



Preserving Swainson's Hawk Habitat

LAFCO

October 5, 2005

Introduction

- Tonight's Presentation
 - Provide LAFCO an update on the City of Elk Grove's Swainson's Hawk Mitigation Program
 - Presenters
 - Taro Echiburú, City of Elk Grove
 - Jim Estep, Estep Environmental Consulting
 - Dan Gifford, California Department of Fish and Game
 - Mike Eaton, The Nature Conservancy

Purpose

Provide information regarding Swainson's hawk and present the City's on-going efforts to ensure appropriate mitigation.



Evolution of City's Mitigation Strategy

July '00	City Incorporation. Mitigation through fees: \$750/acre.
September '03	Fee increased \$3,925/acre.
January '04	City coordinates with DFG to find suitable habitat for mitigation.
February '04	DFG provides City with map of suitable habitat.

Evolution of City's Mitigation Strategy

March '04	City contacts property owners in map (170) with intent to purchase easements/land.
July '04	Ordinance Update: Land for land at an acre-for-acre ratio for projects 40 acres and greater.
March '05	Fee increased \$18,325 for projects under 40 acres.

Evolution of City's Mitigation Strategy

July '05	City Council authorizes purchase of a 740 acre vineyard for conversion to hawk habitat.
August '05	City accepts first mitigation easement from developer for 169 acres.
September '05	City Council authorizes \$2.4 million purchase of conservation easement on 158 acres of habitat.
September '05	City negotiates a \$9 million agreement for vineyard project.



Swainson's Hawk Ecology in the Central Valley of California

some observations
after 16 years,
1988 – 2003

Swainson's Hawk Nesting Range

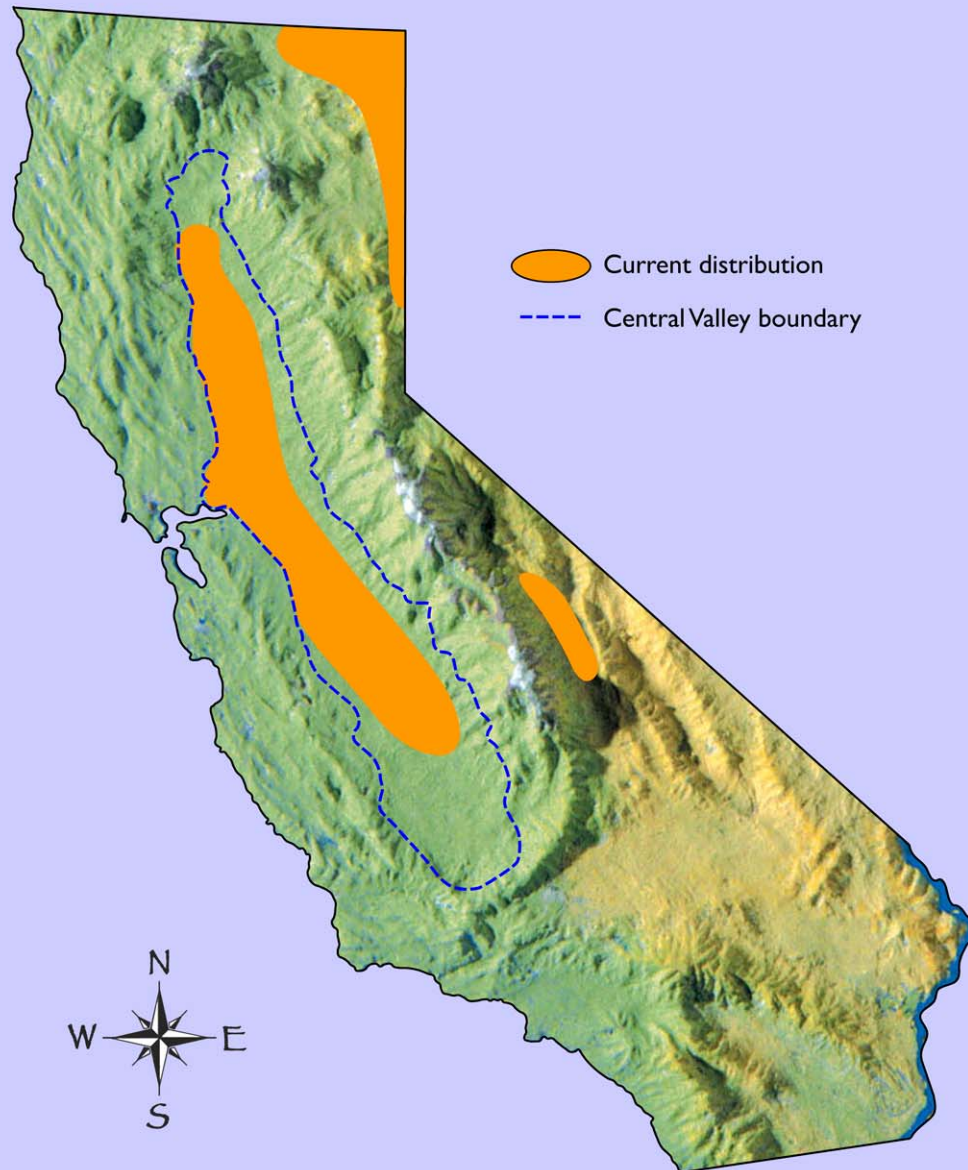
(England et al. 1997)



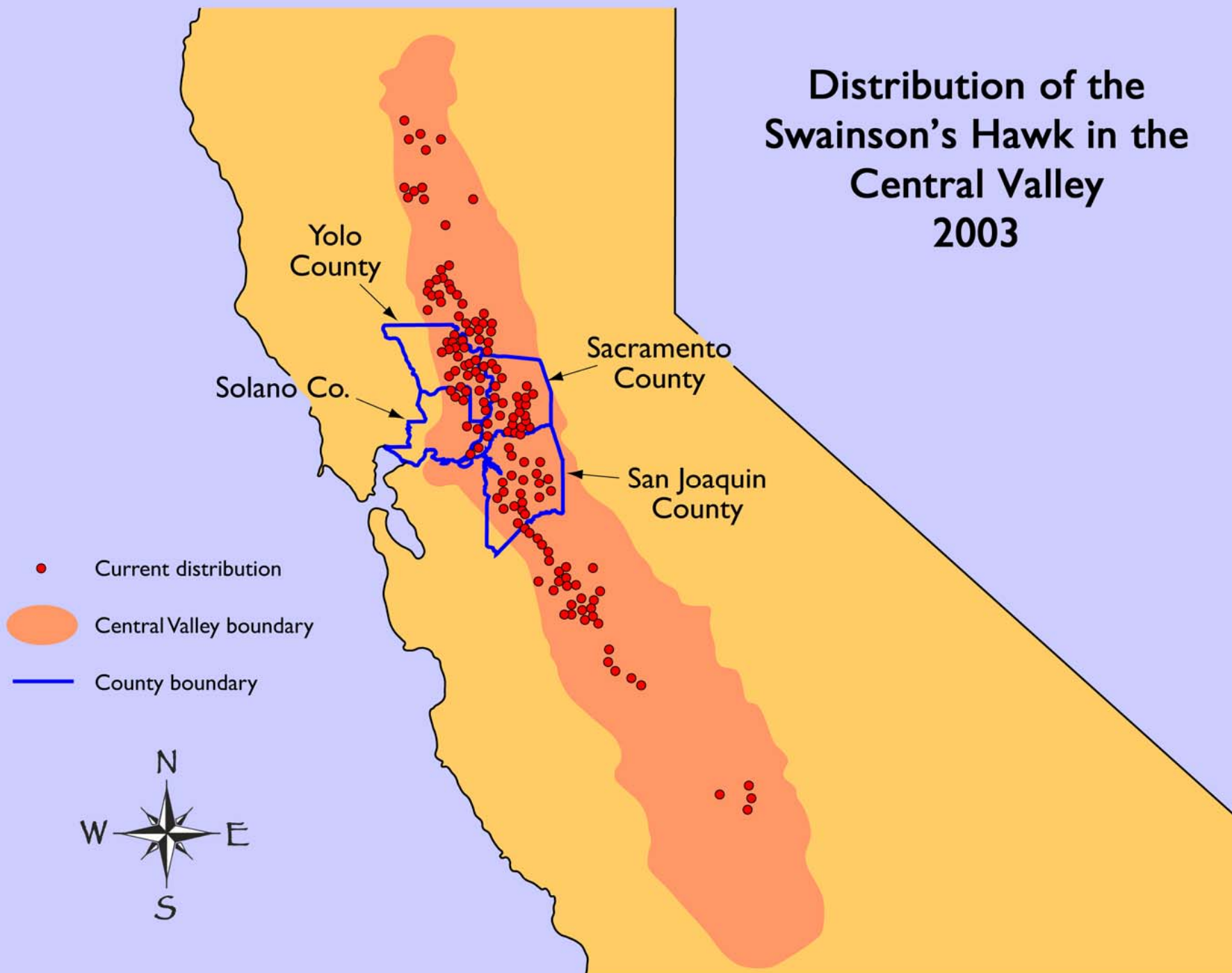
Historic Distribution of the Swainson's Hawk in California



Current Distribution of the Swainson's Hawk in California



Distribution of the Swainson's Hawk in the Central Valley 2003



Migration Routes and Wintering Areas of the Central Valley Swainson's Hawks



















7 26 '98









Swainson's Hawk Mitigation Site Selection Model

Southern Sacramento County

Site Selection Model

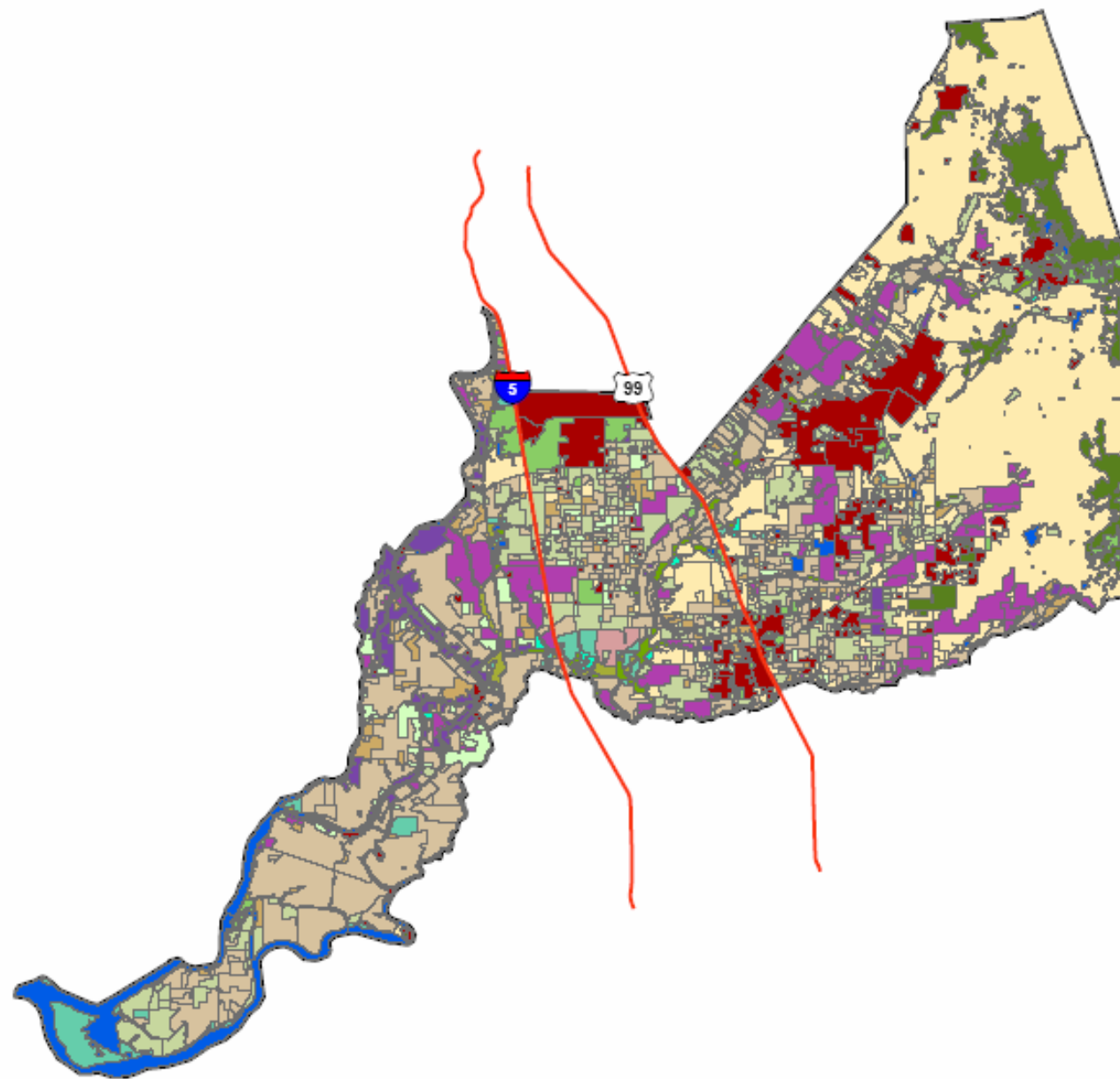
- GIS based site selection model
 - Identify locations that meet user defined criteria
- Swainson's Hawk Model Criteria
 - Foraging Habitat
 - Proximity to existing nest sites
 - Proximity to nesting habitat
 - Density of existing nest sites

Input Datasets










- Habitat Map
- Nesting Sites
- Nesting Habitat
- Preserves/Protected Areas

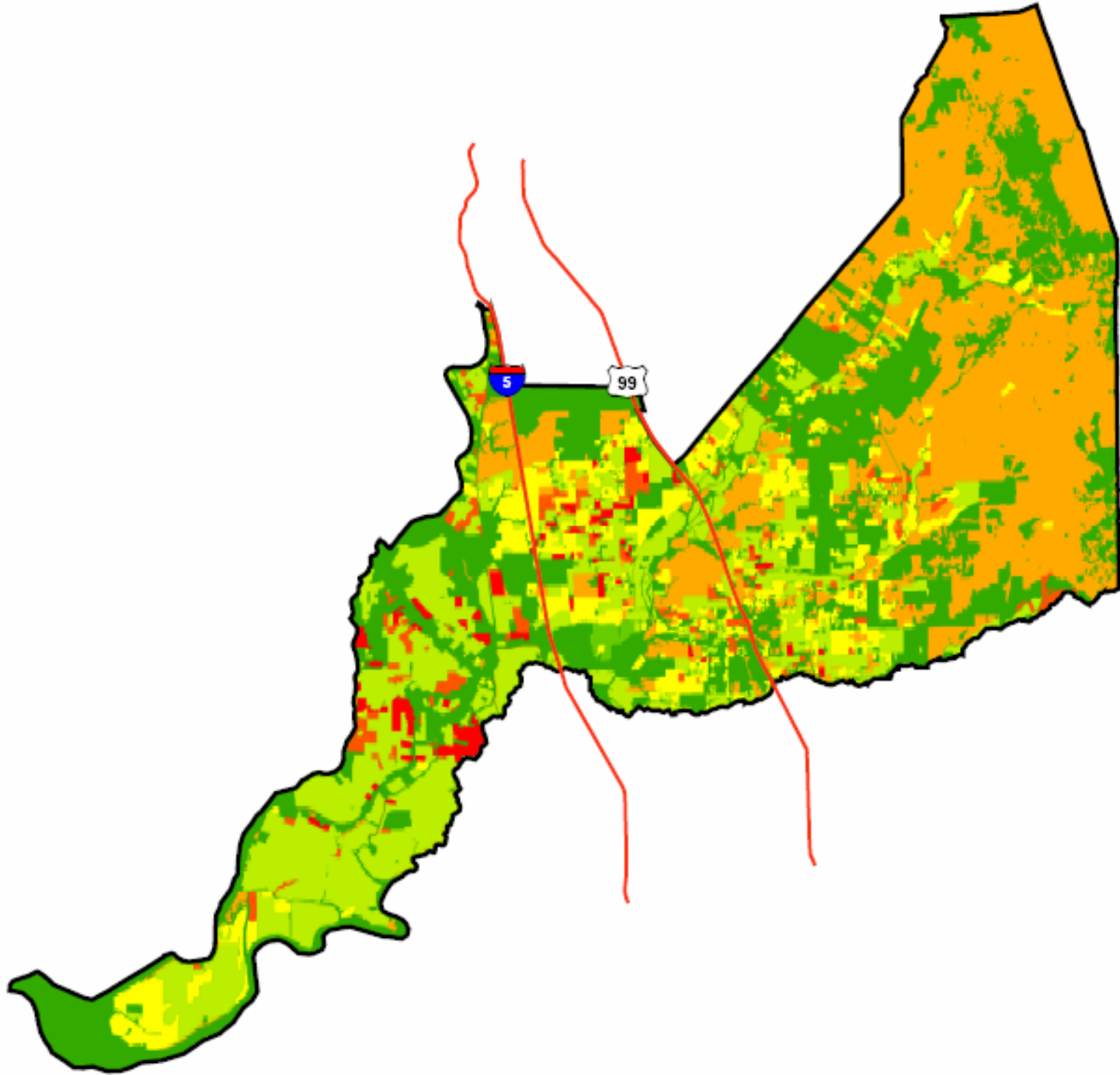
Habitat

- Alfalfa
- Annual Grassland
- Developed
- Dryland Pasture
- Hay (alfalfa, grass)
- Irrigated Pasture
- Non-Riparian Woodlands
- Open Water
- Orchard
- Rice
- Riparian Woodland - Mature Woodland
- Riparian Woodland / Scrub
- Row and Grain Crops
- Vineyard
- Wetlands - Marsh (Permanent)
- Wetlands - Seasonal



Legend

-  Major Roads
-  Study Area
-  0 (Lowest Habitat Value)
-  1
-  2
-  3
-  4
-  5
-  6 (Highest Habitat Value)

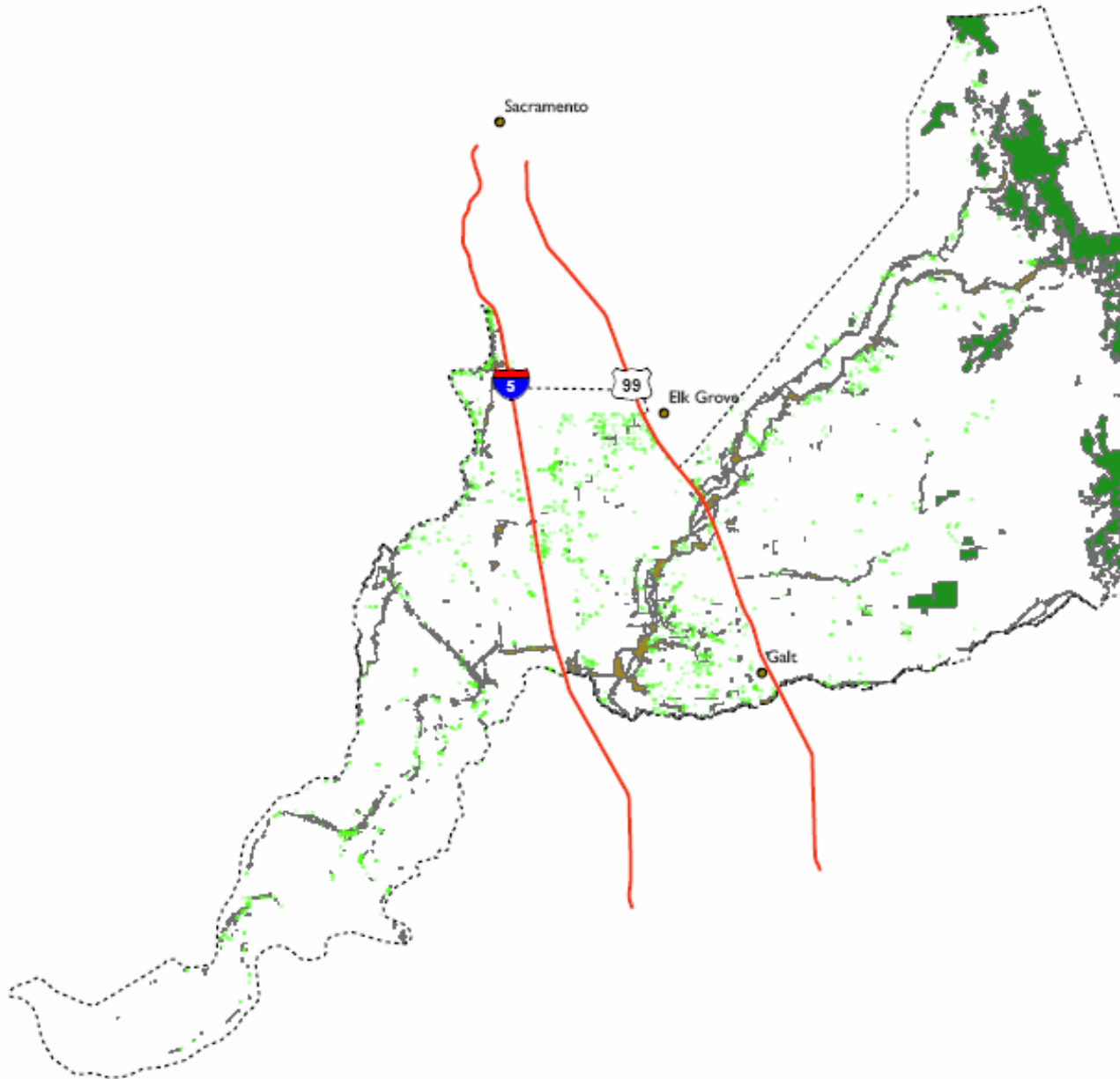


Habitat Type	Model Values
Alfalfa	6
Hay (alfalfa, grass)	5
Row and Grain Crops	2
Dryland Pasture	4
Annual Grassland	4
Irrigated Pasture	3
Rice	1
Orchard	0
Vinyard	0
Wetlands - Seasonal	0
Wetlands - Marsh (Permenet)	0
Riparian Woodland - Mature Woodland	0
Riparian Woodland / Scrub	0
Non-Riparian Woodlands	0
Developed - High Density	0
Developed - Low Density	0
Open Water	0

Weighting Values
 Proximity to Nest Sites = 1
 Proximity to Nesting Habitat = .5
 Density of Nest Sites = .3

Legend

- Cities
- Individual Trees
- Major Roads
- Non-Riparian Woodlands
- Riparian Woodland - Mature Woodland
- ⋯ Study Area




Legend


 Study Area

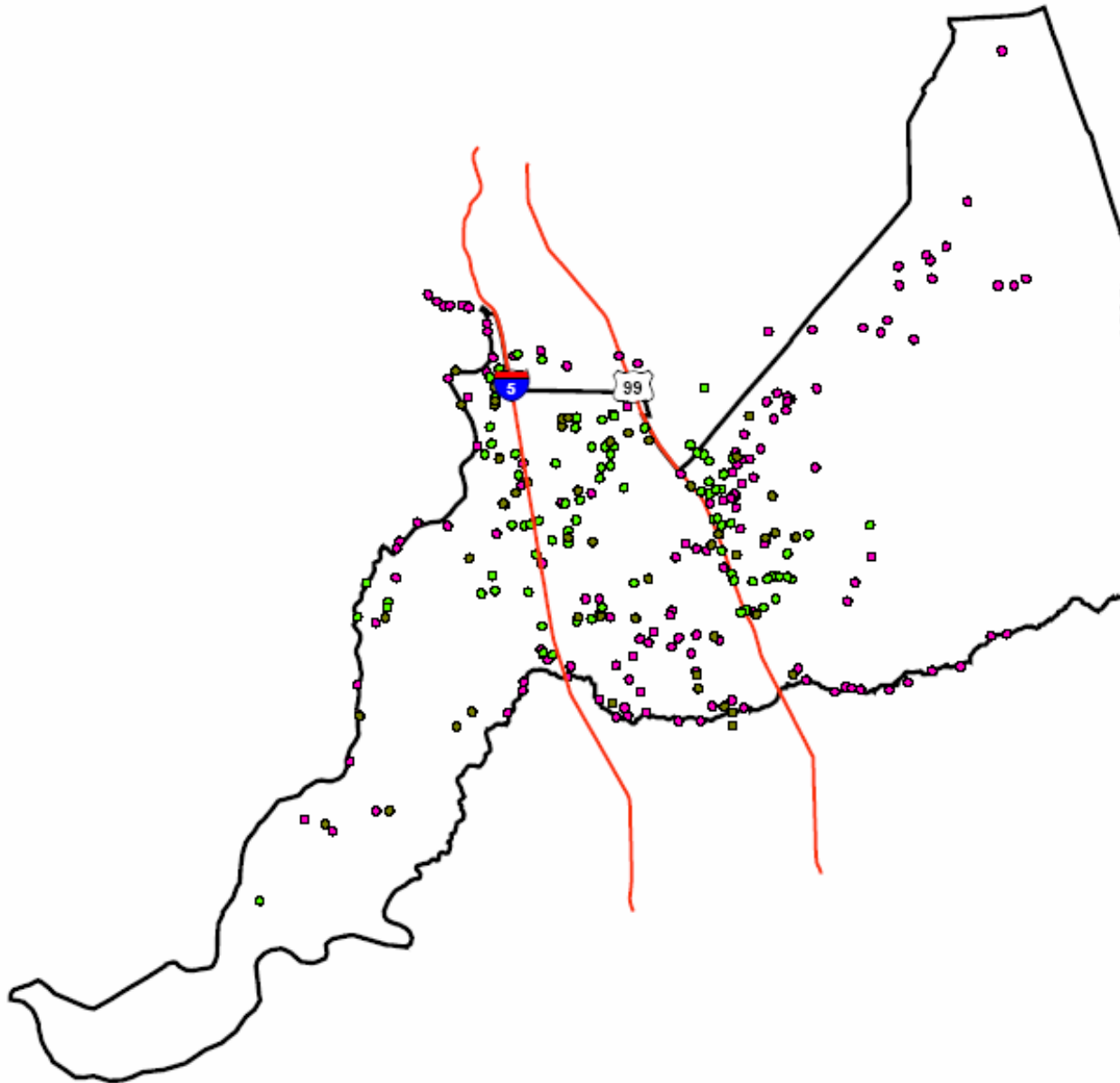
 Major Roads

Swainson's Hawk Nest Site

 Jones & Stokes 2004 Data

 CNDDDB and Other Historic Data

 DFG 2002 - 2003 Data



Detailed Site Suitability Model Steps



Legend

— Major Roads

▭ Study Area

Model Results

■ Unsuitable

■ Very Low

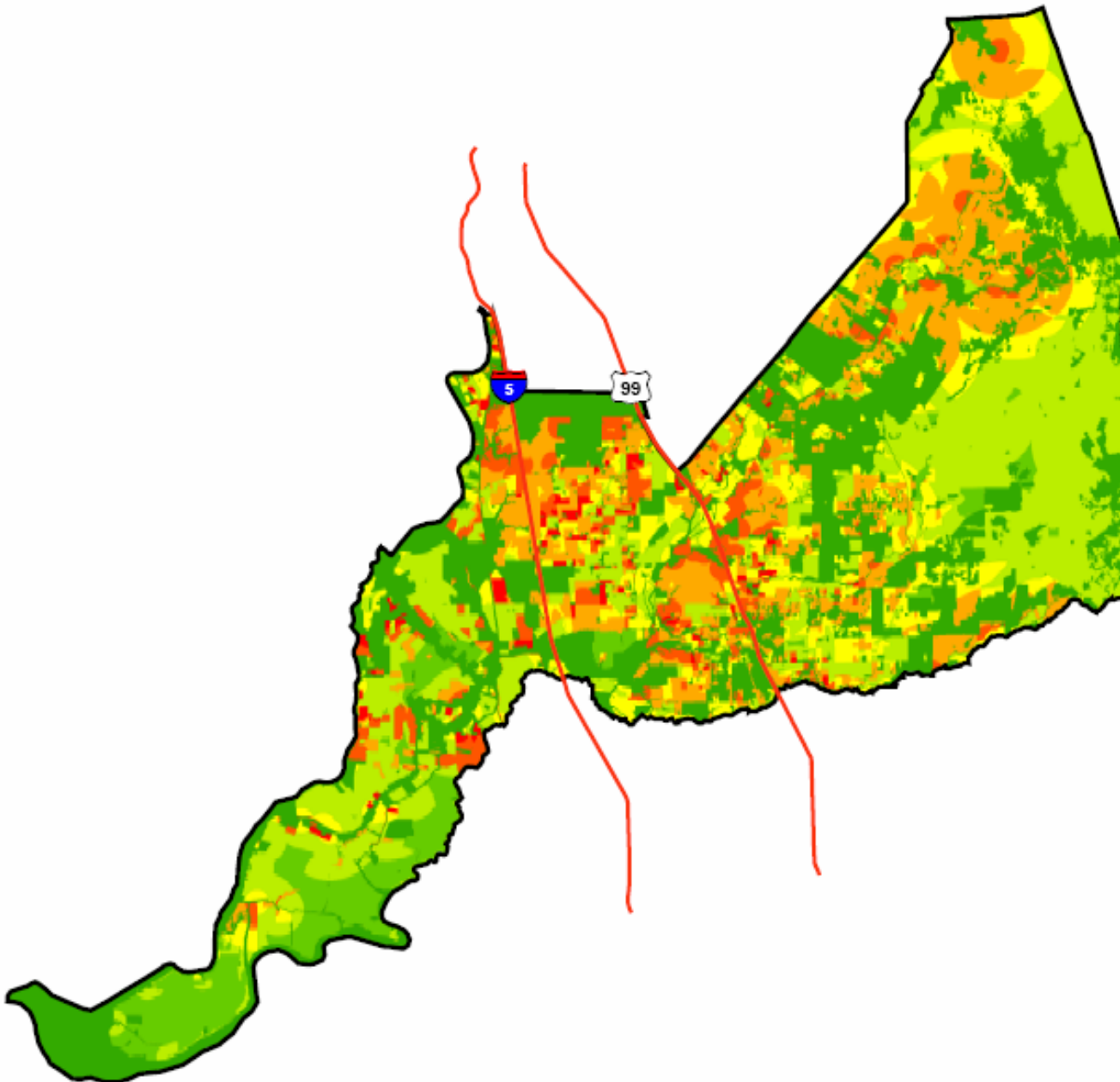
■ Low

■ Moderate

■ High Moderate

■ High

■ Very High



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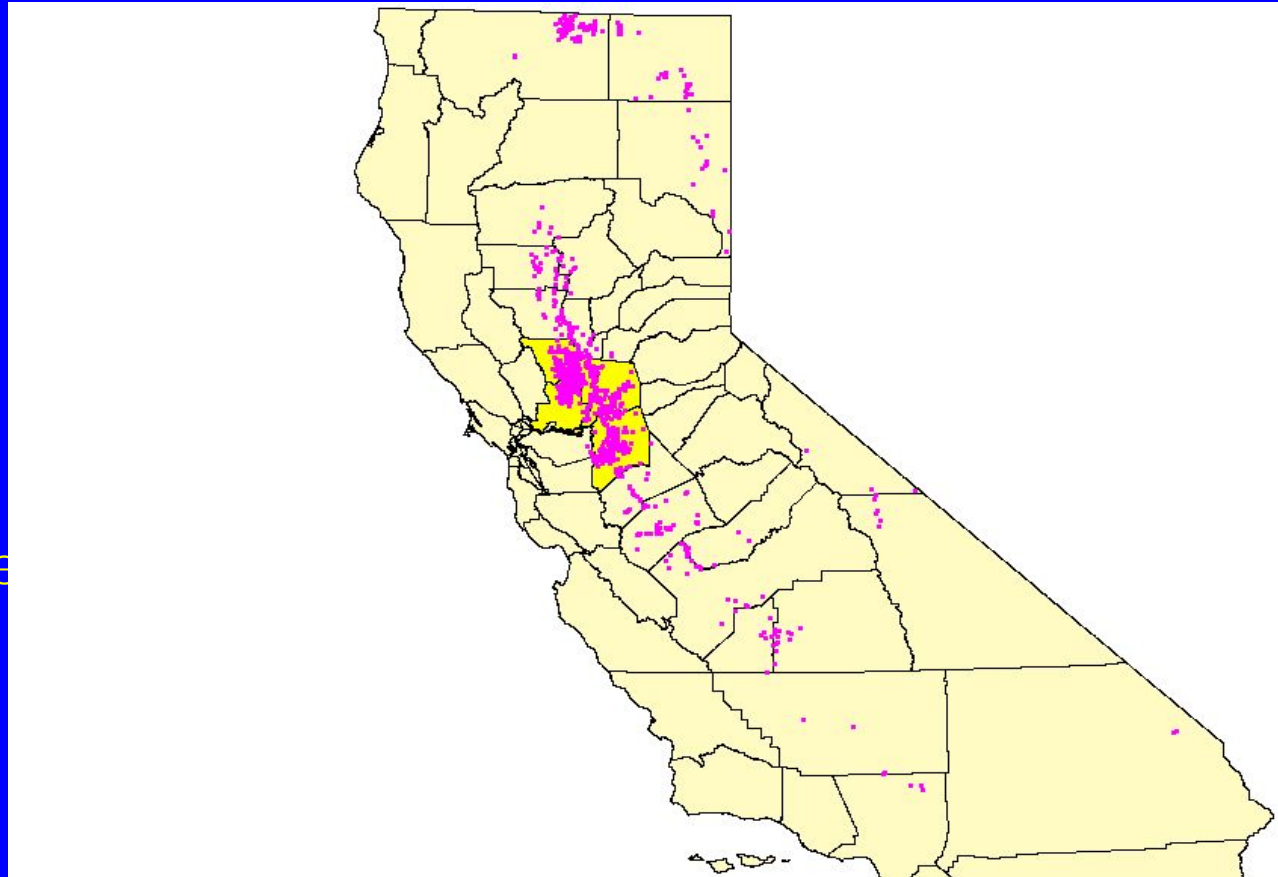


Dan Gifford – Senior Wildlife Biologist, CDFG

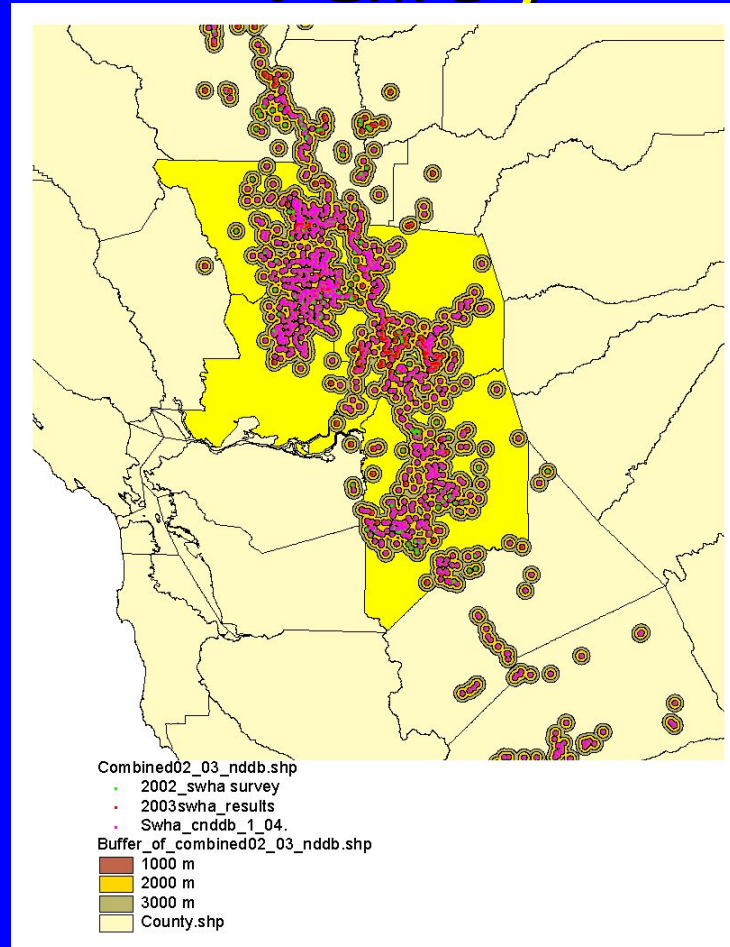
- DFG Role
- California Endangered Species Act
- CEQA
- Acceptable Mitigation

State-wide Distribution of Swainson's Hawk

- Plan Area: San Joaquin, Sacramento, Solano, Yolo Counties
- These Counties contain 70% of the State's breeding pairs, based on CNDDDB data.



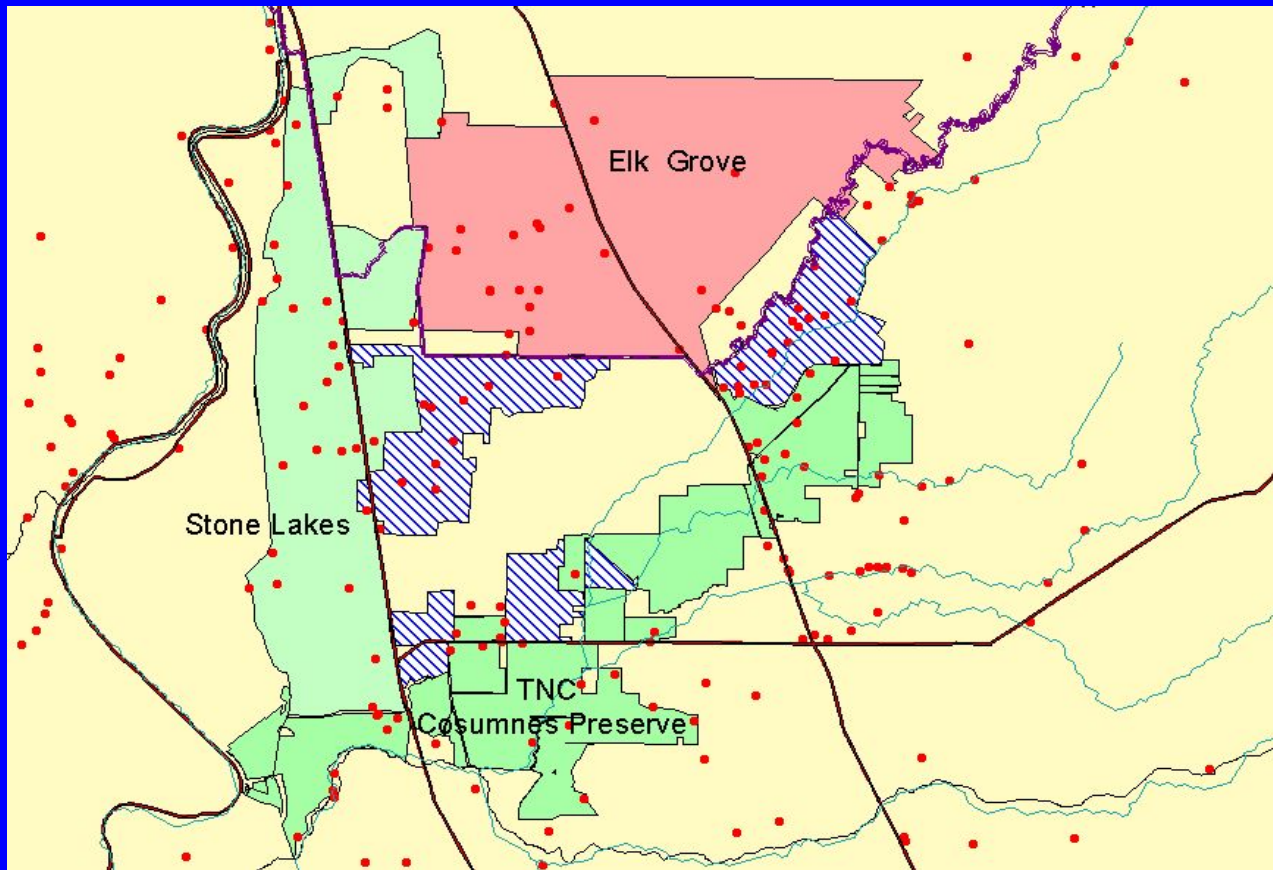
Heart of Swainson's hawk Range in the Central Valley



Some Rules for Selecting Swainson's Hawk Habitat Mitigation

- Avoid Planned Growth areas.
- Proximity to Impacts
- Select Occupied habitat (known nests).
- Select Suitable Habitat.
- Adjacent to Existing Preserves

Potential Mitigation Areas



Mike Eaton – The Nature Conservancy

- TNC's role
- Experience in the region
- Key for a successful program

• The Cosumnes River Preserve

- 45,000 acres
- Broad partnership; TNC was founder and remains lead
- Science-based monitoring and restoration programs
- Emphasizes wildlife-friendly farming
- Protects land in fee and with easements

• The Habitat Mitigation Program

- Provides an opportunity for partnership
- Additions to the preserve will provide maximum benefit and assurance
- Important opportunities for tie-ins to water recycling, groundwater recharge, and future water supply
- Needs to address “big three” - Swainson’s hawk, sandhill cranes, and giant garter snake



City of Elk Grove



- Updated fees
- Shifted burden of preserving land to developers, by requiring land for land.
- Is purchasing land and creating habitat ahead of development
- Is developing a sustainable habitat program through additional scientific research & monitoring.

Sustainable Habitat Program

- Working with TNC, scientific community, land owners and CDFG.
 - Habitat Modeling
 - Existing Habitat
 - Criteria for future Habitat
 - Locations for future preservation

Highlights

- Vineyard – 740 acres
- Kirkham – 158 acres
- Allen Ranch – 80 ac
- Others pending

Highlights

- FOSH – Jim Pachl – from EG City Council meeting February 2, 2005:
 - “[Regarding] Swainson’s hawk conservation in the region, Elk Grove is the good guy”
 - “We are glad Elk Grove is leading the way; pioneering”

Future Actions

- On-going Scientific Studies to ensure Sustainable Habitat Program
- Integrated Approach with multiple agencies for Habitat Protection and additional beneficial impacts
- Getting LAFCO and other regional agencies updated on the City's future progress



Conclusion



- Elk Grove is creating a sustainable habitat program
- Questions and Answers
- Discussion