

Draft Protocol for Creating “May be Present” Maps for Grizzly Bears

Objective:

Standardize the procedure for creating “may be present” and “area of influence” maps for grizzly bears in Idaho, Montana, Washington, and Wyoming.

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Introduction:

The primary challenges to grizzly bear conservation are human-caused mortalities and availability of suitable, secure grizzly bear habitat. To address these challenges, management direction regarding grizzly bear education programs, motorized access, livestock grazing, recreation site development, food storage, and other activities should be considered. However knowing when to consider grizzly bear conservation as a priority depends upon whether grizzly bears may be present in an area.

Background:

The Endangered Species Act (ESA) requires that any agency proposing an action must request from the Service “whether any species which is listed or proposed to be listed may be present in the area of such proposed action.” 16 U.S.C. § 1536(c)(1). “Once an agency is aware that an endangered species may be present in the area of its proposed action, the ESA requires it to prepare a biological assessment...” *Thomas v. Peterson* 753 F. 2d 754, 763 (9th Cir. 1985).

Recently agencies have had cases remanded to the Federal agencies because species that may have been present in the area of a proposed action, were not evaluated under section 7 of the ESA. For example, the Service “did not include lynx on the “may be present” list for a recent project on the grounds that the Forest is not “occupied” by lynx” (*Native Ecosystems Council et al. v. Krueger et al.*, CV 9:12-cv-00027-DLC, Dist. of Mont. 2013). The court however, opined that “the “may be present” standard is...much broader than the Wildlife Service’s requirement that a forest “be occupied” by the species.” Further, “both agencies recognize that lynx may “occur,” travel through, or forage in “unoccupied” areas, and that management actions in unoccupied areas may affect those transient lynx as well as any lynx attempting to establish new home areas.” The court also opined that “As with the lynx, it is not necessary that grizzly bears occupy an area to satisfy the “low threshold” for consultation.” Grizzly bears “may be present” if “transitory bears might move through the project area.”

The intent of the “may be present” map¹ is to identify locations where project proponents should consider whether grizzly bears “may be present” when evaluating the potential impacts of a project, and to encourage action agencies to work with the U.S. Fish and Wildlife Service (Service) on best management practices that may be implemented as part of a proposed action to minimize or eliminate effects to grizzly bears if present. Action agencies can request ‘species lists’ for specific projects, which are created by the Service using any available information and professional judgement. Action agencies can also download species lists on some Service websites (i.e., IPaC program) where species lists are

¹ For the purpose of grizzly bears, the “may be present” map is the same as the species may occur list and the “area of influence” map in the Information for Planning and Consultation (IPaC) program. For the purposes of this protocol we are going to use the term “may be present.”

provided electronically. Species lists are likely to be spatially over inclusive in that they may identify areas with very low likelihood of bears being present.

While the “may be present” map is intended to identify areas where grizzly bears “may be present,” we recognize there is potential for a grizzly bear to occur outside a “may be present” map. There is a remote possibility that project implementation outside the “may be present” map could coincide temporarily with a transient bear moving through the project area; this type of event may not be predictable, but will trigger the evaluation process of whether modifications to the “may be present” map are necessary. The Service will evaluate the need to update the “may be present” map for each state no less than annually using the best available scientific information.

In order to address this issue going forward this document clarifies the agencies protocol for determining when grizzly bears “may be present” in identified landscapes. The Service does not have a standard protocol for creating “may be present” maps for each listed species. Because grizzly bears have a large home range, are solitary and not easily detectable, occur across several western states, and are expanding on the landscape, we felt a standardized protocol, consistent with ESA legal requirements, would provide more clarity and consistency for action agencies to utilize when evaluating potential project impacts.

Procedure:

1. The state ES offices will work with the Grizzly Bear Recovery Program (GBRP) as needed but at least once a year to evaluate the “may be present” map, current distributions², and verified outlier data to update the “may be present” map if necessary. The GBRP will gather current distributions, as updated biennially, from our partner agencies (IGBST, MFWP, USFS, IDFG, etc.) and will maintain an outlier database for the most recent 15 years³. Outlier data will include verified sightings, mortalities, and conflicts.
2. All sighting data provided will be reviewed for credibility by the GBRP, other Federal, State, and/or Tribal bear biologists. Only those data deemed credible (thus verified), will be included in the mapping process. Credibility will be judged by a rating system (see Appendix 1; Kasworm *et al.* 2018) or other similar techniques. The scoring system will differentiate among sightings with supportive evidence (track measurements with photos, photos of a bear, mortality, or other physical evidence and a credible location) which will be rated higher than observations without this type of substantive supporting evidence. The database will also include “possible” sightings, which may include photos that are not definitive; however, these “possible” sightings will be considered anecdotal evidence until such later time they are verified. Anecdotal evidence will not be used to determine the “may be present” line.
3. Because grizzly bears have large annual home ranges (annual home ranges vary from 27–242 km² (10–93 mi²) for adult females and from 78–2,115 km² (30–816 mi²) for adult males), boundaries for

² Current distributions or occupied range calculated for grizzly bear populations do not include low-density peripheral locations and represent a minimum known area of occupancy, not extent of occurrence (Bjornlie et al. 2014).

³ We chose to use a 15 year moving window of data because grizzly bears are a long-lived species and due to small sample size, annual data from observations and radio-collaring efforts cannot accurately represent the extent of distribution or occurrence.

areas included in the “may be present” map will approximate species biological requirements and be easily defined. Examples of such boundaries may be major highways, rivers, watersheds, or public land administrative units.

For example, sixth-level hydrologic unit code (HUC) subwatersheds are on average 40–162 km² (15–63 mi²). Fifth-level HUCs watersheds are on average 162–1,010 km² (63–390 mi²). The sixth and fifth-level HUCs are the approximate size of annual home ranges depending on the ecosystem wherein the grizzly bear resides. Grizzly bear home range size is affected by resource availability, sex, age, and reproductive status. Within an ecosystem, resource availability is influenced by the density of the grizzly bear population and habitat productivity. Annual home ranges encompass all of an individual’s seasonal habitat needs.

4. Numbers or quality of sightings required to add an area to the “may be present” map require a qualitative assessment using professional judgement and review by expert Service and State and/or Tribal bear biologists. Repeated credible sightings within the past 15-year window will likely be sufficient to add an area to the map. Conversely, patterns, movements, and/or expansion of the overall population may lead to additions to a “may be present” map within the same year of a newly verified occurrence if use of an area is expected to continue (e.g., female with cubs) into the future. A single sighting of a bear over a multi-year period may not be sufficient to cause that area to be added to a “may be present” map. Even a bear that is radio-collared may or may not be added to a “may be present” map, depending on the history of the animal; these considerations will include such things as management relocations of bears and what effect that might have on the behavior of the animal. However, telemetry data that exhibits prolonged uses of an area (such as a month or more) will be viewed as evidence to include an area in the “may be present” map. For example, sightings involving subadult bears may be indicative of dispersing animals that have not adopted a fixed pattern of use, while sightings of adults or females with young that may have a more fixed pattern of use will be given greater weight in the judgement process. Either scenario, however, may result in additions to the “may be present” map.

Factors for consideration of including an area as a location where grizzly bear “may be present”:

- Female presence⁴ – (special consideration will be given based on professional judgement if the individual was relocated as a management action)
 - Are there young present? DNA or other sex confirmation?
- Males or individuals of unknown sex – considerations:
 - Radio telemetry showing use of an area: single or multiple years, seasonal range or dispersal movement, duration, additional verified or possible sightings in the area in the past 15 years
 - Multiple verified or possible sightings over the last 15 years⁵? Scope of those sightings?

⁴ Young, female grizzly bears typically establish home ranges within or overlapping their mother’s (Waser and Jones 1983; Schwartz et al. 2003). Radio-telemetry and genetic data suggest females establish home ranges an average of 9.8 to 14.3 km (6.1 to 8.9 mi) away from the center of their mother’s home range, whereas males generally disperse farther, establishing home ranges roughly 29.9 to 42.0 km (18.6 to 26.0 mi) away from the center of their mother’s (McLellan and Hovey 2001; Proctor et al. 2004).

⁵ Changes to the “may be present” map could occur after a single year of information if applicable but changes may include data including up to 15 years of data to incorporate the history of the area.

- DNA?
- Known grizzly bear den sites?

Appendix 1. Grizzly Bear Sighting Rating System (Kasworm *et al.* 2018)

Sightings of grizzly bears are rated 1–5 with 5 being the best quality and 1 being the poorest. General definitions of categories are present below, but it is difficult to describe all circumstances under which sightings are reported. Only sightings receiving ratings of 4 or 5 are judged as credible. Sightings receiving a rating of 3 may be recorded in the database as “possible” and sightings that rate 1 or 2 will not be recorded in the database.

5 – Highest quality reports typically from study personnel or highly qualified observers. Sightings not obtained by highly qualified observers must have physical evidence such as pictures, track measurements, hair, or sightings of marked bears where marks are accurately described.

4 – Good quality reports that provide credible, convincing descriptions of grizzly bears or their sign. Typically, these reports include a physical description of the animal mentioning several characteristics. Observer had sufficient time and was close enough or had binoculars to aid in identification. Observer demonstrates sufficient knowledge of characteristics to be regarded as a credible observer. Background or experience of observer may influence credibility.

3 – Moderate quality reports that do not provide convincing descriptions of grizzly bears. Reports may mention 1 or 2 characteristics, but the observer does not demonstrate sufficient knowledge of characteristics to make a reliable identification. Observers may have gotten a quick glimpse of the bear or been too far away for a good quality observation.

2 – Lower quality observations that provide little description of the bear other than the observer’s judgement that it was a grizzly bear.

1 – Lowest quality observations of animals that may not have been grizzly bears. This category may also involve second hand reports from someone other than the observer.