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Minimization Criteria for Off-Road Vehicle Use

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MINIMIZATION CRITERIA FOR OFF-ROAD VEHICLE USE

*Louisa S. Eberle**

President Nixon recognized the controversy surrounding off-road vehicle (ORV) use on public lands when he signed Executive Order 11,644 in 1972. The Executive Order set out minimization criteria that bound federal land management agencies' ORV area and trail designations. Forty years later, agencies are still struggling to implement the minimization criteria. Recent court opinions have struck down implementation attempts by the National Park Service, Bureau of Land Management, and Forest Service. This note argues that agencies require additional guidance for ORV management, particularly in light of case law that sets a floor for achieving minimization. After examining how the mandate of "minimization" has been applied in other environmental law contexts, this note recommends key components of that much-needed guidance. Overall, guidance should reflect the agencies' obligations to: (1) apply and implement the criteria to locate areas and trails to minimize impacts; (2) gather and consider site-specific information on potential ORV routes; (3) analyze route-specific and landscape-scale effects; (4) involve the public early in the process; (5) incorporate the best available science; and (6) consider agency monitoring and enforcement resources.

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INTRODUCTION

Agency management of federal public lands is full of controversy. One of the most significant tensions arises between conservation, quiet recreation, and motorized recreational use regarding the regulation of off-road vehicles (ORVs), including four-wheel drive trucks, all-terrain vehicles, dirt bikes, and snowmobiles. ORV use can take a enormous toll on the landscape by tearing up soil, damaging plants, scaring wildlife, fragmenting habitat, and introducing harmful invasive plant species, among other impacts.¹ This type of intensive use concerns both federal agencies, who have an obligation to protect their resources and manage ORV use to minimize adverse impacts, and conservation advocates and quiet recreationists, who aim to protect the ecological integrity of sensitive and pristine natural places. The majority of public lands visitors enjoy non-motorized forms of recreation and want to enjoy those areas free from the dust, noise, and fumes associated with ORV use.² When ORV activities threaten sensitive ecosystems or pristine natural areas, the tension between ORV access and conservation comes to a head.

Following decades of mismanagement, which likely inflamed tensions between user groups, federal land-management agencies are now tasked with balancing recreational access and ecological protection appropriately. ORV user groups like the BlueRibbon Coalition have pushed for additional access to public lands,³ utilizing legal battles and member political mobilization to promote an aggressive advocacy position.⁴ Pro-conservation groups

1. U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-09-509, FEDERAL LANDS: ENHANCED PLANNING COULD ASSIST AGENCIES IN MANAGING INCREASED USE OF OFF-HIGHWAY VEHICLES 10 (2009) [hereinafter GAO, Federal Lands], <http://www.gao.gov/assets/300/291861.pdf>.

2. T. Adam Switalski & Allison Jones, *Off-Road Vehicle Best Management Practices for Forestlands: A Review of Scientific Literature and Guidance for Managers*, 8 J. CONSERVATION & PLAN. 12, 20 (2012) (discussing displacement of quiet recreationists due to increased noise, observations of reckless behavior, exhaust smells, and visible environmental damage resulting from ORV use).

3. Because they travel at faster speeds and generally cover more distance than non-motorized recreationists, ORV users require larger areas for a day of recreation. Due to their large land area, public lands are more promising to ORV recreationists than private lands. While ORV groups seek access to all levels of public lands, this note focuses on federal lands because they are subject to national legal mandates designed to minimize tension surrounding ORV use.

4. The BlueRibbon Coalition markets itself as an advocate for user access, seeking to "ensur[e] that recreationists are no longer considered 'politically insignificant' . . . Since 1996, the BlueRibbon legal team has taken the lead in dozens of lawsuits throughout the country defending reasonable recreational [ORV] access." *Accomplishments*, BLUERIBBON COALITION, <https://www.sharetrails.org/about/accomplishments> (last visited Feb. 21, 2015).

like Wildlands CPR (now WildEarth Guardians) and The Wilderness Society aim to reduce ecological damage from ORV use.⁵

To limit conflicts over ORV use across all agencies, Executive Order (E.O.) 11,644 directs federal land management agencies to adopt a procedure for designating trails and areas as open or closed to ORV use.⁶ The Order requires the designation to “be based upon the protection of the resources of the public lands, promotion of the safety of all users of those lands, and minimization of conflicts among the various uses of those lands.”⁷ E.O. 11,644 further provides specific criteria for making those designations, which are often referred to as the “minimization criteria”:

- (1) Areas and trails shall be located to minimize damage to soil, watershed, vegetation, or other resources of the public lands.
- (2) Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats.
- (3) Areas and trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreational uses of the same or neighboring public lands, and to ensure the compatibility of such uses with existing conditions in populated areas, taking into account noise and other factors.
- (4) Areas and trails shall not be located in officially designated Wilderness Areas or Primitive Areas. Areas and trails shall be located in areas of the National Park system, Natural Areas, or National Wildlife Refuges and Game Ranges only if the respective agency head determines that off-road vehicle use in such locations will not adversely affect their natural, aesthetic, or scenic values.⁸

5. *Off-Road Vehicles*, WILDERNESS SOCIETY, <http://wilderness.org/article/road-vehicles> (last visited Sept. 6, 2015) (“Off-road vehicles should have access to our national forests, but it should be separate from the places the majority of visitors use to escape noise and pollution.”); *ORV Reform*, WILDEARTH GUARDIANS, http://www.wildearthguardians.org/site/PageServer?pagename=priorities_wild_places_ORV_reform&AddInterest=1304#.VO1BdXYXvKA (last visited May 24, 2015); *WildEarth Guardians Joins Forces with Wildlands CPR*, WILDEARTH GUARDIANS (Sept. 16, 2013), http://www.wildearthguardians.org/site/News2?page=NewsArticle&tid=8819&news_iv_ctrl=1194#.VeyMdXsXvKA (“Wildlands CPR has achieved many successes, protecting and restoring clean water, wildlife, and quiet recreation from the threats of roads and motorized vehicles.”).

6. Use of Off-Road Vehicles on the Public Lands, Exec. Order No. 11,644 §§ 1, 3, 37 Fed. Reg. 2877, 2877–78 (Feb. 9, 1972), *amended by* Exec. Order No. 11,989, 42 Fed. Reg. 26,959 (May 25, 1977).

7. *Id.* § 3, at 2877–78.

8. *Id.*

This Order was later amended by E.O. 11,989, which required immediate closure of areas or trails to ORV activity in the event of considerable adverse effects to resources.⁹

The Bureau of Land Management (BLM), Forest Service, and National Park Service (NPS) have all incorporated the “minimization criteria” embodied in E.O.s 11,644 and 11,989 into land management decisions involving ORVs. Notwithstanding their legal mandates to implement the minimization criteria, it took a decade for the agencies to even attempt to incorporate the criteria into their designations. Since then, BLM, NPS, and Forest Service have failed to reach a common interpretation of the minimization criteria despite the unifying intent of the cross-agency E.O.s. Furthermore, a slate of court opinions, beginning in 2009, have struck down recent implementation attempts.

Because agency attempts have failed judicial review and decisionmakers lack comprehensive agency guidance on the issue, this note recommends strategies agencies can use to achieve compliance with E.O. 11,644. Part I describes the source of the conflict: why ORV use damages ecosystems and how extensive ORV activities are on federal public lands. Part II explains the context of agency decisionmaking, providing a background on the relevant statutory mandates and agency regulations that guide ORV area and trail designations.

In Part III, the note explains how implementation attempts by each agency have failed judicial review. Overall, this note argues that the minimization criteria require more than “consideration” (even if it’s careful). Rather, the E.O.s impose a substantive obligation to apply and implement the criteria. In other words, the agencies must locate routes with the substantive objective of minimizing impacts and conflicts. Further, agencies must show in the record how they implemented their substantive objective by providing detailed area and trail designation decisions with sufficient explanation. Agencies must aim to minimize impacts throughout the area and trail designation process and must specifically consider the impacts to each segment of ORV routes. Agencies might demonstrate that they located areas and trails in order to minimize impacts through a variety of steps, including restricting the mileage of ORV trails, prohibiting ORV access to ecologically sensitive areas, and placing seasonal restrictions on access to sensitive routes. However, none of these steps alone will guarantee compliance with the minimization criteria in every circumstance.

To supplement the existing case law on the minimization criteria, Part IV gains insight from how “minimization” has been used in other environ-

9. Off-Road Vehicles on Public Lands, Exec. Order No. 11,989, 42 Fed. Reg. 26,959 (May 25, 1977).

mental law contexts to provide recommendations on how BLM, NPS, and Forest Service might implement the minimization criteria. This note argues that, while agencies must take these steps at a minimum to survive judicial review, those steps alone are insufficient to ensure that agencies actually minimize resource damage and conflicts between ORV use and non-motorized uses. Ideally, the designation process would be an iterative one that applies minimization criteria to a starting list of routes, modifies the list of routes, and reapplies minimization criteria to further refine the final route. However, the practical realities of limited time and resources make it unlikely that agencies will apply the criteria twice. Thus, the selection of the baseline from which the agency will proceed toward minimization is critical. Agencies should not reward illegal use by counting areas or trails created through repeated illegal use as part of an existing ORV route system. Instead, agencies should begin with the current, legal areas and trails and aim to modify *that* system to minimize impacts. Further, monitoring and reporting are essential to good management decisions, and agencies should remain receptive to restricting access if ecological impacts increase or where monitoring demonstrates that impacts are not being minimized.¹⁰ Transparency and public participation are also crucial to ensuring that agencies receive input from interested groups. In order to effectively minimize conflict between different uses (which are inherently connected with specific users), it is critical that agencies communicate with those users.

I. THE PROBLEM OF OFF-ROAD VEHICLES AND LAND-USE CONFLICTS

The extent of ORV activities on federal public lands is potentially vast. In its most recent study on the issue, Forest Service reported that roughly one in five Americans, or approximately 44 million people aged 16 years or older, participate in ORV recreation.¹¹ The Forest Service and Bureau of Land Management together control over 446 million acres of land¹² with an estimated 14,000 miles of unofficial trails created by ORV users.¹³

10. Section 9 of E.O. 11,644 also requires immediate temporary closure where ORVs are causing or will cause considerable adverse effects. Exec. Order No. 11,644 § 9, *amended* by Exec. Order No. 11,989 § 2, 42 Fed. Reg. at 26,959.

11. H. KEN CORDELLETAL., U.S. FOREST SERV., OFF-HIGHWAY VEHICLE RECREATION IN THE UNITED STATES, REGIONS AND STATES: A NATIONAL REPORT FROM THE NATIONAL SURVEY ON RECREATION AND THE ENVIRONMENT (NSRE) 9–10, 46 (2008), <http://www.fs.fed.us/recreation/programs/ohv/IrisRec1rpt.pdf> (reporting that approximately 18.6% of the U.S. population participated in ORV activities annually between 1999 and 2007).

12. GAO, FEDERAL LANDS, *supra* note 1, at 3.

13. *Id.* at 10.

High ORV use can endanger ecosystem health. ORV use, even on regulated trails, can tear up soil and root systems, which restricts plant growth and causes harmful soil erosion.¹⁴ In addition to breaking plants, ORV use can impair photosynthesis in nearby intact plants¹⁵ by releasing fugitive soil dust.¹⁶ Further, ORV tires can carry invasive plant species deep into otherwise pristine areas, which can displace native species and severely impair ecosystems.¹⁷ This disruption is particularly dangerous when ORV activities have already impaired native plant coverage through breakage and fugitive dust, exaggerating problems with maintaining native ecosystems.¹⁸ ORV trails also cause habitat fragmentation and reduced habitat connectivity, altering animal behavior.¹⁹ The noise effects from ORV use can also scare wildlife, causing harmful stress and impacting their ability to mate.²⁰ Further, ORV use “increases access for illegal harvest of wildlife in areas that are difficult for game wardens to patrol.”²¹ Water and air quality are also at risk, due to increased soil erosion and releases of pollutants (both liquid and gaseous) from ORVs.²² All of these impacts make ecosystems more vulnerable to threats from climate change.

14. DOUGLAS S. OUREN ET AL., U.S. GEOLOGICAL SURVEY, REPORT 2007-1353, ENVIRONMENTAL EFFECTS OF OFF-HIGHWAY VEHICLES ON BUREAU OF LAND MANAGEMENT LANDS: A LITERATURE SYNTHESIS, ANNOTATED BIBLIOGRAPHIES, EXTENSIVE BIBLIOGRAPHIES, AND INTERNET RESOURCES xii (2007), <https://www.fort.usgs.gov/sites/default/files/products/publications/22021/22021.pdf>; Switalski & Jones, *supra* note 2, at 14–16.

15. KY. DIV. FOR AIR QUALITY, FUGITIVE DUST (Dec. 2014), <http://air.ky.gov/SiteCollectionDocuments/Fugitive%20Dust%20Fact%20Sheet.pdf> (reporting that fugitive dust “can interfere with plant growth by clogging pores and reducing light interception”); OUREN, *supra* note 14.

16. Fugitive soil dust is defined as dust that is not emitted from a definable point source. Instead, fugitive dust comes from other sources, like construction or vehicle travel down an unpaved road. KY. DIV. FOR AIR QUALITY, *supra* note 15.

17. Invasive species include “alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health.” Invasive Species, Exec. Order No. 13,112 § 1(a), 64 Fed. Reg. 6183, 6183 (Feb. 3, 1999). Executive Order 13,112 provides for the creation of an Invasive Species Management Program and directs federal agencies to take actions to limit the detrimental impacts of invasive species by considering such impacts in cost-benefit analyses. *Id.* at 6184–85.

18. OUREN, *supra* note 14.

19. Switalski & Jones, *supra* note 2, at 17–18.

20. OUREN, *supra* note 14 (“Disturbance effects range from physiological impacts—including stress and mortality due to breakage of nest-supporting vegetation, collapsed burrows, inner ear bleeding, and vehicle-animal collisions—to altered behaviors and population distribution/dispersal patterns, which can lead to declines in local population size, survivorship, and productivity.”).

21. Switalski & Jones, *supra* note 2, at 17.

22. OUREN, *supra* note 14, at xii–xiii.

Beyond these detrimental environmental impacts, ORV use can also impair other recreational activities. The visible environmental degradation is unsightly, and noise pollution from ORVs disturbs hikers and backpackers. Reduced ecosystem health also impairs the ability of wildlife viewers, hunters, and fisherman to fully enjoy the outdoors. Generally, “though not inevitably,” ORV impacts are “greater than those of non-motorized recreationists, due in part to the nature of the machines (e.g., their wide stance and substantial weight) and the fact that each motorized recreationist typically impacts a substantially greater area of landscape than does a non-motorized recreationist.”²³

However, all recreation activities can have detrimental environmental impacts. Thus, the real job for land management agencies is to balance competing priorities and strategically plan recreation areas in order to minimize their detrimental impacts. Still, the E.O.s indicate that not all uses are created equal; agencies must take steps to minimize impacts from ORV use. Given the competition between quiet recreation, environmental protection, and ORV use, it is not surprising that federal land management agencies are faced with intense conflict when they seek to regulate ORV activities. Agencies have limited resources, which can lead to poorly managed or completely unmanaged ORV activities.²⁴ Thus, agencies face a significant challenge in effectively managing the conflict between motorized and passive recreation uses.

II. STATUTORY, REGULATORY, AND E.O. CRITERIA FOR ORV MANAGEMENT

Agencies must conduct ORV management in accordance with their statutory and executive mandates. Most relevant to ORV management, the agencies are bound by E.O.s 11,644 and 11,989, which require agencies to designate trails and areas as either open or closed to ORV use.²⁵ In 1972, President Nixon acknowledged the conflict between conservation and motorized recreation when he signed Executive Order 11,644. That Order aimed:

23. John Adams & Stephen McCool, *Finite Recreation Opportunities: The Forest Service, the Bureau of Land Management, and Off-Road Vehicle Management*, 49 NAT. RESOURCES J. 45, 50 (2009).

24. GAO, FEDERAL LANDS, *supra* note 1, at 18.

25. Use of Off-Road Vehicles on the Public Lands, Exec. Order No. 11,644, 37 Fed. Reg. 2877 (Feb. 9, 1972), *amended by* Exec. Order No. 11,989, 42 Fed. Reg. 26,959 (May 25, 1977); Off-Road Vehicles on Public Lands, Exec. Order No. 11,989, 42 Fed. Reg. 26,959 (May 25, 1977).

to establish policies and provide for procedures that will ensure that the use of off-road vehicles on public lands will be controlled and directed so as to protect the resources of those lands, to promote the safety of all users of those lands, and to minimize conflicts among the various uses of those lands.²⁶

In E.O. 11,989, President Carter amended E.O. 11,644 to require any land-management agency to immediately close areas or trails to ORV activity when the agency discovers that such activity “will cause or is causing considerable adverse effects on the soil, vegetation, wildlife, wildlife habitat or cultural or historic resources”²⁷ Together, E.O.s 11,644 and 11,989 require BLM, NPS, and Forest Service to manage ORV impacts in accordance with the minimization criteria.²⁸

In addition to their general obligations under the E.O.s, Forest Service, BLM, and NPS are each bound by general environmental statutes. For example, the National Environmental Policy Act (NEPA) requires agencies to conduct an environmental evaluation of all major federal actions.²⁹ The Endangered Species Act (ESA) also binds Forest Service, BLM, and NPS to “carry[] out programs for the conservation of endangered or threatened species” and ensure that their actions are “not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat”³⁰ Impacts to sites or objects of special historic interest get special consideration under the National Historic Preservation Act.³¹

26. Exec. Order No. 11,644 § 1, 37 Fed. Reg. at 2877.

27. Exec. Order No. 11,989 § 2, 42 Fed. Reg. at 26,959.

28. See Exec. Order No. 11,644 § 3(a), 37 Fed. Reg. at 2877–78; Exec. Order No. 11,989 § 2, 42 Fed. Reg. at 26,959–60.

29. 42 U.S.C. § 4332(2)(C) (2013).

30. Endangered Species Act of 1973 § 7, 16 U.S.C. § 1536(a)(1)–(2) (2013); see also Robert Glicksman, *Wilderness Management by the Multiple Use Agencies: What Makes the Forest Service and the Bureau of Land Management Different?*, 44 ENVTL. L. 447, 472 (2014).

31. National Historic Preservation Act of 1966, Pub. L. No. 89-665, 80 Stat. 915 (codified at 16 U.S.C. §§ 470 to 470x-6 (2012), moved to scattered sections of 54 U.S.C. in 2014). Two courts have held that agencies’ obligations under § 106 of the National Historic Preservation Act (NHPA), 16 U.S.C. § 470f (moved to 54 U.S.C.A. § 306,108 (Westlaw through P.L. 114-61)), include considering the effects of any “undertaking” on historic properties and cultural resources, which requires a detailed, on-the-ground survey for cultural resources along each route designated for motorized uses. *Mont. Wilderness Ass’n v. Connell*, 725 F.3d 988, 1005 (9th Cir. 2013) (outlining BLM’s obligations to conduct an adequate on-the-ground survey to identify and document historic resources); *S. Utah Wilderness All. (SUWA) v. Burke*, 981 F. Supp. 2d 1099, 1109–10 (D. Utah 2013) (same). The upshot of these holdings is that agencies cannot satisfy the minimization criteria by locating designated routes to minimize impacts to cultural resources if they do not know where those resources

Despite these overarching general mandates, Forest Service, BLM, and NPS differ in their missions, statutory mandates, and regulatory frameworks. These differences stem in part from the fact that the agencies each control a particular subset of federal lands.³² Forest Service is responsible for national forests and grasslands;³³ BLM manages “public lands”;³⁴ and NPS manages national parks, monuments, recreation areas, and other specially designated lands.³⁵ Furthermore, the agencies differ in their missions. The Forest Service and BLM manage most of their lands under a multiple-use mandate, which requires the agencies to balance uses like recreation and conservation alongside extractive uses like logging and mining.³⁶ BLM’s multiple-use mandate³⁷ derives from the Federal Land Policy Management Act (FLPMA), which provides BLM with broad discretion in its management decisions. In contrast, the National Forest Management Act (NFMA) includes more specific statutory mandates for Forest Service, such as the obligation to consider conservation uses.³⁸ However, both agencies are required to inventory wilderness (one type of conservation use) as well as create land-use management plans and to conform future decisions to those plans.³⁹

are located. *SUWA*, 981 F. Supp. 2d at 1105–06 (finding both NHPA and minimization criteria violations).

32. See ROSS GORTE ET AL., CONG. RESEARCH SERV., R42,346, FEDERAL LAND OWNERSHIP: OVERVIEW AND DATA 6–8 (2012), <https://fas.org/sgp/crs/misc/R42346.pdf> (providing maps of federal lands managed by BLM, NPS, Forest Service, and Fish and Wildlife Service).

33. *About the Agency*, U.S. FOREST SERV., <http://www.fs.fed.us/about-agency> (last visited May 24, 2015) (reporting that Forest Service “manages and protects 154 national forests and 20 grasslands in 44 states and Puerto Rico”).

34. 43 U.S.C. § 1702(e) (2013) (“The term ‘public lands’ means any land and interest in land owned by the United States within the several States and administered by the Secretary of the Interior through the Bureau of Land Management . . .”).

35. U.S. NAT’L PARK SERV., NATIONAL PARK SYSTEM: UNITS IN THE NATIONAL PARK SYSTEM (Sept. 22, 2015), <http://www.nps.gov/aboutus/news/upload/CLASSLST-408-updated-09-22-2015.pdf>. Note that BLM and Forest Service also manage monuments and other specially designated lands.

36. *About the BLM*, U.S. BUREAU OF LAND MGMT., http://www.blm.gov/es/st/en/info/about_blm.print.html (last visited Apr. 22, 2015) (“BLM manages multiple resources and uses, including energy and minerals; timber; forage; recreation; wild horse and burro herds; fish and wildlife habitat; wilderness areas; and archaeological, paleontological, and historical sites.”).

37. The Federal Land Planning and Management Act defines “multiple use” to mean “the management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people . . .” 43 U.S.C. § 1702(c).

38. For instance, Forest Service is directed to coordinate for wilderness in its land-use planning. 16 U.S.C. § 1604(e)(1) (2013).

39. 16 U.S.C. § 1604 (2013); 43 U.S.C. §§ 1712, 1732(a) (2013).

NPS has a more narrowly targeted mission.⁴⁰ After Yellowstone was designated as the first National Park in 1872,⁴¹ the National Park Service Organic Act created the NPS system in 1916.⁴² The Organic Act directed the NPS to:

promote and regulate the use of the [parks] . . . as provided by law, by such means and measures as conform to the fundamental purpose of the said parks, monuments, and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.⁴³

Thus, the NPS's main purpose is conservation.⁴⁴ As already discussed, recreational ORV use is generally inconsistent with conservation, so it is less common on NPS lands. Therefore, NPS has dealt with ORV use conflicts in more limited circumstances, which limits how NPS implementation attempts can contribute to recommendations for ORV management.⁴⁵

Each agency has its own regulations governing land management that reflect the agencies' statutory mandates. In addition to providing general land-use planning frameworks, NPS, BLM, and Forest Service regulations have guided the implementation of E.O.s 11,644 and 11,989. Differences in these implementing regulations have complicated judicial review when recreational groups and agencies argue that the differences embody divergent legal mandates (although courts have largely rejected these arguments). Therefore, these differences, which are described in connection with associated implementation attempts in Part III below, inform any analysis of the minimization criteria.

40. The National Park Service Organic Act created NPS with the single objective of conservation. 16 U.S.C. § 1 (2013) (relocated to 54 U.S.C.A. § 100,101 (Westlaw through Pub. L. 114-49)).

41. 16 U.S.C. § 1a-1 (2013) (relocated to 54 U.S.C.A. § 100,101 (Westlaw through Pub. L. 114-49)).

42. 16 U.S.C. § 1.

43. *Id.*

44. *Defs. of Wildlife v. Salazar*, 877 F. Supp. 2d 1271, 1276 (M.D. Fla. 2012) (“[N]ational parks are created with a conservation mandate, i.e., to conserve and preserve the scenery, wildlife, and objects (natural and historical) within their boundaries for present and future enjoyment.”).

45. However, NPS's obligation to issue regulations to manage ORV use is hotly contested, with conservation groups arguing that NPS has failed its obligations under the E.O.s. Amy Leinbach Marquis, *Off-road to Recovery*, NAT'L PARKS CONSERVATION ASS'N, <http://www.npsa.org/news/magazine/all-issues/2008/fall/off-road-to-recovery.html> (last visited August 18, 2015).

III. IMPLICATIONS OF FAILED ATTEMPTS BY NPS, BLM, AND FOREST SERVICE TO IMPLEMENT THE MINIMIZATION MANDATE

E.O.s 11,644 and 11,989 apply with equal force to Forest Service, BLM, and NPS. However, due to the agencies' differing objectives, embodied in distinct statutory mandates and regulations, Forest Service, BLM, and NPS have each attempted to implement the E.O.s in diverse ways. These myriad attempts have resulted in a body of case law interpreting what the E.O.s' minimization criteria actually mandate. Some scholars have argued that the E.O.s "apparently fail[] to provide an enforceable standard limiting where ORV use areas may be designated, [but] . . . give the agencies discretion to prohibit ORV use as they choose."⁴⁶ However, recent court opinions confirm that the E.O.s do impose substantive restrictions on agency discretion.

The following section will present a basic overview of the outcomes from challenges to NPS, BLM, and Forest Service attempts to implement the E.O.s' mandate. As a general matter, courts have reviewed agency implementation attempts under the Administrative Procedure Act's arbitrary and capricious standard.⁴⁷ The differences in statutory mandates and regulatory implementation make it necessary to present the case law relevant to each agency individually. However, the E.O.s apply with equal force to all three agencies, and many court opinions cite cross-agency precedent. Therefore, the section concludes with a discussion of the common outcomes and judicial requirements that bind all three agencies.

A. National Park Service

NPS has the least complicated system for ORV designations and thus provides a logical place to begin. NPS's general ORV management regula-

46. Adams & McCool, *supra* note 23, at 64.

47. While the courts all arrived at the arbitrary and capricious standard, courts have differed in how they decided upon that standard. Because BLM regulations so clearly incorporate the language of the E.O.s, multiple courts have found a direct violation of the regulation itself. *See, e.g.*, Wilderness Soc'y v. U.S. Bureau of Land Mgmt., 822 F. Supp. 2d 933, 949 (D. Ariz. 2011); S. Utah Wilderness All. v. Burke, 981 F. Supp. 2d 1099, 1105 (D. Utah 2013). Challenges to Forest Service and NPS actions are slightly more complicated; some courts have simply jumped to the arbitrary and capricious standard without explanation. *See* Defs. of Wildlife v. Salazar, 877 F. Supp. 2d 1271, 1304 (M.D. Fla. 2012). Other courts have held that the E.O.s create a private right of action directly challengeable under the APA's standard. *See* Wilderness Soc. v. U.S. Forest Serv., 850 F. Supp. 2d 1144, 1170 (D. Idaho 2012). Still other courts have held that the E.O.s are incorporated into agency regulations, again getting to the APA's arbitrary and capricious standard. *See, e.g.*, Cent. Sierra Envtl. Res. Ctr. v. U.S. Forest Serv., 916 F. Supp. 2d 1078, 1096–98 (E.D. Cal. 2013); Backcountry Hunters & Anglers v. U.S. Forest Serv., No. 11-cv-03139, 2013 WL 1191245, *6 (D. Colo. 2013).

tions restrict ORV use to designated routes and areas, which are promulgated through special regulations.⁴⁸ However, beyond stating that ORV designations must comply with E.O. 11,644, the regulations fail to provide any guidance on how to designate routes.⁴⁹ The Government Accountability Office has concluded that this absence of interpretive guidance “seems reasonable given that its regulations limit [ORV] use to only a few units and [ORV] use is not a predominant recreational activity on its lands.”⁵⁰ Thus, each NPS unit is essentially left to interpret E.O. 11,644’s requirements independently.

In contrast to the statutory multiple-use mandates for Forest Service and BLM, NPS generally has a more targeted conservation mandate. Therefore, NPS must often prioritize resource protection over ORV activities and other land uses. Congress can modify this mandate through subsequent legislation for individual NPS units. For example, the Establishment and Addition Acts that created the Big Cypress National Preserve specifically introduced a multiple-use mandate including ORV access on those lands.⁵¹ The NPS has been forced to confront the same use conflicts as Forest Service and BLM (i.e., motorized use versus conservation) only insofar as individual NPS units are opened to ORV activities.

Similar to the lack of NPS-wide ORV guidance, there is also relatively little judicial guidance on NPS’s minimization attempts because ORV use, while controversial, is relatively limited on NPS lands. In fact, the Big Cypress National Preserve is the only area where NPS’s ORV decisionmaking has been challenged.⁵²

In *Defenders of Wildlife v. Salazar*, the Middle District of Florida held that NPS failed to comply with the E.O.s when it reopened trails in the Big Cypress for ORV access without “articulat[ing] whether or how it applied the minimization criteria”⁵³ Because “[t]he use of ORVs will necessa-

48. 36 C.F.R. § 4.10(b) (2015).

49. *Id.* Note that § 4.10(b) also requires compliance with emergency closures outlined in 36 C.F.R. § 1.5.

50. See GAO, *FEDERAL LANDS*, *supra* note 1, at 16.

51. Preserving recreation opportunities is an express part of the mission for NPS with respect to the Big Cypress National Preserve. 16 U.S.C. § 698f(a) (2013).

52. ORV use is also controversial on other NPS lands, including the Cape Hatteras National Seashore, Wrangall-St Elias National Park in Alaska, and a number of other NPS units. See Nat’l Park Serv., *Beach Activities: Off-Road Vehicles*, CAPE HATTERAS, <http://www.nps.gov/caha/planyourvisit/beachactivities.htm#ORV> (last updated Sept. 8, 2015); Nat’l Park Serv., *Off Road Vehicle (ORV) Trails*, WRANGELL-ST ELIAS, <http://www.nps.gov/wrst/planyourvisit/orv-trails.htm> (last updated Sept. 11, 2015). However, this note restricts its discussion to the Big Cypress Nature Preserve, which is the only area where NPS’s ORV decisionmaking has undergone judicial review.

53. *Def. of Wildlife v. Salazar*, 877 F. Supp. 2d 1271, 1304 (M.D. Fla. 2012).

rily affect the soil, vegetation, wildlife, wildlife habitat and resources of a particular area,” and NPS “failed to cite to substantive evidence in the record which demonstrates that the decision to reopen trails was made with the objective of minimizing impacts,” NPS failed to justify its decision to reopen trails.⁵⁴

Following that decision, NPS modified its designation process to include an in-depth field investigation of ORV routes, which allowed the agency to withstand a subsequent challenge to its route designations.⁵⁵ After completing field investigations to determine which ORV routes were “sustainable trails,”⁵⁶ NPS closed a number of heavily trafficked ORV trails in some prairies but “authorize[d] ORV use on a limited segment of trails in other prairies.”⁵⁷ NPS also developed indicators, standards, and management strategies designed to protect resources.⁵⁸ Specifically, NPS identified “mitigation measures and best management practices that would be applied to avoid or minimize potential impacts” from implementation of its area and trail designations.⁵⁹ Because NPS conducted site-specific field investigations and specifically articulated the steps it had taken, including closing some ORV trails, the court found that it complied with the minimization criteria.⁶⁰

NPS has the strongest conservation language in its statutory mandate, so other courts may be less inclined to rely on the breadth of the *Defenders*⁶¹ opinion in future challenges to agency decisionmaking. Nonetheless, numerous courts have cited cross-agency precedent, due in large part to the fact that agencies are implementing the same E.O.s with the same goals and the same substantive mandates.⁶² As such, the *Defenders* decision will likely

54. *Id.*

55. *Nat'l Parks Conservation Ass'n v. U.S. Dep't of Interior*, 46 F. Supp. 3d 1254, 1283–84 (M.D. Fla. 2014) (“During field investigations, the ‘GMP planning team’ collected information on vegetation and soil type, trail width, level of use, and the presence of ruts, water, exotic plants, trail improvements, and rare or protected species to aid in the assessment of trail sustainability.”).

56. NPS defined a “sustainable trail” as “a travel surface that can support currently planned and future uses with minimal impact to the natural systems of the area. Sustainable trails have negligible soil loss or movement and allow naturally occurring plant communities to inhabit the area; however, pruning, removal of certain plants, and stabilization over time may be required to accommodate recreational use.” *Id.* at 1284.

57. *Id.*

58. *Id.* at 1286.

59. *Id.*

60. *Id.*

61. *Defs. of Wildlife v. Salazar*, 877 F. Supp. 2d 1271, 1276 (M.D. Fla. 2012).

62. *Defenders of Wildlife* itself cites to *Idaho Conservation League v. Guzman*, 766 F. Supp. 2d 1056 (D. Idaho 2011), a case about Forest Service implementation of the minimization criteria. *Defs. of Wildlife*, 877 F. Supp. 2d at 1304. Similarly, *Idaho Conservation League*

carry some weight in challenges to Forest Service and BLM actions. The NPS opinions suggest that minimization requires agencies to document and describe their work in order to demonstrate specific and concrete mitigation measures or best management practices that will limit ORV impacts.⁶³

B. Bureau of Land Management

BLM has a more complex approach to ORV management. BLM was established with the purpose of enabling multiple, including extractive, uses on the public lands it manages.⁶⁴ Its principal statutory mandate, the FLPMA, directs BLM to act with the goal of “multiple use and sustained yield.”⁶⁵ Multiple use means “the management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people,” including extractive and non-extractive needs.⁶⁶ Still, the FLPMA gives BLM broad discretion in its land-use planning and is “notorious for the lack of guidance and structure [its land-use planning provisions] provide to the BLM.”⁶⁷ The agency’s resource management plans must adhere to nine fairly vague criteria, including a directive to weigh long-term public benefits against short-term benefits.⁶⁸ Only those lands which the agency designates as “wilder-

discusses the BLM regulations. 766 F. Supp. 2d at 1074 (“The different language used in the Forest Service and BLM regulations constitute a distinction without real, practical difference. Not only are both agencies bound by the plain language of the ORV Executive Orders, but both contemplate the same result: the land management agencies will consider the impacts of ORV use and, in selecting appropriate routes, will attempt to minimize these impacts.”).

63. However, the plain text of the E.O.s indicates that after-the-fact monitoring and mitigation measures are not sufficient. The E.O.s require that trails and areas “shall be located” (from the get-go) with the objective of minimizing adverse impacts. Exec. Order No. 11,644 § 3, 37 Fed. Reg. 2877, 2877–78 (Feb. 9, 1972), *amended by* Exec. Order No. 11,989, 42 Fed. Reg. 26,959 (May 25, 1977). Thus, a monitoring and mitigation plan cannot offset a large ORV trail and area system that does not itself aim to minimize impacts. To the extent that language from *National Parks Conservation Ass’n v. U.S. Department of Interior*, 46 F. Supp. 3d 1254, 1254 (M.D. Fla. 2014), might imply otherwise, it is arguably not in line with the plain text of the E.O.s.

64. Glicksman, *supra* note 30, at 467 (“For at least the first thirty years of its existence, the BLM operated on the premise that public lands were primarily a source of forage and mineral resources.”).

65. Federal Land Policy Management Act, 43 U.S.C. § 1701(a)(7) (2013).

66. 43 U.S.C. § 1702(c) (2013).

67. Glicksman, *supra* note 30, at 483.

68. The nine criteria include:

- (1) use and observe the principles of multiple use and sustained yield set forth in this and other applicable law;
- (2) use a systematic interdisciplinary approach to achieve integrated consideration of physical, biological, economic, and other sciences;

ness” must categorically prohibit ORV use. Notably, only 3.5% of BLM lands are designated wilderness (compared with 18.7% of Forest Service’s land).⁶⁹ The agency has historically struggled to integrate wilderness values or designation into its land management decisions.

To implement the E.O.s, BLM adopted a rule requiring field offices to minimize impacts from ORV use.⁷⁰ The BLM rule, codified at section 8342.1 of the Code of Federal Regulations, uses the exact minimization criteria language from E.O. 11,644.⁷¹ While BLM’s Travel and Transportation Manual is supposed to provide additional guidance to field offices on how to implement the minimization criteria, it fails to provide meaningful leadership or on-the-ground guidance.⁷² Thus, despite this uniformly binding

(3) give priority to the designation and protection of areas of critical environmental concern;

(4) rely, to the extent it is available, on the inventory of the public lands, their resources, and other values;

(5) consider present and potential uses of the public lands;

(6) consider the relative scarcity of the values involved and the availability of alternative means (including recycling) and sites for realization of those values;

(7) weigh long-term benefits to the public against short-term benefits;

(8) provide for compliance with applicable pollution control laws, including State and Federal air, water, noise, or other pollution standards or implementation plans; and

(9) to the extent consistent with the laws governing the administration of the public lands, coordinate the land use inventory, planning, and management activities of or for such lands with the land use planning and management programs of other Federal departments and agencies and of the States and local governments within which the lands are located, including, but not limited to, the statewide outdoor recreation plans . . . and of or for Indian tribes by, among other things, considering the policies of approved State and tribal land resource management programs

43 U.S.C. § 1712(c)(1)–(9) (2013).

69. Glicksman, *supra* note 30, at 450.

70. 43 C.F.R. § 8342.1 (2015).

71. Compare *id.* (providing that “(a) Areas and trails shall be located to minimize damage to soil, watershed, vegetation, air, or other resources . . . ; (b) Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats; (c) Areas and trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreational uses of the same or neighboring public lands”) with Exec. Order No. 11,644 § 3(a)(i), 37 Fed. Reg. 2877, 2877–78 (Feb. 8, 1972) (“(1) Areas and trails shall be located to minimize damage to soil, watershed, vegetation, or other resources of the public lands; (2) Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats; (3) Areas and trails shall be located to minimize conflicts between off-road vehicle use and other existing or proposed recreational uses of the same or neighboring public lands”).

72. The Manual cites the minimization criteria in 43 C.F.R. § 8342.1 as providing the relevant criteria for designation of areas and routes, stating that “the decision-making process must be thoroughly documented in the administrative record.” BUREAU OF LAND MGMT., RE-

rule, BLM's field offices operate with a fair amount of autonomy.⁷³ As such, the field offices have produced their own varying interpretations of section 8342.1, with different degrees of success.

Given that BLM manages relatively less total wilderness area than Forest Service,⁷⁴ combined with the physical characteristics of BLM lands being more conducive to ORV use,⁷⁵ it is unsurprising that BLM's discretion has resulted in more ORV access.⁷⁶

The California Desert District of BLM took some concrete steps toward making its area and trail designation process more consistent when it created and used a uniform "Decision Tree" process for designations. This initial iteration of the Decision Tree was essentially a large flow chart.⁷⁷ However, the Tree did not accurately reflect the minimization criteria or ensure that they were applied when making individual route designations. For example, "[t]he only resource-related questions in the Decision Tree concern sensitive species and sensitive species' habitat, and several questions indirectly ask about soil erosion[.]"⁷⁸ Because the Tree gave the impression that it summarized the entirety of the criteria that land managers should consider when designating ORV routes, the Tree did not guarantee that the managers would consider and satisfy the minimization criteria.⁷⁹ In fact, the outcome from the Decision Tree was a plan that would have designated over 5,000 miles of ORV trails, including an extensive network of illegal, user-

LEASE 1-1731, 1626 – TRAVEL AND TRANSPORTATION MANUAL 1626.06A2a (2011), http://www.blm.gov/style/medialib/blm/wo/Information_Resources_Management/policy/blm_manual.Par.38105.File.dat/1626.pdf; see also 43 C.F.R. § 1626.06(A)(2)(a), (B) (2013).

73. BLM Field Offices retain a large amount of discretion in their land-use planning. For example, 43 C.F.R. § 1610.4-7 (2013) merely directs the Field Manager to "identify a preferred alternative" without much guidance in what should inform that preference.

74. For total land managed, Forest Service has more than four times the wilderness area of BLM. Glicksman, *supra* note 30, at 450.

75. See John Leshy, *Contemporary Politics of Wilderness Preservation*, 25 J. LAND RESOURCES & ENVTL. L. 1, 4 (2005) (noting that Forest Service lands, which "tend to be more remote and in terrain less accessible to motorized vehicles[,] are potentially less at risk of development than BLM lands).

76. According to a GAO study of ORV use on federal lands, "most Forest Service field unit officials said that [ORV] use constitutes less than half the recreational activity on their lands, while a majority of BLM field unit officials indicated that [ORV] use constitutes more than half the recreational activity on their lands." GAO, FEDERAL LANDS, *supra* note 1, at 12. In contrast, "[m]ost Park Service field unit officials, however, indicated that [ORV] use constitutes less than 10 percent of the recreation taking place on their lands, in part because [ORV] use is authorized only in certain Park Service field units." *Id.*

77. *Ctr. for Biological Diversity v. U.S. Bureau of Land Mgmt.*, 746 F. Supp. 2d 1055, 1076 (N.D. Cal. 2009).

78. The chart itself only laid out considerations for the agency, it did not actually require the agency to provide a more transparent decisionmaking process. *Id.*

79. *Id.*

created trails, across sensitive desert soils and arguably crucial habitat for the imperiled desert tortoise.⁸⁰ Further, the Tree “in practice [was] almost certain to skew route designation decision-making in favor of ORV use.”⁸¹ In striking down the Decision Tree, the Northern District of California found that “[m]inimize’ as used in [43 C.F.R. § 8342.1] does not refer to the number of routes, nor their overall mileage,” but to the effects of area and trail designations.⁸² Therefore, reducing mileage or number of routes alone is insufficient. Agencies must also minimize the effects associated with each route.

In response to *Center for Biological Diversity*, BLM revised the Decision Tree for the Grand Canyon–Parashant and Vermilion Cliffs National Monuments in a second iteration called the Route Evaluation Tree (RET). This modified tree was upheld in *Wilderness Society v. U.S. Bureau of Land Management* as part of a route-designation process that included: (1) information gathering; (2) refining data, prioritizing resolution of deficiencies; (3) mapping regions and reviewing effects of ORVs; (4) using RET to evaluate routes; (5) reviewing and recording RET’s recommendations; and (6) reviewing outcomes under NEPA.⁸³ Unlike the Decision Tree, the RET specifically directed decision makers to consider the minimization criteria: the “RET require[d] BLM to consider additional management options, such as seasonal limitations or group size restrictions, for the purpose of minimizing harm to the environment.”⁸⁴ As part of the RET, BLM also completed Route Evaluation Reports that “considered whether the continued use of the route would impact, directly or indirectly, ‘special resources,’ including, for example, special status species or their habitat.”⁸⁵ The Route Evaluation Report “asked whether impacts to the those [sic] resources [could] be ‘avoided, minimized or mitigated’ and record[ed] BLM’s response” and ultimate area and trail designation decision.⁸⁶ These Route Evaluation Reports provided a record to link BLM’s area and trail designation to its analysis of how to minimize impacts. Further, because the RET was only one part of a larger decisionmaking process, it inherently signaled to the

80. *Id.* at 1086, 1088–89.

81. *Id.* at 1077 (quoting *Am. Motorcyclist Ass’n v. Watt*, 543 F. Supp. 789, 797 (C.D. Cal. 1982)).

82. *Id.* at 1080.

83. *Wilderness Soc’y v. U.S. Bureau of Land Mgmt.*, 822 F. Supp. 2d 933, 945–46, 949 (D. Ariz. 2011).

84. *Id.* at 947.

85. *Id.* at 949.

86. *Id.*

decisionmaker that there were factors beyond the RET to consider. Thus, BLM satisfied the minimization criteria.⁸⁷

Despite the promise of the Route Evaluation Tree, a different BLM field office was simultaneously using a poorly documented method to designate more than 4,000 miles of trails in fragile desert ecosystems in Utah.⁸⁸ In its Richfield Resource Management Plan (RMP), the BLM included a “cryptic spreadsheet” to describe each route segment without describing what any of the factors meant.⁸⁹ As the spreadsheet provided the only documentation of why BLM chose its designations, the RMP represented a “failure to provide enough information or analysis for someone other than the BLM to know why or how the routes were chosen.”⁹⁰ Because BLM did not provide any elaboration, “[t]here [was] no way to know how the BLM used or considered the information it listed on the spreadsheet.”⁹¹ As such, the entire designation process failed to satisfy the minimization criteria.⁹² While the court was unwilling to force the BLM to immediately close ORV routes pending a re-designation that appropriately applied the minimization criteria, it did set an aggressive timeline for BLM to achieve compliance.⁹³

Notably, this case involved both minimization criteria claims as well as NHPA claims. The interplay between the NHPA and the minimization criteria is currently being litigated,⁹⁴ and deserves more analysis than this note can give.

Overall, BLM’s experience demonstrates that minimization requires agencies to explain their work in a clear, easy-to-understand manner; cryptic spreadsheets presented without explanation are insufficient. A consistent decisionmaking apparatus like the RET might be acceptable, but it must include the substantive objective of locating areas and trails to minimize impacts, cannot include structural preferences for ORV use, and should be only one part of the decisionmaking process.

87. However, the Ninth Circuit’s recent ruling in *WildEarth Guardians v. Montana Snowmobile Ass’n*, 790 F.3d 920, 932 (9th Cir. 2015), discussed *infra* in note 104, may have implicitly overruled this unpublished holding.

88. *S. Utah Wilderness All. v. Burke*, 981 F. Supp. 2d 1099, 1104 (D. Utah 2013).

89. *Id.* at 1105.

90. *Id.*

91. *Id.*

92. *Id.*

93. *S. Utah Wilderness All. v. Burke*, No. 2:12CV257DAK, 2015 WL 2452932, at *4 (D. Utah May 22, 2015) (addressing appropriate remedies given BLM’s failure to comply with minimization criteria).

94. *See supra* note 31 and accompanying text.

C. Forest Service

Of all three agencies, Forest Service ORV management decisions have faced the most legal challenges. Like BLM, Forest Service has adopted regulations to direct its land-use planning decisionmaking.

Specifically, Forest Service adopted, and later modified, the Travel Management Rule (TMR).⁹⁵ Subpart B, adopted in 2005, allows Forest Service to designate roads, trails, and areas for public use.⁹⁶ In making its designation of trails and areas, Forest Service must consider certain factors, including the minimization criteria.⁹⁷ While some parties have argued that the rule's use of the phrase "with the objective of minimizing" did not dictate taking steps to *actually* minimize, courts have generally held that Subpart B requires actual minimization by Forest Service.⁹⁸ That is, merely collecting information on the potential impacts without explaining steps taken to minimize those impacts is insufficient to satisfy the E.O.s.

95. 36 C.F.R. § 212.1–.81 (2015).

96. 36 C.F.R. § 212.50–57.

97. Section 212.55 directs the official responsible for designating areas and trails to consider effects "with the objective of minimizing" including:

- (1) Damage to soil, watershed, vegetation, and other forest resources;
- (2) Harassment of wildlife and significant disruption of wildlife habitats;
- (3) Conflicts between motor vehicle use and existing or proposed recreational uses . . . ;
- (4) Conflicts among different classes of motor vehicle uses . . . ; [and]
- (5) Compatibility of motor vehicle use with existing conditions in populated areas, taking into account sound, emissions, and other factors.

36 C.F.R. § 212.55(b).

98. *Idaho Conservation League v. Guzman*, 766 F. Supp. 2d 1056, 1074 (D. Idaho 2011) ("The language 'with the objective of minimizing' means that the whole goal or purpose of the exercise is to select routes in order to minimize impacts in light of the agency's other duties."); *Ctr. for Sierra Nev. Conservation v. U.S. Forest Serv.*, 832 F. Supp. 2d 1138, 1146 (E.D. Cal. 2011) ("[T]his aspect of Subpart B codifies Executive Order 11,644, and the executive order plainly states that the land management agencies 'shall . . . minimize' the four types of impacts."); *Cent. Sierra Envtl. Res. Ctr. v. U.S. Forest Serv.*, 916 F. Supp. 2d 1078, 1097 (E.D. Cal. 2013) ("Unlike NEPA, which requires agencies to assess environmental consequences of their decisions but does not obligate agencies to take actions that minimize those consequences, the [travel management rule] requires the Forest Service to aim to minimize environmental damage when designating routes."). For additional support, these courts also cited BLM's implementing rule, which clearly required actual minimization. *Idaho Conservation League*, 766 F. Supp. 2d at 1074 ("The different language used in the Forest Service and BLM regulations constitute a distinction without real, practical difference. Not only are both agencies bound by the plain language of the ORV Executive Orders, but both contemplate the same result . . ."); *Ctr. for Sierra Nev. Conservation*, 832 F. Supp. 2d at 1146 ("Subpart B is equivalent to the Bureau of Land Management's corresponding regulation interpreting Executive Order 11,644.").

Subpart C of the TMR covers over-snow vehicle use.⁹⁹ While a previous iteration of Subpart C made winter travel planning optional, a recent court opinion prompted the Forest Service to promulgate a new Subpart C mandating winter travel planning, subject to the same E.O. obligations as wheeled ORV trails and area planning.¹⁰⁰

In addition to the Travel Management regulations, Forest Service currently has internal guidance on the issue, although it is insufficient to provide practical guidance for individual forest units. For example, Forest Service Manual 7715 lists “consider[ation of] the [minimization] criteria in 36 CFR 212.55” as one of seven “policy” objectives for travel management decisions, but then simply recites the language of the regulation.¹⁰¹ Forest Service’s Travel Planning Handbook does not address the minimization criteria, even in the chapter on “Travel Planning for Designations.”¹⁰² Thus, like BLM and NPS, Forest Service’s guidance fails to inform decisionmakers of how to adequately implement the minimization criteria.

Again like BLM, the lack of consistent, practical guidance from Forest Service has resulted in a variety of implementation attempts by individual forest units. Multiple courts have examined Forest Service’s attempts. While these decisions have not left a perfectly clear indication of what Forest Service ought to do to comply with the minimization criteria, they have specified what is not sufficient.

In *Idaho Conservation League v. Guzman*, the District of Idaho considered Forest Service’s use of Route Designation Matrices, which resulted in a preferred alternative of 3,534 miles of areas and trails on the Salmon-Challis National Forest.¹⁰³ The matrices included information collected for each of twenty-eight different “Matrix Criteria,” which collectively covered the minimization criteria.¹⁰⁴ However, the court found that merely listing the collected information was insufficient; instead, Forest Service must have

99. 36 C.F.R. § 212.81 (2015).

100. *Winter Wildlands All. v. U.S. Forest Serv.*, No. 1:11-CV-586-REB, 2013 WL 1319598 (D. Idaho 2013) (striking down a portion of the 2005 Travel Management Rule because Forest Service could not exempt over-snow vehicle use from Executive Order 11,644). However, it remains to be seen how effectively Forest Service will actually implement the minimization criteria for over-snow vehicles.

101. U.S. FOREST SERV., MANUAL 7715.5(2) (2009), http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3802552.pdf.

102. U.S. FOREST SERV., FOREST SERVICE HANDBOOK 7709.55 – TRAVEL PLANNING HANDBOOK (2009), http://www.fs.fed.us/cgi-bin/Directives/get_dirs/fsh?7709.55.

103. *Idaho Conservation League*, 766 F. Supp. 2d at 1072.

104. *Id.*

indicated how it implemented the minimization criteria when making the route determinations.¹⁰⁵

Courts have also found that the minimization criteria must be applied to individual trails and areas, rather than only forest-wide. In *Wildland CPR, Inc. v. U.S. Forest Service*, the District of Montana held that Forest Service was required to do an independent analysis for area and route-specific designations.¹⁰⁶ Demonstrating compliance with the criteria over a large area (such as forest wide) did not automatically ensure compliance for specific area and trail designations.¹⁰⁷

Similarly, the Ninth Circuit recently upheld the requirement that the Forest Service minimize route-specific impacts (not just forest wide ORV trail mileage).¹⁰⁸ After citing with approval the holdings in *Idaho Conservation League, Central Sierra Environmental Resource Center, Defenders of Wildlife, and Center for Biological Diversity* that mere “consideration” of the minimization criteria is insufficient, the court concluded that the Forest Service must locate routes “with the objective of minimizing” adverse ORV impacts.¹⁰⁹ Ultimately, the Ninth Circuit reasoned that:

[T]he Forest Service cannot rely upon a forest-wide reduction in the total area open to snowmobiles as a basis for demonstrating compliance with the minimization criteria. The TMR is concerned with the effects of each particularized area and trail designation. The minimization criteria must be applied accordingly.¹¹⁰

Thus, Forest Service cannot use area designations to avoid applying the minimization criteria. Instead, Forest Service must look more closely at the specific areas and trails concerned and take steps to minimize impacts associated with those designations.

Likewise, the District of Idaho struck down route designations on the Sawtooth National Forest when the Minidoka Ranger District attempted to designate nearly 1,200 miles of ORV trails and areas.¹¹¹ Forest Service ana-

105. *Id.* (“The Route Designation Matrices are not evidence of the implementation of such criteria. Instead, they contain a large number of subject boxes with a variety of different checkmarks and other notations recorded. There is no way to know how or if the Forest Service used this information to select routes with the objective of minimizing impacts.”).

106. *Wildland CPR, Inc. v. U.S. Forest Serv.*, 872 F. Supp. 2d 1064, 1082 (D. Mont. 2012).

107. *Id.*

108. *WildEarth Guardians v. Mont. Snowmobile Ass’n*, 790 F.3d 920, 932 (9th Cir. 2015).

109. *Id.*

110. *Id.* (citations omitted).

111. *Wilderness Soc’y v. U.S. Forest Serv.*, No. CV08-363-E-EJL, 2013 WL 5729056, at *1 (D. Idaho Oct. 22, 2013).

lyzed the impact that modifying ORV routes would have on specific sensitive species in the area without examining impacts to the broader ecosystem, especially water quality.¹¹² Forest Service argued that its “consistency checklist” demonstrated how the designations complied with the minimization criteria.¹¹³ The “consistency checklist” generally required routes to “be designated in a manner that maintains or restores water quality to fully support beneficial uses and native and desired non-native fish species and their habitat” and identified strategies to comply.¹¹⁴ However, neither the species-specific analyses nor the consistency checklist addressed how to minimize impacts from trail closures on water quality.¹¹⁵ Therefore, Forest Service failed to demonstrate minimization of water quality impacts, and the court required Forest Service to address these concerns in its next Environmental Assessment for route designation options.¹¹⁶

In the Stanislaus National Forest in California, Forest Service also tried to comply with the minimization criteria by using tables within its Environmental Impact Statement coupled with brief mitigation descriptions in its Record of Decision. The Eastern District of California found these descriptions insufficient because they did not detail how any mitigation steps were specifically connected with the minimization criteria.¹¹⁷

In contrast to decisions striking down Forest Service action as insufficient, the Ninth Circuit held in an unpublished opinion that Forest Service’s decision was not arbitrary or capricious with regard to actual minimization when it considered numerous route designation options and ultimately chose a modified version to achieve minimization.¹¹⁸ This time, the court found that Forest Service sufficiently connected its decisionmaking to the minimization criteria. Specifically, the court was persuaded that Forest Service made its decision with the objective of minimizing impacts when it “reduced the miles of motorized routes . . . from approximately 150 to 125”; “made a number of its route designations contingent on first reducing negative impacts to soil, fisheries, and water quality”; “avoided route designations that would clearly contribute to unacceptable resource impacts”; and “imposed seasonal restrictions on roughly 64 miles of routes to reduce impacts on soil, vegetation, water quality, and wildlife.”¹¹⁹ However,

112. *Id.* at *10.

113. *Id.*

114. *Id.*

115. *Id.*

116. *Id.* at *11.

117. *Cent. Sierra Envtl. Res. Ctr. v. U.S. Forest Serv.*, 916 F. Supp. 2d 1078, 1098 (E.D. Cal 2013).

118. *Pryors Coal. v. Weldon*, 551 F. App’x 426 (9th Cir. 2014) (unpublished opinion).

119. *Id.* at 430.

the Ninth Circuit's more recent published opinion in *WildEarth Guardians v. Montana Snowmobile Association* rejected the idea that merely reducing total ORV route mileage could be sufficient to demonstrate minimization.¹²⁰

Some courts have simply dodged the minimization question by determining that the Forest Service action at issue did not trigger its application. For example, the District of Colorado determined that the agency's original ORV designation of trails occurred in the 1990s, and as such were no longer reviewable.¹²¹ Furthermore, a 2010 Forest Service order that purported to reaffirm these 1990s trails did not trigger the minimization criteria because it did not include the designation of *new* trails.¹²² Similarly, the District of Oregon held that merely redesignating an area that was once part of a snow park as a parking lot for mixed-recreation vehicles did not trigger the minimization criteria.¹²³ In dictum that diverges sharply from the holding of other jurisdictions, the court also indicated that examining user conflicts, designating parking slots for both motorized and non-motorized users, and making "numerous changes to the proposed action to help address concerns regarding user conflicts" might have been enough to satisfy the minimization criteria.¹²⁴ The decision is currently pending appeal at the Ninth Circuit.

D. *Judicial Outcomes Common to All Agencies*

Collectively, these cases demonstrate that agencies must take affirmative steps to minimize ORV impacts on the lands that they manage. It is clear that the minimization criteria have a substantive and a procedural component. When they implement the minimization criteria through specific procedural tools, agencies must ensure that the minimization criteria are applied in a thoughtful manner throughout a comprehensive process. Something like BLM's RET process might satisfy this requirement.

120. *WildEarth Guardians v. Mont. Snowmobile Ass'n*, 790 F.3d 920, 932 (9th Cir. 2015) ("Forest Service cannot rely upon a forest-wide reduction in the total area open to snowmobiles as a basis for demonstrating compliance with the minimization criteria.").

121. *Backcountry Hunters & Anglers v. U.S. Forest Serv.*, No. 11-CV-03139-MSK-KLM, 2013 WL 1191245, at *8 (D. Colo. Mar. 21, 2013) (rejecting review of claims related to 1990s conduct because the claim was "subject to a six-year statute of limitations," so "the time for challenging the validity of the 1999 Order expired long ago . . .").

122. *Id.* at *8 ("[B]ecause the June 2010 Order did not make any *new* designation of a trail as being [ORV]-permitted, nothing in Executive Order 11,644 applies.").

123. *Wild Wilderness v. Allen*, 12 F. Supp. 3d 1309, 1315 (D. Or. April 14, 2014) *appeal docketed*, No. 14-35505 (9th Cir. June 11, 2014).

124. *Id.* at 1316.

Additionally, agencies must actively demonstrate more than mere data collection. They must specify the methods used to actively minimize impacts from ORV use. The explanations must connect designation decisions with the minimization goal. While it is not totally clear which might be the most important, some combination of reducing the number of ORV trails,¹²⁵ conditioning continued use of area and trail designations on demonstrated minimization, avoiding designations with large and obvious detrimental consequences, and imposing seasonal restrictions will probably survive judicial review. If agencies can demonstrate they have conducted route-by-route field investigations to identify and limit ORV effects, they are more likely in compliance with the minimization criteria. Similarly, effective monitoring and adaptive management that curtails adverse ORV impacts will also help an agency achieve minimization.

Still, the variety within agency implementation attempts and judicial outcomes demonstrates that agencies retain discretion over ORV management. While judicial review has certainly established a floor for implementation requirements, agencies are left with many options for complying with the minimization criteria.

IV. EXAMPLES OF “MINIMIZATION” IN OTHER ENVIRONMENTAL LAW CONTEXTS

It is clear that BLM, NPS, and Forest Service have interpreted E.O. 11,644’s mandate with varying degrees of success against legal challenges. However, agency ORV management decisions continue at a rapid pace, so it is critical for agencies to adopt effective strategies to minimize impacts consistently and avoid prolonged legal battles. Due to the slow pace of judicial review, further guidance from the courts will be insufficient to help guide agencies before they begin work on large-scale route-designation goals.¹²⁶ Therefore, this section takes guidance from other environmental law statutes to further enhance recommendations for how NPS, BLM, and Forest Service can implement the minimization criteria.

The two statutory provisions that are most relevant to this discussion of ORV minimization are section 404 of the Clean Water Act¹²⁷ (CWA) (wet-

125. The Ninth Circuit and multiple district courts have found that reducing the number of trails alone is insufficient to satisfy the minimization criteria. *See supra* notes 82, 120.

126. For example, the BLM is planning to complete almost 250 land-use plans from 2016 to 2020. *See* BUREAU OF LAND MGMT., 2020 TRAVEL AND TRANSPORTATION MANAGEMENT VISION 17 (April 2014), http://www.blm.gov/style/medialib/blm/wo/Information_Resources_Management/policy/im_attachments/2015.Par.52719.File.dat/IM2015-060_att2.pdf. However, BLM may lack the resources to achieve such an ambitious mission.

127. 33 U.S.C. § 1344 (2013).

lands regulations) and section 10 of the Endangered Species Act¹²⁸ (ESA) (incidental take requirements). This section will discuss how “minimize” has been defined in these contexts and determine the policy implications of the various options left open to agencies.

Clean Water Act wetlands regulations are instructive because EPA has provided fairly extensive guidance on what minimization means in this context. EPA’s regulations prohibit filling wetlands “unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem.”¹²⁹ EPA guidelines recommend changing the site location to minimize impacts, specifically:

- (a) Locating and confining the discharge to minimize smothering of organisms;
- (b) Designing the discharge to avoid a disruption of periodic water inundation patterns;
- (c) Selecting a disposal site that has been used previously for dredged material discharge;
- (d) Selecting a disposal site at which the substrate is composed of material similar to that being discharged, such as discharging sand on sand or mud on mud;
- (e) Selecting the disposal site, the discharge point, and the method of discharge to minimize the extent of any plume;
- (f) Designing the discharge of dredged or fill material to minimize or prevent the creation of standing bodies of water in areas of normally fluctuating water levels, and minimize or prevent the drainage of areas subject to such fluctuations.¹³⁰

By analogy, these EPA guidelines suggest that strategically choosing alternate ORV access routes might satisfy minimization.¹³¹ Similar to using previously used disposal sites (as recommended in part (c)), using ORV routes that have previously been used for the purpose would limit the disturbance

128. 16 U.S.C. § 1539 (2013).

129. 40 C.F.R. § 230.10(d) (2015).

130. 40 C.F.R. § 230.70 (2015).

131. This is confirmed by a few cases on ORV issues. *See* *Pryors Coal. v. Weldon*, 551 F. App’x 426, 429–30, 433 (9th Cir. 2014) (unpublished opinion) (Forest Service satisfied minimization when, among other things, it reduced number of trails and avoided clearly negative area and trail designations); *Nat’l Parks Conservation Ass’n v. U.S. Dep’t of Interior*, 46 F. Supp. 3d 1254 (2014) (NPS did enough for actual minimization when, among other steps, it closed access to more ecologically sensitive routes and opened other trails).

to pristine areas.¹³² While this suggestion could discourage ORV encroachment on more pristine lands, it might result in intensification of ORV impacts on existing trails. Part (e) recommends taking steps to minimize the size of a plume of pollution; in the ORV context, this might suggest limiting ORV use numbers. If agencies only provided a limited number of ORV access permits, and then concentrated use onto limited, already designated trails, they could minimize the impacts on the environment and non-motorized users.¹³³ However, as already evidenced by cases rejecting minimization attempts that insufficiently considered route-specific impacts,¹³⁴ agencies would have to demonstrate, likely through field investigations, that the selected trails were durable enough to withstand the increased usage.¹³⁵

EPA's wetland guidelines also recommend modifying the material to be discharged.¹³⁶ Analogizing to the ORV context would indicate that agencies could more tightly control the type of ORVs allowed on trails. While it hasn't come up in minimization case law, agencies already designate access for motorcycles versus other off-road vehicles, encouraged by Subparts B and C of the Travel Management Rule, which recognize that distinctions may be made based on class of vehicle or time of year.¹³⁷

Another option under EPA's wetland guidance is controlling the material after discharge,¹³⁸ or, in the ORV context, attempting to control ORV

132. However, so as to not encourage or reward illegal use, these routes should only include officially designated areas and trails.

133. This assumes, of course, that the trails already designated were located to minimize impacts. If not, agencies could identify new trails, located to minimize impacts, with an eye toward encouraging more concentrated use patterns.

134. See *WildEarth Guardians v. Mont. Snowmobile Ass'n*, 790 F.3d 920, 932 (9th Cir. 2015) (Forest Service's decision to designate areas was insufficient when it failed to consider route-specific impacts); *Ctr. for Biological Diversity v. U.S. Bureau of Land Mgmt.*, No. C 06-4884 SI, 2011 WL 337364, at *1 (order on remedy) (minimization does not refer only to reducing the overall mileage and number of routes, but instead the effects of route designations).

135. See *supra* note 54 and accompanying text.

136. 40 C.F.R. § 230.71 (2015).

137. 36 C.F.R. § 212.51 (2015) (areas and trails for wheeled ORVs may be designated by time of year under Subpart B); 36 C.F.R. § 212.81 (2015) (same for over-snow vehicles); see also, U.S. FOREST SERV., CUSTER FOREST, MOTOR VEHICLE USE MAP (2014), http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5353124.pdf.

138. Those guidelines read:

(a) Selecting discharge methods and disposal sites where the potential for erosion, slumping or leaching of materials into the surrounding aquatic ecosystem will be reduced. These sites or methods include, but are not limited to:

- (1) Using containment levees, sediment basins, and cover crops to reduce erosion;
- (2) Using lined containment areas to reduce leaching where leaching of chemical constituents from the discharged material is expected to be a problem;

user conduct out in the field. Because enforcement would be nearly impossible, it seems doubtful that this would be successful standing alone. However, Forest Service has already tried outreach efforts,¹³⁹ and organizations like BlueRibbon Coalition and Tread Lightly! are already championing stewardship and responsible ORV conduct.¹⁴⁰ If agencies could achieve positive partnerships, voluntary user stewardship might provide an additional tool for agencies.¹⁴¹

Under the EPA wetlands guidance, applicants can also modify the method of dispersion.¹⁴² How this guidance maps onto ORV use is less clear than the other options. Part (g) includes “[s]etting limitations on the amount of material to be discharged per unit of time or volume of receiving water.”¹⁴³ Similar to modifying the ORV routes as discussed above, this guidance could include more restrictions on the number of vehicles or time of use to limit the concentration of impacts.

EPA also provides guidance on utilizing technology,¹⁴⁴ modifying the

(b) Capping in-place contaminated material with clean material or selectively discharging the most contaminated material first to be capped with the remaining material;

(c) Maintaining and containing discharged material properly to prevent point and nonpoint sources of pollution;

(d) Timing the discharge to minimize impact, for instance during periods of unusual high water flows, wind, wave, and tidal actions.

40 C.F.R. § 230.72 (2015).

139. *Respect the River / Rio - Recreationists*, U.S. FOREST SERV., <http://www.fs.fed.us/rtr/rec-ohv.shtml> (last visited Apr. 30, 2015) (including a 7-minute video on responsible off-road vehicle use).

140. *Education*, TREAD LIGHTLY!, <http://treadlightly.org/education/learn/watch-videos/> (last visited May 24, 2015) (with videos on safe and responsible ORV driving).

141. NPS appears to have some sort of partnership with Tread Lightly!, based on information provided on the Big Cypress website. *Big Cypress: Off-Road Vehicle Use*, NAT'L PARK SERV., <http://www.nps.gov/bicy/planyourvisit/orv-use.htm> (last visited Apr. 30, 2015).

142. 40 C.F.R. § 230.73 (2015).

143. 40 C.F.R. § 230.73(g).

144. The regulations specify that minimization might be achieved by

(a) Using appropriate equipment or machinery, including protective devices, and the use of such equipment or machinery in activities related to the discharge of dredged or fill material;

(b) Employing appropriate maintenance and operation on equipment or machinery, including adequate training, staffing, and working procedures;

(c) Using machinery and techniques that are especially designed to reduce damage to wetlands. This may include machines equipped with devices that scatter rather than mound excavated materials, machines with specially designed wheels or tracks, and the use of mats under heavy machines to reduce wetland surface compaction and rutting;

impacts on plants and animals,¹⁴⁵ and minimizing adverse effects on human use potential.¹⁴⁶ Part (b) of the human use minimization suggestions includes “[s]electing disposal sites which are not valuable as natural aquatic areas” could achieve this goal.¹⁴⁷ Once again, the easiest way to achieve this aim might be restricting access or limiting the trails that are available to ORV use. Part (c) suggests “timing the discharge to avoid the seasons or periods when human recreational activity associated with the aquatic site is most important.”¹⁴⁸ Similarly, Part (c) of EPA’s guidance regarding impacts to wildlife includes “Timing discharge to avoid spawning or migration seasons and other biologically critical time periods[.]”¹⁴⁹ Such timing restrictions would correspond with seasonal restrictions on ORV use.

(d) Designing access roads and channel spanning structures using culverts, open channels, and diversions that will pass both low and high water flows, accommodate fluctuating water levels, and maintain circulation and faunal movement;

(e) Employing appropriate machinery and methods of transport of the material for discharge.

40 C.F.R. § 230.74 (2015).

145. The regulations specify that minimization might be achieved by

(a) Avoiding changes in water current and circulation patterns which would interfere with the movement of animals;

(b) Selecting sites or managing discharges to prevent or avoid creating habitat conducive to the development of undesirable predators or species which have a competitive edge ecologically over indigenous plants or animals;

(c) Avoiding sites having unique habitat or other value, including habitat of threatened or endangered species;

(d) Using planning and construction practices to institute habitat development and restoration to produce a new or modified environmental state of higher ecological value by displacement of some or all of the existing environmental characteristics. Habitat development and restoration techniques can be used to minimize adverse impacts and to compensate for destroyed habitat. . . . Use techniques that have been demonstrated to be effective in circumstances similar to those under consideration wherever possible. Where proposed development and restoration techniques have not yet advanced to the pilot demonstration stage, initiate their use on a small scale to allow corrective action if unanticipated adverse impacts occur;

(e) Timing discharge to avoid spawning or migration seasons and other biologically critical time periods;

(f) Avoiding the destruction of remnant natural sites within areas already affected by development.

40 C.F.R. § 230.75 (2015).

146. 40 C.F.R. § 230.76 (2015).

147. *Id.* § 230.76(b).

148. *Id.* § 230.76(c).

149. 40 C.F.R. § 230.74 (2015).

Similar to EPA's minimization requirement on granting wetlands permits, the U.S. Fish and Wildlife Service (FWS)¹⁵⁰ has restrictions on allowing incidental takes under the Endangered Species Act (ESA). Under the incidental take provisions, FWS will not grant an incidental take permit to a private party unless "the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking."¹⁵¹ While incidental take permits apply only to private parties, FWS is also prevented from allowing unrestricted incidental takes by federal agencies. As part of the ESA's consultation requirement, the acting agency is required to comply with the FWS's Biological Opinion if the action involves a threatened or endangered species. Section 1536(a)(2) prohibits agency actions that are "likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of a listed species' critical habitat."¹⁵² However, FWS can issue a Biological Opinion that allows some harm to the species as long as the action will not violate section 1536(a)(2). An agency can only take listed species (even incidentally) if the agency complies with FWS's Biological Opinion.¹⁵³ Even if "the taking of an endangered species or a threatened species incidental to the agency action will not" violate 1536(a)(2), FWS must issue a Biological Opinion that (1) specifies the impact of incidental takes on the listed species; and (2) "specifies those reasonable and prudent measures that the Secretary considers necessary or appropriate to minimize" the impact of incidental takes on the species.¹⁵⁴ Thus, an acting agency is bound by FWS's "incidental take statement" within the Biological Opinion to minimize the impact of incidental takes on endangered and threatened species.

This restriction has come into play in the land-use context; the District of Montana rejected a FWS incidental take statement approving a Forest Service land management plan impacting grizzly bears and grey wolves.¹⁵⁵ The court found that FWS failed to achieve minimization when the statement failed to specify the impact on species and the plan would have permitted "road densities in excess of one mile per square mile . . . , including in areas designated as crucial grizzly bear habitat."¹⁵⁶

150. FWS is responsible for, among other things, enforcing federal wildlife laws (including the Endangered Species Act), managing migratory birds, and conserving and restoring wildlife habitats. *About the U.S. Fish and Wildlife Service*, U.S. FISH & WILDLIFE SERV. (Mar. 25, 2015), http://www.fws.gov/help/about_us.html.

151. 16 U.S.C. § 1539 (2011).

152. 16 U.S.C. § 1536 (2011).

153. 16 U.S.C. § 1536(o)(2).

154. 16 U.S.C. § 1536(b)(4)(C)(i)-(ii).

155. *Swan View Coal, Inc. v. Turner*, 824 F. Supp. 923, 937 (D. Mont. 1992).

156. *Id.*

The Northern District of California also rejected a FWS Biological Opinion to BLM for land-use planning when “it fail[ed] to include required ‘terms and conditions’ regarding how to minimize the potential for incidental take of desert tortoises as a result of [ORV] recreational use.”¹⁵⁷ The terms and conditions at issue specified a surveying and monitoring procedure to track desert tortoises in the area.¹⁵⁸ However, “none of the Terms and Conditions address recreational use” despite the estimates of significant impacts on the species during motorized recreation.¹⁵⁹ In contrast, the court found FWS satisfied minimization when the terms and conditions specifically required BLM to consider the implications from survey results to determine whether modification of the project was necessary to protect the desert tortoise.¹⁶⁰

The D.C. District Court similarly rejected FWS’s approval of a Forest Service action when “FWS [did] not supply a term and condition” regarding steps to minimize impacts to water quality.¹⁶¹ Because “minimizing changes in water quality is deemed a necessary and appropriate measure,” FWS was required by the ESA to include such a term and condition statement.¹⁶²

157. *Ctr. for Biological Diversity v. Bureau of Land Mgmt.*, 422 F. Supp. 2d 1115, 1122 (N.D. Cal. 2006).

158. *Id.* at 1140.

159. *Id.* at 1141.

160. The Terms and Conditions provided:

The Bureau must develop and implement a monitoring plan to determine the level of incidental take of desert tortoises associated with livestock grazing and casual uses in the action area. The monitoring plan must include a standardized mechanism for Bureau employees, contractors, permittees, and volunteers to report any observations of dead or injured desert tortoises to the Desert District office. The Desert District office must collect information obtained through the monitoring plan to include in the Bureau’s annual report to the Service that is required by this incidental take statement and described in the “Reporting Requirements” section herein. At that time, the Service and the Bureau must review the circumstances surrounding the incident to determine whether any patterns of repeated authorized or unauthorized activities are occurring (e.g., use of an authorized area for stopping, parking and camping where habitat is being degraded, development of unauthorized routes or the beginnings of a trash-dumping site, or desert tortoises are being struck by vehicles in particular portions of routes) that may indicate that additional protective measures are required. If, after completion of the review, the Service and Bureau agree that additional protective measures are required and can be implemented within the existing scope of the action, the Bureau must implement the agreed-upon measures within a reasonable time frame; if the corrective actions cannot be implemented within the scope of the existing action, the Bureau and Service will determine whether re-initiation of consultation is appropriate.

Id. at 1125–26.

161. *Pac. Shores Subdiv. Cal. Water Dist. v. U.S. Army Corps of Eng’rs*, 538 F. Supp. 2d 242, 258 (D.D.C. 2008).

162. *Id.*

Under the ESA, merely allowing discretion in how to minimize impacts was inadequate; FWS was required to detail steps to minimize those impacts.¹⁶³

These three FWS cases suggest a few key points about minimization: (1) agencies must actually analyze or quantify the practical impacts to the resource from the agency's proposed action; (2) agencies must include restrictions or plans for managing recreation if it will impact sensitive resources; and (3) agencies cannot ignore impacts that are necessary to achieving full minimization (like impacts to water quality). While some of these requirements are statutorily mandated by the ESA, the fact that they are included at all indicates that they play a role in minimizing impacts. Therefore, NPS, BLM, and Forest Service guidance ought to incorporate these three concepts at a minimum.

CONCLUSION

Combining judicial mandates for the minimization criteria and insight from these other examples of "minimization" in other environmental law contexts, it is clear that agencies need to do more to minimize ORV impacts. The variety of ways that agency subunits (individual national forests, BLM field offices, or national parks) designate ORV access indicates that agencies need to produce guidance or regulations providing instructions on how to minimize ORV impacts. Such guidance could help agencies to successfully implement the minimization criteria on their first attempt at ORV management, rather than being locked up in litigation for failing to minimize impacts.

This guidance should include at least a few key points. First, agencies must actually minimize impacts and include enough information in the administrative record to link their actions to the minimization criteria. Multiple courts determined that the agencies have a substantive duty to minimize impacts; merely considering the criteria without acting on them is insufficient.

Second, agencies need to gather and rely on site-specific information such as ground-truthing route inventories, conducting surveys for sensitive resources, or incorporating information from the public. This process might be more manageable when an agency only needs to closely monitor trails within a specified critical habitat range; it would be vastly more difficult to implement over exceptionally large ORV use areas. This requirement might counsel agencies to designate smaller areas.

Third, agencies should consider ORV impacts at multiple levels, including site-specific and landscape-level. Site-specific impacts also apply to area

163. *Id.*

designations, not only to specific trails. Agencies should consider habitat fragmentation and cumulative noise, air, and water quality impacts.

Fourth, agencies must include the public in the decisionmaking process. As discussed, one goal of the E.O.s was to minimize conflict between user groups, a goal that cannot be achieved without input from those groups early in the process. Along with providing a channel of communication, partnerships with ORV user groups could help control ORV user conduct. Similarly, partnerships with quiet recreationists and conservation advocates will enable transparency and help the agency to gather adequate information about potential ORV impacts.

Fifth, as in other environmental law contexts, minimization should be based on the best available science.¹⁶⁴ Basing these decisions on the best available science will require agencies to collect sufficient quality information on the specific trail/area to be designated before making any management decisions.

Finally, area and trail designations must take into account agency monitoring and enforcement resources. However, achieving this goal might be difficult because historical use might create feelings of entitlement among users. Limited agency enforcement resources, combined with the proximity of population centers, and concerns about unauthorized access, might tempt agencies to allow more easily accessible use. Still, agencies must start with the assumption that people will generally follow the law. Even when regulated and monitored, ORV use can devastate ecosystems. If left unchecked, the impacts could be extensive. Thus, agencies should only designate those trails that they can adequately monitor and enforce.¹⁶⁵ Ensuring compliance will be easier if agencies have simple and clear area and trail designations that are clearly delineated via signage and ORV use maps.

Regardless of which tools an agency decides to utilize, it must document its decisionmaking process. Documentation must be specific enough to demonstrate that the agency made its decisions with the objective of minimizing impacts. While agencies are left with many tools, it is still uncertain exactly what combination of strategies will be sufficient to satisfy the E.O.s' minimization criteria.

164. For example, Switalski & Jones provide numerous Best Management Practices for ORV management for forest managers based on the best available science. See Switalski & Jones, *supra* note 2, at 12–24.

165. Switalski and Jones acknowledge that “the effective implementation of these BMPs must be accompanied by adequate funding and staff levels in order to ensure that necessary monitoring and legal enforcement are carried out.” *Id.* at 21.