

Tehachapi Mountains, Wind Projects and Golden Eagles

December 2, 2011



Gerald and Buff Corsi © California Academy of Sciences



Biology and Status



Golden Eagle Basics

Lifespan: 15 to 30+ years

Body length: 2.5 to 3 feet

Wing span: 5 to 7 feet

Weight: 6 to 15 pounds*

Sexual maturity: 4+ years

Breeding season: Territories established in December, and breeding in January-September



Golden Eagle Habitat Use

Nesting habitat

- Builds large platform nest of sticks, twigs, and greenery.
- Nests on cliffs or rock outcrops, and in large trees in open areas
- Rugged, open habitats with canyons and cliff habitat used most frequently for nesting.



Golden Eagle Habitat Use

Foraging habitat

- Forages in grasslands, deserts, savannahs, and early successional stages of forest and shrub habitats.
- Eats mostly lagomorphs and rodents; also takes other mammals, birds, reptiles, and some carrion.



Threats

- Poisoning (lead, pesticides)
- Collisions
 - cars
 - turbine blades
 - wires
 - fences
- Electrocution
- Loss of habitat
- Declining prey base
- Human disturbance



Population Status

- The status of the population in the western US is unclear. Few published data on golden eagle abundance and population trend are available for CA.
- Of the data that is available (published and unpublished) a declining population in some portions western North America was noted.
- Declines have been documented in San Diego County assessing nesting records spanning over 100 years.

Data Gaps and Outstanding Questions

- Territory size and use in xeric (dry) habitats
- Survival and causes of mortality
- Population size and trend
- Seasonal movements
- Habitat use patterns
- Migration patterns
- Genetic structure



Species Protection

Federal Laws:

Bald and Golden Eagle Protection Act
Migratory Bird Treaty Act

State of California:

Fish and Game Code - Fully Protected

Conservation Standards

Eagle Act and Rule

- Eagle Act - take will be authorized only where it is “compatible with the preservation of the eagle”
 - Rule defined as “consistent with the goal of increasing or stable breeding populations”
- Higher conservation standard than Endangered Species Act permitting.

Two New Permit Types Established

- **Intentional take of eagle nests:**
 - Primarily to deal with safety hazard to people or eagles
 - Only inactive nests allowed to be taken except in safety emergencies
- **Incidental take of eagles**
 - Limited permits available
 - Only when take cannot practicably be avoided



Programmatic Permits

- Programmatic take - take that is recurring and not in a specific, identifiable timeframe and/or location
- Wind Energy Facilities
- Utility Lines
- Power Tower Solar Facilities



Mitigation Standards in Permits

- Authorizations will be based on implementation of “Advanced Conservation Practices” to reduce eagle take to a level where remaining take is **unavoidable**
- **All** permittees are required to avoid and minimize the potential take to the degree practicable.
- Programmatic permits standard is *maximum degree technically achievable* - any take that occurs is unavoidable

Mitigation

- Sequential approach to mitigation
 - Avoid
 - Minimize
 - Rectify
 - Reduce or eliminate over time
 - **Compensate - is last!**



FWS Siting and Permitting Tools

FWS Wind Energy Guidelines

- Based on recommendations from the Federal Advisory Committee
- Revised document expected in early 2012

Eagle Conservation Plan Guidance

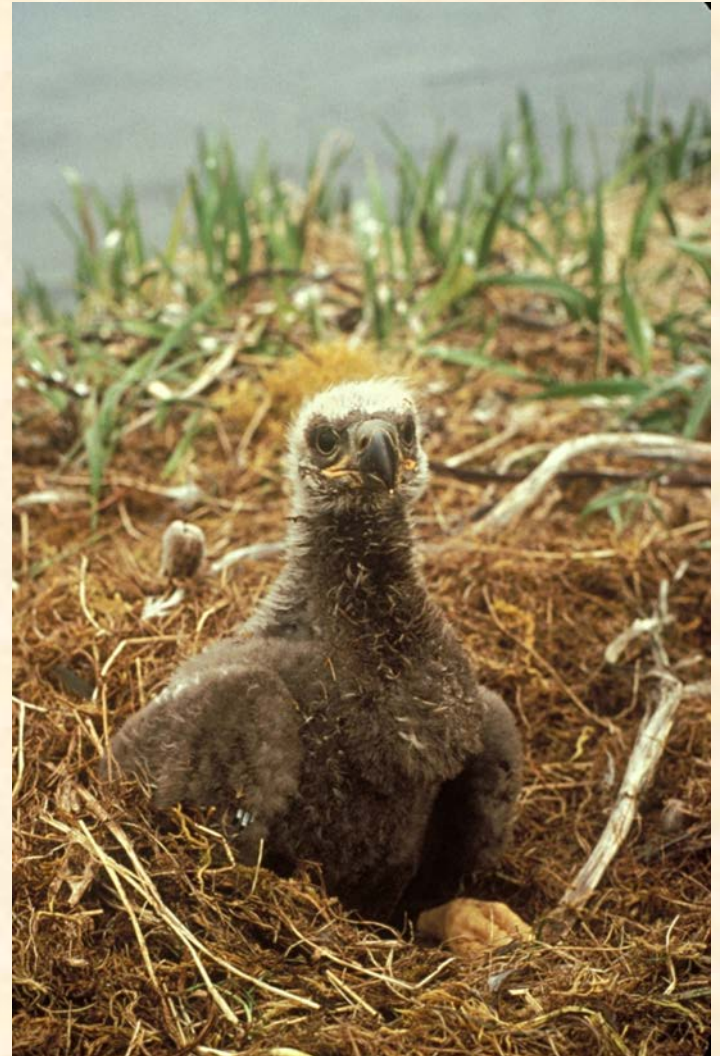
- Under development since May 2010
- V2 out in early 2012 for public comment

Eagle Conservation Plan Guidance

- Provides information necessary for wind-facility project proponents assess the risk to eagles (siting, design, and operational modifications can mitigate risk)
- Eagle Conservation Plans will be used to reduce population-level effect to justify issuance of a programmatic take permit

Eagle Conservation Plan Guidance

- Guidance recommends proponents adopt procedures in site assessments so data can be combined in a formal adaptive management process
- Adaptive management process is designed to reduce uncertainty of the effects of wind facilities



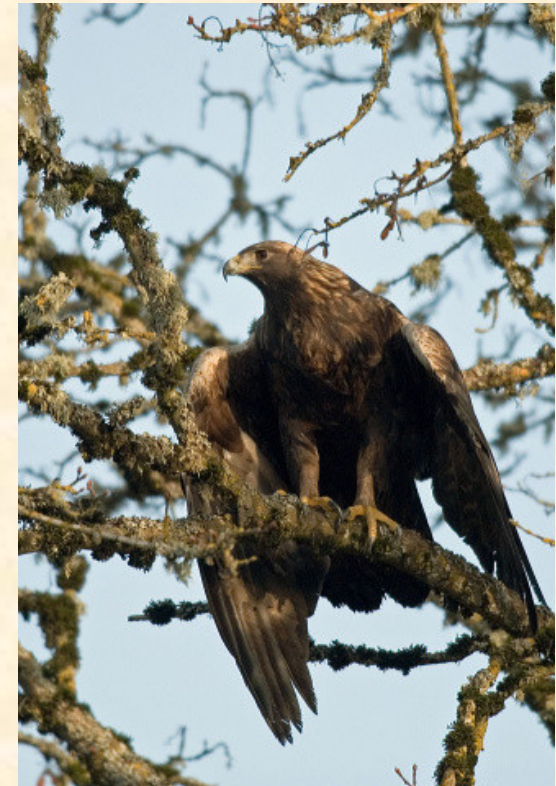
State Protection

- **Listed as a Fully Protected species**
- Permits allowed only for “necessary scientific research, including actions to recover fully protected, threatened, or endangered species...” (Fish and Game Code Section 3511)



State Permitting

- **Scientific Collecting Permits and Research MOU**
 - Only authorizes research activities
 - Does not authorize project-level take
- **Natural Community Conservation Planning Act (NCCPA), Section 2835 of the Fish and Game Code**
 - Senate Bill 618 gave CDFG the option of issuing a permit for the incidental take of fully protected species within the context of a Natural Communities Conservation Plan (NCCP) pursuant to Section 2835 of the Fish and Game Code.



Challenges

- Limited population and demographic data in CA
- Potential compensation measures to offset impacts to the species are limited, due to a lack of supporting data on their effectiveness.
- Current financial incentives and State statutes are driving project timelines
- Limited agency staff and funding to implement permitting programs
- No mechanism for State permitting, except for SB 618

Ongoing Planning Efforts

Agency Efforts

- CA/NV Golden Eagle Working Group
- FWS Eagle Management Team (EMT)
 - Eagle Technical Advisory Team (ETAT)
 - Eagle Strike and Mitigation Teams
- FWS sponsored "North American Golden Eagle Science Meeting " held Sept 2010

Industry or Combined Efforts

- AWWI Eagle Workshop
- DRECP Covered Species Working Group
- CBI Wind/Wings/Wilderness Workshop
- Condor and Eagle Workshop

Ongoing and Planned Research

- USGS Golden Eagle Research in Support of FWS EMT
- Ongoing BLM Projects
 - Golden eagle statewide nest surveys in CA and NV
 - Habitat use and population study in CA
- Upcoming CDFG Project
 - Habitat use and population study in Mojave/Sonoran Desert and San Diego County

Thank you

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