



Serial: NPD-MISC-2011-017
November 4, 2011

Annie Dziergowski
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
7915 Baymeadows Way, Suite 200
Jacksonville, FL 32256-7517

Dear Ms. Dziergowski:

RE: Progress Energy Florida – Proposed Levy Nuclear Plant Project

This letter serves as a follow-up to our September 14, 2011 letter. Attached please find the Summary of Fall Federal Listed Plants Survey.

This submittal will complete the information the USFWS has requested for the project and should allow you to complete the project review. If you have any questions regarding this information please contact Paul Snead at 919-546-2836.

Sincerely,

A handwritten signature in black ink, appearing to read 'R. Kitchen', written over a white background.

Robert Kitchen
Manager Nuclear Plant Licensing
New Generation Programs and Projects

Attachment

c: D. Bruner – NRC (w/attachment)
D. Hambrick – USACOE (w/attachment)

Attachment 1

Florida Power Corporation d/b/a Progress Energy Florida, Inc.

Levy Nuclear Plant Project

Summary of Fall Listed Plant Surveys

This document summarizes the results of threatened and endangered (listed) plant surveys conducted during fall 2011 within the proposed transmission line rights of way (ROWs) and substations associated with the Levy Nuclear Plant Project. As discussed during the meeting with PEF, Golder, and USFWS on April 6, 2011, species-specific field surveys are being conducted for federally-listed plant species within the proposed transmission line ROWs and substations during the appropriate survey seasons.

Spring surveys were conducted between March 22-24, 2011 to locate individuals of Brooksville bellflower (*Campanula robinsiae*) and Britton's beargrass (*Nolina brittoniana*) within all areas of suitable habitat; results were summarized in a May 31, 2011 submittal NPD-MISC-2011-008.

Summer surveys were conducted on July 7-8, 2011 to located individuals of Florida bonamia (*Bonamia grandiflora*) in areas of suitable habitat within the proposed Polk-Hillsborough-Pinellas (PHP) and Levy-Central Florida South (LCFS) transmission line ROWs; results were summarized in a September 14, 2011 submittal NPD-MISC-2011-013.

The following summarizes the habitat preferences (FLUCFCS Codes), flowering times, and survey periods for federally listed plants potentially occurring within the proposed transmission line ROWs or substations for the fall survey.

Table 1. Federally Listed Plants Potentially Occurring Within the Preferred Transmission Line Rights of Way and Substations – Fall Survey

Species (USFWS Classification)	Suitable Habitat (FLUCFCS Codes) and Counties of Occurrence	Flowering Period (Optimal Survey Season)	Preferred ROWs					Substations				
			BBW	CB	Common	LCFS	LCR	PHP	Citrus	CFS	CREC	Kathleen
<i>Chrysopsis floridana</i> Florida golden aster (E)	211, 212, 320, 321, 412, 413, 421, 432 (Hillsborough, Pinellas)	Aug – Nov						X				
<i>Dicerandra cornutissima</i> Long-spurred mint (E)	412, 413, 421, 432 (Marion, Sumter)	Sep – Oct				X						
<i>Justicia cooleyi</i> Cooley's water-willow (E)	414, 423, 425, 431, 434, 438, 615, 617, 630 (Hernando, Sumter)	Aug – Dec		X		X						

Aerial maps of habitat classifications based on the Florida Land Use, Cover and Forms Classification System (FLUCFCS) were used to identify the location of suitable habitat within each preferred transmission line ROW and substation where the species may occur. Habitat classification maps for each transmission line and substation were provided in the March 2011 Listed Species Assessment reports. The fall surveys were conducted October 11-12 and 17-18, 2011. A field team of 2 biologists conducted targeted pedestrian and vehicular surveys through all areas of suitable habitat, utilizing both random meander methods focused upon areas that appear likely to support Florida golden aster, long-spurred mint, or Cooley's water-willow, as well as systematic transects through broad areas of potential habitat. Species descriptions are summarized below.

Florida Golden Aster (*Chrysopsis floridana*)

Florida golden aster is classified as endangered by the USFWS. It is a perennial herb endemic to west-central Florida, approximately 10 - 16 inches tall, with woody base and wooly, erect branches rising from a rosette of densely wooly, spoon-shaped leaves (FNAI, 2001). Flower heads are approximately 1 inch across, in flat-topped clusters of up to 25 heads at the top of the stem, with golden yellow disk and ray flowers surrounded by 3 - 4 series of small bracts, present between September and November. It occurs in sunny, bare patches of sand in sand pine scrub; low sand ridges of excessively well drained, fine sands; and railroad and highway rights-of-way in Hardee, Hillsborough, Manatee, and Pinellas Counties.

Long-spurred Mint (*Dicerandra cornutissima*)

The long-spurred mint, classified as endangered by the USFWS, is known to occur in sand pine and oak scrub habitats of Marion and Sumter Counties (FNAI, 2001). It is a low shrub, to 1.3 feet tall, with numerous stiff square stems rising from a woody base. Leaves are opposite, narrow, needle-like, and smell of mint. The flowers are rose-purple with dark purple lines and dots, whitish throat, and a sharply bent flower tube, present between September and October.

Cooley's Water-Willow (*Justicia cooley*)

Cooley's water-willow is a state and federally endangered perennial herb native to the Brooksville Ridge in north central Hernando County. It grows to approximately 16 inches tall, with erect, square, hairy stems, opposite leaves to 2 inches long, and dark pink flowers in zigzag with purple and white spots, usually 2-branched clusters on long stalks. Flowering takes place from August to December. Most Cooley's water-willow populations are located in mesic hardwood forests on uplands or hills over limestone, while some are situated on low rises in wet hammocks or swamps.

Results

Based upon presence of suitable habitat and the known species distribution ranges, portions of the PHP, LCFS, and CB preferred transmission line ROWs were surveyed for individuals of Florida golden aster, long-spurred mint, and Cooley's water-willow.

Florida Golden Aster

Areas of the PHP transmission line preferred ROW contain potential habitat for Florida golden aster in the form of improved and unimproved pasture (FLUCFCS 211/212) and shrub and brushland (FLUCFCS 320). Within the PHP preferred ROW, survey efforts were focused on areas of potential habitat within Hillsborough County, specifically unimproved pasture and rangeland areas adjacent to parcels of xeric oak (FLUCFCS 421) in the vicinity of the Hillsborough River State Park (see Photograph 1). The PHP transmission line preferred ROW does not contain sand pine scrub (FLUCFCS 413), longleaf pine-xeric oak (FLUCFCS 412), or sand live oak (FLUCFCS 432) habitats which are typically suitable for the Florida golden aster. No individuals of Florida golden aster were observed within the PHP preferred ROW during the fall surveys.

Long-spurred Mint

Areas of the LCFS transmission line preferred ROW contain potential habitat within the known range of the long-spurred mint. Survey efforts included portions of the LCFS preferred ROW that contain or are adjacent to areas of longleaf pine-xeric oak (FLUCFCS 412), sand pine (FLUCFCS 413), xeric oak (FLUCFCS 421), and edges of road ROWs. Surveys were primarily focused upon forested parcels of sand pine and xeric oak located in Marion and Sumter Counties between State Road 200 and Interstate 75, as well as areas of existing cleared ROW adjacent to parcels of xeric forest. Within these habitats, areas of openings or disturbed areas in surrounding xeric forest were targeted when present (see Photograph 2). Typical conditions within forested portions of the LCFS preferred ROW were not conducive to colonization by the long-spurred mint, as considerable accumulation of leaf litter and vegetative debris reduced the occurrence of openings within scrub (see Photograph 3). No individuals of long-spurred mint were observed on the LCFS preferred ROWs during the fall surveys.

Cooley's Water-willow

Portions of the LCFS and CB transmission line preferred ROWs contain mesic and/or wetland forested habitat within the known range of Cooley's water-willow in the form of pine-mesic oak (FLUCFCS 414), mixed hardwood-conifer forest (FLUCFCS 434), mixed wetland hardwoods (FLUCFCS 617), and mixed wetland forest (FLUCFCS 630). Survey efforts focused on areas of the LCFS preferred ROW within Sumter County that contain or are adjacent to areas of mesic forested habitats (see Photograph 4). As the majority of the LCFS preferred ROW in Sumter County traverses relatively xeric habitat with a predominance of pasturelands and forested communities in the form of sand pine, habitat conditions conducive to the presence of Cooley's water-willow are limited (see Photograph 5). Similarly, the majority

of the CB preferred ROW in Hernando County is dominated by relatively dry rangeland, unimproved pasture, and adjacent xeric forest (see Photograph 6), with limited areas of mesic or wetland forest adjacent to the existing cleared ROW. No individuals of Cooley's water-willow were observed during the fall surveys on either the LCFS or CB preferred ROWs.

Seasonal Listed Plant Survey Summary

Threatened and endangered plant surveys were conducted during spring, summer, and fall 2011 within areas of suitable habitat on the CB, Common, LCFS, and PHP preferred ROWs. The following summarizes the habitat preferences, flowering times, and survey dates for federally listed plants potentially occurring within the proposed transmission line ROWs or substations.

Table 2. Federally Listed Plants Potentially Occurring Within the Preferred Transmission Line Rights of Way and Substations, Suitable Habitats, and Flowering Periods

Species (USFWS Classification)	Suitable Habitat (FLUCFCS Codes) and Counties of Occurrence	Survey Season	Preferred ROWs						Substations				Observed	
			BBW	CB	Common	LCFS	LCR	PHP	Citrus	CFS	CREC	Kathleen		
<i>Bonamia grandiflora</i> Florida bonamia (T)	412, 413, 421, 432 (Lake, Hillsborough, Marion, Polk)	Summer (July 2011)				X		X						No
<i>Campanula robinsiae</i> Brooksville bellflower (E)	520, 641, 643, 644, 653, 621 (Hernando, Hillsborough)	Spring (March 2011)		X				X						No
<i>Chrysopsis floridana</i> Florida golden aster (E)	211, 212, 320, 321, 412, 413, 421, 432 (Hillsborough, Pinellas)	Fall (Oct 2011)						X						No
<i>Dicerandra cornutissima</i> Long-spurred mint (E)	412, 413, 421, 432 (Marion, Sumter)	Fall (Oct 2011)				X								Yes ^a
<i>Justicia cooleyi</i> Cooley's water-willow (E)	414, 423, 425, 461, 434, 438, 615, 617, 630 (Hernando, Sumter)	Fall (Oct 2011)		X		X								No
<i>Nolina brittoniana</i> Britton's beargrass (E)	412, 413, 421, 427, 432 (Lake, Hernando, Marion, Polk)	Spring (March 2011)		X	X	X		X	X					Yes ^b

^a An individual of long-spurred mint was identified within the LCFS corridor during 2009 surveys, outside of the preferred ROW, as identified in the March 2011 report, *Progress Energy Levy Nuclear Plant Project Listed Species Assessment Levy to Central Florida South Transmission Line*.

^b An individual of Britton's beargrass was identified within the Common Route preferred ROW during 2009 surveys, as identified in the March 2011 report, *Progress Energy Levy Nuclear Plant Project Listed Species Assessment Common Route Transmission Line*.

Additional surveys will be conducted during the appropriate season immediately prior to initiation of clearing and construction within each transmission line preferred ROW or substation. If any individuals are observed within areas proposed for construction, PEF will consult with the USFWS to determine the appropriate avoidance, minimization, and/or mitigation measures.



Photograph 1. Unimproved pasture/rangeland areas adjacent to parcels of xeric oak in the vicinity of the Hillsborough River State Park targeted for Florida golden aster survey on the PHP preferred right-of-way.



Photograph 2. Disturbed open area in surrounding xeric forest targeted for long-spurred mint survey within the LCFS preferred ROW.



Photograph 3. Typical sand pine and xeric oak habitat within LCFS preferred right-of-way; limited understory openings suitable for long-spurred mint.



Photograph 4. Mesic forest within LCFS preferred right-of-way targeted for Cooley's water-willow survey.



Photograph 5. Typical rangeland and xeric forest within LCFS preferred right-of-way; limited potential habitat for Cooley's water-willow.



Photograph 6. Typical dry rangeland/unimproved pasture and adjacent xeric forest within CB preferred right-of-way; limited potential habitat for Cooley's water-willow.