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SURFACE TENSION: THE PROBLEM OF FEDERAL/PRIVATE SPLIT ESTATE LANDS

*Andrew C. Mergen**

There are many arts and sciences of which a miner should not be ignorant. Lastly there is the law, especially that dealing with metals, that he may claim his own rights, that he may not take another man's property.

Georgius Agricola, *De Re Metallica* (1556)

The fully qualified mining engineer and mining geologist who has to deal with mines and mining properties of the public domain, owned and worked under the grants and terms of the laws of the United States, must be more than a theoretical or practical geologist: he must be learned in the law.

James D. Hague, addressing the Mining Engineering Section of the International Congress of Arts and Sciences in connection with the St. Louis World's Fair, 1904.¹

INTRODUCTION

The quotations cited above state a truism of some antiquity. Individuals and corporations engaged in the recovery of mineral wealth must have considerable familiarity with the laws that govern the ownership and extraction of these resources. This article focuses on an area of increasingly contentious legal disputes: the exploration for and extraction of mineral resources on federal split estate lands.

In the United States, land may be horizontally severed into surface and subsurface estates. Where such a severance has occurred, a split estate is formed such that the mineral and surface rights to a single plot of land are

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1. *Reprinted in 78 ENGINEERING AND MINING JOURNAL*, NO. 16 at 627 (1904).

held by different parties.² The creation of split estate lands is in tension with traditional common law notions of land ownership. Under traditional common law, an owner of a parcel of land controlled it from the heavens to the center of the earth.³

The severance of the mineral estate from the surface estate is thought to promote the public's interest in the development of mineral wealth. Such a severance is also judged useful because mineral extraction requires large investments of capital and sophisticated expertise.⁴ Splitting the mineral estate from the surface estate allows those with the financial wherewithal and expertise, to develop the land's mineral wealth while allowing the surface owner to continue using his estate. Thus, in theory, the creation of split estates provides greater specialization efficiencies because the owners of the different estates can optimize the use of the property.⁵ In practice, however, the use of one estate can damage the usefulness of the other. Not surprisingly, there has been considerable litigation involving split estates and the problems they create for owners of the varied interests.⁶ Until recently, most of this litigation involved private parties and interests. Increasingly, this litigation involves disputes between the federal agencies which manage the surface estates and private development interests which own the mineral

2. See *Del Monte Mining and Milling Co. v. Last Chance Mining and Milling Co.*, 171 U.S. 55, 60 (1898) (stating that "[u]nquestionably at common law the owner of the soil might convey his interest in mineral beneath the surface without relinquishing his title to the surface," thereby separating ownership of surface from ownership of "mines beneath that surface").

3. See *United States v. Causby*, 328 U.S. 256, 260-61 (1946) (explaining that under the common law "ownership of the land extend[s] to the periphery of the universe"). See also Michelle Andrea Wenzell, Note, *The Model Surface Use and Mineral Development Accommodation Act: Easy Easements for Mining Interests*, 42 AM U. L. REV. 607-09 (1993) (reviewing history of property ownership and stating that the split estate concept is seemingly antithetical to traditional notions of property ownership).

4. Wenzell, *supra* note 3, at 609-10; Ernest E. Smith, *Evolution of Oil and Gas Rights in the Eastern United States*, 10 E. MIN. L. FOUND. § 16.03, at 16-13 (1989) (stating that even "shallow wells and relatively crude technology" of oil industry are beyond most landowners). Mining for hard rock minerals is even more capital intensive than oil drilling because of, among other things, greater equipment and labor costs. 4 AM. LAW OF MINING § 122.02-03 (ROCKY MTN. MIN. L. FOUND. ed., 2d. ed. 1992).

5. Professor Huffman has explored the allocational efficiency of mineral severance in some detail. See James L. Huffman, *The Allocative Impact of Mineral Severance: Implications for the Regulation of Surface Mining*, 22 NAT. RESOURCES J. 201 (1982).

6. Cases representative of split estate disputes include *Reno Livestock Corp. v. Sun Oil Co.*, 638 P.2d 147 (Wyo. 1981), and more recently *Gerrity Oil & Natural Gas Corp. v. Magness*, 946 P.2d 913 (Colo. 1997). The secondary literature on private split estate conflicts is rich. Useful analyses include: Laura H. Burney, *A Pragmatic Approach to Decision Making in the Next Era of Oil and Gas Jurisprudence*, 16 J. ENERGY, NAT. RESOURCES & ENVTL. L. 1 (1996); John F. Welborn, *New Rights of Surface Owners: Changes in the Dominant/Servient Relationship Between the Mineral and Surface Estates*, 40 ROCKY MTN. MIN. L. INST. 22-1 (1994); John S. Lowe, *The Easement of the Mineral Estate for Surface Use: An Analysis of Its Rationale, Status and Prospects*, 39 ROCKY MTN. MIN. L. INST. 4-1 (1993); Paul F. Hultin, *Recent Developments in Statutory and Judicial Accommodation Between Surface and Mineral Owners*, 28 ROCKY MTN. MIN. L. INST. 1021 (1982); Marvin D. Truhe, *Surface Owner vs. Mineral Owner or "They Can't Do that, Can They?"*, 27 S.D. L. REV. 376 (1982); Owen M. Lopez, *Upstairs/Downstairs: Conflict Between Surface and Mineral Owners*, 26 ROCKY MTN. MIN. L. INST. 995 (1980).

estates. The disputes focus on the extent and source of the federal government's authority to regulate use of the surface estate.

These disputes are significant for several reasons. First, the lands involved frequently have significant environmental values. Recent litigation has involved among other lands, a national wildlife refuge, a national grassland, and a national seashore.⁷ All three of these federal properties are regulated by different federal agencies. Mining and oil and gas development can have significant impacts on wildlife and plant communities, cultural resources and water, soil, and air quality.⁸ Until recently, many Americans, including environmental commentators, failed to appreciate that oil, gas and mineral exploration and development could occur and was, in fact, occurring on sensitive lands managed by the National Park Service (Park Service) and the United States Fish and Wildlife Service (FWS) where there were private/federal split estates.⁹ The environmental impacts associated with these activities may diminish the environmental values associated with these lands owned and managed for the public at large. In one recent case, a development interest asserted an "unfettered" right to use and even "destroy" the surface lands of a national park in order to develop the mineral estate.¹⁰ In a national wildlife refuge, salt-water contamination from gas production threatened the refuge's ability to support the rare wildlife the refuge was established to protect.¹¹

Second, these disputes are significant because issues of federal versus state or local authority over the development and management of public lands is an area of marked antagonism in parts of the rural west.¹² State law

7. *Duncan Energy Co. v. U.S. Forest Serv.*, 50 F.3d 584 (8th Cir. 1995) (national grassland); *Caire v. Fulton*, No. 84-3184 (W.D. La. filed Feb. 10, 1986) (national wildlife refuge); *Dunn-McCampbell Royalty Interest, Inc. v. Nat'l Park Serv.*, 112 F.3d 1283 (5th Cir. 1997) (the author represented the National Park Service before the Fifth Circuit in this case).

8. For a recent discussion of some of the environmental effects oil and gas development can have on wildlife populations, see Ted Williams, *Fatal Attraction*, AUDUBON, Sept.-Oct. 1997, at 24.

9. For example, a recent book discussing various threats posed to National Park lands focused exclusively on the hazards posed by oil and gas leasing and development near national parks ignoring the fact that many lands managed by the Park Service are already open to oil and gas exploration and development. Philip M. Hocker, *Oil, Gas and Parks*, in OUR COMMON LANDS: DEFENDING THE NATIONAL PARKS, 389-90 (David J. Simon ed., 1988). Likewise, a recent citizens' manual on oil and gas development on public lands sponsored by several environmental organizations makes no mention of the problems posed by split estate lands. KATHLEEN C. ZIMMERMAN, *SAVING YOUR ENERGY: AN OWNER'S MANUAL TO OIL AND GAS DEVELOPMENT ON THE PUBLIC LANDS* (1993).

10. Complaint at 5-6, *Dunn-McCampbell Royalty Interest Inc. v. Nat'l Park Serv.*, 964 F. Supp. 1125 (S.D. Tex. 1995) (on file with the author).

11. GENERAL ACCOUNTING OFFICE, NATIONAL WILDLIFE REFUGES: CONTINUING PROBLEMS WITH INCOMPATIBLE USES CALLS FOR BOLD ACTION 63-64 (GAO/RCED-89 186) (1989) [hereinafter GAO REPORT ON INCOMPATIBLE USES].

12. See, e.g., *United States v. Nye County, Nev.*, 920 F. Supp. 1108 (D. Nev. 1996). For a critical discussion of the "County Supremacy" movement, see Scott W. Reed, *The County Supremacy Movement: Mendacious Myth Marketing*, 30 IDAHO L. REV. 525 (1993-94).

addressing the management and protection of natural resources generally applies on federal lands, unless preempted by constitutionally-authorized federal legislation.¹³ Owners of the mineral estate have recently contended—perhaps fueled by current states' rights rhetoric—that federal land managers lack *any* authority outside of state law to regulate mineral development.¹⁴ In fact, the concept of a “split estate” in a more generic sense has increasingly become a rallying point for the so-called “wise use” movement.¹⁵

Finally, because the owners of the mineral estate have an important and well-defined property interest, these disputes raise questions concerning the ability of land managers to regulate mineral development without implicating the takings clause of the Fifth Amendment. Indeed, two of the Supreme Court's leading “takings” decisions have involved attempts by Pennsylvania to regulate the mining of coal owned separately from the surface estate in order to prevent damage to the surface estate.¹⁶ In the context of federal/private split estates, the “takings” question frequently arises and deserves close scrutiny.

This article will examine the issues surrounding federal split estates including the federal government's authority to regulate the federal surface and the limits on that authority. Part I will provide a brief history and description of split estates and discuss the state law governing split estates. Part II will address the federal government's authority to regulate the use of the federal surface. Part III will discuss the mandates of the federal land management agencies and the existing agency regulatory regimes governing split estate lands. Part IV will consider the limitations on federal authority to

13. California Coastal Comm'n v. Granite Rock Co., 480 U.S. 572 (1987). See also James S. Burling, *Local Control of Mining Activities on Federal Lands*, 21 LAND & WATER L. REV. 33 (1986).

14. See, e.g., Complaint at 5-6, *Dunn-McCampbell*, 964 F. Supp. 1125.

15. Wayne Hage, a Nevada rancher and “wise use” activist, has been particularly adamant in asserting that all federal lands are “split estates” since “[p]rivate interests have long claimed title to most of the utility values in the land.” WAYNE HAGE, *STORM OVER RANGELANDS: PRIVATE RIGHTS IN PUBLIC LANDS* 90 (1989). Thus, Hage contends that the concept of “public lands” is a complete misnomer since these lands are, in his view, carved into several private estates including grazing, water, and mineral rights. See also, James Ridgeway and Jeffrey St. Clair, *Where the Buffalo Roam: The Wise Use Movement Plays on Every Western Fear*, THE VILLAGE VOICE, July 11, 1995, at 14; Brad Knickerbocker, *Sagebrush Rebels Take on Uncle Sam*, CHRISTIAN SCIENCE MONITOR, Jan. 3, 1996, at 1. It is clear that Hage's concept of “split estates” has its origin in federal/private split mineral estates. HAGE, *supra*, at 81-94. For a legal analysis of some of Hage's claims, see Theodore Blank, Comment, *Grazing Rights on Public Lands: Wayne Hage Complains of a Taking*, 30 IDAHO L. REV. 603 (1993-94).

A useful discussion of the aims of the “wise use” movement is contained in Scott Hardt, *Federal Land Management in the Twenty-First Century: From Wise Use to Wise Stewardship*, 18 HARV. ENVTL. L. REV. 345, 346-47 (1994). An endorsement of the “wise use” movement and its legal basis is found in Rene Erm, II, Comment, *The Wise Use Movement: The Constitutionality of Local Action on Federal Lands Under the Preemption Doctrine*, 30 IDAHO L. REV. 631 (1993-94). A description of the predecessor to the “wise use” movement, the so-called “sagebrush rebellion,” is found in John Leshy, *Unraveling the Sagebrush Rebellion: Law, Politics, and Federal Lands*, 14 U.C. DAVIS L. REV. 317 (1980).

16. See *Pennsylvania Coal Co. v. Mahon*, 260 U.S. 393 (1922), and *Keystone Bituminous Coal Ass'n v. DeBenedictis*, 480 U.S. 470 (1987).

split estate lands. Part IV will consider the limitations on federal authority to regulate use of the federal surface estate for developing minerals. Part V will make recommendations for future management of the federal surface so that federal interests are protected in a manner respectful of private property rights.

I. A BRIEF OVERVIEW AND HISTORY OF SPLIT OR SEVERED ESTATES

A. *What are Split Estates?*

It is, of course, well established that a fee simple owner holds the greatest estate one can have in real property.¹⁷ A fee simple owner owns the surface of the property and, subject to the flight of aircraft, the space above the surface. A fee owner may create a separate mineral estate by granting to another all or certain of the minerals found beneath the surface. When the mineral and surface rights to a single plot of land are held by different parties a split or severed estate is formed. Thus, an oil and gas company may obtain title to a subsurface mineral estate while a private landowner or the government retains ownership of the surface estate.¹⁸ Today, the law generally allows a landowner to create as many separate estates as there are different minerals.¹⁹

B. *History of Split Estates*

The English common law of land ownership is generally reduced to the maxim, "*cujus est solum, ejus est usque ad coelum*." The phrase is translated to mean that an owner of property controls it from the center of the earth to the heavens.²⁰ The phrase manifests an absolute ownership of property that is consistent with the ancient ritual of "livery of seisin" or delivery of possession, wherein land changed hands only after the parties to the land sale traveled to the property at issue and exchanged soil or a tree limb taken

17. *In re Sullivan's Estate*, 218 P.2d 1064, 1067 (Colo. 1950); ROGER BERNHARDT, REAL PROPERTY IN A NUTSHELL 28 (1993).

18. Some commentators have suggested that the term "surface estate" is imprecise. They argue that the "surface estate" is usually a remainder interest because a mineral estate generally terminates when the minerals are exhausted or upon abandonment, depending on whether the mineral estate is a freehold or leasehold. Thus, the "surface estate" may expand to encompass both the surface and subsurface estates once the mineral estate has terminated. See Cyril A. Fox, Jr., *Private Mining Law in the 1980s: The Last Ten Years and Beyond*, 92 W. VA. L. REV. 795, 818 (1990); Wenzell, *supra* note 3, at 609 n.5. Notwithstanding this imprecision, the term "surface estate" is commonly used in opposition to the term mineral estate and will be used in this manner throughout this article.

19. See, e.g., *Beulah Coal Mining Co. v. Heihn*, 180 N.W. 787, 789 (1920); *Chartiers Block Coal Mining Co. v. Mellon*, 25 A. 597, 598 (1893).

20. The phrase appears, among other places in the commentaries of William Blackstone. See 2 WILLIAM BLACKSTONE COMMENTARIES 18. See also *United States v. Causby*, 328 U.S. 256, 260-61 (1946) (stating that under the common law "ownership of the land extend[s] to the periphery of the universe"); JOHN S. LOWE, OIL AND GAS LAW IN A NUTSHELL 8 (1995) (paraphrasing the phrase as the "heaven to hell" right of ownership) [hereinafter LOWE, OIL & GAS LAW].

from the land.²¹ Both courts and commentators have observed that this theory of absolute ownership is at odds with the notion of a separate mineral estate. Nonetheless, the concept of a separate mineral estate in property appears to be at least as old as the English common law notion of absolute ownership.

Some commentators trace the concept of a split or severed property interest in the mineral bearing strata of a property to the Romans. Charles Shamel, in his early treatise on American mining law, asserts that in the Roman Empire “all beneath the surface belonged to the state by right of conquest.”²² Following the demise of the Roman Empire, many of the newly independent sovereigns also followed this practice asserting a sovereign right in mineral estates.²³

In England, a regalian right to precious metals like gold and silver was long recognized. Interestingly, the regalian right to precious metals was not an incident of sovereignty but a prerogative of the Crown to exercise. The right derived from the Crown’s power to coin money and its responsibility to defend the realm (a right that allowed the Crown to, among other things, enter private lands to excavate saltpeter for use in making gunpowder).²⁴ Further, the exercise of this prerogative was considered just if for no other reason than that the Crown—“the person who is most excellent”—should possess “the most excellent things which the soil contains.”²⁵ Although the Crown’s regalian rights were broad, the rights were somewhat restrained at home since, according to Shamel, “there is no gold or silver in commercial quantities found in England.”²⁶

England’s regalian rights, however, were brought to its American colonies. Most of the royal charters under which the eastern United States was settled, reserved one-fifth of all gold and silver to the Crown.²⁷ Follow-

21. Wenzell, *supra* note 3, at 614. The ceremony of livery of seisin was intended to mark the land transfer in the memories of the participants as well as to inform interested parties of the sale. Thomas F. Bergin & Paul G. Haskell, *Preface*, ESTATES IN LAND AND FUTURE INTERESTS 10-11 (2d ed. 1984).

22. CHARLES H. SHAMEL, *MINING, MINERAL AND GEOLOGICAL LAW* 20 (1907). *But see* Sylvia L. Harrison, Comment, *Disposition of the Mineral Estate on United States Public Lands*, 10 PUBLIC LAND L. REV. 131, 135-36 (1989) (questioning Shamel’s conclusions about Roman law).

23. Harrison, *supra* note 22, at 136. *See also*, Moore v. Smaw, 17 Cal. 199, 222 (1861) (explaining that after the break up of the Roman Empire “the Princes and States which declared themselves independent appropriated to themselves those tracts of ground in which nature has dispensed her most valuable products”).

24. Wenzell, *supra* note 3, at 614; William B. Stoebuck, *A General Theory of Eminent Domain*, 47 WASH. L. REV. 553, 562 (1972); Queen v. The Earl of Northumberland (the Case of Mines), 75 Eng. Rep. 472, 475 (Ex. 1567).

25. *The Case of Mines*, 75 Eng. Rep. at 479.

26. SHAMEL, *supra* note 22, at 22.

27. Lopez, *supra* note 6, at 996. *See also* Shoemaker v. United States, 147 U.S. 282 (1893) (discussing in detail the history of regalian rights in Maryland).

ing the American Revolution, some states asserted their own sovereign rights to precious metals, but overall these laws did not last long.²⁸ Similarly, although Spain and the Mexican government which succeeded Spain in governing portions of the American southwest, traditionally claimed property rights in all mines and minerals as an incident of sovereignty, this concept did not long apply in the American states and territories acquired from these governments.²⁹

Ultimately, the regal rights, whether by royal prerogative or as an incident of sovereignty, asserted by England, Spain and Mexico are important because they establish a precedent for split or severed estates in the United States.³⁰ The industrial revolution and the westward expansion of the United States both resulted in an increased use of split estates.³¹ In particular, the doctrine of severed estates was driven by the increased use and development of coal resources.³² By 1900 it was well established that

as to mineral lands, the surface may be owned by one person and the mineral underneath by another, and that each owner shall have an indefeasible title. When the surface and the underlying mineral strata are separately owned, they constitute separate corporeal hereditaments, with all the incidents of separate ownership.³³

Although it was coal and hard rock mining that firmly established the split estates in the United States, severance of the mineral and surface estate also made its way into oil and gas law. It is in the area of oil and gas law that the severance doctrine has created the most practical problems and perhaps not surprisingly, contributed the most to the development of the law surrounding split estates.³⁴

C. *Federal/Private Split Estates*

Two types of federal/private split estates occur in the United States. Simply put, the United States may own either the surface or the mineral estate. Not surprisingly, the two types of federal/private split estates have unique histories. Although this Article will only explore the issues surrounding federal surface/private mineral estates in detail, it is useful to initially describe both types of severed estates.

28. Lopez, *supra* note 6, at 997.

29. *Id.*

30. *Id.*

31. *Id.*

32. On the importance of coal mining to the development of mineral severance, see generally Ronald W. Polston, *Mineral Ownership Theory: Doctrine in Disarray*, 70 N.D. L. REV. 541 (1994).

33. Smith v. Jones, 60 P. 1104, 1106 (1900).

34. Lopez, *supra* note 6, at 998.

1. Federal Minerals Under Private Surface

By far the most common federal severed estate involves federal minerals under private surface. Some 60 million acres of land are estimated to overlie federal minerals.³⁵ This situation is the result of a rather complicated history.

During the nineteenth century, it was United States policy to classify lands as mineral or nonmineral in character. Lands containing known mineral deposits were withheld from homesteading and railroad patents. Non-mineral lands were generally available to entry. If a patent was issued and minerals were subsequently discovered on the property, the mineral deposits belonged to the private owner.³⁶

This classification was not without its flaws, and in 1906 President Roosevelt withdrew 66 million acres of known coal deposits from all forms of entry. This action was prompted by reports that large deposits of coal were being obtained not under the coal sale laws, but by homesteaders taking title to land allegedly for agricultural purposes—primarily by fraud—and to substantial coal deposits as well.³⁷

Following the President's lead, Congress subsequently passed reform legislation that required that federal patents for nonmineral purposes contain a reservation of mineral rights in the United States.³⁸ Among others, these acts included the Coal Land Acts of 1909 and 1910, the Agricultural Entry Act of 1914, the Stock-Raising Homestead Act of 1916, and the Taylor Grazing Act of 1934.³⁹

The Agricultural Entry Act of 1914 enabled the entryman to obtain a patent to the land subject to a reservation of certain minerals by the United States.⁴⁰ Likewise, the Stock-Raising Homestead Act of 1916, while opening

35. GEORGE CAMERON COGGINS ET AL., FEDERAL PUBLIC LAND AND RESOURCES LAW 585 (1993); PUBLIC LAND LAW REVIEW COMMISSION, ONE THIRD OF THE NATION'S LAND 137 (1970).

36. See generally CHARLES WILKINSON, CROSSING THE NEXT MERIDIAN: LAND, WATER, AND THE FUTURE OF THE WEST 60-61 (1992). The earliest Homestead Act, enacted in 1862 (Act of May 20, 1862, ch. 75, 12 Stat. 392, *repealed by* Pub. L. No. 94-579, 90 Stat. 2787 (1976)), did not contain a reservation of minerals to the government and the entire fee ownership passed to the homesteader. The Act, however, explicitly required that those lands be non-mineral in character.

37. See WILKINSON, *supra* note 36, at 51-52; *Watt v. Western Nuclear, Inc.*, 462 U.S. 36, 49 (1983). A very useful discussion of President Roosevelt's efforts to reform public land law is found in John C. Lacy, *Conflicting Surface Interests: Shotgun Diplomacy Revisited*, 22 ROCKY MTN. MIN. L. INST. 731, 755-57 (1976).

38. WILKINSON, *supra* note 36, at 51-52.

39. Many of these acts were repealed by the Federal Land Policy and Management Act of 1976, 43 U.S.C. §§ 1701-1784 (1994) (FLPMA).

40. Agricultural Entry Act of 1914, 30 U.S.C. §§ 121-124 (1994); *Holbrook v. Continental Oil Co.*, 278 P.2d 798, 799 (1955).

tracts of 640 acres or less for settlement, nonetheless reserved to the United States coal and other minerals together with the right to prospect for and mine those minerals.⁴¹ Over 32 million acres were patented under the 1916 Act.⁴² The Taylor Grazing Act superseded the Stock-Raising Homestead Act and opened for lease and exchange the remaining public grazing lands. Through this Act, the government again retained ownership of the mineral estate.⁴³

Any federal hardrock minerals that underlie these split estate lands are open for entry under the Mining Law of 1872.⁴⁴ In other words, regardless of the fact that the surface estate is privately held, the land is open to mining and exploration in a manner largely no different from millions of acres of public land.⁴⁵ The Stock-Raising Homestead Act does, however, require the mineral developer to compensate the surface owner for "crops" and "improvements" damaged by mining operations. The Supreme Court held that this provision did not require compensation for any impairment of surface resources that did not strictly qualify as a growing crop or permanent, agriculturally-related improvement.⁴⁶

The severed estates created by the Stock-Raising Homestead Act have always troubled western ranchers and farmers whose land overlies federal minerals. More recently, this situation has begun to concern western towns and cities expanding into former ranching lands.⁴⁷ One commentator has graphically described the potential conflicts inherent in this situation:

Pausing for a moment, one can envisage an entire residential subdivision on Stock-Raising Homestead Act lands. There are many such developments today and more are being built. In come the prospectors, bearing not only their 1916 picks and shovels, but their modern day bulldozers and draglines. They may not harm the per-

41. Stock-Raising Homestead Act of 1916, 43 U.S.C. §§ 219-301 (repealed 1976); see 43 U.S.C. § 702. See also Truhe, *supra* note 6, at 382 (discussing history of severed estates in South Dakota).

42. COGGINS, *supra* note 35, at 585.

43. Taylor Grazing Act of 1934, 43 U.S.C. § 315-315(o)(1) (1994). The three Acts discussed above are among the most important federal statutes that have severed the mineral estate from the surface estate. For a detailed analysis of land statutes that have reserved the mineral rights in the United States, see Howard A. Twitty, *Law of Subjacent Support and the Right to Totally Destroy Surface in Mining Operations*, 6 ROCKY MTN. MIN. L. INST. 497, 513-14 (1961).

44. 30 U.S.C. §§ 21-54 (1994); see generally WILKINSON, *supra* note 36, at 61.

45. See generally Lacy, *supra* note 6; WILKINSON, *supra* note 36, at 61.

46. Kinney-Coastal Oil Co. v. Kieffer, 277 U.S. 488 (1928); see also Holbrook v. Continental Oil Co., 278 P.2d 798 (1955); John C. Stocker, *Protection For Surface Owners of Federally Reserved Mineral Lands*, 2 UCLA-ALAS. L. REV. 171 (1973); Clarence Brimmer, *The Rancher's Subservient Estate*, 5 LAND & WATER L. REV. 49, 50 (1970).

47. See WILKINSON, *supra* note 36, at 61 (describing recent split estate conflicts); Bruce A. Burke, *Mineral Prospecting in Urban Areas: A Study of Surface and Mineral Rights Conflicts Under the Stock-Raising Homestead Act*, 16 ARIZ. L. REV. 860, 868 (1984).

manent improvements; that much is clear So they set to work in the lawn areas of the suburb, and perhaps also in the parks, greenbelts and other “unimproved” areas.⁴⁸

Fortunately, despite close calls throughout the west and midwest, this situation has largely been avoided as a result of several factors. First, Congress may withdraw the underlying minerals from entry in order to avoid the awkward situation of draglines in the suburbs.⁴⁹ Second, hardrock minerals are less likely to occur on the broad plains associated with stockraising and homesteading. While coal, oil and gas may be found in this environment, federal coal, oil and gas are subject to mineral leasing and not to free entry under the Mining Law of 1872.⁵⁰

Finally, in 1993, Congress amended the Stock-Raising Homestead Act, leaving its original text intact but adding provisions protecting the surface owner, including provisions requiring a surface use plan (to be approved by the Secretary of the Interior), requiring the posting of a bond, and extending the Act’s protection to all surface resources.⁵¹ While it is too early to say, these amendments may further reduce unnecessary conflicts on Stock-Raising Homestead Act lands.⁵² Thus, although the potential for serious conflict exists where there are split estates consisting of reserved federal minerals and a private surface estate, profound difficulties have so far been avoided.

2. Private Minerals Under Federal Surface

In contrast, conflicts involving split estates consisting of a federal surface and a private mineral estate have recently been more problematic and resulted in some particularly acrimonious litigation. The history of private mineral estates under federal surface is more complicated than the converse

48. Willis V. Carpenter, *Severed Minerals as a Deterrent to Land Development*, 51 DENV. UNIV. L. REV. 1, 24-25 (1974).

49. Burke, *supra* note 47, at 875-76.

50. WILKINSON, *supra* note 36, at 61; see also HALKA CHRONIC, *ROADSIDE GEOLOGY OF COLORADO*, 109-11 (1994) (explaining the relationship between hardrock minerals, like gold and silver, and geologically faulted mountainous terrain).

When Congress passed the initial legislation reserving federal mineral rights in the early twentieth century, reservation of federal minerals did not distinguish between hardrock minerals and leasable minerals. The first innovation in the leasing of minerals was the Mineral Leasing Act of 1920, 30 U.S.C. §§ 181-287 (1994), which is the primary statute governing oil and gas development on public lands (including federal mineral estates). Coal was subject to a sale system even before the Mining Law of 1872, and coal leasing requirements were reformed by the Federal Coal Leasing Amendments of 1976. 30 U.S.C. §§ 201-209 (1994). Since 1977, all coal surface mining operations whether on federal or private land have been governed by the Surface Mining Control and Reclamation Act of 1977, 30 U.S.C. §§ 1201-1328 (1994).

51. Pub. L. No. 103-23, 107 Stat. 60 (1993) (codified at 43 U.S.C. § 299(b)-(p) (1994)).

52. See generally Welborn, *supra* note 6, at 22-12 - 22-13 (explaining that the amendments represent a change from a policy favoring mineral entry).

situation and tends to vary according to the public land management agency administering the surface.

Four federal agencies act primarily as land and natural resource management agencies.⁵³ The Bureau of Land Management (BLM); the National Park Service and the Fish and Wildlife Service are all agencies within the Department of the Interior. The fourth land management agency, the Forest Service, is an agency within the Department of Agriculture. Of these four agencies, the BLM bears the largest land management responsibility, with 272 million acres of land directly under its control (about a third of which is in Alaska). The Forest Service is the second-largest land manager with approximately 191 million acres of national forests and grasslands (12% in Alaska). The FWS is a distant third with nearly 91 million acres (84% in Alaska), and the Park Service follows with almost 77 million acres of National Parks, Seashores and Recreation Areas (71% in Alaska).⁵⁴

Although the BLM is the largest federal land management agency, split estate problems rarely occur on BLM lands. The precise number of acres of split estate lands administered by the BLM is difficult to estimate since the BLM does not delineate these lands in its statistical report, but the affected acreage is probably small.⁵⁵ This is primarily because the majority of lands the BLM administers are public domain lands that never left federal ownership.⁵⁶ Split estates administered by the BLM are often the result of efforts to consolidate checkerboard patterns of land ownership by reacquiring railroad land grant reserves. When the land is reacquired, the holder of the land will sometimes reserve the mineral estate while conveying the surface estate to the federal government.⁵⁷ Where split estate lands managed by the BLM contain economically valuable minerals, the development of the mineral estate is unlikely to be controversial because in many Western states the

53. Split estate problems can and do arise on lands administered by other federal agencies. Issues involving split estates recently arose on lands managed by the U.S. Army Corps of Engineers and the Department of Energy. This article focuses on those agencies whose mission is specifically related to natural resource management, where conflicts are far more common.

54. SARAH BATES, *THE WESTERN PUBLIC LANDS: AN INTRODUCTION*, NATURAL RESOURCES LAW CENTER, UNIV. COLO. SCHOOL OF LAW 21 (1992).

55. Nor does Professor Marla Mansfield estimate the number of affected acres in her article examining BLM's authority to regulate the surface of BLM split estate lands. Marla E. Mansfield, *On the Cusp of Property Rights: Lessons from Public Land Law*, 18 *ECOLOGY L. Q.* 43, 46 n.13 (1991) (stating only that "[a]lthough most BLM land does not contain reserved mineral interests, the situation does occur") [hereinafter *Property Rights*]. Although the BLM does not address split estate lands in its annual report, the split estate acreage is likely to be small in comparison to the total amount of lands administered by the BLM. In 1982, when then Secretary of Interior James Watt sought to withdraw otherwise qualifying split estate lands from wilderness study consideration, only 525,000 acres of land were affected. *Sierra Club v. Watt*, 608 F. Supp. 305 (E.D. Cal. 1985).

56. DEPT. OF THE INTERIOR, BUREAU OF LAND MGMT., *PUBLIC LAND STATISTICS 1993* 5-6, Tables 3 & 4 (1994).

57. See *Sierra Club v. Watt*, 608 F. Supp. at 333.

BLM routinely permits mineral exploration and development.⁵⁸

The Forest Service estimates that national forest system lands contain approximately six million acres of outstanding mineral deposits.⁵⁹ These split estate lands have proven far more controversial than BLM split estates.⁶⁰ The Forest Service acquired many of these forest lands under the authority of the Weeks Act of 1911.⁶¹ Under the Weeks Act, the government purchased millions of acres of agriculturally depressed or abandoned land in the east for forestry and watershed protection purposes.⁶² The agency also acquired many of the lands currently managed by the Forest Service under the authority of the Bankhead-Jones Farm Tenant Act of 1937.⁶³ This Act directed the Secretary of Agriculture to develop a program of land conservation and utilization to, among other things, assist in "reforestation" and to "protect[] the watersheds of navigable streams and [to protect] the public lands."⁶⁴ The Forest Service manages lands acquired under the Act as part of the National Grasslands, which are components of the National Forest System.⁶⁵ When lands were acquired under the authority of either the Weeks Act or the Bankhead-Jones Farm Tenant Act, often only the surface rights to the land were acquired because the private sellers reserved the mineral rights, sometimes in perpetuity and sometimes for a period of years.⁶⁶ The scope and extent of the Forest Service's authority to regulate surface use where the mineral estate is privately held are the subject of ongoing litigation.⁶⁷

The BLM and the Forest Service are both multiple use agencies.⁶⁸ The lands these agencies manage are utilized for a number of purposes including

58. BATES, *supra* note 54, at 55-56.

59. Interview with John Stahr, attorney, U.S. Dept. of Justice, Environment and Natural Resources Division (April 1996).

60. Recent cases involving split estate lands managed by the Forest Service include: *Duncan Energy Co. v. U.S. Forest Serv.*, 50 F.3d 584 (8th Cir. 1995); *Bellville Mining Co. v. United States*, 999 F.2d 989 (6th Cir. 1993); *United States v. Stearns Coal & Lumber Co.*, 816 F.2d 279 (6th Cir. 1987); *Ramex Mining Corp. v. Watt*, 753 F.2d 521 (6th Cir. 1985); *Downstate Stone Co. v. United States*, 712 F.2d 1215 (7th Cir. 1983); *United States v. Minard Run Oil Co.*, No. 80-129 (W.D. Pa. Dec. 16, 1980).

61. 16 U.S.C. § 552 (1994).

62. See generally PAUL W. GATES, *HISTORY OF PUBLIC LAND LAW DEVELOPMENT*, 595, 596 (1968) (discussing history of the Weeks Act).

63. 7 U.S.C. §§ 1010-1012 (1994).

64. *Id.* § 1010.

65. The National Forest System includes, among other things, the "national grasslands and land utilization projects administered under title III of the Bankhead-Jones Farm Tenant Act." 16 U.S.C. § 1609(a) (1994).

66. COGGINS, *supra* note 35, at 600; *Downstate Stone Co.*, 712 F.2d at 1215 (when lands were acquired under the Weeks Act sellers reserved mineral rights for periods of 50 and 75 years); *Duncan Energy*, 50 F.3d at 584 (United States acquired grasslands under the Bankhead-Jones Act subject to an earlier reservation of mineral rights).

67. *Duncan Energy*, 50 F.3d at 584.

68. For a discussion of "multiple use" and what it may mean for the Forest Service, see Hardt, *supra* note 15.

minerals, timber, grazing, recreation, wildlife and wilderness. In contrast, the FWS and the Park Service manage federal lands for a more limited number of objectives. The FWS manages the National Wildlife Refuge System chiefly for the conservation of wildlife.⁶⁹ While this is not the sole use of the refuge system, it is nonetheless the dominant use.⁷⁰ The National Park Service Organic Act provides that the Park Service shall act to "conserve the scenery and the natural and historic objects and the wild life therein."⁷¹

Consequently, the FWS and the Park Service acquired many split estate lands because of the significant environmental values associated with the land either in terms of natural beauty, historic and cultural significance, or wildlife habitat. For one reason or another, at the time the land was acquired only the surface estate was purchased. Conflicts between mineral development interests and these land management agencies can be especially acute because the lands managed are often associated with extraordinary (and fragile) habitat and rare species of wildlife.

The National Wildlife Refuge system has grown to contain more than 500 units. Oil and gas exploration or extraction takes place on 106 refuge units while mining occurs on twenty-nine units.⁷² These uses occur on split estates or where oil or gas is removed to prevent drainage by off-refuge wells producing from the same reservoir.⁷³ Further, refuge managers cite oil and gas operations as the economic use that most frequently causes adverse impacts on refuge objectives. Conflicts between the agency and oil and gas interests have resulted in litigation.⁷⁴

The Park Service estimates that two-thirds of the 368 units managed by the Park Service contain privately held mineral rights, both full fee ownership (private inholdings within the unit boundaries) and split estates.⁷⁵ The total land area affected is about five million acres.⁷⁶ Present potential for economic development of private minerals exists on an estimated seventy Park Service units.⁷⁷ Currently, an estimated 680 private mineral develop-

69. See COGGINS, *supra* note 35, at 839-40.

70. *Id.* at 840-41.

71. 16 U.S.C. § 1 (1994).

72. Richard J. Fink, *The National Wildlife Refuges: Theory, Practice and Prospect*, 18 HARV. ENVTL. L. REV. 1, 65-66 (1994).

73. *Id.*; see also GAO REPORT ON INCOMPATIBLE USES, *supra* note 11, at 63-64.

74. Fink, *supra* note 72, at 65; see *Caire v. Fulton*, No. 84-3184 (W.D. La. filed Feb. 10, 1986) (dispute over oil and gas operations in D'Arbonne National Wildlife Refuge).

75. OUTLINE BY DAVID SHAVER, CHIEF, GEOLOGIC RESOURCES DIVISION, NATIONAL PARK SERVICE, in *HOT TOPICS IN NATURAL RESOURCES*, NATURAL RESOURCES LAW CENTER, UNIVERSITY OF COLO. SCHOOL OF LAW, April 23, 1996 (on file with author).

76. *Id.*

77. *Id.*

ment operations exist inside the boundaries of thirty-three Park Service units.⁷⁸ These include 65 operations on federal mining claims, 31 mining operations extracting private minerals, and 580 nonfederal oil and gas operations.⁷⁹ The Park Service is currently litigating the scope of its authority to regulate surface use where the mineral estate is privately held.⁸⁰

D. State Law and Split Estates

As the use of severed mineral estates increased throughout the United States, certain general rules became commonly accepted.⁸¹ First, and foremost, the mineral estate was considered the dominant estate. To be sure, parties could specify their respective rights by deed. However, where they had failed to do so, the common law resolved all conflicts by making the mineral estate dominant.⁸² This rule finds its logic in the notion that the mineral estate's value may only be realized through mineral production and the minerals contained in that estate benefit society as a whole.⁸³ Thus, the second rule is that surface owners are generally barred from interfering with the legitimate and proper use of the surface by the mineral lessee or owner.⁸⁴

The other general rules are intended to provide some protection to the owner of the surface estate. First, the mineral owner owns the right to use only as much of the surface as is reasonably necessary for exploration and development of the minerals.⁸⁵ Second, the mineral owner is liable for damage to the surface if excessive or negligent surface use occurs, or if the min-

78. *Id.*; see also CAROL MCCOY, MINERAL LAWS AND REGULATIONS AND THE NATIONAL PARK SYSTEM, NATURAL RESOURCE REPORT NPS/ MMB/NRR-89/01 (1989) (reporting similar numbers).

79. SHAVER, *supra* note 75, at 1.

80. *Dunn-McCampbell Royalty Interest, Inc. v. Nat'l Park Serv.*, 964 F. Supp. 1125 (S.D. Tex. 1995) *aff'd* 112 F.3d 1283 (5th Cir. 1997).

81. The general rules of state law governing split estates are discussed in *Property Rights*, *supra* note 55, at 67-70, Truhe, *supra* note 6, at 384-90, and Welborn, *supra* note 6, at 22-13 - 22-14. See also J. Michael Morgan and Glen Droegemueller, *Accommodation Between Surface Development and Oil and Gas Drilling*, 24 COLO. LAW. 1323 (1995) (summarizing general rules governing surface use in Colorado).

82. *Property Rights*, *supra* note 55, at 67.

83. This notion is best expressed by the Pennsylvania Supreme Court which asserted that if access to the land's minerals was restricted

the public might be debarred the use of the hidden treasures . . . of the earth [and] . . . coal, oil, gas, and iron are absolutely essential to our common comfort and prosperity. To place them beyond the reach of the public would be a great public wrong . . . It is not to be treated as a mere contest between A. and B. over a little corner of the earth.

Chartiers Block Coal Co. v. Mellon, 25 A. 597, 599 (Pa. 1893).

84. *Kinney-Coastal Oil Co. v. Kieffer*, 277 U.S. 488, 506 (1928) (holding that a mineral developer was "entitled to the interposition and aid of a court of equity to prevent the threatened occupancy and use of the surface for purposes incompatible with their right to continue the mining operations under the lease and to make any necessary use of the surface"). See also Truhe, *supra* note 6, at 389-90 (reviewing history and case law regarding concept of non-interference).

85. See, e.g., *Holbrook v. Continental Oil Co.*, 278 P.2d 798, 802 (1955); Truhe, *supra* note 6, at 387-88.

eral owner violates an express contractual obligation like a lease provision.⁸⁶ Third, the mineral owner may be responsible for the creation of a nuisance, depending upon the definition of nuisance in the particular state where the lands are located.⁸⁷

These general rules have offered the courts considerable guidance over the years in the resolution of surface/mineral estate disputes. However, they of course fail to address all conceivable situations. Thus, both courts and state legislatures have sought to further define the rights of surface and mineral estate owners. Since 1975, nine states have adopted surface damage acts.⁸⁸ These states include North Dakota,⁸⁹ South Dakota,⁹⁰ Montana,⁹¹ Kentucky,⁹² Tennessee,⁹³ Illinois,⁹⁴ West Virginia,⁹⁵ and Oklahoma.⁹⁶ Texas has also adopted a statute governing mineral exploration and development in areas where the surface is being subdivided for residential development.⁹⁷

In addition, the so-called "accommodation doctrine" exists as a judicial, non-statutory construct intended to govern surface/mineral disputes.⁹⁸ Generally, the doctrine requires the mineral owner to act with prudence and to have due regard for the interests of the surface owner in exercising its right to use the surface to explore for and extract minerals. The doctrine originated in Texas⁹⁹ and has been followed by courts in Utah,¹⁰⁰ Arkansas¹⁰¹ and New Mexico.¹⁰²

It is useful to briefly compare the North Dakota surface damage statute and the accommodation doctrine as it has evolved in Texas and elsewhere.

86. As explained by the North Dakota Supreme Court:

The lessee has the right to use as much of the surface of the lands, and to use it in such a manner as is necessary to effect the purpose of its lease, but shall treat the leased premises in such a manner that no substantial injury shall be done to it through any negligence or willful misconduct on its part.

Bell v. Cardinal Drilling Co., 85 N.W.2d 246, 250 (N.D. 1957). *Truhe*, *supra* note 6, at 387-88; *Welborn*, *supra* note 6, at 22-14.

87. *Welborn*, *supra* note 6, at 22-14.

88. *Id.* at 22-14, 22-15.

89. N.D. CENT. CODE § 38-18-01 to -08 (1987 & Supp. 1997) (coal); *id.* § 38-11.1-01 to -38-11.10 (oil and gas).

90. S.D. CODIFIED LAWS § 45-5A-1 to -45-5A-10 (Michie 1997).

91. MONT. CODE ANN. §§ 82-10-501 to -82-10-503 (1997).

92. KY. REV. STAT. ANN. § 353.575 (Michie 1997).

93. TENN. CODE ANN. §§ 60-1-601 to -60-1-608 (1997).

94. ILL. COMP. STAT. ANN. ch. 765, 530/1-530/7 (West 1993).

95. W. VA. CODE §§ 22-7-1 to -22-7-8 (Michie 1994 & Supp. 1997).

96. OKLA. STAT. ANN. tit. 52, §§ 318.1 to -320 (West 1991 & Supp. 1998).

97. TEX. NAT. RES. CODE ANN. § 92.001 to -92.007 (West 1993).

98. *Welborn*, *supra* note 6, at 22-21 - 22-22.

99. The doctrine was first put forward in *Getty Oil Co. v. Jones*, 470 S.W.2d 618 (Tex. 1971).

100. *Flying Diamond Corp. v. Rust*, 551 P.2d 509 (Utah 1976).

101. *Diamond Shamrock Corp. v. Phillips*, 511 S.W.2d 160 (Ark. 1974).

102. *Amoco Prod. Co. v. Carter Farms Co.*, 703 P.2d 894 (N.M. 1985).

Both regimes illustrate a trend toward providing greater protection to the surface estate than common law recognizes.¹⁰³ A brief discussion of these two regimes is also useful because recent litigation involving federal/private split estates has occurred in these two states and in each case the development interests asserted that state law rather than federal law governed their activities.¹⁰⁴

1. The North Dakota Statute

According to one commentator, the North Dakota statute, which became the model for statutes in Montana and South Dakota, is a significant shift away from traditional common law notions of mineral estate dominance.¹⁰⁵ While the statute fully recognizes the mineral owner's right of entry, it increases the protection available to the owner of the surface estate.

As an initial matter, the legislature found that oil and gas exploration and development "interferes with the use, agricultural or otherwise, of the surface" and that a shift away from the traditional policies favoring mineral exploration and development was "necessary" to protect the economic well-being of the surface.¹⁰⁶ Thus, the statute enlarges the traditional scope of compensable damages by providing that the mineral developer is obligated to pay damages to the surface owner not only for loss of agricultural production but also for the lost value of land and improvements, and the lost use of surface access.¹⁰⁷

The net effect of the North Dakota statute, as several commentators have observed, is to eliminate the common law right not to compensate for unavoidable damage to the surface.¹⁰⁸ Thus, while the North Dakota statute and its imitators have preserved the mineral developer's right of entry, the statute nonetheless represents a shift away from common law notions of mineral estate dominance.¹⁰⁹

103. See generally Welborn, *supra* note 6, at 22-14 (observing that there are increasingly legislative, judicial and political inroads on common law notions of mineral estate dominance).

104. See *Duncan Energy Co. v. U.S. Forest Serv.*, 50 F.3d 584 (8th Cir. 1995) (involving a National Grassland administered by the Forest Service in North Dakota), and *Dunn-McCampbell Royalty Interest, Inc. v. Nat'l Park Serv.*, 112 F.3d 1283 (5th Cir. 1997) (involving Padre Island National Seashore, Texas, administered by the National Park Service).

105. Welborn, *supra* note 6, at 22-17.

106. N.D. CENT. CODE § 38-11.1-02 (1987 & Supp. 1997).

107. *Id.* § 38-11.1-01.

108. Welborn, *supra* note 6, at 22-17; *Property Rights, supra* note 55, at 69 & n.157.

109. The constitutionality of the North Dakota Statute was upheld primarily because the right of mineral entry was not taken away by the statute. See *Murphy v. Amoco Prod. Co.*, 729 F.2d 552 (8th Cir. 1984). The court held that to the extent the statute deprived mineral interests of the common law right not to pay damages for unavoidable damage to the surface, this right, "if indeed it is 'property' at all, amounts to only a minor strand in the full bundle of rights" which constitute the mineral estate. *Id.* at

2. The Accommodation Doctrine

Likewise, the accommodation doctrine represents a shift away from the traditional dominance of the mineral estate. As noted above, the traditional rule has long been that the mineral developer was entitled to use so much of the surface as was reasonably necessary for exploration and development of the minerals. The focus of this test is on the needs of the mineral developer and wholly ignores the surface owner's situation or needs. The accommodation doctrine, as adopted in Texas and elsewhere, represents a modest attempt to consider and accommodate existing surface uses if possible.

The doctrine originated in the case of *Getty Oil Co. v. Jones*.¹¹⁰ There, the surface owner, Jones, used an irrigation system requiring seven feet of surface clearance to water his cotton fields.¹¹¹ Getty Oil, one of several mineral owners, installed two oil pumps, exceeding seven feet in height that obstructed Jones' irrigation system.¹¹² Two other oil companies produced oil from underneath Jones' land without affecting his irrigation system because they reconfigured their pumping units to avoid any interference.¹¹³

Jones brought suit to enjoin Getty's use of its pumps and for damages.¹¹⁴ In response, Getty asserted that the easement required by its pumps fell well within the "reasonably necessary" standard.¹¹⁵ The Texas Supreme Court rejected Getty's arguments. The court held instead that the surface owner had a right "to an accommodation between the two estates."¹¹⁶ The accommodation doctrine as set forth in *Getty Oil*, does not entail a balancing of surface owner harm and inconvenience against mineral owner options. The burden is on the surface owner to show that the mineral developer's surface use is unreasonable and that reasonable alternatives exist.¹¹⁷

In the leading accommodation case from Utah, the Utah Supreme Court required the mineral developer to use an alternative means of access to a mineral site, because the alternative access was reasonable and to do otherwise would render the surface owner's land unusable for agricultural purposes.¹¹⁸ The Utah court held that "wherever there exists separate owner-

558.

110. 470 S.W.2d 618 (Tex. 1971).

111. *Id.* at 620.

112. *Id.*

113. *Id.*

114. *Id.* at 619.

115. *Id.* at 621.

116. *Id.* at 623.

117. *Id.* at 627-28. For a more comprehensive discussion of *Getty Oil Co. v. Jones*, see Wenzell, *supra* note 3, at 633, *Property Rights*, *supra* note 55, at 70-71, and LOWE, OIL & GAS LAW, *supra*, note 20, at 175-77.

118. *Flying Diamond Corp. v. Rust*, 551 P.2d 509, 511 (Utah 1979).

ships of interest in the same land, each should have the right to the use and enjoyment of his interest in the property to the highest degree possible, not inconsistent with the rights of others."¹¹⁹ The court explained that this does not mean that the mineral owner must use any possible alternative; only that it is required to do that which is reasonable and practical "under the circumstances."¹²⁰

As the foregoing cases make clear, the accommodation doctrine is a judicial construct intended to require that mineral developers make an accommodation of surface uses by adopting alternative technologies or access where practicable. The doctrine does not offer surface owners anything approaching total protection of the surface estate. Indeed, the dominant/servient relationship between mineral and surface estates is preserved.¹²¹ Nonetheless, the doctrine is important in that it requires the use of practical alternatives wherever they exist.

II. THE CONSTITUTIONAL AUTHORITY TO REGULATE FEDERAL LAND

As mentioned above, much of the recent litigation involving federal surface/private minerals split estates has focused on the federal government's authority to regulate surface use and its ability to impose conditions on that use. This section will explore the federal authority to regulate federal land.

Increasingly, as the "wise use" movement has gained prominence, federal authority to regulate federal lands has been challenged both in the media and in court.¹²² This part of the article will examine the constitutional basis for congressional authority over federal lands. Part III will examine the statutory mandates and relevant regulatory regimes of the federal land management agencies.¹²³

The most important constitutional provisions relating to congressional authority over federal lands are the Enclave Clause,¹²⁴ the Property Clause,¹²⁵ the Commerce Clause,¹²⁶ and the Supremacy Clause.¹²⁷ The Property Clause and the Commerce Clause are the most important provisions of Congress-

119. *Id.*

120. *Id.*

121. *Property Rights*, *supra* note 55, at 174.

122. *See supra* notes 11-14 and accompanying text.

123. A more comprehensive examination of constitutional authority and statutory mandates is found in Marla E. Mansfield, *A Primer of Public Land Law*, 68 WASH. L. REV. 801 (1993) [hereinafter *Public Land Law*].

124. U.S. CONST. art. I, § 8, cl.17.

125. *Id.* § 3, cl. 2.

126. *Id.* § 8, cl. 3.

127. *Id.* at art. VI, cl. 2.

sional authority to legislate on matters relating to federal lands.¹²⁸ The Supremacy Clause is the basis for the doctrine of preemption which requires conflicting state law to yield to federal law.

A. *The Enclave Clause and the Property Clause*

Article I's Enclave Clause provides one source of authority to regulate federal lands. The Enclave Clause provides that Congress may

exercise exclusive Legislation in all Cases whatsoever over [the District of Columbia] and [may] exercise like Authority over all Places purchased by the Consent of the Legislature of the State in which the same shall be, for the Erection of Forts, Magazines, Arsenals, Dock-Yards, and other needful Buildings.¹²⁹

The Clause's "exclusive Legislation" is interpreted as the equivalent to exclusive jurisdiction.¹³⁰ Lands under federal jurisdiction by operation of the Enclave Clause, which according to this section must be acquired with state consent, are commonly referred to as "federal enclaves." These "enclaves" are not limited to buildings and forts but have been interpreted to include lands for a National Park.¹³¹ The Enclave Clause by its express terms authorizes significant legislative activities,¹³² but ultimately the clause is not that significant to federal land management. While "enclaves" can be found among categories of federal land including military bases, national parks and post offices, ultimately, only 6%-9% of the federal lands fall wholly or partially into this category. Thus, while some lands managed by the National Park Service are federal enclaves, the Enclave Clause is of limited relevance to the split estate issue.

Of far more importance to the split estate issue is congressional authority over public lands derived from the Property Clause. The Property Clause provides that: "The Congress shall have Power to dispose of and make all needful Rules and Regulations respecting the Territory or other property belonging to the United States."¹³³ Courts have generally given the

128. Other constitutional provisions are, of course, often relevant to issues involving federal lands. The Treaty Clause provides authority for many wildlife management laws. U.S. CONST. art. II, § 2, cl. 2. See *Missouri v. Holland*, 252 U.S. 416 (1920). The spending for general welfare power has been used to justify federal water projects. U.S. CONST. art. I, § 8, cl. 1. See *United States v. Gerlach Live Stock Co.*, 339 U.S. 725 (1950).

129. U.S. CONST. art. I, § 8, cl. 17.

130. *United States v. Bevens*, 16 U.S. (3 Wheat.) 336, 387 (1818). COGGINS, *supra* note 35, at 173.

131. *Collins v. Yosemite Park & Curry Co.*, 304 U.S. 518 (1938).

132. For a more detailed account of federal and state law in federal enclaves, see *Public Land Law*, *supra* note 123, at 804-06.

133. U.S. CONST. art. IV, § 3, cl.2.

Property Clause a broad reading.¹³⁴ There are, however, two important dimensions to the Property Clause power. The first is the power to regulate conduct occurring on federal land and the second is the power to regulate conduct occurring off federal lands.

Where Congress is legislating conduct occurring on federal land it is executing not only the power of a proprietor but also the power of a sovereign. In *Kleppe v. New Mexico*,¹³⁵ the Supreme Court considered a challenge to the Wild Free-Roaming Horses and Burros Act ("the Wild Horse Act").¹³⁶ The Act was intended to protect wild horses and burros on public lands from capture, harassment and death. Because New Mexico state law permitted the rounding up of wild burros, the state challenged the Wild Horse Act as beyond the scope of congressional authority.¹³⁷

New Mexico's theory was that the United States had only the rights of a proprietor and thus could dispose of and regulate and protect the use of the land.¹³⁸ Since, the United States did not claim ownership of wild horses and burros, it was without power to regulate their treatment without interfering with the state's primary jurisdiction over wildlife.

The Supreme Court rejected New Mexico's contentions. The Court held that the Act was a valid exercise of congressional authority derived from the Property Clause.¹³⁹ The Court concluded that the horses and burros were an integral part of the federal lands themselves and thus it was possible that the Act was intended to protect the animals. More importantly, the Court rejected New Mexico's argument that congressional powers over federal lands are limited to those of a proprietor. Instead, the Court held that Congress exercises both the powers of a proprietor and a legislature where federal lands are concerned.¹⁴⁰ Rejecting New Mexico's argument that the Act impermissibly interfered with traditional state authority over wildlife, the Court held that the Property Clause is a direct grant of power to Congress and Congress may use that power to preempt existing state law.¹⁴¹

The *Kleppe* case is widely recognized as a broad interpretation of the Property Clause. After *Kleppe*, it is understood that Congress has consider-

134. *Kleppe v. New Mexico*, 426 U.S. 529, 539 (1976) (stating that "while the furthest reaches of the power granted by the Property Clause have not yet been definitively resolved, we have repeatedly observed that '[t]he power over the public lands thus entrusted to Congress is without limitations'").

135. *Id.*

136. 16 U.S.C. §§ 331-340 (1994).

137. *Kleppe*, 426 U.S. at 533-36.

138. *Id.* at 536.

139. *Id.* at 537.

140. *Id.* at 540-41.

141. *Id.* at 541-42.

able latitude where federal land is at issue. Significantly, however, the *Kleppe* case was concerned entirely with federal lands. The case did not decide whether the Property Clause authorizes regulation of actions on private lands.¹⁴²

As Professor Mansfield has noted, federal control of activity on private property may qualify as "needful Rules and Regulations respecting . . . Property belonging to the United States"¹⁴³ when the government requires such rules and regulations to protect federal lands from physical harm or to retain lands intact for congressional purposes.¹⁴⁴ The Supreme Court has long recognized that the property power may be utilized to prevent harm to federal lands from activities undertaken on private lands. Early Supreme Court cases upheld a federal conviction for causing a fire that threatened federal land although the fire began on private property,¹⁴⁵ and affirmed the conviction of an individual who had erected fences on private land preventing access to public lands.¹⁴⁶

The lower courts have followed the Supreme Court's lead in this area and have also upheld federal regulation of activities that occur off federal property as valid exercises of the Property Clause. In *Minnesota v. Block*,¹⁴⁷ the Court of Appeals for the Eighth Circuit held that Congress could impose motorboat restrictions on state-owned waters in a wilderness area where 90% of the surrounding land was federal property and 10% was state-owned. The court found that even though the federal government had no ownership in the water itself, the Property Clause allowed it to implement restrictions to protect the surrounding federal wilderness.¹⁴⁸ *Minnesota v. Block* is typical of those cases involving private inholdings where the private interest sits within the geographic boundaries of what is otherwise federal land.¹⁴⁹ In this context, it is, of course, particularly important that the

142. The Court left this issue open explaining that: "While it is clear that regulations under the Property Clause may have some effect on private lands not otherwise under federal control . . . , we do not think it is appropriate . . . to determine the extent, if any, to which the Property Clause empowers Congress to protect animals on private lands . . ." *Id.* at 546.

143. U.S. CONST. art. IV, § 3, cl. 2.

144. *Public Land Law*, *supra* note 123, at 809-10.

145. *United States v. Alford*, 274 U.S. 264 (1927).

146. *Camfield v. United States*, 167 U.S. 518 (1897). Interestingly, neither *Camfield* nor *Alford* refers explicitly to the Property Clause. In fact they cite no constitutional provision whatsoever to support the authority of Congress to act in this area. In *Kleppe*, however, the Supreme Court explained that the Property Clause was the foundation of the holdings in *Camfield* and *Alford*. *Kleppe v. New Mexico*, 426 U.S. 529, 540 (1976).

147. 660 F.2d 1240 (8th Cir. 1981).

148. *Id.* at 1249 (stating that "Congress's power must extend to regulation of conduct on or off the public land that would threaten the designated purpose of federal lands").

149. *United States v. Vogler*, 859 F.2d 638, 640 (9th Cir. 1988); *United States v. Lindsey*, 595 F.2d 5, 6 (9th Cir. 1979); *United States v. Brown*, 552 F.2d 817 (8th Cir. 1977); *Wilkenson v. Dept. of the Interior*, 634 F. Supp. 1265, 1279 (D. Colo. 1986).

federal government have the ability to regulate since the private inholding lies within the borders of federal property. This is not, however, the sole circumstance where federal regulatory authority has survived a court challenge. The lower courts have upheld federal regulatory authority where a criminal conviction was based on a violation of Forest Service regulations prohibiting persons outside a forest from renting equipment for use in the forest,¹⁵⁰ and have also upheld the regulation of businesses lying outside of a national park where the businesses affected the national park.¹⁵¹ As these cases demonstrate, the Property Clause provides considerable authority for agency regulatory regimes directed at the protection of federal lands.

B. *The Commerce Clause*

The Commerce Clause also provides constitutional authority for federal land regulation. The Commerce Clause gives Congress authority over matters in, or affecting, interstate commerce.¹⁵² The Commerce Clause, among other things, provides constitutional authority for the Clean Air Act,¹⁵³ the Clean Water Act (CWA),¹⁵⁴ the Surface Mining Control and Reclamation Act (SMCRA),¹⁵⁵ and the Endangered Species Act (ESA).¹⁵⁶ Of particular importance to the federal regulation of split estates are SMCRA, the CWA and the ESA.¹⁵⁷

SMCRA, which regulates the development of federal coal, provides that with certain exceptions, no coal mining which disturbs the surface "shall be permitted . . . on any federal lands within the boundaries of any national forest 'subject to' valid existing rights."¹⁵⁸ Thus, "valid existing

150. *United States v. Richard*, 636 F.2d 236, 240 (8th Cir. 1980) ("[F]ederal regulation may exceed federal boundaries when necessary for the protection of human life or wildlife or government forest land or objectives").

151. *Free Enterprise Canoe Renters Ass'n v. Watt*, 711 F.2d 852, 855-56 (8th Cir. 1983).

152. U.S. CONST. art. I, § 8, cl. 3. Congress has the power "to regulate Commerce . . . among the several States . . ." *Id.*

153. 42 U.S.C. §§ 7401-7671q (1994).

154. 33 U.S.C. §§ 1251-1376 (1994).

155. 30 U.S.C. §§ 1201-1328 (1994). For a discussion of the constitutional basis of the Act, see *Hodel v. Virginia Surface Mining and Reclamation Ass'n*, 452 U.S. 264 (1981).

156. 16 U.S.C. §§ 1531-1544 (1994). For a recent discussion of the constitutional basis of the ESA, see *National Ass'n of Homebuilders v. Babbitt*, 130 F.3d 1041 (D.C. Cir. 1997).

157. Although not as important as either SMCRA or the CWA to federal authority over split estates, the Clean Air Act is nonetheless generally relevant to mineral and oil and gas extraction. The Clean Air Act requires greater controls for sources of air pollution, regardless of their location, if those sources have emissions that interfere with visibility on certain types of federal lands. 42 U.S.C. § 7491. For example, oil and gas development in the Red Desert of western Wyoming has been of particular concern to some environmental advocates because of its potential effect on air quality in wilderness areas in the nearby Wind River Mountains. FRIENDS OF WYOMING DESERTS ET AL., *THE RED DESERT BLUES: THE INDUSTRIALIZATION OF SOUTHWEST WYOMING* 9 (1996); see also Marilyn S. Kite et al., *Visibility: A Critique of the National Program; A Review of the Impacts in Southwest Wyoming*, 33 LAND & WATER L. REV. 3 (1998).

158. 30 U.S.C. § 1272(e)(2). The Act prohibits surface mining within national parks, wildlife refuges,

rights," including split estates, may be open to development within the boundaries of a National Forest. SMCRA, however, invests the Department of the Interior with the authority to determine whether a person meets the regulatory requirements for the SMCRA exceptions including possession of a "valid existing right."¹⁵⁹

Section 404 of the CWA¹⁶⁰ is also an important constraint on the surface use of some split estate lands. Section 404 is the principal mechanism for the protection of wetlands.¹⁶¹ The provision is significant because oil and gas development, among other mineral uses, can and do impact this environment. Thus, Section 404 can be an important regulatory tool for federal land managers seeking to protect a federal surface estate.

Jurisdiction under Section 404 is shared between the Army Corps of Engineers (the Corps) and the Environmental Protection Agency (EPA).¹⁶² Pursuant to Section 404(a), the Corps has the authority to issue dredge and fill permits.¹⁶³ Section 404(b) provides that each such permit shall be based on the guidelines developed by the EPA Administrator, in conjunction with the Corps.¹⁶⁴ In addition, pursuant to Section 404(c), the EPA has veto authority over the Corps' permitting decisions.¹⁶⁵ Section 404 is a powerful tool for protecting the federal surface insofar as wetlands are concerned. Increasingly, the Corps has denied permit applications when valuable wetlands are at risk.¹⁶⁶

wilderness areas or wild and scenic rivers. *Id.* § 1272(e)(1).

159. See *Bellville Mining Co. v. United States*, 999 F.2d 989, 992 (6th Cir. 1993).

160. 33 U.S.C. § 1344 (1994).

161. The constitutional authority for Section 404 is discussed in *Leslie Salt Co. v. United States*, 55 F.3d 1388 (9th Cir. 1995), *cert. denied sub nom., Cargill, Inc. v. United States*, 516 U.S. 955 (1995). Justice Thomas entered a dissent from the denial of certiorari in *Leslie Salt* questioning whether there was a sufficient enough nexus with interstate commerce to justify the regulation of the wetlands at issue. More recently, the Court of Appeals for the Fourth Circuit has found that a wetland regulation addressed to waters that "could affect interstate" waters is not authorized by the Commerce Clause. *United States v. Wilson*, Nos. 96-4498, 96-4503, 96-4537, 96-4774, 1997 WL 785530 at *253-54 (4th Cir. Dec. 23, 1997).

While for many years the traditional view has been that Commerce Power of Congress is without significant limitations (see *Public Land Law*, *supra* note 123, at 812) this view is open to question in light of *United States v. Lopez*, 514 U.S. 549 (1995), invalidating federal criminal legislation because of the legislation's insufficient nexus with interstate commerce.

162. A useful review and history of Section 404 is contained in Michael C. Blumm & D. Bernard Zaleha, *Federal Wetlands Protection under the Clean Water Act: Regulatory Ambivalence, Intergovernmental Tension, and a Call for Reform*, 60 U. COLO. L. REV. 695 (1989).

163. 33 U.S.C. § 1344(a).

164. *Id.* § 1344(b). See *Bersani v. U.S. Env't'l Protection Agency*, 850 F.2d 36, 39 (2d Cir. 1988).

165. 33 U.S.C. § 1344(c).

166. One indicator of the frequency with which the Corps denies Section 404 permits is the number of takings cases filed in the Court of Federal Claims arising from the denial of Section 404 permit applications. A Fall 1997 list of takings cases currently pending in the United States Court of Federal Claims and United States Court of Appeals for the Federal Circuit compiled by the Environmental Policy Project of the Georgetown University Law Center, lists more than a dozen such cases (list on file with the

The ESA prevents the taking of any protected species. "Take" covers any possible conduct that could cause actual injury to an endangered or threatened species: to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or to attempt to engage in any such conduct."¹⁶⁷ The verb "harm" is especially significant to split estate problems. "Harm" includes habitat modification where there is a showing of actual injury to wildlife.¹⁶⁸ "Habitat modification" encompasses any activity that would significantly impair essential behavioral patterns such as breeding, feeding or sheltering.¹⁶⁹

The ESA's section 9 prohibits private actions that will result in the "take" of an endangered species,¹⁷⁰ and has been utilized to prevent that result.¹⁷¹ The provision would apply to oil and gas or mining activities that would result in the "take" of an endangered species. Consequently, like Section 404, of the CWA, the ESA is a potentially significant restraint on the development of split estate lands. However, all of the regulatory regimes authorized by the Commerce Clause are constrained by the limits imposed on federal regulatory authority imposed by the Takings Clause of the Constitution. This issue is addressed below in Part IV.B.

C. *The Supremacy Clause and the Doctrine of Preemption*

The Supremacy Clause¹⁷² is an important source of federal authority over federal lands because, as noted above, state law addressing the management and protection of natural resources generally applies on federal lands.¹⁷³ Briefly, in any conflict of laws, the Supremacy Clause makes federal law superior to state law.

The standards for federal preemption are well established. Conflicting state law must yield to federal law where Congress evidences an intent to occupy a given field or where state law actually conflicts with federal law.¹⁷⁴ A conflict is generally found when it is impossible to comply with both state and federal law or where the state law stands as an obstacle to the accom-

author).

167. 16 U.S.C. § 1532(19) (1994).

168. *Babbitt v. Sweet Home Chapter of Communities for a Greater Oregon*, 115 S. Ct. 2407 (1995).

169. 50 C.F.R. § 17.3 (1996).

170. 16 U.S.C. § 1538(a)(1)(B), (C) (1994).

171. See *Forest Conservation Council v. Rosboro Lumber Co.*, 50 F.3d 781 (9th Cir. 1995).

172. The Supremacy Clause provides, in relevant part, "[t]his Constitution, and the Laws of the United States which shall be made in Pursuance thereof . . . shall be the Supreme Law of the Land." U.S. CONST. art. VI, cl. 2.

173. The exception is, of course, federal enclaves where, as an initial matter, federal law is presumed to apply. *Public Land Law*, *supra* note 123, at 813.

174. *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 248 (1984); *ANR Pipeline Co. v. Iowa State Commerce Comm'n*, 828 F.2d 465, 468 (8th Cir. 1987).

plishments of the full purposes and objectives of Congress.¹⁷⁵ The potential for such a conflict arose in the split estates context in *Duncan Energy Co. v. U.S. Forest Service*.¹⁷⁶ In that case, the district court interpreted North Dakota law to allow the developer unrestricted access to the surface including the authority to destroy the surface estate.¹⁷⁷ As discussed below, the court of appeals rejected this argument holding that if North Dakota law is read to allow a developer unrestricted access to the surface, state law is pre-empted by federal law.¹⁷⁸

Federal choice-of-law standards are related to the preemption doctrine. While federal law generally governs the federal government's property interest, in appropriate circumstances federal courts may borrow substantive state law as the rule of law governing disputes concerning federal property.¹⁷⁹ The Supreme Court, however, has made plain that federal law will not borrow "any specific aberrant or hostile state rules" that interfere with the government interest in property.¹⁸⁰ The lower courts have followed this rule.¹⁸¹

III. AGENCY MANDATES AND REGULATIONS RELEVANT TO SPLIT ESTATE LANDS

A. *The Bureau of Land Management*

As discussed above, split estate issues rarely arise on BLM lands. For this reason, and because Professor Mansfield has examined BLM authority in the split estate context in some detail, the discussion of BLM statutory regulatory authority over split estate lands here will be brief.¹⁸²

The Federal Land Policy and Management Act (FLPMA) defines "public lands" as including any interest in land owned by the United States and managed by the BLM.¹⁸³ This definition appears to clearly encompass surface estates owned by the United States and managed by the BLM.¹⁸⁴

175. *California v. ARC America Corp.*, 490 U.S. 93, 100-01 (1989); *Silkwood*, 464 U.S. at 248.

176. 50 F.3d 584 (8th Cir. 1995).

177. *Id.* at 587-88 (describing the district court's holding).

178. *Id.* at 591.

179. *United States v. Little Lake Misere Land Co.*, 412 U.S. 580, 594 (1973).

180. *Id.* at 595-96.

181. *See, e.g., United States v. Albrecht*, 496 F.2d 906 (8th Cir. 1974) (holding that state law could not preclude a landowner from draining waterfowl production area pursuant to the Migratory Bird Act, stating that "the specific governmental interest in acquiring rights to property for waterfowl production areas is stronger than any possible 'aberrant' or 'hostile' North Dakota law that would preclude the conveyance granted in this case"). *Id.* at 911.

182. *Property Rights*, *supra* note 55.

183. 43 U.S.C. § 1702(e) (1994).

184. *Sierra Club v. Watt*, 608 F. Supp. 305, 333 (E.D. Cal. 1985).

Pursuant to FLPMA, the BLM is required to manage the public lands under principles of multiple use and sustained yield, in accordance with federal land use plans.¹⁸⁵ FLPMA directs the BLM to regulate, “through easements, permits, leases, licenses, published rules, or other instruments . . . the use, occupancy and development of the public lands.”¹⁸⁶ FLPMA does not provide any substantive standard for carrying out these management duties, other than to provide that, “in managing the public lands, the Secretary shall, by regulation or otherwise, take any action necessary to prevent the unnecessary and undue degradation of the lands.”¹⁸⁷

In the context of split estate lands this standard raises the question of how far the BLM can go in regulating surface operations on split estate lands. Arguably, the FLPMA standard does not authorize the BLM to prohibit those environmental impacts that would be created by a reasonable and prudent operator,¹⁸⁸ and the regulatory regime adopted by the BLM is consistent with this conclusion. The BLM’s mining regulations,¹⁸⁹ for instance, define “unnecessary and undue degradation” as surface disturbance greater than what would normally result when an activity is being accomplished by a prudent operator in usual, customary, and proficient operations of similar character.¹⁹⁰ Significantly, this regulation provides that when evaluating “unnecessary and undue degradation,” the effects of the operation on other resources and land uses must be taken into account.¹⁹¹ As Professor Mansfield has noted, this approach has much in common with the accommodation doctrine.¹⁹²

Professor Mansfield has argued persuasively that although this “accommodation” approach is a valid interpretation of FLPMA’s “unnecessary and undue” degradation standard and entitled to judicial deference, the BLM could go further in its regulatory regime.¹⁹³ Specifically, she argues that the “unnecessary and undue degradation” standard vests considerable regulatory discretion in the BLM and that the agency has the authority to prohibit mineral exploration and extraction where necessary to protect the

185. 43 U.S.C. § 1732(a). For a brief discussion of BLM, its mission and responsibilities, see BATES, *supra* note 54, at 10-11.

186. 43 U.S.C. § 1732(b).

187. *Id.*

188. See, e.g., *Sierra Club v. Clark*, 774 F.2d 1406, 1410 (9th Cir. 1985); *Concerned Citizens for Responsible Mining on Reconsideration*, 131 IBLA 257, 270 (1994).

189. The BLM does not have regulations specifically addressing the management of split estate lands consisting of federal surface and private minerals.

190. 43 C.F.R. § 3809.0-5(k) (1997).

191. *Id.*

192. *Property Rights*, *supra* note 55, at 61. The accommodation doctrine is discussed in greater detail at *supra* pp. 16-18.

193. *Property Rights*, *supra* note 55, at 103.

environmental values served by the surface estate.¹⁹⁴ Professor Mansfield acknowledges that the “takings” clause is a potential limitation on this authority but nonetheless concludes that this authority could be exercised without requiring compensation consistent with traditional concepts of nuisance law.¹⁹⁵ The potential limits imposed by the “takings” clause on federal land management and Professor Mansfield’s analysis are discussed in greater detail in Part IV.

B. *The Forest Service*

Like the BLM, the Forest Service is a multiple use agency. Although it did not create the Forest Service, the so-called “Forest Service Organic Act” enacted in 1897 provided the basic management mandate for the National Forest System until 1960.¹⁹⁶ The Act explains that Forest Reserves (now National Forests) were established to “improve and protect the forest within the reservation for the purpose of securing favorable conditions of water flow, and to furnish a continuous supply of timber for the use and necessities of the citizens of the United States”¹⁹⁷ The Act also vests broad powers in the Secretary of Interior¹⁹⁸ to make such rules and regulations necessary to “regulate the occupancy and use of the national forest reserves.”¹⁹⁹

In 1960, the Multiple Use Sustained Yield Act (MUSYA)²⁰⁰ considerably broadened the Forest Service’s mandate. Henceforth, the Forest Service was to “develop and administer the renewable surface resources of the national forests for multiple use and sustained yield of the several products and services obtained therefrom.”²⁰¹ MUSYA defines the surface resources for which the national forests are to be managed as “outdoor recreation, range, timber, watershed and wildlife and fish purposes.” MUSYA requires these resources to be managed “so that they are utilized in the combination that will best meet the needs of the American people.”²⁰²

194. *Id.* at 103-04.

195. *Id.* at 102.

196. Act of June, 4, 1897, ch. 2, 30 Stat. 11, 34-36 (codified as amended at 16 U.S.C. §§ 473-478, 480-82, 551 (1994)). The National Forest System includes all lands administered by the Forest Service including National Grasslands. 16 U.S.C. § 1609(a) (1994). The history and development of the Forest Service is well told in WILKINSON, *supra* note 36, at 114-74. The history of mineral development in National Forests is set forth in Charles L. Kaiser and Scott W. Hardt, *Fitting Oil and Gas Development into the Multiple-Use Framework: A New Role for the Forest Service?*, 62 COLO. L. REV. 827 (1991).

197. 16 U.S.C. § 475 (1994).

198. The Forest Reserves were initially within the jurisdiction of the Interior Department. Largely through the efforts of Gifford Pinchot, in 1905, the forest reserves were transferred from Interior to Agriculture. 16 U.S.C. § 472 (1994) (the “Transfer Act”).

199. 16 U.S.C. § 551 (1994).

200. *Id.* §§ 528-531.

201. *Id.* § 529.

202. *Id.*

As two leading mineral law practitioners, Charles Kaiser and Scott Hardt have observed, MUSYA is directed at surface resources and does not alter in anyway the Secretary of the Interior's traditional authority over mineral resources in the national forests.²⁰³ In 1976, however, with the passage of FLPMA, Congress required that mineral management decisions be made in the multiple use context. FLPMA defines multiple use to include both renewable resources and mineral extraction. Although FLPMA offers scant guidance as to how these requirements are to be implemented on lands within the National Forest System, the Forest Service has taken the position that mineral development is not entitled to any preference on forest lands and that all potential resource uses should be considered and balanced to provide the mix that best serves the public's interest.²⁰⁴

Finally, management of the national forest system has been significantly altered by the National Forest Management Act (NFMA).²⁰⁵ NFMA amended the Forest and Rangeland Renewable Resource Planning Act (RRRPA) which required inventories of Forest and Rangeland resources across the nation and directed the Secretary of Agriculture to prepare forest land and resource management plans.²⁰⁶ NFMA has eclipsed the RRRPA in importance because in NFMA, Congress issued specific management and planning guidance requiring the Secretary of Agriculture to prepare local plans for each unit of the National Forest System according to these guidelines.²⁰⁷ NFMA requires, among other things, that the Forests be managed for "multiple use and sustained yield . . . and in particular include coordination of outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness; and provide for diversity of plant and animal communities based on the suitability and capability of the specific land area."²⁰⁸ NFMA also provides that forest plans are subject to valid existing rights.²⁰⁹

203. Kaiser and Hardt, *supra* note 196, at 839 (discussing MUSYA provision stating that the Act "does not affect the use or administration of the mineral resources of national forest lands"). 16 U.S.C. § 528.

Although the Interior Department has traditionally had primary responsibility over mineral resources on lands within the National Forest System, this regulatory regime was altered by the Federal Onshore Oil and Gas Leasing Reform Act of 1987. 30 U.S.C. §§ 181-287 (1994) (FOOGLRA). FOOGLRA requires that all federal oil and gas leasing be subject to competitive bidding. *Id.* § 226(b)(1)(A). In FOOGLRA, Congress recognized that the Forest Service should play a role in federal oil and gas leasing decisions and now Forest Service consent (in addition to BLM consent) is generally required before Forest Service lands are open to an oil and gas lease. See Kaiser and Hardt, *supra* note 196, at 853-54.

204. Oil and Gas Resources, 55 Fed. Reg. 10,423-24 (1990) (codified at 36 C.F.R. Parts 228, 261 (1997)). See also Kaiser and Hardt, *supra* note 196, at 839-40 & n.88.

205. 16 U.S.C. §§ 1600-1614 (1994).

206. *Id.* §§ 1601-1610.

207. *Id.* § 1604.

208. *Id.* §§ 1604(c), 1604(g)(3)(B).

209. *Id.* § 1604(i).

Two Forest Service regulatory regimes are relevant to split estate lands. First, the Forest Service has promulgated regulations addressing management of surface impacts from the development of mineral rights reserved in conveyances to the United States.²¹⁰ These “reserved” mineral rights, of course, result in the creation of split estates.

The Forest Service reserved mineral right regulations provide first that whoever undertakes to exercise reserved rights shall give prior written notice to the Forest Service and shall submit evidence of the authority to exercise these rights. The regulations further provide that only so much of the surface of the lands shall be occupied and disturbed as is necessary for bona fide mineral activities.²¹¹ The regulations also require that the mineral developer obtain a permit from the Forest Service and post a reclamation bond. The Forest Service permit may contain conditions deemed “necessary to provide for the safety of the public and other users of the land.”²¹² The reclamation bond is to be posted in an amount sufficient to guarantee restoration of the surface estate. The mineral developer is further obligated to “restore the land to a condition safe and reasonably serviceable for authorized programs of the Forest Service.”²¹³ The regulations also provide that the mineral developer shall make “reasonable provisions . . . for the disposal of . . . deleterious materials . . . in such a manner as to prevent obstruction, pollution, or deterioration of water resources.”²¹⁴

The second regulatory regime provides a mechanism for the Forest Service to regulate so-called “outstanding” mineral rights. Outstanding mineral rights are mineral rights owned by third parties that were severed before the government acquired its surface rights. The government acquired the property subject to these outstanding mineral rights.²¹⁵ Outstanding mineral rights are regulated under the Forest Service’s general special use regulations.²¹⁶ These regulations provide that all uses of the national forest system lands, with exceptions not relevant here, are designated “special uses,” and “must be approved by an authorized officer.”²¹⁷ That approval is through a special use authorization.²¹⁸ Each authorization contains terms and conditions intended to “minimize damage to scenic and aesthetic values and fish

210. 36 C.F.R. § 251.15 (1997).

211. *Id.* § 251.15.(a)(1).

212. *Id.* § 251.15(a)(2)(ii).

213. *Id.* § 251.15(2)(iii).

214. *Id.* § 251.15(a)(5).

215. *Duncan Energy Co. v. U.S. Forest Serv.*, 50 F.3d 584, 588 n.3 (8th Cir. 1995).

216. 36 C.F.R. § 251.110.

217. *Id.* § 251.50(a).

218. *Id.* § 251.53(f).

and wildlife and otherwise protect the environment.²¹⁹

In *Duncan Energy Co. v. U.S. Forest Service*,²²⁰ the Eighth Circuit upheld a challenge to an attempt by the Forest Service to regulate the development of outstanding oil and gas rights on the Custer National Grassland in North Dakota pursuant to the special use regulations. The oil and gas developer contended that traditionally, the Forest Service regulated the surface use for outstanding mineral rights, if at all, through negotiation with the developer and through the application of state law.²²¹ The developer further contended that the Forest Service could not deviate from this agency precedent. In addition, the developer observed that although the Forest Service had regulations governing reserved rights, it lacked any regulations specifically addressing outstanding mineral rights. To the developer, this lack of authority for outstanding rights meant that state law ought to apply.²²² The Eighth Circuit rejected these arguments, holding that the Forest Service had the authority to regulate surface use since Congress had continuously given the agency broad power to regulate forest lands. To the extent that the exercise of this authority conflicted with state law, the court held state law must yield.²²³

Significantly, the Forest Service, in its briefs, was circumspect about its power, if any, to preclude altogether the development of these outstanding rights. In its opening brief on appeal, the Forest Service explained its position in this way: "When there is a split estate, . . . while [the Forest Service] may not generally preclude development of the dominant mineral estate, it may exercise federal statutory authority to establish reasonable conditions and mitigation measures to protect federal surface resources."²²⁴ In its reply brief, the Forest Service explained that it was not claiming any authority to prevent Duncan from developing its mineral estate.²²⁵ Ultimately, the court understood the Forest Service to concede that it lacked the authority to prohibit mineral development altogether.²²⁶ The *Duncan* court clearly found that although the Forest Service cannot wholly preclude development of the mineral estate without running afoul of the Takings Clause, its legislative mandates authorized by the Property Clause would

219. *Id.* § 251.56.

220. 50 F.3d 584 (8th Cir. 1995).

221. *Id.* at 590.

222. *Id.*

223. *Id.* at 591.

224. *Id.*, U.S. Opening Brief at 3 (on file with the author).

225. *Id.*, U.S. Reply Brief at 3 (on file with the author).

226. *Id.* at 589 (stating that "[t]he Forest Service recognizes that it cannot prevent Duncan, as the owner of the dominant mineral estate, from exploring for or developing its minerals"). Perhaps because the court of appeals understood it to have conceded this point, the Forest Service in its brief filed in opposition to the developers petition for *en banc* review, expressly stated that it lacked the authority to preclude access to the mineral estate altogether) (brief on file with the author).

almost certainly permit it to bar development where necessary to protect the federal surface. As in the case of the BLM, the question as to how far the Forest Service can go without implicating the Takings Clause is an important issue addressed in Part IV of this article.

C. *The National Park Service*

The National Park Service, unlike the BLM and the Forest Service, is not a multiple use agency. The National Park Service Organic Act directs the Park Service to conserve park resources unimpaired for the enjoyment of future generations.²²⁷ The purposes prescribed by the Organic Act were made applicable to all the land units within the National Park System by the General Authorities Act of 1970.²²⁸ In 1978, Congress amended the provisions of the General Authorities Act to reaffirm and direct that activities taking place within the National Park System shall not be in derogation of the values and purposes for which park units were established.²²⁹

Although not directly relevant to split estate lands, the Mining in the Parks Act of 1976²³⁰ is an important expression of congressional intent to safeguard park values even where private property interests were implicated. This Act directs the NPS to regulate mineral development operations on patented and unpatented federal mining claims in the parks. The statute is unusual in that Congress explicitly grants authority to regulate mining on private lands (i.e., patented claims). Regulations promulgated pursuant to this Act require that the Park Service approve a plan of operations.²³¹ This plan of operations must include a description of the operation, a timetable for the operation, the nature and extent of the known deposit, a reclamation plan, evidence of the steps taken to comply with all regulatory requirements, and an environmental report intended to aid the Park Service in evaluating the impacts of the proposed operation.²³² Operators must also post a performance bond before beginning operations.²³³

Of particular relevance to split estate issues are the individual park enabling acts. Between 1961 and 1980, the park system underwent rapid expansion. Many of these newer units were not carved from existing federal lands and already contained severed mineral rights.²³⁴ Thus, individual park

227. 16 U.S.C. §§ 1 (1994).

228. *Id.* § 1a-1.

229. *Id.* § 1a-1.

230. 16 U.S.C. §§ 1901-12 (1994).

231. *See generally* 36 C.F.R. § 9.9 (1997).

232. *Id.*

233. *Id.* § 9.13.

234. Frank Buono et al., *Mining Laws and Regulations and the National Park System*, in *MANAGING NATIONAL PARK SYSTEM RESOURCES: A HANDBOOK ON LEGAL DUTIES, OPPORTUNITIES, AND TOOLS*

enabling acts often contain specific language relating to restrictions on acquisition of private minerals, and calling for regulations to manage development of private mineral rights. For example, legislation establishing Big Cypress National Preserve provides that “[n]o improved property . . . , nor oil and gas rights, shall be acquired without consent of the owner unless the Secretary, in his judgment, determines that such property is subject to, or threatened with, uses which are or would be, detrimental to the purpose of this preserve.”²³⁵ Other units with statutory provisions limiting the service’s acquisition authority include Big Thicket National Preserve, Texas;²³⁶ Jean Lafite National Historical Park, Louisiana;²³⁷ Fort Union National Monument, New Mexico;²³⁸ and Padre Island National Seashore, Texas.²³⁹

The enabling legislation for some of these units contains statutory provisions pertaining to mineral development of nonfederally owned mineral rights. In Big Thicket National Preserve, for example, Congress directed the Secretary of the Interior to “promulgate and publish such rules as he deems necessary and appropriate to limit and control the . . . exploration for, and extraction of, oil, gas and other minerals.”²⁴⁰ Other units with similar authority include Padre Island,²⁴¹ Big Cypress,²⁴² Jean Lafitte,²⁴³ Gateway National Recreation Area,²⁴⁴ New River Gorge,²⁴⁵ and Big South Fork.²⁴⁶

Based on the direction contained in certain unit-specific enabling legislation and the mandate of the Organic Act, the Park Service promulgated regulations for the development of nonfederal oil and gas rights in all of its units.²⁴⁷ The regulations for nonfederal oil and gas require Park Service approval of a plan of operations before the nonfederal party may conduct operations.

Like the Forest Service reserved mineral regulations,²⁴⁸ under the Park Service regulations, a plan of operations²⁴⁹ and a reclamation bond²⁵⁰ are the

129 (Michael A. Mantell ed., 1990). In contrast to many of the newly created park units, the United States now holds title to almost all lands within park boundaries in units created before 1961. *Id.*

235. 16 U.S.C. § 698f (1994).

236. *Id.* § 698.

237. *Id.* § 230.

238. *Id.* § 450kk.

239. *Id.* § 459(d).

240. *Id.* § 698(c).

241. *Id.* § 459d.

242. *Id.* § 698f.

243. *Id.* § 230.

244. *Id.* § 460cc.

245. *Id.* § 460m-15.

246. *Id.* § 460ee.

247. 36 C.F.R. § 9(B) (1997).

248. *See supra* pp. 445-49.

249. *See* 36 C.F.R. § 9.36.

basic instruments of Park Service regulatory control on split oil and gas estates. The Park Service regulations are, however, far more detailed. The plan of operations submitted by the operator lays out when, where and how the mineral operation is to proceed.²⁵¹ The plan also addresses contingency plans for accidents and site reclamation methods.²⁵² The plan process requires the operator to identify potential resource impacts, to develop alternative operational methodologies and mitigation strategies, and to reclaim the site.²⁵³ The Park Service grants final approval only after the developer posts a mitigation bond.²⁵⁴

The Park Service's nonfederal oil and gas regulations have recently been subject to a legal challenge. In *Dunn-McCampbell Royalty Interest, Inc. v. National Park Service*,²⁵⁵ the owner of a severed mineral estate within Padre Island National Seashore asserted an "unfettered right" to use and even "destroy" surface lands during mineral development.²⁵⁶ The Park Service carefully conditions oil and gas operations on Padre Island because the park encompasses a rich variety of wetlands and serves as important habitat for a wide range of flora and fauna. Portions of the park provide unique habitat for endangered species like sea turtles and brown pelicans. In *Dunn-McCampbell*, the severed estate owner contended that the Park Service's nonfederal oil and gas regulations were issued without authority and could not apply to oil and gas operations on Padre Island.²⁵⁷ Specifically, the owner asserted that Texas law rather than federal law governed the extraction of oil and gas on Padre Island.²⁵⁸ In addition, the owner alleged that to the extent federal regulations did govern oil and gas operations, they constituted an uncompensated taking in violation of the Fifth Amendment.²⁵⁹

The United States District Court for the Southern District of Texas held, as an initial matter, that this challenge to the Park Service's regulations was time barred since it was not filed within the six year statute of limitations applicable to civil actions against the government.²⁶⁰ The court further found that even assuming that the challenge was timely it would

250. *Id.* § 9.48.

251. *Id.* § 9.36.

252. *Id.*

253. *Id.*

254. *Id.* § 9.48.

255. 964 F. Supp. 1125 (S.D. Tex. 1995), *aff'd*, 112 F.3d 1283 (5th Cir. 1997).

256. Complaint at 5-6, *Dunn-McCampbell*, 964 F. Supp. 1125 (on file with the author).

257. *Dunn-McCampbell*, 964 F. Supp. at 1129.

258. *Id.*

259. *Id.* at 1130.

260. *Id.* at 1132. The district court relied on 28 U.S.C. § 2401 which bars civil actions against the United States unless filed within 6 years after the right of action accrues. The Park Service first promulgated its non-federal oil and gas regulations in 1978. 43 Fed. Reg. 57,822 (1978).

nonetheless fail, as the Park Service regulations were a valid exercise of the Service's authority.²⁶¹ The court also held that to the extent state law conflicted with federal authority it must yield under the Supremacy Clause.²⁶² Finally, the district court transferred the owner's takings claim to the Court of Federal Claims.²⁶³

The Court of Appeals for the Fifth Circuit recently affirmed the district court's decision.²⁶⁴ A majority of the court of appeals panel held that the owner's facial challenge to the regulations was barred by the six-year statute of limitations.²⁶⁵ In addition, the court found that there was no proper "applied" challenge to regulations before it because the Park Service had not taken any action against the owner.²⁶⁶ Consequently, the court found it unnecessary to reach the issue of the Park Service's authority to regulate the surface use. One Judge, the Honorable Edith H. Jones, dissented. Judge Jones asserted that so long as the owner brought its lawsuit within six years of the time it reacquired its leases the suit was timely.²⁶⁷ Judge Jones considered resolution of the merits of the case especially important because if the owner's theory of the case was correct, the Park Service had no jurisdiction to regulate the surface use of the lands in question.²⁶⁸ Notwithstanding Judge Jones' vigorous dissent, the majority's decision in *Dunn-McCampbell* appears to leave the Park Service's oil and gas regulations on solid footing for the time being.

Significantly, however, the Park Service split estate program is incomplete. Many nonfederal oil and gas operations within the national park system are largely exempt from the Park Service's regulatory regime. These operations were either: 1) being conducted before the Park Service's oil and gas regulations were adopted in 1979; 2) predate the establishment of the park unit; or 3) were incorporated into the unit as a result of boundary expansion.²⁶⁹ So long as these operations are conducted according to a valid state or federal permit, they are largely exempt from the Park Service regulatory regime.²⁷⁰ Approximately 331 active oil and gas operations within

261. *Dunn-McCampbell*, 964 F. Supp. at 1133-37.

262. *Id.* at 1137-39.

263. *Id.* at 1139.

264. *Dunn-McCampbell Royalty Interest, Inc. v. Nat'l Park Serv.*, 112 F.3d 1283 (5th Cir. 1997).

265. *Id.* at 1287-88.

266. *Id.* at 1288.

267. *Id.* at 1290.

268. *Id.*

269. 36 C.F.R. § 9.33 (1997).

270. These operations are subject only to regulations at 36 C.F.R. § 9.33 (defining existing operations and requiring such operations to submit to the full regulatory regime at the expiration of their existing permit), and the regulations governing the appeal of Park Service actions. 36 C.F.R. § 9.49.

Park Service Units are exempt from the Park Service regulations.²⁷¹

In addition, no Park Service regulations specifically address nonfederal minerals other than oil and gas in the national park system. The Park Service attempts to regulate such mining operations under a special use permit system.²⁷² The Park Service also pursues cooperative agreements and voluntary surface use agreements with operators developing nonfederal mineral rights.²⁷³ Thus, although the NPS has a detailed regulatory regime for nonfederal oil and gas operations, a number of operations on split estate lands within the Park System remain largely unaffected by the regulations. In addition, as the *Dunn-McCampbell* case illustrates, even where the Park Service regulations apply, the agency is subject to "takings" allegations.

D. *The National Wildlife Refuge System*

The National Wildlife Refuge System administered by the FWS, is the only extensive system of federally owned lands managed chiefly for the conservation of wildlife.²⁷⁴ Although the National Wildlife Refuge System contains more land than the Park Service, it lags behind the Park Service in its management of operations on split estate lands within its units.

Wildlife refuges have a long history in the United States, but the statutory authorities governing their management are of more recent vintage. The first refuge is generally considered to be Pelican Island, Florida, established in 1903 by President Theodore Roosevelt.²⁷⁵ Before the end of Roosevelt's first term, he had established 49 additional refuges.²⁷⁶ Each of the national wildlife refuges, created through congressional or executive action (or a combination of the two), has one or more primary purposes for which it was established and around which management of the refuge is designed.²⁷⁷

The first major legislation addressing the refuge system was the Refuge

271. Interview with the Geologic Resources Branch, Nat'l Park Service (figures as of Jan. 1995).

272. The regulatory authority for these special use permits is 36 C.F.R. § 5.6(c) which governs business operations in the National Park System.

273. See Buono, *supra* note 234, at 133.

274. Fink, *supra* note 72, at 5. Fink's article is a recent and comprehensive examination of the National Wildlife Refuge System.

275. Ted Williams, *Seeking Refuge*, AUDUBON, May-June 1996, at 42 [hereinafter *Seeking Refuge*]. Michael Bean has suggested that although Pelican Island is usually regarded as the first National Wildlife Refuge, Alaska's Afognak Island reserved by President Harrison in 1892 might deserve that honor. MICHAEL J. BEAN, *THE EVOLUTION OF NATIONAL WILDLIFE LAW* 22 n.29 (1983).

276. *Seeking Refuge*, *supra* note 275, at 42.

277. It is not unusual for refuges within the system to have been created for the benefit of a single species or group of animals. Fink, *supra* note 72, at 22. See, e.g., the legislation creating the National Key Deer Refuge, 16 U.S.C. § 696 (1994), "to protect and preserve . . . the Key deer and other wildlife resources in the Florida keys . . ."

Recreation Act of 1962.²⁷⁸ This was the first act to establish a “compatibility” standard for use of refuge system lands. This Act requires that any recreational use be compatible with the primary purpose or purposes for which the area was established.²⁷⁹ The National Wildlife Refuge System Administration Act of 1966, (NWRSA), consolidated the diverse units managed by the FWS into the refuge system as it exists today.²⁸⁰ Significantly, the NWRSA is not an organic act. It does not define the purpose and function of the refuge system. The Act did, however, reinforce and expand the compatibility standard. The Act authorized the Secretary of the Interior, under such regulations as he may prescribe, to “permit the use of any area within the System for any purpose, including but not limited to hunting, fishing, public recreation and accommodations, and access whenever he determines that such uses are compatible with the major purposes for which such areas were established.”²⁸¹

On October 9, 1997, President Clinton signed the National Wildlife Refuge System Improvement Act (NWRISA) of 1997.²⁸² This legislation is expressly intended to serve as an organic act for the refuge system.²⁸³ While the legislation adopts the definition of compatibility set forth in the NWRSA, compatibility must now be tested against the refuge system mission as well as the individual refuge purposes. Although it is still too soon to tell, the NWRISA should provide the FWS with more protective authority over refuge lands.²⁸⁴

The current regulations adopted by the FWS pursuant to the refuge system administration act close refuges to all forms of public use until a determination is made that the proposed use is compatible with the refuge’s purposes.²⁸⁵ In a recent report on secondary uses occurring within the refuge system, the FWS explained that certain secondary uses are permitted where the service lacks the authority to control the use such as “when [the Service] does not acquire the right to control a use when purchasing property; and . . . when uses were established on refuge lands prior to the enactment of the Refuge System Administration Act.”²⁸⁶

278. 16 U.S.C. § 460k to -k-4 (1994).

279. *Id.*

280. 6 U.S.C. § 668dd, § 668ee (1994).

281. *Id.* § 668dd(d)(1).

282. Pub. L. No. 105-57, 111 Stat. 1252 (1997)

283. H.R. REP. NO. 106, at 2 (1997).

284. The National Audubon Society has already filed suit under the NWRISA seeking to curtail agricultural use of refuge lands on the Oregon/California border. *Groups Sue Under New Wildlife Law; Federal Court Asked to Curb Farming in Northwest Refuges*, WASH. POST, Dec. 11, 1997, at A25.

285. 50 C.F.R. subchapter C (1996).

286. U.S. FISH AND WILDLIFE SERVICE COMPATIBILITY TASK GROUP, REPORT TO THE DIRECTOR: A REVIEW OF SECONDARY USES OCCURRING ON NATIONAL WILDLIFE REFUGES 13 (1990) [hereinafter

As noted above, oil and gas operations on split estate lands within the national refuge system are extremely common and refuge managers cite oil and gas operations as the economic use that most frequently causes adverse impacts on refuge objectives.²⁸⁷ In response to those impacts, the FWS has promulgated a regulation governing reserved mineral rights on refuge system lands, but the regulation is modest.²⁸⁸ It requires to the extent practicable, that mineral operations be conducted in such a manner as to prevent damage, erosion, pollution or contamination to the lands, waters, facilities and vegetation of the area. In addition, the regulation specifies that so far as practicable, operations should be conducted without disturbance to wildlife. Also, persons conducting mineral operations on refuge areas must comply with federal and state laws and regulations for the protection of wildlife and the administration of the area. The regulation also specifies that wastes be confined to the smallest possible area and contained to prevent escape. Finally, the regulation provides that at the cessation of operations the area shall be restored as nearly as possible to its condition prior to the commencement of operations.²⁸⁹ The regulation appears to be largely inadequate given the significant numbers of refuge managers who consider oil and gas operations harmful to their refuges.²⁹⁰

In addition, in at least one case where the FWS attempted to apply the regulation, a district court held that the regulation was inapplicable. In *Caire v. Fulton*,²⁹¹ the question before the court was whether the United States as surface owner of a national wildlife refuge has the authority to regulate privately owned subsurface mineral interests.²⁹² The case arose on the D'Arbonne National Wildlife Refuge in northeast Louisiana. The refuge was established in 1975 in conjunction with some lands acquired by the Army Corps of Engineers.²⁹³ The Corps, however, acquired only the surface of the refuge lands despite the fact that some of the lands overlaid the once highly productive Monroe gas field.²⁹⁴ Originally, the federal condemnation complaint expressly stated that oil and gas development on the property would be subject to the provisions of the FWS regulation governing reserved mineral rights. After one of the holders of the oil and gas rights objected to the validity of the condemnation proceeding, the parties negotiated a settlement approved and entered by the court that made no mention of the

SECONDARY USES] (on file with the author).

287. Fink, *supra* note 72, at 65-66; SECONDARY USES, *supra* note 286, at 26, Table 9.

288. 50 C.F.R. § 29.32 (1996).

289. *Id.*

290. Fink, *supra* note 72, at 65-66; SECONDARY USES, *supra* note 286, at 26, Table 9.

291. *Caire v. Fulton*, No. 84-3184 (W.D. La. filed Feb. 10, 1986).

292. *Id.* slip op. at 8.

293. *Id.* at 1-2.

294. *Id.* at 2.

FWS regulation.²⁹⁵

The refuge provides wintering and breeding habitat for a wide variety of birds and resident species including the endangered red cockaded woodpecker and the bald eagle.²⁹⁶ As oil and gas development increased on the refuge—in part because the gas field was declining and more wells were necessary to make it productive—the refuge manager sought to impose a permit system, including permit conditions for oil and gas operations within the refuge which ultimately gave rise to the *Caire* litigation.²⁹⁷ The district court concluded that the FWS was without any authority to impose permit conditions on the oil and gas operators.

The court rejected the government's argument that the NWRSA provided authority for the regulation of private mineral estates. The court noted that in an early version of the Act, authority to regulate the surface of mining locations was included in the legislation but ultimately deleted from the final Act.²⁹⁸ The court observed that a report to Congress from the Interior Department stated that this authority would ultimately be desirable. From that statement the court concluded that absent express authority the FWS had no authority over private mineral rights.²⁹⁹ Further, the court concluded that the Migratory Bird Conservation Act was irrelevant to the extent it provided for the acquisition of refuges. The court held that the Act could not apply here because it specifies that rules and regulations that might govern reserved property interests be spelled out in the deed or lease. Here, such language was expressly deleted from the documents acquiring the surface estate.³⁰⁰

The district court's decision in *Caire* is inconsistent with the subsequent holdings in *Duncan Energy* and *Dunn-McCampbell* and is ultimately unpersuasive. In the Senate Report relied on by the district court, the Interior Department did not state that it lacked the authority to regulate the surface use of mining in refuges. Instead the report merely indicated that such authority would ultimately be desirable.³⁰¹ The NWRSA specifically vested the Secretary with authority to issue regulations governing the use of the refuges.³⁰² In addition, the district court's interpretation of the Migratory

295. *Id.* at 2-4.

296. *Id.* at 6.

297. *Id.* at 5-6.

298. *Id.* at 10.

299. *Id.* (citing S. REP. NO. 1463 (1966), reprinted in 1966 U.S.C.C.A.N. 3342, 3351-52).

300. *Id.* at 11 (citing 16 U.S.C. § 715c, stating that "reservations shall be subordinate to and subject to such rules and regulations as are set out in such deed or lease or, if deemed necessary by the Secretary of Interior, to such rules and regulations as may be prescribed by him from time to time").

301. S. REP. NO. 1463 (1966), reprinted in 1966 U.S.C.C.A.N. 3342, 3351-52.

302. 16 U.S.C. § 668dd(d)(1) (1994).

Bird Conservation Act seems strained. Since the condemnation document ultimately approved by the court contemplated that oil and gas development on the property "shall be subject to Federal and State Laws with respect to pollution,"³⁰³ it is at least arguable that the parties contemplated that the oil and gas operations would be subject to regulation akin to that imposed by the FWS.

The *Caire* case illustrates some of the difficulties the FWS has in regulating split estate lands within its jurisdiction. In the agency's recent report on secondary uses occurring within refuges, oil and gas operations are repeatedly deemed harmful to refuge wildlife and operations. However, the only solution to this problem offered by refuge personnel is to "work cooperatively with oil companies to minimize impacts."³⁰⁴ Whether the agency's regulatory authority is sufficient to "minimize impacts" to refuge resources is discussed in Part V.

IV. THE LIMITS OF FEDERAL AUTHORITY OVER SPLIT ESTATE LANDS

Several important factors limit federal authority over split estate lands. In Part A, the limits imposed by congressionally recognized valid and contractual rights are set forth. Part B, addresses the protections afforded private property by the Takings Clause.

A. *Valid Existing Rights and Contractual Rights*

The protections afforded property through statutory valid existing rights "language" and the rights afforded by the document creating the severed mineral estate, here termed a "contractual" right, are similar in that in both a property right is recognized as existing prior to federal acquisition of property or of a new federal regulatory regime being imposed. Valid existing rights are private interests in property that have been protected by statutory language. The phrase has frequently been used by Congress. One pair of commentators found over 100 uses of the phrase "valid existing rights" or a variant in the United States Code.³⁰⁵ Typically, valid existing rights are not defined by Congress and the task of interpretation falls on Department of the Interior or Department of Agriculture as the primary land management agencies to decipher the term subject to check by the courts.³⁰⁶

303. *Caire*, No. 84-3184, slip op. at 4.

304. SECONDARY USES, *supra* note 286, at 182-83 (describing harmful impacts in Region 6 of the Refuge System).

305. James N. Barkeley & Lawrence V. Albert, *A Survey of Case Law Interpreting "Valid Existing Rights"—Implications for Unpatented Mining Claims*, 34 ROCKY MTN. MIN. L. INST. 9-1, 9-6 n.7, 9-56 n.301 (1988).

306. Jan G. Laitos & Richard A. Westfall, *Government Interference with Private Interests in Public*

A reserved mineral right on federal surface is conceivably a valid existing right. Indeed, the Interior Board of Land Appeals has held that a severed mineral estate is a "vested right" subject to even greater protection than a valid existing right.³⁰⁷ Both FLPMA³⁰⁸ and NFMA³⁰⁹ have valid existing right provisions and the FWS regulations governing reserved minerals state that they are not intended to "contravene or nullify rights vested in holders of mineral interests on public lands."³¹⁰

Whether as vested rights or valid existing rights reserved or outstanding, mineral rights are not free from regulation. The Supreme Court has stated that "vested economic rights are held subject to the Government's substantial power to regulate for the public good."³¹¹ Likewise, valid existing rights may be regulated.³¹² A regulation adopted for proper governmental purposes may diminish the value of the right.³¹³ And both vested and valid existing rights may be regulated up until the point at which a "taking" has occurred.³¹⁴

As discussed briefly above, the act regulating surface mining, SMCRA, has a valid existing rights provision. The Act provides that with certain exceptions, no coal mining which disturbs the surface "shall be permitted . . . on any federal lands within the boundaries of any national forest" —subject to "valid existing rights."³¹⁵ In the SMCRA context there is an important interplay between valid existing rights and contractual rights. This is because where a valid existing right to mine coal on a national forest has been found to exist, the courts have looked to the actual terms of the conveyance or deed to determine whether strip mining is a permissible means of extracting the coal. This is obviously an issue of some importance to the Forest Service since where strip mining is permitted it will destroy the surface. Depending upon the precise instrument under examination the courts have

Resources, 11 HARV. ENVTL. L. REV. 1, 20 (1987).

307. *Santa Fe Pacific R.R. Co.*, 64 IBLA 27 (1982). Vested rights are "[t]he highest 'estate' that a party can acquire from the federal government . . ." Laitos and Westfall, *supra* note 306, at 12. Although there is not universal agreement on the precise definition of vested right, the concept is generally understood to encompass fee title, or legal or equitable rights to a fee title. *Id.*

308. FLPMA provides that: "[a]ll actions by the Secretary concerned under this Act shall be subject to valid existing rights." 43 U.S.C. § 1701 (1994).

309. NFMA contains a provision providing that forest plans are subject to valid existing rights. 16 U.S.C. § 1604(i) (1994).

310. 50 C.F.R. § 29.32 (1996).

311. *United States v. Locke*, 471 U.S. 84, 105 (1985) (involving regulation of an unpatented mining claim).

312. Solicitor's Opinion M-36910 (Supp.), 88 Int. Dec. 909, 913-14 (1981). The Secretary of Interior may subject valid existing rights to "reasonable mitigating measures to protect environmental values." *Id.* at 914.

313. *Hodel v. Virginia Surface Mining and Reclamation Ass'n*, 452 U.S. 264 (1981).

314. Solicitor's Opinion M-36910, 86 Int. Dec. 89, 116-118 (1979).

315. 30 U.S.C. § 1272(e)(2) (1994).

ruled either way.

In *United States v. Stearns Coal and Lumber Co.*,³¹⁶ the parties agreed that Kentucky law controlled construction of a deed conveying land to the Forest Service and reserving the minerals to the seller. The court held that the deed did not reserve to the mineral owner the right to strip mine coal without permission of the Forest Service because the parties to the deed did not contemplate that the mineral owner could totally destroy the surface.³¹⁷ In *Bellville Mining Co., Inc. v. United States*,³¹⁸ after examining the deeds surrounding the acquisition of four tracts of land within an Ohio national forest, a divided court held that the deeds contemplated strip mining on three of the four tracts.³¹⁹ The dissenting judge concluded that the terms of the deed would have barred strip mining on all four tracts. Thus, the terms of a deed, in so far as valid existing rights are concerned, can limit the federal authority to regulate mineral extraction.

B. *The Takings Clause*

While the Takings Clause is the most discussed limitation on federal regulatory authority, its precise reach is far from well understood. The Takings Clause of the Constitution states in relevant part: "nor shall private property be taken for public use without just compensation."³²⁰ The prohibition has been extended beyond those situations where the government has acquired land or personal property without paying for it.³²¹ In addition, to these situations a physical occupation of land may be a taking and a regulation that greatly impedes private rights in the property has also been held to be a taking.³²² This last category of actions constitutes the so-called "regulatory taking" where no physical occupation of the property has occurred but the regulation has nonetheless resulted in the owner's economic loss.

Questions involving the regulation of split estate lands have played a seminal role in the development of takings jurisprudence. At issue in *Pennsylvania Coal Co. v. Mahon*,³²³ was a state statute intended to regulate the mining of coal owned separately from the surface estate. The Court, per

316. 816 F.2d 279 (6th Cir. 1987).

317. *Id.* at 283. In *United States v. Stearns Co.*, 949 F.2d 223 (6th Cir. 1991), the Sixth Circuit reaffirmed the earlier result and rejected Steam's argument that it should be reversed because of a recent Kentucky Supreme Court decision striking a state statute prohibiting strip mining of minerals reserved by so-called "broad-form" deeds.

318. 999 F.2d 989 (6th Cir. 1993).

319. *Id.* at 1002.

320. U.S. CONST. amend. V.

321. Marla Mansfield, *When "Private" Rights Meet "Public" Rights: The Problems of Labeling and Regulatory Takings*, 65 U. COLO. L. REV. 193, 212 (1994) (summarizing takings jurisprudence).

322. *Id.*

323. 260 U.S. 393 (1922).

Justice Holmes, struck down the subsidence as a taking, finding that the regulation went “too far.”³²⁴ More than eighty years later in *Keystone Bituminous Coal Association v. DeBenedictis*,³²⁵ the Supreme Court considered a similar statute, and held that the statute did not constitute a taking. The majority in *Keystone* distinguished *Mahon* primarily on the ground that the earlier statute aimed solely at protecting the private surface owners who had bargained away their rights to the coal, while the more recent statute sought to promote the broader public goals of conservation, safety, and preservation of property for tax purposes.³²⁶ The disparate results in *Mahon* and *Keystone* well illustrate the contradictory and ad hoc nature of takings jurisprudence.

Although the Supreme Court is aware of the confused nature of its takings decisions, the recent case law has not been much help. In a recent case on regulatory takings, *Lucas v. South Carolina Coastal Commission*,³²⁷ the Supreme Court held that whenever a land use regulation deprives an owner of all economic use, compensation is required unless the provision duplicates a provision of nuisance law or some other state common law doctrine.³²⁸ The definition of nuisance law adopted by the court leaves little room for growth or current environmental concerns. In *Lucas*, the Court held that a statute that prohibited a developer from building habitable structures on a beach front lot must be deemed to violate the “Takings Clause” unless the state court on remand found that “an objectively reasonable application” of state nuisance law would also prescribe the construction of permanent structures on the property in question.³²⁹

The majority of federal regulatory takings claims are brought in the United States Court of Federal Claims.³³⁰ Following the Supreme Court’s decision in *Lucas*, the United States Court of Appeals for the Federal Circuit described its framework for determining when a taking occurs. In *Lovelandies Harbor, Inc. v. United States*,³³¹ the court adopted a three prong test to determine when there has been a regulatory taking: “With regard to the interest alleged there has been a taking if (1) there was a denial of economically viable use of property as a result of the regulatory imposition; (2) the property owner had distinct investment-backed expectations; and (3) it was an interest vested in the owner, as a matter of state property law, and not

324. *Id.* at 415.

325. 480 U.S. 470 (1987).

326. *Id.* at 485-90.

327. 112 S. Ct. 2886 (1992).

328. *Id.* at 2900.

329. *Id.* at 2902 n.18.

330. Pursuant to the Tucker Act, 28 U.S.C. §§ 1346(a)(2) & 1491(a) (1994), takings claims that amount to more than \$10,000 are heard exclusively in the Court of Federal Claims.

331. 28 F.3d 1171 (Fed. Cir. 1994).

within the power of the state to regulate under common law nuisance doctrine."³³²

In cases prior to *Loveladies*, the Federal Circuit and other courts had indicated that the deprivation of economical use of a mineral claim would constitute a taking.³³³ The decision in *Loveladies* is unlikely to change this equation. Although, as Professor Mansfield notes, many state statutes requiring the payment of damages to the surface estate caused by oil and gas operations have been challenged on takings grounds and survived, these statutes are not necessarily analogous to federal regulation of mineral estates. These statutes do not go so far as to prohibit the development of privately held mineral rights.³³⁴ Indeed, states have been circumspect in their regulation of oil and gas well spacing requirements on small tracts precisely for fear of running afoul of the Takings Clause.³³⁵ In contrast, Federal land managers may determine that resource protection in some cases requires an outright ban on mineral development.

Notwithstanding this problem it may still be possible for federal land managers to deny a mineral extraction operation without implicating the Takings Clause. Much recent discussion, and academic commentary on takings issues has focused on the so-called denominator problem.³³⁶ In *Lucas*, the Court held that although the government may generally restrict the use of private property without compensation it may not deny all economically beneficial use of the land. What the Court did not decide is how to determine the relevant parcel of land. Relevant to such determinations of course are the contiguity of the property, and whether it is used for a single purpose and held by a single owner.³³⁷ Currently no firm rule for determining the proper denominator has been developed, although the Federal Circuit has held that a compensable partial taking is possible,³³⁸ the exact nature of the compensable denominator is still undefined.

If federal land managers can demonstrate that such mineral interests as

332. *Id.* at 1179.

333. *Whitney Benefits, Inc. v. United States*, 926 F.2d 1169 (Fed. Cir. 1991) (taking of coal resulted from SMCRA prohibition on surface mining); *Skaw v. United States*, 740 F.2d 932 (Fed. Cir. 1984) (regulation of an unpatented mining claim—recognized as a valid existing right—may be a taking if the owner is deprived of any economically viable use of the claim); *State of Utah v. Andrus*, 486 F. Supp. 995, 1011 (D. Utah 1979) (a regulation permanently depriving a mining claimant of access to its claims could constitute a taking).

334. *Property Rights*, *supra* note 55, at 101. *See, e.g.*, *Murphy v. Amoco Prod. Co.*, 729 F.2d 552, 558 (8th Cir. 1984).

335. *LOWE, OIL & GAS LAW*, *supra*, note 20, at 20-28.

336. *See, e.g.*, James L. Huffman, *Judge Plager's 'Sea Change' In Regulatory Takings Law*, 6 *FORDHAM ENVTL. L.J.* 597 (1995); John E. Fee, Comment, *Unearthing the Denominator in Regulatory Takings Claims*, 61 *U. CHI. L. REV.* 1535 (1994).

337. Fee, *supra* note 336, at 1537.

338. *Florida Rock Industries, Inc. v. United States*, 18 F.3d 1560, 1570 (Fed. Cir. 1994).

oil and gas fields should be viewed as a single parcel of property (or denominator) it may give these managers the ability to deny the development of individual well pads. This is significant because many of the conflicts between oil and gas development and federal land management objectives occur when a field is declining. Thus, in the *Caire* case, a conflict developed when operators wanted to greatly expand the number of wells in the hopes of making this declining field profitable. If the FWS had denied the operator the right to develop all these wells it would still not have denied "all economically beneficial or productive use of the land."³³⁹ Clearly, before federal land managers reject outright an application to drill, the particular circumstances surrounding the application to drill should be carefully scrutinized. If the operator has already enjoyed productive use of the mineral estate and increased drilling activity will damage the resource, the land manager should consider denying any new applications to drill.

In sum, the Takings Clause as it is currently understood is a powerful check on the authority of the land management agencies, as these agencies cannot wholly deny a reserved mineral holders right to develop his property without paying just compensation. However, the Takings Clause jurisprudence also continues to recognize that the government has considerable regulatory powers so long as it stops short of denying the property owner all economically beneficial use of her land.

V. RECOMMENDATIONS FOR IMPROVED MANAGEMENT OF SPLIT ESTATE LANDS

Recent litigation involving federal/private split estate lands has been marked by considerable acrimony. In large part, this may be a result of misunderstandings between the role and needs of the opposing parties. It may also stem from a confused and inadequate statutory and regulatory authority. What follows are recommendations intended to dissipate the surface tension that currently surrounds federal/private split estates.

339. *Lucas v. South Carolina Coastal Council*, 112 S. Ct. 2886, 2893 (1992).

A. *Management Recommendations*

1. Operators Must Become Familiar with the Agency Regulations

Developing the mineral wealth of federal lands would be easier if the management of these lands were more centralized. The facts are, however, that all four federal land management agencies have different histories, structures, management schemes, and most importantly different missions and authorizing legislation. To avoid conflicts and facilitate the development of private mineral estates, operators and developers must familiarize themselves with the relevant agency's mission and authority. The days where mineral operators on split estate lands could rely solely on state law as a guide are now over.

In *Dunn-McCampbell*, for instance, the owner of the mineral estate brought a challenge to the Park Service's regulatory regime before even applying for approval of a surface use plan to develop oil and gas at Padre Island National Seashore.³⁴⁰ If instead of challenging the Park Service's regulatory regime the owner had familiarized itself with the Park Service's process the litigation might have been avoided. The Park Service has never denied a surface use plan at Padre Island.³⁴¹ Instead of bristling at the regulatory regime, the owner might have avoided litigation by first approaching the Park Service with its plans.

2. The Land Management Agencies should Process Requests to Develop Reserved or Outstanding Minerals on Federal Lands in a Timely Manner

In both *Duncan Energy*,³⁴² and *Bellville Mining*,³⁴³ the time it took the Forest Service and the Office of Surface Mining to process operator requests ultimately became an issue in the litigation. Issues of timeliness of government action should be avoided. Courts are likely to judge an agency's position on the merits harshly where it looks as though there has been unreasonable bureaucratic delay. The courts may compel agency action that has been "unlawfully withheld or unreasonably delayed."³⁴⁴

Courts and operators, however, should understand that land management agencies are often strapped for resources and that the proper study of

340. *Dunn-McCampbell Royalty Interest, Inc. v. Nat'l Park Serv.*, 112 F.3d 1283, 1288 (5th Cir. 1997).

341. Interview with the Geologic Resources Branch of the National Park Service (March 1996).

342. 50 F.3d 584 n.8 (8th Cir. 1995).

343. 999 F.2d 989, 1000 (6th Cir. 1993).

344. Administrative Procedure Act, 5 U.S.C. §§ 555(b), 706(1) (1994). See, e.g., *Barrick Goldstrike Mines, Inc. v. Babbitt*, 1995 WL 408667 (D. Nev. March 21, 1994).

operator requests may take some time. In *Duncan Energy*, on remand from the Eighth Circuit, the district court entered an order holding that the Forest Service must process all surface use plans within 60 days. The Eighth Circuit subsequently reversed this order finding that “[r]easonableness of processing time must be determined on the basis of the totality of circumstances related to each surface use plan and the obligations of the Forest Service.”³⁴⁵ The court indicated that “unwarranted delays” would not be tolerated but otherwise adopted a reasonableness approach.³⁴⁶ A reasonableness standard requires land managers to act as quickly as possible, but operators must understand that this process cannot occur overnight.

3. The Federal Land Management Agencies should Develop the Procedures and Staff Expertise to Effectively and Efficiently Regulate Reserved Minerals

The federal land management agencies should all have staff familiar with mineral exploration and extraction and educated in the relevant legal issues. An educated staff will allow these agencies to effectively regulate private mineral operations on public lands. Although this, and the timely processing of paper work discussed above, are in large part agency resource issues, it is ultimately money well spent. The costs of not maintaining such programs is at the very least the public’s loss of faith and potentially includes the cost of cleaning up abandoned mines and oil and gas wells.

For example, at the Cuyahoga Valley National Recreation Area in Ohio, the Park Service has been struggling to find the resources to cap abandoned gas wells in the park that the Park Service inherited when it purchased privately owned land.³⁴⁷ Without vigilance in Park Service units where oil and gas operations are currently ongoing, the Park Service will only add to the number of reclamation projects funded at taxpayer expense.

B. Positive Law Recommendations

1. Certain Outstanding and Reserved Mineral Rights should be Acquired

In *Bellville*,³⁴⁸ the Forest Service was without power to prohibit strip mining on several tracts of land once it had been demonstrated that the right to strip mine coal on these tracts had been reserved in the applicable deeds. Clearly, in some circumstances akin to this one, Congress may wish to pro-

345. *Duncan Energy Co. v. U.S. Forest Serv.*, 109 F.3d 497, 500 (8th Cir. 1997).

346. *Id.*

347. Donna Robb, *All Old Wells Don't End Well*, THE PLAIN DEALER, Apr. 15, 1996 at B1.

348. 999 F.2d at 1002.

vide for the acquisition of the mineral estate. Likewise, in several of the national wildlife refuges where mineral development is having particularly adverse effects on wildlife and habitat, Congress should acquire the mineral properties. This result is consistent with the General Accounting Office Report on National Wildlife Refuges and FWS's own compatibility review and study.³⁴⁹

2. The Bureau of Land Management Regulations

It is on BLM lands that the great majority of mineral exploration and development on federal land occurs.³⁵⁰ The management of private mineral rights under federal surface are only a small percentage of the mineral development issues addressed by the agency, and the BLM does not have regulations specifically addressing this situation. Although split estate problems have not arisen with great frequency on BLM lands, the BLM should contemplate drafting regulations addressed to this issue. FLPMA certainly vests this authority in the agency.³⁵¹ Alternatively, the reasoning in *Duncan Energy*³⁵² supports a conclusion that the BLM could regulate mineral development on split estate lands pursuant to its general land use regulations.³⁵³

3. Forest Service Regulations

The Forest Service Regulations governing reserved mineral estates do not govern outstanding mineral estates. Although, the court in *Duncan Energy* held that these estates may be regulated under its special use regulations,³⁵⁴ the Forest Service should, if only to avoid future challenges to its authority, bring these regulations in line with its reserved mineral rights regulations. In addition, the Forest Service regulations for reserved mineral rights are remarkably general. More comprehensive regulations, like those adopted by the Park Service, have the advantage of putting mineral operators and developers on notice as to what is expected of them and when. In *Duncan Energy*,³⁵⁵ the mineral developer contended the Forest Service was applying the wrong regulatory "paradigm." More comprehensive Forest Service regulations would put an end to such claims.

349. GAO REPORT ON INCOMPATIBLE USES, *supra* note 11, at 63-64; SECONDARY USES, *supra* note 286, at 212.

350. BATES, *supra* note 54, at 54-55.

351. See discussion of FLPMA, *supra* pp. 25-26.

352. 50 F.3d 584 (8th Cir. 1995).

353. 43 C.F.R. § Part 2920 (1997) (BLM general land-use regulations).

354. *Duncan Energy*, 50 F.3d at 584.

355. *Id.* at 588.

4. National Park Service Regulations

The Park Service has comprehensive regulations and an effective program addressing nonfederal oil and gas.³⁵⁶ There are, however, two significant gaps in this regulatory program. The Park Service exempts oil and gas operations that predate the 1978 nonfederal oil and gas regulations. Approximately 331 oil and gas operations within National Park units are currently unregulated.³⁵⁷ The Park Service has the requisite authority to regulate these operations in a manner consistent with the existing regulations. In addition, these conditions could be imposed without implicating the Takings Clause. These are, after all, existing oil and gas operations that have in all likelihood already produced significant economic benefits for their owners.

Currently, no Park Service regulations govern the development of nonfederal minerals. Nonfederal minerals do not appear to impact Park Service units to the same extent as nonfederal oil and gas. The Park Service could, however, easily issue regulations governing these operations.

5. Fish and Wildlife Service Regulations

The FWS has a weak regulatory regime in place³⁵⁸ which appears to address the impacts associated with mineral development on a refuge by refuge basis leaving it to individual refuge managers to fashion the best solution possible.³⁵⁹ Commentators, including agency personnel, have observed that the FWS and the Refuge System have been hindered by the lack of an organic act.³⁶⁰ Professor Fink, for example, has written persuasively that an organic act is crucial to the future of the agency's mission.³⁶¹

As noted above, this problem has been rectified as Congress has recently enacted the NWRSA, an organic act for the refuge system.³⁶² This Act defines the mission of the refuge system as the administration of "a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future

356. 36 C.F.R. § 9(B) (1997).

357. See *supra* notes 269-71 and accompanying text.

358. The regulation governing nonfederal oil and gas operations in Wildlife Refuges is found at 50 C.F.R. § 29.32 (1996).

359. See generally SECONDARY USES, *supra* note 286, in which the most frequently cited solution to reserved mineral rights issue is that the Refuge Manager should work cooperatively with operators. See, e.g., *id.* at 182.

360. *Seeking Refuge*, *supra* note 275; Fink, *supra* note 72, at 110-13; SECONDARY USES, *supra* note 286, at 214.

361. Fink, *supra* note 72, at 110-14.

362. Pub. L. No. 105-57, 111 Stat. 1252 (1997).

generations of Americans."³⁶³ In addition, the Act requires that the definition of compatibility set forth in the NWRSA be tested against the refuge system mission as well as the individual refuge purposes.³⁶⁴ Unfortunately, neither the NWRSA or the house report that accompanied this legislation addressed the issue of nonfederal minerals.

The FWS must improve regulations that currently govern nonfederal minerals. The surveys contained in the Service's Compatibility Task Group Report suggest that many Refuge managers feel powerless to address nonfederal mineral operations beyond negotiating with the operators.³⁶⁵ Notwithstanding the decision in *Caire*, both the Refuge Administration Act and the Migratory Bird Conservation Act provide authority for the existing regulatory regime.³⁶⁶ The FWS should consider revising its regulation to expressly provide for surface use plans (subject to FWS approval) and bonding and reclamation requirements. Refuge managers should not hesitate to condition surface use or operations on the basis of this regulation and its provisions.

CONCLUSION

The current conflicts between mineral developers and federal land managers regarding the development of split estate lands is part of a larger on-going struggle between the traditional dominance of mineral industries at the founding of our nation and the conservation and preservation concerns that are increasingly important to the public at large.

How we resolve this conflict between private property rights on the one hand and the health of federal lands, managed for all Americans, on the other is an important indicator of where public land policy in America is headed. Although there are important limits on the federal regulatory authority over reserved mineral rights, the review of the current federal regulatory regime shows that it could be more protective of federal lands and interests. The industry's willingness to tolerate increased regulation is related to the efficiency and timeliness of agency action. The land management agencies should strive for efficient and responsive action. Whether the issue of federal split estate lands will get the attention it deserves only time will tell.

363. *Id.* § 4 (to be codified at 16 U.S.C. 668dd(a)(2)).

364. *Id.* § 5 (to be codified at 16 U.S.C. 668dd(a)(3)(A)).

365. See generally SECONDARY USES, *supra* note 286, in which Refuge Managers state that there is "[n]o perfect solution" to reserved mineral rights issue. See, e.g., *id.* at 182.

366. See *supra* pp. 35-38.