Center for Biological Diversity ● Grand Canyon Trust ● Project Eleven Hundred
Southern Utah Wilderness Alliance ● WildEarth Guardians
Western Watersheds Project

November 15, 2022

Nick Glidden
Pine Valley District Ranger
Dixie National Forest
196 E. Tabernacle, Suite 38
St. George, UT 84770
nicholas.glidden@usda.gov
Submitted via https://cara.fs2c.usda.gov/Public//CommentInput?Project=57110

Re: Comments on Pine Valley Wildlife Habitat and Ecological Resiliency Improvement Project

Ranger Glidden:

On behalf of the Center for Biological Diversity, Project Eleven Hundred, Grand Canyon Trust, WildEarth Guardians, Western Watersheds Project, and Southern Utah Wilderness Alliance, thank you for the opportunity to comment on the Pine Valley Wildlife Habitat and Ecological Resiliency Improvement Project Environmental Assessment ("Pine Valley Project EA" or "EA").

We appreciate the Dixie National Forest's efforts at engagement with the public through the life of this project, including incorporating some proposals we made during previous opportunities for input. In particular, we appreciate the Forest's concern for old growth retention and focus on preferentially retaining pinyon pine. We recognize the potential value of ecologically-informed landscape-scale restoration efforts. However, we believe that this project and the environmental analysis supporting it, while improved from previous iterations, still require substantive modifications along the lines outlined below in order for us to support its implementation. We welcome further engagement with the Dixie National Forest and the Pine Valley Ranger District going forward.

As described below, we urge the Forest Service to, among other things:

- Disclose the site-specific impacts of the project by abandoning what is in effect a condition-based management approach;

- Ensure compliance with the Roadless Area Conservation Rule;

- Address the potentially significant cumulative impacts of massive regional pinyon and juniper removal on Pinyon Jay and Gray Vireo;

- Address the interaction of post-removal livestock grazing, drought, and cheatgrass expansion;

- Include measures to prevent destruction of old-growth woodlands;

- Adopt measures to better protect riparian areas;

- Analyze at least one action alternative besides the proposed action, including fire and manual treatments in IRAs, 30% livestock utilization; and

- Prepare a full environmental impact statement given the potential for significant impacts and the controversy surrounding the studies used to support the proposed action.

I. THE EA FAILS TO DISCLOSE THE PROJECT'S SITE-SPECIFIC IMPACTS, VIOLATING THE NATIONAL ENVIRONMENTAL POLICY ACT.

A. The National Environmental Policy Act Requires the Forest Service to Disclose Site-Specific Impacts.

NEPA is "our basic national charter for protection of the environment." *Ctr. for Biological Diversity v. U.S. Forest Serv.*, 349 F.3d 1157, 1166 (9th Cir. 2003).[1] In passing NEPA, Congress "recogniz[ed] the profound impact of man's activity on the interrelations of all components of the natural environment" and set out "to create and maintain conditions under which man and nature can exist in productive harmony." 42 U.S.C. § 4331(a). To bring federal action in line with Congress' goals and to foster environmentally informed decision-making by federal agencies, NEPA "establishes 'action-forcing' procedures that require agencies to take a 'hard look' at environmental consequences." *Metcalf v. Daley*, 214 F.3d 1135, 1141 (9th Cir. 2000).

An agency's NEPA analysis serves two purposes:

> First, it ensures that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts. Second, it guarantees that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision.

Dep't of Transp. v. Pub. Citizen, 541 U.S. 752, 768 (2004). *See also Envtl. Prot. Info. Ctr. v. Blackwell*, 389 F. Supp. 2d 1174, 1184 (N.D. Cal. 2004) (quoting *Neighbors of Cuddy Mt. v. Alexander*, 303 F.3d 1059, 1063 (9th Cir. 2002)); *see also Earth Island v. United States Forest Serv.*, 351 F.3d 1291, 1300 (9th Cir. 2003) ("NEPA requires that a federal agency 'consider

[1] This action is governed by the Council on Environmental Quality's 1978 regulations, as amended, and so all references to the CEQ regulations are to those currently in force as of July 14, 2020, unless otherwise noted. Although CEQ issued a final rulemaking in July 2020 fundamentally rewriting those regulations, the new rules apply only "to any NEPA process begun after September 14, 2020," or where the agency has chosen to "apply the regulations in this subchapter to ongoing activities." 40 C.F.R. § 1506.13 (2020). The Pine Valley project NEPA process began before September 2020; the Dixie National Forest issued a scoping notice in November 2019. The Forest Service nowhere alleges it has chosen to apply the 2020 rules to this project.

every significant aspect of the environmental impact of a proposed action . . . [and] inform the public that it has indeed considered environmental concerns in its decision-making process.'").

"NEPA promotes its sweeping commitment to 'prevent or eliminate damage to the environment and biosphere' by focusing Government and public attention on the environmental effects of proposed agency action." *Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 371 (1989) (quoting 42 U.S.C. § 4321). Stated more directly, NEPA's "'action-forcing' procedures . . . require the [Forest Service] to take a 'hard look' at environmental consequences" *before* the agency approves an action. *Metcalf v. Daley*, 214 F.3d 1135, 1141 (9th Cir. 2000) (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 348 (1989)) "By so focusing agency attention, NEPA ensures that the agency will not act on incomplete information, only to regret its decision after it is too late to correct." *Marsh*, 490 U.S. at 371 (citation omitted). To ensure that the agency has taken the required "hard look," courts hold that the agency must utilize "public comment and the best available scientific information." *Biodiversity Cons. Alliance v. Jiron*, 762 F.3d 1036, 1086 (10th Cir. 2014) (internal citation omitted). To ensure that the agency has taken the required "hard look," courts hold that the agency must utilize "public comment and the best available scientific information." *Biodiversity Cons. Alliance v. Jiron*, 762 F.3d 1036, 1086 (10th Cir. 2014) (internal citation omitted).

Under NEPA, an agency must analyze the direct, indirect, and cumulative impacts of a proposed action. 40 C.F.R. §§ 1508.8, 1508.7. These analyses undergird NEPA's "hard look" requirement—a "thoughtful and probing reflection of the possible impacts associated with the proposed project." *Silverton Snowmobile Club v. U.S. Forest Serv.*, 433 F.3d 772, 781 (10th Cir. 2006). "General statements about 'possible' effects and 'some risk' do not constitute a 'hard look' absent a justification regarding why more definitive information could not be provided." *Neighbors of Cuddy Mountain*, 137 F.3d at 1380; *Conservation Cong. v. Finley*, 774 F.3d 611, 621 (9th Cir. 2014). "The agency must explain the conclusions it has drawn from its chosen methodology, and the reasons it considered the underlying evidence to be reliable." *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1075 (9th Cir. 2011) (citation and internal quotation marks omitted).

Without "quantified, detailed information," the Forest Service cannot adequately assess the project's environmental impacts. *See Neighbors of Cuddy Mountain v. U.S. Forest Serv.*, 137 F.3d 1372, 1380 (9th Cir. 1998). The agency may not simply rely on its staff's opinions without hard data. *Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt.*, 387 F.3d 989, 996 (9th Cir. 2004).

In *Natural Resources Defense Council v. U.S. Forest Service*, for example, the Court faulted the Forest Service for providing empty disclosures that lacked any analysis, explaining the agency "d[id] not disclose the effect" of continued logging on the Tongass National Forest and "d[id] not give detail on whether or how to lessen the cumulative impact" of the logging. *Natural Res. Def. Council v. U.S. Forest Serv.,* 421 F.3d 797, 812 (9th Cir. 2005). The Court explained that "general statements about possible effects and some risk do not constitute a hard look, absent a justification regarding why more definitive information could not be provided." *Or. Natural Res. Council Fund v. Brong*, 492 F.3d 1120, 1134 (9th Cir. 2007) (citation omitted); *see also Or. Natural Res. Council Fund v. Goodman*, 505 F.3d 884, 892 (9th Cir. 2007) (holding the Forest Service's failure to discuss the importance of maintaining a biological corridor violated NEPA,

explaining that "[m]erely disclosing the existence of a biological corridor is inadequate" and that the agency must "meaningfully substantiate [its] finding"). The court reasoned that the Forest Service also must provide the public "'the underlying environmental data' from which the Forest Service develop[ed] its opinions and arrive[d] at its decisions." *WildEarth Guardians v. Mont. Snowmobile Ass'n*, 790 F.3d 920, 925 (9th Cir. 2015). In the end, "vague and conclusory statements, without any supporting data, do not constitute a 'hard look' at the environmental consequences of the action as required by NEPA." *Great Basin Mine Watch v. Hankins*, 456 F.3d 955, 973 (9th Cir. 2006). "The agency must explain the conclusions it has drawn from its chosen methodology, and the reasons it considered the underlying evidence to be reliable." *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1075 (9th Cir. 2011) (citation and internal quotation marks omitted).

NEPA permits an agency to forecast broad cumulative impacts of related actions in a programmatic NEPA document before it knows the actual direct and indirect effects of implementation decisions on specific project areas. *See, e.g., Nat'l Wildlife Fed'n v. Appalachian Reg'l Comm'n*, 677 F.2d 883, 888 (D.C. Cir. 1981) (examining programmatic EIS and requirement to perform site-specific NEPA analysis); *New Mexico ex rel. Richardson*, 565 F.3d at 717-18. However, once the site-specific effects of a proposed action become reasonably foreseeable, an agency must analyze the direct and indirect effects of the proposed action. *New Mexico ex rel. Richardson*, 565 F.3d at 717-18. This analysis must take place in a NEPA document. *See S. Utah Wilderness Alliance v. Norton*, 457 F. Supp. 2d 1253, 1264 (D. Utah 2006), *aff'd in part, appeal dismissed in part on other grounds sub nom. S. Utah Wilderness Alliance v. Kempthorne*, 525 F.3d 966 (10th Cir. 2008).

Where an agency seeks to authorize site-specific actions through an environmental assessment — that is, where a NEPA analysis represents the agency's "last word" on environmental impacts before ground-level implementation—the required level of analysis is stringent. *See, e.g., Friends of Yosemite Valley v. Norton*, 348 F.3d 789, 800-01 (9th Cir. 2003).

At the "implementation stage," the NEPA review must be more tailored and detailed because the agency is confronting "individual site specific projects." *California v. Block*, 690 F.2d 753 (9th Cir. 1982); *Forest Ecology Ctr., Inc. v. U.S. Forest Serv*., 192 F.3d 922, 923 n.2 (9th Cir. 1999). Indeed, federal courts have faulted the Forest Service for failing to provide site-specific information in a landscape level analysis:

> This paltry information does not allow the public to determine where the range for moose is located, whether the areas open to snowmobile use will affect that range, or whether the Forest Service considered alternatives that would avoid adverse impacts on moose and other big game wildlife. In other words, the EIS does not provide the information necessary to determine how specific land should be allocated to protect particular habitat important to the moose and other big game wildlife. Because the Forest Service did not make the relevant information available . . . the public was limited to two-dimensional advocacy—interested persons could argue only for the allocation of more or less land for snowmobile use, but not for the protection of particular areas. As a result, the Forest Service effectively stymied the public's ability to challenge agency action.

WildEarth Guardians v. Montana Snowmobile Ass'n, 790 F.3d 920, 927 (9th Cir. 2015).

When the Forest Service fails to conduct that site-specific analysis, the agency "does not allow the public to 'play a role in both the decision-making process and the implementation of that decision.'" *Id*. at 928 (quoting *Methow Valley Citizens Council*, 490 U.S. at 349). "Although the agency does have discretion to define the scope of its actions, . . . such discretion does not allow the agency to determine the specificity required by NEPA." *City of Tenakee Springs v. Block*, 778 F.2d 1402, 1407 (citing *California v. Block*, 690 F.2d 753, 765 (9th Cir. 1982)). In *State of Cal. v. Block*, for example, the decision concerned 62 million acres of National Forest land, and the Ninth Circuit still required an analysis of "[t]he site-specific impact of this decisive allocative decision." *California v. Block*, 690 F.2d 753, 763 (9th Cir. 1982). In short, NEPA's procedural safeguards are designed to guarantee that the public receives accurate *site-specific* information regarding the impacts of an agency's project-level decision *before* the agency approves the decision.

Analyzing and disclosing site-specific impacts is critical because where (and when and how) activities occur on a landscape strongly determines that nature of the impact. As the Tenth Circuit Court of Appeals has explained, the actual "location of development greatly influences the likelihood and extent of habitat preservation. Disturbances on the same total surface area may produce wildly different impacts on plants and wildlife depending on the amount of contiguous habitat between them." *New Mexico ex rel. Richardson*, 565 F.3d at 706. The Court used the example of "building a dirt road along the edge of an ecosystem" and "building a four-lane highway straight down the middle" to explain how those activities may have similar types of impacts, but the extent of those impacts – in particular on habitat disturbance – is different. *Id*.at 707. Indeed, "location, not merely total surface disturbance, affects habitat fragmentation," *id*., and therefore location data is critical to the site-specific analysis NEPA requires. Merely disclosing the existence of particular geographic or biological features is inadequate—agencies must discuss their importance and substantiate their findings as to the impacts. *Or. Natural Res. Council Fund v. Goodman*, 505 F.3d 884, 892 (9th Cir. 2007).

Courts in the Ninth Circuit have taken a similar approach. For example, the U.S. District Court for the District of Alaska in 2019 issued a preliminary injunction in the case *Southeast Alaska Conservation Council v. U.S. Forest Service,* halting implementation of the Tongass National Forest's Prince of Wales Landscape Level Analysis Project. *Southeast Alaska Conservation Council v. U.S. Forest Serv.*, 413 F. Supp. 3d 973 (D. Ak. 2019). The court did so because the Forest Service's condition-based management approach, which failed to disclose the site-specific impacts of that logging proposal, raised "serious questions" about whether that approach violated the National Environmental Policy Act (NEPA).

The district court explained the approach the Forest Service took in the Prince of Wales EIS:

> each alternative considered in the EIS "describe[d] the conditions being targeted for treatments and what conditions cannot be exceeded in an area, or place[d] limits on the intensity of specific activities such as timber harvest." But the EIS provides that "site-specific locations and methods will be determined during implementation based on defined conditions in the alternative selected in the . . .

> ROD . . . in conjunction with the . . . Implementation Plan . . . .” The Forest Service has termed this approach “condition-based analysis.”

See id. at 976-77 (citations omitted). The Prince of Wales EIS made assumptions “in order to consider the ‘maximum effects’ of the Project.” *Id*. at 977. It also identified larger areas within which smaller areas of logging would later be identified, and approved the construction of 164 miles of road, but “did not identify the specific sites where the harvest or road construction would occur.” *Id*.

The Court found the Forest Service’s approach contradicted federal appellate court precedent, including *City of Tenakee Springs v. Block*, 778 F.2d 1402 (9th Cir. 1995). In that case, the appellate court set aside the Forest Service’s decision to authorize pre-roading in a watershed without specifically evaluating where and when on approximately 750,000 acres it intended to authorize logging to occur. The district court evaluating the Prince of Wales project found the Forest Service’s approach was equivalent to the deficient analysis set aside in *City of Tenakee Springs.*

> Plaintiffs argue that the Project EIS is similarly deficient and that by engaging in condition-based analysis, the Forest Service impermissibly limited the specificity of its environmental review. The EIS identified which areas within the roughly 1.8-million-acre project area could potentially be harvested over the Project’s 15-year period, but expressly left site-specific determinations for the future. For example, the selected alternative allows 23,269 acres of old-growth harvest, but does not specify where this will be located within the 48,140 acres of old growth identified as suitable for harvest in the project area. Similar to the EIS found inadequate in *City of Tenakee Springs*, the EIS here does not include a determination of when and where the 23,269 acres of old-growth harvest will occur. As a result, the EIS also does not provide specific information about the amount and location of actual road construction under each alternative, stating instead that “[t]he total road miles needed will be determined by the specific harvest units offered and the needed transportation network.”

Id. at 982 (citations omitted).

The district court concluded that plaintiffs in the case raised “serious questions” about whether the Prince of Wales EIS condition-based management approach violated NEPA because “the Project EIS does not identify individual harvest units; by only identifying broad areas within which harvest may occur, it does not fully explain to the public how or where actual timber activities will affect localized habitats.” *Id*. at 983, 984.

On March 11, 2020, the Alaska district court issued its merits opinion on the Prince of Wales Project, reaffirming its September 2019 preliminary injunction decision and holding that the Forest Service’s condition-based management approach violated NEPA. *Southeast Alaska Conservation Council v. United States Forest Serv*., 443 F. Supp. 3d 995 (D. Ak. 2020). The court explained that “NEPA requires that environmental analysis be specific enough to ensure informed decision-making and meaningful public participation. The Project EIS’s omission of

the actual location of proposed timber harvest and road construction within the Project Area falls short of that mandate." *Id*. at 1009 (citations omitted).

The district court also concluded that the Forest Service's "worst case analysis" was insufficient, explaining: "This approach, coupled with the lack of site-specific information in the Project EIS, detracts from a decisionmaker's or public participant's ability to conduct a meaningful comparison of the probable environmental impacts among the various alternatives." *Id*. at 1013. Consequently, the court concluded that

> By authorizing an integrated resource management plan but deferring siting decisions to the future with no additional NEPA review, the Project EIS violates NEPA. The Forest Service has not yet taken the requisite hard look at the environmental impact of site-specific timber sales on Prince of Wales over the next 15 years. The Forest Service's plan for condition-based analysis may very well streamline management of the Tongass . . . however, it does not comply with the procedural requirements of NEPA, which are binding on the agency. NEPA favors coherent and comprehensive up-front environmental analysis to ensure . . . that the agency will not act on incomplete information, only to regret its decision after it is too late to correct.

Id. at 1014-15 (internal citations and quotations omitted).

B. The EA Fails to Disclose the Pine Valley Project's Site-Specific Direct and Indirect Effects.

The Pine Valley Project purports to be a project-level decision. While the EA envisions further site-specific data collection, monitoring, and project design, it does not anticipate or describe any future NEPA analysis or any future public involvement consistent with that law. Therefore, any NEPA analysis must include the detailed information and analysis that NEPA and CEQ (and Forest Service) regulations require because the Forest Service admits there will be no further NEPA analysis beyond the Final EA for this large, landscape-scale undertaking. Failure to include such detailed, site-specific data precludes informed agency decisionmaking and informed public comment, in violation of NEPA.

Although NEPA requires that analysis disclose specific information about the when, where, and how of any agency action, so that the impacts and alternatives can be described and weighed, the Pine Valley Project EA fails to contain much of this data or analysis. The EA defers critical decisions about on-the-ground conditions, siting, project implementation, and impact mitigation to the future with no NEPA review. The public is left to speculate as to exactly where treatments will occur, how treatments will be conducted, and how these treatments will impact site-specific environmental values. And the EA only paints an abstract picture of possible effects that is essentially meaningless when used to evaluate site-specific impacts.

The EA states that "approximately 181,576 acres are under review for treatments including 101,765 acres in IRA." Pine Valley Project EA at 5. This is an area four times the size of the District of Columbia, and about the same size as Bryce Canyon and Zion National Parks *combined*. The EA adopts a programmatic approach that fails to disclose what treatments will

take place where or when, and makes clear that project "implementation plans" that make such decisions will not be drafted until years or decades after the project is approved.

The EA fails to provide a clear picture as to the process by which the agency would decide what logging, burning, or mechanical treatments would occur at what locations. What is clear is that the "site-by-site" analysis is not in the EA itself. The EA describes the agency's general approach as follows:

> Treatments would be targeted at areas that are identified as ecologically departed but may include areas where vegetation within a desired NRV would be protected or enhanced by being within or adjacent to treatment areas. Treatments would also be focused in areas of past disturbance (e.g. fire post-2000), potential future disturbed sites, and within 100 feet of specified riparian corridors. All treatments within departed BpS settings would be evaluated using the *Field Guide for Selecting the Treatment in Sagebrush and Pinyon-Juniper Ecosystems in the Great Basin* (Miller, Chambers, and Pellant 2014) to determine the resiliency and the risk factors that will affect the success of proposed treatments on a site-by-site basis. Treatments would be focused on areas where the evaluation indicates the purpose and need can be met.

Pine Valley Project EA at 5. The what, where, and when of treatments is thus not defined now, and there is no way for the public or the decisionmaker to understand what they could or will be.

Further descriptions are similarly vague but make clear that a Forest Service team will make decisions after the agency approves the action.

> The Proposed Action is split into different treatment actions. These treatments can be applied in a *unique combination of actions depending on the specific characteristics of each site* (Appendix E and F). A combination of actions [would] be arrived at through an IDT process that determines which actions would lead to a successful treatment.

Pine Valley Project EA at 56 (emphasis added). Thus, only *after* project approval will the Forest Service evaluate the "specific characteristics" of areas proposed for treatment, and choose the "unique combination of action" suitable for the site. *See also* Pine Valley Project EA at 13 ("Site specific implementation plans will be developed through an interdisciplinary team approach and will include monitoring and adaptive management to minimize potential impacts and improve future implementation."); *id*. at 15 (describing a similar process for post-NEPA development of "Prescribed Fire Plans").

Appendix E, the "Implementation Matrix," contains 24 discrete tasks that the agency must take to identify and implement the "unique combination of actions," including "[i]dentify[ing] specific treatment methods for each major BPS type in treatment unit based on the average resiliency scores" and reliance on a further "7 Step Process" from a Forest Service "Field Guide." *Id*. at 88-93. This "plan to make a plan" makes it impossible for the Forest Service or the public to understand the what, where, and when of the proposed action, or understand the impacts of actions that have not yet been identified. Simply put, the Forest Service cannot and

has not analyzed direct effects—those "caused by the action [which] occur at the same time and place," 40 C.F.R. § 1508.8(a)—or indirect effects—those "caused by the action [that] are later in time or farther removed in distance, but are still reasonably foreseeable," *Id.* § 1508.8(b)—because the action, time, and place of project implementation are unknown.

Further, the lack of site-specific information makes it impossible for the Forest Service or the public to understand whether the project will ensure that no significant impacts will occur, and thus whether the record can support a Finding of No Significant Impact, or instead whether the agency must prepare a full EIS. The impacts caused by any proposed action (including this one) vary based on specific site conditions, including slope, aspect, watershed condition, habitat type, stand structure, past and current human use, and numerous other factors. Here, site-specific conditions particularly differ across the project area, as the Forest Service acknowledges: "The Mojave Desert, Great Basin and Colorado Plateau merge in Washington County and result in *ecological transition zones* within the Pine Valley District. The district supports *a diversity of ecosystems* which provide habitat for a wide variety of plant and animal species." Pine Valley Project EA at 26 (emphasis added).

The "7-step process" that will be used to help design project implementation pursuant to a "Field Guide," and that the EA does not explicitly incorporate by reference, only further demonstrates the EA's failure to disclose what actions will occur where. *See* Pine Valley Project EA at 9-10; *id*.at 25 (in addressing potential impacts to hydrology and soils, the EA states that "A pre-implementation matrix (including the 7-step process), based on specific site conditions, would occur prior to implementation," but after this decision). The "Field Guide" explains that it "provides a framework for *evaluating potential treatment areas* within sagebrush and piñon pine and/or juniper ecosystems in the Great Basin and Columbia River Plateau that are being *considered* for vegetation management treatments." R.F. Miller et al., A Field Guide for Selecting the Most Appropriate Treatment in Sagebrush and Piñon-Juniper Ecosystems in the Great Basin (2014) ("Field Guide") at 2 (emphasis added). Thus, applying the Field Guide underlines that the Forest Service has not yet identified the location, timing, or extent of potential treatments.[2]

The uncertainty about what specific plans will be implemented where is highlighted by the fact that the Forest Service identifies a variety of specific treatments, and fails to identify which ones would be used where or when. For example, "mechanical vegetation treatments" could include:

> mastication machinery (including excavators, skid steer, and wheeled tractors/loaders), chain harrow, dixie harrow, carpet harrow, forestry equipment (feller bunchers, etc.), mechanical mowers, shredders, and chippers. Generally deployed only on slopes less than 30% but dependent on specific BpS type.

[2] The Field Guide "was developed for the northern Great Basin and Columbia River Plateau," as identified in a map in the Guide. Field Guide at 2, 5. The map does not clearly identify the project area as part of the northern Great Basin that the Field Guide is meant to address. The Forest Service must explain whether the Field Guide applies to the Pine Valley Project area, and if the project is not in the northern Great Basin as defined by the Field Guide, the agency must explain why the Field Guide applies.

Pine Valley Project EA at 6. Presumably, the Forest Service would choose which tool to use because each one has unique impacts. But the agency does not disclose in which situation it would use which tool, or what the different impacts of each would be, making it impossible to discern the impacts. For instance, harrows, which are included in the above list, are generally not used to remove pinyon and juniper trees, but rather shrubs such as sagebrush. Based on the EA's Proposed Action, it is unclear even whether the Forest Service intends to manipulate or remove shrublands mechanically. Any subsequent NEPA document should clarify whether the project will undertake such potentially significant actions.

More generally, the Proposed Action provides no distinction between treatment methods for all but one of the biophysical settings (pinyon-juniper woodland). The mechanical, seeding, hand, and herbicide treatment methods for the black sagebrush, montane chaparral, montane sagebrush steppe, mountain shrub-stansbury cliffrose, mountain shrub-Utah serviceberry, and Wyoming big sagebrush biophysical settings are identical, providing the same list of potential treatment methods for all of these biophysical settings. The seeding and herbicide treatment methods for the pinyon-juniper woodlands biophysical setting is also identical to the others; the only unique treatment methods are the list of mechanical and hand treatments in pinyon-juniper woodland. Pine Valley EA at 8 (Table 1). Thus, not only does the EA not specify which treatment methods will be used where on the landscape, but it also does not specify how treatment methods might be utilized differently in the seven different biophysical settings proposed for treatment.

In addition, the EA recognizes the distinction between three general kinds of pinyon-juniper (woodlands, savannas, and wooded shrublands) and states that all three types exist across the project area. Pine Valley Project EA at 26, 28. However, the EA does not discuss differential approaches to these three types of pinyon-juniper, even though it recognizes that they have different disturbance regimes in the form of fire intervals (shrub woodland 30-40 years, savanna woodland 5-10 years, persistent woodland 150-400 years). Pine Valley Project EA at 27. Treatment methods in pinyon-juniper savannas and wooded shrublands are not discussed. These ecosystems may be treated under the pinyon-juniper woodland biophysical setting, but the EA does not provide site-specific information regarding proposed actions in pinyon-juniper savannas or in pinyon-juniper wooded shrublands.

Similarly, for reseeding, the agency could use equipment that will have an impact on the ground, or not, or could use native seed or not. Pine Valley Project EA at 6-7 ("Seeding treatments: rangeland drill, mechanical broadcast spreaders, hand seeding, and aerial application from fixed wing or helicopter. Native seeding is preferred in IRA, but non-native seeding of desirable plant species is allowed when site conditions require more competitive species due to threats from invasive and/or weedy species."). Thus, native seeding may or may not occur in roadless areas, depending on conditions that the Forest Service does not disclose and will determine after the NEPA process is complete.

Furthermore, the EA's discussion of seeding is not in compliance with Forest Service Manual 2000, Chapter 2070, *Vegetation Ecology*. Available at https://www.fs.usda.gov/im/directives/fsm/2000/2070_clear.doc (last viewed Nov. 15, 2022). The Policy section of that Chapter includes the following guidance:

1. Ensure genetically appropriate native plant materials are given primary consideration.

2. Restrict use of persistent**,** non-native, non-invasive plant materials to only those situations when timely reestablishment of a native plant community either through natural regeneration or with the use of native plant materials is not likely to occur….

3. Select non-native plants as interim, non-persistent plant materials provided they will not hybridize with local species, will not permanently displace native species or offer serious long-term competition to the recovery of endemic plants, and are designed to aid in the re-establishment of native plant communities.

4. Base determination and selection of genetically appropriate plant materials on the site characteristics and ecological setting, using the best available information and plant materials.

Forest Service Manual 2070.3 (Jan. 14, 2008). The EA is more permissive regarding seeding of non-native species than this Manual directs. In addition to the above, the EA, in Design Feature V-6, states that the Forest will promote the use of native plant materials "to the greatest extent possible." Pine Valley Project EA at 16. The EA does not demonstrate that specific site conditions "require" non-native seeding, nor has it explained in general what site conditions would "require" non-native seeding. The EA has also not analyzed whether such non-native seeding would be "required" if changes to grazing management were made for periods before and/or after project activities with the aim of reducing invasive and/or weedy species resulting from the impacts of grazing. Similarly, promoting the use of native plant materials "to the greatest extent possible" includes the potential modification of grazing to the extent that grazing management is resulting in conditions that hinder the re-establishment of native plant communities and favor the increased extent and cover of invasive and/or weedy species. Furthermore, the Manual makes clear that any non-native plants used must be non-persistent, will not permanently displace native species or offer serious competition to endemic plants, and are designed to aid in the re-establishment of native plant communities. The EA fails to provide a list of non-native species that might be used in the project, so it is not possible to determine whether the project will comply with this Manual. The Forest Service must modify the project to comply with agency guidance, or explain in any subsequently prepared NEPA document why it will not comply with the manual and explain the reasons for that refusal to comply.

For hand logging, fire may be used for material left on the ground, or not. Pine Valley Project EA at 7 ("Hand treatments: including lop and scatter, cut and pile, pile and burn."). And for treatments in riparian areas, various treatments, including fencing "may be" required, or may not be, and active restoration "may be implemented," or may not be; the EA fails to disclose which types of treatments the agency will use in what circumstances. Pine Valley Project EA at 10 ("In areas where residual riparian vegetation is severely depleted, not meeting plan objectives, or unresponsive to passive restoration; active restoration *may be* implemented. Active revegetation will consist of *one or more* of the following: seeding, woody riparian species plantings, and sedge plug or mat plantings.").

The proposed action would also pre-approve undefined actions in the event of "future fires" on an indeterminate and un-knowable number of acres. Pine Valley Project EA at 9. The Forest Service will approve these actions despite the fact that "it is impossible to identify where future wildfires will occur, [and so] there is some uncertainty in the potential impacts of these

treatments to populations of Sensitive species, MIS, and other species with conservation implications. Pine Valley Project EA at 11. Like baseline conditions, fire impacts vary. The Forest Service cannot predict when future fire (and thus post-fire treatments) will occur, or the magnitude, severity, location, juxtaposition, or extent of such disturbances. Despite this fact, the Forest Service claims that the treatments it will undertake, whatever they may be, will not have significant impacts, despite the "uncertainty [of] the potential impacts." This approach again exemplified "carte blanche" management and violates NEPA. It is also contrary to the Forest Service's practice of preparing rapid assessments following fires and undertaking emergency action while complying with NEPA. The Forest Service must explain why it is departing from long-standing agency practice.[3]

The EA relies in part on "project design features" to reach its conclusion that mechanical vegetation removal, fire, and other proposed actions cannot have significant impacts. But the design features, like the proposed action, are vague and so their efficacy cannot be understood. Design features are more akin to plans to make plans to limit impacts. For example, for hydrology/soils:

> For hand and mechanical treatments, watershed disturbance will not exceed appropriate percentages of detrimental disturbance (typically 10-15 percent of a HUC 6 subwatershed and no more than 20 percent over a three-year period). *Appropriate percentages will be determined on an individual treatment basis by considering soil types, other disturbances (cumulative) within the subwatersheds. WEPP or debris flow modeling may be used to make the determination*."

Pine Valley Project EA at 14 (emphasis added). Thus, Forest Service doesn't know what specific design features it will employ when, but it will determine the measures later, depending on site-specific (subwatershed) information. This is exactly what NEPA require the agency to do during the assessment project, not later. Further another hydrology/soils design feature includes this ambiguous statement: "No activity unit will exceed 15% of detrimental soil disturbance. If limit is exceeded, *actions will be taken* to move the unit under this threshold." Pine Valley Project EA at 14 (emphasis added). The Forest Service fails to identify how "detrimental soil disturbance" will be measured, what "actions" the agency will take, nor does it explain how effective these undescribed "actions" may be. The Forest Service cannot possibly conclude that no significant impacts can occur because undefined "actions will be taken."

For wildlife, a project decision feature states: "Implementation actions will be coordinated with the District wildlife biologist and Forest fish biologist to avoid *unnecessary* impacts to wildlife *when feasible*." Pine Valley Project EA at 17 (emphasis added). This measure makes it impossible for the decisionmaker of the public to understand how this measure will impact project design, or how or whether it will reduce impacts to wildlife, because measures will

[3] Potential treatments to respond to future fires are also not of the type that are entirely benign or likely to have zero impacts, because they involve the use of heavy machinery, herbicides, and the removal of green trees and other vegetation. *See* Pine Valley Project EA at 9 (describing "Treatment methods in Disturbance Treatment Area," which includes areas disturbed by fire in the future).

merely "avoid unnecessary impacts . . . *when feasible*." This implies that some "unnecessary impacts" will occur.

Another wildlife design feature underscores the Forest Service's failure to gather baseline data on areas that may be impacted by the project.

> General wildlife surveys are to be conducted in proposed treatment areas during the breeding and/or nesting season . . . prior to habitat treatments implementation. These surveys are to document general wildlife use in the project areas and will be administered by the district wildlife biologist or their staff. If sensitive species or important nesting areas are discovered, treatment design *can be modified* to avoid conflict and protect sensitive areas. These surveys will help managers in assessing general wildlife use before and after the implementation of the proposed action.

Pine Valley Project EA at 17 (emphasis added). Thus, the Forest Service doesn't know what wildlife is in treatment areas before project approval, and will survey them only after this NEPA process is over. If impacts to wildlife may occur, the project *could* be modified, but the agency does not disclose what that modification would be or how it would impact other aspects of project implementation. Again, this approach violates NEPA's "hard look" mandate.

The Forest Service appears to supply several explanations for its failure to disclose baseline data and the site-specific nature of actions and impacts.

> The Forest Service has frequently been in a position of spending two to three years on NEPA for a site-specific project, to have a wildland fire burn part or all the project area prior to NEPA completion. The Pine Valley WHERIP project supports a management approach that allows for responding to dynamic environmental and site conditions that may have changed between the decision and the implementation. Environmental conditions change across the landscape and from season to season. Landscape planning allows for proposed treatments to be aligned, after the decision has been made, with the conditions on the ground at the time of implementation. Landscape scale project planning has a distinct advantage for this project, where managers and IDT members can again consider invasive weeds, drought and other conditions directly prior to implementation design through the seven-step resiliency analysis process. This allows managers to choose among several implementation areas, to select appropriate treatments in the right place at the right time. The best available science would further inform sequencing of treatments throughout the project area. Within the project area, there is widespread departure, across a somewhat homogenous set of vegetation types. This approach to project planning was chosen to allow for a response commensurate with the need for action, so that the widespread vegetative departure could be addressed at a landscape scale.

Pine Valley Project EA at 5. This explanation lacks support and ignores CEQ and Forest Service regulations on a variety of counts.

First, the Forest Service provides no evidence to support the EA's assertion that the agency has "*frequently* been in a position of spending two to three years on NEPA for a site-specific project, to have a wildland fire burn part or all the project area prior to NEPA completion." Just how frequently? We request that the Forest Service provide any data it has supporting this conclusion.

Second, the EA ignores that NEPA is a flexible tool that permits agencies to supplement NEPA documents to address changed circumstances. Since at least 1978, NEPA regulations have explicitly provided that flexibility by authorizing agencies to change a project and/or to account for changed conditions via the use of supplemental NEPA analysis. *See* 40 C.F.R. 1502.9(c)(1). Forest Service guidance incorporates and expands on the agency's duties and authorities to address new information, change circumstances, and adjustments to a project's actions. Forest Service Handbook 1909.15, Ch. 18.

Third, NEPA also provides for a "phased" approach, wherein the agency can prepare a programmatic analysis followed by more concise, site-specific NEPA analysis when site-specific treatments are identified. Forest Service regulations also explicitly provide for "adaptive management." *See* 36 C.F.R. §§ 220.3, 220.5(e)(2). *See also* 73 Fed. Reg. 43,084, 43,090 (July 24, 2008) (preamble to 2008 rule adopting adaptive management provisions, stating that "[w]hen proposing an action[,] the responsible official may identify possible adjustments that may be appropriate during project implementation. Those possible adjustments must be described and their effects analyzed in the EIS.").

The Pine Valley Project, with its emphasis on "landscape" planning could also be considered a programmatic NEPA document. An agency may prepare a "programmatic" NEPA document broadly analyzing the cumulative effects of a program of work or set of connected actions, to which subsequent site-specific analyses may "tier." *Ventling v. Bergland*, 479 F. Supp. 174, 179 (D.S.D. 1979), aff'd, 615 F.2d 1365 (8th Cir. 1979); *Earth First v. Block*, 569 F. Supp. 415 (D. Or. 1983) (holding that the Forest Service erred by relying on a programmatic EIS that was deemed insufficient by the Ninth Circuit to prepare a subsequent EIS for the same Wilderness Area). Well-designed programmatic analysis can increase the efficiency in agency decision-making by deferring site-specific decisions for which site-specific information would be time consuming to obtain. *See, e.g*., Memorandum from Michael Boots, Acting Director of Council on Env't Quality, to Heads of Fed. Dep'ts and Agencies, *Effective Use of Programmatic NEPA Reviews* (Dec. 18, 2014), available at https://obamawhitehouse.archives.gov/sites/default/files/docs/effective_use_of_programmatic_nepa_reviews_final_dec2014_searchable.pdf (last viewed Nov. 15, 2022). NEPA analysis works like a funnel, where the mouth is the full breadth of the agency's discretion and the spout is concrete, on-the-ground action. If an agency is starting from scratch every time, its site-specific analyses will be unwieldy and duplicative. Programmatic analysis, however, moves the agency partway down the funnel, putting sideboards on future actions and commensurately reducing the complexity of site-specific analysis.

This appears to be an apt description of the Pine Valley Project's approach. But the Forest Service cannot rely on a programmatic NEPA analysis to disclose site-specific impacts; step-down NEPA is required. If the agency were to retool the Pine Valley Project EA as a programmatic analysis and commit to subsequent disclosure of site-specific actions and impacts,

that might pass legal muster. The present EA, which purports to be the final NEPA analysis, does not.

Finally, the Forest Service's assertion that the area is "somewhat homogenous" again ignores the agency's own conclusion that the area includes "*a diversity of ecosystems* which provide habitat for a wide variety of plant and animal species." Pine Valley Project EA at 26.

Elsewhere, in apparent response to comments on scoping that the "proposed action needs to [be] site-specific," the EA asserts that the "proposed action is site-specific." Pine Valley Project EA at 19. As the analysis above proves, this assertion is false. The Forest Service here intends to define site-specific actions only *after* NEPA is complete, and so it fails to disclose site specific impacts.

Federal courts have made clear that NEPA analysis must identify specific treatments for specific areas. The Forest Service gets the process backward. The approach here looks like "carte blanche management" as the Forest Service has sometimes described "condition-based management."

The implementation plan offered by the Forest Service here is little different than the process offered by the Forest Service in the enjoined Prince of Wales timber sale, which the District of Alaska concluded violated NEPA. To avoid a court reaching a similar conclusion about the Pine Valley Project, the Forest Service must disclose the proposal's site-specific impacts in a NEPA document before approving the project.

Charitably, the EA could be described as taking a programmatic approach. But NEPA regulations, guidance, and caselaw make clear that where agencies complete a programmatic analysis, further site-specific NEPA is still required when specific actions are contemplated. Here, the Forest Service proposes to offer no such further NEPA.[4] The Forest Service should either prepare a new environmental analysis that discloses the project's site-specific impacts, or revise the EA to confirm that it is a programmatic analysis that will bar any activities implementing the project until the Forest Service completes subsequent, site-specific NEPA analysis informed by additional public comment.

II. THE FOREST SERVICE FAILS TO COMPLY WITH THE ROADLESS RULE AND NEPA CONCERNING IMPACTS TO ROADLESS AREAS.

The national Roadless Area Conservation Rule generally prohibits the cutting, sale or removal of timber from National Forest Service inventoried roadless areas in Utah. 36 C.F.R. § 294.13(a), published at 66 Fed. Reg. 3244 (Jan. 12, 2001) ("Timber may not be cut, sold, or removed in inventoried roadless areas of the National Forest System, except as provided in paragraph (b) of this section."). The EA nonetheless asserts that the Forest Service has determined that

[4] The Implementation Matrix is also a poor substitute for NEPA, if that is the intent. For example, while the matrix states that the Forest Service will identify "Stakeholders" for site-specific implementation, Pine Valley Project EA at 89, neither the Implementation Matrix nor the EA state that stakeholders will ever be consulted during the process, or that the agency will ever do anything besides identifying them. In short, once this EA is complete, the Forest Service will design project implementation in a black box, away from public oversight or accountability.

"mechanical treatment," that is, tree removal and destruction, "via overland masticators, OHV seeding, herbicide application (without the use of aircraft) and other 'mechanized' equipment is indeed consistent with the exemptions granted through the 2001 Roadless Rule." Pine Valley Project EA at 46. The Forest Service relies on the EA, a "specialist report," and several other documents to support its conclusion. *See, e.g.*, N. Glidden, Pine Valley Wildlife Habitat and Ecological Resiliency Improvement Project Inventoried Roadless Area, Recreation, and Scenery Specialist Report (Oct. 14, 2021) ("IRA Specialist Report").

The Forest Service, however, fails to make its case that the proposed action complies with the Roadless Rule, particular given the massive scope of the project in roadless areas, and the lack of baseline data about individual roadless areas.

A. Proposed Actions within Roadless Areas

As the EA describes, the Pine Valley Project will involve the cutting, sale, or removal of trees and the use of heavy machinery and vehicle travel in across more than a dozen inventoried roadless areas (IRAs).

- Mastication or other mechanical tree removal use OHVs and wheeled or tracked vehicles, and additional burning activities would be authorized over a 15-20 year period across up to 101,765 acres of IRAs. Pine Valley Project EA at 11 (15-20 years); *id*. at 5 (acreage). Mastication machinery includes: excavators, skid steer, and wheeled tractors/loaders. Other machinery used will include chain harrows, dixie harrows, carpet harrows, feller bunchers, mechanical mowers, shredders, chippers, and off-highway vehicles. *Id*. at 6, 46. Overland travel will be necessary to move machinery into roadless areas. *Id*. at 46.

- Mechanical destruction of trees, sage, and other vegetation, and other motor vehicle use could occur within 13 different IRAs. Regional Forester, Roadless Area Review: Pine Valley Wildlife Habitat Improvement Project (Oct. 24, 2019) (listing 16 IRAs to be subject to project actions); Pine Valley Project EA at 21 (Figure 1) (showing 3 of the 16 IRAs no longer subject to project actions). Logging and other actions could occur across the entirety of the following 8 IRAs: Atchinson (17,655 acres); Cedar Bench (8,911 acres); Cottonwood outside of wilderness (4,250 acres); Cove Mountain (16,645 acres); Gum Hill (3,181 acres); Kane Mountain (8,016 acres); Magotsu (16,773 acres); and Moody Wash (31,856 acres). They would also occur in parts of 5 other IRAs: Bull Valley; Cave Canyon; North Hills; Pine Valley Mountains outside of wilderness; and Stoddard Mountain.

- "The transportation system necessary to complete all proposed actions would require access through a combination of State Routes (highways), open Forest Service roads, and administrative routes. No temporary roads would be constructed for this project." Pine Valley Project EA at 11. *See also* IRA Specialist Report at 5 ("There will be no roads constructed for this project"). Neither the EA nor the specialists' reports appear to display the location of open roads, motor vehicle trails, and administrative routes that would be used to access (or that currently exist within) inventoried roadless areas.

- The project design does not limit tree removal to generally small diameter trees, but includes some direction for the protection of "old growth." "In general [old growth] retention trees will be juniper with a root collar diameter of 18 inches or greater and 9 inches or greater for pinyon." Pine Valley Project EA at 16 (describing project design feature (PDF) V-3). "Although growth structure is the most appropriate means in defining old-growth trees, a PDF (V-3) was also created to generally define leave trees in PJ woodlands as 9 inches and above for pinyon pine and 18 inches and above for juniper." N. Glidden, Pine Valley Wildlife Habitat and Ecological Resiliency Improvement Project Inventoried Roadless Area, Recreation, and Scenery Specialist Report (Oct. 14, 2021) at 5 ("IRA Specialist Report").

B. Legal Framework: The Roadless Rule

The Roadless Rule provides that, in general, "[t]imber may not be cut, sold, or removed in inventoried roadless areas of the National Forest System." 36 C.F.R. § 294.13(a). One exception to this general provision states:

> timber may be cut, sold, or removed in inventoried roadless areas if the Responsible Official determines that one of the following circumstances exists. The cutting, sale, or removal of timber in these areas *is expected to be infrequent.*
>
> (1) The cutting, sale, or removal of *generally small diameter timber* is needed for one of the following purposes and will *maintain or improve one or more of the roadless area characteristics* as defined in § 294.11.
>
> (i) To improve threatened, endangered, proposed, or sensitive species habitat; or
>
> (ii) To maintain or restore the characteristics of ecosystem composition and structure, such as to reduce the risk of uncharacteristic wildfire effects, within the range of variability that would be expected to occur under natural disturbance regimes of the current climatic period.

36 C.F.R. § 294.13(b)(1) (emphasis added).

The Roadless Rule defines roadless area characteristics as:

> Resources or features that are often present in and characterize inventoried roadless areas, including:
>
> (1) High quality or undisturbed soil, water, and air;
>
> (2) Sources of public drinking water;
>
> (3) Diversity of plant and animal communities;
>
> (4) Habitat for threatened, endangered, proposed, candidate, and sensitive species and for those species dependent on large, undisturbed areas of land;

(5) Primitive, semi-primitive nonmotorized and semi-primitive motorized classes of dispersed recreation;

(6) Reference landscapes;

(7) Natural appearing landscapes with high scenic quality;

(8) Traditional cultural properties and sacred sites; and

(9) Other locally identified unique characteristics.

36 C.F.R. § 294.11.

The rule requires a highly site-specific analysis, given the regulation's emphasis on "*locally identified* unique characteristics." *Id.* (emphasis added).

Roadless Rule's preamble reinforces the need for such a site-specific analysis.

> Because of the great variation in stand characteristics between vegetation types in different areas, a description of what constitutes "generally small diameter timber" is not specifically included in this rule. Such determinations are best made through *project specific* or land and resource management plan *NEPA analyses*, as guided by ecological considerations such as those described below.
>
> The intent of the rule is to limit the cutting, sale, or removal of timber *to those areas that have become overgrown with smaller diameter trees*….
>
> [A]ll such *determinations of what constitutes* "*generally small diameter timber*" will consider how the cutting or removal of various size classes of trees would affect the potential for future development *of the stand*, and the characteristics and interrelationships of plant and animal communities associated with the site and the overall landscape. *Site productivity due to factors such as moisture and elevational gradients, site aspect, and soil types will be considered, as well as how such cutting or removal of various size classes of standing or down timber would mimic the role and legacies of natural disturbance regimes in providing the habitat patches, connectivity, and structural diversity critical to maintaining biological diversity*. In all cases, the cutting, sale, or removal of small diameter timber will be consistent with maintaining or improving one or more of the roadless area characteristics as defined in § 294.11.

Forest Service, Roadless Area Conservation Rule, 66 Fed. Reg. 3244, 3257 (Jan. 12, 2001) (emphasis added).

> Vegetative management would focus on removing generally small diameter trees while leaving the overstory trees intact. The cutting, sale, or removal of trees pursuant to 294.13(b)(1) *must be clearly shown through project level analysis to contribute to the ecological objectives described*. Such management activities are expected to be rare and to focus on small diameter trees.

Id. at 3258 (emphasis added). *See also Los Padres ForestWatch v. United States Forest Serv*., 25 F.4th 649, 656-57 (9th Cir. 2022) (quoting same).

In adopting the Roadless Rule, the Forest Service thus anticipated that logging or other tree removal in IRAs under this specific exception would only occur following a project-level NEPA analysis that evaluated stand-specific conditions.

As the Ninth Circuit Court of Appeals has summarized the Roadless Rule's requirements:

> "[w]hether the [Forest] Service may harvest timber in an inventoried roadless area is a three-step inquiry*." All. for the Wild Rockies v. Krueger*, 950 F. Supp. 2d 1196, 1214 (D. Mont. 2013), *aff'd sub nom*. *All. for the Wild Rockies v. Christensen*, 663 F. App'x 515 (9th Cir. 2016). "First, the timber to be harvested must be 'generally small diameter.' Second, the harvest must be needed for one of two listed purposes [as defined in 36 C.F.R. § 294.13]. Third, the harvest must maintain or improve one or more of the roadless area characteristics as defined in § 294.11." *Id*.

Los Padres ForestWatch, 25 F.4th at 656.

C. The Forest Service Fails to Address the "Frequency" of Roadless Area Tree Removal.

The Roadless Rule "expects" that tree removal in roadless areas for any purpose will "be infrequent." 36 C.F.R. § 294.13(b). While the Forest Service asserts that this standard will be met, the evidence indicates otherwise.

The agency states

> The cutting of timber in the project is expected to be infrequent. This project proposes to potentially treat approximately 181,000 acres. The project is focused on improving wildlife habitat across those acres. Given the large scale of this project and the careful consideration to not directly impact the wildlife itself or other multiple uses on the district, the frequency of timber removal in each individual IRA would be low. Given the need to rest the treated areas from livestock grazing (PDF R-1), the density of the treated acres will be spread across the landscape, generally based on defined pastures within allotments. This approach will spread the treated areas out spatially and temporally. The removal of post-treatment regrowth of small Pinyon and Juniper in non-PJ Woodland BPS are expected to be needed *every 15 to 25 years* unless other forms of natural disturbance (fire and insects) occur prior."

IRA Specialist Report at 5-6 (emphasis added). While the agency thus asserts that tree removal via the use of mechanical equipment will be spread out in time and location across 100,000+ acres of roadless lands, it also indicates that treatments will need to recur at intervals of as little 15 years later, making these treatments a regular (and not an infrequent) occurrence. The fact that the treatments will be spread out over time and the landscape means, and could begin recurring before the up-to-20 year life of the project is complete, means that there will never

again be a time on these IRAs when there is not some tree removal project ongoing. In sum, it is arbitrary for the Forest Service to conclude that the ongoing, recurring, and never-ending logging of trees within the IRAs of this project area amounts to "infrequent" tree removal as the Roadless Rule mandates.

The agency also states that the impacts to roadless characteristics from mechanical tree removal will last from several years for up to 7 years. *See, e.g.*, IRA Specialist Report at 7 (regarding impacts to scenery, "[o]bservations of past treatments on USFS land and BLM administered lands have shown the short-term evidence of human manipulation lasts on average of 3 to 7 years," including 5-7 years of impacts to the "immediate foreground"); *id*. ("The proposed vegetation treatments could have an initial negative impact on recreation that could last for several years"). Given that treatments could recur every 15 years, and impacts last up to seven 7 year, there will be evidence of tree removal on individual sites within the roadless area nearly half the time going forward for decades. Not only does this undermine the Roadless Rule requirement that timber removal be "infrequent," it indicates that impacts to recreational and scenic values within roadless areas may be significant, requiring preparation of an EIS.

D. The Forest Service Fails to Ensure that Logging Will Be Limited to "Generally Small Diameter Timber."

Neither the EA nor the Regional Forester's 2019 "Roadless Area Review" addresses or acknowledges the Roadless Rule's mandate that tree removal in IRAs be limited to "generally small diameter timber." And while the IRA Specialist Report (at 5) recognizes the Rule's mandate, it EA does not demonstrate that the project will meet the conditions of this exception.

In adopting the Roadless Rule, the Department of Agriculture explained that "[t]he intent of the rule is to limit the cutting, sale, or removal of timber *to those areas that have become overgrown with smaller diameter trees*." Forest Service, Roadless Area Conservation Rule, 66 Fed. Reg. 3244, 3257 (Jan. 12, 2001) (emphasis added). *See also Los Padres ForestWatch*, 25 F.4th at 656 (quoting same). It is not clear that the Pine Valley Project would do so.

Further, the failure to make clear what constitutes a small diameter tree in a specific stand also violates the Roadless Rule. As noted above, the preamble to the Rule states:

> *determinations of what constitutes* "*generally small diameter timber*" will consider how the cutting or removal of *various size classes of trees* would affect the potential for future development *of the stand*, and the characteristics and interrelationships of plant and animal communities associated with the site and the overall landscape.

Forest Service, Roadless Area Conservation Rule, 66 Fed. Reg. 3244, 3258 (Jan. 12, 2001) (emphasis added). Here, the Dixie National Forest nowhere "determines" what constitutes a small diameter tree. Nor does the EA appear to address or disclose the factors necessary to make such a determination.

Neither the EA nor any of the specialists' reports provides information about each stand that may be treated or what types of treatment may occur in each stand. In fact, neither the EA nor the IRA Specialist Report contains *any* site-specific information about baseline conditions in each of

the 13 individual roadless areas. Without this information, neither the Forest Service nor the public can be assured that logging will cut or remove generally small diameter timber, or even what constitutes small diameter timber in each stand. Such information is particularly critical because, as the agency admits: "[t]he growth structure (size and shape) of pinyon and juniper trees largely depends on site characteristics," IRA Specialist Report at 5, characteristics which the Forest Service will not evaluate for project evaluation until after the project is approved. Approving this project without the required stand-specific information violates the Roadless Rule. And because it omits information about the project's baseline conditions and site-specific impacts to roadless areas, the EA also violates NEPA.

A federal appeals court decision issued this year demonstrates that a court would likely find this project violates the Roadless Rule. In *Los Padres ForestWatch v. United States Forest Service*, 25 F.4th 649 (9th Cir. 2022), the Forest Service approved the Tecuya Ridge logging project in a roadless area, setting a limit of logging trees less than 21 inches diameter at breast height (dbh), arguing that trees of such width constituted "generally small diameter timber." 25 F.4th at 656-57. The court found that the Forest Service failed to support its conclusion that a 21" dbh tree constituted a "small diameter" tree, noting among other things that "the Forest Service did not attempt to articulate this explanation or, indeed, provide any information at all on the average dbh of the trees located within the … Project area." *Id*. at 658. The court therefore found the agency violated the Roadless Rule and remanded the project back to the Forest Service for further explanation as to what constitutes a small diameter tree. *Id*. at 659.

The Forest Service provides no stand-level data for the project's roadless areas to allow the public or the decision-maker to discern the size of trees in stands in the project area, and the size of trees to be removed. Thus, as with the project at issue in the *Los Padres ForestWatch* case, a reviewing court is likely to set aside the Pine Valley Project as in violation of the Roadless Rule.

Here, the Dixie National Forest has done even less than the Forest Service in *Los Padres ForestWatch*. Neither the Pine Valley Project EA nor the Dixie National Forest's supporting documents purport to define what constitutes a "small diameter" tree for any of the stands within the project area, let alone within individual roadless areas. Nor does the Forest Service explain how the project's provisions and design features will limit logging to small trees, whatever those might be.

The Forest Service does allege that the mastication and other tree removal treatments will generally avoid old growth trees, and proposes project design features which asserts that trees of a certain diameter at root collar (DRC) will be "generally" spared:

> Leave tree spacing in old growth stands and leave islands will be determined during the development of implementation plan based on site characteristics. Leave trees will be kept by order of priority 1) Old Growth Pinyon 2) Old Growth Juniper 3) Young Pinyon 4) Young Juniper.
>
> In general retention trees will be juniper with a root collar diameter of 18 inches or greater and 9 inches or greater for pinyon.

> Pinyon and juniper woodland BpS types would be thinned according to growth form and managed for old growth trees. Sample coring would be used to validate age when appropriate.

Pine Valley Project EA at 16 (design features V-3 and V-4). But retaining old trees is not the same as limiting logging to generally small trees, particularly because old trees can be small trees and large trees can still be young trees. *See* IRA Specialist Report at 5 ("a large tree does not indicate the age of the tree, but rather the site condition where the tree grows…. [T]rees in lower areas may be larger but may not be older"). Further, the Forest Service asserts that older trees will be destroyed: "Some older juniper would be thinned to release pinyon pine in order to improve pinyon pine seed production." Regional Forester, Roadless Area Review: Pine Valley Wildlife Habitat Improvement Project (Oct. 24, 2019).

In addition, while the "intent of the [Roadless] rule is to limit the cutting, sale, or removal of timber to those areas that have become overgrown with smaller diameter trees," the project design does not identify an over-abundance of smaller diameter trees as a problem; rather it appears that the Forest Service is concerned with too many "mid-successional" stands, which the agency explicitly distinguishes from "smaller size classes":

> The desired representation of size classes within pinyon pine and juniper areas at the landscape scale is to have a relatively equal representation of all sizes (Amundson 1996). The stands in the project area are often mid-successional and dominated by average stand diameters of between 12 and 24 inches DBH. Stands in the *smaller* size classes are generally lacking in the project area in pure form as the smaller diameter trees are intermixed with the *larger* size classes except in areas of recent treatment…. Healthy pinyon-juniper stands, in those areas where they are the true dominant vegetation type, would have a small percentage in the largest and smallest size classes and the majority of the trees fairly evenly distributed through the *middle classes*.

Pine Valley Project EA at 28 (emphasis added). Thus, the Forest Service asserts that there are small, middle, and larger size trees classes, but fails to define what DRC or DBH tree characterizes each class, nor does the agency explain how the limits meant to protect *old growth* stands and trees relate to limiting logging to *generally small diameter timber*.[5]

Because the Pine Valley Project is likely to violate the Roadless Rule, the Forest Service must prepare a full environmental impact statement (EIS). Council on Environmental Quality regulations implementing NEPA identify numerous factors that may require an agency to find that an action is likely to have a significant impact, and therefore requires preparation of an EIS. One of those is "[w]hether the action threatens a violation of federal, state, or local law or requirements imposed for the protection of the environment." 40 C.F.R. § 1508.27(b)(10) (2019).

[5] The Forest Service's analysis here is also reductive. It is unlikely that the generalized statements here are true across all stands in the area, despite NEPA's and the Roadless Rule's mandate for site-specific and stand-specific analysis. *See also id*. at Pine Valley Project EA at 30 (making sweeping statements about the current conditions across the 300,000+ acre project area.

See also Forest Service Handbook 1909.15, Ch. 15 (agency NEPA handbook quoting the 1978 CEQ regulations).

In sum, the Forest Service must ensure that the Pine Valley Project complies with the Roadless Rule's mandate that cutting and tree removal may only occur where it involves "generally small diameter timber" by:

- defining what constitutes small diameter timber based on a stand-specific analysis of areas proposed for treatment in each of the 13 roadless areas;

- generally limiting tree removal and cutting to trees meeting the definition of small diameter;

- demonstrating whether and how stands proposed for logging are "overstocked" with small diameter trees; and

- explaining whether and how the agency's treatments that allow removal of some old growth trees comply with the Roadless Rule.

The Forest Service must include this analysis in any subsequently prepared NEPA document, preferably an EIS. If it cannot make the showing required above, it must cancel the project's timber cutting and removal in Inventoried Roadless Areas.

E. The Forest Service Fails to Take a "Hard Look" at the Project's Impacts to Roadless Area Characteristics.

As part of its review of the project, the Forest Service must disclose impacts to IRAs and roadless area characteristics. Any subsequently-prepared NEPA document should provide maps displaying roadless area boundaries overlaying plant and animal communities, soil types, wildlife habitat, and treatments proposed so that the public and decisionmaker can understand both the values of each individual IRA and the potential for proposed treatments to degrade or improve those values. Neither the EA nor the IRA Specialist Report contains information describing the specific values and characteristics of individual roadless areas, let alone the specific treatments by specific stands, making the conclusions in the IRA Specialist Report arbitrary.

III. THE PROPOSAL MUST ADOPT STRONGER MEASURES TO PROTECT OLD-GROWTH PINYON AND JUNIPER.

A. The Forest Service Must Identify and Protect Old-Growth.

It is highly probable that old-growth pinyon and juniper woodlands exist in the project area. Old trees play an important role in storing carbon, producing seed and providing nesting, perches and other wildlife habitat among other important ecosystem functions. Unfortunately, woody plant removal, like what is proposed in the Pine Valley Project EA, sometimes results in declines in small mammals, birds and ungulates according to a review of 19 studies by Bombaci and Pejchar (2016) who concluded:

> In spite of the fact that woodland reduction is often used to improve habitat for ungulates, most investigators found either non-significant or negative responses to tree removal by mule deer and elk…
>
> [and]
>
> bird responses to mechanical removal woodland reduction methods were often negative. (Bombaci and Pejchar 2016, p. 39)

It can be challenging to visually determine which trees are very old, which increases the risk of removing old-growth trees in the implementation of this project. In various places in Utah there are pinyon and juniper trees that are centuries old but less than 18 inches in diameter (Bill Gray personal communication). Specifically, in the Henry Mountains of southern Utah we have measured very old trees that are not very large in terms of diameter (photos available at https://flic.kr/s/aHBqjzW666):

- 97 year-old Utah juniper stem that was 5 inches in diameter;
- 208 year-old pinyon pine that was 12 inches in diameter;
- 294 year-old pinyon pine that was 13 inches in diameter;
- 530 year-old Utah juniper stem that was 8 inches in diameter; and
- 783 year-old Utah juniper stem that was 13 inches in diameter.

Those relatively small-diameter pinyon and juniper represent old-growth trees that could be cut under the Pine Valley Project EA. In addition, those data show the inconsistent relationship between age and size, making it difficult to visually determine and protect old trees as treatment actions are being implemented. Old trees can be relatively small. And trees can be large but not old where conditions (soil moisture in particular) are favorable.

It is essential that the Forest Service determine the age of some of the trees in the various proposed treatment areas before they implement tree removal. Aging of trees can be done by using an increment core to extract a small piece of wood where the rings can be counted, which works well for pinyon pine. For the dense, hard wood of juniper it is usually easier to cut stems and then count the rings. Both of these methods require processing (including sanding) of the woody material in the lab to determine the age. The Utah Museum of Natural History in Salt Lake City is one place where this expertise is employed. Some Forest Service research stations also have this expertise. The Dixie National Forest could partner with researchers or others to age trees before cutting takes place.

Project Design Feature V2 provides excellent guidance on identifying old pinyon and juniper trees. Pine Valley Project EA at 16. The characteristics described there should be used to choose some older trees to age. Those old-growth characteristics need to be understood and used by personnel cutting trees so that they can avoid removing old trees. The Forest Service should gather this data to inform the NEPA process, and to be included within any subsequently prepared NEPA document, as part of the baseline data that NEPA requires before a decision is made.

B. The EA Fails to Identify or Protect Old Growth or Mature Forests as Required by Executive Order 14,072.

The importance of preserving mature forests in staving off the worst impacts of the climate crisis and the extinction crisis led President Biden on Earth Day in 2022 to issue Executive Order 14,072, "Strengthening the Nation's Forests, Communities, and Local Economies." E.O. 14,072, 81 Fed. Reg. 24851 (Apr. 27, 2022), available at https://www.govinfo.gov/content/pkg/FR-2022-04-27/pdf/2022-09138.pdf. That order notes:

> Globally, forests represent some of the most biodiverse parts of our planet and play an irreplaceable role in reaching net-zero greenhouse gas emissions. Terrestrial carbon sinks absorb around 30 percent of the carbon dioxide emitted by human activities each year. Here at home, America's forests absorb more than 10 percent of annual United States economy-wide greenhouse gas emissions. *Conserving old-growth and mature forests on Federal lands* while supporting and advancing climate-smart forestry and sustainable forest products *is critical to protecting these and other ecosystem services provided by those forests*.

E.O. 14,072, 81 Fed. Reg. at 24851 (emphasis added).

The President directed the Forest Service to "within 1 year of the date of this order, define, identify, and complete an inventory of old-growth and mature forests on Federal lands," and after, that inventory is complete, to "analyze the threats to mature and old-growth forests on Federal lands," and to develop strategies "that address threats to mature and old-growth forests on Federal lands." E.O. 14,072, Sec. 2, 81 Fed. Reg. at 24852.

The Pine Valley Project EA contains some measures that it asserts will protect old-growth pinyon-juniper trees and stands. *See, e.g.*, Pine Valley Project EA at 62 ("One of the goals of this project is to help protect old growth pockets of pinyon and juniper in p/j woodlands. This would be accomplished by thinning younger trees in this vegetation type where these woodlands have been encroached and overgrown."). However, the Executive Order directs the Forest Service to "[c]onserv[e] old-growth *and mature* forests," which the EA fails to address specifically. E.O. 14,072, 81 Fed. Reg. at 24851 (emphasis added). In any subsequently prepared NEPA document, the Forest Service must inventory both mature and old-growth trees and stands, and disclose the impacts of the project on mature pinyon-juniper trees and stands as well as old growth.

C. To Take the Required Hard Look at Project Impacts, the Forest Service Must Address the Differences Between Pinyon and Juniper Trees.

The EA and supporting Forestry and Vegetation Specialist Report generally lumps together multiple pinyon pines (*Pinus edulis* and *P. monophylla*) and junipers (*Juniperus osteosperma* and *J. scopulorum*), instead referring largely to "pinyon-juniper" or "pinyon and juniper."

Redmond, et al. (2013), reviewing 25 years of "pinyon-juniper" removal in nearby Grand Staircase-Escalante National Monument, indicated that treated areas may become more juniper-dominated (Utah juniper) in the future due to increased post-vegetation treatment establishment of Utah juniper compared to pinyon pine. Breshears, et al (2005) note the large die-off specifically of pinyon pine following the 2002-2003 drought in the Southwest. Examining

extreme droughts of 1996 and 2002, Mueller, et al. (2005) found that in both droughts, pinyon mortality was higher than that for juniper:

> Pinyon mortality following both droughts was 6.5-fold higher than juniper mortality . . . . Differential mortality of large pinyons resulted in a vegetation shift such that the pinyon–juniper woodlands are becoming dominated by juniper, a species that is typical of lower elevations and more arid conditions.

As a potentially partial explanation of this differential response to drought, Breshears, et al. (1997) note that juniper obtains water from more shallow depths in soil than pinyon, contributing to greater drought resistance.

We appreciate that the proposed action provides for some differentiation in treatment of pinyon vs. juniper trees, providing as a project design feature: "In general retention trees will be juniper with a root collar diameter of 18 inches or greater and 9 inches or greater for pinyon." Pine Valley Project EA at 16. However, the EA also treats the two tree species as one when it addresses the need to remove certain size classes of trees: "The desired representation of size classes within pinyon pine and juniper areas at the landscape scale is to have a relatively equal representation of all sizes (Amundson 1996). The stands in the project area are often mid-successional and dominated by average stand diameters of between 12 and 24 inches DBH." Pine Valley Project EA at 28.

To use best available science and to take a hard look at two different plant species it is removing at a landscape scale, the Forest Service must analyze and disclose how the two species differ and how the proposed treatments may have differential impacts on the two species.

IV. THE FOREST SERVICE MUST ANALYZE A RANGE OF REASONABLE ALTERNATIVES.

A. NEPA Requires Agencies to Evaluate a Range of Reasonable Alternatives in EAs.

In taking the "hard look" at impacts that NEPA requires, an EA must "study, develop, and describe" reasonable alternatives to the proposed action. 42 U.S.C. § 4332(2)(C) & (E); 40 C.F.R. § 1508.9(b) (an EA "[s]hall include brief discussions . . . of alternatives"). The Tenth Circuit explains that this mandate extends to EAs as well as EISs. "A properly-drafted EA must include a discussion of appropriate alternatives to the proposed project." *Davis v. Mineta*, 302 F.3d 1104, 1120 (10th Cir. 2002) (granting injunction where EA failed to consider reasonable alternatives). This alternatives analysis "is at the heart of the NEPA process, and is 'operative even if the agency finds no significant environmental impact.'" *Diné Citizens Against Ruining Our Env't v. Klein*, 747 F. Supp. 2d 1234, 1254 (D. Colo. 2010) (quoting *Greater Yellowstone Coal. v. Flowers*, 359 F.3d 1257, 1277 (10th Cir. 2004)). *See also W. Watersheds Project v. Abbey*, 719 F.3d 1035, 1050 (9th Cir. 2013) (in preparing EA, "an agency must still give full and meaningful consideration to *all* reasonable alternatives" (emphasis added) (internal quotation and citation omitted)); 40 C.F.R. § 1502.14 (describing alternatives analysis as the "heart of the environmental impact statement"). Reasonable alternatives must be analyzed for an EA even where a FONSI is issued because "nonsignificant impact does not equal no impact. Thus, if an

even less harmful alternative is feasible, it ought to be considered." *Ayers v. Espy*, 873 F. Supp. 455, 473 (D. Colo. 1994) (internal citation omitted). When an agency considers reasonable alternatives, it "ensures that it has considered all possible approaches to, and potential environmental impacts of, a particular project; as a result, NEPA ensures that the most intelligent, optimally beneficial decision will ultimately be made." *Wilderness Soc'y v. Wisely*, 524 F. Supp. 2d 1285, 1309 (D. Colo. 2007) (quotations & citation omitted).

In determining whether an alternative is "reasonable," and thus requires detailed analysis, courts look to two guideposts: "First, when considering agency actions taken pursuant to a statute, an alternative is reasonable only if it falls within the agency's statutory mandate. Second, reasonableness is judged with reference to an agency's objectives for a particular project." *Diné Citizens Against Ruining Our Env't*, 747 F. Supp. 2d at 1255 (quoting *New Mexico ex rel. Richardson*, 565 F.3d at 709). Any alternative that is unreasonably excluded will invalidate the NEPA analysis. "The existence of a viable but unexamined alternative renders an alternatives analysis, and the EA which relies upon it, inadequate." *Id.* at 1256. The agency's obligation to consider reasonable alternatives applies to citizen-proposed alternatives. *See Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin*., 538 F.3d 1172, 1217-19 (9th Cir. 2008) (finding EA deficient, in part, for failing to evaluate a specific proposal submitted by petitioner); *Colo. Envtl. Coal. v. Dombeck*, 185 F.3d 1162, 1171 (10th Cir. 1999) (agency's "[h]ard look" analysis should utilize "*public comment* and the best available scientific information") (emphasis added).

Courts hold that an alternative may not be disregarded merely because it does not offer a complete solution to the problem. *Natural Resources Defense Council, Inc. v. Morton*, 458 F.2d 827, 836 (D.C. Cir. 1972). Even if additional alternatives would not fully achieve the project's purpose and need, NEPA "does not permit the agency to eliminate from discussion or consideration a whole range of alternatives, merely because they would achieve only some of the purposes of a multipurpose project." *Town of Matthews v. U.S. Dep't. of Transp.*, 527 F. Supp. 1055 (W.D. N.C. 1981). If a different action alternative "would only partly meet the goals of the project, this may allow the decision maker to conclude that meeting part of the goal with less environmental impact may be worth the tradeoff with a preferred alternative that has greater environmental impact." *North Buckhead Civic Ass'n v. Skinner*, 903 F.2d 1533, 1542 (11th Cir. 1990).

The courts also require that an agency adequately and explicitly explain in the EA any decision to eliminate an alternative from further study. *See Wilderness Soc'y*, 524 F. Supp. 2d at 1309 (holding EA for agency decision to offer oil and gas leases violated NEPA because it failed to discuss the reasons for eliminating a "no surface occupancy" alternative); *Ayers*, 873 F. Supp. at 468, 473.

B. The EA Fails to Analyze Any Action Alternatives Besides the Proposed Action.

The proposed action involves over 180,000 acres of tree removal and habitat manipulation, perhaps thousands of additional acres to address "future fires," and 15-20 years of activity, longer than the life that the National Forest Management Act anticipates for a Forest Plan. 16 U.S.C. § 1604(f)(5). It is simply not believable that the proposed action is the *only* reasonable

way to manage the landscape while still achieving at least some of the ends identified in the purpose and need statement. If the Forest Service concludes that the proposed action is the only way, then the agency has apparently set its purpose and need statement too narrowly, in violation of NEPA.

Among the reasonable alternatives the Forest Service should consider are:

- A "defined action" alternative. This alternative would require the Forest Service to identify the site-specific actions across the project area, specifically siting and designing the mastication, lop and scatter, fire, and other treatments the agency intends to implement. This would allow the public and the decision-maker to better understand the location and nature of the impacts, rather than wait for the project to be complete to understand the potential damage to the landscape. This would meet the project's purpose and need, and is distinct from the proposed action because it would allow for more precise disclosure of potential impacts, rather than relying in part on conjecture about the scale of impacts, as the Pine Valley Project EA does now.

- A livestock reduction alternative. The EA reports that a key factor resulting in the alleged "increase in both density and area of pinyon and juniper" was "the introduction of livestock." Pine Valley Project EA at 26. Further, the project aims to limit the spread of cheatgrass which "pose[s] an immediate threat to wildlife habitat by out competing native vegetation and act as high-risk fine fuels." *Id*. at 4. Cheatgrass is commonly spread by cattle, and livestock can stress ecosystems and disturb soil to create conditions that favor cheatgrass over native plants. Federal and other researchers have concluded that "[p]assive restoration by reducing cumulative cattle grazing may be one of the most effective means of" restoring certain ecosystems that are being degraded by an abundance of cheatgrass. *See* M.D. Reisner, et al., 2013, Conditions favouring *Bromus tectorum* dominance of endangered sagebrush steppe ecosystems, Journal of Applied Ecology 50, 1039–1049, attached as Ex. 1.

In our September 11, 2020 letter regarding this project (Grand Canyon Trust, et al. 2020), conservation groups recommended 30% utilization when/where cattle grazing is resumed after juniper or pinyon removal because such a reduction in current livestock vegetation extraction would be both ecologically beneficial and economically beneficial to the permittee:

> Livestock management that will allow for recovery of native plants and resist cheatgrass expansion: 30% utilization
>
> Footnote: 30% utilization is both ecologically and economically beneficial. Holechek, JL, H Gomez, F Molinar, and D Galt. 1999. Grazing studies: what we've learned. Rangelands 21(2): 12-16.

Thus, there is science to support the fact that reducing or removing livestock could achieve at least some of the purpose and need for this project. Analyzing such an alternative would also enable the public and the decision-maker to understand the tradeoffs involved in continued grazing of this landscape.

The EA notes (at p. 4 re: Tuhy et al. 2014) that in 2014 the Dixie NF entered into a cost-share agreement with The Nature Conservancy (TNC) to identify future site-specific projects that would improve ecological conditions on the Pine Valley RD. However, TNC was directed by the Forest Service to consider only *active* treatments and not passive treatments such as removal or reduction of livestock (Mary O'Brien personal communication with Joel Tuhy). This EA reflects that same exclusion of economically and ecologically reasonable alternatives for post-removal cattle management on the District.

- A roadless protection alternative. The Forest Service should also consider an alternative that treats the 84,000 acres of lands outside IRAs using mechanical means, but allows only the use of hand tools within IRAs. Such an alternative would allow the public and decision-maker to understand the tradeoffs in limiting soil and sound disruption inside roadless areas with the added time (and perhaps cost) of hand treatments within IRAs.

The Forest Service should also consider the "passive restoration" alternative proposed by conservation groups in previous comments. The EA states that the agency rejected this alternative for reasons stated in its "Issues Analysis." Pine Valley Project EA at 18. The "Issues Analysis" document dismisses such an alternative on the grounds that it will not meet the project purpose and need:

> Passive restoration will take place on the majority of the area, but active restoration will meet the need of the project purpose and need. "Passive restoration" will not stop PJ succession into sagebursh [sic], nor will it eradicate cheat grass and other invasive weeds. Natural ignitions will still occcur [sic] under "Passive restoration" and spread invasive species further exacerbating and worsening current issues.

Dixie National Forest, Issue Analysis for the Pine Valley Wildlife Habitat Improvement Project (no date) at un-numbered page 13. This three-sentence dismissal is insufficient. The agency does not explain why the removal of stressors (including livestock grazing) would not allow for soil, hydrology, and other conditions to improve over time such that native plants would be able to outcompete non-native plants, as discussed above. The fact that natural ignitions will still occur under "passive restoration" does not mean that invasive species would still spread. The Forest Service could undertake burned area emergency response actions whether or not it approves the Pine Valley Project and so could respond to any threat of additional spread of invasives on an as-needed basis, as it has for decades across the forest system.

V. THE FOREST SERVICE FAILS TO JUSTIFY ITS APPROACH TO WATER QUALITY ANALYSIS.

The Forest Service's hydrology and soils specialist report relies on a study and approach from Jeffrey J. Steuer – "A generalized watershed disturbance-invertebrate relation applicable in a range of environmental settings across the continental United States" (2010) – for determining how many acres of disturbance per watershed is acceptable for the project. V. Thacker, Hydrology and Soils Specialist Report (2021) at 12, 21. It is unclear how comparable or applicable this approach is to a forest vegetation management project. From the study:

> Watershed percent imperviousness, a commonly understood *urban* metric was used as the basis for a generalized watershed disturbance metric that, when applied in conjunction with weighted percent agriculture and percent grassland, predicted stream biotic conditions based on Ephemeroptera, Plecoptera, and Trichoptera (EPT) richness across a wide range of environmental settings. A threshold was identified (disturbance values <15) that defined a region of increased EPT richness change.

The Pine Valley Project EA uses a 15% disturbance threshold per subwatershed to determine if the impacts are acceptable or not significant.

The Forest Service does not offer support for using this "generalized" approach. This approach appears particularly weak in its ability to assess impacts to soils and riparian areas.

For this approach to be useful, the agency must connect the dots to demonstrate that its 15% disturbance value uses relevant indicators sufficient to assess hydrological and soil conditions, and that the 15% threshold can actually provide sufficient habitat conditions necessary to ensure viable species populations. The agency has a number of watershed analysis approaches, including the Watershed Condition Framework, which includes useful indicators and attributes. U.S. Forest Service, Watershed Condition Framework (May 2011), available at https://www.fs.usda.gov/naturalresources/watershed/condition_framework.shtml (last viewed Nov. 15, 2022). The Forest Service must explain why the 2010 Steuer study/approach is better than other approaches, including the Watershed Condition Framework (WCF).

In order to take a hard look at the potential environmental consequences to watershed conditions from the proposed actions, the Forest Service should provide more detailed analysis utilizing the WCF indicator and attributes. *See* Figure 1, below.

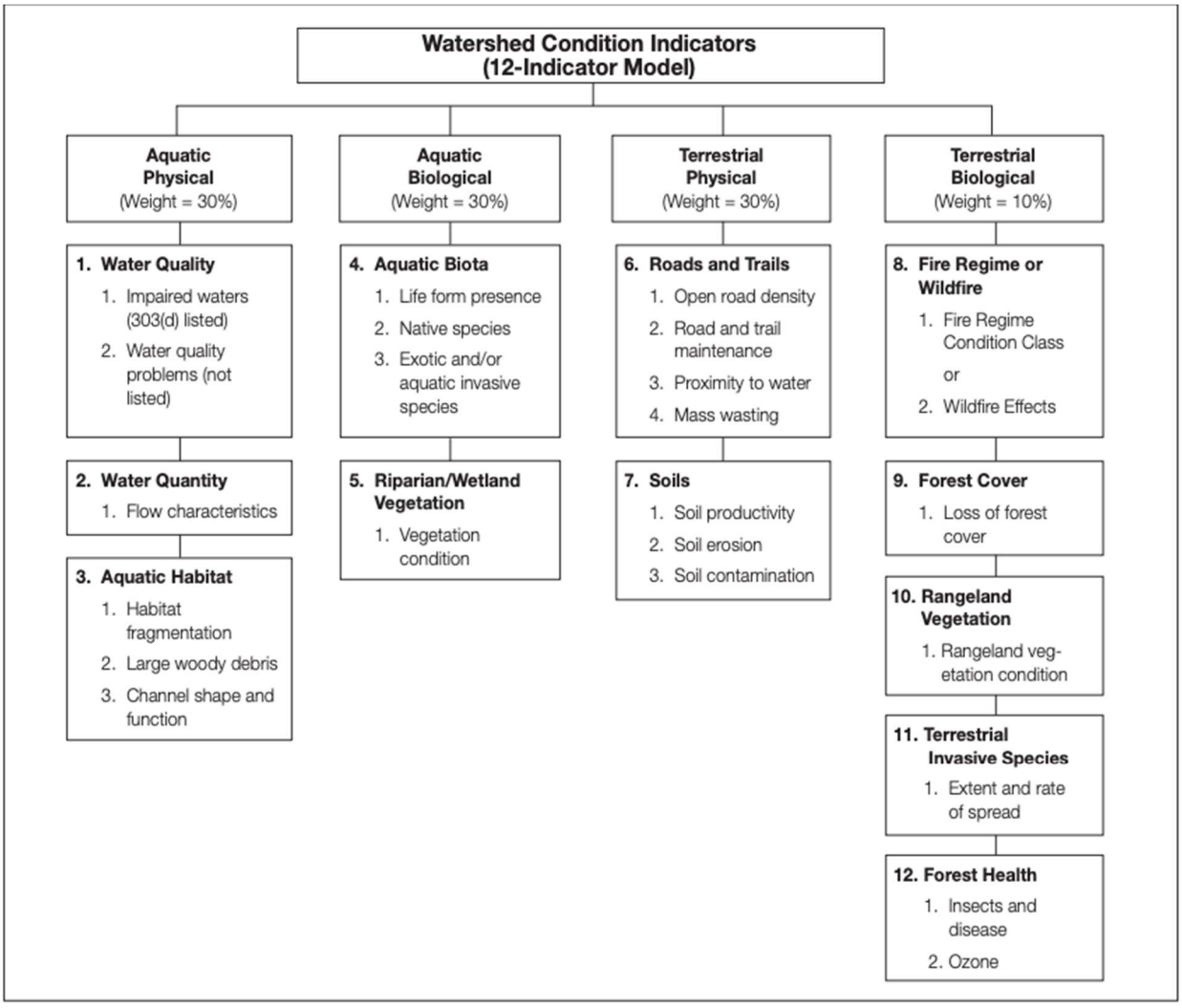

Figure 1. WCF Indicator and Attributes.
From U.S. Forest Service, Watershed Condition Framework (May 2011) at 9.

While the Pine Valley Project EA considers stream biota that may be similar to aquatic biota, it omits numerous factors that affect watershed function. The agency must explain why its own Framework for assessing watershed conditions is not applicable to this project and how its current analysis addresses each attribute, including open road density. Here it is important to note that for classification purposes, and thus analysis purposes under NEPA, the Watershed Condition Classification Technical Guide (WCCTG) clarifies the meaning of its open road attribute as follows:

> For the purposes of this reconnaissance-level assessment, the term "road" is broadly defined to include roads and all lineal features on the landscape that typically influence watershed processes and conditions in a manner similar to roads. Roads, therefore, include Forest Service system roads (paved or nonpaved) *and any temporary roads* (skid trails, legacy roads) not closed or decommissioned, including private roads in these categories. Other linear features that might be included based on their prevalence or impact in a local area are

> motorized (off-road vehicle, all-terrain vehicle) and nonmotorized (recreational) trails and linear features, such as railroads. Properly closed roads should be hydrologically disconnected from the stream network. If roads have a closure order but are still contributing to hydrological damage they should be considered open for the purposes of road density calculations.

WCCTG at 26 (emphasis added), available at https://www.fs.usda.gov/biology/resources/pubs/watershed/maps/watershed_classification_guide2011FS978.pdf (last viewed Nov. 15, 2022). Road densities, the proximity to water, maintenance and mass wasting are essential attributes to consider when determining potential watershed impacts. The Forest Service fails to consider these attributes, or the effects of the proposed road actions on sedimentation.

We caution the agency against relying on best management practices or project design features to claim the proposed action will not have any significant effects. Should the Forest Service make such assertions, it must demonstrate both the successful implementation and efficacy of such practices or design features. At the very least, the agency must not assume 100 percent efficacy in its analysis.

In sum, there are more comprehensive approaches to assess hydrology, aquatic habitat, soils and overall watershed conditions.

VI. THE EA AND BIOLOGICAL EVALUATION FAIL TO TAKE A HARD LOOK AT PROJECT IMPACTS TO BIRDS.

A. The EA and Biological Evaluation Fail to Take a Hard Look at the Existing Condition of Pinyon Jay in the Project Area.

The Specialist Report and Biological Evaluation of Sensitive Terrestrial Wildlife and Plant Species (hereinafter "BE") indicates that Pinyon Jay is an EA priority species that is representative for pinyon and juniper habitat within the project area. BE at 43. The BE states that Pinyon Jay populations have declined by 80% (BE at 46) and that the proposed action "may impact individuals or habitat", but "viable populations [will be] maintained." Pine Valley Project EA at 55 (Table 12). Further, the EA indicates the proposed action will cause "limited short-term displacement" of Pinyon Jay, as well as "[s]ome impacts to pinyon-juniper woodland breeding habitat." *Id*.

The Pinyon Jay (*Gymnorhinus cyanocephalus)* is an obligate and keystone species of pinyon-juniper woodlands and a major pinyon pine seed disperser. It has suffered steep declines, exceeding that of the Greater Sage-Grouse (*Centrocercus urophasianus*), with 85% of the population lost since the 1960s (Sauer et al. 2017). Threats include loss of significant amounts of pinyon-juniper habitat due to drought and removal/thinning/chemical treatments of woodlands. Climate change models predict a large-scale piñon-juniper die-off in the future (Williams et al. 2010, McDowell et al. 2016).

Based on current trends, the population is expected to decline by an additional 50% by 2035 (Somershoe et al. 2020). Though there are still substantial populations, the Pinyon Jay is on the Partners in Flight Yellow Watch List, identified as one of 39 "Species on the Brink" in the U.S.

and Canada exhibiting "high vulnerability to extinction, steep population decline, and high urgency" and with a "range-wide loss in abundance > 1 million," and the most dependent on public lands management. The Pinyon Jay is a Species of Greatest Conservation Need in the Wildlife Action Plan of Utah (UDWR 2022). This species is also on the U.S. Fish and Wildlife Service Birds of Conservation Concern list, is designated as a Species of Greatest Conservation Need in State Wildlife Action Plans for seven of the 12 states in which it is found, and is listed as Vulnerable on IUCN's Red List, suggesting a "high risk of extinction in the medium-future if current population declines continue." The Pinyon Jay's precarious status led conservationists to submit a petition to list the jay as an endangered species in April 2022. *See* Defenders of Wildlife, Petition to List the Pinyon Jay (*Gymnorhinus cyanocephalus*) as Endangered or Threatened Under the Endangered Species Act (Apr. 25, 2022), attached as Ex. 2. This petition contains the latest science on the Pinyon Jay and threats to its survival, which include Forest Service projects to remove pinyon pine and juniper across hundreds of thousands of acres.

According to the New Mexico Bird Conservation Plan's (NMBCP) Pinyon Jay (*Gymnorhinus cyanocephalus*) Species Account (Johnson et al. 2020), attached as Ex. 3:

- "Gallo and Pejchar (2017) found that high levels of thinning (where unthinned sites had 90% higher tree cover than chained sites) had significant effects on avian community structure. Magee et al. (2019) found that Pinyon Jay occupancy decreased locally in piñon-juniper woodland treated to reduce canopy cover from 36% to 5%. Another study found that Pinyon Jays avoided nesting within parts of a known colony site in persistent piñon-juniper woodland after the colony site was significantly thinned (87% reduction of trees per acre) (Johnson et al. 2018). Based on the above-mentioned research, as well as recent habitat studies of Pinyon Jays (Johnson et al. 2014, 2015), it appears moderate to heavy woodland thinning has negative impacts on the quality of Pinyon Jay habitat." *Id*. at 7.

- "Many piñon-juniper management projects are conducted based on the assumption that piñon-juniper woodlands are invasive and expanding. While this was true in some areas in the past, and may be true in some areas today, as a whole this expansion has decreased or ceased (Kerr 2007, Miller et al. 2008, Sankey and Germino 2008). *Id*.

The NMACP recommends, among other things, that: a) prior to planning a tree thinning treatment, standardized and statistically robust surveys for Pinyon Jay activity should be carried out, b) treatment should be avoided if Pinyon Jays are using the area for nesting, seed caching, or foraging, c) treatment should be avoided in current or historical colony sites (if occupied within the past ten years or longer), d) a no-treatment buffer should be observed around any colony site, and e) any treatments done in jay-occupied areas should be planned and carried out in collaboration with Pinyon Jay researchers. *Id*. at 8.

Analysis of treatment effects on potentially vulnerable species like Pinyon Jay and other pinyon- or juniper-dependent species (*e.g.*, Juniper Titmouse, Gray Vireo) should be done on a population or landscape scale. In other words, the Dixie National Forest should collect pre- and post-treatment data on a scale and frequency that allows determining the overall status of the species throughout the project area and related off-project areas. This should be done in a timely

manner so that treatments can be altered as needed (adaptive management) to avoid harmful effects.

An additional consideration when thinning is the need to keep enough trees to form dense canopy cover sufficient to lower nest temperatures. Such trees may not be particularly large, but collectively form a significant canopy (Johnson et al. 2014, 2015; Johnson and Sadoti 2019; Somershoe et al. 2020). Dense canopy may likewise benefit many species of birds that nest in pinyon-juniper.

Finding nesting Pinyon Jay colonies is very difficult and requires expert training and experience. Pinyon Jays nest as a group, in the same general location every year, and it is possible to walk through a nesting colony without ever knowing they are there because the females on nests are silent to avoid drawing in predators (Johnson and Balda 2020). Additionally, unlike large fall and winter flocks of Pinyon Jays, during the Pinyon Jay breeding season (generally early March to late May), flocks of Pinyon Jays are small and consist of males collecting cached seeds to bring to females on nests. Therefore, both time of year and flock size can determine the ease of detecting whether Pinyon Jays are breeding in an area (Johnson and Balda 2020).

The BE identifies Pinyon Jay as a priority species that is representative of pinyon-juniper habitat within the project area. The BE cites a 2021 publication that indicates "researchers" (but not on-ground Dixie staff) "are identifying potential hotspots for pinyon jay nesting" in p-j woodland and shrubland in the Great Basin through computer mapping exercises (as opposed to on-the-ground surveys). BE at 47. As for the proposed action, the BE claims that "substantial areas of pinyon and juniper woodland BPs [biophysical settings] areas are targeted for protection and enhancement through the proposed action." *Id*. However, neither the BE nor EA identifies *where* Pinyon Jay "hotspots" in p-j woodland and shrubland are in the Pine Valley project area (or even whether the Forest Service has identified or will identify such hotspots prior to project approval) or *what "substantial areas"* of pinyon and juniper woodland are being targeted for protection. It is also unclear whether the "protections" the BE alludes to are where heavy machinery to implement mastication and logging will be used, as well as burning, that some studies have concluded may harm Pinyon Jays depending on the degree of thinning in terms of trees per acre or canopy cover. *See supra*. The vague nature of the EA and proposed action – which contain no numerical limits on reduction of canopy cover or trees per acre – makes it impossible to tell whether the proposed action will undermine rather than "protect" or "enhance" Pinyon Jay habitat. The failure to make clear and disclose these impacts violates NEPA.

Regarding undisturbed buffers around Pinyon Jay flock nesting locations, Johnson et al. (2018), NMACP (Johnson et al. 2020), and Somershoe et al. (2020) recommend 500-meter buffers around nesting colony sites to allow for future shifting of the colony to suitable nearby habitat. *See* NMACP (Ex. 3) at 8; Somershoe et al. (2020) at 38, 40. The Great Basin Bird Observatory, in its "Recommendations for Avoiding Impacts to Pinyon Jay Colonies in Nevada" recommends a 1,200-meter buffer free of vegetation treatment (Partners in Flight 2019). The *Shivwits Plateau Landscape Restoration Project EA* for the Grand Canyon-Parashant National Monument specified a 500m buffer around nesting sites or nesting behavior (NPS-BLM 2021). The EA does not indicate any buffer size, instead indicating only "appropriate spatial buffers and timing restrictions will be applied," Pine Valley Project EA at 17, a description so vague that it is impossible for the decision-maker or the public to understand what exactly the agency will do,

what impact such buffers will have on project design, whether such buffers will comport with the best available science, and whether they will have the desired effect of protecting Pinyon Jays. Furthermore, this language is with respect to migratory birds in general. Often a standard nesting season is used for analyzing impacts to migratory birds, generally April or May 1 to July 31. However, this window is not appropriate for Pinyon Jays given the fact that they may nest much earlier in the year, and standard survey methods for other birds (such as the Breeding Bird Survey) are likely not adequate for Pinyon Jays. (The Pine Valley Project specialist report for wildlife contains no discussion of buffers for Pinyon Jay at all.) The Forest Service cannot rely on such ambiguous measures which are not specific to pinyon jays to reduce project impacts to jays below the level of significance.

Pinyon Jays can have very high nest site fidelity. Marzluff and Balda (1992) documented a flock that bred at the same site each of the 14 years that this flock was observed, and for another flock documented 5 different nesting sites that were each used 9 times. Marzluff, J.M., & Balda, R.P. (1992). The Pinyon Jay: Behavioral Ecology of a Colonial and Cooperative Corvid. T & A D Poyser, London, p. 161. This highlights the importance of species-specific, appropriately timed surveys. Surveys done outside of the Pinyon Jay breeding season may identify nests that are not currently being used, and the inference made that tree removal in the area would not impact Pinyon Jays. Since Pinyon Jays can have high nest site fidelity, such an area may be a traditional nesting colony, and modification of this important habitat could have significant impacts on Pinyon Jays, particularly at the scale of tree removal contemplated by this project. The EA and its supporting documents do not analyze this issue and the associated potential implications of the proposed action.

Not only should existing colonies be protected by scientifically supported buffers, but so should recently active but currently abandoned sites. Researchers have recommended that colony sites inactive during the previous ten years also be protected because jays may return to previous colony sites as resource conditions change (Marzluff and Balda 1992, Johnson et al. 2018).

Under "Existing Condition and Method of Analysis," the BE for the Pine Valley EA does not indicate whether *any* project area surveys for Pinyon Jay presence have been undertaken. No systematic survey data by experts is presented, summarized, or cited in the EA or BE.

However, a critical source of data on Pinyon Jays in the Pine Valley Ranger District does exist: eBird. eBird observations are gathered by birders worldwide; the project is sponsored by the Cornell Lab of Ornithology. Breeding Pinyon Jay habitat is important, but so is foraging habitat. The below eBird maps show data from breeding and foraging birds, including individual sightings reported to eBird, as well as a scientific analysis of Pinyon Jay densities based upon eBird data. The eBird data, and resulting maps, show that the project area is important for both breeding and foraging Pinyon Jays, with high densities of Pinyon Jays in and surrounding the project area. Additionally, they show sightings in areas immediately adjacent to pinyon-juniper woodlands, which likely represent ecotone areas consisting of pinon-juniper and other vegetation. Recent research has shown that these ecotone areas are of crucial importance to Pinyon Jays. *See* Boone et al. (2021). Pinyon Jays appear to prefer nesting, foraging, and caching close to and within the woodland-shrubland interface, which many pinyon-juniper removal projects, including this project, target. Pinyon-juniper projects targeting the woodland-shrubland interface, where jays prefer to nest, forage, and cache, is a potential explanation for the

precipitous decline in their populations. The EA and its supporting documents do not analyze this issue, which has the potential to significantly impact Pinyon Jay populations.

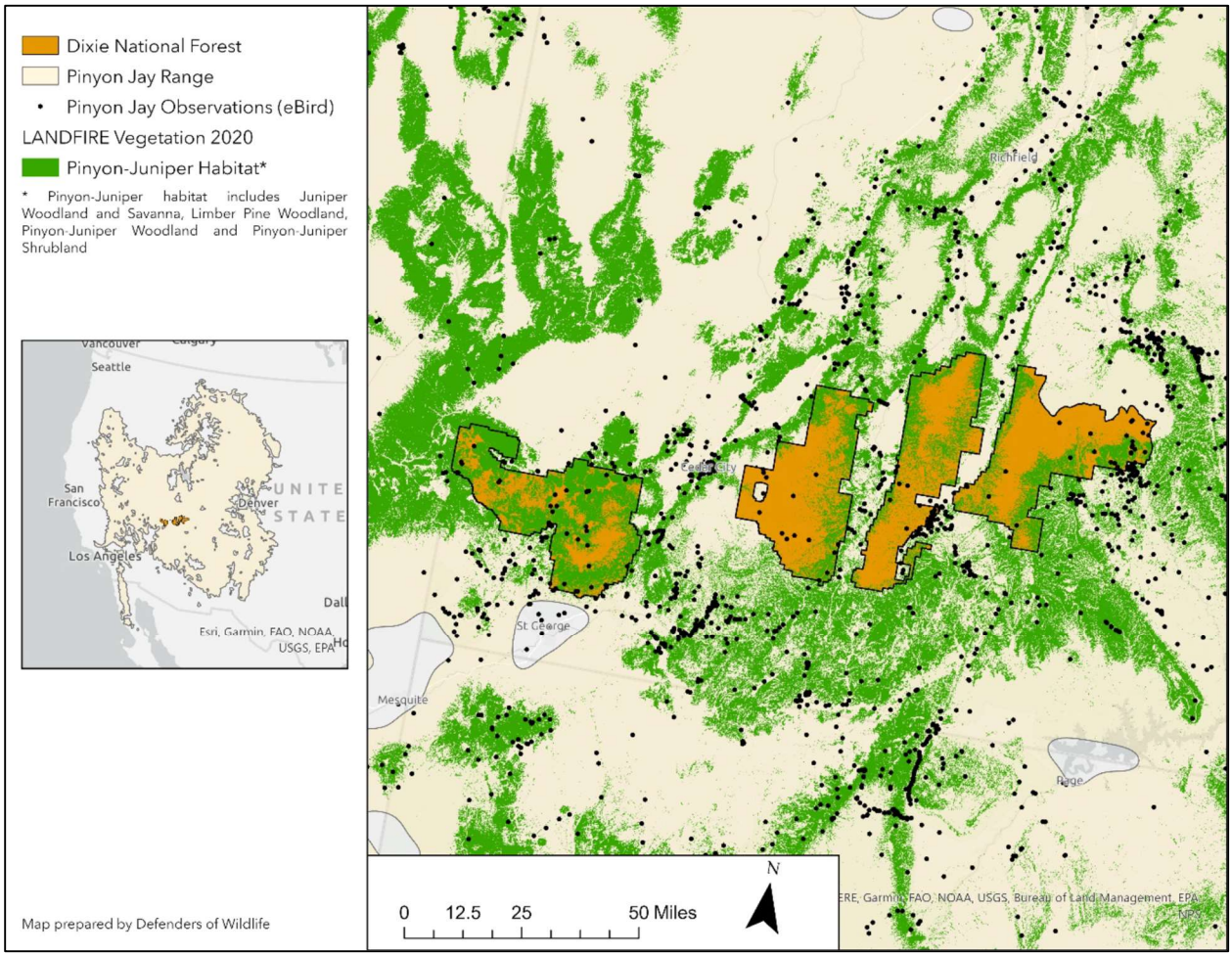

Figure 2. eBird data on Pinyon Jay sightings on Dixie National Forest and proximity to pinyon-juniper habitat (green). Pine Valley is the ranger district on the far left.

An October 2022 analysis of eBird data found that numerous small flocks have been documented by birders in the project area during the breeding season in the past few years. This means breeding birds are in the area, thus a trained professional must survey for Pinyon Jay nesting colonies prior to treatment, and a disturbance-free buffer (discussed below) must be placed around each nesting colony.

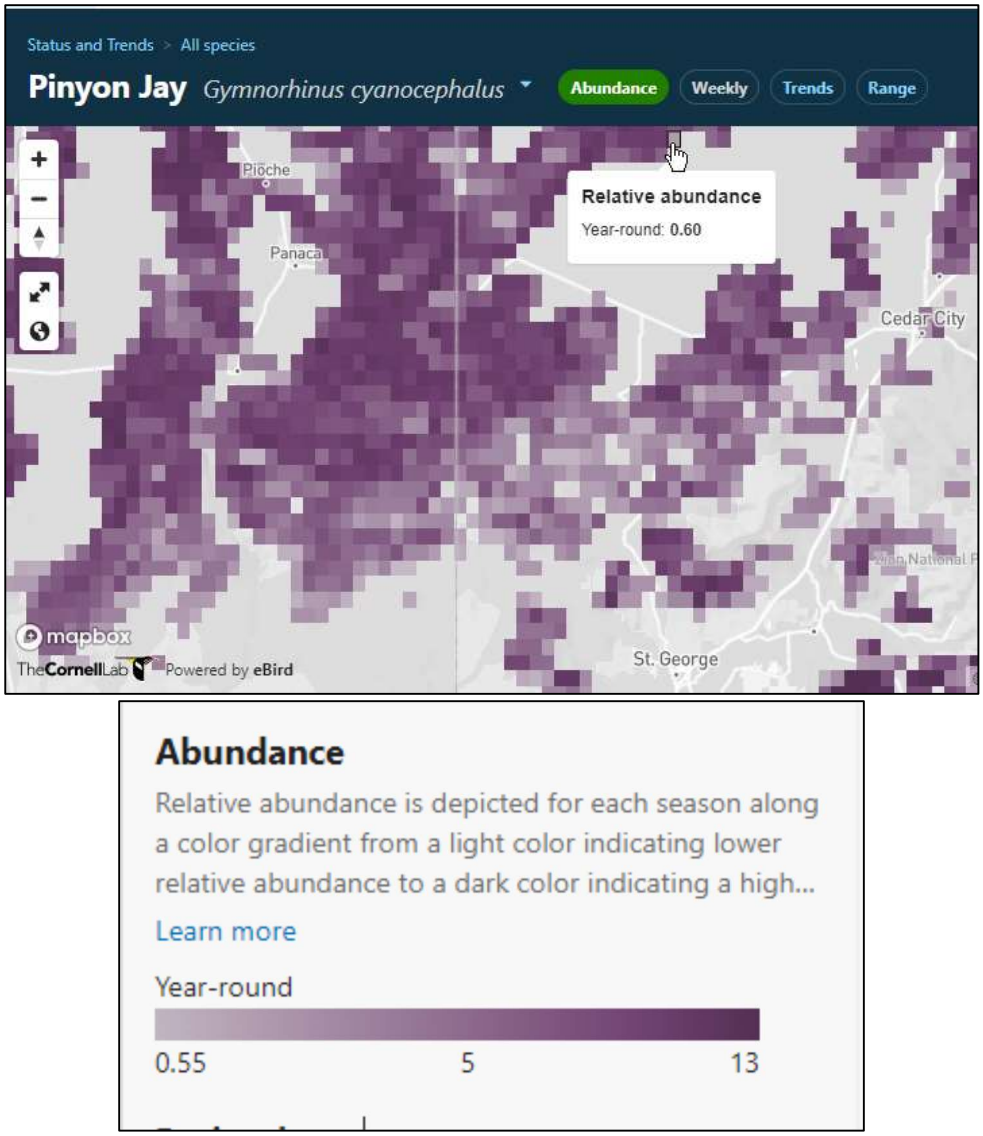

Figure 3. eBird abundance data for Pinyon Jay in the Pine Valley RD area (generally red circle).

Due to an apparent lack of Pinyon Jay surveys in the project area by trained professionals, a thorough impacts analysis has not been conducted and the EA's statement (at page 55) that the project "May impact [Pinyon Jay] individuals or habitat but will not cause a loss of viability to the population or species" is unsubstantiated. Further, NEPA requires that the agency analyze and disclose the environmental baseline in project analysis. Without such data, the Forest Service cannot comply with its mandate to understand and evaluate the baseline condition.

Additionally, removal of pinyon trees at, or greater than, 6 inches DBH could significantly reduce overall mast production available to a Pinyon Jay colony. Parmenter et al. (2018) identified age and size of *P. edulis* as an indicator of probable nut productivity: medium productivity (3.5–5.9 inches or 9–15 centimeters DBH); and high productivity (>6.3 inches or >16 centimeters DBH) (Zlotin and Parmenter 2008). Note that significant seed production may be occurring in trees 3.5 inches DBH and greater. The EA fails to mention DBH in relation to

mast production, and does not protect pinyon pines between 6 and 9 inches in diameter, and thus fails to address a significant impact to Pinyon Jays.

Further, guidance for protecting Pinyon Jay habitat recommends that agencies should "[f]avor south- and west-facing slopes for thinning, as opposed to north- and east-facing slopes, because trees on north- and east-facing slopes are projected to better survive future climate change scenarios (Rondeau et al. 2017). Colonies have been found on (north-facing) sites with lower heat load (Johnson et al. 2017b)." *See* NMACP (Ex. 3) at 11; Somershoe et al. (2020) at 41, 44.

The following measures based on the best available science should be utilized for any project activities with the potential to impact Pinyon Jays:

- Survey all areas where trees will be removed or habitat disturbance will occur, with surveys conducted during Pinyon Jay nesting season (generally February through May). Areas should be surveyed even if the tree removal or disturbance will take place outside the nesting season, as Pinyon Jays can have very high nest site fidelity and may use the same nesting sites across years.

- To establish Pinyon Jay absence, three surveys should be conducted during the nesting season, with each survey separated by at least two weeks.

- If Pinyon Jay nests are found, the breeding colony should be buffered by a 500 meter no-treatment/disturbance zone as recommended by the *Conservation Strategy for the Pinyon Jay* led by the U.S. Fish & Wildlife Service.

Somershoe et al. (2020).

To sum up our concerns:

- Because the EA lacks adequate safeguards to protect Pinyon Jays, the project likely will contribute to the overall severe decline of Pinyon Jays throughout the Southwest that led to the current listing petition before the U.S. Fish and Wildlife Service. Cumulative effects of this and similar projects within the range of the Pinyon Jay may have been helping to push the species to the point where listing is necessary.

- The EA and BE fail to provide evidence of adequate surveys done during the planning process to detect the presence of nesting pinyon. These birds are notoriously difficult to detect during the nesting period, and detailed on-the-ground surveys by experts should be done throughout the project area prior to approving the EA. If this is not done, it is likely the project will adversely affect nesting Pinyon Jays and contribute to their continued population decline.

- The EA and BE do not specify survey methodologies that would successfully identify present and historical nesting sites and key foraging habitat. The EA should specify how surveys for jays and other sensitive species will be carried out, e.g., frequency, scale, expert guidance.

- The project EA and BE fail to describe any monitoring program that would identify harmful effects of the proposed treatments on Pinyon Jays and other sensitive species as they occur so that treatments can be halted or modified to prevent said harm.

- The project EA and BE do not include specific guidelines for protecting key habitat, i.e., no buffer zones are specified around present or historical nesting colonies (i.e. those abandoned within the past ten years or longer). A buffer zone of at least 500 meters should be specified around present and historical nesting colonies. Protection of historical colonies is important because jays can return to past nesting locations [Johnson et al. 2020], and the vast majority of pinyon-juniper habitat does not provide adequate nesting habitat (which is different from foraging and caching habitat).

- The project EA and BE only propose to protect pinyon trees over 9" DRC, which will exclude from protection smaller trees that, according to the best available science, produce plentiful nuts critical for Pinyon Jay survival. For example, Parmenter et al. (2018) considered pinyon trees of greater than 6.3" DBH to provide high nut productivity. Because the best available science uses DBH (not DRC), and because most pinyon pines are single stemmed (as opposed to multi-stemmed junipers), the project should use DBH as its standard, and should avoid removing any pinyon pines at or above 6" DBH. Additionally, large junipers should not be targeted for complete, or near complete removal, because Pinyon Jays regularly nest in Juniper, and many other wildlife species depend upon Juniper.

B. The EA and BE fail to disclose cumulative impacts to Pinyon Jay.

The 85% reduction in Pinyon Jay populations is throughout its range. Massive projects removing pinyon and juniper are occurring throughout the region, but the EA Cumulative Effects Area appears to be limited largely to the Pine Valley RD (EA, Appendix G, p. 94) or the Dixie NF (BE, p. 17). However, the nearby Cedar City RD, adjacent national forest (Fishlake NF), and BLM lands in southern Utah and the Arizona Strip are all undertaking and proposing similar major reductions in pinyon and juniper cover. This is all Pinyon Jay habitat, and thus impacts to the Pinyon Jay can be expected to be rangewide. In Utah alone, the decline of Pinyon Jay populations has averaged 3.76% between 2005 and 2015 (Somershoe, et al. 2020). This is during the most severe 20-year drought in 1,200 years (Williams, et al. 2022) and with ongoing pinyon and juniper removal projects.

The EA never discusses cumulative impacts of removal of pinyon pines in the Pine Valley RD with removal throughout southern Utah and the Arizona Strip amid a megadrought. This is precisely the issue upon which the Interior Board of Land Appeals reversed a BLM plan to remove pinyon-juniper within a 33,000-acre project area where the agency failed to address the cumulative impacts of the project together with other pinyon-juniper removal projects. *Southern Utah Wilderness Alliance*, IBLA Case No. 2019-94 (Sep. 16, 2019), available at https://www.oha.doi.gov/IBLA/Dispositives/2019%20Dispositive%20Orders/September/2019-0094.pdfattached, and attached as Ex. 4 ("SUWA met its burden by showing BLM failed to consider the cumulative effects of the Project on migratory birds."). The IBLA stated that "This conclusion comports not only with our precedent but with relevant federal caselaw, in which courts have held that projects are reasonably foreseeable when they have been publicly

announced and at least some of their specifics known." Many of the specifics of pinyon-juniper removal for the next-door Cedar City Sagebrush Steppe project are known; the draft EA was released at nearly the same time as the EA for this project. Further, the petition to list the Pinyon Jay identifies numerous other proposed or recently approved p-j removal projects in Utah, neighboring Nevada, and beyond. *See* Defenders of Wildlife, Petition (2022) at 76-78 (Ex. 2).

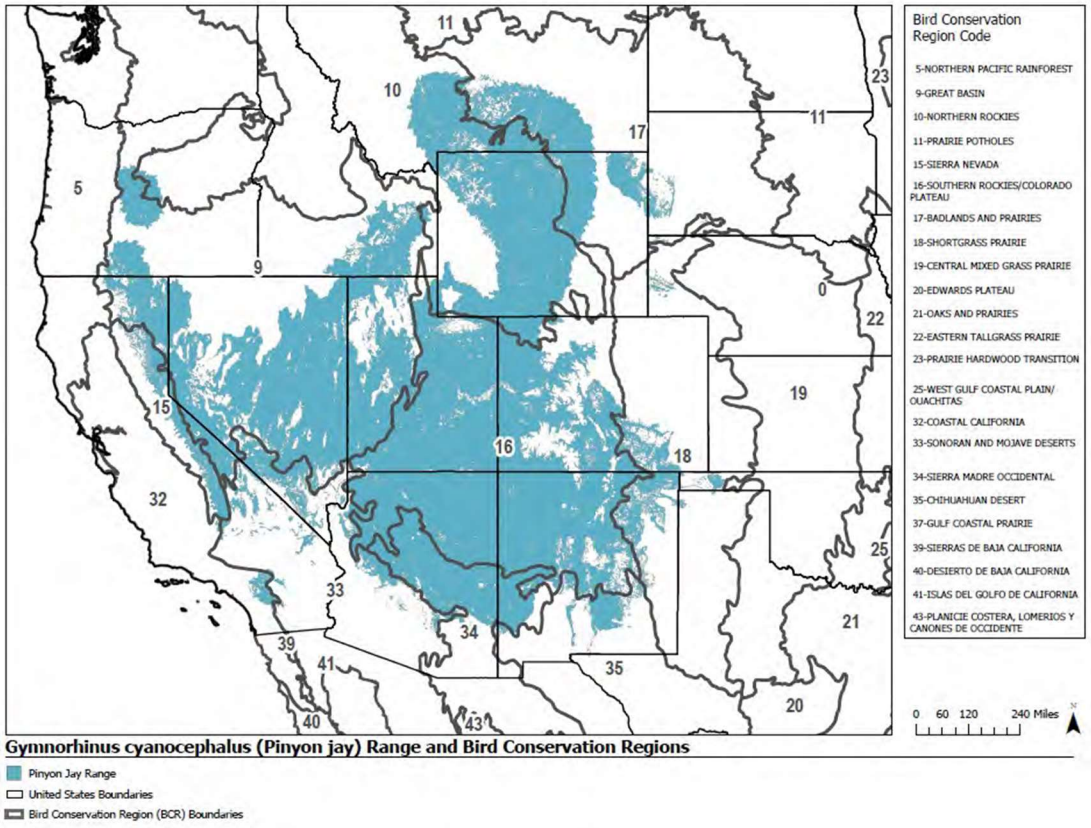

Figure. 4. Pinyon Jay range and bird conservation regions (Somershoe, et al. 2020)

C. The EA and BE fail to disclose cumulative impacts to Gray Vireo

The Specialist Report and Biological Evaluation of Sensitive Terrestrial Wildlife and Plant Species (hereinafter "BE") indicates that Gray Vireo is an EA priority species that is representative for shrub-steppe and pinyon-juniper habitat within the project area (BE at p. 43). The BE notes that the Gray Vireo is considered obligate of "semiarid mature, relatively weed-free, pinion-juniper, juniper, or oak woodlands that are relatively "open" with a shrubby under story" (BE at p. 49). The BE does not discuss whether "relatively weed-free" open areas exist on the Pine Valley RD. The eBird observations show that Gray Vireo have been observed in and surrounding Pine Valley RD. *See* Figure 5 below. The Forest Service analysis for this project therefore should disclose the potential reduction of pinyon-juniper habitat upon which Gray Vireo is an obligate.

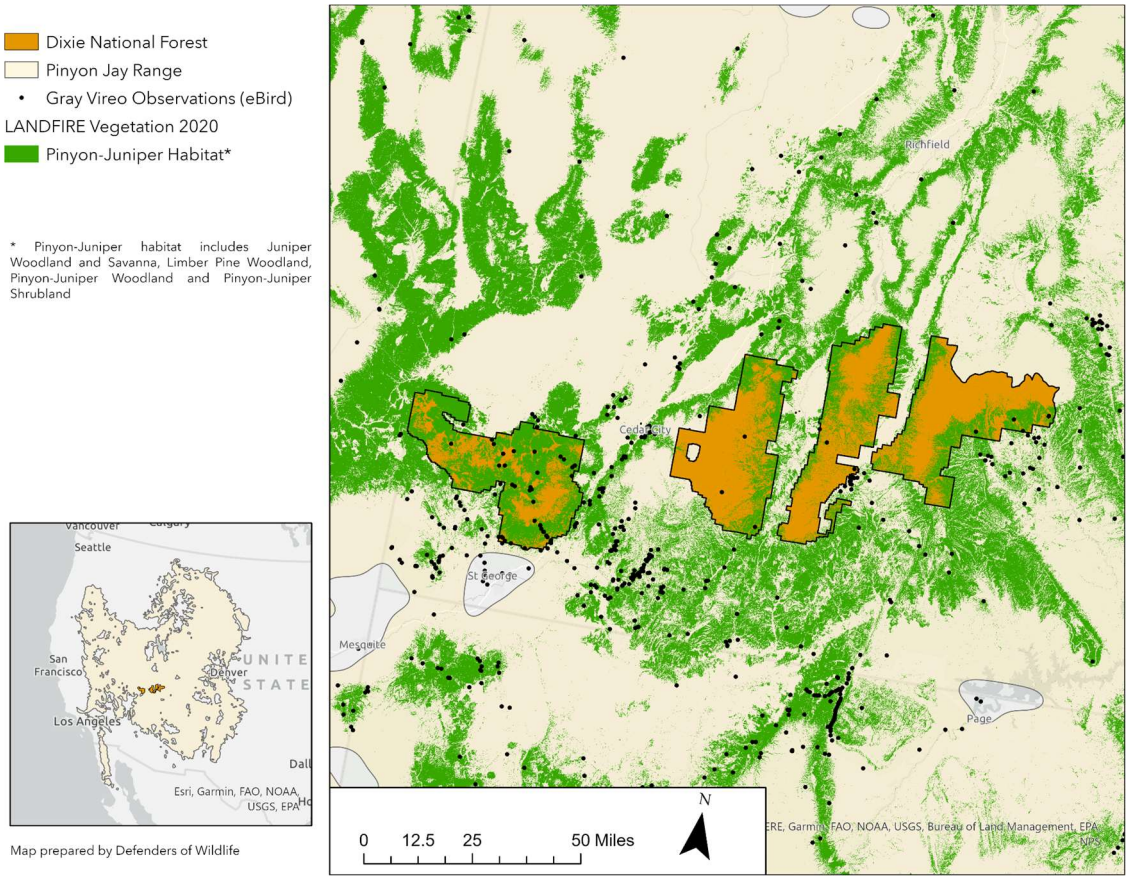

Figure 5. eBird data on Gray Vireo sightings on Dixie National Forest and proximity to pinyon-juniper habitat (green). Pine Valley is the ranger district on the far left.

While the BE focuses on potential "short-term" impacts on Gray Vireo, it claims that "long term impacts to gray vireo habitat are expected to be minimal because of the extensive pinyon-juniper, oak woodlands, and shrub habitats adjacent and available across the PPA at any given time." (BE at 50). As with Pinyon Jay above, the EA fails to discuss the potential impacts to Gray Vireo of extensive pinyon-juniper removal attributable to this project and to other Forest Service and BLM projects within the "extensive pinyon-juniper" throughout southern Utah and its range. This represents a failure of the Forest Service to consider both the direct and cumulative impacts of this project on Gray Vireo.

VII. THE EA FAILS TO TAKE A HARD LOOK AT THE CUMULATIVE IMPACTS OF THE PINE VALLEY PROJECT WHEN TAKEN TOGETHER WITH OTHER FORESEEABLE ACTIONS.

NEPA requires federal agencies to analyze the cumulative impacts of a proposed action. 40 C.F.R. § 1508.25(c)(3). Cumulative impacts are those "impact[s] on the environment which result[ ] from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions." 40 C.F.R. § 1508.7; *see also Kern v. U.S. Bureau of Land Management,* 284 F.3d 1062, 1075 (9th Cir. 2002). A CEQ guidance document on cumulative effects recognizes that "the most devastating environmental effects may result not from the direct effects of a particular action, but from the combination of individually minor effects of multiple

actions over time." CEQ Guidance, Considering Cumulative Effects Under the National Environmental Policy Act, at 1 (1997), available at https://www.energy.gov/sites/prod/files/nepapub/nepa_documents/RedDont/G-CEQ-ConsidCumulEffects.pdf (last viewed Nov. 15, 2022).

In evaluating cumulative impacts, agencies must do more than catalogue relevant "past projects in the area." *City of Carmel-by-the-Sea v. U.S. Dep't of Transp.*, 123 F.3d 1142, 1160 (9th Cir. 1997). NEPA documents must also include a "useful analysis of the cumulative impacts of past, present and future projects." *Id.* This means a discussion and an analysis in sufficient detail to assist "the decisionmaker in deciding whether, or how, to alter the program to lessen cumulative environmental impacts." *Id.* (citation omitted). Agencies also cannot merely list the number of road miles to be built or acres disturbed by past, present, and foreseeable projects. *Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt.*, 387 F.3d 989, 994-95 (9th Cir. 2004) ("A calculation of the total number of acres to be harvested in the watershed is … not a sufficient description of the actual environmental effects that can be expected from logging those acres…. Moreover, while a tally of the total road construction anticipated in the … watershed is definitely a good start to an adequate analysis, stating the total miles of roads to be constructed is similar to merely stating the sum of the acres to be harvested – it is not a description of *actual* environmental effects.").

CEQ has further advised agencies that a broader geographic scope of analysis is required for cumulative effects as compared to project-specific analysis. CEQ Guidance, Considering Cumulative Effects Under the National Environmental Policy Act, at 12 (1997). "Cumulative effects analysis should be conducted on the scale of human communities, landscapes, or airsheds." *Id.* Further, the appropriate scope for the analysis should be the largest of the geographic areas occupied by resources that are in the project's "impact zone." *Id*. at 15.

The Ninth Circuit held a timber sale EIS inadequate where it failed to consider the cumulative impacts of the sale on spotted owl habitat in an adjacent forest. *Earth Island Inst. v. U.S. Forest Serv.*, 351 F.3d 1291, 1306–07 (9th Cir. 2003). Likewise, courts have held that federal land management agencies violated NEPA when they failed to consider the impacts to faltering sage-grouse populations from management in adjacent areas. *W. Watersheds Proj. v. Jewell*, 56 F. Supp. 3d 1182, 1190 (D. Idaho 2014) (cumulative impacts discussion violated NEPA where agency did not discuss impacts of authorized grazing on sage-grouse in surrounding areas); *W. Watersheds Project v. Salazar*, 843 F. Supp. 2d 1105, 1125-28 (D. Id. 2012) (same); *W. Watersheds Proj. v. Bennett*, 392 F. Supp. 2d 1217, 1223–25 (D. Idaho 2005) (agency violated NEPA, acting "like a horse with blinders," by not considering impacts to a declining sage-grouse population from management in adjacent areas).

Here, the Pine Valley Project EA does that which the courts forbid agencies to do: merely list project names and compile acres. The EA provides a list of prior and foreseeable projects, with no discussion of how their impacts might interact with those of this project. Pine Valley Project EA at 94 (Appendix G). For example, the EA lists as foreseeable projects "Dixie National Forest Prescribed Fire Landscape Resiliency Project (1.5 million acres, no wilderness or Resource Natural Areas)" and "Fuels work (Santa Clara, Grass Valley, Pine Valley Fuel Break, 4-mile Bench Project, 8-Mile, Gum Hill)" with no description of the location, nature, extent, or impact of these projects, or how those projects would interact with this one. The perimeters of fires over

the last 22 years are displayed on a map, and the acreage of the fires listed, *see* Pine Valley Project EA at 93 (Appendix G), but how those fires, their severity and impacts may bear on the location, extent, and impacts of treatments proposed in the Pine Valley Project is not disclosed.

The EA admits that this project won't include prescribed fire actions (and thus doesn't disclose impacts of such activities) because another project will propose such actions. "The project is also not proposing prescribed fire (with the exception of in the disturbance treatments) as there is a Forestwide Prescribed Fire Project currently underway through a separate analysis." Pine Valley Project EA at 18. But the fact that another project will propose such actions in the same areas means that the Forest Service must disclose those cumulative impacts. The Forest Service's failure to address these impacts skews the agency's analysis. For example, the Pine Valley fire and fuels report asserts that desired conditions in the Dixie National Forest Plan "for both fuels management and prescribed fire would not be met" under the "no action" alternative. *See* T.M. Suwyn, Fire, Fuels, & Air Quality Report (Oct. 12, 2021) at 12. But even under the "no action" alternative, the Dixie National Forest is preparing a separate project that is presumably designed to meet those very Plan goals. By ignoring the cumulative impacts of foreseeable future actions, the Forest Service reaches an unsupported conclusion about the state of Forest Plan compliance under the "no action" alternative.

Where the Pine Valley Project EA does address cumulative effects, it does so in ways that lack meaningful description or analysis. For example, the EA states:

> Canopy cover would be reduced by the activities proposed in this project and coupled with similar treatments in past activities and proposed future treatments would lead to an overall reduction of canopy cover to more historic conditions across the landscape. This overall reduction of canopy cover would encourage recruitment of grasses, forbs, and shrubs across the landscape improving resiliency to disturbance as well as providing more diverse habitat for wildlife.

Pine Valley Project EA at 43. The EA does not disclose the name, location, extent or any other information about the "similar treatments," or how or where they would interact with this project, or what level of canopy cover was desired, or what the projects cumulative would achieve. See also id. at 44 (making the similarly vague assertion that "Within the cumulative effects area, several past and present activities (Appendix G) along with fire suppression policies have led to conditions that are prone to large-scale, catastrophic wildland fires").

The EA also does not appear to address the potential for cumulative impacts of the Pine Valley Project together with that of the Cedar City Sagebrush Steppe project, one that will take place about 15 miles or so from the Pine Valley Project, and that will similarly eradicate vast swaths of habitat for the imperiled Pinyon Jay, thus likely having damaging cumulative impacts on that species. We therefore urge the Forest Service to disclose the cumulative impacts of the two projects together on that species.

VIII. THE EA FAILS TO TAKE A HARD LOOK AT THE CUMULATIVE IMPACTS OF, AND ALTERNATIVES TO, CONVENTIONAL POST-TREATMENT CATTLE GRAZING.

The EA identifies livestock as a major source of the problem in terms of p-j "encroachment."

> Factors most frequently attributed to the increase in both density and area of pinyon and juniper are climate, *the introduction of livestock*, post-industrial increases in atmospheric CO2, and the reduced role of fire on the landscape. One of the earliest changes that occurred as a result of European settlement was the introduction of domestic livestock, beginning with the Spanish occupation.

Pine Valley Project EA at 26 (emphasis added). As noted above, however, the EA fails to consider the impacts of livestock grazing on cheatgrass. The EA also fails to consider recommendations provided to the District regarding post-removal cattle utilization of vegetation.

The Pine Valley Project proposes landscape-scale removal of pinyon and juniper, which will significantly reduce canopy cover, exposing the soil and vegetation to increased sunlight and heat, which will support increased expansion by cheatgrass and other invasive species, and will provide opportunity for increased grass and forb growth ("forage production"). The EA assures permittees that almost nothing will change with the current management of cattle grazing, other than indicating that livestock will be "monitored and herded away from," or otherwise excluded from, post-treatment areas for two years. Pine Valley Project EA at 15. The EA fails to clearly indicate how that exclusion will occur, e.g., when pastures are split into smaller pastures for treatment (fencing? herding?), or when or how intensively areas currently off-limits to cattle will be used. *Id*. at 11. Nor does the EA disclose the environmental impacts if trespass within treated areas does occur, as is often the observed reality when "herding" is relied upon for exclusion from forage.

The EA contains several project design features that are of dubious value in relation to livestock grazing. For example, design feature AQ-10 states: "in areas where riparian vegetation does not meet Forest Plan objectives within 5 years following treatment, active revegetation will be completed." Pine Valley Project EA at 13. It is unclear to us why (and how) this design feature would be implemented independent of an analysis of the role of cattle grazing in any such riparian areas. If cattle are determined to be a cause in the area of the riparian area not meeting Plan objectives, rather than automatically expending resources to undertake active revegetation, cattle grazing should first be modified.

Another design feature, R-2, reads: "Prior to stocking these areas an evaluation is needed to make sure that the rangelands are within 80% of desired effective ground cover values for the site and desirable plant species are established and producing seed." Pine Valley Project EA at 15. However, it is unclear why this criteria is not applied to grazed areas independent of treatment. The project's "Range Effects Analysis" report includes a table entitled "2021 *Upland Long-Term Vegetation Monitoring Summary - Pine Valley RD*." R. Walch, Range Effects Analysis (Jan. 28, 2021) at 12. Only page 1 of 3 is included, but the data the table includes is illustrative. Of the 16 sites listed, 10 of them (62.5%) have less than 80% ground cover, and several of those areas are in a "downward" trajectory. The Range Effects Analysis report also

states: "Livestock returning to treatment area before 80 percent ground cover is achieved, or during drought conditions, can negatively affect the impacts on regeneration and seeding establishment of vegetation." *Id*. at 7. If 80% ground cover is important post-treatment and pre-grazing, and cattle use below 80% ground cover has the negative effects cited above, it should also be ensured that these lands reduce cattle use now, under the no action alternative. That is, cattle should not be permitted to graze where ground cover is below 80%, regardless of whether that condition is due to post-treatment recovery or due to current grazing management. We request that subsequent NEPA analysis include all three pages of the Upland Long-Term Vegetation Monitoring data from the table cited above, along with the steps that are being and will be taken in areas where current ground cover is less than 80% independent of whether treatment has occurred.

The EA claims that "[p]rior to stocking these areas an evaluation is needed to make sure that the rangelands are within 80 percent of desired effective ground cover values for the site and desirable plant species are established and producing seed." Pine Valley Project EA at 48. The District, to our knowledge, does not delay livestock grazing beyond two years post-treatment, when cheatgrass is dominant. Re-establishment of perennial bunchgrasses (a major resistance to cheatgrass; Reisner, et al. 2013 (Ex. 1, attached)) does not occur quickly and particularly after 22 years of megadrought (Williams, et al. 2022). Also, the EA notes that fire can reduce biological soil crusts, providing a window for invasion of cheatgrass, but fails to acknowledge that the resumption of widespread cattle trampling of newly exposed soil after mechanical removal will likewise reduce biological crust, providing a window for cheatgrass invasion. *See* Pine Valley Project EA at 46.

The EA indicates that "non-native seeding of desirable plant species is allowed when site conditions require more competitive species due to threats from invasive and/or weedy species." Pine Valley Project EA at 6. However, the EA does not consider that post-treatment livestock grazing, even two years after treatments, will encourage invasive and/or weedy species, thereby producing the "need" to seed non-native plants into the landscape. The EA does not support with any documentation its claim that a two-year absence of cattle herds followed by years of cattle grazing has allowed or will allow for establishment and maintenance of cheatgrass-resistant vegetation (as opposed to cheatgrass and non-native seedings). *See* 40 C.F.R. § 1502.23 ("Methodology and scientific accuracy. Agencies shall ensure the professional integrity, including scientific integrity, of the discussions and analyses in environmental documents.").

In addition, the EA states: "Implementation in areas that have permitted livestock allotments will be accomplished in a pasture-by-pasture fashion, allowing proper rest of the treated pastures, while maintaining the remaining pastures for permitted use" Pine Valley Project EA at 11. There is no discussion of whether this pasture rest approach will entail either reduced numbers of cattle and/or reduced time period of use in the remaining pastures. Absent either of these measures, a reliable consequence of the proposed action is increased concentration and subsequent impacts of cattle use in pastures not being treated. Thus a reasonably foreseeable indirect impact of the proposed action is the spread and increase in cover of cheatgrass in areas either previously treated or slated to be treated in the future, potentially undermining efforts at ecological restoration. The Forest Service must disclose the various potential impacts of increased cattle concentration as a result of the Proposed Action, and the relation of those impacts to the project's stated goals, which it has failed to do here.

IX. THE PROPOSED ACTION FAILS TO ADEQUATELY PROTECT RIPARIAN AREAS.

Riparian areas are uncommon in southwest Utah and provide important habitat for both terrestrial and aquatic biota in addition to supporting unique plant communities. Therefore riparian areas should be protected and carefully managed. The EA indicates that "The riparian treatment area would be within the Aquatic Management Zone (AMZ), which is defined as a 100-foot buffer on either side of specified streams and drainages." Pine Valley Project EA at 10. We are concerned about the negative impacts of these proposed treatments in riparian areas for the reasons described below.

Soil Protection

Minimizing soil disturbance, particularly in riparian areas, should be a goal in land management. The AMZ (within 100 feet of stream) has alluvial soil, deposited from floods, that is generally more porous than upland soil. The aquatic specialist report (Golden 2022) acknowledges that "loss of ground cover, displacement of soil, and compaction of soils from machinery could increase overland flow and upland erosion rates" (p. 3). We oppose driving heavy machinery in the AMZ because floodplain soil is vulnerable to compaction, which decreases infiltration capacity and the ability of that soil to store water. Heavy machinery causes soil displacement which makes it vulnerable to erosion. All of these impacts to soil make it harder for native vegetation to persist or to establish and therefore heavy machinery should not be used in riparian areas.

Streambank Protection

Design Feature AQ-1 says to "avoid … Use of heavy equipment unless it is authorized by the Zone Hydrologist or Forest Fish Biologist." Pine Valley Project EA at 12. We urge a stronger prohibition against using heavy machinery in riparian areas because it damages streambanks as vehicles drive across and along the channel. In addition to the direct impacts, streambanks also become more vulnerable to erosion during high flows which can lead to channel widening and declines in habitat for fish and other aquatic biota.

We recognize that there can be value in placing cut woody material in the stream, as the proposal states (Design Feature AQ-3, Pine Valley Project EA at 12), which can be helpful in slowing flows, capturing sediment and rebuilding streambanks and floodplains. Where that is deemed useful, hand-cutting can be employed to cut trees and place them in the channel. "Hand thinning should have no direct impacts to stream bank stability" according to the aquatic specialist report (Golden 2022, p. 40).

Removal of woody vegetation in the AMZ could allow increased livestock access to the stream which could result in damage to streambanks and aquatic habitat. This is another reason to do minimal or no treatments in riparian areas. The aquatic specialist report (Golden 2022) says

> Other indirect effects to riparian vegetation include potential increased access by livestock once dead and down fuels are reduced and/or standing vegetation is thinned; however, increased forage production from the mechanical treatments is

> hoped to offset any access impacts by improving distribution opportunities and spreading livestock use. (p. 39)

We are not confident that the "increased forage production" will "offset any access impacts by improving distribution opportunities and spreading livestock use," and the specialist report provides no scientific basis for this "hope." This is one more way the EA fails to take the hard look at impacts to riparian areas, and one more reason to minimize vegetation treatments in riparian areas.

Avoiding Weed Infestation

Using machinery in riparian areas damages or destroys vegetation resulting in increased bare ground, which is a favorable condition for weed establishment. Machinery also has the potential to spread weeds, even if efforts are made to clean equipment before arrival at the site as prescribed in Design Feature NW-2, which we support. Minimizing disturbance to soil and vegetation is an effective way to reduce weed infestation, and one we urge the Forest Service to consider and adopt in any subsequently prepared NEPA document.

Fostering Native Vegetation

The aquatic specialist report (Golden 2022, at 29) acknowledges "Terrestrial treatments involving machinery (including the use of machinery during seeding) have the potential to reduce ground cover, increase soil disturbance/compaction/runoff, and decrease tree and shrub cover." Altering or removing native vegetation in riparian areas should be avoided as much as possible because of the risks from disturbance described above. If some thinning of Utah juniper is deemed ecologically beneficial, then hand-cutting should be the method used. If fire reduction is the goal, then cutting a few patches across the riparian area could serve as fire breaks. There is no need to remove all conifers from riparian areas. A functioning stream-riparian ecosystem will periodically flood the floodplain and damage, uproot or kill some conifers naturally.

The EA says "Treatments would be focused on removing encroaching conifers and invasive woody species such as tamarisk and Russian olive." Pine Valley Project EA at 10. We support the removal of tamarisk and Russian olive, which should be done by hand-cutting and herbicide use. Hand-cutting of some Utah Juniper could also be done. No cutting in riparian setting should be done of other conifers including ponderosa, spruce, fir, or Rocky Mountain juniper. No cutting in riparian areas should be done on any deciduous trees including cottonwood, water birch and aspen.

We oppose the use of herbicide on native species such as rabbitbrush as proposed in the EA: "Areas with rabbitbrush invasion would be treated with a wet-mow herbicide application using precautions from the label of the specific herbicide applied" (p. 10). Native vegetation should not be eliminated especially with herbicides that can impact other native plants.

For riparian areas that are not functioning properly, it is imperative that they be rested from livestock grazing, whatever the treatment or lack of treatment. We support Design Feature R-1 that says "Livestock will be monitored and herded away from treatment areas for two growing seasons to allow for vegetation to regenerate," Pine Valley Project EA at 15, though as noted above, this measure is vague as to its implementation, unclear as to its impacts on areas where

grazing may therefore be concentrated, and two growing seasons may not be sufficient to protect emerging vegetation. We support the concept in the EA that "Temporary fencing may be required post-treatment in the Riparian Treatment Area to allow for vegetation regrowth and prevent further desertification, incision, or adverse impacts to hydric vegetation." Pine Valley Project EA at 10. But use of the vague term "may" undercuts the utility of this measure. We urge a stronger commitment to post-treatment rest from livestock that lasts more than two years.

X. THE EA FAILS TO CONSIDER THE IMPACTS OF EXTENDED DROUGHT AND CLIMATE CHANGE WITHIN THE PINE VALLEY RANGER DISTRICT.

A 22-year "millennial drought" has brought the driest 22 years since 800 A.D. to the U.S. Southwest, including the project area of this EA. *See* Williams, et al. 2022. The EA proposes to undertake 15-20 years of removal of pinyon and juniper, which will change the landscape for decades after that, amid climate warming. However, the EA fails to evaluate impacts on the project area of extended drought, which is associated with both pinyon and juniper die-offs. This is a failure to take a hard look, failure to use best available science, and failure to address this significant issue that was raised in scoping comments.

The Pine Valley Project EA acknowledges that "drought and climate change have created conditions where fire scale and intensity are commonly beyond the normal levels." Pine Valley Project EA at 44. But the EA does not clearly address the fact that extended drought and climate change will interact cumulatively and synergistically with landscape-scale pinyon juniper removal. We found no mention of repeated droughts or the 22-year megadrought in the EA or related documents, or whether or how the megadrought could intensify the project's damaging impacts.

The EA's failure to consider the implications of extended drought and increased climate warming has several important ramifications for the Forest Service's analysis. First, it calls into question the EA's assumption that the "no action" alternative will result in an increasingly dense forest structure that is more susceptible to fires. A die-off or reduced growth rate of these forests may result in a very different forest from the dense and encroaching stands that the EA predicts will occur if the Forest Service does not implement the proposed action. *See, e.g.*, Pine Valley Project EA at 26 ("Many areas that were formerly dominated by shrubs are now being taken over by pinyon and juniper, a trend that began in the late 1800s and is continuing to this day (Miller and Wigand 1994, Tausch 2001)."). The assertion that areas are "being taken over by … juniper" runs counter to recent observations of significant juniper die offs in the southwestern US in response to the megadrought. *See* S. Kannenberg et al., 2021, Rapid and surprising dieback of Utah juniper in the southwestern USA due to acute drought stress, Forest Ecology and Management 480, attached as Ex. 5. At a minimum, the Forest Service must explain this apparent contradiction.

Second, this project is being proposed as if the project area is subject to past, occasional droughts and is not under the new regime of multi-year, even multi-decadal droughts. As such, the EA may underestimate the proposed action's impacts. Proposed treatments may thus transform and degrade, rather than protect, the natural ecosystem. Breshears, et al. (2005) documented extensive pinyon pine die-off throughout the Southwest following the 2002-2003 drought. The researchers note,

> Most of the patchy mortality in the 1950s was associated with trees 100 years old, whereas nearly complete tree mortality across many size and age classes was observed in response to the recent drought.

Examining a century of pinyon pine regeneration at grazed and ungrazed sites in southeastern Utah, Barger, et al (2009) sound a warning for managers operating under past climate regimes:

> Moreover, prolonged drought combined with potentially slow regeneration times for pinyon under future climate scenarios could result in substantial declines in pinyon populations across the region, *a result that land managers should consider when planning for future restoration treatments in persistent pinyon-juniper woodlands* [emphasis added].

A more recent study raised a similar alarm about the "unprecedented" impacts of ongoing and impending change due to drought.

> The speed and scale of this [recent] drought-induced juniper dieback seems to be historically unprecedented in the region and foreshadows an uncertain future for piñon-juniper woodlands as the region continues to get warmer and drier.

S. Kannenberg (Ex. 5). Failure to address these developments, and to make reasonable predictions about the future, violate NEPA's hard look mandate.

The Pine Valley Project EA asserts that the Forest Service will use the "Climate Change Vulnerability and Adaption [sic] in the Intermountain Region" report (Halofsky et al. 2018) … as a guide to inform management decisions in relation to climate change." Pine Valley Project EA at 57. This assertion provides neither the public nor the decision-maker with any idea what in the 550+ page report the Forest Service intends to rely on. The non-peer-reviewed report contains only the most general recommendations, although it acknowledges that "[c]limatically suitable habitat for persistent pinyon-juniper ecosystems may be lost" as a result of climate change. Halofsky et. al., Climate Change Vulnerability and Adaptation in the Intermountain Region (2019) at 461.

In summary, the EA fails to consider or plan for the significant issue of prolonged drought and thus has failed to accurately or adequately examine the environmental consequences of the proposed project. Without considering the consequences of prolonged and/or repeated drought and higher temperatures, the project risks: (1) removing species that may not return; and (2) overestimating the capacity of the post-treatment openings to regenerate or sustain native understory (native forbs, grasses, and shrubs), or resist dominance by cheatgrass or other invasive species. *See, e.g*., Pine Valley Project EA at 42 (assuming, without reference to climate change or the ongoing megadrought that "increased vigor through tree removal will allow the treated areas to be more resilient to insect, fire, disease and climate disturbances," citing a study from 1999). This problem is exacerbated by the intention to solidify the project with an EA and FONSI precluding opportunity for the public, including scientists, to comment or suggest adaptive changes if post-treatment failures occur.

XI. RARE PLANTS

The Pine Valley Mountains of southwestern Utah are a unique mountain ecosystem surrounded by the Great Basin and Mojave deserts. The Utah Native Plant Society Rare Plant List: Version 2 (UNPS 2016) lists 16 plant species of concern for the Pine Valley Mountains which are listed below. Three of those species are noted in the EA: *Ericameria crispa, Penstemon pinorum*, and *Astragalus zionis* var. *vigulus.* The EA indicates that Design Feature V-8 will include efforts to mark and flag those three species "to avoid disturbance." Pine Valley Project EA at 17. We urge that those efforts be carefully implemented. We are also concerned about the other 13 priority and watch list species listed below which could be harmed by this project. We urge that surveys be done for these species before any vegetation alteration occurs and before any decision to approve this project is made.

Rare or High Priority Species (UNPS 2016)

- *Ericameria crispa*, Pine Valley goldenbush (noted in Pine Valley Project EA at 17) or Crisped heath-goldenrod is endemic to Pine Valley Mountains.
- *Erigeron higginsii,* Higgin's fleabane
- *Penstemon pinorum*, Pinyon penstemon (noted in Pine Valley Project EA at 17). Threats listed on FS web page are: Overstory removal and ground disturbance from green-wood cutting damages several populations. https://www.fs.usda.gov/wildflowers/Rare_Plants/profiles/Critically_Imperiled/penstemon_pinorum/index.shtml

Watch List Species (UNPS 2016)

- *Lepidospartum latisquamum,* Nevada scalebroom
- *Rudbeckia montana,* Montane coneflower
- *Astragalus concordius,* Hairy-pod milkvetch
- *Astragalus zionis* var. *vigulus*, guard milkvetch (noted in Pine Valley Project EA). The Forest Service webpage lists this as a "Critically Imperiled Plant" that is limited to the Pine Valley Mountains. (https://www.fs.usda.gov/wildflowers/Rare_Plants/profiles/Critically_Imperiled/astragalus_zionis_var_vigulus/index.shtml).
- *Phacelia austromontana,* Southern Sierran scorpion-weed
- *Platystemon californicus,* California creamcups
- *Panicum hallii,* Hall's panic grass

Medium Priority Species (UNPS 2016)

- *Astragalus straturensis*, Pine Valley milkvetch
- *Hieracium fendleri,* Yellow hawkweed
- *Opuntia chlorotica,* Clock-face prickly-pear
- *Astragalus convallarius* var. *finitimus,* Pine Valley milkvetch
- *Prunus emarginata,* Bitter cherry

Need Data List (UNPS 2016)

- *Artemisia tridentata* ssp. *parishii*, Parish's Great Basin sagebrush

XII. THE FOREST SERVICE MUST PREPARE AN EIS.

A. An Agency Must Prepare an EIS If There Are Questions as to Whether Impacts May Be Significant.

NEPA requires federal agencies to prepare a full environmental impact statement (EIS) before undertaking "major Federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(C). Federal courts affirm this approach.

> We have held that an EIS must be prepared if 'substantial questions are raised as to whether a project ... may cause significant degradation to some human environmental factor.' To trigger this requirement a 'plaintiff need not show that significant effects will in fact occur,' [but instead] raising 'substantial questions whether a project may have a significant effect' is sufficient.

Idaho Sporting Cong. v. Thomas, 137 F.3d 1146, 1149-50 (9th Cir. 1998) (citations omitted) (emphasis original). *See also Ocean Advocates v. U.S. Army Corps of Eng'rs*, 402 F.3d 846, 864-65 (9th Cir. 2005) ("To trigger this [EIS] requirement a plaintiff need not show that significant effects will in fact occur, but raising substantial questions whether a project may have a significant effect is sufficient." (internal quotations, citations, and alterations omitted)). Other circuits courts agree. "If the agency determines that its proposed action may 'significantly affect' the environment, the agency must prepare a detailed statement on the environmental impact of the proposed action in the form of an EIS." *Airport Neighbors Alliance v. U.S.,* 90 F.3d 426, 429 (10th Cir. 1996) (citation omitted) (emphasis added).

If an agency "decides not to prepare an EIS, 'it must put forth a convincing statement of reasons' that explains why the project will impact the environment no more than insignificantly. This account proves crucial to evaluating whether the [agency] took the requisite 'hard look.'" *Ocean Advoc.*, 402 F.3d at 864.

"Significance" under NEPA requires consideration of the action's context and intensity. 40 C.F.R. § 1508.27 (1978). An agency must analyze the significance of the action in several contexts, including short- and long-term effects within the setting of the proposed action (including site-specific, local impacts). *Id.* § 1508.27(a) (1978). Intensity refers to the severity of the impact and requires consideration of ten identified factors that may generally lead to a significance determination, including:

> (1) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas;

(2) whether the action is likely to be highly controversial;

(3) whether the effects on the environment are highly uncertain or involve unique or unknown risks;

(4) whether the action may have cumulative significant impacts;

(5) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973; and

(6) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

Id. § 1508.27(b)(3)-(5), (7), (9)-(10) (1978). With respect to the degree to which the environmental effects are likely to be highly controversial, the word "controversial" refers to situations where "'substantial dispute exists as to the size, nature, or effect of the major federal action.'" *Town of Cave Creek v. FAA,* 325 F.3d 320, 331 (D.C. Cir. 2003) (quoting *North American Wild Sheep v. U.S. Department of Agriculture*, 681 F.2d 1172, 1182 (9th Cir. 1982)) (emphasis in original). *See also Middle Rio Grande Conservancy Dist. v. Norton*, 294 F.3d 1220, 1229 (10th Cir. 2002) (same); *Town of Superior v. U.S. Fish and Wildlife Serv.*, 913 F. Supp. 2d 1087, 1120 (D. Colo. 2012) (same).

B. Because the Pine Valley Project Is Likely to Have Significant Impacts, the Forest Service Should Prepare an EIS.

The Pine Valley Project meets numerous standards for "significance."

The Pine Valley Project area has unique characteristics including 13 individual roadless areas (the values for each of which the EA nowhere addresses) covering over 100,000 acres that the Forest Service intends to "treat" with mechanized equipment as often as every 15 years. The project area includes "the ecological transition zone between the Mojave Desert, Great Basin and Colorado Plateau." Pine Valley Project EA at 26. The project area would degrade habitat for the imperiled Pinyon Jay, which has been petitioned for listing under the Endangered Species Act.

The size and scope of the project alone – involving the use of mechanized equipment and motorized vehicles, tree removal and other activities across more than 180,000 acres (the size of over 136,000 football fields or more than four times the size of the District of Columbia) over a two-decade period (longer than the projected life of a forest plan) – is significant. The project's ambitious purpose involves changing conditions across an entire ranger district's landscape.

The Pine Valley Project's effects on the environment are also highly uncertain because the Forest Service has failed to undertake a site-specific analysis or to explain what treatment will happen where when. There is thus no way for the public or the decision-maker to understand the impacts the project will have. The Forest Service cannot have it both ways: it cannot both conclude that this huge project will have no significant effects, while simultaneously declining to disclose the site-specific impacts of thousands of treatments across decades.

Further, the project's impacts are uncertain because the EA is based on the critical assumption that destroying vegetation across nearly 200,000 acres now will improve the forest's "resilience"

in comparison to doing nothing because it will forestall damaging impacts (e.g., from fire, bugs, and the expansion of non-native species). But while the proposed project will certainly destroy pinyon-juniper trees and habitats across a huge area, the threat such actions attempts to forestall may never occur. For example, the EA relies on projections from a contractor (The Nature Conservancy) for changes in ecosystems anticipated to occur over the 25 years following 2014. Nearly one-third of that 25-year period has elapsed, and yet the Forest Service provides no updates or inventories disclosing whether any of the projected changes have begun to come to pass. This failure to field check the agency's projections not only violates NEPA mandates that agencies take a hard look at impacts, and disclose baseline information, it further underscores the need for the agency to prepare an EIS.

C. The Proposed Action Is Highly Controversial Because the Science Upon Which It Is Based Is Questionable.

The effects of this project meet the definition of "highly controversial. 40 C.F.R. § 1508.27(b)(4) (1978). In this context, the term "controversial" refers to "cases where a substantial dispute exists as to the size, nature, or effect of the major Federal action rather than to the existence of opposition to a use." *Sierra Club v. United States Forest Serv*., 843 F.2d 1190, 1193 (9th Cir. 1988) (finding that where Sierra Club presented evidence from experts showing the EA's inadequacies and casting doubt on the agency's conclusions, "this is precisely the type of 'controversial' action for which an EIS must be prepared."). Courts explain:

> A substantial dispute exists when "evidence, raised prior to the preparation of an EIS or FONSI, casts serious doubt upon the reasonableness of the agency's conclusions." *Nat'l Parks* [*& Conservation Ass'n v. Babbitt,* 241 F.3d 722, 736 (9th Cir. 2001)] (internal citation omitted). Such evidence generally challenges the scope of the scientific analysis, the methodology used, or the data presented by the agency. *See Blue Mountain* [*Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1212-13 (9th Cir. 1998)] (citing the Forest Service's failure to consider the recommendations and data of an independent scientific report that ran contrary to the proposed action as evidence of controversy).

Anglers of the Au Sable v. United States Forest Serv., 565 F. Supp. 2d 812, 827-828 (E.D. Mich. 2008). Here, among other things, the Forest Service fails to adopt or explain why it has not adopted several measures recommended by agency and other scientists as important for the protection of Pinyon Jays. There is also controversy over whether the project will address or worsen the impacts of the megadrought and climate change, and whether the agency has considered those impacts sufficiently. This is the type of "controversy" that courts find sufficient to require preparation of an EIS. *Anglers of the Au Sable*, 565 F. Supp. 2d at 827-828. The dispute is heightened here because the Forest Service has so far ignored and failed to acknowledge many of these contrary studies.

CONCLUSION

The Pine Valley Project is potentially massive (nearly 200,000 acres, and an indeterminate amount more in the event of "future fires"), could degrade the character of 100,000 acres of roadless lands, and threatens violations of NEPA and the Roadless Area Conservation Rule. It

remains so ill-defined that it is impossible for the public to understand what the Forest Service intends to do where, for how long, and with what expected outcome(s).

We therefore urge the Forest Service to prepare either a revised draft Environmental Assessment, or an EIS, for public review and comment, so that the agency can provide the public with a better understanding of the project's methods, goals, and impacts before a decision is made, and so that the agency can comply with law.

Thank you for this opportunity to comment.

Sincerely,

Edward B. Zukoski, Senior Attorney
Center for Biological Diversity
1536 Wynkoop Street, Suite 421
Denver, CO 80202
303-641-3149
tzukoski@biologicaldiversity.org

Mary O'Brien, Executive Director
Project Eleven Hundred
HC 64 Box 2604
Castle Valley, UT 84532
541-556-8801
maryobrien10@gmail.com

Marc Coles-Ritchie, Utah Public Lands Manager
Grand Canyon Trust
Salt Lake City, UT
435-881-4078
mcolesritchie@grandcanyontrust.org

Adam Rissien, ReWilding Manager
WildEarth Guardians
PO Box 7516
Missoula, MT 59807
406-370-3147
arissien@wildearthguardians.org

Laura Welp, Vegetation Projects Lead
Western Watersheds Project
15 Overlake Lane
McCleary, WA 98557
435-899-0204
laura@westernwatersheds.org

Kya Marienfeld, Wildlands Attorney
Southern Utah Wilderness Alliance
435-259-5440
kya@suwa.org

TABLE OF EXHIBITS

Exhibit 1. M.D. Reisner, et al., Conditions favouring *Bromus tectorum* dominance of endangered sagebrush steppe ecosystems, Journal of Applied Ecology 2013, 50, 1039–1049

Exhibit 2. Defenders of Wildlife, Petition to List the Pinyon Jay (*Gymnorhinus cyanocephalus*) as Endangered or Threatened Under the Endangered Species Act (Apr. 25, 2022)

Exhibit 3. Johnson et al., New Mexico Bird Conservation Plan's (NMBCP) Pinyon Jay (*Gymnorhinus cyanocephalus*) (2020)

Exhibit 4. *Southern Utah Wilderness Alliance*, IBLA Case No. 2019-94 (Sep. 16, 2019)

Exhibit 5. S. Kannenberg et al., Rapid and surprising dieback of Utah juniper in the southwestern USA due to acute drought stress, Forest Ecology and Management 480 (2021)

SELECTED ADDITIONAL REFERENCES

Barger, et al. 2009. Influence of Livestock Grazing and Climate on Pinyon Pine (Pinus edulis) Dynamics. Rangeland Ecology Management 62:531–539.

Bombaci, S. and L. Pejchar. 2016. Consequences of pinyon and juniper woodland reduction for wildlife in North America. Forest Ecology and Management 365, 34-50.

Boone J.D., Witt C., Ammon E.M. 2021. Behavior-specific occurrence patterns of Pinyon Jays (*Gymnorhinus cyanocephalus*) in three Great Basin study areas and significance for pinyon-juniper woodland management. *PLoS ONE* 16(1): e0237721. https://doi.org/10.1371/journal.pone.0237621.

Breshears, D.D. et al. 1997. Differentials of spatially heterogeneous soil moisture by two semiarid woody species: Pinus edulis and Juniperus monosperma. Jl. of Ecology. 85, 289-299.

Breshears, D.D., et al. 2005. Regional vegetation die-off in response to global-change-type drought. PNAS vol. 102, no. 42, 15144-148.

Holechek, J.L. et al. 1999. Grazing Studies: What We've Learned. Rangelands 21(2).

Johnson, K., et al. 2014. Habitat Use at Multiple Scales by Pinyon-Juniper Birds on Department of Defense Lands III: Landscape, Territory/Colony, and Nest Scale.

Johnson, K., et al. 2015. Nest-scale Habitat Use by Pinyon Jay and Gray Vireo in the BLM Farmington Resource Area 2013−2014.

Johnson, K., et al. 2018. Piñon-juniper fuels reduction treatment impacts pinyon jay nesting habitat. Global Ecology and Conservation 16.

Johnson, K. and R. P. Balda. 2020. Pinyon Jay (Gymnorhinus cyanocephalus), version 2.0. In Birds of the World (P. G. Rodewald and B. K. Keeney, Editors). Cornell Lab of Ornithology, Ithaca, NY, USA. https://birdsoftheworld.org/bow/species/pinjay/cur/introduction.

Johnson, K., and G. Sadoti. 2019. Model transferability and implications for woodland management: a case study of Pinyon Jay nesting habitat. Avian Conservation and Ecology 14(2):17.

McDowell, N.G., et al. 2015. Multi-scale predictions of massive conifer mortality due to chronic temperature rise, Nature Climate Change.

Mueller, R.C., et al. 2005. Differential tree mortality in response to severe drought: evidence for long-term vegetation shifts. Jl. of Ecology. doi: 10.1111/j.1365-2745.2005.01042.x.

National Park Service & Bureau of Land Management. 2021. Shivwits Plateau Landscape Restoration Project Environmental Assessment. https://parkplanning.nps.gov/document.cfm?parkID=436&projectID=98370&documentID=114760.

Partners in Flight. 2019. Recommendations for Avoiding Impacts to Pinyon Jay Colonies in Nevada

Redmond, M.D., et al. 2013. Long-term effects of chaining treatments on vegetation structure in piñon–juniper woodlands of the Colorado Plateau. Forest Ecology and Management 305, 120-128.

Sauer, J. R., et al. 2017. The North American Breeding Bird Survey, Results and Analysis 1966–2015. Version 2.07.2017. USGS Patuxent Wildlife Research Center, Laurel, MD.

Somershoe, S. G., et al. 2020. Conservation Strategy for the Pinyon Jay (*Gymnorhinus cyanocephalus*). Partners in Flight Western Working Group and U.S. Fish and Wildlife Service.

U.S. Forest Service. 2011. Watershed Condition Framework.

U.S. Forest Service. 2011. Watershed Condition Classification Technical Guide.

Utah Division of Wildlife Resources. 2022. Utah's Species of Greatest Conservation Need, May 2022. https://wildlife.utah.gov/wildlife-action-plan.html.

UNPS 2016. The Utah Native Plant Society Rare Plant List: Version 2. Calochortiana February 2016 Number 3, by Jason Alexander, Chair, Rare Plant Committee https://www.unps.org/Calochortiana/CalochortianaMay2016Num3.pdf.

Williams, A.P. 2010. Forest responses to increasing aridity and warmth in the southwestern United States. PNAS vol. 107, no. 50, 21289–21294.

Williams, A.P., et al. 2022. Rapid intensification of the emerging southwestern North American megadrought in 2020–2021. Nature Climate Change. Vol. 12, 232–234.

Zlotin, R.I., & Parmeter, R.R. 2008. Patterns of mast production in pinyon and juniper woodlands along a precipitation gradient in central New Mexico (Sevilleta National Wildlife Refuge) Journal of Arid Environments Vol. 72, Issue 9, 1562-1572.