

**FINDING OF NO SIGNIFICANT IMPACT AND DECISION TO IMPLEMENT
VISITOR SERVICES PLAN
EVERGLADES HEADWATERS NATIONAL WILDLIFE REFUGE
VERO BEACH, FL**

The Service is developing a Visitor Services Plan (VSP or plan) providing hunting, fishing, and other recreational opportunities for Everglades Headwaters National Wildlife Refuge (Refuge). This plan ensures that recreational uses on the Refuge are appropriate and compatible with the National Wildlife Refuge System (NWRS) mission and the purposes of the Refuge.

This VSP identifies program goals, objectives, and strategies to reach over the next 15-year period. It addresses the following proposed compatible wildlife-dependent recreational uses on the Refuge: hunting, fishing (including frog gigging, bowfishing, and fish gigging), wildlife observation, photography, environmental education, and interpretation. Hiking and biking are supporting uses allowed under wildlife-dependent recreation. In addition, horseback riding, pets-on-leash, camping, commercial recording and ecotours, and off-road vehicle (ORV) use in support of hunting and fishing are forms of non-wildlife dependent recreation being proposed, and in designated areas have also been determined to be compatible.

An Environmental Assessment (EA) was prepared to inform the public of the possible environmental consequences of implementing the VSP for the Refuge. A description of the alternatives, the rationale for selecting the preferred alternative, the environmental effects of the preferred alternative, the potential adverse effects of the action, and a declaration concerning the factors determining the significance of effects, in compliance with the National Environmental Policy Act of 1969, are outlined below. The supporting information can be found in the EA.

SELECTED ACTION

Preferred Action Alternative:

The preferred action is to develop a VSP that outlines future management of public outdoor recreational opportunities on the Refuge. The preferred action would address new and expanded uses on the Refuge.

The Refuge is offering the following public use opportunities in line with the Visitor Services Plan Standards:

Welcome and Orient

The Refuge will expand opportunities to welcome and orient visitors to the Refuge including opening the entire Refuge for limited access.

Bicycling

Bicycling is a mode of transportation currently used to facilitate wildlife observation and photography. This use occurs all year. Bicycling will only be authorized in support of other approved refuge uses and on dedicated roads and trails. Off-trail bicycling will not be allowed.

Camping

Camping is a traditional use in this area. Camping, as considered under this plan, is the primitive overnight cooking and sleeping accommodations erected at designated sites that facilitate access to remote areas of the refuge that will otherwise be unavailable during priority

public use activities such as hunting and fishing. Camping will only be authorized in support of other approved refuge uses and to facilitate access to remote areas. Campsites will typically be located at the terminus of a designated trail and accessible by foot, bike, or horse. Campsite use by recreational vehicle or camper trailer is not permitted.

Commercial Recording

The use is commercial recording (digital or film) including but not limited to videography, photography, and audio recording, collectively called “commercial recording”. Commercial recording is an existing economic, non-priority public use; however, it promotes and facilitates certain priority public uses.

Commercial Tours

Commercial tours for non-consumptive use directed toward environmental education, interpretation, and/or observation of wildlife and habitats is an economic use. The use is not a priority public use; however, it promotes and facilitates several priority public uses

Environmental Education and Interpretation

Environmental education comprises a variety of activities and facilities that seek to increase the public’s knowledge and understanding of wildlife and to promote wildlife conservation. These are tools used to inform the public of resource values and issues. Activities may include on-site, refuge-led, or refuge-approved environmental education programs and teacher workshops relating to habitat, other natural features, and/or management activities occurring on the refuge. These activities seek to increase the public’s knowledge and understanding of wildlife and their habitats and to contribute to wildlife conservation and support of the Refuge. Environmental education programs will be conducted by the Service or by a Service-approved member. Any non-Service environmental education activities must be reviewed and approved by the Service through a special use permit issued by the Refuge. These permits will contain conditions to minimize negative effects and ensure compatibility. The Service will work with the local schools and others to develop an understanding of existing environmental education activities for particular sites during the acquisition process.

The Service defines interpretation as a communication process that forges emotional and intellectual connections between the audience and the resource. Interpretation is intended to promote a visitor’s understanding of, and increase appreciation for, America’s natural and cultural resources and conservation history. It also develops a sense of stewardship among the public, leading to actions and attitudes that reflect interest and respect for wildlife resources, cultural resources, and the environment. Interpretive programs and facilities could include special events, visitor center displays, interpretive trails, visitor contact stations, auto tour routes, staff and volunteer led tours, and signs. Any non-Service interpretation activities must be reviewed and approved by the Service through a special use permit issued by the Refuge. These permits will contain conditions to minimize negative effects and ensure compatibility. The Service will work with partners to develop an understanding of potential interpretation activities for particular sites during the acquisition process.

Fishing

Recreational freshwater fishing will occur on lakes, rivers, and/or ponds on or adjacent to the Refuge. The Refuge will not have jurisdiction over state navigable waters, thus boating and access to navigable waters will continue according to state regulations. There may be the potential for visitors to fish from the banks of the Refuge. Frogging is included under this use. The taking of non-listed frogs would be permitted per state Wildlife Management Area (WMA) regulations. Fishing will be per State regulations.

Hiking/Backpacking/Jogging

Hiking is a traditional use in this area and includes backpackers and joggers. Hiking will only be authorized in support of other approved refuge uses on dedicated trails. Trails can provide the opportunity for participants to become surrounded by the natural environment, instilling an appreciation for plants, animals, and their habitats.

Horseback Riding

Horseback riding is a traditional use in this landscape and is currently allowed on the Refuge on designated roads and trails. This use can facilitate priority uses such as hunting and wildlife observation.

Hunting

All portions of the Refuge will include some form of hunting.

White-tailed Deer

White-tailed deer are wide-spread and occur across most of Florida, with some exceptions in areas where habitat is unsuitable. Generally, deer populations favor areas where there is a mix of wooded and more open habitats, such as is found in much of rural Florida. Suburban areas that offer sufficient cover and forage opportunities are increasingly utilized by this adaptable species. Deer occur on all units.

On existing refuge lands, deer hunting is currently being coordinated with Florida Fish and Wildlife Conservation Commission (FWC) to ensure hunts meet goals and objectives of the State of Florida "Strategic Plan for Deer Management in Florida 2008-2018" Citation – FWC 2008?). In the FWC plan, the deer population goal is to, "Ensure the existence of robust deer populations that meet the public's desires for recreational opportunities and protection of property while ensuring the long-term welfare of the species". Deer hunting opportunities on any future refuge lands that are added to the WMA program would be aimed toward supporting FWC's deer management.

Feral Hogs

Feral (wild) hogs are an invasive, non-native species known to alter native habitat, damage crops, and spread diseases (U.S. Department of Agriculture 2013). This highly prolific, adaptable species is wide-spread across Florida and occurs on all units. Complete eradication of feral hog on refuge lands is desirable, but currently is not feasible. Hunting of feral hogs, which is an activity widely enjoyed by local hunters, provides the Refuge with another management tool for reducing this detrimental species.

Wild Turkey

Wild turkeys are relatively common in much of rural Florida, utilizing a range of agricultural, grassland, and woodland habitats. They are increasingly found in suburban areas when there is suitable habitat. Wild turkeys occur on all units.

Wild turkey in Florida are managed under the guidance of the FWC Wild Turkey Management Program (WTMP). The WTMP is charged with coordinating wild turkey management and research activities across the state and providing a statewide approach to conservation and management of Florida's wild turkey population. As a part of the 10-year strategic plan (2008-2018) the following goal was developed: "Ensure healthy and sustainable wild turkey" populations throughout the state while providing and promoting compatible uses of the resource (FWC 2008). On existing refuge lands, wild turkey hunting is currently being coordinated with FWC to ensure that the hunts meet the goals and objectives of their 10-year plan. Wild turkey hunting opportunities on any future refuge lands that are added to the WMA program would be aimed toward supporting FWC's management of this game species.

Migratory Game Birds

For the purposes of this EA, migratory game birds fall into the following two categories:

1. **Waterfowl:**

Waterfowl that are hunted in Florida include various ducks (e.g. mallards, canvasback, wood duck), geese (e.g. Canada, snow, blue), teal, and merganser. The units have limited suitable habitat for most of these species.

2. **Non-waterfowl:**

Examples of migratory game birds in this category include rails, moorhen, snipe, coot, doves, crows, and woodcock. These species have been observed on all units.

The Service annually prescribes a framework, or outer limits, for dates and times when hunting may occur and the number of migratory game birds that may be taken and possessed. These frameworks are necessary to allow state selections of season and limits for recreation and sustenance; aid federal, state, and tribal governments in the management of migratory game birds; and permit harvests at levels compatible with population status and habitat conditions. Because the Migratory Bird Treaty Act stipulates that all hunting seasons for migratory game birds are closed unless specifically opened by the Secretary of the Interior, the Service annually promulgates regulations (50 CFR Part 20) establishing the frameworks from which states may select season dates, bag limits, shooting hours, and other options for each migratory bird hunting season.

Small Game

For the purposes of this plan, small game includes several small to medium sized mammals, (e.g. squirrel, raccoon, rabbit, bobcat, coyote, opossum, otter, skunk) and bobwhite quail, a non-migratory bird species. Most small game mammal species are expected to occur on all units. Quail have been observed on all units.

During the 2018-2019 season, bobwhite quail were only legally hunted within FWC's purview on several WMAs designated as Quail Enhancement Areas or via a release permit on select WMAs and Wildlife and Environmental Areas (WEAs). Refuge lands currently within the WMA program do not offer quail hunts. However, there is the potential that current lands or new refuge lands added to the WMA may provide this opportunity in the future.

Alligator

Since 1988, FWC has offered hunters the opportunity to take part in its annual statewide recreational alligator harvest. The purpose of reinstating alligator hunting was to provide the public with a much-desired opportunity to hunt alligators in Florida. Recreational alligator hunting is just one part of the FWC's overall approach to managing the population. FWC has

identified state-wide alligator hunt units. Although refuge lands do not fall within present FWC alligator harvest units, it is possible they may in the future.

Off-road Vehicle (ORV) Use for Hunting and Fishing

The refuge proposes to allow ORV activities on designated roads and trails in support of hunting and fishing. General ORV use by the public of designated roads and trails and not in support of hunting and fishing will not be allowed.

For hunting activities, the Service will work with FWC to evaluate a particular property, the specific resources protected on that property, and hunting activities and access to help design the hunting program for that particular property (e.g., access roads and trails suitable for ORV access where minimal negative effects to wildlife and habitat are anticipated).

Pets-on-Leash

Under this use, visitors could enjoy the Refuge with their leashed or confined pet (dog or other companion animal) not in conjunction with hunting. Pets may include, but are not limited to, dogs, cats, pigs, and birds. Animals not permitted on the Refuge for this activity include all animals listed as Prohibited Nonnative Wildlife or Conditional Nonnative species by FWC.

Wildlife Observation and Photography

Wildlife observation and photography are traditional uses in this landscape. Wildlife observation and photography have been identified in the 1997 National Wildlife Refuge System Improvement Act as priority wildlife-dependent recreational uses provided they are compatible with the purposes of the Refuge. Wildlife observation uses include wildlife watching by hiking, bicycles, and horses as examples.

Outreach

The preferred alternative will expand outreach through additional planning meetings including annual meetings with stakeholders, government agencies, and city councils. An outreach plan will be developed to articulate communication strategies and schedules. The Refuge will work to expand relationships with local leaders and the media. All outreach information such as brochures, tear sheets, and websites will be updated and expanded to provide information on the Refuge.

Volunteers, Friends, and Partnerships

The Refuge will develop new strategies to recruit volunteers, encourage the formation of a Friends group, and develop or expand partnerships.

Recreation Fees

Under this plan, recreation fees are not foreseen.

This alternative is the Service's preferred action because it offers the best opportunity for public use that would result in a minimal impact on physical and biological resources, while meeting the Service's mandates under the National Wildlife Refuge System Administration Act of 1966, the National Wildlife Refuge Improvement Act of 1997, and Secretarial Order 3356.

OTHER ALTERNATIVES

No Action – Current Visitor Services

NEPA requires an EA to consider the “No Action” alternative, where current conditions and trends are projected into the future without another proposed action (40 CFR 1502.14(d)). Under the No Action Alternative, the Refuge would continue to implement the visitor services program outlined in the 2012 Land Protection Plan.

This alternative was not selected, because it would not offer the range of public uses listed under the preferred alternative.

SUMMARY OF EFFECTS OF THE SELECTED ACTION

An Environmental Assessment (EA) was prepared in compliance with the National Environmental Policy Act (NEPA) to provide decision-making framework that 1) explored a reasonable range of alternatives to meet project objectives, 2) evaluated potential issues and impacts to the refuge, resources and values, and 3) identified mitigation measures to lessen the degree or extent of these impacts. The EA evaluated the effects associated with the preferred alternative. It is incorporated as part of this finding.

Implementation of the agency’s decision would be expected to result in the following environmental, social, and economic effects:

Environmental effects include those that are direct, indirect, and cumulative. Direct effects are caused by the action and occur at the same time and place. Indirect effects are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Cumulative impacts are effects on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions.

A primary concern for allowing any public use to occur on the Refuge is to ensure that impacts to wildlife and habitats are maintained within acceptable limits and potential conflicts between user groups are minimized. There are some situations that could be harmful to plant and animal life, which would warrant Refuge closures or the development of use restrictions. Examples of these situations include, but are not limited to, protection of trust and listed species (flora and fauna), impacted vegetation, nesting species, and the protection of and possible conflicts with other Refuge management programs. Uses under the VSP standards of outreach; volunteers, Friends, partnerships; and recreations fees would have no to negligible impacts.

Physical Environment

Effects on Noise

All the proposed uses would create some level of noise. Some wildlife could be disturbed by increased noise from human voices for all of the described activities, disrupting their normal pattern of behavior. Barking dogs could also scare off near-by wildlife. Gunshots would temporarily cause noise, but this effect would be relatively infrequent and of short duration. Off-road vehicles would create some noise, but at the low speeds allowed this effect would be much reduced. Larger drones, where permitted, may disturb some wildlife as they emit more noise. Overall, noise levels as they relate to public uses are likely to be transient and relatively localized and are not expected to substantially affect the biology of any wildlife species present.

Hence, minimal adverse effects from noise are anticipated to be similar under both alternatives, with those under the proposed action potentially lasting several years longer.

Biological Environment

Habitats

All of the proposed uses can adversely affect habitats. However, most of the activities would be limited to public use infrastructure already disturbed, such as roads, trails, fire-breaks, and parking areas. Hunters would be allowed off-trail on foot, but any associated vegetation disturbance would likely be negligible. Permitted (e.g. hunting and fishing) off-road vehicle use may cause localized and temporary vegetation disturbance. Horses, dogs, and pedestrians can spread the seeds of non-native plant species by passing through the site. Overall, the intensity of uses is expected to be low, relative to the size of each unit, and adverse effects to habitats are expected to be minor. Any negative effects could be further reduced by limiting use to existing trails and by making potentially sensitive areas off-limits. Environmental education and interpretation programs could increase awareness and support for refuge programs among the visiting public which may translate into benefits to these resources. These effects would be similar under each alternative, albeit for a long timeframe under the proposed action.

Threatened and Endangered Species

The potential effects to listed species are anticipated to be minimal under both alternatives, though the effects would continue for a longer timeframe under the action alternative. Environmental education and interpretation programs could increase awareness and support for Service programs and regional conservation efforts geared to protecting imperiled species among the visiting public which may translate into benefits to these resources. None of the game species potentially taken are prey for any listed species utilizing the site. Increased noise levels could cause some disturbance to listed bird species, such as caracara. However, given short duration of the disturbance, this effect is expected to be minimal. Crushing of listed plants and sand skinks would be minimized by closing sensitive areas, as needed.

At-Risk Species

Gopher tortoise could potentially be negatively affected by off-road vehicle use. However, slow speeds, operator awareness, the use of designated trails, and closure of sensitive areas would keep the effects to a minimum. For both alternatives, effects would be at minimal levels described for threatened and endangered species above.

Migratory Birds (Non-game)

Non-game, migratory birds could be adversely affected by each of the proposed uses to some degree, with disturbance being the common factor. The foraging, resting, and breeding activities of birds could be altered, especially along roads and trails where public use is expected to be at higher levels. There is a low probability that ground-nesting birds may have their nests inadvertently disturbed or destroyed by any allowed, off-trail uses. However, user awareness would minimize that negative effect. Effects, both adverse and beneficial, would be minimal, and similar to those described for threatened and endangered species above.

Non-imperiled Wildlife

Disturbance from any of the proposed uses would likely be the primary adverse effect on non-imperiled wildlife, as has been documented elsewhere. However, these sources of disturbance would be infrequent and of short duration. Furthermore, many wildlife species are known to habituate to frequent, non-threatening human activities. Direct injury or mortality from collisions with bicycles, albeit unlikely is a possibility. Permitted ORV use can have similar consequences.

Discarded fishing line may injure or kill birds and other wildlife. Taken together, these consequences are expected to be localized, relatively infrequent, and of negligible importance to non-imperiled wildlife populations. Hence, any adverse effects to non-imperiled wildlife species are expected to be minimal under each alternative, differing only in timeframe. Potential positive effects could include a greater awareness and support for Refuge, State and other conservation efforts aimed at keeping relatively common species from declining.

White-tailed Deer

White-tailed deer have restricted home ranges and local hunting efforts would not affect regional populations. Furthermore, deer hunting can maintain herd size and sex ratios at a healthy population level commensurate with available habitat. The direct effect of hunting will have a negligible effect on the population. It is expected that the deer population will recover seasonally, and no indirect effects are expected. Cumulatively, this slight increase in deer take is not expected to be significant. Hence, the overall negative effect on deer is expected to be minimal. Conversely, a positive effect could include further awareness by hunters of the state's deer management efforts, possibly resulting in increased support for the program, with associated benefits for the deer population and a range of other species.

Feral (wild) Hog

Feral hog are an invasive species and any incidental take is likely to have a beneficial effect to native wildlife and habitat, since hogs compete for mast; destroy native plants; and prey upon bird nests, small vertebrates, and invertebrates. There is no limit of take for feral hog. Feral hogs reproduce rapidly, and the direct effect of increased take is expected to be negligible. Population recovery is expected, and no direct or cumulative effects are expected. Hence, a positive effect resulting from the proposed uses is expected, albeit minor.

Wild Turkey

Wild turkey have increased in Florida since the 1970s due to habitat protection and management efforts. This game species has limited home ranges, and local hunting efforts are unlikely to affect regional populations, although spring turkey hunting can disrupt nesting. The proposed action is expected to have a negligible increase in take for this species. Hence, there the direct effect is a slight decline in turkey numbers. The local population is expected to rebound seasonally with no indirect effects. Range-wide, this slight increase in take is not expected to have a cumulative effect on the species. Overall, the adverse effects of hunting on wild turkey is expected to be minimal. Positive effects would also be minor, as those described under deer.

Alligator

Alligator conservation has been considered a success, and it is estimated there are approximately 1.3 million alligators living in Florida (FWC 2019). Under the preferred alternative, there would be slight direct effect on alligator numbers seasonally. However, this would not translate to any measurable indirect or cumulative effects. Hence, take of alligator per state regulations will have a minimal adverse effect on this species while potentially providing an additional hunting opportunity.

Migratory Game Birds

The Service annually prescribes a framework, or outer limits, for dates and times when hunting may occur and the number of migratory game birds that may be taken and possessed. These frameworks are necessary to allow state selections of season and limits for recreation and sustenance; aid federal, state, and tribal governments in the management of migratory game birds; and permit harvests at levels compatible with population status and habitat conditions.

Because the Migratory Bird Treaty Act stipulates that all hunting seasons for migratory game birds are closed unless specifically opened by the Secretary of the Interior, the Service annually promulgates regulations (50 CFR Part 20) establishing the frameworks from which states may select season dates, bag limits, shooting hours, and other options for each migratory bird hunting season. All migratory bird hunting regulations will be per WMA rules, and the overall effect is expected to have a minimal adverse effect. The effects of hunting under the proposed action is detailed for individual species below. The sale of hunter Duck Stamps would support conservation efforts at the national level. Additionally, increased awareness of the range-wide reductions of populations of several migratory game birds may bring about increased support by hunters, possibly resulting in support for other conservation efforts for this resource.

Small (Upland) Game

Small game mammals include species such as rabbits, raccoon, opossum, coyote, and squirrel, and are believed to be widespread and common on the Refuge. The structure and length of hunt seasons for the Refuge will be planned and managed through existing state WMA regulations. The proposed action is anticipated to cause a slight increase in the take of all small game species, except beaver and nutria, neither of which are found on the Refuge. This impact is expected to be negligible, as these species have high reproductive rates that can support the expected levels of take. Bobcat and otter have relatively low reproductive rates compared to the other small game species, hence their take is limited to one each annually. The direct effect is a negligible decline in local small game numbers seasonally. These small game species' populations recover seasonally and no indirect or cumulative effects are anticipated. Overall, the adverse effect of hunting on small game species is expected to be minimal. In some instances, the populations of medium-sized predators such as raccoons can rise to levels where nest predation and other negative effects become noticeable. Small game hunting can have beneficial effects by helping keep raccoon populations at acceptable levels either by direct removal or causing temporary displacement, providing some level of respite from nest predation. Other small game species are considered sufficiently numerous by FWC to allow their take per State regulations.

Range-wide, the bobwhite quail population has declined since the 1950s, and FWC is actively working with state and federal agencies, landowners, and other partners to reverse that trend. Refuge lands currently within the WMA program do not offer quail hunts, and currently, no take of quail is expected. Hence, at the present time, there would be no direct, indirect, or cumulative effects associated with quail hunting on the Refuge. However, there is the potential that current lands or new refuge lands added to the WMA may provide this opportunity in the future. If quail were permitted to be hunted on the Refuge, it is estimated that the take would be about two seasonally.

Fish

The legal take of fish species will be in accordance with state-wide freshwater fishing regulations. Any adverse effects on fish populations are expected to be minimal for both alternatives, differing only in timeframe. All freshwater Florida game fish species are considered sufficiently numerous to allow their take according to regulation. Possible beneficial effects include the sale of State fishing licenses which are used to further management efforts aimed at keeping fishable populations at sustainable levels. The legal take of frog species will be in accordance with state-wide freshwater fishing regulations. Any effects, adverse and positive are similar to those described above for fish resources.

Non-native Species

All proposed uses have the potential to inadvertently spread nonnative plants and animals. Seeds of invasive plants can be carried on vehicles, clothing, and the fur of dogs and horses. Small non-native animals can hitch-hike on vehicles or in camping gear. However, most of the non-native species that may spread by these means are likely already present in some numbers on refuge lands. This negative effect is expected to be minimal under both alternatives and having a longer duration for the proposed action.

The awareness raised on non-native species through various environmental educational and interpretive materials is considered a minimal positive consequence that would be similar under both alternatives. Visitors that are informed about the harmful nature of invasive species may be less likely to release unwanted exotic pets into the environment.

Effects on Socioeconomics

The proposed action is expected to benefit socioeconomic resources through the contracting/purchasing of various locally-provided outdoor recreational services/goods. There would be a minor beneficial economic effect. The EA associated with the LPP provides a more detailed analysis of the economic effects associated with outdoor recreation.

Under the no-action alternative, the listed activities would sunset sooner than what is expected under the proposed action. Although associated expenditures (e.g. sales of hunting equipment, etc.), as well as indirect economic activities (e.g. restaurant/hotel use by visitors in the surrounding areas) are unknown, this overall adverse effect is expected to be minimal under the no action alternative.

Effects on Cultural Resources

The listed activities are expected to adversely affect any cultural resources at minimal levels under both alternatives, differing only in timeframe. There are no known historical resources on the units that could be damaged. Since these activities would not require any digging, no disturbance to archeological resources is expected. Any cultural resources on possible future refuge units would be protected. Conversely, a heightened awareness by the visiting public of the importance of these resources could garner increased support for local efforts and beyond to protect America's heritage.

Environmental Justice

None of the management alternatives described in this environmental assessment will disproportionately place any adverse environmental, economic, social, or health impacts on minority and low-income populations. Implementation of any action alternative that includes public use and environmental education is anticipated to provide a benefit to the residents residing in the surrounding communities.

Cumulative Impacts

A cumulative impact is defined as an impact on the natural or human environment, which results from the incremental impact of the proposed action when added to other past, present, and reasonably foreseeable future actions regardless of which agency (federal or non-federal) or person undertakes such other actions (40 Code of Federal Regulations, 1508.7).

Cumulative impacts are the overall, net effects on a resource that arise from multiple actions. Impacts can “accumulate” spatially, when different actions affect different areas of the same resource. They can also accumulate over the course of time, from actions in the past, the present, and the future. Occasionally, different actions counterbalance one another, partially canceling out each other’s effect on a resource. More typically, multiple effects add up, with each additional action contributing an incremental impact on the resource. In addition, sometimes the overall effect is greater than merely the sum of the individual effects, such as when one more reduction in a population crosses a threshold of reproductive sustainability, and threatens to extinguish the population.

A thorough analysis of impacts always considers their cumulative aspects, because actions do not take place in a vacuum: there are virtually always some other actions that have affected that resource in some way in the past, or are affecting it in the present, or would affect it in the reasonably foreseeable future. So any assessment of a specific action’s effects must in fact be made with consideration of what else has happened to that resource, what else is happening, or what else would likely happen to it.

With increased wildlife-dependent recreation opportunities, user group conflicts may occur. The refuge’s visitor use programs would be adjusted as needed to eliminate or minimize occurrences to provide quality wildlife-dependent recreational opportunities.

Noise

The preferred alternative would have some adverse cumulative effects to physical resources from new photo blinds. However, through site planning and best management the effects on noise are expected to be localized and of relatively short duration. The overall impacts to these resources would be minimal. Some minimal adverse effects to biological resources are possible. Proposed photo blinds construction would cause a fraction of wildlife habitat to be lost and is considered a minimal adverse effect. Disturbance from public uses to wildlife are anticipated to be localized and/or temporary and should not result in any long- term changes in the behavior of wildlife, imperiled species, or migratory birds. Opening up the Refuge to expanded public use is expected to instill a greater appreciation and understanding of the Refuge’s biological resources. This could inspire an increased level of conservation awareness and, possibly, action being taken off-refuge, which would have a positive effect. None of the proposed activities are expected to have any significant cumulative effects to the biological resources of the Refuge.

Habitats

Since most of the public uses would occur on already existing trails, roads, fence-lines, and fire-breaks, the loss of habitat is expected to be minimal. The proposed photo blinds would occupy a fraction of Refuge habitat. Taken together, none of the activities are expected to have any significant cumulative effects.

Threatened, Endangered and At-risk Species

Effects on listed and at-risk species is expected to be minimal. None of the game species potentially taken are prey for any listed species utilizing the site. Increased noise levels could cause some disturbance to listed bird species, such as caracara. However, given short duration of the disturbance, this effect is expected to be minimal. Crushing of listed plants and sand skinks would be minimized by closing sensitive areas, as needed. Hence, the cumulative effects to listed and at-risk species is anticipated to be insignificant.

Migratory Birds (Non-game)

Non-game migratory birds could be negatively affected through disturbance, especially along trails and roads. Areas could be closed seasonally to reduce the effects, if warranted. Overall, significant cumulative effects to non-game migratory birds is not foreseen.

Non-imperiled Wildlife

Disturbance from the range of public uses would likely be the most common adverse effect to non-imperiled wildlife species. Most of these species are common and generally habituate well to human presence. Furthermore, due to limited home ranges of these animals, regional impacts would not occur. Locally there may be temporary displacement of resident birds, small mammals, reptiles, amphibians, and invertebrates. Cumulative effects to this group is not expected to be significant.

Game Species

Deer hunting provides economic return for local economies and provides funding to state programs that benefit all wildlife. Deer hunting on the Refuge should have minimal effects on deer populations and potential beneficial effects on habitat and herd health. Feral hog hunting helps reduce the numbers of this invasive species. Take of wild turkey would affect the local population, and the expected numbers to be harvested would be sustainable. There is expected to be a small increase in take of some migratory game bird species. Range-wide, this effect on take is expected to be negligible. Some small game species can become destructive to nesting birds at high densities, and hunting could help keep the numbers of these medium-sized predators at optimal levels. Take of bobcat and coyote would be negligible compared to their State-wide populations. Bobwhite quail are not anticipated to be taken in the foreseeable future, as the Refuge lands are currently not designated for hunting this species. There may be a small increase in take of alligator, but this effect is expected to be negligible compared to the range-wide population. Overall, hunting is not expected to cause a cumulative significant effect on any of the species permitted to be taken.

Fishing

The proposed use is not likely to adversely affect fish and frog populations. Fish harvest would occasionally occur; however, most anglers generally practice catch and release. Although frogging may increase pressure on frog populations, the proposed season and bag limit restrictions should alleviate pressure on populations or competition for wading birds. The season proposed excludes four months during which frogs are most actively breeding and during peak wading bird foraging/nesting season. Applying restrictions should alleviate any long-term and/or cumulative impacts to frog populations and the wildlife that prey on them. Recreation participants are required to adhere to all FWC fishing and frogging regulations except where Refuge-specific regulations have been set. These regulations are designed to protect species populations from the pressures of fishing and frogging by the public. This use should not result in long-term or cumulative impacts that adversely affect the purposes for which the Refuge was established or alter any existing or proposed uses as stipulated in the VSP. Cumulative impacts are not anticipated on wildlife, their behaviors, or their habitat.

Cultural Resources

There would be no major cumulative effects to cultural resources. Prior to any ground disturbance activities, the USFWS would conduct a cultural resource assessment. Any cultural resources discovered would be protected.

Socioeconomics

Potential effects on socioeconomics are generally expected to be neutral or positive. Increased opportunities for public recreation on the Refuge would help meet some of the growing local demand for such activities. There would be a positive effect on the local economy resulting from public visitation and associated spending. Carefully coordinated and managed hunts are expected to keep any risks to human health and safety to a minimum.

While refuges, by their nature, are unique areas protected for conservation of fish, wildlife and habitat, the proposed action will not have a significant impact on refuge resources and uses for several reasons:

The Service works closely with the State to ensure that species harvested on a refuge are within the limits set by the State to ensure healthy populations of the species for present and future generations of Americans.

The action will result in beneficial impacts to the human environment as well as the wildlife-dependent recreational opportunities and socioeconomics of the local economy, with only negligible adverse impacts to the human environment as discussed above.

The adverse direct and indirect effects of the proposed action on noise, habitat, and wildlife are expected to be minor and short-term.

The NWRS uses an adaptive management approach to all wildlife management on refuges, monitoring and re-evaluating the hunting and fishing opportunities on the refuge on an annual basis to ensure that the hunting and fishing programs continue to contribute to the biodiversity and ecosystem health of the refuge and these opportunities do not contribute to any cumulative impacts to habitat and wildlife from climate change, population growth and development, or local, State, or regional wildlife management.

The action, along with proposed mitigation measures, will ensure that there is low danger to the health and safety of refuge staff, visitors, and the hunters/fishers themselves.

The action will not impact any threatened or endangered species; or any Federally-designated critical habitat;

The action will not impact any cultural or historical resources;

The proposal is not expected to have any significant adverse effects on wetlands and floodplains, pursuant to Executive Orders 11990 and 11988.

Public Review

The proposal has been thoroughly coordinated with all interested and/or affected parties.

Parties contacted include:

Florida Fish and Wildlife Conservation Commission (FWC)
Florida Forest Service (FDACS)
Florida State Historic Preservation Officer
Highlands County
Miccosukee Tribe of Indians
Muscogee (Creek) Nation
Okeechobee County
Osceola County

Poarch Band of Creek Indians
Polk County
Seminole Indian Tribe of Florida
Seminole Nation of Oklahoma
South Florida Water Management District (SFWMD)
U.S. Army Corps of Engineers
Interested Citizens
Non-Government Organizations

The USFWS also held two intergovernmental meetings that were attended by a number of state and local agencies. Due to the COVID-19 epidemic, the Refuge held a virtual question and answer session on April 28, 2020 in lieu of a public meeting on the draft VSP and EA. The Refuge advertised the public webinar on its website and via emails to the VSP contact list. Approximately 35 individuals attended, and a summary of the questions and corresponding Service answers was subsequently made available on the refuge website.

During the scoping and review process, the Refuge consulted with the Miccosukee Tribe of Indians, Muscogee (Creek) Nation, Poarch Band of Creek Indians, Seminole Indian Tribe of Florida, and Seminole Nation of Oklahoma. Letters were sent on June 18, 2018 inviting them to planning process. On October 28, 2019, these Tribes were sent copies of the “Everglades Headwaters National Wildlife Refuge and Conservation Area: Cultural Resources Overview” to assist them in their review process. On March 23, 2020, the respective Tribes were sent letters or emails inviting them to review the draft VSP and EA.

On March 25, 2020, the Service put the draft VSP and EA out for a 60-day public review and comment. Copies of the Draft VSP and EA could be obtained online from the Refuge website. Approximately 14 individuals, non-profit entities, and governmental agencies provided over 150 substantive comments. These comments were summarized, with corresponding Service responses, and grouped into the following categories in Appendix E of the Final VSP:

- 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

Due to the COVID-19 pandemic, a virtual question and answer session was held on April 28, 2020 during the comment period in lieu of a public information meeting. The virtual information session was advertised on the Refuge website and reminders were sent to an email contact list. Approximately 35 people attended. A summary of the questions and corresponding Service responses was subsequently made available on the Refuge website.

Finding of No Significant Impact

Based upon a review and evaluation of the information contained in the EA as well as other documents and actions of record affiliated with this proposal, the Service has determined that the proposal to implement the Visitor Services Plan on the Everglades Headwaters NWR does not constitute a major Federal action significantly affecting the quality of the human environment under the meaning of section 102 (2) (c) of the National Environmental Policy Act of 1969 (as amended). As such, an environmental impact statement is not required.

Decision

The Service has decided to implement new and expanded wildlife-dependent recreational opportunities including biking, Camping, commercial recording and tours, environmental education and interpretation, fishing, hiking/backpacking/jogging, horseback riding, hunting (big game, migratory bird, small game, and alligator), off-road vehicle use (in support of hunting and fishing), pets-on-leash, and wildlife observation and photography. New infrastructure to be constructed includes several photo blinds.

This action is compatible with the purposes of the Refuge and the mission of the National Wildlife Refuge System. The action is consistent

Regional Chief
National Wildlife Refuge stem
U.S. Fish and Wildlife Service

Date