

Everglades Mink

Neovison vison evergladensis



Photograph by David Shindle, Conservancy of Southwest Florida.

Species Overview

Status: Listed as Threatened on Florida’s Threatened and Endangered Species List.

Current Protections

- 68A-27.003(2)(a), F.A.C., No person shall take, possess, or sell any threatened species included in this subsection or parts thereof or their nests or eggs except as authorized by Commission rule or by permit from the Commission.
- 68A-27.001(4), F.A.C., Take – to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. The term “harm” in the definition of take means an act which actually kills or injures fish or wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering. The term “harass” in the definition of take means an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding or sheltering.
- 68A-24.002(2)(d), F.A.C. The taking or possession of mink as a fur-bearing animal is prohibited.

Cryptic Species

Cryptic species are those that may be difficult to detect due to behavior, habitat, or physical features, even when using standardized survey techniques in occupied habitat. Interpretation of when harm or harassment may occur is difficult without a clear understanding of essential behavioral patterns of the species or habitat features that may support those behavioral patterns. The documented difficulties in detecting cryptic species and the lack of a reliable detection methodology leads to different considerations for take due to harm.

- The permitting standards for incidental take policy in Florida’s Imperiled Species Management Plan identifies the Everglades mink as a cryptic species.
- Permitting standards for Everglades mink will focus on cooperation and acquiring information, with the understanding that as information is gained, permitting standards may need to be adjusted.
- For Everglades mink, information on distribution and habitat use may constitute a scientific benefit.
- Thorough surveys can be used to determine the presence of Everglades mink. Even if surveys are conducted, detection is difficult because little is known about the life history, behavior, or biology of this species.

Biological Background

A species’ biological background provides context for conservation measures and permitting guidelines. It focuses on the habitats that support essential behavioral patterns, threats to the species, and what may constitute significant disruption of essential behavioral patterns.

The Everglades mink is a subspecies of the American mink (*Neovison vison*). This subspecies historically occurred in the freshwater marshes and swamps of the Everglades, the Big Cypress area, and Lake Okeechobee (Smith 1980, Humphrey and Setzer 1989). Most sightings and specimens have come from either Collier County or Miami-Dade County (Smith 1980, Smith and Cary 1982), but the Everglades mink presumably inhabits northern Monroe County as well (Humphrey 1992). Although the range of the Everglades mink may have extended from Lake Okeechobee south through much of the Everglades (Allen and Neill 1952, Humphrey and Setzer 1989, Humphrey 1992). Most recent mink sightings have only been reported near Fakahatchee Strand Preserve State Park (FSPSP; D. Shindle, Conservancy of Southwest Florida, personal communication). However, Pifer et al. (2011) reported opportunistic sightings at Big Cypress National Preserve. Rosenblatt et al. (2014) recorded mink in Everglades National Park (ENP), an area where Smith and Cary (1982) documented numbers of mink, especially near the northern boundary of the park.

Current knowledge of Everglades mink distribution is limited to data from a small number of studies. There has been a lack of thorough studies across the accepted range of this species in south Florida. Much of what is known about the behavior and ecology of the Everglades mink comes from a few studies. Studies of Everglades mink are difficult to conduct in part because of a lack of reliable survey methods. In general, the biology of this subspecies is expected to be similar to that of mink outside Florida. Though some variations may be tied to wet-dry season changes in south Florida. Little is known about breeding of the Everglades mink, but it is believed to have delayed implantation as do other mink (Lariviere 1999). Breeding may occur in winter, perhaps February (Lariviere 2003), though Humphrey and Zinn (1982) interpreted observed behaviors of the mink to indicate they may breed in autumn. The young are not born until spring, when prey are typically more available near the end of the dry season as wetland pools become smaller and tend to concentrate those necessary resources (Lariviere 1999). Mink typically use dens for shelter and as sites where young are born, but they rarely excavate their own dens (Lariviere 1999). Known den sites include burrows, cavities under trees, and brush piles and culverts (Lariviere 1999). Smith and Cary (1982) reported a female mink using a partially buried car as a den site along a levee.

Habitat Features that Support Essential Behavioral Patterns

Because of the cryptic nature of the Everglades mink, we have limited data on habitat features that most directly affect essential behavior patterns. The Everglades mink has been documented in a variety of wetland habitats in south Florida. Specifically, it is believed that spike rush marshes and salt marshes between



Everglades mink in forested wetland habitat. FWC photograph.

mangroves and freshwater habitats are used during the wet season, while freshwater swamp forests are used during the dry season.

Wetlands holding standing water are essential for feeding and raising young. As water levels recede during the dry season, data indicate the Everglades mink may alter the habitats they use, relocating to depressions in areas of freshwater swamp forest that retain water for longer periods (long hydroperiod) and, as a result, food sources become more concentrated there, particularly in March and April when young are not yet weaned (Smith and Cary 1982, Humphrey and Zinn 1982,

Humphrey 1992, Cox and Kautz 2000). In some cases, the Everglades mink has been documented establishing territories that encompass landscape features such as canals and levees (Smith 1980). Water quality and quantity is a critical component of the life cycle of the Everglades mink. Maintenance or restoration of the natural hydrologic regime on both privately and publically managed lands will be an important component of high-quality freshwater wetland habitat for the Everglades mink.

In forested wetland habitat, retention of an intact tree canopy is expected to be crucial for maintaining essential behavioral patterns of breeding, feeding, and sheltering, especially during dry seasons. Maintaining natural connectivity among wetland habitats is also important in allowing the mink to move seasonally among different habitats when necessary.

Threats

The body of evidence regarding threats to the Everglades mink suggest that actions that change the natural hydrology of the wetland habitats on which they depend (FWC 2010). Some studies suggest that habitat modifications including logging, conversion to other land uses, drainage, road construction, dike construction, and changes to the natural hydroperiod that can negatively impact wetland habitats important for Everglades mink (Humphrey 1992, Humphrey and Zinn 1982). Road mortality and reduced reproduction (from den flooding and selection of suboptimal den sites) may result if water levels are maintained at artificially high water levels, especially during dry seasons (Smith 1980, Rosenblatt et al. 2014). Loss and degradation of habitat can have direct as well as indirect effects on essential behaviors. Indirect effects are expected to result through reductions in the abundance of invertebrate and vertebrate prey species. Mink are believed to be extremely sensitive to heavy metals and toxic chemicals in the waters they occupy (Osowski et al. 1995, Lariviere 1999). Osowski et al. (1995) studied mink populations in North Carolina, South Carolina, and Georgia and reported that mercury concentrations, within the toxicity range known to negatively impact growth along with reproduction and other essential behaviors of wild mink, were significantly higher in mink in the coastal plain. Further, Osowski et al. (1995) stated that negative effects from mercury were greater when polychlorinated biphenyls were present.

Cunningham et al. (2009) found that that infection by canine distemper virus appeared to cause significant mortality in the Everglades mink population within FSPSP. Conditions that promote exotic vegetation may further degrade habitat.

Potential to Significantly Impair Essential Behavioral Patterns

Everglades mink rely on multiple wetland habitats and appear to vary their use of different habitats. Therefore actions that degrade water quality, change hydrology, or result in loss or fragmentation of suitable natural wetlands can cause significant impairment of essential behavioral patterns. Actions that change the timing, quantity, or quality of water in suitable natural wetlands should be expected to result in significant impairment of essential behavioral patterns. For example, artificially high water levels, especially if maintained during the dry season, can lead to reduced reproduction (from den flooding and selection of suboptimal den sites) and increased road mortality (by altering movements by mink) (Smith 1980, Rosenblatt et al. 2014). Actions that cause heavy metals and toxic chemicals to go into suitable natural wetlands should be expected to result in significant impairment of essential behavioral patterns.

Distribution and Survey Methodology

The range map below represents the presumed current geographic range of the Everglades mink. This map is for informational purposes only and is not for regulatory purposes.

Counties: Collier, Miami-Dade, Monroe

Recommended Survey Methodology

Surveys are not required but can be used to determine if Everglades mink are present in a given area. Because this is a cryptic species, surveys conducted in accordance with the methodology described below may not detect this species.

At this time, no single survey method is considered effective for determining the presence of the Everglades mink. Thus, use of multiple survey methods may be the most appropriate approach for conducting surveys. The following methods are recommended.

- Camera-based survey protocols are currently recommended for detecting Everglades mink, but also may not detect mink when they are present.

As new information becomes available, different survey methods may be recommended for increased detection of the species. Two types of camera traps may be used to survey for mink, floating camera traps (McCleery et al. 2014) and trail cameras attached to trees. The floating camera trap design has proven effective at detecting mink in other regions of Florida (J. Gore, FWC, personal communication).

- Night-time spotlight surveys can be conducted using two different methods. First, along pedestrian transects on trails or levees. Transect surveys have been used with mixed success at FSPSP (J. Gore, FWC, personal communication). Second, from boats in saltmarsh habitat at selected locations. This method has sometimes been effective in other regions of Florida (J. Gore, FWC, personal communication) and in other states (Gorga 2012).
- Daytime observations surveys can be conducted at locations where Everglades mink are expected to occur. Surveys could be point-based. Surveys could be conducted at selected points, where the points would be near suitable wetland habitats. Observations could be conducted for specific amounts of time, at optimal times of the day.
- Live-trapping methods for Everglades are not recommended. Any live trapping requires a scientific collecting permit.

Incidental sightings should be recorded and reported. Such sightings can be maintained in a database that is accessible to other agencies and the public for such reports. Incidental sightings can have a scientific benefit.



Recommended Conservation Practices

Recommendations are general measures that could benefit the species but are not required. No Florida Fish and Wildlife Conservation Commission permit is required for these activities.

- Maintain or restore hydrology in areas where habitats are potentially suitable for Everglades mink. For example, incorporate culverts into new road designs that will allow for maintenance and/or restoration of natural hydrology.
- Avoid placement of impermeable surfaces, such as roads or parking lots, near or adjacent to wetlands suitable for Everglades mink in ways that would allow untreated runoff to go into those wetlands.
- Implement prescribed fire and other appropriate habitat management practices as necessary to maintain the quality of wetland habitats that are potentially suitable for Everglades mink.
- Silvicultural management activities that follow recommended Water Quality BMPs.
- Agricultural activities that follow recommended Water Quality BMPs.
- Agriculture, as defined in Section 570.02, F.S., conducted in accordance with Chapter 5I-8, F.A.C., and the wildlife best management practices (BMPs) adopted in Rule 5I-8.001, F.A.C., by the Department of Agriculture and Consumer Service pursuant to Section 570.94, F.S., is authorized and does not require a permit authorizing incidental take despite any other provision of this section or Rule 68A-27.005, F.A.C.
- Channelization of streams and the removal of aquatic vegetation and woody debris in streams or other wetlands should be avoided as that can reduce the availability of vertebrate and invertebrate (e.g., crayfish) prey. Maintaining vegetative cover on land adjacent to wetlands can be important to enable or promote movements by mink (Lariviere 1999, Trani and Chapman 2007).

Measures to Avoid Take

Avoidance Measures that Eliminate the Need for FWC Take Permitting

The following measures will eliminate the need for an FWC take permit.

- Avoid removing or altering levees without checking for den sites.
- Avoid altering hydrology from early spring through early summer when young mink can be killed in flooded dens, or are incapable of traveling to distant wetlands for feeding.
- Avoid killing or injuring mink when they are observed, especially on or near roads.
- Identify Everglades mink den sites and avoid disturbance within 200 meters of known den sites, especially during those during times of the year when young mink are most likely to be present in them. Gerrell (1970) showed that movements are concentrated around active dens, with the greatest intensity (frequency) of movements within 200 meters of occupied dens.

Examples of Activities Not Expected to Cause Take

This list is not an exhaustive list of exempt actions. Please contact FWC if you are concerned that you could potentially cause take.

- Activities that restore natural hydrology in potential habitat.
- Routine maintenance of vegetation in existing linear utility and highway right-of-way's.

Florida Forestry Wildlife BMP's and Florida Agricultural Wildlife BMP's

- These best management practices do not include the Everglades mink and thus do not apply.

Other Authorizations for Take

- As described in Rule 68A-27.007(2)(c), F.A.C., land management activities (e.g., prescribed fire) that benefit wildlife and are not inconsistent with FWC Management Plans are authorized and do not require a permit authorizing incidental take.

Coordination with Other State and Federal Agencies

The FWC participates in other state and federal regulatory programs as a review agency. During review, FWC identifies and recommends measures to address fish and wildlife resources to be incorporated into other agencies' regulatory processes. The FWC provides recommendations for addressing potential impacts to state listed species in permits issued by other agencies. If permits issued by other agencies adequately address all of the requirements for issuing a SSC or State-Threatened species take permit under 68A-27.007, F.A.C., the FWC will consider these regulatory processes to fulfill the requirements of Chapter 68A-27, F.A.C., with minimal additional application process. This may be accomplished by issuing a concurrent take permit from the FWC, by a memorandum of understanding with the cooperating agency, or by a programmatic permit issued to another agency. These permits would be issued based on the understanding that implementation of project commitments will satisfy the requirements of 68A-27.007, F.A.C.

Review of Land and Water Conversion projects with State-Listed Species Conditions for Avoidance, Minimization and Mitigation of Take

- FWC staff, in coordination with other state agencies, provide comments to Federal agencies (e.g., the Army Corps of Engineers) on federal actions, such as projects initiated by a federal agency or permits being approved by a federal agency.
- FWC staff works with landowners, local jurisdictions, and state agencies such as the Department of Economic Opportunity on large-scale land use decisions, including long-term planning projects like sector plans, projects in Areas of Critical State Concern, planned unit developments, master planning unit developments, and large-scale comprehensive plan amendments.
- FWC staff coordinates with state agencies such as the Department of Environmental Protection (DEP) and the five Water Management Districts on the Environmental Resource Permitting (ERP) program, which regulates activities such as dredging and filling in wetlands, flood protection, stormwater management, site grading, building dams and reservoirs, waste facilities, power plant development, power and natural gas transmission projects, oil and natural gas drilling projects, port facility expansion projects, some navigational dredging projects, some docking facilities, and single-family developments such as for homes, boat ramps, and artificial reefs.
- During the ERP process, the FWC will provide guidance on avoidance, minimization, and mitigation measures for Everglades mink.
- The FWC staff will also work with DEP, water management districts, and the applicants during the ERP process so that ERP mitigation will satisfy the applicant's responsibilities under rule 68A-27, F.A.C. and associated rule enforcement policies (see [FWC Incidental take Permitting Process](#) below).
- Conservation benefit as defined under rule 68A-27, F.A.C. can be accomplished through avoidance, minimization, and mitigation measures outlined in the ERP permit. The existing ERP requirements for wetland mitigation include replacement of functional loss from impacts to wetlands. The mitigation includes provisions for perpetual conservation and management. Mitigation achieved through the ERP process could be considered a conservation benefit when mitigation sites include suitable wetlands where natural hydrology is maintained.
- Management practices and management zones established along streams or other water bodies to protect habitats and water quality can benefit the Everglades mink.

- These guidelines are based on current information and may change as new information is acquired.

FWC Permitting: Incidental Take

As defined in Rule 68A-27.001, F.A.C., “incidental take” is take that is incidental to, and not the purpose of, carrying out an otherwise lawful activity. Activities that result in impacts to Everglades mink can require an Incidental Take Permit from the FWC (see [above](#) for actions that do not require a permit). Permits may be issued when there is a scientific or conservation benefit to the species and only upon showing by the applicant that that the permitted activity will not have a negative impact on the survival potential of the species. Scientific benefit, conservation benefit, and negative impacts are evaluated by considering the factors listed in Rule 68A-27.007(2)(b), F.A.C. These conditions are usually accomplished through a combination of avoiding take when practicable, minimizing take that will occur, and mitigating for the permitted take. This section describes the minimization measures and mitigation options available as part of the Incidental Take Permit process for take of Everglades mink. This list is not an exhaustive list of options.

Minimization Measure Options

The options below are intended to address the evaluation factors required for consideration when issuing an incidental take permit. These options can lessen the impact of activities, and ultimately may reduce what is needed to achieve a conservation or scientific benefit (see below).

Seasonal, Temporal, and Buffer Measures

- No season or temporal restrictions are required for Everglades mink at this time.
- Avoid disturbance within 200 meters of known Everglades mink den sites.
- Minimize disturbance to potentially occupied habitats surrounding project areas with a minimal buffer distance (25 - 35 feet) outside the specific footprint of planned development activities (i.e., outside the project work zone).
- Restore any impacts to natural habitat within buffer areas adjacent to project work zones and, whenever possible, within project work zones.

Design Modification

- Site designs should minimize areas where potentially occupied Everglades mink habitat occurs, especially shallow freshwater marshes, swamp forests, coastal marshes, and mangroves.
- Minimize amount of suitable forested wetland habitat converted to other land uses.
- Design projects to minimize changes in timing, quantity, or quality of water that could degrade suitable forested wetland habitat.
- Design projects to minimize fertilizer, herbicide, and pesticide runoff into potentially suitable wetland habitat.
- Minimize placement of impermeable surfaces, such as roads and parking lots, adjacent to wetlands used by Everglades mink. This reduces the chance of flooding and minimizes runoff.
- Efforts should be made to maintain connectivity with offsite areas of potentially suitable habitat.
- Design roads away from suitable wetlands to minimize habitat fragmentation and degradation, and to minimize road mortality.
- For road placement and other projects that may impede water flow, include culverts to maintain or restore natural hydroperiods and flow levels.

Method Modification

- Use silt fencing and other methods to minimize impacts to water quality (e.g., turbidity) in suitable wetland habitats.

- Avoid or minimize the release of heavy metals and other chemicals that may bioaccumulate, as well as other chemicals and pollutants, especially into surface water runoff that can drain into potentially suitable wetland habitats.
- In areas where Everglades mink are believed to be present and vehicle-caused mortality has been observed, or is considered likely to occur, post signs to alert motorists to be watchful and avoid mink.
- Flag or otherwise mark known Everglades mink den sites, and avoid disturbance within 100 meters of these areas. Gerrell (1970) showed that movements are concentrated around active dens, with the greatest intensity (frequency) of movements within 200 meters of occupied dens.
- Allow Everglades mink observed during construction activities to move safely away from an area by pausing activities until the animal has moved away.

Mitigation Options

Mitigation is scalable depending on the impact, with mitigation options for take causing significant impairs or disruption of essential behavioral patterns. Multiple options for mitigation may exist that could be appropriate to counterbalance impacts to essential behavioral patterns resulting from a given project or action. From those options, the most appropriate combination of actions can be selected. The DEP's environmental resource permitting (ERP) process forms the basis of mitigation for loss or degradation of suitable Everglades mink habitat. Following the ERP process, the FWC will review the resulting wetland mitigation to assess whether it meets the seven factors outlined in Rule 68A-27.007, F.A.C., and meets the definition of scientific or conservation benefit for the Everglades mink. In many cases, wetland mitigation through the ERP process will satisfy the applicant's responsibilities under Rule 68A-27, F.A.C., and associated rule enforcement policies. However, under certain circumstances, the FWC may require additional measures to achieve scientific or conservation benefit specific for take of Everglades mink. Potential options for mitigation are described below. This is not an exhaustive list.

Scientific Benefit

This section describes research and monitoring activities that provide scientific benefit, per Rule 68A-27.007, F.A.C. Conducting or funding these activities can be the sole form of mitigation for a project.

- Any verified record that includes associated data on date, location, and habitat, and presence of water can provide scientific benefit. Photographic records from beyond or outside of locations where Everglades mink are currently known to occur can provide greater benefits.
- Funding for multi-year implementation of an accepted monitoring protocol for the Everglades mink. Until such a protocol is developed, incidental sightings should be recorded and reported. Such sightings can have a scientific benefit.
- A study radio or satellite telemetry study examining movements, home-range size, productivity, and survival.
- Surveys for Everglades mink on sites with potentially occupied habitat using recommended survey protocols.
- Studies that improve knowledge of life history and population management strategies for Everglades mink.
- Studies that provide data on the response of Everglades mink to habitat management activities.
- Studies that provide data on the response of Everglades mink to habitat fragmentation or urbanization of nearby areas.

Habitat

The acquisition option includes wetland mitigation through the ERP program. FWC will review the ERP mitigation to evaluate whether it meets the definition of conservation benefit for Everglades mink.

- With few exceptions, ERP mitigation is expected to satisfy the applicants' responsibilities under Rule 68A-27, F.A.C., and associated rule enforcement policies, and no FWC permit would be necessary.
- Select sites within Collier, Miami-Dade, and Monroe counties that encompass potentially occupied habitats.
- Preference is given to sites that are adjacent to, or increase connectivity (the ability of individual animals to move between) of existing conservation lands.

The management option includes wetland restoration or creation through the ERP program. FWC will review the ERP mitigation to evaluate whether it meets the definition of conservation benefit for the Everglades mink. Suitable mitigation sites would include forested wetlands connected to similar habitat on conservation lands.

- With few exceptions, ERP mitigation is expected to satisfy the applicants' responsibilities under rule 68A-27, F.A.C., and associated rule enforcement policies, and no FWC permit would be necessary.
- Restore natural hydrology within the historic range of the Everglades mink.
- Restore any disturbed ground cover with native species following project completion.
- Follow recommended procedures to maintain/ enhance habitat quality for Everglades mink.

Funding

No funding option has been identified at this time. A funding option may be appropriate in circumstances where ERP mitigation does not satisfy the FWC's definition of conservation benefit for the Everglades mink. Funds can be used to support activities identified in the [Species Action Plan](#) for the Everglades Mink (SAP) or in the information and habitat options within the permitting guidelines.

Information

- FWC approved research projects consistent with actions in the SAP.
- Surveys conducted on undisturbed sites in potential habitat to determine presence.
- Photo and location data for all specimens captured, collected, or observed during surveys.
- The information option may be appropriate in circumstances where ERP mitigation does not satisfy the FWC's definition of conservation benefit for the Everglades mink.

Programmatic Options

No programmatic option available.

Multispecies Options

- The ERP process can act as a multi-species option for Everglades mink and other species that use shallow freshwater marshes, swamp forests, coastal marshes, and mangroves. In many circumstances, mitigation provided through the ERP process may be sufficient to cover take of Everglades mink and other State-Threatened wetland dependent species.
- Whenever possible, develop multispecies habitat management or restoration actions that will benefit the Everglades mink along with federally listed species such as the Florida bonneted bat (*Eumops floridanus*) and Florida panther (*Puma concolor coryi*).
- Whenever possible, develop multispecies habitat management or restoration actions that will

benefit the Everglades mink along with other state-listed species such as the Sherman's short-tailed shrew (*Blarina shermani*) and Big Cypress fox squirrel (*Sciurus niger avicennia*).

FWC Permitting: Intentional Take

Intentional take is not incidental to otherwise lawful activities. Per Chapter 68A-27, F.A.C., intentional take is prohibited and requires a permit. For state-Threatened species, intentional take permits may only be considered for scientific or conservation purposes (defined as activities that further the conservation or survival of the species taken). Permits are issued for state-Threatened species following guidance in Rule 68A-27.007(2)(a), F.A.C.

Risks to Property or People

Intentional Take for Human Safety

Permits will be issued only under limited and specific circumstances, in cases where there is an immediate danger to the public's health and/or safety, including imminent or existing power outages that threaten public safety, or in direct response to an official declaration of a state of emergency by the Governor of Florida or a local governmental entity. Applications submitted for this permit must include all information that is required from any other applicant seeking a permit, along with a copy of the official declaration of a state of emergency, if any. This permit process may be handled after the fact or at least after construction activities have already started. An intentional take permit may be issued for such purposes.

Aversive Conditioning

- No approved aversive conditioning techniques have been identified at this time.

Permits Issued for Harassment

- Not applicable to this species

Scientific Collecting and Conservation Permits

Scientific collecting permits may be issued for the Everglades mink using guidance found in Rule 68A-27.007(2)(a), F.A.C. Activities requiring a permit include any research that involves capturing, handling, or marking wildlife; conducting biological sampling; or other research that may cause take.

Considerations for Issuing a Scientific Collecting Permit:

- 1) Is the purpose adequate to justify removing the species (if the project requires this)?
 - Permits will be issued if the identified project is consistent with the goal of the SAP (i.e., improvement in status that leads to removal from Florida's Endangered and Threatened Species List), or addresses an identified data gap important for the conservation of the species.
- 2) Is there a direct or indirect effect of issuing the permit on the wild population?
- 3) Will the permit conflict with program intended to enhance survival of species?
- 4) Will purpose of permit reduce likelihood of extinction?
 - Projects consistent with the goal of the SAP or that fill identified data gaps in species life history or management may reduce the likelihood of extinction. Applications should clearly explain how the proposed research will provide a scientific or conservation purpose for the species.
- 5) Have the opinions or views of other scientists or other persons or organizations having expertise concerning the species been sought?

- 6) Are applicant expertise, facilities, and other resources adequate?
- Applicants must have prior documented experience with this or similar species; applicants should have met all conditions of previously issued permits; and applicants should have a letter of reference that supports their ability to handle the species.

Relevant to All Scientific Collecting for the Everglades Mink

- Permits may be issued to display a taxidermied specimen for educational or scientific purposes as specified in 68A-12.004, F.A.C., if the specimen was obtained originally via a rehabilitation facility or was encountered dead.
- Applications must include a proposal that clearly states the objectives and scope of work of the project, including a justification of how the project will result in a scientific or conservation purpose for the species. The proposal also must include a thorough description of the project's methods, time frame, and final disposition of all individuals. Permit amendment and renewal applications must be "stand alone" (i.e., include all relevant information on objectives and methods).
- Permits may be issued for captive possession (removal from the wild) if the individual is deemed non-releasable.
- Trapping and handling protocols, and a justification of trapping methods, must be included in the permit application and should identify measures to lessen stress for captured Everglades mink.
- Methodologies for any collection of tissues, such as blood, should be clearly spelled out, including measures taken to reduce stress/injury to the animals.
- Disposition involving captive possession for any period of time must include a full explanation of whether the facility has the appropriate resources for accomplishing the objectives and for maintaining the animals in a safe and humane manner.
- Any mortality should be reported immediately to the FWC at the contact information below. The FWC will provide guidance on proper disposal of specimens.
- Active den sites should be reported as soon as possible to the FWC at the contact information below.
- A final report should be provided to the FWC in the format specified in the permit conditions.

Additional information

Information on the economic impacts assessment of the Species Conservation Measures and Permitting Guidelines for the Everglades mink can be found at

<http://myfwc.com/wildlifehabitats/imperiled/management-plans/>

Contact

For more species specific information or related permitting questions, contact the FWC at (850) 921-5990 or WildlifePermits@myfwc.com. For regional information, visit <http://myfwc.com/contact/>.

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