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CHUGACH NATIONAL FOREST

FY2009 Forest Plan Monitoring and Evaluation Report

EXECUTIVE SUMMARY

The Forest Plan and subsequent documents established 43 general monitoring questions for the Chugach National Forest. Included are three questions added after the Plan was published. One had been left out inadvertently and two were added as a result of appeal decisions. In fiscal year 2009 (FY2009), 11 of the 43 questions were monitored. This includes: ecosystem trends and changes, soil conditions, sensitive plant species, invasive plants, bear human interactions, brown bears, dusky Canada geese, moose, black oystercatchers, fire protection and fuels management, and Research Natural Areas. Results of this monitoring are displayed in this report. The remaining questions in the monitoring strategy were not monitored for reasons including: (1) monitoring question being reviewed, (2) monitoring protocol had not been completed or approved by the Forest leadership team, (3) monitoring schedules that did not require monitoring to take place in FY09, or (4) budgetary constraints.

CERTIFICATION

I have reviewed the FY2009 Forest Plan Monitoring and Evaluation Report for the Chugach National Forest. Under laws and regulations in effect at the time the Forest Plan was revised (May 31, 2002) a forest plan is generally revised every 10 to 15 years, or whenever the Forest Supervisor determines that conditions or demands have changed. This is the seventh year implementing the Revised Land and Resource Management Plan. Based on the monitoring results in this document, I am satisfied that the revised Forest Plan is sufficient to guide management of the Forest and that there is no need to change the plan at this time.

This report is approved.

Maria Lisowski
Forest Supervisor, Acting

9/8/10
Date

INTRODUCTION

This is the annual monitoring and evaluation report for fiscal year 2009 (FY2009) for the Chugach National Forest Revised Land and Resource Management Plan (Forest Plan). The Forest Plan provides guidance for all resource management activities on the Chugach National Forest. It does this in part by establishing Forest-wide goals, objectives, and management direction. The monitoring and evaluation process is used to ensure that Forest Plan direction is being implemented, is effective, and is not causing effects that were not predicted in the Forest Plan's Final Environmental Impact Statement (FEIS). The evaluation process is also used to assess progress in achieving the desired conditions, goals, and objectives, and to verify that assumptions made in the Forest Plan and FEIS are valid.

The Forest's monitoring and evaluation strategy is located in Chapter 5 of the Forest Plan. The strategy outlines the basic elements of the monitoring program, establishes a Monitoring and Evaluation Interdisciplinary Team (MEIT), and defines 40 key monitoring questions. Three questions were added after the Forest Plan was published, resulting in 43 items to be monitored. The three additional questions included one left out inadvertently (monitoring of mountain goat, a management indicator species), and two added as a result of appeal decisions (air quality and summer off-highway vehicle use). All Forest Plan monitoring is directed toward answering these 43 general monitoring questions.

The MEIT developed protocols with specific monitoring details for many of the general questions. However, many of the previously completed monitoring protocols are currently being revised. Until this effort is complete, monitoring efforts may be minimal or non-existent for those monitoring questions that do not have revised protocols. Protocols are documented in the Monitoring Guide and their revision occurs outside of the forest planning process in order to be responsive to the best available science. A copy of the most current Monitoring Guide can be obtained from the Supervisor's Office.

The Record of Decision (ROD) for the Forest Plan acknowledged a need for obtaining information about the effects of winter snow machine use on ungulates and bears. The Forest regards this as a study to address specific informational needs, not as Forest Plan monitoring; therefore, no information is presented in this document on this subject.

MONITORING ITEMS

All Forest Plan monitoring questions are presented below with a summary of results for FY2009, including items for which no monitoring occurred. Reasons questions were not monitored in FY2009 include: 1) monitoring question being reviewed, (2) monitoring protocol had not been completed or approved by the Forest leadership team, (3) monitoring schedules that did not require monitoring to take place in FY09, or (4) budgetary constraints.

The general monitoring questions are grouped by monitoring purpose or applicable resource category (e.g., soil resources), and are in the same order as presented in Chapter 5, the Monitoring and Evaluation Strategy of the Forest Plan. The three items

that were added after the Plan was published are at the end in a category called "Additional Questions".

For each general monitoring question, the frequency (i.e., schedule) of data collection and evaluation are displayed as presented in Chapter 5 of the Forest Plan. In some cases, the collection and evaluation frequencies are different than what is documented in the Monitoring and Evaluation Strategy. These differences are the result of the establishment and approval of peer reviewed monitoring protocols. Where protocols have been approved that have changed the frequency of data collection in the Forest Plan, the revised frequencies are displayed below. The schedules represent expectations under maximum funding levels.

Monitoring results are summarized only for items monitored in FY2009 and include (1) recommendations for remedial action, and (2) actions taken in FY2009 to respond to previous recommendations. The monitoring strategy specifically calls for these items to be included in the annual reports.

Compliance with Revised Forest Plan

Are projects being implemented consistent with the Forest Plan direction?

- Frequency of Collection: Annually
- Frequency of Evaluation: Every 5th year
- Status in FY2009: Not monitored or evaluated.

Integrated Effectiveness/Validation Monitoring

Are management activities achieving their intended outcomes?

- Frequency of Collection: Annual
- Frequency of Evaluation: Every 5th year
- Status in FY2009: Not monitored or evaluated. Approved protocol is expected in 2010.

To what extent is ecosystem composition and structure changing and has forest management influenced these changes? How do these changes compare to the expected range?

- Frequency of Collection: Annual
- Frequency of Evaluation: Every 5th year
- Status in FY2009: Monitored and evaluated. Protocol was approved by the Forest leadership team in June, 2009.

This monitoring item summarizes trends in ecosystem composition and structural attributes to identify if and where there are changes of sufficient magnitude to be of concern to management. In FY2009, the Forest Inventory and Analysis (FIA) grid inventory data was to be summarized to describe baseline vegetation compositional and structural diversity changes Forest wide and by geographic area (Kenai Peninsula, Prince William Sound, and Copper River Delta).

Evaluation: Summaries of the FIA grid inventory data could not be accomplished because FIA data from multiple time steps (re-measurement data) for the area were not available in 2009. A final report regarding an application of part of the protocol was completed by the Remote Sensing Application Center (RSAC) in January 2009 (RSAC-2102-RPT1). Specifically, RSAC investigated use of vegetation indices to detect change between two Moderate Resolution Spectroradiometer (MODIS) satellite image dates. The MODIS change detection methods are scheduled to be applied operationally in 2012.

Recommendation of Remedial Action: None

Actions taken in response to previous reports: None

Other recommendations: None

Soil Resources

What is the level of ground disturbing activity?

- Frequency of Collection: Annual
- Frequency of Evaluation: Every 5th year
- Status in FY2009: Monitored and evaluated

The draft soil monitoring protocol was applied to a selected project that was judged most likely to have ground disturbance of the types that are categorized as detrimental in the protocol. The project is a heavily thinned and piled forest stand along the Old Sterling Highway on moderate to moderately steep slopes. Though the overstory and middle vegetation layers were severely manipulated from cutting and piling, ground disturbance was nil. Disturbance to the ground vegetation was relatively high, most likely to meet the fuels objectives; disturbance to the forest floor organic layers varied but was low overall. In no cases where the organics were disturbed was the mineral soil disturbed. In the disturbance criteria of the protocol, less than one percent of the area surveyed was disturbed and none of it rated detrimentally disturbed. Slash has not yet been burned. A survey for burn severity will be made after the slash is burned.

Evaluation: Though the overstory and middle vegetation layers were severely manipulated from cutting and piling, ground disturbance was nil. Disturbance to the ground vegetation was relatively high, most likely to meet fuels objectives; however, disturbance to the forest floor organic layers varied but was low overall. In no cases where the organics were disturbed was the mineral soil disturbed. Less than one percent of the area surveyed was disturbed and none of it rated detrimentally disturbed. None of the slash had been burned yet.

Recommendation of Remedial Action: None

Actions taken in response to previous reports: None

Other recommendations: Conduct survey for post burn severity after slash is burned.

Water Resources

What is the existing water quantity?

It has been proposed that this monitoring question be dropped from the monitoring strategy because it reflects a research question rather than a monitoring need. The Forest does not expect to develop a protocol for this question.

Are Best Management Practices (including wetland management) effective in meeting water quality standards?

- Frequency of Collection: Annual
- Frequency of Evaluation: Annual
- Status in FY2009: Not monitored or evaluated

Sensitive and Exotic Plant Species

What is the abundance and distribution of sensitive plants in areas affected by management activities?

- Frequency of Collection: Annual
- Frequency of Evaluation: Every 5th year
- Status in FY2009: Monitored and evaluated. The sensitive plants monitoring protocol was approved as final by the Forest leadership team in April, 2009.

This monitoring evaluates the likelihood that Forest management activities are contributing to a downward trend in sensitive plant populations. Both effectiveness and implementation monitoring components are included. The effectiveness monitoring is to determine whether sensitive plant population abundance or distribution is changing in areas where management activities are occurring. The implementation monitoring is to determine the extent to which mitigation measures from biological evaluations (BE's) and other botanical input are carried into NEPA documents, incorporated into decisions and permits, and finally implemented. Under the protocol, reporting occurs every five years (beginning 2012), data entry in to NRIS TESP occurs annually, and once there are at least five populations available for sampling annual effectiveness monitoring occur.

In FY2009, one sensitive plant species (pale poppy – *Papaver alboroseum*) was found in surveys of project areas as documented in biological evaluations. Mitigation measures from the BE will be carried forward into the environmental assessment for the project (Avalanche Acres Hazardous Fuels Reduction Project). There are fewer than five known instances of overlap of sensitive plant populations and areas of active management.

Evaluation: In the one instance where management activities were proposed in an area near sensitive plants, mitigation measures were incorporated into the decision to protect this species.

Recommendation of Remedial Action: None

Actions taken in response to previous reports: None

Other recommendations: None

What is the distribution and abundance of exotic plants, particularly in areas affected by management activities?

- Frequency of Collection: Annual
- Frequency of Evaluation: Every 5th year
- Status in FY2009: Monitored and evaluated. The invasive plants monitoring protocol was approved as final by the Forest leadership team in April, 2009.

This protocol includes both effectiveness and implementation monitoring components. The effectiveness monitoring is to determine the contribution of human-caused disturbance associated with Forest management on the distribution and abundance of invasive plants on the Forest. The implementation monitoring is to determine if projects are being implemented consistent with invasive plant standards and guidelines specified in the Forest Plan and in project specific mitigation measures. Under the protocol, most of the monitoring would be reported on every five years (beginning in 2012).

As specified in the protocol, invasive plant control project monitoring is conducted annually to assess treatment effectiveness towards meeting the Forest Plan goal to "reduce areas of current infestation". In FY2009, as documented in FACTS, the average effectiveness of the manual invasive plants treatments used on the Forest was estimated at about 45%.

Evaluation: In FY2009, the average effectiveness of the manual invasive plants treatments (hand pulling) was estimated at approximately 45%.

Recommendation of Remedial Action: None

Actions taken in response to previous reports: None

Other recommendations: The effectiveness of manual treatments is limited because roots can remain. Future effectiveness could potentially be increased by supplementing the manual methods with herbicide treatments.

Management Indicator Species

What are the population trends for Management Indicator Species (MIS) and their relationship to habitat? Are MIS truly reflective of all fish and wildlife species on the Forest?

Status in FY2009: Upon the evaluation of the Monitoring and Evaluation IDT, a recommendations has been made to drop this question from the monitoring strategy because: (1) the first component of the question is redundant with the general monitoring questions for specific MIS, and (2) the second component of the question is more appropriately addressed as a research item than as a monitoring question.

Has the Revised Forest Plan direction prevented adverse interactions between bears and humans?

- Frequency of Collection: Annual
- Frequency of Evaluation: Every 5th year
- Status in FY2009: Monitored and Evaluated

The Forest Plan seeks to manage human use within bear habitat to minimize the risk of defense of life and property (DLP) mortality to brown bears.

Evaluation: DLP incidents and adverse encounters across the Chugach National Forest were evaluated in 2009 which are typically separated by District or relevant geographic area and by activity under which the DLP occurred. No DLP incidents were recorded on the Chugach NF in 2009 in contrast to 8 DLPs occurring within the Interagency Russian River/Kenai Ferry Management Area during 2008. Until 2008, DLPs on the Forest since the 2002 Forest Plan have typically been between 0 to 2 with the exception of 4 (sow and 3 cubs) during 2003. Most of the DLPs on the Forest have occurred in the vicinity of the Russian and Kenai River confluence area. A Kenai Russian River Interagency Team has been working to reduce adverse interactions between humans and bears in this area.

Recommendation of Remedial Action: None

Actions taken in response to previous reports: None

Other recommendations: None

What are the population trends for brown bear and the relationship to habitat?

- Frequency of Collection: Annual
- Frequency of Evaluation: Annual
- Status in FY2009: Monitored with evaluation available in 2011.

The Interagency Brown Bear Study Team (IBBST) completed a detailed study plan for a DNA-based mark/recapture population estimate for brown bears on the Kenai Peninsula. Work in 2009 also included communication associated with a rigorous scientific review by 10 scientists and edits associated with their comments, consultation with mark-recapture modeling expert Dr. Gary White and also with a DNA lab regarding analytical processing, negotiations with Alaska Department of Fish and Game, development of scientific permit, logistics and planning field work, contract preparations, interagency meetings, and budgetary planning. The study is designed to collect brown bear hair at barbed-wire snares that would be systematically distributed across the landscape from June 1 through July 1 2010. Hair samples will be analyzed for DNA to identify individual bears and those data will be used for estimating the population by mark/recapture computations.

Evaluation: This study is ongoing with results expected to be available in 2011.

Recommendation of Remedial Action: None

Actions taken in response to previous reports: None

Other recommendations: None

What are the population trends for dusky Canada geese and the relationship to habitat?

- Frequency of Collection: Annual for artificial nest island monitoring, and every third year for population trends.
- Frequency of Evaluation: Annual, and every 3 years
- Status in FY2009: Monitored and Evaluated. Monitoring in 2009 consisted of monitoring dusky Canada geese artificial nest islands. Monitoring protocols for both population trends and habitat (nest islands) were approved in February 2010.

The dusky Canada goose breeds primarily on the Copper River Delta in south-central Alaska. The dusky Canada goose has experienced a population decline caused by the 1964 earthquake and its impact on nest success. The Chugach National Forest and Ducks Unlimited initiated an artificial nest island program in 1984. Since 1984, more than 850 artificial nest islands have been installed on the Copper River Delta. Currently, there are approximately 330 artificial nest islands on the Copper River Delta. Monitoring indicates that nests on artificial islands are more than twice as likely to succeed as nests on the shore.

Nests are monitored annually after peak hatch to determine use, nest success, type of predation. In FY 2009, 330 artificial nest islands were monitored. Nests occurred on 144 of the artificial nest islands. The islands with nests included 126 successful nests, 16 destroyed by predators, and 2 that were abandoned.

Evaluation: Artificial nests appear to be an effective way to increase nest success. Approximately 88% of the artificial nest islands were successful in 2009, producing over 600 goslings. The artificial nest islands appear to be helping the dusky Canada goose population trend recover from the effects of the 1964 earthquake in the Copper River Delta area.

Recommendation of Remedial Action: None

Actions taken in response to previous reports: None

Other recommendations: None

What are the population trends for moose and the relationship to habitat?

- Frequency of Collection: Annual
- Frequency of Evaluation: Annual
- Status in FY2009: Monitored and evaluated

Moose are identified as a Management Indicator Species (MIS) on the Chugach National Forest. In addition, moose are an important subsistence species.

Primary and secondary moose winter range has been identified on the Copper River Delta; however, these areas have never been monitored to determine if

these areas are providing substantial nutrition for the current moose population. Moose browse biomass data can be entered into the FRESH model (developed for moose) to determine the carrying capacity of the winter range available to moose. This model was developed by UAA and the USFS PNW research station.

In 2009, District staff in collaboration with the Alaska Department of Fish and Game and the University of Alaska Anchorage collected woody vegetation biomass data on the Copper River Delta. A total of 20 plots were sampled and these data were entered into the moose biomass model FRESH.

Evaluation: The data from the 20 sampled plots within the moose winter range were entered into the moose browse biomass model with results pending.

Recommendation of Remedial Action: None

Actions taken in response to previous reports: None

Other recommendations: None

What are the population trends for black oystercatchers and the relationship to habitat *change*? (The question was revised in 2006 from "What are the population trends for black oystercatchers and the relationship to habitat?")

- Frequency of Collection: 3 years of each 5 year period
- Frequency of Evaluation: Every 5th year
- Status in FY2009: Monitored

The black oystercatcher is a management indicator species (MIS) on the Chugach National Forest that primarily occupy shoreline habitat of Prince William Sound. Human activity in Prince William Sound is increasing at a rapid rate largely due to better access from Anchorage via the Whittier tunnel. Much of this activity takes place in shoreline habitat where oystercatchers nest.

Surveys for black oystercatchers were conducted on the mainland shoreline of Prince William Sound from Cordova through the Valdez Arm, as well as parts of the Bligh Island shoreline from May 27 through June 12. Surveyors recorded numbers of eggs or chicks, nests, and nest bowls, as well as habitat features

Evaluation: Surveys were conducted on 330 miles of shoreline in Nelson, Simpson, and Sheep Bays, Port Gravina, Port Fidalgo, and Valdez Arm. 72 individual black oystercatchers and 25 nesting territories were identified. The black oystercatcher nesting densities were lower on the surveyed mainland section of shoreline than on other shorelines within Prince William Sound.

Recommendation of Remedial Action: None

Actions taken in response to previous reports: None

Other recommendations: None

What are the population trends for Dolly Varden char and the relationship to habitat?

- Frequency of Collection: Annual
- Frequency of Evaluation: Every 5th year
- Status in FY2009: Not monitored or evaluated. Upon the evaluation of the Forest's fisheries biologist, Regional WFEW Director, Acting CNF Planning Staff Officer and the CNF Resources Staff Officer, a recommendation has been made to drop this question from the monitoring strategy because of the extreme difficulty in being able to detect any meaningful level of change as a result of the Forest's management practices. A more appropriate question will be developed to replace this one.

What are the population trends for Coho salmon and the relationship to habitat?

- Frequency of Collection: Annual
- Frequency of Evaluation: Every 5th year
- Status in FY2009: Not monitored or evaluated. Upon the evaluation of the Forest's fisheries biologist, Regional WFEW Director, Acting CNF Planning Staff Officer and the CNF Resources Staff Officer, a recommendation has been made to drop this question from the monitoring strategy because of the extreme difficulty in being able to detect any meaningful level of change as a result of the Forest's management practices. A more appropriate question will be developed to replace this one.

Species of Special Interest

Is Forest management maintaining favorable conditions for sustaining gray wolves?

- Frequency of Collection: Annual
- Frequency of Evaluation: Every 5th year
- Status in FY2009: Not monitored or evaluated. All species of special interest monitoring questions ranked low in priority during the Monitoring and Evaluation IDT ranking process. Consequently no protocols are being developed at this time for these questions. Should the inventory and monitoring budgets remain stable or decline, the Forest will propose dropping these questions.

Is Forest management maintaining favorable conditions for sustaining Kenai wolverines?

- Frequency of Collection: 5 out of 10 years
- Frequency of Evaluation: 5 out of 10 years
- Status in FY2009: Not monitored or evaluated. Monitoring protocol approved by the Forest leadership team in March, 2010.

Is Forest management maintaining favorable conditions for sustaining Townsend warblers?

- Frequency of Collection: Every 5th year
- Frequency of Evaluation: Every 5th year
- Status in FY2009: Not monitored or evaluated. All species of special interest monitoring questions ranked low in priority during the Monitoring and Evaluation IDT ranking process. Consequently no protocols are being developed at this time for these questions. Should the inventory and monitoring budgets remain stable or decline, the Forest will propose dropping these questions.

Is Forest management maintaining favorable conditions for sustaining northern goshawks?

- Frequency of Collection: Annual
- Frequency of Evaluation: Every 5th year
- Status in FY2009: Not monitored or evaluated. All species of special interest monitoring questions ranked low in priority during the Monitoring and Evaluation IDT ranking process. Consequently no protocols are being developed at this time for these questions. Should the inventory and monitoring budgets remain stable or decline, the Forest will propose dropping these questions.

Is Forest management maintaining favorable conditions for sustaining Sitka black-tailed deer?

- Frequency of Collection: Annual
- Frequency of Evaluation: Every 5th year
- Status in FY2009: Not monitored or evaluated. All species of special interest monitoring questions ranked low in priority during the Monitoring and Evaluation IDT ranking process. Consequently no protocols are being developed at this time for these questions. Should the inventory and monitoring budgets remain stable or decline, the Forest will propose dropping these questions.

Is Forest management maintaining favorable conditions for sustaining the Montague Island marmot?

- Frequency of Collection: 1 time
- Frequency of Evaluation: Every 5th year (if marmot are found to be present, adjustments will be made to the schedule)
- Status in FY2009: Not monitored or evaluated. All species of special interest monitoring questions ranked low in priority during the Monitoring and Evaluation IDT ranking process. Consequently no protocols are being developed at this time for these questions. Should the inventory and monitoring budgets remain stable or decline, the Forest will propose dropping these questions.

Is Forest management maintaining favorable conditions for sustaining cutthroat trout?

- Frequency of Collection: Annual
- Frequency of Evaluation: Every 5th year
- Status in FY2009: Not monitored or evaluated. All species of special interest monitoring questions ranked low in priority during the Monitoring and Evaluation IDT ranking process. Consequently no protocols are being developed at this time for these questions. Should the inventory and monitoring budgets remain stable or decline, the Forest will propose dropping these questions.

Threatened, Endangered and Sensitive Animal Species

What are the population trends for trumpeter swans and the relationship to habitat change? (The question was revised in FY2008 from "What are the status and trends of trumpeter swans?")

- Frequency of Collection: Annual
- Frequency of Evaluation: Every 5th year
- Status in FY2009: Not monitored or evaluated. Trumpeter Swans were removed from the Region's Sensitive Species list in February 2009. There are no management issues associated with this species and its population is not of concern. As a consequence, no monitoring protocol is currently being developed and a recommendation will be made to drop this question from the Forest's monitoring strategy.

Forest Products

Are forestlands restocked?

- Frequency of Collection: Annual sample of selected areas
- Frequency of Evaluation: Annual
- Status in FY2009: Not monitored or evaluated. Protocol approved by the Forest leadership team in 2007.

Have conditions changed that would affect the suitability of timber production lands?

- Frequency of Collection: Every 10 years
- Frequency of Evaluation: Every 10 years
- Status in FY2009: Not monitored or evaluated. Protocol approved by the Forest leadership team in 2007.

Minerals

Are mining plans of operations consistent with Revised Forest Plan direction?

Note: In FY2008, this item was determined to be an inventory to be completed in 2008 and the recommendation was made to drop this question from the monitoring plan.

- Frequency of Collection: One time
- Frequency of Evaluation: At year 5
- Status in FY2009: Not monitored or evaluated

Heritage Resources

Are National Register eligible heritage resources being adequately maintained and protected?

- Frequency of Collection: Annual
- Frequency of Evaluation: Annual
- Status in FY2009: Not monitored or evaluated. Protocol is being developed and is expected to be approved in 2010.

What is the status and condition of heritage resources on the Forest?

- Frequency of Collection: Annual
- Frequency of Evaluation: Every 5th year
- Status in FY2009: Not monitored or evaluated. Protocol is being developed and is expected to be approved in 2010.

Recreation Opportunities, Tourism, Access, and Facilities

What are the characteristics of recreational visitors? What is their pattern of recreational use? What are their perceptions of opportunities and settings?

- Frequency of Collection: Once every 5 years
- Frequency of Evaluation: Every 5th year
- Status in FY2009: Not monitored or evaluated. This monitoring question ranked low in priority during the Monitoring and Evaluation IDT ranking process. Additionally, it was determined that the National Visitor Use Monitoring survey with its added location specific questions could adequately address this question. Consequently no protocol is being developed. The Forest has proposed dropping this question. The National Visitor Use Monitoring survey was conducted again on the Forest during the 2008 fiscal year. Survey results are expected late in 2010.

Is the Revised Forest Plan direction for motorized and non-motorized access working?

- Frequency of Collection: Every 5th year
- Frequency of Evaluation: Every 5th year
- Status in FY2009: Not monitored or evaluated

Are areas of the Forest being managed in accordance with the prescribed Recreation Opportunity Spectrum (ROS) class in Forest-wide standards and guidelines?

- Frequency of Collection: Annual
- Frequency of Evaluation: 5 years
- Status in FY2009: Not monitored or evaluated. This monitoring question ranked low in priority during the Monitoring and Evaluation IDT ranking process. Consequently no protocol is being developed at this time. Should the inventory and monitoring budgets remain stable or decline, the Forest will propose dropping this question.

What is the use of developed recreational facilities and how does it compare to capacity?

- Frequency of Collection: Every 5th year
- Frequency of Evaluation: Every 5th year
- Status in FY2009: Not monitored or evaluated. Protocol was approved by the FLT in FY2009.

What are the trends in commercial recreation services on the Forest and how does it compare to capacity?

- Frequency of Collection: Annual
- Frequency of Evaluation: Every 3rd year
- Status in FY2009: Not monitored or evaluated. Protocol was approved by the FLT in FY2009.

Scenic Quality

Are areas of the Forest being managed in accordance with the Scenery Integrity Objectives (SIO) in Forest-wide Standards and Guidelines?

- Frequency of Collection: Annual sample of selected areas
- Frequency of Evaluation: Every 5th year
- Status in FY2009: Not monitored or evaluated. The protocol was approved by the FLT in March of 2010.

Fire Protection and Fuels Management

What is the pattern of abundance of different fuel types on the Kenai Peninsula?

- Frequency of Collection: Annual or once every 5 years depending on the method used
- Frequency of Evaluation: Every 5th year
- Status in FY2009: Monitored and evaluated.

This protocol includes both effectiveness and implementation monitoring components. The effectiveness monitoring component interprets whether changes in fire regime condition class (FRCC) and down wood abundance (based on Forest Inventory and Analysis data) on the Kenai Peninsula geographic area are of sufficient magnitude to be a concern to management. The effectiveness monitoring component is reported every five years with the first report expected in 2012.

The implementation monitoring component is to determine if fire protection and fuels management activities are consistent with the goals, objectives, standards and guidelines specified in the Forest Plan. The implementation monitoring component is monitored annually.

Evaluation: In FY2009, 792 acres of hazardous fuel reduction were accomplished (documented in FACTS). The Forest Plan specifies that 400 acres

of hazardous fuel reduction should be completed annually to reduce fuel buildups. Therefore, in FY2009 this annual specification was exceeded.

Recommendation of Remedial Action: None

Actions Taken In Response to Previous Reports: None

Other Recommendations: None

Wilderness

Is the wilderness character of the Wilderness Study Area (WSA) and areas recommended for Wilderness being maintained?

- Frequency of Collection: Annual sample of selected areas
- Frequency of Evaluation: Every 5th year
- Status in FY2009: Not monitored or evaluated. A protocol is currently being developed for this monitoring question.

Research Natural Areas

Are proposed and established Research Natural Areas (RNA) being maintained in a state unmodified by human activity?

- Frequency of Collection: Annual, and every 5 years
- Frequency of Evaluation: Annual, and every 5 years
- Status in FY2009: Monitored and Evaluated

There are two methodologies for this protocol; 1) database review that occurs annually, and 2) visitor effects monitoring that occur once every 5 years.

There are five research natural areas (RNAs) on the Chugach National Forest. This monitoring documents the ways that each of the Research Natural Areas (RNAs) on the Forest are being managed in a manner consistent with Standards and Guidelines and RNA Management Area Prescriptions specified in the Forest Plan. As specified in the protocol annual database (e.g., PALS, FACTS) reviews were conducted to ascertain compliance with the Forest Plan. On site monitoring for visitor effects occurs every 5 years and is scheduled to take place in 2012.

Evaluation: In FY2009, no cases of non-compliance were found for any of the five RNAs on the Forest.

Recommendation of remedial action: None

Actions taken in response to previous reports: None

Other recommendations: None

Community Effects

What are the trends in local economies?

- Frequency of Collection: Annual
- Frequency of Evaluation: Every 3rd year
- Status in FY2009: Not monitored or evaluated. This question ranked low in priority during the Monitoring and Evaluation IDT ranking process. Consequently no protocol is being developed at this time. Should the inventory and monitoring budgets remain stable or decline, the Forest will propose dropping this question.

What are the effects of National Forest management on lands, resources and communities adjacent to the Forest?

- Frequency of Collection: Once every 5 years
- Frequency of Evaluation: Every 5th year
- Status in FY2009: Not monitored or evaluated. This question ranked low in priority during the Monitoring and Evaluation IDT ranking process. Consequently no protocol is being developed at this time. Should the inventory and monitoring budgets remain stable or decline, the Forest will propose dropping this question.

Additional Questions

What are the population trends for mountain goat and the relationship to habitat *change*? (In FY2008 FLT decided to revise the question to include the word "change".)

- Frequency of Collection: Annual
- Frequency of Evaluation: Every 3rd year
- Status in FY2009: Not monitored or evaluated. Approved protocol expected in 2010.

Are Forest management actions contributing to changes in air quality on the Forest?

Note: This general question was added in response to the Revised Forest Plan appeal decision.

- Frequency of collection: Every 3-5 years
- Frequency of evaluation: Every 3-5 years
- Status in FY2009: Not monitored or evaluated

What is the effect of summer OHV use on soils and/or vegetation where OHV use is allowed?

Note: This general question was added in response to the Revised Forest Plan Appeal Decision.

- Frequency of collection: Not defined
- Frequency of evaluation: Not defined
- Status in FY2009: Not monitored or evaluated. Approved protocol expected in 2010.