

EXHIBIT 2: RECOMMENDED TRANSPORTATION FRAMEWORK AND RELATED PLAN COMPONENTS  
(EXCERPT FROM THE WILDERNESS SOCIETY'S SCOPING LETTER, DATED OCTOBER 28, 2016)

A. Recommended Plan Components to Achieve an Ecologically and Fiscally Sustainable Road System

The plan components of the revised forest plans should integrate a variety of approaches to satisfy the substantive mandates of the 2012 Planning Rule and subpart A. The following recommendations are based on the Forest Service's current roads policy framework and relevant legal requirements, which are described above, on the best available science, which is summarized in the attached literature review (Appendix F) and which the Forest Service is required to utilize under the 2012 Planning Rule, and on examples of road plan components from existing forest plans (see non-comprehensive compilation attached in Appendix J).

Moving towards an environmentally and fiscally sustainable minimum road system requires removal of unneeded roads (both system and non-system) to reduce fragmentation and the long-term ecological and maintenance costs of the system. Reconnecting islands of unroaded forest lands is one of the most effective actions land managers can take to enhance forests' ability to adapt to climate change. The Wilderness Society 2014. To that end, the revised plans should prioritize reclamation of unauthorized and unneeded roads in roadless areas (both Inventoried Roadless Areas under the 2001 Roadless Area Conservation Rule and newly inventoried areas under the Chapter 70 process), important watersheds, and other sensitive ecological and conservation areas and corridors.

In addition to creating a connected network of un-roaded and lightly-roaded lands, the plans should address roads-related impairment of watersheds, as identified by the Watershed Condition Framework roads and trails indicator and section 303(d) of the Clean Water Act, 33 U.S.C. § 1313(d). The revised plan should prioritize removal of unneeded and unauthorized roads in watersheds functioning at risk or in an impaired condition, or that contain 303(d) segments impaired by sediment or temperature associated with roads. More generally, the plan must implement national best management practices (BMPs) for water quality, 36 C.F.R. § 219.8(a)(4),<sup>1</sup> and plan components should integrate BMPs into management direction aimed at reducing the footprint and impacts of the forest road systems and ensure they are effective in doing so.

A sustainable road system also requires maintenance and modification of needed roads and transportation infrastructure to make them more resilient to extreme weather events and other climate stressors. See Exec. Order 13653, §§ 1, 3, 5(a) (agency tasked with enhancing resilience and adaptation to climate change impacts). Plan components should direct that needed roads be upgraded to standards able to withstand more severe storms and flooding by, for example, replacing under-sized culverts and installing additional outflow structures and drivable dips. The Wilderness Society 2014; see also FSH 1909.12, ch. 20, § 23.23(2)(b)(1) (plan components may include road improvement objectives for culvert replacement or road stabilization). Plan components should also prioritize decommissioning of roads that pose significant erosion hazards or are otherwise particularly vulnerable to climate change

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<sup>1</sup> See also USDA Forest Service 2012 (National Best Management Practices for Water Quality).

stressors, and should address barriers to fish passage. See FSH 1909.12, ch. 20, § 23.2I(2)(b)(1) (plan components may include decommissioning objectives).

In addition to reducing fragmentation and enhancing climate change adaptation, adoption of road density thresholds for important watersheds, migratory corridors and other critical wildlife habitat, and general forest matrix is one of the most effective strategies for achieving an ecologically sustainable road system. The Wilderness Society 2014 (pages 6-8 and Attachment 2 summarize best available science on road density thresholds for fish and wildlife). Indeed, there is a direct correlation between road density and various markers for species abundance and viability. *Id.*; see also FSH 1909.12, ch. 10, § 12.13 & Ex. 01 (identifying road density as one of the “key ecosystem characteristics for composition, structure, function, and connectivity” used to assess the “status of ecosystem conditions regarding ecological integrity”). Plan components should incorporate road density thresholds, based on the best available science, as a key tool in achieving a sustainable minimum road system that maintains and restores ecological integrity. See FSH 1909.12, ch. 20, § 23.23I(2)(a) (desired condition for road system may describe desired road density for different areas). In doing so, it is critical that the density thresholds apply to all motorized routes, including closed, non-system, and temporary roads, and motorized trails. The Wilderness Society 2014 (Attachment 2 describes proper methodology for using road density as a metric for ecological health).

A sustainable road system must also be sized and designed such that it can be adequately maintained under current fiscal limitations. See FSH 1909.12, ch. 20, § 23.23I(1)(c) (plan components for road system “must be within the fiscal capability of the planning unit and its partners”). Inadequate road maintenance leads to a host of environmental problems. The Wilderness Society 2014. It also increases the fiscal burden of the entire system, since it is much more expensive to fix decayed roads than maintain intact ones, and it endangers and impedes access for forest visitors and users as landslides, potholes, washouts and other failures occur.

To integrate the approaches described above and satisfy the substantive mandates of the 2012 Planning Rule and subpart A, we recommend the following plan components and elements, which are supported by best available science, as the building blocks of a framework for sustainable management of forest roads and transportation infrastructure:

1. *Desired Future Condition is an appropriately sized and environmentally and fiscally sustainable minimum road system that facilitates enjoyable visitor experiences and forest programs.*

The Forest Service’s current roads management policy framework is generally aimed at shrinking the agency’s vast and decaying road system and its associated adverse environmental and social impacts to create a streamlined, efficient, and sustainable system. Accordingly, the desired future condition for transportation infrastructure should include a well-maintained and appropriately sized system of needed roads that is fiscally and environmentally sustainable and provides for safe and consistent access for the utilization, administration, and protection of the forest. That forest road system is designed and maintained to withstand future storm events associated with climate change, to

prioritize passenger vehicle access to major forest attractions, and to integrate with road systems on adjacent lands. The road system reflects long-term funding expectations. Unneeded roads, including system, temporary, and non-system roads, are decommissioned and reclaimed as soon as practicable to reduce environmental and fiscal costs. Reclamation efforts are prioritized in roadless and other ecologically sensitive areas to enhance ecological integrity and connectivity and to facilitate climate change adaptation. The system meets road density thresholds, based on the best available science, for all motorized routes in important watersheds and wildlife habitat, migratory corridors, and general forest matrix, and for relevant threatened and endangered species and species of conservation concern. Road construction, reconstruction, decommissioning, and maintenance activities are designed to minimize adverse environmental impacts. Passenger vehicle roads are maintained to standard to ensure reliable access to popular developed recreation sites. Best management practices are in place on all system roads, monitored regularly for effectiveness, and modified as needed based on monitoring.

2. *Objectives provide a concise, measurable, and time-specific statement of a desired rate of progress towards achieving a sustainable minimum road system.*
  - a. Over the life of the plan, decommission and naturalize all unneeded roads (e.g., those identified as likely not needed for future use in the Travel Analysis Report (TAR)). Decommission at least 5% of roads identified as unneeded each year. Within 10 years of plan approval, decommission unneeded roads with the most benefit in achieving an ecologically and fiscally sustainable transportation network (e.g., roads posing a high risk to forest resources, roads in inventoried roadless areas and other ecologically sensitive areas, etc.).
  - b. Over the life of the plan, implement the minimum road system (pursuant to 36 C.F.R. § 212.5(b)).
  - c. Within 10 years of plan approval, address all roads within at-risk and impaired watersheds with poor or fair ratings for the Watershed Condition Framework (WCF) roads and trails indicator, and within watersheds contributing to sediment or temperature impairment under section 303(d) of the Clean Water Act.
  
3. *Standards ensure that roads do not impair ecological integrity and otherwise satisfy the substantive requirements of the 2012 Planning Rule and subpart A.*
  - a. To ensure ecological integrity and species viability, establish density standards based on the best available science for all motorized routes:
    - i. In important watersheds, wildlife habitat, migratory corridors, and general forest matrix; and
    - ii. For relevant species or resources present on the forest, including but not limited to threatened and endangered species and species of conservation concern.
  - b. Within 3 years of plan adoption, the forest shall identify its minimum road system and an implementation strategy for achieving that system that is consistent with forest plan direction and relevant regulatory requirements.

- c. The forest shall identify and update as necessary its road management objectives for each system road and trail.
  - d. With respect to temporary roads, the forest shall:
    - i. Within 5 years of plan approval, establish a publicly available system for tracking temporary roads that includes but is not limited to the following information: road location, purpose for road construction, the project-specific plan required below, year of road construction, and projected date by which the road will be decommissioned. Within 10 years of plan approval, all temporary roads will be reflected in the tracking system.
    - ii. All temporary roads will be closed and rehabilitated within two years following completion of the use of the road.
    - iii. Over the life of the plan, all unaddressed temporary roads will be decommissioned and naturalized.
  - e. All roads, including temporary roads, will comply with applicable and identified Forest Service best management practices (BMPs) for water management. Implement BMP monitoring to evaluate BMP effectiveness and identify necessary modifications to address deficiencies.
  - f. With respect to riparian management zones, the forest shall:
    - i. Establish widths for riparian management zones around all lakes, springs, perennial and intermittent streams, and open-water wetlands.
    - ii. Ensure that all management practices and project-level decisions with road-related elements in riparian management zones do not cause detrimental changes in water quality or fish habitat.
  - g. Watershed restoration action plans address road-related impacts identified in the TAR.
4. *Guidelines are designed to achieve a sustainable minimum road system*
- a. The forest shall make annual progress toward achieving the minimum road system and motorized route density standards.
  - b. Project-level decisions with road-related elements implement TAR recommendations and advance implementation of the minimum road system and motorized route density standards.
  - c. Routes (unauthorized, temporary, non-system, and system) identified for decommissioning and naturalization through the TAR or other processes will be closed, decommissioned, and reclaimed to a stable and more natural condition as soon as practicable.
  - d. Prioritize road decommissioning and naturalization to enhance landscape connectivity and ecological integrity based on:
    - i. Effectiveness in reducing fragmentation, connecting un-roaded and lightly-roaded areas, and improving stream segments, with a focus on inventoried roadless areas, important watersheds, and other sensitive ecological and conservation areas and corridors;
    - ii. Benefit to species and habitats;

- iii. Addressing impaired or at-risk watersheds;
  - iv. Achieving motorized route density standards;
  - v. Enhancement of visitor experiences; and
  - vi. Cost-effectiveness and feasibility, including opportunities to incorporate road decommissioning work into other forest projects.
- e. Prioritize maintenance of needed routes based on:
- i. Providing passenger vehicle access;
  - ii. Storm-proofing needs and opportunities (e.g., relocating roads away from water bodies, resizing or removing culverts, etc.);
  - iii. Restoring aquatic and terrestrial habitats and habitat connections; and
  - iv. Increasing resilience.
5. *Monitoring program ensures progress toward Desired Future Condition using monitoring questions/indicators such as:*
- a. Percentage of passenger car roads with a safety condition rating of good.
  - b. Percentage of unneeded road miles decommissioned and reclaimed within inventoried roadless areas or areas with identified wilderness characteristics (in FSH 1909.12, chapter 70, section 72), critical habitat, or other area with recognized conservation values.
  - c. Percentage of subwatersheds with an identified minimum road system.
  - d. Percentage of subwatersheds with an implemented minimum road system.
  - e. Percentage of roads addressed in subwatersheds with a “poor” WCF roads and trails indicator, and in watersheds contributing to sediment or temperature impairment under section 303(d) of the Clean Water Act.
  - f. Miles/percentage of roads identified as likely not needed for future use in the TAR or other processes that have been decommissioned.
  - g. Miles of road improved or maintained to meet BMP guidelines.