

1. Protect/Monitor/Enhance Existing South Florida Panther Population, Associated Habitats, and Prey Resources.

1.1 Protect/monitor/enhance existing panther population. Although there are frequent reports of Florida panthers from many areas of the species' historic range, the only confirmed surviving population is in south Florida. The survival of the Florida panther depends upon the continued existence of this population.

1.1.1 Continue/expand investigations and monitoring of panther population.

It is essential that monitoring of the extant population continue and expand. In order to accomplish this task, an Interagency Backup Capture Team should be established. This capture team will be able concentrate on alternative capture methods and capture of uncollared animals outside of the core population area.

1.1.1.1 Continue/expand population demographic investigations.

1.1.1.1.1 Continue current activities and expand to areas north of Caloosahatchee River. Dennis, can you expand more on this?

1.1.1.1.2 Strive to achieve acceptable satellite/GPS tracking capability. Continue to investigate the use of satellite tracking equipment. This type of equipment would better enable us to determine how panthers move through the landscape by gathering data at night when the animals are most active.

1.1.1.2 Continue population health investigations. This task is essential when determining the success of the genetic restoration program as well as monitoring general population health. It should be continued and expanded as needed.

1.1.1.3 Continue/expand population genetic investigations. This is a requirement for maintaining scientific control over the population genetics of the Florida panther, and will be essential when determining where reestablished population stock will come from.

1.1.1.4 Define use patterns in mosaic landscapes. In order to identify conflicting and compatible land use changes, we must first understand how panthers move through and use landscapes kept in a mosaic of native, agriculture, and residential/commercial development.

1.1.2 Identify and minimize causes of panther injury and mortality. In a small population such as the Florida panther, any additional mortality could be catastrophic. Minimizing human-related causes of mortality is an important issue.

1.1.2.1 Address highway risks. Wildlife crossings that benefit the panther have been installed on several major roadways in areas of high density panther use or areas with a high incidence of road mortalities. As additional areas of concern are identified, these measures should be implemented. Likewise, additional design options should be investigated in order to identify the most cost efficient type of structure that wildlife will utilize.

1.1.2.2 Continue monitoring mercury and other environmental contaminants in panthers and take appropriate action. Mercury investigations should continue. Although only one mortality was likely attributable to mercury toxicity, other data on the effects of mercury in

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south Florida are available.

1.1.2.3 Address other threats. Dennis/Andy, can you expand on this?

1.1.3 Manage existing panther population. The implementation of the genetic restoration program and the continuing loss of habitat has resulted in the need to actively manage the extant panther population. Management, primarily, will be through continued monitoring and translocations of individuals.

1.1.3.1 Translocate panthers as appropriate to address demographic needs and achieve better utilization of available habitat. In order to manage the existing population genetics, expand the existing range, and provide stock for population reestablishment sites, translocation of subadult animals may be necessary. A protocol for translocations will be developed and presented to the FPIC for consideration.

1.1.3.1.1 Monitor translocation efforts. Any translocation project will have to be closely monitored to determine if the expected results are achieved. Monitoring would include telemetry, health examinations, and radio-instrumentation of any offspring produced in a translocation project. The results of these monitoring endeavors would indicate if changes in the accepted protocol were necessary.

1.2 Protect/monitor/enhance panther habitat in south Florida. The HPP will provide guidance for this recovery task.

1.2.1 Develop and implement a panther habitat preservation strategy and monitoring program. This task should integrate the HPP into a GIS system in order to analyze how the landscape and Priority 1 and 2 lands have changed since 1993. This project should result in revision of the HPP as appropriate.

1.2.2 Preserve panther habitat. Habitat loss, degradation, and loss of connectivity continue to be the major limiting factor in panther recovery. Native vegetative communities need to be preserved in order for the extant population to survive.

1.2.2.1 Emphasize cooperative habitat preservation programs with landowners. This program should involve perpetual conservation easements, cooperative agreements, management funds through partners in wildlife of Farm Bill, and other means as appropriate or available by county. In addition, a compensate program aimed at encouraging private landowners to maintain panther habitat or important corridors on their lands should be developed.

1.2.2.2 Continue to acquire additional lands. Land acquisition can involve fee simple and less than fee title means. Andy, can you expand here?

1.2.3 Enhance/manage panther habitat.

1.2.3.1 Continue efforts to develop/identify effective habitat management techniques. Efforts to increase prey base and restore habitat to better serve the panthers life history needs should be continued.

1.2.3.2 Continue to implement management actions on public lands. Public lands in south Florida constitute the largest contiguous block of land protected from developmental or agricultural pressures. These lands should be managed to optimize ecosystem functions and better benefit the Florida panther.

1.2.3.2.1 Manage habitat to enhance conditions for panthers. Fire management, removal of dense stands of exotic vegetation

that affords minimum value to wildlife species, and other actions as appropriate should be implemented.

1.2.3.2.2 Manage public use activities to minimize panther disturbance, harassment and competition for prey resources.

Although data in the literature is sparse, human disturbance *through recreation and hunting may disrupt normal panther movements*. This form of disturbance needs to be minimized, particularly during the denning season.

1.2.3.3 Establish habitat management partnerships with private landowners. In addition to the preservation mechanisms identified in 1.2.2.1, cooperation, technical assistance, and funding sources for management need to be developed.

1.2.3.4 Maintain/reestablish important habitat linkages. This task is essential in maintaining and expanding the present panther population in South Florida and will also be essential in the population reestablishment sites.

1.3 Protect/monitor/enhance prey resources. Identify areas where prey may be a limiting factor to panthers and develop programs to enhance the prey base in these locations.

1.3.1 On public lands. Establish prey density baselines for newly acquired lands to identify the effects management actions have on prey species.

1.3.2 On private lands. Obtain prey density data from GFC, where available and incorporate this information into 1.2.1 in order to assess the effects mosaic land uses have on prey densities and use patterns.

Objective 2. Take Actions to Address Population Health

2.1 Continue implementation/monitoring of genetic restoration program. Follow the guidelines in the approved "Genetic Restoration Plan." Monitoring of this program includes radio-instrumentation of all progeny produced by female Texas cougars and Florida panthers.

2.1.1 Identify and implement actions to aid in maintaining scientific control. Radio-instrumentation of progeny is essential in this program. Likewise, eliminating the possibility of male progeny backcrossing with female Texas cougars is paramount. A protocol to address this issue needs to be developed. This protocol should identify male genetic restoration progeny, where they were born, when they are collared, when they may reach breeding age, as well as areas they may be translocated to. Translocations of these animals should follow the protocol developed in 1.1.3.1. An analysis of the need to eliminate backcrossing should also include the option of removing the Texas cougar.

2.2 Continue to implement actions to address other population health concerns, i.e. immunize, etc. The GFC currently immunizes all cats captured for ??????. This program should continue. In addition, when cats are captured for recollaring, their health is assessed and recommendations on any course of action to be undertaken are made, this portion of the biological investigation program should continue.

2.3 Manage/utilize captive population as appropriate to enhance population health. The captive population should be used to enhance the health of the wild population, where possible. This may involve implementation of the captive breeding program to provide stock for population reestablishment sites. The protocol for captive propagation should be reviewed and revised as necessary. The revised protocol should be presented to the FPIC for consideration.