

Rare Plant Conservation Projects funded for 2018-19

(taken from annually submitted
*APPLICATION FOR FEDERAL ASSISTANCE-
WORK PLAN 2018-2019*,
submitted to United States Fish and Wildlife
Service from Florida Department of Agriculture
and Consumer Services, Florida Forest Service)

FLORIDA STATEWIDE ENDANGERED AND THREATENED PLANT CONSERVATION PROGRAM

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**FLORIDA STATEWIDE ENDANGERED AND THREATENED PLANT
CONSERVATION PROGRAM, ANNUAL WORK PLAN
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APPLICATION FOR FEDERAL ASSISTANCE
WORK PLAN 2018-19
OCTOBER 1, 2018 THROUGH DECEMBER 31, 2019

Florida Plant Conservation Program Administration, Management, and Research

(Florida Forest Service - “State” Match as per AFA form 424). The objectives of this project are: to administer the Florida Plant Conservation Program through the timely completion and submission of both federal and state documents; administer plant conservation projects conducted by various organizations and provide access to reporting in an online database and list of report titles; test, populate, and conduct analyses using the database of funded projects related to plant recovery in Florida; and, conduct *in situ* monitoring of known rare plant populations and restoration of their habitat, if needed.

Federal	\$ 66,750.32
State Match	22,500
Total	\$ 89,250.32

Lake Wales Ridge Scrub Plant Monitoring and Management Plan Development

(Florida Forest Service - “State” Match as per AFA form 424). The objectives of this project are to: continue Level 1, 2, and 3 monitoring programs for occurrences of federally listed scrub plants on public lands in perpetuity (after Menges and Gordon 1996). Determine population trends, survival, growth, fecundity, and recruitment for selected species using Level 2 and 3 monitoring; plan and implement habitat management in locations where these species occur or where there is potential of occurrence; evaluate and research the effects of management activities on selected federally listed plant populations on at least three sites.

Federal	\$ 90,413
State Match	30,138
Total	\$ 120,551

Removal of Invasive, Exotic Plants Around *Torreya taxifolia* and *Silene catesbaei* (City of Chattahoochee, Florida/Florida Forest Service/private contractors - “Local” Match as per AFA form 424). The objectives of this project are to fund at least 5, 8 hour days using invasive plant contractors to remove invasive plants using herbicide, and hand pulling near rare plants. The federal funds requested will be utilized wholly for contractual herbicide treatments, while match for this project will come in the form of in-kind services (volunteer time and staff time).

Federal	\$ 4,412 (All Contractual Services)
Local Match	3,000 (In-Kind volunteer and staff time)
Total	\$ 7,412

APPLICATION FOR FEDERAL ASSISTANCE 2018-19 WORK PLAN (cont.)

Seminole Wayside and Addition Lands – Pine Rockland Restoration (Miami-Dade County Parks, Recreation & Open Spaces, Natural Areas Management - “Local” Match as per AFA form 424). The objectives of this project are to update and implement a management plan, inventory and monitor rare plant species and ecosystem health within selected county lands, restore and enhance habitats towards historic conditions, and introduce new federally listed species.

Federal	\$ 20,000
Local Match	31,435
Total	\$ 51,435

Conservation Research of the Recovery of Florida Ziziphus (*Ziziphus celata*) (Archbold Biological Station - “Other” Match as per AFA form 424). The objectives of this project are to conduct demographic monitoring and analysis of most wild, translocated and captive Florida ziziphus populations, conduct analysis on long-term demographic data, carry out adaptive management on translocated populations to improve microhabitat conditions for survival and growth, collaborate with molecular geneticists to document genetic diversity among wild multi-clonal populations, assess parentage of plant material to be used in future translocations, explore additional genetic factors that may lead to introduction success, assist in cultivating propagules of underrepresented genotypes through tissue culture, root cuttings and seed for future Florida ziziphus translocations.

Federal	\$ 20,000
Other Match	6,667
Total	\$ 26,667

Habitat improvement in four central Florida Counties with introduction, monitoring and research efforts for three target rare plant species: Phase I - Sandhill, Scrub, and ephemeral wetland. (Bok Tower Gardens - “Other” Match as per AFA form 424). The objectives of this project for Claspig Warea are to meet the recovery goals of ten protected, self-sustaining populations, to secure germplasm of each population within the Center for Plant Conservation National Collection, and to ensure there is sufficient quality habitat for the persistence and expansion of each introduced and reintroduced population. The objectives of this project for Scrub Lupine are to restore habitat within at least two natural sites and one introduced site, improve understanding of the species’ response to management practices, including fire, introduce/augment at least two populations on protected lands, and germination trials will provide the opportunity to investigate the influence of weather changes, maternal genotype, and/or other factors on *in situ* germination. The objectives of this project for Brooksville Bellflower are to restore and

APPLICATION FOR FEDERAL ASSISTANCE 2018-19 WORK PLAN (cont.)

maintain habitat long-term within the remaining historical population, to secure germplasm of each population within the CPC National Collection, and to analyze six years of annual monitoring data of all known populations to better understand species trends.

Federal	\$ 12,000
Other Match	15,000
Total	\$ 27,000

Meeting *in-* and *ex situ* federal recovery plan objectives of *Harperocallis flava* via seed biology and micropropagation (University of Florida - “State” Match as per AFA form 424). The objectives of this project are to determine long-term soil seed bank potential of Harper’s Beauty, examine greenhouse production of Harper’s Beauty plantlets, and expand Harper’s Beauty’s *in vitro* germplasm library.

Federal	\$ 19,552
State Match	7,774
Total	\$ 27,326

Surveys for the At-Risk species black-bracted pipewort (*Eriocaulon nigrobacteatum*) in the Florida panhandle. (Florida State University - “State” Match as per AFA form 424). The objectives for this project include conducting range-wide surveys of the endemic, At-Risk black-bracted pipewort in the Florida panhandle by revisiting all known element occurrences on public and private lands where access is granted, expand searching efforts for new populations on nearby public conservation lands, provide an estimate of population size at each element occurrence, and describe potential threats to the species.

Federal	\$ 15,247
State Match	5,083
Total	\$ 20,330

Post Hurricane Irma Survey of Rare Plants in the National Key Deer Refuge (Florida State University - “State” Match as per AFA form 424). The objectives of this project are to conduct a rangewide survey of the of three pine rockland species by revisiting all Bradley et al. 2015 plots to determine population size, document presence and extent of invasive plant species, assess the broad scale impacts to the forest structure as a result of Hurricane Irma, and analyze the current data in comparison to past abundances to determine the effects of two hurricane events.

Federal	\$ 18,223
State Match	6,075
Total	\$ 24,298

APPLICATION FOR FEDERAL ASSISTANCE 2018-19 WORK PLAN (cont.)

***Ex- and in-situ* seed germination, seedling survivorship, and seed bank studies for *Pinguicula ionantha* populations and its congeners (University of Illinois - “Other” Match as per AFA form 424).** The objectives of this project are to conduct seed germination and seed bank studies on multiple populations of *P. ionantha* and its two congeners *P. lutea* and *P. planifolia*, all found growing near each other on site.

Federal	\$ 20,312
Other Match	6,777
Total	\$ 27,089

FLORIDA STATEWIDE ENDANGERED AND THREATENED PLANT CONSERVATION PROGRAM ANNUAL WORK PLAN TABLE OF PROPOSED 2018-2019 (SEGMENT E-9-27) PROJECTS, OCTOBER 1, 2018 THROUGH DECEMBER 31, 2019 FEDERAL (75% or less), MATCH (25+%), AND TOTAL COST AMOUNTS					
Proposed Projects, Organization	Federal Match	State Match	Local Match	Other Match	Total
Florida Plant Conservation Program Administration, Management and Research, Florida Forest Service.	\$66,750.32	\$22,500	\$0	\$0	\$89,250.32
Lake Wales Ridge Scrub Plant Monitoring and Management Plan Development, Florida Forest Service	\$59,000	\$19,700	\$0	\$0	\$78,700
Removal of Invasive, Exotic Plants Around <i>Torreya taxifolia</i> and <i>Silene catesbaei</i> , City of Chattahoochee, FL.	\$4,412	\$0	\$3,000	\$0	\$7,412
Seminole Wayside and Addition Lands – Pine Rockland Restoration, Miami-Dade County	\$20,000	\$0	\$31,435	\$0	\$51,435
Conservation Research of the Recovery of Florida Ziziphus (<i>Ziziphus celata</i>), Archbold Biological Research Station	\$20,000	\$0	\$0	\$6,667	\$26,667
Habitat improvement in four central Florida Counties with introduction, monitoring and research efforts for three target rare plant species: Phase I - Sandhill, Scrub, and ephemeral wetland, Bok Tower Gardens	\$12,000	\$0	\$0	\$15,000	\$27,000
Meeting <i>in-</i> and <i>ex situ</i> federal recovery plan objectives of <i>Harperocallis flava</i> via seed biology and micropropagation, University of Florida	\$19,552	\$7,774	\$0	\$0	\$27,326
Surveys for the At-Risk species black-bracted pipewort (<i>Eriocaulon nigrobracteatum</i>) in the Florida panhandle, Florida State University	\$15,247	\$5,083	\$0	\$0	\$20,330
Post Hurricane Irma Survey of Rare Plants in the National Key Deer Refuge, Florida State University	\$18,223	\$6,075	\$0	\$0	\$24,298
<i>Ex-</i> and <i>in-situ</i> seed germination, seedling survivorship, and seed bank studies for <i>Pinguicula ionantha</i> populations and its congeners, University of Illinois	\$20,312	\$0	\$0	\$6,777	\$27,089
Total Federal, State, Local, and Other Match, Total Funding 2018-19	\$255,496.32	\$61,132	\$34,435	\$28,444	\$379,507.32
Total Federal Match, Non-federal Match, Total Funding 2018-19	\$255,496.32	\$124,011			\$379,507.32