

11/14/16

PG&E's Avian Protection Plan

Key Elements





APLIC's 12 Key APP Elements

1. Corporate Policy
2. Training
3. Permit Compliance
4. Construction Design Standards
5. Nest Management
6. Avian Reporting System
7. Risk Assessment Methodology
8. Mortality Reduction Measures
9. Avian Enhancement Options
10. Quality Control
11. Public Awareness
12. Key Resources



PG&E's APP Key Elements



Pacific Gas and Electric Company

Utility Standard S2321

Sponsor: **Director, Standards and Compatible Units Department**

Effective Date: June 1, 2007

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Title: Avian Protection Plan

The Following are Elements from PG&E's APP:

- 3. Avian Reporting
- 6. Raptor Concentration Zone
- 9. Risk Assessment and Retrofit Program
- 11. Avian Enhancement
- 12. Public Awareness





Avian Reporting

DEPARTMENT OF THE INTERIOR
U.S. FISH AND WILDLIFE SERVICE

FEDERAL FISH AND WILDLIFE PERMIT

U.S. Fish and Wildlife Special Purpose Permit requires reporting for:

- Bird mortality
 - Nest take
 - Permission to remove active nests (in writing from USFWS)
 - Eagle salvage
-
- PG&E developed a comprehensive web based reporting system to report and track bird incidents

1. PERMITTEE

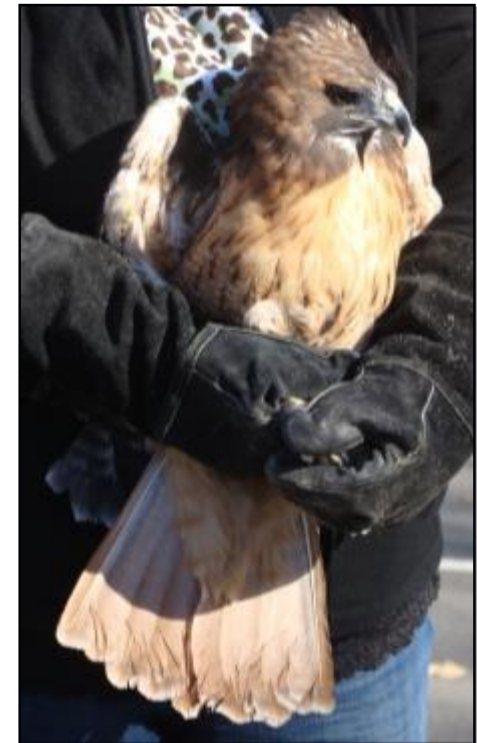
PACIFIC GAS & ELECTRIC CO.
ELECTRIC ASSET LIFE CYCLE PLANNING
ATTN: MIKE BEST
4040 WEST LANE
STOCKTON, CA 95204
U.S.A.



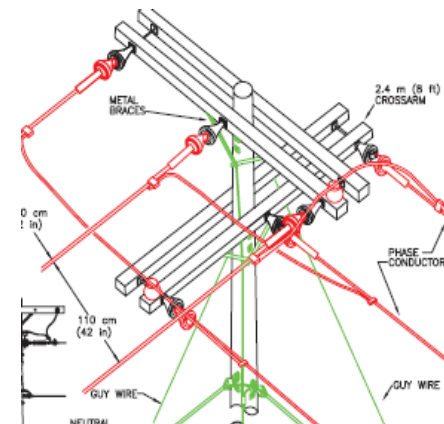
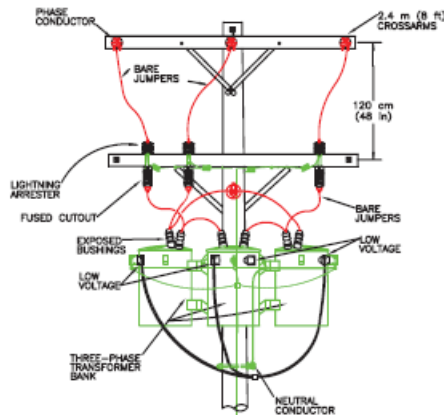
Risk Assessment & Retrofit Program



- PG&E retrofits 2000 poles annually
= *proactive retrofits*
- 2,161 poles proactively retrofit in 2014
- 2002-2015 >28,500 poles addressed through program
- PG&E responds to identified bird-caused outages with *reactive retrofits*



Reactive Raptor Retrofit



- Raptor Incident = retrofit within 90 days
- 5 pole adjacent review targets high risk poles
- 2015 “reactive” work = 2,074 poles
- 2015 > 1,050 bird-caused outages reported
- 2002-2015 > 32,300 poles “reactively” retrofit
- Retrofits & avian-safe construction can prevent bird-caused outages

Avian Enhancement



- Some species may benefit from habitat improvements, nest platforms, nest boxes, and cooperative efforts with agencies or other wildlife organizations
- Miles of bird flight diverters added in critical habitat to reduce collision risk
- Certain species such as ospreys benefit from utility infrastructure & nest platforms





Owl Safe Project

- Partnerships with Lodi Woodbridge Winegrape Commission & Central Coast Vineyard Team
- The program has received National & International coverage
- Informs growers on the proper placement and maintenance of owl boxes
- Reduces barn owl electrocutions on utility poles / minimizes bird-related outages



Owl Box Best Management Practices (BMPs)

See Brochure -- *Barn Owl Nesting Boxes, BMPs*

Box Location

Field edges / Nearby refuge trees for owlets / 1 per 10-20 acres /
Low traffic areas not close to fast and busy roadways / Vineyards

Barn Owl Nesting Boxes

Best Management Practices



Box Maintenance

Do not disturb Feb – Sept
Clean box Oct – Dec
Use protective equipment (rubber gloves/mask)
Mount 8 – 12 ft high on metal pole or post
Face box East / Northeast / Southeast
Apply bedding (wood mulch) at 1-3 in depth
Use pine, fir, hardwood – no cedar/sawdust/straw
May install in vicinity of barn / other structures



Barn Owl (Tyto Alba)

Locates prey by sound / Double clutches / Large families ~4-5 eggs; ~4-7 range / Small mammal prey / Silent nocturnal flight / Fledge ~1.5 months / Dependent ~1.5-2.5 months / Juvenile dispersal ~3.5 months



Great Horned Owl (Bubo virginianus)





Public Awareness

- Information about PG&E's Avian Protection Plan (APP) is provided by APP brochures, @ pge.com, and PG&E's Corporate Responsibility Report
- The APP is a key measurement of PG&E's commitment to Environmental Stewardship

