September 16, 2020

Comments

By: David J. Mattson, Ph.D.

Regarding: South Plateau Area Landscape Treatment (SPLAT) Project Draft Environmental Assessment Custer Gallatin National Forest, Hebgen Lake Ranger District, August 2020

What follows are my comments on the SPLAT Project Draft Environmental Assessment pertaining to adequacy of analysis, prospective project impacts, and desired management direction with specific reference to grizzly bears. Please give these comments due regard.

1. The SPLAT project analysis and proposed action is deficient in addressing habitat security for grizzly bears.

1a. Even though the project is operating under a USFWS Incidental Take Statement, this does not obviate the fact that the affected BMU Subunits are deficient in overall security as reckoned by distance-from-road criteria. Compliance does not equate to sufficient protection of real grizzly bears from real harm.

1b. Related to point 1a, The SPLAT analysis does not seriously address the fact that the2006 Gallatin National Forest Travel Plan established an aspirational goal of substantially improving habitat security for grizzly bears in BMU Subunits affected by the project rather than simply maintaining the status quo, which is the essential outcome of proposed project action.

1c. Of further relevance to point 1a, the SPLAT project encompasses an area that has been consistently identified as a population sink for Yellowstone grizzly bears (Merrill & Mattson 2003, Johnson et al. 2004, U.S. Forest Service 2006, Schwartz et al. 2010). This simple fact creates an imperative for the Forest Service to remedy this sink condition rather than excuse the perpetuation of a lethal situation by invocation of an Incidental Take Statement issued under duress.

1d. The SPLAT analysis conflates habitat recovery criteria with the ESA-mandated need for on-the-ground protections. Recovery criteria are merely a basis for judging whether habitat conditions on the ground are putatively sufficient to support a recovered grizzly bear population. This is not synonymous with whether project actions will harm grizzly bears or not.

1e. The size of security areas used in the SPLAT analysis to assess overall BMU Subunit security for grizzly bears is far too small and does not comport with any scientific evidence (e.g., Mattson 1993, Gibeau et al. 2001). Because of this, the SPLAT analysis substantially over-estimates habitat security for grizzly bears in the affected area.

1f. The SPLAT analysis does not adequately address the ways in which project activities will perpetuate, accentuate, or facilitate well-documented impacts of people on grizzly bears attributable to varying levels of traffic on forest roads (Mace et al. 1999; Chruszoz et al. 2003;

Martin et al. 2010; Ordiz et al. 2014, 2016; Northrup et al. 2012; Roever et al. 2010; Ladle et al. 2019; Van der Marel et al. 2020) or to non-motorized human activities, many of which occur off-road (Mattson 2019, Naidoo & Burton 2020). The analysis thus under-estimates project impacts on grizzly bears.

1g. Of relevance to point 1f, the SPLAT analysis fails to address the emerging impacts of burgeoning mountain biking in the region and on the Gallatin National Forest. Mountain biking has the potential to impact grizzly bears far more than any other non-motorized human activities (Mattson 2019, Naidoo & Burton 2020) and has not been meaningfully addressed in any U.S. Forest Service or U.S. Fish & Wildlife Service planning or decision documents to date.

1h. The SPLAT analysis fails to adequately consider or address the actual reasons why grizzly bears die, not only in the affected area, but also in comparable landscapes. At best, these factors are merely addressed in passing.

1i. The SPLAT analysis fails to consider the isolating and fragmenting effects of Highway 20 on grizzly bear movements and, because of that, both the capacity of grizzly bears to adjust to project-related human activities and thereby the magnitude of impacts. Of particular relevance to this point, traffic on Highway 20 near the project area substantially exceeds to summer-times totals on US-2 (Montana Department of Transportation, Traffic Data-Reports), where near complete blockage of daytime grizzly bear movements was documented by Waller & Servheen (2005).

1j. Statements in the SPLAT analysis claiming that grizzly bears will somehow be able to accommodate all proposed project activities and residual impacts within the bounds of security-deficient semi-isolated Subunits, without incurring any harm, are little more than assertions. Moreover, rather than being precautionary, these assertions are used to justify project actions that accentuate rather than ameliorate risks to grizzly bears.

2. The SPLAT project analysis and proposed action is deficient in assessing and addressing nearer-term impacts on grizzly bear foods and habitats.

2a. The SPLAT analysis fails to consider a substantial amount of scientific research directly relevant to grizzly bear use of lodgepole pine forests and the foods therein (e.g., Mattson & Knight 1991; Mattson 1997a, 2000; Mattson et al. 2004). The analysis instead substitutes vague generalizations and unsubstantiated assertions about the importance and/or bear use of lodgepole pine forests and aspen and riparian habitats for a deliberative consideration of the best available science.

2b. The SPLAT analysis also fails to consider a substantial amount of grizzly bear-specific research that was conducted near the project area (e.g., Blanchard 1978, Schleyer 1983, Harting 1985, Podruzny 2012). This research provides ample information on diets, behaviors, and habitat selection of grizzly bears in habitats nearly identical to those encompassed by the project area.

2c. As a consequence, the SPLAT analysis fails to consider the sorts of conditions in lodgepole pine-dominated forests that produce foods most often used by grizzly bears in these austere

environments: specifically ants; wasps and bees; and mushrooms and other fungal sporocarps (e.g., Mattson 2000, 2001, 2002; Mattson et al. 2002, 2004). Nor does the SPLAT analysis explicitly consider the sorts of conditions associated with grizzly bear exploitation of elk and bison in environments typical of the SPLAT project area, whether by scavenging or predation (Schleyer 1983, Green et al. 1997, Mattson 1997b).

2d. Although aspen and riparian communities are plausibly important to grizzly bears in the SPLAT project area (see Mattson 1984), the SPLAT analysis offers no scientific substantiation for this assertion or for the assertion that project activities will result in a meaningful increase in either use of aspen community types by grizzly bears or production of bear foods.

2e. Despite making passing reference to the fact that bear foods differ in quality, the SPLAT analysis goes on to make numerous potentially contradictory statements suggesting that grizzly bears are, in effect, indifferent to the abundance and quality of foods presumably because they exhibit "dietary plasticity," and eat "more than two hundred different foods." Ample research has shown that bear foods do, in fact, differ in quality by orders of magnitude (Mattson et al. 2004), and that grizzly bears are, in fact, highly attuned to the comparative abundance and quality of foods (e.g., Mattson 2000; Mattson et al. 2004; Apps et al. 2004, 2016; Nielsen et al. 2010; Proctor et al. 2017; Lamb et al. 2017). Grizzly bears are also not Latin taxonomists that differentiate foods on the basis of Latin nomenclature.

2f. The SPLAT analysis consistently overstates the potential importance of herbaceous grazed foods in extolling the virtues of proposed project actions. Herbaceous foods are minimally digested by grizzly bears and rarely of significant nutritional and energetic consequence in environments such as those encompassed by the SPLAT project area (Mattson et al. 2004).

2g. On a minor note, the SPLAT analysis claims that snowberries are a bear food. This not true, except as a consequence of accidental consumption.

3. The SPLAT project analysis and proposed action is deficient in assessing and addressing cumulative effects of climate change and human activity on grizzly bear foods, habitats, and habitat security.

3a. The SPLAT analysis of cumulative effects fails to consider almost certain future increases in human activity in and near the project area arising from a continued influx of new residents to the region as well as continued increases in visitation to regional National Forests and National Parks.

3b. On a related note, the analysis of cumulative effects fails to consider impacts that historical increases and other changes in human activity on and near project-area roads have had on grizzly bear habitat security (see point 1f, above; U.S. Census Bureau: County Population Totals 2010-2019; Gunther 2019; Wilmot 2019).

3c. Of similar relevance, the SPLAT analysis of cumulative effects fails to consider how past and proposed activities in the project area will likely affect exposure of grizzly bears to the hazards posed by high-speed high-volume traffic on Highway 20 on the north boundary of the project area.

These effects are likely to be indirect, in the form of temporary or permanent displacement of bears towards the highway, or even attraction to the highway vicinity through modifications of vegetation attractiveness.

3d. The SPLAT analysis fails almost completely to address the prospective impacts of climate change on vegetation and, through that, on grizzly bear foods and habitats. For one, wildfire will become either or both much more extensive and frequent, with substantial induced changes in forest composition and cover. Climate change will also deleteriously affect summer forage conditions for elk and bison, with potentially substantial effects on distributions and even numbers of both species in the region. Climate change will continue to collapse the climate envelope and other favorable environmental conditions for whitebark pine, which the likelihood of altogether negating proposed treatments to favor or restore whitebark pine in the project area. At face value, SPLAT project actions may amplify rather than mitigate longer-term effects of climate change. At the very least, climate change will likely negate any of the benefits claimed for grizzly bears by project actions. (The literature covering these topics is so extensive that my space here prevents presenting in a minimal listing of relevant publications).

4. Recommendations

4a. The SPLAT analysis should recalculate habitat security using security areas of a defensible size, ideally >2000 acres sequestered by 500 m from the nearest open road.

4b. SPLAT project actions should include provisions for permanently or temporarily closely substantial mileages of currently open roads to more closely approach levels of security within the affected BMU Subunits that will remedy the current population sink, and, because of that, work towards obviating the need for an Incidental Take Statement to cover baseline conditions.

4c. Rather than simply relying on assertion and passing reference to the available research, the SPLAT analysis should account for and address the impacts of different traffic levels on grizzly bears when considering effects of roads (e.g., Mace et al. 1996, 1999; Roever et al. 2010; Northrup et al. 2012) and also account for the well-documented impacts of non-motorized human activities (for a synthesis see: Mattson 2019; see also Naidoo & Burton 2020).

4d. The SPLAT analysis and proposed project actions should more accurately represent and substantively account for and address factors directly linked to grizzly bear deaths in or near the project area as well as in comparable landscapes. These factors include encounters with big game hunters, availability of attractants, collisions with motor vehicles, and malicious killing. Annual summaries of mortality in Interagency Grizzly Bear Study Team Annual Reports can be readily used to determine precisely why grizzly bears are known to die on Custer Gallatin National Forest jurisdictions. Several IGBST special reports provide a list of recommended remedies (e.g., Servheen 2009). The current superficial representations of mortality causes and subsequent offhand dismissals of these causes in the SPLAT analysis are patently inadequate.

4e. The SPLAT analysis needs to explicitly consider implications of the ample available research directly relevant to effects of proposed project actions on grizzly bear habitats and foods rather than relying on assertions and vague generalizations. Related to this, the analysis needs to more accurately represent the considerable available research on bear nutrition and bear habitat. Current representations are both inattentive to and misrepresentative of the best available science.

4f. The SPLAT analysis needs to adequately address how proposed project actions will ameliorate or exacerbate the effects of foreseeable changes in levels and types of human activity on grizzly bears in and near the project area.

4g. The SPLAT analysis needs to adequately address how proposed project actions will ameliorate or exacerbate the effects of foreseeable climate change on grizzly bear foods and habitats in and near the project area.

If of interest, please contact me for any scientific publications of relevance to the points I raise above. I would also be happy to elaborate on any of the points raised here. I can be reached at davidjmattson@gmail.com

You can also contact me if you would like a statement of my qualifications for making these comments.

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