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U.S. Fish & Wildlife Service

Draft Recovery Plan for the Giant Garter Snake

(Thamnopsis gigas)

DRAFT RECOVERY PLAN

FOR THE GIANT GARTER SNAKE

(Thamnopsis gigas)

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Date: XXXXXXXXXXXXXXXXXXXX

DISCLAIMER PAGE

Recovery plans delineate reasonable actions that are believed to be required to recover and/or protect listed species. Plans are published by the U.S. Fish and Wildlife Service, sometimes prepared with the assistance of recovery teams, contractors, State agencies, and others. Objectives will be attained and any necessary funds made available subject to budgetary and other constraints affecting the parties involved, as well as the need to address other priorities. Recovery plans do not necessarily represent the views, official positions, or approval of any individuals or agencies involved in the plan formulation, other than the U.S. Fish and Wildlife Service. They represent the official position of the U.S. Fish and Wildlife Service ***only*** after they have been signed by the Director, Regional Director, or Manager ***as approved***. Approved recovery plans are subject to modification as dictated by new findings, changes in species statuses, and the completion of recovery tasks.

LITERATURE CITATION SHOULD READ AS FOLLOWS:

U.S. Fish and Wildlife Service. 1999. Draft Recovery Plan for the Giant Garter Snake *(Thamnopsis gigas)*. U.S. Fish and Wildlife Service, Portland, Oregon. ix+ 192 pp.

II. RECOVERY

Objective

The overall objective of this recovery plan is to delist the giant garter snake. Interim goals are (1) stabilizing and protecting existing populations, and (2) conducting research necessary to further refine recovery criteria. Because data upon which to base decisions about giant garter snake recovery are mostly lacking, recovery criteria in this plan are necessarily preliminary. Tasks carried out for the giant garter snake are expected to provide secondary benefits to tricolored blackbirds, white-faced ibis, western pond turtles, and waterfowl in the Central Valley.

Recovery Criteria

To assist in establishing recovery criteria and guiding recovery tasks, the Central Valley is divided into four recovery units (Figure 7). These are (1) the Sacramento Valley Unit, extending from the vicinity of Red Bluff south to the confluence of the Sacramento and Feather Rivers; (2) the Mid-Valley Unit, extending from the American and Yolo Basins south to Duck Slough near the City of Stockton; (3) the San Joaquin Valley Unit, extending south of Duck Slough to the Kings River; and (4) the South Valley Unit, extending south of the Kings River to the Kern River Basin. Table 2 lists giant garter snake populations included in each recovery unit.

For purposes of this recovery plan, the following definitions are used:

Recovery unit - a geographic region that has similar land uses, conservation issues, and water supply.

Population - all giant garter snakes within a basin or area (e.g., Colusa Basin, American Basin, Mendota Area).

Subpopulation - a cluster of locality records in a contiguous habitat area.

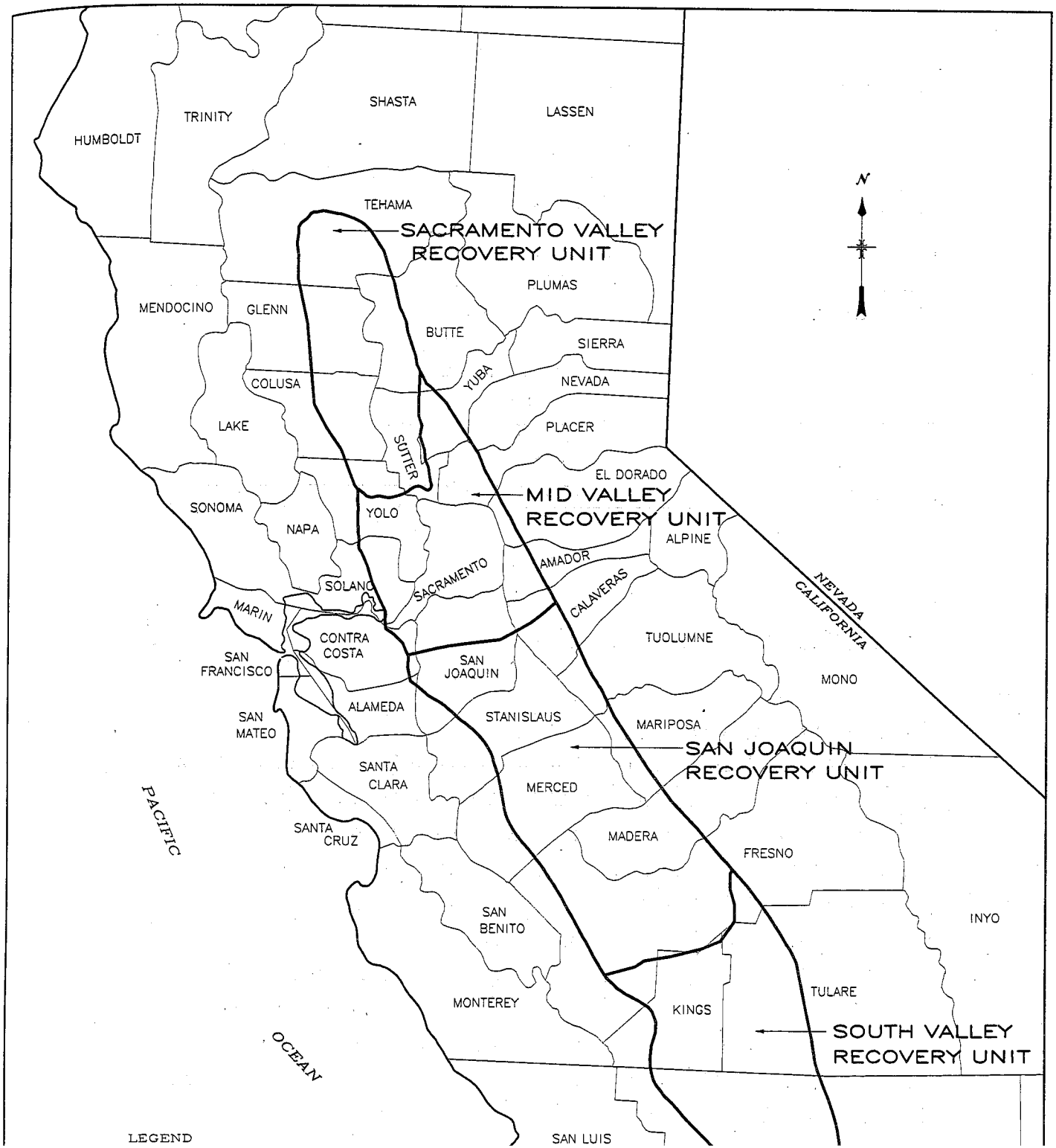
HUMBOLDT
TRINITY
SHASTA
LASSEN
TEHAMA
SACRAMENTO VALLEY
RECOVERY UNIT
PLUMAS
MENDOCINO
GLENN
BUTTE
SIERRA
COLUSA
YUBA
NEVADA
LAKE
PLACER
SUTTER
EL DORADO
MID VALLEY
RECOVERY UNIT
SONOMA
NAPA
YOLO
ALPINE
AMADOR
SACRAMENTO
SOLANO
CALAVERAS
NEVADA
CALIFORNIA
MARIN
CONTRA
COSTA
TUOLUMNE
SAN
FRANCISCO
SAN
JOAQUIN
MONO
ALAMEDA
STANISLAUS
SAN
MATEO
MARIPOSA
SAN JOAQUIN
RECOVERY UNIT
SANTA
CLARA
MERCED
PACIFIC
SANTA
CRUZ
MADERA
FRESNO
SAN
BENITO
INYO
TULARE
MONTEREY
KINGS
SOUTH VALLEY
RECOVERY UNIT
OCEAN
LEGEND
SAN LUIS
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Table 2. Giant garter snake populations located in Central Valley recovery units.

Recovery Unit	Giant Garter Snake Populations
Sacramento Valley	Butte Basin Colusa Basin Sutter Basin
Mid-Valley	American Basin Yolo -- Willow Slough Yolo -- Liberty Farms Sacramento Area Badger Creek/Willow Creek Caldoni Marsh (White Slough) East Stockton -- Diverting Canal and Duck Creek
San Joaquin Valley	North and South Grasslands Mendota Area Burrel/Lanare Area
South Valley	No populations known at this time

Giant Garter Snake Delisting Criteria:

The sizes and densities at which giant garter snake populations occur is not well known. Turner (1977) gives some density estimates for snakes. Population structure, population dynamics, the strength, frequency and direction of environmental fluctuations, and edge effects are also largely unknown for giant garter snakes. Until uncertainties about these and other small population effects and their interactions are resolved, it is not possible to establish population numbers as a delisting criterium for the giant garter snake. As an alternative, the first delisting criterium below for each recovery unit requires that subpopulations contain both adults and young. The U.S. Fish and Wildlife Service believes that if monitoring detects both adults and young in a given subpopulation, this suggests that the subpopulation is viable.

1. Sacramento Valley Recovery Unit

a. Monitoring shows that in 17 out of 20 years, 90 percent of the subpopulations in the recovery unit contain both adults and young.

b. The three existing populations within the recovery unit are protected from