Bear Management Plan Update

December 11, 2019

Florida Fish and Wildlife Conservation Commission

Florida Black Bear Management Plan update

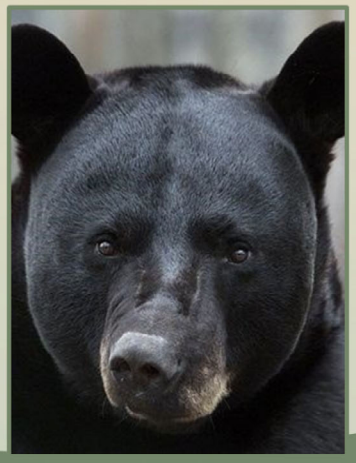
Staff contact: David Telesco, Habitat & Species Conservation

All photos by FWC unless otherwise noted.

Photo: Black bear in ferns, by WTSP.com.

Purpose

- 2017 Commissioners asked staff to bring Plan update in 2019
- Directed to include:
  - New data
  - Management progress
  - Population management options



In April 2017, the FWC Commissioners asked staff to draft an update to the Florida Black Bear Management Plan and provide it to them in 2019. The original Plan, approved in 2012, was a 10 year plan and was not scheduled for review until 2021. They requested inclusion of progress since 2012 in both research and management be incorporated to create one comprehensive document. Also, there was very little discussion on regulated hunting or any other population management options in the original Plan, and therefore Commissioners specifically asked staff to include a review of those options as part of the update.

Photo: Black bear, by Tallahassee Democrat

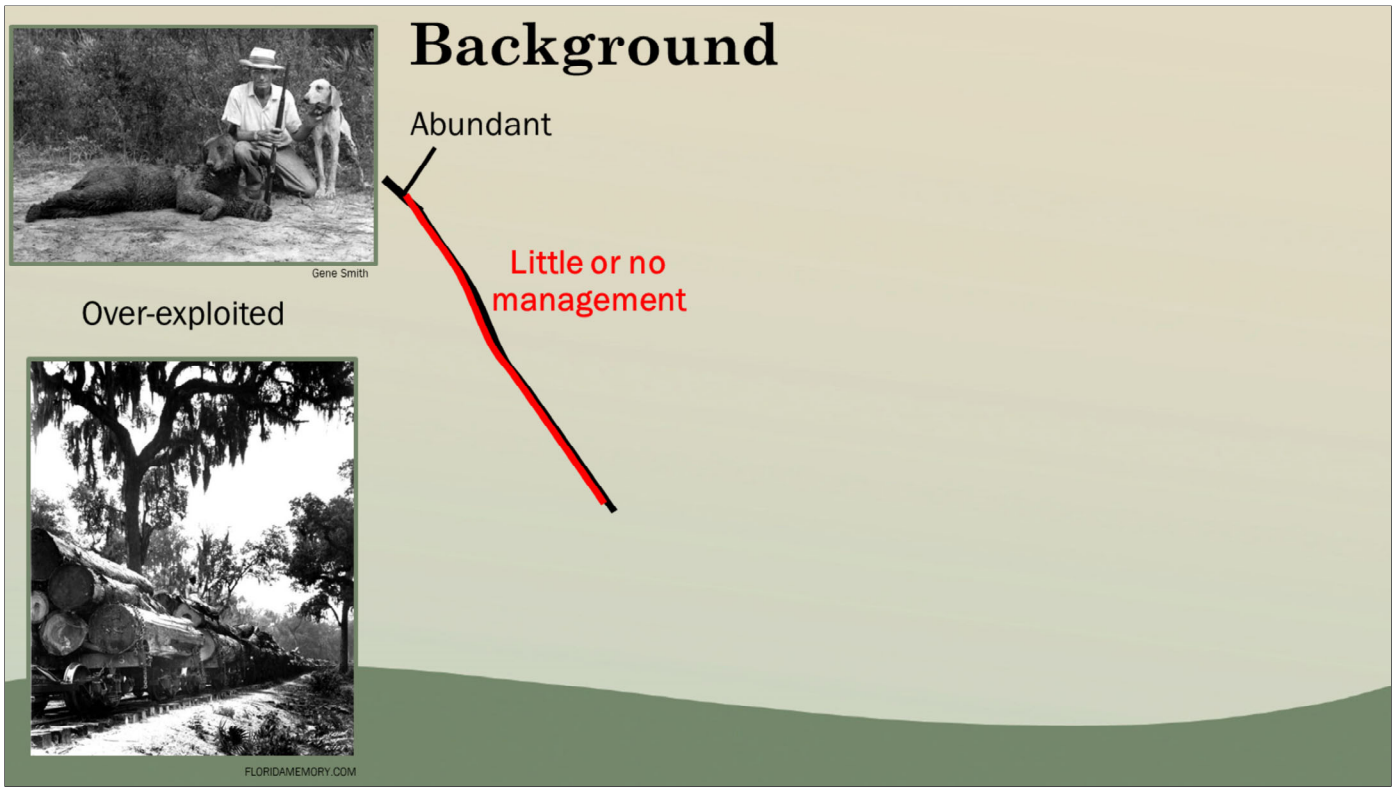
Presentation Outline

- History of bear management in Florida
- Overview of major updates to Plan
- Summary of stakeholder and public comments

IFAS.UFL.EDU

The presentation will touch briefly on the history of bears and how they have been managed in Florida, followed by a summary of some of the major updates made to the Plan, and finally a summary of the feedback received from stakeholders and the public on the Plan update.

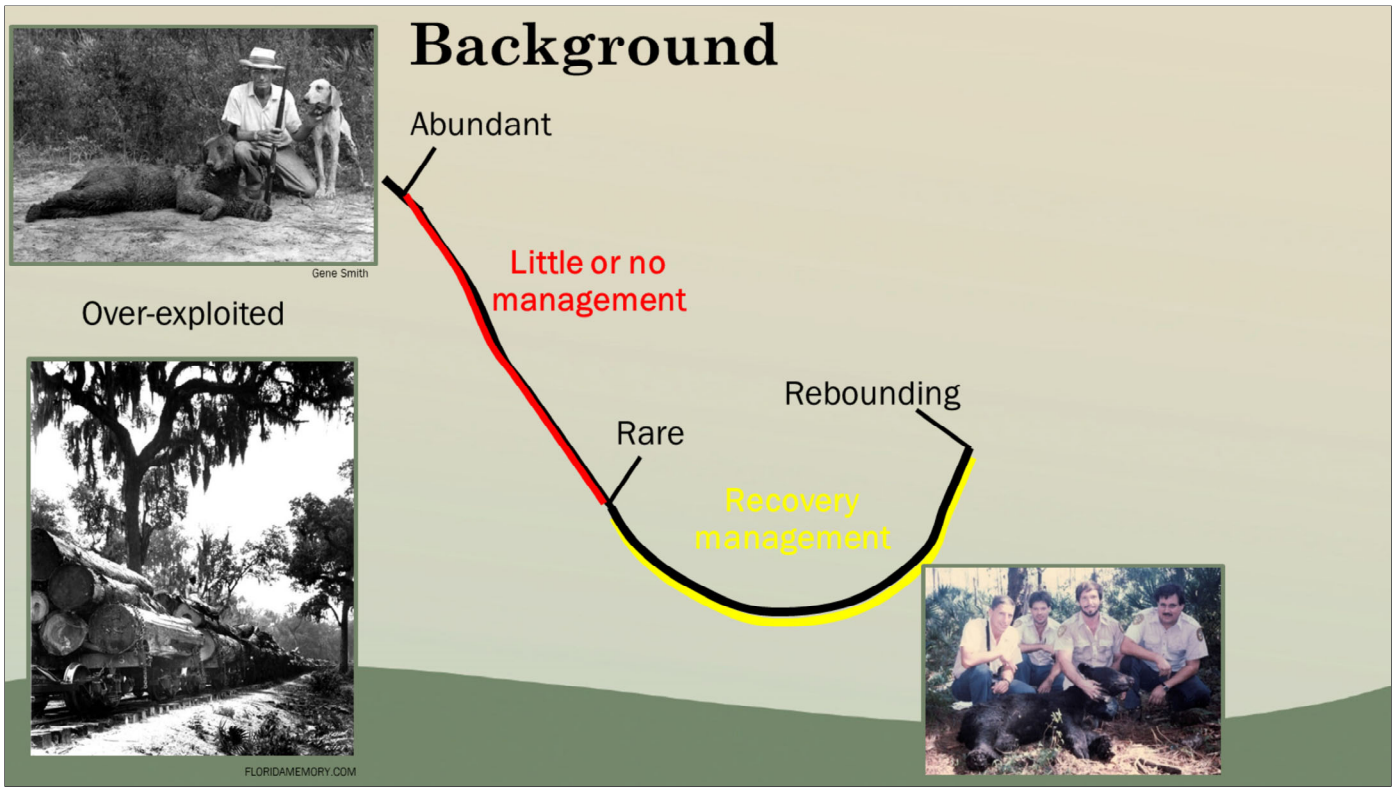
Photo: Florida black bear in forest by University of Florida IFAS



Understanding the history of bear populations and their management in Florida helps to provide context to what we are discussing today. This history is explained on a curve to help illustrate changes in the species status and how they were managed over time. In the early centuries, there may have been over 11,000 bears in Florida. As Florida was settled, bears were over-exploited and hunted indiscriminately, which led to the bear becoming rare in the state. The first part of the curve is labeled as ‘Little or no management’, since there were no rules or regulations that governed how bears were hunted or managed.

Photos: top to bottom

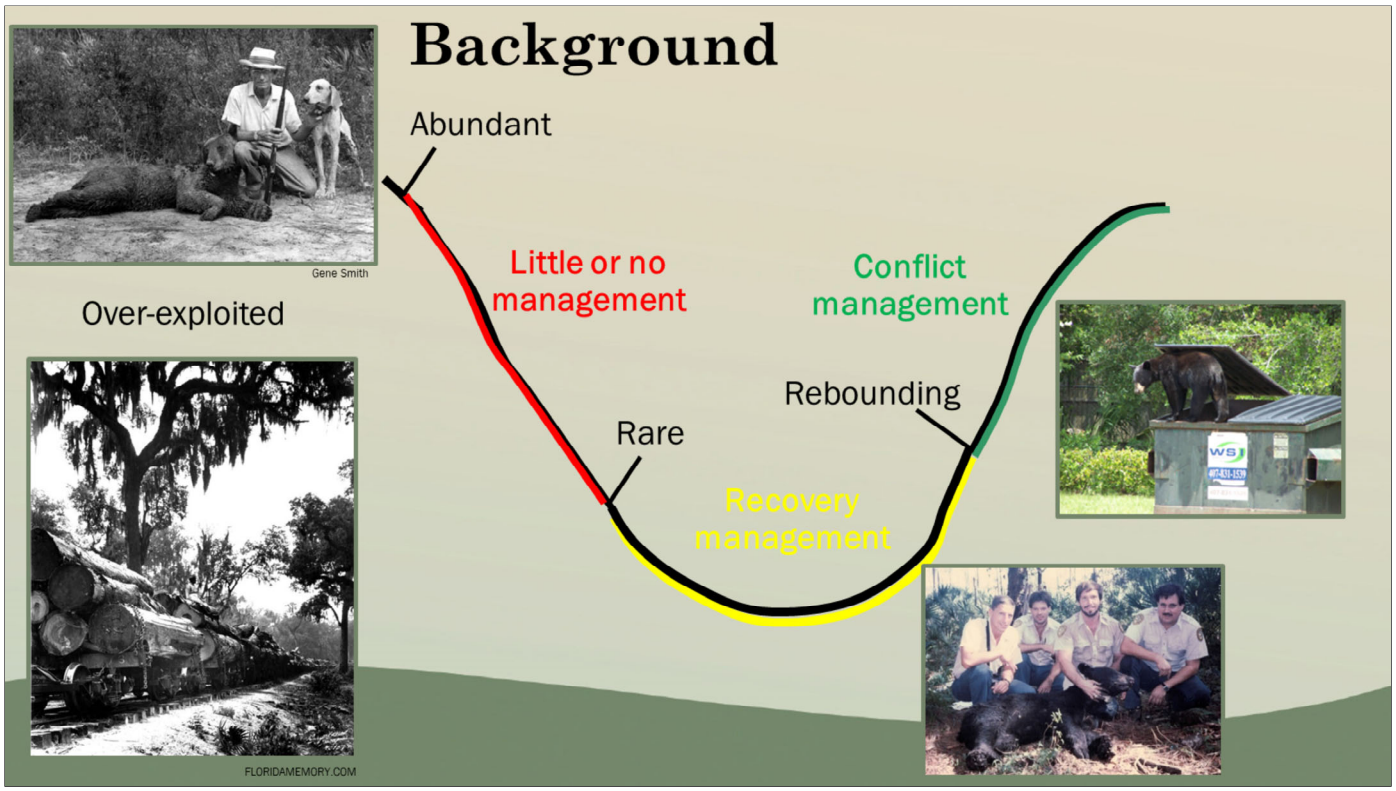
Florida black bear hunter and dog with bear by Gene Smith; cypress logs on railcars by Florida Memory



In the 1970's, Florida was one of the first states to adopt a program for identifying species that were in decline or at risk of extinction. By the mid-1970's, fewer than 500 bears were believed to remain in the state, and in 1974, the state listed the bear as threatened. With increased protection, bear populations began to rebound and become more numerous. This is labeled as the 'recovery management phase'; conservation efforts of state and federal agencies, local governments, non-profit groups, and private citizens helped the bear population start to rebound.

Photos, counter clockwise from top left:

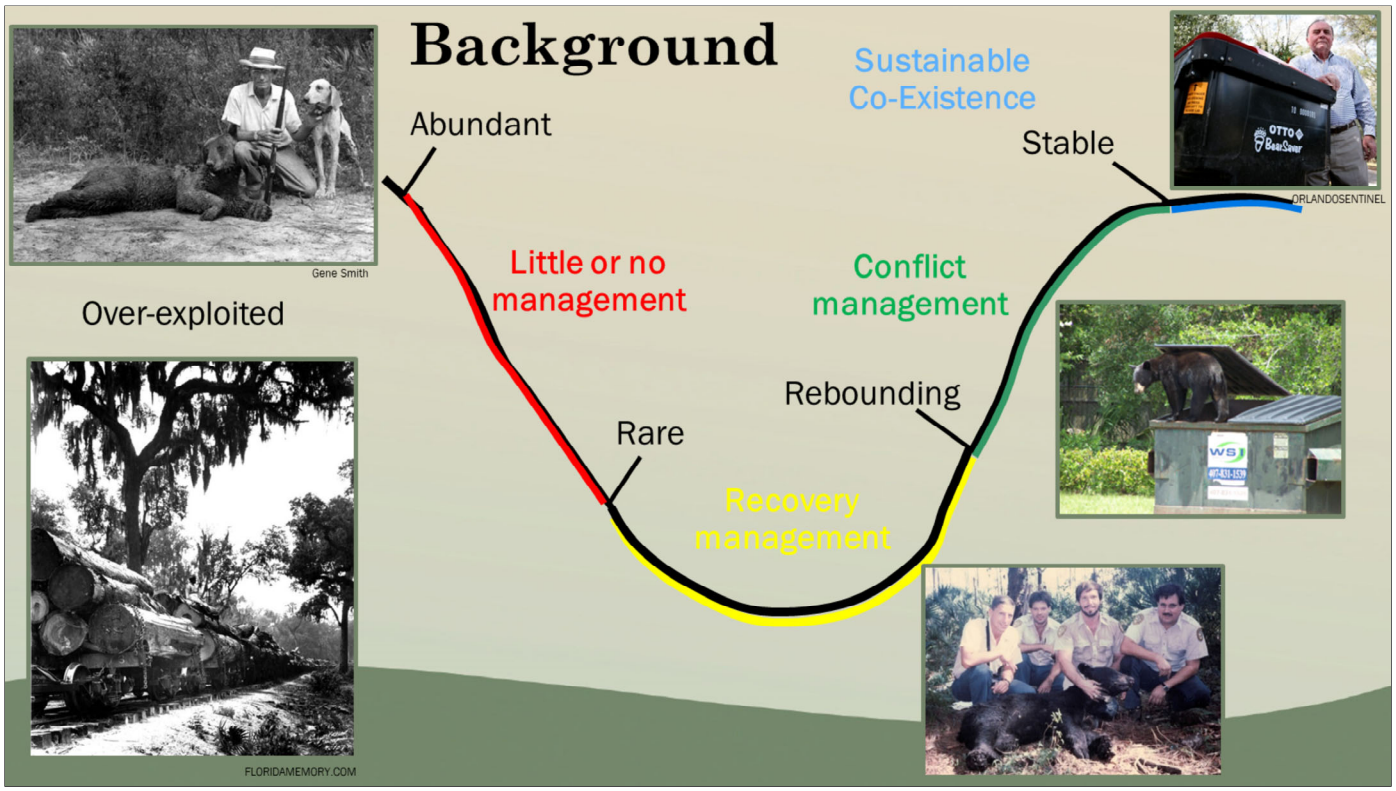
Florida black bear hunter and dog with bear by Gene Smith; cypress logs on railcars by Florida Memory; Biologists with chemically-immobilized Florida black bear



As conservation actions took place, the bear population recovered, with increasing numbers of bears throughout the state. At the same time, the human population increased in Florida, resulting in more interactions between bears and people. In 2011, the FWC revisited the status of all State-designated listed species, and determined the bear had recovered to the point it was no longer at high risk of extinction. In 2012, the bear was removed from the state threatened list, and as part of that process the first Bear Management Plan was approved. This is referred to as the ‘conflict management’ phase as people adjust to rebounding bear populations. Bear calls to the FWC from the public increased 400% over the last decade, ranging from sightings to bears in garbage to more serious incidents involving injuries to people and pets.

Photos, counter clockwise from top left:

Florida black bear hunter and dog with bear by Gene Smith; cypress logs on railcars by Florida Memory; Biologists with chemically-immobilized Florida black bear; Florida black bear on top of garbage dumpster



As we move forward with bear management in Florida, our goal is to maintain a sustainable population of bears in the state while minimizing human-bear conflicts, so that we can achieve the next stage, which is sustainable co-existence.

Photos, counter clockwise from top left:

Florida black bear hunter and dog with bear by Gene Smith; cypress logs on railcars by Florida Memory; Biologists with chemically-immobilized Florida black bear; Florida black bear on top of garbage dumpster; Man with bear-resistant garbage can, by Orlando Sentinel

2012 Bear Management Plan

- Original Plan written over 5-year period
- Drafts reviewed by stakeholder groups and public
- Commissioners approved Plan in 2012
- Designed for 10-year period

As our statewide bear population recovered, our objective has become sustainable coexistence. The 2012 Florida Black Bear Management Plan became the vehicle for the change in how we manage bears, incorporating conflict management techniques and policies. While the Plan was approved in 2012, staff started drafting it in 2007. Staff exchanged multiple drafts of the Plan with members of the Statewide Bear Technical Assistance Group, which included representatives of over 20 different government and non-government organizations. The Plan was then reviewed by the public before bringing it to the Commissioners, who approved it in 2012. The original Florida Black Bear Management Plan set as a goal a sustainable bear population, and outlined steps to address conflict management over a 10 year period.

Photo: Florida black bear in tree.

Bear Management Plan Goal

"Maintain sustainable black bear populations in suitable habitats throughout Florida for the benefit of the species and people"

- Long-term survival of statewide population
- Foundation for policies, rules and actions
- Local flexibility under statewide framework

The goal has not changed from the original Plan, which also describes the actions needed to ensure bears remain on the landscape in Florida into the future. The Plan provides the basis for the FWC policies and actions for managing bears for the next 10 years.

While this is a statewide Plan, it allows for the flexibility needed to manage bears at the local (Bear Management Unit) level. This means that bears can be managed differently depending on the specific characteristics of the bear and human populations in different parts of the state.

Photo: Florida black bear

Updating the Bear Management Plan

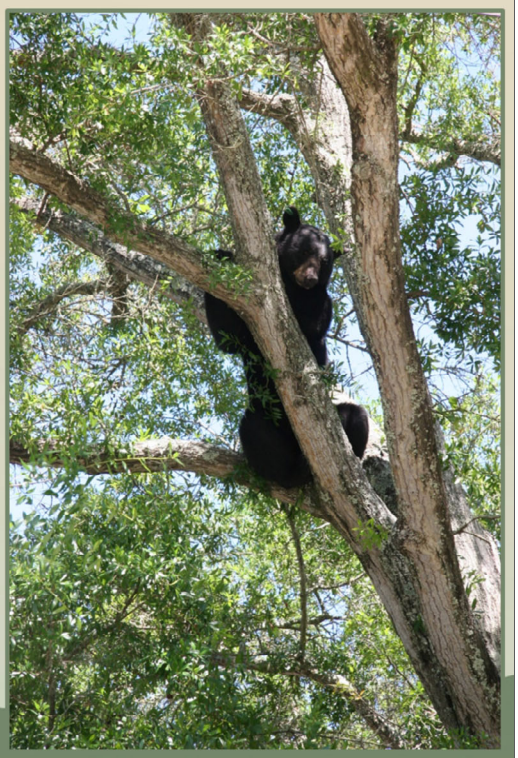
- FWC staff update: Oct. 2017 to Nov. 2019
- Entire 2012 Plan was reviewed and updated
- Internal review: Aug. to Sep. 2019
- External review: Oct. 7 to Nov. 6, 2019

A team of FWC staff have been working on updating the Plan since October 2017. The team went through all 200+ pages of the original Plan and updated language and data throughout. Once the team completed their review and edits, the Plan was submitted for internal review by staff and agency leadership. The Plan was then provided to the public for their review in early October.

Photo: cover of original Florida Black Bear Management Plan

Major Updates

- New available science
- Progress update
- Population management options



The major updates are grouped as follows for the presentation:
New data collected and analyzed since 2012
Progress on management activities identified in the original Plan
Addition of options to manage bear populations

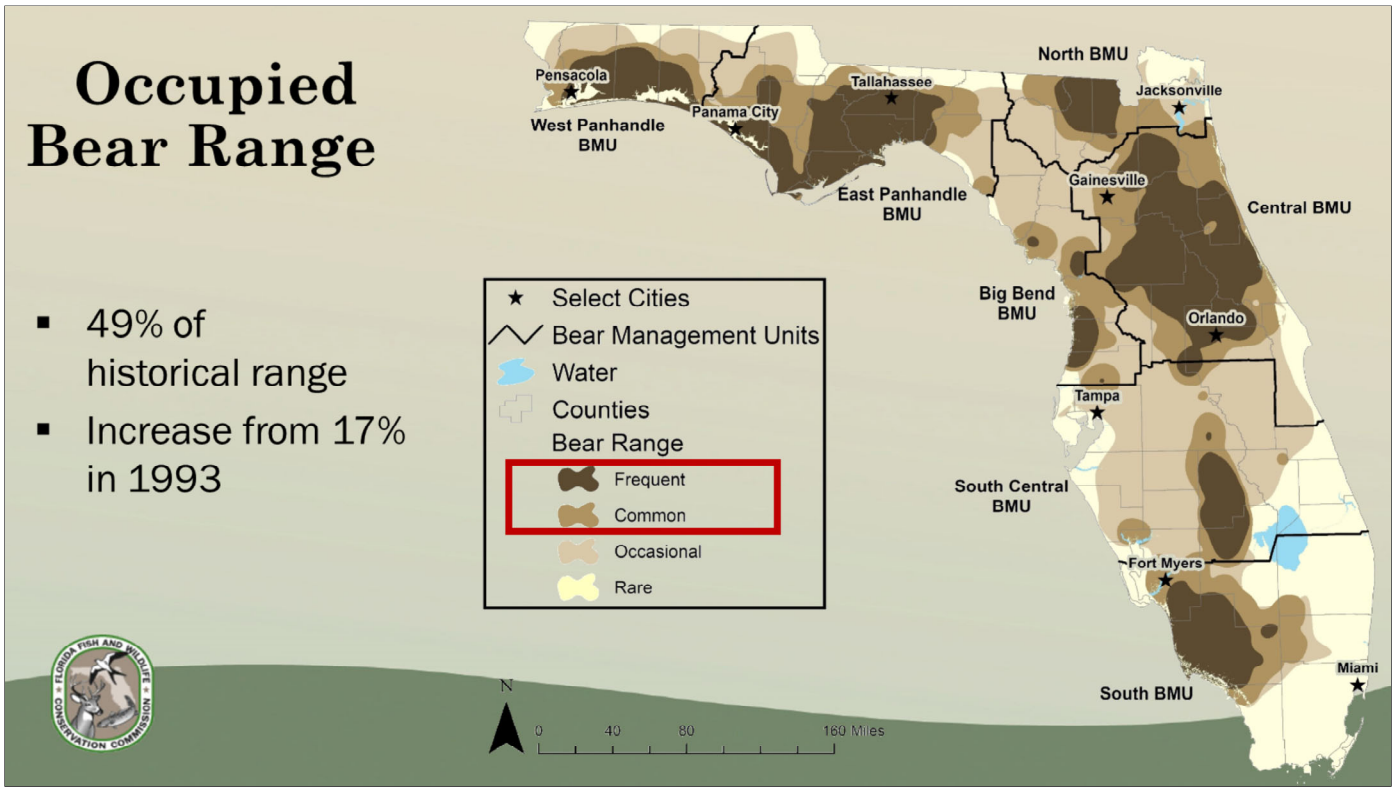
Photo: Florida black bear in tree

Major Updates

- New available science
- Progress update
- Population management options

New available science includes information collected by staff, contracted research, and human dimensions surveys.

Photo: Florida black bear at barbed wire hair snare



An analysis of bear range in Florida was completed in 2019. The range information was classified in four different categories:

Frequent: the core areas of the bear subpopulations, where we expect to find the most bears

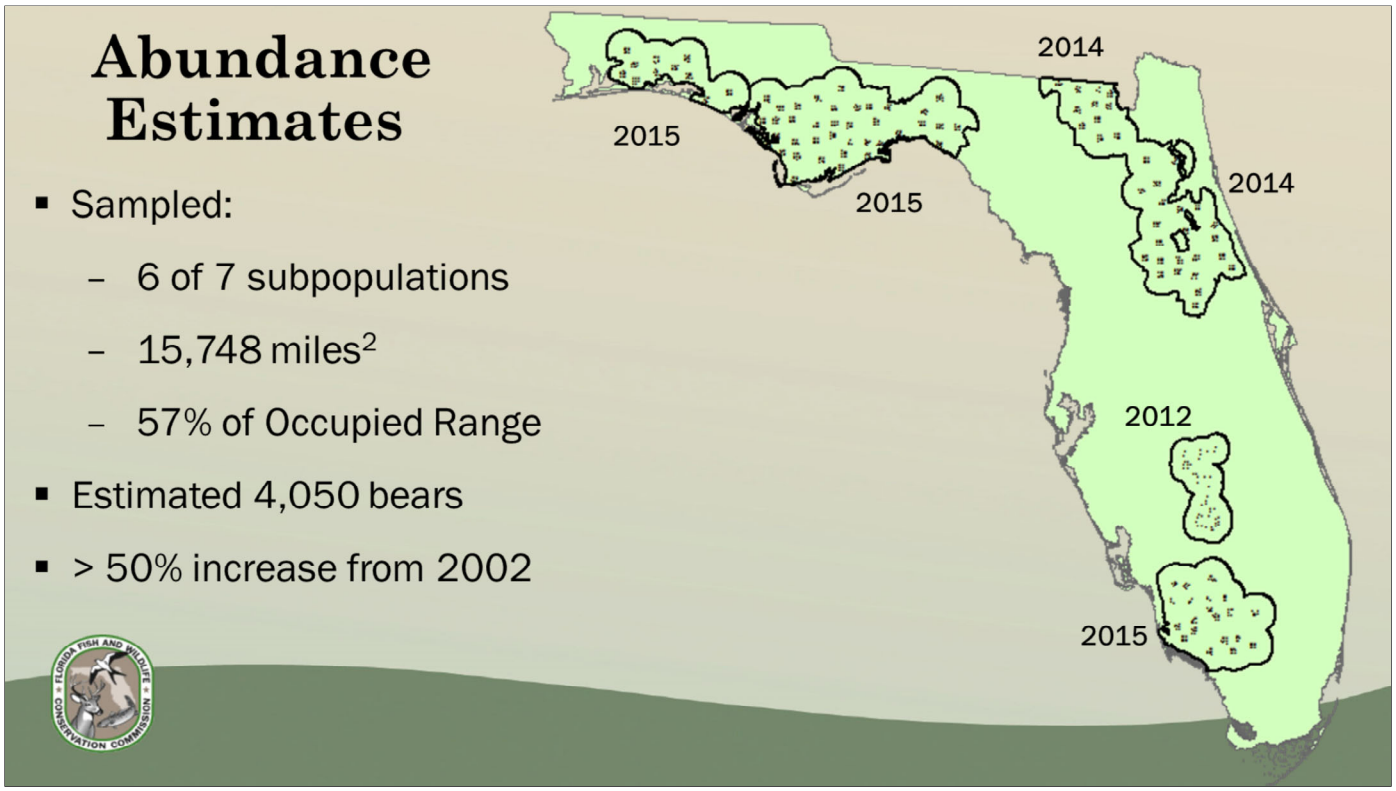
Common: bears are spending a fair amount of time in these areas, and are regularly found here

Occasional: bears are only found occasionally in these areas, but their presence is not completely unexpected

Rare: While bears have been observed almost everywhere in Florida, bears only rarely occur here

The occupied bear range is the combination of the Frequent and Common categories. Bears now occupy almost half of their historical range, which is a significant increase since 1993, when they occupied only 17% of historic range

Image: Florida black bear range map with abundance categories



Since 2012, abundance estimates were completed and published in scientific peer-reviewed journals for 6 of the 7 bear subpopulations in Florida. More than 15,000 square miles of habitat were sampled to estimate the bear subpopulations. This represented almost 60% of occupied bear range (areas labeled as Frequent and Common). The population estimate was over 4,000 bears in Florida in 2015, which is greater than 50% more bears since our last statewide estimate in 2002.

Image: map of abundance area sampling areas with year surveys conducted

In 2016, the FWC hired Responsive Management, an internationally recognized survey research firm specializing in attitudes toward natural resources, to survey Floridians on their opinion about bears and bear management. The survey selected a random sample of Floridians to ensure they had a scientifically valid representation of both the statewide human population, as well as a representative sample of people from each Bear Management Unit.

Based on survey results, Floridians were very supportive of having bears in Florida, whether they observed them or not. People were also very willing to take actions to avoid conflicts with bears.

Photo: Florida black bear in tree

Floridian's Views on Regulated Hunting

Question	Support	Oppose
Hunting any wildlife	70%	22%
Hunting bears	48%	43%

Although 1% or less of Floridians have hunting licenses, people were very supportive of hunting in general. When asked about bear hunting specifically, however, people we fairly evenly divided, with slightly more in support than against. When people were asked if they believed hunting was compatible with maintaining healthy bear numbers, their support for bear hunting increased.

Photo: hunter in woods

Floridian's Views on Regulated Hunting

Question	Support	Oppose
Hunting any wildlife	70%	22%
Hunting bears	48%	43%
If compatible with maintaining healthy bear numbers	62%	28%

When people were asked if they believed hunting was compatible with maintaining healthy bear numbers, their support for bear hunting increased.

Photo: hunter in woods

Subpopulation Growth Rates

Subpopulation	2014/2015 Abundance	Annual Growth Rate
Apalachicola	1,060	7.8%
Big Cypress	1,044	12.2%
Ocala	1,198	2.2%
Osceola	496	15.4%
TOTAL	3,798	N/A

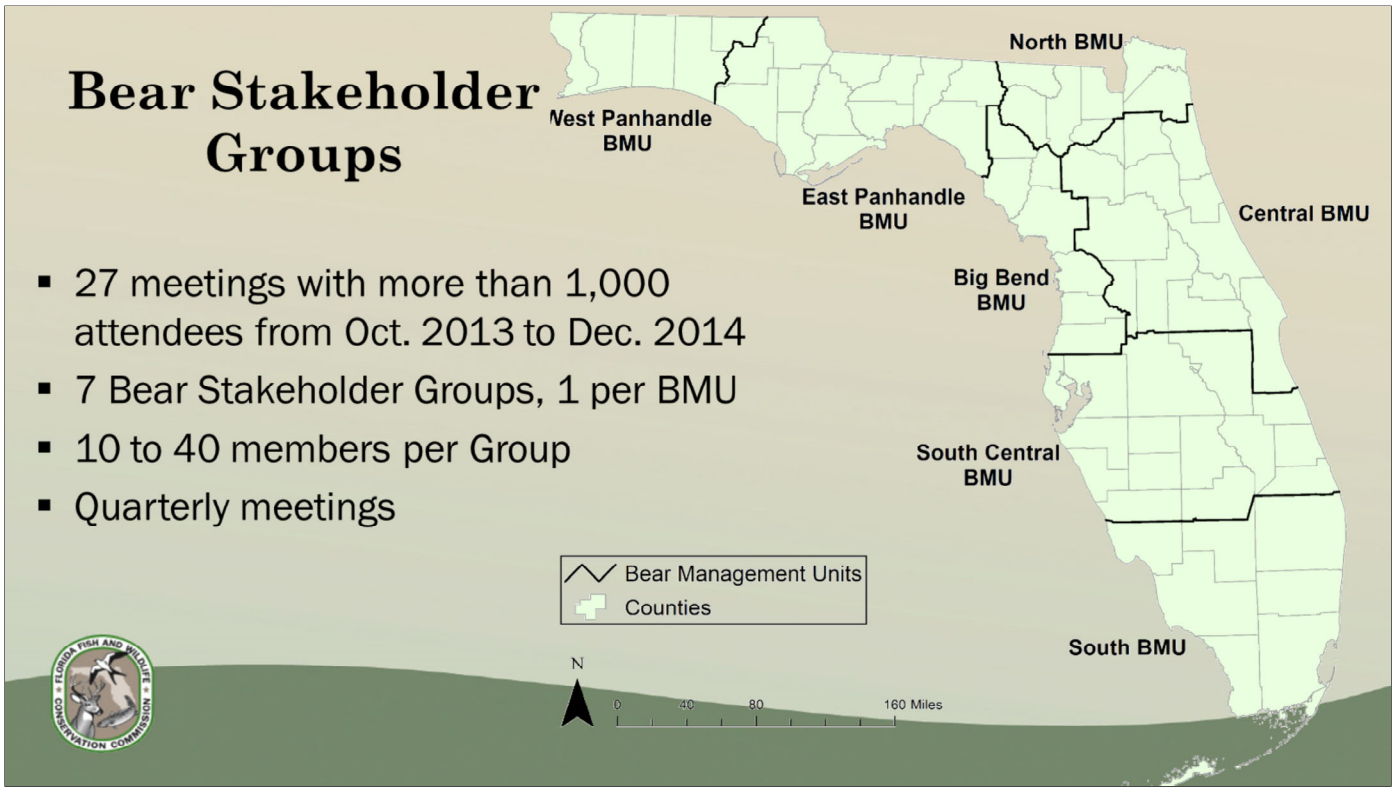
In 2017, researchers completed a final report on annual growth rates for four of the seven subpopulations. They examined characteristics of the subpopulations that most influence population growth, including annual survival of adult females, litter size and time between litters. The growth rates ranged from as low as 2.2% in the Ocala subpopulation to 15.4% in the Osceola subpopulation.

Major Updates

- New available science
- Progress update
- Population management options

With the growing bear population statewide, staff have worked to implement many of the management actions outlined in the 2012 Plan, particularly in areas of conflict management.

Photo: FWC bear contractor with bear trap



The original Plan called for the creation of seven Bear Stakeholder Groups, one for each Bear Management Unit, to allow the FWC to get local input and assistance in management and research efforts. Beginning in 2013, staff held 27 public meetings, which attracted over 1,000 attendees. From these public meetings, the FWC recruited active participants representing a diversity of views to join the Bear Stakeholder Groups and participate in quarterly meetings in each of the BMUs. The BSGs have provided excellent review and input as the bear management program implements the bear management plan.

Image: Map of Bear Management Units

BearWise Efforts

- Provided almost $2.1 million to local governments in 16 counties
  - > 13,000 cans
  - > 10,000 hardware sets
- 69% to local governments with ordinances
  - Seminole, Lake, Santa Rosa, Orange, Collier
  - Apopka, Fort Walton Beach
  - Numerous HOAs

The FWC has focused on helping communities secure trash because this is the primary driver of human-bear conflicts. In order to help residents and businesses secure their trash, the FWC used state funding and grants from sales of the Conserve Wildlife license plate from the Fish and Wildlife Foundation of Florida to share the costs of getting bear-resistant equipment to those areas most in need. The FWC has provided almost $2.1 million to the 16 counties with the most human-bear conflicts in Florida. Those funds were matched with funds from the local governments, residents and businesses to buy equipment. Most of the funding has gone to local governments who passed ordinances, bylaws, or rules that require people to keep their trash secure. Florida is among the States with the most BearWise local ordinances, with 5 counties, 2 cities, and numerous homeowner's associations with ordinances.

Photo: bear resistant trashcans

Conflicts Resulting in Injuries

- Tracking began in 1976
- First incident in 2006
- 13 moderate to serious injuries
- Key factors:
  - Female bears w/ young
  - Dogs present

The FWC has been keeping records of bear interactions with people since 1976. We have documented 27 incidents where bears made physical contact with people, all of which have occurred since 2006. Thirteen of these incidents resulted in moderate to serious injuries to people and required medical attention. Four of those 13 incidents occurred over a 13 month period between 2013 and 2014, which triggered multiple changes in how we approached bear management. Females with cubs or young bears are a common factor among incidents, in cases where the sex of the bear is known. Another common factor is a dog interacting with the bear before the injury to the person occurred.

Photo: bear in a trap

Bear Feeding Rule and Penalty Changes

- Intentionally feeding bears is prohibited
- Unintentionally feeding bears such that it is likely to create a nuisance is prohibited after receiving written notice:

FOXNEWS

On of those changes in bear management approaches was completed in 2015. The FWC updated the feeding rule that prohibits people from feeding bears. The new rule separates intentional and unintentional feeding, and requires officers to provide a notice of non-compliance for unintentional feeding before a warning or citation is given. This has resulted in hundreds of notices issued; for many people, the notice, which does not have a penalty, provides the incentive to change their actions and better manage the food resources available to bears.

Photo: Woman feeding bear by Fox News

Bear Feeding Rule and Penalty Changes

- Intentionally feeding bears is prohibited
- Unintentionally feeding bears such that it is likely to create a nuisance is prohibited after receiving written notice:

FOXNEWS

1st Offense: Non-criminal, $100 fine

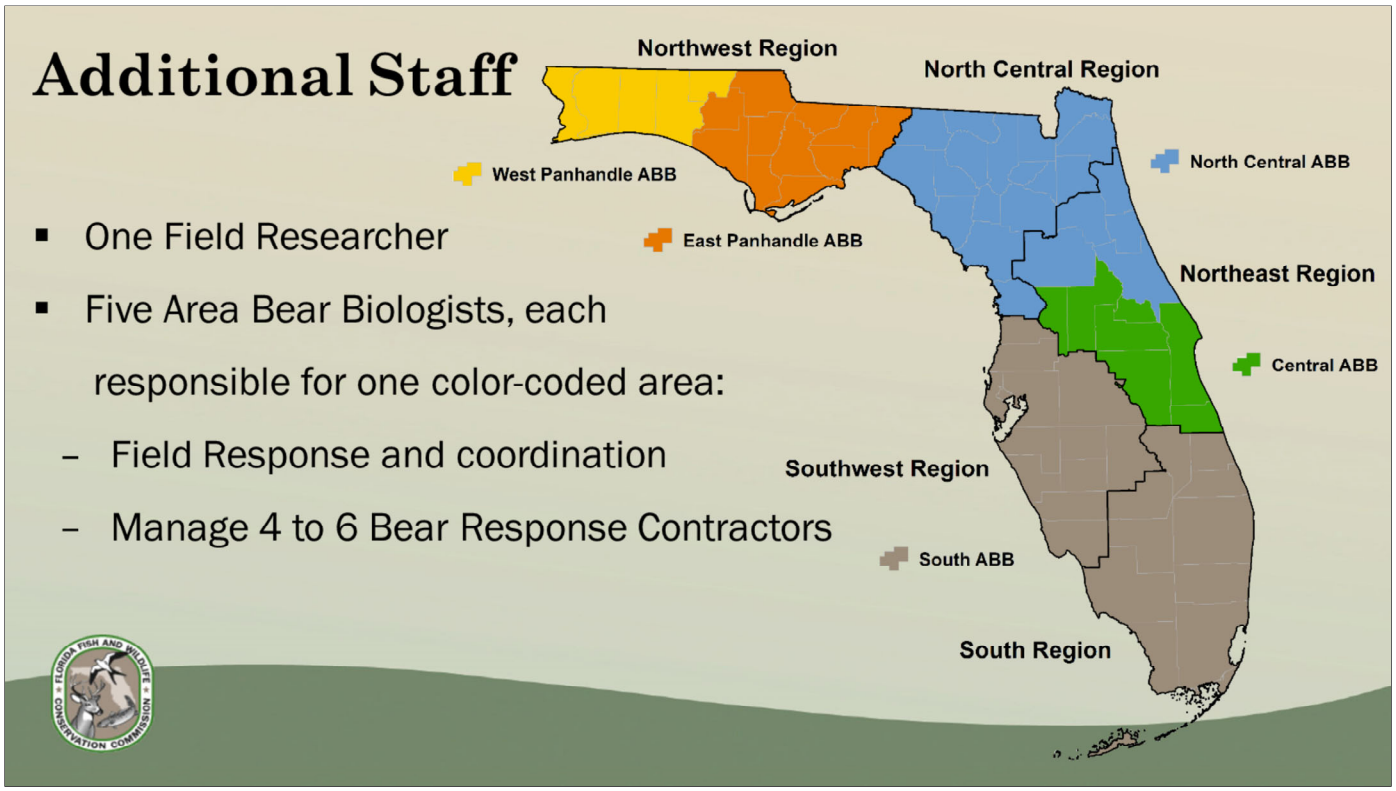
2nd Offense: 2nd degree misdemeanor, $500 fine, 60 days jail

3rd Offense: 1st degree misdemeanor, $1,000 fine, 1 year prison

4th Offense: 3rd degree felony, $5,000 fine, 5 years prison

In addition to a new feeding rule, the penalties for feeding wildlife (except for marine fish) were also changed in 2015. Prior to the rule change, a third of wildlife feeding cases were dismissed, another third received only fines, and the remaining third received both fines and criminal penalties. The penalties were changed to align with case history, so the first offense is now a civil penalty with a $100 fine and the second offense graduates to criminal penalties. For bears, alligators, and crocodiles, the penalties increase all the way up to a felony, thousands of dollar fines, and prison time.

Photo: Woman feeding bear by Fox News



Another change resulting from the series of people injured by bears was the realization that the FWC needed to request additional staff to address the challenges resulting from the increasing bear and human populations in Florida. In 2015, the FWC allocated funding to increase the number of staff focused on bear management. Additional staff included one bear research biologist and five bear management biologists. The bear management biologists are responsible for coordinating and responding to conflicts in their area of responsibility. The state is divided into five different areas based on the average number of conflicts; for example, the number of conflict calls in the gray area and the green area are roughly equal.

Image: map of the bear management biologist response areas

Implementation: 2012 to 2019 Plan Actions

Focus Area	Action Items with Progress
Population	100%
Habitat	82%
Conflict	100%
Outreach	92%
TOTAL	92%

The original Plan had actions identified in 4 target areas: population, habitat, conflict, and outreach. These actions were scheduled to be completed between 2012 and 2021. Staff have been able to make progress or complete almost all of those actions by 2019.

Image: Chart showing progress on actions in the 2012 Plan

Major Updates

- New available science
- Progress update
- Population management options

The final updates to the plan include the addition of population management options, as requested by Commissioners in 2017. No single population management option is proposed, but a suite of options are available to address management needs at the BMU level.

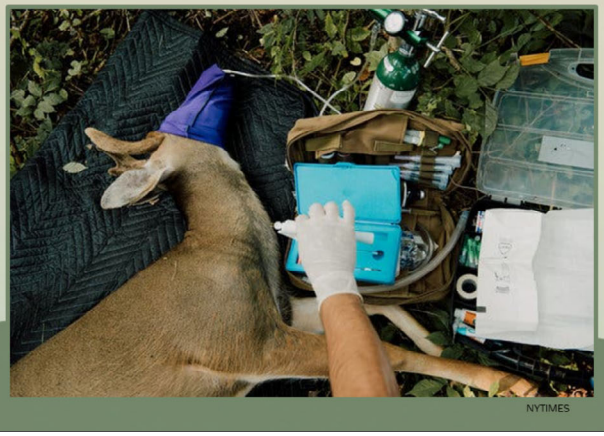
Photo: Black bear by pine tree by BearInfo.org

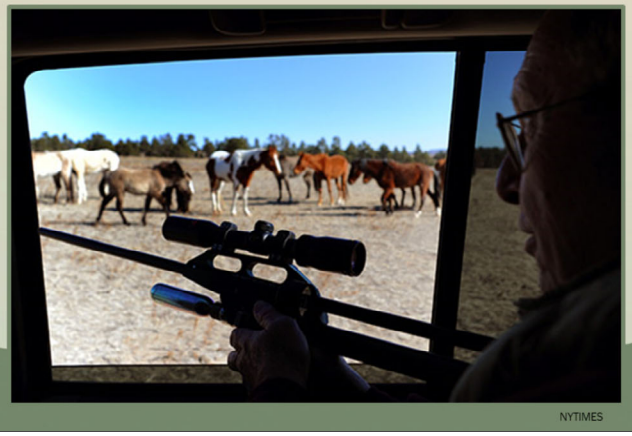
Contracted shooting and trapping programs are used on numerous species to reduce their overall numbers. However, contracted shooting and trapping programs for black bears are used to remove individual bears to resolve conflicts, and have not been used by other states to reduce overall bear numbers in an area. The FWC currently uses targeted trapping to remove bears in conflict situations.

Photos, left to right: Canada geese by Wildlife.org, feral hogs, by Oklahoma State University, beaver by Planet Science.org, White-tailed deer female and fawns by Missouri Department of Conservation, and coyote by USDA Wildlife Services

Population Management Options

- Contracted Shooting/Trapping Programs
- Fertility Control





Fertility control has been used on some wildlife species, mostly herd animals in open terrain or in island situations. Unlike herd animals, bears do not congregate nor do they prefer open habitats, which could make delivery of fertility control agents very difficult. Fertility control has not been attempted on any wild bear population and its efficacy is unknown, both in delivery and in the chemicals used. Additional research is needed to assess the effectiveness of fertility control for bears.

Photos, left to right: deer under sedation; delivering fertility control drugs to wild horses via dart rifle, photos from New York Times.

Population Management Options

- Contracted Shooting/Trapping Programs
- Fertility Control
- Habitat Manipulation

FDACS

The quality of habitat can be managed to encourage or discourage bear use at a local level. Large scale habitat manipulation targeted to increasing or decreasing bear populations has not been done at a regional level. Managing habitat with a specific goal to support more or less bears could present a challenge in managing other species in large areas.

Photo: pine forest

Population Management Options

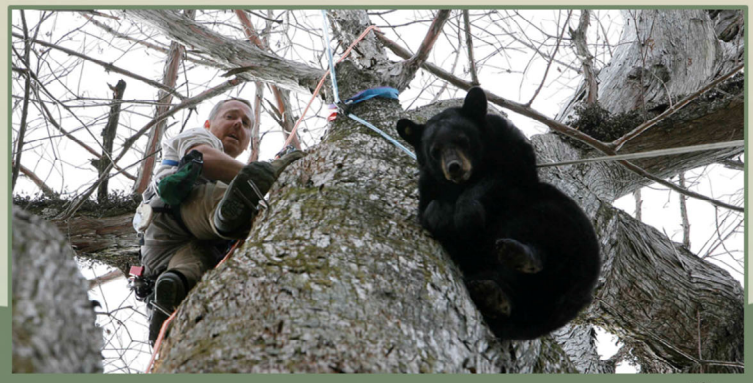
- Contracted Shooting/Trapping Programs
- Fertility Control
- Habitat Manipulation
- Regulated Hunting

Regulated hunting is the most common method used to manage black bear populations in North America. This is the most intensively researched and practiced management option. In states that use regulated hunting, harvest numbers are set to ensure that bear populations are sustained into the future.

Photo: hunters in wooded area

Population Management Options

- Contracted Shooting/Trapping Programs
- Fertility Control
- Habitat Manipulation
- Regulated Hunting
- Translocation



Translocation has been successful in increasing bear numbers and genetic diversity by taking bears from a larger donor population and moving them into a smaller recipient population. Donor populations are much larger than the recipient populations and the number of bears translocated is a very small percentage of the donor population. Because recipient populations are small, a small number of bears can make a significant difference in the genetic diversity of the recipient population. Translocation has not been used to stabilize or reduce the size of the donor population.

Photo: Biologist lowering sedated black bear from tree den by U.S. Geological Survey

Staff used multiple methods to collect feedback on the updated Plan, seeking input from our formal stakeholder groups as well as the public in general. From Oct. 7 to Nov. 6, we collected over 3,000 comments via our online survey. This survey was not intended to gauge opinions on bear management, but asked for specific input or suggested edits on the Plan. Between Oct. 21 and Oct. 28, staff met with all seven of our Bear Stakeholder Groups and our Statewide Bear Technical Assistance Group. On Oct. 24 and 29, we invited the public to participate in webinars, either online, on the phone, or in-person. The most popular way to provide feedback was through the online survey.

Overall Feedback

- Reviewed all suggestions and incorporated edits
- Supportive of content in general
- Strong feelings for/against regulated hunting

USFWS

In addition to the survey questions, there were also text boxes where people could provide their specific feedback. Based on comments received on the survey, meetings, emails, and letters, staff edited the first draft of the updated Plan. Over 100 changes were made to the updated Plan, most of which were to include additional information for clarity. Overall, the feedback received was supportive of the Plan's objectives. However, most of the feedback focused on whether the FWC will or will not re-open the bear hunting season. There was support for, and opposition to, regulated hunting as a population management option.

Photo: black bear by USFWS

Conclusion

- FWC is a leader in bear management and research
- More staff and resources dedicated to bears than other states
- Using quality long-term data and research to manage bears

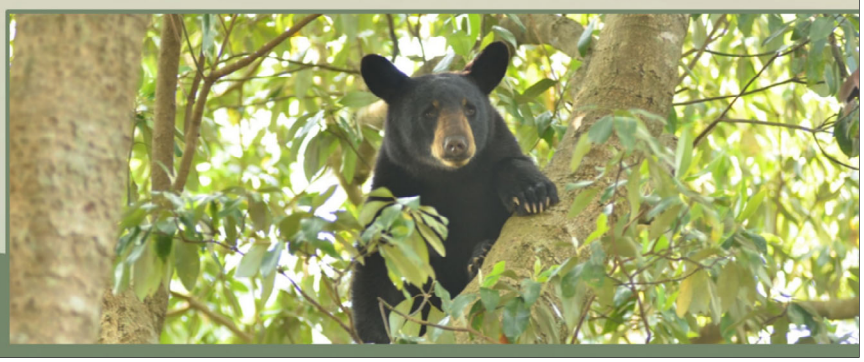
Florida is known throughout the U.S. as a leader in both bear research and management. In contrast to other states, we have more staff and resources specifically dedicated to bears, and regularly present our efforts at regional and national conferences. In 2016, the FWC invited a panel of experts in bear research and management from across the country to critically review our program. The group concluded that the FWC ‘is employing quality long-term data and scientific research to manage Florida’s black bears.’

Photo: Female black bear and cubs, by Tennessee Wildlife Resources Agency

Staff Recommendation

Approval of the 2019 Florida Black Bear Management Plan

- Updated Plan with best available science
- Critical review of population management options
- Documented recent accomplishments
- Extensive internal and external review



Staff have thoroughly researched, reviewed, and vetted the updates to the Plan. We are confident the Plan contains the best available science on bear research and management, and have provided a critical review on several population management options. We have also documented our progress since 2012. The Plan has been through an extensive internal and external review process to ensure it provides comprehensive and complete coverage of all topics related to bears. FWC staff feel that the Plan provides us with the guidance needed to manage bears in Florida. We request that Commissioners approve the updated Plan.

Photo: Florida black bear in tree