

# Appendix A

## Response to Comments

### Introduction

Appendix A includes all the comments received on the draft environmental impact statement (DEIS) and the Forest Service responses to them.

Fifty-one individuals, organizations, and agencies submitted written and email comments on the DEIS during the 45-day comment period. These comments were placed in an index that identified who made the comment, the specific comment, the category in which the comment was placed, coded the letter and comment, and then showed how the comment was addressed. All written correspondence was analyzed and the comments were summarized. Five letters were received from Native corporations and State and Federal agencies, and are reproduced in full at the end of this appendix. A copy of the index can be found in the project planning record.

### Letters Received from Individuals, Organizations, and Agencies

The following list includes all individuals, organizations, and agencies that the Forest Service received written comments from during the 45-day comment period for the DEIS.

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Table A-1. List of individuals, organizations, and agencies that sent comments

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Last Name	First Name	Organization
Ekker	Tina Marie	Wilderness Watch
Fields	Kenyon	Sitka Conservation Society
Lindekugel	Buck	Southeast Alaska Conservation Council
Hood	Kevin	
Stahl	Andy	Forest Service Employees for Environmental Ethics
Dal Vera	Anne	
Keim	Frank	
Artley	Richard	
Hartmann	Cindy	National Marine Fisheries Service
Shelton	Larry	

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Last Name	First Name	Organization
Egan	Veronica	Great Old Broads for Wilderness
Goggins	Alan	
Mauer	Fran	
Cann	Roald	
Larson	Gary & Melody	
Geise	Mark	
Lihou	Leslie	
Conn	John	
Redding	Dell	
Wiebe	Tobey	
Lufkin	Elise	
Towne	Scott	
Ellis	Barbara	
Colby	Robert	
Mannchen	Brandt	
Kreck	Loren	
Stetson	Judith	
Carrubba	Louis	
Sommer	Nancy	
Doohan	Delores	
Martineau	Claire	
Wilson	Richard	
Swanson	John	
Deters	Bill	The Mountaineers
Hanson	Joel	The Boat Company
Wolper	Steven	
Lanciotti	Donna	
Fritz	Anna	
Kovalicky	Tom	
Moore	Scott	
Bry	Brenna	
Schmidt	Lee	
Koppe	Robert	
Warren	Greg	
Proescholdt	Kevin	
Muller	Don	
Satler	Natalie	
Reichgott	Christine	Environmental Protection Agency
Magee	Susan	State of Alaska
Bergmann	Pamela	Department of Interior
Langnor	Mark	
Metz	Michele	Sealaska
Edwards	Jack	

## Comment and Response Summary

The index served as the basis for grouping similar comments in general categories. The Response to Comments section begins with a general statement that outlines the key point(s) of each comment. This is generally followed by italicized excerpts from some of the comment letters. In some cases, an excerpt is not included because the key point is the same as the excerpt. A response is provided for each comment and the comments are grouped according to general categories. The categories are:

- Past Project History and Minimum Requirements
- Purpose and Need
- FIA Data and Uses of the Data
- Non-Forested Plots
- Laws
- Effects
- Range of Alternatives
- Statistics and FIA Protocol
- Monumentation
- Safety
- Forest Service Manual and Handbook
- Monitoring, Mitigation, and Field Operations

### Past Project History and Minimum Requirements

**Comment:** There was no explanation in the DEIS of how the current FIA proposal to use helicopters in Alaska Region wilderness areas is different than the 1996 FIA decision that was appealed and reversed by the Chief of the Forest Service in 1997. In addition, the DEIS did not identify any administrative actions that will result from the inventory or explain how the inventory is the minimum requirement for managing wilderness.

*Clearly explain how this current proposal is substantially different from the similar 1997 decision that was overturned by the Chief on appeal, and how this latest proposal is the minimum action necessary to enable managers to effectively protect the wilderness character of these places.*

*With respect to administration, the EIS has not identified any administration actions that will occur as a result of the survey (much less any administration necessary for wilderness preservation). As a result, by definition, we believe the § 4(c) exception cannot be applied...*

*The first problem is that the minimum requirements for managing wilderness are never discussed. The minimum requirements for managing wilderness are those practices essential to the preserving the wild character. The FIA DEIS only documents how the FIA will degrade or have a negligible impact on wilderness character. In no way does the FIA DEIS demonstrate how the FIA is essential to preserving wilderness character.*

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*The DEIS does not explain why the data and scientific knowledge gained by the inventory are necessary to preserve the wilderness character of these lands.*

**Response:** The Proposed Action for this environmental analysis does not differ substantially from the decision that was reversed by the Chief of the Forest Service on administrative appeal in 1997, in that they both propose the use of helicopters to conduct forest inventory in Alaska Region wilderness areas. However, the 1997 appeal decision reversed the Regional Forester's decision because of the inadequacy of the environmental analysis and a failure to demonstrate that the purpose for gathering the data supports the administration of wilderness on the Tongass National Forest. The appeal decision did not state that the use of helicopters in wilderness areas for forest inventory purposes was not appropriate or could not occur altogether.

In order to address the concerns identified by the Chief of the Forest Service in the 1997 appeal decision, the Alaska Region has prepared this EIS. The EIS provides a more detailed discussion of the direct, indirect, and cumulative effects of the Proposed Action and alternatives. It also explains the potential benefits of inventory data and how this data could be used to help administer wilderness areas in the Alaska Region.

Additional information has been added to the FEIS to more clearly explain:

- The past project history (FEIS page 5);
- Changes in the Tongass National Forest plan and national program direction (The Agricultural Research, Extension, and Education Reform Act of 1998, 2005 intra-agency agreement with FIA and the Wilderness and Wild and Scenic River programs) regarding FIA inventory in wilderness areas, and their relation to the current proposal (FEIS page 5);
- The benefit of inventory data to wilderness areas (FEIS pages 7 through 10).

The EIS recognizes the importance of selecting the minimum action necessary to accomplish the inventory as required by the Wilderness Act at Section 4(c) (FEIS pages 5, 6, 7 and 41).

**Comment:** The collection of baseline data should not automatically be assumed to be the minimum requirement for administering wilderness.

*There is a false and detrimental assumption that the acquisition of new baseline data automatically qualifies as a minimum requirement for administering wilderness.*

**Response:** This analysis does not assume that the acquisition of baseline data automatically qualifies as the minimum requirement for administering wilderness. The value of FIA data is recognized in the 2005 intra-agency agreement that "acknowledges the need within the Forest Service to establish and maintain basic information on the extent and condition of the Nation's

wilderness areas. A reliable inventory is basic to the development of any land use plan, whether recreational development, commercial enterprise, or preservation of fragile environments are the ultimate objectives. The inventory covered in this intra-agency agreement is designed to provide strategic ‘state-of-the-wilderness’ information on vegetation, soils, and wildlife habitat (FEIS page 13).” This project also provides an opportunity to obtain consistent, statistically valid data within a wilderness area, and across wilderness areas and adjacent non-wilderness areas. The FIA project was evaluated through the Minimum Requirement Decision Guide (MRDG) process that all projects requesting motorized equipment in wilderness areas are required to use.

## Purpose and Need

**Comment:** Wilderness protection is not identified as a need for this project.

*Wilderness protection is notably not listed as a primary need that is driving this proposal.*

**Response:** The intra-agency agreement between the FIA and Wilderness and Wild and Scenic Rivers programs states, “A reliable inventory is basic to the development of any land use plan, whether recreational development, commercial enterprise, or preservation of fragile environments are the ultimate objectives.” Without knowing more about wilderness ecosystems, it can make it more difficult to administer and protect those ecosystems. Additional information has been added to the FEIS (pages 7 through 9) that discusses this topic.

## FIA Data and Uses of the Data

**Comment:** It is not clear why there is a pressing, wilderness-related, need for this data now.

*There is also no explanation as to how the lack of this data over the decades since wilderness designation has somehow hampered effective administration of these wildernesses to date.*

*Nowhere does the DEIS demonstrate that the no action alternative would impair the wilderness character of these lands or harm the Forest Service’s ability to administer these areas to protect their wilderness character.*

**Response:** Monitoring many types of baseline conditions of the natural environment has not, for the most part, been taking place in a statistically valid, replicable, and systematic manner within a specific wilderness area or across the wilderness areas in the Alaska Region. In addition, the FEIS (page 47) mentions opportunities forgone by not collecting the FIA data, and additional information has been added to this section to help clarify that point.

The intra-agency agreement between the Wilderness and Wild and Scenic Rivers and FIA programs “acknowledges the need within the Forest Service to establish and maintain basic information on the extent and condition of the Nation’s wilderness areas. A reliable inventory is basic to the development of

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any land use plan...The inventory is designed to provide strategic, ‘state-of-the-wilderness’ information (FEIS page 13).”

FIA has direction from Congress to inventory plots on all forested National Forest System lands and this inventory responds to that direction (FEIS page 7). A team of wilderness managers within the Alaska Region requested that FIA include the non-forested plots to obtain additional vegetation information. Requests for non-forested plot data do occur, and other regions have made similar requests for this type of data (O’Brien et al 2003). FIA’s primary focus is to inventory plots but the work is to be done consistent with management guidelines for the National Forest System lands (i.e. wilderness areas) upon which they are operating.

**Comment:** Wilderness managers are not aware of the FIA program and do not have a use for the data.

*The administrative record reveals that the Alaska Region USFS did conduct an informal survey of wilderness staff in every other Region in 2004 and discovered 1) Many other wilderness managers are not even aware of the FIA program (so how could they be using the FIA data for any wilderness purpose?) 2) Even managers who were familiar with the FIA program have not used the FIA data for any wilderness protection purposes.*

**Response:** There are wilderness managers who are not familiar with FIA or the data. There are several reasons why that occurs including different priorities, position responsibilities, and timeframes. FIA data has been collected in lower 48 wilderness areas and used in reports and scientific studies on topics that include: mapping habitat for sensitive species, estimating old growth, understanding catastrophic windstorm events, and recovery from wildfire. Additional information has been added to the FEIS (pages 7 through 11) to discuss the uses of FIA data and the differing perspectives that currently exist about FIA data. In addition, the intra-agency agreement between the Wilderness and Wild and Scenic Rivers and FIA programs “acknowledges the need within the Forest Service to establish and maintain basic information on the extent and condition of the Nation’s wilderness areas” (FEIS page 13)

## Non-Forested Plots

**Comment:** No other USFS region has requested FIA to inventory add-on plots.

**Response:** Regions 1, 4 and 6 of the Forest Service have requested and inventoried non-forested plots in wilderness and non-wilderness areas. For example, a report on non-forested plots on the Bridger—Teton National Forest was produced by O’Brien et al (2003). See the project planning record for more information.

**Comment:** Provide additional information about the non-forested plots and access to them.

*Identify how many of the 913 inventory plots are forested and therefore part of FIAs core inventory program, and how many plots are add-ons, being added to the survey at the request of non-FIA forest officials. Also specify how many of the add-on plots are proposed for helicopter access compared to how many of the regular forested FIA plots would be accessed by helicopter.*

The DEIS (page 2-2) states that there are 646 forested plots and 267 non-forested plots. The Proposed Action would have 225 non-forested plots accessed by helicopter. Table 2-4 has been added in the FEIS that shows the type of plots (forested, non-forested) and the type of access by alternative.

## **Laws**

**Comment:** The use of helicopters to gather inventory data is contrary to Section 1110 of ANILCA because helicopter travel is not considered a traditional activity and/or the forest inventory is not a subsistence use. It was felt that only those types of motorized access listed in Section 1110 are allowed in wilderness areas and that these types of access must be related to traditional activities or subsistence uses in order to be allowed. In addition, Section 4(c) of the Wilderness Act does not allow helicopters and permanent installations for this type of work.

*The desired conditions of wilderness include no landing of helicopters or placement of installations in wilderness except under very narrow exceptions as described in § 4(c) of the Wilderness Act and § 1100(a) of ANILCA, neither of which apply in this situation.*

**Response:** Section 1110 requires the Secretary to allow certain types of access in ANILCA created wilderness areas. The FEIS recognizes that Section 1110 requires that the Secretary permit access by snowmachines, motorboats, airplanes, and other forms of non-motorized surface transportation methods for traditional activities or to travel to and from villages and homesites (FEIS page 40).

The Forest Service is not asserting that Section 1110 grants the authority to conduct the forest inventory using helicopters or any other means of access, or that helicopter use is considered a traditional activity. The authority to conduct the forest inventory is granted by the Forest and Rangeland Renewable Resources Planning Act of 1974, Forest and Rangelands Renewable Resources Research Act of 1978, and the Agricultural Research, Extension, and Education Reform Act of 1998 (FEIS pages 11 through 12).

In deciding whether helicopters can be used to accomplish the inventory, the Forest Service is directed by the Wilderness Act, Forest Service manual and handbook guidance, and 36 CFR Part 293 to use motorized access only as

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necessary to meet the minimum requirements for the administration of wilderness areas (FEIS pages 10 through 13).

The intra-agency agreement between FIA and the Wilderness and Wild & Scenic River programs determines how to conduct monumentation in wilderness and all alternatives are consistent with this agreement (FEIS page 25).

**Comment:** The use of helicopters to accomplish the FIA inventory is contrary to the purpose of the Wilderness Act. The Wilderness Act has a singular “statutory purpose” to protect wilderness character and that the “public purposes” identified in the Wilderness Act at Section 4(b) are subservient to the “statutory purpose. The “public purposes” (recreational, scenic, scientific, educational, conservation, and historical use) are the “purposes for which the public may use wilderness.

*While allowable, these public purposes are not the statutory purpose of the Act, they are the appropriate purposes for which the public may use wilderness. These public purposes are allowable uses of wilderness, but they are not mandatory uses. These public purposes or uses do not take precedence over the singular statutory purpose of the Act, which is to preserve an enduring resource of wilderness by preserving the wilderness character of each area in the National Wilderness Preservation System. For this reason, these allowable uses cannot trigger use of the administrative exceptions listed in § 4(c) of the Act.*

**Response:** The FEIS recognizes the purpose of the Wilderness Act (FEIS pages 11 through 12). The forest inventory and data collection in wilderness areas of the Alaska Region would be conducted in accordance with the purposes of the Wilderness Act. Wilderness areas were established in order to protect wilderness character, while providing for recreation, scenic, scientific, educational, and conservation uses. In this case, the proposed forest inventory would gather information that cannot be collected anywhere else and would be done with a long-term goal of providing information that could be used for monitoring the natural ecological condition of the wilderness areas. In addition, the data produced by FIA inventories in wilderness areas have been used in scientific research papers and administrative studies that are relevant to wilderness administration and have expanded our understanding and appreciation of the overall wilderness resource (FEIS pages 8 through 9).

The EIS (FEIS pages 8, 9, and 44 through 60) identifies that the use of helicopters to accomplish the forest inventory will impact wilderness values, and mentions the analysis considers the benefits and impacts of the FIA inventory (FEIS pages 7 and 11).

**Comment:** The EIS needs to address that using helicopters to accomplish the forest inventory is a violation of Section 4(d)(2) because helicopters and survey monumentation markers “fall under the list of prohibitions cited under Section 4(c) of the Wilderness Act and they are not demonstrated anywhere in the DEIS as having met the threshold to qualify as valid exemptions under the law.”

*Section 4(d)(2) of the Wilderness Act must be addressed in the FIA DEIS and it must be documented how helicopter access and permanent monumentation represent “a manner compatible with the preservation of the wilderness environment.” This would seem difficult in that helicopters and monuments fall under the list of prohibitions cited under Section 4(c) of the Wilderness Act and they are not demonstrated anywhere in the FIA DEIS as having met the threshold to qualify as valid exemptions under the law.*

*Your proposal is clearly illegal. The last time I checked, a helicopter was a motorized vehicle.*

**Response:** Section 4(d)(2) of the Wilderness Act is not discussed in the FEIS because it primarily relates to mineral activities and surveys for mineral value, which are not the subject of the forest inventory. Although Section 4(d)(2) allows for “gathering information about minerals and other resources, if such activity is carried on in a manner compatible with the preservation of the wilderness environment;” the Wilderness Act at Sections 2 and 3(c) provides more applicable direction for accomplishing the forest inventory consistent with the purposes of the Wilderness Act.

Helicopter landings in wilderness are not normally allowed in wilderness areas, *except* as necessary to meet the minimum requirements of the Wilderness Act (FEIS page 7). In addition, the Forest Service Manual provides direction for research projects and the use of motorized equipment authorizations in wilderness areas (FEIS page 41).

The Wilderness Act and Forest Service Manual provide guidance but do not provide a definitive threshold for types of use. Using this guidance, each proposal is evaluated to weigh the impacts and benefits. “There are no objective, quantitative means for making this evaluation, and once the benefits and impacts are explicit, the decision-maker will need to make a subjective judgment about whether the benefits of the proposed activity outweigh the impacts, or vice-versa (Landres 2000).”

**Comment:** The Wilderness Act is the controlling law in determining how the FIA inventory is carried out.

*Congressional law authorizes the FIA inventory, but it does not override the existing wilderness legislation. That is to say, the inventory needs to be revised to comply with wilderness; not the other way around.*

**Response:** The Forest Service is not asserting that the legislative direction that authorizes the inventory is controlling authority over the Wilderness Act for decisions on whether or not the forest inventory should occur in wilderness areas of the Alaska Region. The Wilderness Act provides the legal framework for the kinds of uses that can occur in wilderness areas (FEIS pages 9 through 12) and FIA inventory is a scientific use of wilderness.

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## Effects

**Comment:** By separating the number of landings from the number of reconnaissance flights, the table misleadingly masks the actual number of helicopter overflights and the total time helicopters are performing overflights.

**Response:** Table 2-3 has added an estimate of the hours for overflights. The effects of the overflights are included in the Wilderness effects section. Specific examples can be found on FEIS pages 50 and 58 and in Table 3-3 (FEIS page 54) and Table 3-5 (FEIS page 60).

**Comment:** The DEIS fails to address the impacts of monumentation.

*The FIA DEIS does not adequately address the impacts of the inventory to wilderness. Helicopters are discussed in some detail; however, the installation of permanent monument –another exemption under Section 4(c) - is not addressed at all.*

**Response:** The DEIS and FEIS document the effects to many wilderness resources beginning on FEIS page 37. Discussion of the effects to the four wilderness character qualities are specifically addressed (FEIS pages 46 through 60). The effects from installation of permanent monuments are identified as common to all action alternatives, and are discussed on page 47. The effects from monumentation was also in the DEIS on page 3-11.

**Comment:** The effects of the stakes for marking plots are not correct based upon the definitions provided for the effects.

*The EIS is contradictory in its assessment of the impact caused by the permanent survey markers. Under Effects common to all Action Alternatives the EIS states: “The 3,600 reference point stakes used for marking plots diminish the undeveloped quality of wilderness character and have a major overall effect on this quality. The stakes also... have an overall moderate effect on solitude.” (page 3-11). Major impact is defined as long term impacts, lasting more than one season (page 3-10). But inexplicably, the EIS concludes that the overall impact on the undeveloped quality of wilderness would be negligible under Alternative 1 and moderate under Alternative 4, the preferred Alternative.*

*If the “lasting more than one season” criteria of the FIA DEIS definition for a major impact (page 2-11) is retained, than the proposed level of monumentation for implementing the inventory should constitute a major impact to both the Undeveloped character and the Outstanding Opportunities for Solitude character for Alternatives 1, 2, 3, 4 and 5. This is due to the permanency (lasting indefinitely) of the monuments, and it is compounded by the large total number (3,600) and the comprehensive coverage (installations every three miles throughout every wilderness without exception).*

**Response:** The FEIS has been corrected and modified to address the impact of monumentation to the undeveloped quality of wilderness character (FEIS pages

47 through 60). The undeveloped quality has been split into two parts to better differentiate the effects on that quality. This was done to address the effects of: 1) motorized use; and; 2) monumentation.

The primary emphasis of the undeveloped quality is on the permanent monumentation. Helicopters may be the means for reaching plots where monuments are installed. This means that the effect of motorized use on the undeveloped quality changes as the amount of helicopter landings increases. As a result, the range of effects associated with helicopter use goes from negligible in Alternative 1 to major in Alternative 5.

For the monumentation component of the undeveloped quality, the effect has been changed to major for all the action alternatives because the monuments will be present longer than one season.

No change in effect from the monumentation was made to outstanding opportunities for solitude because this quality relates to the opportunities for people to experience solitude or primitive and unconfined recreation, including the values of inspiration and physical and mental challenge while the undeveloped quality focuses more on the structures and installations.

The impact of helicopter use to the outstanding opportunities for solitude quality has been changed from moderate to major in Alternative 5 because the proportion of summer days per season in the wilderness areas without helicopter landings would exceed 25 percent (FEIS page 54).

**Comment:** The cumulative effects of helicopters (landings and overflights) should be treated separately from fixed-wing.

*The cumulative impacts of helicopter flights in wilderness (pages 3-18 –3-24) lumps together the proposed FIA helicopter flights with existing fixed-wing traffic for each wilderness in Table 3-4. There is a qualitative difference between fixed-wing aircraft and helicopters....A proper analysis would break out helicopter flights separately for each wilderness and consider pre- and post-effects to wilderness character for the helicopter flights proposed by the various FIA DEIS alternatives. This analysis should include reconnaissance flights within 2,000' of the ground surface.*

*For instance, we are concerned about the levels of commercial flightseeing and guided fly-in sport fishing activities taking place on Wilderness Lakes throughout the Tongass.... Helicopter presence would only compound the problem, and further degradation would take place.*

**Response:** The cumulative effects discussion includes fixed-wing and helicopter uses because of the concern about overall noise and visual impacts from both uses. Helicopters are different than fixed-wing and the FEIS addressed helicopters separately in the Wilderness section of Chapter 3 whenever possible. Specific examples can be found on FEIS page 50 and on pages 51 through 54. The cumulative effects section for Wilderness beginning on FEIS page 54 identified several types of specific helicopter activities

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occurring in and around wilderness areas. In addition, FEIS pages 78 through 80 provided information regarding higher use wilderness areas and the screening process (which included specific criteria for helicopter as well as fixed-wing).

The cumulative effects section did not break out helicopter flights separately for each wilderness but did separate the higher use (fixed-wing and helicopter) wildernesses and discusses the effects. Information provided by Tongass and Chugach National Forest wilderness managers indicates that helicopter activity is generally low or does not exist. To further break out the analysis by individual wilderness where existing use and potential use is very low and/or nonexistent would not be meaningful in terms of understanding the effects and making a reasoned choice among the alternatives (See FEIS pages 37 and 38).

The effects of the reconnaissance flights are included in the Wilderness effects section. Specific examples can be found on FEIS pages 50 and 59 and in Table 3-3 (FEIS page 54) and Table 3-5 (FEIS page 60).

In addition, the Noise and Visual Cumulative Effects Analysis located in the project planning record identified specific projects in and around individual wilderness areas that were proposing helicopter activities or had the potential for helicopter use.

**Comment:** The use of helicopters is not a quantitative effect; it is qualitative and the fact that it could bother one person using a wilderness area means the effects to all alternatives using helicopters should be considered major.

*There is a problem with the scale of impacts ascribed to helicopter use. The effects start off measured quantitatively with “slight” for Negligible and “ephemeral” for Minor, but then are measured temporally with “short-term” for Moderate and “long-term” for Major (page 2-11). While I applaud the effort to categorize the impact of helicopters to wilderness and the wilderness visitor, in actuality the impacts are qualitative (versus quantitative or temporal). That is a single helicopter may greatly disturb one person. It is not a numbers issue; it is a presence issue. Thus Alternatives 2, 3, 4 and 5 (those promoting helicopter access in wilderness) should have Major impacts to both the Undeveloped character and the Outstanding Opportunities for Solitude character of wilderness.*

**Response:** The FEIS (page 53) acknowledges that the presence of helicopters would not be acceptable to some visitors. Despite the qualitative nature of the effect of helicopters to wilderness users, the FEIS assumes that the more helicopter activity, the greater the effect and a single helicopter flight is different than a dozen flights. Consistent with that approach, the impact of helicopter use to the outstanding opportunities for the solitude quality has been corrected from moderate to minor in Alternative 3 because the number of summer days without helicopter landings in the wilderness areas would be less than 25 percent. Alternative 5 changed from moderate to major because the proportion of summer days per season in the wilderness areas without FIA helicopter landings would exceed 25 percent (FEIS page 54).

The undeveloped quality has been split into two parts to better differentiate the effects on that quality. This was done to address the effects of: 1) motorized use and; 2) monumentation. As a result, the effects to the motorized component of undeveloped quality have changed from moderate to major in Alternative 5. In addition, the effects to all action alternatives on the monumentation component of undeveloped quality have changed to major because of the permanent nature of the monumentation (FEIS page 54).

**Comment:** The number of helicopter landings is not minor and has a cumulative effect on wilderness values.

*While 100+ landing a year may seem minor to some; they are not. These landing violate intent of the Act and add to an incremental and cumulative assault on the values prescribed in the Act.*

**Response:** The cumulative effects have been analyzed and vary from negligible in Alternative 1 (hike to all the plots) to major in Alternative 5 (helicopter to all the plots). These effects are discussed in FEIS pages 54 through 60.

**Comment:** The effects to outstanding opportunities for solitude from helicopters and monumentation should be considered to be major.

*To expound upon the helicopter and monument impacts to solitude, one definition of solitude is remoteness from society and its trappings (Marshall 1930, Hollenhorst and Jones 2001). This means leaving the modern world behind and entering a wild realm. Knowing that there are helicopter landings in the wild and monument clusters every three miles violates this sense. The proposed FIA helicopter and monumentation use is a major impact to solitude.*

**Response:** The effects of monumentation on the outstanding opportunities for solitude quality were not included because monumentation is not the focus of the opportunities for solitude quality; the solitude quality's emphasis is on primitive forms of recreation and non-motorized travel. Monumentation is addressed under the undeveloped quality (FEIS page 47). See the earlier response in this section for additional discussion of the effects of helicopters and monumentation.

**Comment:** We don't think 1,100 helicopter pads should be built within any designated wilderness area because of the ecological impact.

**Response:** None of the alternatives propose constructing helicopter pads. The helicopter would land in existing openings and the ecological impacts have been determined to be No Impact to sensitive species, and negligible to rare plants and general vegetation (FEIS page 97). This is because the helicopter would land only twice in one area during a 10-year period.

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**Comment:** The Preferred Alternative should not eliminate the possibility of using base camps.

Base camps are included in other alternatives and all alternatives are being considered by the Regional Forester.

**Comment:** The effects from hiking and the presence of crews on wilderness visitors are not as impacting as those identified in the DEIS.

*We also strongly object to portraying the mere presence of base camps and USFS field crews on foot as a negative impact on solitude and other visitor's wilderness experience. Camping and hiking are very wilderness-compatible activities and therefore would be far less visually disturbing to other visitors than the sight and sound of helicopters flying overhead. Furthermore, the survey crews are small (estimate 2-4 people each) whereas the group size limit for the public is 12 people. While some visitors would prefer to not meet any other parties, it is hard to imagine that visitors would be so distressed at running into a small FIA crew that it would displace the visitor from the wilderness. The EIS therefore overplays the possibility of visitor displacement.*

**Response:** While camping and hiking are wilderness-compatible activities, the use of base camps by the FIA crews does create a negative impact on solitude for those visitors who prefer to see few or no people. The effects from base camps and other hiking and camping activities are considered to be less than those from helicopters, and this is identified in Table 3-3 and the discussion of effects to the wilderness resource on pages 45 through 60. The FIA crews are smaller than the commercial group size limit of 12; however, the crews do create a presence in the field that could affect other visitors. The visitors would not be displaced from the entire wilderness. Rather, a group would likely move down the bay to another campsite or to the next bay. In many cases, suitable campsites are not common due to rugged terrain and brush, and the use of one campsite may make it difficult for another party to use the area.

**Comment:** The ROS class is not being exceeded which means there cannot be negative impacts from the FIA crews.

*The USFS primitive ROS class is defined as meeting less than 3 other parties per day. Visitors would be extremely unlikely to encounter more than one FIA crew per day on the ground, and encountering one FIA party is clearly within the ROS parameters. Therefore, such an encounter cannot be classified as a negative impact, based on the USFS own ROS standards.*

**Response:** The ROS class establishes a maximum number of parties per day. The fact that the ROS class is not exceeded does not mean there are no impacts; rather, it means that the impacts are within a range of acceptable limits established by the Forest Plan. Remaining within the ROS class is not meant to imply that no impacts occur.

**Comment:** The DEIS only discusses the required distances that helicopters must fly from certain species. The DEIS does not explain the elevation that the helicopters will fly in relation to birds and wildlife.

**Response:** In several cases (e.g. seabirds, goats), the FEIS mentions the elevations the helicopters must fly (FEIS pages 25 through 26) while providing for allowances due to weather. In other cases, a spatial buffer surrounding the nest applies to the elevation as well. Helicopters are required to fly for safety purposes at least 500 feet above ground level and this is the minimum buffer that would be applied to other species not specifically mentioned in the project mitigation section. In all cases, the mitigation is consistent with the Forest Plans, FAA, or other State and Federal direction.

**Comment:** How will the Forest Service ensure that animals will not be adversely affected by a very large increase in administrative helicopter flights over wilderness?

**Response:** The Forest Service cannot guarantee that an animal or animals will not be adversely affected. The purpose of the EIS is to make an informed prediction of the potential effects based on the nature of the proposal. In this case, the potential effects to animals are discussed on pages 61 through 80. The effects to animals from helicopters in all helicopter alternatives have been determined to be No Effect for threatened and endangered species and No Impact for sensitive species. With the exception of minor effects to bears in Alternatives 1 and 2, the effects are negligible for other species. In addition, the Alaska Department of Fish and Game and the United States Fish and Wildlife Service have commented that they do not have concerns with the proposed project because the effects are minor and short-term.

**Comment:** Additional information about the effects of helicopter noise may be found in other studies such as Creel et al (2002) and could better evaluate the effects.

*The Draft EIS acknowledges that helicopter noise could “affect” wildlife, and as such is a significant issue (page 1-12). However the Draft EIS indicates the array of wildlife responses to noise is so broad that disturbance to wildlife is difficult to evaluate (page 3-27).*

*We suggest, for your consideration, information that discusses specific noise-induced stress effects to wildlife mammals. Research by Creel and others (2002) addressed stress caused by snowmobiles by monitoring fecal glucocorticoid (GC) levels in both elk and wolves. These results may provide insight into the use of the effects of helicopter noise on the potential welfare of mammals at the project site, and could be used in preparing the Final EIS.*

**Response:** Pages 62 through 64 of the FEIS discussed the general concepts of aircraft effects to wildlife. These concepts addressed the difficulty in identifying the specific effect(s) to an animal(s). In addition, the literature demonstrates that

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there is a wide variety of potential effects to wildlife, and these effects are often specific to the particular study or project.

A review of Creel et al (2002) does provide insight into glucocorticoid levels for wolves and elk; however, the factors unique to that study are very different and not comparable to those that occur in the FIA inventory. The Creel et al study takes place in a portion of Yellowstone National Park during a different season (winter) with different types and higher amounts of use. The FIA inventory would have two landings per 6,000 acres over 10 years. It is unknown if glucocorticoid levels change from this level of use. If it did occur, it would not likely result in the loss of reproductive capacity in the individual, or contribute to a drop in the population level due to the limited amount of helicopter use that would occur in any one area. Both the Alaska Department of Fish and Game and the United States Fish and Wildlife Service did not express concerns about impacts to wildlife from the proposed inventory.

**Comment:** If subsistence activities are occurring within the project area, then subsistence will need to be addressed in the FEIS.

*There is no reference to subsistence activities in the document and an ANILCA Section 810 evaluation is not included, therefore we assume that subsistence is not a relevant issue.*

**Response:** The effects of the inventory have been evaluated using the criteria established in the Subsistence Management and Use Handbook (FSH 2090.23). The evaluation concluded that the inventory will not result in a significant possibility of a significant restriction of subsistence uses. A discussion of effects to subsistence has been added to the FEIS (page 101).

**Comment:** The DEIS should include a comparison of financial costs among the alternatives.

The FEIS makes no comparison of financial costs between alternatives because, “[w]here a choice must be made between wilderness values, and visitor or any other activity, preserving the wilderness resource is the overriding value. Economy, convenience, commercial value, and comfort are not standards of management or use of wilderness (FSM 2320.6).” This direction has been added in the FEIS on page 41.

## Range of Alternatives

**Comment:** A “wilderness-compatible” alternative should have been developed that included no helicopter use and no placement of installations.

*We suggest that one or more additional alternatives be developed and submitted for public review that describe means of conducting the FIA inventory in ways that are fully compatible with the Wilderness Act and ANILCA -- i.e. no helicopter use and no placement of installations in wilderness..*

*The FIA DEIS would benefit from adding Alternatives that are carried out by means compatible with wilderness preservation. Currently, only Alternative 0, the No Action Alternative, complies with the Wilderness Act. It would be quite simple to add other compliant Alternatives.*

*Even if scientific study was necessary to preserve the wilderness character, these data can be collected without the landing of aircraft. Even if one assumes that scientific study is the Wilderness Act's purpose (which it is not), and even if such inventory studies were necessary to administer the wilderness for the protection of its character (which it is not), data collection can be accomplished without the landing of aircraft. Thus, landing of aircraft is not "necessary."*

**Response:** Based on public comment, a suggested "wilderness-compatible" alternative was added in the FEIS (page 28) but eliminated from detailed analysis. The rationale for not considering this alternative further are:

Helicopter Plots: Dropping all the helicopter landings would not meet the Purpose and Need, which is to safely collect a statistically valid sample of the plots. Approximately 200 plots are considered inaccessible by Alaska Region wilderness managers, and an additional amount of plots have safety concerns. Dropping these plots from the inventory would not allow a statistically valid sample.

Monumentation: GPS and digital photos that do not leave stakes or other markings have their application depending on the type of study, but have not proven reliable for the precise reestablishing of plots and specific microplots within those plots. This is because GPS accuracy varies a great deal depending on the number of satellites that can be reached, the time of day, type and thickness of forest canopy and topography that can block satellite signals (McLachlan 2006, [www.okono.com/accuracy](http://www.okono.com/accuracy) 2006). Digital photos are helpful but, the level of vegetation change that can occur over time can prevent precise reestablishment of the plot. GPS, a compass, and aerial photos are used to navigate to the general area near the plot.

Minimum guidelines for the use of monumentation in wilderness areas have been established in a 2005 national intra-agency agreement between the Wilderness, Wild and Scenic Rivers and FIA programs and cannot be rescinded without mutual approval by both of these programs. The monumentation included as part of this inventory is consistent with that agreement. Additional information regarding the suitability of alternative methods and discussions about monumentation are included in the planning record.

Overflights: Overflights by floatplanes to scout safe routes in tight, mountainous terrain will make the reconnaissance work less safe because they fly faster, need larger areas to turn, can stall at low speeds, and cannot stop or turn around like helicopters. Helicopters also have lower weather minimums (one-half mile versus two miles) which allow them to operate more safely in variable weather conditions.

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In addition, the effects of the use of helicopters for access to plots, monumentation, and overflights have been analyzed within the existing range of alternatives.

**Comment:** The analysis should have included an alternative that removed the inventory of non-forested plots.

*The EIS therefore violates NEPA by not including at least one Alternative that examined deleting the add-on plots from the proposed inventory. This is doubly true since roughly half (or more) of the heli flights and landings would be to access the remote, unforested, high-elevation add-on plots. Not giving consideration to dropping the unnecessary add-ons is therefore unreasonable...*

**Response:** This alternative was considered, but eliminated from detailed study in the Draft EIS because the Regional Forester stated at the time that not including the non-forested plots would not fully meet the Purpose and Need. As the process evolved, effects were analyzed in more depth and public comments on the Draft EIS were considered. The possibility of excluding the non-forested plots became more viable as a component of any of the action alternatives to lessen the effects to the wilderness character while still partially meeting the Purpose and Need. An analysis was done to determine if an alternative should be considered in detail or if this could be added to any alternative as a way to lessen effects (FEIS pages 29 and 102 through 104). The analysis indicated the current range of alternatives was sufficient because a review of the alternative components and effects from including forested and non-forested plots (a total of 913 plots) and only the forested plots (646 total plots) indicated:

1. Almost all of the alternative components such as the number of campsites, helicopter-accessed plots, overflights, etc. fall within the existing range of components displayed in the Draft EIS;
2. None of the effects in the Final EIS increase from not inventorying the non-forested plots. The majority of resource effects are largely the same with a few effects decreasing.

The range of alternatives in the Draft EIS analyzed the maximum level of potential effects to all resources. There was not enough difference between alternative components or effects to warrant additional analysis of alternatives in the Final EIS regarding excluding non-forested plots from the inventory. In addition, excluding the non-forested plots from all the alternatives did not affect the relative ranking of the alternatives. The existing number of alternatives in the Final EIS provides a reasonable range of alternatives for the decision maker and excluding the non-forested plots is an option that could be applied to any of the action alternatives in the Final EIS. Additional information about the review of alternative components and effects is available in the project planning record.

**Comment:** The DEIS fails to assess any alternative that departs from FIA protocol, e.g., the proposed action or one of the other alternatives but omitting the helicopter plots.

**Response:** The EIS does not contain an alternative that departs from FIA protocol because the purpose of the project is to collect FIA data for obtaining baseline vegetation information. Deviating from the protocol would not meet the project need and FIA would not do the inventory if it is not done according to the national sampling design. There is no other existing form of inventory, nor is one contemplated, that has established procedures and provides the consistency that would accomplish the Purpose and Need. See additional comments in the Statistics and FIA Protocol section for information on statistical concerns with dropping the helicopter plots and Chapters 1 and 2 in the FEIS.

## Statistics and FIA Protocol

**Comment:** The statistical validity of the FIA inventory will not be affected by excluding the non-forested plots.

*[T]he statistical validity of the FIA program will not be harmed by not inventorying non-forested add-on plots on the Tongass and Chugach national forests.*

**Response:** The statistical validity will not be harmed by inventorying only the forested plots. Non-forested plots are included in the inventory because a team of wilderness managers of the Alaska Region were interested in obtaining more complete baseline information about the wilderness area vegetation. To accomplish this, non-forested plots will need to be randomly sampled and the sample size will need to be sufficient. The non-forested data will also be consistent with non-forested data collected from non-wilderness areas in the Alaska Region.

**Comment:** None of those earlier surveys can be statistically compared to recent surveys conducted since yet another new protocol was established in the mid-90s.

**Response:** The earlier surveys did have different protocols so they are not statistically comparable to the current protocol used by FIA. Two or more independent estimates (inventories performed using different sample designs, parameter definitions, measurement procedures, or different plot locations) cannot be compared to assess change as would be necessary for monitoring.

The changes to FIA protocols made in the 1990s were adopted to achieve a single scientifically valid sampling design and estimation process across all forest lands in the country, and the supporting legislation (Agricultural Research Extension, and Education Reform Act of 1998) and subsequent institutional changes are directed toward ensuring continuity of inventory protocols into the future.

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**Comment:** Some of the plots scheduled for inventory in 2005 were not inventoried due to treacherous access, and no claim has been made that this has upset the study's statistical validity.

**Response:** There were three plots in 2005 that were determined to be inaccessible, even with the use of the helicopter. Invariably, this will occur; however, the overall number of inaccessible plots was low relative to the overall plots that were part of the sample and this should not affect the statistical validity of the inventory.

The statistical validity would be affected if the all the helicopter-accessed plots were dropped. This is because the amount of plots dropped would affect the sampling error standards that are part of the national FIA protocol. In addition, the sample would produce biased estimates since only the plots within a short proximity to an access point would be sampled (i.e. the sample would exclude a large portion of the interior and higher elevation plots).

**Comment:** As proposed, the FIA inventory in Alaska Region wilderness areas would occur over a 10 year period and “each plot would not be accessed again for at least several decades (DEIS 1-9).” As a result, there is no guarantee that the inventory will be conducted again in the future.

*This current EIS states that the inventory in wilderness won't be repeated for at least 30-50 years, which basically means that it may never be repeated!*

**Response:** Normally the inventory would start another cycle once it is completed within the estimated 10 years. The FEIS states the inventory would not be repeated for at least several decades because of concerns about having the helicopter access be part of a continuous process. The decades-long interval in data collection is one method to limit the number of helicopter landings. The intent of this statement in the FEIS is to acknowledge that at some future time, remeasurement of the plots could occur. Any future helicopter access would not be authorized without further environmental analysis.

**Comment:** It is not clear why the chance to collect FIA data will be lost if this proposal is not approved.

*The EIS seems to recognize that the wilderness plots may never be inventoried again in the future -- on page 3-11 the EIS notes that if the preferred Alternative is not implemented the USFS would lose this chance to obtain statistically valid baseline data. Why would the chance be lost?*

**Response:** FEIS page 47 states that if the No Action Alternative is selected, there would be no FIA inventory in Alaska Region wilderness areas and the chance to obtain the data is lost. This section also clarifies that the use of the term “lost” means for the immediate future and would likely not occur pending significant changes in the natural or political environment.

**Comment:** The DEIS does not provide the statistical analysis that justifies the use of helicopters.

*The DEIS is notably bereft of any statistical analysis of the accuracy or precision of the FIA protocol or alternatives to it.*

**Response:** The EIS was prepared to consider and disclose the potential effects of helicopters on the environment. General statistical concepts such as bias, random sampling, variance, etc. that the FIA program employs are included in the analysis because of questions related to the number of helicopter-accessed plots. Deintensifying the inventory beyond national FIA protocols increases sampling error and results in data that is difficult to compare. A more detailed explanation of statistics used by FIA is located in the EIS (page 28) and can also be found in the project planning record.

**Comment:** An analysis of past inventory data should be able to determine if the helicopter plots are statistically necessary.

*Past FIA survey data could be used to determine whether excluding helicopter plots either biases the analysis (making it less accurate) or increases the error (making it less precise).*

**Response:** FIA inventory work in the 1970s included lands that are now wilderness areas. That inventory work was designed primarily to provide information about the productive component of the forest land base (productive forest lands are those capable of producing at least 20 cubic feet of merchantable wood per acre per year at culmination of mean annual increment). Large acreages of lower productivity forest were not ground-sampled during the 1970s (Manual of Field Instructions for Forest Survey, Coastal Alaska, 1970).

If the current FIA inventory was only sampling productive forest lands, then it might be possible to make some assessment about excluding the helicopter plots. FIA now inventories all forest lands, and lacking any historic data for the low productivity forest lands, it is not possible to assess the effects of excluding the helicopter plots. Since there is limited past inventory data for the wilderness areas in the Alaska Region, determining the amount of bias that would occur by excluding helicopter plots is unknown. In addition, inaccessible plots cannot be viewed as a random selection of the forest, so bias can be assumed.

Even if the inaccessible plots were a random selection of the forest, reducing the number of plots would substantially increase errors by decreasing the precision of estimates. At this point, there is not sufficient information to determine how the statistics might be affected because it is not known if the vegetation present on the inaccessible plots is different than the accessible plots. It is possible that the inaccessible plots are different than the accessible plots.

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## Monumentation

**Comment:** The 2005 inventory work left permanent plot markers and it is not clear why GPS was not used as a substitute for the permanent markers.

*The administrative record leading up to the 2005 authorization for the inventory indicated that nothing would be left behind at the survey sites, and that the sites would be recorded and re-visited using GPS technology. In contrast, the current proposal calls for installing 3,600 survey markers in wilderness. Why? No explanation is given as to why GPS coordinates would not be sufficient for finding and documenting the survey plots. That possibility needs to be considered.*

A review of the administrative record leading up to the 2005 authorization indicated that the project communication plan's Frequently Asked Questions (Jan. 20, 2005) stated that, "There will be no permanent improvements;" however, this sentence was related to not having the need to clear vegetation for helipads, and not monumentation. The Minimum Requirement Decision Guide (MRDG) dated Feb. 8, 2005 stated, "The national MOU addresses measurement and marking protocols for Wilderness to minimize any disturbances from the survey. This protocol includes the use of stakes. In addition, meeting notes (April 15, 2005) indicated that metal survey markers would be used.

The issue of FIA monumentation in wilderness areas has been discussed at regional and national levels and has focused on alternative methods such as GPS and digital photos that do not leave stakes or other markings. These methods have their application but have not proven reliable for the precise reestablishment of plots and specific microplots within those plots. This is because GPS accuracy varies depending on the number of satellites that can be reached, the time of day, type and thickness of forest canopy and topography that can block satellite signals (McLachlan 2006, [www.okono.com/accuracy](http://www.okono.com/accuracy) 2006). Digital photos are helpful but the level of vegetation change that can occur over time can also make precise reestablishment of plots difficult. GPS, a compass, and aerial photos are used to navigate to the general plot area. Additional information has been added to the FEIS (page 29) to address the use of GPS.

The discussions that have occurred between the national FIA and Wilderness programs resulted in a 2005 intra-agency agreement regarding the minimum level of monumentation (FEIS page 29). This agreement identifies that monumentation is appropriate for the type of work FIA does in wilderness areas. Additional information regarding the suitability of alternative methods and discussions about monumentation are included in the planning record.

**Comment:** From a practical standpoint, if the plots are not going to be reinventoried for 30-50 years, then it is very likely that very few of the markers could even be found after so much time. So why place them?

**Response:** When FIA crews return to re-measure a plot (each plot contains four subplots), it is critical that the center point and the trees within the plot can be positively identified. There are two things they do before they begin the inventory of the plot. They first have to relocate the general area of the plot; this involves finding evidence (nails, reference point tags, subplot center point stakes) that indicate they are at the correct location. Then they reestablish each of the subplots by finding the center point stakes whenever possible by using the distance and azimuth from the marked trees within the subplots. Placing the stakes in the ground or being able to relocate them accurately using the marked trees is important because they are the starting point for the transects and microplots. If the stakes cannot be relocated accurately, an error of at least several feet can occur and this can affect the subplot remeasurements.

Previous inventory monumentation has been used to relocate plots and the use of stakes that are unobtrusive to visitors, rot-resistant and ultraviolet light-resistant, not attractive to animals, and not easily scattered by wind or animals are necessary so the subplots can be reestablished. Additional information about monumentation can be found in the project planning record.

## Safety

**Comment:** Other Forest Service crews in Alaska do not use helicopters for field work and this information is not included in the EIS.

*A major omission in the EIS is its failure to disclose the extent that USFS personnel are currently conducting on-the-ground work by foot and skiff, without use of helicopters for access in Alaska. Timber crews spend all day walking through the forest on foot, despite the risk of bears, slips, sprains, or falls. So do bird survey crews. What makes the FIA crews so different that they need helicopters for access and reconnaissance purposes?*

The section on employee safety in the FEIS discusses hazards that are common to all Alaska Region employees. FEIS 3-50 identifies the hazards and the related injury statistics “to Forest Service employees in the Alaska Region.” The risk assessment that is included in the FEIS is for the FIA project, but the same hazards, as well as any others specific to other projects, would be evaluated using the same principles.

Timber and other resource crews do spend time walking, although they do not access plots randomly spread across at least 6,000 acre (approximately 10 square mile) polygons. They also use helicopters on a regular basis outside wilderness for doing their work. As part of this work, the helicopter is used for reconnaissance and for determining safe routes. During the last decade, over 12,000 hours of helicopter time have been flown in the Alaska Region (FEIS page 82). Additional information about helicopter use and field crew safety is included in the project planning record.

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**Comment:** Helicopters are not being used for FIA work in wilderness areas anywhere else in the country, so why are they needed in Alaska Region wilderness areas?

*Inventory your vegetation using aerial photos and if you want more specific data, use a crew with stock or just hiking and camping. Our crews could cover 10 miles per day while taking plot data, campout and 10 miles the next, and the next etc.*

**Response:** FIA does use aerial photos or satellite imagery in the first phase of the inventory. The second phase is to field-verify the first phase and obtain data that cannot be determined using photos or imagery (USDA Forest Service 2005b). The nature of the proposed field work in Alaska has identified safety concerns. This proposal is considering helicopter access because of the consistently steep, wet and brushy terrain that makes traveling to many of the plots hazardous. FEIS page 5 discusses some of the differences in Alaska versus lower 48 wilderness field work (there are very few trails and pack stock cannot be feasibly used in Alaska Region wilderness areas), as well as the risks associated with different types of access (FEIS pages 8, and 80 through 91).

**Comment:** There is no requirement in any of the statutes and directives guiding the FIA program that mandates crews to attempt accessing inventory plots that may be inaccessible by normal wilderness means (i.e. without helicopters) or where access poses serious safety risk or even death.

**Response:** The Wilderness Act does allow exceptions for certain purposes (FEIS pages 11 through 12) and the Forest Service manual identifies the conditions under which that use can occur (FEIS page 41). If an FIA crew attempts to get close to a plot, even with the use of a helicopter, but finds it too dangerous to continue, the plot is considered to be inaccessible (USDA Forest Service 2005b).

**Comment:** Aircraft operations risk probability should be classified at least as seldom instead of unlikely because of the two injuries in the past two years associated with being around an aircraft.

**Response:** The risk probability due to aircraft operations was classified as unlikely because the accidents that are noted in the FEIS (page 82) were from a slip while getting off a floatplane that resulted in a dislocated shoulder and a sprained wrist from handling a helicopter longline. The accidents were not the result of an aircraft problem (crash or mechanical problem) but fall more under the category of slips, trips, and falls. In addition, the FIA crew will not be using longlines in their operations. The risk severity reflected the potentially catastrophic nature of aircraft operations but recognized that the chance of a catastrophic accident was unlikely (FEIS page 84).

**Comment:** While the EIS classifies bear encounters as high risk it classifies aircraft-associated risk as medium risk. What is the data on aircraft-related

injuries to USFS personnel in Alaska over the past 25 years compared to bear-related injuries for that same time period?

**Response:** Only Alternatives 1 and 2 are rated as high risk for bear encounters because FIA crews will spend substantially more time in the field, which increases the probability of a bear encounter. Alternatives 3 and 4 rate the bear risk as medium and Alternative 5 rates the risk as low due to the decrease in hiking and camping. The level of risk assigned to a hazard such as bears evaluates items such as past accident records, the nature of the work, location, and the ability to reduce or control the hazard (FEIS page 85 through 90).

Aircraft operations are rated as medium risk in all alternatives because of the demonstrated safety record and the operational controls that minimize the residual risk (FEIS pages 87 and 90).

The Forest Service does not systematically track bear-related injuries and does not have records back 25 years so a direct comparison with aviation accidents is not possible. Information on several bear-related incidents is included in the planning record.

**Comment:** The emphasis on safety should be secondary to the focus on an alternative that preserves wilderness character and that discussion should take place in the Record of Decision.

*Safety is important and must be seriously considered. However, safety is a means, not an end. We do not manage wilderness for the safety of the FIA. We manage wilderness to preserve wilderness character. We should select the Alternative that best preserves wilderness character; indeed, this is what the Wilderness Act obligates us to do. Then we should determine the safest way to implement the Alternative. This would mean moving the emphasis on safety from the FIA DEIS to its appropriate place in the documents that discuss the implementation of the Record of Decision.*

The issue of safety has been included as a significant issue because it is a topic that is intertwined with the method of access. The analysis discloses the potential effects of these various means of access to FIA plots, and is the logical place to display them. Removing these effects from the EIS to the Record of Decision would preclude detailed discussion of these effects. The Regional Forester will weigh the benefits of the inventory and all safety concerns against the potential impacts of the alternatives to wilderness character, and other resources in making his decision. The rationale for his decision will be discussed in the Record of Decision.

**Comment:** Crews have been working in wilderness areas for years without helicopters and the FIA crew use of helicopters would be setting a double standard.

*The double standard the FIA DEIS presents is obvious to anyone who has worked in wilderness: It is too risky for the FIA crews to engage in the activities that wilderness crews have been doing for years.*

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**Response:** There are aspects to the FIA project that differ from most other wilderness projects. While other wilderness crews work in remote places and rough terrain, the FIA crews will routinely be working off-trail, on steep, wet and brushy slopes in an effort to inventory randomly selected plots across the landscape. They will often be doing this work at least several miles from water-based transportation while carrying heavy packs. The majority of wilderness crew work takes place near water, often with boat or kayak support to carry gear, or they work at cabins and trails. These crews are not regularly venturing off-trail into the interior parts of the wilderness areas on overnight or multi-night trips on foot with heavy packs. If FIA cannot do their work safely, it means they will not be able to meet the sample size required by the national sampling protocol.

There are approximately 200 plots that have already been determined at the outset of the project to be inaccessible by foot by Alaska Region wilderness managers. Access to other plots is a cause for additional safety concern. Requiring non-helicopter access to these plots essentially means that FIA cannot accomplish the inventory because they cannot do it safely.

The key for Forest Service crews working in wilderness areas is finding a way to accomplish the work while emphasizing safety in attempting to reach places people would not normally go. Challenge and risk are important components of wilderness; Forest Service crews, unlike the general public, are *required* to balance their safety with obtaining a goal such as inventorying a plot.

## Forest Service Manual and Handbook

**Comment:** Forest Service Manual Directive 2324.42 needs to be added to the FIA DEIS.

**Response:** This was included in the DEIS at 3-5 and is in the FEIS on page 41.

**Comment:** The FIA DEIS needs to explain how using helicopters is reconciled with Forest Service Manual Directive 2326.03, which declares policy for use of motorized equipment and mechanical transport in wilderness: Discourage flights over wilderness within 2,000 feet of the ground surface, except in emergencies or for essential military missions.

**Response:** FSM 2326.03 discourages flights over wilderness within 2,000 feet of the ground surface associated with wilderness areas. Although helicopter landings are generally prohibited, they can occur under the conditions set forth in FSM 2326.1 (FEIS pages 7 and 41). Helicopter overflights allow scouting for hazards such as cliffs that do not always show up clearly on aerial photos or are not accurately represented on topographic maps. Table 3-5 (FEIS page 60) provided an estimate of the number of overflights by alternative. This table indicates that not every plot has an overflight or landing associated with it.

## Monitoring, Mitigation and Field Operations

**Comment:** There are plots that are accessible on foot and the EIS should consider this and reduce the number of helicopter-accessed plots.

*All plots on Coronation Island, for instance, have been designated heli access, yet the island is readily reachable by boat and floatplane, has several good anchorages and saltwater floatplane landing sites, and the terrain is suitable everywhere for hike-in.*

**Response:** Access to the plots was developed with local wilderness area managers who evaluated 913 plots and used a leveling process for consistency across the region. In some cases, information from the public can provide additional insight into accessing the plots. The current proposal is for FIA to inventory approximately 10 percent of plots annually. The Monitoring section of the FEIS (page 27) requires FIA to meet twice annually with local wilderness managers to discuss access to the plots. New information about specific plot access such as Coronation Island would be considered and the intent is to evaluate if changes need to be made to the proposed access on an annual basis.

**Comment:** FIA crews may be able to provide monitoring information about commercial floatplane operators while they are in the field.

*In fact, we feel that there may be a possible benefit in the FS's use of floatplanes for FIA related landings on wilderness lakes. FS field personnel may be able to better monitor lakeshore impacts from commercial floatplane operations.*

**Response:** The FIA crews can provide anecdotal information about wilderness use, but a more formal monitoring program would typically be done by wilderness managers.

**Comment:** The FIA field crew supervisor should have the authority to modify field operations.

*The Forest Service person in charge of field work and project should have the authority to modify the plan as circumstances may dictate. The supervisor should be able to substitute helicopter flights for hikes when the result is a more efficient use of the crew and field work time. In addition, this includes substituting helicopter access to plot locations to take advantage of the weather and to assure that field work is accomplished within schedule objective.*

*There may be situations where occupied nests will need to be avoided which may modify the use of the crew and equipment. The field supervisor should have the authority to make such changes.*

**Response:** The FIA person in charge of the field work would have the authority to modify the plan as circumstances may dictate, but the changes would be based on safety concerns or new information regarding access to the plot (FEIS page 41). The field supervisor has the authority to adjust the types and uses of

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equipment based upon field specific observations. This discretion extends to avoiding the use of motorized equipment near occupied nests. Each field season is limited to a specified minimum number of landings authorized per season. It was also recognized that the information gained accessing plots during each field season would be used to further evaluate access for the next field season (FEIS page 21).