PERSPECTIVE ON IMPACTS AND MITIGATION - CEQA AND OTHER STATE LAWS

California Department of Fish and Game Workshop

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Reducing Project Impacts

Step-wise Process

- Avoidance – Project Siting and Design
- Minimization – Turbine Design and Operational
- Compensation – Actions to "offset" any remaining impacts: Typically habitat protection, enhancement or restoration
- Monitoring to Ensure Goals are Met.

Pre-Permitting Assessment

Essential Information for Screening Potential Biological Impacts, Impact Assessment, CEQA Determinations

- Species utilizing site and vicinity
- Presence of any listed species or other special status species.
- Magnitude of bird use at site
- Guidelines should discuss assessment methods and protocols and recommend a standardized approach

State Laws Relating to Wildlife Protection

- California Fish and Game Code § 3503.5 Falconiformes and Strigiformes
- California Fish and Game Code § 3511 "Fully Protected Birds"
- California Fish and Game Code § 3513 MTBA
- California Fish and Game Code § 3800 Non-Game Birds

Fully-Protected Birds
(F&G Code §3511)

- American peregrine falcon
- Brown pelican
- California black rail
- California clapper rail
- California condor
- California least tern
- Golden eagle
- Greater sandhill crane
- Light-footed clapper rail
- Southern bald eagle
- Trumpeter swan
- White-tailed kite
- Yuma clapper

Federal Laws Relating to Wildlife Protection

- Federal Endangered Species Act (FESA)
- Migratory Bird Treaty Act (MTBA)
- Bald Eagle Protection Act

Use of Compensatory Mitigation

- CEQA – Mitigate significant impacts to a level of "less than significant"
- CESA – Achieve "full mitigation standard"
- Compliance with State Wildlife Laws – Compensate or "offset" impacts that remain after avoidance and minimization to achieve "no net loss"

DFG Role - CEQA

- Consult with lead agencies on projects as required.
- Develop and recommend mitigation measures as appropriate for the resources with its purview
- Provide public comment and testimony during the CEQA Process
- Responsible Agency if additional CDFG approvals are required

DFG Role - CESA

- Lead Permitting Agency for "Incidental Take" of State-listed Species
- Assessment of "Jeopardy"
- Projects Effects must be "Minimized and Fully Mitigated"
- CEQA Compliance for Permit Issuance –
  - Responsible Agency
  - State Lead Agency

DFG Role - Other Wildlife Laws

- State Trustee for Fish, Wildlife and Their Habitats
- Preserve, Restore, Protect and Enhance the State's wildlife resources to maintain their ecological values and to ensure continued use and enjoyment by the public
- Public Education, Scientific Expertise
- Work Cooperatively with Project Proponents to reduce and/or offset project effects
- Enforce Violations of State Law

Post-Project Monitoring

- Operational Monitoring is Essential to:
  - Validate and Confirm Impact Estimates
  - Evaluate Success of Avoidance and Minimization Measures
  - Provide Feedback to Operational Planning
- Monitoring of Compensatory Mitigation also Required to Evaluate Success

Guidelines

- Discuss the Framework of State Law to be Considered
- Provide Recommendations for Site Assessment Methodology, both Pre- and Post-Project
- Identify the Types of Impacts that Should be Assessed and Provide a Decision Framework and/or Tools for Performing the Assessments
- Identify Potential Options for Compensatory Mitigation that Ensure Bird and Bat Protections and a Decision Framework for Application

TYPES OF IMPACTS TO CONSIDER FOR PROJECT SITING

Direct Impacts

- Those effects that are caused by a project and occur at the same time and place.
  - Turbine Effects
  - Guy Wires and other Infrastructure
  - Lighting
  - Weather events

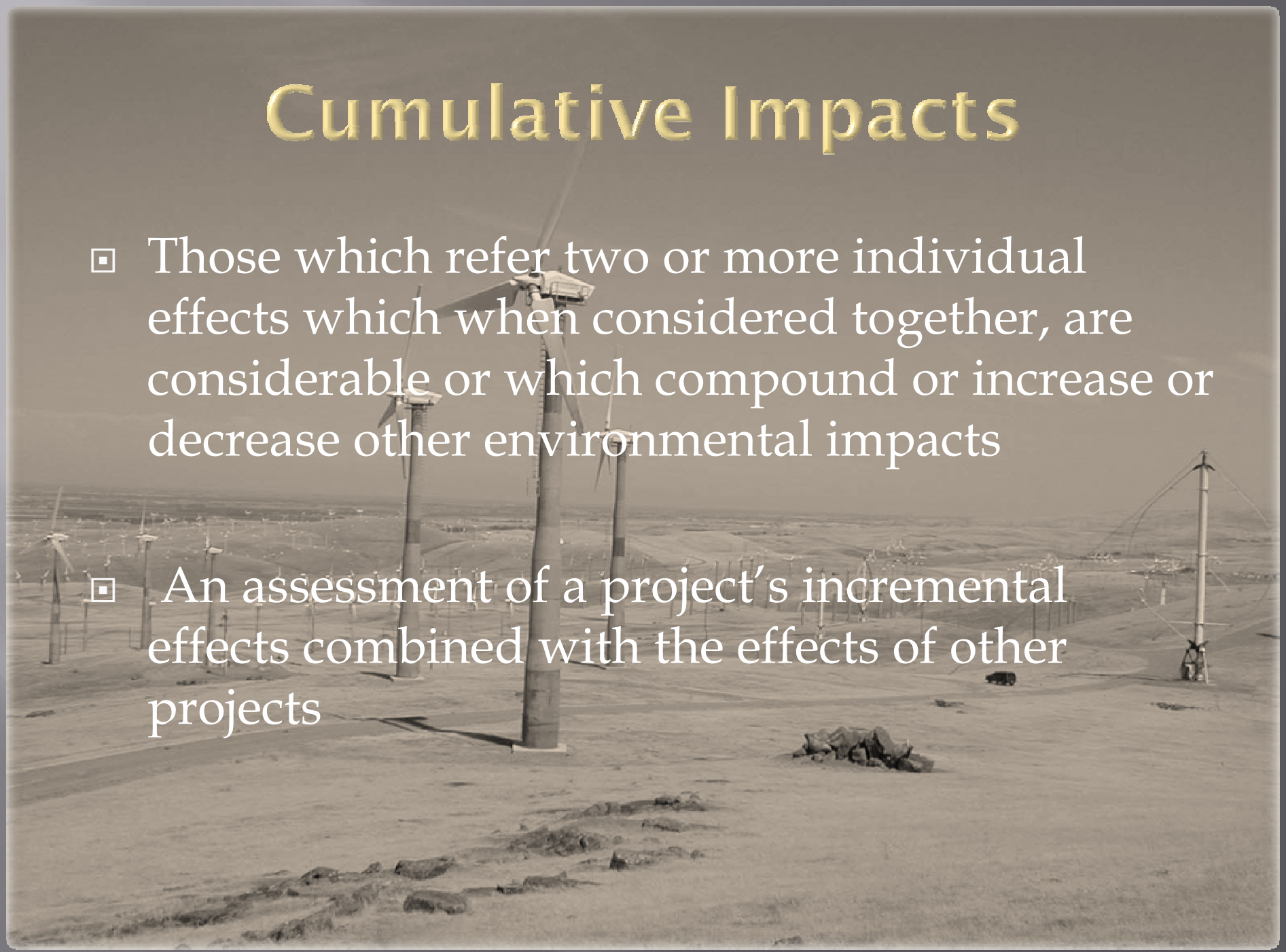
Indirect or Secondary Impacts

- Those effects that are reasonably foreseeable and caused by a project but occur at a different time or place.
  - Local Disturbance
  - Habitat Displacement
  - Site Avoidance
  - Disruption to Migratory Patterns

Cumulative Impacts

- Those which refer two or more individual effects which when considered together, are considerable or which compound or increase or decrease other environmental impacts

- An assessment of a project's incremental effects combined with the effects of other projects



Cumulative Impact Assessment

- Determination of risk to species as a whole or over affected geographical region, inclusive of the project site
- Evaluation of threat to local breeding populations
- A listing and review or analysis of other wind generation projects, as well as other projects that may result in the loss of habitat or collision fatalities

Cumulative Impacts

- An identification of the extent of habitat that may be lost by the combined projects
- An evaluation of the effect that the cumulative loss might have on local or regional species populations or population as a whole

COMPENSATORY MITIGATION

Reducing Project Impacts

- Avoidance
- Minimization
- Compensation – Actions to "offset" any remaining impacts: Typically habitat protection, enhancement or restoration
- Monitoring

Use of Compensatory Mitigation

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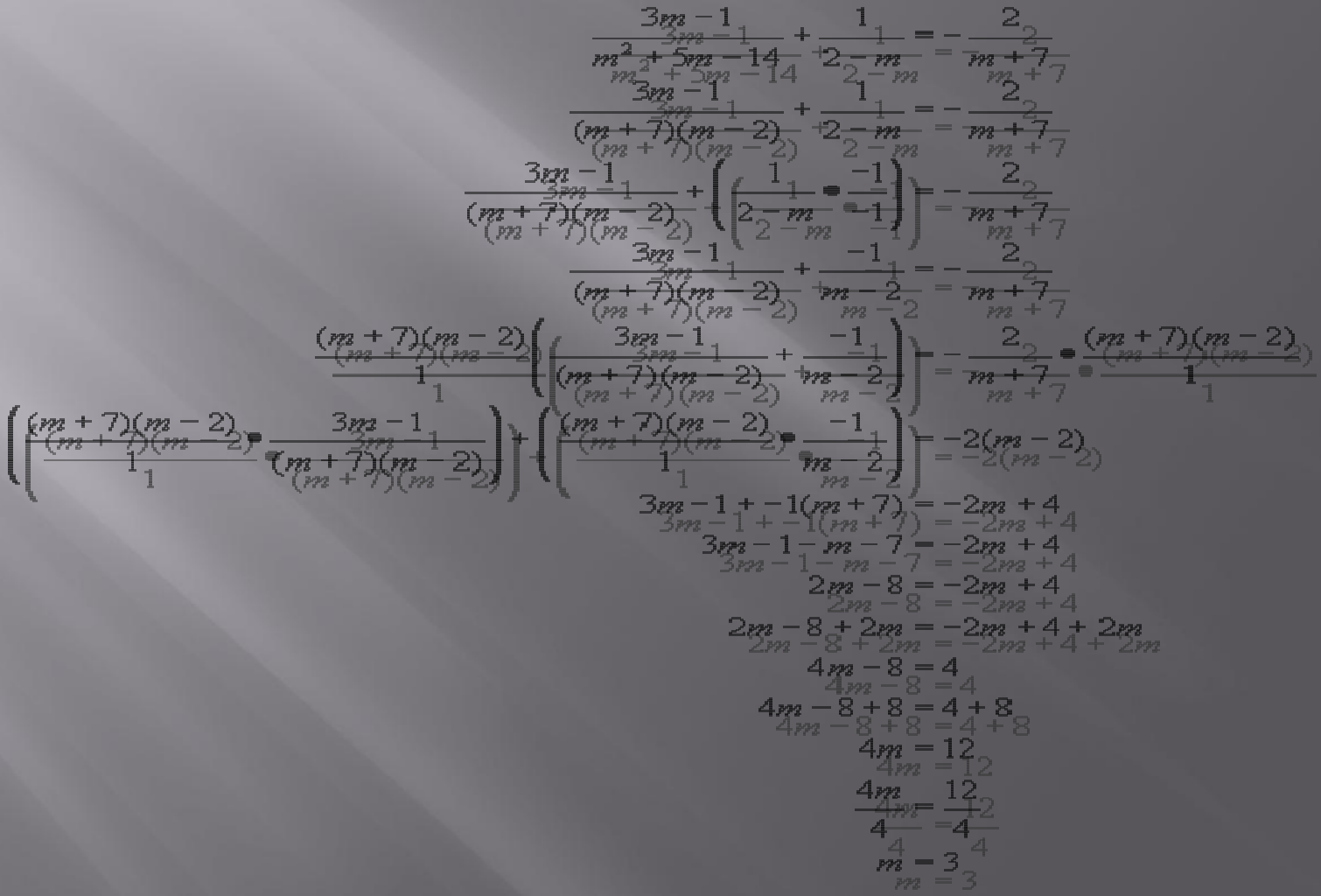
Conservation Biology Principles

- Conserve Larger, Contiguous Habitat Areas, Multi-species Focus
- Conserve and Restore Habitat Connectivity Corridors
- Conserve and Maintain Associated Ecological Systems
- Conserve Population Structures and Genetics

Determination of Compensation Requirements



Determination of Compensation Requirements

- Biological Basis – Replace lost individuals into the population
  - enhance reproductive capacity
  - enhance or expand breeding areas and opportunities
  - enhance other critical habitat areas
  - Remove or control other population stressors

Project/Compensation Nexus

- Birds per Megawatt
- Rotor-swept Area
- Aerial Extent of Rotor-swept Area
- Entire site rendered unsuitable
- WAG

Compensation Approaches

- Conservation of Essential Habitat
  - Nest Trees
  - Breeding Areas
  - Wintering or Roost Areas
  - Foraging Habitat
  - Migratory Rest Areas
  - Habitat Linkages

Compensation Mechanisms

- Permanent Conservation Mechanisms
  - Mitigation Banks
  - Purchase Fee Title
  - Conservation Easements

Compensation Approaches

- Habitat Restoration
  - Assumption that we can create habitat, restore functions
  - Assumption that we can increase carrying capacity
  - Disagreement on Success
  - Stringent Monitoring Requirements

Compensation Mechanisms

- Habitat Restoration
  - Restore non-functional areas
  - Conserved areas - to increase carrying capacity
- Habitat Enhancements
  - Exotic Species Removal

Compensation – Other Ideas

- Industry "Habitat Bank" Consortium
- Combination Approaches involving Research Contributions
- "Green" Allowance
- Decommissioning of Orphaned Facilities

Other Considerations

- Goal is Preservation in Perpetuity
- Long-Term Management funding for Mitigation Lands
- Use of third-party Land Managers

Guidelines

- Outline Decision Framework For Compensatory Mitigation Decisions
- Identify Potential Options for Compensatory Mitigation that Ensure Bird and Bat Protections
- Recommend Mitigation Monitoring Scenarios