

Working Lands for Florida Panther Conservation
September 9, 2015

This project has been submitted to the Natural Resource Conservation Service (NRCS) to be considered for their Regional Conservation Partnership Program (RCPP). The project requests a \$630,000 grant from the RCPP funds. This project is designed to make Florida panthers compatible with working cattle ranches. The project is extremely important for both panther recovery and sustaining Florida's cattle industry.

When ranchers manage land for cattle they are, at the same time, creating quality habitat for panthers. Basically, this project would assist cattle ranchers with costs they bear for maintaining high quality panther habitat. FWC and USFWS have referred to this as a Payment for Ecosystem Services project, or PES.

Most ranchers don't mind panthers using their property because panthers feed mostly on deer, wild hogs, and other wildlife. But sometimes panthers prey on calves, and that can become a sizeable problem. Studies have shown calf loss to panthers can range from 0 to 5% per year on a given ranch (2014 study, Caitlin Jacobs and Martin Main, University of Florida, "Calf Depredation by the Florida Panther in Southwest Florida").

This creates a tough situation where conservation agencies and the general public want to see panther numbers increasing and their range expanding so panthers can be removed from the endangered species list. However, panthers are already placing a burden on ranchers and the burden will expand as the panther population grows and expands. The current panther population is estimated at about 180 adults, and that number is growing.

State and federal agencies worked with ranchers and environmental advocates to design this project. A list of committed project partners is included below, and it shows the value of each partner's contribution (financial assistance or technical assistance) to the project. All of these parties know how important it is to make panther recovery compatible with ranching and livestock, and they are committing major resources to make this work.

Ranchers in Florida are under intense pressure to sell land for urban and suburban development, and those land uses are incompatible with panthers. The per-acre profit margin from cattle ranching is extremely low compared to the per-acre profits of other land uses like real estate development, mining, orchards, row crops, and oil and gas production. Therefore, if agencies can help share the cost of land management practices that benefit panthers it will help ranchers in two ways. First, it helps keep ranching financially viable and prevents land from being converted to uses that are incompatible with panthers. Second, it helps indirectly offset the financial loss ranchers incur from losing calves to panthers.

Funds will be precisely targeted towards the land most important to panthers. For an acre to be eligible for this project it must pass through two filters. First, it must be in the in the Panther Focus Area (about 29% of which is in private ownership); this is the main area where Florida panthers feed and move. Second, and more specifically, it must also be within either the Primary Zone or Dispersal Zone. The Primary Zone is the portion of the Panther Focus Area where

panthers actually breed and raise young. The Dispersal Zone contains lands that facilitate range expansion north of the Caloosahatchee River. Breeding panthers have also been documented in the Dispersal Zone.

Once it passes the above filters, it must also be within an eligible Tier. We classified the private lands in the Primary and Dispersal Zones into 3 categories: Tier 1 Eligible, Tier 2 Eligible, and Not Eligible. Tier 1 Eligible includes 113,038 acres which have mixtures of forest, scrub, and grasslands that create the highest quality panther habitat. Tier 2 Eligible includes 46,819 acres which are primarily improved pasture. Improved pasture contains less of the forest and shrub cover that panthers prefer, but it is still a very valuable and important habitat for panther prey. Lands classified as Not Eligible include habitats of low value to panthers like urbanized land, homesteads, and industrial land.

Funds will be provided only for practices that clearly benefit panthers. Those practices include: invasive plant control; prescribed levels of fire, grazing, mowing, and roller-chopping that create habitat diversity; and monitoring for presence of panthers and their prey with game cameras.

This project would pay landowners \$30.80 per acre per year over 5 years for land in Tier 1 and \$9.00 per acre per year over 5 years for land in Tier 2. These are relatively small amounts to private landowners in order to get a maximum return on the public benefits coming from their ranch lands.

This project is a 5-year pilot intended to introduce the PES concept to ranchers within the range of Florida panthers. Over the 5-year life of the project, we anticipate \$850,000 (\$600K from NRCS and \$250K from the Service) in financial assistance going to landowners to manage their land for panthers. Annually, we expect about \$170,000 will be awarded to landowners for managing panther habitat on about 9,000 acres per year.

Within the panther Primary and Dispersal Zones, we estimate about 159,857 acres of private lands could potentially be enrolled in the program. If all eligible landowners in this area were interested in the PES Program, then \$3,902,941/year (based on the values above) would be needed to implement the program over a 10-year period.

The partners to the PES project have been working for many years and on several fronts to make panthers and livestock compatible, and this project will marry their efforts together and fill a serious gap. For example, the Conservancy of Southwest Florida reimburses livestock owners on small, family-owned and operated ranches (typically less than 100 head) who experience verified calf losses to panthers. Defenders of Wildlife and the Conservancy of Southwest Florida also provide money and labor to people who build panther-resistant livestock enclosures, but that effort is also limited to hobby livestock. Panther-resistant enclosures can be built for small numbers of livestock, but they are impractical on full-scale ranches with thousands of acres and hundreds or thousands of cattle.

The U.S. Farm Service Agency offers Livestock Indemnity Payments (LIP) to ranchers who lose livestock to animals protected by federal law, and a few ranchers have been compensated through LIP for losses due to panthers. But LIP has some significant limitations. For example, it

reimburses only 75% of market value of the lost livestock. It also requires extensive documentation of the death of individual livestock, which is often not possible with panther kills. Panthers almost always “cache” and hide their kills by dragging them into forest or brush and covering them with vegetation. In the 2014 depredation study all 11 of the radio-transmitted calves that were killed by panthers were cached this way. Thus, on a typical ranching operation where calves do not have VHF ear tags, calves will definitely be lost to panthers, never discovered by ranchers, and therefore be impossible to document. Because it would be impossible to document every animal lost to panthers, conservationists and ranchers have both suggested a better way to compensate ranchers would be to pay them for their actions that contribute to conservation goals. Therefore, this project was designed as a “Payment for Ecosystem Services” that pays ranchers for their land management that contributes to the goal of panther recovery.

In addition to the Florida panther, 27 other imperiled species would benefit from this PES project. Of those 28 imperiled species, 5 are Endangered, 4 are Threatened, and 19 are At-Risk (At-Risk means they are candidates for listing under the ESA). The project would enhance recovery for the Endangered and Threatened species, and it would help prevent the need to list the At-Risk species. The 28 total species include 4 mammals, 6 birds, 6 amphibians/reptiles, 4 invertebrates, and 8 plants, and they are listed below. This PES project would also benefit hundreds of other animal and plant species that are common and not imperiled.

The timeline for this project to be considered for RCPP funding is:

- July 8, 2015: Pre-proposal was due and submitted
- Sept. 4, 2015: Pre-proposal was selected to move on to the full proposal stage
- Nov. 10, 2015: Full proposal due
- Dec. 2015: Announcement of full proposals that are selected for funding
- Feb. 2016: Funded proposal partners will meet with NRCS to develop contracts
- March 2016: Contracts signed, money obligated, work starts

Federally Endangered (E), Threatened (T), and At-Risk (AR) Species Benefitting from a Panther PES Program

Birds:

Everglade snail kite (E)

Red-cockaded woodpecker (E)
Audubon's crested caracara (T)
Florida scrub-jay (T)
Wood stork (T)
Florida sandhill crane (AR)

Mammals:

Florida bonneted bat (E)
Florida panther (E)
Insular hispid cotton rat (AR)
Sherman's short-tailed shrew (AR)

Amphibians and reptiles:

Eastern indigo snake (T)
Eastern diamondback rattlesnake (AR)
Florida pine snake (AR)
Florida scrub lizard (AR)
Gopher frog (AR)
Gopher tortoise (AR)

Invertebrates:

Florida cave amphipod (AR)
Florida cave crayfish (AR)
Hobb's cave amphipod (AR)
Pallid cave crayfish (AR)

Plants:

Beautiful pawpaw (E)
Carter's small-flowered flax (AR)
Florida prairie clover (AR)
Hartwrightia (AR)
Lowland loosestrife (AR)
Narrowleaf naiad (AR)
Sand flax (AR)
West's flax (AR)

In total, 5 Endangered species, 4 Threatened species, and 19 At-Risk species would benefit from the implementation of the PES program. These 28 species are comprised of: 6 birds, 4 mammals, 6 amphibians/reptiles, 4 invertebrates, and 8 plants.

Summary of Contributions by All Partners

\$630,000 - Natural Resources Conservation Service (NRCS)

NRCS will primarily provide the financial assistance that will help pay landowners for the cost of land management activities that benefit panthers. This funding will come through Farm Bill programs which are designed for exactly this purpose. NRCS will also provide a small amount

of technical assistance by advising landowners on how to make this program compatible and complimentary with other federal conservation programs that are available.

\$100,000 - Florida Fish and Wildlife Conservation Commission (FWC)

FWC will provide technical assistance to landowners regarding panther management. FWC has dozens of staff in a variety of functions (private lands biologists, research biologists, law enforcement officers, etc.) who regularly provide landowners advice on the movements and behavior of panthers, how to distinguish panther depredations from those of other predators, and legal options for minimizing all types of depredations.

\$350,000 - US Fish and Wildlife Service (FWS)

FWS will provide mostly technical assistance with panther management in a way similar to the technical assistance provided by the FWC. However, FWS technical assistance will focus on helping landowner activities stay compatible with the Endangered Species Act. FWS will also contribute about \$250K of financial assistance that will be pooled with the NRCS funds to pay landowners for management activities.

\$25,000 - Florida Cattleman's Association (FCA)

FCA will provide technical assistance by reaching out to all cattle producers in the project area to inform them about the availability of the PES program and encourage use of the program. The FCA also provides technical assistance by helping cattle producers network within their own ranks to share strategies on how to safely raise livestock in the range of Florida panthers.

\$75,000 - University of Florida - Institute of Food and Agricultural Sciences (IFAS)

IFAS will provide technical assistance through its extension agents in Collier and Hendry Counties who will advise ranchers of the latest research findings relative to making panthers and livestock compatible. For example, IFAS conducted the study on panther/calf depredation rates and published the findings for the public. Similarly, IFAS routinely advises landowners on how to build predator-proof livestock enclosures, how to manage pastures to meet the nutritional needs of cattle, etc. All of these types of information must be available so ranchers can be best informed as they work to make livestock and panthers compatible.

\$100,000 - Farm Services Administration - Livestock Indemnity Program (FSA – LIP)

FSA will provide financial assistance through its LIP program to partially compensate ranchers for livestock that are loss to panthers and subsequently found and documented. .

\$25,000 - Defenders of Wildlife (Defenders)

Defenders will provide financial assistance to small livestock owners to help them build predator-resistant livestock enclosures, as well as volunteers to help with construction. In addition, Defenders will provide information and technical assistance to landowners (ranchers, owners of hobby farms, and homeowners) about strategies for sharing the landscape with panthers and other wildlife.

\$35,000 - Conservancy of Southwest Florida (Conservancy)

The Conservancy's Free-Ranging Cattle Compensation Program will provide financial compensation to livestock owners with verified panther depredations on small, family-owned

and operated ranches (typically less than 100 head). The Conservancy will also provide financial assistance to homeowners who build predator-resistant enclosures for their hobby livestock and technical assistance by educating landowners (ranchers, owners of hobby farms, and homeowners) about strategies for sharing the landscape with panthers and other wildlife.

\$25,000 - Friends of the Florida Panther National Wildlife Refuge (FFPNWR)

FFPNWR will provide technical assistance by coordinating canvassing events in neighborhoods to let people know when neighbors have experienced panther depredations. They will also help with outreach events to demonstrate how the predator proof pens should be built in order to deter panthers, bears, and other wildlife.