

Congress's Intent in Banning Mechanical Transport in the Wilderness Act of 1964

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I. Introduction

At forty years old, the Wilderness Act of 1964¹ (the Act) is a venerable occupant of the pantheon of American conservation landmarks. Its hallowed status is enhanced by the fact that, except for a trivial modification in 1978,² it has never been amended, although new areas are regularly added to the Wilderness inventory under separate pieces of legislation.

In the meantime, four decades of societal change, including revolutionary changes in the technology available for recreational pursuits, have grown around the Act. By themselves, these technological changes would require readdressing one of the Act's more significant provisions: the prohibition in Wilderness of any "form of mechanical transport."³

But that is not all. The increased acreage of federal land that has become Wilderness, and legislative proposals to expand Wilderness further, have added to the tension over the scope of the activities that may be pursued in Wilderness areas. The combination of technological advances in recreation and continued expansion of Wilderness areas makes resolving the mechanical transport question crucial.

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1. 16 U.S.C. §§ 1131-1136 (1964).

2. Act of Oct. 21, 1978, Pub. L. No. 95-495, § 4(b), 92 Stat. 1650 (deleting former paragraph 5 in 16 U.S.C. § 1133(d), relating to management of the Superior National Forest in Minnesota).

3. 16 U.S.C. § 1133(c).

Many commonly used devices could be considered types of mechanical transport and hence barred from Wilderness. Among those that aid human transport, alpine and mountaineering skis, rowboats with oarlocks, antishock hiking poles, and climbing gear all aid overland or water transportation, and all rely on mechanical components: springs, bindings, sliders, fasteners, and swiveling fulcrums. The Act's prohibition, moreover, is not limited to the mechanical transport of humans. It forbids the mechanical transport of anything, and so devices like fishing reels, wheelbarrows, and game carts also may fall within the Act's ambit. Some of these devices have changed little since 1964, whereas others did not then exist or were more primitive, with fewer moving parts or less complex machinery than today's equipment.

The most pressing issue involves the mountain bike. Federal agency prohibitions of bicycle use in Wilderness have created a standoff between many mountain bikers and proponents of expanding Wilderness. Mountain bikers worry that every proposal to enlarge the nation's Wilderness inventory means the loss of trails they have traditionally ridden. This has made it more difficult to pass legislation creating additional Wilderness areas.⁴ In addition, many mountain bikers are perturbed that other forms of mechanical transport (arguably less in keeping with the Wilderness ethic) are permitted in Wilderness while mountain bikes are excluded.

Bicycles have been used to visit public wildlands ever since their invention. Still, if the Congressional Record is a proper indication, the bicycle itself was far from legislators' thoughts in 1964, when the Wilderness Act became law. Most bicycles then were typically considered toys and fitted with coaster brakes, balloon tires, handlebar streamers, and baskets. Bicycles were usually a means of neighborhood travel for those too young to have earned their first driver's license.

Times have changed. According to the International Mountain Bicycling Association (IMBA), a trail access advocacy organization, in 2001 there were 7.5 million mountain bike "enthusiasts," i.e., active off-road cyclists, in the United States.⁵ A number of them relish, and skillfully accomplish, adventurous travel on narrow trails in difficult terrain. IMBA has 32,000 individual members and 450 IMBA-affiliated local clubs have 46,000 members.⁶ In California, mountain bikers are among those challenging legislation that proposes to add some 2.5

4. See, e.g., *Mountain Bikers Up Against Calif. Conservationists*, WASH. POST, Oct. 2, 2002, at A03; Grace Lichtenstein, *Mountain Bikers Try to Hold Their Own on the Trails*, N.Y. TIMES, Aug. 1, 2001, at D1.

5. Telephone conversation with Jenn Dice, Government Affairs Director, International Mountain Bicycling Association (Feb. 2, 2004).

6. *Id.*

million acres of federal Wilderness in that state.⁷

Beyond the mountain bike, the advent of other forms of human-powered recreational transport threatens to create new rifts between Wilderness advocates and recreational enthusiasts. Some are using a new type of kayak that can fairly be likened to a bicycle on water, the major difference being that traction is gained by propellers rather than wheels.⁸ If the ban on mechanical transport is interpreted to prohibit types of kayak use, Wilderness proponents will face the disaffection of yet more people who seek to explore Wilderness in rugged, but mechanically aided, ways. And in decades to come, other forms of human-powered recreational transport devices are certain to be invented.

As this article will explain, close scrutiny of the Wilderness Act of 1964, the Act's legislative history, and a 1980 statute creating a Wilderness area in Montana should resolve the impasse. Congress did not intend for the Act to prohibit human-powered transport that leaves no permanent trace but is capable of operating on the trails or bodies of water found in Wilderness. Accordingly, the regulations of the Forest Service, the National Park Service, and the Bureau of Land Management prohibiting mountain bike use in Wilderness require reevaluation. Moreover, these agencies should not promulgate new regulations forbidding other forms of mechanically aided human-powered transport, such as skiing, boating, kayaking, rock climbing, or mountain climbing, as long as these activities leave no permanent trace and do not require placing permanent installations or structures on federally designated Wilderness lands.

Because the mountain bike issue requires resolution if Wilderness is to expand with minimum opposition, the rest of this article will focus on the law governing that recreational activity. It does not do so exclusively, however; other recreational pursuits that use mechanical assistance will also be discussed.

7. California Wild Heritage Act of 2003, S. 1555, 108th Cong. (2003). *See* 149 CONG. REC. 10906, 10909 (daily ed. Aug. 1, 2003) (statement of Sen. Boxer, defending bill against mountain bikers' objections). *See also* *California Bills Go Wild in Congress!*, Friends of the River (2003), at http://www.friendsoftheriver.org/Articles2003_BillsGoWild.html (last visited Feb. 2, 2004); *Legislative Update*, The California Cattleman's Association (Nov. 2003), at <http://www.calcattlemen.org/legislative.htm> (last visited Feb. 2, 2004); *The California Wild Heritage Act of 2003 (S.1555)*, Sen. Boxer, at http://boxer.senate.gov/senate/b_1555.cfm (last visited Feb. 2, 2004).

8. *See infra* note 96.

II. The Law

A. *The Wilderness Act of 1964*

1. The Statutory Text

Passed in 1964, the Act explains that creating Wilderness is meant to "assure that an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify all areas within the United States . . . , leaving no lands . . . in their natural condition. . . ."⁹ Wilderness is to be a barrier to the proliferation of "areas where man and his own works dominate the landscape. . . ."¹⁰

"An area of wilderness is further defined to mean . . . an area of undeveloped Federal land retaining its primeval character and influence . . . and which . . . generally appears to have been affected primarily by the forces of nature, with the imprint of man's work

9. 16 U.S.C. § 1131(a). In its entirety, 16 U.S.C. § 1131(a) provides:

In order to assure that an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify all areas within the United States and its possessions, leaving no lands designated for preservation and protection in their natural condition, it is hereby declared to be the policy of the Congress to secure for the American people of present and future generations the benefits of an enduring resource of wilderness. For this purpose there is hereby established a National Wilderness Preservation System to be composed of federally owned areas designated by Congress as "wilderness areas," and these shall be administered for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness, and so as to provide for the protection of these areas, the preservation of their wilderness character, and for the gathering and dissemination of information regarding their use and enjoyment as wilderness; and no Federal lands shall be designated as "wilderness areas" except as provided for in this chapter or by a subsequent Act.

10. 16 U.S.C. § 1131(c). In its entirety, 16 U.S.C. § 1131(c) provides:

A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this chapter an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

substantially unnoticeable. . . ."¹¹

To further the purpose of preserving areas in which "the imprint of man's work [is] substantially unnoticeable,"¹² thereby limiting the expansion of federal land on which "man and his own works dominate the landscape,"¹³ the Act provides that except in very limited circumstances, "there shall be no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any [Wilderness] area."¹⁴

The Act also provides that Wilderness is an important venue for certain forms of rugged recreation. "An area of wilderness is further defined . . . [as] undeveloped Federal land . . . [containing] outstanding opportunities for solitude or a primitive and unconfined type of recreation. . . ."¹⁵

B. Agency Regulations Created Under the Act's Mechanical-Transport Ban

Four federal land-management agencies--the Forest Service, National Park Service, Bureau of Land Management, and U.S. Fish & Wildlife Service—administer the Wilderness areas that Congress creates. The first three agencies prohibit bicycle use in Wilderness—inconsistently in the case of the Forest Service and the Bureau of Land Management, but consistently in the case of the National Park Service. By contrast, the U.S. Fish & Wildlife Service does not have any regulation that governs bicycle use generally.¹⁶

1. Forest Service Regulations Stemming From the Act

The Forest Service's interpretation of the Act, as applied to bicycles,

11. *Id.*

12. *Id.*

13. *Id.*

14. 16 U.S.C. § 1133(c). In its entirety, 16 U.S.C. § 1133(c) provides:

Except as specifically provided for in this chapter, and subject to existing private rights, there shall be no commercial enterprise and no permanent road within any wilderness area designated by this chapter and, except as necessary to meet minimum requirements for the administration of the area for the purpose of this chapter (including measures required in emergencies involving the health and safety of persons within the area), there shall be no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area.

15. *Id.* § 1131(c).

16. *Cf.* 50 C.F.R. § 35.5 (2004) (prohibiting use of "mechanized transport" in Wilderness areas administered by the U.S. Fish & Wildlife Service).

has been found in three different sections of the Code of Federal Regulations. One rule dates back to 1966, another to 1977, and the third (which is no longer extant with regard to bicycles) to 1981.

a. A 1966 Regulation Permits Human-Powered Transport

In a regulation whose pedigree dates to 1966, and that remains in effect today, the Forest Service interpreted the Act as allowing human-powered transport, even if it is mechanically assisted. The regulation provides that "there shall be in National Forest Wilderness . . . no use of motor vehicles, motorized equipment, motorboats, or other forms of mechanical transport (a) *Mechanical transport*, as herein used, shall include any contrivance which travels over ground, snow, or water on wheels, tracks, skids, or by floatation and is propelled by a nonliving power source contained or carried on or within the device."¹⁷ Under this regulation, bicycles are not excluded from Wilderness.

b. A 1977 Regulation Prohibits Mountain Biking

By contrast, a regulation dating to 1977 forbids bicycles in Wilderness areas of National Forests. It provides in relevant part: "[t]he following are prohibited in a National Forest Wilderness: . . . (b) [p]ossessing or using a hang glider or bicycle."¹⁸

c. A 1981 Regulation Briefly Controlled Mountain Biking

A third regulation, still in effect for other purposes, controlled bicycle operation in Wilderness from 1981 to 1984. The regulation provided that individual National Forest authorities could permit or deny bicycle use. "When provided by an order, the following are prohibited: . . . (h) [p]ossessing or using a bicycle, wagon, cart, or other vehicle."¹⁹

d. A 1984 Regulatory Change Finally Ended Mountain Biking

In 1984, the reference to bicycles created by the 1981 regulation

17. 36 C.F.R. § 293.6 (2004). The relevant portion of 36 C.F.R. § 293.6 is substantively identical to former 36 C.F.R. § 251.75. That regulation was put into effect in 1966. Administration and Use of National Forest Wilderness and National Forest Primitive Areas, 31 Fed. Reg. 7899, 7900 (June 3, 1966). It was renumbered as 36 C.F.R. § 293.6 in 1973. Recreation in National Forests, Redesignation of Existing Regulations, 38 Fed. Reg. 5851, 5856 (Mar. 5, 1973).

18. 36 C.F.R. § 261.16. See Prohibitions, 42 Fed. Reg. 2956, 2959 (Jan. 14, 1977).

19. 36 C.F.R. § 261.57(h) (1981). See Prohibitions and Rewards and Impoundments, 46 Fed. Reg. 33518, 33521 (June 30, 1981).

was removed.²⁰ The practical effect was to conclusively eliminate bicycling in National Forest Wilderness. Although 36 C.F.R. § 293.6(a), which permits bicycling in National Forest Wilderness, was retained, it is not followed.

e. Internal Forest Service Policy

In addition to the three regulations, chapter 2320 of the Forest Service Manual governs "Wilderness Management." The Manual defines mechanical transport as: "[a]ny contrivance for moving people or material in or over land, water, or air, having moving parts, that provides a mechanical advantage to the user, and that is powered by a living or nonliving power source. This includes, but is not limited to, sailboats, hang gliders, parachutes, bicycles, game carriers, carts, and wagons. It does not include wheelchairs when used as necessary medical appliances. It also does not include skis, snowshoes, rafts, canoes, sleds, travois, or similar primitive devices without moving parts."²¹

2. National Park Service Regulations

A National Park Service regulation prohibits "[p]ossessing a bicycle in a wilderness area established by Federal statute."²²

3. Bureau of Land Management Regulations

The Bureau of Land Management (BLM) requires that "in BLM wilderness areas you must not: . . . (d) [u]se . . . other forms of mechanical transport."²³ The BLM defines mechanical transport as "any vehicle, device, or contrivance for moving people or material in or over land, water, snow, or air that has moving parts. This includes . . . bicycles. . . ."²⁴ The BLM regulations further provide that the Act does not operate to exclude "skis, snowshoes, non-motorized river craft [listing examples], or sleds, travois, or similar devices without moving parts."²⁵

20. See Special Uses; Prohibitions, 49 Fed. Reg. 25447, 25448, 25450 (June 21, 1984) (to be codified at 36 C.F.R. pts. 251, 261).

21. U.S. DEP'T OF AGRIC. FOREST SERV., FOREST SERVICE MANUAL § 2320.5(3) (1990), available at <http://www.fs.fed.us/im/directives/fsm/2300/2320.1-2323.26b.txt> (last visited April 7, 2004).

22. 36 C.F.R. § 4.30(d)(1).

23. 43 C.F.R. § 6302.20 (2004).

24. *Id.* § 6301.5.

25. *Id.*

III. Discussion

A. *The Act's Prohibition of Mechanical Transport Is Ambiguous*

The prohibition of any "form of mechanical transport"²⁶ in Wilderness is ambiguous regarding what Congress meant to prohibit and what it intended to permit. The presence of this ambiguity explains the historically inconsistent positions the Forest Service has taken on bicycles in Wilderness in its 1966 and 1977 regulations,²⁷ and the internal inconsistency in the Bureau of Land Management's current regulation.²⁸ There are at least three possible constructions of the "mechanical transport" clause.

1. The "Any Transportation Machine" Construction

One possible construction is that the Act prohibits the use of any non-motorized machine in Wilderness that enables transportation, even if the machine is simple, quiet, human-powered, and only temporarily present. Under this view, the Act's prohibition of mechanical transport is unambiguous.²⁹ As will appear, however, the legislative history disproves this interpretation of the Act.

2. The "Any Mechanical Device" Construction

Another possible construction of the Act is even broader: that the use in Wilderness of any mechanical component or device that contributes to or enables transportation is prohibited.

Terms used in the Act must be read with an understanding of what they meant to Congress in 1964.³⁰ An authoritative contemporary source defines "mechanical" as meaning "of, relating to, or concerned with machinery. . . ."³¹ A definition of "machinery" is "the constituent parts

26. 16 U.S.C. § 1133(c).

27. 36 C.F.R. §§ 261.16(b), 293.6(a).

28. 43 C.F.R. § 6301.5. The inconsistency in the Bureau of Land Management regulation consists of its prohibiting "*Mechanical transport*," defined as "any" transportation device "that has moving parts," but at the same time allowing the use of a list of devices such as "skis" and "river craft" that are likely to contain moving parts. *Id.*

29. The argument has been presented by Douglas W. Scott. See Douglas W. Scott, *Mountain Biking in Wilderness: Some History*, WILD EARTH 23, 23-25 (Thomas Butler ed., Spring 2003); Douglas W. Scott, *Mechanization in Wilderness Areas: Motors, Motorized Equipment, and Other Forms of Mechanical Transport*, Campaign for America's Wilderness (2003), at http://www.leaveitwild.org/reports/mechanization_0403.pdf (last visited Aug. 25, 2003).

30. See *Smiley v. Citibank*, 900 P.2d 690, 699-700 (Cal. 1995), *aff'd sub nom. Smiley v. Citibank (South Dakota), N. A.*, 517 U.S. 735 (1996).

31. WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY 1400 (1961).

of a machine or instrument. . . ."³² Two of the definitions of "machine" are "an assemblage of parts . . . that transmit forces, motion, and energy one to another in some predetermined manner and to some desired end" and "an instrument . . . designed to transmit or modify the application of power, force, or motion. . . ."³³ Thus, in theory, Congress's prohibition of any "form of mechanical transport"³⁴ could be so broad as to ban all mechanisms that aid transport.

Under this construction of the Act, a number of mechanical devices would have to be excluded from Wilderness that currently are permitted. They include alpine and mountaineering skis, rowboats with oarlocks, antishock hiking poles, and climbing gear. All of these devices rely on mechanical components to aid overland or water transportation. Because many of these devices were in use when the Act was fashioned by Congress, albeit in forms that were often primitive compared to those available today, it is implausible that Congress intended to prohibit them.

3. The Heavy, Bulky, or Scarring Equipment Construction

Yet another possible construction is that Congress meant to prohibit mechanical transport, even if not motorized, that (1) required the installation of infrastructure like roads, rail tracks, or docks, or (2) was large enough to have a significant physical or visual impact on the Wilderness landscape.

The text of the Act itself suggests that prohibiting heavy, bulky, or scarring equipment was the rule that Congress had in mind. Congress explained that it intended to keep Wilderness areas "in their *natural condition*."³⁵ It wanted to ensure that "expanding settlement and growing mechanization, does not *occupy* and *modify* all areas within the United States."³⁶ It intended to "provide for the protection of these areas, the preservation of their wilderness character."³⁷

Congress summarized its intention in a formal definition: "[a] wilderness, *in contrast with those areas where man and his own works dominate the landscape*, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain."³⁸ It "retain[s] its primeval character and influence, without *permanent improvements* or human habitation."³⁹

32. *Id.* at 1354.

33. *Id.* at 1353.

34. 16 U.S.C. § 1133(c).

35. 16 U.S.C. § 1131(a) (italics added).

36. *Id.* (italics added).

37. *Id.*

38. *Id.* § 1131(c) (italics added).

39. *Id.* (italics added).

Thus, the Act itself strongly suggests that the kind of non-motorized mechanical transport Congress wished to exclude from Wilderness was the type requiring roads or other artificial "works dominat[ing] the landscape,"⁴⁰ making it impossible to keep Wilderness areas "in their natural condition."⁴¹

As will appear in the discussion of the Act's legislative history, the heavy, bulky, or scarring equipment prohibition is in fact what Congress intended. Non-motorized carriers requiring such constructed infrastructure as roads or other obtrusive "permanent improvements,"⁴² or themselves dominating the landscape, were the aim of the Act's proscription. Thus, load-bearing rolling stock like trailers, tankers, wagons, ore carts, and the like are banned, and so are certain watercraft.

B. The Act's Legislative History Resolves the Mechanical-Transport Question

Because the Act's prohibition of any "form of mechanical transport"⁴³ is ambiguous, an examination of the Act's legislative history is warranted.⁴⁴ This inquiry leads to the conclusion that the Act does not prohibit the use of human-powered transport in Wilderness, be it by bicycle, ski, rock-climbing or mountain-climbing equipment, rowboat, kayak,⁴⁵ snowshoe, or similar device. It does prohibit permanent installations or structures,⁴⁶ including any that might facilitate a human-powered activity, but not the activity itself. Thus, rock climbing is allowed, but installing permanent anchors that facilitate the activity arguably is not.

In fact, Congress did not have any type of human-powered transport in mind when it passed the Act. Congress wanted to prohibit heavy mechanical transport that would require installing obtrusive permanent facilities such as roads, rail tracks, docks, and airstrips. During the House debate on the Act, the chairperson of the House Committee on Interior and Insular Affairs, Representative Wayne N. Aspinall of

40. 16 U.S.C. § 1131(c).

41. *Id.* § 1131(a).

42. *Id.* § 1131(c).

43. *Id.* § 1133(c).

44. *Patterson v. Schumate*, 504 U.S. 753, 761 (1992).

45. *See infra* note 96. The kayak is particularly important to this discussion because, as noted, some kayaks now employ a pedal-actuated propulsion system with similarities to the drive-train that propels a bicycle.

46. *See* 16 U.S.C. §§ 1131(c), 1133(c). To be sure, the latter provision prohibits any "structure or installation" without requiring that it be permanent or fixed. To interpret the provision in isolation, though, would lead to absurd results: no tent could be set up in a Wilderness area. Thus, the prohibition is best understood in harmony with and in light of the Act's definition of Wilderness areas as places lacking "permanent improvements."

Colorado, made it clear that the Act was intended to bar obtrusive infrastructure. Another House member asked, "[o]n page 17 of the bill . . . the language is as follows: 'has outstanding opportunities for solitude or a primitive and unconfined type of recreation.' I wonder what 'a primitive and unconfined type of recreation' might be?"⁴⁷ Representative Aspinall responded, "it just simply means that there will not be any manmade structures about in order to embarrass and handicap the enjoyers of this particular area."⁴⁸ The language quoted by the inquiring House member is now part of the Act.⁴⁹

Human-powered transport on Wilderness trails does not appear as a legislative concern; rather, it is identified as the very signature of the Wilderness experience. In regard to the most disruptive current controversy, whether cyclists should be permitted to explore Wilderness with mountain bikes, the House author and one of two principal Senate sponsors of the Act came as close to declaring bicycling a proper activity in Wilderness as a legislator could in the early 1960s, considering that the modern mountain bicycle would not be familiar for twenty more years. Testifying before a House subcommittee, Representative John P. Saylor of Pennsylvania asked to have included in the record a 1961 statement by Senator Clinton P. Anderson of New Mexico, made when Senator Anderson introduced a prior version of the Act in the Senate. In a passage titled "Wilderness Recreation," Senator Anderson stated, as relevant here:

Yet we must recognize and emphasize more than we have the values of wilderness recreation in providing for the health and vigor of our citizens.

"Physical fitness is the basis of all the activities of our society," and I say this in the words of President-elect John F. Kennedy writing thus in the December 26, 1960, issue of *Sports Illustrated*. In an article entitled "The Soft American," this great and vigorous leader warns that this "age of leisure and abundance can destroy vigor and muscle tone as effortlessly as it can gain time."

"Many of the routine physical activities which earlier Americans took for granted," he points out, "are no longer part of our daily life. A single look at the packed parking lot of the average high school will tell us what has happened to the traditional bike to school that

47. 110 CONG. REC. 17443 (1964).

48. *Id.*

49. 16 U.S.C. § 1131(c). *See also* 110 CONG. REC. 17447, 17454-56 (1964) (implying that Wilderness is meant to restrict development leading to mass recreational use).

helped to build young bodies. The television set, the movies, and the [myriad] conveniences and distractions of modern life all lure our young people away from the strenuous physical activity that is the basis of fitness in youth and in later life."

....

"Our kids are all right," said General Hershey [Maj. Gen. Lewis B. Hershey, director of the selective service], "but autos, innerspring mattresses, and regulated heating make it tougher for us to stay fit." Mr. Saylor agreed with General Hershey's comment that "we've got to stay vigorous and still enjoy our luxury," and he added the suggestion that our wilderness areas give us a chance to develop physical fitness and adventurous habits of mind, as well as find relief for jaded minds, tense nerves, and soft muscles.⁵⁰

In sum, key House and Senate backers of the Act thought that Wilderness was meant to "develop physical fitness and adventurous habits of mind"⁵¹ and they quoted President Kennedy regarding the virtues of the "traditional bike to school that helped to build young bodies."⁵² Had the ability to explore the outdoors by rugged bicycle travel existed in the 1960s, it seems unlikely that the forefathers of the Act would have thought it unsuitable for Wilderness.

1. The House Wished to Prohibit the Transport and Delivery of Persons and Supplies for Development Purposes, But Not to Prohibit Human-Powered Recreational Use

The House of Representatives' version of the Act initially provided that there should be no "use of motor vehicles, motorized equipment, or motorboats, or landing of aircraft, nor any other mechanical *transport or delivery of persons or supplies*, nor any temporary road, nor any structure or installation, in excess of the minimum required. . . ."⁵³ This language was identical to the version the Senate passed except for the placement of a comma following "aircraft."

The passive nature of the phraseology "mechanical transport or delivery of persons or supplies" provides the key to unlocking Congress's

50. *Wilderness Preservation System: Hearings Before the Subcomm. on Public Lands of the Comm. on Interior and Insular Affairs, House of Representatives*, 87th Cong., 2d Sess. (1962) 1050, 1097 (statement of Sen. Anderson, one of two Senate sponsors of the Act, sought to be placed in the record by Rep. Saylor, House author of the Wilderness Act).

51. *Id.*

52. *Id.*

53. 109 CONG. REC. 21430, 21435 (1963) (italics added).

intent. This is not language that would be employed to describe exploring Wilderness under one's own power. It connotes the *carrying* of human beings as passengers, or the conveyance of supplies as cargo, on a road in a mechanical conveyance like a wagon or by water on a barge. Congress intended to prohibit the passive transport of passengers. It did not intend to prohibit simple forms of human-powered transport, such as bicycles, snowshoes, skis, kayaks, rowboats, or climbing equipment, that can be used quietly on narrow trails or natural features. These devices do not require roads, nor do they leave any permanent trace.⁵⁴ The House wanted to preclude mechanical transport, whether or not motorized, that would require an artificial infrastructure and permanent alteration of the physical environment.

Following subcommittee and committee hearings in June 1964, the House of Representatives reduced "nor any other mechanical transport or delivery of persons or supplies" to "no other form of mechanical transport," the language now found in 16 U.S.C. § 1133(c). But this amendment did not widen the prohibition. Rather, the intent of the original "transport or delivery of persons or supplies" language remained following the simplification. The historical record establishes this point: a member of Congress explained to the House Committee on Interior and Insular Affairs that the clause was being amended "solely for the purpose of clarification. The substance and intent of the original language and of the substitute language are the same."⁵⁵

The House debate is replete with statements that the Act's purpose was to stop the installation of roads, mines, recreational facilities, commercial establishments, and other instances of modern infrastructure that, once in place, would permanently deprive an area of its primitive character.⁵⁶ The purpose of prohibiting mechanical transport was to ban conveyances that would require or support such facilities. Members of Congress wanted to "slow down the relentless process of development"⁵⁷ and limit "the encroachments of civilization."⁵⁸ Wilderness preservation

54. With regard to the mountain bike in particular: Not only does it not dominate the landscape, but it also does not cause changes in the natural condition of land beyond those temporary surface marks left by a tire and, like shoeprints or hoofprints, washed away in the next rain or soon erased by wind.

55. Statement of Representative Baring, on June 18, 1964, in the unpublished hearing *To Establish a National Wilderness Preservation System etc.*, House of Representatives, 88th Cong., 2d Sess. (1964) 121, 131. The committee was considering amendments to the House version of the Wilderness Act, H.R. 9070, recommended on June 3, 1964, in a committee print. See SUBCOMM. AMENDMENTS TO H.R. 9070, 88th Cong., 2d Sess. (Comm. Print No. 23) (1964) 14, lines 9-25, 15, lines 1-6.

56. 110 CONG. REC. 17427, 17430, 17434, 17435, 17437-39, 17442, 17444, 17446-48, 17453, 17454-56 (1964).

57. *Id.* at 17439 (statement of Rep. Cohelan).

58. *Id.* at 17435 (statement of Rep. Curtin).

was intended to stop "a continued reduction in this type of area, a reduction by roads, a reduction by improvements, a reduction by lumbering in areas that should not have lumbering in them, and in other ways through commercial resorts. . . ."⁵⁹ Wilderness would mean the welcome absence of "highways and beer cans, road signs, gas stations, junkyards, and taverns,"⁶⁰ the detritus of modern life. Wilderness areas were meant to "serve as a refuge from the fast-paced life of our modern, mechanized, and urban world . . . the pavement of the city, the snarls of traffic and the smokestack skyline."⁶¹

But human-powered recreation was welcome, even if aided by mechanical devices enabling activities like mountain climbing or skiing, and members of Congress saw such recreation as the proper use of Wilderness. "[T]he use of wilderness [is] those recreational pleasures that go with it—of . . . hiking, swimming, mountain climbing . . . and the general enjoyment of natural scenery and wildlife habitat."⁶² In the San Gorgonio primitive ski area, which was a subject of controversy during the House debate because it was targeted for commercial skiing development, "[i]nterested persons can ski . . . now, but they must walk or ski in rather than ride. They must also climb the slopes rather than be transported on tows. Is not this the mark of a true outdoorsman?"⁶³

2. The Senate's Intent Mirrored That of the House

Substantively identical to the version of the Act introduced in the House, the version that the Senate passed on April 9, 1963, provided that there should be no "use of motor vehicles, motorized equipment, or motorboats, or landing of aircraft nor any other mechanical *transport or delivery of persons or supplies*, nor any temporary road, nor any structure or installation, in excess of the minimum required. . . ."⁶⁴ This followed a debate that dwelled on the Act's effect on the mining industry, with its considerable infrastructure needs.⁶⁵

Like the House, the Senate wanted to preclude mechanical load-bearing conveyances that would inevitably require an artificial

59. *Id.* at 17437 (statement of Rep. Baldwin).

60. *Id.* at 17447 (statement of Rep. Gubser).

61. *Id.* at 17447 (statement of Rep. Osmer).

62. 110 CONG. REC. at 17443 (statement of Rep. Boland).

63. *Id.* at 17454-55 (statement of Rep. Goodling). *See also id.* at 17434, 17441 (statements of Reps. Dingell and Conte, making similar points). One House member regretted "the detrimental effect on these lands of our mechanical expansion." *Id.* at 17444 (statement of Rep. Libonati). In the context of the House debate, the comment appears to refer to the encroachment of modern development on primitive areas.

64. 109 CONG. REC. 5945 (1963) (*italics added*).

65. *See, e.g., id.* at 5942 (statement of Sen. Neuberger regarding the use of sluices); *see generally id.* at 5922-46.

infrastructure or permanent alteration of the physical environment—hence its prohibition of "mechanical transport or delivery of persons or supplies."⁶⁶ This is a sentence in which "mechanical transport" and "delivery" specify the means of the prohibited furnishing of "persons" (i.e., passengers) and "supplies" (i.e., cargo).

This conclusion is confirmed by examining another source of the legislative history. In its introductory comments on the legislation's function, the Senate committee considering the Act explained that the purpose of Wilderness was to preclude artificial installations and the use of heavy equipment that would alter the majestic landscape and scar the land. "As parts of the Wilderness Preservation System, they [Wilderness areas] would be preserved in their primitive condition, as nearly as possible devoid of the works of man. . . ."⁶⁷ Wilderness areas were to be "areas where man's work is substantially unnoticeable. . . ."⁶⁸ They have "a beauty that can be lost if the areas are opened to physical exploitation and not preserved substantially as the Creator has presented them to us."⁶⁹

To ensure the preservation of pristine areas, the Senate Report stated, in a paragraph linking the "no-mechanical-transport" statutory language to the infrastructure question at issue here, that "prohibited are construction of permanent roads, use of motor vehicles or motorized equipment, motorboats, landing of aircraft, or use of any other mechanical transport. The construction of temporary roads or structures or other installations is limited to the minimum necessary to the administration of the area for the purposes of the act, including measures required in emergencies. . . ."⁷⁰

3. The Act's Final Version Employed the Simplified Language

The House-Senate conferees would accept the House version of the

66. *Id.* at 5945.

67. S. REP. No. 88-109, at 1 (1963).

68. *Id.* at 8.

69. *Id.* at 16. The House of Representatives Report was to similar effect. H.R. REP. No. 88-1538 (1964), *reprinted in* 1964 U.S.C.C.A.N. 3615, 3615-16. The House Report is not as thorough or comprehensive as is the Senate Report, and accordingly is not extensively discussed here.

70. S. REP. No. 88-109, at 10. An opponent of the Act predicted that "There are to be no roads [and no new areas for] motorboats. . . . There will be no machinery of any kind in these areas. There will be nothing allowed in the areas except man on his two legs and on horses." 109 CONG. REC. 5894 (1963) (statement of Sen. Allard). If Senator Allard was predicting that the banning of roads and motorboats would eliminate from Wilderness all machinery that assists human transport, his concerns were unfounded. It is correct, though, that the Senate intended to ban land-based mechanical transport that required roads. To that extent, Senator Allard's prediction has been fulfilled.

Act.⁷¹ The conferees thereby adopted the simplified "no other form of mechanical transport"⁷² language rather than the "nor any other mechanical transport or delivery of persons or supplies"⁷³ clause. But the Conference Report did not mention its rationale for adopting the House version of the clause, whereas it did describe seven specific areas in which the conferees settled controversies arising from the different House and Senate versions of the Act, or repaired perceived flaws in the House version. This makes sense given Representative Baring's explanation that the amendment prohibiting mechanical transport was not substantive, but was offered only for clarity. If the two different versions of the no-mechanical-transport clause had created controversy, the conferees would have mentioned the reason for adopting the House version of the clause in place of the Senate version.

In sum, the clause prohibiting any "other form of mechanical transport"⁷⁴ is a shorthand form of disallowing "any other mechanical transport or delivery of persons or supplies."⁷⁵ It means that non-motorized mechanical transport used to carry people or material, requiring an artificial infrastructure or causing damaging alteration of the physical environment, is prohibited. It does not mean that exploring Wilderness by mechanically aided human-powered transport is prohibited.

4. The Commission on Which Congress Relied Equated Mechanized and Motorized Transport

Further evidence of Congress's intent to prohibit only certain types of mechanical transport may be found in the work of the Outdoor Recreation Resources Review Commission (ORRRC).

The legislative history of the Act differs from many statutes because, although congressional committees considered and issued reports on the proposed Act, their deliberations were preceded by, and heavily influenced by, a blue-ribbon report and the background studies that it summarized.⁷⁶ The Senate Report conveying the Senate's version of the Act provides additional evidence of Congress's reliance on the ORRRC's report.⁷⁷ Also, during the House debate on the Act, Representative Aspinall called the ORRRC "an instrument, if you please,

71. H.R. CONF. REP. No. 1829, *reprinted in* 110 CONG. REC. 20628 (1964), and *reprinted in* 1964 U.S.C.C.A.N. 3615, 3631-33.

72. 16 U.S.C. § 1133(c).

73. *See* 109 CONG. REC. 21430, 21435; 109 CONG. REC. 5945.

74. 16 U.S.C. § 1133(c).

75. *See* 109 CONG. REC. 21430, 21435; 109 CONG. REC. 5945.

76. *Sierra Club v. Block*, 622 F.Supp. 842, 856 (D. Colo. 1985).

77. S. REP. No. 109, at 2 (1963).

of the Congress of the United States."⁷⁸

The ORRRC report, *Outdoor Recreation for America*, was based on 27 separate Study Reports. ORRRC Study Report 3, *Wilderness and Recreation—A Report on Resources, Values, and Problems*, is a densely composed document of more than 300 pages. It was written for the ORRRC by the Wildland Research Center of the University of California, and, like the ORRRC report, was issued in 1962.

In a key passage, Study Report 3 uses "mechanized" to mean motorized forms of transport exclusively. It concluded that "wilderness recreation stands in strong contrast to other types of outdoor recreation commonly available by mechanized means."⁷⁹ "In our judgment, wilderness recreation will be available in areas having the following characteristics. . . . Not open to *auto, jeep, truck, motorcycle, motorboat, airplane, helicopter*, or other means of *mechanized* travel."⁸⁰ To the authors of the Study Report, mechanized travel meant travel by motorized transport.

The authors of ORRRC Study Report 3 foresaw Wilderness as land that would be protected from the great mass of visitors who prefer to sightsee by car.⁸¹ Roads should be excluded from Wilderness "not only because they are unnatural elements in the landscape but also because their absence discourages crowds, which would replace the wilderness environment with an entirely different one, suitable for other kinds of recreation."⁸² The authors noted the prevailing ethos: "Our people do not . . . wish to walk where they can ride, nor do they desire to go by canoe where they can go by automobile."⁸³ Quoting the renowned conservationist Aldo Leopold among others, the authors envisioned Wilderness as a refuge protected from those wanting to sightsee as a form of motor-powered leisure and thereby despoiling pristine land.⁸⁴

In sum, "mechanized travel" was seen as using motor-driven carriers collectively able to move people interested in seeing federal lands in comfort. The authors thought that Wilderness should offer different experiences: adventure, challenge, tolerable discomfort,

78. 110 CONG. REC. 17452 (1964).

79. STUDY REP. 3, 298.

80. *Id.* at 298-99 (italics added).

81. STUDY REP. 3 at 28-30, 298-99, 301-02.

82. *Id.* at 29.

83. *Id.* at 28, quoting the Department of Lands and Forests of Ontario, Canada (1947) (ellipsis in the Study Report).

84. ORRRC Study Report 3 also mentioned an "intermediate" form of recreation that would be roadless but in which a "wilderness environment is not essential." *Id.* at 298. It is unclear what the authors were referring to; it may have been forms of recreation that required neither roads nor much physical effort, such as boating on tranquil lakes.

solitude, and a difficult to achieve sensory experience.⁸⁵ In their words, "wilderness travel" should be "hard work and often uncomfortable," requiring "good physical conditioning . . . and confidence in one's own resourcefulness. . . . There is a fascination in this persistent challenge to the will."⁸⁶ The value of solitude was, for the authors, also properly bound up with hard physical work. "In this sense it comes from an affirmative action; it is a solitude comparable to a climber's sensations on reaching a mountain top: a hard-earned, open privacy."⁸⁷

One major objective of recommending that "mechanized travel" be excluded from Wilderness⁸⁸ was to keep Wilderness free of obtrusive and obviously manmade installations like roads, quays, airstrips, and rail tracks. In *Outdoor Recreation for America*, the ORRRC explained that "[p]rimitive areas satisfy a deep-seated human need occasionally to get far away from the works of man."⁸⁹ The "basic criteria of primitive areas" are that their "natural environment has been undisturbed by commercial utilization, and [that] they are without roads."⁹⁰

The ORRRC made clear the fundamental incompatibility between obtrusive infrastructure and Wilderness, and linked mechanical transport to the former. "There should be no development of public roads, permanent habitations, or recreation facilities of any sort. Their avoidance is the keystone of management. Mechanized equipment of any kind should be allowed in the area only as needed to assure protection from fire, insects, and disease."⁹¹

The ORRRC further noted that "[t]he objective in the management of all Class V [i.e., primitive] areas . . . is the same--to preserve primitive conditions,"⁹² i.e., to keep roads and road-utilizing equipment out. "The purpose of legislation to designate outstanding areas in this class in Federal ownership as 'wilderness areas' is to give the increased assurance of attaining this objective that action by the Congress will provide."⁹³

The mountain bike, which is human-powered and needs no more than narrow trails for quiet recreation, does not interfere with a Wilderness area's desired "primitive characteristics."⁹⁴ Similar considerations apply to skis, kayaks, rowboats, and rock-climbing and

85. STUDY REP. 3 at 29-30.

86. *Id.* at 29-30.

87. *Id.* at 30.

88. STUDY REP. 3 at 299.

89. OUTDOOR RECREATION RESOURCES REVIEW COMMISSION, OUTDOOR RECREATION FOR AMERICA, at 131 (1962).

90. *Id.* at 132.

91. *Id.* at 113.

92. ORRRC REPORT, *supra* note 89, at 132; *see also id.* at 8, 113.

93. *Id.* at 132.

94. ORRRC REPORT, *supra* note 89, at 113.

mountain-climbing equipment. Even if these devices contain sophisticated mechanical components, it is very unlikely that the ORRRC's authors would have thought that they should be prohibited in Wilderness.

5. Conclusion From the Act's Legislative History

The language of the House and Senate versions of the Act, which simplified the prohibition of the "mechanical transport or delivery of persons or supplies,"⁹⁵ the congressional debates, the committee hearings, the statements of key legislators in favor of using Wilderness to promote physical fitness, and the work of the ORRRC, all lead to one conclusion. It is clear that with regard to non-motorized mechanical transport, Congress intended to exclude from Wilderness only heavy, load-bearing rolling stock or watercraft that would require roads, rail tracks, docks, or other obtrusive infrastructure, or that would have an undue physical or visual impact on the landscape. Congress never desired to prohibit healthful human-powered exploration of federal wildlands with devices that have none of the foregoing deleterious effects. The Act does not prohibit exploring Wilderness by such mechanical means as bicycles with pedals and gears, skis with sophisticated bindings, rowboats with oarlocks, modern kayaks that use pedals for propulsion⁹⁶ or steering, or the pulleys, carabiners, and similar devices required for mountain climbing.⁹⁷

95. See 109 CONG. REC. 21430, 21435; 109 CONG. REC. 5945.

96. Advances in kayak technology include similarities to bicycles, such as the use of pedals, chains, and sprockets for propulsion:

A penguin flapping its wings to generate forward thrust is the best analogy for the new Mirage Drive kayak propulsion system from Hobie Cat Co., Oceanside, Calif., says Engineering Vice President Greg Ketterman.

Linking the kayak's underwater fins to the foot pedals driving them is a support made of Verton RF from LNP Engineering Plastics, Exton, Pa. The support pivots on a stainless-steel shaft on which three cables attach. The cables apply force to a chain-and-sprocket arrangement, which moves the fins back and forth.

Lawrence Kren, *Kayak Trades Paddles for Pedals*, MACHINE DESIGN, June 7, 2001, http://www.findarticles.com/cf_dls/m3125/11_73/75834137/p1/article.jhtml (last visited April 14, 2004).

The benefits of the pedal propulsion system, according to Hobie Cat, a manufacturer of kayaks so equipped, include these: "Eliminates drip from a paddle . . . [t]he larger muscles in our legs produce more powerful propulsion versus a paddle kayak . . . [l]eaves hands free for fishing, photography or holding a drink." *Benefits of the Hobie MirageDrive Mechanism, Hobie Mirage Drive*, at <http://www.hobiecat.com/kayaking/miragedrive.html> (last visited April 14, 2004).

97. This article does not consider whether the Wilderness Act prohibits mechanical transport that is not human-powered but that does not necessarily impact the landscape. See *Stupak-Thrall v. U.S.*, 843 F. Supp. 327, 328, 334 (W.D. Mich. 1994), *aff'd*, 70 F.3d 881 (6th Cir. 1995), *aff'd by an equally divided en banc court*, 89 F.3d 1269 (6th Cir.

C. *Bicycling and the Rattlesnake Wilderness Act of 1980*

With regard to the bicycle in particular, evidence suggesting that Congress never meant to exclude cyclists from Wilderness is found in a later statute. In enacting the Rattlesnake National Recreation Area and Wilderness Act of 1980,⁹⁸ Congress created the Rattlesnake Wilderness in Montana's Lolo National Forest. In so doing, for the first and only time, Congress addressed the suitability of bicycle travel in a Wilderness area. Congress expressly authorized the activity.

The 1980 Act describes "bicycling" as a form of "primitive recreation" fitting for Wilderness,⁹⁹ as opposed to other forms of "recreation"¹⁰⁰ that are not equally deserving. The statute provides, as relevant here: "[t]he Congress finds that—(1) certain lands on the Lolo National Forest in Montana have high value [as Wilderness]. This national forest area has long been used as a wilderness . . . as a source of solitude . . . and *primitive recreation*, to include such activities as hiking, camping, backpacking, hunting, fishing, horse riding, and *bicycling*. . . ."¹⁰¹

A separate statutory provision explains, by contrast, that "certain

1996) (Forest Service may ban sailboats as mechanical transport forbidden under Wilderness Act). Hang gliders are prohibited in Forest Service-administered Wilderness. 36 C.F.R. § 261.16(b) (2004).

98. 16 U.S.C. § 460ll et seq. (hereinafter sometimes referred to as the 1980 Act). In its entirety, 16 U.S.C. § 460ll provides:

(a) The Congress finds that—

- (1) certain lands on the Lolo National Forest in Montana have high value for watershed, water storage, wildlife habitat, primitive recreation, historical, scientific, ecological, and educational purposes. This national forest area has long been used as a wilderness by Montanans and by people throughout the Nation who value it as a source of solitude, wildlife, clean, free-flowing waters stored and used for municipal purposes for over a century, and primitive recreation, to include such activities as hiking, camping, backpacking, hunting, fishing, horse riding, and bicycling; and
- (2) certain other lands on the Lolo National Forest, while not predominantly of wilderness quality, have high value for municipal watershed, recreation, wildlife habitat, and ecological and educational purposes.

(b) Therefore, it is hereby declared to be the policy of Congress that, to further the purposes of the Wilderness Act of 1964 (16 U.S.C. 1131) and the National Forest Management Act of 1976 (16 U.S.C. 1600), the people of the Nation and Montana would best be served by national recreation area designation of the Rattlesnake area to include the permanent preservation of certain of these lands under established statutory designation as wilderness, and to promote the watershed, recreational, wildlife, and educational values of the remainder of these lands.

99. *Id.* § 460ll(a)(1).

100. *See id.* § 460ll(a)(2).

101. *Id.* § 460ll(a)(1) (italics added).

other lands on the Lolo National Forest, while not predominantly of wilderness quality, have high value for municipal watershed, *recreation*, wildlife habitat, and ecological and educational purposes."¹⁰²

Finally, Congress declared that creating the Rattlesnake Wilderness will "further the purposes of the Wilderness Act of 1964. . . ." ¹⁰³ In other words, the 1980 Act is in harmony with the original Act.

The inclusion of bicycling as a form of primitive recreation suitable for the Rattlesnake Wilderness suggests that in 1980, Congress did not disapprove of the presence of bicycles in Wilderness. Certainly it did not disapprove of bicycle use in the Rattlesnake Wilderness. To the contrary, it found that bicycling in that Montana Wilderness area is a worthwhile activity.

On its face, of course, the 1980 Act shows an intent by Congress only to permit bicycling in the Rattlesnake Wilderness. But the 1980 Act suggests a degree of congressional equanimity about bicycle use in Wilderness generally. As described, the 1980 Act provides that "bicycling" is a form of "primitive recreation" suitable for the Rattlesnake Wilderness.¹⁰⁴ In turn, the 1964 Wilderness Act specifies that "primitive . . . recreation" is one purpose for Wilderness generally.¹⁰⁵ Congress declared that creating the Rattlesnake Wilderness will "further the purposes of the Wilderness Act of 1964. . . ." ¹⁰⁶ Unless the topography of the Rattlesnake Wilderness or the trail network that existed there in 1980 is markedly different from those of most other Wilderness areas, the passage of the 1980 Act suggests that the contemporary Congress held positive views on bicycling generally in the nation's wildlands.¹⁰⁷

IV. Policy Considerations

The Wilderness Act of 1964 is a monumental achievement in the history of American conservation, and few outdoor enthusiasts would wish to undermine its integrity. Plainly, the Act's specification that Wilderness is to provide "outstanding opportunities for solitude or a primitive and unconfined type of recreation"¹⁰⁸ and to be a place where

102. 16 U.S.C. § 460*ll*(a)(2) (italics added).

103. 16 U.S.C. § 460*ll*(b).

104. *Id.* § 460*ll*(a)(1).

105. 16 U.S.C. § 1131(c).

106. 16 U.S.C. § 460*ll*(b).

107. There is also statutory evidence of congressional approval of bicycling in federal wildlands generally. Congress has found mountain biking suitable in principle for trails on the national trails system. "Potential trail uses allowed on designated components of the national trails system may include . . . bicycling. . . ." 16 U.S.C. § 1246(j).

108. 16 U.S.C. § 1131(c).

"the imprint of man's work [is] substantially unnoticeable"¹⁰⁹ must be respected. Ideally, the goals of preserving solitude, providing possibilities for primitive recreation, and allowing only minimal impact on the land should all be given the greatest possible attention. Striving to achieve these goals will inevitably raise the question of the environmental and social carrying capacity of a Wilderness area, including its trails and waterways.

Fortunately, agency regulations provide Wilderness managers with the flexibility to ensure that an area is not overburdened by crowds or by the impact of the use of the Wilderness. A Forest Service regulation provides: "[t]he Chief, each Regional Forester, each Experiment Station Director, the Administrator of the Lake Tahoe Basin Management Unit and each Forest Supervisor may issue orders which close or restrict the use of any National Forest System road or trail within the area over which he has jurisdiction."¹¹⁰ The other Wilderness-administering agencies—the National Park Service, Bureau of Land Management, and U.S. Fish & Wildlife Service—have a similar authority.¹¹¹

Thus, it need not undermine the integrity of Wilderness to permit forms of human-powered transport in Wilderness areas that have not been impacted from these activities for some time, if ever (since 1977, in

109. *Id.*

110. 36 C.F.R. § 261.50(b) (1977). Not only does 36 C.F.R. 261.50(b) permit regulation of visitor uses of Wilderness so as to eliminate or mitigate their impact, but the Forest Service Manual also has a number of provisions that require Forest Service staff to protect Wilderness from degradation caused by human activity. *See* FOREST SERVICE MANUAL, *supra* note 21, § 2320.6 ("Manage wilderness toward attaining the highest level of purity in wilderness within legal constraints"); *id.* ("Where a choice must be made between wilderness values and visitor or any other activity, preserving the wilderness resource is the overriding value"); *id.* § 2322.03(2)(b) (forest plan must address suitable recreation); *id.* § 2322.03(2)(c) (forest plan must include monitoring to ensure standards are met); *id.* § 2323.04c(1) (Regional Forester may require visitor registration and/or permits); *id.* § 2323.04d(3) (Forest Supervisor may limit "the number of visitors, parties, party size, or duration of visitor stays in a specific area when the wilderness resource is threatened or damaged because of use by an excessive number of people"); *id.* § 2323.14 ("Plan and manage public use of wilderness in such a manner that preserves the wilderness character of the area. Provide for the limiting and distribution of visitor use according to periodic estimates of capacity in the forest plan").

111. 43 C.F.R. § 6302.19 (2000) (Bureau of Land Management regulation permitting agency to limit use to protect Wilderness); *id.* § 8364.1 (Bureau of Land Management regulation enabling agency to close or restrict use of public lands to protect them); *id.* § 8365.1-4(a) (Bureau of Land Management regulation prohibiting noxious or dangerous conduct on public lands); 50 C.F.R. §§ 26.31-26.33 (1987) (U.S. Fish & Wildlife Service regulations regarding public use and recreation); *id.* § 35.2(b) (U.S. Fish & Wildlife Service regulation protecting character of Wilderness); *id.* § 35.6(a) (U.S. Fish & Wildlife Service regulation allowing agency to restrict visits to Wilderness); *Niobrara River Ranch, L.L.C. v. Huber*, 277 F.Supp.2d 1020, 1036-37 (Neb. Dist. Ct. 2003) (describing U.S. Fish & Wildlife Service limits on use of Wilderness portion of Niobrara River); *see generally* 36 C.F.R. pts. 2, 3 (1995) (National Park Service regulations).

the case of the mountain bike in National Forest Wilderness areas).¹¹² Conversely, overuse of Wilderness for traditional recreational pursuits like camping and horseback riding does harm Wilderness. In sum, the issue is one not of the type of use, for all have impacts, but of proper management of Wilderness lands.

With regard to the bicycle, concerns about intrusiveness, speed, and environmental effects are sure to arise. But Wilderness land managers can confidently rely on their management authority and on recent observational data and scientific studies that demonstrate that any potential problems are eminently susceptible to mitigation.

Bicyclists may travel longer average distances than hikers, but hikers often spend more time in habitat, regularly camping overnight and sometimes leaving traces of their passage.¹¹³ A study in Switzerland indicated that bicyclists' effects on alpine chamois were about equal to those of other user groups.¹¹⁴ A recent experiment performed at the University of Guelph in Ontario indicated that bicycling and hiking had similar effects on the vegetation studied.¹¹⁵ In sum, bicycling affects wildlands, but hiking, horseback-riding,¹¹⁶ boating, and just about every other human endeavor has a similar effect.

It is likely that there will be some trails on which adding cyclists to the current mix of pedestrians and equestrians will present an environmental challenge or test the social carrying capacity of the Wilderness. In those areas, agency regulations allow land managers to regulate visitor use so that a trail's carrying capacity is not exceeded.

Because exploring rugged Wilderness terrain by bicycle is physically taxing, it is safe to conclude that only intrepid mountain bikers will be attracted to the venture. Thus, the character of Wilderness is likely to be observed and respected. Mountain bikers capable of navigating Wilderness are among "those rugged few who seek the solitude of these areas."¹¹⁷ Wilderness-oriented mountain bikers have "a

112. 36 C.F.R. § 261.16(b).

113. See Lichtenstein, *supra* note 4.

114. Hans Gander & Paul Ingold, *Reactions of Male Alpine Chamois Rupicapra r. rupicapra to Hikers, Joggers and Mountainbikers*, BIOLOGICAL CONSERVATION, Vol. 79, 107 (1996).

115. Eden Thurston & Richard J. Reader, *Impacts of Experimentally Applied Mountain Biking and Hiking on Vegetation and Soil of a Deciduous Forest*, ENVIRONMENTAL MANAGEMENT, Vol. 27, No. 3, 397, 402, 405, 407 (2001).

116. Though travel with horses and pack animals is allowed in Wilderness, the authors of ORRRC Study Report 3 were aware of its environmental problems. Noting that "recent studies have suggested that horse and packstock use are primary factors in trail degeneration," they concluded, "Airplane 'drops' of supplies to camping parties in wilderness areas . . . is less detrimental to the wilderness environment, if limited, than supply by pack animals." STUDY REP. 3, *supra* note 79, at 301.

117. S. REP. No. 87-635, at 42 (1961) (expressing minority views).

great love of wild places, both the ones we visit for renewal and reinvigoration and the ones that we'll never visit, but know are there. We love living in a world that is still wild."¹¹⁸ If Wilderness is made accessible to bicyclists, then they, "like other responsible wilderness visitors, can enjoy the solitude, splendor, adventure, discovery, and awe of traveling through untrammelled land."¹¹⁹ Similar to other Wilderness visitors, Wilderness cyclists are likely to be those desiring to "lead a better life by, for at least some of our time, leaving behind all that is quick, easy, conventional, and externally driven."¹²⁰ As explained, this is the type of experience that Congress intended for the intrepid to enjoy in Wilderness.

Some may fear that new human-powered uses in Wilderness (and again bicycling in particular) will disrupt the placidity and solitude that they believe to be the signature of the Wilderness experience, i.e., that some mountain bikers, even if they are a small minority, might turn Wilderness areas into theme parks for feats of skill and daring.

For the last two decades, federal agencies and the mountain bike community have successfully managed user interactions and controlled improper conduct. Thus, little cause for concern exists, especially inasmuch as the great majority of mountain bikers who explore Wilderness are likely to be those who, like their fellow hikers, climbers, anglers, boaters, kayakers, runners, snowshoers, equestrians, and skiers, seek an adventurous, yet appreciative experience—one that is not only respectful of Wilderness but is positively inspired by it. The travel is too arduous and the setting is too spectacular for it to be otherwise. In sum, the goals of rugged recreation and solitude are possible for all, as long as visitor access is well regulated.

V. Conclusion

The Forest Service, National Park Service, and Bureau of Land Management should reexamine the prohibition of bicycles in Wilderness that they have promulgated in federal regulations. The regulations appear to run counter to congressional intent. In promulgating new regulations to control human-powered travel in Wilderness, the agencies should ensure that they do not prohibit human-powered activities like boating, kayaking, skiing, rock climbing, or mountain climbing.

As mentioned, some Wilderness trails or areas may attract enough

118. Jim Hasenauer, *A Niche for Bicycles*, WILD EARTH 21 (Thomas Butler ed., Spring 2003).

119. *Id.*

120. Sarah Krakoff, *Mountains Without Handrails . . . Wilderness Without Cellphones*, 27 HARV. ENVTL. L. REV. 417, 425 (2003).

new users, particularly cyclists, to warrant mitigating measures. The use of horses and pack stock and of popular camping areas is sometimes regulated to preserve the Wilderness experience for everyone, and these same tactics may also be required for new activities. Current regulations and agency practices suffice to address concerns regarding overuse or improper use.

Finally, it is in the interest of traditional Wilderness advocates and human-powered recreational enthusiasts who value Wilderness to settle the question of human-powered transport cooperatively.

For their part, mountain bikers and bicycle access advocates should realize that an amicable approach in relating to the four Wilderness-administering agencies is more likely to succeed than litigation, civil disobedience in defiance of current closures, or similarly combative actions. The United States Court of Appeals for the Ninth Circuit recently explained that formally promulgated agency regulations interpreting ambiguities in the Act's Wilderness use restriction language¹²¹ enjoy considerable deference on judicial review.¹²² Thus it behooves the mountain biking community to approach the Forest Service, National Park Service, Bureau of Land Management, and U.S. Fish & Wildlife Service in a non-adversarial manner and suggest approaches that will allow mountain biking in Wilderness without undue impact on Wilderness areas.

Similar considerations should govern the conduct of Wilderness proponents. They face enough obstacles to Wilderness expansion without alienating tens of thousands of mountain bikers (and, in the future, other categories of recreational enthusiasts whose numbers may grow).¹²³ The proponents should trust that the same land managers who have successfully regulated off-road bicycling on federal lands for many years will be able to do so in Wilderness.

*Wilderness Society v. U.S. Fish & Wildlife Service*¹²⁴ also gives Wilderness proponents reasons to compromise. As this article has

121. 16 U.S.C. § 1133(c).

122. *Wilderness Society v. U.S. Fish & Wildlife Service*, 353 F.3d 1051 (9th Cir. 2003) (en banc) (addressing the meaning of the prohibition of commercial enterprises in Wilderness found in 16 U.S.C. § 1133(c), and explaining in a dictum, at 1059-60, 1067-68, that ambiguous Wilderness use restrictions interpreted through generally applicable agency regulations properly having the force of law will be upheld unless the agency's interpretation is arbitrary, capricious, or manifestly contrary to the statute).

123. Senator Boxer recognized the strength of mountain bikers' opposition to her California Wilderness bill on the Senate floor. "While wilderness designation means the wilderness areas are closed to mountain bikers, they remain open to a myriad of recreational activities. . . ." 149 CONG. REC. 10909 (Aug. 1, 2003). If the question of mountain biking were removed from the table, presumably the opposition of most mountain bikers to Wilderness expansion would dwindle or cease.

124. See *Wilderness Society*, 353 F.3d at 1051, 1059-60, 1067-68.

explained, the law favors mountain bike access to Wilderness. If federal agencies agree and rewrite their regulations, those who would prefer to exclude bicycles from Wilderness will face major difficulties in trying to overturn the changed rules through judicial review. To be sure, the Wilderness Act of 1964 could always be amended to favor either side's position, and that would be the end of the matter.¹²⁵ But it is not in the interest of Wilderness proponents to go so far. If Congress were to amend the Act, as it has done only once before, more than 25 years ago,¹²⁶ it might make changes far beyond amending the text of the no-mechanical-transport clause—changes that could undermine the character of Wilderness and diminish its luster.

125. See 42 U.S.C. § 12207(c) (1990) (authorizing wheelchair access to Wilderness in limited circumstances).

126. See *supra* note 2.