

PUBLIC COMMENT AND SERVICE RESPONSE

SUMMARY OF PUBLIC COMMENTS AND THE SERVICE RESPONSES

This appendix summarizes all comments that were received on the Draft Visitor Services Plan and Environmental Assessment for Everglades Headwaters National Wildlife Refuge. The Refuge announced public comment on the draft for a 60-day review starting March 25, 2020 to May 23, 2020. A link to the draft was posted on the Refuge's website and an informational bulletin was distributed to several media outlets. Throughout the public review period, approximately 14 individuals, non-profit entities, and governmental agencies submitted comments on the Draft Visitor Services Plan and Environmental Assessment.

Under the State Clearinghouse review, the proposed activities were found to be consistent with the state or regional goals, policies, plans, fiscal resources, criteria for developments of regional impact, environmental impacts, federal executive orders, acts and/or rules and regulations with which the clearinghouse is concerned.

Under the National Environmental Policy Act, the Service must respond to substantive comments. For purposes of this Environmental Assessment, a substantive comment is one that was submitted during the public review and comment period, which is within the scope of the proposed action (and the other alternative outlined in the Environmental Assessment), is specific to the proposed action, has a direct relationship to the proposed action, and includes reasons for the Service to consider it. For example, a substantive comment might be that the document referenced 500 acres of a particular habitat type, but that current research has determined 250 acres. In such a case, the Service will likely update the plan to reflect the 250, citing the latest information. A comment that will not be considered substantive will be: "The Refuge is a nice place."

The comments submitted during the public review and comment period were evaluated, summarized, and grouped into the following categories:

- General
- Legislation and Policies
- Consumptive Uses (e.g. hunting, fishing)
- Non-consumptive Uses (e.g. wildlife observation, camping)
- Volunteers, Infrastructure, Security & Staffing
- Landscape Context
- Corrections & Edits

GENERAL

Comment: Audubon is extremely supportive of your efforts and commends the USFWS for leading and partnering with the Florida Fish and Wildlife Conservation Commission and others to protect and manage these lands. These refuge units will do much for the restoration of fish, wildlife, plants, and their habitats, and create benefits such as wetland restoration and preservation, landscape connectedness and other ecosystem services.

Service Response: comment noted

Comment: Defenders of Wildlife (Defenders) appreciates the opportunity to comment on the U.S. Fish and Wildlife Service's (Service) draft Visitor Services Plan and Environmental Assessment (VSP/EA) for Everglades Headwaters National Wildlife Refuge and Conservation Area (EHNWR, Everglades Headwaters Refuge).

Our organization has been extremely supportive of efforts to establish and expand the Everglades Headwaters Refuge to help conserve and restore large acreages of interconnected wild lands and working lands. We also appreciate refuge managers' efforts to connect people with nature and our public lands through a variety of ongoing and additional uses proposed in the VSP/EA. The draft VSP/EA anticipates the following 14 public uses: bicycling, camping, commercial recording, commercial tours, environmental education and interpretation, fishing and frogging, hiking/ backpacking/jogging, horseback riding, hunting, off-road vehicle in support of hunting and fishing, pets on leash, wildlife observation and wildlife photography. The 2012 Land Protection Plan (LPP)¹ contained interim Compatibility Determinations (CDs) approving 11 of these public uses; the draft VSP/EA proposes adding commercial recording, commercial tours and pets on leash as public use opportunities.

Founded in 1947, Defenders of Wildlife is a national non-profit conservation organization focused on conserving and restoring native species and their habitats across the country. Based in Washington, DC, the organization also maintains six regional field offices and represents more than 1.8 million members and supporters in the United States and around the world, including nearly 120,000 in Florida. Defenders is deeply involved in public lands management and wildlife conservation, including the protection and recovery of flora and fauna in the Greater Everglades ecosystem, which is a focal landscape for our organization.

Our priorities include ensuring proper management of the National Wildlife Refuge System, the only network of federal lands and waters dedicated to wildlife conservation. The Refuge System is essential to preserving America's remarkable diversity of wildlife, while also providing innumerable recreational and educational opportunities for wildlife watchers, sportsmen, scientists and outdoor enthusiasts. Nationally, refuge visitation generates more than \$2.4 billion in sustainable local economic activity, supporting more than 37,000 jobs and accounting for \$792 million in annual employment income.

¹ Land Protection Plan for the Establishment of the Everglades Headwaters National Wildlife Refuge and Conservation Area. U.S. Department of the Interior, Fish and Wildlife Service Southeast Region, Atlanta, Georgia, January 2012 (403 pp).

Service Response: comment noted

LEGISLATION AND POLICIES

National Environmental Policy Act (NEPA)

Comment: The Humane Society of the United States ("HSUS") and the Humane Society Legislative Fund ("HSLF") hereby oppose the U.S. Fish and Wildlife Service's ("Service") proposal to open a coyote and bobcat hunting season on Everglades Headwaters National Wildlife Refuge ("Proposal") (see 85 Fed. Reg. 20030 (Apr. 9, 2020), "Proposed Rule"), as the Proposal is biologically unsound, contrary to the Service's mandate for managing the National Wildlife Refuge System, and is not supported by legally sufficient environmental analysis. The Service's Environmental Assessment ("EA") on this proposal is insufficient, and the Service must not publish a final EA or Finding of No Significant Impact ("FONSI") on activities at the

Everglades National Wildlife Refuge before it has accepted and analyzed all comments on the Proposed Rule, including on the Cumulative Impacts Report.

Service Response: The Service works closely with our State partners in managing hunting and fishing programs on refuge lands. The Service generally allows hunting or fishing of wildlife on refuges and hatcheries consistent with State regulations, including seasons and bag limits. Refuge-specific hunting and fishing regulations can be more restrictive (but not more liberal) than State regulations and often are more restrictive in order to help meet specific refuge objectives. Refuge has an agreement with the State to add fee-title lands to the wildlife management area (WMA) program. Our authority to do so stems from the Administration Act, as amended, which states, “when the Secretary [of the Interior] determines that a proposed wildlife-dependent recreational use is a compatible use within a refuge, that activity should be facilitated, subject to such restrictions or regulations as may be necessary, reasonable, and appropriate” (16 U.S.C. 668dd(a)(3)(D)), and “ regulations permitting hunting or fishing of fish and resident wildlife within the [Refuge] System shall be, to the extent practicable, consistent with State fish and wildlife laws, regulations, and management plans” (16 U.S.C. 668dd(m)). The Service defers to the State Game and Fish Agency to monitor populations of these species and implement any adjustments to future harvests as needed under the existing state regulations to ensure sustainable populations and minimize cumulative impacts.

We disagree that the analysis provided in the environmental assessment was not sufficient. The Environmental Assessment (EA) specifies how take limits are established and provides natural history information on the species to clarify how take limits were determined (EA Page 196).

Bobcat hunting is aligned with state regulations to meet the purpose and need of the action. It is estimated that there would be less than one bobcat taken on the Refuge annually. Hence, there are negligible impacts to bobcats that may be found on the Refuge and within the state of Florida. Additional details on how the Service derived at the estimated annual refuge bobcat take can be found in our responses under the following “Bobcat Hunting” section. There will be no changes made to opening of bobcat hunting on the refuge and the NEPA analysis is sufficient.

Coyote hunting is aligned with state regulations to meet the purpose and need of the action. It is estimated that there would be less than one coyote taken on the Refuge annually. Hence, there are negligible impacts to coyote that may be found on the Refuge and within the state of Florida. Additional details on how the Service derived at the estimated annual refuge coyote take can be found in our responses under the following “Coyote Hunting” section. There will be no changes made to opening of coyote hunting on the refuge and the NEPA analysis is sufficient.

Comment: The Service Is Required to Take a Hard Look at the Expansion of Hunting in National Wildlife Refuges. Pursuant to the National Environmental Policy Act (“NEPA”), major federal actions that may significantly affect the environment, must first be analyzed through an Environmental Impact Statement (“EIS”) to thoroughly consider the potential environmental impacts prior to taking that proposed action. 42 U.S.C. § 4332(C); 40 C.F.R. § 1502.3. If the agency is unsure whether its proposed action rises to the level of requiring an EIS, it may choose to issue an EA to help it make that determination. 40 C.F.R. §§ 1501.3(b), 1501.4(c). In deciding whether an agency’s proposed action may have a significant environmental impact, the agency must consider both the “context” and “intensity” of the proposed action. 40 C.F.R. § 1508.27.

Service Response: The Service disagrees with the assertion that we should prepare an EIS

before proposing expanded hunting and fishing opportunities on refuges or hatcheries. The Service's NEPA-related analysis of the impacts of the proposed rule demonstrated that the rule would not have significant impacts at the local, regional, or national level, and the commenter has provided no additional information that would change our analysis. As discussed above, we annually conduct management activities on refuges and hatcheries that minimize or offset impacts of hunting and fishing on physical and cultural resources, including establishing designated areas for hunting; restricting levels of use; confining access and travel to designated locations; providing education programs and materials for hunters, anglers, and other users; and conducting law enforcement activities.

The Service completed individual environmental assessments for or applied categorical exclusions to 89 refuges and hatcheries in compliance with NEPA to evaluate the impacts of opening or expanding hunting and fishing opportunities on the stations in connection with this rulemaking. These environmental assessments and categorical exclusions underwent regional and national review to address and consider these actions from a multi-State or flyway perspective, and to consider the cumulative impacts from this larger geographical context. The 2019-2020 cumulative impacts report concludes that, after analyzing the impacts of these 89 environmental assessments and categorical exclusions collectively with the refuges that already allow hunting and fishing, the rule will not result in significant adverse impacts to the human environment. A court found that this approach was an appropriate way for the Service to analyze the impacts of the rule in compliance with NEPA (see *Fund for Animals v. Hall*, 777 F. Supp. 2d 92, 105 (D.D.C. 2011)). Therefore, we did not find that the impacts to the human environment were severe, as the commenter suggests.

We did not make any changes to the rule as result of these comments.

Comment: To assess the adequacy of an EA, courts look to whether the agency took a "hard look" at the problem, whether the agency identified the relevant areas of environmental concern, considered adequate alternatives and cumulative risk, and whether the agency made a convincing case that the impact was insignificant. See, e.g., *Sierra Club v. Watkins*, 808 F. Supp. 852,865 (D.D.C. 1991) (quoting *Natural Res. Defense Council v. Herrington*, 768 F.2d 1355, 1430 (D.C. Cir. 1985)); see also *Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 373-74 (1989). In order to take the required "hard look," the Service must consider both direct and indirect environmental impacts, cumulative impacts, and short- and long-term impacts, among other things. See 40 C.F.R. §§ 1508.7, 1508.8, 1508.27.

Service Response: We do not allow hunting on a refuge if it is found incompatible with that individual refuge's purposes or with the mission of the NWRS. Part of the mission of the National Wildlife Refuge System is to "ensure that the biological integrity, diversity, and environmental health of the System are maintained for the benefit of present and future generations of Americans." (16 U.S.C. 668dd(a)(4)(B)). Therefore, each Service station manager uses his or her "sound professional judgment" in making these inherently complex management decisions to ensure that each proposed action complies with this mandate. Each manager incorporates field experience, knowledge of refuge resources, considerations of the refuge's role within an ecosystem, applicable laws, and best available science in making these decisions. Service biologists and wildlife professionals, in consultation with the State, determine the optimal number of each game animal that should reside in an ecosystem and then establish hunt parameters (e.g., bag limits, sex ratios) based on those analyses. We carefully consider how a proposed hunt fits with individual refuge goals, objectives, and strategies before allowing the hunt. None of the known, estimated, or projected harvests of migratory game birds, upland game, or big game species in this rulemaking is expected to have significant adverse direct,

indirect, or cumulative impacts to hunted populations, non-hunted wildlife, endangered or threatened species, plant or habitat resources, wildlife-dependent recreation, resources, refuge facilities, or socio-economics. We analyze these impacts not only in each refuge's NEPA document, but also in the 2019-2020 cumulative impacts report.

The Everglades Headwaters Visitor Services Plan and associated Compatibility Determinations and Environmental Assessment specify the public uses of the refuge, determine compatibility of those uses and analyzed the impacts of those uses including direct, indirect, short-term, long-term and cumulative impacts. The commenter is referred to the document, specifically pages 63-155 and 190-201, for those discussions. In addition, the Service conducted a Section 7 Threatened and Endangered Species Intra-Service Biological Evaluation on the impacts to listed species on the proposed actions with a concurrence of "Not Likely to Affect" for those species evaluated.

Comment: The Service Must Consider All Cumulative Impacts and Should Complete a Comprehensive EIS. As discussed above, the Service must consider both direct and indirect environmental impacts, cumulative impacts, and short- and long-term impacts, among other things, in order to satisfy NEPA's "hard look" requirement. See 40 C.F.R. §§ 1508.7, 1508.8, 1508.27. When considering the cumulative impacts of the action, the Service must consider "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." *Id.* at § 1508.7.

The Service is planning, through its Proposed Rule, to open or expand hunting or sport fishing on over two million acres of Service lands, across 97 national wildlife refuges and 9 national fish hatcheries. 85 Fed. Reg. at 20033, 20034. This action represents "the single largest expansion of hunting and fishing opportunities by the U.S. Fish and Wildlife Service (Service) in history." Press Release, U.S. Fish and Wildlife Service, Secretary Bernhardt Proposes Historic Expansion of Hunting and Fishing Opportunities (Apr. 8, 2020), available at <https://www.fws.gov/news/ShowNews.cfm?ref=secretary-bernhardt-proposes-historic-expansion-of-hunting-and-fishing- & ID=36541>.

Yet, despite the massive scope of the Proposed Rule and the fact that the Service is expanding hunting and fishing opportunities on all 2.3 million acres and 106 Service lands simultaneously as one agency action, the EA analyzes the impacts of new and expanded hunting opportunities only on that single Refuge. Nowhere does the EA consider the remainder of the openings as "reasonably foreseeable future actions" and analyze the cumulative impacts of the Proposal when added to opening other refuges or hatcheries to hunting. It is difficult to imagine a more "reasonably foreseeable future action" than the opening of 105 other federal lands to hunting opportunities on an unprecedented scale, considering all of these openings are occurring simultaneously as part of one agency action.

Indeed, as the agency is taking one action to open or expanding hunting on all of the lands simultaneously, the Service should conduct one comprehensive EIS analyzing the impacts of the entire agency action rather than artificially segment its action into over 100 different pieces.

The only place where the Service makes an attempt to consider the cumulative impacts of the Proposal when added to the remainder of the Proposed Rule is in the document titled "2020-2021 Final Cumulative Impacts Report," which was posted to the docket for the Proposed Rule on April 17, 2020. See 2020-2021 Station-Specific Hunting and Sport Fishing Regulations, Docketed ID: FWS-HQ-NWRS-2020-0013, <https://www.regulations.gov/docket?D=FWS-HQ-NWRS-2020-0013>. At the most basic level, this analysis fails to substitute for the EA's analysis

of cumulative impacts for two main reasons. First, the Report is titled as "final" despite the fact that the Service never made a draft available for public comment, as it is required to do; should the Service not accept comment on this supposedly "final" document and respond to comments on that document, this would violate the Service's duty to take public input on its proposed action. Second, as commenters including HSUS and HSLF will be commenting on the flawed analysis contained in that Report as part of their comments on the Proposed Rule due June 8, the Service cannot finalize the EA or reach a FONSI until it has analyzed all comments submitted on the Proposed Rule after the June 8 deadline. Otherwise, at minimum, it will not have considered all cumulative impacts before reaching a determination as to the environmental impacts of its action.

Additionally, HSUS and HSLF intend to submit more detailed comments on the EA, as well as on the Cumulative Impacts Report and the rest of the Proposed Rule, as part of the comment period ending June 8. Despite the fact that the Proposed Rule is an issue of "national concern," the EAs for the various refuges were not published in the Federal Register and the Service did not notify national organizations (such as HSUS and HSLF) who commented extensively on the 2019-2020 Station-Specific Hunting and Sport Fishing Regulations and were "reasonably expected to be interested." 40 C.F.R. § 1506.6(b)(2). The fact that the Service segmented its action into EAs for each individual refuge does not somehow convert the environmental impact of the entire Proposed Rule (one agency action) into 106 issues of local concern. Yet the Service only published the Proposed Rule announcing which refuges would be at issue on April 9, 2020, and only posted the environmental review documents on the docket on April 24, 2020. See 2020-2021 Station-Specific Hunting and Sport Fishing Regulations, Docket ID: FWS-HQ-NWRS-2020-0013, <https://www.regulations.gov/docket?D=FWS-HO-NWRS-2020-0013>.

As the public did not receive proper notice, and commenters will be submitting comments on the Proposal's environmental impacts (including cumulative impacts) as part of the comment period for the Proposed Rule, in order to take a "hard look" the Service must, at minimum, consider all comments on the EA, the Cumulative Impacts Report, and the Proposed Rule before reaching its final determination as to the environmental impacts of the Proposal.

Service Response: The Service disagrees with the assertion that we should prepare an EIS before proposing expanded hunting and fishing opportunities on refuges or hatcheries. The Service's NEPA-related analysis of the impacts of the proposed rule demonstrated that the rule would not have significant impacts at the local, regional, or national level, and the commenter has provided no additional information that would change our analysis. As discussed above, we annually conduct management activities on refuges and hatcheries that minimize or offset impacts of hunting and fishing on physical and cultural resources, including establishing designated areas for hunting; restricting levels of use; confining access and travel to designated locations; providing education programs and materials for hunters, anglers, and other users; and conducting law enforcement activities.

The Service completed individual environmental assessments for or applied categorical exclusions to 89 refuges and hatcheries in compliance with NEPA to evaluate the impacts of opening or expanding hunting and fishing opportunities on the stations in connection with this rulemaking. These environmental assessments and categorical exclusions underwent regional and national review to address and consider these actions from a multi-State or flyway perspective, and to consider the cumulative impacts from this larger geographical context. The 2019-2020 cumulative impacts report concludes that, after analyzing the impacts of these 89 environmental assessments and categorical exclusions collectively with the refuges that already allow hunting and fishing, the rule will not result in significant adverse impacts to the human

environment. A court found that this approach was an appropriate way for the Service to analyze the impacts of the rule in compliance with NEPA (see *Fund for Animals v. Hall*, 777 F. Supp. 2d 92, 105 (D.D.C. 2011)). Therefore, we did not find that the impacts to the human environment were severe, as the commenter suggests.

We did not make any changes to the rule as result of these comments.

National Wildlife Refuge System Administration Act

Comment: The Service Is Required to Take a Hard Look at the Expansion of Hunting in National Wildlife Refuges. Pursuant to the National Wildlife Refuge System Administration Act ("Administration Act"), "[t]he mission of the [Refuge] System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans." 16 U.S.C. § 668dd(a)(2). The Administration Act also requires the Service to "ensure that the mission of the System, and the purposes of each refuge are carried out." *Id.* at § 668dd(a)(4)(D).

Service Response: The Administration Act, as amended, stipulates that hunting (along with fishing, wildlife observation and photography, and environmental education and interpretation), if found to be compatible, is a legitimate and priority general public use of a refuge and should be facilitated. The Service has adopted policies and regulations implementing the requirements of the Administration Act that refuge managers comply with when considering hunting and fishing programs.

We allow hunting of resident wildlife on NWRs only if such activity has been determined compatible with the established purpose(s) of the refuge and the mission of the Refuge System as required by the Administration Act. Hunting of resident wildlife on NWRs generally occurs consistent with State regulations, including seasons and bag limits. Refuge-specific hunting regulations can be more restrictive (but not more liberal) than State regulations and often are more restrictive in order to help meet specific refuge objectives. These objectives include resident wildlife population and habitat objectives, minimizing disturbance impacts to wildlife, maintaining high-quality opportunities for hunting and other wildlife-dependent recreation, eliminating or minimizing conflicts with other public uses and/or refuge management activities, and protecting public safety.

Each refuge manager makes a decision regarding hunting on that particular refuge only after rigorous examination of the available information. Developing or referencing a comprehensive conservation plan (CCP), a 15-year plan for the refuge, is generally the first step a refuge manager takes. Our policy for managing units of the NWRS is that we will manage all refuges in accordance with an approved CCP, which, when implemented, will achieve refuge purposes; help fulfill the Refuge System mission; maintain and, where appropriate, restore the ecological integrity of each refuge and the Refuge System; help achieve the goals of the National Wilderness Preservation System; and meet other mandates. The CCP will guide management decisions and set forth goals, objectives, and strategies to accomplish these ends. The next step for refuge managers is developing or referencing step-down plans, of which a hunting plan would be one. Part of the process for opening a refuge to hunting after completing the step-down plan would be appropriate compliance with the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 et seq.), such as conducting an environmental assessment accompanied by the appropriate decision documentation (record of decision, finding of no significant impact, or environmental action memorandum or statement). The rest of the elements in the opening

package are an evaluation of section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.), copies of letters requesting State and/or tribal involvement, and draft refuge-specific regulatory language. We make available the CCP, hunt plan, and NEPA documents, and request public comments on them, as well as on any proposed rule, before we allow hunting on a refuge.

In sum, this illustrates that the decision to allow hunting on a NWR is not a quick or simple process. It is full of deliberation and discussion, including review of all available data to determine the relative health of a population before we allow it to be hunted.

The word "refuge" includes the idea of providing a haven of safety for wildlife, and as such, hunting might seem an inconsistent use of the NWRs. However, again, the Administration Act stipulates that hunting, if found compatible, is a legitimate and priority general public use of a refuge. Furthermore, we manage refuges to support healthy wildlife populations that in many cases produce harvestable surpluses that are a renewable resource. As practiced on refuges, hunting and fishing do not pose a threat to wildlife populations. It is important to note that taking certain individuals through hunting does not necessarily reduce a population overall, as hunting can simply replace other types of mortality. In some cases, however, we use hunting as a management tool with the explicit goal of reducing a population; this is often the case with exotic and/or invasive species that threaten ecosystem stability. Therefore, facilitating hunting opportunities is an important aspect of the Service's roles and responsibilities as outlined in the legislation establishing the NWRs, and the Service will continue to facilitate these opportunities where compatible with the purpose of the specific refuge and the mission of the NWRs.

Note that not all refuges are inviolate sanctuaries. If we acquired a refuge as an inviolate sanctuary, we may open up to 40 percent of that refuge's area for hunting of migratory game birds (16 U.S.C. 668dd(d)(1)(A)). However, if we acquired a refuge without the stipulation that it be an inviolate sanctuary, we may open 100 percent of the refuge's area for hunting.

The Fish and Wildlife Improvement Act of 1978 (16 U.S.C. 742l) amended section 6 of the Administration Act to provide for the opening of all or any portion of an inviolate sanctuary to the taking of migratory birds if taking is determined to be beneficial to the species. Such opening of more than 40 percent of the refuge to hunting is determined by species. This amendment refers to inviolate sanctuaries created in the past or to be created in the future. It has no application to areas acquired for other management purposes.

We did not make any changes to the rule as a result of these comments.

Comment: The Service Is Required to Take a Hard Look at the Expansion of Hunting in National Wildlife Refuges. The National Wildlife Refuge System Improvement Act ("Improvement Act"), enacted subsequent to the Administration Act, provides that certain hunting may be a permissible activity on refuges, but consumptive recreational uses are not given any higher priority than non-consumptive uses (such as wildlife watching, hiking, camping, photography, etc.), and protection of wildlife and other natural resources found within refuges must be accorded the highest of priorities. See 16 U.S.C. § 668dd. Moreover, the Improvement Act retains and reemphasizes the Administration Act's compatibility requirements and imposes other standards that require more biological and ecological evidence to support decisions to open refuges to activities that would harm or kill wildlife. See 16 U.S.C. § 668dd(a)(2); see also *Fund for Animals v. Hall*, 448 F. Supp. 2d 127 (D.D.C. 2006). Indeed, the Refuge System remains the "only federal lands to be managed primarily for the benefit of wildlife." GAO, *National Wildlife Refuges: Continuing Problems with Incompatible Uses Call for Bold Action*, at

2 (1989).

Under the Improvement Act, the Service has jurisdiction for administering the National Wildlife Refuge System and is charged with carrying out its conservation mandate. 16 U.S.C. § 668dd(a)(1), (4) ("the Secretary shall...provide for the conservation of fish, wildlife, and plants, and their habitats within the System [and] ensure that the biological integrity, diversity, and environmental health of the system are maintained for the benefit of present and future generations of Americans"). This jurisdiction includes the explicit authority to issue regulations to carry out the purpose of the Improvement Act. *Id.* at § 668dd(b) (S).

Service Response: The Administration Act, amended by the Improvement Act, stipulates that hunting (along with fishing, wildlife observation and photography, and environmental education and interpretation), if found to be compatible, is a legitimate and priority general public use of a refuge and should be facilitated. The Administration Act authorizes the Secretary to allow use of any refuge area for any purpose as long as those uses are compatible. In the case of each refuge that is opening or expanding hunting opportunities in this rule, the refuge managers went through the NEPA and compatibility process, which allows for public comment, to make the determination before the opening or expanding. The principal focus of the Improvement Act was to clearly establish a wildlife conservation mission for the Refuge System and provide managers clear direction to make determinations regarding wildlife conservation and public uses within the units of the Refuge System. The Service manages NWRs primarily for wildlife conservation, habitat protection, and biological integrity, and allows uses only when compatible with refuge purposes. In passing the Improvement Act, Congress reaffirmed that the Refuge System was created to conserve fish, wildlife, plants, and their habitats and would facilitate opportunities for Americans to participate in compatible wildlife-dependent recreation, including hunting and fishing on Refuge System lands. The Service has adopted policies and regulations implementing the requirements of the Improvement Act that refuge managers comply with when considering hunting and fishing programs.

Because this Environmental Assessment analyzes all public uses, there is a comprehensive assessment of impacts to natural resources as well as to other uses. Actions to minimize effects are provided throughout the effects analysis.

In addition, we do not allow hunting on a refuge if it is found incompatible with that individual refuge's purposes or with the mission of the NWRs. Part of the mission of the National Wildlife Refuge System is to "ensure that the biological integrity, diversity, and environmental health of the System are maintained for the benefit of present and future generations of Americans." (16 U.S.C. 668dd(a)(4)(B)). Therefore, each Service station manager uses his or her "sound professional judgment" in making these inherently complex management decisions to ensure that each proposed action complies with this mandate. Each manager incorporates field experience, knowledge of refuge resources, considerations of the refuge's role within an ecosystem, applicable laws, and best available science in making these decisions. Service biologists and wildlife professionals, in consultation with the State, determine the optimal number of each game animal that should reside in an ecosystem and then establish hunt parameters (e.g., bag limits, sex ratios) based on those analyses. We carefully consider how a proposed hunt fits with individual refuge goals, objectives, and strategies before allowing the hunt. None of the known, estimated, or projected harvests of migratory game birds, upland game, or big game species in this rulemaking is expected to have significant adverse direct, indirect, or cumulative impacts to hunted populations, non-hunted wildlife, endangered or threatened species, plant or habitat resources, wildlife-dependent recreation, prescribed fire, air, soil, water, cultural resources, refuge facilities, solitude, or socio-economics. We analyze these

impacts not only in each refuge's NEPA document, but also in the 2019-2020 cumulative impacts report.

Findings of Appropriateness

Comment: Page 82 - Appears "Finding of appropriateness of a refuge use" table for fishing is missing.

Service Response: As one of "big six" priority, wildlife-dependent uses, fishing was determined to be an appropriate use under the 1997 Refuge Improvement Act.

Comment: Page 84 - Appears "Finding of appropriateness of a refuge use" table for hunting is missing.

Service Response: As one of "big six" priority, wildlife-dependent uses, hunting was determined to be an appropriate use under the 1997 Refuge Improvement Act.

CONSUMPTIVE USES

Beekeeping

Comment: Why is beekeeping considered not an allowable practice?

Service Response: The Service has determined that commercial beekeeping is not an appropriate use on the Refuge because it does not support native bee diversity. Managed bees have been shown to have adverse effects on native bees through competition for floral and nesting resources, indirect effects via changes in plant communities, including the spread of exotic plants and decline of native plants, and transmission of pathogens (Mallinger et al. 2017).

Mallinger RE, Gaines-Day HR, Gratton C. 2017. Do managed bees have negative effects on wild bees?: A systematic review of the literature. PLoS ONE 12(12):e0189268. <https://doi.org/10.1371/journal.pone.0189268>

Bobcat Hunting

Comment: Hunting of bobcats is inhumane.

Service Response: While this is clearly an activity that elicits strong emotions, the Service contends that hunting as practiced according to State regulations is ethical. It serves to maintain a balance among wildlife populations and provides an outdoor tradition.

Comment: Trophy hunting of bobcats is not biologically supported. If not persecuted, wild bobcats can live up to 15 years in the wild.¹

¹ Luke Hunter, Carnivores of the World (Princeton, New Jersey: Princeton University Press, 2011).

Service Response: The Service does not attempt to define or authorize "trophy hunting" in any of our laws, regulations, or policies concerning hunting. We follow State hunting and fishing regulations, except for where we are more restrictive on individual stations, including State regulations concerning responsible hunting, or prohibitions on wanton waste (defined as "to intentionally waste something negligently or inappropriately"). We only allow hunting on refuges

and hatcheries when we have determined that the opportunity is sustainable and compatible.

Comment: Bobcats face a variety of threats-most of them from people, including from trophy hunters, trappers, poachers, vehicle collisions,² and predator-control agents (for perceived or real livestock losses).³ Bobcats' white and black-spotted belly fur is highly desirable on overseas fur markets. ⁴ According to the International Union for the Conservation of Nature:

World demand for Bobcat fur rose gradually in the late 1960s and early 1970s and jumped in the mid-1970s after CITES entered into force, when the pelts of cats listed on Appendix I became legally unobtainable for the commercial fur trade (Nowell and Jackson 1996). Of particular concern is the recent increase in Bobcat pelt prices from \$85 in 2000, to record highs of \$589 in 2013, \$447 in 2014, and \$305 in 2015, driven by high demand for fur in China, Europe, and Russia (Knudson 2016). The number of Bobcat pelts exported from the U.S. has quadrupled in recent years, climbing to a high of 65,000 in 2013 when pelt prices were highest.⁵

The Service should not expand hunting opportunities for these animals on Service lands, as they are already facing a myriad of threats and hunting them is not biologically supported. The Service must fully analyze the impacts of expanding these opportunities.

2 Alisa Ellsworth et al., "California Department of Fish and Wildlife: Inland Deserts Region: Eastern Sierra Nevada Bobcat Study: Annual Report,"

<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=135918&inline> (2016); S. A. Poessel et al., "Roads influence movement and home ranges of a fragmentation-sensitive carnivore, the bobcat, in an urban landscape," Article, Biological Conservation 180 (Dec 2014), <https://doi.org/10.1016/j.biocon.2014.10.010>, <Go to ISI>:/FWOS:000346211700022.

3 The Humane Society of the United States, "Government data confirm that cougars have a negligible effect on U.S. cattle and sheep industries,"

https://www.humanesociety.org/sites/default/files/docs/Cougar-Livestock-6.Mar_.19-Final.pdf (2019).

4 L. M. Elbroch et al., "Contrasting bobcat values," Biological Conservation

<https://www.springerprofessional.de/contrasting-bobcat-values/13278284> (2017).

5 Bobcat: *Lynx rufus*. Threats. <https://www.iucnredlist.org/species/12521/50655874#threats>.

Service Response: According to a 2010 report, range-wide, bobcat populations were increasing between 1981 and 2010. Florida was the only state where the bobcat population was decreasing (Roberts and Crimmins 2010). However, the report stated that: "*Given the stability of bobcat populations elsewhere in the United States, the decreasing population in Florida does not pose any immediate threat to the large-scale persistence of bobcat populations in the United States. However, research into the vital rates and demographic patterns of the Florida bobcat population could provide useful information to wildlife managers if populations elsewhere begin declining.*" (Roberts and Crimmins 2010). According to the latest Florida Fish and Wildlife Conservation Commission data, bobcat harvests in Florida ranged from 29 to 264 annually between 2010 and 2019. In 2019, bobcat take was 78 (B. Welch, pers. comm., May 28, 2020). The estimated Florida bobcat population in 2010 was approximately 303,338 (Roberts and Crimmins 2010). Even the highest annual take in Florida (264) would represent a loss of approximately 0.09 percent of the State's population annually.

Roberts NM, Crimmins SM. 2010. Bobcat population status and management in North America: evidence of large-scale population increase. *Journal of Fish and Wildlife Management* 1(2):169–174; e1944-687X. doi: 10.3996/122009-JFWM-026.

Comment: Bobcat density estimates vary and are poorly understood. A bobcat's home range is a fixed area that includes necessary resources for life, such as sufficient prey, water resources, and denning sites where mothers can rear their kittens.⁶ Male and female bobcats establish home ranges with considerable overlap. Male bobcats generally occupy larger home ranges than females - typically two to three times the size.⁷ The average range size for a female bobcat is from 1 km² to 86 km² while the average range for a male bobcat is from 2 km² to 325 km².⁸ Bobcats' home range size is strongly correlated with their population density, which is dictated by prey availability.⁹ But unless an intensive study has been undertaken, states have a poor grasp on their population sizes, densities and demographics.

Bobcats' density estimates vary widely, including 4 to 6 bobcats per 100 km² (e.g., in Idaho, Minnesota, Utah) and 20 to 28 per 100 km² (e.g. Arizona and Nevada).¹⁰ Most states have neither reliable statewide population nor trend data; wildlife managers are wholly reliant on untrustworthy anecdotal data including from states' hunter surveys, sightings, and vehicle collisions.¹¹

Because the Service has little knowledge of bobcat populations and trends over time and across the nation, national wildlife refuges should serve as source populations to protect the species, not as sinks that only benefit trophy hunters.

6 Hansen, K. 1992. Cougar: The American Lion. Northland Publishing, Flagstaff, AZ.

7 Hunter, L. 2015.

8 Ibid.

9 D. B. Lesmeister et al., "Spatial and Temporal Structure of a Mesocarnivore Guild in Midwestern North America," Article, Wildlife Monographs 191, no. 1 (May 2015), <https://doi.org/10.1002/wmon.1015>, <Go to ISI>:/JWOS:000353896300001.

10 Hunter, L. and P. Barrett. 2011. Carnivores of the World. Bobcat *Lynx rufus*. Princeton University Press, p. 34.

11 Elbroch et al., "Contrasting bobcat values."

Service Response: According to a 2010 report, range-wide, bobcat populations were increasing between 1981 and 2010 (Roberts and Crimmins 2010). The study estimated that the 2010 bobcat population abundance in the entire United States was 2,352,276 – 3,571,681. According to the latest Florida Fish and Wildlife Conservation Commission data, bobcat harvests from all WMAs in Florida ranged from five to 16 animals killed annually between 2010 and 2019. The highest take (16 animals) was in 2011 (B. Welch, pers. comm., May 28, 2020). Combined, WMAs in Florida cover an area of about 9,375 square miles. This means that in 2011, less than one bobcat was killed per square mile of WMA. Currently, the Refuge covers about six square miles, which means that at the higher end of the range, less than one bobcat would be expected to be taken on the Refuge annually based on average annual Florida harvest data. This is considered a low number of animals taken annually relative to the Florida population, which was estimated at approximately 303,338 in 2010 (Roberts and Crimmins 2010).

Roberts NM, Crimmins SM. 2010. Bobcat population status and management in North America: evidence of large-scale population increase. *Journal of Fish and Wildlife Management* 1(2):169–174; e1944-687X. doi: 10.3996/122009-JFWM-026.

Comment: Bobcats' preferred habitat is vanishing. Bobcats' ability to adapt to many different natural habitats increases their survival. Bobcats have a wide habitat tolerance and can live in almost any natural habitat that provides cover, which they require in order to hunt. However,

bobcats are sensitive to human activities,¹² including human development and disturbance.¹³ Bobcats avoid urban and exurban (that is, low density housing in formerly pristine areas) lands,¹⁴ agricultural lands¹⁵ and deep snow.¹⁶ Alarming, exurban areas are gobbling up wildlife habitats and are many times greater in size than all suburban and urban areas combined.¹⁷ Studies show that adult females avoid urban areas and fragmented habitats.¹⁸ Subadult bobcat transients need safe passages in order to find new habitats and establish home ranges. Yet, bobcats are threatened by habitat fragmentation and can become locally extinct in habitats that are highly fragmented.¹⁹

Because their habitats and corridors are in decline, bobcats should not endure hunting on our national wildlife refuges.

12 Erica Goad et al., Habitat use by mammals varies along an exurban development gradient in northern Colorado, vol. 176 (2014).

13 J. S. Lewis et al., "Interspecific interactions between wild felids vary across scales and levels of urbanization," Article, Ecology and Evolution 5, no. 24 (Dec 2015), <https://doi.org/10.1002/ece3.1812>, <Go to ISI>://WOS:000368136600018.

14 R. N. Larson et al., "Food habits of coyotes, gray foxes, and bobcats in coastal southern California urban landscape," Article, Western North American Naturalist 75, no. 3 (Oct 2015), <Go to ISI>://WOS:000365250700010.

15 Lesmeister et al., "Spatial and Temporal Structure of a Mesocarnivore Guild in Midwestern North America."

16 Hunter, L. 2015.

17 Goad et al., Habitat use by mammals varies along an exurban development gradient in northern Colorado, 176. 18 Seth P. D. Riley et al., "Effects of Urbanization and Habitat

Fragmentation on Bobcats and Coyotes in Southern California," 17, no. 2 (2003), <https://doi.org/10.1046/j.1523-1739.2003.01458.x>, <https://onlinelibrary.wiley.com/doi/abs/10.1046/j.1523-1739.2003.01458.x>; Seth Riley et al., A southern California freeway is a physical and social barrier to gene flow in carnivores, vol. 15 (2006).

19 Lesmeister et al., "Spatial and Temporal Structure of a Mesocarnivore Guild in Midwestern North America."; Lewis et al., "Interspecific interactions between wild felids vary across scales and levels of urbanization."

Service Response: Providing connectivity between protected areas is a conservation tool utilized by the Service, FWC, and other partners that benefits wide-ranging species such as bobcat. Garnering the public support needed to establish new conservation lands includes offering the widest range of appropriate recreational opportunities, including hunting.

Comment: Bobcats are limited by available prey, competition, predation, excluded from small urban habitats, and susceptible to disease. Trophy hunting is wholly unnecessary to keep bobcat populations in check, as they are self-regulating and limited by other factors. For instance, bobcats also compete for food resources with coyotes, gray foxes and even birds of prey such as great horned owls, and to a lesser extent, with cougars.²⁰ Also they face competition with other carnivores for prey and may be killed themselves by coyotes, domestic dogs and cougars.²¹

Researchers found that coyotes and gray foxes enjoyed omnivorous diets that included mammals, fruit and seeds, invertebrates, and birds.²² But bobcats were not detected in small urban fragments, because they, as obligate carnivores, required a more specialized diet.

Because of bobcats' food specialization, they were excluded from small urban areas, unlike more opportunistic carnivores.²³

In a Colorado study, authors found that bobcats and cougars shared the same habitats, but in wildlands bobcats avoided areas where lions had been for a few days.²⁴ In exurban areas, however, bobcats did not avoid cougars and were more likely to come into contact with them-risking deadly strife. Lewis et al. (2015) conclude that human development has a potential to alter felid communities with its associated changes in ecological communities.²⁵

Opportunistic hunters, bobcats consume a wide variety of prey, but their main foods of choice include lagomorphs (e.g. snowshoe hares, cottontail rabbits and jackrabbits) and rodents (mice, voles, squirrels and beavers).²⁶ Bobcats are an "obligate" carnivore - meaning that they require an all-meat diet.²⁷ Prey populations generally far exceed the biomass of their predators, and the number of prey generally determines the numbers of their predators.²⁸ But in a ground-breaking 2015 study published in *Science*, biologists reviewed more than 1,000 studies and came to a different conclusion: Even as prey biomass increases, predator numbers do not necessarily follow. That is because predators mainly eat the young and old prey animals, and prey animals who live in crowded conditions breed more slowly, leaving fewer animals for carnivores to eat.²⁹ For example, on the Kalahari, Hatton et al. (2015) found 200kg of prey (buffalo, impala etc.) per square kilometer, but only 4kg of lions and hyenas in that same space.³⁰

Furthermore, bobcats do not pose a credible threat to livestock. Data show that farmers and ranchers lose nine times more cattle and sheep to health, weather, birthing and theft problems than all carnivores (including domestic dogs) combined.³¹ Bobcats are opportunistic hunters. They may kill livestock such as sheep, goats, piglets and poultry, but data show that those attacks are miniscule.³²

Bobcats are susceptible to disease, including from domestic cats. If domestic cats do not receive regular veterinary care and are free-roaming, they become the source for numerous diseases to wildlife including rabies, feline leukemia virus and numerous parasites.³³ Researchers have documented the transmission of diseases from domestic cats to wild felids.³⁴ In urban areas, cougars and bobcats are susceptible to feline immunodeficiency virus (FIV) from domestic cats.³⁵

20 J. S. Lewis et al., "Contact Networks Reveal Potential for Interspecific Interactions of Sympatric Wild Felids Driven by Space Use," *Ecosphere* 8, no. 3 (2017); J. Witzuk et al., "Niche Overlap between Sympatric Coyotes and Bobcats in Highland Zones of Olympic Mountains, Washington," *Journal of Zoology* 297, no. 3 (2015); Hias Melville et al., "Prey Selection by Three Mesopredators That Are Thought to Prey on Eastern Wild Turkeys (*Meleagris Gallopavo Sylvestris*) in the Pineywoods of East Texas," *Southeastern Naturalist* 14, no. 3 (2015); D. B. Lesmeister et al., "Spatial and Temporal Structure of a Mesocarnivore Guild in Midwestern North America," *Wildlife Monographs* 191, no. 1 (2015).

21 M. J. Cherry et al., "Coyote diets in a longleaf pine ecosystem," *Article, Wildlife Biology* 22, no. 2 (Mar 2016), <https://doi.org/10.2981/wlb.00144>, <Go to ISI>:JWOS:000377803600005.

22 Larson et al., "Food habits of coyotes, gray foxes, and bobcats in coastal southern California urban landscape."

23 Larson et al., "Food habits of coyotes, gray foxes, and bobcats in coastal southern California urban landscape."

24 Lewis et al., "Interspecific interactions between wild felids vary across scales and levels of urbanization."

25 Lewis et al., "Interspecific interactions between wild felids vary across scales and levels of

urbanization."

26 C. C. Hass, "Competition and coexistence in sympatric bobcats and pumas," Article, *Journal of Zoology* 278, no. 3 (Jul 2009), <https://doi.org/10.1111/j.1469-7998.2009.00565.x>, <Go to ISI>://WOS:000267173900002; Oregon State University, "Species at a Glance: Nutria," [https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=l&cad=rja&uact=8&ved=2](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=l&cad=rja&uact=8&ved=2ahUKEwjV3cyUic7hAhUP)

[ahUKEwjV3cyUic7hAhUPcq0KHct_DAgQFjAAegQIABAC&url=https%3A%2F%2Fseagrant.oregonstate.edu%2Ffile%2F1341%2Fdownload%3Ftoken%3D-q6VIsqk&usg=AOvVaw3ivkVuXjFVEb5z8YiB_f_d](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=l&cad=rja&uact=8&ved=2ahUKEwjV3cyUic7hAhUPcq0KHct_DAgQFjAAegQIABAC&url=https%3A%2F%2Fseagrant.oregonstate.edu%2Ffile%2F1341%2Fdownload%3Ftoken%3D-q6VIsqk&usg=AOvVaw3ivkVuXjFVEb5z8YiB_f_d).

27 Kitchen, A.M., E.M. Gese, and E.R. Schauster. 1999. Resource partitioning between coyotes and swift foxes: space, time and diet." *Canadian Journal of Zoology-Revue Canadienne De Zoologie*. 77(10).

28 Barbara L. Peckarsky et al., "Revisiting the Classics: Considering Nonconsumptive Effects in Textbook Examples of Predator-Prey Reactions," *Ecological Society of America* 89, no. 9 (2008).

29 I. A. Hatton et al., "The predator-prey power law: Biomass scaling across terrestrial and aquatic biomes," *Science* 349, no. 6252 (2015).

30 Marc Montgomery, "Predators, prey, and the mathematics of nature," *Radio Canada International* (<http://www.rcinet.ca/en/2015/09/09/predators-prey-and-the-mathematics-of-nature/>) 2015.

31 The Humane Society of the United States, "Government data confirm that cougars have a negligible effect on U.S. cattle and sheep industries.," The Humane Society of the United States, "Government data confirm that wolves have a negligible effect on U.S. cattle and sheep industries," https://www.humanesociety.org/sites/default/files/docs/HSUS-Wolf-Livestock-6.Mar_.19Final.pdf (2019); The Humane Society of the United States, "Government data confirm that grizzly bears have a negligible effect on U.S. cattle and sheep industries," https://www.humanesociety.org/sites/default/files/docs/HSUS-Grizzly-Livestock-6.Mar_.19Final.pdf (2019).

32 Hunter, L. and P. Barrett, 2011.

33 R. W. Gerhold and D. A. Jessup, "Zoonotic Diseases Associated with Free-Roaming Cats," *Zoonoses and Public Health* 60, no. 3 (2013), <https://doi.org/10.1111/j.1863-2378.2012.01522.x>, <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1863-2378.2012.01522.x>.

34 Gerhold and Jessup, "Zoonotic Diseases Associated with Free-Roaming Cats."

35 Lewis et al., "Interspecific interactions between wild felids vary across scales and levels of urbanization.," Gerhold and Jessup, "Zoonotic Diseases Associated with Free-Roaming Cats.," Ashley Gramza et al., "Understanding public perceptions of risk regarding outdoor pet cats to inform conservation action," 30, no. 2 (2016),

<https://doi.org/10.1111/cobi.12631>, <https://onlinelibrary.wiley.com/doi/abs/10.1111/cobi.12631>.

Service Response: The Service offers hunting as both a wildlife management tool and an outdoor tradition. According to a 2010 report, bobcat populations were stable or increasing between 1981 and 2010 in 39 states. Most of these states allow bobcat hunting (Roberts and Crimmins 2010). Therefore, bobcat numbers are unlikely to be adversely affected by regulated hunting.

Roberts NM, Crimmins SM. 2010. Bobcat population status and management in North America: evidence of large-scale population increase. *Journal of Fish and Wildlife Management* 1(2):169–174; e1944-687X. doi: 10.3996/122009-JFWM-026.

Comment: Bobcats reproduce slowly, and the species is harmed by trophy hunting. While females are sexually mature at about one year of age, they do not breed until after they are two years old.³⁶ Males can start to mate at two years of age, but most do not until they become

territorial residents after they are about three years old.³⁷ Bobcats can reproduce year-round but typically breed during winter and spring, with most young born during the spring and summer months.³⁸ Females prefer secluded den sites to raise their litter of one to six kittens (the average is three kittens per litter), and will often move their kittens around between multiple den sites to prevent detection from other predators.³⁹ Birth intervals vary, with some bobcats having one litter per year or even one litter every two years.⁴⁰

Bobcat kittens depend on their mothers for survival for eight to ten months.⁴¹ They are weaned at approximately two to three months of age, after which they follow their mothers on daily hunts to master the craft of survival. By wintertime, kittens make their own kills.⁴²

When kittens are self-sufficient, typically nine to 24 months of age, these subadult transients disperse from their natal areas (the area where they were born) in an attempt to find their own home range and mates. Dispersal distances vary widely among young bobcats.⁴³

Trophy hunting and trapping bobcats orphans dependent kittens, leaving them to starve or die of predation or exposure.

36 Ibid.; V. Segura, "A three-dimensional skull ontogeny in the bobcat (*Lynx rufus*) (Carnivora: Felidae): a comparison with other carnivores," Article, *Canadian Journal of Zoology* 93, no. 3 (Mar 2015), <https://doi.org/10.1139/cjz-2014-0148>, <Go to ISI>:/fWOS:000352214400008.

37 Hunter, *Carnivores of the World*.

38 Crowe, D. M. 1975. Aspects of Ageing, Growth, and Reproduction of Bobcats from Wyoming. *Journal of Mammalogy*, Vol. 56, No. 1, pp. 177-198; Fritts, S. H. and J. A. Sealander. 1978. Reproductive Biology and Population Characteristics of Bobcats (*Lynx rufus*) in Arkansas. *Journal of Mammalogy*, Vol. 59, No. 2, pp. 347-353; Lawhead, D. N. 1984. Bobcat *Lynx rufus* Home Range, Density and Habitat Preference in South-Central Arizona. *The Southwestern Naturalist*, Vol. 29, No. 1, pp. 105-113.

39 Arizona Game and Fish Department. Bobcat Fact Sheet: Understanding Bobcat Management in Arizona. Retrieved from <https://www.azgfd.com/Portals1/Images/files/hunting/Bobcat%20Fact%20Sheet.pdf>. Segura, "A three-dimensional skull ontogeny in the bobcat (*Lynx rufus*) (Carnivora: Felidae): a comparison with other carnivores."

40 Hunter, *Carnivores of the World*.

41 Hansen, Bobcat: Master of Survival. Segura, "A three-dimensional skull ontogeny in the bobcat (*Lynx rufus*) (Carnivora: Felidae): a comparison with other carnivores."

42 Ibid.

43 Hunter, L. 2015

Service Response: The Service offers hunting as both a wildlife management tool and an outdoor tradition. According to a 2010 report, bobcat populations were stable or increasing between 1981 and 2010 in 39 states. Most of these states allow bobcat hunting (Roberts and Crimmins 2010). Therefore, bobcat numbers are unlikely to be adversely affected by regulated hunting.

Roberts NM, Crimmins SM. 2010. Bobcat population status and management in North America: evidence of large-scale population increase. *Journal of Fish and Wildlife Management* 1(2):169–174; e1944-687X. doi: 10.3996/122009-JFWM-026.

Comment: The Humane Society of the United States (HSUS) and Humane Society Legislative

Fund (HSLF) strongly urge the Service to not finalize its Proposal to authorize bobcat hunting in the Everglades Headwaters National Wildlife Refuge, as such Proposal fails to comply with federal law and is biologically unsound. The Service must, at minimum, consider an alternative that omits bobcat as a new species to be hunted. Furthermore, HSUS and HSLF plan to submit more in-depth comments on the Proposal, as well as other aspects of the Proposed Rule, as part of the comment period for the Proposed Rule that ends on June 8, 2020. If the Service nevertheless finalizes this Proposal, HSUS and HSLF will consider all available options to seek judicial review of such decision and of the Proposed Rule more broadly.

Service Response: In 2012, the Service approved a Land Protection Plan (LPP), which authorized the establishment of the Refuge, with a conservation lands cap of 50,000 acres in fee simple and 100,000 acres in easements (USFWS 2012). As part of the National Environmental Policy Act (NEPA) planning process, the Service evaluated the required No Action Alternative, under which the Service would not have established the Refuge, nor any visitor services, including hunting. Although the No Action Alternative would have precluded bobcat hunting (because there would be no refuge to hunt on), the continued loss of habitat that would have otherwise been protected by a refuge could have negatively affected bobcat populations. According to Crimmins (2010), extensive human development may be partly responsible for the declining Florida bobcat population. To date, the Refuge has protected over 9,000 acres from development, benefitting bobcat and a range of other wildlife species.

Roberts NM, Crimmins SM. 2010. Bobcat population status and management in North America: evidence of large-scale population increase. *Journal of Fish and Wildlife Management* 1(2):169–174; e1944-687X. doi: 10.3996/122009-JFWM-026.

USFWS. 2012. Land Protection Plan and Environmental Assessment for Everglades Headwaters NWR and Conservation Area. https://www.fws.gov/refuge/everglades_headwaters/

Bobcat Trapping

Comment: Bobcat should not be trapped on the Refuge.

Service Response: This proposed action does not include recreational trapping of any wildlife.

Coyote Hunting

Comment: Killing coyotes is cruel.

Service Response: While this is clearly an activity that elicits strong emotions, the Service contends that hunting as practiced according to State regulations is ethical. It serves to maintain a balance among wildlife populations and provides an outdoor tradition.

Comment: Killing coyotes is not biologically supported, and should not be permitted on National Wildlife Refuges. The Service should not expand opportunities for killing coyotes on Service lands, and if it does so, it must fully analyze the environmental impacts of that action. Coyotes are important environmental contributors, and killing them is cruel and an ineffective means of population control.

Service Response: The Service offers hunting as both a wildlife management tool and an outdoor tradition. According to the latest Florida Fish and Wildlife Conservation Commission data, coyote harvests in on WMAs in Florida ranged from 14 to 26 annually between 2013 and 2019. In 2019, coyote take on WMAs was 23 (B. Welch, pers. comm., May 28, 2020). WMAs in

Florida cover approximately 9,375 square miles. This means that at the high end of the WMA take range (26), less than one coyote was taken per square mile annually. The Refuge cover six square miles, so less than one coyote could be expected to be taken annually on the Refuge. The coyote population in Florida is estimated between 13,000 and 70,000 (Sarasota Magazine 2018). Hence, the estimated number of annual Refuge take would be less than one animal and is unlikely to reduce coyote numbers State-wide. The species is expected to continue to thrive and cause both beneficial and adverse biological effects.

Sarasota Magazine. 2018. They're Back! After Nearly 12,000 Years, Coyotes Return to Florida. By David Hackett. <https://www.sarasotamagazine.com/news-and-profiles/2018/01/coyotes-florida> Accessed: June 2020.

Comment: Coyotes are critical ecosystem actors and contribute to biological diversity. Biologists have documented ecosystem benefits from coyotes, particularly with regards to indirectly protecting ground nesting birds like sage grouse from other smaller mesocarnivores.⁴⁴ Coyotes also contribute to biological diversity in rodent communities,⁴⁵ indirectly benefitting ground-nesting birds⁴⁶ and floral production by decreasing deer herbivory.⁴⁷

44 K. R. Crooks and M. E. Soule, "Mesopredator release and avifaunal extinctions in a fragmented system," *Nature* 400, no. 6744 (Aug 5 1999), <Go to ISI>://000081854800055; S. E. Henke and F. C. Bryant, "Effects of coyote removal on the faunal community in western Texas," *Journal of Wildlife Management* 63, no. 4 (Oct 1999), <Go to ISI>://000083330600002; E. T. Mezquida, S. J. Slater, and C. W. Benkman, "Sage-Grouse and indirect interactions: Potential implications of coyote control on Sage-Grouse populations," *Condor* 108, no. 4 (Nov 2006), <Go to ISI>://000241976200001

45 Henke and Bryant, "Effects of coyote removal on the faunal community in western Texas."

46 Crooks and Soule, "Mesopredator release and avifaunal extinctions in a fragmented system."

47 N. M. Waser et al., "Coyotes, deer, and wildflowers: diverse evidence points to a trophic cascade," *Naturwissenschaften*

101, no. 5 (May 2014), <https://doi.org/10.1007/s00114-014-1172-4>, <Go to ISI>://JWOS:000335671800007.

Service Response: According to the latest Florida Fish and Wildlife Conservation Commission data, coyote harvests in on WMAs in Florida ranged from 14 to 26 annually between 2013 and 2019. In 2019, coyote take on WMAs was 23 (B. Welch, pers. comm., May 28, 2020). WMAs in Florida cover approximately 9,375 square miles. This means that at the high end of the WMA take range (26), less than one coyote was taken per square mile annually. The Refuge cover six square miles, so less than one coyote could be expected to be taken annually on the Refuge. The coyote population in Florida is estimated between 13,000 and 70,000 (Sarasota Magazine 2018). Hence, the estimated number of annual Refuge take would be less than one animal and is unlikely to reduce coyote numbers State-wide. The species is expected to continue to thrive and cause both beneficial and adverse biological effects.

Sarasota Magazine. 2018. They're Back! After Nearly 12,000 Years, Coyotes Return to Florida. By David Hackett. <https://www.sarasotamagazine.com/news-and-profiles/2018/01/coyotes-florida> Accessed: June 2020.

Comment: Killing coyotes is ineffective for population control. Sentient coyotes rarely have their welfare concerns met by states' inadequate requirements. Many states open coyote hunting seasons, or even killing contests, in an attempt to decrease coyote populations; but this is unproductive. For coyotes, constant killing is not only unduly violent, it also does not reduce

populations because they change breeding and immigration strategies to compensate for their losses.⁴⁸ Because of their biology, coyotes are far more resilient to predator-control regimes compared to bears and wolves.⁴⁹ Bergstrom (2017) writes:

There are 3 reasons that predator removal is likely to have no long-term effect-or even adverse effects-on depredation of livestock: vacant territories are quickly recolonized (Knowlton et al. 1999; Treves and Naughton-Treves 2005); immigration rate of breeding pairs into the area experiencing lethal control can increase (Sacks et al. 1999); and immigrants are more likely to be subadults, which have a greater propensity for livestock depredation than older adults (Peebles et al. 2013).⁵⁰

Therefore, increasing hunting opportunities for coyotes is unnecessary and ineffective.

48 See, e.g., B. J. Bergstrom, "Carnivore conservation: shifting the paradigm from control to coexistence," *Journal of Mammalogy* 98, no. 1 (Feb 2017), <https://doi.org/10.1093/jmammal/gyw185>, <Go to ISI>:/WOS:000397232500001.

49 Darimont et al., "The unique ecology of human predators."; Weaver, Paquet, and Ruggiero, "Resilience and conservation of large carnivores in the Rocky Mountains."; W. J. Ripple et al., "Status and Ecological Effects of the World's Largest Carnivores," *Science* 343, no. 6167 (Jan 2014), 1241484, <https://doi.org/10.1126/science.1241484>, <Go to ISI>:/JWOS:000329440800033; Wallach et al., "What is an apex predator?."; J. H. Schmidt, J. W. Burch, and M. C. MacCluskie, "Effects of Control on the Dynamics of an Adjacent Protected Wolf Population in Interior Alaska," *Article, Wildlife Monographs* 198, no. 1 (Jul 2017), <Go to ISI>:/JWOS:000404130600001; Sterling D. Miller et al., "Trends in Intensive Management of Alaska's Grizzly Bears, 1980-2010," *Journal of Wildlife Management* 75, no. 6 (Aug 2011 2011), <https://doi.org/http://dx.doi.org/10.1002/jwmg.186>; Bradley J. Bergstrom et al., "License to kill: reforming federal wildlife control to restore biodiversity and ecosystem function," *Conservation Letters* <http://onlinelibrary.wiley.com/doi/10.1111/conl.12045/abstract> (2013)., Bergstrom, "Carnivore conservation: shifting the paradigm from control to coexistence," 3.

50 Bergstrom, "Carnivore conservation: shifting the paradigm from control to coexistence."

Service Response: The Service acknowledges that hunting coyotes would have a relatively small effect on their population. The Service offers hunting as both a wildlife management tool and an outdoor tradition.

Comment: The Humane Society of the United States (HSUS) and Humane Society Legislative Fund (HSLF) strongly urge the Service to not finalize its Proposal to authorize coyote hunting in the Everglades Headwaters National Wildlife Refuge, as such Proposal fails to comply with federal law and is biologically unsound. The Service must, at minimum, consider an alternative that omits coyote as a new species to be hunted. Furthermore, HSUS and HSLF plan to submit more in-depth comments on the Proposal, as well as other aspects of the Proposed Rule, as part of the comment period for the Proposed Rule that ends on June 8, 2020. If the Service nevertheless finalizes this Proposal, HSUS and HSLF will consider all available options to seek judicial review of such decision and of the Proposed Rule more broadly.

Service Response: As part of the 2012 Land Protection Plan (LPP), which authorized the establishment of the Refuge, compatibility determinations were approved for a variety of public uses, including hunting on fee- title lands that would subsequently be acquired by the Service (USFWS 2012). Additionally, the LPP discusses a memorandum of agreement with the Florida Fish and Wildlife Conservation Commission, under which fee-title lands would be added to the State's WMA program, with a range of species being offered as game, including coyote. The

associated environmental assessment for the 2012 LPP included, as required under the National Environmental Protection Act (NEPA), a no-action alternative under which the Refuge would not have been established. Hence, under the LPP's no-action alternative, hunting would not have occurred as there would be no Refuge.

USFWS. 2012. Land Protection Plan and Environmental Assessment for Everglades Headwaters NWR and Conservation Area. https://www.fws.gov/refuge/everglades_headwaters/ Accessed: June 2020.

Feral Hog Hunting

Comment: Page 141 - Paragraph (a): The VSP describes Feral hogs as "big game" but are not considered a "game" species in Florida.

Service Response: Feral hog as categorized by the Service as big game, and that term is used in the VSP to maintain consistency with the Federal rule-making language.

Comment: Throughout the document hogs are correctly described as detrimental and warranting control. Hunting is a poor control mechanism for hog populations due to seasonality and lack of efficiency (hunters quit when bored). Although not directly related to recreation, we (Audubon) recommend the cooperating agencies also pursue professional hog control efforts.

Service Response: Incidental hunting of feral hogs while pursuing State game species is one tool the Service proposes to utilize to control this invasive species. Other, more concerted, control methods will be evaluated as needed.

Comment: Page 31; Table excludes April-June for hunting. Hog hunts during this time should be considered or be open for future consideration. Hog hunts during this time can be thoughtfully executed and potentially become a valuable management tool to protect sensitive or critical resources.

Service Response: Comment incorporated

Fishing and Frogging

Comment: Page 41-42 in Draft Hunting and Sport Fishing Plan, Section B, Table 1: FWC staff suggests editing the access column to read "year-round when WMA is open," and striking the words "and not closed for hunting" to maintain consistency with the suggested edits for Table 2. Visitor Services Annual Work Plan (page 31).

Service Response: Comment incorporated

Comment: I am concerned about fish stocks on the Everglades Headwaters NWR. How will the Refuge ensure that fishing does not deplete fish populations?

Service Response: Fishing is administered through State of Florida Fish and Wildlife Conservation Commission (FWC) regulations whose goal is to manage game fish populations at sustainable levels through season and bag limits. FWC uses the best scientific management possible to help fulfill its mission of "Managing fish and wildlife resources for their long-term well-being and the benefit of people." Furthermore, commercial fishing would not be permitted.

Comment: The draft CD fails to acknowledge the potential for take of imperiled frogs or any potential impacts on refuge ecosystems and food chains that could result from loss of frogs and associated tadpoles. Instead, the CD assumes that FWC WMA rules should prevent harm to species and natural systems.

Service Response: The only aquatic, imperiled frog that bears any resemblance to species that might be legally taken is the Florida bog frog (*Lithobates okaloosae*). The Florida bog frog is only found northern Florida (FWC 2020) and does not occur within the acquisition boundary of the Refuge.

American bullfrog (*Lithobates catesbeianus*) and pig frog (*Lithobates grylio*) are the larger frog species that would generally be sought after. Both these species are considered least concern by the International Union for Conservation of Nature (IUCN) given that they occupy a relatively large range, with stable populations (IUCN 2020). Commercial frogging is not allowed, and the Service anticipates that the relatively low numbers of frogs taken recreationally will not have a substantial adverse effect on local populations or any other wildlife species that prey on frogs.

FWC. 2020. Florida bog frog. <https://myfwc.com/wildlifehabitats/profiles/amphibians/florida-bog-frog/> Accessed: June 2020.

IUCN. 2020. IUCN Red List. <https://www.iucnredlist.org/> Accessed: June 2020.

Migratory Bird Hunting

Comment: I strongly oppose the proposal of hunting and fishing on refuge lands. I suspect this administration does not understand the meaning of the word "refuge", but I do. The idea is to protect key species on key migratory routes. Generations of birds are ingrained with key locations to feed, mate, and raise young.

Service Response: Hunting is a healthy, traditional recreational use of renewable natural resources deeply rooted in America's heritage, and it can be an important wildlife management tool. The National Wildlife Refuge System Administration Act of 1966, the National Wildlife Refuge System Improvement Act of 1997, other laws, and the U.S. Fish and Wildlife Service's policy permit hunting on a national wildlife refuge when it is compatible with the purposes for which the refuge was established and acquired.

National wildlife refuges exist primarily to safeguard wildlife populations through habitat preservation. The word "refuge" includes the idea of providing a haven of safety for wildlife, and as such, hunting might seem an inconsistent use of the National Wildlife Refuge System. However, habitat that normally supports healthy wildlife populations produces harvestable surpluses that are a renewable resource.

The harvesting of wildlife on refuges is carefully regulated to ensure equilibrium between population levels and wildlife habitat. As practiced on refuges, migratory bird hunting does not pose a threat to their populations. Migratory bird hunting regulations are designed to keep harvests at sustainable levels. Hunt seasons, bag limits and possession limits, and shooting hours are based on both flyway data and local conditions.

The decision to permit hunting on national wildlife refuges is made on a case-by-case basis. The National Wildlife Refuge System Improvement Act of 1997 determined that hunting is an appropriate, priority public use. It outlined the process for determining if public uses such as

hunting are compatible, before allowing them. Considerations include biological soundness, economic feasibility, effects on other refuge programs, and public demand.

Comment: Hunting has significantly dwindled as a leisure activity. If you really wish to be open to larger numbers of human visitors, expanding education programs would appeal to a much larger pool of people.

Service Response: Between 2011 and 2016, the number of hunters in the US declined by about four percent (USFWS 2016). Like hunting, environmental education is a priority, appropriate use on refuges. During the period from 2011 to 2014, environmental education visitation declined by about two percent (USFWS Refuge Annual Performance Planning, unpublished data).

USFWS. 2016. National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. <https://www.census.gov/content/dam/Census/library/publications/2018/demo/fhw16-nat.pdf> Accessed: April 2020.

Non-native Species Hunting

Comment: FWC staff recommends including non-native species here as legal for take in case of future need.

Service Response: The Service plans to propose adding hunting of non-native species during the next round of federal rule-making and if approved, it would be added to the code of federal regulations (CFR) in 2021.

Comment: Page 41-42 in Draft Hunting and Sport Fishing Plan, Section B, Table 1: FWC staff suggests making this more comprehensive by revising this table to include a row for the take of non-native wildlife, with seasons listed as “coordinated and conducted by FWC through State Hunting Program and Permit” and access listed as “access coordinated by FWC through WMA Hunting Program Permit”.

FWC staff also suggests adding a row to the end of the table that allows for take of other non-native wildlife (non-native reptiles primarily but suggest nomenclature be general in case problems arise with axis deer or Eurasian collared-doves (probably already established there, but this was just an example of an invasive bird) so there is a plan in place to allow take of non-native wildlife before they can become established and to bring the Okeechobee Unit into alignment with the Executive Order for take of non-native reptiles on Public Hunting Areas in FWC South Region (year-round take allowed, but firearms can only be used for hunting as allowed during open seasons).

Service Response: The Service is committed to aligning with State regulations to the greatest extent possible. In this case, the Service did not propose the hunting of non-native species during this year’s (2020) federal rule-making process. The Service plans to propose adding hunting of non-native species during the next round of federal rule-making, and if approved, it would be added to the code of federal regulations (CFR) in 2021.

Turkey Hunts

Comment: Page 31 - Annual Work Plan Table 2: Hunt Seasons (4th row from top): no seasons are listed for April. However, because of where these WMAs are located, spring turkey season

will likely run into April (as currently occurs in Arbuckle and Hatchineha). From Florida Administrative Code - 2. Spring season (gobblers or bearded turkeys only): a. Opening on the first Saturday of March and closing 36 days thereafter south of State Road 70. Opening on the third Saturday of March and closing 36 days thereafter north of State Road 70. (for these areas).

These areas would be north of SR 70 and thus seasons would begin the 3rd Saturday in March. The annual work plan calendar probably needs to have April included in hunt seasons planned for spring turkey and no potential for a spring wild hog hunt. Hog-only hunts may be needed because populations may be high at least at onset of hunting at the Okeechobee unit.

The hunt meeting with FWC (8th row from top) is scheduled for March but should probably be held in April or May after the conclusion of spring turkey hunts or spring wild hog hunts, if allowed.

Quail Hunts

Comment: Page 57 - Paragraph that begins "Range-wide, the bobwhite quail population...": This paragraph does not state whether there are huntable quail populations on the Okeechobee Unit. The area used to be a cattle ranch. Such areas usually have good quality upland habitats conducive to quail. Could FWS include information for the Okeechobee Unit as to whether it is considered to have a sustainable bobwhite population? Could very limited hunting be performed through a quota hunt opportunity?

Service Response: The Refuge does not have quail population estimates for the Okeechobee Unit. In consultation with FWC, the opportunity to offer limited quail hunts on the unit can be evaluated.

Comment: It may be clearer to state that "During the 2018-2019 season, bobwhite quail were only legally hunted on WMAs where take was allowed or via a release permit on select WMAs and Wildlife and Environmental Areas."

Service Response: Comment incorporated

Hunt Seasons

Comment: Page 31 - Annual Work Plan; Annual Events: Table 2. The plan designates activities by month with an "X". The row heading of Hunt Seasons the months of April, May, and June are not designated. FWC staff suggests revising the table to include hunting in all months consistent with the opportunities on many FWC-managed and co-managed lands. These edits will encompass the current hunting seasons (January, February, March, April, October, November, December); allow for a full spring turkey season as per Florida Administrative Code for areas north and south of State Road 70; provide consistency with spring wild hog hunts; and provide consistency with FWC's non-native wildlife hunting policies.

Service Response: No substantive changes to the current federal hunt rule-making process can be made at this time. The Refuge plans to amend the Hunt/Fish Plan with incidental hunting of non-native wildlife during the 2020-2021 federal rulemaking process.

Centerfire Rifles

Comment: Audubon supports well-managed hunting. We recommend determining whether the

Hatchineha and Arbuckle Units, due to their shapes and relatively small size, are suitable for center fire rifles (whose bullets can travel miles). FWC has many units that restrict centerfire rifles, but allow other firearms, and that consideration is appropriate here.

Service Response: comment noted

Licenses and Permits

Comment: Page 51 - Paragraph that begins “Licenses and permits are required”: FWC staff recommends adding a clarifying statement that hunting licenses are not required for wild hogs or non-native wildlife

Recommend inserting the suggested paragraph below to The Draft Hunt and Sport Fish Plan section IV A. Hunter Permit Application, Selection, and/or Registration Procedures (if applicable) that states:

“A Management Area Permit or hunting license may, or may not, be required for taking non-native wildlife as consistent with lands owned, leased, or managed by FWC. The Management Area rules brochure will be specific as to the requirements for non-native wildlife.”

Service Response: Comment noted

Comment: Page 53 - Quota Permits section: Worksheets listing limited entry hunts, application periods, deadlines, and instructions are available at MyFWC.com/License. Limited Entry and Quota application periods occur throughout the year beginning in May and can be submitted online at GoOutdoorsFlorida.com, at retail license agent locations, or at county tax collector offices. The FWC Hunting Handbook or the agency website at <https://MyFWC.com/license/limited-entry> provides specific application dates. Worksheets will be available about two weeks prior to each application period and applicants can check permit availability at GoOutdoorsFlorida.com.

Service Response: Comment noted

Comment: The Service must work with FWC to ensure that the agencies can provide the capacity to monitor and enforce hunting and fishing regulations and that hunting and fishing impacts to habitat and wildlife are minimized. The absence of sufficient capacity to enforce these regulations could have direct negative implications for threatened and endangered species, such as illegal or accidental shooting or taking

Service Response: FWC and the Service manage hunting and fishing in partnership, including the provision of law enforcement. The draft fishing and hunting CDs (pages 133 and 144, respectively in the Draft VSP) state under the stipulation to ensure compatibility that these uses may be altered or eliminated if the unacceptable impacts are found.

NON-CONSUMPTIVE USES

Boating

Comment: We (Audubon) agree traditional motorized boating is not compatible with the refuge goals and resource configuration but suggest the USFWS consider allowing kayaks. Many of the wetlands on the Okeechobee Unit are suitable for them during certain periods of the year

and offer some opportunity for this activity.

Service Response: The Refuge is currently not considering boating on ephemeral waters, such as wetlands due to limited access to these areas and the risk of disturbing waterfowl and wading birds.

Bicycling

Comment: We (Audubon) support allowing bicycling on the refuges. We also strongly support that use be restricted to designated trails. Many of the endangered plants can be harmed by off-trail bicycling and endangered sand skinks are vulnerable to harm as well.

Service Response: comment noted

Comment: The VSP/EA states that bicycling is a historic use of the refuge but not a priority public use as defined by the National Wildlife Refuge System Improvement Act. The CD for bicycling states that impacts such as littering, wildlife disturbance and wildlife mortality (amphibians on roads and trails and bird nests near roads and trails) could be associated with bicycling in the refuge and that refuge law enforcement officers would patrol regularly and that volunteers would pick up litter. Both of these assertions seem unrealistic given the lack of staff and volunteer capacity in the remote locations of these refuge units. Other management strategies include educating road and trail users; lack of staff and volunteer capacity makes this task difficult.

Service Response: The CD for bicycling lists potential adverse effect from this use and ways the Service and State partners can mitigate those impacts. The Service does not anticipate a high level of this use. Additionally, law enforcement will help limit harmful effects by ensuring riders stay on dedicated roads and trails. If the Service determines that future harmful effects effect do rise to unacceptable levels, the use could be altered or prohibited.

Comment: Page 69 - Section (j): The VSP proposes bike riding only on designated roads and trails but on the Arbuckle WMA and the Arbuckle Unit of the Refuge, FWC does not have any bicycle restrictions.

Service Response: The Service will work with the Florida Forest Service and FWC to address bicycling regulations on refuge lands in the WMA brochure.

Comment: Bicycles (except for Electric bicycles) and horses are acceptable.

Service Response: The CD (page 97 of Draft VSWP) defines the use as non-motorized bicycling, so electric bicycles are not allowed.

Commercial Recording and Commercial Tours

Comment: Commercial recording and commercial tours are economic, non-priority uses. As such, Defenders of Wildlife supports the stipulation that these public uses as described in the VSP/EA would only be authorized with Special Use Permits that clearly specify the limitations of these activities to ensure they do not materially interfere with or detract from the purposes of Everglades Headwaters Refuge or fulfillment of the wildlife-first mission of the National Wildlife Refuge System. The CD states that refuge personnel will monitor commercial recording and commercial tour activities to ensure compliance. Defenders of Wildlife continues to have concerns that refuge staff lack capacity to effectively oversee the variety of public use activities

proposed for these remote areas.

Service Response: These uses require special use permits (SUPs); see page 112 and 120 of Draft VSP. Each SUP is issued based on whether the refuge can support the use, including the provision of law enforcement oversight.

Comment: Commercial recording and commercial tours are compatible with refuge purposes and should be encouraged. However, the Okeechobee Unit has had federally endangered Florida Grasshopper Sparrows breeding on it in the past and may have them now or in the future. Visitors recording and observing FGSP can harm them through harassment, inadvertently stepping on their nest, and possibly predator attraction. Given their extreme endangerment at this time, the Refuge should take extra steps to avoid problems. These activities require a Special Use Permit (SUP), so this issue can be addressed partly through that process. FWC's Three Lakes Wildlife Management Area has breeding FGSP and a visitor program; we recommend consulting with their staff for how they handle these issues.

Service Response: Comment noted

Drones

Comment: The Okeechobee and Hatchineha units are in the air space for training flights for the Avon Park Air Force Range. Drones are a threat to this mission and another reason to diligently manage their use.

Service Response: Comment noted

Environmental Education and Interpretation, Wildlife Observation and Photography

Comment: Environmental education and interpretation and wildlife observation and photography are compatible with both the purposes for which Everglades Headwaters Refuge was established and the mission of the National Wildlife Refuge System. These wildlife-dependent priority public uses can provide innumerable opportunities for visitors to enjoy the refuge and its wildlife. However, rather than allowing these activities to be conducted by members of the general public on any portion of the refuge open to public use, these activities must be restricted from highest value wildlife habitat, managed to conserve sensitive species and balanced with competing demands on the refuge's budget.

Service Response: The CD lists several stipulations to ensure compatibility for these uses (pp. 97 and 98 of the Draft VSP), including establishing buffer and no-entry zones around sensitive areas.

Hiking, Backpacking, Jogging

Comment: Hiking, backpacking and jogging are non-priority uses that support wildlife-dependent recreation. The draft CD restricts these uses to designated roads and trails. Impacts from these activities could include littering, trampling of vegetation and wildlife disturbance. The VSP/EA proposes orienting visitors through information kiosks and signage.

Service Response: comment noted

Comment: We (Audubon) agree that hiking is a compatible use, but off trail use is a threat to

listed species from trampling.

Service Response: The draft CD restricts these uses to designated roads and trails (page 136 of Draft VSP).

Camping

Comment: Camping as considered under the related CD includes backcountry primitive campsites at designated sights to facilitate access to remote areas of the refuge; regulations regarding camping would be specific to each WMA. Long-term effects on wildlife could include habituation or attraction to humans or alteration and disturbance of the area. The VSP/EA states that refuge staff will provide outreach to the public through the permitting process, to educate campers on how to avoid disturbing wildlife, the importance of not feeding wildlife, proper food storage and rules that campers remove everything they brought with them. We have concerns that FWS lacks the capacity and funding to manage camping and associated human activities in such remote locations.

Service Response: The draft CD (pp. 102-106 Draft VSP) states that camping would be issued by special use permit (SUP). Each SUP is only issued when the refuge has determined, on a case-by-case basis, that it can support all aspects of the use, including law enforcement oversight.

Horseback Riding

Comment: Page 137 - Section (b): The VSP limits horseback riding to designated roads and trails, but on the Arbuckle WMA and the Arbuckle Unit of the Refuge, the FWC rule states that horses can be on firebreaks, designated horse trails, and named roads only.

Service Response: The Service's definition of roads and trails includes firebreaks.

Comment: We (Audubon) agree that horseback riding is a compatible use, but off trail use is a threat to listed species from trampling.

Service Response: The draft CD states that in order for this use to be compatible, it will only be allowed on designated roads and trails (page 139 of Draft VSP).

Comment: According to the VSP/EA, horseback riding would be restricted to designated roads and trails in each unit. The draft CD for horseback riding notes that riders may not stay on roads and trails. Horses can trample vegetation and wildlife, graze on vegetation, spread exotic plants and deposit waste onto trails and other refuge resources.

Service Response: The draft CD states that in order for this use to be compatible, it will only be allowed on designated roads and trails (page 139 of Draft VSP). Law enforcement efforts will help ensure that equestrians stay on designated roads and trails.

Comment: And allowing visitors to take leashed pets, which include but are not limited to dogs, cats, pigs and birds, onto the refuge, seems to set the stage for problematic outcomes for wildlife, pets and refuge visitors for which refuge staff lacks the capacity to document or control. The CD for pets on leash stipulates that pets remain on a leash, remain in their owner's control at all times and be restricted to roads and trails. Owners would be required to promptly remove pet waste from refuge lands. However, refuge staff have no capacity to enforce any of these

conditions. Allowing visitors to bring leashed pets onto the refuge invites a series of potential problems, including harassment, injury or death of refuge wildlife, harassment or injury of visitors and injury or death from refuge wildlife, such as alligators. Pets can be disruptive to sensitive species, as well as to the enjoyment of the refuge by other visitors. In the United States alone, outdoor cats kill more than two billion birds every year as well as many small mammals and other wildlife. And pets within the refuge would also provide additional vectors for introduction of invasive species. It seems unlikely that refuge staff have the capacity to effectively monitor and enforce stipulations on leashed pets on the refuge, making the compatibility determinations for each of these uses doubtful.

Service Response: Law enforcement will help ensure that this use is practiced within the confines of the regulations. This use will be monitored and evaluated annually. It may be eliminated if negative effects rise to unacceptable levels (page 153 of Draft VSP).

ORV Use

Comment: The VSP/EA proposes the use of off-road vehicles to facilitate hunting. Defenders is concerned regarding the negative effects of off-road vehicles on refuge resources, namely that not all vehicle operators will stay on designated trails. Leaving trails and driving on refuge lands has the potential to cause detrimental impacts by damaging and destroying habitat, trampling or disturbing wildlife and affecting vegetation, soils, hydrology, water quality and helping to spread invasive species. We do not believe that the refuge has the capacity to patrol these areas and enforce the requirement that off-road vehicles stay on designated trails. We also question refuge staff's capacity to monitor habitat degradation in areas near designated trails as well as the Service's ability to fund costs associated with monitoring and enforcement (not to mention restoration of damaged habitat).

Expansion of sporting opportunities and associated activities on Everglades Headwaters Refuge must not take place in a manner that detracts from other wildlife-dependent priority public uses, including wildlife observation, photography, environmental education and interpretation.

Service Response: Law enforcement will help ensure that this use is practiced within the confines of the regulations. This use will be monitored and evaluated annually. It may be altered or eliminated if negative effects rise to unacceptable levels (page 148 of Draft VSP).

Comment: The Okeechobee unit (Triple Diamond) was acquired in 2019 and has not yet been through the WMA process. Refuge planners and FWC should consider the sensitive grassland habitat that used to and could again support critically endangered Florida grasshopper sparrows with proper stewardship and restoration, when they plan for hunting and other public uses on that unit. Use of off-road vehicles could be particularly damaging to sensitive habitats on the Okeechobee unit.

Service Response: The Service determined that ORV use in support of hunting and fishing is compatible, if all stipulations are met (see page 148 for details). The decision to allow ORV use in support of hunting and fishing on any particular unit that is slated to become a WMA would involve coordination with the State. Permitting ORV use for hunting and fishing on dedicated roads or trails limits disturbance to wildlife and habitats. Consistent with this approach to ORV use (in support of hunting and fishing), the Okeechobee Unit is being evaluated in consultation with the State

Comment: We (Audubon) adamantly agree that off-road vehicles (for recreational use) are not

appropriate. Audubon managed the 7,315 acre Ordway-Whittell Kissimmee Prairie Sanctuary (now part of the Kissimmee Prairie Preserve State Park) for 22 years. We learned that a single vehicle pass over native prairie could leave vehicle tracks that last for years. Off-road vehicles would create major negative impacts and are not compatible with the refuge's ecological goals.

Service Response: Comment noted

Comment: We (Audubon) realize details of this use (Off-road vehicles for fishing and hunting) will be worked out between FWC and USFWS in future efforts, but we recommend restricting this activity to existing roads only and restricted from unimproved trails. Unimproved trails not only can get degraded by vehicles, but tend to get widened as problem spots develop.

Service Response: Comment noted

Comment: The VSP envisions that all supportive recreational uses – equestrian, hiking, bicycling, etc. are limited to existing roads and trails. The VSP also proposes year-round off-road vehicle access on the same system of roads and trails. The straight road configuration on many of the existing areas within the refuge system may encourage ORV operation at high speeds. This may pose a safety hazard.

Service Response: Currently, ORVs are not allowed on the Arbuckle Unit. On the Hatchineha Unit, only street-legal vehicles are permitted. ORV use (in support of hunting and fishing) on the Okeechobee Unit is being evaluated in consultation with the State. Wherever there is evidence of illegal activity, be it speeding or otherwise, the Service and partners will take appropriate measures.

Comment: Please note also that on the Arbuckle Unit, regulations are consistent with the Arbuckle tract, which does not allow ORVs. If the VSP does allow ORVs use on the Refuge, the USFWS may wish to consider allowing only during hunting seasons. In addition to enhanced safety, this may reduce inappropriate use of ORVs that may increase with growing awareness of the areas.

Service Response: On the Arbuckle Unit, ORV use for recreational purposes (including hunting and fishing), is not permitted. Only approved researchers may use ORVs to conduct their work via a Refuge special use permit.

Photography

Comment: Page 25, strategy 5.1.2; It is rare to have photography blind installed at a location that meets visitor expectation and adds value as intended. I would change the wording on the strategy to something along the lines of "...explore the feasibility of installing photography blinds...". The cost (initial and long-term) may outweigh the benefit of this infrastructure and unnecessarily erode at limited financial and personnel resources.

Service Response: Comment noted.

VOLUNTEERS, INFRASTRUCTURE, SECURITY & STAFFING

Volunteers and Friends

Comment: Page 29 - Standard 10 Volunteers and Friends Groups: The FWC's Volunteer

Program Coordinator, Sharon Tatem (Sharon.Tatem@MyFWC.com) may be able to partner with the EHNWR staff.

Service Response: Comment noted

Parking

Comment: Page 142: FWC staff recommends FWS consider investing in an improved parking area, particularly for higher volumes of users during popular quota hunts or on weekends during busier recreation seasons.

Service Response: The Arbuckle and Hatchineha Units have parking areas that, for the time being, appear adequate. For the Okeechobee Unit, the Service is in the planning phase of enhancing the entrance and providing parking on-site.

Comment: The reference in the plan to the availability of limited parking inside the Okeechobee Unit along designated access roads raises several concerns. The narrow shell rock access roads within the gates of the Okeechobee Unit do not provide a place for vehicles to safely turn around for exit (especially not trucks towing trailers with horses or ATV's). In addition, the current access roads are subject to water retention in wet months and are not wide enough for safe passage alongside a row of parked vehicles.

Service Response: The Service and State partners are in the planning phase of enhancing the entrance, shoring-up the interior access road, and providing parking inside the Okeechobee Unit. The implementation schedule is dependent on funding and work-force availability.

Comment: The plan recites that parking areas were constructed in the other two Units discussed in the plan document. The most effective way to provide parking inside the Okeechobee Unit would be to utilize land immediately North and West of the existing Eastern entrance where the service grade runs adjacent to the North/South boundary fence to construct a parking area with turn around (Note: the area nearest to the entrance gates is a wetland subject to flooding and construction restrictions).

Service Response: Comment noted.

Comment: There is certainly no safe public parking along the unpaved berms of NW 224 Ave. and NW 288 St. since the entire narrow roadbed is needed to traverse those roads in the Viking/Coquina area. Vehicles parked along those roads could block owner access to private property in that area and further obstruct public access needed for emergency and maintenance vehicles to reach the many owner parcels adjacent to the Okeechobee Unit.

Service Response: Comment noted.

Visitor Capacity and Multiple-use Trails

Comment: Roads and trails in the units will be subject to hiking, hiking with dogs on leashes, jogging, biking, horseback riding, vehicles for hunting and fishing, and other activities that can conflict with each other. We strongly recommend the cooperating agencies work to manage conflicts on the same trails rather than create new trails for exclusive activities. Multiple trails create more habitat destruction, and habitat fragmentation including greatly expanding trail edges where humans can interfere with plants and animals. More trails also would be an

infrastructure expansion that would cost more to maintain.

Service Response: The Refuge is currently not planning new roads or trails. If designated trails are needed in the future, existing trails would likely be considered first. Any new trails would have to meet environmental, cultural resources, and threatened/endangered species compliance standards as part of the planning process.

Refuge Staff Capacity and Budget Concerns

Comment: Refuge staff have worked diligently to strike a balance between offering existing and additional recreational opportunities and protecting the wildlife and other resources at Everglades Headwaters Refuge. We are concerned, however, that the remote locations of the fee-titled lands within the vast geographic area administered as part of the Everglades Headwaters National Wildlife Refuge Complex make it very difficult for the Service to provide adequate oversight and enforcement of the variety and scale of the new and expanded uses proposed in the VSP/EA. These appear to exceed the capacity and funding for current refuge staff to provide sufficient monitoring and effective enforcement to support the VSP necessary to protect natural resources from damage due to human activities (e.g. riding ORVs, bicycles or horses off trails and trampling sensitive vegetation, pets off leash disturbing wildlife or refuge visitors, improper extinguishing of camp fires, littering) and harm from poaching, illegal collection and other illicit activities.

It is unrealistic to charge limited refuge staff capacity with supervising human behavior and safety concerns, combatting poaching, preventing feeding or harassment of wildlife, or disturbance of sensitive species within these remote areas, and the VSP/EA seems to rely heavily on the honor system regarding recreational users complying with the rules and conditions associated with the various public uses proposed. And while visitation and usage of the refuge are relatively low at this time, as more people learn about the refuge and the VSP, recreation at Everglades Headwaters Refuge can be expected to increase. The Service lacks the funding that would be necessary to manage the variety of activities proposed now and into the future. Overseeing the array of activities to ensure they do not negatively impact the refuge and its wildlife places an excessive burden on refuge staff.

The Service, FWC and other agencies should collaborate on monitoring and enforcement programs to ensure adequate resource protection is achieved throughout Everglades Headwaters Refuge.

Adaptive management relies upon knowledge of changes and impacts to refuge resources and would benefit from partnerships with other agencies.

Service Response: The Service considers FWC a valuable conservation partner and has a memorandum of understanding (MOU – see Appendix E pp. 156 – 164 of the Draft VSP) to administer the Refuge as a WMA. An essential component of this partnership is to collaborate law enforcement capabilities. In addition, all proposed uses require that they are monitored to ensure compatibility. This monitoring will be achieved by Refuge staff, conservation partners, or via biological consulting contracts.

Security

Comment: References are made throughout the plan to provide entrance access to the Okeechobee Unit through the dissemination of codes to open combination locks securing the entrance gates. While this plan is not inherently dangerous in normal circumstances, the

proximity of the entrance gates to many of the Viking/Coquina owners magnifies the chance that the gate code becomes known to owners of other parcels in the adjacent area. As the current owner of the cattle ranch immediately South of the Okeechobee Unit, we are well aware of the traffic flow in this vicinity and the fact that there is no regular patrol of this area to limit any unauthorized use of the property or to report that gates are closed and locked regularly. While many community residents are decent, law-abiding citizens, the Viking/Coquina area is subjected to access and use by many non-residents who frequent this area on weekends and who flagrantly disobey laws and safety guidelines.

Service Response: The plan does not address the types of locks used on gates, but the Refuge typically uses combination or keyed locks. Generally, the Refuge only provides lock combinations or keys to those who need to access the site in an official capacity such as State partners, special use permittees, and contractors. We change the lock combinations periodically, and regular law enforcement patrols are also used to maintain security. Once the unit is ready to accept visitors, an opening could be provided within the unit to allow access to pedestrians, equestrians, and cyclists. All public access regulations, including possibly vehicular, will be analyzed in consultation with our State partners and publicly vetted through the State's rule-making process.

Public Safety

Comment: An important concern is for the public safety of individuals and groups who will lawfully enter the Okeechobee Unit. As you know, cell service coverage is spotty at best in this area and frequently not available at all throughout large areas of the Okeechobee Unit. Neighboring land owners near the Unit will be miles away and unable to be of any assistance in an emergency. Thought should be given to any type of emergency notification system which could be installed inside the entrance gates or elsewhere on the property to assist any visitors in urgent need of help.

Service Response: The Service will work with State partners to evaluate options to address the potential need for emergency communication on the unit. We also encourage visitors to the Okeechobee Unit to let a relative or friend know when they expect to be off the unit as the Refuge does not have method to track if visitors have safely returned from their visit.

Distance and Direction to the Nearest Town

Comment: Reference page 210 of The Draft Document to Distance and Direction to the nearest town. This reference for the Okeechobee Unit should be restated as follows: The Okeechobee unit is located two miles north of NW 256 St. in Okeechobee County, about 20 miles west of Highway 441 and two miles West of the Peavine Trail.

Service Response: Comment noted.

Adaptive Management

Comment: Agencies should incorporate adaptive management strategies when new information becomes available and if conditions on the ground change. It is essential that agencies manage hunting, fishing and related recreational activities within the refuge to ensure that these activities do not adversely affect wildlife, ecological integrity or visitor experience for the non-hunter.

Service Response: Adaptive management is an approach the Service uses in recurrent

decision making. The Refuge will monitor the effects of all uses and adjust them accordingly. In some cases a use may be eliminated if negative impacts rise to unacceptable levels.

LANDSCAPE CONTEXT

Restoring the Everglades

Comment: In the last 50 years of my life I have watched the Everglades itself go downhill to the point that you may as well fill it in and go residential. What do you propose to save the headwaters?

Service Response: The proposed Visitor Services Plan (VSP) only addresses goals and associated objectives related to outdoor recreation. None of the proposed uses in the VSP are expected to have any effects on the water resources of the Everglades Headwaters (see associated EA for details).

“Enhanced water quality, quantity, and storage” is an overarching goal for the Refuge, as outlined in the 2012 Land Protection Plan (LPP). The LPP and Final Environmental Assessment can be downloaded from the Refuge website. The potential beneficial effects on water resources can be found on pages 156, 157, 158, 159 of the LPP’s final environmental assessment.

Sentinel Landscape

Comment: The Hatchineha and Okeechobee units are in the boundaries of the Avon Park Air Force Range’s (APAFR) Sentinel Landscape designation (see hyperlinks). This designation primarily deals with protecting compatible land uses around the APAFR but has additional considerations. As mentioned previously, this proximity adds another consideration to the regulation of drone use.

https://sentinellandscapes.org/media/h0ifkcwc/avon_park_fact_sheet.pdf
<https://sentinellandscapes.org/landscapes/avon-park-air-force-range/>

An element of compatibility in the Sentinel Landscape is maintaining dark skies. APAFR is supportive of a dark sky designation for Kissimmee Prairie Preserve State Park (KPPSP) to help protect the Range’s mission. The Okeechobee and Hatchineha Units are near the APAFR and the Okeechobee Unit is adjacent to the KPPSP and should consider dark sky principles in all its lighting considerations (e.g., lights in parking lots or future facilities).

Dark Skies activity: We recommend the USFWS evaluate dark sky activities (e.g., star gazing) as part of its list of potential activities. Since being awarded a Dark Sky Park designation by the International Dark Sky Association, the KPPSP has seen such a significant increase in the use of “star gazing” that they are working to expand opportunities for visitors. Because this activity occurs after dark, additional management issues arise. Finally, light pollution is increasingly recognized as harmful to biological systems and managing it will help meet refuge conservation goals.

Service Response: Night-sky viewing has been added as a potential activity via special use permit under the environmental education CD.

Water Storage

Comment: This section of the document references that overarching goals for the Everglades Headwaters NWR include “Enhanced water quality, quantity, and storage”. There is no detailed discussion presented anywhere else in the document of how that will be determined and what, if any, additional steps will be undertaken in this regard. As a neighboring land owner very familiar with the water situation on this unique property and having seen the effects changes to water management plans have had on our property, we would appreciate knowing what might be under consideration now and in the future.

Service Response: “Enhanced water quality, quantity, and storage” is an overarching goal for the Refuge, as outlined in the 2012 Land Protection Plan (LPP), which can be downloaded from the Refuge website. This goal and related objectives are outlined on page 105 and 106 of the LPP. Additionally, the potential environmental effects of this goal are analyzed in the final environmental assessment (EA) for the LPP.

The proposed Visitor Services Plan (VSP) only addresses goals and associated objectives related to outdoor recreation. None of the proposed uses in the VSP are expected to have any effects on water storage (see associated EA for details).

Although the Refuge currently does not have any plans to restore or alter the hydrology on the Okeechobee Unit (or any other unit), future conditions might call for the need. If that were the case, the Refuge would be required to conduct an environmental analysis, including a hydrological study to make sure there would be no off-site impacts. The environmental analysis process would require public input.

CORRECTIONS & EDITS

Corrections

Comment: Page 54 - Section B; title: It appears this should read “Anticipated Public Reaction to...”

Service Response: Correction made

Comment: Page 53 - Under bulleted list of “Types of hunts potentially available”: Please add “wild-hog still” and “non-native wildlife” to the list to maintain consistency with the suggested edits for Table 2. Visitor Services Annual Work Plan (page 31)

Service Response: Edits incorporated

Comment: Page 53 - Second paragraph; first sentence: Should read “Southwest and South FWC administrative regions...Northeast or South administrative regions”

Service Response: Correction made

Comment: Page 39 - Goal 4: Refuge is bolded

Service Response: Correction made

Comment: Page 11 - Background Information, Section F, Second Paragraph: The last two words should be “fire breaks”

Service Response: Corrections made

Comment: Page 31; Table 2 cited as Table 4 and Page 32; Table 3 cited as Table 5

Service Response: Corrections made