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Via www.regulations.gov

Public Comments Processing
Attn.: FWS-HQ-NWRS-2022-0106
U.S. Fish and Wildlife Service
5275 Leesburg Pike, MS: PRB (JAO/3W)
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**Re: Safari Club International Comments on National Wildlife Refuge System;
Biological Integrity, Diversity, and Environmental Health, 89 Fed. Reg. 7345
(Feb. 2, 2024); Docket No. FWS-HQ-NWRS-2022-0106**

Dear Ms. Harrigan,

Safari Club International (“SCI”) appreciates the opportunity to comment on the draft Biological Integrity, Diversity, and Environmental Health (“BIDEH”) policy and related proposed rule for the National Wildlife Refuge System (“Refuge System”). For the following reasons, SCI requests that the U.S. Fish and Wildlife Service (“Service”) withdraw these proposals. A number of provisions are contrary to the National Wildlife Refuge System Improvement Act of 1997 (“Improvement Act”) and the Administrative Procedure Act (“APA”). Further, the Service has violated the National Environmental Policy Act (“NEPA”) by failing to prepare an environmental analysis. At the very least, SCI requests that the Service conduct a full NEPA analysis of these proposals, and withdraw certain provisions highlighted below.

Safari Club International

Safari Club International, an I.R.C. § 501(c)(4) nonprofit corporation, has approximately 88,000 members and advocates worldwide. Many of SCI’s members hunt on Refuge System lands. SCI’s missions include the conservation of wildlife, protection of the hunter, and education of the public concerning hunting and its use as a conservation tool. SCI has long been an active supporter of the Refuge System. For example, SCI is a founding member of CARE, the Cooperative Alliance for Refuge Enhancement. Several years ago, SCI intervened to defend the Service’s actions in a lawsuit challenging a 2019 step-down plan for bison and elk management on the National Elk Refuge in Wyoming. SCI recently intervened to defend the Service’s actions with respect to a hunting step-down plan for Canaan Valley National Wildlife Refuge in West Virginia. SCI routinely submits public comments regarding Refuge management, including comments on the annual Hunt Fish Rule and comments in response to scoping, development, or revisions to management plans on Refuges around the country.

Comments on Draft BIDEH Policy and Proposed Rule

Compliance with the National Wildlife Refuge System Improvement Act

SCI appreciates the Service’s efforts to review and update the BIDEH policy, which was adopted in 2001. However, as an initial matter, SCI questions the need for the BIDEH policy. The proposed rule asserts that the Improvement Act “elevated ensuring the maintenance of BIDEH to a similar level of importance as ensuring that the Refuge System mission and refuge purposes are carried out.” 89 Fed. Reg. at 7346-47. But this statement “elevates” BIDEH out of proportion to its role in the Improvement Act. The Act refers to maintaining BIDEH in a list of 14 directives to the Secretary of the Interior for administering the Refuge System. 16 U.S.C. § 668dd(a)(4)(A)-(N). These directives are not set forth with any priority, but simply included in a list. *Id.* Thus, if Congress “elevated” BIDEH, then it simultaneously “elevated” 13 other directives including to:

(E) ensure effective coordination, interaction, and cooperation with owners of land adjoining refuges and the fish and wildlife agency of the States in which the units of the System are located;

...

(H) recognize compatible wildlife-dependent recreational uses as the priority general public uses of the System through which the American public can develop an appreciation for fish and wildlife;

(I) ensure that opportunities are provided within the System for compatible wildlife-dependent recreational uses;

(J) ensure that priority general public uses of the System receive enhanced consideration over other general public uses in planning and management within the System;

(K) provide increased opportunities for families to experience compatible wildlife-dependent recreation, particularly opportunities for parents and their children to safely engage in traditional outdoor activities, such as fishing and hunting . . .

§ 668dd(a)(4)(E), (H)-(K). While maintaining BIDEH is important, it is not a singular directive in the Improvement Act. Therefore, a separate BIDEH policy is unnecessary in the first place—or else 14 separate policies are needed to implement these directives. To our knowledge, the Service has not developed a policy for ensuring that opportunities for compatible wildlife-dependent recreational uses are provided within the Refuge System or for providing increased opportunities for families to experience these uses. Accordingly, it is unclear why the Service has singled out BIDEH, except to restrict access to the Refuge System for wildlife-dependent recreational uses that Congress prioritized. *See also* § 668dd(a)(3) (declaring the prioritization

and facilitation of priority wildlife-dependent recreational uses, including hunting and fishing, as the “policy of the United States”).

SCI is also concerned that the proposals employ a “one size fits all” approach to conservation across the Refuge System that runs counter to the Improvement Act’s intent. The Improvement Act defines “conservation” as:

to sustain and, where appropriate, restore and enhance, healthy populations of fish, wildlife, and plants utilizing, in accordance with applicable Federal and State laws, methods and procedures associated with modern scientific resource programs. Such methods and procedures include, consistent with the provisions of this Act, protection, research, census, law enforcement, habitat management, propagation, live trapping and transplantation, and regulated taking.

§ 668ee(4). In other words, the Improvement Act authorizes and approves of active management of the Refuge System. This includes but is not limited to habitat management and regulated taking. The draft BIDEH policy and proposed rule foreclose the option for active management, except in specific and limited conditions. For example, cooperative agriculture and predator management are largely prohibited—even though these are commonly used conservation management practices (specifically authorized by the Improvement Act and used to advance state wildlife management objectives).¹ Accordingly, SCI urges the Service to withdraw or revise these provisions to allow conservation on each Refuge, as required by the Improvement Act, without the top-level bias imposed by the draft BIDEH policy and proposed rule.

In the same vein, SCI urges the Service to direct Refuge Managers to work closely and cooperatively with state wildlife management authorities to achieve a balanced and healthy ecosystem, through natural processes or whatever management actions are necessary. The Service should remove language promoting too much deference to “natural processes” as the primary method of managing the Refuge System. This deference conflicts with the Service’s simultaneous recognition of the impacts of climate change and human activities—which are not “natural processes,” and therefore may necessitate more hands-on action to achieve appropriate balance (i.e., biological diversity and environmental health) on a Refuge. *E.g.*, 89 Fed. Reg. at 7347-48. In other words, why should the Service lean on natural processes to address challenges created by human activities? More management intervention is likely needed, including to preserve the six wildlife-dependent and “generally compatible” recreational uses set forth by Congress in the Improvement Act. “Natural processes” may not be feasible or available as a response to impacts that are not caused by “nature,” but by human activities. It is likely the state wildlife management authority (as the primary authority for wildlife management) will already

¹ Examples of these practices are available in the testimony of Gordon Batcheller, Executive Secretary of the Northeast Association of Fish and Wildlife Agencies, representing the Association of Fish & Wildlife Agencies, before the Subcommittee on Water, Wildlife, and Fisheries (Apr. 10, 2024), available at https://naturalresources.house.gov/uploadedfiles/testimony_batcheller.pdf.

have recognized this failure and responded accordingly. But the proposals' blanket prohibitions on predator and habitat management may create a false and unnecessary conflict with state management activities.

For example, predator control is used in specific management circumstances to protect vulnerable species, such as sea turtle or whooping crane nests from predation by raccoons, or woodland caribou from predation by wolves.² These uses of predator control are long-standing and supported by research. The proposed rule claims to “provide flexibility” to implement prohibited practices, such as predator and habitat management. But the proposals restrict the use of these practices except in rare cases, and only after a great deal of paperwork. It is unlikely that a Refuge Manager will be able to (or wish to) jump through the necessary hoops to permit these practices.³ The Service should reduce the burden. SCI is concerned with the amount of discretion placed on Refuge Managers—but is less concerned if Refuge Managers are able to tether themselves to state management objectives and plans. For these reasons, SCI requests that the Service remove the blanket prohibitions on predator management and agricultural practices on Refuge System lands from the draft BIDEH policy and proposed rule.

Last, the proposals threaten to reduce compatible wildlife-dependent recreational activities, including hunting. The proposal does not clarify who will make decisions whether recreational hunting “do[es] not compromise maintaining biological integrity, diversity, and environmental health on the refuge,” as to be allowed under the draft BIDEH policy. The draft BIDEH policy also warns that “conserving and managing BIDEH may require spatial or temporal zoning of public use programs and associated infrastructures,” including the priority wildlife-dependent recreational uses of hunting and fishing. 603 FW 3.9(H). SCI is concerned that this language will be used as a screen to prohibit hunting and fishing, or to limit these uses to the point of prohibition.

This concern is borne out by prior agency actions. The Service and the National Park Service have already published rules that conflate predator hunting with “predator control.” *E.g.*, 88 Fed. Reg. 1176 (Jan. 9, 2023) (National Park Service rule reimplementing a 2015 rule to prohibit “predator control” on National Preserves in Alaska, even though the State of Alaska, SCI, and others objected that the prohibited activities are recreational hunting and not “control”); 81 Fed. Reg. 52248 (Aug. 5, 2016) (Service rule that prohibited “predator control” on National Wildlife Refuges, even where States objected that the prohibited activities were recreational hunting and

² See attached presentation on this issue by SCI Foundation’s Director of Conservation, Dr. Chris Comer.

³ As one example, the draft BIDEH policy states that a decision to allow “predator control” would be permitted “only” in “limited circumstances,” would require evaluation of non-lethal control first, and would “require scientific peer review prior to approval.” 603 FW 3.13(A)(1). In essence, the Service has unnecessarily raised the burden of proof for using this management tool, removing a tool from the toolbox of management options otherwise available to wildlife managers.

not “control”). These agency actions have led to losses of compatible hunting opportunities. And those losses of hunting opportunities violate the Improvement Act—and the concept of promoting BIDEH. As explained above, the Act found that these uses help develop an appreciation for conservation among users and are beneficial for the long-term conservation of the Refuge System. Accordingly, SCI urges the Service to remove this “caveat” from the draft BIDEH policy.

Guardrails for Refuge Manager Discretion

The draft BIDEH policy and proposed rule provide too much discretion to Refuge Managers, without sufficient guardrails. The Service should provide examples of the best available science, which include reliance on state wildlife data. The Service should also clarify that state or tribal objections to proposed actions need to be heavily weighted in a Refuge Manager’s decision-making. Objections or push back from peer authorities would suggest that a Refuge Manager’s judgment is not necessarily “sound” or based on settled principles of wildlife management.

Further, it is no secret that the Refuge System is chronically underfunded and understaffed.⁴ SCI is concerned about putting so much discretion in the hands of Refuge Managers. We are concerned about the lack of checks and balances on their decisions. But we are also concerned about the lack of people in positions to make or support those decisions, and the possibility of getting “stuck” in a scientifically unsupported decision as a result.

SCI also is concerned with language in the proposed rule stating that the “sound professional judgment” standard would “bolster decision making that avoids putting BIDEH at risk, and help prevent further degradation of environmental conditions on refuges.” 89 Fed. Reg. at 7347. This language makes the Refuge System sound like the National Park System, which focuses on preservation and not conservation. That is not the intent of the Improvement Act, and it should not be the Service’s intent. Accordingly, SCI requests that the Service remove this language from any final rule.

Incentivizing Stewardship Outside Refuge Boundaries

The draft BIDEH policy requires Refuge Managers to monitor “land use proposals, changes to adjacent lands, and external activities” on lands outside of Refuge boundaries, and authorizes them to “take action within the legal authorities available to the Service” to avoid “unacceptable impacts” to Refuges. 601 FW 3.15(A). This directive oversteps legal boundaries. The Service is not the landholder or manager of lands **outside** Refuge boundaries. Landholders and land managers are permitted under state laws to engage in all legal activities on their lands, including activities that the Service might find “unacceptable” under its view of BIDEH. But

⁴ Along with its CARE partners, SCI routinely advocates for additional funding for the Refuge System via Congressional appropriations to address this underfunding and staffing shortages.

“unacceptable” does not mean illegal—or even “unacceptable” to other stakeholders besides the Service. Accordingly, this provision should be removed.

Moreover, this not-so-veiled threat potentially violates the Improvement Act. Congress directed the Service to stay in its lane. The Act specifically prohibits the Service from trying “to control or regulate hunting or fishing of fish or resident wildlife on lands or waters that are **not** within the System,” such as adjacent lands. § 668dd(l) (emphasis added). Congress further admonished the Service to cooperate with the States. The Act affirms “the authority, jurisdiction, or responsibility of the several States to manage, control, or regulate fish and resident wildlife under State law or regulations in any area within the System.” § 668dd(m). The Service’s declaration of intent to challenge lawful activities that may involve fishing or hunting, or to contradict the traditional management authority of the state, is overreaching the Service’s authority. SCI again urges the Service to remove this language from the draft BIDEH policy. SCI urges the Service to revise the draft BIDEH policy to focus on collaborating with adjacent landholders and land managers, including States, whose buy-ins are necessary to achieve the Service’s objectives and conservation benefits across the landscape. Through collaboration and positive incentives, the Service can encourage good management practices on and around Refuges—without imposing regulatory restrictions that alienate adjacent landholders, stakeholders, and users.

Definition of “Predator Control” and Conflict with Other Legal Authorities

SCI also objects to the definition and restriction on “predator control” in Sections 3.4(R) and 3.13(A) of the draft BIDEH policy and in Sections 29.3(b) and 29.3(d)(1) of the proposed rule.

First, the definition of “predator control” is overly broad. By referring to actions or programs “with the intent **or potential** to alter predator-prey dynamics,” the Service is sweeping in most predator hunting. This overly broad definition of “predator control” violates the APA because it runs counter to the findings of a federal court. In *Alaska Wildlife Alliance v. Haaland*, the court held that hunting, “by [its] very nature, ha[s] the potential to alter natural predator-prey population levels.” 632 F. Supp. 3d 974, 986 (D. Alaska 2022). Because Congress explicitly authorized hunting on National Preserves, the court found no conflict between National Park Service mandates to maintain sound populations of wildlife on National Preserves and the directive to allow hunting, including predator hunting. *See id.*

Here, any take of predators on a Refuge has “the potential”—however remote or unlikely—to alter predatory-prey population dynamics. Yet Congress **prioritized** hunting on Refuge System lands. Congress made the “facilitation” of hunting and other priority wildlife-dependent recreational uses the policy of the Improvement Act. § 668dd(a)(3)(C)-(D) (“With respect to the System, it is the policy of the United States that— ... compatible wildlife-dependent recreational uses are the priority general public uses of the System ... when the Secretary determines that a proposed wildlife-dependent recreational use is a compatible use within a refuge, that activity should be facilitated ...”). Accordingly, SCI requests that the Service remove this definition of “predator control” in its entirety. At the very least, the Service **must** remove this overbroad phrase (“the potential”), which contravenes the Improvement Act.



Second, these provisions conflict with a Congressional Review Act (“CRA”) resolution voiding a substantially similar definition and restriction. In 2016, the Service adopted a regulation for National Wildlife Refuges in Alaska which also sought to “clarify how our existing mandates for the conservation of natural and biological diversity, biological integrity, and environmental health on refuges in Alaska relate to predator control.” 81 Fed. Reg. 52248 (Aug. 5, 2016) (“Refuges Rule”). In February 2017, Congress invoked the CRA to repeal this regulation. See H.J. Res. 69 and S.J. Res. 18, signed into law as Pub. L. No. 115-20, 131 Stat. 86 (Apr. 3, 2017). Congress emphasized its desire to protect traditional state authority for wildlife management. E.g., 163 Cong. Rec. H1259, H1260 (daily ed. Feb. 16, 2017). That authority includes decisions on the appropriate predator-prey balance.

An agency may not issue “a new rule that is substantially the same” as a prior rule that has been disapproved by a joint Congressional resolution under the CRA. 5 U.S.C. § 801(b)(2). The draft BIDEH policy and proposed rule use almost the same exact definition of “predator control” as in the Refuges Rule:

Draft BIDEH Policy and Proposed Rule	Refuges Rule
(1) <i>Native predator control.</i> We prohibit predator control unless it is determined necessary to meet statutory requirements, fulfill refuge purposes, and ensure biological integrity, diversity, and environmental health...	(2) We prohibit predator control on refuges in Alaska, unless it is determined necessary to meet refuge purposes; is consistent with Federal laws and policy; and is based on sound science in response to a conservation concern...
<i>Predator control</i> means actions or programs with the intent or potential to alter predator-prey population dynamics on a refuge by reducing a population of native predators through lethal or nonlethal methods, except for actions necessary to protect public health and safety and those enumerated under paragraph (d)(1) of this section.	We define predator control as the intention to reduce the population of predators for the benefit of prey species. For clarity, this includes predator reduction practices, such as, but not limited to, those undertaken by government officials or authorized agents, aerial shooting, or same-day airborne take of predators. Other less intrusive predator reduction techniques such as, but not limited to, live trapping and transfer, authorization of particularly effective public harvest methods and means, or utilizing physical or mechanical protections (barriers, fences) are also included with exception for barriers for human life and property safety.

Through the draft BIDEH policy and proposed rule, the Service is essentially making an end-run around Congress. Congress stopped the Service from prohibiting predator control on Alaska

Refuges. The Service is now attempting to reach the same result, just more broadly—applying the same provision to all Refuges. The CRA does not allow this. Accordingly, SCI requests that the Service remove provisions relating to predator control from the draft BIDEH policy and proposed rule.

Failure to Comply with NEPA

Under NEPA, federal agencies must “take a hard look at the environmental consequences of their actions” by preparing a detailed Environmental Impact Statement “for major Federal actions significantly affecting the quality of the human environment.” *Sierra Club v. Bosworth*, 510 F.3d 1016, 1018 (9th Cir. 2007) (quoting 42 U.S.C. § 4332(C)). If unsure whether a proposed action will have significant environmental effects, an agency may first prepare an Environmental Assessment. 40 C.F.R. § 1501.3; § 1501.5. An agency may also comply with NEPA if a proposed action falls within a “categorical exclusion”: “categories of actions that do not normally have a significant effect on the human environment.” § 1501.4. To properly invoke a categorical exclusion, the agency “must supply a convincing statement of reasons why potential effects are insignificant.” *Alaska Ctr. for the Env't. v. U.S. Forest Serv.*, 189 F.3d 851, 859 (9th Cir. 1999). Additionally, the agency must analyze whether “extraordinary circumstances” exist such that “a normally excluded action may have a significant environmental effect” and require full NEPA analysis. *Id.* An agency violates NEPA if it fails to address and explain whether extraordinary circumstances are present. *See id.*; *Jones v. Gordon*, 792 F.2d 821, 828 (9th Cir. 1986).

The proposed rule determines that it “falls under the class of actions covered by the following Department of the Interior categorical exclusion: Policies, directives, regulations, and guidelines: that are of an administrative, financial, legal, technical, or procedural nature; or whose environmental effects are too broad, speculative, or conjectural to lend themselves to meaningful analysis and will later be subject to the NEPA process, either collectively or case-by-case (43 CFR 46.210(i)).” SCI vigorously disagrees.

The draft BIDEH policy and proposed rule is not administrative, financial, legal, technical, or procedural. It is intended to guide and guardrail decision-making for Refuge Managers with respect to biological integrity, diversity, and environmental health of wildlife and habitat on Refuges for the foreseeable future.

Nor are its effects too broad, speculative, or conjectural to lend themselves to meaningful analysis. The Service has selected the directions **and prohibitions** of the policy for a reason. It apparently believes that certain activities, such as predator management and agriculture on Refuges, are detrimental to BIDEH across-the-board. But the draft BIDEH policy and proposed rule spend little time analyzing these allegedly detrimental effects. Yet these management interventions are normally undertaken to protect wildlife or improve habitat, as part of advancing state wildlife management objectives. The Service should conduct a full NEPA analysis because its proposal interferes with state management activities, purports to extend federal authority off federal lands, and interferes with the federal-state distribution of authority.

The proposed rule also fails to include any mention, much less analysis, of extraordinary circumstances that would preclude application of a categorical exclusion. But the existence of extraordinary circumstances has been triggered by several factors, including the controversy surrounding the proposals and the objections of state wildlife agencies and other interested parties like SCI. *Sierra Club v. Bosworth*, 510 F.3d 1016 (9th Cir. 2007); *California ex rel. Lockyer v. USDA*, 459 F. Supp. 2d 874, 899 (N.D. Cal. 2006). SCI requests that the Service, at the very least, include this discussion in any final rule.

For these reasons, SCI objects to the Service’s failure to conduct a NEPA analysis of the draft BIDEH policy and proposed rule. SCI requests that the Service conduct this analysis and publish it for public review and comment before finalizing the draft BIDEH policy or proposed rule. Failure to do so violates NEPA.

Coordination with States

The Improvement Act recognizes that the States have the legal authority, jurisdiction, and responsibility to manage, control, and regulate resident wildlife on National Wildlife Refuges. For this reason, the Act directs the Service to align its regulations to be consistent with state wildlife laws, regulations, and management plans, as much as practicable. 16 U.S.C. § 668dd(m). SCI encourages the Service to consider revising and being more specific in describing how it will engage with state wildlife agencies in the draft BIDEH policy and proposed rule.⁵

As one example, the draft BIDEH policy and proposed rule state that the Service will “conserve fish and wildlife populations within the Refuge System to meet refuge population objectives ...” See 603 FW 3.10(C); § 29.3(c)(3). But the Service does not clarify who will set those population objectives. It should be the state wildlife authorities, consistent with state objectives and management planning. The Service’s failure to acknowledge its state partners in the proposals is concerning, to say the least, and should be rectified in any final rule.

Conclusion


For the foregoing reasons, SCI urges the Service not to adopt the draft BIDEH policy or proposed rule. These proposals as written violate the Improvement Act, APA, and NEPA. At the very least, the Service should engage in full NEPA analysis before finalizing these proposals. And the Service should make a number of significant changes, including but not limited to

⁵ The Association of Fish and Wildlife Agencies’ testimony to Congress on the draft BIDEH policy and proposed rule objects to the Service’s failure to incorporate state input. Batcheller Testimony, cited in note 1, at p. 1 (“While the Association made the most of the opportunity to engage with the Service on the review of the draft policy and rule, the vast majority of our substantive input was ignored.”). Before the Service finalizes these proposals—if it does—it should take a new opportunity to engage fully with state agencies.

striking the prohibitions on predator control and agricultural practices on Refuges and limiting its assertion of authority to federal lands.

Thank you again for the opportunity to comment. If you have any questions, please contact Regina Lennox, SCI Litigation Counsel, at litigation@safariclub.org.

Sincerely,



John McLaurin
President, Safari Club International

Predators and the Science of Wildlife Management



Chris Comer, Ph.D.
Director of Conservation
Safari Club International Foundation

Some definitions!

Predator:

An organism that consumes other animals, either living or recently killed.



Christopher E. Comer, Ph.D. Director of Conservation



Hunting vs. Control

Predator Hunting

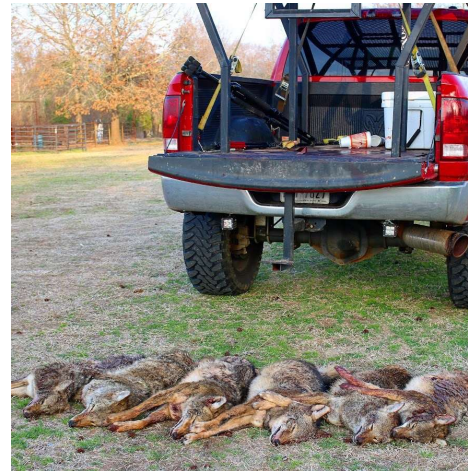
- Recreation and food purposes
- Done by the public
- Often tightly regulated for season, method, bag limit



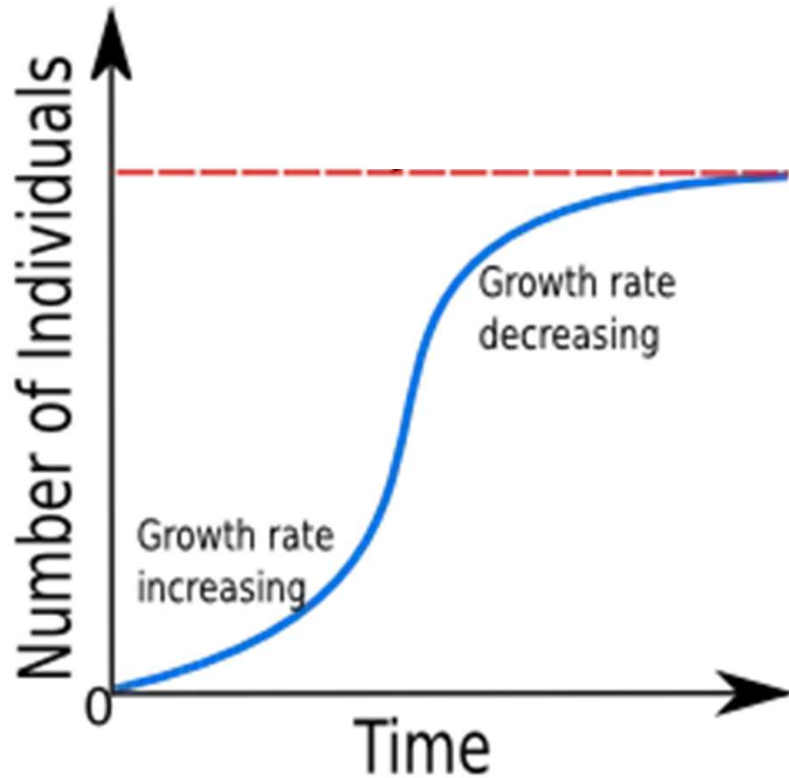
Christopher E. Comer, Ph.D. Director of Conservation

Predator Control

- Management purposes
- Done by professionals
- Typically no limits on take or method*



Carrying Capacity

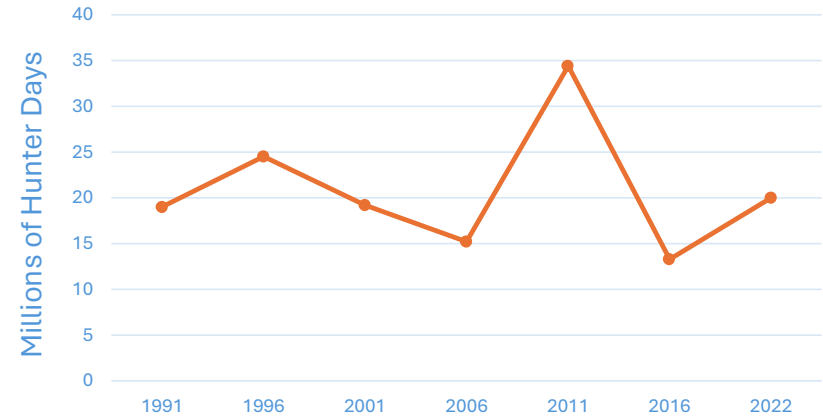


- Ecological Carrying Capacity
- Societal Carrying Capacity

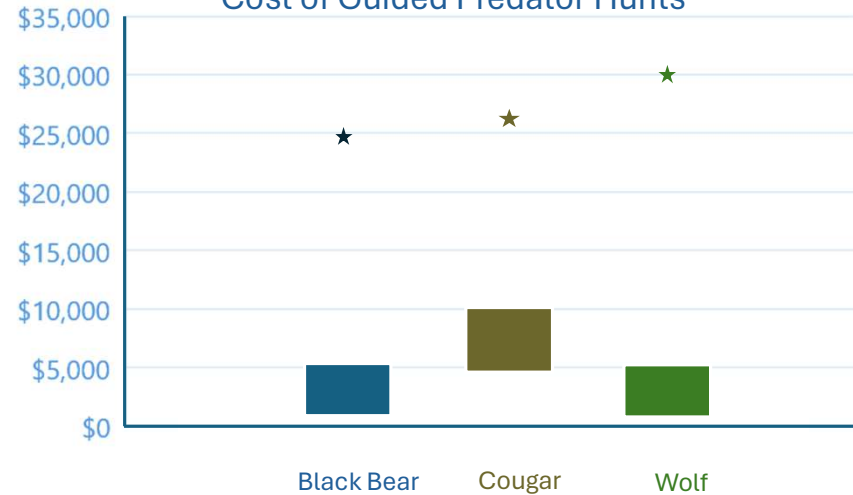
Predator Hunting

The Public Trust Doctrine:
“The greatest good for the greatest number”

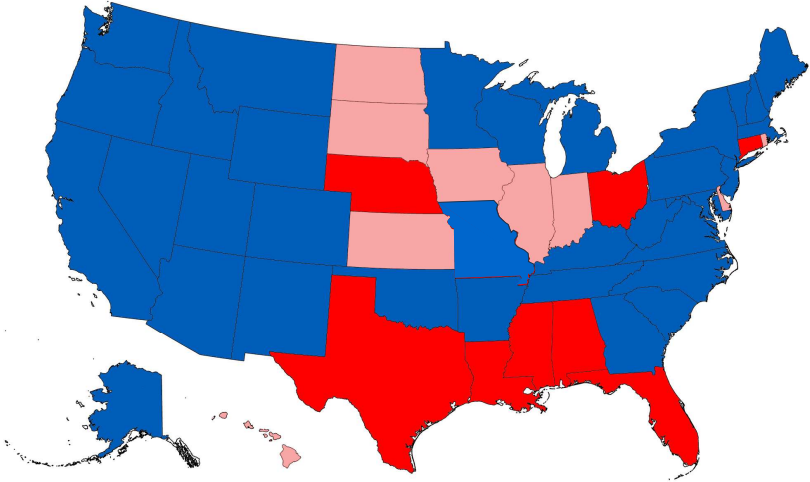
Hunting Days for "Other Animals" in millions



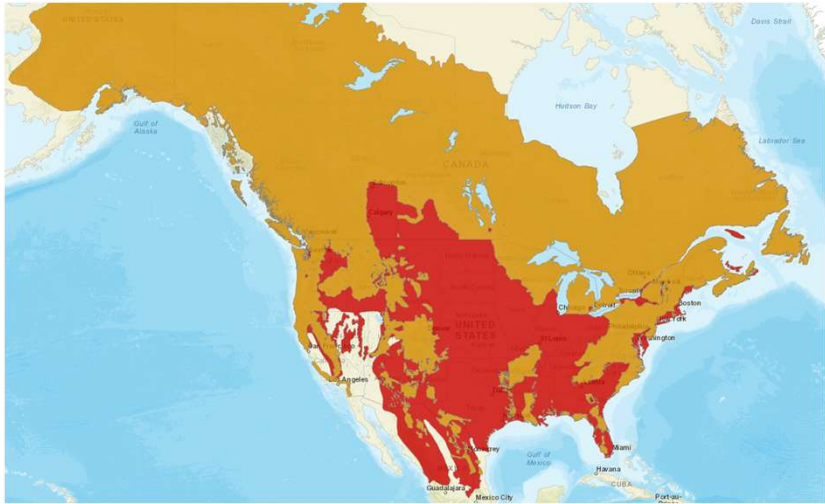
Cost of Guided Predator Hunts



Can we hunt predators sustainably?



- STATES/PROVINCES/TERRITORIES WITH SEASONS
- PROVINCES/TERRITORIES WITH SEASON AND VERY SMALL OR NONEXISTENT BEAR POPULATIONS
- STATES WITH STABLE OR GROWING BEAR POPULATIONS BUT NO SEASON
- STATES WITH NO SEASON AND VERY SMALL OR NONEXISTENT BEAR POPULATIONS



2016



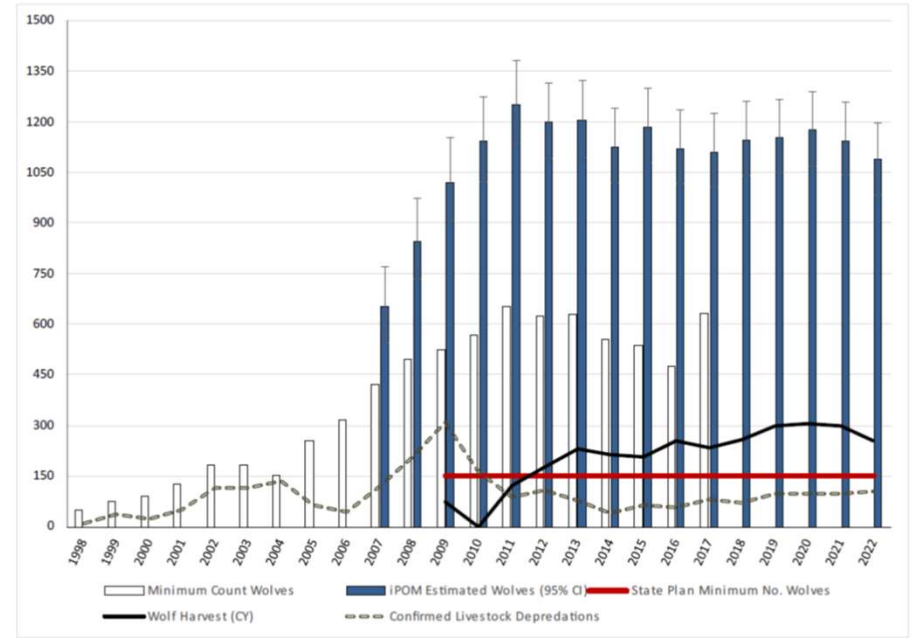
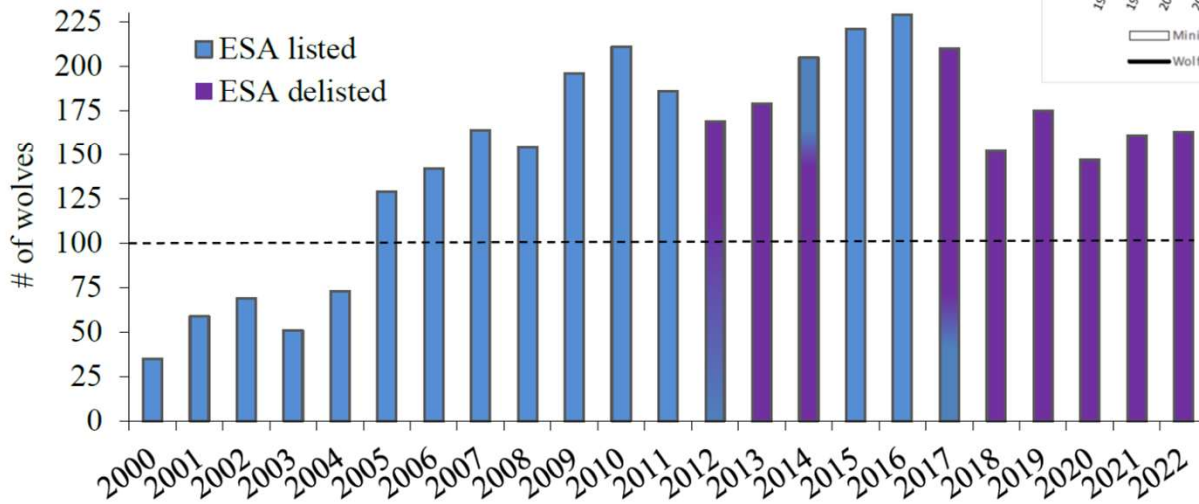
1994

Christopher E. Comer, Ph.D. Director of Conservation



Can we hunt predators sustainably?

Wyoming WTMA (wolf hunt since 2012)



Montana (wolf hunt since 2009)



Hunting as a management tool

- What is the “right” number of predators?

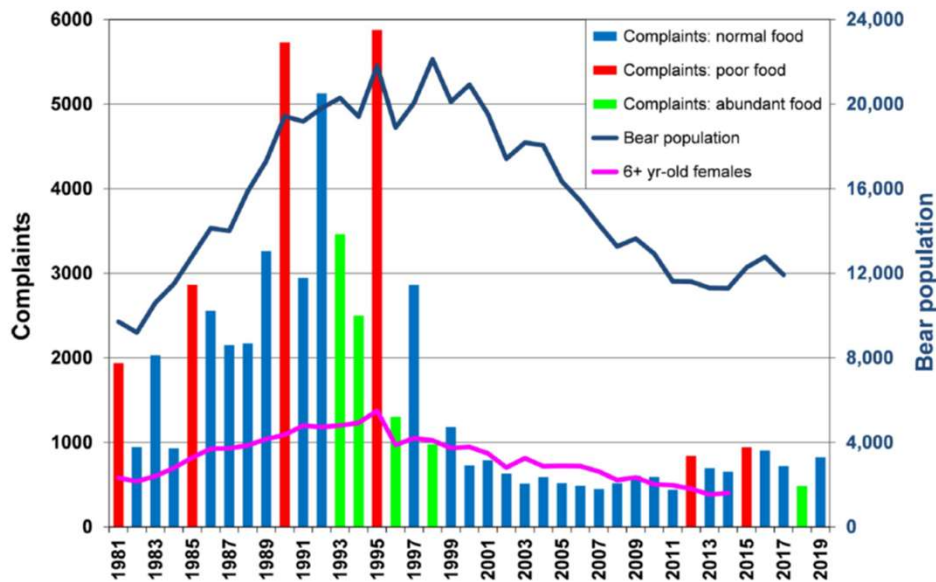


Fig. 4. Comparison of total bear complaints, population size, and yearly rating of natural foods. Bear complaints rose sharply as the population of bears rose (population estimates not available for most recent 2 years). Complaints were especially high in years when natural summer and fall foods for bears were sparse, and were low when foods were abundant. A sharp decline in complaints occurred during 1998–2000 when the MNDNR phased-in a policy against translocating bears and greatly reduced on-site visits (Fig. 1). Reduced complaints also corresponded with fewer prime-age females in the population.

Garshelis et al. 2020 (Minnesota bears)

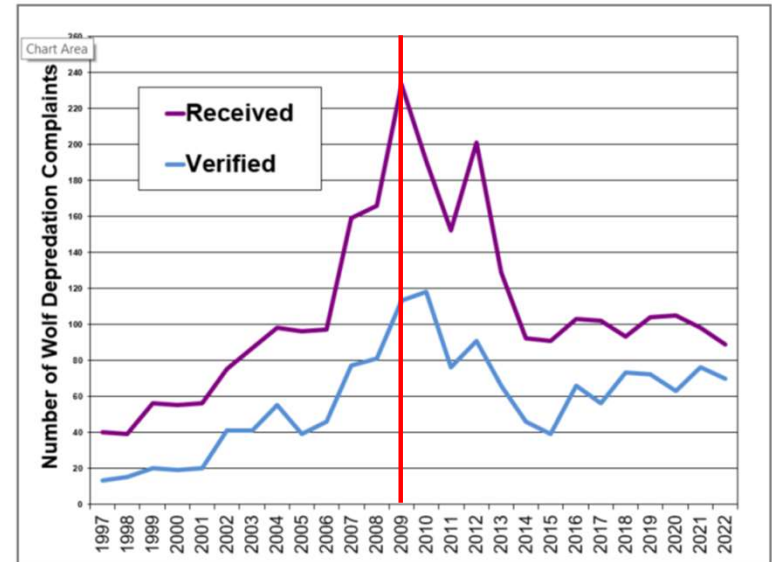
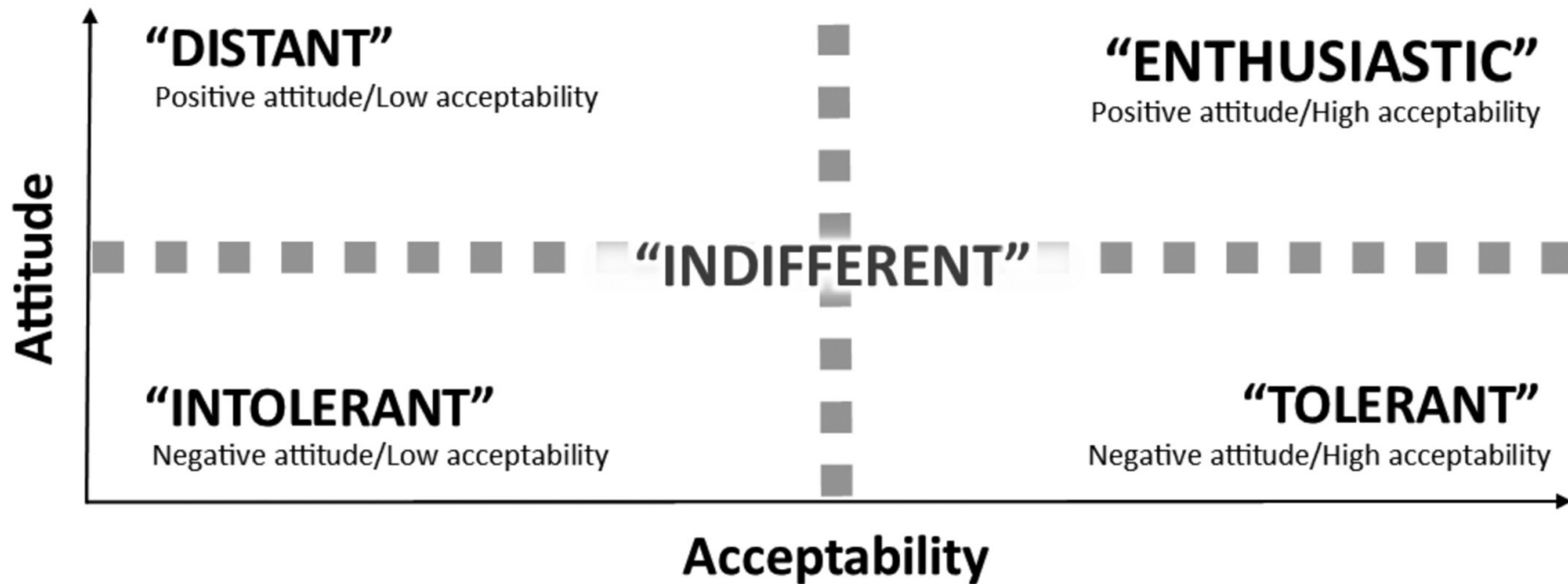


Figure 11. Number of complaints received by USDA Wildlife Services as suspected wolf damage and number of complaints verified as wolf damage, Federal Fiscal Year 1997-2022.

Montana FWP 2022 (Montana wolves)

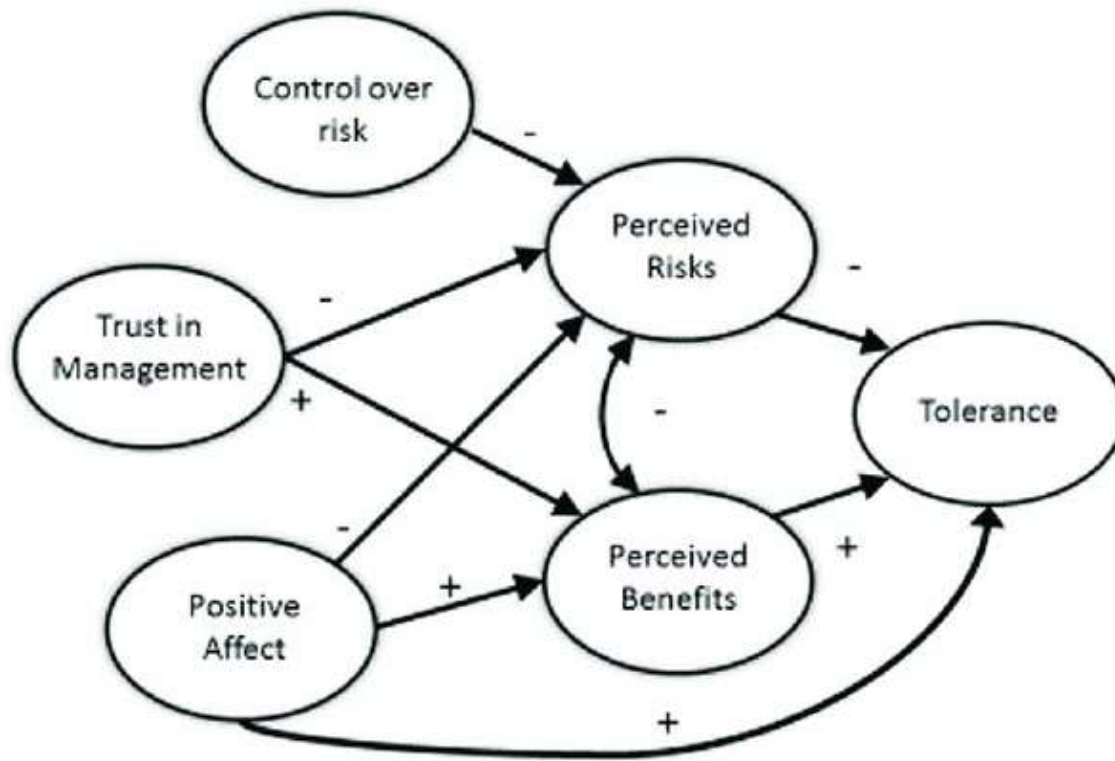


Social Tolerance



Brenner and Metcalf 2019

Hunting and Social Tolerance



Slagle et al. 2022

Christopher E. Comer, Ph.D. Director of Conservation

SOCIETY & NATURAL RESOURCES
<https://doi.org/10.1080/08941920.2022.2048152>

Routledge
Taylor & Francis Group

Check for updates

"They Need to Be Managed:" Hunters' and Ranchers' Narratives of Increased Tolerance of Wolves after a Decade of Wolf Hunting

Jill Eileen Richardson

Department of Community and Environmental Sociology, University of Wisconsin, Madison, WI, USA

ABSTRACT
How do hunters and livestock producers who report increased tolerance for wolves account for the changes in their attitudes, and how

ARTICLE HISTORY
Received 19 January 2021
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Volume 144, Issue 12, December 2011, Pages 3018-3027

Dynamics of public attitudes toward bears and the role of bear hunting in Croatia

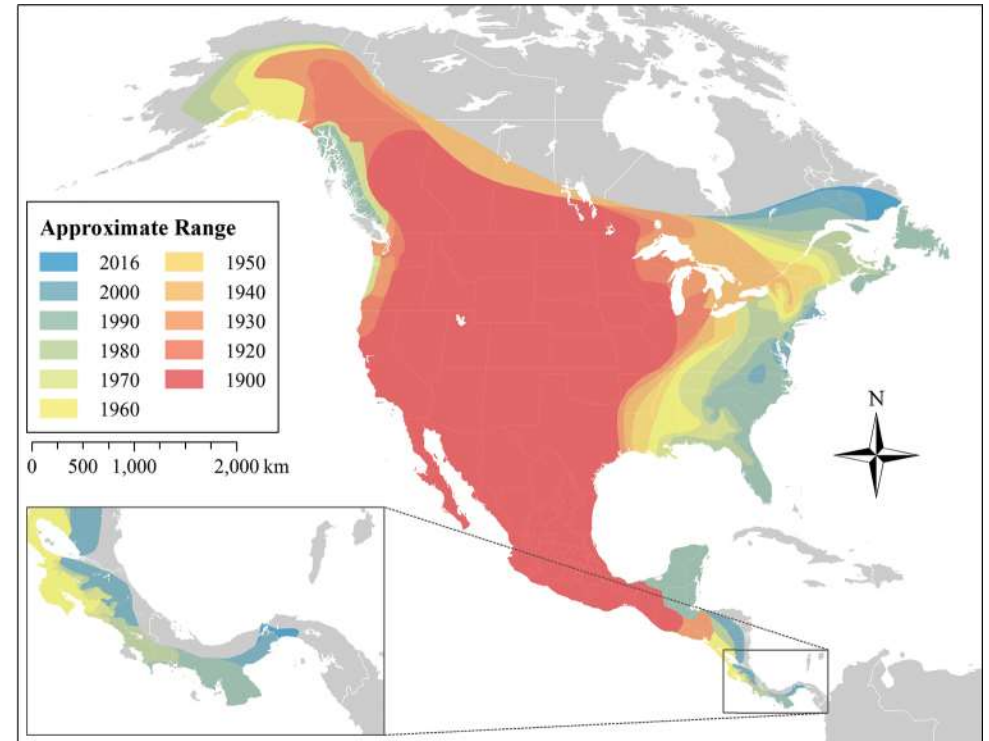
Aleksandra Majić ^{a,1} , Agnese Marino Taussig de Bodonia ^{b,1} , Duro Huber ^c , Nils Bunnefeld ^b

Show more



Predator Control

- Nothing new...
- One tool in the toolbox
- Abundant native predators
- Not applicable in every situation
- Not necessarily a long-term solution



Coyote range 1900-2016, Hodey and Kays 2018.

Sea Turtles and Raccoons (and pigs)

 Journal of Experimental Marine Biology and Ecology
Volume 395, Issues 1–2, 15 November 2010, Pages 147–152

Dramatic and immediate improvements in insular nesting success for threatened sea turtles and shorebirds following predator management

Richard M. Engeman ^a, Anthony Duffiney ^b, Sally Braem ^c, Christina Olsen ^c, Bernice Constantin ^b, Parks Small ^d, John Dunlap ^b, J.C. Griffin ^{b,1}

Raccoon Removal Reduces Sea Turtle Nest Depredation in the Ten Thousand Islands of Florida

Abjond S. Garmestani, H. Franklin Percival

Author Affiliations +

Southeastern Naturalist, 4(3):469–472 (2005). [https://doi.org/10.1656/1528-7092\(2005\)004\[0469:RRRSTNJ2.0.CO;2](https://doi.org/10.1656/1528-7092(2005)004[0469:RRRSTNJ2.0.CO;2)



Facts About Sea Turtles & Raccoons



Raccoons destroy thousands of sea turtle eggs each year and are a one of the greatest causes of sea turtle mortality on Florida's beaches. This brochure provides information on how you can help protect Florida's sea turtles.



Sea Turtle Conservancy
4424 NW 13th St, Ste B-11
Gainesville, FL 32609
352-373-6441
www.conserveturtles.org



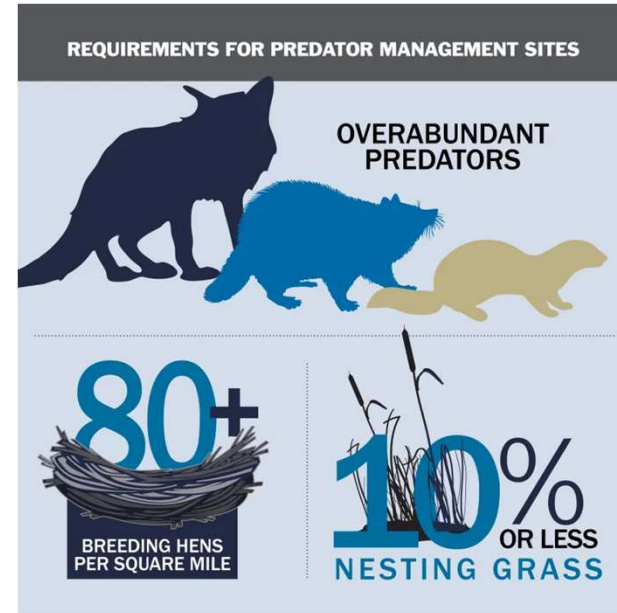
Ducks and skunks (and foxes and raccoons)

HIGH DUCK NESTING SUCCESS IN A PREDATOR-REDUCED ENVIRONMENT

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Abstract: Duck nesting and production were studied during 1969–74 on a 51-ha field of undisturbed grass-legume cover and a surrounding 8.13-km² area in north-central South Dakota. The principal mammalian predators of ducks were reduced within a 259-km² zone from May 1969 through August 1971. Dabbling duck nest densities, hatching success, and breeding populations attained high levels. Seven duck species produced 1,062 nests on the 51-ha field during 6 years; 864 (81%) hatched, 146 (14%) were destroyed, and 52 (5%) had other fates. During 1970–72, when predator reduction was most effective, the hatching success for 756 nests was 94%. The number of mallard (*Anas platyrhynchos*) nests increased from 37 (0.7/ha) in 1969 to 181 (3.5/ha) in 1972. Mallard pairs increased from 2.8/km² to 16.8/km² on the 8.13-km² area during the same period. A minimum of 7,250 ducklings hatched on the 51-ha field during the 6 years, including 2,342 ducklings in 1972. Exceptionally high duck nesting densities and hatching rates occurred when predators were controlled.

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Woodland caribou and wolves

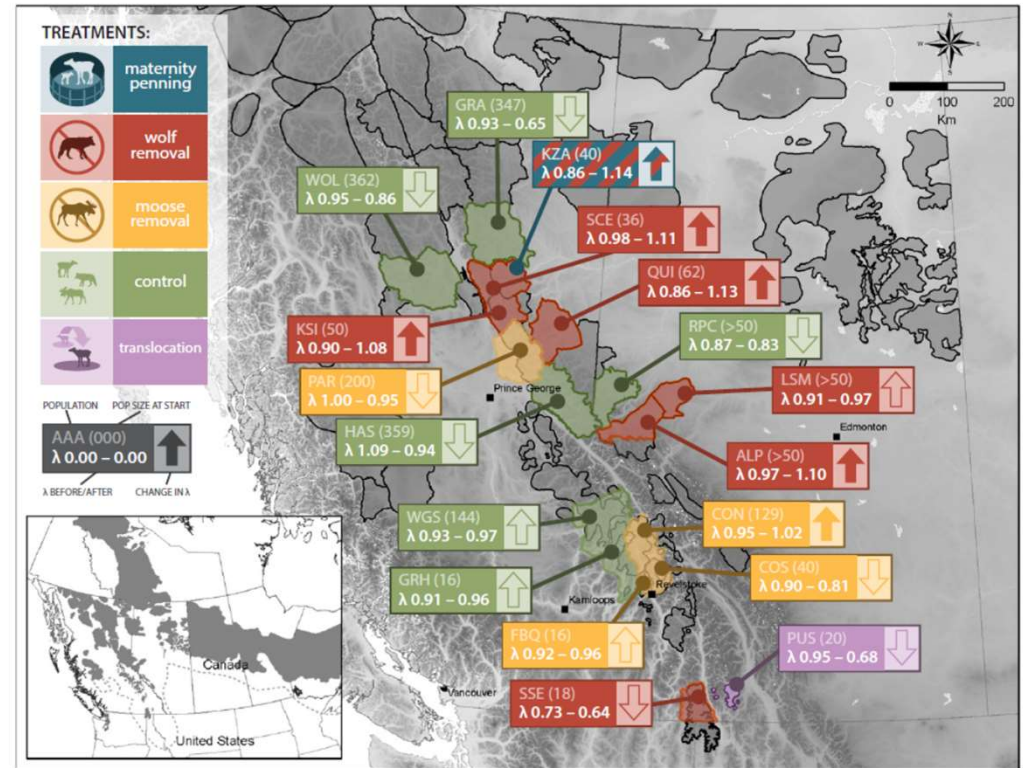
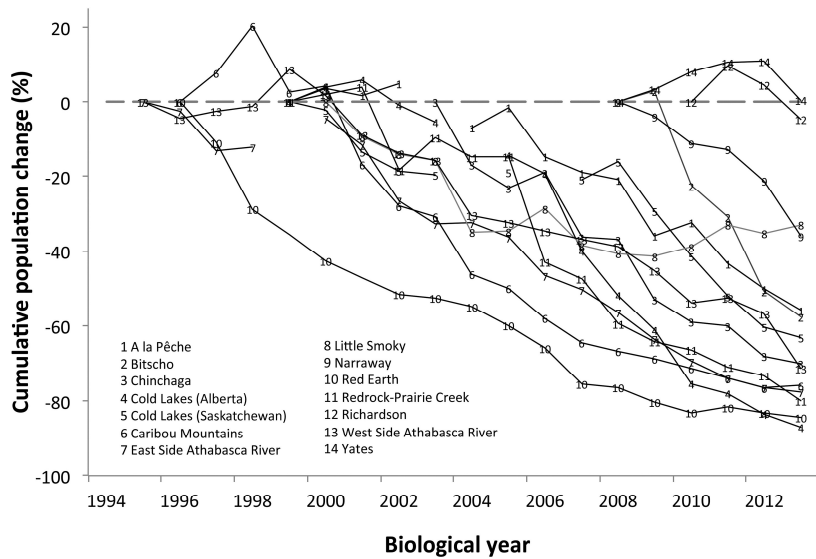


Fig. 2. Population growth rates (λ ; $\lambda = 1$ = stability) before and after treatments were initiated, with controls matched by a similar time period (SI Appendix, Table S1). Solid arrows indicate $\lambda > 1$. Population values apply to the beginning of treatment. Black outlines show woodland caribou range boundaries. (Inset) current (gray) and historic (dashed line) distribution in the contiguous United States and Canada. ALP, A la Pêche; CON, Columbia North; COS, Columbia South; FBQ, Frisby Quest; GRA, Graham; GRH, Groundhog; HAS, Hart South; KSI, Kennedy Siding; KZA, Klinse-Za; LSM, Little Smoky; PAR, Parsnip; PUS, Purcells South; QUI, Quintette; RPC, Redrock-Prairie Creek; SCE, Scott East; SSE, South Selkirks; WGS, Wells Gray South; WOL, Wolverine.

Take Homes

Predator Hunting

- Appropriate use of a valuable resource.
- Can be done sustainably and scientifically.
- Issues of societal carrying capacity.
- Likely to promote social tolerance.

Predator Control

- Important in management of rare and endangered species.
- Must be done deliberately and as part of an integrated management plan.
- Why remove a useful tool from the toolbox?

Thank You!



Questions?

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