

**UPDATED IMPLEMENTATION
SCHEDULE
FOR THE
FLORIDA PANTHER RECOVERY PLAN
JUNE 1993**

III. IMPLEMENTATION SCHEDULE

GENERAL CATEGORIES FOR IMPLEMENTATION SCHEDULE

Information Gathering - I or R (Research)

1. Population status
2. Habitat status
3. Habitat requirements
4. Management techniques
5. Taxonomic studies
6. Demographic studies
7. Propagation
8. Migration
9. Predation
10. Competition
11. Disease
12. Environmental contaminant
13. Reintroduction
14. Other information

Other - O

1. Information and education
2. Law enforcement
3. Regulations
4. Administration

Management - M

1. Propagation
2. Reintroduction
3. Habitat maintenance and manipulation
4. Predator and competitor control
5. Depredation control
6. Disease control
7. Other management

Acquisition - A

1. Lease
2. Easement
3. Management agreement
4. Exchange
5. Withdrawal
6. Fee title

TASK PRIORITIES

Priorities in Column 4 of the following Implementation Schedule are assigned as follows:

Priority 1 - An action that must be taken to prevent extinction or to prevent the species from declining irreversibly in the foreseeable future.

Priority 2 - An action that must be taken to prevent a significant decline in species population/habitat quality, or some other significant negative impact short of extinction.

Priority 3 - All other actions necessary to provide for full recovery of the species.

IMPLEMENTATION SCHEDULE COST INFORMATION

1. Cost estimates are for planning purposes and will be reflected through agency budget processes as new research findings or management information dictates.
2. All agencies will strive to carry out all tasks identified in the implementation schedule. However, this will be contingent upon appropriations, personnel availability and other constraints. Each agency has developed individual Participation Schedules which outline specific tasks the agency will accomplish and the time frame for accomplishment.
3. Some routine agency activities that do not lend themselves to separating out costs for Florida panther recovery such as ongoing law enforcement, coordination or other programs, may not be included in the schedule.
4. Land acquisition costs are not included in this schedule because these efforts serve multiple resource objectives.
5. Costs may rise or be modified for future years as current research programs provide management recommendations that are currently not planned. Additionally, the initiation of some tasks are contingent on the completion/results of others. Therefore, target dates for some actions may require adjustments over time.

LIST OF ABBREVIATIONS

APC	= Abomasal parasite count
BCNP	= Big Cypress National Preserve
BIA	= Bureau of Indian Affairs
CARL	= Conservation and Recreation Lands
DNR	= Florida Department of Natural Resources
DOD	= Department of Defense
EVER	= Everglades National Park
FDHS	= Florida Department of Highway Safety and Motor Vehicles
FDOT	= Florida Department of Transportation
FGC	= Florida Game and Fresh Water Fish Commission
FHP	= Florida Highway Patrol
FPIC	= Florida Panther Interagency Committee
FPNWR	= Florida Panther National Wildlife Refuge
FS	= U.S. Forest Service
FSSP	= Fakahatchee Strand State Preserve
FWS	= U.S. Fish and Wildlife Service
GIS	= Geographic Information System
GMP	= General Management Plan for Big Cypress National Preserve
HPP	= Florida Panther Habitat Preservation Plan
I & E	= Information and Education
JZP	= Jacksonville Zoological Park
LO	= Landowners
LPZ	= Lowry Park Zoo
MM	= Miami Metrozoo
MSIT	= Miccosukee and Seminole Indian Tribes of Florida
MVP	= Minimum viable population
NPS	= National Park Service
ORV	= Off-road vehicle
SFWMD	= South Florida Water Management District
SR	= State Route
VA&SSP	= Population Viability Analysis and Species Survival Plan
WOP	= White Oak Plantation
ZOOS	= Participating breeding facilities

IMPLEMENTATION SCHEDULE

(Revised June 1993)

Florida panther (Recovery Priority #6C)

General Category	Plan Task	Task Number	Priority	Task Duration	Responsible Agency	Estimated Fiscal Year Costs (in thousands)					Comments/Notes
						FY-1	FY-2	FY-3	FY-4	FY-5	
R-1 R-3	Conduct radio-telemetry studies in NPS south FL units	1111	1	Completed	NPS	-	-	-	-	-	EVER study completed in '91. BCNP study completed in '92. Monitoring underway (See Task 151). Costs reflected in Task 151.
R-1 R-3	Conduct radio tracking studies in FSSP & BCNP	1112	1	Continuing	FGC	-	-	-	-	-	Initiated in '81. Most studies completed in '90. Study of panther removal impacts on wild population still ongoing. Monitoring underway (See Tasks 151 & 152). Costs reflected in Task 151.
R-1 R-3	Expand studies to private lands N of Alligator Alley	1113	1	Continuing	FGC	-	-	-	-	-	Initiated in '87. Most studies completed in '90. Monitoring underway (See Tasks 153 & 154). Costs reflected in Task 151.
R-1 R-3	Conduct panther surveys at FPNWR	1114	1	Continuing	FWS	-	-	-	-	-	Initiated in '89. FGC carries out radio-telemetry work (see Task 155). FWS conducts track surveys. FGC costs reflected in Task 151. FWS costs reflected in Task B.2.
M-3 O-1	Post warning signs and reflectors	1211	2	Continuing	FDOT	-	-	-	-	-	Routine. Initiated in '85.
O-3	Reduce nighttime speed limits	1212	1	Continuing	FDOT	-	-	-	-	-	Initiated in '85. FGC carries out most enforcement under routine activities.
O-4	Develop plan for emergency veterinary aid	1213	1	Continuing	FGC	-	-	-	-	-	Plan being developed. Costs reflected in Task 122.
O-2 O-4	Develop protocol for handling dead panthers	1214	3	Completed	FGC	-	-	-	-	-	Necropay protocol developed 3/92.
M-3	Modify hazardous roadways	1215	1	Continuing	FDOT	-	-	-	-	-	No costs estimates. 36 wildlife crossings/bridge extensions have been installed under I-75 through Big Cypress Swamp in Collier County. Additional crossings under consideration for planned work on SR-29 & US-1. Approximately 4 miles of SR-29 were modified in '86. Additional modifications under consideration.
R-11 M-6	Identify panther diseases	122	1	Continuing	FGC	125*	125*	125*	125*	125*	Studies initiated in '84 & are continuing. Costs shown in this task cover entire medical management program.
I-2	Develop cumulative effects model	123	2	4 years	FWS,FGC & NPS	-	-	-	-	-	On hold pending outcome of other similar activities (GFC's GIS & SFWMD's citrus conversion study) & the completion of the HPP.

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R-1	Develop genetic profile	124	1	Continuing	FGC FWS NPS	- - -	- - -	- - -	- - -	- - -	Studies initiated in '86 in collaboration with Dr. S. O'Brien. Initial examination of S. FL subpopulations completed in '90 under FPIC jointly funded study w/Dr. O'Brien. Analysis, needed in regards to decisions on genetic management, completed for some new individuals in '93.
I-1	Identify management options if genetic profile shows problems	1241	1	Continuing	FWS FGC	- -	- -	- -	- -	- -	Results of pop. viability analysis & species survival planning process in '89 concluded that establishment & management of a captive population was essential for panther survival. Captive population establishment initiated in '91. Viability update & genetic management workshop conducted in Fall '92. Recommendations regarding reestablishing gene flow into the panther under consideration presently. Decision expected by end of '93.
M-1	Establish sperm bank	1242	1	Continuing	FGC FWS	8* 70	8* -	8* -	8* -	8* -	Established in '88. Refinements in technologies being developed by Dr. D. Wildt under Grant Agreement with FWS. FWS costs indicated represent costs for ongoing AI/IVF work, which includes sperm bank activities.
I-1	Develop panther population model	125	2	Completed	FGC FWS	15* -	15* -	- -	- -	- -	Initial population modelling completed as part of viability analysis in '89. Additional modelling completed during viability update & genetic workshop held in Fall '92.
M-3	Develop Comprehensive Mgmt. Plans for public lands	126	1	Continuing	FGC NPS DNR FWS	- - - -	- - - -	- - - -	- - - -	- - - -	Routine. GMP completed 1/92. Current plan under revision. Funded under B.2. Fire Mgmt. & Law Enforcement Plans completed. Cropland Mgmt. Plan presently under development.
M-7	Inventory captive cougars	127	3	Completed	FGC	-	-	-	-	-	
I-1, 2, 3	Conduct deer studies in EVER	1311	1	Continuing	NPS	69	59	34	19	-	Original study initiated '87. Completed '91. Final report expected '93. New study for EVER & BCNP targeted for '93-96.
M-3	Evaluate & enhance habitat conditions on public lands	1312	1	Continuing	FWS NPS DNR FGC SFWMD Collier Co. Dade Co.	- 200 59 - - - -	- 200 60 - - - -	- 200 60 - - - -	- 200 60 - - - -	- 200 60 - - - -	Initiated in '89. Funded under B.2. Underway. Underway. Routine No information available. No information available. No information available.

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R-1	Continue ongoing deer studies & initiate new ones in BCNP & FSSP	1313	1	Continuing	FGC NPS	- 100	- 100	- 100	- 60	- 60	FGC studies initiated '84 & completed in '90. NPS expanded studies in '89, final report expected '93. See Task 132 for monitoring. New studies for Addition lands scheduled to begin in '93.
R-1	Conduct deer studies in N. Fakahatchee Strand, FPNWR, & on private lands	1314	1	Completed	FGC FWS	- -	- -	- -	- -	- -	Completed in '90. See Task 132 for ongoing monitoring.
I-1	Evaluate effect of deer hunting in BCNP & FSSP	1315	1	Continuing	FGC NPS DNR	- - -	- - -	- - -	- - -	- - -	Routine. Costs reflected in 1313 FSSP was closed to deer/hog hunting effective 7/1/87.
R-1	Refine APC technique	1316	2	Completed	FGC	-	-	-	-	-	
I-1	Offer to work with Indian Tribes to evaluate and enhance deer status & mgmt. techniques on Indian lands.	1317	2	Continuing	FGC MSIT	- -	- -	- -	- -	- -	Routine No information available.
R-4	Test effectiveness of supplementing prey base in FSSP	1318	3	Completed	FGC DNR	- -	- -	- -	- -	- -	12 radio-instrumented wild hogs released in 3/86 & monitored. Present position is that activity is not something to pursue further at this time.
I-2	Monitor prey species at EVER, BCNP, FSSP, FPNWR, & selected private lands	132	2	Continuing	NPS FGC DNR FWS	30 - 3 -	30 - 2 -	30 - 2 -	30 - 2 -	30 - 2 -	Costs reflected in Task B.2.
O-2	Provide law enforcement	133	1	Continuing	FGC, NPS & DNR MSIT FWS	- - - 50	- - - 50	- - - 50	- - - 50	- - - 50	Routine No information available. Does not include ongoing routine law enforcement actions.
I-1	Maintain & expand clearinghouse	14	3	Completed	FGC FWS	- -	- -	- -	- -	- -	Expanded in FL in '85. Responsibilities assigned to FGC's Regional Offices. Contacts with other States were made in 1988. Some were already operating clearinghouse-type activities. Most states feel that the panther no longer exists in their state. No additional actions planned at the present time.
I-1	Monitor panthers in EVER & BCNP	151	1	Continuing	NPS FGC	60 -	60 -	60 -	65 -	65 -	Underway. See 1111 & 1112. FGC costs reflected in 154.

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I-1	Monitor panthers at FSSP	152	1	Continuing	FGC DNR	- -	- -	- -	- -	- -	Underway. FGC costs reflected in 154.
I-1	Offer to monitor panthers at Indian Reservations	153	1	Continuing	FGC MSIT	- -	- -	- -	- -	- -	Underway. Costs reflected in 154. No information available.
I-1	Offer to monitor panthers on selected private lands	154	1	Continuing	FGC	250*	250*	250*	250*	250*	Underway.
I-1	Monitor panthers at FPNWR	155	1	Continuing	FGC FWS	- -	- -	- -	- -	- -	Underway. FGC costs reflected in 154. FWS costs reflected in B.2.
O-4	Assess benefits of designating Critical Habitat	16	2	Continuing	FWS	-	-	-	-	-	Routine. Initial assessment in 1/87 concluded not appropriate at time. Will be reassessed after completion of HPP scheduled for July '93.
O-4	Establish FPIC	17	1	Completed	FWS, NPS, FGC, DNR	-	-	-	-	-	Established 5/86 & continues.
O-4	Establish Technical Subcommittee	171	1	Completed	FWS, NPS & DNR FGC	- 5	- 5	- 5	- 5	- 5	Established 5/86 & continues. Costs associated with TS activities.
O-4	Designate a Florida Panther Coordinator	172	1	Completed	FWS	80	80	80	80	80	Position established 1/87 & continues.
O-4	Develop Participation Schedules	173	1	Completed	FWS, NPS & DNR FGC	- -	- -	- -	- -	- -	Each agency has completed initial Schedules; which will be periodically updated. FWS costs covered under task 171.
O-3, O-4	Evaluate public use laws & regulations	18	2	Continuing	FWS, NPS, DNR, FGC, FDOT, MSIT	- - - -	- - - -	- - - -	- - - -	- - - -	Routine Routine No information available. No information available.
O-4	Review policies on land management & regulatory functions.	191	1	Continuing	FWS, NPS, DNR, FGC, & other State & Fed. agencies	-	-	-	-	-	Routine. Authorities will be fully utilized in support of habitat preservation needs.

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M-7	Develop contingency plan for removal of panthers	A	2	Continuing	FWS, NPS, DNR, & FGC	-	-	-	-	-	Establishment of captive pop. lessens need for contingency plan.
A-7	Acquire land essential for panther survival	B	1	Continuing	FWS, NPS, DNR, FGC	-	-	-	-	-	Working group established 3/91 to develop HPP. Draft plan for FPIC review completed 6/92. Final plan targeted for FPIC action July '93.
A-6	Establish FPNWR	B.1	1	Completed	FWS	-	-	-	-	-	Initial 25,000 acres acquired in 6/89. Most of remainder will be acquired through exchange legislation.
O-4	Staff & fund FPNWR	B.2	1	Continuing	FWS	520	550	575	575	575	Funding & staffing initiated in Fall '86.
A-6	Acquire "in-holdings" in FSSP	B.3	1	Continuing	DNR	(Cannot be pre-determined)					Ongoing. Funding contingent on legislative appropriations. Acquisition approximately 71 % complete.
A-7	Acquire lands resulting from I-75 construction	B.4	1	Continuing	FDOT, NPS, FGC, DNR, FWS	(Cannot be pre-determined)					Ongoing. Acquisition of BCNP Addition (146,000 acres) is approximately 27% complete.
A-6	Acquire south Golden Gate Estates	B.5	1	Continuing	DNR	(Cannot be pre-determined)					Ongoing. Approximately 7,300 acres acquired to date (approximately 18% complete).
A-7	Secure Jet Port property	B.6	1	Continuing	NPS, FGC	-	-	-	-	-	
O-1	Work with sportsmen	211	2	Continuing	DNR FGC, FWS & NPS	- - -	- - -	- - -	- - -	- - -	Routine
O-1	Work with conservation groups	212	2	Continuing	DNR FWS, NPS & FGC	1 - -	1 - -	1 - -	1 - -	1 - -	Routine
O-1	Post interpretive signs	213	3	Continuing	FDOT DNR NPS FPNWR	- - - -	- - - -	- - - 30	- - - -	- - - -	No information available. Routine Routine Informational Kiosk along SR-29

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O-1	Distribute panther literature	214	2	Continuing	FSSP NPS FWS FGC	5 - - 25	- - - 20	- - - 20	- - - 20	- - - 20	Routine Routine
O-1	Produce & distribute audio-visual aids	215	3	Continuing	FGC DNR, FWS & NPS	10 -	10 -	10 -	10 -	10 -	Routine
O-1	Develop traveler information service	216	3	Continuing	FDOT	-	-	-	-	-	No information available.
O-1	Develop "popularized" recovery plan	217	3	2 years	FWS	-	-	-	-	-	On hold pending likely need for Recovery Plan revision in '94.
M-7	Develop Comprehensive Habitat Management plan for private lands	221	2	Continuing	FGC FWS	- -	- -	- -	- -	- -	Determination of need & identification of key habitats will be facilitated with the completion & implementation of the HPP scheduled for July '93.
M-2	Evaluate & prioritize potential reintroduction sites	311	2	Continuing	FWS FGC	- -	- -	- -	- -	- -	Initial identification & evaluation of candidate sites in FL completed in 1987. Initial identification & evaluation of candidate sites range-wide is underway and should be completed in 1993. FWS costs reflected under Task 172.
M-2	Coordinate plans with private, State, and Federal landowners	312	3	Continuing	FGC FWS DOD & FS	- - -	- - -	- - -	- - -	- - -	Completed for initial Phase I surrogate study (translocation) conducted in '88 & 89. Phase II (combination translocation & captive raised/conditioned) surrogate study initiated Feb. '93 (3 yr. project). FGC costs reflected in 333. FWS costs reflected in 172.
M-2	Determine public attitudes toward reintroduction.	313	3	Continuing	FWS FGC	- .*	- .*	- .*	- .*	- .*	Costs reflected in 172. Costs reflected in 333. Completed for initial Phase I surrogate study. Phase II surrogate study underway (see task 312).
M-2	Survey reintroduction sites for parasites & diseases	314	3	Continuing	FGC	.*	.*	.*	.*	.*	Costs reflected in 333 for FL project.
M-2	Determine existence of panthers in reintroduction areas	315	3	Continuing	FGC	.*	.*	.*	.*	.*	Costs reflected in 333 for FL project. Completed for initial Phase I surrogate study.

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M-2	Determine captive productivity of wild caught panthers	321	1	Continuing	ZOOS	50	50	100	150	200	Development of captive population for breeding purposes initiated in 1991. Federal participation permits have been issued to WOP, JZP, LPZ & MM. To date, 10 panther kittens have been brought into captivity for breeding purposes.
M-2	Develop captive breeding facilities	3211	1	Continuing	JZP LPZ MM WOP	10 50 30 220	- 50 30 50	- 20 - 50	- 20 - -	- 20 - -	Breeding & conditioning capabilities being developed at institutions identified under Task 321.
M-2	Condition offspring for reintroduction into wild	322	3	Continuing	ZOOS	20	50	50	50	50	Actions to develop condition technology continuing utilizing surrogate cougars produced in captivity for Phase II reintroduction experiment study. 3 of 10 animals used in initial Phase II release were captive born/conditioned cougars.
M-2	Introduce captive-raised surrogates into wild	323	3	2 years	FGC	.*	.*	.*	.*	.*	Costs reflected in 333 for FL project. Experimental reintroduction (Phase II) presently underway (see task 312).
M-2	Supplement existing population as needed	324	1	As needed	FGC	.*	.*	.*	.*	.*	Animals from the captive population could possibly be available for this purpose by '96.
M-2	Obtain surrogate animals for translocation study	331	3	2 years	FGC	.*	.*	.*	.*	.*	Costs reflected in 333 for FL project. Initial translocation experiment (Phase I) involving surrogate cougars completed 4/89. Phase II project underway.
M-2	Sterilize, radio-collar & release surrogate animals	332	3	2 years	FGC	.*	.*	.*	.*	.*	Experimental translocation initiated with release of 5 Texas cougars in 6/88. After 10-months, remaining 2 cougars were removed from reintroduction area in 4/89. Additional experimental releases underway (see task 312). Costs for FL project reflected in 333.
M-2	Monitor surrogate animals	333	3	2 years	FGC	225*	225*	225*	.*	.*	Phase I animals monitored from 6/15/88-4/19/89. Phase II monitoring underway (initiated Feb. '93).
M-2	Recapture & remove from the wild	334	3	2 years	FGC	.*	.*	.*	.*	.*	Costs for FL project reflected in 333. Last cougar from initial release removed from wild 4/19/89.
M-2	Reintroduce Florida panthers into the wild	34	3	Continuing	FGC	.*	.*	.*	.*	.*	Reintroduction actions will be initiated when sites have been selected and panthers for reintroduction purposes are available, not likely for 5-10 years.

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