



United States Department of Agriculture



OFFICE OF INSPECTOR GENERAL



Forest Service's Plan for Addressing Climate Change

Audit Report 08601-0005-41

OBJECTIVE

We evaluated FS' efforts to administer and meet the Department's strategic goal for climate change on National Forest System lands.

REVIEWED

We reviewed FS' activities related to climate change conducted during fiscal years (FY) 2011-2015, including the performance reports from all of its national forests. We performed fieldwork at the Washington Office, two regional offices, and four national forests.

RECOMMENDS

FS should develop and monitor outcome-based performance measures for addressing climate change, including a new scorecard that fully documents FS' accomplishments for reporting progress. The agency should supply guidance for using the performance measures and for incorporating climate change considerations into all project planning. It should provide training for the climate change coordinators who complete and review the scorecard, and establish a standard job description for the regional climate change coordinators.

OIG reviewed FS' methods for tracking progress towards meeting USDA goals for addressing climate change.

WHAT OIG FOUND

The Forest Service (FS) reported that the agency is meeting the Department of Agriculture's (USDA) strategic goals for developing forests and grasslands that are more resilient to climate change. However, we found that the performance measure FS used to reach that conclusion did not adequately demonstrate accomplishments toward climate change adaptation and mitigation in agency-managed lands. The measure was output-based and only quantified FS compliance with its own strategy because the data and resources needed to assess outcomes were not readily available. The agency's reporting tool (the Climate Change Performance Scorecard) did not dependably reflect FS progress because responders did not provide sufficient supplementary information that described accomplishments. The FS did not issue clear guidance and direction to the national forests for completing the scorecard, and regional offices did not adequately verify the national forests' answers when reviewing the scorecards. National forests inconsistently documented considerations for addressing climate change when planning projects because guidance did not provide specific instructions on when those considerations should be documented.

Without outcome-based performance measures and adequate documentation, FS lacks transparency and accountability, limiting assurance that national forests are implementing climate change actions as the agency expects. Consequently, FS risks not taking actions necessary to achieve its goal and the Department's goal of making the nation's forests and grasslands more resilient to climate change. Due to the findings discussed in this report, we were unable to determine whether FS actually met the Department's strategic goal for climate change.

FS generally agreed with our recommendations. However, management decision has not been reached on these recommendations because FS is still obtaining approval for its planned corrective actions.



United States Department of Agriculture
Office of Inspector General
Washington, D.C. 20250



DATE: August 7, 2017

AUDIT
NUMBER: 08601-0005-41

TO: Thomas L. Tidwell
Chief
Forest Service

ATTN: Antoine Dixon
Chief Financial Officer

FROM: Gil H. Harden
Assistant Inspector General for Audit

SUBJECT: Forest Service's Plan for Addressing Climate Change

This report presents the results of the subject review. We are issuing this report without the Forest Service's (FS) plan for corrective action on the report's recommendations. In its written response to the official draft, the agency generally agreed with the recommendations to improve performance management in the future. However, FS is still in the process of obtaining approval on its planned corrective actions. As a result, management decision has not been reached on any of the report's recommendations.

In accordance with Departmental Regulation 1720-1, please furnish a reply within 60 days describing the corrective actions taken or planned, and timeframes for implementing the recommendations. Please note that the regulations require management decision to be reached on all recommendations within 6 months from report issuance, and final action to be taken within 1 year of each management decision to prevent being listed in the Department's annual Agency Financial Report.

In your written response to the official draft report, you expressed concerns with some aspects of our report. You expressed concerns with the overall design of the review to assess how well the agency met the Department's goal of making the nation's forests and grasslands more resilient to climate change, as stated in the USDA Strategic Plan. You contended that the focus of the Office of Inspector General's review was the Climate Change Performance Scorecard, which was not intended to serve as the sole measure for implementing actions to address climate risk. Rather, the Scorecard was to be used to communicate and improve the agency's organizational

capacity and readiness to respond to risk from climate change by each of the agency's 113 management units that administer the nation's 154 national forests and grasslands.

As was noted in the report, FS used the Scorecard as a performance measure to report to both the Office of Management and Budget and Congress its progress in meeting the Department's strategic goal for climate change. Since compliance with the scorecard is reported as an official performance measure, it should have been adequately and accurately completed to reflect FS' progress.

You also stated in your written response to the official draft report that the Scorecard was designed to allow for flexibility in developing preparedness to adapt to changing ecological conditions. You stated that achievements across regions and forests varied based on knowledge of climate change and analytical capacity when the Scorecard was initiated and that some units had greater achievements than others. You contended that the units selected for the field review did not represent this range and you are concerned the results were skewed towards the low end due to this sample bias.

The suggestion that our sample was biased is not accurate. We obtained and reviewed the scorecards from all 113 national forest management units. Our conclusions were based on our review of all of the scorecards, not just those from the national forests we visited.

We are available to meet with you and your staff at your convenience should you wish to further discuss these matters.

We appreciate the courtesies and cooperation extended to us by members of your staff during our audit fieldwork and subsequent discussions. The report contains publically available information and will be posted in its entirety on our website (<http://www.usda.gov/org>) in the near future.

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Background and Objectives

Background

The Forest Service (FS) manages more than 193 million acres of U.S. public land. FS' mission is to sustain the health, diversity, and productivity of the nation's forests and grasslands to meet the needs of present and future generations. Americans rely on their forests and grasslands for a wide range of benefits, such as water, food, wood, and outdoor recreation. Climate change will affect the ability of these lands to continue delivering these benefits. According to both the National Oceanic and Atmospheric Administration (NOAA) and National Aeronautics and Space Administration (NASA), 2016 was the warmest year on record.¹ Long-term observation indicated that the United States and the world are getting warmer, and some types of extreme weather and climate events are becoming more frequent and severe. These changes have far-reaching implications for urban and rural areas, food security and water supply, natural resources, and human health. In 2014 alone, eight U.S. weather and climate disasters cost at least \$1 billion each.²

One of USDA's primary goals in its 2014-2018 Strategic Plan is to "ensure our National Forests and private working lands are conserved, restored, and made more resilient to climate change, while enhancing our water resources."^{3,4} To coincide with the Department's goal for climate change, FS established a similar goal in its strategic plan to "foster resilient, adaptive ecosystems to mitigate climate change."⁵ The GPRA Modernization Act of 2010⁶ requires agencies such as FS to measure and report their progress in meeting their strategic goals annually to the Office of Management and Budget (OMB) and to Congress.

To achieve Department and FS strategic goals for climate change, FS developed a National Roadmap for Responding to Climate Change. The Roadmap established a range of short and long-term actions to help national forests respond to the challenges posed by climate change.⁷ FS created a performance management tool called the Climate Change Performance Scorecard to track its progress on climate change. The scorecard was designed to be used for fiscal years (FY) 2011-2015 to improve FS' organizational capacity and readiness to respond to climate change and to determine national forests' compliance with the FS' adaptation and mitigation strategy. Each of the agency's 113 management units that administer the nation's 154 national forests submits an annual scorecard that documents progress in implementing strategic actions

¹ According to NOAA, not only was this the third consecutive year to rank hotter than all previous years, it also means 16 of the 17 hottest years on record have occurred since 2000.

² NOAA National Centers for Environmental Information (last visited September 8, 2016), <http://www.ncdc.noaa.gov/billions/events.pdf>.

³ USDA, *Strategic Plan FY 2014-2018* (January 2014).

⁴ This was also stated as a primary goal in USDA's Strategic Plan for 2010-2015.

⁵ USDA FS *Strategic Plan: FY 2015-2020* (June 2015).

⁶ GPRA Modernization Act of 2010, Pub. L. No. 111-352, 124 Stat. 3866 (2011). The acronym "GPRA" generally refers to the Government Performance Results Act of 1993, Pub L. No. 103-62, 107 Stat. 285, which the GPRA Modernization Act of 2010 superseded.

⁷ USDA FS, *National Roadmap for Responding to Climate Change* (Feb. 2011).

related to climate change.⁸ The climate change coordinator for the national forest management unit completes the scorecard, which consists of ten elements (questions) divided into four dimensions (categories). The coordinator answers “yes” or “no” to each question, and should support that answer with a description of accomplishments or plans for improvement. The annual scorecards are evaluated by FS’ Office of Sustainability and Climate Change (OSCC), and the results are reported to OMB and Congress.

FS plays an important role in mitigating the effects of climate change. Mitigation strategies include promoting healthy forests to increase the uptake of atmospheric carbon by forests and the storage of carbon in soils, vegetation, and long-lived wood products.⁹ The absorption of carbon in forests helps to offset sources of carbon in the atmosphere from deforestation, forest fires, and fossil fuel emissions. FS also uses adaptation strategies to build resistance to climate stressors such as drought, insects, and wildfire.¹⁰ The agency implements adaptation strategies and manages the land through project work, most of it designed to make the forests more resilient to climate change impacts. The National Environmental Policy Act of 1969 (NEPA)¹¹ requires agencies to complete an Environmental Impact Statement (EIS) or Environmental Assessment (EA) when the project work proposed impacts the natural environment.¹² FS issued supplemental guidance recommending that both the EIS and EA include analysis on the proposed project’s impact regarding climate change.

Objectives

Our audit objective was to evaluate FS’ efforts in administering and meeting the Department’s strategic goal for climate change on National Forest System lands. Due to the findings discussed in this report, we were unable to determine whether FS actually met the Department’s strategic goal for climate change.

⁸ FS reduced the number of management units administering its national forests from 154 to 113 by consolidating the administrative function for a number of its national forests.

⁹ Carbon is a greenhouse gas that can be emitted from direct human-induced impacts on forestry and other land use.

¹⁰ USDA-FS, *Climate Change: What is the Forest Service Doing to Help?* (last visited July 11, 2016), <http://www.fs.fed.us/science-technology/climate-change/what-forest-service-doing-to-help>.

¹¹ National Environmental Policy Act of 1969, Pub. L. No. 91-190, 83 Stat. 852 (codified at 42 U.S.C. §§ 4321-4347).

¹² Under NEPA, agencies conduct environmental analyses to assess the nature and importance of the physical, biological, social, and economic effects of a proposed action and its reasonable alternatives. Conclusions about the significance of effects determine the levels of analysis and documentation. In general, if preliminary analysis indicates there may be significant effects on the environment, an EIS is prepared. If it is uncertain whether the proposed action may have a significant effect on the environment, an EA is prepared. If the expected impact is insignificant, the agency proposing the work can be categorically excluded from preparing an EIS or EA.

Finding 1: FS' Performance Measures for Climate Change Are Inadequate

In the *USDA Strategic Plan: FY 2014-2018*, FS was assigned responsibility for contributing to the Department's goal for addressing climate change. FS used a single performance measure to assess progress towards that goal. We found that because the measure was output-based, it only quantified FS' compliance with its own climate change adaptation and mitigation strategy and did not demonstrate accomplishments towards adaptation and mitigation in forests and grasslands. Moreover, all of FS' performance measures reported in the *USDA Strategic Plan* were output-based. The agency emphasized output-based performance measures because it lacked the data and resources needed to assess, track, and monitor outcomes, specifically those related to climate change. Without outcome-based performance measures that fully describe accomplishments, FS cannot adequately determine and report progress toward meeting the Department's strategic goal for addressing climate change.

The GPRA Modernization Act of 2010 requires each agency to prepare an annual performance plan covering each program activity. Such plans should establish "performance indicators" (measures) to be used in measuring or assessing the relevant outputs and outcomes of each program activity, which provide a basis for comparing actual program results with established performance goals.¹³ Federal agencies are required to be more transparent about their goals and their performance accomplishments in the achievement of those goals, and those goals are required to be outcome-oriented.

FS reported five Key Performance Measures (KPM) in the *USDA FY 2015 Annual Performance Report*.¹⁴ All five were output-based performance measures, and only one of those (KPM 2.2.1) was specific to climate change. These performance measures quantified the work completed, such as the number of acres treated for watershed restoration or volume of timber sold. KPM 2.2.1 measured the "percentage of national forests and grasslands in compliance with a climate change and mitigation strategy." FS reported that 85 percent of its national forest management units were in compliance in FY 2015.¹⁵ But KPM 2.2.1 and FS' reported results did not fully describe the outcomes of the type of work performed, or assess how the work has made the national forests more resilient to the negative effects of climate change. Because the Department's overall strategic goal for climate change is outcome-oriented, FS' reported output-based results make it difficult to accurately measure FS' progress toward the agency and Department's climate change goals.

FS relied on output-based performance measures that do not directly correlate to the Department's outcome-oriented strategic goal for climate change because it lacked the data needed to assess, track, and monitor outcomes. For example, FS currently tracks and reports the

¹³ GPRA defines an "output measure" as the tabulation, calculation, or recording of activity or effort that can be expressed in a quantitative or qualitative manner and defines an "outcome measure" as an assessment of the results of a program activity compared to its intended purpose. GPRA Modernization Act of 2010, Pub. L. No. 111-352.

¹⁴ USDA, *FY 2015 Annual Performance Report/FY 2017 Annual Performance Plan* (last visited March 15, 2016), <http://www.usda.gov/documents/usda-fy15-annual-performance-report.pdf>.

¹⁵ Forest Service used the Climate Change Performance Scorecard to measure output for KPM 2.2.1. The agency reported that 85 percent of its national forest management units were in compliance, which is short of the FY 2015 goal of 100 percent compliance (we found that the FY 2015 result of 85 percent is questionable; see Finding 2 for a detailed explanation).

number of acres it treats for watershed restoration, but not the overall impact the treatment had on addressing the negative effects of climate change on the watershed or the surrounding landscape. Agency projects do not routinely collect data to measure or study the projects' effects on climate change adaptation and mitigation. Outcome-based performance measures require a good monitoring system to gather data. For the land management agencies tasked with addressing climate change, this means that deliberate monitoring is necessary in order to facilitate timely generation of data needed for reporting outcomes.

According to a FS official at the Washington Office, developing outcome-based performance measures has been a challenge for the agency because of scope and time: the results of actions taken on the vast landscapes managed by FS may take many years to become visible. Additionally, limited resources inhibit FS' capacity to analyze data and report the outcomes. FS weighed the value of data collection and management of that information versus completing more projects.

FS has recognized the need to develop outcome-based performance measures. In a briefing paper from 2013, FS acknowledged that the agency did not have an effective means of quantifying and communicating the work that has been done, the outcome on the landscape, or the value of that work to the American public.¹⁶ The paper further outlined how to develop high level outcome-based performance measures and how these would evaluate the existing output-based measures, agency activities, and supporting statements about the impacts of restoration. Some examples of the proposed outcome-based measures included:

- Number of watersheds within 5 years with improved function (changes in classification)¹⁷
- Reduction in the spread of invasive species by percentage¹⁸
- Percentage reduction of sedimentation due to the number of roads decommissioned¹⁹
- Reduction in fire risk due to acres thinned

Each of these outcome-based performance measures could be used to more fully describe the agency's progress toward meeting the Department's strategic goal for climate change. For example, measuring the reduction in fire risk due to the removal of hazardous fuels²⁰ from the landscape (thinning), or measuring the change in watershed classifications to more closely correlate to the Department's strategic goal.

¹⁶ USDA FS, *Restoration Performance Measure: Recommendation for Staffing the Development of Measure(s)* (June 2013).

¹⁷ A watershed is an area of land where all the water that is under it, or drains off it, collects into the same place (e.g., river). Under the Watershed Condition Framework, FS has established a three level classification for watershed functionality: Class 1 = Functioning Properly; Class 2 = Functioning at Risk; and Class 3 = Impaired Function.

¹⁸ An invasive species (plant or animal) is a nonnative species to the ecosystem and capable of causing environmental, economic, or human harm. Invasive species often compete so successfully in a new ecosystem that it displaces the native species and disrupts an important ecosystem process.

¹⁹ Road closures have been shown to reduce the delivery and transport of sedimentation into watersheds. Studies have shown that sedimentation has negative consequences to the aquatic habitat and water resource infrastructure.

²⁰ Hazardous fuels are the over-accumulation of vegetation on National Forest System lands such as grass, plants, shrubs, and trees that feed fire.

FS agreed that outcome-based performance measures need to be developed to adequately assess its program activities and has taken some steps to accomplish this. In February 2016, OSCC established a working group to review the newly redesigned Climate Change Performance Scorecard and to evaluate FS' existing output-based measures. FS showed us a draft version of the new scorecard at that time, which demonstrated a shift toward documenting desired project outcomes. This scorecard also more effectively aligned the different elements with the agency's strategic plan. We encourage FS to continue to develop outcome-based performance measures and design an effective tool to measure outcomes.

Under the current output-based performance measures, FS has an inadequate basis to compare the results of its program activities to determine if the agency has achieved its performance goals. FS must develop performance measures that are outcome-based, not only to comply with GPRA's requirements, but also because FS otherwise cannot adequately determine and report that it is supporting the Department's goal for leading efforts to address climate change in forestry.

Recommendation 1

Develop outcome-based performance measures specific to climate change that adequately assess the agency's progress in meeting the Department's strategic goal for climate change.

Recommendation 2

Establish a monitoring system to track, assess, and report the agency's progress in meeting the Department's strategic goal for climate change using the outcome-based performance measures developed in Recommendation 1.

Finding 2: FS' Climate Change Performance Scorecard Results Are Questionable

FS developed a performance measurement tool to gauge the agency's progress towards reaching its goals for climate change adaptation and mitigation. The Climate Change Performance Scorecard was introduced in 2011, and all forests used it to report activities performed. However, we found that the results from the scorecards did not dependably reflect FS' progress toward meeting its stated goals and objectives. Although 96 of the 113 national forest management units (85 percent) reported compliance with FS expectations, we questioned the accuracy of that number. The forests visited during our audit could not provide enough supplementary information to support the "yes" answers on the scorecard. This occurred because FS did not issue clear guidance and direction to the national forests for completing the scorecard, and regional offices did not adequately verify the national forests' answers when reviewing the scorecards. As a result, FS may have overstated to Congress and the American public its accomplishments on climate change. Also, without accurate results, FS risks not taking the necessary actions to meet the Department's strategic goal for climate change.

FS developed a guide²¹ to accompany the Climate Change Performance Scorecard that instructs national forests to use the scorecard to measure progress toward compliance with FS' climate change adaptation and mitigation strategy.²² The guide says forests should develop narratives that describe accomplishments and/or plans for improvement to support scorecard answers. By 2015, each national forest was expected to answer "yes" to at least seven of the ten scorecard questions (referred to as "elements"), with at least one "yes" in each of four categories (see Exhibit B).²³

National forests' climate change coordinators supply a "yes" or "no" answer to the scorecard's questions, and then, according to the guide, develop a narrative that supports the answer. To determine if the scorecard questions were both adequately and accurately answered, we reviewed scorecard narratives from FY 2015. According to FS' scorecard results, 96 national forest management units met the criteria. However, based on our review of the scorecard narratives, we questioned whether 86 of the 96 national forest management units (90 percent) took sufficient actions and adequately supported those actions in the narratives to record "yes" responses. As a result of those questionable "yes" responses, the compliance of 32 of the 86 national forest management units (37 percent) with FS' expectation²⁴ is questionable.

Unclear guidance and a lack of consistent directions caused questionable results

After review of the scorecards, we determined that the questionable responses resulted from unclear guidance from the Washington Office. The guide described the actions

²¹ USDA FS, *Navigating the Climate Change Performance Scorecard, A Guide for National Forests and Grasslands (Version 2)* (Aug. 2011).

²² USDA, Strategic Plan FY 2010-2015, at 14, <http://www.ocfo.usda.gov/usdasp/sp2010/sp2010.pdf>.

²³ The scorecard is organized around four categories, also referred to as dimensions: Organizational Capacity, Engagement, Adaptation, and Mitigation and Sustainable Consumption.

²⁴ As was previously noted, FS' expectation was that by 2015 each national forest would have answered "yes" to at least seven of the ten scorecard questions, with at least one "yes" in each of the four categories.

required to answer “yes” to the ten elements, and supplied questions to elicit the information necessary to support the positive answers. However, the guide did not specify the number of actions the forests should implement, or the descriptive details the forests should include in their narratives to meet the requirements. In addition, the directions from one of the regional offices we reviewed contradicted the national office guidance by instructing the forests to complete the requirements of the elements without satisfying requirements for the narratives. Below, we discuss results for two of the ten elements:

Element 1: Employee Education—To answer yes on this element, forests must require all employees and program specialists to receive relevant training. OIG found that the “yes” responses on 69 of 85 scorecards (81 percent) were questionable.²⁵ The narratives did not demonstrate that all employees had received such training. The guide did not instruct forests to track participation, but only asked respondents to identify the type of training required.

Regions did not enforce the requirement for training. Forests were permitted to answer “yes” to Element 1 by simply making a 30-minute webinar available to employees. Forests did not make the viewing mandatory and did not track the number of employees who actually viewed the webinar since participation was not required to be tracked. Forests also could not identify whether program specialists had received advanced training, as required by Element 1.

Element 7: Adaptation Actions—Forests must report actions taken to reduce the impacts of climate change on key resources. We found that 18 of 88 “yes” responses (20 percent) were questionable, because forests did not describe specific projects or only mentioned a small number of projects in the narratives.²⁶ For example, one forest stated that it incorporated recommendations from its regional research station for addressing the impacts of climate change. However, the forest did not specify which projects the recommendations affected, or describe the outcomes of those projects. The guide does not provide quantifiable criteria that would measure a forest’s actions; therefore, we could not verify that actions taken were sufficient.

Without clear and specific guidance and relevant directions from the regional offices and the Washington Office, the national forests may not report their results consistently, or include quantitative analysis of their actions.

Climate change coordinators lacked necessary resources and training to adequately complete and review scorecard

Climate change coordinators are the FS employees tasked with ensuring the scorecards are prepared and reviewed accurately and consistently throughout the agency. This

²⁵ For Element 1, we reviewed the 85 scorecards that had a “yes” response to the element, and the national forest management unit reported that it had met FS’ previously discussed expectation.

²⁶ For Element 7, we reviewed the 88 scorecards that had a “yes” response to the element, and the national forest management unit reported that it had met FS’ previously discussed expectation.

responsibility was a collateral duty and not a full-time position, and was not defined by a standard job position description. As a result, coordinators were frequently challenged to allocate the time needed to properly carry out their responsibilities, and they did not receive training for proper completion of the scorecards. These obstacles contributed to the questionable results for the scorecards.

The national forests' climate change coordinators were primarily responsible for scorecard preparation, and the regional offices' coordinators were primarily responsible for reviewing those scorecards and summarizing results. Regional coordinators also provided guidance and support to the forests' climate change coordinators, enabled communication between the forests and OSCC, and encouraged the forests to improve performance for integrating climate change considerations into projects.²⁷

In addition to the lack of guidance previously discussed, the questionable results for the scorecard reflect dual problems. First, the forests' climate change coordinators did not adequately prepare the scorecards, and the regional climate change coordinators did not adequately review the scorecards. Furthermore, regional climate change coordinators did not consistently question the forests' responses when the responses were incomplete or unsatisfactory, and they often approved forests' responses without questions.

Lack of time and training limited the coordinators' ability to interpret requirements and accurately prepare and review the scorecards.²⁸ This was especially true for those coordinators who worked at the regional level and divided time between the multiple scorecard tasks and the duties required by their primary position. For example, several staff we interviewed at a national forest, including the forest's climate change coordinator, did not know the identity of the regional climate change coordinator because that person spent so little time in that capacity.

Furthermore, no climate change coordinators in our sample received training specific to the role, even though Element 2 requires that all coordinators receive training sufficient to make the assignment "successful." In the examples we cited, training would have helped coordinators understand the requirements of the elements so that they could better prepare the scorecard.

The agency relies on the scorecard as a core element of FS' climate change strategy. Climate change coordinators are crucial to making the scorecard a successful performance measure. Therefore, FS should develop a standard job description for the regional climate change coordinator position to ensure that the scorecard is adequately and consistently completed throughout the country. A standard job description would formalize the climate change coordinator position and its responsibilities, thus giving them more authority to act on climate change activities. It would also provide further assurance that their climate change responsibilities will be effectively completed, which

²⁷ USDA FS, *Navigating the Climate Change Performance Scorecard, A Guide for National Forests and Grasslands (Version 2)* (Aug. 2011).

²⁸ While time constraints presented challenges for the forests' climate change coordinators, 100 percent of the scorecards were still completed and submitted timely.

would help contribute to national goals. As of our closeout meeting, OSCC has begun consideration to develop a formal agreement toward creating a standard job description for the regional climate change coordinator position.

FS should also establish training specifically for the climate change coordinators so that they are better equipped to prepare and review scorecards, especially with the new scorecard currently under development (see discussion below). Scorecard elements may sometimes require specific items or details, so training for scorecard requirements would be beneficial and provide clarity.

New scorecard needed to more adequately track FS' climate change accomplishments

Since the original scorecard was intended to be used only through FY 2015, OSCC has been preparing another version of the scorecard.

FS is planning a number of significant changes to the scorecard. For example, the new version proposes an outcome-oriented approach for the three elements under the "Adaptation" dimension. Under this approach, the national forests would quantify the results of the work completed using specific metrics for each program. In addition to quantitative results, the new performance measures would describe the type of work performed and how the work has made the national forests more resilient to the negative effects of climate change. With this approach, FS will have a basis to compare the results of its program activities to determine if the agency has achieved its performance goals.

OIG supports FS' new and improved design for this key dimension as it would provide more detailed information for decision-makers. However, the overall design of the new scorecard will still have most of the same elements as the original scorecard. FS will need to establish additional guidance that clearly defines what actions the forests should implement and how many actions and descriptive details the forests should include in their narratives to support their scorecard results.

OIG concurs that FS should implement the new version of the scorecard. The new scorecard focuses on outcome measures for adaptation activities using program specific quantitative metrics. To avoid the limitations of the original scorecard, the agency should implement the recommendations of this finding in the new scorecard. The agency should also address the lack of a standard job description and training for the climate change coordinators to ensure that the new, more extensive scorecard is prepared and reviewed in an accurate and consistent manner.

Recommendation 3

Establish criteria that clearly define what should be included in the scorecard narratives.

Recommendation 4

Establish criteria that clearly define what actions would be sufficient to satisfy the requirements of each scorecard element.

Recommendation 5

Establish a tracking process to ensure that all FS staff required to take climate change related training actually received it.

Recommendation 6

Establish a formal agreement and standard job description for regional climate change coordinators so they are allocated sufficient time and resources to perform their assigned duties.

Recommendation 7

Establish training specifically for the climate change coordinators so they are able to adequately prepare and review the scorecards.

Recommendation 8

Implement a new scorecard that more fully documents FS' accomplishments relating to climate change.

Finding 3: FS Lacks Adequate Guidance for Documenting Its Climate Change Related Considerations and Analysis

During the course of the audit, we identified that national forests inconsistently documented their consideration of mitigating and adapting to the effects of climate change when planning project work. Although FS asserted that they expect climate change considerations to be incorporated into the design of all of their projects and provided guidance to include climate change as a factor when developing projects, that guidance did not provide specific instruction on when those considerations should be documented. Without sufficient documentation, FS was not able to substantiate that national forests are considering the impacts from climate change when proposing, selecting, and implementing climate change actions as the agency expects. As a result, FS may not be achieving its goal and the Department's goal to ensure that national forests and grasslands are made more resilient to climate change.

FS issued guidance to national forests in 2009²⁹ for considering climate change effects when evaluating projects for NEPA. It says that when planning and proposing projects requiring NEPA analysis (i.e., an EIS or EA),³⁰ forests should consider the impact climate change may have on those projects. Forests should also consider the potential for affecting climate change when proposing those projects.

FS has provided guidance for climate change considerations and analysis for NEPA documents, but the guidance is general and provides flexibility for land managers to decide whether or not to incorporate their considerations and analysis in the NEPA documents. FS did not have guidance or requirements for considering and documenting climate change effects in projects that did not require NEPA analysis. As a result, projects could be planned and executed with little or no consideration for climate change effect. Out of the sample of 24 projects we reviewed,³¹ 12 (50 percent) did not include FS' project-specific climate change considerations or analysis in the project files.³² Given that 8 (67 percent) of these projects did not require NEPA analysis and therefore no climate change analysis, the lack of guidance allowed many FS projects to overlook documenting climate change considerations.³³

Some NEPA analysis did not include climate change factors in the documentation

A NEPA analysis must be conducted whenever a project is proposed that would impact the natural environment. Of the types of NEPA analysis possible, the guidance for EISs and EAs contains the most rigorous requirements for environmental analysis and is included in the agency's 2009 guidance for climate change analysis for NEPA. Our

²⁹ USDA FS, *Climate Change Consideration in Project Level NEPA Analysis* (Jan. 13, 2009).

³⁰ NEPA requires an EIS or EA be prepared when the proposed work is expected to have an impact on the natural environment. If the expected impact is insignificant, the agency proposing the work can be categorically excluded from preparing an EIS or EA.

³¹ The 24 projects were selected from 217 climate change related projects conducted during FYs 2011-2015 at the 4 national forests we reviewed.

³² The project file is a file maintained by the national forest that contains all documentation to describe the proposal, plan, design, and implementation of a project, including all NEPA required analysis.

³³ For the purposes of this report, we considered a project not to require NEPA analysis if the agency was categorically excluded from preparing an EIS or EA.

review determined that climate change considerations and analysis have not been consistently documented in NEPA analysis. We reviewed EISs and EAs for the 14 sampled projects that required them. Of those 14 projects, 2 (14 percent) did not include FS' project-specific climate change considerations or analysis.³⁴ In both cases, the national forest units believed that the level of analysis documented in the EIS or EA was in compliance with FS' NEPA climate change guidance.

One project contained an analysis of climate change that was not project-specific. The national forest felt that the analysis performed reflected the level that the unit could accomplish at the time. It felt that project-specific climate change analysis was beyond the unit's level of knowledge at the time, and it would not be able to provide quantifiable analysis about the project with regard to climate change.

The other project did not mention climate change in its NEPA analysis at all. The national forest felt that climate change did not need to be included because it was not identified as an issue during the analysis.

In our view, documenting considerations for climate change in a project proposal and NEPA analysis should be considered standard practice, even if the results are not quantifiable or sophisticated. Such information helps evaluate a project's contributions to FS' and USDA's goal for climate change adaptation and mitigation. To ensure consistent and comprehensive availability of information, FS should provide additional guidance to ensure forests are fully conducting climate change analysis when completing EISs and EAs.

FS stated that it was reluctant to amend the climate change elements of its 2009 NEPA guidance before the Council on Environmental Quality (CEQ) finalized its draft climate change guidance.³⁵ On August 1, 2016, CEQ finalized its NEPA guidance, stating that agencies should document their climate change analysis in all new EISs and EAs. It also stated that agencies should provide a qualitative analysis even if the necessary data are not available to quantify the impact. To comply with CEQ's guidance, FS should act to amend its 2009 NEPA guidance to ensure that its national forests fully document their climate change considerations and analysis in the NEPA documents when an EIS or EA is required.

Most non-NEPA project files did not include climate change considerations

FS issued guidance that defined required elements and the purpose of project file documentation. The FS manual states that project-level plans should be designed to achieve long-term objectives identified in the agency's strategic plan.³⁶ Additionally, the

³⁴ There were two additional projects where FS did not include project specific climate change considerations or analysis in the NEPA documents; however, we did not take exception because the NEPA documents were prepared before FS issued its 2009 NEPA guidance.

³⁵ CEQ was established by NEPA and is responsible for developing and recommending national NEPA policy. In 2010, CEQ issued draft guidance for including climate change considerations and analysis in NEPA documentation.

³⁶ USDA FS, Forest Service Manual, §§ 1906.2, "Short-Range Tactical Planning," 1906.21, "Project Planning" (Oct. 2007).

FS and USDA strategic plans clearly indicate climate change adaptation and mitigation within the national forest system is a high priority that project planning should address. Under the agency's first goal in the FS strategic plan,³⁷ Objective A states that FS will "Foster resilient, adaptive ecosystems to mitigate climate change." This guidance implies that climate change considerations should be included in project-level plans (which would be included in the project file), but does not make it a stated requirement. The result of such guidance is reflected in our finding that 8 of the 10 projects that did not need NEPA analysis (i.e., an EIS or EA) did not contain any project-specific climate change analysis in the project files.

The Forest Service manual states that

"The focus of short-range plans is to design projects and activities under long-term guidance of the strategic plan.... This includes analysis and evaluation of the projects and activities under the plans.[...]Such plans and processes deal with the specifics of how to get the job done.[...]Project-level plans describe on-the-ground projects and activities designed to achieve long-term objectives identified in the strategic plan"³⁶

Without documentation, FS cannot ensure that national forests are meeting this requirement to support all long-term objectives and strategic goals in their project work, let alone the climate change specific objectives. However, there is currently no direction from FS that requires climate change considerations and analysis to be documented in the project files. Such action is necessary to ensure consistency and transparency and to provide adequate support that climate change is truly being considered in FS' work on national forest system land.

Within the agency's strategic plan, FS has identified transparency and accountability as two core values. FS stated that the agency attempts to support these values by striving to make its processes more open and accessible to the American public and trying to ensure that the performance of all employees is measured against the achievement of the Department's strategic goals. The documentation of climate change considerations and analysis in official project files by national forest staff supports the core values of transparency and accountability. Without sufficient documentation, FS was not able to substantiate that they considered the impacts from climate change when proposing, selecting, and implementing projects on National Forest System lands. This in turn inhibits transparency about achieving the agency and Department's goals, and the American public has reduced assurance that USDA is making positive contributions in addressing climate change.

Recommendation 9

Amend the 2009 FS NEPA guidance to comply with the Council on Environmental Quality (CEQ) guidance issued on August 1, 2016, to ensure that FS' national forests fully document their climate change considerations and analysis in the National Environmental Policy Act

³⁷ USDA FS *Strategic Plan: FY 2015-2020* (June 2015).

(NEPA) documents when an Environmental Assessment (EA) or Environmental Impact Statement (EIS) is required.

Recommendation 10

Issue guidance to ensure that national forests fully document their climate change considerations and analysis in the project files.

Scope and Methodology

We conducted a nationwide audit of FS' climate change related activities in the National Forest System. The scope of our audit work covered climate change related activities completed during FYs 2011-2015. To accomplish our objectives, we performed fieldwork at the agency's Washington Office, located in Washington, D.C., two regional offices, and four national forests (for specific locations visited, see Exhibit A). We performed our audit fieldwork from August 2015 through May 2016.

We non-statistically selected two regional offices and four national forests for review based primarily on the amount of funding received for programs impacted by climate change, number of projects completed within the climate change related programs, and climate change scorecard results. At the four national forests, we also non-statistically selected 24 of 217 climate change related projects that were conducted during FYs 2011-2015 based primarily on the size of the projects and their expected impact on climate change.

In developing the findings for this report, we performed the following steps and procedures:

At the FS' Washington Office (see Exhibit A), we:

- Reviewed the pertinent laws, regulations, policies, and procedures related to climate change;
- Interviewed key personnel, including the acting director for OSCC, to gain an understanding of their roles and responsibilities relating to climate change;
- Ascertained the adequacy and effectiveness of FS performance measures related to climate change;
- Ascertained the adequacy of FS guidance, oversight, and monitoring relating to the completion of the climate change scorecard;
- Obtained and reviewed the climate change scorecards for 113 national forest management units for FY 2015 and tested them for completeness and accuracy; and
- Ascertained the adequacy of FS' guidance to ensure that proposed projects' impact on climate change was adequately analyzed and documented in the NEPA documents (i.e., EIS or EA), if one was required.

At selected FS regions (see Exhibit A), we:

- Reviewed any supplemental guidance the regional office issued relating to climate change;
- Interviewed key personnel at the regional office, including the regional office's climate

change coordinator, to determine their roles and responsibilities relating to climate change;

- Interviewed key personnel from a number of program areas at the regional office to determine their processes for considering climate change when assisting national forests in proposing and designing their project work;
- Discussed the climate change scorecard results with the regional office's climate change coordinator to ascertain his or her process for reviewing the scorecards; and
- Ascertained the adequacy of the regional office's guidance and oversight to ensure that proposed projects' impact on climate change was adequately analyzed and documented in the NEPA documents (i.e., EIS or EA), if one was required.

At selected FS national forests (see Exhibit A), we:

- Reviewed any supplemental guidance the national forest issued related to climate change;
- Interviewed key personnel, including the national forest's climate change coordinator, to determine their roles and responsibilities related to climate change;
- Interviewed key personnel from a number of program areas within the national forest to determine their processes for considering climate change when assisting ranger districts in proposing and designing project work;
- Discussed the climate change scorecard results with the national forest's climate change coordinator to ascertain his or her process for completing the scorecard; and
- Ascertained the adequacy of the national forest's guidance and oversight to ensure that proposed projects' impact on climate change was adequately analyzed and documented in the NEPA documents (i.e., EIS or EA), if one was required.

For selected projects at the national forests, we:

- Reviewed the files for 24 selected projects to ascertain whether climate change was adequately considered in the project design and adequately documented in both the NEPA document (i.e., EIS or EA), if one was required, and the project file; and
- When weather permitted, visited the project site to assess the status of the work performed.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Abbreviations

CEQ.....	Council on Environmental Quality
EA.....	Environmental Assessment
EIS.....	Environmental Impact Statement
FS.....	Forest Service
FY.....	Fiscal Year
GPRA.....	Government Performance Results Act
KPM.....	Key Performance Measure
NEPA.....	National Environmental Policy Act
NF.....	National Forest
OIG.....	Office of Inspector General
OMB.....	Office of Management and Budget
OSCC.....	Office of Sustainability and Climate Change
USDA.....	Department of Agriculture

Exhibit A: Audit Sites Visited

This exhibit shows the name and location of all FS sites visited.

AUDIT SITE	LOCATION
FS Washington Office	Washington, D.C.
FS Rocky Mountain Regional Office (Region 2) <u>National Forests (NF) in Region 2</u> Grand Mesa Uncompahgre and Gunnison NF Black Hills NF	Golden, CO Delta, CO Custer, SD
FS Southwestern Regional Office (Region 3) <u>NFs in Region 3</u> Coconino NF Carson NF	Albuquerque, NM Flagstaff, AZ Taos, NM

Exhibit B: National Forest Climate Change Scorecard

The Forest Service Climate Change Performance Scorecard, 2011 (version 1.3) To be completed annually by each National Forest or Grassland (Unit).		
Scorecard Element	Unit Name	Yes/No
Organizational Capacity		
1. Employee Education	Are all employees provided with training on the basics of climate change, impacts on forests and grasslands, and the Forest Service response? Are resource specialists made aware of the potential contribution of their own work to climate change response?	
2. Designated Climate Change Coordinators	Is at least one employee assigned to coordinate climate change activities and be a resource for climate change questions and issues? Is this employee provided with the training, time, and resources to make his/her assignment successful?	
3. Program Guidance	Does the Unit have written guidance for progressively integrating climate change considerations and activities into Unit-level operations?	
Engagement		
4. Science and Management Partnerships	Does the Unit actively engage with scientists and scientific organizations to improve its ability to respond to climate change?	
5. Other Partnerships	Have climate change related considerations and activities been incorporated into existing or new partnerships (other than science partnerships)?	
Adaptation		
6. Assessing Vulnerability	Has the Unit engaged in developing relevant information about the vulnerability of key resources, such as human communities and ecosystem elements, to the impacts of climate change?	
7. Adaptation Actions	Does the Unit conduct management actions that reduce the vulnerability of resources and places to climate change?	
8. Monitoring	Is monitoring being conducted to track climate change impacts and the effectiveness of adaptation activities?	
Mitigation and Sustainable Consumption		
9. Carbon Assessment and Stewardship	Does the Unit have a baseline assessment of carbon stocks and an assessment of the influence of disturbance and management activities on these stocks? Is the Unit integrating carbon stewardship with the management of other benefits being provided by the Unit?	
10. Sustainable Operations	Is progress being made toward achieving sustainable operations requirements to reduce the environmental footprint of the Agency?	

The Scorecard. This form, along with supporting narratives for each element, will be completed annually by each Forest or Grassland.

**USDA'S
FOREST SERVICE
RESPONSE TO AUDIT REPORT**

**File Code:** 1430**Date:** May 4, 2017**Subject:** FS Response on Office of Inspector General Report No. 08601-0005-41, "Forest Service's Plan for Addressing Climate Change"**To:** Gil H. Harden, Assistant Inspector General for Audit, Office of Inspector General

Thank you for the opportunity to review the Office of Inspector General (OIG) Draft Report Number 08601-0005-41, Forest Service's Plan for Addressing Climate Change. The Forest Service appreciates the time and effort that went into the report and the engagement with the Agency by the review team. The purpose of the evaluation was to assess the Agency's efforts to administer and meet the USDA's strategic goal for climate change on National Forest System lands.

While the Agency generally agrees with recommendations to improve performance management in the future, we have concerns with the overall design of the review to assess how well the Agency met the Department's goal of making the nation's forests and grasslands more resilient to climate change as stated in the USDA Strategic Plan, 2014 – 2018 (p. 14). The focus of the OIG review was the Climate Change Performance Scorecard. The Scorecard was not intended to serve as the sole measure for implementing actions to address climate risk. The scorecard was designed to be used for fiscal years (FY) 2011-2015 as a framework to communicate and improve the Agency's organizational capacity and readiness to respond to risk from climate by each of the Agency's 113 management units that administer the nation's 154 national forests and grasslands.

In addition, the Scorecard was designed to allow for flexibility in developing preparedness to adapt to changing ecological conditions. Achievements across regions and forests varied based on knowledge of climate change and analytical capacity when the Scorecard was initiated. Some units had greater achievements than others. The units selected for the field review did not represent this range and we are concerned the results were skewed towards the low end due to this sample bias.

The Forest Service has several areas of emphasis and measures that support its accomplishments to address risk from climate. These include the percentage of public and private forest and grazing land with conservation or management applied to improve or sustain productivity; ecological health of key watersheds; and the number of acres treated annually to sustain/restore watershed health. These serve as cornerstones of the Agency's restoration plan to improve ecological function; and resiliency to disturbance, including climate.



Please contact Antoine L. Dixon, Chief Financial Officer, at (202)-205-0429 or aldixon@fs.fed.us with any questions.

/s/ Thomas L. Tidwell
THOMAS L. TIDWELL
Chief

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