Categorical Exclusion Documentation Form (CE Form)

Project: Assessing the Effects of Traffic (and No Traffic) on the Behavior and Viewability of Grizzly Bears (2023-2026)
PEPC Project Number: 109149
Description of Action (Project Description):

Purpose of Study: The current road closure west of the Pretty Rocks Landslide presents an opportunity to assess grizzly bears' response to traffic by deploying a before-after-impact (i.e., BACI) study to assess changes in bear movement and habitat use along a 45-mile segment of the Denali Park Road. As of February 2023, a contract to construct a bridge has been awarded and the road is anticipated to open to traffic by 2025. The multi-year closure of the western half of the park road provides an opportunity to study the effects of high traffic volume on grizzly bears, using the same bears in the same area and thus controlling for major confounding effects. The non-traffic "control" period in 2023-24 will be compared to the impact or "treatment" period when high traffic levels resume in 2025-26.

The conservation of, and opportunities to view wildlife were reasons for the creation of Mount McKinley NP in 1916, and for its expansion in 1980. In 1972, park managers restricted private vehicles traffic along the park road to preserve wildlife viewing opportunities during surging visitation. Today Denali's visitors expect to view wildlife from buses; however, despite a history of studying the relationship between traffic and wildlife, park managers know little about how traffic affects wildlife viewing opportunities, behavior or habitat use due to the lack of a no-traffic period for comparison.

The objective of this management-oriented study is to:

1. Determine whether the natural movement, use of space, and patterns of habitat selection of grizzly bears are disrupted or change due to vehicle traffic on the park road. through:

- A quantitative analysis of spatial and temporal movements of grizzly bears using GPS collars and

- An assessment of daily and seasonal movements of grizzly bears in relation to road traffic on the Denali Park Road.

Background: In 2006, to examine potential impacts of Park Road traffic on wildlife movements and distribution, researchers deployed GPS collars on 20 Dall's sheep and 20 grizzly bears within the road corridor. Location information and movement paths of collared animals were modeled with habitat and traffic data to determine possible relationships between vehicles on the Park Road and wildlife behavior. The Denali Vehicle Management Plan (2012) used information from the 2006 wildlife study along with other data to identify a vehicle management alternative that would benefit wildlife and wildlife habitat from actions such as comprehensive monitoring programs and adaptive management measures (e.g., use of indicators and standards and a BACI study) and reductions in private vehicle use. The 2023-2026 study will enhance the 2006 study to further check and refine traffic model assumptions and inform future vehicle management measures. See the park webpage for more information about the 2006 and earlier studies: https://www.nps.gov/dena/learn/nature/denali-park-road-capacity-study.htm

The study will be focused on bear behavior and movement along the Denali Park Road Corridor. Ideally, there will be two years of the study with no traffic on the west end of the park (mile 42-77) and there will be 2 years of the study with traffic west of mile 42 once the bridge over the landslide is completed. There will also be an eastern study area in the portion of the road open to traffic (mile 32-42) that can also serve as a comparison area for bear behavior in the presence of traffic under similar environmental conditions.

Methods We will collect the following data for this study: ground-based behavioral observations, GPS collar movement data, and data on the phenology of common bear forage types.

Proposed capture and associated road closure dates for the bear study in 2023 are May 15-19 for the eastern study area including backcountry unit 29 (west of the Teklanika River), 31, 31, 6 (west of the Teklanika River), 7, and 8. Capture operations will occur during the beginning of the closure (May 15-16) with additional days of road closure to allow for sedated bears to recover. From June 5-9, all areas west of Polychrome will be closed to hikers, including backcountry units 8,9,10,11,12,13,14,18,19,31,32,33,34,35,36. Capture will occur June 5-6 (updated dates) with additional days of closure to allow for recovery of sedated bears.

The capture and collaring will be replicated in year 3 of the study to a) replace collars on existing bears that remained in the study area and b) add additional collars to replace any bears that died while in the sample or moved outside of the study area. Additional capture dates and dates of closure will be finalized in early FY 25.

At the end of the study in September of year 4, radio collars remaining on study bears will automatically release from the bears and be retrieved by hiking into locations or by helicopter if locations are too far to access from the park road.

During the study duration (years 1-4), fixed-wing radio-tracking flights will occur monthly (April - Oct) 2023-2026 and will co-occur with ongoing wolf tracking flights.

Summary of proposed field methods and activities: 1. Grizzly bears will be captured by aerial methods and instrumented with satellite tracking collars. Biological samples will be collected at the time of capture (hair, skin plugs, blood). Biological measurements will also be made at the time of capture.

2. Scat and hair samples will be collected throughout the study using non-invasive and opportunistic methods.

3. Remote cameras could be deployed along the park road and adjacent trails.

4. Field observations of grizzly bear behavior will be conducted along the park road

5. Plant phenology and berry abundance index data collection along roadside bear habitat

Location: Capture activities will occur within 10 miles of the park road. Hair, scat, and photograph collection will occur within 100 feet of the park road.

Access Method: Access for capture activities will occur via both fixed-wing and rotor-wing aircraft. Access methods for other research activities will include, flying from INR to Kantishna. Driving the park road in GOV vehicles and hiking on the park road.

Collect Specimen: No

Project Locations:

Location

County: Denali Borough **State:** AK

Mitigation(s):

- Ensure that this project is communicated to affected staff and visitors.
- Affected backcountry units should be closed to overnight use during and immediately following capture operations for visitor safety.
- When possible and safe, helicopter landings for breaks to relieve the capture crew should be conducted in the Frontcountry Developed Area (non-wilderness areas of the Old Park, including the Park Road when it is closed.)

- Number and location (GPS waypoints) of helicopter landings and number of new ear tags and collars will be reported to the Wilderness Coordinator on an annual basis.

CE Citation: 3.3.E.5 Nondestructive data collection, inventory (including field, aerial, and satellite surveying and mapping), study, research, and monitoring activities.

CE Justification:

Wildlife capture activities will follow established protocols for human and wildlife safety. Geo-collars will be removed or released following the study.

Decision: I find that the action fits within the categorical exclusion above. Therefore, I am categorically excluding the described project from further NEPA analysis. No extraordinary circumstances apply.

Signature

Superintendent: Signature on File **Date:** 4/19/2023

Brooke Merrell

Extraordinary Circumstances:

If implemented, would the proposal...	Yes/No	Explanation
A. Have significant impacts on public health or safety?	No	No, capture and monitoring activities are designed to minimize risks to researchers, pilots, and visitors, including the use of standard bear capture protocols and experienced staff, experienced pilots (helo and fixed wing).
B. Have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation, or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (Executive Order 11990); floodplains (Executive Order 11988); national monuments; migratory birds; and other ecologically significant or critical areas?	No	Knowledge gained through this research can assist the park in furthering wildlife populations protections in areas adjacent to the Park Road.
C. Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources (NEPA section 102(2)(E))?	No	
D. Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks?	No	See response to A.
E. Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects?	No	Information gained may provide data and results that will inform future management decision regarding vehicle use of the Denali Park Road.
F. Have a direct relationship to other actions with individually insignificant, but cumulatively significant, environmental effects?	No	
G. Have significant impacts on properties listed or eligible for listing on the National Register of Historic Places, as determined by either the bureau or office?	No	
H. Have significant impacts on species listed or proposed to be listed on the List of Endangered or Threatened Species, or have significant impacts on designated Critical Habitat for these species?	No	
I. Violate a federal, state, local or tribal law or requirement imposed for the protection of the environment?	No	Activities proposed can be approved by the Superintendent in support of resource protection.
J. Have a disproportionately high and adverse effect on low income or minority populations (EO 12898)?	No	
K. Limit access to and ceremonial use of Indian sacred sites on federal lands by Indian religious practitioners or adversely affect the physical integrity of such sacred sites (EO 130007)?	No	Field work is temporary in nature and no long-term monuments requested on known sacred sites.
L. Contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and Executive Order 13112)?	No	