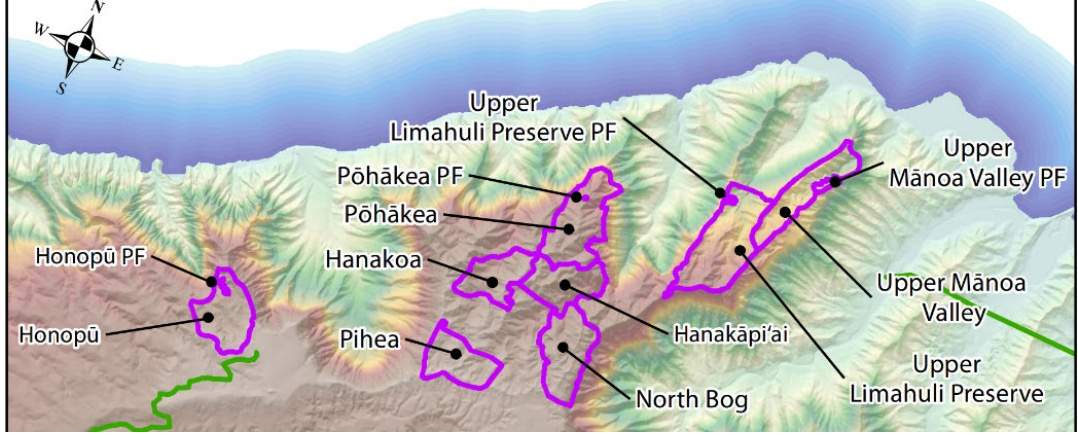
Kaua'i Island Utility Cooperative (KIUC) HCP

KIUC Responses to
ESRC Comments from
Dec. 18, 2025 meeting (cont'd) and
Jan. 16, 2026 meeting

February 6, 2026

David Zippin, Ph.D., ICF
Dawn Huff, Joule Group

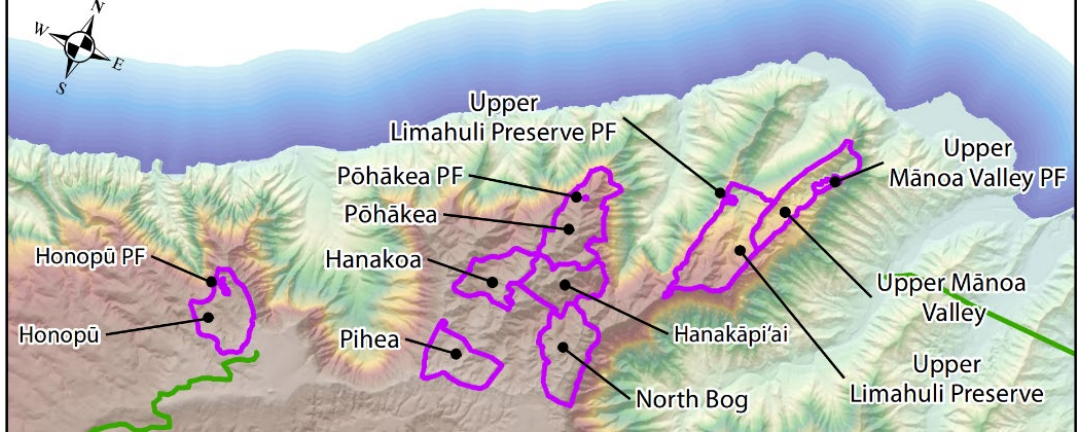
Ensure Net Environmental Benefit



ESRC Comment 9: Ensure that net benefit and net environmental benefit are clearly articulated and align with HRS Sect. 195D. Make a clear commitment to protecting ecosystems, especially for covered seabird species.

- The HCP provides a net benefit for each covered species (explained at 12/18/25 ESRC meeting)
- KIUC can include a summary table of net benefits for each covered species in the final HCP
- Achieving biological goals and objectives for Newell's shearwater (ʻaʻo) and Hawaiian petrel (ʻuaʻu) will provide tangible commitment to ecosystem level protection on Kauaʻi:
  - Provide for survival of Kauaʻi metapopulation of each species
  - Contribute to species' recovery
  - Support a viable metapopulation on Kauaʻi

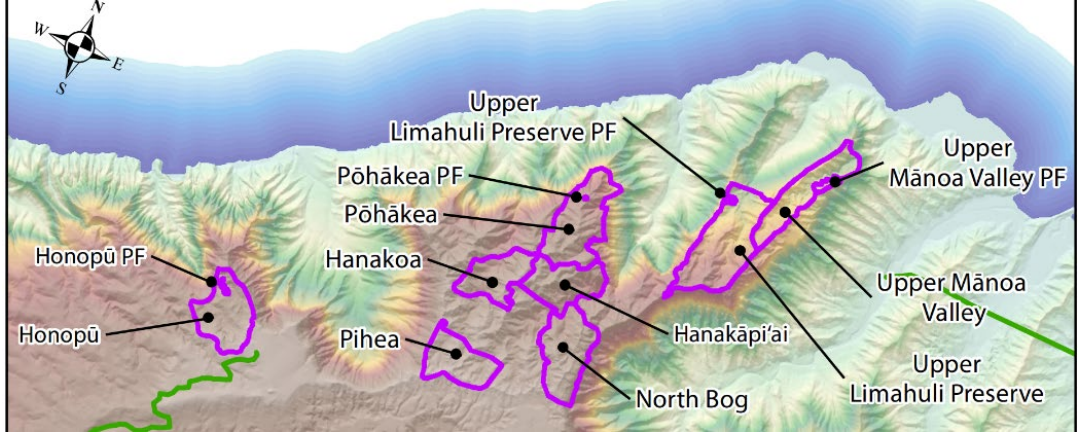
Ensure Net Environmental Benefit (cont'd)



ESRC Comment 9: Ensure that net benefit and net environmental benefit are clearly articulated and align with HRS Sect. 195D. Make a clear commitment to protecting ecosystems, especially for covered seabird species.

- Conservation actions at the 12 conservation sites (1,981 acres) provide clear benefits to ecosystems and provide net environmental benefits:
  - Increasing populations of Newell's shearwater (ʻaʻo) and Hawaiian petrel (ʻuaʻu) at conservation sites helps restore ecological balance
  - Improved soil composition from increasing amounts of seabird guano—supports, revitalizes native plant communities
  - Benefits to forest birds through rodent and feral cat control
  - Benefits to native plant communities through rodent control
  - Increased native seed recruitment and growth through removal of invasive plant species and rodent control
  - Best long-term data set on Newell's shearwater (ʻaʻo) and Hawaiian petrel (ʻuaʻu) in Hawaiʻi
  - Continued data analysis and peer-reviewed publications have and will increase knowledge of species and improve future conservation efforts

Ensure Net Environmental Benefit (cont'd)



ESRC Comment 9: Ensure that net benefit and net environmental benefit are clearly articulated and align with HRS Sect. 195D. Make a clear commitment to protecting ecosystems, especially for covered seabird species.

- Landscape-level predator control and invasive plant control will occur at 8 conservation sites (1,980 acres);
  - Maintenance of sites free from mammalian predators
  - Social attraction
- Intensive invasive plant management and replanting of native plant species that support seabird breeding habitat will occur at 5 sites: Upper Limahuli Preserve and 4 social attraction sites (395 acres)
  - Benefits to wide range of native plant and wildlife species
- Powerline collision minimization benefits other non-listed native bird species
- KIUC funding of SOS benefits other bird species
  - KIUC funding ensures continued base of operations; funding is not limited to covered species only
  - 2024: 19 non-covered bird species rescued by SOS (288 individuals out of 581 total)
- KIUC will more clearly articulate these net benefits and net environmental benefits in the final HCP

EIS Alternatives C and D: Additional Minimization and Mitigation

ESRC Comment 10: Referencing the Draft EIS, additional powerline and lighting minimization options (Options C and D) are included and should be considered. If feasible, the law requires KIUC to pursue these options.

- HCP costs affect electricity rates on Kauaʻi—direct impact to residents and businesses
- In 2023, Hawaiʻi PUC approved increase in KIUC electricity rates to include HCP costs as of 2023
- Additional HCP actions (minimization or mitigation) that significantly increase HCP costs will require further rate increase
- Economic hardship concern
  - Asset Limited, Income Constrained, Employed (ALICE) households = above poverty level but unable to afford basic living expenses
  - Kauaʻi County in 2023: 34% of households meet ALICE criteria. Another 8% are below poverty line.
  - Conclusion: 42% of KIUC households would struggle to pay another electric bill increase

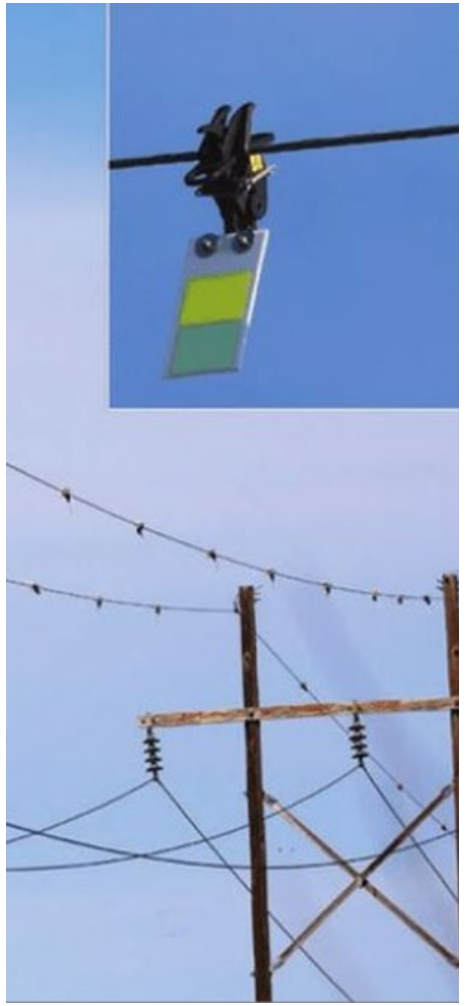
EIS Alternative C Overview: Additional Minimization

- **EIS Alternative C proposes additional minimization**
  - Powerline minimization
  - Streetlight minimization
  - Increase funding to SOS for additional rescue and release of covered birds
- **Origins of Alternatives**
  - Public scoping comments
  - Ideas from DOFAW, USFWS, and EIS consultants
- **KIUC had no input into design of EIS alternatives**
  - Few details provided
  - EIS: “KIUC has not specifically evaluated the alternative for technical and economic feasibility.”

EIS Alternative C: Additional Powerline Minimization

Context:

- KIUC conducted economic analysis of all potential minimization actions on all spans with a bird strike risk
- Based on span-by-span strike estimates developed in 2020 by KESRP using a Bayesian model (HCP Appendix 5C)
- Based on strike risk for each span and the economic analysis, KIUC selected spans for minimization to achieve the greatest benefit to birds from minimization



EIS Alternative C: Additional Powerline Minimization (cont'd)

1. ***Alt C: Reconfigure vertical profile of 4.4 mi of existing powerlines with "higher risk"***
   - KIUC completed 3 major reconfiguration projects west of Lihue (Fig. 4-4, Table 4-3)
   - Reconfiguration projects are costly and must be reserved only for highest collision-risk spans in areas where reconfiguration is feasible with limited impacts to native plants and cultural resources
   - Reconfiguration projects do not necessarily provide greatest benefit to birds – a combination of bird flight diverters and static wire removal may provide equal or greater benefit depending on location, strike risks
   - KIUC does not know where the 4.4 miles of reconfiguration are proposed – cannot evaluate feasibility
   - Cost for reconfiguration varies widely based on location, terrain, accessibility, size of the easement and clearance from roadway
2. ***Alt C: Remove static wire on 0.7 mi of existing powerlines that have higher collision risk***
   - KIUC already removed over 95% of static wires with collision risk (Fig. 4-3)
   - Remaining static wires cannot be removed due to safety and fire considerations (e.g., lightning protection at substations) or wires are inaccessible

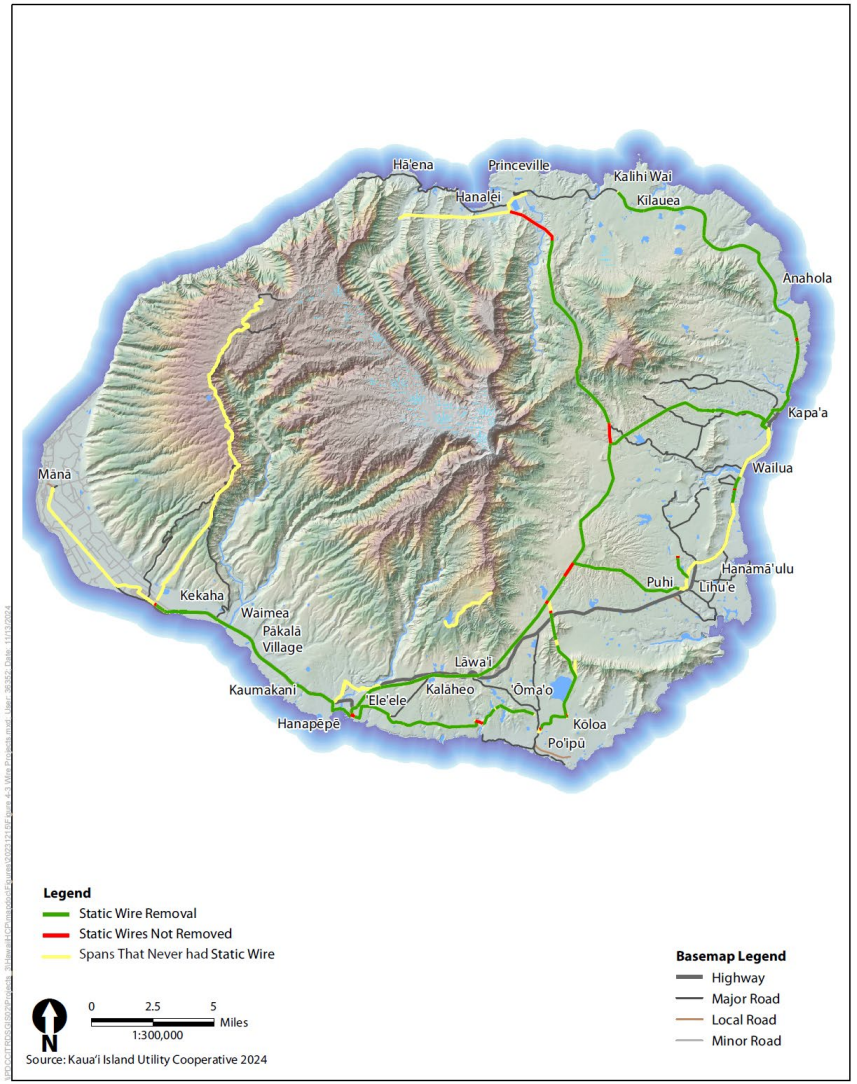


Figure 4-3. Static Wire Removal

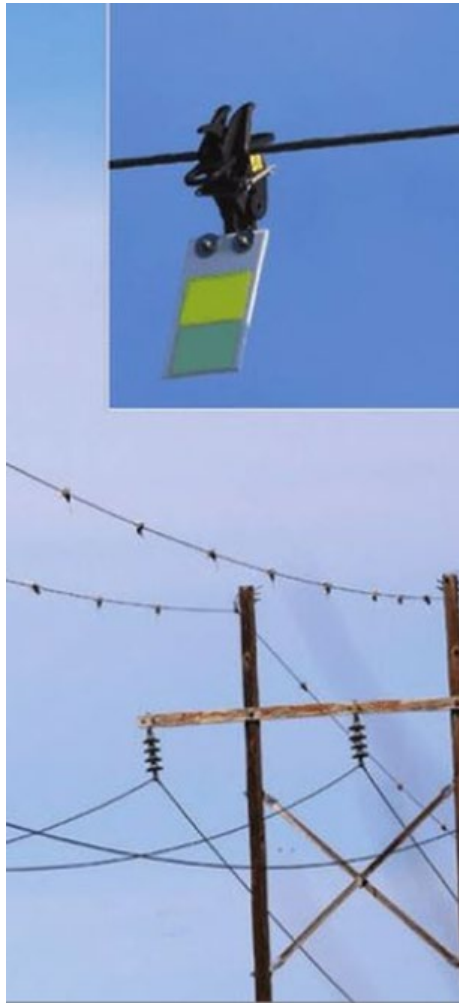
EIS Alternative C: Additional Powerline Minimization (cont'd)

3. *Alt C: Install flight diverters (LED or reflective) on 2.7 mi of existing powerlines with higher collision risk*

- KIUC installed bird flight diverters (reflective or LED) on almost all spans with collision risk, often multiple levels (Fig. 4-2)
- Additional diverters have high cost and low benefit

4. *Alt C: Employ flight diverters on each layer of wires on 8.9 mi of powerline spans with higher collision risk*

- Often low to no benefit for seabirds from flight diverters on lower wires – location specific information would be required to evaluate whether there would be benefits gained by adding diverters to multiple layers
- Areas with high risk to waterbirds have diverters on all layers of wires



EIS Alternative C: Additional Streetlight Minimization

Alt C: Reduce lumens on streetlight bulbs by 15 percent by using light dimmers

Context: Streetlight minimization in HCP

- Streetlight minimization actions must balance light pollution and public safety
- KIUC completed streetlight minimization 2017-2019 on lights at that time
- KIUC employs streetlight minimization on all new streetlights
- KIUC maintains minimization on existing streetlights as needed
- KIUC installed full-cutoff shields on all fixtures – light blocked from bird's view plane
- KIUC converted high-pressure sodium bulbs to 3000-kelvin LED bulbs using a combination of 41 watts and 90 watts
  - Approximately 75% of the streetlights are 41 watts and 25% are 90 watts
  - 41 watt bulbs are primarily in rural areas with few or no other light sources

- **Implementation is not practicable**
  - No data that dimming lights by 15 percent will measurably reduce seabird fallout compared to current wattage and full cut-off shields
  - Most KIUC streetlights (~75%) are already dim at 41 watts; dimming *increases risks to public safety*
  - Without county ordinance requiring dimming, KIUC could be subject to safety damages claims
  - KIUC does not control wattage, illumination, or location of streetlights – Kaua‘i County Code 9-2.7(a)(4): **“**The construction of streetlights shall conform to the standards established by the Department of Public Works.”

EIS Alternative C: Additional Streetlight Minimization (cont'd)

- ***Alt C: Reduce the lumens on streetlight bulbs by 15 percent by using light dimmers***

- **Even if there is a benefit to seabirds, benefit to HCP would be minimal**
  - Radiance model (HCP Appendix 5B) indicates streetlights contribute less than 10% of "lightscape" on Kaua'i – 6.1% overall (up to 13.2% in two sectors)
  - Newell's shearwater mortality from fallout = up to 100 birds/year (5.6% of all HCP mortality)
  - Hawaiian petrel mortality from fallout = up to 5.5 birds/year (0.8% of all HCP mortality)
  - Additional minimization would not result in a significant reduction of take
- **Conclusions**
  - KIUC believes HCP minimization represents reasonable balance of minimizing light pollution, light attraction for seabirds, and safeguarding public safety
  - KIUC cannot justify legal risk and risk to public safety of dimming without County ordinance
  - KIUC cannot justify dimming lights without scientific basis for benefit to seabirds

EIS Alternative C: Additional Funding to SOS Program

- ***Alt C: Increase funding by 50% (to $450,000 annually) to increase discovery rate of seabirds during fallout season from 10% to 20%***
  - EIS claims this additional funding would increase listed seabird discovery, intake, rehab, and release
  - No evidence or explanation provided as to how 50% more funding would double rate of seabird fallout discovery
  - Increasing funding to public education and outreach would likely have very limited or no effect on discovery rate
  - Most additional funding would expand intake and rehab capacity without changing seabird intake numbers
- **KIUC funding commitment**
  - $300,000 per year in current dollars that would increase with inflation
  - $14,000 per year for public outreach and education (in addition to KIUC direct outreach)
  - Per SOS, this funding is sufficient to provide benefits cited in HCP
  - Provides consistent level of base funding that enables SOS to remain open and operational
  - Provides minimization *and mitigation* for covered waterbirds (5 species)
  - Provides minimization for 3 covered seabirds (but no benefit assumed in HCP seabird model)

EIS Alternative D: Additional Mitigation for Seabirds

- **EIS Alternative D:**
  - *Expand ungulate control on state land around the conservation sites within the Hono O Nā Pali Natural Area Reserve. Increase acreage enclosed by ungulate fences by 1,915 acres*
  - *Expand predator control in 1,394 acres of three additional conservation sites where predator-proof fences, social attraction, and a predator trapping network would be implemented (i.e., to 3,375 acres, a 70% increase)*
  - *Expand area of barn owl control outside conservation sites by 1,394 acres (same increase)*
  - *Expand predator control, habitat management, waterbird population monitoring, and barn owl control within an area outside of the conservation sites on 50 acres of state land within Mānā plain wetlands.*
- **Conclusions**
  - KIUC never proposed the additional mitigation in Alternative D
  - KIUC HCP provides the proposed conservation measures to fully offset impacts of the taking and provide a net benefit to the covered species
  - KIUC HCP conservation strategy already meets the maximum extent practicable standard
  - Additional mitigation would increase cost and require PUC rate increase (same ALICE economic hardship concerns)

Change KIUC Streetlights to < 2% Blue Light

ESRC Comment 11: Maximizing minimization as much as practicable has not been achieved and should not be presumed to be complete for the 50-year permit duration. a. Convert KIUC lights to less than 2% blue light-emitting lights. This is practical, and the technology is available. b. Motion sensors should also be used; this can be implemented for streetlights in remote areas.

- **HCP demonstrates full offset and net benefit to covered seabirds – additional minimization is not needed or required to meet state standards**
  - HCP minimization includes full cut off shields, which block light from projecting upwards into seabird field of view.
  - Majority (~75%) of KIUC's streetlights are 41 watts (very low wattage)
  - Approximately 25% of streetlights are 90 watts—along state highways only
  - KIUC is committed to maintaining a balance of public safety and minimizing light pollution, but there is significant liability to KIUC in the absence of a county ordinance mandating it
- **No data indicate quantifiable benefit from bulbs with <2% blue light content or motion sensors**
  - KIUC does not control wattage, illumination, or location of streetlights

Change KIUC Streetlights to < 2% Blue Light (cont'd)

ESRC Comment 11: Maximizing minimization as much as practicable has not been achieved and should not be presumed to be complete for the 50-year permit duration. a. Convert KIUC lights to less than 2% blue light-emitting lights. This is practical, and the technology is available. b. Motion sensors should also be used; this can be implemented for streetlights in remote areas.

- **Even if there is a benefit to seabirds, benefit would be small**
  - Small proportion of KIUC streetlights located in otherwise unlit areas
  - Radiance model (HCP Appendix 5B) indicates streetlights contributes small proportion of total "lightscape" on Kaua'i – 6.1% overall, up to 13.2% in two of 33 zones)
  - Most streetlights in highly lit areas—changing those streetlights would not benefit seabirds
  - Without a county-wide lighting ordinance that affects ALL light sources, further streetlight minimization will make very little difference in the lightscape on Kaua'i
- **Conclusions**
  - KIUC cannot justify public safety and legal risk, and increasing economic hardship for Kaua'i families by switching to bulbs with <2% blue light or utilizing motion sensors, without a County ordinance mandating this for all light sources
  - KIUC cannot justify additional light minimization without scientific data indicating a significant benefit to seabirds given the lightscape context