Vernal pool conservation in California’s central valley...

- Areas of highest historic vernal pool loss
- The regulatory framework
- What is a fairy shrimp?
- Conservation success stories
  - Mather Field Vernal Pools
  - University of California at Merced
  - And others, plus a look into the future
Areas of highest vernal pool loss past, present and future...

Vernal Pool Distribution

- pre-1492*
- 1997 (~13% remain)

*based on biogeography of 29 endemic species by Robert F. Holland

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Areas of highest vernal pool loss
past, present and future...

Yuba County
- 25,245 acres (67%) lost between 1971-1995
- urbanization and agricultural conversion
Areas of highest vernal pool loss
past, present and future...

Sacramento County
- 30,251 acres (36%) lost between 1972-1993
- over ½ remaining pools within USB
- recent incorporation of new towns
- >13,000 acres in the planning process
Areas of highest vernal pool loss
past, present and future...

Merced County
- tens of thousands of acres recently lost
- most loses due to conversion to orchards
- UC Merced campus and Campus Community
- will impact adjacent Madera and Mariposa Counties through growth inducement

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Areas of highest vernal pool loss
past, present and future...

Fresno County
• 11,842 acres (30%) lost between 1973-1994
• rapid ongoing urbanization
Areas of highest vernal pool loss
past, present and future...

Other areas...
• Butte County (Chico urbanization, Highway expansion)
• Placer County (Roseville, Lincoln urbanization)
• Solano County (East Bay expansion)
• Glenn County (orchard conversion)
• Tehama County (timber product conversion)

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Extirpated rare plant occurrences recorded in the CNDDB

- Hoover’s spurge – 13%
- Colusa grass – 32%
- San Joaquin Valley Orcutt grass – 38%
- Hairy Orcutt grass – 33%
- Sacramento Orcutt grass – 20%
- Greene’s Tuctoria – 48%
Key regulatory milestones related to vernal pool conservation

- 1994 – Listing of 4 vernal pool crustaceans
- 1997 – Listing of 11 vernal pool plants
- 2002 – Draft designation of Critical Habitat
- 2003 – First final designation of Critical Habitat
- 2005 – Second final designation of Critical Habitat
- 2005 – Vernal Pool Recovery Plan

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But regulations only regulate
they don’t really protect vernal pools

✓ No regulation of vernal pool losses prior to 1994
✓ Neither the Clean Water Act or the Endangered Species Act prohibit the destruction of vernal pool wetlands or endangered species
✓ Plants are second class citizens under the Endangered Species Act and so fairy shrimp drive mitigation requirements
What is a fairy shrimp? and why are they special
Education inspires activism
a local Sacramento County success story...
Mather Field Air Force Base
2,300+ acres of vernal pool grassland...

- Mather AFB decommissioned in 1993
- County agencies plan for economic development
  - Aggregate mining
  - Airport expansion
  - Regional park
  - Urban development
  - Urban forest
  - Water treatment facility
  - Private university

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Mather Field Vernal Pools

fifteen years and holding...
Public awareness campaign grows into an elementary school curriculum...
An overview of Mather successes

no project has been approved to date...

• >12,000 fifth graders have explored the magic and mystery of the Mather Field vernal pools

• Database of over 800 people willing to write letters and testify at public meetings
  • 1000 postcards mailed
  • 150 people at a board of supervisors meeting

• Eventually the board of supervisors instructed staff to prepare a comprehensive plan for the Mather Field area

• In December 2005, county staff and stakeholders presented a plan that will preserve >1000 acres
University of California at Merced

voluntary consensus planning reduces impacts...

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Other successes

and looking into the future...

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dedicated to saving California’s vernal pool landscapes