Soda Creek (38.4156, −122.2953); Spencer Creek (38.2729, −122.1909); Sulphur Creek (38.4839, −122.5161); Suscol Creek (38.2522, −122.2157); Tulucay Creek (38.2929, −122.2389); Unnamed Tributary (38.4248, −122.4935); York Creek (38.5128, −122.5023).

(9) Suisun Hydrologic Unit 2207—*Suisun Creek Hydrologic Sub-area 220722.* Outlet(s) = Suisun Creek (Lat 38.2020, Long −122.1035) upstream to endpoint(s) in: Suisun Creek (38.3301, −122.1371); Wooden Valley Creek (38.3749, −122.1830).

(10) Big Basin Hydrologic Unit 3304—*(i) Davenport Hydrologic Sub-area 330411* Outlet(s) = Baldwin Creek (Lat 36.9669, −122.1232); Davenport Landing Creek (37.0231, −122.2153); Laguna Creek (36.9824, −122.1560); Liddell Creek (37.0001, −122.1816); Majors Creek (36.9762, −122.1423); Molino Creek (37.0368, −122.2292); San Vicente Creek (37.0093, −122.1940); Scott Creek (37.0404, −122.2307); Waddell Creek (37.0935, −122.2762); Wilder Creek (36.9535, −122.0775) upstream to endpoint(s) in: Baldwin Creek (37.0126, −122.1006); Bettencourt Creek (37.1081, −122.2386); Big Creek (37.0832, −122.2175); Davenport Landing Creek (37.0475, −122.1920); East Branch Waddell Creek (37.1482, −122.2531); East Fork Liddell Creek (37.0204, −122.1521); Henry Creek (37.1695, −122.2751); Laguna Creek (37.0185, −122.1287); Liddell Creek (37.0030, −122.1768); Little Creek (37.0688, −122.2097); Majors Creek (36.9815, −122.1374); Middle Fork East Fork Liddell Creek (37.0194, −122.1608); Mill Creek (37.1034, −122.2218); Molino Creek (37.0384, −122.2125); Peasley Gulch (36.9824, −122.0861); Queseria Creek (37.0521, −122.2042); San Vicente Creek (37.0417, −122.1741); Scott Creek (37.1338, −122.2306); Waddell Creek (37.1338, −122.2677); West Branch Waddell Creek (37.1697, −122.2642); West Fork Liddell Creek (37.0117, −122.1763); Unnamed Tributary (37.0103, −122.0701); Wilder Creek (37.0107, −122.0770).

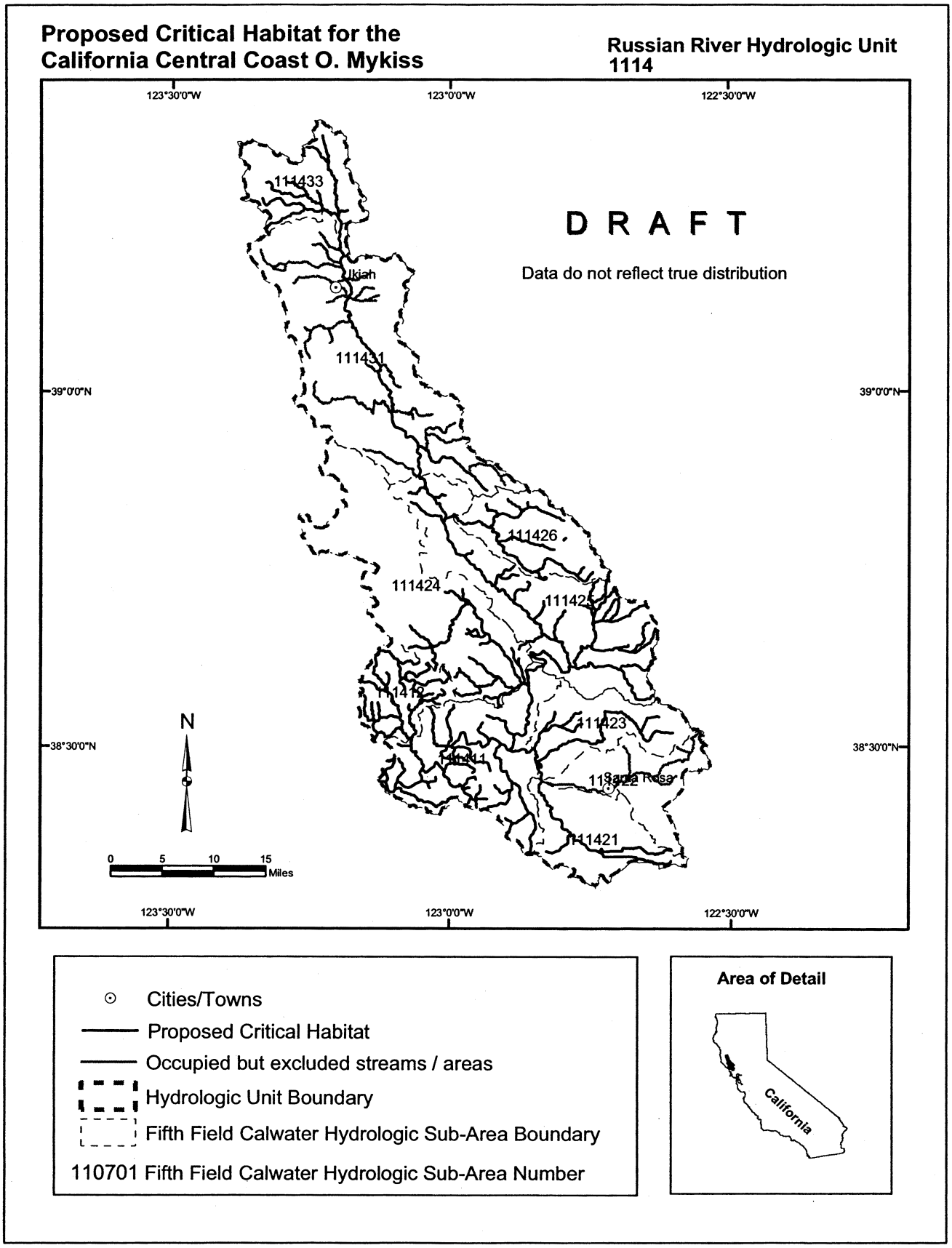
(ii) San Lorenzo Hydrologic Sub-area 330412. Outlet(s) = Arana Gulch Creek (Lat 36.9676, Long −122.0028); San Lorenzo River (36.9641, −122.0125) upstream to endpoint(s) in: Arana Gulch Creek (37.0270, −121.9739); Bean Creek (37.0956, −122.0022); Bear Creek (37.1711, −122.0750); Boulder Creek (37.1952, −122.1892); Bracken Brae Creek (37.1441, −122.1459); Branciforte Creek (37.0701, −121.9749); Crystal Creek (37.0333, −121.9825); Carbonera Creek (37.0286, −122.0202); Central Branch Arana Gulch Creek (37.0170, −121.9874); Deer Creek (37.2215, −122.0799); Fall Creek (37.0705, −122.1063); Gold Gulch Creek (37.0427, −122.1018); Granite Creek (37.0490, −121.9979); Hare Creek (37.1544, −122.1690); Jameson Creek (37.1485, −122.1904); Kings Creek (37.2262, −122.1059); Lompico Creek (37.1250, −122.0496); Mackenzie Creek (37.0866, −122.0176); Mountain Charlie Creek (37.1385, −121.9914); Newell Creek (37.1019, −122.0724); San Lorenzo River (37.2276, −122.1384); Two Bar Creek (37.1833, −122.0929); Unnamed Tributary (37.2106, −122.0952); Unnamed Tributary (37.2032, −122.0699); Zayante Creek (37.1062, −122.0224).

(iii) Aptos-Soquel Hydrologic Sub-area 330413. Outlet(s)=Aptos Creek (Lat 36.9692, Long −121.9065); Soquel Creek (36.9720, −121.9526) upstream to endpoint(s) in: Amaya Creek (37.0930, −121.9297); Aptos Creek (37.0545, −121.8568); Bates Creek (37.0099, −121.9353); Bridge Creek (37.0464, −121.8969); East Branch Soquel Creek (37.0690, −121.8297); Hester Creek (37.0967, −121.9458); Hinckley Creek (37.0671, −121.9069); Moores Gulch (37.0573, −121.9579); Soquel Creek (37.0443, −121.9404); Valencia Creek (37.0323, −121.8493); West Branch Soquel Creek (37.1095, −121.9606).

(iv) Ano Nuevo Hydrologic Sub-area 330420. Outlet(s)=Ano Nuevo Creek (Lat 37.1163, Long −22.3060); Gazos Creek (37.1646, −122.3625); Whitehouse Creek (37.1457, −122.3469) upstream to endpoint(s) in: Ano Nuevo Creek (37.1269, −122.3039); Bear Gulch (37.1965, −122.2773); Gazos Creek (37.2088, −122.2868); Old Womans Creek (37.1829, −122.3033); Whitehouse Creek (37.1775, −122.2900).

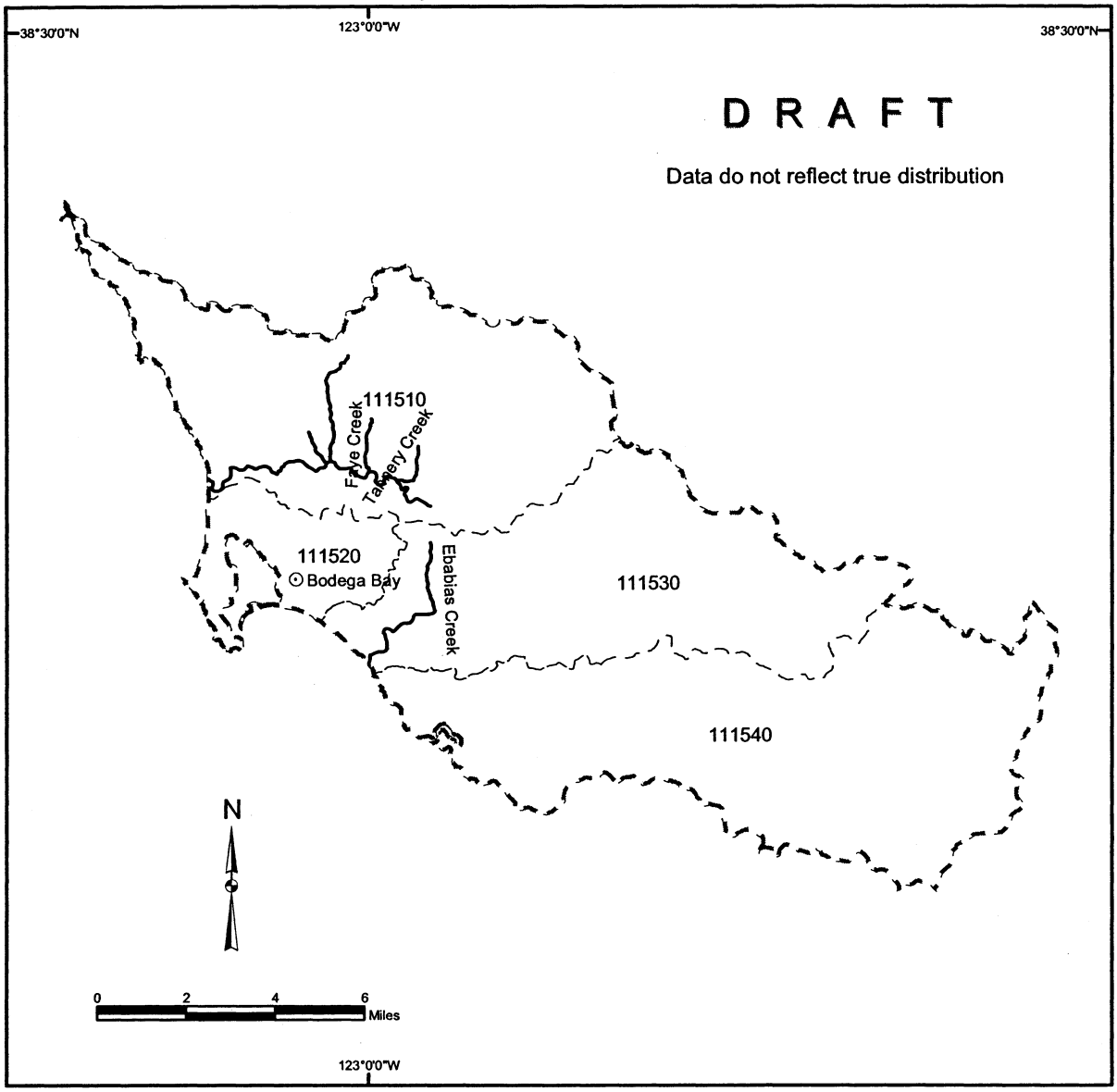
(11) Maps of proposed critical habitat for the Central California Coast O. mykiss ESU follow:

BILLING CODE 3510–22–P


Proposed Critical Habitat for the California Central Coast O. Mykiss
Russian River Hydrologic Unit 1114
123°30'0"W
123°0'0"W
122°30'0"W
39°0'0"N
38°30'0"N
111433
DRAFT
Data do not reflect true distribution
Ukiah
111431
111426
111424
111425
111422
111423
111411
Santa Rosa
111421
N
0 5 10 15
Miles
Cities/Towns
Proposed Critical Habitat
Occupied but excluded streams / areas
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California

Proposed Critical Habitat for the California Central Coast O. Mykiss

Bodega Hydrologic Unit 1115



⊙ Cities/Towns

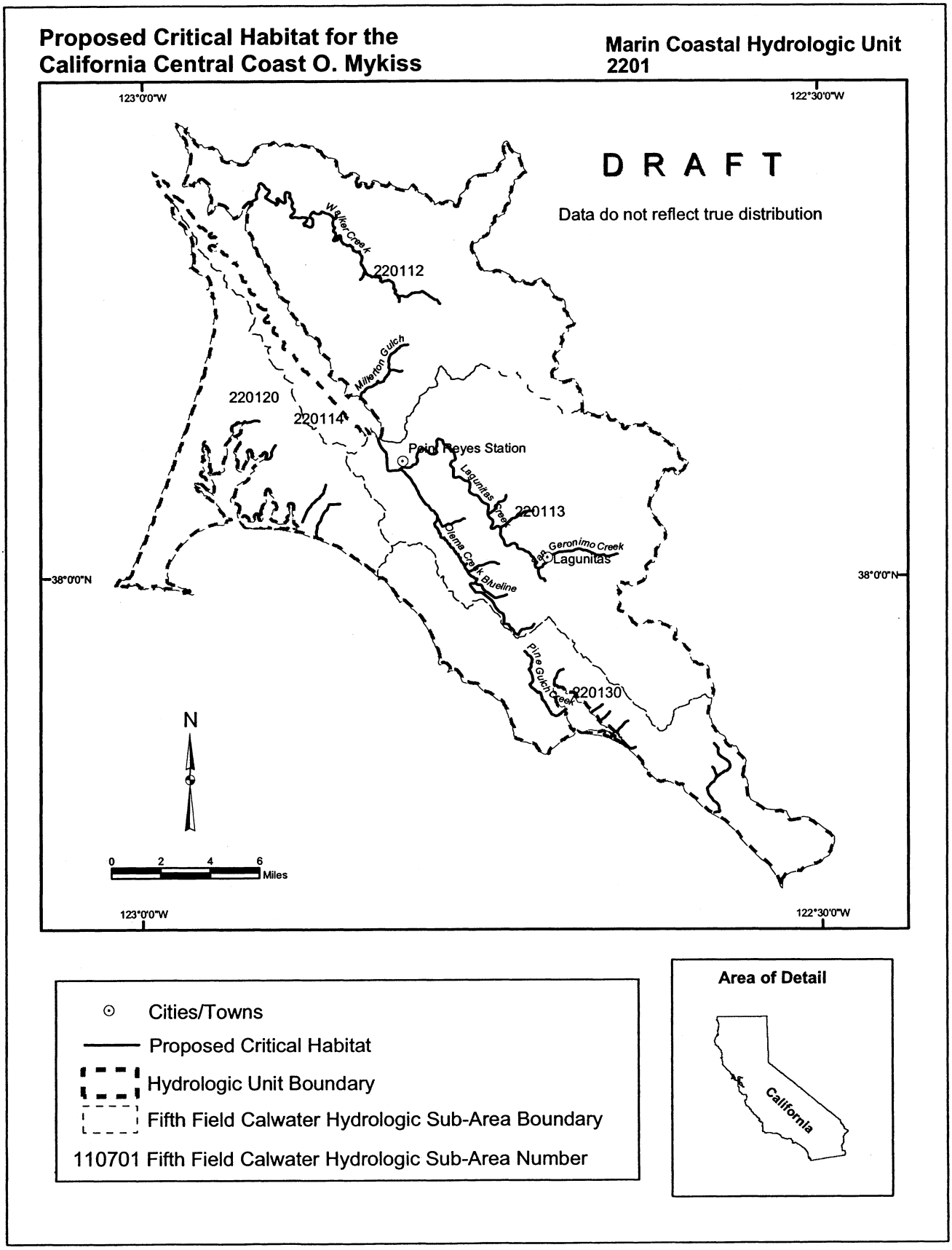
Proposed Critical Habitat

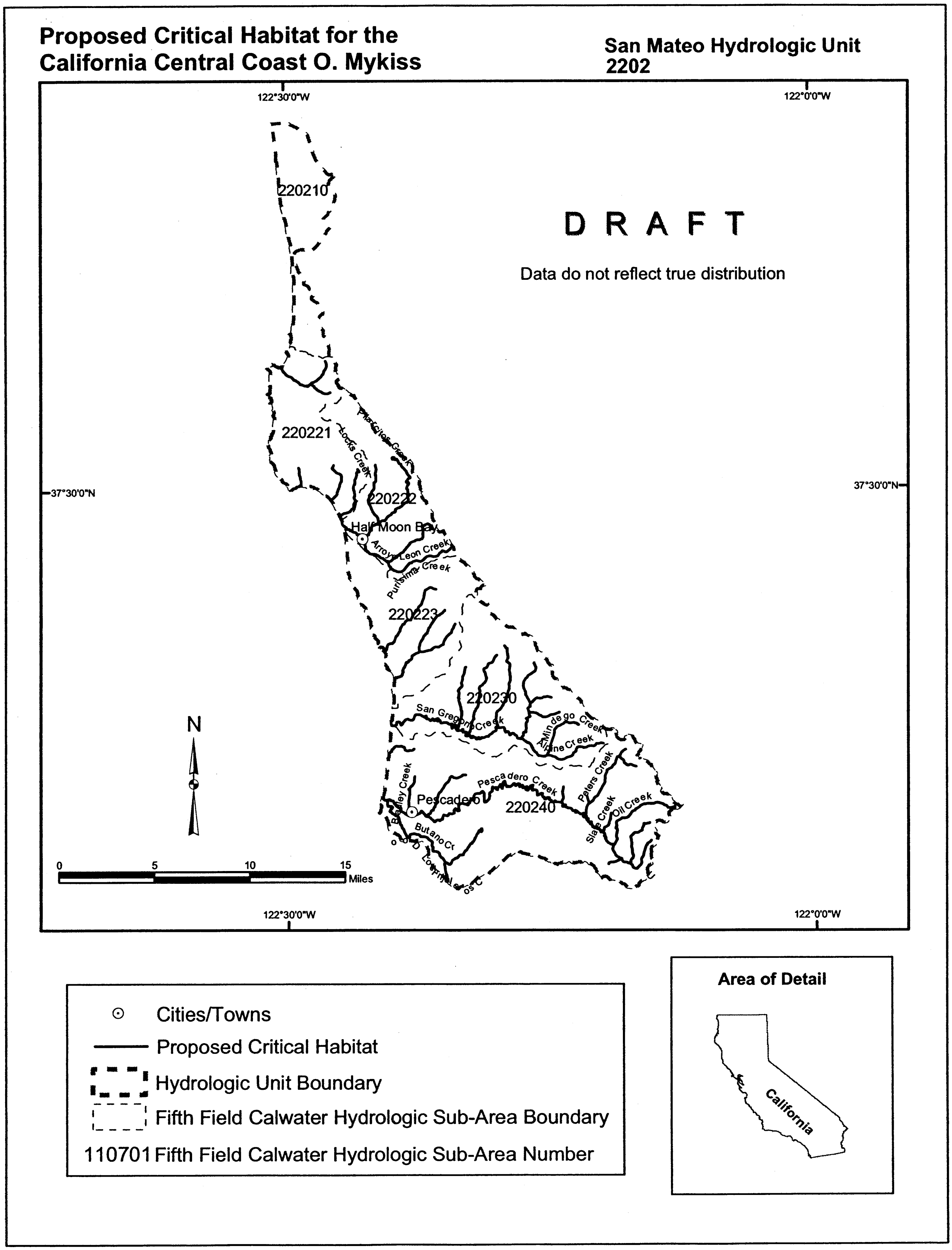
Hydrologic Unit Boundary

Fifth Field Calwater Hydrologic Sub-Area Boundary

110701 Fifth Field Calwater Hydrologic Sub-Area Number

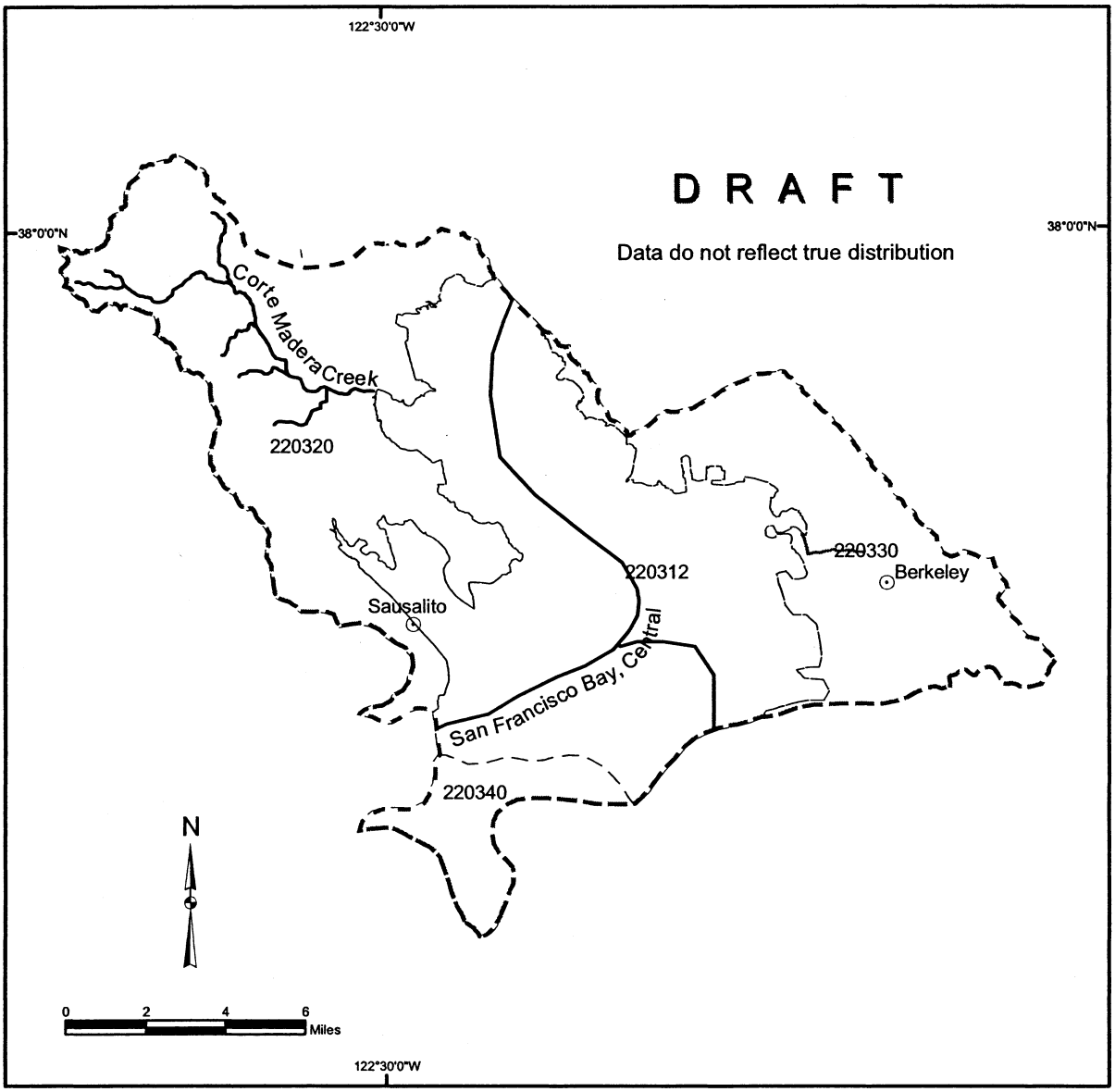
Area of Detail


Proposed Critical Habitat for the California Central Coast O. Mykiss
Marin Coastal Hydrologic Unit 2201
123°0'0"W
122°30'0"W
38°0'0"N
DRAFT
Data do not reflect true distribution
Walker Creek
220112
Millerton Gulch
220120
220114
Point Reyes Station
Lagunitas Creek
220113
Geronimo Creek
Lagunitas
Pierce Creek
Blueline
Pine Gulch Creek
220130
N
0 2 4 6
Miles
Cities/Towns
Proposed Critical Habitat
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California


Proposed Critical Habitat for the California Central Coast O. Mykiss
San Mateo Hydrologic Unit 2202
122°30'0"W
122°0'0"W
37°30'0"N
DRAFT
Data do not reflect true distribution
220210
220221
220222
220223
220230
220240
Half Moon Bay
Pescadero
Pilarcitos Creek
Locks Creek
Arroyo Leon Creek
Purisima Creek
San Gregorio Creek
Mindego Creek
Alpine Creek
Peters Creek
Pescadero Creek
Oil Creek
Slate Creek
Butano Cr
N
0
5
10
15
Miles
Cities/Towns
Proposed Critical Habitat
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California

Proposed Critical Habitat for the California Central Coast O. Mykiss

Bay Bridges Hydrologic Unit 2203



⊙ Cities/Towns

Proposed Critical Habitat

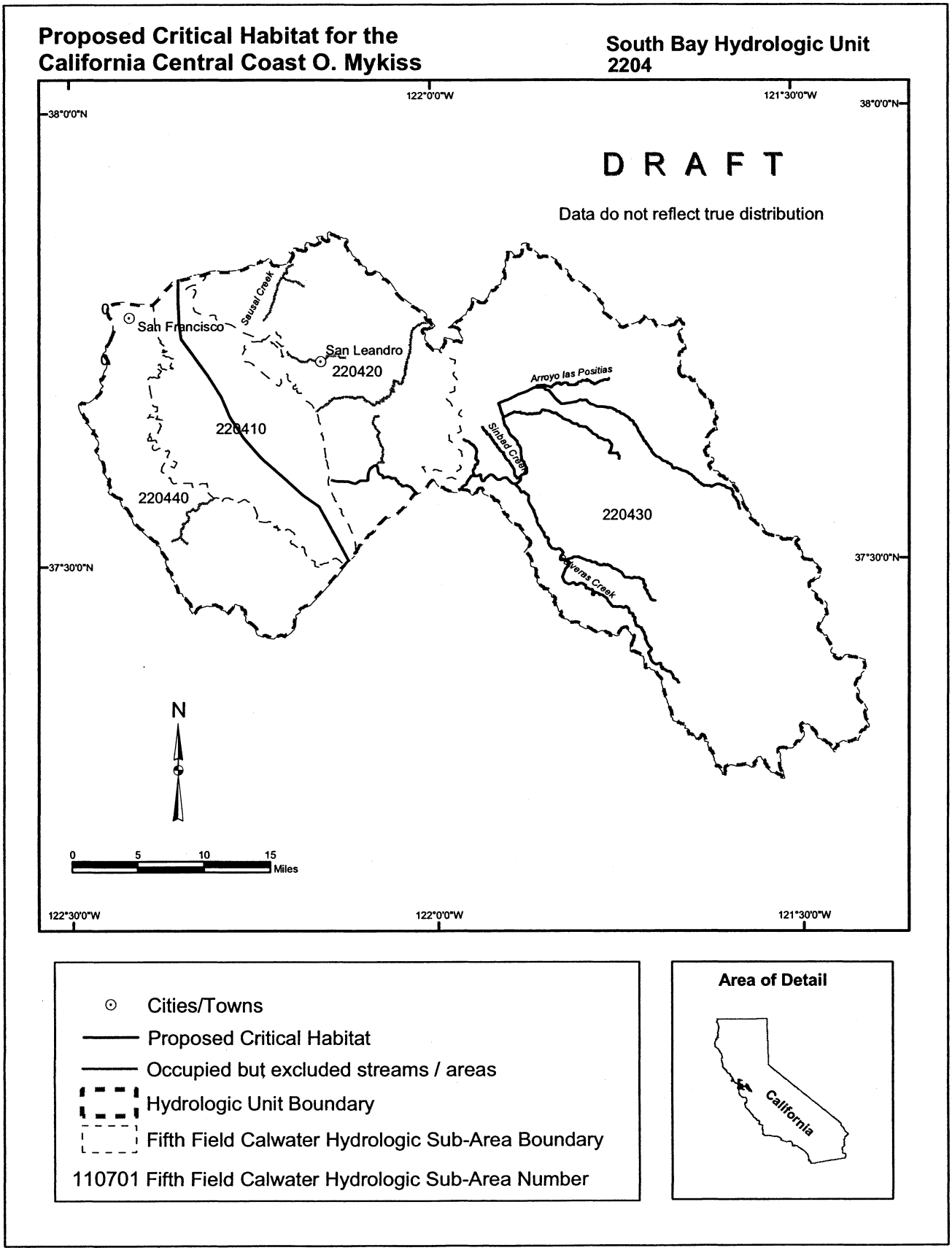
Occupied but excluded streams / areas

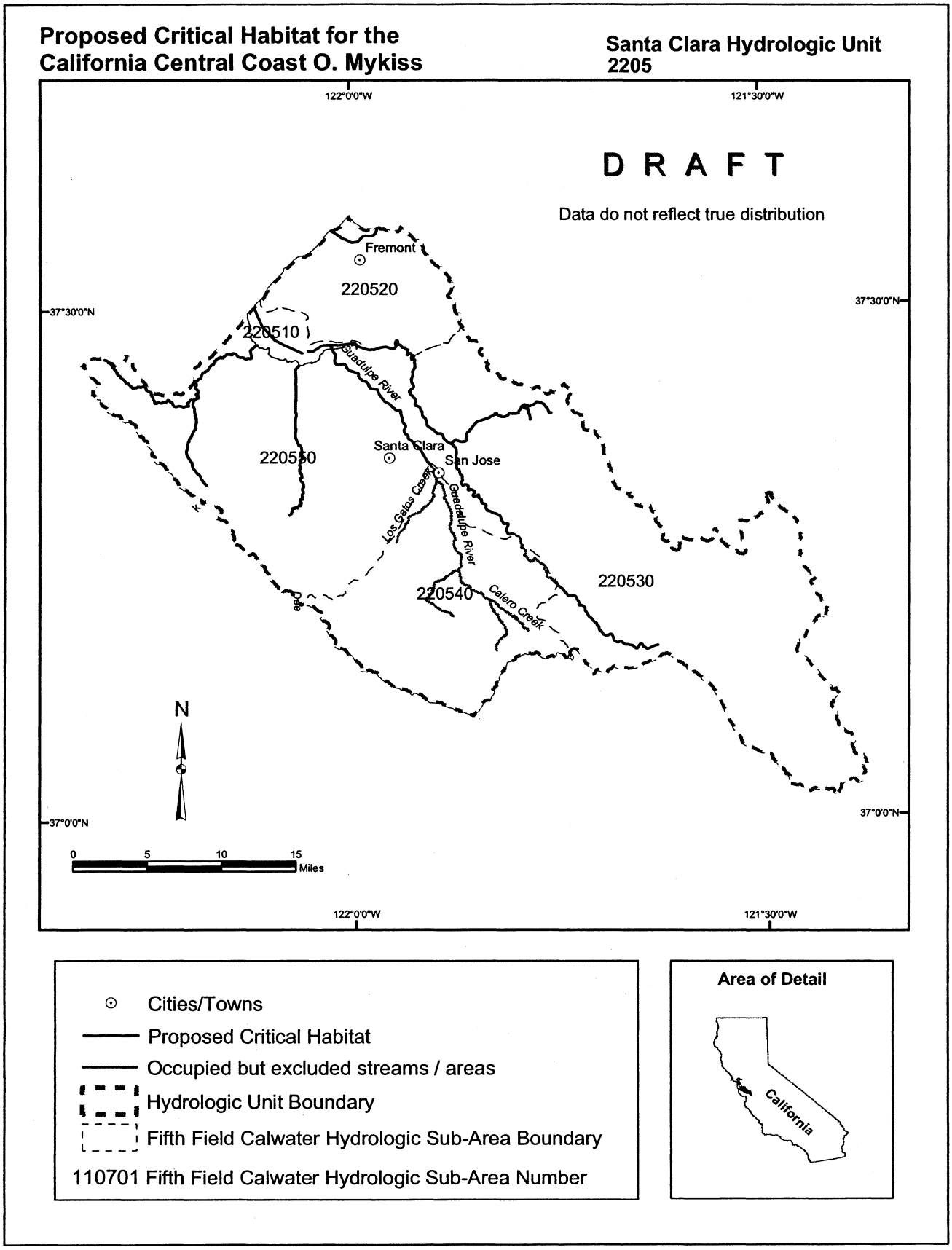
Hydrologic Unit Boundary

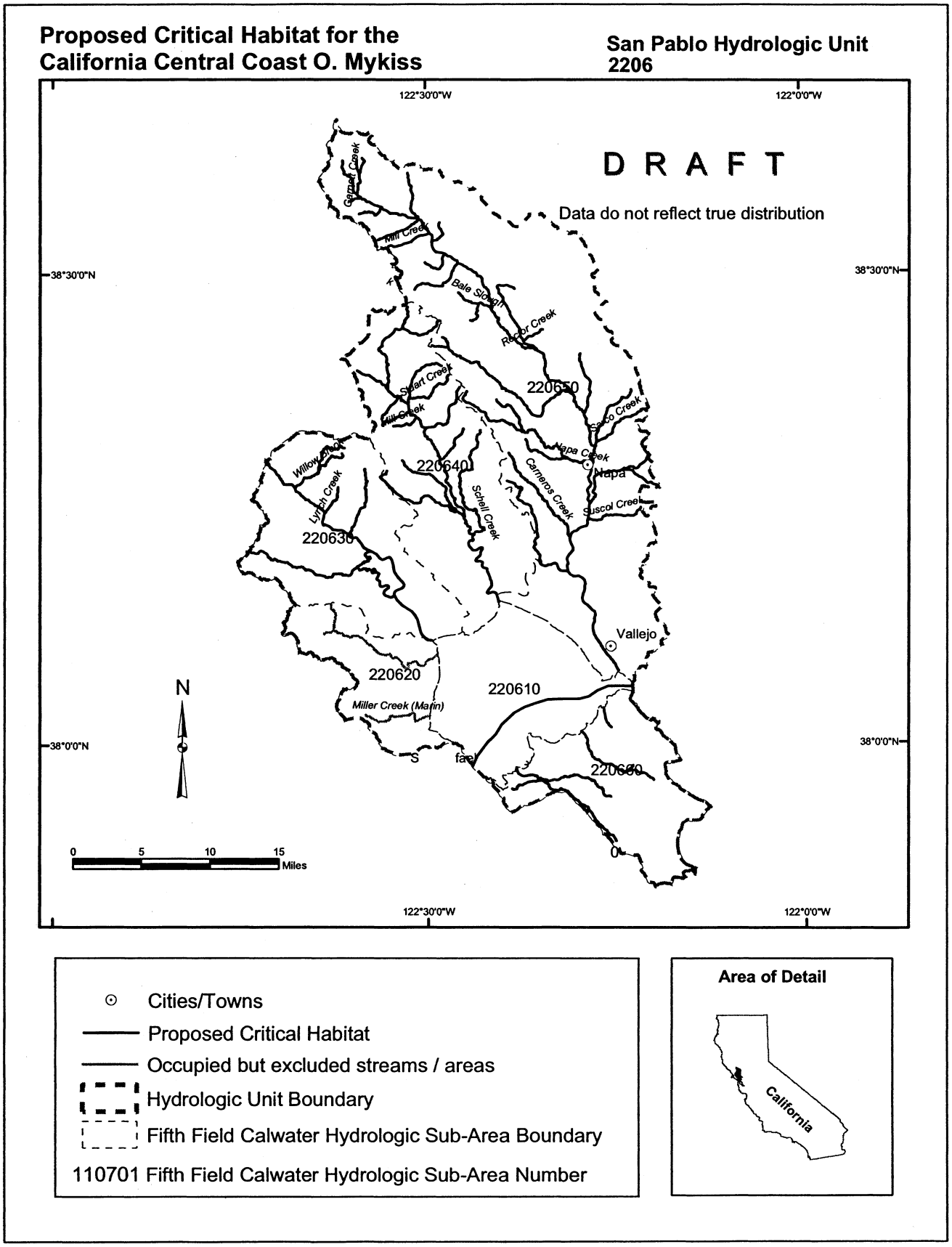
Fifth Field Calwater Hydrologic Sub-Area Boundary

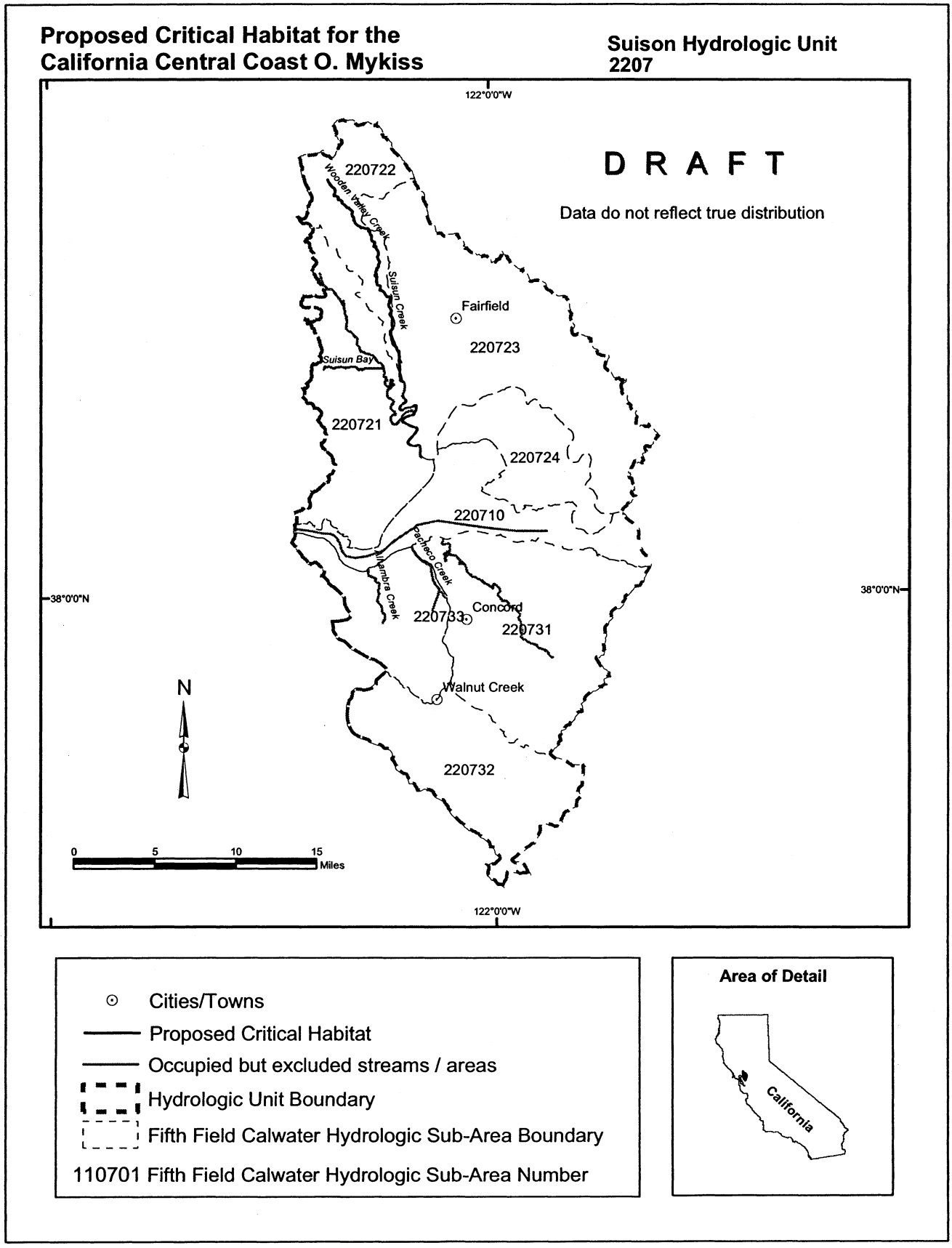
110701 Fifth Field Calwater Hydrologic Sub-Area Number

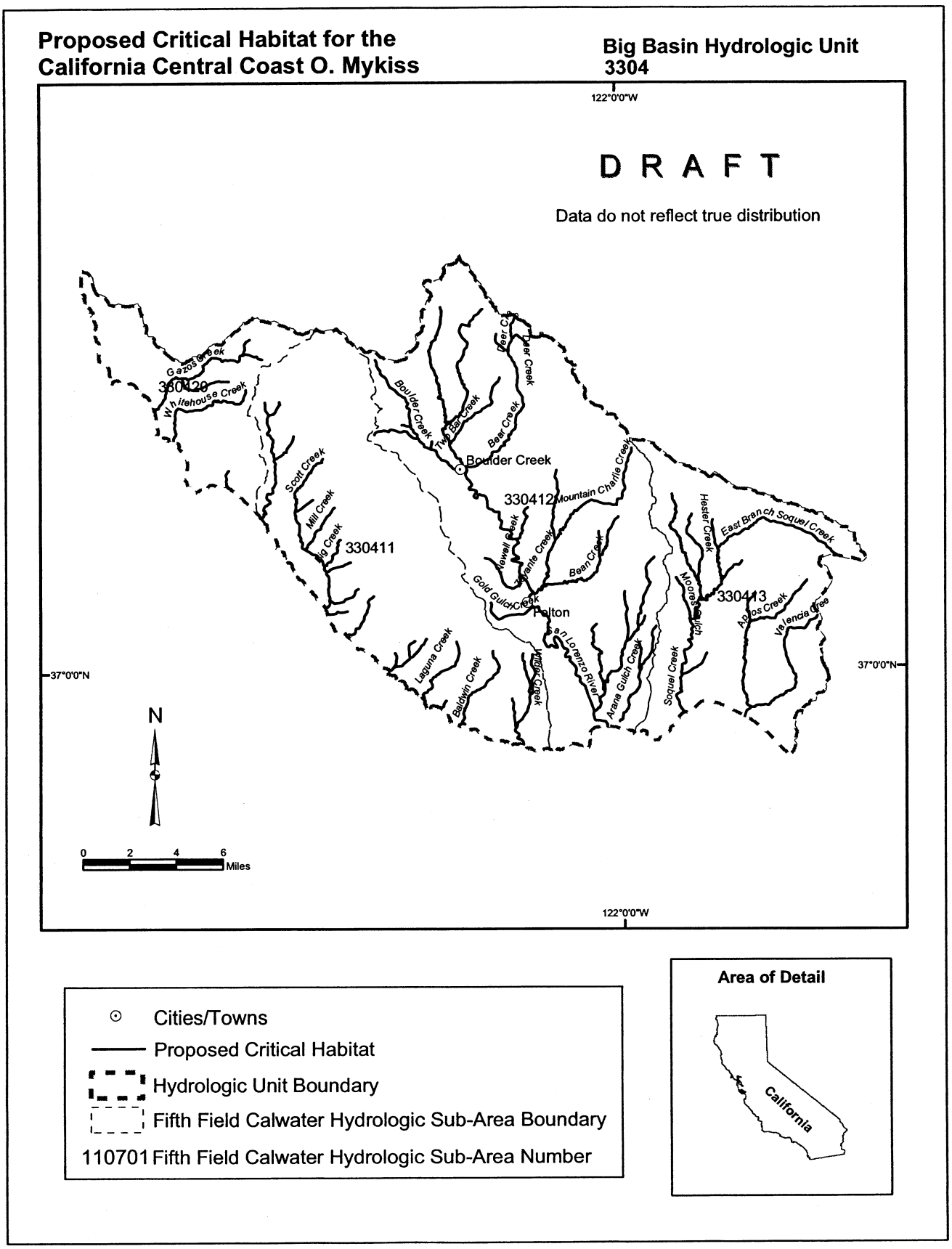
Area of Detail


Proposed Critical Habitat for the California Central Coast O. Mykiss
South Bay Hydrologic Unit 2204
122°0'0"W
121°30'0"W
38°0'0"N
37°30'0"N
DRAFT
Data do not reflect true distribution
Sausal Creek
San Francisco
San Leandro
220420
Arroyo las Positas
220410
Sinbad Creek
220440
220430
Alameda Creek
N
0 5 10 15
Miles
122°30'0"W
Cities/Towns
Proposed Critical Habitat
Occupied but excluded streams / areas
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California


Proposed Critical Habitat for the California Central Coast O. Mykiss
Santa Clara Hydrologic Unit 2205
122°0'0"W
121°30'0"W
DRAFT
Data do not reflect true distribution
Fremont
220520
37°30'0"N
220510
Guadalupe River
220550
Santa Clara
San Jose
Los Gatos Creek
Guadalupe River
220530
220540
Calero Creek
Coyote
N
37°0'0"N
0 5 10 15
Miles
Cities/Towns
Proposed Critical Habitat
Occupied but excluded streams / areas
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California


Proposed Critical Habitat for the California Central Coast O. Mykiss
San Pablo Hydrologic Unit 2206
122°30'0"W
122°0'0"W
38°30'0"N
38°0'0"N
DRAFT
Data do not reflect true distribution
Gerrard Creek
Mill Creek
Bale Slough
Rector Creek
Stuart Creek
Hill Creek
220650
Sarco Creek
Napa Creek
Napa
Willow Slough
Lynch Creek
220640
Schell Creek
Carneros Creek
Suscol Creek
220630
Vallejo
220620
220610
Miller Creek (Marin)
220660
N
0 5 10 15
Miles
Cities/Towns
Proposed Critical Habitat
Occupied but excluded streams / areas
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California


Proposed Critical Habitat for the California Central Coast O. Mykiss
Suison Hydrologic Unit 2207
122°0'0"W
D R A F T
Data do not reflect true distribution
220722
Wooden Valley Creek
Suisun Creek
Fairfield
220723
Suisun Bay
220721
220724
220710
Pacheco Creek
Alhambra Creek
38°0'0"N
Concord
220733
220731
N
Walnut Creek
220732
0 5 10 15
Miles
122°0'0"W
Cities/Towns
Proposed Critical Habitat
Occupied but excluded streams / areas
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California



BILLING CODE 3510–22–C

(i) *South-central California Coast O. mykiss (Oncorhynchus mykiss).* Critical habitat is proposed to include the areas defined in the following units:

(1) Pajaro River Hydrologic Unit 3305—*(i) Watsonville Hydrologic Sub-area 330510.* Outlet(s) = Pajaro River (Lat 36.8506, Long −121.8101) upstream to endpoint(s) in: Banks Canyon Creek (36.9958, −121.7264); Browns Creek (37.0255, −121.7754); Casserly Creek (36.9902, −121.7359); Corralitos Creek (37.0666, −121.8359); Gaffey Creek (36.9905, −121.7132); Gamecock Canyon (37.0362, −121.7587); Green Valley Creek (37.0073, −121.7256); Ramsey Gulch (37.0447, −121.7755); Redwood Canyon (37.0342, −121.7975); Salsipuedes Creek (36.9350, −121.7426); Shingle Mill Gulch (37.0446, −121.7971).

(ii) Santa Cruz Mountains Hydrologic Sub-area 330520. Outlet(s) = Pajaro River (Lat 36.8963, Long −121.5620); Bodfish Creek (37.0020, −121.6715); Pescadero Creek (36.9125, −121.5882); Tar Creek (36.9304, −121.5520); Uvas Creek (37.0251, −121.6430) upstream to endpoint(s) in: Blackhawk Canyon (37.0168, −121.6912); Bodfish Creek (36.9985, −121.6859); Little Arthur Creek (37.0299, −121.6874); Pescadero Creek (36.9826, −121.6274); Tar Creek (36.9558, −121.6009); Uvas Creek (37.0660, −121.6912).

(iii) South Santa Clara Valley Hydrologic Sub-area 330530. Outlet(s) = San Benito River (Lat 36.8961, Long −121.5625); Pajaro River (36.9222, −121.5388) upstream to endpoint(s) in: Arroyo Dos Picachos (36.8866, −121.3184); Bird Creek (36.7837, −121.3731); Bodfish Creek (37.0080, −121.6652); Bodfish Creek (37.0041, −121.6667); Carnadero Creek (36.9603, −121.532); Llagas Creek (37.1159, −121.6938); Miller Canal (36.9516, −121.5115); San Felipe Lake (36.9835, −121.4604); Tar Creek (36.9297, −121.5419); Tequisquita Slough (36.9170, −121.3887); Uvas Creek (37.0146, −121.6314).

(iv) Pacheco-Santa Ana Creek Hydrologic Sub-area 330540. Outlet(s) = Arroyo Dos Picachos (Lat 36.8866, Long −121.3184); Pacheco Creek (37.0055, −121.3598) upstream to endpoint(s) in: Arroyo Dos Picachos (36.8912, −121.2305); Cedar Creek (37.0922, −121.3641); North Fork Pacheco Creek (37.0514, −121.2911); Pacheco Creek (37.0445, −121.2662); South Fork Pacheco Creek (37.0227, −121.2603).

(v) San Benito River Hyddrologic Sub-area 330550. Outlet(s) = San Benito River (Lat 36.7838, Long −121.3731) upstream to endpoint(s) in: Bird Creek (36.7604, −121.4506); Pescadero Creek (36.7202, −121.4187); San Benito River (36.3324, −120.6316); Sawmill Creek (36.3593, −120.6284).

(2) Carmel River Hydrologic Unit 3307—*Carmel River Hydrologic Sub-area 330700.* Outlet(s) = Carmel River (Lat36.5362, Long −121.9285) upstream to endpoint(s) in: Aqua Mojo Creek (36.4711, −121.5407); Big Creek (36.3935, −121.5419); Blue Creek (36.2796, −121.6530); Boronda Creek (36.3542, −121.6091); Bruce Fork (36.3221, −121.6385); Cachagua Creek (36.3909 , −121.5950); Carmel River (36.3701, −121.6621); Danish Creek (36.3730, −121.7590); Hitchcock Canyon Creek (36.4470, −121.7597); James Creek (36.3235, −121.5804); Las Garzas Creek (36.4607, −121.7944); Millers Fork (36.2961, −121.5697); Pinch Creek (36.3236, −121.5574); Pine Creek (36.3827, −121.7727); Potrero Creek (36.4801, −121.8258); Rana Creek (36.4877, −121.5840); Rattlesnake Creek (36.3442, −121.7080); Robertson Canyon Creek (36.4776, −121.8048); Robertson Creek (36.3658, −121.5165); San Clemente Creek (36.4227, −121.8115); Tularcitos Creek (36.4369, −121.5163); Ventana Mesa Creek (36.2977, −121.7116).

(3) Santa Lucia Hydrologic Unit 3308—*Santa Lucia Hydrologic Sub-area 330800.* Outlet(s) = Alder Creek (Lat 35.8578, Long −121.4165); Big Creek (36.0696, −121.6005); Big Sur River (36.2815, −121.8593); Bixby Creek (36.3713, −121.9029); Garrapata Creek (36.4176, −121.9157); Limekiln Creek (36.0084, −121.5196); Little Sur River (36.3327, −121.8853); Malpaso Creek (36.4814, −121.9384); Mill Creek (35.9825, −121.4917); Partington Creek (36.1753, −121.6973); Plaskett Creek (35.9195, −121.4717); Prewitt Creek (35.9353, −121.4760); Rocky Creek (36.3798, −121.9028); San Jose Creek (36.5259, −121.9253); Vicente Creek (36.0442, −121.5855); Villa Creek (35.8495, −121.4087); Willow Creek (35.8935, −121.4619) upstream to endpoint(s) in: Alder Creek (35.8685, −121.3974); Big Creek (36.0830, −121.5884); Bixby Creek (36.3715, −121.8440); Devil's Canyon Creek (36.0773, −121.5695); Garrapata Creek (36.4042, −121.8594); Joshua Creek (36.4182, −121.9000); Limekiln Creek (36.0154, −121.5146); Little Sur River (36.3327, −121.8853); Logwood Creek (36.2105, −121.6719); Malpaso Creek (36.4681, −121.8800); Mill Creek (35.9907, −121.4632); North Fork Big Sur River (36.2178, −121.5948); Partington Creek (36.1929, −121.6825); Plaskett Creek (35.9228, −121.4493); Prewitt Creek (35.9419, −121.4598); Redwood Creek (36.2825, −121.6745); Rocky Creek (36.3805, −121.84400); San Jose Creek (36.4662, −121.8118); South Fork Big Sur River (36.1903, −121.6114); South Fork Little Sur River (36.3026, −121.8093); Unnamed Tributary (36.2045, −121.6075); Vicente Creek (36.0463, −121.5780); Villa Creek (35.8525, −121.3973); Wildcat Canyon Creek (36.4124, −121.8680); Williams Canyon Creek (36.4466, −121.8526); Willow Creek (35.9050, −121.3851).

(4) Salinas River Hydrologic Unit 3309—*(i) Neponset Hydrologic Sub-area 330911.* Outlet(s) = Salinas River (Lat 36.7498, Long −121.8055); Old Salinas River (36.8080, −121.7854) upstream to endpoint(s) in: Gabilan Creek (36.6923, −121.6300); Old Salinas River (36.7728, −121.7884); Tembladero Slough (36.6865, −121.6409).

(ii) Chualar Hydrologic Sub-area 330920. Outlet(s) = Gabilan Creek (Lat 36.6923, Long −121.6300) upstream.

(iii) Soledad Hydrologic Sub-area 330930. Outlet(s) = Salinas River (Lat36.4878, Long −121.4688) upstream to endpoint(s) in: Arroyo Seco River (36.2644, −121.3812); Reliz Creek (36.2438, −121.2881).

(iv) Upper Salinas Valley Hydrologic Sub-area 330940. Outlet(s) = Salinas River (Lat 36.3183, Long −121.1837) upstream.

(v) Arroyo Seco Hydrologic Sub-area 330960. Outlet(s) = Arroyo Seco River (Lat 36.2644, Long −121.3812); Reliz Creek (36.2438, −121.2881); Vaqueros Creek (36.2642, −121.3369) upstream to endpoint(s) in: Arroyo Seco River (36.2041, −121.5002); Calaboose Creek (36.2942, −121.5082); Church Creek (36.2762, −121.5877); Paloma Creek (36.3195, −121.4894); Piney Creek (36.3023, −121.5629); Reliz Creek (36.1935, −121.2777); Rocky Creek (36.2676, −121.5225); Santa Lucia Creek (36.1999, −121.4785); Tassajara Creek (36.2679, −121.6149); Vaqueros Creek (36.2479, −121.3369); Willow Creek (36.2059, −121.5642); Zigzag Creek (36.1763, −121.5475).

(vi) Gabilan Range Hydrologic Sub-area 330970. Outlet(s) = Gabilan Creek (Lat 36.7800, −121.5836) upstream to endpoint(s) in: Gabilan Creek (36.7335, −121.4939).

(vii) Paso Robles Hydrologic Sub-area 330981. Outlet(s) = Salinas River (Lat 35.9241, Long −120.8650) upstream to endpoint(s) in: Atascadero Creek (35.4468, −120.7010); Eagle Creek (35.4209, −120.6760); Graves Creek (35.4838, −120.7631); Hale Creek (35.3964, −120.6702); Jack Creek (35.5815, −120.8560); Nacimiento River (35.7610, −120.8853); Paso Robles Creek (35.5636, −120.8455); Salinas River (35.3886, −120.5582); San Antonio River (35.7991, −120.8849); San Marcos Creek (35.6734, −120.8140); Santa Margarita Creek (35.3923, −120.6619); Santa Rita Creek (35.5262, −120.8396); Sheepcamp Creek (35.6145, −120.7795); Summit

Creek (35.6441, −120.8046); Tassajera Creek (35.3895, −120.6926); Trout Creek (35.3394, −120.5881); Willow Creek (35.6107, −120.7720).

(5) Estero Bay Hydrologic Unit 3310—

(i) San Carpoforo Hydrologic Sub-area 331011. Outlet(s) = San Carpoforo Creek (Lat 35.7646, Long −121.3247) upstream to endpoint(s) in: Dutra Creek (−121.3273, 35.8197); Estrada Creek (−121.2661, 35.7710); San Carpoforo Creek (−121.2745, 35.8202); Unnamed Tributary (−121.2703, 35.7503); Wagner Creek (−121.2387, 35.8166).

(ii) Arroyo De La Cruz Hydrologic Sub-area 331012. Outlet(s) = Arroyo De La Cruz (Lat 35.7097, Long −121.3080) upstream to endpoint(s) in: Arroyo De La Cruz (−121.1722, 35.6986); Burnett Creek (−121.1920, 35.7520); Green Canyon Creek (−121.2314, 35.7375); Marmolejo Creek (−121.1082, 35.6774); Spanish Cabin Creek (−121.1497, 35.7234); Unnamed Tributary (−121.1977, 35.7291); West Fork Burnett Creek (−121.2075, 35.7516).

(iii) San Simeon Hydrologic Sub-area 331013. Outlet(s) = Arroyo del Corral (Lat 35.6838, Long −121.2875); Arroyo del Puerto (35.6432, −121.1889); Little Pico Creek (35.6336, −121.1639); Oak Knoll Creek (35.6512, −121.2197); Pico Creek (35.6155, −121.1495); San Simeon Creek (35.5950, −121.1272) upstream to endpoint(s) in: Arroyo Laguna (35.6895, −121.2337); Arroyo del Corral (35.6885, −121.2537); Arroyo del Puerto (35.6773, −121.1713); Little Pico Creek (35.6890, −121.1375); Oak Knoll Creek (35.6718, −121.2010); North Fork Pico Creek (35.6886, −121.0861); Pico Creek (35.6640, −121.0685); San Simeon Creek (35.6228, −121.0561); Steiner Creek (35.6032, −121.0640); Unnamed Tributary (35.6482, −121.1067); Unnamed Tributary (35.6616, −121.0639); Unnamed Tributary (35.6741, −121.0981); Unnamed Tributary (35.6777, −121.1503); Unnamed Tributary (35.6604, −121.1571); Unnamed Tributary (35.6579, −121.1356); Unnamed Tributary (35.6744, −121.1187); Unnamed Tributary (35.6460, −121.1373); Unnamed Tributary (35.6839, −121.0955); Unnamed Tributary (35.6431, −121.0795); Unnamed Tributary (35.6820, −121.2130); Unnamed Tributary (35.6977, −121.2613); Unnamed Tributary (35.6702, −121.1884); Unnamed Tributary (35.6817, −121.0885); Van Gordon Creek (35.6286, −121.0942).

(iv) Santa Rosa Hydrologic Sub-area 331014. Outlet(s) = Santa Rosa Creek (Lat 35.5685, Long −121.1113) upstream to endpoint(s) in: Green Valley Creek (35.5511, −120.9471); Perry Creek (35.5323–121.0491); Santa Rosa Creek (35.5525, −120.9278); Unnamed Tributary (35.5965, −120.9413); Unnamed Tributary (35.5684, −120.9211); Unnamed Tributary (35.5746, −120.9746).

(v) Villa Hydrologic Sub-area 331015. Outlet(s) = Villa Creek (Lat 35.4601, Long −120.9704) upstream to endpoint(s) in: Unnamed Tributary (35.4798, −120.9630); Unnamed Tributary (35.5080, −121.0171); Unnamed Tributary (35.5348, −120.8878); Unnamed Tributary (35.5510, −120.9406); Unnamed Tributary (35.5151, −120.9497); Unnamed Tributary (35.4917, −120.9584); Unnamed Tributary (35.5173, −120.0171); Villa Creek (35.5352, −120.8942).

(vi) Cayucos Hydrologic Sub-area 331016. Outlet(s) = Cayucos Creek (Lat 35.4491, Long −120.9079) upstream to endpoint(s) in: Cayucos Creek (35.4887, −120.8968); Unnamed Tributary (35.5157, −120.9005); Unnamed Tributary (35.4943, −120.9513); Unnamed Tributary (35.5257, −120.9271).

(vii) Old Hydrologic Sub-area 331017. Outlet(s) = Old Creek (Lat 35.4345, Long −120.8868) upstream to endpoint(s) in: Old Creek (35.4480, −120.8871)

(viii) Toro Hydrologic Sub-area 331018. Outlet(s) = Toro Creek (Lat 35.4126, Long −120.8739) upstream to endpoint(s) in: Toro Creek (35.4945, −120.7934); Unnamed Tributary (35.4917, −120.7983).

(ix) Morro Hydrologic Sub-area 331021. Outlet(s) = Morro Creek (Lat 35.3762, Long −120.8642) upstream to endpoint(s) in: East Fork Morro Creek (35.4218, −120.7282); Little Morro Creek (35.4155, −120.7532); Morro Creek (35.4280, −120.7518); Unnamed Tributary (35.4292, −120.8122); Unnamed Tributary (35.4458, −120.7906); Unnamed Tributary (35.4122, −120.8335); Unnamed Tributary (35.4420, −120.7796).

(x) Chorro Hydrologic Sub-area 331022. Outlet(s) = Chorro Creek (Lat 35.3413, Long −120.8388) upstream to endpoint(s) in: Chorro Creek (35.3340, −120.6897); Dairy Creek (35.3699, −120.6911); Pennington Creek (35.3655, −120.7144); San Bernardo Creek (35.3935, −120.7638); San Luisito (35.3755, −120.7100); Unnamed Tributary (35.3821, −120.7217); Unnamed Tributary (35.3815, −120.7350).

(xi) Los Osos Hydrologic Sub-area 331023. Outlet(s) = Los Osos Creek (Lat 35.3166, Long −120.8112) upstream to endpoint(s) in: Los Osos Creek (35.2727, −120.7636).

(xii) San Luis Obispo Creek Hydrologic Sub-area 331024. Outlet(s) = San Luis Obispo Creek (Lat 35.1822, Long −120.7303) upstream to endpoint(s) in: Brizziolari Creek (35.3236, −120.6411); Froom Creek (35.2525, −120.7144); Prefumo Creek (35.2615, −120.7081); San Luis Obispo Creek (35.3393, −120.6301); See Canyon Creek (35.2306, −120.7675); Stenner Creek (35.3447, −120.6584); Unnamed Tributary (35.2443, −120.7655).

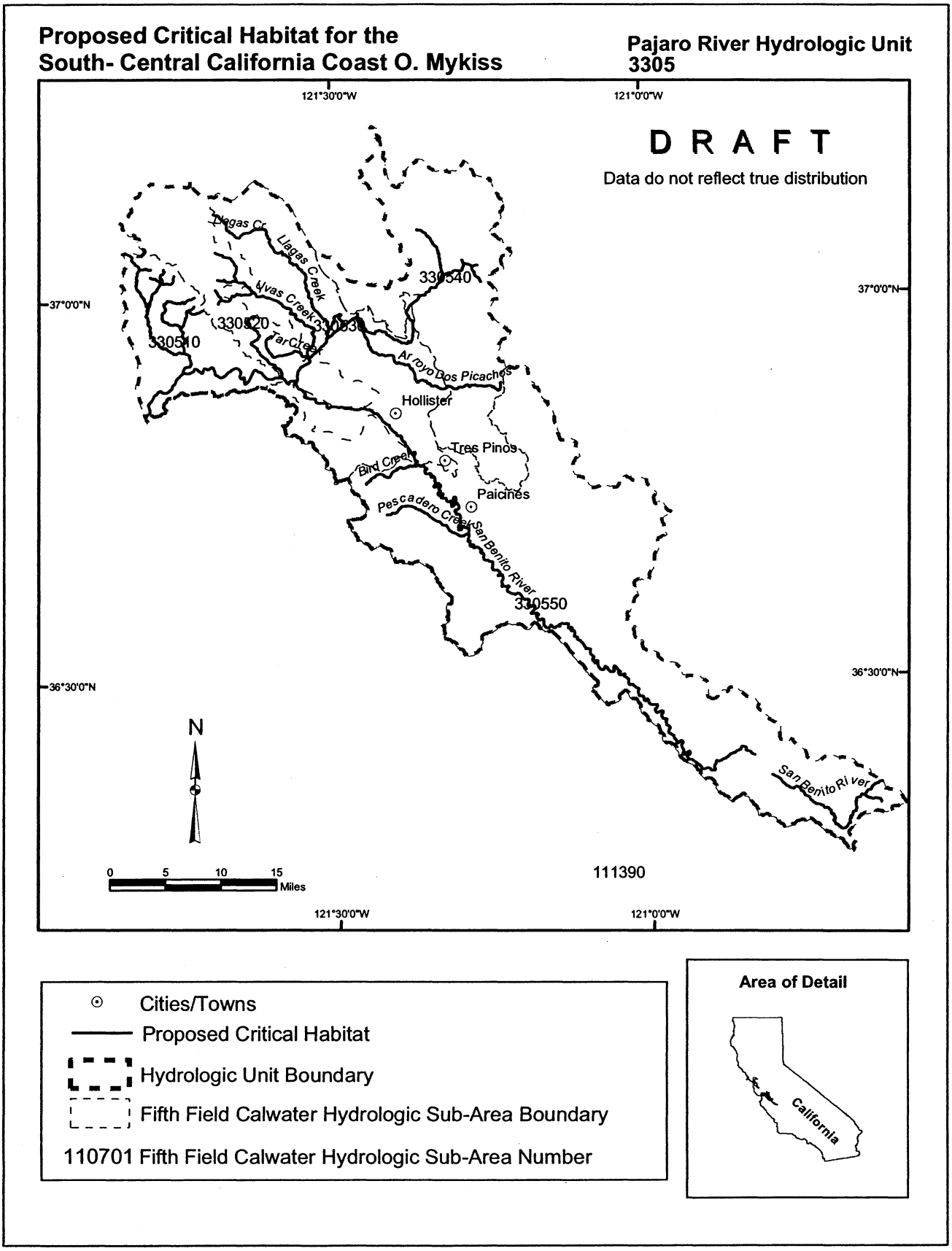
(xiii) Point San Luis Hydrologic Sub-area 331025. Outlet(s) = Coon Creek (Lat 35.2590, Long −120.8951); Islay Creek (35.2753, −120.8884) upstream to endpoint(s) in: Coon Creek (35.2493, −120.7774); Islay Creek (35.2574, −120.7810); Unnamed Tributary (35.2753, −120.8146); Unnamed Tributary (35.2809, −120.8147); Unnamed Tributary (35.2648, −120.7936).

(xiv) Pismo Hydrologic Sub-area 331026. Outlet(s) = Pismo Creek (Lat 35.1336, Long −120.6408) upstream to endpoint(s) in: East Corral de Piedra Creek (35.2343, −120.5571); Pismo Creek (35.1969, −120.6107); Unnamed Tributary (35.2462, −120.5856).

(xvi) Oceano Hydrologic Sub-area 331031. Outlet(s) = Arroyo Grande Creek (Lat 35.1011, Long −120.6308) upstream to endpoint(s) in: Arroyo Grande Creek (35.1868, −120.4881); Los Berros Creek (35.0791, −120.4423).

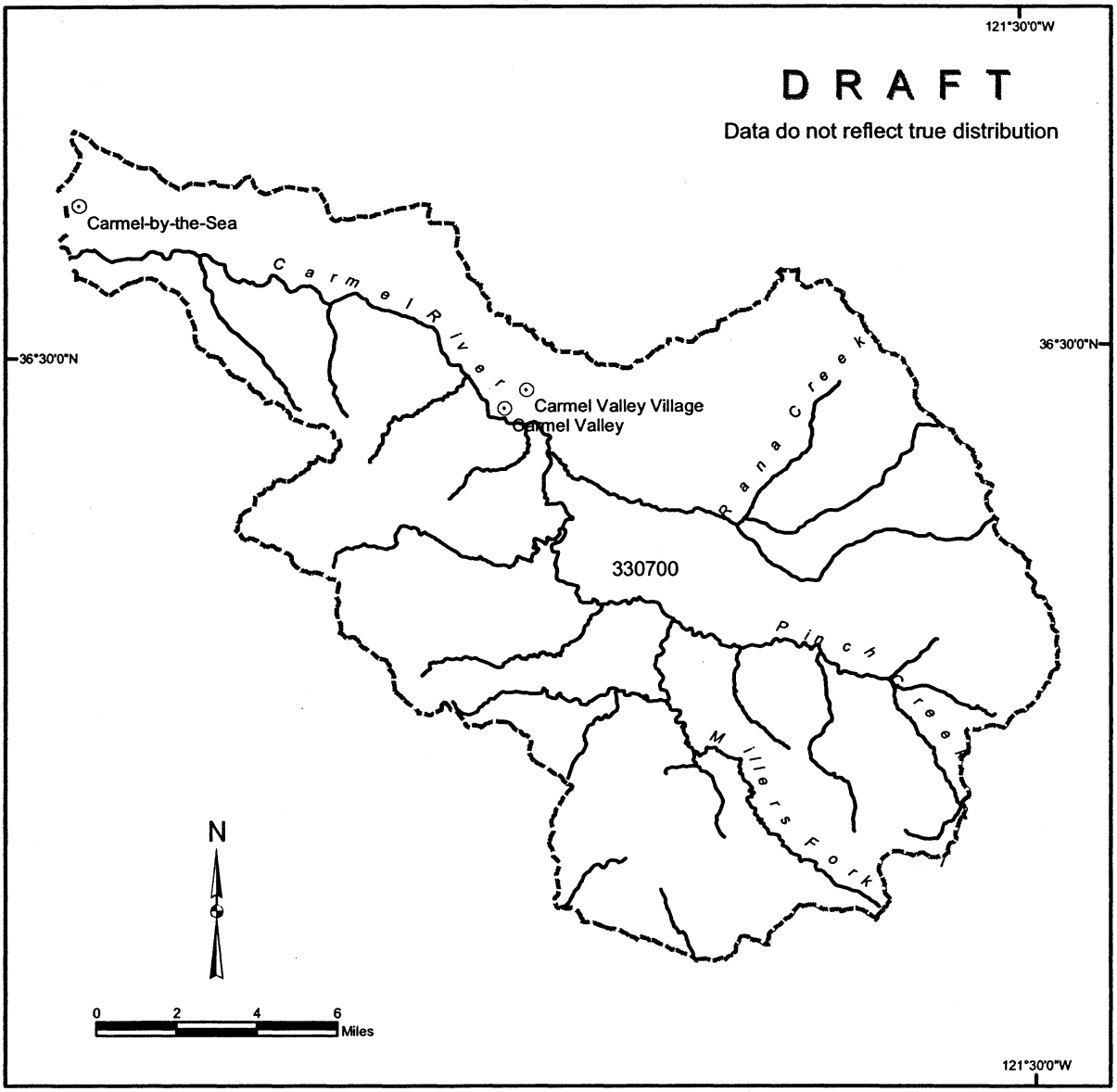
(6) Maps of proposed critical habitat for the South-central California Coast *O. mykiss* ESU follow:

BILLING CODE 3510–22–P


Proposed Critical Habitat for the
South- Central California Coast O. Mykiss
Pajaro River Hydrologic Unit
3305
121°30'0"W
121°0'0"W
DRAFT
Data do not reflect true distribution
37°0'0"N
36°30'0"N
Llagas Cr
Llagas Creek
Nivas Creek
Tar Creek
330540
330520
330530
330510
Arroyo Dos Picachos
Hollister
Tres Pinos
Bird Creek
Paicines
Pescadero Creek
San Benito River
330550
San Benito River
N
0 5 10 15
Miles
111390
Cities/Towns
Proposed Critical Habitat
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California

Proposed Critical Habitat for the South- Central California Coast O. Mykiss

Carmel River Hydrologic Unit 3307



⊙ Cities/Towns

——— Proposed Critical Habitat

Hydrologic Unit Boundary

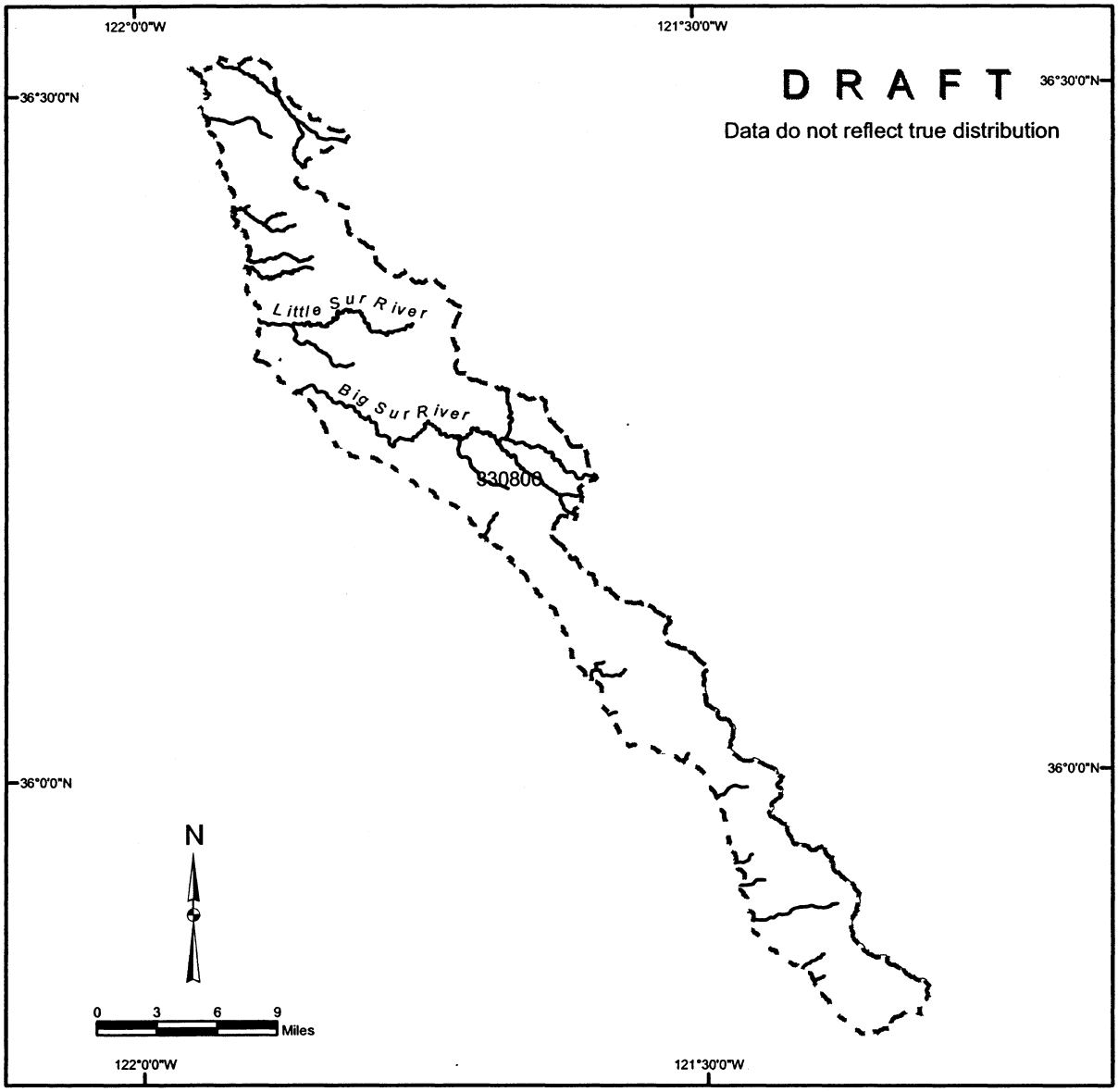
Fifth Field Calwater Hydrologic Sub-Area Boundary

110701 Fifth Field Calwater Hydrologic Sub-Area Number

Area of Detail

Proposed Critical Habitat for the South- Central California Coast O. Mykiss

Santa Lucia Hydrologic Unit 3308



Cities/Towns

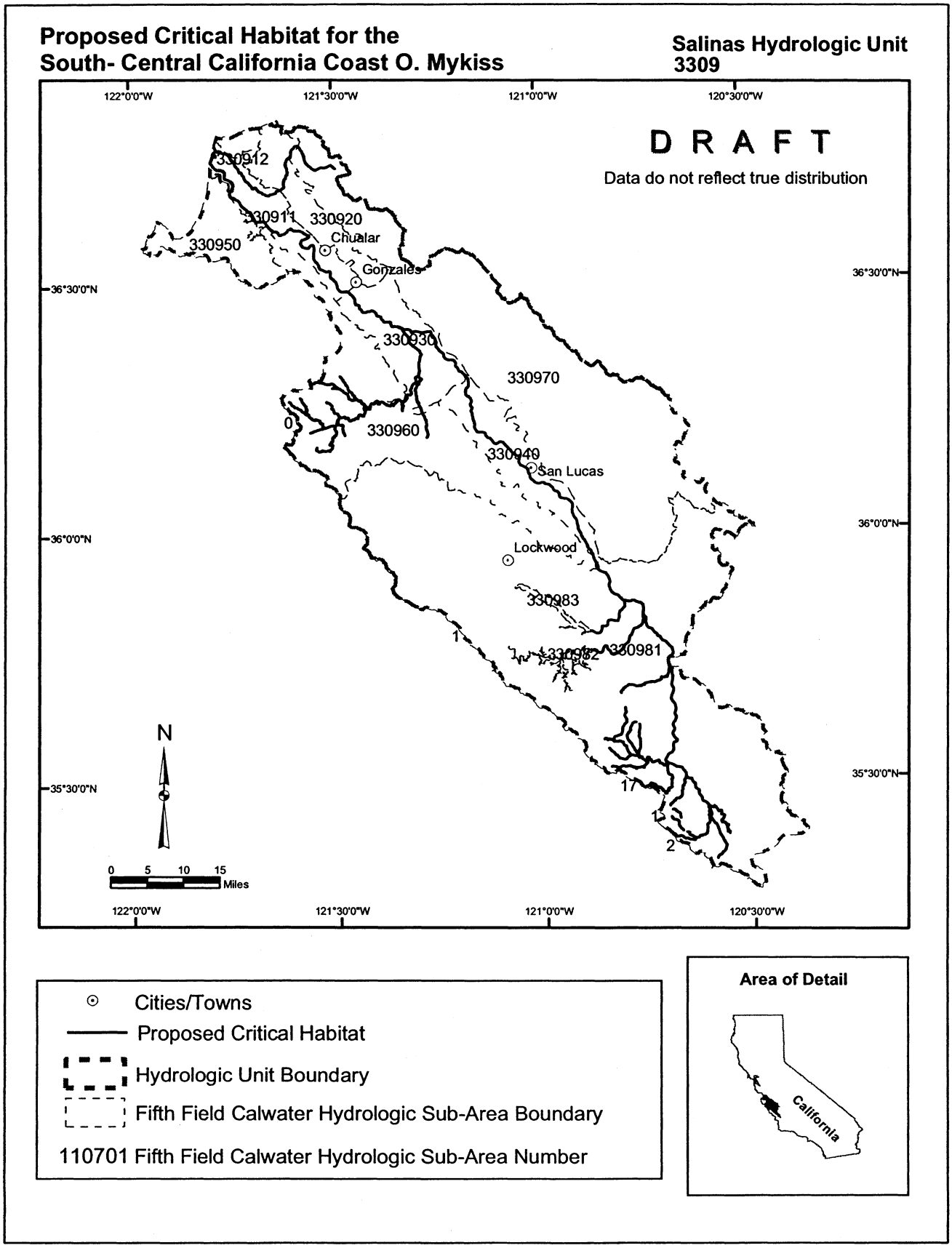
Proposed Critical Habitat

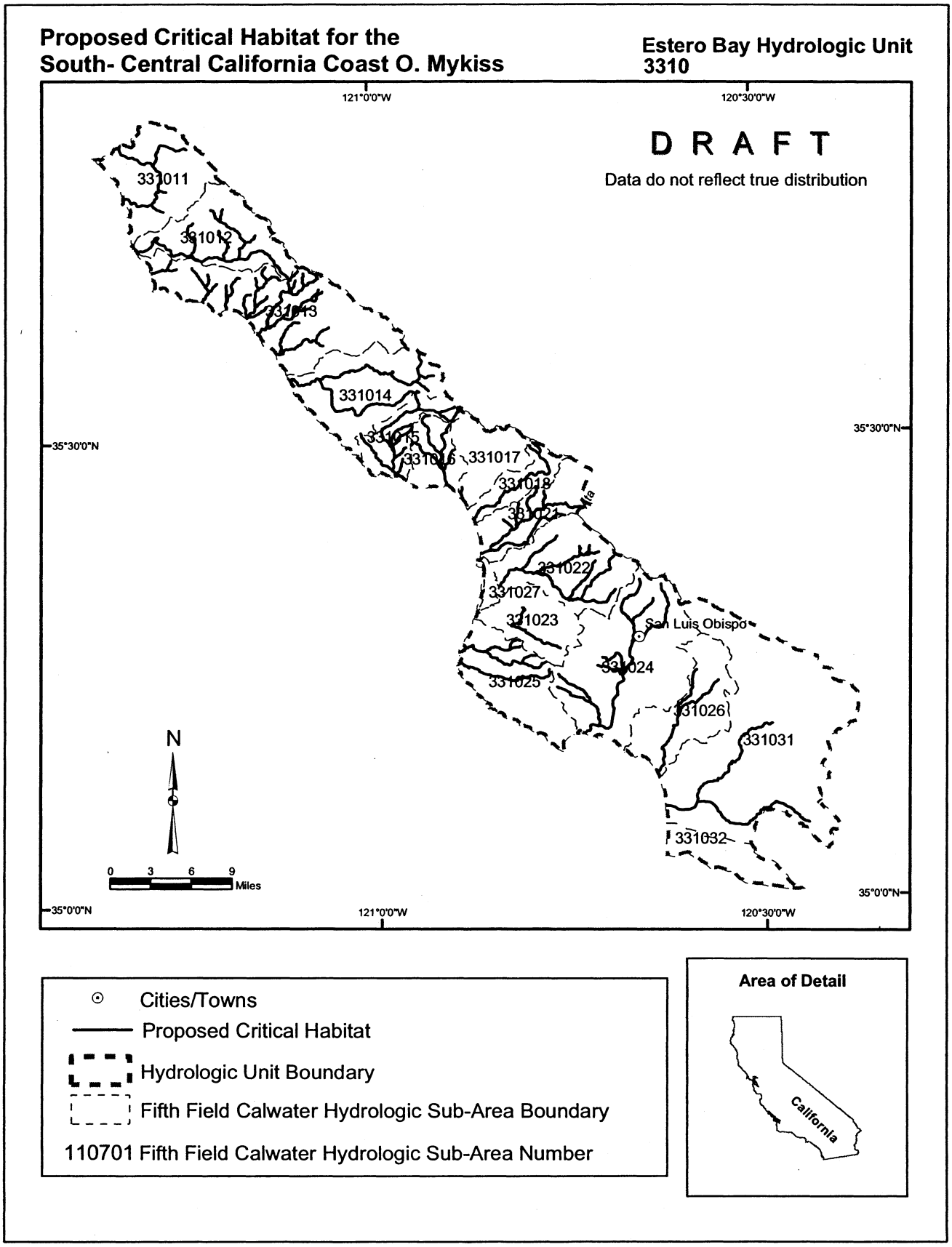
Hydrologic Unit Boundary

Fifth Field Calwater Hydrologic Sub-Area Boundary

110701 Fifth Field Calwater Hydrologic Sub-Area Number

Area of Detail


Proposed Critical Habitat for the
South- Central California Coast O. Mykiss
Salinas Hydrologic Unit
3309
122°0'0"W
121°30'0"W
121°0'0"W
120°30'0"W
DRAFT
Data do not reflect true distribution
330912
330911
330920
Chualar
330950
Gonzales
36°30'0"N
330930
330970
330960
330940
San Lucas
36°0'0"N
Lockwood
330983
330982
330981
35°30'0"N
N
0 5 10 15
Miles
Cities/Towns
Proposed Critical Habitat
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California



BILLING CODE 3510–22–C

(j) *Southern California O. mykiss (Oncorhynchus mykiss).* Critical habitat is proposed to include the areas defined in the following units:

(1) Santa Maria River Hydrologic Unit 3312—*(i) Santa Maria Hydrologic Sub-area 331210.* Outlet(s) = Santa Maria River (Lat 34.9710, Long −120.6494); Sisquoc River (Lat 34.9042, Long −120.3067); Cuyama River (Lat 34.9042, Long −120.3067) upstream to endpoint(s) in: Santa Maria River (Lat 34.9042, Long −120.3067); Cuyama River (Lat 34.9058, Long −120.3018).

(ii) Sisquoc Hydrologic Sub-area 331220. Outlet(s) = Sisquoc River (Lat 34.8942, Long −120.3053) upstream to endpoint(s) in: La Brea Creek (Lat 34.8804, Long −120.1308); South Fork La Brea Creek (Lat 34.9543, Long −119.9783); Unnamed Tributary (Lat 34.9342, Long −120.0579); Unnamed Tributary (Lat 34.9511, Long −120.0130); North Fork La Brea Creek (Lat 34.9681, Long −120.0102); Unnamed Tributary (Lat 34.9687, Long −120.1410); Unnamed Tributary (Lat 34.9626, Long −120.1490); Unnamed Tributary (Lat 34.9672, Long −120.1184); Unnamed Tributary (Lat 34.9682, Long −120.0980); Unnamed Tributary (Lat 34.9973, Long −120.0652); Unnamed Tributary (Lat 34.9922, Long −120.0284); Unnamed Tributary (Lat 35.0158, Long −120.0328); Unnamed Tributary (Lat 34.9464, Long −120.0298); Horse Creek (Lat 34.8373, Long −120.0161); Manzana Creek (Lat 34.7082, Long −119.8314); Davey Brown Creek (Lat 34.7541, Long −119.9641); Unnamed Tributary (Lat 34.7544, Long −119.9466); Fish Creek (Lat 34.7532, Long −119.9090); Unnamed Tributary (Lat 34.7466, Long −119.9038); Unnamed Tributary (Lat 34.7647, Long −119.8664); Water Canyon (Lat 34.8754, Long −119.9314); Unnamed Tributary (Lat 34.8726, Long −119.9515); Unnamed Tributary (Lat 34.8884, Long −119.9315); Unnamed Tributary (Lat 34.8660, Long −119.8972); Abel Canyon (Lat 34.8662, Long −119.8344); Unnamed Tributary (Lat 34.8677, Long −119.8503); Unnamed Tributary (Lat 34.8608, Long −119.8531); Unnamed Tributary (Lat 34.8785, Long −119.8448); Unnamed Tributary (Lat 34.8615, Long −119.8149); Unnamed Tributary (Lat 34.8694, Long −119.8220); Unnamed Tributary (Lat 34.7931, Long −119.8475); Unnamed Tributary (Lat 34.7846, Long −119.8327); Foresters Leap (Lat 34.8112, Long −119.7445); Unnamed Tributary (Lat 34.7873, Long −119.7674); Unnamed Tributary (Lat 34.7866, Long −119.7542); Unnamed Tributary (Lat 34.8129, Long −119.7704); Unnamed Tributary (Lat 34.7760, Long −119.7439); South Fork Sisquoc River (Lat 34.7300, Long −119.7868); Unnamed Tributary (Lat 34.7579, Long −119.7989); Unnamed Tributary (Lat 34.7510, Long −119.7912); Unnamed Tributary (Lat 34.7769, Long −119.7139); Unnamed Tributary (Lat 34.7617, Long −119.6868); Judell Creek (Lat 34.7613, Long −119.6486); Unnamed Tributary (Lat 34.7680, Long −119.6494); Unnamed Tributary (Lat 34.7738, Long −119.6483); Unnamed Tributary (Lat 34.7333, Long −119.6277); Unnamed Tributary (Lat 34.7519, Long −119.6199); Unnamed Tributary (Lat 34.7188, Long −119.6663); Sisquoc River (Lat 34.7087, Long −119.6399).

(2) Santa Ynez Hydrologic Unit 3314—*(i) Mouth of Santa Ynez Hydrologic Sub-area 331410.* Outlet(s) = Santa Ynez River (Lat 34.6930, Long −120.6023) upstream to endpoint(s) in: San Miguelito Creek (Lat 34.6310, Long −120.4623).

(ii) Santa Ynez, Salsipuedes Hydrologic Sub-area 331420. Outlet(s) = Santa Ynez River (Lat 34.6335, Long −120.4116) upstream to endpoint(s) in: Salsipuedes Creek (Lat 34.5711, Long −120.4066); El Jaro Cr (Lat 34.5327, Long −120.2851); Llanito Cr (Lat 34.5500, Long −120.2752); El Callejon (Lat 34.5476, Long −120.2691).

(iii) Santa Ynez, Zaca Hydrologic Sub-area 331430. Outlet(s) = Santa Ynez River (Lat 34.6172, Long −120.2352) upstream.

(iv) Santa Ynez to Bradbury Hydrologic Sub-area 331440. Outlet(s) = Santa Ynez River (Lat 34.5847, Long −120.1435) upstream to endpoint(s) in: Alisal Creek (Lat 34.5465, Long −120.1348); Alamo Pintado Creek (Lat 34.7207, Long −120.1047); Quiota Creek (Lat 34.5370, Long −120.0311); Santa Agueda Creek (Lat 34.7288, Long −119.9720); San Lucas Creek (Lat 34.5558, Long −120.0109); Unnamed Tributary (Lat 34.5646, Long −120.0033); Hilton Creek (Lat 34.5839, Long −119.9845); Santa Ynez River (Lat 34.5829, Long −119.9795).

(3) South Coast Hydrologic Unit 3315—*(i) Arroyo Hondo Hydrologic Sub-area 331510.* Outlet(s) = Jalama Creek (Lat 34.5119, Long −120.5013); Cojo Creek (Lat 34.4531, Long −120.4155); San Augustine Creek (Lat 34.4588, Long −120.3532); Santa Anita Creek (Lat 34.4669, Long −120.3056); Sacate Creek (Lat 34.4935, Long −120.2990); Alegria Creek (Lat 34.4688, Long −120.2710); Gaviota Creek (Lat 34.4706, Long −120.2257); San Onofre Creek (Lat 34.4699, Long −120.1863); Arroyo Hondo Creek (Lat 34.4735, Long −120.1405); Refugio Creek (Lat 34.4627, Long −120.0686); El Capitan Creek (Lat 34.4577, Long −120.0215); Gato Creek (Lat 34.4498, Long −119.9876); Dos Pueblos Creek (Lat 34.4408, Long −119.9636); Tecolote Creek (Lat 34.4306, Long −119.9163) upstream to endpoint(s) in: Jalama Creek (Lat 34.5031, Long −120.3605); Escondido Creek (Lat 34.5663, Long −120.4633); Unnamed Tributary (Lat 34.5527, Long −120.4538); Cojo Creek (Lat 34.4840, Long −120.4096); La Olla (Lat 34.4836, Long −120.4061); San Augustine Creek (Lat 34.4598, Long −120.3551); Santa Anita Creek (Lat 34.4742, Long −120.3075); Sacate Creek (Lat 34.4984, Long −120.2983); Unnamed Tributary (Lat 34.4972, Long −120.3016); Alegria Creek (Lat 34.4713, Long −120.2704); Gaviota Creek (Lat 34.5176, Long −120.2170); San Onofre Creek (Lat 34.4853, Long −120.1881); Arroyo Hondo Creek (Lat 34.5112, Long −120.1694); Refugio Creek (Lat 34.5110, Long −120.0499); El Capitan Creek (Lat 34.5238, Long −119.9796); Gato Creek (Lat 34.5204, Long −119.9748); Dos Pueblos Creek (Lat 34.5230, Long −119.9239); Tecolote Creek (Lat 34.5133, Long −119.9049).

(ii) UCSB Slough Hydrologic Sub-area 331531. Outlet(s) = Tecolito Creek (Lat 34.4179, Long −119.8285); San Pedro Creek (Lat 34.4179, Long −119.8285) upstream to endpoint(s) in: Carneros Creek (Lat 34.4674, Long −119.8574); Tecolito Creek (Lat 34.4478, Long −119.8754); Glen Annie Creek (Lat 34.4985, Long −119.8657); Unnamed Tributary (Lat 34.4774, Long −119.8836); Maria Ygnacio Creek (Lat 34.4900, Long −119.7820); San Antonio Creek (Lat 34.4553, Long −119.7816); Atascadero Creek (Lat 34.4690, Long −119.7555); San Jose Creek (Lat 34.4919, Long −119.8023); San Pedro Creek (Lat 34.4774, Long −119.8349).

(iii) Mission Hydrologic Sub-area 331532. Outlet(s) = Arroyo Burro Creek (Lat 34.4023, Long −119.7420); Mission Creek (Lat 34.4124, Long −119.6866); Sycamore Creek (Lat 34.4166, Long −119.6658) upsream to endpoint(s) in: San Roque Creek (Lat 34.4530, Long −119.7314); Arroyo Burro Creek (Lat 34.4620, Long −119.7451); Rattlesnake Creek (Lat 34.4633, Long −119.6893); Mission Creek (Lat 34.4482, Long −119.7079); Sycamore Creek (Lat 34.4609, Long −119.6832).

(iv) San Ysidro Hydrologic Sub-area 331533. Outlet(s) = Montecito Creek (Lat 34.4167, Long −119.6334); San Ysidro Creek (Lat 34.4191, Long −119.6244); Romero Creek (Lat 34.4186, Long −119.6198) upstream to endpoint(s) in: Montecito Creek (Lat 34.4594, Long −119.6532); Unnamed Tributary (Lat 34.4753, Long −119.6428); Cold Springs Creek (Lat 34.4794, Long −119.6594); San Ysidro Creek (Lat

34.4686, Long −119.6220); Romero Creek (Lat 34.4452, Long −119.5914).

(v) Carpinteria Hydrologic Sub-area 331534. Outlet(s) = Arroyo Paredon (Lat 34.4146, Long −119.5551); Carpenteria Salt Marsh (Santa Monica Creek) (Lat 34.3961, Long −119.5365); Carpenteria Lagoon (Carpenteria Creek) (Lat 34.3904, Long −119.5195); Rincon Lagoon (Rincon Creek) (Lat 34.3733, Long −119.4759) upstream to endpoint(s) in: Arroyo Paredon (Lat 34.4371, Long −119.5471); Carpenteria Salt Marsh (Santa Monica Creek) (Lat 34.4003, Long −119.5289); Carpenteria Salt Marsh (Franklin Creek) (Lat 34.3992, Long −119.5265); Carpinteria Creek (Lat 34.4429, Long −119.4955); Unnamed Tributary (Lat 34.4481, Long −119.5102); Gobernador Creek (Lat 34.4249, Long −119.4737); Steer Creek (Lat 34.4687, Long −119.4586); El Dorado Creek (Lat 34.4682, Long −119.4800); Rincon Lagoon (Rincon Creek) (Lat 34.3757, Long −119.4767).

(4) Ventura River Hydrologic Unit 4402—*(i) Ventura Hydrologic Sub-area 440210.* Outlet(s) = Ventura Estuary (Ventura River) (Lat 34.2742, Long −119.3067) upstream to endpoint(s) in: Canada Larga (Lat 34.3675, Long −119.2367); Sulphur Canyon (Lat 34.3727, Long −119.2353); Hammond Canyon (Lat 34.3903, Long −119.2220); Unnamed Tributary (Lat 34.3344, Long −119.2416); Unnamed Tributary (Lat 34.3901, Long −119.2737).

(ii) Ventura Hydrologic Sub-area 440220. Outlet(s) = Ventura River (Lat 34.3517, Long −119.3059); San Antonio Creek (Lat 34.3797, Long −119.3063) upstream to endpoint(s) in: Ventura River (Lat 34.4852, Long −119.2985); Matilija Creek (Lat 34.4846, Long −119.3076); North Fork Matilija Creek (Lat 34.5129, Long −119.2728); Coyote Creek (lower) (Lat 34.3735, Long −119.3327).

(iii) Lions Hydrologic Sub-area 440231. Outlet(s) = Lion Creek (Lat 34.4222, Long −119.2632) upstream to endpoint(s) in: Lion Creek (Lat 34.4331, Long −119.1995).

(iv) Thatcher Hydrologic Sub-area 440232. Outlet(s) = San Antonio Creek (Lat 34.4224, Long −119.2635) upstream to endpoint(s) in: San Antonio Creek (Lat 34.4674, Long −119.2029); Unnamed Tributary (Lat 34.4729, Long −119.2250); Unnamed Tributary (Lat 34.4948, Long −119.1934); Thacher Creek (Lat 34.5016, Long −119.1863); Unnamed Tributary (Lat 34.4876, Long −119.2127); Unnamed Tributary (Lat 34.4992, Long −119.2125); Thacher Creek (Lat 34.4876, Long −119.1675); Reeves Creek (Lat 34.4902, Long −119.1426).

(5) Santa Clara-Calleguas Hydrologic Unit 4403—*(i) Mouth of Santa Clara Hydrologic Sub-area 440310.* Outlet(s) = Santa Clara River (Lat 34.2348, Long −119.2559) upstream.

(ii) Santa Clara, Santa Paula Hydrologic Sub-area 440321. Outlet(s) = Santa Clara River (Lat 34.2731, Long −119.1464) upstream to endpoint(s) in: Santa Paula Creek (Lat 34.4500, Long −119.0554).

(iii) Sisar Hydrologic Sub-area 440322. Outlet(s) = Sisar Creek (Lat 34.4271, Long −119.0900) upstream to endpoint(s) in: Sisar Creek (Lat 34.4615, Long −119.1303).

(iv) Sespe, Santa Clara Hydrologic Sub-area 440331. Outlet(s) = Santa Clara River (Lat 34.3513, Long −119.0388); Sespe Creek (Lat 34.3774, Long −118.9562) upstream to endpoint(s) in: Pole Creek (Lat 34.4384, Long −118.8876).

(v) Sespe Hydrologic Sub-area 440332. Outlet(s) = Sespe Creek (Lat 34.4509, Long −118.9249) upstream to endpoint(s) in: Little Sespe Creek (Lat 34.4598, Long −118.8929); Fourfork Creek (Lat 34.4735, Long −118.8884); Pine Canyon Creek (Lat 34.4488, Long −118.9651); Unnamed Tributary (Lat 34.5125, Long −118.9302); West Fork Sespe Creek (Lat 34.5106, Long −119.0492); Alder Creek (Lat 34.5691, Long −118.9519); Unnamed Tributary (Lat 34.5537, Long −119.0039); Unnamed Tributary (Lat 34.5537, Long −119.0078); Park Creek (Lat 34.5537, Long −119.0019); Red Reef Creek (Lat 34.5344, Long −119.0432); Timber Creek (Lat 34.5184, Long −119.0688); Bear Creek (Lat 34.5314, Long −119.1031); Trout Creek (Lat 34.5869, Long −119.1350); Piedra Blanca Creek (Lat 34.6109, Long −119.1828); Lion Creek (Lat 34.5047, Long −119.1092); Howard Creek (Lat 34.5459, Long −119.2144); Rose Valley Creek (Lat 34.5195, Long −119.1747); Tule Creek (Lat 34.5615, Long −119.2977); Unnamed Tributary (Lat 34.5757, Long −119.3042); Unnamed Tributary (Lat 34.5988, Long −119.2726); Portrero John Creek (Lat 34.6010, Long −119.2685); Munson Creek (Lat 34.6152, Long −119.2954); Chorro Grande Creek (Lat 34.6285, Long −119.3236); Unnamed Tributary (Lat 34.5691, Long −119.3418); Lady Bug Creek (Lat 34.5724, Long −119.3163); Abadi Creek (Lat 34.6099, Long −119.4213); Sespe Creek (Lat 34.6295, Long −119.4402).

(vi) Santa Clara, Hopper Canyon, Piru Hydrologic Sub-area 440341. Outlet(s) = Santa Clara River (Lat 34.3860, Long −118.8702) upstream to endpoint(s) in: Hopper Creek (Lat 34.4264, Long −118.8299); Santa Clara River (Lat 34.3996, Long −118.7828); Piru Creek (Lat 34.4613, Long −118.7528).

(6) Santa Monica Bay Hydrologic Unit 4404—*(i) Topanga Hydrologic Sub-area 440411.* Outlet(s) = Topanga Creek (Lat 34.0397, Long −118.5821) upstream to endpoint(s) in: Topanga Creek (Lat 34.0838, Long −118.5971).

(ii) Malibu Hydrologic Sub-area 440421. Outlet(s) = Malibu Creek (Lat 34.0322, Long −118.6787) upstream to endpoint(s) in: Malibu Creek (Lat 34.0648, Long −118.6978).

(iii) Arroyo Sequit Hydrologic Sub-area 440444. Outlet(s) = Arroyo Sequit (Lat 34.0445, Long −118.9329) upstream to endpoint(s) in: Arroyo Sequit (Lat 34.0834, Long −118.9178); West Fork Arroyo Sequit (Lat 34.0909, Long −118.9225).

(7) Calleguas Hydrologic Unit 4408—*Calleguas Estuary Hydrologic Sub-area 440813.* Outlet(s) = Mugu Lagoon (Calleguas Creek) (Lat 34.1093, Long −119.0917) upstream to endpoint(s) in: Mugu Lagoon (Calleguas Creek) (Lat 34.1125, Long −119.0816).

(8) San Juan Hydrologic Unit 4901—*(i) Trabuco Hydrologic Sub-area 490121.* Outlet(s) = Trabuco Creek (Lat 33.5164, Long −117.6718); upstream.

(ii) Upper Trabuco Hydrologic Sub-area 490122. Outlet(s) = Trabuco Creek (Lat 33.6619, Long −117.5789) upstream to endpoint(s) in: Trabuco Creek (Lat 33.6827, Long −117.4572).

(iii) Middle Trabuco Hydrologic Sub-area 490123. Outlet(s) = Trabuco Creek (Lat 33.5185, Long −117.6718) upstream.

(iv) Middle San Juan Hydrologic Sub-area 490124. Outlet(s) = San Juan Creek (Lat 33.5238, Long −117.6127) upstream.

(v) Upper San Juan Hydrologic Sub-area 490125. Outlet(s) = San Juan Creek (Lat 33.5199, Long −117.5605) upstream to endpoint(s) in: San Juan Creek (Lat 33.6092, Long −117.4387).

(vi) Mid-upper San Juan Hydrologic Sub-area 490126. Outlet(s) = San Juan Creek (Lat 33.5241, Long −117.6124) upstream.

(vii) Lower San Juan Hydrologic Sub-area 490127. Outlet(s) = San Juan Creek (Lat 33.4621, Long −117.6833); Trabuco Creek (Lat 33.5164, Long −117.6718) upstream.

(viii) Middle San Juan Hydrologic Sub-area 490128. Outlet(s) = San Juan Creek (Lat 33.4969, Long −117.6551) upstream.

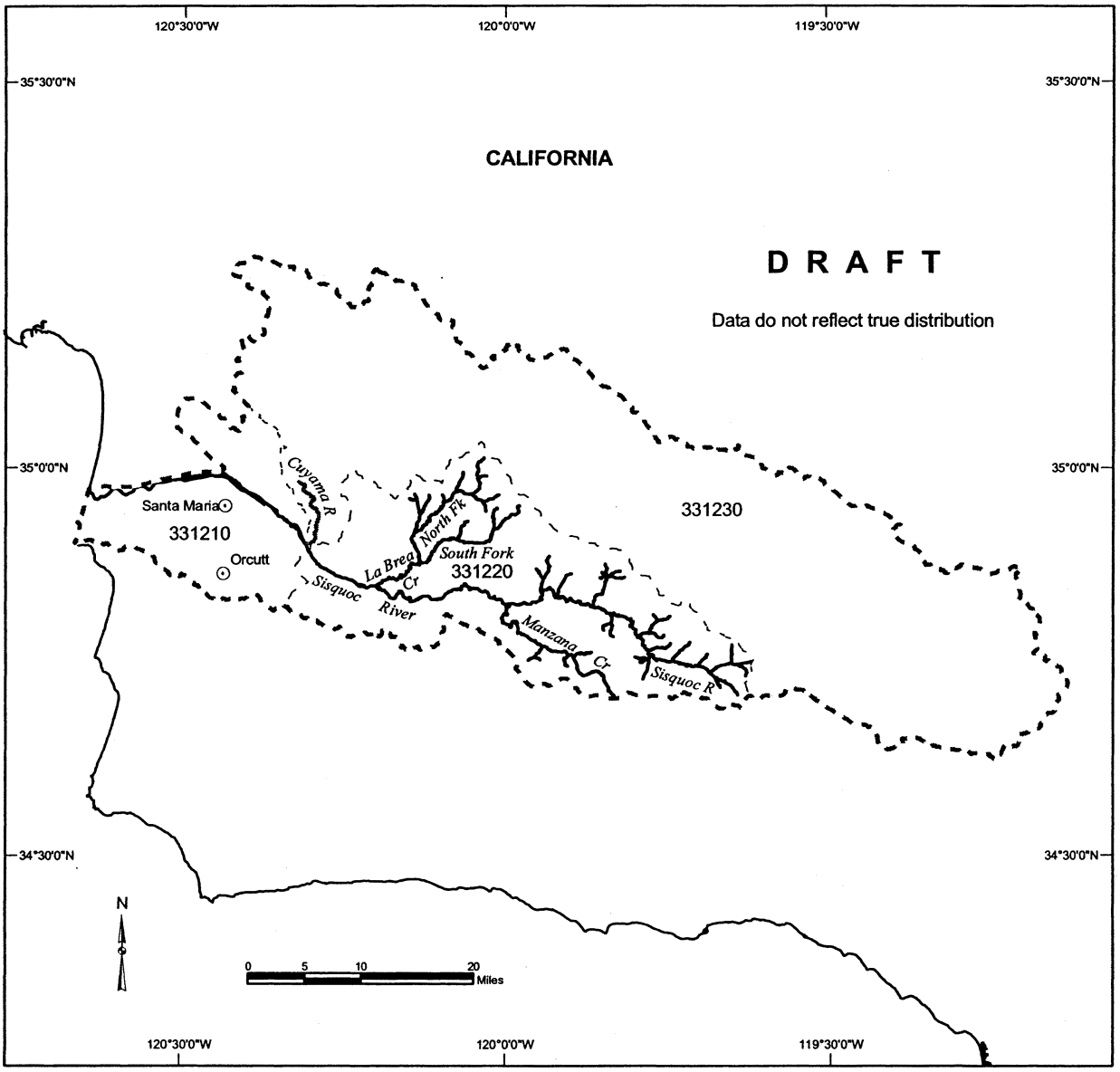
(ix) San Mateo Hydrologic Sub-area 490140. Outlet(s) = San Mateo Creek (Lat 33.3851, Long −117.5924) upstream to endpoint(s) in: San Mateo Creek (Lat 33.4827, Long −117.3692); San Mateo Canyon (Lat 33.4957, Long −117.4513).

(9) Maps of proposed critical habitat for the Southern California *O. mykiss* ESU follow:

BILLING CODE 3510–22–P

Proposed Critical Habitat for the Southern California O. Mykiss ESU

Santa Maria River Hydrologic Unit 3312



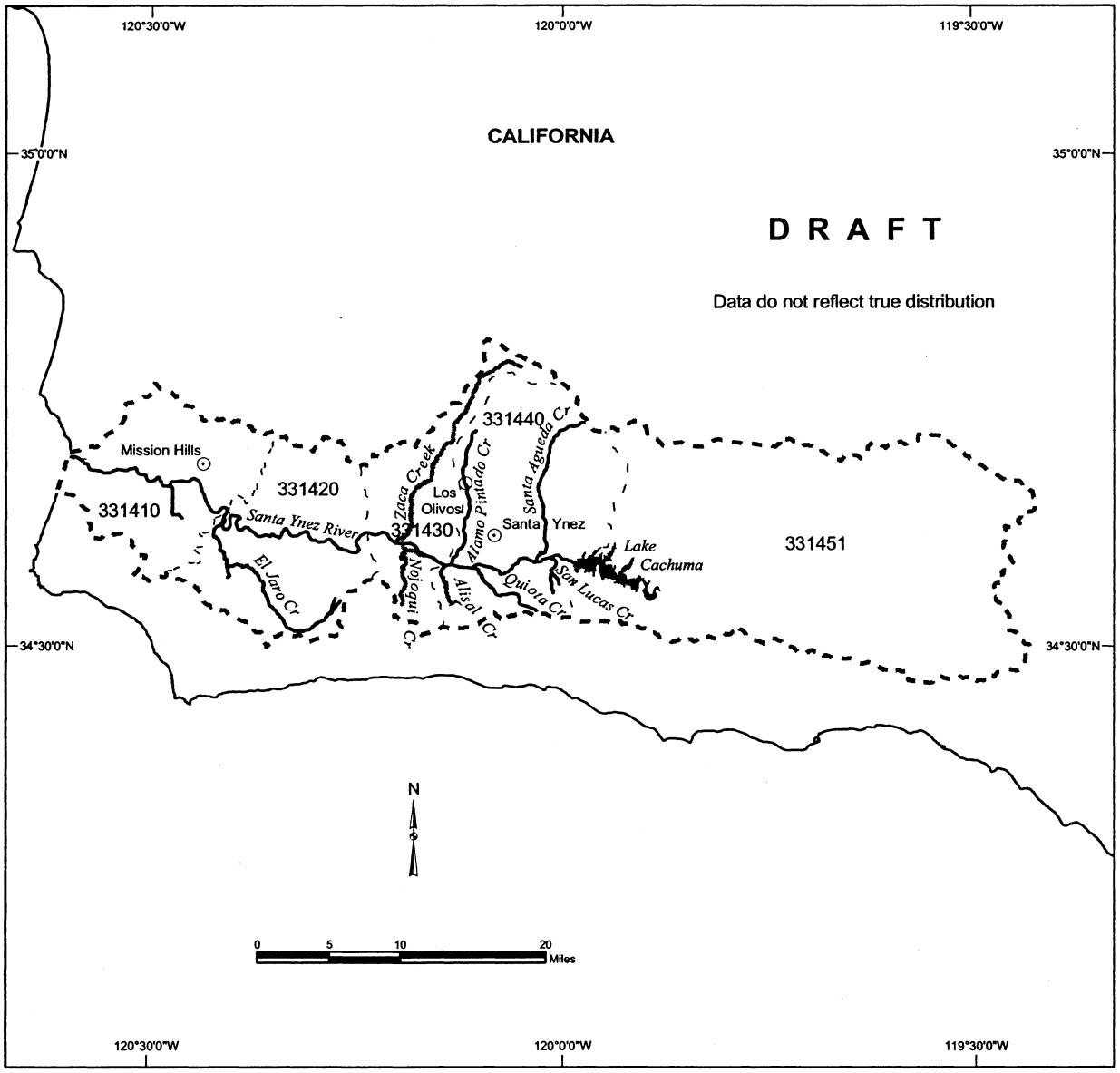
Legend

- ⊙ Cities/Towns
- Proposed Critical Habitat
- Occupied but excluded streams / areas
- CalWater Hydrologic Unit (HU) Boundary
- CalWater Hydrologic Sub-Area (HSA) Boundary
- State Boundary
- **331210** CalWater HSA Number

Area of Detail

Proposed Critical Habitat for the Southern California O. Mykiss ESU

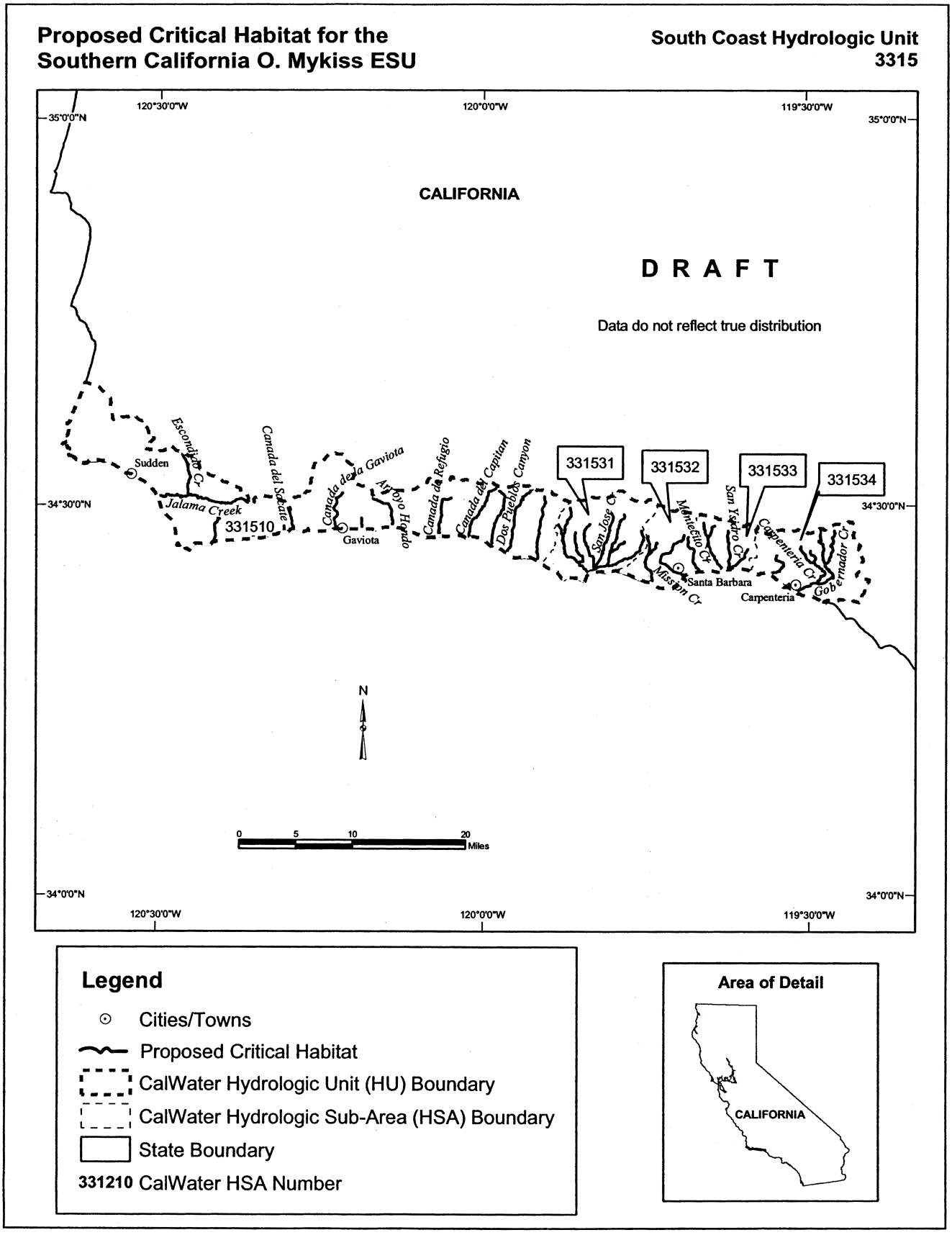
Santa Ynez Hydrologic Unit 3314



Legend

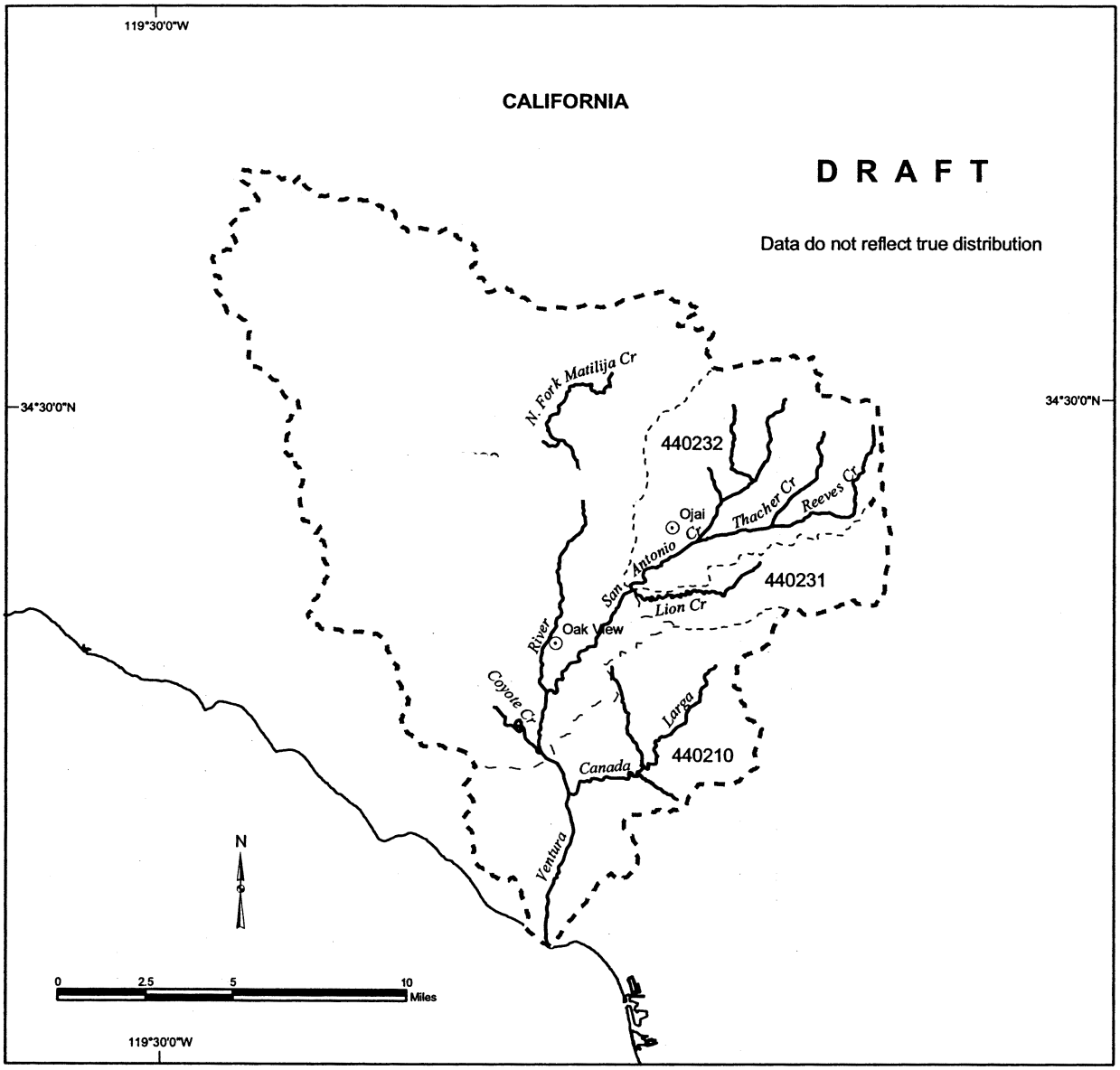
- ⊙ Cities/Towns
- Proposed Critical Habitat
- Occupied but excluded streams / areas
- CalWater Hydrologic Unit (HU) Boundary
- CalWater Hydrologic Sub-Area (HSA) Boundary
- State Boundary
- **331210** CalWater HSA Number

Area of Detail


Proposed Critical Habitat for the Southern California O. Mykiss ESU
South Coast Hydrologic Unit 3315
120°30'0"W
120°0'0"W
119°30'0"W
35°0'0"N
34°30'0"N
34°0'0"N
CALIFORNIA
DRAFT
Data do not reflect true distribution
Sudden
Escondido Cr.
Jalama Creek
331510
Canada del Sotare
Canada de la Gaviota
Arroyo Hondo
Gaviota
Canada del Refugio
Canada del Capitan
Dos Pueblos Canyon
331531
San Jose Cr.
331532
Montecito Cr.
Mission Cr.
Santa Barbara
San Ysidro Cr.
331533
Carpenteria Cr.
Carpenteria
331534
Gobernador Cr.
N
0 5 10 20
Miles
Legend
Cities/Towns
Proposed Critical Habitat
CalWater Hydrologic Unit (HU) Boundary
CalWater Hydrologic Sub-Area (HSA) Boundary
State Boundary
331210 CalWater HSA Number
Area of Detail
CALIFORNIA

Proposed Critical Habitat for the Southern California O. Mykiss ESU

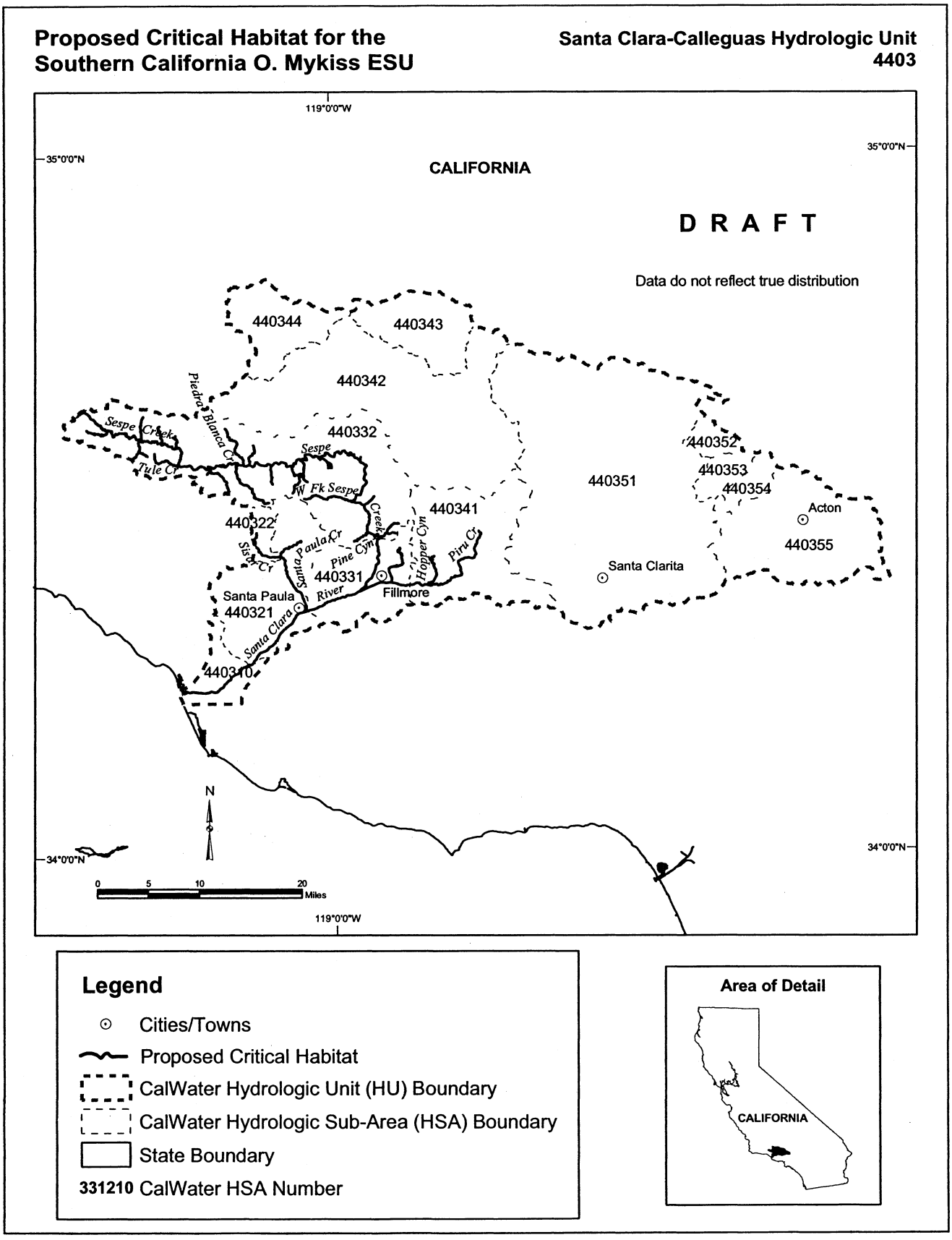
Ventura River Hydrologic Unit 4402



Legend

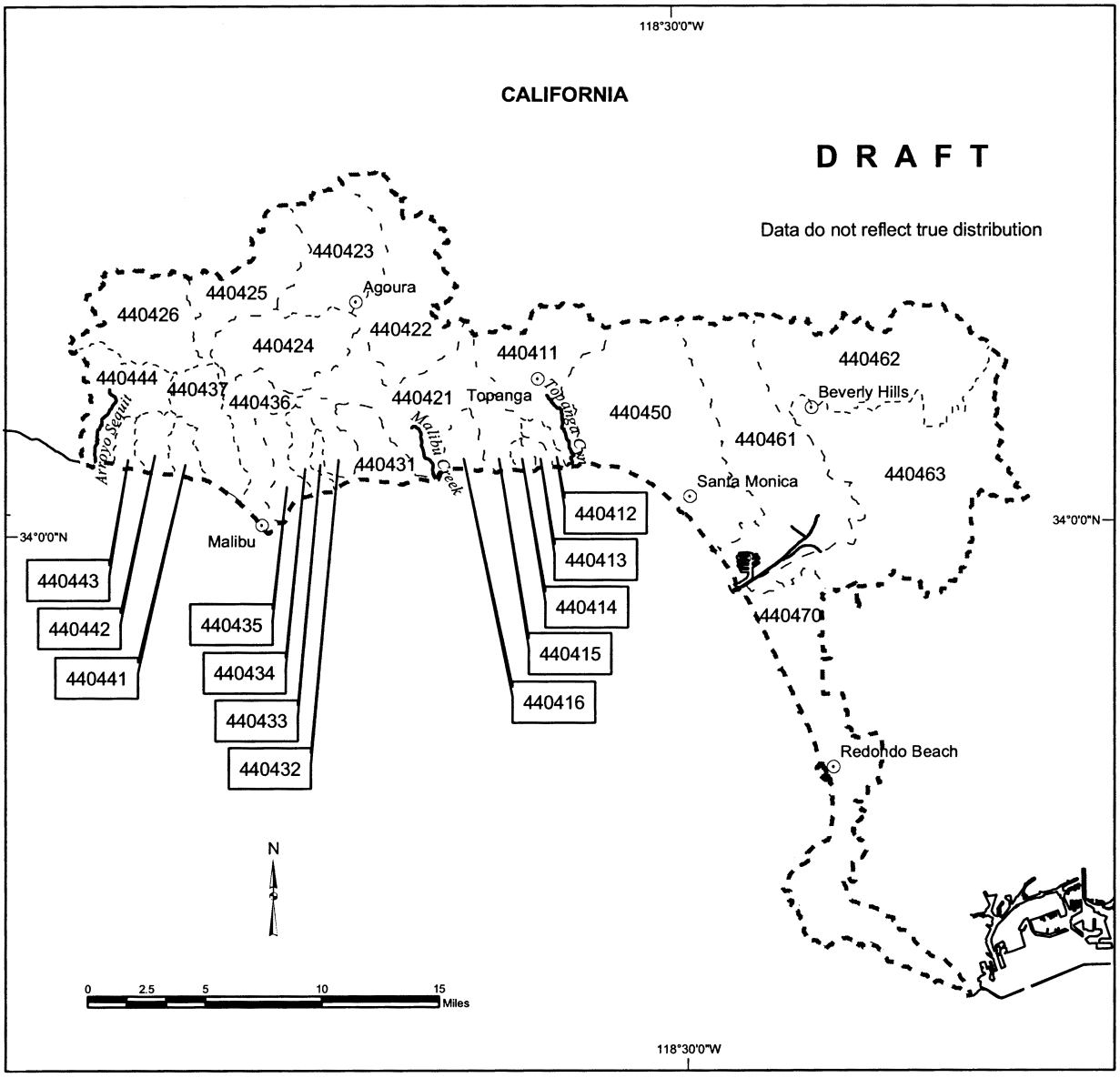
- ⊙ Cities/Towns
- Proposed Critical Habitat
- CalWater Hydrologic Unit (HU) Boundary
- CalWater Hydrologic Sub-Area (HSA) Boundary
- State Boundary
- **331210** CalWater HSA Number

Area of Detail


Proposed Critical Habitat for the Southern California O. Mykiss ESU
Santa Clara-Calleguas Hydrologic Unit 4403
119°0'0"W
35°0'0"N
CALIFORNIA
DRAFT
Data do not reflect true distribution
440344
440343
440342
440332
440352
440353
440354
440351
440341
440322
440331
440355
Acton
Santa Clarita
Fillmore
Santa Paula
440321
440310
Piedra Blanca Cr
Sespe Creek
Tyle Cr
Sespe
W Fk Sespe Creek
Sisar Cr
Santa Paula Cr
Pine Cyn
Topper Cyn
Piru Cr
Santa Clara River
N
34°0'0"N
0 5 10 20 Miles
Legend
Cities/Towns
Proposed Critical Habitat
CalWater Hydrologic Unit (HU) Boundary
CalWater Hydrologic Sub-Area (HSA) Boundary
State Boundary
331210 CalWater HSA Number
Area of Detail
CALIFORNIA

Proposed Critical Habitat for the Southern California O. Mykiss ESU

Santa Monica Bay Hydrologic Unit 4404



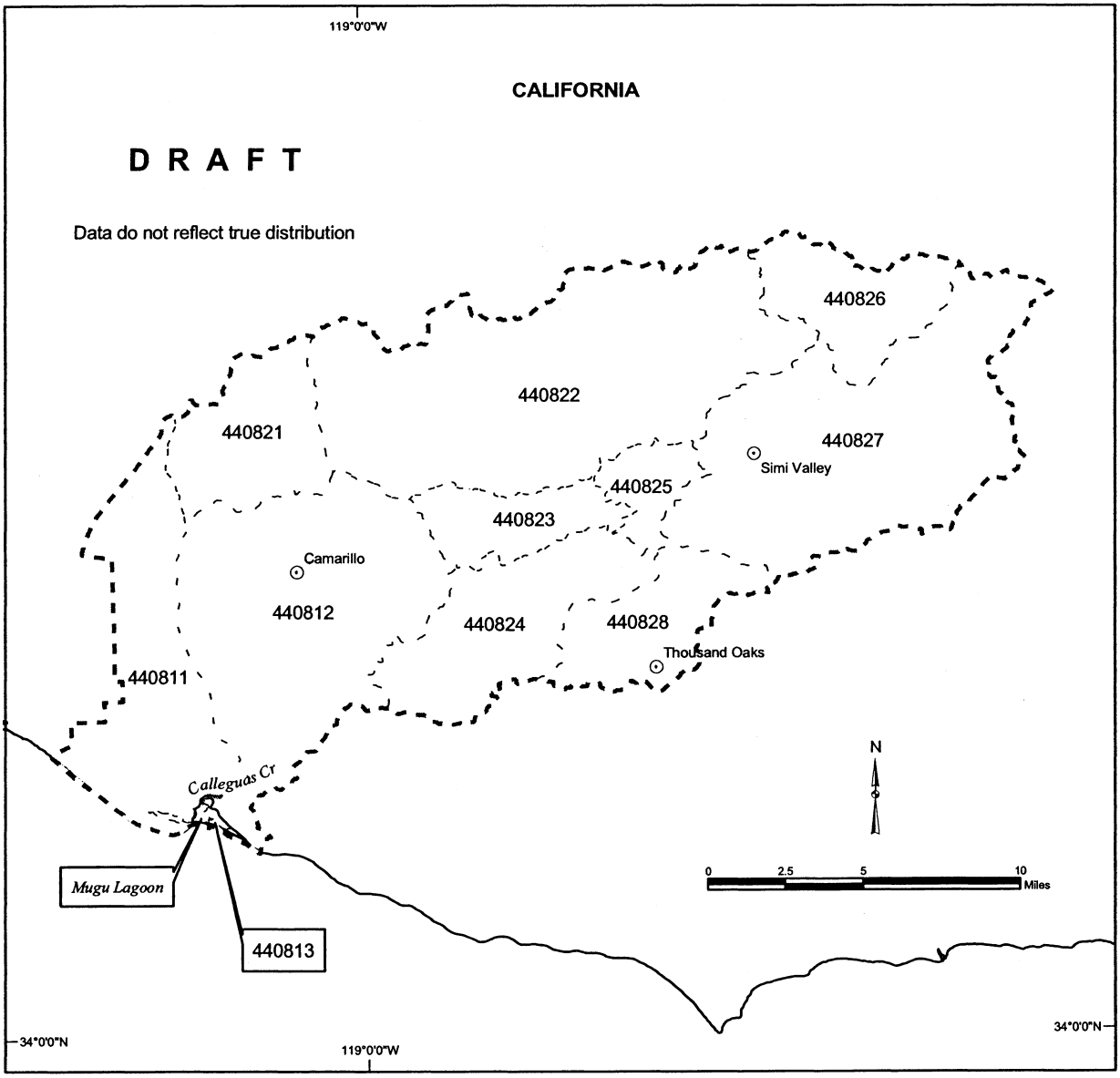
Legend

- Cities/Towns
- Proposed Critical Habitat
- CalWater Hydrologic Unit (HU) Boundary
- CalWater Hydrologic Sub-Area (HSA) Boundary
- State Boundary
- **331210** CalWater HSA Number

Area of Detail

Proposed Critical Habitat for the Southern California O. Mykiss ESU

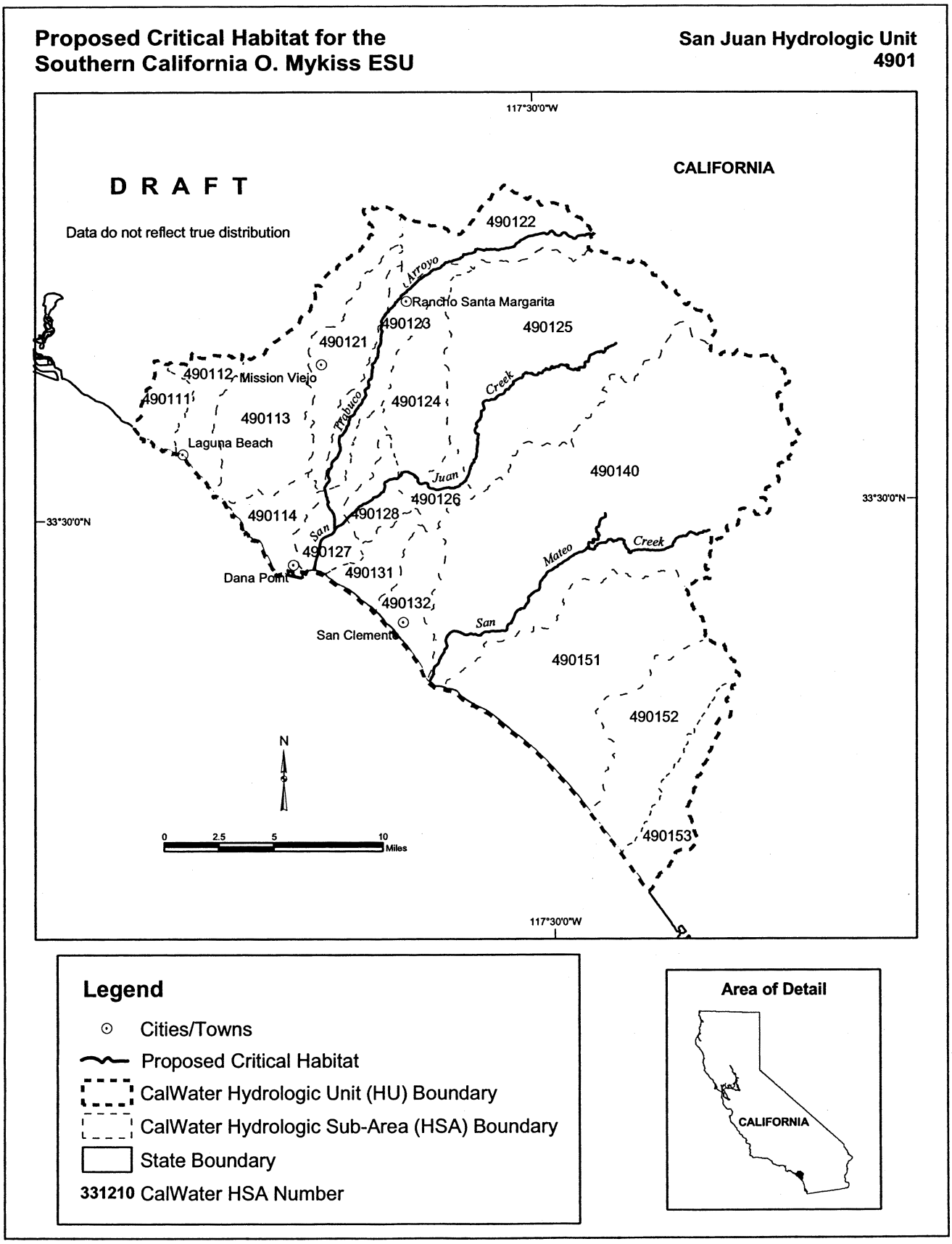
Calleguas Hydrologic Unit 4408



Legend

- Cities/Towns
- Proposed Critical Habitat
- Occupied but excluded streams / areas
- CalWater Hydrologic Unit (HU) Boundary
- CalWater Hydrologic Sub-Area (HSA) Boundary
- State Boundary
- **331210** CalWater HSA Number

Area of Detail



BILLING CODE 3510–22–C

(k) *Central Valley spring-run chinook (Oncorhynchus tshawytscha).* Critical habitat is proposed to include the areas defined in the following units:

(1) Tehama Hydrologic Unit 5504—*(i) Lower Stony Creek Hydrologic Sub-area 550410.* Outlet(s) = Glenn-Colusa Canal (Lat 39.6762, Long −122.0151); Stony Creek (39.7122, −122.0072) upstream to endpoint(s) in: Glenn−Colusa Canal (39.7122, −122.0072); Stony Creek (39.8178, −122.3253).

(ii) Red Bluff Hydrologic Sub-area 550420. Outlet(s) = Sacramento River (Lat 39.6998, Long −121.9419) upstream to endpoint(s) in: Antelope Creek (40.2023, −122.1275); Big Chico Creek (39.7757, −121.7525); Blue Tent Creek (40.2284, −122.2551); Burch Creek (39.8526, −122.1502); Coyote Creek (40.0929, −122.1621); Craig Creek (40.1617, −122.1350); Deer Creek (40.0144, −121.9481); Dibble Creek (40.2003, −122.2420); Dye Creek (40.0904, −122.0767); Elder Creek (40.0526, −122.1717); Jewet Creek (39.8913, −122.1005); Kusal Slough (39.7577, −121.9699); Lindo Channel (39.7623, −121.7923); McClure Creek (40.0074, −122.1729); Mill Creek (40.0550, −122.0317); Mud Creek (39.7931, −121.8865); New Creek (40.1873, −122.1350); Oat Creek (40.0847, −122.1658); Pine Creek (39.8760, −121.9777); Red Bank Creek (40.1391, −122.2157); Reeds Creek (40.1687, −122.2377); Rice Creek (39.8495, −122.1626); Rock Creek (39.8189, −121.9124); Salt Creek (40.1869, −122.1845); Singer Creek (39.9200, −121.9612); Thomes Creek (39.8822, −122.5527); Toomes Creek (39.9808, −122.0642); Unnamed Tributary (39.8532, −122.1627); Unnamed Tributary (40.1682, −122.1459).

(2) Whitmore Hydrologic Unit 5507—*(i) Inks Creek Hydrologic Sub-area 550711.* Outlet(s) = Inks Creek (Lat 40.3305, Long −122.1520) upstream to endpoint(s) in: Inks Creek (40.3418, −122.1332).

(ii) Battle Creek Hydrologic Sub-area 550712. Outlet(s) = Battle Creek (Lat 40.4083, Long −122.1102) upstream to endpoint(s) in: Battle Creek (40.4228, −121.9975); North Fork Battle Creek (40.4746, −121.8436); South Fork Battle Creek (40.3549, −121.6861).

(iii) Inwood Hydrologic Sub-area 550722. Outlet(s) = Bear Creek (Lat 40.4352, Long −122.2039) upstream to endpoint(s) in: Bear Creek (40.4859, −122.1529); Dry Creek (40.4574, −122.1993).

(3) Redding Hydrologic Unit 5508—*(i) Enterprise Flat Hydrologic Sub-area 550810.* Outlet(s) = Sacramento River (Lat 40.2526, Long −122.1707) upstream to endpoint(s) in: Anderson Creek (40.3910, −122.1984); Ash Creek (40.4451, −122.1815); Battle Creek (40.4083, −122.1102); Churn Creek (40.5431, −122.3395); Clear Creek (40.5158, −122.5256); Cow Creek (40.5438, −122.1318); Olney Creek (40.5262, −122.3783); Paynes Creek (40.2810, −122.1587); South Cow Creek (40.5440, −122.1314); Stillwater Creek (40.4789, −122.2597).

(ii) Lower Cottonwood Hydrologic Sub-area 550820. Outlet(s) = Cottonwood Creek (Lat 40.3777, Long −122.1991) upstream to endpoint(s) in: Cottonwood Creek (40.3943, −122.5254); Middle Fork Cottonwood Creek (40.3314, −122.6663); South Fork Cottonwood Creek (40.1578, −122.5809).

(4) Eastern Tehama Hydrologic Unit 5509—*(i) Big Chico Creek Hydrologic Sub-area 550914.* Outlet(s) = Big Chico Creek (Lat 39.7777, Long −121.7495) upstream to endpoint(s) in: Big Chico Creek (39.8873, −121.6979).

(ii) Deer Creek Hydrologic Sub-area 550920. Outlet(s) = Deer Creek (Lat 40.0144, Long −121.9481) upstream to endpoint(s) in: Deer Creek (40.2019, −121.5130).

(iii) Upper Mill Creek Hydrologic Sub-area 550942. Outlet(s) = Mill Creek (Lat 40.0550, Long −122.0317) upstream to endpoint(s) in: Mill Creek (40.3997, −121.5135).

(iv) Antelope Creek Hydrologic Sub-area 550963. Outlet(s) = Antelope Creek (Lat 40.2023, Long −122.1272) upstream to endpoint(s) in: Antelope Creek (40.2416, −121.8630); North Fork Antelope Creek (40.2691, −121.8226); South Fork Antelope Creek (40.2309, −121.8325).

(5) Sacramento Delta Hydrologic Unit 5510—*Sacramento Delta Hydrologic Sub-area 551000.* Outlet(s) = Sacramento River (Lat 38.0612, Long −121.7948) upstream to endpoint(s) in: Cache Slough (38.3078, −121.7592); Delta Cross Channel (38.2433, −121.4964); Elk Slough (38.4140, −121.5212); Elkhorn Slough (38.2898, −121.6271); Georgiana Slough (38.2401, −121.5172); Miners Slough (38.2864, −121.6051); Prospect Slough (38.1477, −121.6641); Sevenmile Slough (38.1171, −121.6298); Steamboat Slough (38.1123, −121.5966); Sutter Slough (38.3321, −121.5838); Threemile Slough (38.1155, −121.6835); Yolo Bypass (38.5800, −121.5838).

(6) Valley-Putah-Cache Hydrologic Unit 5511—*Lower Putah Creek Hydrologic Sub-area 551120.* Outlet(s) = Yolo Bypass (Lat 38.5800, Long −121.5838) upstream to endpoint(s) in: Sacramento Bypass (38.6057, −121.5563); Yolo Bypass (38.7627, −121.6325).

(7) Marysville Hydrologic Unit 5515—*(i) Lower Yuba River Hydrologic Sub-area 551530.* Outlet(s) = Yuba River (Lat 39.1270, Long −121.5981) upstream to endpoint(s) in: Yuba River (39.2203, −121.3314).

(ii) Lower Feather River Hydrologic Sub-area 551540. Outlet(s) = Feather River (Lat 39.1270, Long −121.5981) upstream to endpoint(s) in: Feather River (39.5203, −121.5475).

(8) Yuba River Hydrologic Unit 5517—*(i) Browns Valley Hydrologic Sub-area 551712.* Outlet(s) = Dry Creek (Lat 39.2207, Long −121.4088); Yuba River (39.2203, −121.3314) upstream to endpoint(s) in: Dry Creek (39.3201, −121.3117); Yuba River (39.2305, −121.2813).

(ii) Englebright Hydrologic Sub-area 551714. Outlet(s) = Yuba River (Lat 39.2305, Long −121.2813) upstream to endpoint(s) in: Yuba River (39.2388, −121.2698).

(iii) Nevada City Hydrologic Sub-area 551720. Outlet(s) = Deer Creek (Lat 39.2303, Long −121.2813) upstream to endpoint(s) in: Deer Creek (39.2354, −121.2192).

(9) Valley-American Hydrologic Unit 5519—*Pleasant Grove Hydrologic Sub-area 551922.* Outlet(s) = Sacramento River (Lat 38.5965, Long −121.5086) upstream to endpoint(s) in: Feather River (39.1264, −121.5984).

(10) Colusa Basin Hydrologic Unit 5520—*(i) Sycamore-Sutter Hydrologic Sub-area 552010.* Outlet(s) = Sacramento River (Lat 38.7604, Long −121.6767) upstream.

(ii) Sutter Bypass Hydrologic Sub-area 552030. Outlet(s) = Sacramento River (Lat 38.7851, Long −121.6238) upstream to endpoint(s) in: Butte Creek (39.1987, −121.9285); Butte Slough (39.1987, −121.9285); Nelson Slough (38.8901, −121.6352); Sacramento Slough (38.7843, −121.6544); Sutter Bypass (39.1417, −121.8196; 39.1484, −121.8386); Unnamed Tributary (39.1586, −121.8747).

(iii) Butte Basin Hydrologic Sub-area 552040. Outlet(s) = Butte Creek (Lat 39.1990, Long −121.9286); Sacramento River (39.4141, −122.0087) upstream to endpoint(s) in: Butte creek (39.1949, −121.9361); Colusa Bypass (39.2276, −121.9402); Unnamed Tributary (39.6762, −122.0151).

(11) Butte Creek Hydrologic Unit 5521—*Upper Little Chico Hydrologic Sub-area 552130.* Outlet(s) = Butte Creek (Lat 39.7096, −121.7504) upstream to endpoint(s) in Butte Creek 3(9.8665, −121.6344).

(12) Shasta Bally Hydrologic Unit 5524—*(i) Platina Hydrologic Sub-area 552436.* Outlet(s) = Middle Fork Cottonwood Creek (Lat 40.3314, −122.6663) upstream to endpoint(s) in Beegum Creek (40.3066, −122.9205);

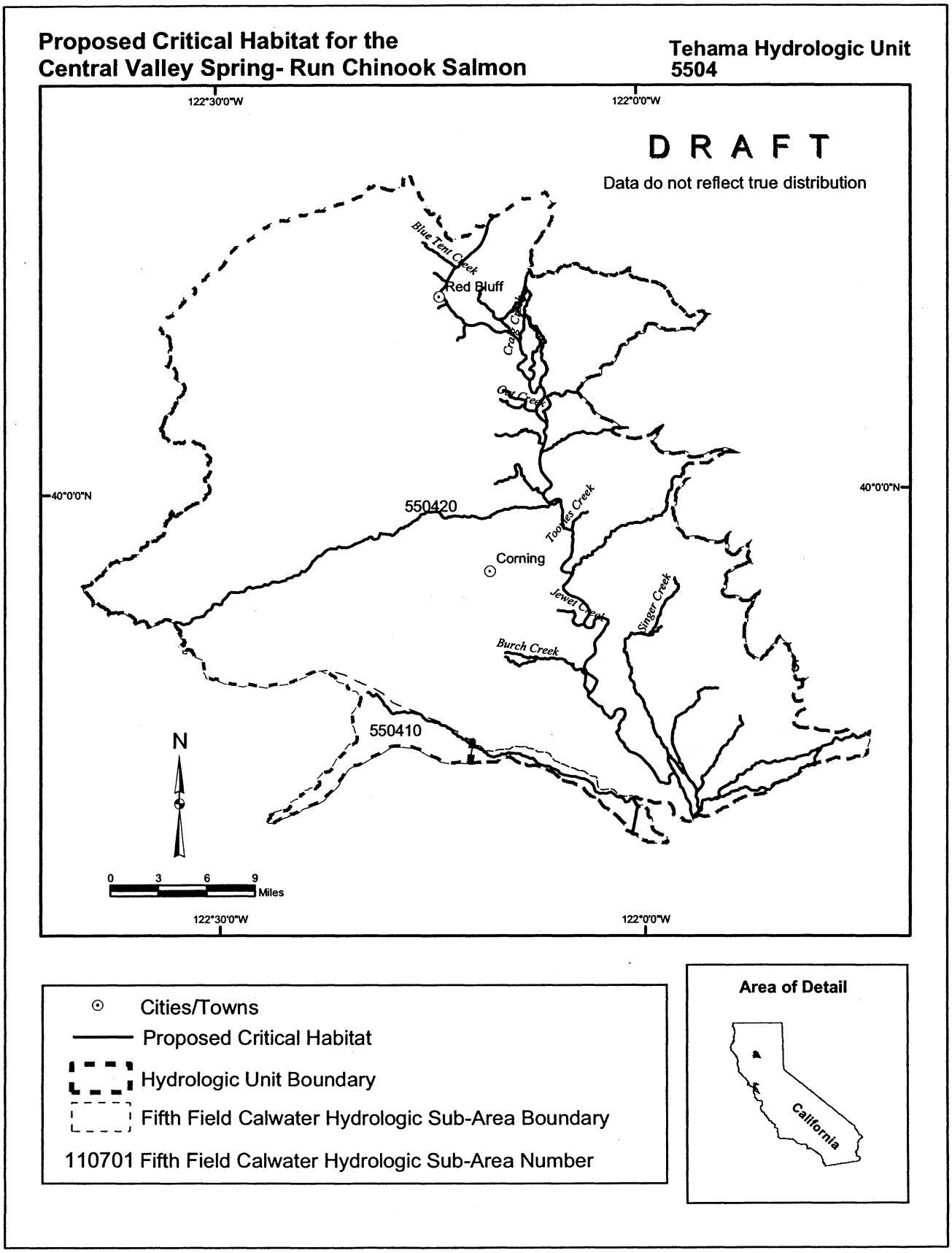
Middle Fork Cottonwood Creek (40.3655, −122.7451).

(ii) Spring Creek Hydrologic Sub-area 552440. Outlet(s) = Sacramento River (Lat 40.5943, Long −122.4343) upstream to endpoint(s) in: Sacramento River (40.6116, −122.4462)

(iii) Kanaka Peak Hydrologic Sub-area 552462. Outlet(s) = Clear Creek (Lat 40.5158, Long −122.5256) upstream to endpoint(s) in: Clear Creek (40.5992, −122.5394).

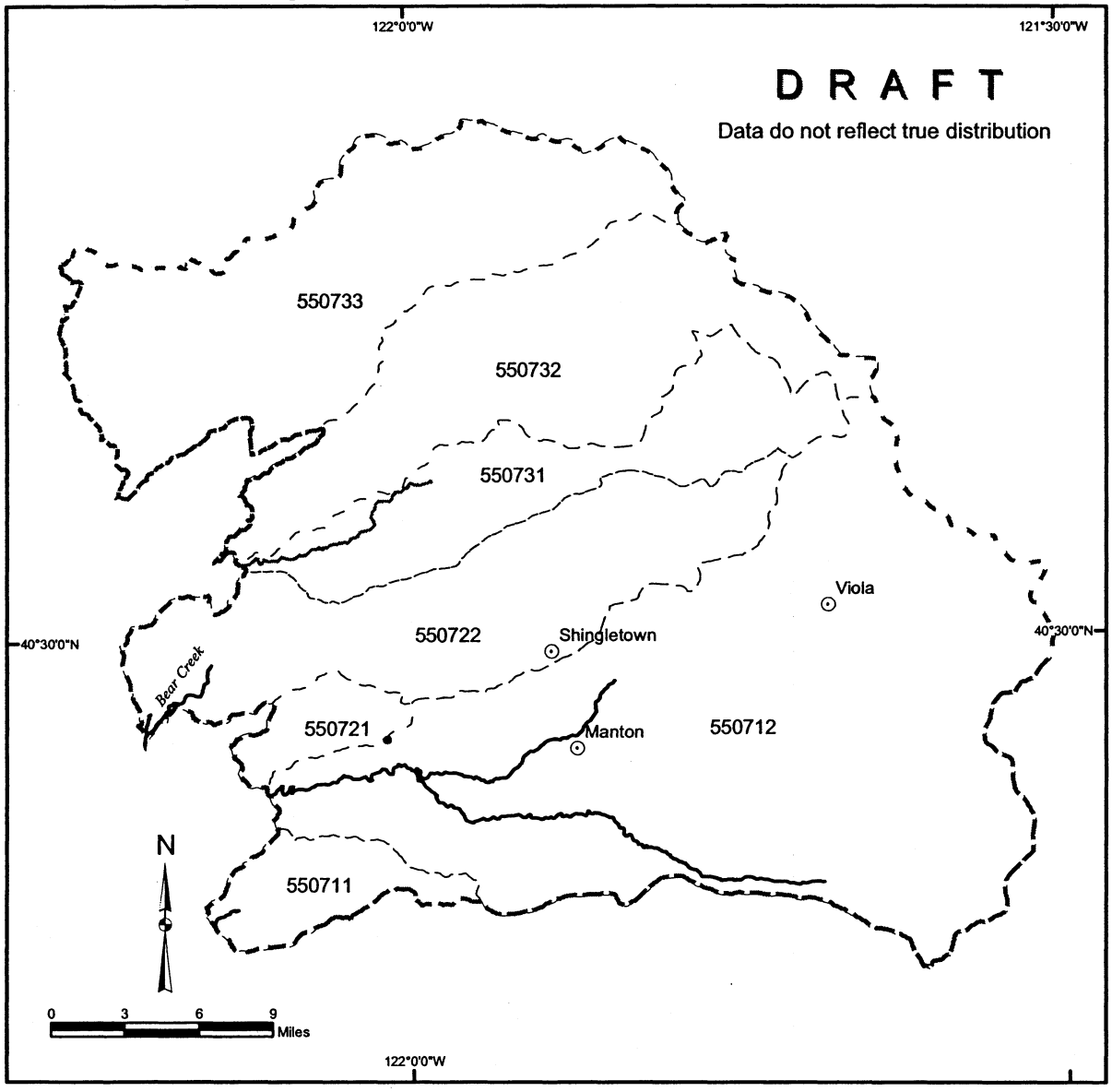
(13) Maps of proposed critical habitat for the Central Valley spring−run chinook salmon ESU follow:

BILLING CODE 3510–22–P


Proposed Critical Habitat for the
Central Valley Spring- Run Chinook Salmon
Tehama Hydrologic Unit
5504
122°30'0"W
122°0'0"W
DRAFT
Data do not reflect true distribution
Blue Tent Creek
Red Bluff
Oat Creek
40°0'0"N
550420
Toomes Creek
Corning
Jewett Creek
Singer Creek
Burch Creek
550410
N
0 3 6 9
Miles
Cities/Towns
Proposed Critical Habitat
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California

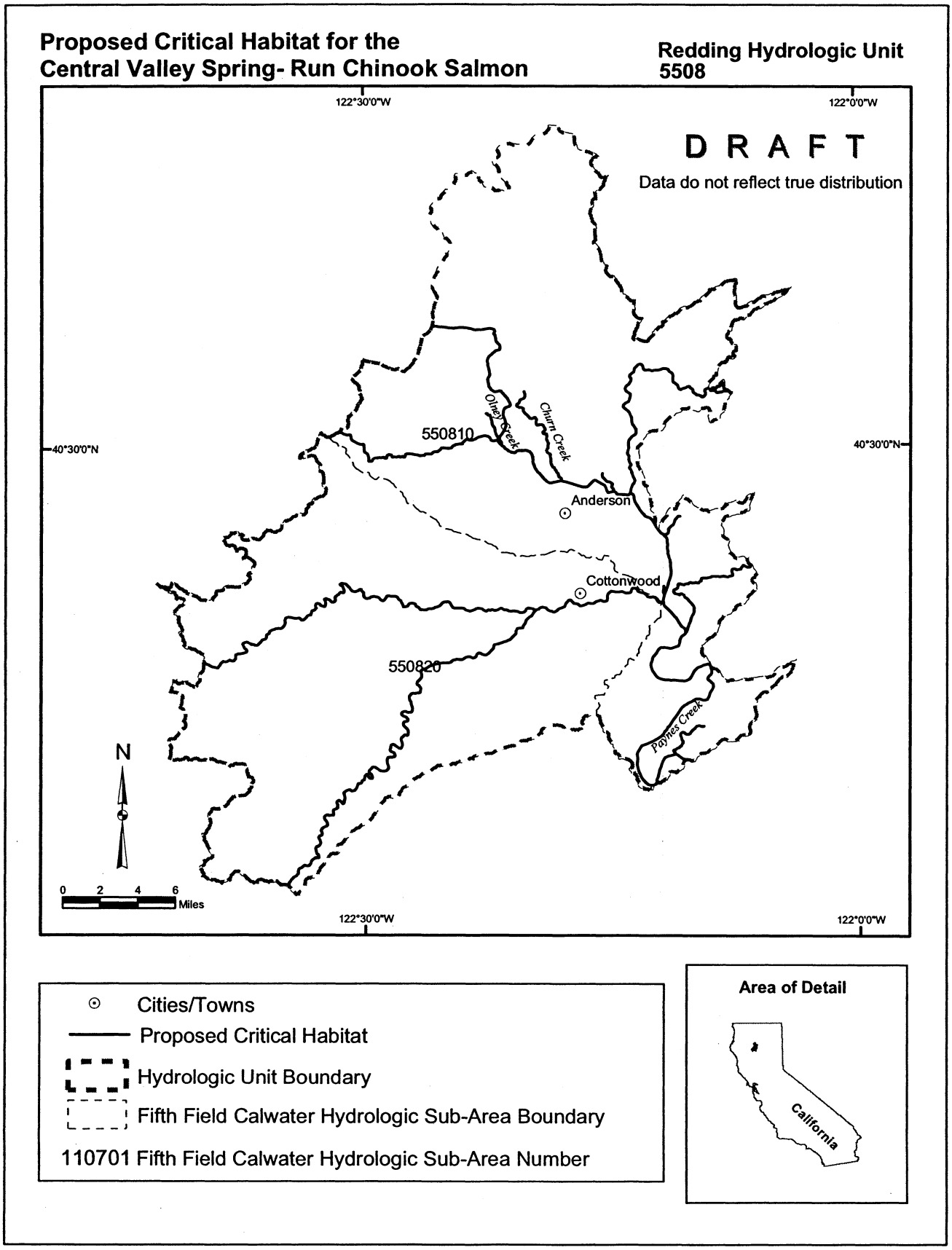
Proposed Critical Habitat for the Central Valley Spring- Run Chinook Salmon

Whitmore Hydrologic Unit 5507



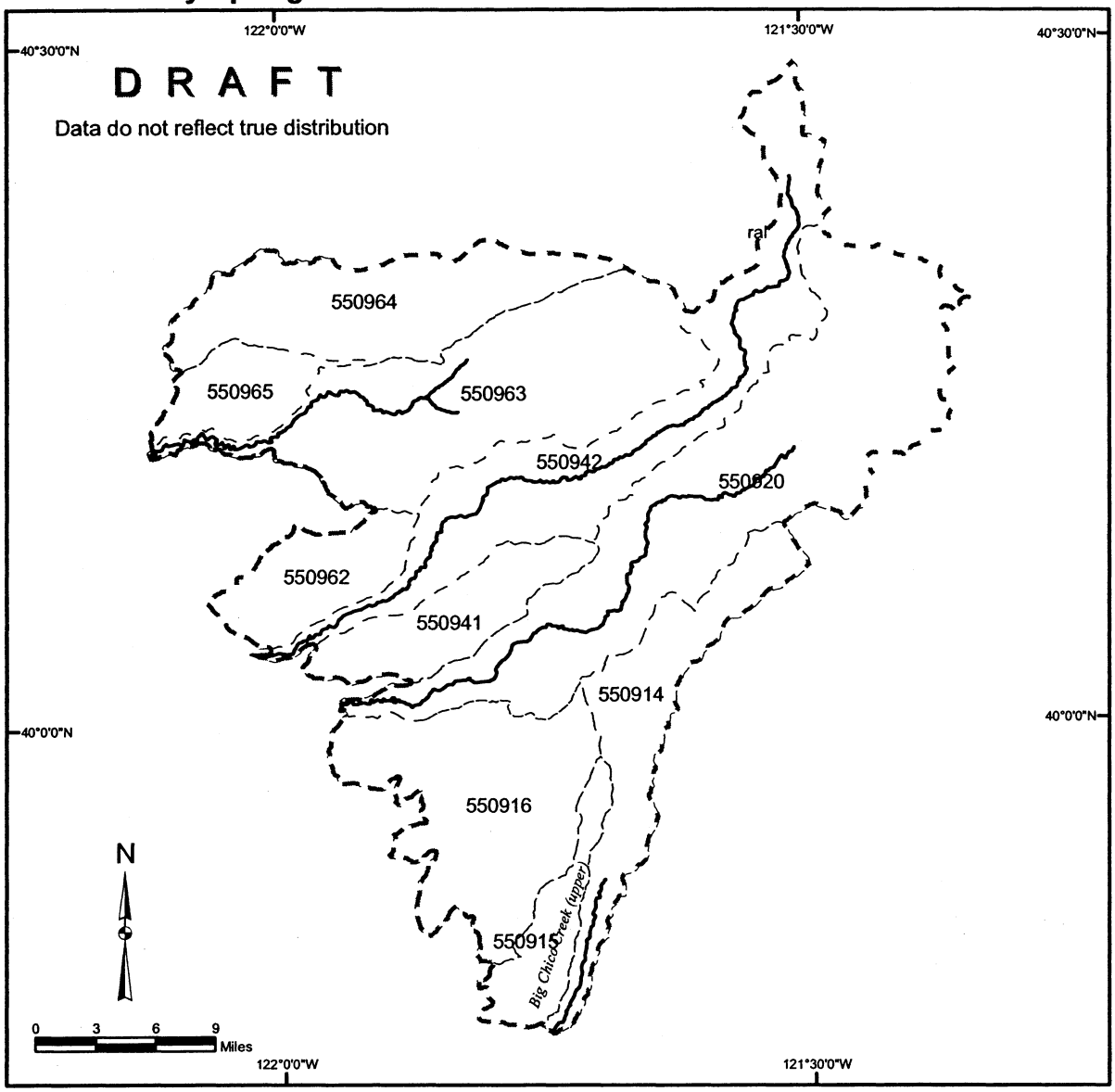
- Cities/Towns
- Proposed Critical Habitat
- Occupied but excluded streams / areas
- Hydrologic Unit Boundary
- Fifth Field Calwater Hydrologic Sub-Area Boundary
- 110701 Fifth Field Calwater Hydrologic Sub-Area Number

Area of Detail


Proposed Critical Habitat for the
Central Valley Spring- Run Chinook Salmon
Redding Hydrologic Unit
5508
122°30'0"W
122°0'0"W
D R A F T
Data do not reflect true distribution
40°30'0"N
40°30'0"N
Olney Creek
Churn Creek
550810
Anderson
Cottonwood
550820
Paynes Creek
N
0 2 4 6
Miles
122°30'0"W
122°0'0"W
Cities/Towns
Proposed Critical Habitat
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California

Proposed Critical Habitat for the Central Valley Spring- Run Chinook Salmon

Eastern Tehama Hydrologic Unit 5509



⊙ Cities/Towns

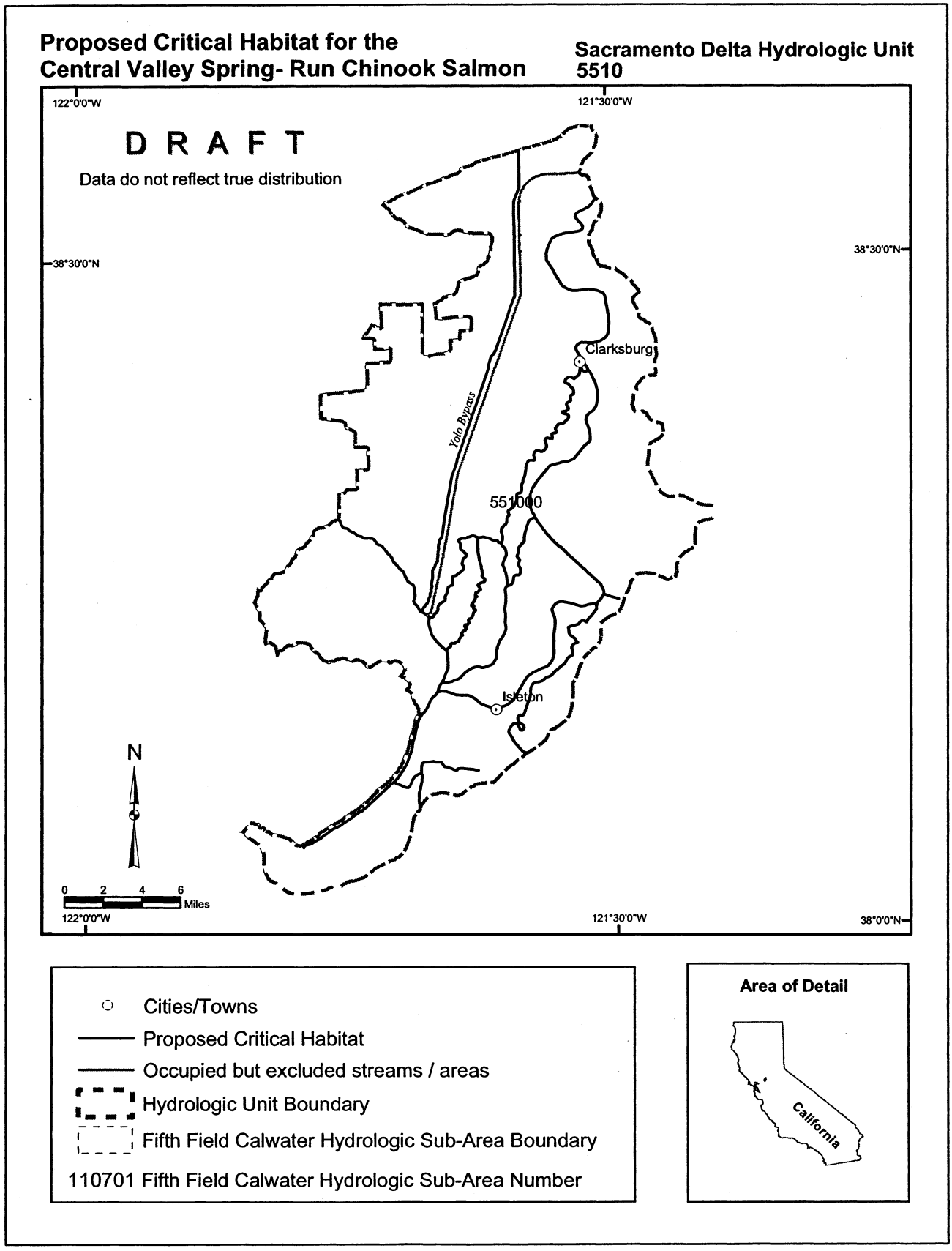
——— Proposed Critical Habitat

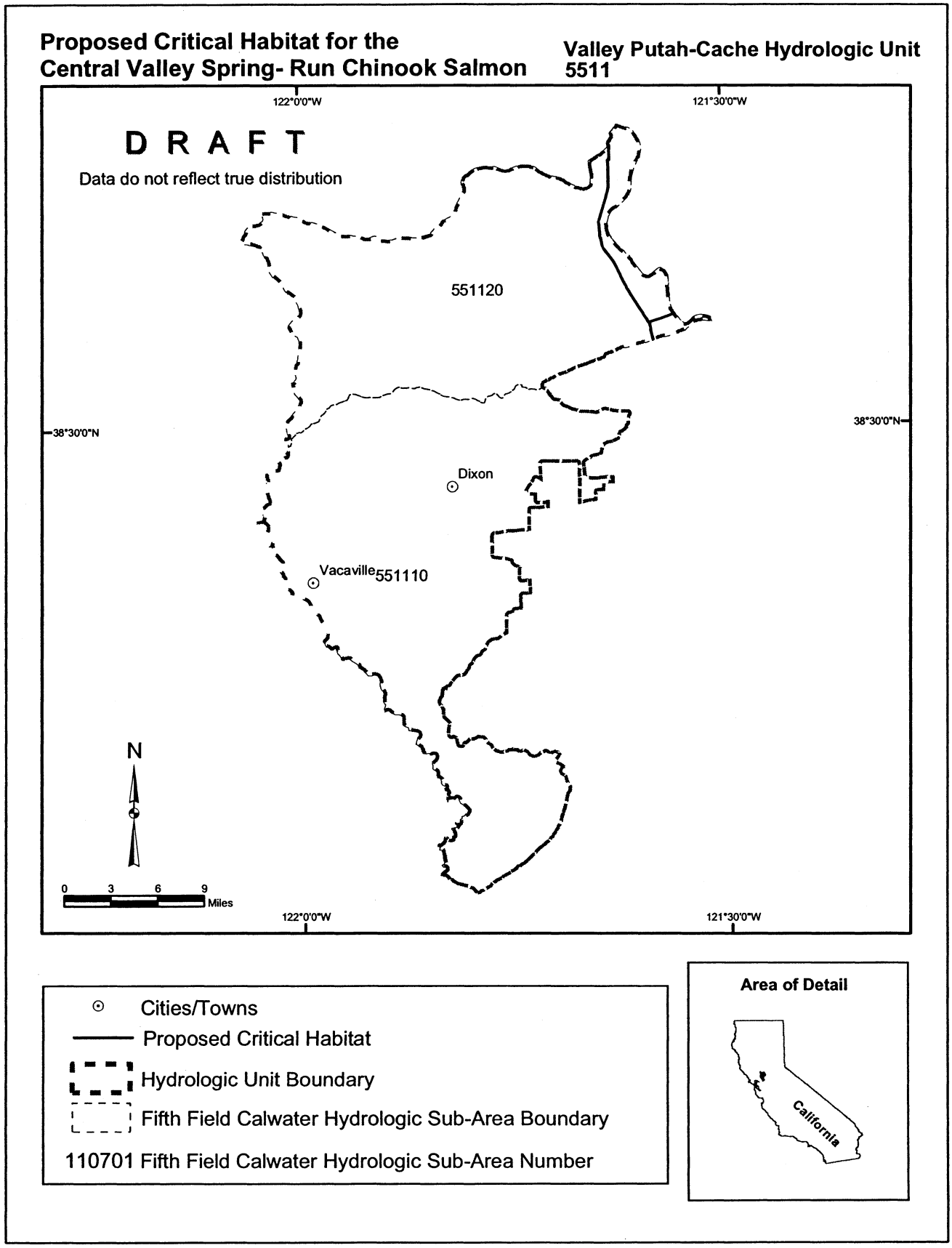
Hydrologic Unit Boundary

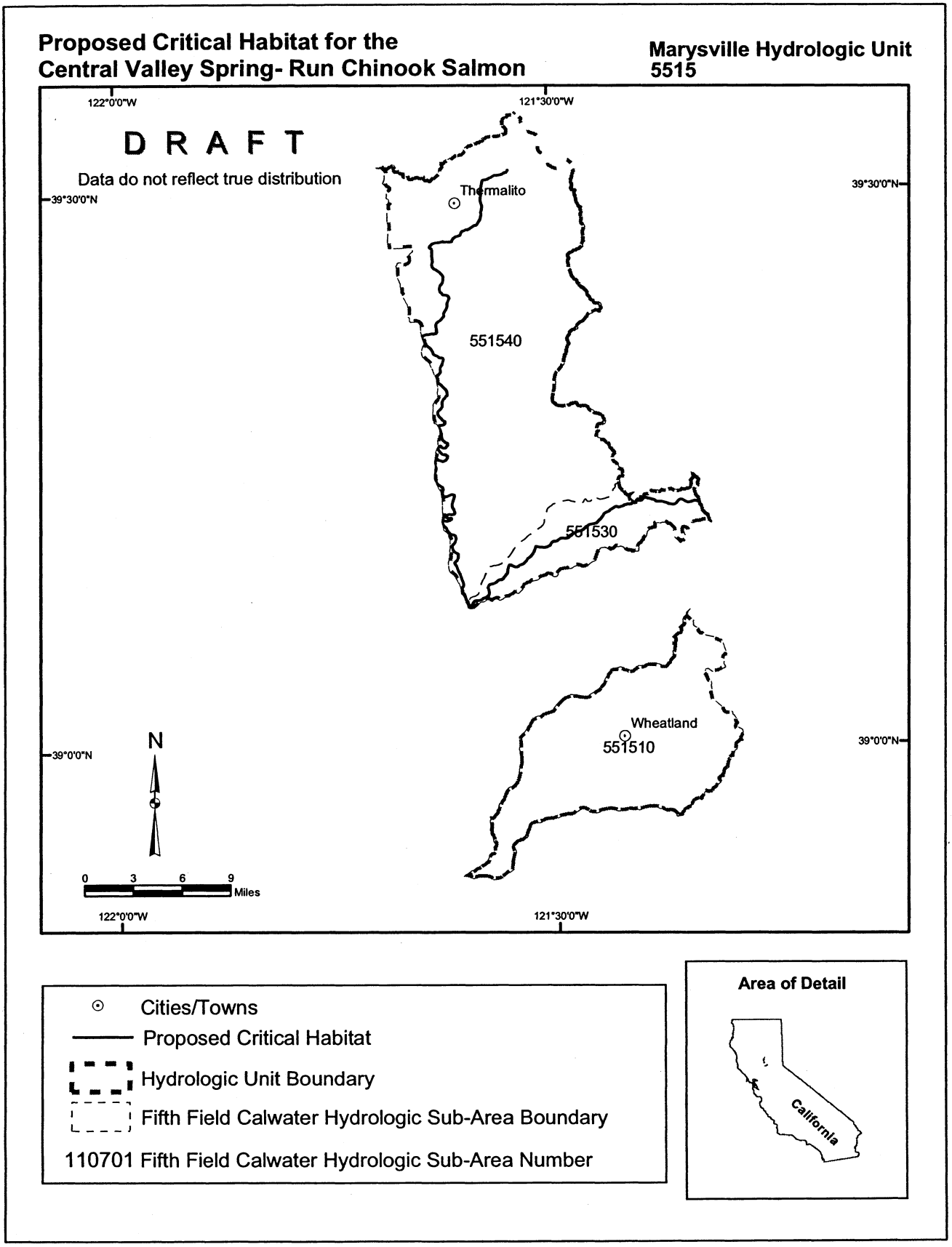
Fifth Field Calwater Hydrologic Sub-Area Boundary

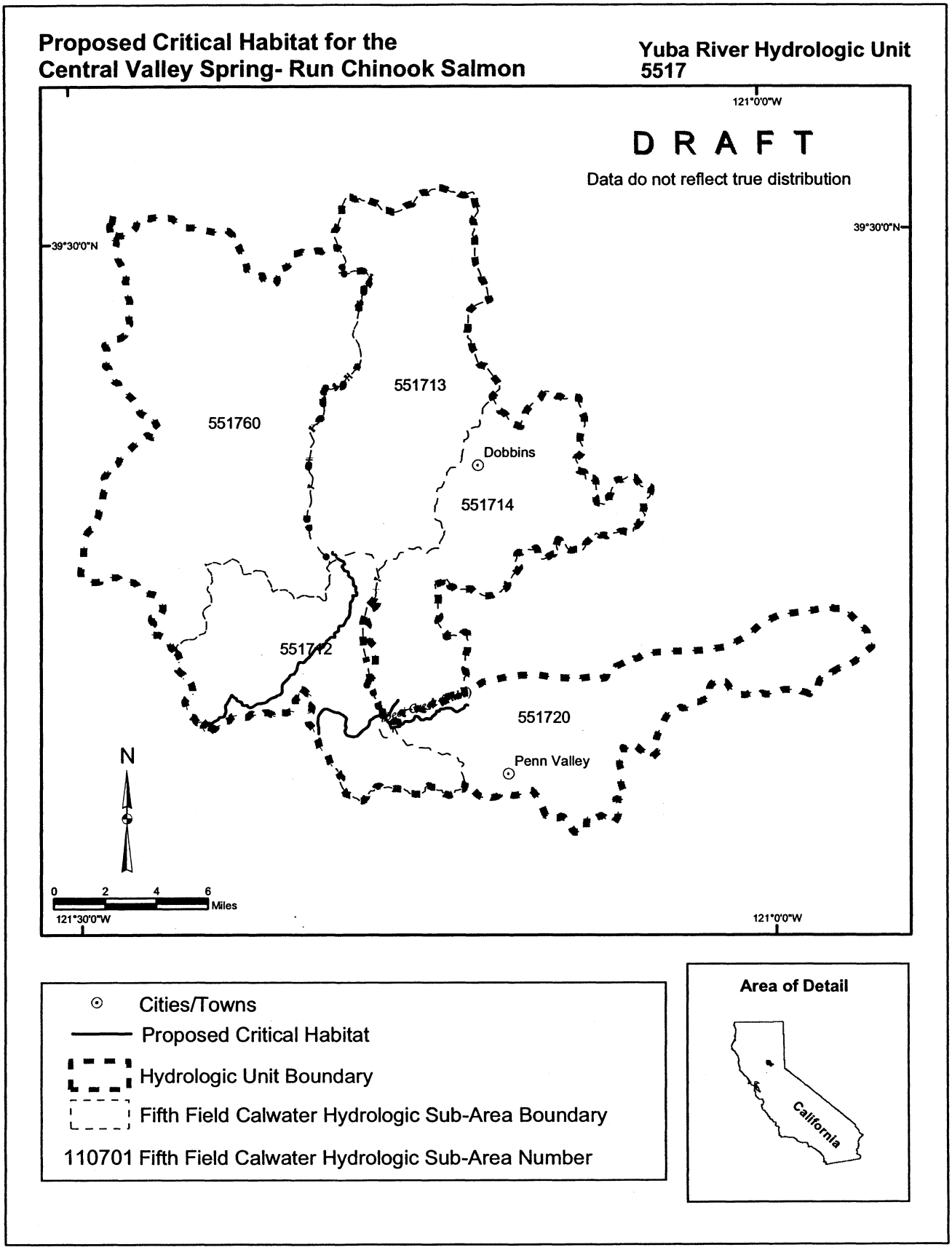
110701 Fifth Field Calwater Hydrologic Sub-Area Number

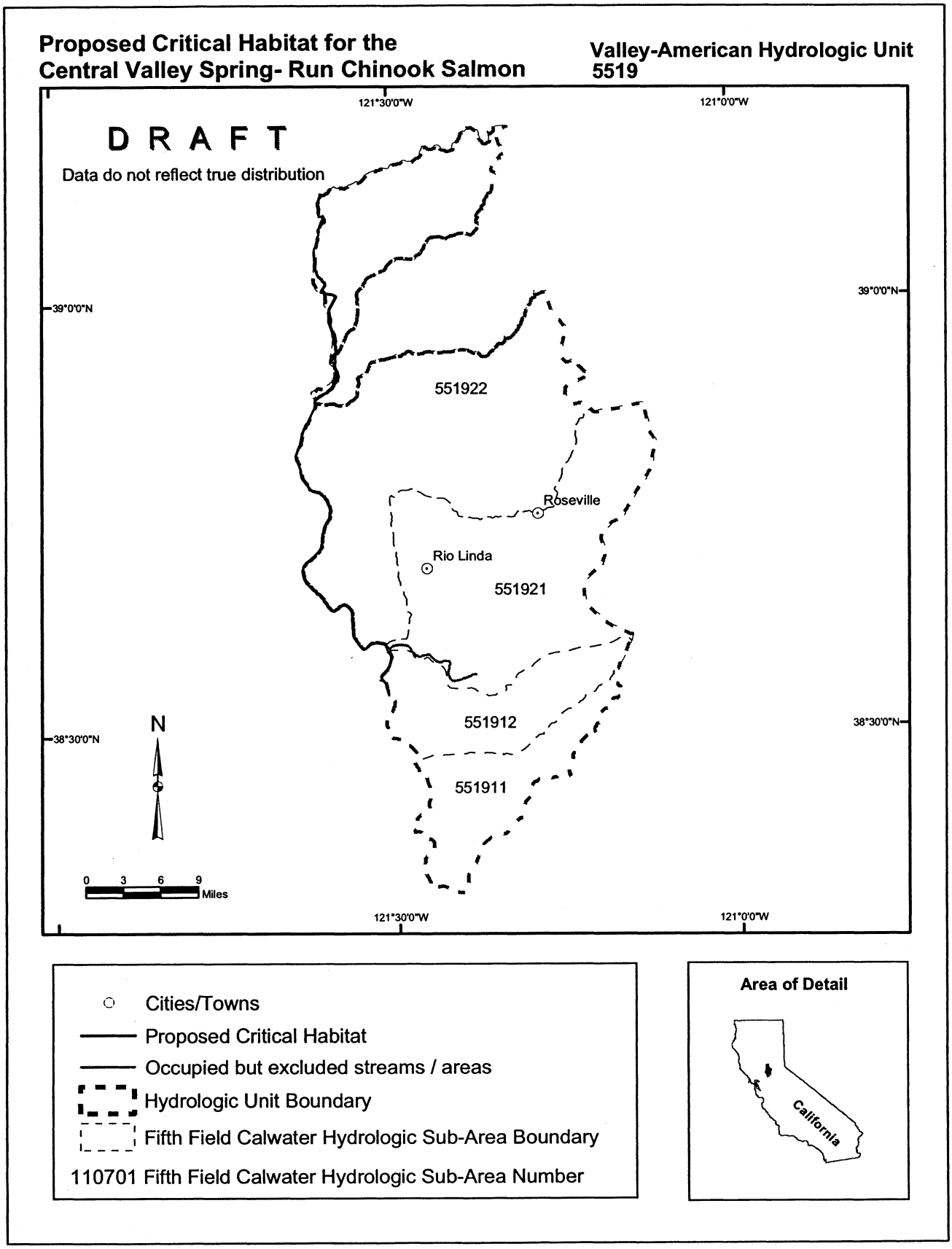
Area of Detail

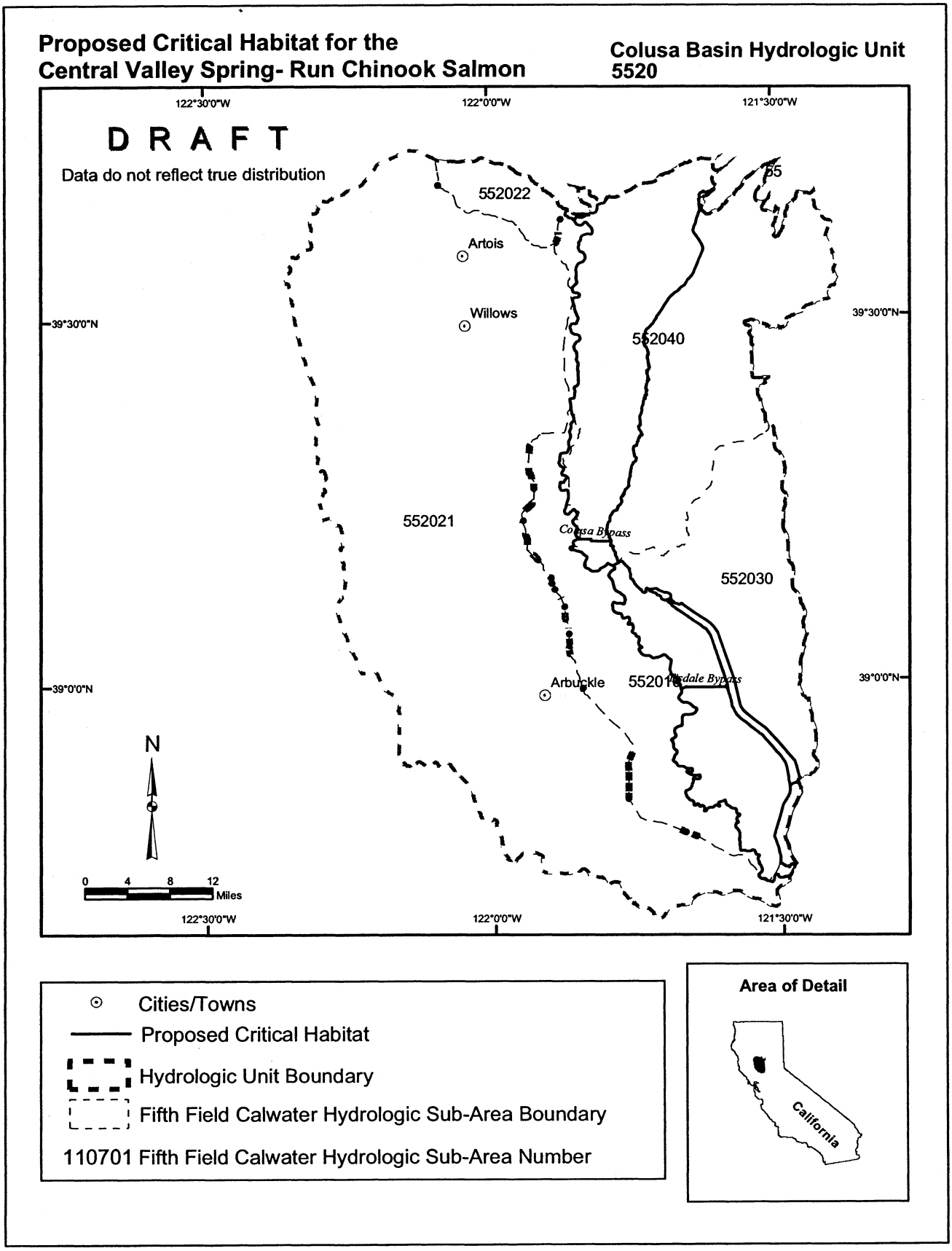

Proposed Critical Habitat for the
Central Valley Spring- Run Chinook Salmon
Sacramento Delta Hydrologic Unit
5510
122°0'0"W
121°30'0"W
D R A F T
Data do not reflect true distribution
38°30'0"N
38°30'0"N
Clarksburg
Yolo Bypass
551000
Isleton
N
0 2 4 6
Miles
122°0'0"W
121°30'0"W
38°0'0"N
Cities/Towns
Proposed Critical Habitat
Occupied but excluded streams / areas
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California

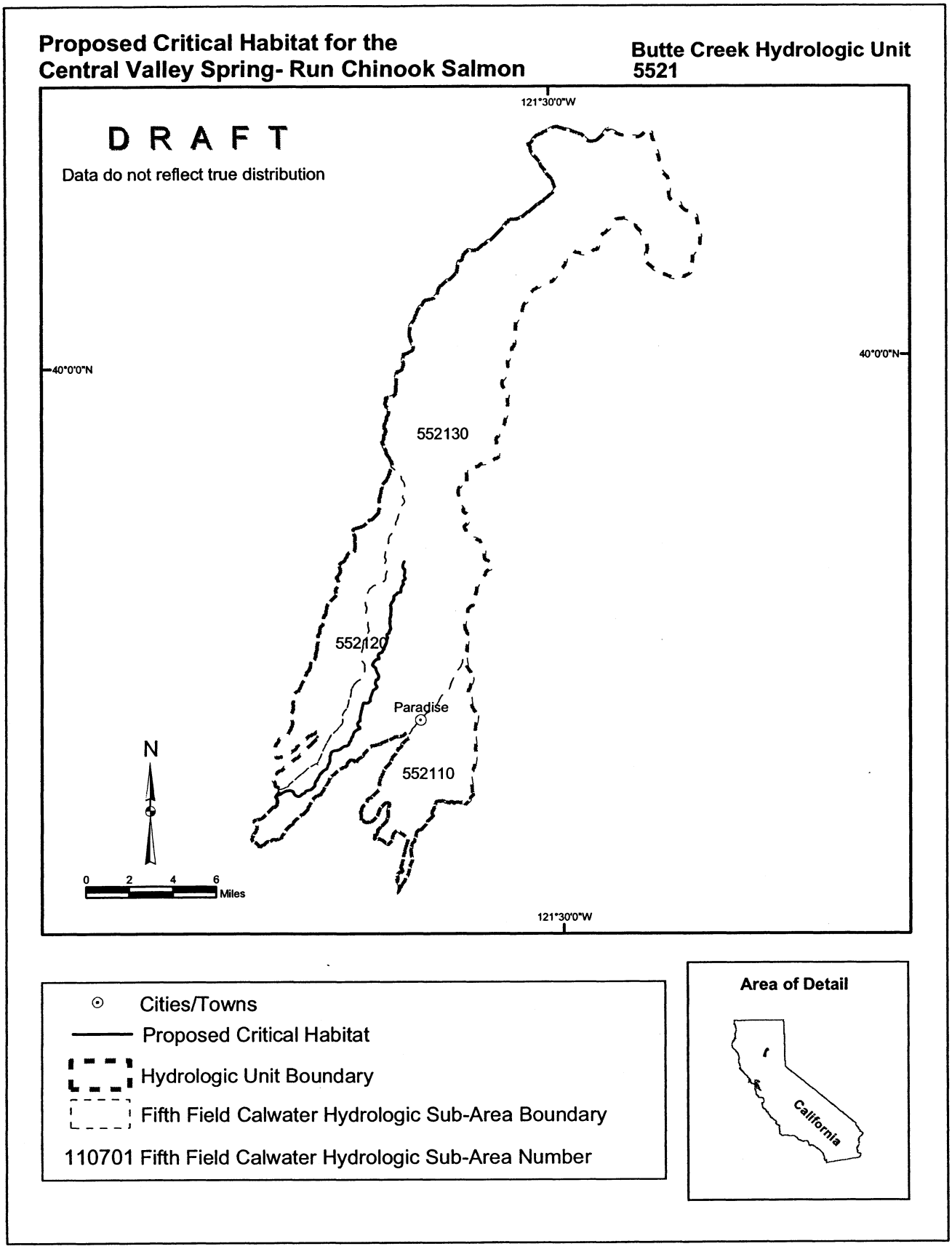

Proposed Critical Habitat for the
Central Valley Spring- Run Chinook Salmon
Valley Putah-Cache Hydrologic Unit
5511
122°0'0"W
121°30'0"W
D R A F T
Data do not reflect true distribution
551120
38°30'0"N
Dixon
Vacaville
551110
N
0 3 6 9
Miles
Cities/Towns
Proposed Critical Habitat
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California

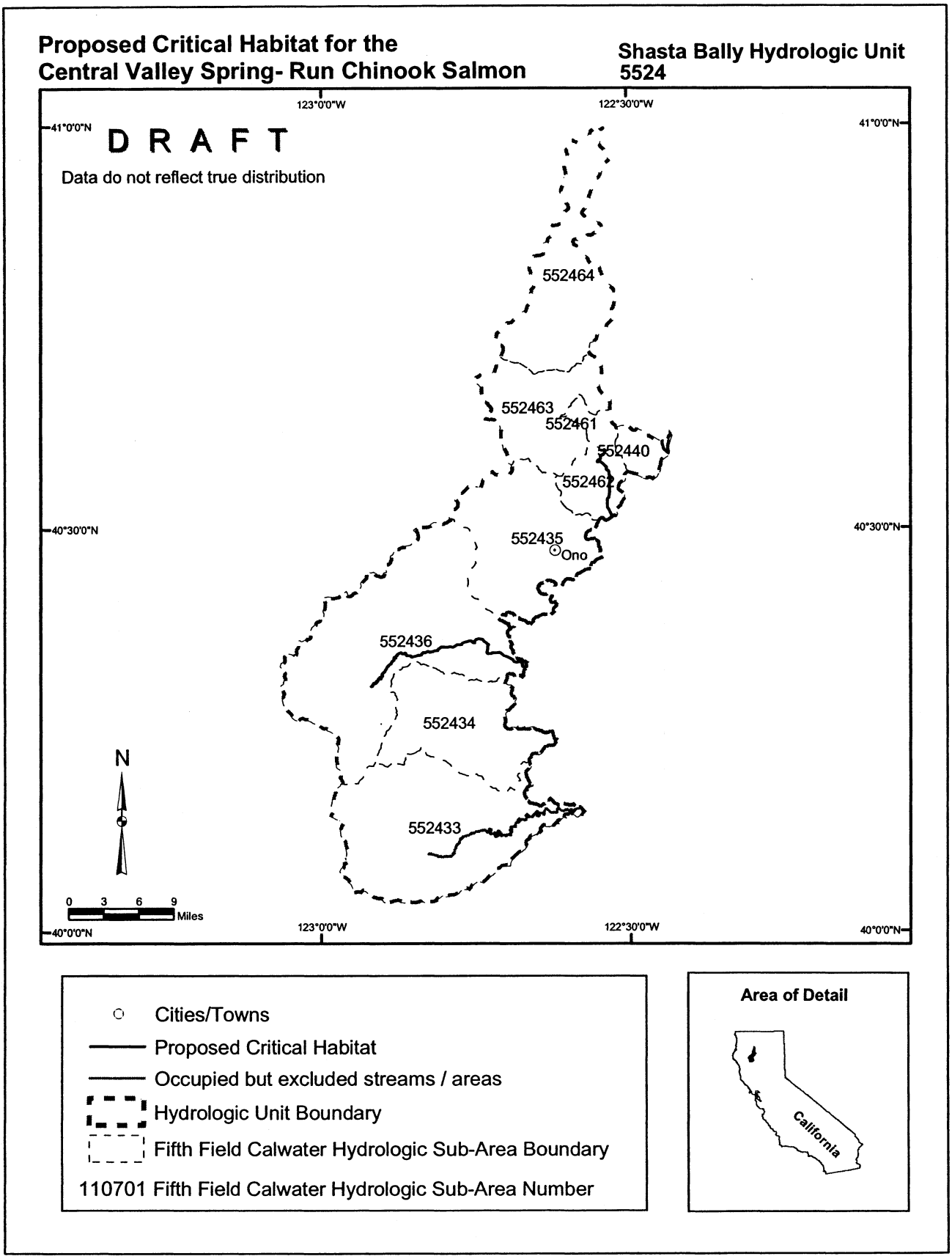

Proposed Critical Habitat for the
Central Valley Spring- Run Chinook Salmon
Marysville Hydrologic Unit
5515
122°0'0"W
121°30'0"W
D R A F T
Data do not reflect true distribution
39°30'0"N
39°0'0"N
Thermalito
551540
551530
Wheatland
551510
N
0 3 6 9
Miles
Cities/Towns
Proposed Critical Habitat
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California


Proposed Critical Habitat for the
Central Valley Spring- Run Chinook Salmon
Yuba River Hydrologic Unit
5517
121°0'0"W
D R A F T
Data do not reflect true distribution
39°30'0"N
39°30'0"N
551713
551760
Dobbins
551714
551712
551720
Penn Valley
N
0 2 4 6
Miles
121°30'0"W
121°0'0"W
Cities/Towns
Proposed Critical Habitat
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California


Proposed Critical Habitat for the Central Valley Spring- Run Chinook Salmon
Valley-American Hydrologic Unit 5519
121°30'0"W
121°0'0"W
D R A F T
Data do not reflect true distribution
39°0'0"N
38°30'0"N
551922
Roseville
Rio Linda
551921
551912
551911
N
0 3 6 9
Miles
Cities/Towns
Proposed Critical Habitat
Occupied but excluded streams / areas
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California


Proposed Critical Habitat for the
Central Valley Spring- Run Chinook Salmon
Colusa Basin Hydrologic Unit
5520
122°30'0"W
122°0'0"W
121°30'0"W
D R A F T
Data do not reflect true distribution
552022
Artois
Willows
39°30'0"N
552040
552021
Colusa Bypass
552030
39°0'0"N
Arbuckle
Yolo Bypass
N
0 4 8 12
Miles
Cities/Towns
Proposed Critical Habitat
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California


Proposed Critical Habitat for the
Central Valley Spring- Run Chinook Salmon
Butte Creek Hydrologic Unit
5521
DRAFT
Data do not reflect true distribution
121°30'0"W
40°0'0"N
552130
552120
Paradise
552110
N
0 2 4 6
Miles
Cities/Towns
Proposed Critical Habitat
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California



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(l) Central Valley O. mykiss (Oncorhynchus mykiss). Critical habitat is proposed to include the areas defined in the following units:

(1) Tehama Hydrologic Unit 5504—*(i) Lower Stony Creek Hydrologic Sub-area 550410.* Outlet(s) = Stony Creek (Lat 39.6760, Long −121.9732) upstream to endpoint(s) in: Stony Creek (39.8199, −122.3391).

(ii) Red Bluff Hydrologic Sub-area 550420. Outlet(s) = Sacramento River (Lat 39.6998, Long −121.9419) upstream to endpoint(s) in: Antelope Creek (40.2023, −122.1272); Big Chico Creek (39.7757, −121.7525); Blue Tent Creek (40.2166, −122.2362); Burch Creek (39.8495, −122.1615); Butler Slough (40.1579, −122.1320); Craig Creek (40.1617, −122.1350); Deer Creek (40.0144, −121.9481); Dibble Creek (40.2002, −122.2421); Dye Creek (40.0910, −122.0719); Elder Creek (40.0438, −122.2133); Lindo Channel (39.7623, −121.7923); McClure Creek (40.0074, −122.1723); Mill Creek (40.0550, −122.0317); Mud Creek (39.7985, −121.8803); New Creek (40.1873, −122.1350); Oat Creek (40.0769, −122.2168); Red Bank Creek (40.1421, −122.2399); Rice Creek (39.8484, −122.1252); Rock Creek (39.8034, −121.9403); Salt Creek (40.1572, −122.1646); Thomes Creek (39.8822, −122.5527); Unnamed Tributary (40.1867, −122.1353); Unnamed Tributary (40.1682, −122.1459); Unnamed Tributary (40.1143, −122.1259); Unnamed Tributary (40.0151, −122.1148); Unnamed Tributary (40.0403, −122.1009); Unnamed Tributary (40.0514, −122.0851); Unnamed Tributary (40.0530, −122.0769).

(2) Whitmore Hydrologic Unit 5507—*(i) Inks Creek Hydrologic Sub-area 550711.* Outlet(s) = Inks Creek (Lat 40.3305, Long −122.1520) upstream to endpoint(s) in: Inks Creek (40.3418, −122.1332).

(ii) Battle Creek Hydrologic Sub-area 550712. Outlet(s) = Battle Creek (Lat 40.4083, Long −122.1102) upstream to endpoint(s) in: Baldwin Creek (40.4369, −121.9885); Battle Creek (40.4228, −121.9975); Brush Creek (40.4913, −121.8664); Millseat Creek (40.4808, −121.8526); Morgan Creek (40.3654, −121.9132); North Fork Battle Creek (40.4877, −121.8185); Panther Creek (40.3897, −121.6106); South Ditch (40.3997, −121.9223); Ripley Creek (40.4099, −121.8683); Soap Creek (40.3904, −121.7569); South Fork Battle Creek (40.3531, −121.6682); Unnamed Tributary (40.3567, −121.8293); Unnamed Tributary (40.4592, −121.8671).

(iii) Ash Creek Hydrologic Sub-area 550721. Outlet(s) = Ash Creek (Lat 40.4401, Long −122.1375) upstream to endpoint(s) in: Ash Creek (40.4628, −122.0066).

(iv) Inwood Hydrologic Sub-area 550722. Outlet(s) = Ash Creek (Lat 40.4628, Long −122.0066); Bear Creek (40.4352, −122.2039) upstream to endpoint(s) in: Ash Creek (40.4859, −121.8993); Bear Creek (40.5368, −121.9560); North Fork Bear Creek (40.5736, −121.8683).

(v) South Cow Creek Hydrologic Sub-area 550731. Outlet(s) = South Cow Creek (Lat 40.5438, Long −122.1318) upstream to endpoint(s) in: South Cow Creek (40.6023, −121.8623).

(vi) Old Cow Creek Hydrologic Sub-area 550732. Outlet(s) = Clover Creek (Lat 40.5788, Long −122.1252); Old Cow Creek (40.5438, −122.1318) upstream to endpoint(s) in: Clover Creek (40.6305, −122.0304); Old Cow Creek (40.5442, −122.1317).

(vii) Little Cow Creek Hydrologic Sub-area 550733. Outlet(s) = Little Cow Creek (Lat 40.6148, −122.2271); Oak Run Creek (40.6171, −122.1225) upstream to endpoint(s) in: Little Cow Creek (40.7114, −122.0850); Oak Run Creek (40.6379, −122.0856).

(3) Redding Hydrologic Unit 5508—*(i) Enterprise Flat Hydrologic Sub-area 550810.* Outlet(s) = Sacramento River (Lat 40.2526, Long −122.1707) upstream to endpoint(s) in: Ash Creek (40.4401, −122.1375); Battle Creek (40.4083, −122.1102); Bear Creek (40.4360, −122.2036); Churn Creek (40.5986, −122.3418); Clear Creek (40.5158, −122.5256); Clover Creek (40.5788, −122.1252); Cottonwood Creek (40.3777, −122.1991); Cow Creek (40.5437, −122.1318); East Fork Stillwater Creek (40.6495, −122.2934); Inks Creek (40.3305, −122.1520); Little Cow Creek (40.6148, −122.2271); Oak Run (40.6171, −122.1225); Old Cow Creek (40.5442, −122.1317); Olney Creek (40.5439, −122.4687); Paynes Creek (40.3024, −122.1012); Stillwater Creek (40.6264, −122.3056); Sulphur Creek (40.6164, −122.4077).

(ii) Lower Cottonwood Hydrologic Sub-area 550820. Outlet(s) = Creek (Lat 40.3777, Long −122.1991) upstream to endpoint(s) in: Cold Fork Cottonwood Creek (40.2060, −122.6608); Cottonwood Creek (40.3943, −122.5254); Middle Fork Cottonwood Creek (40.3314, −122.6663); North Fork Cottonwood Creek (40.4539, −122.5610); South Fork Cottonwood Creek (40.1578, −122.5809).

(4) Eastern Tehama Hydrologic Unit 5509—*(i) Big Chico Creek Hydrologic Sub-area 550914.* Outlet(s) = Big Chico Creek (Lat 39.7757, Long −121.7525) upstream to endpoint(s) in: Big Chico Creek (39.8898, −121.6952).

(ii) Deer Creek Hydrologic Sub-area 550920. Outlet(s) = Deer Creek (Lat 40.0142, Long −121.9476) upstream to endpoint(s) in: Deer Creek (40.2025, −121.5130).

(iii) Upper Mill Creek Hydrologic Sub-area 550942. Outlet(s) = Mill Creek (Lat 40.0550, Long −122.0317) upstream to endpoint(s) in: Mill Creek (40.3766, −121.5098); Rocky Gulch Creek (40.2888, −121.5997).

(iv) Dye Creek Hydrologic Sub-area 550962. Outlet(s) = Dye Creek (Lat 40.0910, Long −122.0719) upstream to endpoint(s) in: Dye Creek (40.0996, −121.9612).

(v) Antelope Creek Hydrologic Sub-area 550963. Outlet(s) = Antelope Creek (Lat 40.2023, Long −122.1272) upstream to endpoint(s) in: Antelope Creek (40.2416, −121.8630); Middle Fork Antelope Creek (40.2673, −121.7744); North Fork Antelope Creek (40.2807, −121.7645); South Fork Antelope Creek (40.2521, −121.7575).

(vi) Paynes Creek Hydrologic Sub-area 550964. Outlet(s) = Paynes Creek (Lat 40.3024, Long −122.1012) upstream to endpoint(s) in: Paynes Creek (40.3357, −121.8300).

(5) Sacramento Delta Hydrologic Unit 5510—*Sacramento Delta Hydrologic Sub-area 551000.* Outlet(s) = Sacramento River (Lat 38.0653, Long −121.8418) upstream to endpoint(s) in: Cache Slough (38.2984, −121.7490); Elk Slough (38.4140, −121.5212); Elkhorn Slough (38.2898, −121.6271); Georgiana Slough (38.2401, −121.5172); Horseshoe Bend (38.1078, −121.7117); Lindsey Slough (38.2592, −121.7580); Miners Slough (38.2864, −121.6051); Prospect Slough (38.2830, −121.6641); Putah Creek (38.5155, −121.5885); Sevenmile Slough (38.1171, −121.6298); Streamboat Slough (38.3052, −121.5737); Sutter Slough (38.3321, −121.5838); Threemile Slough (38.1155, −121.6835); Ulatis Creek (38.2961, −121.7835); Unnamed Tributary (38.2937, −121.7803); Unnamed Tributary (38.2937, −121.7804); Yolo Bypass (38.5800, −121.5838).

(6) Valley−Putah−Cache Hydrologic Unit 5511—*Lower Putah Creek Hydrologic Sub-area 551120.* Outlet(s) = Sacramento Bypass (Lat 38.6057, Long −121.5563); Yolo Bypass (38.5800, −121.5838) upstream to endpoint(s) in: Sacramento Bypass (38.5969, −121.5888); Yolo Bypass (38.7627, −121.6325).

(7) American River Hydrologic Unit 5514—*Auburn Hydrologic Sub-area 551422.* Outlet(s) = Aubourn Ravine (Lat 38.8921, Long −121.2181); Coon Creek (38.9891, −121.2556); Doty Creek (38.9401, −121.2434) upstream to endpoint(s) in: Auburn Ravine (38.8888, −121.1151); Coon Creek (38.9659,

−121.1781); Doty Creek (38.9105, −121.1244).

(8) Marysville Hydrologic Unit 5515—*(i) Lower Yuba River Hydrologic Sub-area 551530.* Outlet(s) = Yuba River (Lat 39.1270, Long −121.5981) upstream to endpoint(s) in: Bear River (39.2203, −121.3314).

(ii) Lower Feather River Hydrologic Sub-area 551540. Outlet(s) = Feather River (Lat 39.1264, Long −121.5984) upstream to endpoint(s) in: Feather River (39.5205, −121.5475).

(9) Yuba River Hydrologic Unit 5517—*(i) Browns Valley Hydrologic Sub-area 551712.* Outlet(s) = Dry Creek (Lat 39.2215, Long −121.4082); Yuba River (39.2203, −121.3314) upstream to endpoint(s) in: Dry Creek (39.3232, Long −121.3155); Yuba River (39.2305, −121.2813).

(ii) Englebright Hydrologic Sub-area 551714. Outlet(s) = Yuba River (Lat 39.2305, Long −121.2813) upstream to endpoint(s) in: Yuba River (39.2399, −121.2689).

(10) Valley−American Hydrologic Unit 5519—*(i) Lower American Hydrologic Sub-area 551921.* Outlet(s) = American River (Lat 38.5971, −121.5088) upstream to endpoint(s) in: American River (38.6373, −121.2202); Dry Creek (38.7554, −121.2676); Miner's Ravine (38.8429, −121.1178); Natomas East Main Canal (38.6646, −121.4770); Secret Ravine(38.8541, −121.1223).

(ii) Pleasant Grove Hydrologic Sub-area 551922. Outlet(s) = Sacramento River (Lat 38.6026, Long −121.5155) upstream to endpoint(s) in: Auburn Ravine (38.8913, −121.2424); Coon Creek (38.9883, −121.2609); Doty Creek (38.9392, −121.2475); Feather River (39.1264, −121.5984).

(11) Colusa Basin Hydrologic Unit 5520—*(i) Sycamore−Sutter Hydrologic Sub-area 552010.* Outlet(s) = Sacramento River (Lat 38.7604, Long −121.6767) upstream to endpoint(s) in: Tisdale Bypass (39.0261, −121.7456).

(ii) Sutter Bypass Hydrologic Sub-area 552030. Outlet(s) = Sacramento River (Lat 38.7851, Long −121.6238) upstream to endpoint(s) in: Butte Creek (39.1990, −121.9286); Butte Slough (39.1987, −121.9285); Nelson Slough (38.8956, −121.6180); Sacramento Slough (38.7844, −121.6544); Sutter Bypass (39.1586, −121.8747).

(iii) Butte Basin Hydrologic Sub-area 552040. Outlet(s) = Butte Creek (Lat 39.1990, Long −121.9286); Sacramento River (39.4141, −122.0087) upstream to endpoint(s) in: Butte Creek (39.1949, −121.9361); Colusa Bypass (39.2276, −121.9402); Little Chico Creek (39.7380, −121.7490); Little Dry Creek (39.6781, −121.6580).

(12) Butte Creek Hydrologic Unit 5521—*(i) Upper Butte Creek Hydrologic Sub-area 552120.* Outlet(s) = Little Chico Creek (Lat 39.7380, Long −121.7490) upstream to endpoint(s) in: Little Chico Creek (39.8680, −121.6660).

(ii) Upper Little Chico Hydrologic Sub-area 552130. Outlet(s) = Butte Creek (Lat 39.7097, Long −121.7503) upstream to endpoint(s) in: Butte Creek (39.8215, −121.6468); Little Butte Creek (39.8159, −121.5819).

(13) Ball Mountain Hydrologic Unit 5523—*Thomes Creek Hydrologic Sub-area 552310.* Outlet(s) = Thomes Creek (39.8822, −122.5527) upstream to endpoint(s) in: Doll Creek (39.8941, −122.9209); Fish Creek (40.0176, −122.8142); Snake Creek (39.9945, −122.7788); Thomes Creek (39.9455, −122.8491); Willow Creek (39.8930, −122.9051).

(14) Shasta Bally Hydrologic Unit 5524—*(i) South Fork Hydrologic Sub-area 552433.* Outlet(s) = Cold Fork Cottonwood Creek (Lat 40.2060, Long −122.6608); South Fork Cottonwood Creek (40.1578, −122.5809) upstream to endpoint(s) in: Cold Fork Cottonwood Creek (40.1881, −122.8690); South Fork Cottonwood Creek (40.1232, −122.8761).

(ii) Ono Hydrologic Sub-area 552435. Outlet(s) = North Fork Cottonwood Creek (Lat 40.4539, Long −122.5610) upstream to endpoint(s) in: North Fork Cottonwood Creek (40.5005, −122.6972).

(iii) Platina Hydrologic Sub-area 552436. Outlet(s) = Middle Fork Cottonwood Creek (Lat 40.3314, Long −122.6663) upstream to endpoint(s) in: Beegum Creek (40.3149, −122.9776): Middle Fork Cottonwood Creek (40.3512, −122.9629).

(iv) Spring Creek Hydrologic Sub-area 552440. Outlet(s) = Sacramento River (Lat 40.5943, Long −122.4343) upstream to endpoint(s) in: Middle Creek (40.5904, −121.04825); Rock Creek (40.6137, −122.5180); Sacramento River (40.6116, −122.4462); Salt Creek (40.5830, −122.4586); Unnamed Tributary (40.5734, −122.4844).

(v) Kanaka Peak Hydrologic Sub-area 552462. Outlet(s) = Clear Creek (Lat 40.5158, Long −122.5256) upstream to endpoint(s) in: Clear Creek (40.5998, 122.5399).

(15) North Valley Floor Hydrologic Unit 5531—*(i) Lower Mokelumne Hydrologic Sub-area 553120.* Outlet(s) = Mokelumne River (Lat 38.2104, Long −121.3804) upstream to endpoint(s) in: Mokelumne River (38.2263, −121.0241); Murphy Creek (38.2491, −121.0119).

(ii) Lower Calaveras Hydrologic Sub-area 553130. Outlet(s) = Calaveras River (Lat 37.9836, Long −121.3110); Mormon Slough (37.9456, −121.2907) upstream to endpoint(s) in: Calaveras River (38.1025, −120.8503); Mormon Slough (38.0532, −121.0102); Stockton Diverting Canal (37.9594, −121.2024).

(16) Upper Calaveras Hydrologic Unit 5533—*New Hogan Reservoir Hydrologic Sub-area 553310.* Outlet(s) = Calaveras River (Lat 38.1025, Long −120.8503) upstream to endpoint(s) in: Calaveras River (38.1502, −120.8143).

(17) Stanislaus River Hydrologic Unit 5534—*Table Mountain Hydrologic Sub-area 553410.* Outlet(s) = Stanislaus River (Lat 37.8355, Long −120.6513) upstream to endpoint(s) in: Stanislaus River (37.8631, −120.6298).

(18) San Joaquin Valley Floor Hydrologic Unit 5535—*(i) Riverbank Hydrologic Sub-area 553530.* Outlet(s) = Stanislaus River (Lat 37.6648, Long −121.2414) upstream to endpoint(s) in: Stanislaus River (37.8355, −120.6513).

(ii) Turlock Hydrologic Sub-area 553550. Outlet(s) = Tuolumne River (Lat 37.6059, Long −121.1739) upstream.

(iii) Montpelier Hydrologic Sub-area 553560. Outlet(s) = Tuolumne River (Lat 37.6401, Long −120.6526) upstream to endpoint(s) in: Tuolumne River (37.6721, −120.4445).

(iv) El Nido-Stevinson Hydrologic Sub-area 553570. Outlet(s) = Merced River (Lat 37.3505, Long −120.9619) upstream to endpoint(s) in: Merced River (37.3620, −120.8507).

(v) Merced Hydrologic Sub-area 553580. Outlet(s) = Merced River (Lat 37.3620, Long −120.8507) upstream to endpoint(s) in: Merced River (37.4982, −120.4612).

(vi) Fahr Creek Hydrologic Sub-area 553590. Outlet(s) = Merced River (Lat 37.4982, Long −120.4612) upstream to endpoint(s) in: Merced River (37.5081, −120.3581).

(19) Delta-Mendota Canal Hydrologic Unit 5541—*(i) Patterson Hydrologic Sub-area 554110.* Outlet(s) = San Joaquin River (Lat 37.6763, Long −121.2653) upstream to endpoint(s) in: San Joaquin River (37.3491, −120.9759).

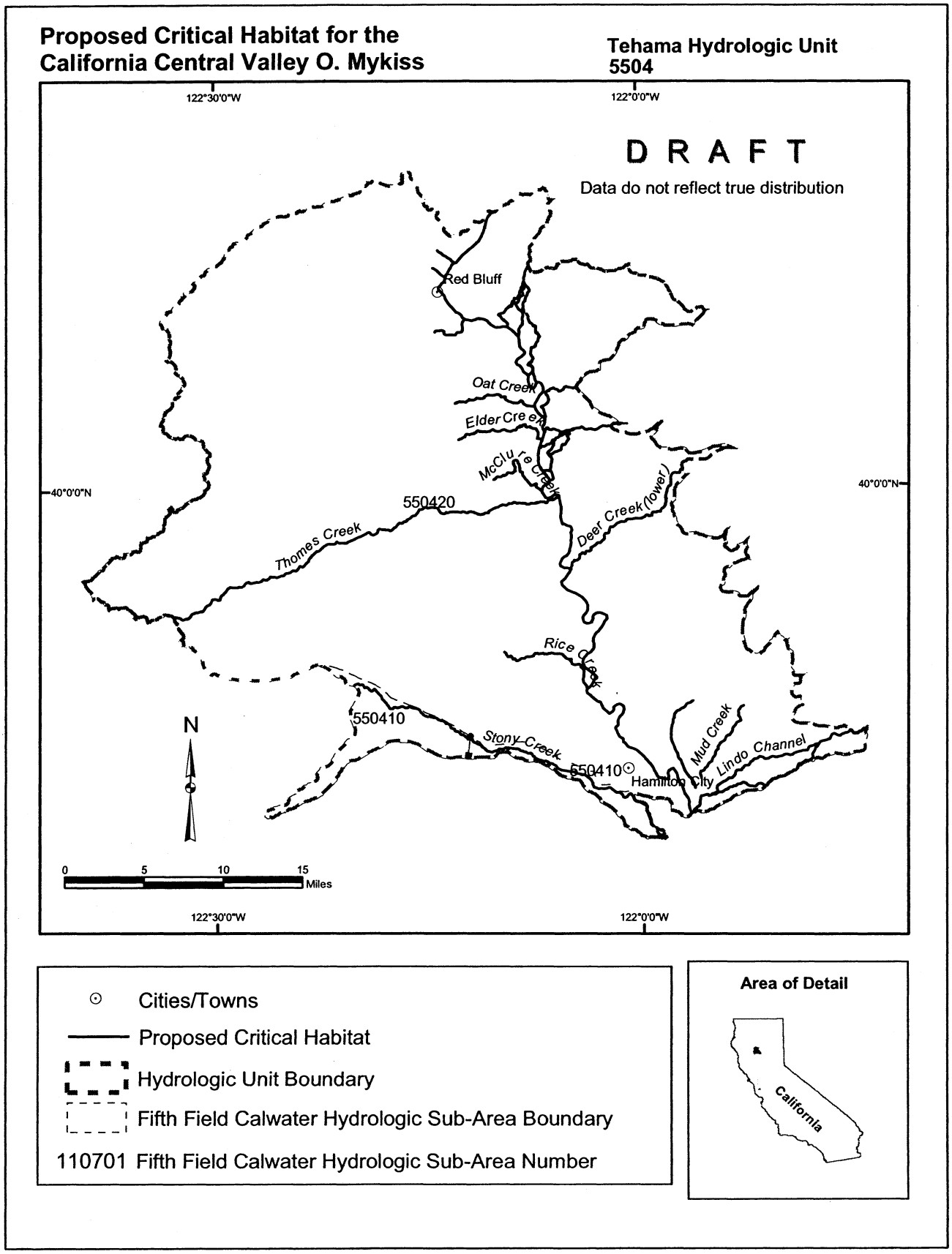
(ii) Los Banos Hydrologic Sub-area 554120. Outlet(s) = Merced River (Lat 37.3490, Long −120.9756) upstream to endpoint(s) in: Merced River (37.3505, −120.9619).

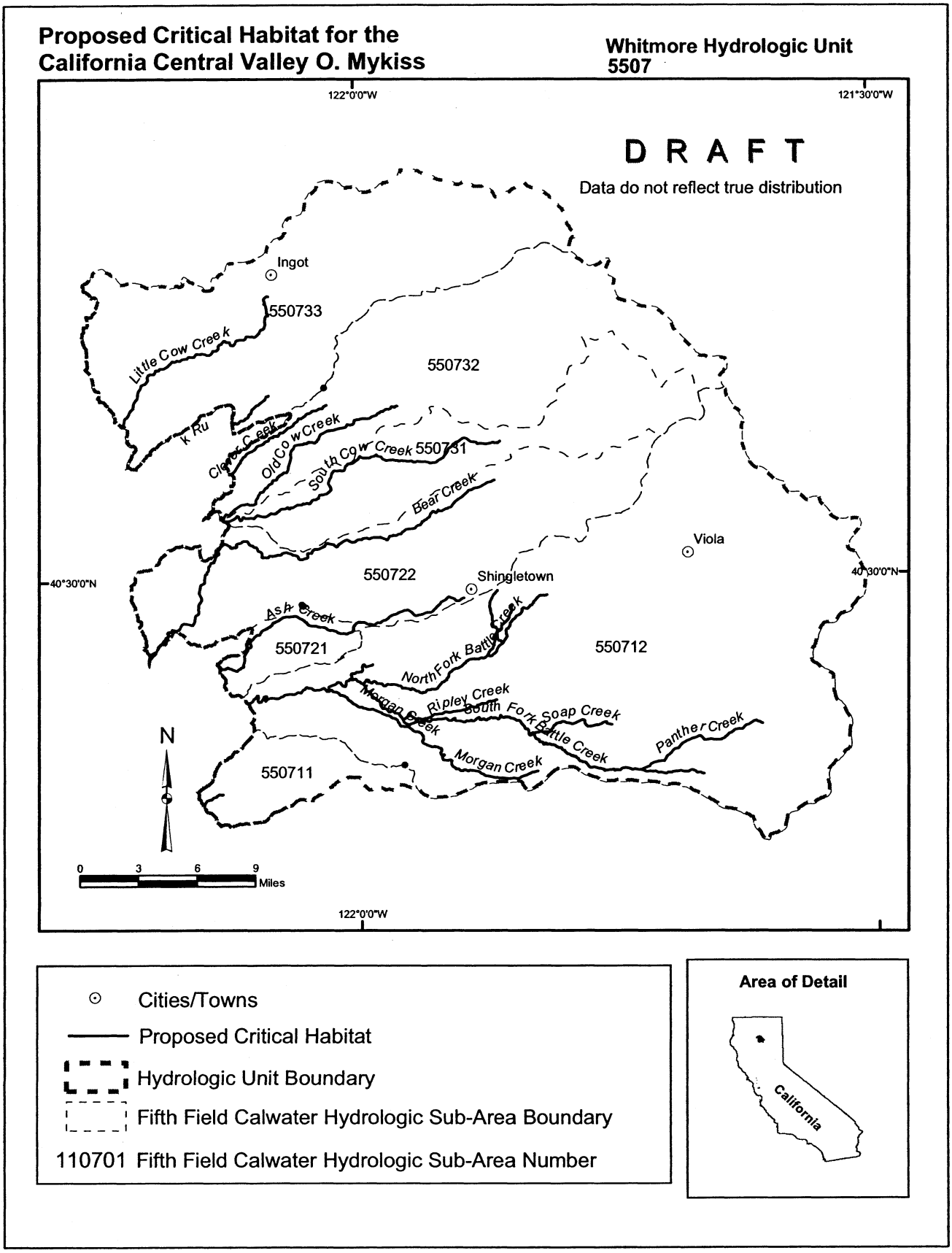
(20) San Joaquin Delta Hydrologic Unit 5544—*San Joaquin Delta Hydrologic Sub-area 554400.* Outlet(s) = San Joaquin River (Lat 38.0246, Long −121.7471) upstream to endpoint(s) in: Big Break (38.0160, −121.6849); Bishop Cut (38.0870, −121.4158); Calaveras River (37.9836, −121.3110); Cosumnes

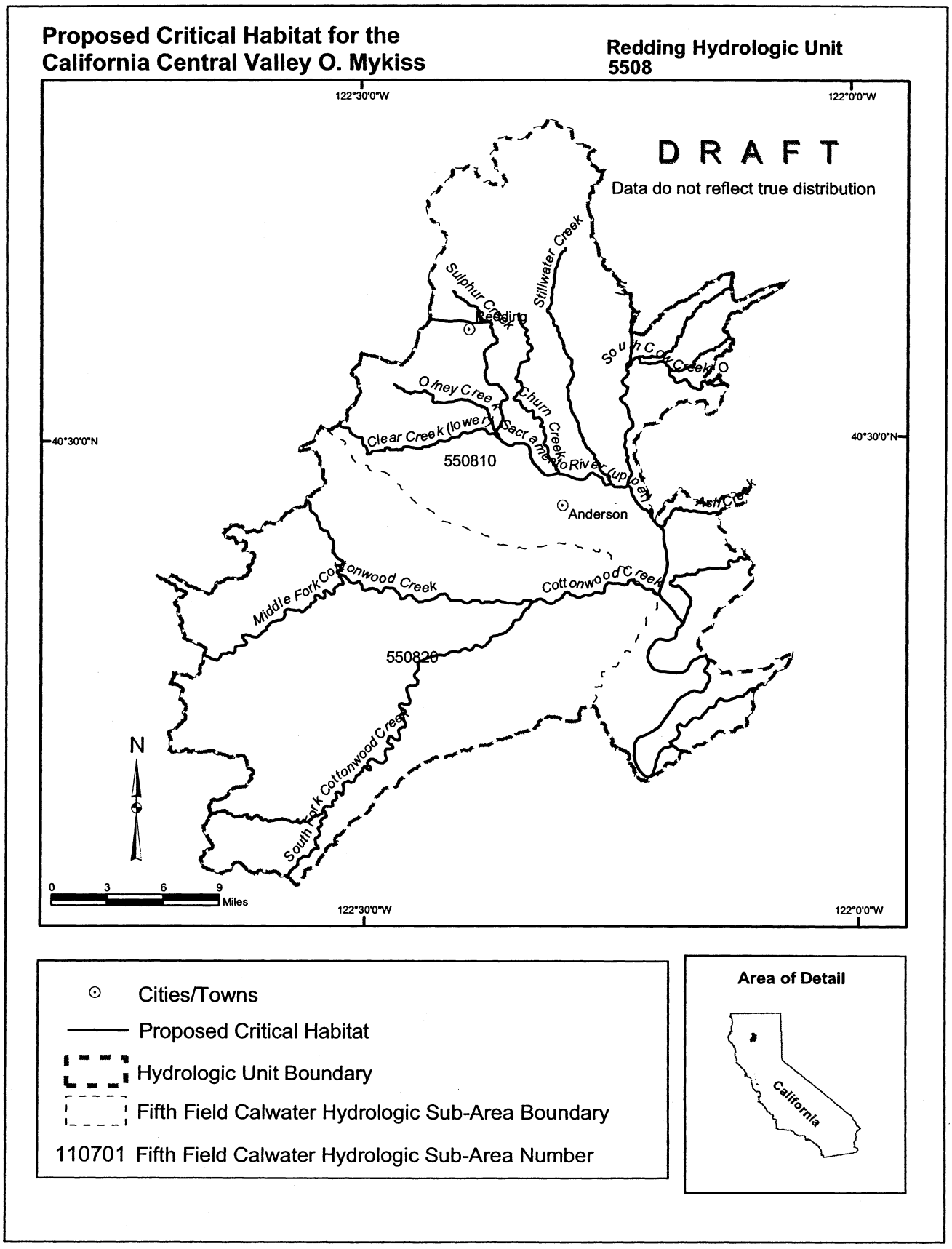
River (38.2538, −121.4074); Disappointment Slough (38.0439, −121.4201); Dutch Slough (38.0088, −121.6281); Empire Cut (37.9714, −121.4762); False River (38.0479, −121.6232); Frank's Tract (38.0220, −121.5997); Frank's Tract (38.0300, −121.5830); Holland Cut (37.9939, −121.5757); Honker Cut (38.0680, −121.4589); Kellog Creek (37.9158, −121.6051); Latham Slough (37.9716, −121.5122); Middle River (37.8216, −121.3747); Mokelumne River (38.2104, −121.3804); Mormon Slough (37.9456, −121.2907); Mosher Creek (38.0327, −121.3650); North Mokelumne River (38.2274, −121.4918); Old River (37.8086, −121.3274); Orwood Slough (37.9409, −121.5332); Paradise Cut (37.7605, −121.3085); Pixley Slough (38.0443, −121.3868); Potato Slough (38.0440, −121.4997); Rock Slough (37.9754, −121.5795); Sand Mound Slough (38.0220, −121.5997); Stockton Deep Water Channel (37.9957, −121.4201); Turner Cut (37.9972, −121.4434); Unnamed Tributary (38.1165, −121.4976); Victoria Canal (37.8891, −121.4895); White Slough (38.0818, −121.4156); Woodward Canal (37.9037, −121.4973).

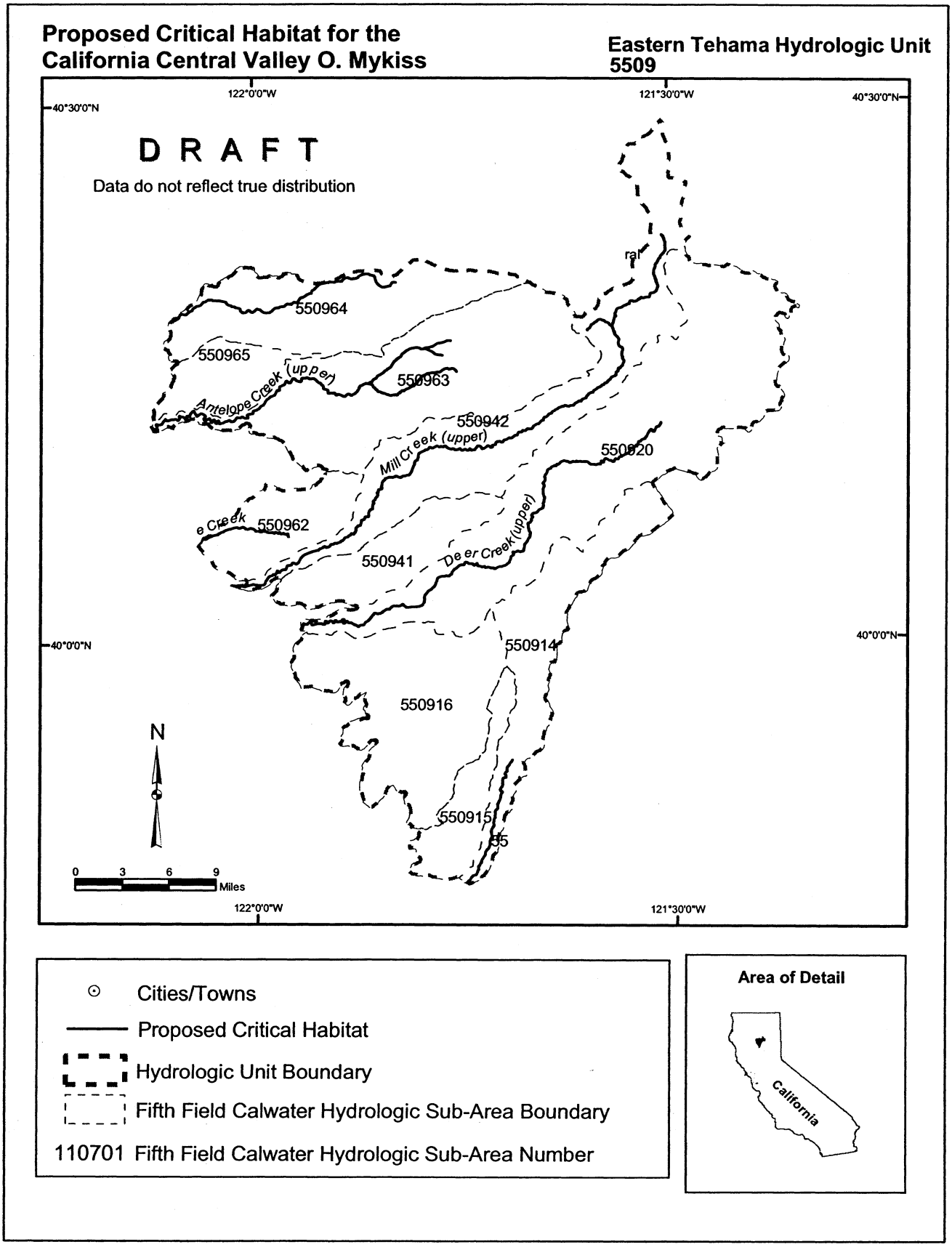
(21) Maps of the proposed critical habitat for the Central Valley *O. mykiss* ESU follow:

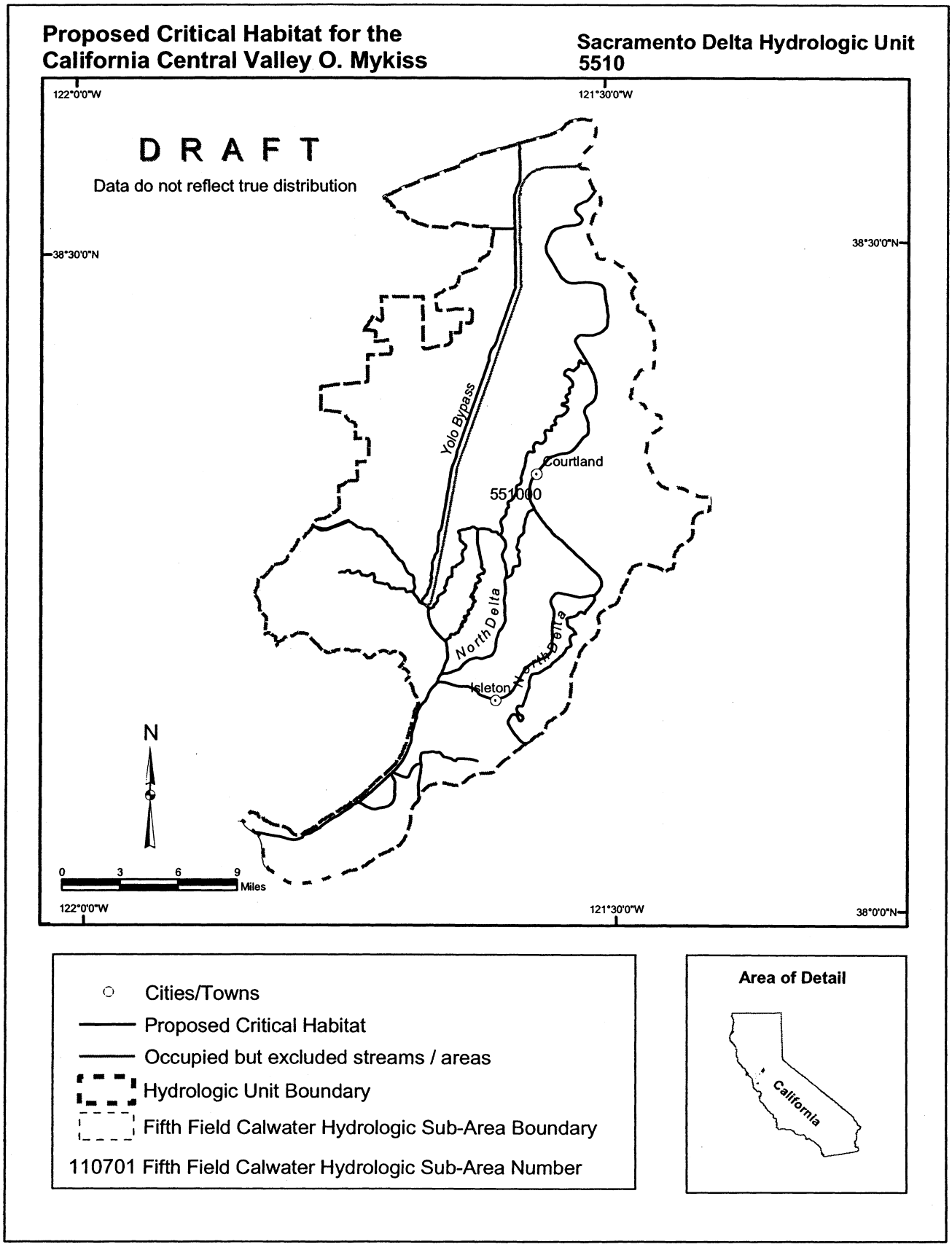
BILLING CODE 3510–22–P


Proposed Critical Habitat for the California Central Valley O. Mykiss
Tehama Hydrologic Unit 5504
122°30'0"W
122°0'0"W
DRAFT
Data do not reflect true distribution
Red Bluff
Oat Creek
Elder Creek
McClure Creek
40°0'0"N
550420
Thomes Creek
Deer Creek (lower)
Rice Creek
550410
Stony Creek
Mud Creek
Lindo Channel
Hamilton City
N
0 5 10 15
Miles
Cities/Towns
Proposed Critical Habitat
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California


Proposed Critical Habitat for the California Central Valley O. Mykiss
Whitmore Hydrologic Unit 5507
122°0'0"W
121°30'0"W
DRAFT
Data do not reflect true distribution
Ingot
550733
Little Cow Creek
550732
Old Cow Creek
South Cow Creek
550731
Bear Creek
Viola
40°30'0"N
550722
Shingletown
Ash Creek
550721
550712
North Fork Battle Creek
Ripley Creek
South Fork Soap Creek
Morgan Creek
Panther Creek
Battle Creek
550711
N
0 3 6 9
Miles
122°0'0"W
Cities/Towns
Proposed Critical Habitat
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California

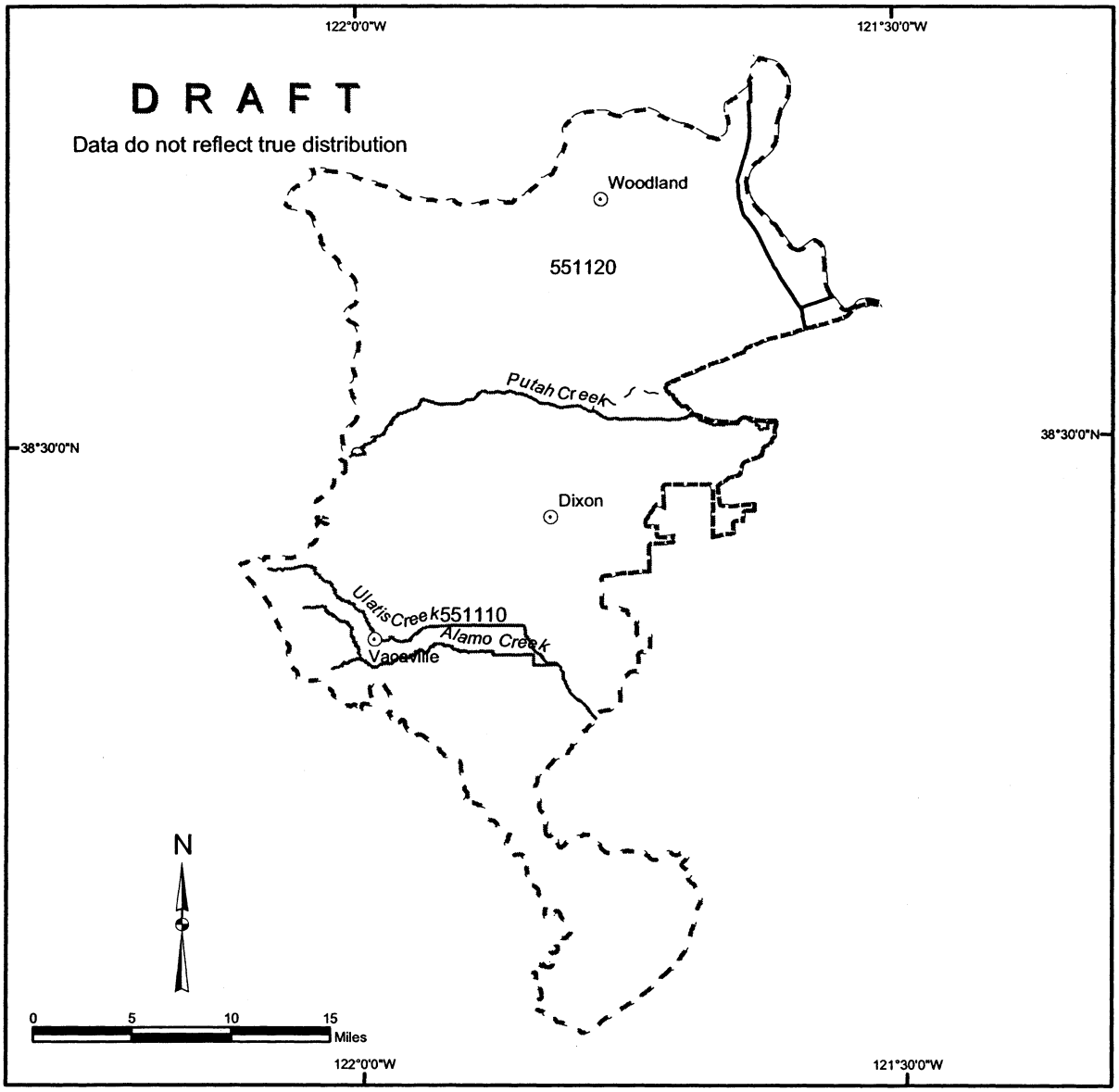

Proposed Critical Habitat for the California Central Valley O. Mykiss
Redding Hydrologic Unit 5508
122°30'0"W
122°0'0"W
DRAFT
Data do not reflect true distribution
Stillwater Creek
Sulphur Creek
Redding
South Cow Creek
Olney Creek
Churn Creek
Clear Creek (lower)
Sacramento River (upper)
40°30'0"N
550810
Anderson
Ash Creek
Middle Fork Cottonwood Creek
Cottonwood Creek
550820
South Fork Cottonwood Creek
N
0 3 6 9
Miles
Cities/Towns
Proposed Critical Habitat
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California


Proposed Critical Habitat for the
California Central Valley O. Mykiss
Eastern Tehama Hydrologic Unit
5509
122°0'0"W
121°30'0"W
40°30'0"N
40°0'0"N
DRAFT
Data do not reflect true distribution
550964
550965
Antelope Creek (upper)
550963
550942
Mill Creek (upper)
550920
550962
550941
Deer Creek (upper)
550914
550916
550915
N
0 3 6 9
Miles
Cities/Towns
Proposed Critical Habitat
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California


Proposed Critical Habitat for the California Central Valley O. Mykiss
Sacramento Delta Hydrologic Unit 5510
122°0'0"W
121°30'0"W
D R A F T
Data do not reflect true distribution
38°30'0"N
38°0'0"N
Yolo Bypass
Courtland
551000
North Delta
Isleton
N
0 3 6 9
Miles
Cities/Towns
Proposed Critical Habitat
Occupied but excluded streams / areas
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California

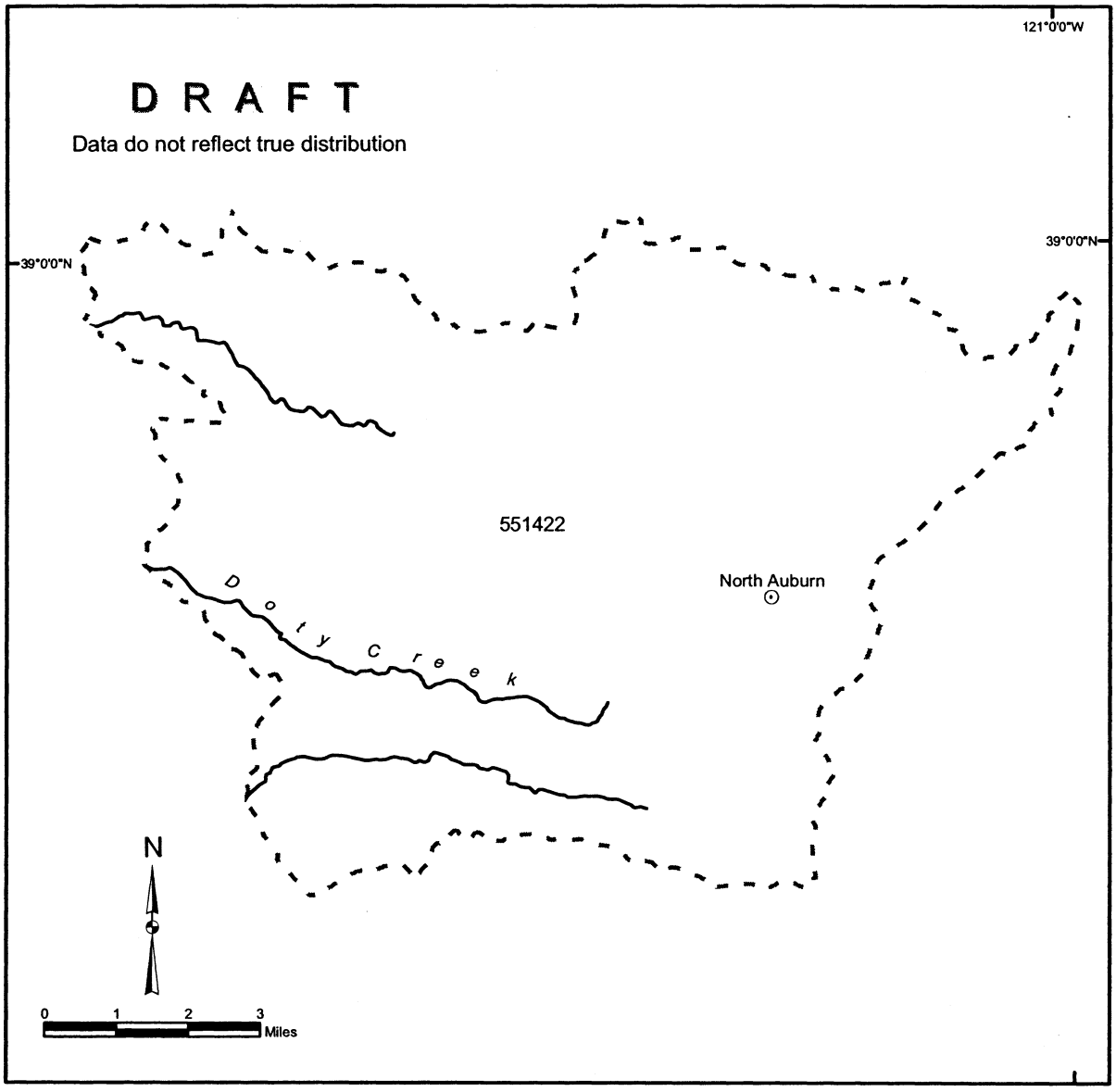
Proposed Critical Habitat for the California Central Valley O. Mykiss

Valley Putah-Cache Hydrologic Unit 5511



Proposed Critical Habitat for the California Central Valley O. Mykiss

American River Hydrologic Unit 5514



⊙ Cities/Towns

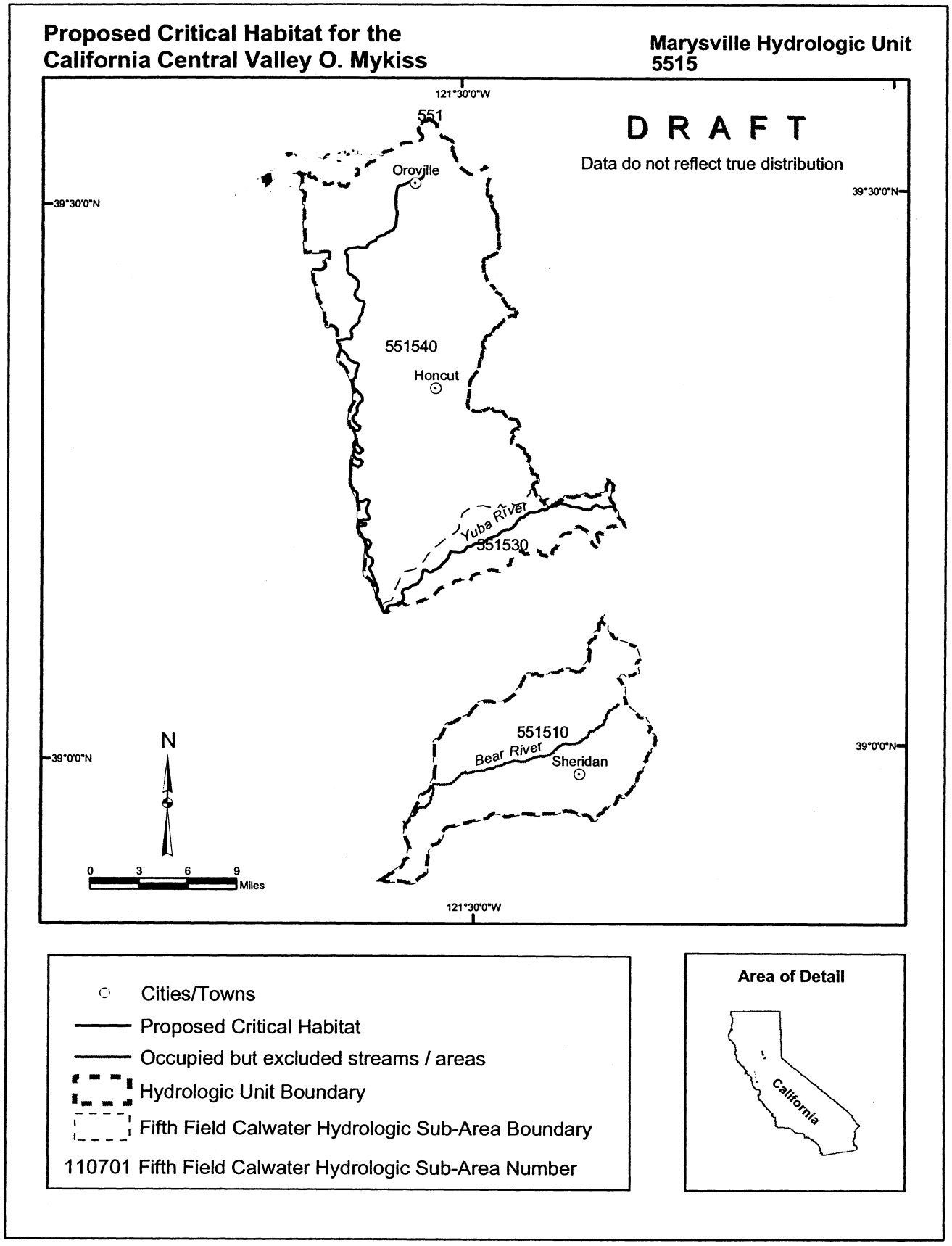
Proposed Critical Habitat

Hydrologic Unit Boundary

Fifth Field Calwater Hydrologic Sub-Area Boundary

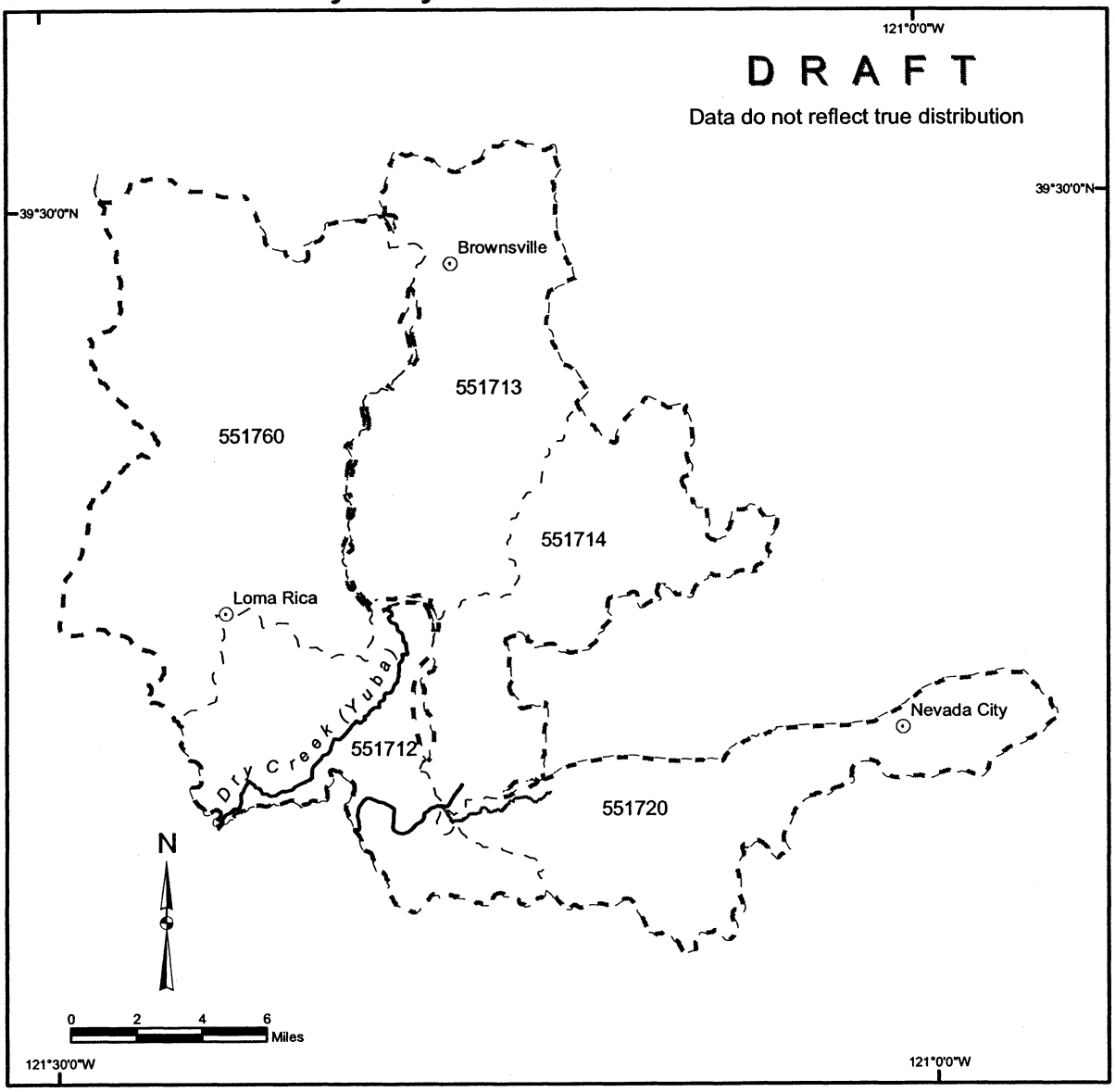
110701 Fifth Field Calwater Hydrologic Sub-Area Number

Area of Detail


Proposed Critical Habitat for the
California Central Valley O. Mykiss
Marysville Hydrologic Unit
5515
121°30'0"W
551
DRAFT
Data do not reflect true distribution
Oroville
39°30'0"N
551540
Honcut
Yuba River
551530
551510
Bear River
Sheridan
39°0'0"N
N
0 3 6 9
Miles
Cities/Towns
Proposed Critical Habitat
Occupied but excluded streams / areas
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California

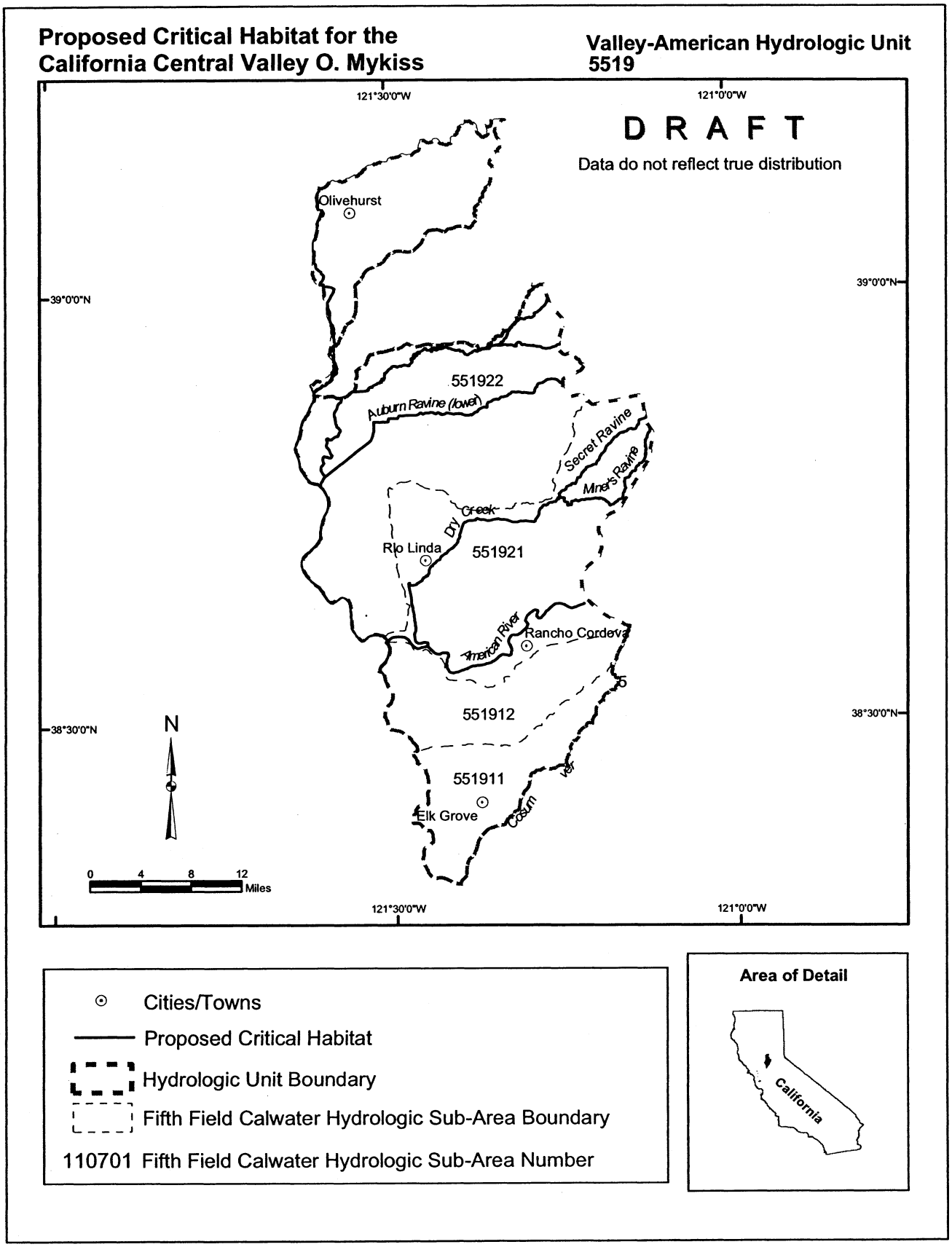
Proposed Critical Habitat for the California Central Valley O. Mykiss

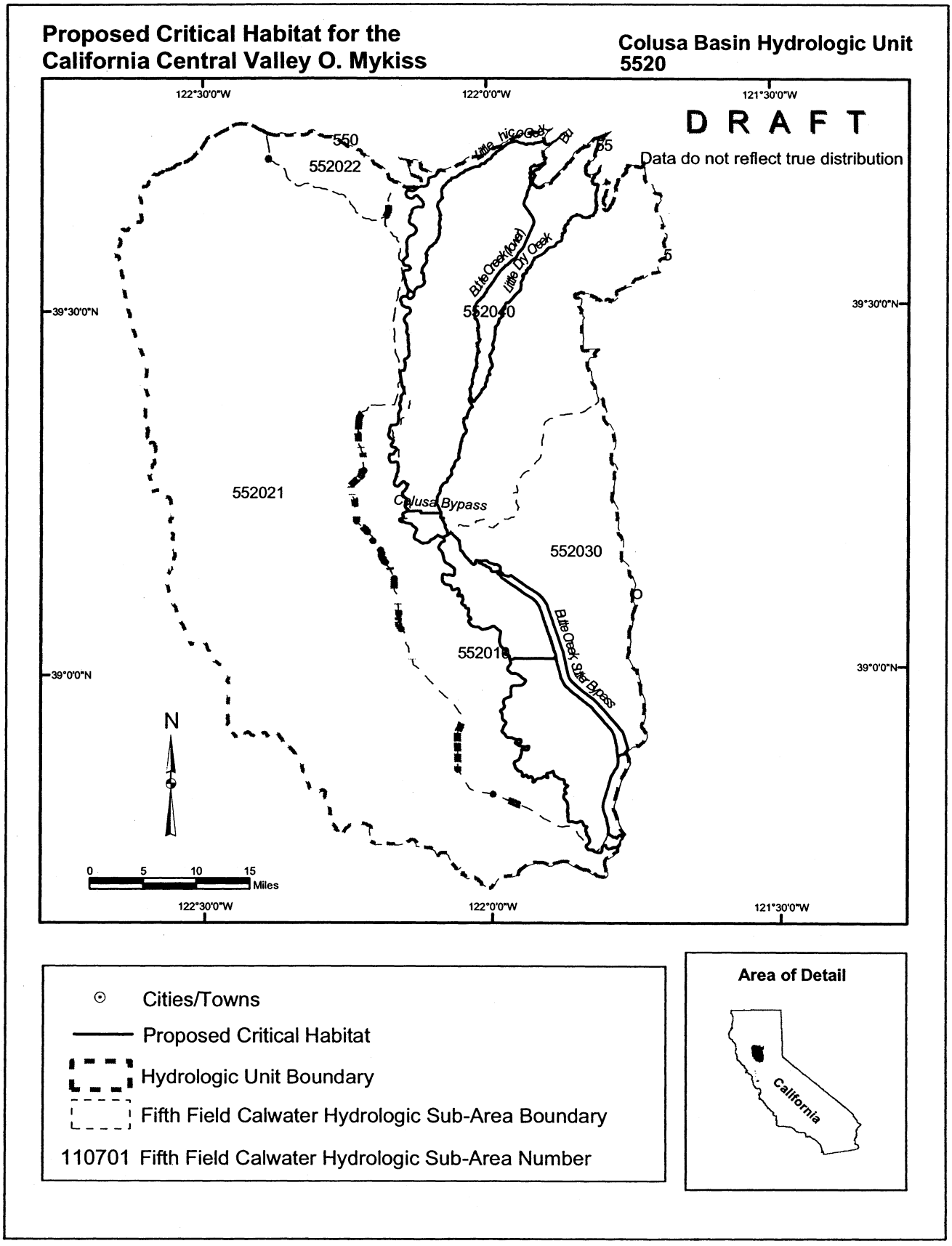
Yuba River Hydrologic Unit 5517

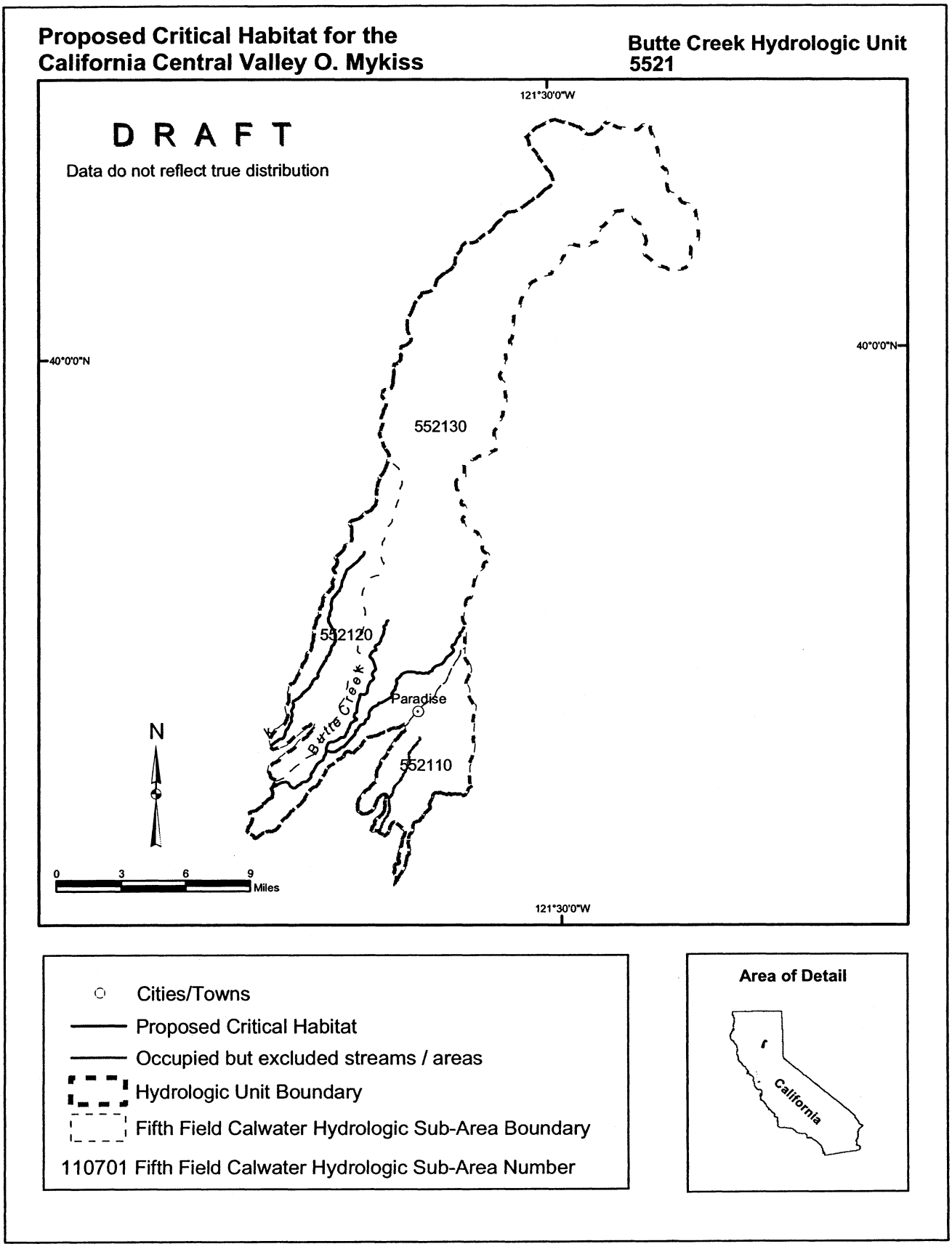


Cities/Towns
Proposed Critical Habitat
Occupied but excluded streams / areas
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number

Area of Detail

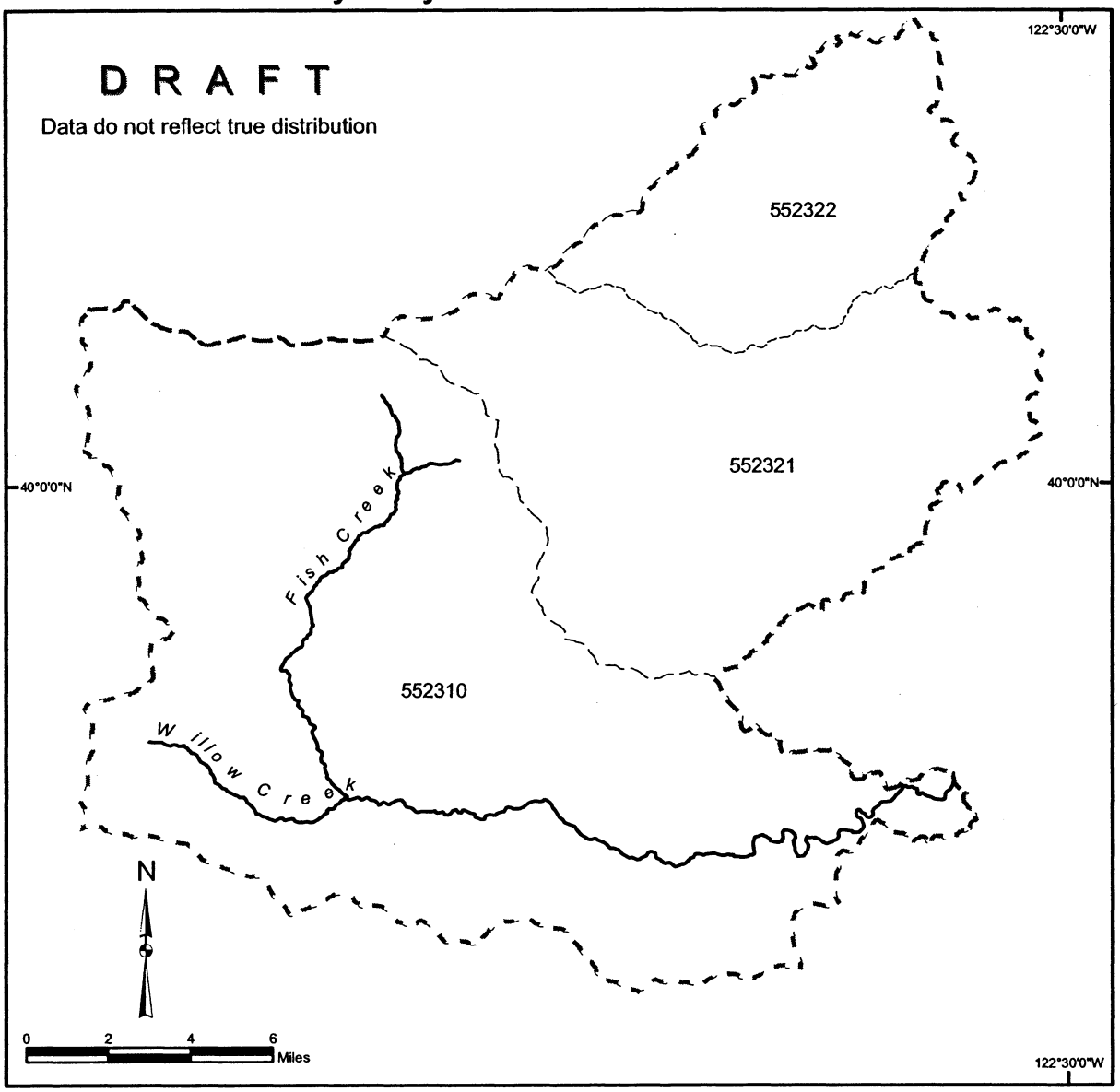

Proposed Critical Habitat for the California Central Valley O. Mykiss
Valley-American Hydrologic Unit 5519
121°30'0"W
121°0'0"W
DRAFT
Data do not reflect true distribution
Olivehurst
39°0'0"N
551922
Auburn Ravine (lower)
Secret Ravine
Miners Ravine
Dry Creek
Rio Linda
551921
American River
Rancho Cordova
38°30'0"N
551912
551911
Elk Grove
Cosumnes River
N
0 4 8 12
Miles
Cities/Towns
Proposed Critical Habitat
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California


Proposed Critical Habitat for the California Central Valley O. Mykiss
Colusa Basin Hydrologic Unit 5520
DRAFT
Data do not reflect true distribution
122°30'0"W
122°0'0"W
121°30'0"W
39°30'0"N
39°0'0"N
550
552022
552021
552040
552030
552010
Little Chico Creek
Butte Creek (lower)
Little Dry Creek
Colusa Bypass
Butte Creek Side Bypass
N
0 5 10 15
Miles
Cities/Towns
Proposed Critical Habitat
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California


Proposed Critical Habitat for the California Central Valley O. Mykiss
Butte Creek Hydrologic Unit 5521
121°30'0"W
DRAFT
Data do not reflect true distribution
40°0'0"N
552130
552120
Butte Creek
Paradise
552110
N
0 3 6 9
Miles
Cities/Towns
Proposed Critical Habitat
Occupied but excluded streams / areas
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California

Proposed Critical Habitat for the California Central Valley O. Mykiss

Ball Mountain Hydrologic Unit 5523



Cities/Towns

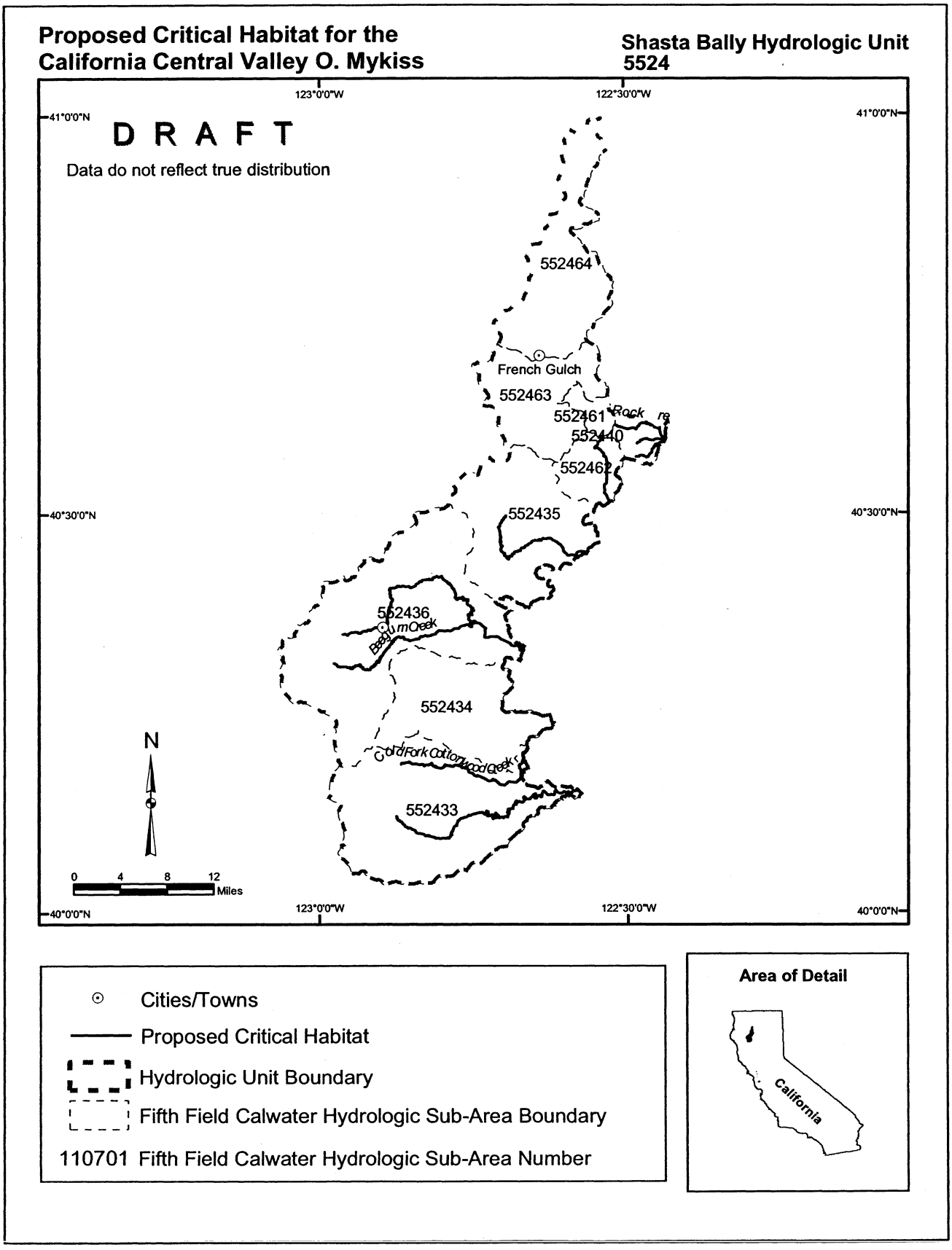
Proposed Critical Habitat

Hydrologic Unit Boundary

Fifth Field Calwater Hydrologic Sub-Area Boundary

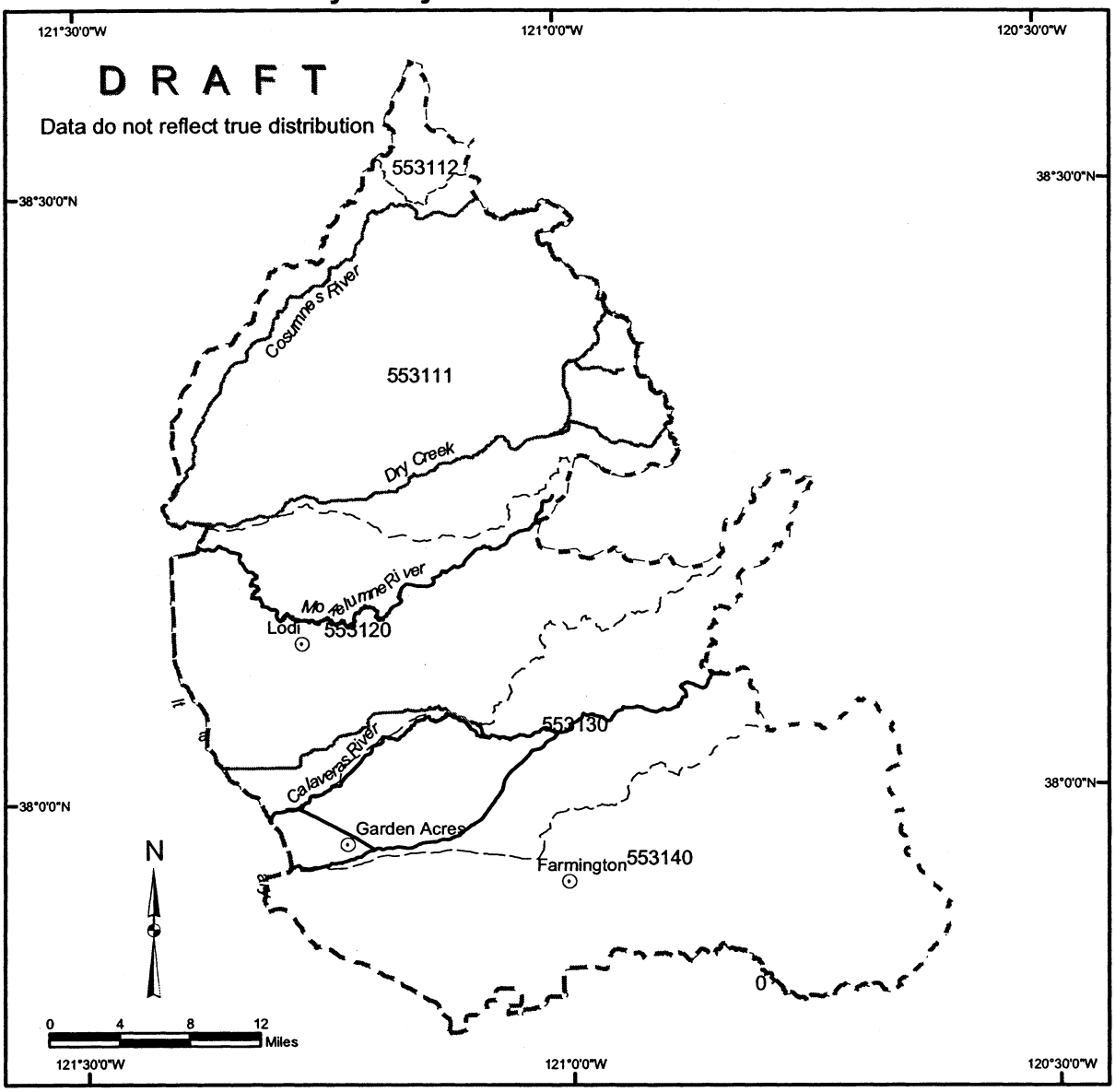
110701 Fifth Field Calwater Hydrologic Sub-Area Number

Area of Detail


Proposed Critical Habitat for the California Central Valley O. Mykiss
Shasta Bally Hydrologic Unit 5524
123°0'0"W
122°30'0"W
41°0'0"N
40°30'0"N
40°0'0"N
DRAFT
Data do not reflect true distribution
552464
French Gulch
552463
552461
552440
552462
552435
552436
552434
552433
N
0 4 8 12
Miles
Cities/Towns
Proposed Critical Habitat
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California

Proposed Critical Habitat for the California Central Valley O. Mykiss

North Valley Floor Hydrologic Unit 5531

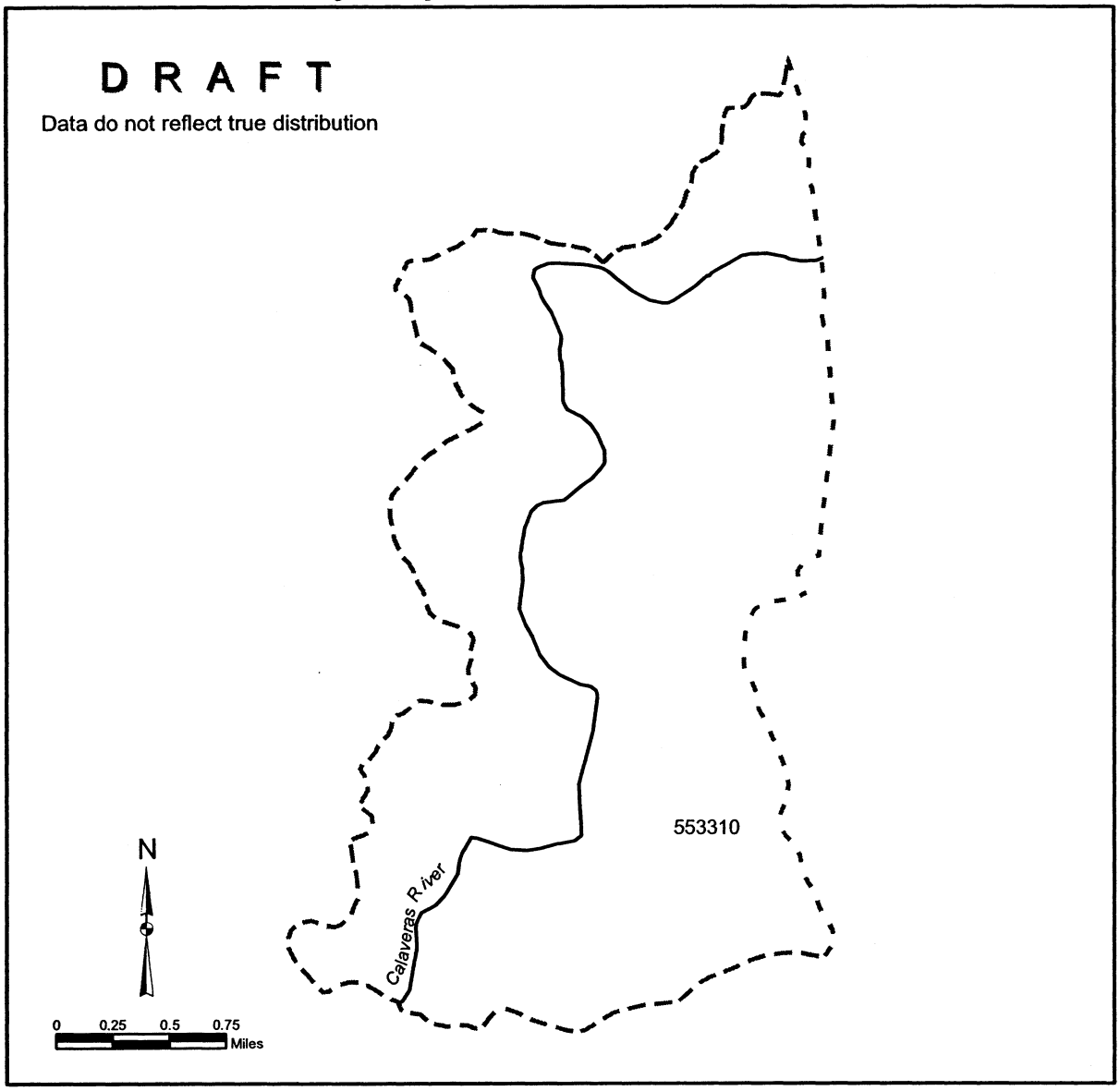


- Cities/Towns
- Proposed Critical Habitat
- Occupied but excluded streams / areas
- Hydrologic Unit Boundary
- Fifth Field Calwater Hydrologic Sub-Area Boundary
- 110701 Fifth Field Calwater Hydrologic Sub-Area Number

Area of Detail

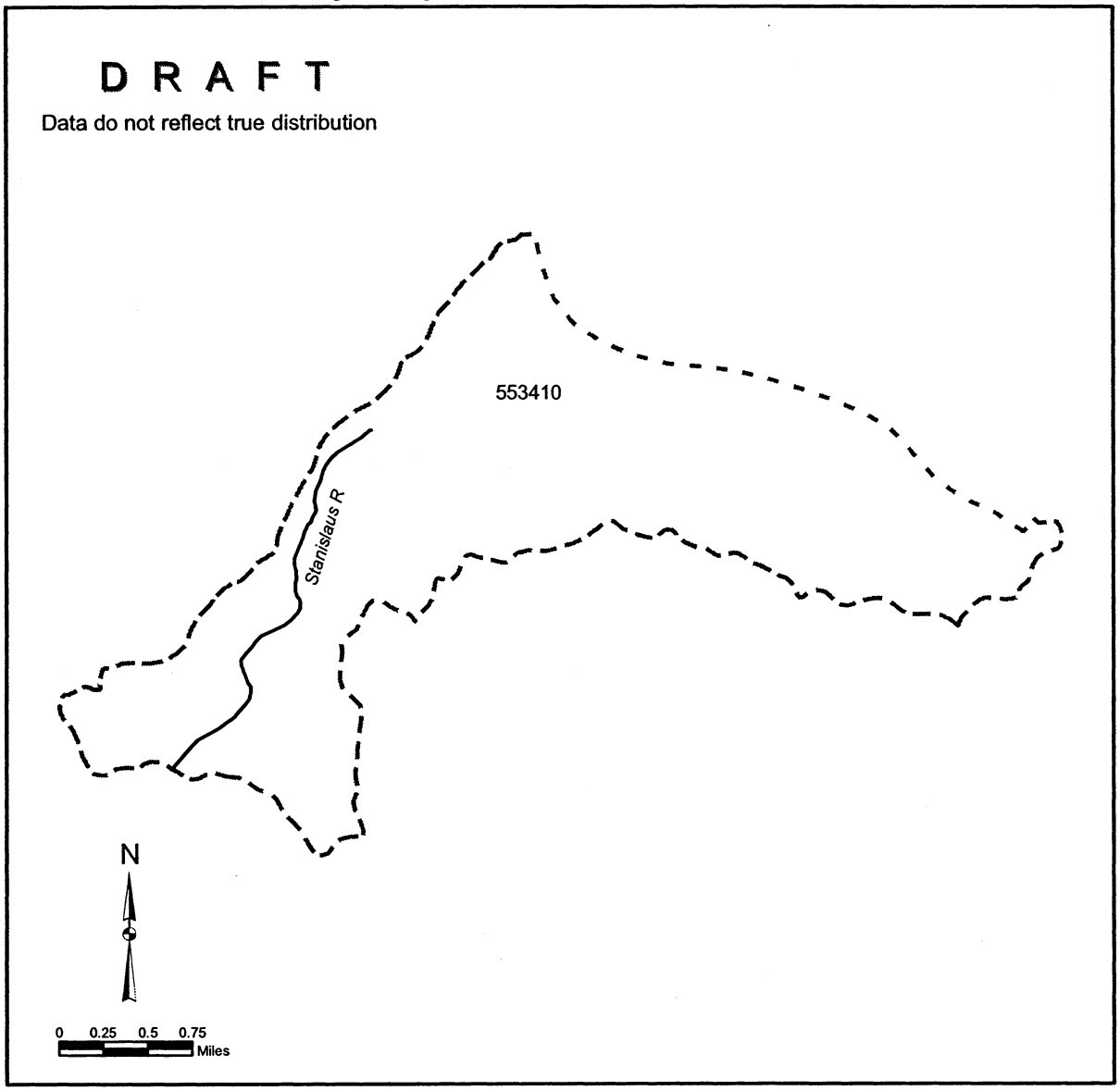
Proposed Critical Habitat for the California Central Valley O. Mykiss

Upper Calaveras Hydrologic Unit 5533



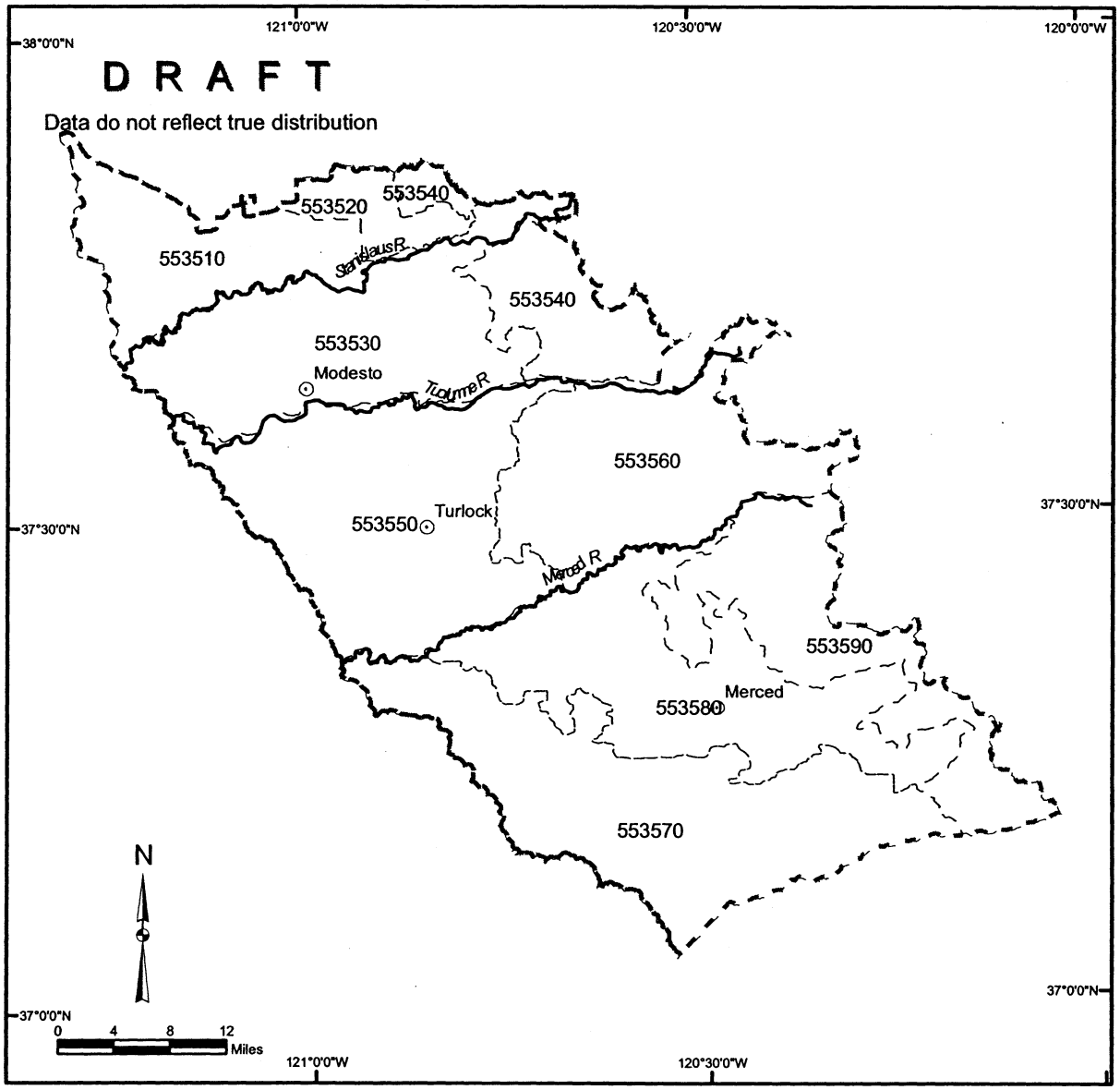
Proposed Critical Habitat for the California Central Valley O. Mykiss

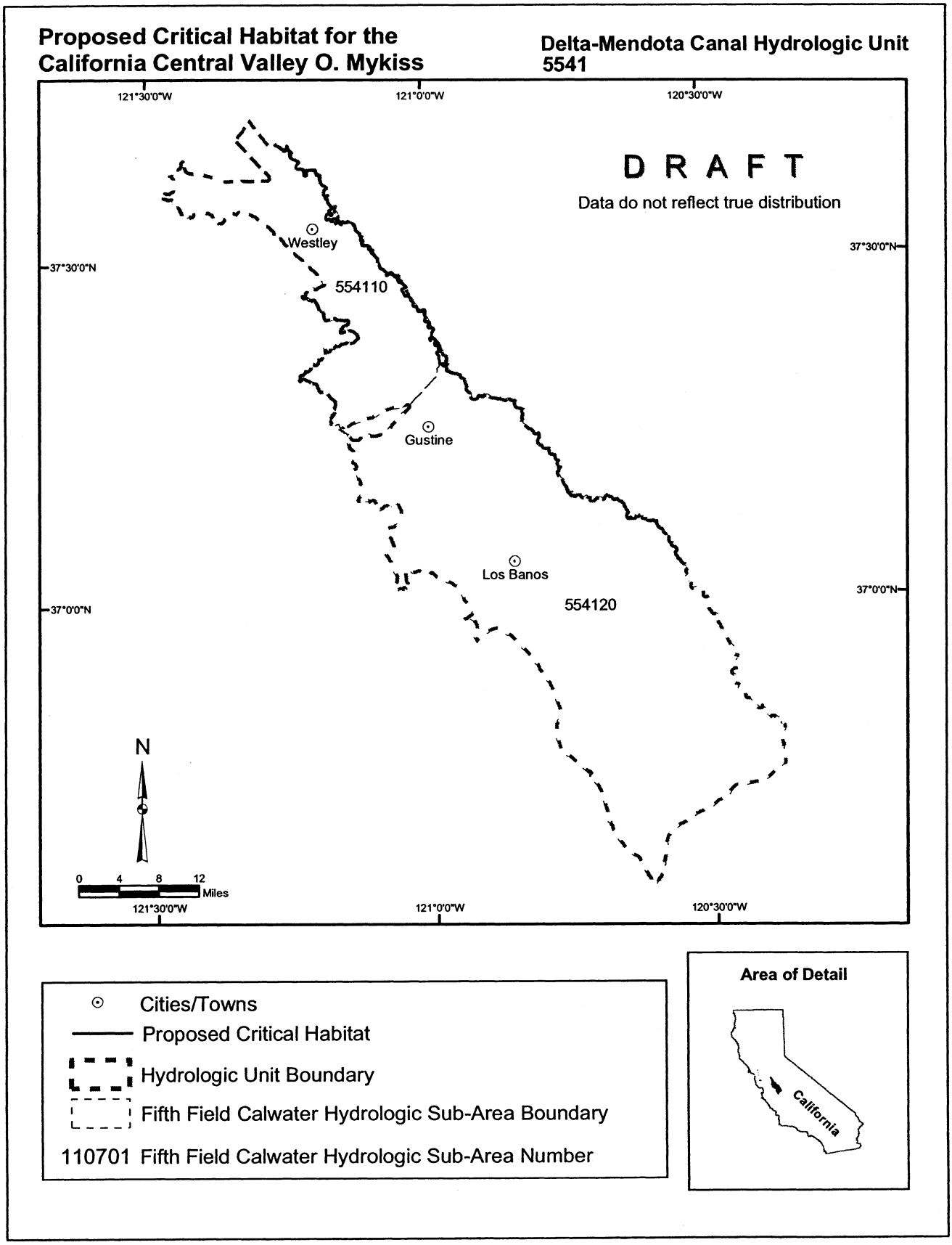
Stanislaus River Hydrologic Unit 5534

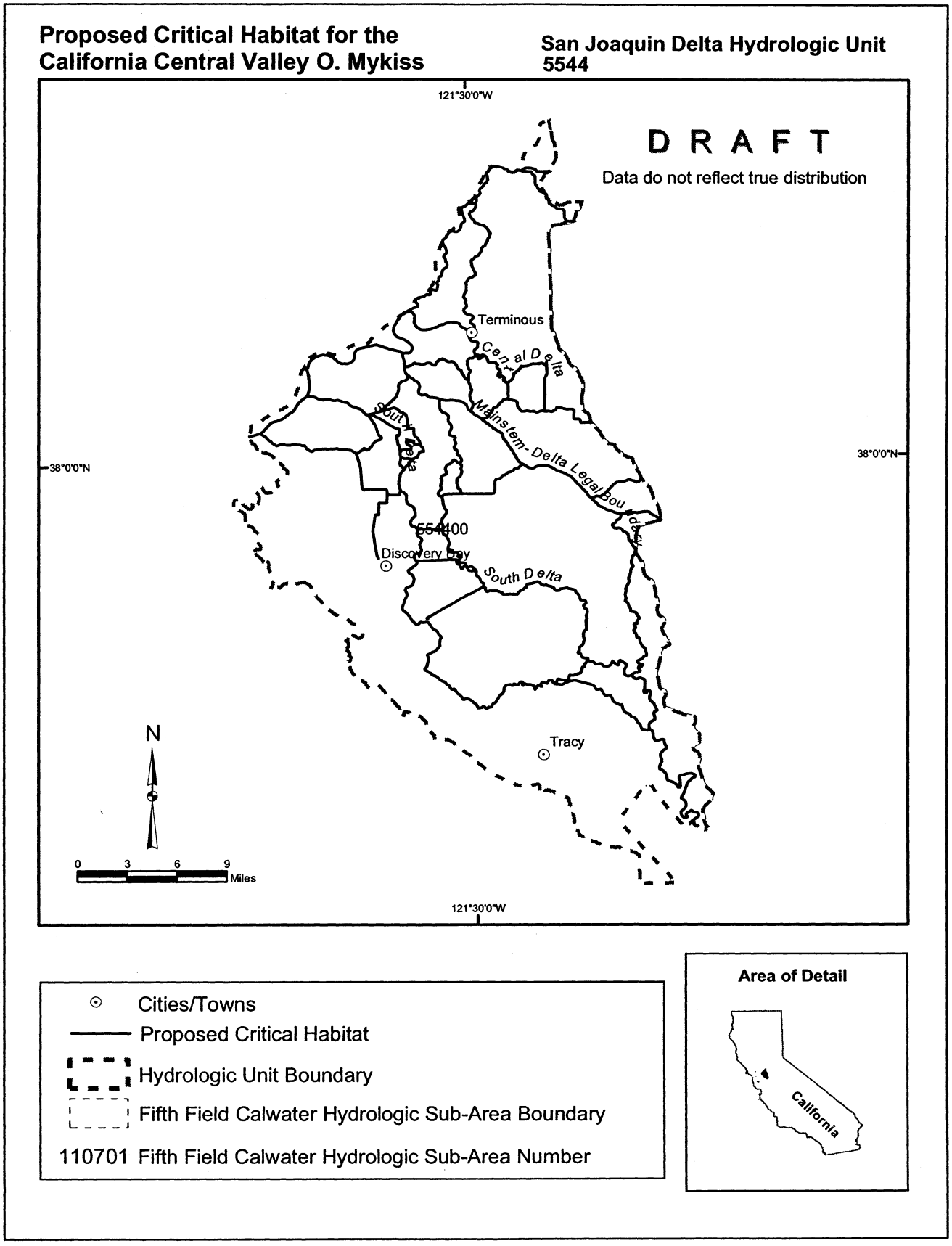


Proposed Critical Habitat for the California Central Valley O. Mykiss

San Joaquin Valley Floor Hydrologic Unit 5535




Proposed Critical Habitat for the California Central Valley O. Mykiss
Delta-Mendota Canal Hydrologic Unit 5541
121°30'0"W
121°0'0"W
120°30'0"W
D R A F T
Data do not reflect true distribution
Westley
37°30'0"N
554110
Gustine
Los Banos
37°0'0"N
554120
N
0 4 8 12
Miles
Cities/Towns
Proposed Critical Habitat
Hydrologic Unit Boundary
Fifth Field Calwater Hydrologic Sub-Area Boundary
110701 Fifth Field Calwater Hydrologic Sub-Area Number
Area of Detail
California



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