

**Updated Biological Assessment Determinations**  
**by U.S. Nuclear Regulatory Commission Staff for Combined License for FPL Turkey Point Units 6 and 7**  
**August 2016**

Scientific Name	Common Name	Federal Status	February 2015 BA Determination	Updated 2016 NRC Staff Determination	Rationale
<b>Mammals</b>					
<i>Eumops floridanus</i>	Florida bonneted bat	E	May affect, but not likely to adversely affect	May affect, but not likely to adversely affect	Habitat generalist despite its limited geographic range; apparent preference for urban habitats rather than the wetland and other natural habitats prevalent over much of action area.
<i>Puma concolor coryi</i>	Florida panther	E	Likely to adversely affect	Likely to adversely affect	Lands south and west of Turkey Point site are Florida Panther Consultation Area (FPL 2011). Historical Telemetry records of panthers west of L-31E Canal and portions of proposed transmission line corridors (FPL 2011). Broad home range of Florida panther makes impacts related to habitat loss unlikely, but potential exists for collision with and injury from vehicles and equipment. FPL has committed to speed limits of 45 mph on access roads and transmission corridors crossing panther habitat (FPL 2011).
<i>Trichechus manatus latirostris</i>	Florida manatee	E	May affect, but not likely to adversely affect	May affect, but not likely to adversely affect	Known to occur in Biscayne Bay but not within Turkey Point site or industrial wastewater (cooling canal) facility (FPL 2011). Area affected by proposed barge basin lacks attributes favorable to manatees (FPL 2011). FPL proposes to use manatee observers wherever in-water work is performed in potential manatee habitat (FPL 2011).
<b>Birds</b>					
<i>Ammodramus maritimus mirabilis</i>	Cape Sable seaside sparrow	E	No Effect	No Effect	Absence of suitable habitat in action area (NRC 2015).
<i>Calidris canutus rufa</i>	Rufa red knot	T	May affect, but not likely to adversely affect	May affect, but not likely to adversely affect	May transiently use mudflat areas on mud island where reactors will be built, but compensatory habitat to be established as mitigation in marshes within Turkey Point site and Everglades Mitigation Bank (FPL 2012). Action area out of breeding range.
<i>Charadrius melodus</i>	Piping plover	T	May affect, but not likely to adversely affect	May affect, but not likely to adversely affect	May transiently use mudflat areas on mud island where reactors will be built, but compensatory habitat to be established as mitigation in marshes within Turkey Point site and Everglades Mitigation Bank (FPL 2012). Action area out of breeding range.
<i>Mycteria americana</i>	Wood stork	E	Likely to adversely affect	Likely to adversely affect	Habitat loss addressed as part of wetland compensatory mitigation plan (FPL 2012). Potential for physical injury by transmission lines addressed

**Updated Biological Assessment Determinations**  
**by U.S. Nuclear Regulatory Commission Staff for Combined License for FPL Turkey Point Units 6 and 7**  
**August 2016**

					in avian protection plan and Conditions of Certification (FPL 2011). Some uncertainty regarding effectiveness of avian protection measures.
<i>Rostrhamus sociabilis plumbeus</i>	Everglade snail kite	E	Likely to adversely affect	Likely to adversely affect	Western transmission line corridor passes through freshwater marsh habitats providing potential habitat (FPL 2011). The FFWCC has observed and documented successful snail kite nesting in adjacent habitats, and construction on the west side of the L-31 canal could affect suitable habitat. FPL has proposed pre-clearing surveys prior to work on western transmission line in potentially suitable freshwater marsh habitat (FPL 2011). Additionally, the avian protection plan (FPL 2011) and avian protection measures in Conditions of Certification will reduce risk of collision injury with transmission lines. Some uncertainty regarding effectiveness of avian protection measures and other mitigation.
<i>Sterna dougallii</i>	Roseate tern	T	No Effect	No Effect	Occurs in isolated areas of Miami-Dade County but not expected in any part of action area
<b>Insects</b>					
<i>Anaea troglodyte floridalis</i>	Florida leafwing butterfly	E	May affect, but not likely to adversely affect	May affect, but not likely to adversely affect	Potential occurrence limited to areas of vegetation disturbance in pine rocklands (NRC 2016). Approximately 0.84 ac of the King's Highway Pine Rockland would be subject to vegetative disturbance to build the west transmission line (NRC 2016). However, the work would all be performed within an existing transmission line corridor, and in accordance with vegetation management practices established under the Florida Conditions of Certification. The 31-ac King's Highway Pine Rockland is targeted for acquisition by Miami-Dade County Environmentally Endangered Lands Program, where lands in and outside of the transmission corridor will be preserved and continue to provide habitat for this butterfly (NRC 2016).
<i>Cicindela floridana</i>	Miami Tiger Beetle	PE	No ESA Status at time of 2015 BA	May affect, but not likely to adversely affect	Potential occurrence limited to areas of vegetation disturbance in pine rocklands (NRC 2016). Approximately 0.84 ac of the King's Highway Pine Rockland would be subject to vegetative disturbance to build the west transmission line (NRC 2016). However, the work would all be performed within an existing transmission line corridor, and in accordance with vegetation management practices established under

**Updated Biological Assessment Determinations**  
**by U.S. Nuclear Regulatory Commission Staff for Combined License for FPL Turkey Point Units 6 and 7**  
**August 2016**

					the Florida Conditions of Certification. The 31-ac King's Highway Pine Rockland is targeted for acquisition by Miami-Dade County Environmentally Endangered Lands Program, where lands in and outside of the transmission corridor will be preserved and continue to provide habitat for this beetle (NRC 2016).
<i>Cyclargus thomasi bethunebakeri</i>	Miami blue butterfly	E	No Effect	No Effect	Only known to occur in Lower Florida Keys (out of action area) (NRC 2015).
<i>Heraclides aristodemus ponceanus</i>	Schaus swallowtail butterfly	E	May affect, but not likely to adversely affect	May affect, but not likely to adversely affect	Project would not affect any tropical hardwood or western Everglades hardwood habitats (NRC 2015). Building transmission lines could affect habitat dominated by Brazilian pepper, which is recognized as providing possible habitat (NRC 2015). However, the potential occurrence of the butterfly in lands dominated by an aggressive invasive species such as Brazilian pepper is low (NRC 2015).
<i>Strymon acis bartrami</i>	Bartram's scrub-hairstreak butterfly	E	Likely to adversely affect	May affect, but not likely to adversely affect	Potential occurrence limited to areas of vegetation disturbance in pine rocklands (NRC 2016). Approximately 0.84 ac of the King's Highway Pine Rockland, designated critical habitat for the Bartram's scrub-hairstreak, would be subject to vegetative disturbance to build the west transmission line (NRC 2016). However, the work would all be performed within an existing transmission line corridor, and in accordance with vegetation management practices established under the Florida Conditions of Certification. The 31-ac King's Highway Pine Rockland is targeted for acquisition by Miami-Dade County Environmentally Endangered Lands Program, where lands in and outside of the transmission corridor will be preserved and continue to provide habitat for this butterfly (NRC 2016).
<b>Reptiles</b>					
<i>Crocodylus acutus</i>	American crocodile	T	Likely to adversely affect	May affect, but not likely to adversely affect	FPL proposes pre-clearing surveys prior to work in potential habitat and removal of individuals found in areas of proposed work (FPL 2011). Daytime and nighttime pre-clearing surveys proposed no more than 48 hours prior to start of construction in potential habitat (FPL 2011). Additionally FPL plans construction of wildlife underpasses on the road between the northern end of the IWF and the test canals to minimize

**Updated Biological Assessment Determinations**  
**by U.S. Nuclear Regulatory Commission Staff for Combined License for FPL Turkey Point Units 6 and 7**  
**August 2016**

					vehicular mortalities. The utility will continue annual monitoring for the species.
<i>Drymarchon couperi</i>	Eastern indigo snake	T	May affect, but not likely to adversely affect	May affect, but not likely to adversely affect	FPL has committed to the US Fish & Wildlife Service Standard Protection Measures for Eastern Indigo Snakes as well as pre-clearing surveys and installing wildlife fencing where appropriate to reduce vehicular injury (FPL 2011).
<b>Plants</b>					
<i>Amorpha herbacea</i> var. <i>crenulata</i>	Crenulate lead-plant	E	May affect, but not likely to adversely affect	May affect, but not likely to adversely affect	Potential occurrence limited to pine rocklands (NRC 2015); proposed mitigation calls for pre-clearing surveys of any affected pine rockland habitat and relocation of any potentially affected individuals (NRC 2016).
<i>Argythamnia blodgettii</i>	Blodgett's silverbush	C	N/A	N/A	Candidate species addressed in BA but not subject to conclusions.
<i>Brickellia eupatorioides</i> var. <i>floridana</i>	Florida Brickell-bush	PE	Likely to adversely affect	May affect, but not likely to adversely affect	Potential occurrence limited to pine rocklands (NRC 2015); King's Highway pine rockland within Western Transmission corridor is designated critical habitat. Proposed mitigation calls for pre-clearing surveys of any affected pine rockland habitat and relocation of any potentially affected individuals (NRC 2016).
<i>Chamaesyce deltoidea</i> ssp. <i>deltoidea</i>	Deltoid spurge	E	May affect, but not likely to adversely affect	May affect, but not likely to adversely affect	Potential occurrence limited to pine rocklands (NRC 2015); proposed mitigation calls for pre-clearing surveys of any affected pine rockland habitat and relocation of any potentially affected individuals (NRC 2016).
<i>Chamaesyce deltoidea</i> ssp. <i>pinetorum</i>	Pineland sandmat	C	N/A	N/A	Candidate species addressed in BA but not subject to conclusions.
<i>Chamaesyce garberi</i>	Garber's spurge	T	May affect, but not likely to adversely affect	May affect, but not likely to adversely affect	Potential occurrence limited to pine rocklands (NRC 2015); proposed mitigation calls for pre-clearing surveys of any affected pine rockland habitat and relocation of any potentially affected individuals (NRC 2016).
<i>Cucurbita okeechobeensis</i> ssp. <i>okeechobeensis</i>	Okeechobee gourd	E	No effect	No effect	Known range does not encompass action area (NRC 2015)

**Updated Biological Assessment Determinations  
by U.S. Nuclear Regulatory Commission Staff for Combined License for FPL Turkey Point Units 6 and 7  
August 2016**

<i>Dalea carthagenensis</i>	Florida prairie-clover	C	N/A	N/A	Candidate species addressed in BA but not subject to conclusions.
<i>Digitaria pauciflora</i>	Florida pineland crabgrass	C	N/A	N/A	Candidate species addressed in BA but not subject to conclusions.
<i>Galactia smallii</i>	Small's milkpea	E	May affect, but not likely to adversely affect	May affect, but not likely to adversely affect	Potential occurrence limited to pine rocklands (NRC 2015); proposed mitigation calls for pre-clearing surveys of any affected pine rockland habitat and relocation of any potentially affected individuals (NRC 2016)
<i>Jacquemontia reclinata</i>	Beach jacquemontia	E	May affect, but not likely to adversely affect	May affect, but not likely to adversely affect	Preferred coastal dune and coastal scrub habitat do not occur in action area (NRC 2015).
<i>Linum arenicola</i>	Sand flax	C	N/A	N/A	Candidate species addressed in BA but not subject to conclusions.
<i>Linum carteri</i> var. <i>carteri</i>	Carter's small-flowered flax	PE	Likely to adversely affect	May affect, but not likely to adversely affect	Potential occurrence limited to pine rocklands (NRC 2015); King's Highway pine rockland within Western Transmission corridor is designated critical habitat. Proposed mitigation calls for pre-clearing surveys of any affected pine rockland habitat and relocation of any potentially affected individuals (NRC 2016).
<i>Polygala smallii</i>	Tiny polygala	E	May affect, but not likely to adversely affect	May affect, but not likely to adversely affect	Potential occurrence limited to pine rocklands (NRC 2015); proposed mitigation calls for pre-clearing surveys of any affected pine rockland habitat and relocation of any potentially affected individuals (NRC 2016).

References

FPL (Florida Power & Light). 2011. FPL Turkey Point Units 6 & 7 Threatened and Endangered Species Evaluation and Management Plan, July 2011, 09387652.

FPL (Florida Power & Light). 2012. Turkey Point Units 6 and 7, Mitigation Plan Rev. 2 (USACE Supplement), Presented in accordance with USACE mitigation guidance.

NRC (U.S. Nuclear Regulatory Commission). 2015. Biological Assessment for the U.S. Fish and Wildlife Service, U.S. Nuclear Regulatory Commission and U.S. Army Corps of Engineers, Turkey Point Units 6 and 7 Project. Included in Appendix F to Draft Environmental Impact Statement.

**Updated Biological Assessment Determinations  
by U.S. Nuclear Regulatory Commission Staff for Combined License for FPL Turkey Point Units 6 and 7  
August 2016**

NRC (U.S. Nuclear Regulatory Commission). 2016. Supplementary Information for U.S. Fish & Wildlife Service (FWS) for Turkey Points Units 6 and 7. Submitted in August 2016 to FWS, Vero Beach, FL.