



# Permitting Incidental Take of Eagles



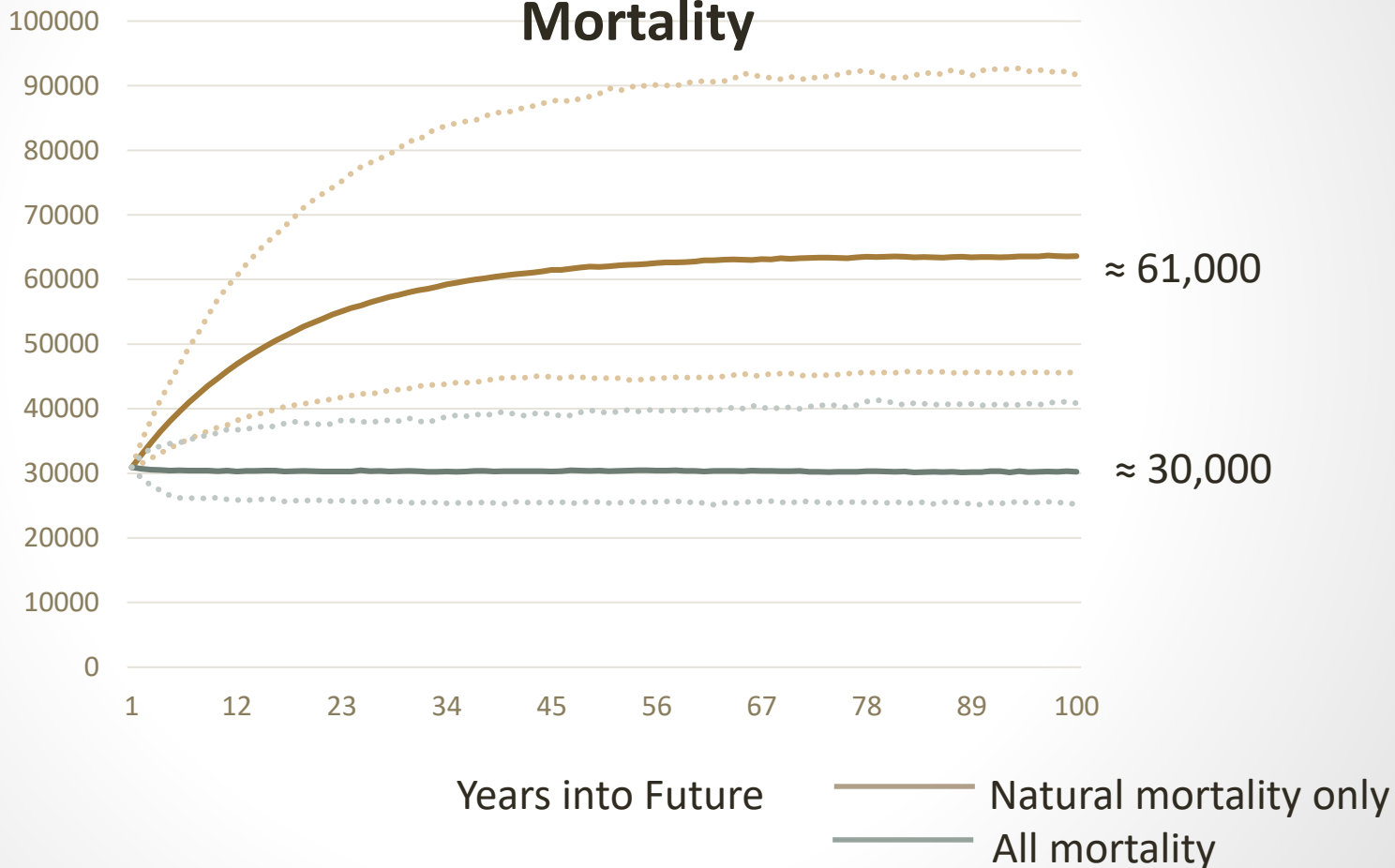
***Wildlife & Energy Interaction  
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# Status of Golden Eagle

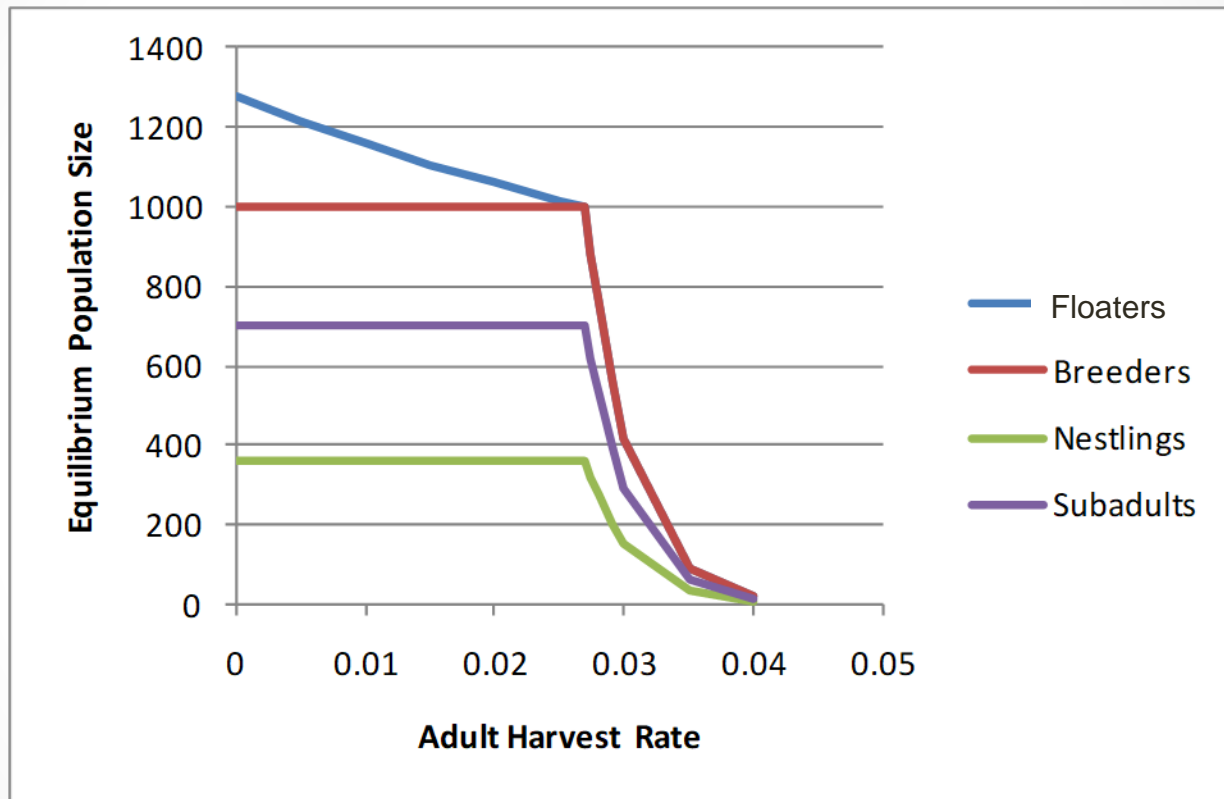
## Population Size With and Without Current Human-caused Mortality



# Managing Eagle Take

- Managing take of long-lived, slow-reproducing birds like eagles is complex
  - Populations are robust to increased take to a point, beyond which populations rapidly collapse
    - Buffering effects
      - Non-breeding adult floaters
      - Flexibility in age-at-first breeding
  - Collapse occurs when buffers have been exhausted and take rates can not be immediately reduced
    - Once buffers are exhausted, collapse can occur with only a small increase in take

# Managing Eagle Take



# Managing Eagle Take

Two possible management strategies if goal is to allow additional take but avoid the collapse

- Option 1: Monitor populations and take levels constantly and with high precision, reduce take at onset of a decline
  - This level of monitoring is impractical
  - With long-term permits, there is no practical way to reduce take once sustainable levels have been exceeded
  - “Jeopardy” threshold is exceeded before a decline can even be detected

# Managing Eagle Take

- Option 2: Estimate the sustainable take rate, and ensure it is not exceeded over the term of all permits
  - Requires setting a firm upper limit on possible take under each permit, and cumulatively over all permits, each year
    - Minimizes the chance take will exceed the critical value
    - Provides a buffer to account for uncontrollable changes in unpermitted take and environmental conditions
    - Obviates the need to suddenly reduce take

# Managing Eagle Take

Service's eagle permit program is based on Option 2

- Effects of most permits on eagles are pre-analyzed in PEIS for the permit program
- Streamlines NEPA for individual permits on eagles, as long as:
  - The upper bound on take for the permit can be determined
  - Adaptive management is incorporated to ensure a means to adjust if permitted take limits are exceeded
  - Any take over regional eagle take limits is offset through compensatory mitigation in the region

# Progress

- FY 17 to FY 18 implementation period for 2016 streamlining
- FY 19 first year of being fully operational
  - Wind permits per year FY 09 to FY 18 = 0.2
  - Wind permits per year FY 19, so far = 6.0, potentially = 10.0
- Rate of permitting under 2016 streamlining has **increased 30 to potentially 50 times**



# Further Streamlining

- FR Notice in updating “priors” for the collision risk model for wind facilities
  - Better predictions of wind-energy take
- FR Notice seeking comments on proposed low-risk permit option in review
  - Reduces monitoring requirements at low-risk sites
  - Will benefit ~ 40% of wind energy development
- Realignment of resources in Migratory Bird Program underway
  - More resources devoted to permit analyses, more permits processed

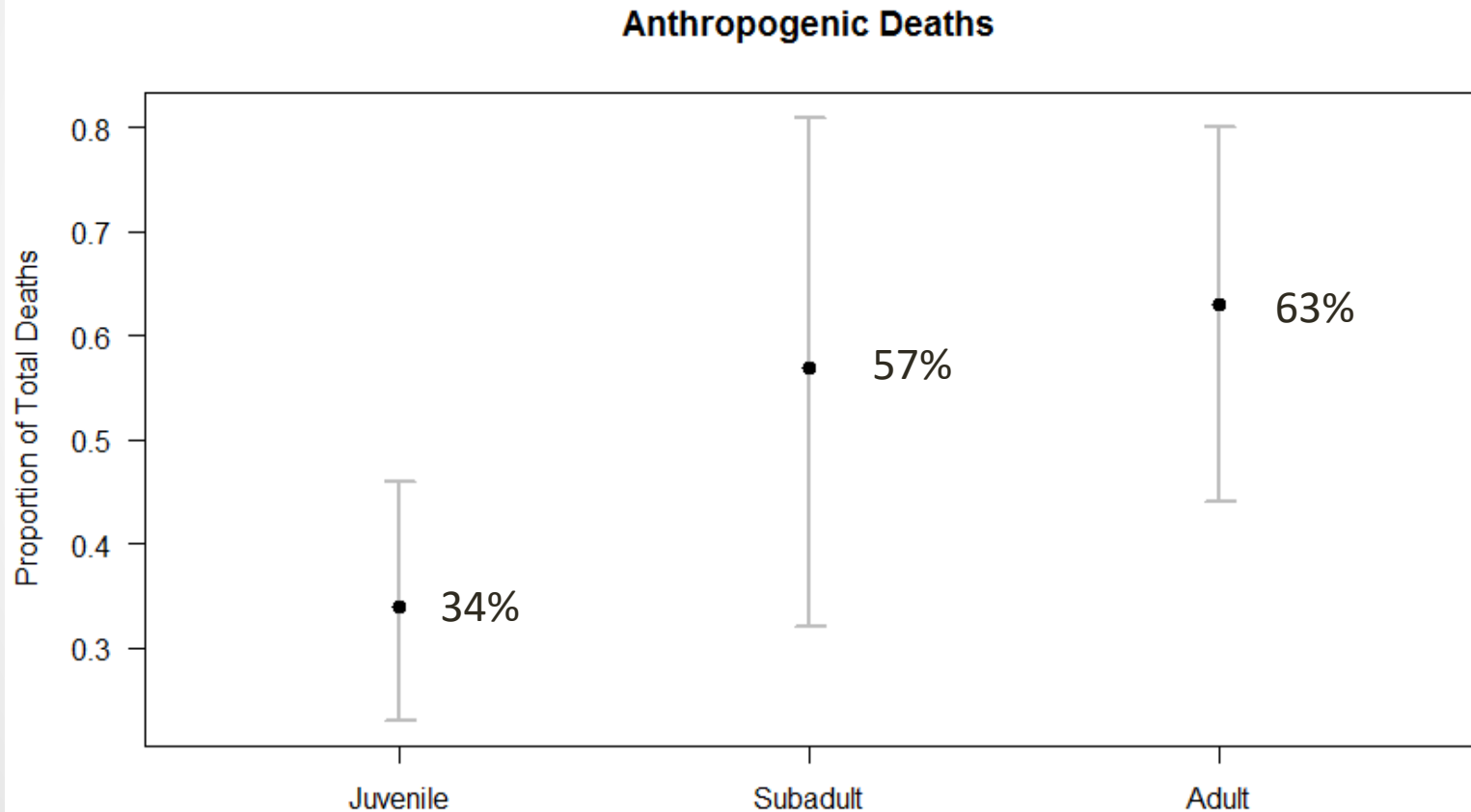
# Emergence of Third Party Mitigation Providers

- Eagle Electrocution Solutions' in lieu fee program
  - Currently operational
  - Retrofits equipment poles
- Burns & McDonnell proposed Eagle Protection Offset Program
- Contractor-arranged mitigation

All of these approaches depend on – and have contributed to – ongoing development of Service standards for using retrofits to offset eagle take.

# Additional Methods of Offsetting Eagle Take

## Proportion of Mortality Caused by Humans



# Additional Methods of Offsetting Eagle Take

- Metrics being developed for:
  - Lead abatement
  - Roadkill carcass removal
- Studies are looking at merits of:
  - Habitat enhancement
  - Rehabilitation

# Permits for Electric Utilities

- Framework should be relatively straightforward – avoidance and minimization measures are known
  - Elements of a *potential* framework:
    - Utility must have and implement a robust APP
    - New lines must follow APLIC guidelines
    - Take on pre-2009 infrastructure does not require compensatory mitigation. Retrofitting those poles can be considered compensatory mitigation for residual take from avian-friendly poles.
    - Need to identify a reasonable way to estimate fatalities
    - Need to identify feasible permit monitoring

# Thank you!

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