



*Cost-Benefit and Regulatory Flexibility Analyses:  
Revisions to Sport Hunting and Trapping Regulations in National  
Preserves in Alaska*

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## **Introduction**

This report presents the cost-benefit and regulatory flexibility analyses of the regulatory action amending regulations for sport hunting and trapping in national preserves in Alaska. This rule will remove a regulatory provision issued by the National Park Service in 2015 that prohibited certain sport hunting practices that are otherwise permitted by the State of Alaska. These changes are consistent with Secretary of the Interior Orders 3347 and 3356. Quantitative analyses were not conducted due to a lack of available data. Given the data limitations, the NPS believes that the analyses below provide the best possible assessment of relevant costs and benefits associated with this regulatory action.

The results of the cost-benefit analysis indicate that small and localized costs and benefits are expected under the regulatory action. Additionally, this regulatory action will not have an annual economic effect of \$100 million, and will not adversely affect an economic sector, productivity, jobs, the environment, or other units of the Federal Government.

The results of the regulatory flexibility analysis indicate that the regulatory action will not impose a significant economic impact on a substantial number of small entities.

## **Cost-Benefit Analysis**

### **Background**

On October 23, 2015, the NPS published a final rule (2015 Rule) to amend its regulations for sport hunting and trapping in national preserves in Alaska (80 FR 65325). The 2015 Rule codified prohibitions on certain types of harvest practices that are otherwise permitted by the State of Alaska. The practices are: taking any black bear, including cubs and sows with cubs, with artificial light at den sites; harvesting brown bears over bait; taking wolves and coyotes (including pups) during the denning season (between May 1 and August 9); taking swimming caribou; taking caribou from motorboats under power; taking black bears over bait; and using dogs to hunt black bears.

Since the publication of the 2015 Rule, the Secretary of the Interior issued two Secretary's Orders (3347 and 3356) regarding how the Department of the Interior should manage recreational hunting and trapping in the lands and waters it administers, and directing greater collaboration with state, tribe, and territorial partners in doing so.

The purpose of this rule is to align sport hunting regulations in national preserves in Alaska with State of Alaska regulations and to enhance consistency with harvest regulations on surrounding non-federal lands and waters in furtherance of Secretary's Orders 3347 and 3356. The rule will apply the State of Alaska's hunting regulations to national preserve lands, with limited exceptions found elsewhere in NPS regulations (see, e.g., 36 C.F.R. 13.42(d)).

### **Statement of Need**

Executive Order 12866 (58 FR 51735) directs Federal agencies to demonstrate the need for the regulations they promulgate. In general, regulations should be promulgated when a "market failure" exists that cannot be resolved effectively through other means. A market failure exists

when private markets fail to allocate resources in an economically efficient manner. Other justifications for promulgating regulations include improving the functioning of government, removing distributional unfairness, or promoting privacy and personal freedom (OMB 2003). Since the publication of the 2015 Rule, the Secretary of the Interior issued two Secretarial Orders regarding how the Department of the Interior should manage recreational hunting and trapping in the lands and waters it administers, and directing greater collaboration with state, tribal, and territorial partners in doing so. Consistent with those Secretarial Orders, the NPS published a proposed rule (83 FR 23621) that would remove sections of the 2015 Rule, which prohibited certain sport hunting practices. Action is needed at this time to improve governmental functions by more closely aligning sport hunting regulations in national preserves in Alaska with State regulations, and to enhance consistency with harvest regulations on lands and waters surrounding national preserves in Alaska, in furtherance of Secretarial Orders 3347 and 3356.

The rule will apply the State of Alaska's hunting regulations to national preserve lands, with limited exceptions found elsewhere in NPS regulations (see, e.g., 36 C.F.R. 13.42(d)). The current NPS regulations prohibit the practices described because NPS found those practices: (1) to have intent or potential to alter or manipulate natural predator-prey dynamics, and associated natural ecological processes for the purpose of increasing harvest of ungulates by man; (2) to adversely impact public safety; or (3) to be inconsistent with federal law authorizing sport hunting in national preserves in Alaska. NPS has broad discretion in managing wildlife on national preserves under applicable laws, policies, and regulations. Taking into account the Secretary's Orders 3347 and 3356, NPS has re-considered its earlier conclusions and determined that these practices can be allowed consistent with the goal of aligning its rules with those of the State. This rule will improve governmental functions by enhancing consistency between harvest regulations in national preserves and surrounding non-federal lands and waters.

## **Alternatives Considered in the Current Analysis**

### ***Final Action***

The NPS will remove paragraphs (f) and (g) of 36 CFR 13.42. Paragraph (f) states that State of Alaska management actions or laws or regulations that authorize taking of wildlife are not adopted in park areas if they are related to predator reduction efforts, which is defined as efforts with the intent or potential to alter or manipulate natural predator-prey dynamics and associated natural ecological processes, in order to increase harvest of ungulates by humans. Paragraph (g) sets forth a table of prohibited methods of taking wildlife for sport purposes in national preserves in Alaska. Most of these prohibited methods are also prohibited by the State of Alaska. Some of them, however, conflict with authorizations by the State of Alaska as explained above. The NPS believes that removing paragraphs (f) and (g) will implement the direction announced in Secretary's Orders 3347 and 3356 by increasing hunting opportunities in national preserves and promoting consistency between federal regulations and state wildlife harvest regulations. In addition, the rule removes the definitions of "Big game", "Cub bear", "Fur animal", and "Furbearer" from section 13.1 because those terms are only used in paragraphs (f) and (g).

### **Baseline Conditions**

The costs and benefits of a regulatory action are measured with respect to its baseline conditions. Baseline describes conditions that would exist without the regulatory action. Therefore, all costs

and benefits included in this analysis are incremental to the baseline conditions. That is, any future impacts that would occur without the final action, as well as any past impacts that have already occurred, are not included in this analysis.

For this analysis, the baseline conditions would continue the prohibitions, codified in the 2015 Rule, on certain types of harvest practices in national preserves that are otherwise permitted by the State of Alaska. The practices are: taking any black bear, including cubs and sows with cubs, with artificial light at den sites; harvesting brown bears over bait; taking wolves and coyotes (including pups) during the denning season (between May 1 and August 9); taking swimming caribou; taking caribou from motorboats under power; taking black bears over bait; and using dogs to hunt black bears.

## **Benefits and Costs of the Regulatory Action**

### ***Benefits***

Compared to baseline conditions, it is anticipated that this rule could generate benefits by expanding hunting opportunities in national preserves and promoting consistency between federal regulations and state wildlife harvest regulations. Certain types of harvest practices permitted by the State of Alaska but prohibited by current NPS regulations will now be allowed in national preserves. These additional hunting opportunities could possibly result in an overall increase in the number of hunting participants and/or the number of days spent hunting in national preserves, thus generating the potential for additional economic benefits.

For example, some hunters could take wolves or coyotes for a longer season where authorized. A year-round season for coyotes is consistent with seasons in 40 of the 49 states that allow coyote hunting (SOA 2014). However, there are no data available to quantify the magnitude of these potential effects. While the State maintains some information, including on license sales, general harvest numbers, and the registration of bait stations, there is no existing information that is specific to national preserves. Further, the majority of the visitor surveys administered in national parks in Alaska have not collected information about hunting (e.g., Manni et al., 2012; Littlejohn, 2000; Littlejohn, 1996). Although there is the potential for increased hunting participation, some hunters may simply shift the location or season that they hunt in, resulting in no change in the number of days spent hunting.

For example, the use of a leashed dog to hunt a wounded black bear has been allowed in Alaska since 1970 and was only prohibited in NPS preserves starting in 2015. While authorized since the 1980s, also until 2015, the practice of hunting black bears over bait in NPS preserves was relatively uncommon. On average, less than two black bears per year were harvested over bait on NPS-managed lands (Hilderbrand, Rabinowitch, & Mills 2013). While closed by regulation, those hunters that preferred to utilize bait or trained dogs maintained the opportunity to harvest bears without those practices. Although State of Alaska regulations may change from year to year, guides are not required to hunt bears over bait at this time; therefore, no impacts on guiding services are expected. Anyone wanting to register a bait station anywhere in Alaska must have successfully completed a bear baiting clinic.

Additionally, harvesting caribou while swimming has been a limited exception under State law for decades to recognize harvest practices primarily used in the Noatak National Preserve in Northwest Alaska. At the request of the Kotzebue Advisory Committee to the State Board of Game, the harvest of swimming caribou and the use of motorized boats for the harvest of caribou have been authorized since 1982, and have been allowed under federal subsistence regulations since 1989 (SOA 2014). On Alaska preserves, federally qualified rural residents can choose to hunt either under federal subsistence hunting regulations, which tend to be more liberal, or under state regulations, which sometimes provide different opportunities than the federal regulations (e.g., youth hunts). Take of swimming caribou has only been closed since 2015 to those hunting under state regulations, and has remained available while hunting under federal subsistence regulations. Most non-federally qualified hunters are unlikely to engage in these practices, preferring to hunt on land with limited access to the necessary motorized boats (SOA 2014).

The net economic benefit (or consumer surplus) of recreational hunting is defined as the amount of money an individual is willing to pay for the recreation experience above and beyond any costs actually paid (Loomis & Walsh, 1997). According to a database of the existing literature, the net economic benefit of a day spent hunting big game in Alaska is around \$82 per person (in 2014 dollars; USGS Benefit Transfer Toolkit). While this average value provides some context, it is important to note that none of the existing studies that this estimate is based on were conducted in national preserves specifically, and none focused on the species affected by this regulatory action. While NPS preserves have not been closed to the harvest of black bears, some increase in hunting activity could occur where the use of bait or dogs is allowed under state regulations. According to a 1992 survey of Alaskan resident and nonresident hunters (Miller et al., 1998), the net economic value per black bear hunting trip was \$396 for resident hunters and \$1,155 for nonresident hunters (adjusted to 2019 dollars by the Consumer Price Index inflation calculator (US Bureau of Labor Statistics (2019))).

A portion of hunters in Alaska could experience a marginal increase in the net economic benefit per day spent hunting as a result of the additional hunting opportunities and potential for increased harvest in national preserves. For example, the harvest of brown bears could increase for sport hunters because of the opportunity to harvest bears over bait. Previous studies have demonstrated an increase in net economic values associated with increased hunting success for animals such as deer and elk (Helfrich, 1981; Loomis, Donnelly, & Sorg-Swanson, 1989). There is a lack of data available to forecast and quantify these potential effects, but levels of additional harvest under the final rule are expected to be low (NPS, 2019).

Compared to baseline conditions, the benefits of expanded hunting opportunities in national preserves resulting from this rule cannot be quantified without further analysis and more intensive research and study, but they are anticipated to be small. The harvest practices are already permitted on non-federal lands and waters in Alaska, and sport hunting and trapping in national preserves account for less than 6% of the lands in Alaska open to these activities. On average, less than two black bears per year were harvested over bait on NPS lands before the practice was prohibited in 2015 (Hilderbrand, Rabinowitch, & Mills 2013).

This rule also has the potential to generate economic benefits that are independent of any current on-site use of NPS resources. For instance, some individuals may place a value on retaining the

option to engage in additional hunting opportunities or have increased hunting success in national preserves in the future, regardless of whether they currently hunt there or not. These option values would be captured by their willingness to pay to ensure future availability (see Brookshire, Eubanks, & Randall, 1993, for an example of option values associated with grizzly bear hunting). However, in the absence of primary data collection, such option values resulting from this regulatory action cannot be quantified with any certainty.

Overall, it is anticipated that this action could impose positive benefits on hunters and the general public.

### **Costs**

Compared to baseline conditions, this rule could result in an increase in the number of bear bait stations in national preserves. Although the quantity of additional stations is unknown, they would likely occur in national preserves with more extensive road networks, such as Wrangell-St. Elias National Park and Preserve, as opposed to more rural and roadless units. It is recognized that food-conditioned bears may present a greater safety concern (Herrero 1970, 1976, 2002). However, bear baiting differs in that bears do not necessarily associate baits with humans, and thus may not become food conditioned or habituated, as defined by Herrero (2002). Paquet (1991:2, cited in Hristienko and McDonald 2007) reported that bears exposed to bait in Manitoba did not become nuisance animals. Further, because the bear baiting season would overlap with the primary park visitor season, some recreational visitors may avoid areas around bait stations due to perceived safety concerns or other issues, resulting in minor decreases in public uses and enjoyment of these areas. The NPS will attempt to address any site-specific issues related to bear baiting with the State of Alaska Board of Game to the maximum extent allowed by Federal law, and maintains the ability to enact specific closures, if necessary in the future, under the Alaska National Interest Lands Conservation Act of 1980 (ANILCA), Section 1313 (NPS, 2019).

Increased hunting opportunities resulting from this rule also have the potential to impact wildlife viewing opportunities in national parks in Alaska. For instance, research conducted in Denali National Park and Preserve and Yellowstone National Park has found that the harvest of wolves is one of several factors that potentially affects wildlife viewing opportunities in these parks. By examining data on wolf sightings, pack sizes, den site locations, and harvest adjacent to the parks, Borg et al. (2016) find that “the harvest of wolves adjacent to protected areas can reduce sightings within those areas despite minimal impacts on the size of protected wolf populations.” However, the NPS would be able to ensure that no meaningful adverse population-level effects would occur through its ability to enact specific hunting and trapping closures, if necessary, in the future (NPS, 2019).

A decrease in the number of wildlife viewing participants or the number of days visitors come to national parks to view wildlife would result in a loss of economic benefits. According to a database of the existing literature, the net economic benefit of a day spent viewing wildlife in Alaska is around \$83 per person (in 2014 dollars; USGS Benefit Transfer Toolkit). This value is nearly identical to the per person value associated with a day spent hunting big game in Alaska, and the difference in the value estimates is not found to be statistically significant. It is important to note that the majority of the studies that this estimate is based on were not conducted in

national parks. A more recent study of visitors to Katmai National Park estimated a per person value of \$287 per day of bear viewing (Richardson, Huber, & Loomis, 2017); however, unlike other parks in Alaska, Katmai offers a very unique experience to view brown bears up close from viewing platforms. This activity would not be affected by this rule.

Park visitors could experience a marginal decrease in the net economic benefit per day spent viewing wildlife if there are fewer sightings. McCollum et al. (1998) found that recreation values derived by visitors to Denali National Park increased with wildlife viewing success. This suggests that a decrease in the probability of a sighting could lead to a decrease in wildlife viewing benefits.

Compared to baseline conditions, the extent to which this rule could impact wildlife viewing opportunities in national parks in Alaska is unknown. Hunting is already permitted in national preserves, and the addition of certain types of harvest practices, such as the taking of bears over bait and the taking of wolves and coyotes during the denning season, could have very little impact on wildlife viewing opportunities. Further, only low numbers of additional harvest are expected under this action (NPS, 2019). However, there is the potential for localized decreases in opportunities for visitors to view bears and wolves, especially along access corridors. In addition, a corresponding increase in opportunities to view prey species could be expected as well (NPS, 2019). There is a lack of data available to forecast and quantify these potential effects and their associated costs with any certainty. However, due to the low level of additional take expected and the ability of the NPS to designate closures under ANILCA Section 1313, it is anticipated that the overall costs to wildlife viewers of this regulatory action would be small and localized.

This rule also has the potential to generate economic costs that are independent of any current on-site use of NPS resources. For instance, some members of the general public may place a value on knowing that certain types of harvest practices, such as the taking of bears over bait, are prohibited in national preserves, resulting in a loss of economic benefits. Passive use values associated with ecosystem preservation may be affected if individuals believe that the permitted harvest practices have the potential to alter natural ecological processes. However, in the absence of primary data collection, the magnitude of these values are unknown.

Compared to baseline conditions, this rule does not involve any additional fees or other measures that would increase the monetary costs to visitors, businesses, or communities. No new or additional licenses would be required. Overall, it is anticipated that this rule could impose small, localized costs on park visitors and the general public.

### **Summary**

To estimate the total benefits and costs generated by this rule, the resulting change in hunters, wildlife viewers, and other visitors, as well as the marginal change in value experienced by visitors and the general public would require more intensive research and study. This action is expected to generate small, localized benefits to hunters and small, localized costs to non-hunting user groups. However, the data required to estimate these factors are not available. Therefore, the NPS was not able to quantify the total change in net economic value generated by this action.



## **Uncertainty**

The overall change in hunters, wildlife viewers, and other visitors as well as the marginal change in value experienced by visitors and the general public resulting from this rule are unknown. Thus, the total costs and benefits generated by this action cannot be estimated. The NPS maintains the ability to enact specific closures, if necessary in the future, under ANILCA Section 1313 and will attempt to address any site-specific safety issues with the State of Alaska Board of Game to the maximum extent allowed by Federal law (NPS, 2019). Therefore, it is anticipated that small and localized costs and benefits would be associated with this rule. NPS is not aware of any other sources of uncertainty.

## **Conclusion**

The results of this cost-benefit analysis indicate that the total change in net economic value generated by this action to affected user groups is unknown, but anticipated to be small. Further, this regulatory action is not expected to have an annual economic effect of \$100 million, or to adversely affect an economic sector, productivity, jobs, the environment, or other units of government. This regulatory action will improve governmental functions by enhancing consistency between harvest regulations in national preserves and surrounding non-federal lands and waters.

## **Regulatory Flexibility Analysis**

The Regulatory Flexibility Act of 1980, as amended in 1996 requires agencies to analyze impacts of regulatory actions on small entities (businesses, non-profit organizations, and governments), and to consider alternatives that minimize such impacts while achieving regulatory objectives. Agencies must first conduct a threshold analysis to determine whether regulatory actions are expected to have significant economic impact on a substantial number of small entities. If the threshold analysis indicates a significant economic impact on a substantial number of small entities, an initial regulatory flexibility analysis must be produced and made available for public review and comment along with the proposed regulatory action. A final regulatory flexibility analysis that considers public comments must then be produced and made publicly available with the final regulatory action. Agencies must publish a certification of no significant impact on a substantial number of small entities if the threshold analysis does not indicate such impacts.

This final analysis relies on the cost-benefit analysis. Public use and experience would be both adversely and beneficially impacted under the rule, depending on the type of activity visitors wish to enjoy (NPS, 2019). There are several guided commercial activities visitors use for wildland adventures, hunting, and sport fishing trips to the national preserves. Visitation is highest during the summer season for fishing, hunting, wildlife viewing, river floating, backpacking, mountain climbing, and photography (NPS, 2019). NPS concessionaire and commercial use data were reviewed to determine the overall number of small businesses focused

on hunting and wildlife viewing activities in national preserves that have the potential to be affected by the rule (NAICS 713990). The U.S. Small Business Administration defines a “small business” as one with annual receipts that meet or fall below the established size standard, which is \$8 million for “All Other Amusement and Recreation Industries” (NAICS 713990). This NAICS code includes establishments primarily engaged in, among other recreational activities, providing guide services such as hunting and wildlife viewing.

For hunting activities, there are currently 23 authorized hunting guides operating in national preserves in Alaska. It is assumed that all 23 hunting guides qualify as small businesses. Some hunting guides may experience a slight increase in business if there is a slight increase in the number of hunters due to this rule. At present the quantity of increase is unknown but expected to be negligible. Guides are not required for residents or nonresidents to hunt bears over bait, and therefore impacts on guiding services are not anticipated.

For bear viewing activities, 103 businesses (including air charter services) have commercial use authorization permits listing bear viewing as a service offered within the national preserves of Alaska. Ninety-five of these businesses offer a variety of services and activities beyond bear viewing and therefore are not expected to be impacted by this rule. The NPS identified eight businesses with commercial use authorization permits listing bear viewing as a service that are assumed to qualify as small entities. Of these eight businesses, five operate at Katmai National Park and Preserve, two operate at Lake Clark National Park and Preserve, and one operates at Katmai and Lake Clark. Establishing and maintaining bait stations involves significant labor and materials and is typically conducted off of road or trail systems, and all but one preserve in Alaska (Wrangell St. Elias National Park and Preserve) is separated from the road system, where easier to access lands are available (SOA 2018). The NPS anticipates any potential for localized decreases in opportunities for visitors to view bears would happen along access corridors in Wrangell St. Elias. Since Katmai and Lake Clark are not on the road system, the eight businesses focused on bear viewing are not expected to be affected by the rule. Due to the low level of additional harvest anticipated from the rule, which is not expected to result in effects at the population level, additional effects on businesses operating outside NPS lands are expected if bears that might otherwise have been seen are harvested using one of the practices adopted under the rule.

Other businesses focused on activities such as air charter services, fishing, boating, and hiking are not expected to be impacted by this rule, as no impacts to these activities are anticipated. In total, the NPS does not anticipate small businesses operating in these areas to experience an impact from adopting state regulations in NPS preserves. Any potential impact to the 23 commercial guides (26% of concessionaires in national preserves in Alaska) or 8 bear viewing businesses (8% of businesses listing bear viewing on their commercial use authorization permit) is expected to be small or negligible owing to the low level of additional activity that is reasonably expected to occur under this rule.

As described in the cost-benefit analysis, the overall change in hunters, wildlife viewers, and other visitors as well as the marginal change in value experienced by visitors and the general public resulting from this rule are unknown. While there is a lack of sufficient data available to quantitatively forecast the potential effects and associated costs, the NPS would continue to work

with the State to obtain relevant data related to hunting, trapping, and wildlife populations on national preserves, and would continue to monitor wildlife, as appropriate and practicable (NPS 2019). Based on available data, the NPS could take actions in the future if necessary to protect NPS resources and values, including implementing specific local hunting and trapping closures pursuant to the ANILCA Section 1313. Therefore, the cost-benefit analysis concludes that only small, localized benefits to hunters and small, localized costs to non-hunting user groups are anticipated. Further, activities such as hunting bears over bait do not require a guide, and bear viewing opportunities are expected to remain available at current levels due to the low level of additional harvest expected under the rule. Given these findings, the NPS certifies that the number of small entities expected to be impacted by this rule is not substantial. In addition, this action will not impose restrictions on local businesses in the form of fees, training, record keeping, or other measures that would increase costs.

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