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January 14, 2020

Attn: 4FRI Rim Country DEIS Team  
% Coconino National Forest Supervisor's Office  
1824 South Thompson St.  
Flagstaff, AZ 86001

Comments were submitted electronically to:

<https://cara.ecosystem-management.org/Public/CommentInput?project=48210>

**RE: 2nd Four-Forest Restoration Initiative Rim Country Draft Environmental Impact Statement (October 2019)**

Dear United States Forest Service:

Under Title 17 of the Arizona Revised Statutes (ARS), the Arizona Game and Fish Department (Department), by and through the Arizona Game and Fish Commission, has public trust responsibility and primary authority to manage and regulate take of wildlife within the state of Arizona irrespective of land ownership. Through those authorities, the Department appreciates the opportunity to participate as a Cooperating Agency in the preparation of the Four-Forest Restoration Initiative (4FRI) Rim Country Draft Environmental Impact Statement (DEIS); part of the largest forest restoration project yet undertaken in the western U.S. The Department and the U.S. Forest Service's (USFS) partnership will help ensure that both phases of 4FRI Rim Country yield the greatest possible benefits to Arizona wildlife and people who value those resources. The Department looks forward to continued coordination with the USFS to make this landmark effort a success on the ground. The Department's general issues of concern are highlighted within this letter, while our specific comments are in the attached comment matrix.

#### **Cooperating Agency Status and Integration of Department Data**

As a Cooperating Agency and an Interdisciplinary team member, the Department utilized its own funding and committed several hours of subject matter expert support and resources at the request of the USFS to enhance the Environmental Impact Statement (EIS). However, the Department is concerned that some of its environmental analysis and recommendations have not been fully incorporated into the DEIS, such as the inclusion of Species of Economic and Recreational Importance (SERI) provided to the USFS and identified in the Arizona State Wildlife Action Plan. It is also unclear if this information was used in the resource specialist reports that assist in the underlying assumptions and analysis for the DEIS.

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The Department understands the USFS is ultimately responsible for ensuring the EIS is consistent with its responsibilities as lead agency, but should consider the environmental analysis and recommendations of Cooperating Agencies with jurisdiction by law or special expertise to the maximum extent possible (Council on Environmental Quality, 40 CFR 1501.6(a)(2)). The Department requests further consideration of the Department's environmental analysis and recommendations in the Final Environmental Impact Statement (FEIS). For your convenience, the Department has provided some of this information again as an attachment to this letter and also in the comment matrix. In addition, the Department is supportive of issues in need of resolution outlined in the 4FRI stakeholder group (SHG) comment letter for the DEIS dated January 16, 2020. The following are the Department's comments related to the seven key issue categories that were highlighted in the SHG letter.

### **Conditions Based Management**

The Department agrees with the USFS that there needs to be on-the-ground flexibility with the options available for implementing restoration projects. To address this need, the USFS has introduced conditions based management within the DEIS in the form of two flexible toolboxes; the aquatic flexible toolbox for restoring watersheds and aquatic systems, and the mechanical flexible toolbox for mechanical treatments in terrestrial uplands. Even though the Department agrees with the need for these toolboxes, the Department has numerous questions and concerns about both toolboxes, as outlined below.

Aquatic ecosystems and upland forest ecosystems are integrally linked. Restoration of one element translates into improved ecosystem function in the other. The Department is concerned that the interactions (both the planning and implementation components) between the two toolboxes are not clearly defined in the DEIS. Currently the mechanical flexible toolbox and the aquatic flexible toolbox do not account for decision-making processes when projects involve elements of both toolboxes. The two toolboxes speak at different decision-making levels; the mechanical toolbox seems to have higher level decision-making process in regards to thinning prescriptions based off of numerous hard and soft filters, while the aquatic toolbox is simply a decision guide on what appropriate tools can be used to restore aquatic ecosystems.

The Department is concerned that the two independent decision-making mechanisms within the toolboxes will be confusing to on-the-ground professionals who will be tasked with planning site specific projects. For example, does a hard filter in the mechanical toolbox have more prominence than the aquatic toolbox in driving a prescription in a project area encompassing aquatic and terrestrial systems? This is just one example of the potential confusion that can occur because the toolboxes are not linked together. Considering the anticipated 20 year implementation horizon of 4FRI Rim Country, along with the numerous USFS staff that will be charged with implementing Rim Country projects, the current framework of the toolboxes may not promote predictable, reliable, and repeatable decision-making and compromise outcomes on the ground. The Department recommends that the USFS work with the SHG in developing an effective bridge between the aquatic and terrestrial restoration efforts/toolboxes and include it in the FEIS.

The Department is concerned that the DEIS provides no hierarchical decision-making framework to standardize real-time coordination of treatments and track management outcomes, both temporally and spatially, across the four-forest footprint. As stated in the SHG letter "...treatments across the four-forest footprint need to be applied in a predictable, reliable, and repeatable manner for the lifespan of the EIS" (4FRI SHG, 2020). This concern is most prominent in the mechanical flexible toolbox. The Department recognizes that the USFS has reporting/processes in place that collect some of the required data to track implementation, but these are not standardized across Forests/Districts nor integrated, and managed in a manner to support reliable implementation for the four-forest footprint. The Department recommends the USFS work with the 4FRI planning team in building upon the current reporting/processes to track and allocate resources across four-forests in near real-time to ensure treatments do not exceed sideboards in the record of decision (ROD). These tracking mechanisms should also be incorporated into the FEIS Implementation Plan.

Over the last three years, the Department has worked with the USFS, Trout Unlimited, and the U.S. Fish and Wildlife Service to identify aquatic restoration needs and priorities within the Rim Country footprint. These recommendations were based off of known site-specific conditions, as well as, long-term restoration goals outlined and identified in the Department's watershed management plans applicable to the planning area. During this DEIS process, the compilation table of potential priority aquatic restoration projects and stream reaches was shared with the USFS, but was not included in the DEIS or supporting appendices. The Department believes this work provides a valuable foundation for the USFS to base site-specific coverage for future stream restoration projects. The Department recommends the inclusion of this table (attached) into the DEIS to minimize confusion on whether additional National Environmental Policy Act will be required in the future to accomplish priority projects.

The Department would like to be an engaged partner with the USFS during project-level implementation of both aquatic and terrestrial projects. Rim Country is a Collaborative Forest Landscape Restoration Program (CFLRP) project that stipulates the USFS is required to coordinate and utilize stakeholder engagement throughout the planning and implementation of projects tiered to the EIS. The Department recommends the USFS create a formal coordination process between the USFS and stakeholders that occurs when planning restoration projects. The Department would like to be engaged on toolbox implementation as early as possible to share the latest wildlife site-specific information (e.g. turkey roosts, wildlife corridors, etc.) that can assist in the decision-making process to determine treatment prescriptions for restoration projects.

### **Degree of Openness Pre- and Post-Treatment**

The Department and the SHG spent many hours interpreting and discussing with the USFS the information in the DEIS regarding the spectrum of openness (i.e., interspace concept) as it related to proposed mechanical treatments. During these discussions, there was a consensus among forest health subject matter experts that there is no baseline understanding in the literature to support the use of the term "interspace" nor is there a recognized metric to quantify the degree of "interspace." The Department is concerned these concepts will not be interpretable by the general public or future USFS staff and contractors charged with consistently implementing these projects/prescriptions over the course of the next 20 years.

As a solution, the SHG has proposed removing confusing and redundant terms in the current “openness and interspace” methodology contained within the DEIS. Currently, the SHG is working with the USFS on developing canopy cover/openness metrics that are clearly interpretable for inclusion within the FEIS. The Department is supportive of this effort as it will assist in giving a more clear and consistent understanding of mechanical thinning prescriptions for future natural resource professionals implementing these projects and provide transparency for the general public.

Lastly, the DEIS included prescriptions for “regeneration openings.” These “regeneration openings” are an additive element within the treatment prescriptions, which can range as high as 20% additional clearing of a location for the sole purpose of growing more trees. This will make visualizing silvicultural prescriptions problematic because there will not be a true representation of how open an area will be after mechanical treatment. Historically, “regeneration openings” have been used by the USFS for sustaining yield of harvest for timber resources, but there is no scientific basis for inclusion of “regeneration openings” for ecological restoration objectives. Since the objectives of Rim Country are to restore ecosystem function by focusing on thinning of small diameter trees with little timber value, there is no value to include “regeneration openings” as a treatment design. For these reasons, the Department agrees with the SHG recommendation to remove “regeneration openings” as treatment designs in the DEIS.

### **Old Growth Protection and Large Tree Retention**

Protection of old growth trees in various forest types is a primary concern for the Department. This concern is shared by the SHG and is evident in their “Old Growth Protection & Large Tree Retention Strategy” that is incorporated into the 1st Rim Country EIS and which USFS has translated into Rim Country’s “Old Tree” and “Large Tree” Implementation plans. The intent and purpose for Rim Country is to restore ecosystem health, reduce fuels to mitigate risk of severe wildfires, and provide for wildlife and plant diversity. This intent aligns with the CFLRP funding that is utilized for 4FRI restoration actions. CFLRP stipulates its “funding be used for any forest restoration treatments that reduce hazardous fuels by focusing on small diameter trees, thinning, strategic fuel breaks, and fire ...while maximizing the retention of large trees, as appropriate for the forest type, to the extent that the trees promote fire-resilient stands” (H.R.146 - Omnibus Public Land Management Act of 2009).

The Department is concerned that there may be too many exceptions outlined within the DEIS that would allow for the cutting of large and old growth trees. The lack of limitations and oversight on these cutting exceptions could lead to large differences in their application by USFS Districts, and could run counter to the “social license” afforded under the SHG framework. The recent Little Timber sale highlights this potential lack of transparency and oversight regarding old and large trees. The Department has the same recommendations as the SHG regarding suggested changes to DEIS to address this issue. Similarly, the Department is not supportive of cutting large and old growth trees in the name of Ponderosa Pine Dwarf Mistletoe mitigation. The Department recommends the ROD prohibit the harvest of these large and old trees in mitigating Dwarf Mistletoe infection.

### **Management of Ponderosa Pine Dwarf Mistletoe**

Dwarf Mistletoe is a natural disturbance component of ecosystem function within Ponderosa Pine forests in northern Arizona. The broom structures created by Dwarf Mistletoe are ideal for wildlife to use for nesting, roosting, foraging and for cover. Tree mortality (snags) caused by dwarf mistletoe also creates habitat for cavity nesting birds, bats and other species. The Department supports maintaining the natural range of variability for this disturbance element.

The Department acknowledges the USFS's efforts to refine mistletoe management within the DEIS, but Dwarf Mistletoe management remains a central element in the mechanical flexible toolbox decision framework that could potentially allow for aggressive stand removal, including even-aged thinning treatments. This is at odds with restoration priorities articulated by the SHG and the best available science. Additionally, the emphasis of Dwarf Mistletoe treatment in the mechanical flexible toolbox has the potential to be applied inconsistently across Forests/Districts allowing for more even-aged thinning treatments, as well as conditions more open than the silviculture prescriptions outlined in the DEIS. The USFS' focus on aggressive treatment of Dwarf Mistletoe stands in the mechanical flexible toolbox continues to be controversial within the SHG and could potentially impede timely completion of the ROD. The Department concurs with the SHG that restoration treatments followed by prescribed fire at regular intervals should be sufficient to meet objectives, and therefore precludes the need for aggressive stand removal.

### **Description of Pre-Treatment Conditions**

The Rim Country footprint is vast and covers many diverse ecosystems. The project area encompasses a number of forest cover types including Mixed Conifer with Aspen, Mixed Conifer/Frequent Fire, Ponderosa Pine-Evergreen Oak, along with Pinyon-Juniper forests, Savanna, riparian, and wet meadow/spring systems. USFS has done well in describing the pre-treatment conditions for Ponderosa Pine forests within the DEIS, but robust information is lacking in most other forest cover types/ecosystems. The Department requests that the FEIS more fully address the diversity of the planning area by being more specific about existing conditions in these different forest types/ecosystems so that the Department, and the general public, have a better picture of current restoration needs outside the Ponderosa Pine forests.

### **Collaborative Role in Implementation**

4FRI derives portions of its funding through the CFLRP used for implementation of the 1st EIS, and the USFS has a renewal proposal submitted for Rim Country. As work within the 1st EIS is well underway, it has become apparent that stakeholder engagement outside of the planning process has been very limited, which is in conflict with CFLRP stipulations to facilitate stakeholder engagement in all phases of 4FRI from planning through implementation. Consistent with the CFLRP and the Department's Cooperating Agency status, the Department also requests to be engaged in all aspects of 4FRI to assist with planning and implementing treatments. The Department offers subject matter expertise, the pooling of financial resources (e.g., Department habitat partnership grants and other money sources) that can be leveraged with USFS projects to expand project scope, and the sharing of resources and site specific knowledge to assist in planning and implementing aquatic and upland restoration projects.

Currently, there is no formal framework memorializing stakeholder engagement and coordination. The Department recommends that a solution be provided within the FEIS that is binding, along with bolstering this formal framework within the 4FRI Memorandum of Understanding. In conjunction with the Department and other stakeholders, USFS should develop a framework that captures stakeholder expectations for 4FRI. One example highlighted in the SHG letter in Appendix V titled “Public Engagement in Adaptive Implementation - A Process for Adaptive Implementation of the Spruce Beetle Epidemic-Aspen Decline Management Response EIS” is a potential example of this framework that the USFS already has for a long term project with many engaged stakeholders (4FRI SHG, 2020). Another example to consider is the White Mountain Stewardship Multi-party Monitoring Board. The USFS conducted pre- and post-thinning field trips throughout the implementation phase. By doing this, the Board had the opportunity to see the results of various thinning prescriptions in real time, allowed the USFS to incorporate stakeholder input and modify treatments to better meet treatment objectives and stakeholder expectations, and most importantly, share stakeholder feedback on how well they felt the USFS was doing at meeting stakeholder member expectations for the post-treatment landscape.

#### **Adaptive Management and Monitoring**

All adaptive management and monitoring plans need the best available science to inform actions on-the-ground. Additionally, there have been improvements and efficiencies learned through the implementation of 4FRI’s 1st EIS. The Department is concerned that the Rim Country Monitoring Plan does not incorporate these components. The Department requests that the USFS incorporate efficiencies and improvements learned from the 1st EIS into the Monitoring Plan, as well as update references within the Monitoring Plan to reflect the best available science. Lastly, the Department requests the FEIS and Monitoring Plan incorporate language that emphasizes the collaborative role in the decision-making process with the existing 4FRI Multi-Party Monitoring Board and the 4FRI SHG.

#### **Road Decommissioning and Transparency of Road-related Actions**

Keeping roads open and available for public recreation is a core principle for the Department. With that in mind, it was unclear to the Department what road impacts were analyzed within the DEIS. The Department found inconsistencies in the total number of miles to be decommissioned/constructed in the DEIS. Since there was no spatial data containing road layers provided in the DEIS, the Department and the general public are unable to comment on the full scope of impacts of roads within Rim Country. The Department recommends that USFS provide greater transparency and continuity of road-related actions within the FEIS by including shapefiles and verifying the information provided in the DEIS is consistent with the information presented in each Forest Plan. For this reason, the Department cannot support the decommissioning of roads in this EIS except for those that are consistent with the Travel Management Plan (TMP) decisions for each Forest.

In summary, the 4FRI Rim Country DEIS reflects a fundamental shift towards restoring natural function to many ecosystems in northern and eastern Arizona. The Department is committed to continued involvement in the development of the EIS, and requests clarification on the issues in this letter and the attached comment matrix. Further, the Department requests continued

partnership with the USFS throughout the implementation of this landmark effort. Please contact Rob Nelson at 928-214-1253 to answer potential questions, as well as for additional collaboration with the Department as this DEIS progresses.

Sincerely,



Clay Crowder

Habitat, Evaluation, and Lands Program Branch Chief

Cc: Shaula Hedwall, US Fish and Wildlife Service  
Amy Waltz, Ecological Restoration Institute  
Steve Rosenstock, Grand Canyon Trust  
Pascal Berlioux, Eastern Arizona Counties  
Joe Miller, Trout Unlimited  
Joe Trudeau, Center for Biological Diversity  
Travis Wooley, The Nature Conservancy

Attachments: AGFD comment matrix  
AGFD Aquatic restoration priority treatment table

AGFD# M19-09273910

Work Cited:

Council on Environmental Quality. 2005. Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act, 40 CFR. Sec 1501.6(a)(2).

4FRI Stakeholder Group (SHG). 16 Jan. 2020. Stakeholder Comments: 4FRI Rim Country Draft Environmental Impact Statement.

Public Law 111-11, 111th Congress. 2009. H.R. 146 - Omnibus Public Land Management Act of 2009.

**AGFD Aquatic Restoration Priority Treatment Table for the Rim Country DEIS (2019)**

Location Name	Treatment Recommendation	Main Species Targeted & Other Species Benefitted	Comments
Campbell Spring	Headwater Meadow/Spring Restoration	Northern Leopard Frog & Other Spring associated wildlife (canyon treefrogs, etc.)	Road is impacting Campbell Spring habitat; if roads are already closed through TMR, improve closure signage on the ground; rehab to return to vegetated state
Jones Spring	Headwater Meadow/Spring Restoration	Northern Leopard Frog & Other spring associated wildlife	Jones Springs and perennial stream stretch below springs should be restored, livestock should be excluded; if roads are already closed through TMR, improve closure signage on the ground; rehab to return to vegetated state
Chevelon Canyon Creek	Headwater Meadow/Spring Restoration	Little Colorado Spinedace	Forest thinning and burning activities should minimize sediment and ash inputs to stream channels in this watershed
Foster Spring	Headwater Meadow/Spring Restoration	Northern Leopard Frog & Other spring associated wildlife	Foster Spring restoration and protection (a livestock fence is needed to protect sensitive riparian habitat and species, provide water to livestock outside sensitive riparian habitat)
Potato Lake	Headwater Meadow/Spring Restoration		
Dines Tank	Headwater Meadow/Spring Restoration		
Dane Spring	Headwater Meadow/Spring Restoration	Restore wet meadow and spring habitat for native species including frogs and fish & Spinedace downstream	Restore wet meadow and spring habitat for native species including frogs and fish
General Springs	Headwater Meadow/Spring Restoration	Restore wet meadow and spring habitat for native species including frogs and fish	Restore wet meadow and spring habitat for native species including frogs and fish
Immigrant Spring	Headwater Meadow/Spring Restoration	Restore wet meadow and spring habitat for native species including frogs and fish	Restore wet meadow and spring habitat for native species including frogs and fish
Kehl Spring	Headwater Meadow/Spring Restoration	Restore wet meadow and spring habitat for native species including frogs and fish	Restore wet meadow and spring habitat for native species including frogs and fish
Pivot Rock Spring	Headwater Meadow/Spring Restoration	Restore wet meadow and spring habitat for native species including frogs and fish	Restore wet meadow and spring habitat for native species including frogs and fish
Whistling Spring	Headwater Meadow/Spring Restoration	Restore wet meadow and spring habitat for native species including frogs and fish	Restore wet meadow and spring habitat for native species including frogs and fish
Willow Spring	Headwater Meadow/Spring Restoration	Restore wet meadow and spring habitat for native species including frogs and fish	Restore wet meadow and spring habitat for native species including frogs and fish
Upper Buck Spring	Headwater Meadow/Spring Restoration	Restore wet meadow and spring habitat for native species including frogs and fish	Restore wet meadow and spring habitat for native species including frogs and fish
Lower Buck Spring	Headwater Meadow/Spring Restoration	Restore wet meadow and spring habitat for native species including frogs and fish	Restore wet meadow and spring habitat for native species including frogs and fish
Pieper Hatchery Spring	Headwater Meadow/Spring Restoration	Chiricahua leopard frog & Other native aquatic species	Restore spring habitat for frogs and other native species
Bear Springs	Headwater Meadow/Spring Restoration	Chiricahua leopard frog & Other native aquatic species	Restore spring habitat for frogs and other native species
Poison Spring	Headwater Meadow/Spring Restoration	Chiricahua leopard frog & Other native aquatic species	Restore spring habitat for frogs and other native species
Pine Spring	Headwater Meadow/Spring Restoration	Chiricahua leopard frog & Other native aquatic species	Restore spring habitat for frogs and other native species
Schneider Spring	Headwater Meadow/Spring Restoration	Restore wet meadow and spring habitat for native species including frogs and fish	Restore wet meadow and spring habitat for native species including frogs and fish
Barbershop Canyon Creek	Headwater Meadow/Spring Restoration		Upper Barbershop
East Fork Woods Canyon	Headwater Meadow/Spring Restoration		Upper East Fork Woods Canyon
Poverty Draw/Poverty Spring	Headwater Meadow/Spring Restoration		
Willow Creek	Headwater Meadow/Spring Restoration		
Woods Canyon Creek	Headwater Meadow/Spring Restoration		
East Clear Creek	Headwater Meadow/Spring Restoration		See East Clear Creek Strategy (1999); Region 2 centric
Black Canyon Creek	Headwater Meadow/Spring Restoration		
Thompson Creek	Headwater Meadow/Spring Restoration		
Hart Canyon	Headwater Meadow/Spring Restoration		
Fairchild Draw	Headwater Meadow/Spring Restoration		R1
Beaver Creek, including Beaver Park	Headwater Meadow/Spring Restoration		
Cienega Draw	Headwater Meadow/Spring Restoration		
Alder Creek	Headwater Meadow/Spring Restoration		
Beaver Creek (Turkey Crk trib)	Headwater Meadow/Spring Restoration		
Gentry Creek	Headwater Meadow/Spring Restoration		
Houston Draw	Headwater Meadow/Spring Restoration		
Pius Farm Draw	Headwater Meadow/Spring Restoration		
Quaking Aspen Canyon	Headwater Meadow/Spring Restoration		
Turkey Creek	Headwater Meadow/Spring Restoration		
Brown Creek	Headwater Meadow/Spring Restoration		
Double Canyon	Headwater Meadow/Spring Restoration		
Long Tom Cabin	Headwater Meadow/Spring Restoration		
Coldwater Spring	Headwater Meadow/Spring Restoration	Native aquatic species	
Jones Crossing	Headwater Meadow/Spring Restoration	Native aquatic species	
Wiggins Crossing	Headwater Meadow/Spring Restoration	Native aquatic species	
East Clear Creek/Miller Creek Confluence	Headwater Meadow/Spring Restoration	Native aquatic species	
Potato Lake Draw	Headwater Meadow/Spring Restoration	Native aquatic species	
Merritt Draw	Headwater Meadow/Spring Restoration	Native aquatic species	
Bill McClintock Draw	Headwater Meadow/Spring Restoration	Native aquatic species	
Miller Canyon	Headwater Meadow/Spring Restoration	Native aquatic species	
East Miller Canyon	Headwater Meadow/Spring Restoration	Native aquatic species	
Crackerbox Canyon Upper E, W	Headwater Meadow/Spring Restoration	Native aquatic species	
Leonard Canyon Creek	Headwater Meadow/Spring Restoration	Native aquatic species	
West Fork Leonard Canyon Creek	Headwater Meadow/Spring Restoration	Native aquatic species	Upper West Leonard
West Bear Canyon	Headwater Meadow/Spring Restoration	Native aquatic species	Upper West Bear
Candy Spring	Headwater Meadow/Spring Restoration		Candy Spring is a potential RACH stocking location; spring dredging and spring box restoration are needed prior to the release of RACH
Little Green Valley	Headwater Meadow/Spring Restoration		Little Green Valley meadow
Foster Spring	Headwater Meadow/Spring Restoration		frogs and other spring associated wildlife use for hibernation& dispersal in summer; this spring should be restored and livestock should be kept outside of sensitive riparian habitat
	Other	Bebb's Willow	Re-build elk enclosure fence
East Bear Canyon	Stream restoration	Little Colorado Spinedace	Protect stream from siltation from Forest treatments
Houston Draw	Other	LC Spinedace or Apache trout	Restore flow by increasing enclosure, erosion control, streambed restoration
Miller Canyon	Headwater Meadow/Spring Restoration	LC Spinedace	Protect water flow/ and protect from siltation from forest treatments
Miller Canyon	Headwater Meadow/Spring Restoration	LC Spinedace	Protect/increase flow, protect stream from siltation from forest treatments
Webber Creek	Stream restoration	Aquatic species	Perennial water. Protect for aquatic species
Bray Creek	Stream restoration	Aquatic species	Perennial water. Protect for aquatic species
Sycamore Creek	Stream restoration	Aquatic species	Perennial water. Protect for aquatic species
Chase Creek	Stream restoration	Aquatic species	Perennial water. Protect for aquatic species
Dude Creek	Stream restoration	Aquatic species	Perennial water. Protect for aquatic species
Bonita Creek	Stream restoration	Aquatic species	Perennial water. Protect for aquatic species
Ellison Creek	Stream restoration	Aquatic species	Perennial water. Protect for aquatic species
Horton Creek	Stream restoration	Aquatic species	Perennial water. Protect for aquatic species
Dick Williams Creek	Stream restoration	Aquatic species	Perennial water. Protect for aquatic species
Christopher Creek	Stream restoration	Aquatic species	Perennial water. Protect for aquatic species
Gordon Canyon Creek	Stream restoration	Aquatic species	Perennial water. Protect for aquatic species
Haigler Creek	Stream restoration	Aquatic species	Perennial water. Protect for aquatic species
Unnamed tributary of Chase Creek	Stream restoration	Aquatic species	Perennial water. Protect for aquatic species
East Verde River	Stream restoration	Aquatic species	Perennial water. Protect for aquatic species
Mail Creek	Stream restoration	Aquatic species	Perennial water. Protect for aquatic species
Willow Springs Canyon	Stream restoration	Aquatic species	Perennial water. Protect for aquatic species
Show Low Creek	Stream restoration	Aquatic species	Perennial water. Protect for aquatic species
General Springs Creek	Stream restoration	Aquatic species	Perennial water. Protect for aquatic species
East Fork Leonard Canyon Creek	Stream restoration		
Pine Creek	Stream restoration	Aquatic species	Perennial water. Protect for aquatic species
East Verde River	Stream restoration	Aquatic species	Perennial water. Protect for aquatic species
East Verde River	Stream restoration	Aquatic species	Perennial water. Protect for aquatic species
Canyon Creek	Stream restoration	Aquatic species	Perennial water. Protect for aquatic species
Tonto Creek	Stream restoration	Aquatic species	Perennial water. Protect for aquatic species



**AGFD Comment Matrix - 2nd 4FRI Rim Country DEIS (AGFD # M19-09273910)**

CH/App/Report	Page	Section Title	Issue	Comment/Observation	Action Requested
CH 2	35-38	Alternatives Considered in Detail	Facilitative operations is not included	The EIS discusses mechanical and fire treatments, however, facilitative operations for both mechanical and fire was not included in the discussion.	Action: Included facilitative operations (both mechanical and fire) as a treatment in the discussion, and include descriptions of ecotone types (pinyon-juniper and mixed conifer) where the treatments will occur.
CH 2	45	Alternatives Considered in Detail	Insufficient detail and planning for facilitative operations	Insufficient detail is provided for facilitative treatments. The reader does not know what standards will be applied and what the thinning and burning treatments will look like across 120,000+ acres of ecotone types (pinyon-juniper and mixed conifer). This is a significant area of treatment and includes sensitive habitats for many wildlife species, including turkey. Therefore, the treatment plans should be more detailed and not simply seen as facilitating ponderosa pine treatment.	Action: Modify the EIS to include guidance for facilitative treatments that bring these systems closer to their respective Desired Conditions and follow best available science. For example, large and old junipers have high value to many wildlife species, and should be excluded from thinning or burning treatments.
CH 3	102	Water and Riparian	Best Management Practices (BMPs) vs Mitigation Measures	On page 102 it discusses the use BMPs to mitigate impacts to water quality. BMPs mitigate potential impacts by avoiding, minimizing, or reducing/eliminating impacts. However, BMPs should be distinguished from mitigation measures in the EIS if BMPs are 1) existing requirements for the proposed action, 2) ongoing, regularly occurring practices, and 3) not specific to this proposed action.	Action: Ensure terms are used appropriately in the EIS.
CH 3	269	Climate Change	Climate Change	<p>Overall this section was incomplete and lacked a summary of the affected resources. A limited number of citations were referenced, and of those provided appeared to be outdated. The short narrative only discussed emissions and carbon sequestration relating to treatments, and did not discuss other potential sources of greenhouse gas emissions (e.g., equipment operations etc.). In addition, this section did not provide any references to other sections that discussed effects of climate change or special reports (e.g., the wildlife section). This section also lacked analysis of cumulative impacts of other projects outside of the DEIS, but are within the project footprint.</p> <p>Without a clear understanding of the affected resources, ecosystem services and relevant metrics for each affected resource, the Department is concerned that the purpose of the EIS - to increase ecosystem resilience (page 21), may not be achieved.</p>	<p>Action: Update citations and address comments provided. Ensure section is in accordance with USFS guidance on climate change analysis (<a href="https://www.fs.usda.gov/ccrc/topics/environmental-analysis-nepa">https://www.fs.usda.gov/ccrc/topics/environmental-analysis-nepa</a>).</p> <p>Action: Summarize and provide references to climate change-related discussions, methods, and assumptions discussed elsewhere in the EIS.</p> <p>Action: Provide a citation for the following statement - "High severity fire in ponderosa pine forests releases large quantities of CO2 to the atmosphere. The emissions below are associated with ponderosa within an existing, healthy fire regime. Far more carbon is stored in the healthy ponderosa pine forest than the area recovering from a high severity fire."</p>
CH 3	277	Socio-Economics	Wildlife-related recreation is not included	Wildlife-related recreation was not recognized in this section. The footprint has many high-quality wildlife-related recreational opportunities that the project may potentially impact.	<p>Action: Include wildlife-related recreational statistics for the counties and across the Game Management Units (GMU's) within the footprint, including the most-valued hunting and fishing locations; and analyze in the EIS.</p> <p>Suggested resources:                      Link to map of most-valued hunting and fishing locations - <a href="http://azgfd.maps.arcgis.com/apps/MapSeries/index.html?appid=72ef284e22ab441b81c72472409c5d24&amp;autoplay">http://azgfd.maps.arcgis.com/apps/MapSeries/index.html?appid=72ef284e22ab441b81c72472409c5d24&amp;autoplay</a>                      Link to the Economic Importance of Hunting and Fishing - <a href="https://www.azgfd.com/Wildlife/EconomicImpact/">https://www.azgfd.com/Wildlife/EconomicImpact/</a></p>

**AGFD Comment Matrix - 2nd 4FRI Rim Country DEIS (AGFD # M19-09273910)**

CH/App/Report	Page	Section Title	Issue	Comment/Observation	Action Requested
CH 3	304	Transportation	Road Decommissioning - and Transparency of Road-related Actions	<p>The discussion of road-related actions requires greater transparency and continuity throughout the EIS. On page 31 it lists the road-related bullet points below as additional actions common to both Alternative 2 and 3, but these bullet points are not in the Transportation section. In addition no maps or Forest Plans were referenced, and there was no discussion on how the number of miles for each Forest were derived, with the exception of Tonto National Forest. The recreation specialist report stated all the Travel Management Rule (TMR) decisions for the Coconino, Tonto, and Apache-Sitgreaves National Forest will be adhered too, but this statement is missing from page 31 and the Transportation section.</p> <ul style="list-style-type: none"> <li>• "Decommission up to 200 miles of existing system roads on the Coconino and Apache-Sitgreaves National Forests, and up to 290 miles on the Tonto National Forest.</li> <li>• Decommission up to 800 miles of unauthorized roads on the Apache-Sitgreaves, Coconino, and Tonto National Forests.</li> <li>• Construct or improve approximately 330 miles of temporary roads (new and/or occurring on existing unauthorized roads) to facilitate mechanical treatments; decommission all temporary roads when restoration treatments are completed.</li> <li>• Relocate and reconstruct existing open roads adversely affecting water quality and natural resources, or of concern to human safety."</li> </ul>	<p>Action: Provide greater transparency and continuity of road-related actions. The Department and the public are unable to comment on these actions if they have not been identified. Provide shapefiles and maps, and include a table of the number of miles of road-related actions per Forest. Both page 31 and CH 3 - Transportation section should include a narrative on how the number of miles were derived. Describe how actions will be prioritized, identified, and implemented; and describe how actions will not conflict with travel management direction. Include what criteria will be used to determine which roads are decommissioned or relocated.</p> <p>Action: Ensure that page 31 and CH 3 - Transportation, and other applicable discussions and tables agree.</p>
CH 3	305 -306	Transportation	Temporary Roads	<p>The DEIS states only 80,561 of the 210,251 acres on the Tonto National Forest were analyzed for temporary road construction because only "a small amount of merchantable material are present, likely many areas will not be treated." However, facilitative operations (that is treatments for non-merchantable materials) could occur across the entire Tonto footprint and, therefore, would require temporary road construction. The DEIS continues "Areas not proposed for mechanical treatments with wood products removal would not need the same level of access as those areas where forest products would be utilized."</p>	<p>Action: The Department believes the scope of work for temporary roads should include both merchantable material treatments and facilitative operations. Include a description of the temporary roads that will be needed for facilitative operations across all Forests and include in the analysis.</p> <p>Action: Provide additional evidence and justification for the conclusions made in this section. Include a citation for the following statement "Areas not proposed for mechanical treatments with wood products removal would not need the same level of access as those areas where forest products would be utilized."</p>

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CH 3	307 - 308; 314 ; 331	Transportation; Terrestrial Wildlife	Consistency with Forest Plans	<p>The status and numbers presented in the EIS are not consistent with information provided in the Forest Plans.</p> <p>For example:                      1) On page 307, numbers of miles of roads on the Tonto National Forest do not reflect those presented in the Tonto National Forest TMP;                      2) The NEPA status of the Tonto TMP on page 308 needs to be updated;                      3) On page 314 in the Terrestrial Wildlife section, the following statements are incorrect "It is proposed in the Tonto Travel Management DEIS 354 miles of ML2 roads be converted to motorized trail.", and "a route 50 inches or less in width or a route over 50 inches wide that is identified and managed as a trail."; and                      4) On page 331, the Terrestrial Management Indicator Species (MIS) or Focal Species analyzed in the DEIS need to be updated to reflect Forest Plan "Species of Conservation Concern.", as necessary.</p>	<p>Action: Verify information provided in the EIS is consistent with information presented in the Forest Plans.</p> <p>Action: Include the corrected Species of Conservation Concern/Focal species across Forest Plans as they get amended.</p>
CH 3	308	Transportation	Road Decommissioning	<p>The Department requests clarity of the following statements:                      "This analysis does not identify specific road segments for decommissioning. Rather it would provide the NEPA decision to decommission roads and road segments at the time that task orders or other projects are implemented." and; "Under this alternative both National Forest Systems roads and unauthorized roads could be decommissioned."</p> <p>The Department cannot support the decommissioning of roads, unless this EIS only provides for the NEPA decision to decommission roads and roads segments as to remain fully consistent with the Travel Management Plan (TMP) decisions for each Forest. The Department would object to this analysis providing for the decommissioning of roads and road segments, which the Department and public had not had the opportunity to specifically analyze for potential impacts to its ability to meet its statutory trust responsibilities through the TMR/TMP process.</p>	<p>Action: The EIS must clearly state it would only provide for the NEPA decision to decommission roads and roads segments as to remain fully consistent with the TMP decisions for each Forest. It should further clarify that in cases where a Forest does not have a completed TMP, this EIS would not provide for road or road segment decommissioning.</p> <p>Action: Given this statement "...NEPA decision to decommission roads and road segments at the time that task orders or other projects are implemented (page 308)." The Department requests transparency on how the number of miles identified on page 31 and in the Transportation section were derived.</p>
CH 3	309	Transportation	Road Relocation	<p>The scope of road relocations is unclear, and important road relocation methods and assumptions stated in the EIS were not included in the Transportation section.</p> <p>An example of such a statement that should be included in this section is on page 31 - "Road relocation of a system road is not considered construction of a new permanent road. It is considered a relocation of an existing road."</p> <p>Page 31, goes on to state how road relocations will be prioritized - "Relocate and reconstruct existing open roads adversely affecting water quality and natural resources, or of concern to human safety." and; page 36 states - high priority roads are those that are within 300 feet of water. Given these statements the majority of road relocations can be identified via a desktop review and therefore should be included in the EIS.</p>	<p>Action: Identify roads that met the high priority criteria, and present the total number of miles that will be relocated for each alternative and for each Forest. Include shapefiles and maps.</p> <p>Action: The public should not have to search the EIS for details regarding road-related actions. Ensure the Transportation section is the primary place where information is summarized and referenced to facilitate public comments.</p>

**AGFD Comment Matrix - 2nd 4FRI Rim Country DEIS (AGFD # M19-09273910)**

CH/App/Report	Page	Section Title	Issue	Comment/Observation	Action Requested
CH 3	311	Transportation	Road Decommissioning	<p>The Department request clarification of the following statements:</p> <p>The total number of miles in the Transportation section changes from the original number presented on page 31; and it is difficult for the reader to understand the scope for road-related actions. For example - "Under both action alternatives up to 200 miles of system road on the Coconino and Apache-Sitgreaves National Forests could be decommissioned. The Tonto National Forest Travel Management EIS has identified approximately 290 miles of roads within the Rim Country project area for decommissioning. In addition to system road decommissioning, up to 800 miles of unauthorized roads on all three forests could be decommissioned under these alternatives. In addition to these road mileages the Larson and Upper Rocky Arroyo environmental assessments on the Apache-Sitgreaves National Forests identified 18 miles of system road and 57 miles of unauthorized road for decommissioning."</p> <p>The same comment as above for the following statement. "...50 miles of temporary road that have been analyzed under separate project within the project area and are in various stages of implementation. When these are added to the 330 miles proposed in alternative 2 the total mileage of temporary roads is 380 miles within Rim Country analysis area, which is more than under alternative 3." In addition it is unclear what project is being referenced and context of the project.</p> <p>Moreover, the cumulative effect analysis for transportation is incomplete and insufficient. The only statement that mentioned 'cumulative impacts' was on page 311 - "Overall, the cumulative effect to the transportation system in the project area from the action alternatives would result in a more sustainable road system that would provide access for the Rim Country Project Area." This statement is an oversimplification of potential effects lacking justification and citations to support this conclusion.</p>	<p>Action: Total number of miles to be decommissioned/constructed in the EIS differed from the original number of miles presented on page 31, and numbers presented in the comparison of Alternatives by Activity table on page iii to v. Total number of miles in the EIS and number of miles for outside projects not analyzed in the EIS should be clearly presented in a table along with a narrative or other format to clarify scope of road-related actions.</p> <p>Action: Provide context for the following statement and a citation for the project - "...50 miles of temporary road that have been analyzed under separate project within the project area and are in various stages of implementation. When these are added to the 330 miles proposed in alternative 2 the total mileage of temporary roads is 380 miles within Rim Country analysis area, which is more than under alternative 3."</p> <p>Action: The cumulative effect analysis for transportation is incomplete and insufficient. Include a dedicated section that discusses the 'cumulative effects' of the proposed road system. The effects of habitat loss and fragmentation on wildlife and recreational opportunities should be included in the analysis. Other topics to address are: impacts to aquatic habitat, sedimentation and erosion, noise, and habitat degradation etc. Discuss how implementation and adaptive management will be applied to the road system in the project footprint to reduce potential impacts?</p> <p>Action: In addition, projects that are outside of this EIS, but within the project footprint that need to be included in the cumulative impacts analysis should be clearly listed and cited; to include their respective timelines and number of miles for road-related actions (e.g., decommissioned, temporary roads, relocation, unauthorized routes etc.). Include roads that have already been analyzed under previous project(s) in the EIS shapefiles, applicable App A - Maps and tables. Project(s) that will be concurrent with actions in the EIS have the potential to multiply impacts to natural resources, and therefore should be included in the cumulative effects analysis.</p> <p>The Department is concerned that road-related actions addressed in subsequent NEPA documents (e.g., categorical exclusions or environmental assessments) will preclude public involvement; specifically if the proposed NEPA rule (2019) is finalized. For this reason the Department requests the scope of work for road-related actions and the decision points be clearly defined in the EIS, and summarize and referenced in the Transportation section.</p>

**AGFD Comment Matrix - 2nd 4FRI Rim Country DEIS (AGFD # M19-09273910)**

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CH 3	312; 317	Terrestrial Wildlife	Species of Economic and Recreational Importance (SERI) and Species of Greatest Conservation Need (SGCN) are not included	<p>As a Cooperating Agency and ID Team member, the Department provided environmental analysis and recommendations that were not included in the DEIS.</p> <p>For example:                      1) SERI species and some of the SGCN were not included in the Terrestrial Wildlife section (page 312 and 317).                      2) Information provided in memorandums/specialist reports/geospatial data and in other communications to 4FRI were not included in the DEIS.</p> <p>Some of the design features/BMPs (App C) could be better integrated into the body of the DEIS and the toolboxes.</p>	<p>Action: Review and incorporate Department environmental analysis and recommendations.</p> <p>Action: Ensure species design features/BMPs in the EIS are compatible with the toolboxes, silviculture guidance, and other aspects of the EIS.</p>
App D	619	section D - Large Tree Implementation	The large tree implementation plan.	<p>The large tree implementation plan is inadequate and provides no assurances that large trees will not be targeted for removal within certain stands. In addition, there is a lack of transparency, in that review and decisions occur by and within the District without the express opportunity for Stakeholder input. Specifically, from Section D, Page 619: "There may be additional areas and/or circumstances where large post-settlement trees need to be removed in order to achieve restoration objectives. During implementation (prescription development), if there is a condition where forest plan desired conditions conflict with the exception condition categories listed below, no large trees would be felled until the NEPA decision is reviewed by the District. The District would decide whether the action is consistent with the analysis and the decision made."</p> <p>West Escudilla Old and Large Tree Implementation Strategy: "[...] is designed to reflect the intent to focus restoration treatment on small-diameter tree thinning, to retain large trees whenever possible, and to more specifically design treatments so that large trees will be retained unless they must be cut to meet the desired conditions listed in the LMP."</p>	<p>Action: Modify Section D, Page 619: "There may be additional areas and/or circumstances where large post-settlement trees need to be removed in order to achieve restoration objectives as described in forest plan desired conditions. During implementation (prescription development), if there is a condition where adherence to the Large Tree Implementation Plan would be inconsistent with forest plan desired conditions conflict with the exception condition categories listed below, no large trees would be felled until the NEPA decision is reviewed by the District. The District would decide whether the action is consistent with the analysis and the decision made. To be consistent with the desired conditions of the plan, retention of large trees, when assessed at the appropriate spatial scale described in the plan (e.g., landscape scale), must meet one or more of the following conditions:</p> <ul style="list-style-type: none"> <li>• Maintain or make progress toward one or more of the desired conditions of a plan without adversely affecting progress toward, or maintenance of, other desired conditions; or</li> <li>• Be neutral with regard to progress toward plan desired conditions; or</li> <li>• Maintain or make progress toward one or more of the desired conditions over the long term, even if the project or activity would adversely affect progress toward or maintenance of one or more desired conditions in the short term; or</li> <li>• Maintain or make progress toward one or more of the desired conditions over the long term, even if the project or activity would adversely affect progress toward other desired conditions in a negligible way over the long term.</li> </ul> <p>In circumstances where the District plans to fall large trees outside of the exception categories for felling large trees, as provided for in the Large Tree Implementation Plan, the District shall inform interested stakeholders, including the 4FRI Stakeholder Group of its decision prior to awarding the unit for sale. Documentation provided by the District to stakeholders shall explain how the Large Tree Implementation Plan is inconsistent with forest plan desired conditions in the specific area/circumstance in which the decision is being made.</p>

**AGFD Comment Matrix - 2nd 4FRI Rim Country DEIS (AGFD # M19-09273910)**

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App C	590-598	Design Features, Best Management Practices, Mitigation, and Conservation Measures	Lack of required coordination with the Department for wildlife related input during prescription plan development, layout, marking, and thinning.	Given the length of time (20+ years) and the acreage involved (889,000+ acres of mechanical treatment) over which this project will be implemented, it is essential that the each Forest District coordinate with the local Department Regional Habitat, Evaluation, and Lands Programs, to ensure that the most up-to-date, site-specific wildlife information is incorporated into the prescription plan development, layout, and marking for each cutting unit. This includes facilitative treatments.	Action: Under the wildlife portion, include the following BMPs/Mitigation/Conservation Measures: "Coordination with the local Arizona Game and Fish Department Regional Habitat, Evaluation, and Land Program Manager will occur during prescription or burn plan development, layout, marking, thinning, and burning. This is to ensure that the most up-to-date, site-specific wildlife information is considered, in order to minimize negative impacts, and maximize benefits to the extent practicable."
App D	Section F	New: Aquatic Toolbox Implementation (attachment)	Site-specific implementation recommendations not included	Upon request from the USFS, in 2016, the Department initiated a lengthy data collection process to identify site-specific restoration needs in both aquatic and terrestrial systems across Rim Country. These recommendations culminated in GIS datasets, letters, and tables from the Department identifying priority locations for wildlife habitat restoration. None of these recommendations appear to have been included in the Rim Country DEIS.	Action: Site specific restoration recommendations from AGFD should be included in a tabular form in Appendix D or as a separate Appendix in the DEIS for future reference to aid implementation.
General	General	General	Toolboxes	Context for the toolboxes was not provided early in the DEIS, instead the DEIS defers to referencing App D. These toolboxes (along with other sections of the Implementation Plan in App D) drive the work on the ground and, therefore, should be summarized early in the document to provide context for the reader.  Some questions that should be addressed in the description of the toolboxes early in the EIS are: How the toolboxes were developed, What is in the toolboxes, and How they will be implemented to provide greater transparency of the toolboxes. Without context, it is difficult for the reader to understand what the toolboxes mean as it is related to the design, BMPs, etc.	Action: Provide context for the toolboxes and summarize the process early in the EIS to provide context for the reader and transparency of actions.
General	General	All	Does not meet project objectives	Alternative 3 represents a less intensive and extensive treatment plan. It does not meet the objectives of 4FRI.	Action: Drop Alternative 3 and chose Alternative 2 in the Record of Decision.