



Grand Mesa, Uncompahgre & Gunnison (GMUG) National Forests

Spruce Beetle Epidemic and Aspen Decline Management Response (SBEADMR) Project

Questions and Answers May 2015

Q. Why is there urgency to complete analysis on a large-scale landscape to manage spruce-fir and aspen?

A. The GMUG contains approximately 223,000 cumulative acres of spruce beetle mortality and 229,000 acres of affected aspen accumulated over the past decade, which corresponds to approximately 30% of the spruce-fir and aspen vegetation on the Forests. While insects and disease naturally occur in these ecosystems, prolonged drought and unusually high temperatures have exacerbated these disturbances. Mortality resulting from spruce beetle has significantly increased since 2012 and is expected to continue to increase in coming years. Aspen decline has stabilized since 2010 but stands already affected continue to decline. The implications of these continued conditions include increased risk to the public and infrastructure from hazard trees, high mortality in spruce-dominated stands, decline of aspen stands, and changes in plant community and vegetation structure over time. Furthermore, in the context of a changing climate conducive to more frequent and extensive wildfires in forests at high elevation—irrespective of tree condition—desired conditions for fire and fuels management include more locations across the landscape from which firefighters can safely and effectively manage or suppress fires for values at risk and/or resource benefit.

Q. Is the Forest Service utilizing a collaborative process to plan and implement the project?

A. Based on the rapid spread and epidemic nature of the infestation and decline of spruce beetle infestation and aspen on the GMUG, the Forest Service initially decided to utilize a more limited approach where public comment is sought through formal scoping. On the spectrum of public participation from inform→consult→involve→collaborate, the GMUG's initial public participation approach for SBEADMR was on the inform/consult end of the spectrum. After conducting formal scoping and hosting public meetings between July 2013 and August 2014, the Forest Service identified public interest in a higher level of public involvement and collaboration for the project, which influenced the Forest Service's subsequent strategies for public participation with respect to the SBEADMR planning process, as well as the proposed adaptive implementation of SBEADMR.

Recognizing a desire on the part of stakeholders to continue dialogue and potential benefits for further involvement and/or collaborative work, Uncompahgre/Com and PLP offered to convene and facilitate a working group for SBEADMR. The Working Group is its own entity; however, it is facilitated by the Public Lands Partnership as part of their efforts to “bring together varied interests to work on local natural resources issues.” The Working Group met throughout the fall and winter and continues to meet. Stakeholders discussed a variety of topics, and representatives of the Forest Service have attended to provide technical information regarding the SBEADMR DEIS, forest management and other topics of interest to the Group. For more information, contact Chris Miller at info@publiclandspartnership.org.

Q. What is the Public Lands Partnership?

A. The Public Lands Partnership (PLP) was formed in 1992 as an informal forum to address public land issues in west central Colorado via diverse public stakeholder engagement and dialogue.

Q. What is being done to ensure other affected parties are aware and extended the opportunity to collaborate in this process/analysis?

A. The Forest Service has and will continue to encourage affected parties to comment on the project. One mechanism is the use of a website where scoping information, the Draft EIS, and questions and answers are posted for public review and comment. The comment link is: http://www.fs.usda.gov/goto/SBEADMR_comments

Comments/suggestions may also be sent hard copy form to:

Attn: SBEADMR Project c/o Scott Armentrout, 2250 Highway 50 Delta, CO 81416.

To inform the development of the Draft EIS, the Forest Service held two workshops/public meetings, provided several presentations to interested groups and stakeholders, and hosted a science workshop and a field trip in late August 2014.

Additionally, Forest Service representatives are available to meet with individuals and groups upon request to help facilitate a better understanding of the project. Please contact Clay Speas (970) 874-6677 or email cspeas@fs.fed.us with any questions and/or for additional information.

Q. How is current science being incorporated into the analysis?

A. A neutral third-party Forest Service Enterprise Team comprised of various specialists was hired to complete the analysis and write the Draft Environmental Impact Statement (EIS). The Team is composed of Forest Service professionals with advanced degrees in areas of wildlife, fire ecology, botany, archeology, landscape architecture, engineering, watershed science and land resource planning. Per Forest Service Policy, these specialists are preparing specialist sections to address potential effects of each of the alternatives and methods/approaches that will be used to minimize or eliminate potential effects. Specialists are required to use best available science (peer reviewed publications, internal Forest Service reports and professional judgment) when completing their sections. The sections also document compliance with Forest Service

Policy and applicable law and regulation, and include a bibliography of all referenced publications used in the analysis. All environmental documents are reviewed by counterpart specialists on the GMUG.

Additionally, the GMUG has entered into an agreement with the Rocky Mountain Research Station and Colorado State UniversityColorado Forest Restoration Institute to address science questions and monitoring needs for the project throughout the proposed adaptive implementation process. Scientists involved in the agreement would provide timely, relevant science-based information to stakeholders and the GMUG throughout the life of the SBEADMR project. This science-based information would help address uncertainties and issues associated with the location, design, and effects of tree harvest and removal.

Q. What is the purpose and need for the project?

A.

The purpose of the project is to reduce the safety threats of falling, dead trees and of managing wildfires on the landscape (safety); improve the resiliency of stands at-risk of insect and disease (resiliency); and to treat affected stands via recovery of salvageable timber and subsequent re-establishment of desired forest conditions (recovery). Given the substantial mortality of spruce-fir and aspen forests on the GMUG over the past decade, the need for the project is to manage forest vegetation to bring current and foreseeable conditions closer to desired conditions on landscapes available for active management. On these landscapes, vegetation management would be used to help sustain or promote potential natural vegetation types. Desired conditions include a balance of habitat structural stages, tree species composition, and seral stage distributions that are appropriate for each vegetation type across the geographic areas of the GMUG (See **Error! Reference source not found.**). Furthermore, in the context of a changing climate conducive to more frequent and extensive wildfires in forests at high elevation irrespective of tree condition (Westerling et al. 2006, Agee 2007; Funk 2012; Rangwala and Rondeau) desired conditions for fire and fuels management include more locations across the landscape from which firefighters can safely and effectively manage or suppress fires for values at risk and/or resource benefit.

Q. The Forest Service uses terms like “recovery”, “resiliency” and “human safety”. What do these mean in context of the action alternatives?

A. Safety, recovery, and resiliency are the goals of the action alternatives, and these goals elaborate on the purpose and need. They are adapted from the Western Bark Beetle Strategy and expanded to include aspen.

Public Safety

1. Remove hazard trees proximal to roads, utility corridors, communication sites, dispersed recreation sites, developed campgrounds and other recreation sites, and within ski areas both within and outside the wildland urban interface (WUI).
2. Increase the extent of defensible space around values at risk.
3. Provide safer locations from which firefighters can initiate fire management actions.

Resiliency

1. Increase the forest's ability to respond to multiple and interacting stresses, including climate change, insect attack, drought or disease.
 - a. In healthier spruce-fir stands, promote regeneration and create multiple age classes of trees.
 - b. Minimize spread of bark beetle from infected stands to neighboring healthy stands.
 - c. Promote aspen regeneration via active treatments in live stands, with emphasis on those affected by Sudden Aspen Decline.

Recovery

1. Provide commercial forest products to local dependent industries at a level commensurate with Forest Plan direction and in harmony with other Plan goals (1991 GMUG Amended Forest Plan, p. III-3).
2. Subsequent to treatment, treat fuels, prepare sites, and re-establish and maintain forest cover via replanting where seed sources are lacking.

Opportunity areas in SBEADMR are the maximum extent of geographic area analyzed for potential treatments. As noted above, a *subset* of the opportunity area would be treated; treatment maximum analyzed include 120,000 acres (40-60,000 acres of commercial treatments and 30-60,000 acres of noncommercial treatment). Opportunity areas are limited to spruce and aspen forest types outside of Wilderness, Research Natural Areas, Special Interest Areas, Cultural Areas, and National Natural Landmarks. Additionally, Colorado Roadless Areas (CRAs) are not included within the SBEADMR opportunity areas. Treatments in CRAs would be authorized under separate NEPA processes.

Starting with these basic parameters, each action alternative further delimits opportunity areas based on different management objectives. In Alternative 3, for example, the emphasis is public safety, so areas on the GMUG composed of spruce, aspen or spruce/aspen that pose a risk to infrastructure from dead or dying trees wildland urban interface have been identified for potential treatment. Of the total *opportunity* acres being analyzed in the Environmental Impact Statement (EIS), the maximum analyzed for actual *treatment* includes 60,000 acres of commercial treatments and 60,000 acres of prescribed fire or non-commercial treatments over the life of the project.

Q. What activities are common to each of the action alternatives?

A.

Total Acres Analyzed for Treatment

Consistent across all action alternatives, a maximum of 120,000 acres of treatment are proposed and analyzed in this DEIS for treatment over the approximately 8-12 year implementation span of the SBEADMR project and within the defined opportunity areas. Of this total, 40-60,000 acres of commercial treatments and 30-60,000 acres of noncommercial treatment are proposed and analyzed, implemented annually in the range of 3-6,000 acres for both noncommercial and commercial treatment categories. Annual

acres treated would largely be driven by personnel and budget constraints in the Forest Service. All commercial treatment would occur on lands identified as suitable for timber production as defined by the Forest Plan (GMUG Forest Plan Amendment, 1991, pages F-1-F-7). At the time of the analysis, there is no existing market for aspen; unless a market were to emerge during the implementation timeframe of this project, commercial treatments in aspen would not be likely to occur.

Composition of Treatments for Recovery & Resiliency Goals

The exact ratio of commercial mechanical treatments to address salvage versus resiliency goals will be driven by on-the-ground conditions as projects are implemented. While the impact from SAD has stabilized over recent years, tree mortality resulting from spruce beetle is increasing. For the purposes of analysis and given the current location and progress of the spruce bark beetle epidemic, the GMUG assumes that 80% of commercial mechanical treatment in the Gunnison Basin will be to address recovery goals (generally salvage harvest) and 20% to address resiliency goals (generally uneven-aged and sanitation harvest). On the Grand Mesa and Uncompahgre Plateau treatments, it will be closer to an even split between commercial mechanical treatments to address recovery versus resiliency goals.

Adaptive Implementation Approach

The Forest Service cannot significantly alter the current infestation or rate of decline in spruce stands, but management of associated hazards, economic opportunities, and resilience, as detailed in the purpose and need, are the core of this project. Nor can it accurately project the ultimate location and scale of eventual beetle activity. To be more responsive to the rapidly changing conditions of spruce and aspen stands across the landscape to achieve the purpose and need, SBEADMR relies on an adaptive implementation framework for defining treatment locations within the analyzed opportunity areas. Treatment design, incorporating additional monitoring questions, reviewing and evaluating the effects of treatments, and adjusting management towards desired conditions and away from undesirable conditions must also be conducted in an adaptive manner. Public involvement is critical throughout implementation, and is explicitly incorporated into the approach (See Figure 1 below).

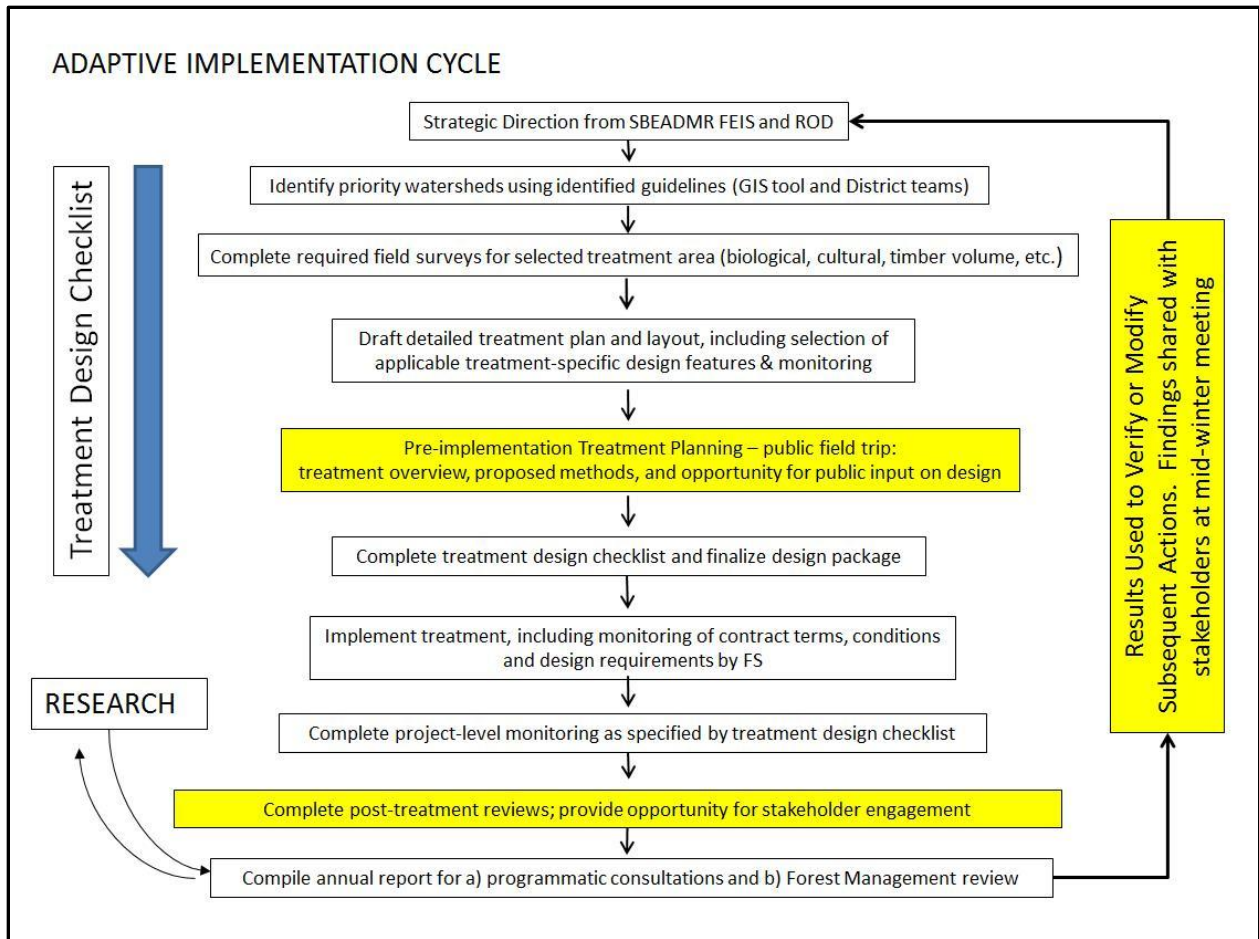


Figure 1. Overview of adaptive implementation cycle.

Implementation Toolbox

An implementation toolbox defines the range of silvicultural and fire prescriptions and design features for treatment implementation and provides a mechanism for monitoring and documenting compliance. These tools would be used throughout the adaptive implementation cycle and the decision points, outlined above. The prescriptions and design features are incorporated into all action alternatives and effects analyses; however, the application of an individual prescription and a suite of design features will depend upon on-the-ground conditions at the time of implementation. These conditions, or triggers for use, are defined in the DEIS. Tools include:

- Guidelines for selection of priority treatment areas – Guidelines developed through stakeholder involvement in 2014 and 2015 would be used by district interdisciplinary teams to identify priority watersheds for treatment. Watersheds would typically range from 10,000 to 40,000 acres in size. Required resource inventories would then be completed and results used to identify treatment areas, identify current vegetative conditions and other factors used to develop a detailed treatment plan(s) for an area.

- Silvicultural Prescription Matrix – would be used to identify which and how various stands will be treated to achieve management objectives. Detailed silvicultural prescriptions would be completed by a certified silviculturist by comparing current versus desired vegetative conditions.
- Design Features – would be applied to treatments to minimize or avoid undesirable impacts to resources including, but not limited to, vegetation, soils, water, wildlife and cultural resources. Design Features are incorporated into all action alternatives and their effects analyses. The appropriate design features would be applied when surveys or management activities indicate a need to do so. It is also assumed that design features would be implemented as designed and in a readily visible way, effective. Analysis completed in the Draft EIS assumes implementation of the appropriate design features.
- Pre-Treatment Checklist – tracking tool would document that all required surveys and compliance checks for an individual treatment have been completed. The checklist would also identify design features that would be applied to a particular treatment. As such, the checklist would assure treatments are implemented consistent with the EIS. The checklist would also be used to confirm compliance with the Forest Plan.
- Annual Interdisciplinary Team Treatment Review – a monitoring method that provides documentation that treatments are implemented as planned. The treatment review, combined with monitoring results and research findings, is intended to provide feedback to forest managers about how to best design and implement future treatments in the treatment area. The results of this monitoring, in conjunction with best available science, would identify relevant improvements to procedures or exemplary practices to benefit future treatments authorized by the SBEADMR record of decision.
- Public Engagement in Adaptive Implementation – a tool to guide the phases, principles, and activities comprising an adaptive implementation framework for the SBEADMR project. The primary goal is to engage diverse groups and individuals so that they might identify common interests and create solutions that would facilitate science-based and stakeholder-driven implementation of SBEADMR.

Protection of People and Community Infrastructure

All action alternatives would include treatments to increase the protection of people, communities, and infrastructure by:

- Removal of hazard trees;
- Increasing the extent of defensible space around values at risk;
- Providing safer locations from which firefighters can initiate wildfire management actions, whether to protect values at risk or to manage fire for resource benefit.

Location of Commercial Harvest

Commercial treatments would occur in lands identified in the 1991 GMUG LRMP as suitable for timber production by the 1991 Forest Plan Amendment (USDA Forest Service, 1991, Appendix F). During treatment reconnaissance and layout, Forest Service personnel would make a *final* determination of suitability based upon the following factors, as well as other considerations for resource protection:

- low productivity sites
- steep slopes (>40%)
- sites where irreversible damage could occur
- visually sensitive areas

Roads and Road Construction

Primarily the existing road network would be used to access the proposed treatments and to remove forest products. Existing roads would be supplemented by constructing new temporary and/or designed roads only when necessary; criteria are indicated below. Where necessary for resource protection, existing roads would be reconstructed. Per Forest direction, there would be no increase in open road density. A maximum projection of potential miles of roads needed are a combination of new and reconstructed roads, and are quantified under each action alternative. The management of project roads would be addressed through the use of design features and BMPs. The GMUG anticipates decommissioning all designed roads post-project implementation, but may retain a limited number of designed roads for longer-term use. All temporary roads constructed would be decommissioned post-project implementation.

Q. Where would treatments to protect people and infrastructure occur?

A. Treatments to protect people, communities, and infrastructure would occur:

- In spruce, aspen, and spruce/aspen mix within the WUI, defined as one mile from communities, developed sites, administrative facilities, and within ski area boundaries.
- Hazard spruce, aspen, and incidental other tree species would be removed within a 300 foot buffer (600 feet total) of infrastructure, including:
 - Roads open to the public
 - Campgrounds and other administrative facilities (approximately 160 facilities)
 - Dispersed recreation sites
 - Developed campgrounds and recreation sites
 - Within Western Area Power Administration (WAPA) and Tri-State power transmission lines rights-of-way and border zones
 - Aboveground electrical power and telephone line corridors
 - Communication sites, water, pipeline, and other utility corridors

Q. What are the different draft alternatives?

A. Alternative 1 – No Action

Under the No Action Alternative, no treatments would take place within the project area. This alternative represents no attempt to actively respond to the action-oriented issues or the purpose and need identified in the Notice of Intent. There would be no effort to modify existing conditions, unless authorized by other decisions.

Alternative 2 - Proposed Action

Alternative 2 (Proposed Action) was developed by the Forest Service to meet the purpose and need outlined above. The total Alternative 2 opportunity area is 718,000 acres where commercial, non-commercial mechanical and prescribed fire treatments could be implemented. The *opportunity area* includes spruce and aspen forest types analyzed for treatment in this EIS on the GMUG. This is the maximum extent of opportunity area for Alternative 2, yet opportunities for commercial and non-commercial treatment have distinct spatial parameters within this total opportunity area. Commercial treatments would occur only on an identified subset of lands designated as suitable timber, comprising a commercial opportunity area of 278,000 acres. Suitable timber lands are designated per the 1991 Forest Plan. Non-commercial treatments would be primarily focused outside suitable lynx habitat and could be implemented across the 718,000 total opportunity acres.

Alternative 3 - Public Safety Focus

Alternative 3 (Public Safety Focus) was developed to address public comments that proposed that treatments focus on public safety purposes, rather than using active management on the larger landscape to address the bark beetle infestation and SAD. Alternative 3 shifts the geographic extent of treatments exclusively to 1) the wildland urban interface (WUI) and 2) outside the WUI, proximal to additional human infrastructure. The total Alternative 3 *opportunity area* covers 426,000 acres. Maximum treatments and treatment types would be the same as under the proposed action.

Alternative 4 - Spruce Salvage

Alternative 4 (Spruce Salvage) excludes green-stand spruce treatments to meet resiliency goals and expands the area available to meet recovery goals for commercial harvest. The FS developed this alternative to address scoping comments questioning the effectiveness of green-stand resiliency treatments in spruce, as well as comments that encouraged the Forest Service to maximize opportunities to salvage merchantable spruce across the planning area. Treatments would occur in the same geographic areas as Alternative 2, except opportunities for commercial mechanical treatments would be expanded by 50,000 acres – covering the full extent of suitable timber lands within the opportunity area – relative to Alternative 2.

Summary of Alternatives

Description	Alternative 1 No Action	Alternative 2 Proposed Action	Alternative 3 Public Safety Focus	Alternative 4 Spruce Salvage
Opportunity Areas (acres)				
Total Opportunity Area (OA)	0	718,000 acres	426,000 acres	718,000 acres
Subsets of the Total Opportunity Area, commercial and noncommercial categories				
Commercial Opportunity Area (can include noncommercial treatments)	0	278,000 acres (39% of total OA)	164,000 acres (38% of total OA)	323,000 acres (45% of total OA)
Limited to noncommercial, slopes >40% (limited to prescribed burns and hand treatments)	0	132,000 acres (18% of total OA)	101,000 acres (24% of total OA)	132,000 acres (18% of total OA)
Limited to noncommercial, slopes <40%	0	308,000 acres (43% of total OA)	161,000 acres (38% of total OA)	263,000 acres (37% of total OA)
Subsets of the Total Opportunity Area, by species				
Aspen	0	289,000 (40 % of total OA)	190,000 (45 % of total OA)	289,000 (40 % of total OA)
Spruce	0	258,000 (36 % of total OA)	141,000 (33 % of total OA)	258,000 (36 % of total OA)
Aspen-Spruce Mix	0	171,000 (24 % of total OA)	94,000 (22 % of total OA)	171,000 (24 % of total OA)
Subset of the Opportunity Area: Public Safety Treatments in Spruce, Aspen and Aspen-Spruce Mix (acres)				
Within WUI	0	372,000	372,000	372,000
Road corridors outside WUI	0	54,000	54,000	54,000

Description	Alternative 1 No Action	Alternative 2 Proposed Action	Alternative 3 Public Safety Focus	Alternative 4 Spruce Salvage
Access				
These numbers represent maximum potential miles that may be implemented by alternative.				
Road reconstruction, (miles)	0	260	260	260
Designed road construction (miles)	0	60	10	60
<i>Decommissioned designed roads⁷</i>	0	(48)	(8)	(48)
Temporary road construction (miles)	0	260	70	260
<i>Decommissioned temporary roads</i>	0	(260)	(70)	(260)
Road maintenance (miles)	0	444	646	444
¹ Note that due to inaccuracies of vegetation type mapping, minor amounts of treatment could occur outside the actual GIS polygons used in analysis if the vegetation type, stand conditions and management area are such that treatment is warranted by the matrix. Acres rounded to nearest 1,000. Public safety areas, defined as road corridors and the wildland urban interface (WUI) are common to the opportunity area for all action alternatives.				

Q. How much of the GMUG National Forests could be directly affected by the project?

A. The GMUG includes approximately 3 million acres of Forest Service lands. Across all action alternatives, a maximum of 120,000 acres are analyzed in the EIS for a) commercial mechanical treatment (60,000 acres) and b) prescribed fire or non-commercial treatment (60,000 acres). These acres represent approximately 4% (2% commercial mechanical and 2% prescribed fire or non-commercial mechanical) of the total Forest Service land base of the GMUG. As a proportion of spruce on the GMUG, a maximum of 8% may be commercially treated. As a proportion of aspen on the GMUG, a maximum of 8% may be treated with prescribed fire and noncommercial mechanical methods.

Q. A large amount of Canada lynx habitat is proposed for treatment. How will impacts to lynx be addressed?

A. In 2010, Region 2 of the Forest Service completed the *Southern Rockies Lynx Amendment* (SRLA) addressing the effects of various management activities on Canada lynx and its habitat. This document amended all Forest Plans in Colorado. The SRLA established management direction and impact limits for management activities, including timber management. All

applicable management direction from the SRLA is incorporated into action alternatives analyzed in the Draft EIS and would be required at the time of treatment layout and implementation. Canada lynx as well as all other threatened, endangered and sensitive species and Management Indicator Species are addressed. The Fish and Wildlife Service has been collaborating on the development of the project proposal and mechanism for annual reporting. All aspects of the project would conform to requirements of the SRLA.

Q. How will other wildlife species concerns be analyzed and addressed in the Draft EIS?

A. Per Forest Service policy, the wildlife biologist and botanist on the team are each preparing a specialist's report addressing potential impacts of the various management alternatives to wildlife, fish and plant resources and associated management considerations. Address species include Management Indicator Species (common trout, cutthroat, brewer's sparrow, Northern Goshawk, red-napped sapsucker, American martin, and Rocky Mountain elk), Forest Service sensitive species (33 mammals, birds, reptiles, amphibians, and fish) and over 50 sensitive plants. The analysis also addressed one threatened bird species (Gunnison sage-grouse), a threatened mammal (Canada lynx), and a threatened fish (greenback cutthroat trout). Any impact to threatened or endangered species or proposed critical habitat requires consultation with Fish and Wildlife Service. All action alternatives are designed to meet Forest Plan direction.

Prior to treatment implementation, all required surveys for these species would be completed and the data would be used to design the treatment to minimize impacts and, in some cases, to enhance habitats for various wildlife species. Design features would be applied to a specific project area to avoid or minimize impacts to wildlife or plants and to meet Forest Plan standards and guidelines.

Q. How is climate change being addressed in the Draft EIS?

A. On 16 January 2009, the Washington Office of the USDA Forest Service released guidance to Forest Service units regarding the incorporation of climate change science into project-level NEPA documents (Climate Change Considerations in Project Level NEPA Analysis, USDA 2009). On December 18, 2014, CEQ released revised draft guidance for public comment that describes how Federal departments and agencies should consider the effects of greenhouse gas emissions and climate change in their NEPA reviews. The revised draft guidance supersedes the draft greenhouse gas and climate change guidance released by CEQ in February 2010.

The potential greenhouse gas emissions that may be produced from prescribed burns and transpiration activities associated with SBEADMR are quantified in the Draft EIS. However, as spruce and aspen stands die and decay they would produce an unknown amount of greenhouse gas emissions that, over time, would be offset by an unknown amount of sequestration from forest regeneration, and to a lesser amount if forest stands are replaced by grass and shrubs. The timber harvest proposed in SBEADMR would provide a supply of harvested wood products that

would sequester carbon when the harvested wood products (HWPs) are used in construction or the manufacture of durable goods. The net effects greenhouse gas emissions associated with SBEADMR, given variable and uncertain carbon sequestration from forest regeneration and vegetation growth, is unknown.