Protecting the Arctic National Wildlife Refuge without Section 1003: Will the Discretionary Requirements of Environmental and Resource Management Statutes Fill the Gap?

Danford D. Grant

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PROTECTING THE ARCTIC NATIONAL WILDLIFE REFUGE WITHOUT SECTION 1003: WILL THE DISCRETIONARY REQUIREMENTS OF ENVIRONMENTAL AND RESOURCE MANAGEMENT STATUTES FILL THE GAP?

Danford D. Grant*

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I. INTRODUCTION

Congress created the Arctic National Wildlife Refuge (ANWR) in 1980, when it enacted the Alaska National Interest Lands Conservation Act (ANILCA).\(^1\) Located along the border with Canada and the Beaufort Sea, ANWR occupies more than eighteen million acres in northeastern Alaska.\(^2\) It was fashioned by enlarging and elevating the status of the Arctic National Wildlife Range, an area withdrawn by President Eisenhower twenty years earlier.\(^3\) ANWR was designed to accomplish four purposes: conserve fish and wildlife in their natural habitats and diversity; fulfill international treaty obligations; provide for continued subsistence uses by local residents (consistent with the first two purposes); and protect adequate water quantity and quality to the maximum extent practicable.\(^4\)

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2. See James Walker, Oil Development in the Arctic National Wildlife Refuge and its Impact on United States International Wildlife Commitments, 4 INT’L LEGAL PERSp. 1, 2 (1992) (citing Pub. L. No. 96-487 § 303, 94 Stat. at 2390 and Public Land Order No. 2214, 25 Fed. Reg. 12,598 (1960)). The exact size of ANWR is unclear. ANILCA added at least 9,160,000 acres to the 8,900,000 acres in the original Arctic National Wildlife Range, for a total of at least 18,060,000 acres. See Pub. L. No. 96-487 § 303(2)(A), 94 Stat. at 2390. Confusion arises from the use of the descriptive language “including lands, waters, interests, and whatever submerged lands were retained in Federal ownership at the time of statehood . . . .” See id. This language created ambiguity by adding disputed territory to ANWR.

3. See Walker, supra note 2, at 2. This implied withdrawal authority of the President, recognized in United States v. Midwest Oil Co., 236 U.S. 459, 471-76 (1915), was “repealed” by the Federal Land Policy and Management Act of 1976 (FLPMA). See Walker, supra note 2, at 2 n. 3 (citing Pub. L. No. 94-579 § 704(a), 90 Stat. 2743, 2792 (1976)). However, valid land uses existing prior to the enactment of the FLPMA remained valid. Id. The Range was withdrawn from all forms of appropriation except the mineral leasing laws in order to preserve the “unique wildlife, wilderness, and recreational values” of the area. Id. at 2 (citing Public Land Order No. 2214, 25 Fed. Reg. 12,598 (1960)).

ANWR is an intact and functioning ecosystem, and has been described as the most pristine of our wildlife refuges. It has also been described as an area that must be developed to prevent "grim economic, social, and national security [conditions]." Arising from these two apparently conflicting descriptions is a debate that has raged for more than a decade: should oil and gas reservoirs underlying ANWR be developed?

This article examines this "refuge versus oil field" issue. Part II of the article contains background information on ANWR, discusses the evaluative reports prepared by the Department of Interior, describes ANILCA, and discusses attempts by Congress to either eliminate or enlarge ANWR's current protection. It concludes by predicting that section 1003 of ANILCA will eventually be repealed. Part III discusses federal onshore oil and gas leasing by describing exploration and development processes, applicable laws, and the potential impacts of development. Part IV examines whether development can be limited or prevented without section 1003. Finally, Part V concludes that without section 1003, ANWR will be opened for leasing.

II. THE ARCTIC NATIONAL WILDLIFE REFUGE

A. The 1002 Area

Referred to as the "coastal plain," the 1002 Area (Area) occupies 1.55 million acres of pristine, fragile tundra between the Brooks Range and the Beaufort Sea. It is over 100 miles long and between 16 and 34 miles wide. Of the 1.55 million acres, 1.5 million (or 99%) are classified as wetlands. In the winter, the Area contains only a few free-
standing lakes and no unfrozen streams or rivers.\textsuperscript{12} Summers are short and cool.\textsuperscript{13} Persistent winds that blow throughout the year can create white-outs and hard packed snow drifts in the winter.\textsuperscript{14} Generally, the Area is very cold, remote, and frozen.\textsuperscript{15}

Much of the 1002 Area is covered by an organic mat of living vegetation, one to two inches thick.\textsuperscript{16} There are seventeen classes of vegetation cover represented on the coastal plain\textsuperscript{17} and six different types of terrain, including 131 square miles of ocean.\textsuperscript{18} Four distinct areas have been identified as “area[s] with special characteristics,”\textsuperscript{19} and thirty different plant types in Alaska may be endangered or threatened.\textsuperscript{20} Most of the erosion on the plain is caused by water, which flushes heavy sediment loads into the sea;\textsuperscript{21} wind erosion is apparently confined to the river deltas.\textsuperscript{22}

The Area also contains several types of coastal environments that provide habitats for fish and wildlife populations. These include offshore, nearshore, open coast, and delta.\textsuperscript{23} The state developed a coastal zone management program, but it initially failed to win federal approval because it “did not provide adequate consideration of the national interest in energy facility siting as required by . . . the [Federal] Coastal Zone Management Act.”\textsuperscript{24} The state program recognized that several places within

\begin{itemize}
\item \textsuperscript{12} See Chase, supra note 10, at 46. Two rivers, the Canning and the Aichilik, border the coastal plain and many others pass through both the plain and ANWR in the summer. By fracturing and eroding the frozen rivers, the spring snow melt can cause extensive flooding. \textit{Final LEIS}, supra note 11, at 13.
\item \textsuperscript{13} Booth, supra note 9, at 112.
\item \textsuperscript{14} \textit{Final LEIS}, supra note 11, at 9-10.
\item \textsuperscript{15} Office of Tech. Assessment, Congress of the U.S., \textit{Oil Production in the Arctic National Wildlife Refuge: The Technology & the Alaskan Oil Context} 37-38 (1989) [hereinafter OTA REPORT]. The area is underlain by as much as 2000 feet of permafrost, presenting technological hurdles that must be overcome. For example, the thawing summer soil provides an inadequate foundation for oil platforms. \textit{Id.} at 38.
\item \textsuperscript{16} \textit{Final LEIS}, supra note 11, at 13. The sand dunes, ridgetops, and unvegetated gravel areas are not covered by this mat. \textit{Id.}
\item \textsuperscript{17} \textit{Id.} at 16-17.
\item \textsuperscript{18} \textit{Id.} at 18. The other five terrains are foothills, river flood plains, hilly coastal plains, flat thaw-lake plains, and mountains. \textit{Id.} at 18-19.
\item \textsuperscript{19} \textit{Id.} at 19-20.
\item \textsuperscript{20} \textit{Id.} at 16. One such species is found in the 1002 Area. \textit{Id.}
\item \textsuperscript{21} \textit{Id.} at 14.
\item \textsuperscript{22} \textit{Id.} at 15.
\item \textsuperscript{23} \textit{Id.} at 20. The others are barrier island/lagoon-mainland shore areas, and those parts of the coastal uplands directly affected by storm surges and marine saline intrusions. \textit{Id.}
\item \textsuperscript{24} \textit{Id.} at 20; (citing § 306(c)(8) of the Coastal Zone Management Act). Before approving a state plan, the Secretary of Commerce must find that it “provides for adequate consideration of the national interest . . . including the siting of [energy] facilities . . . .” 16 U.S.C. § 1455(d)(8) (1994).
\end{itemize}
the Area had “values warranting special attention.”

1. Oil

Supporters of oil development consider the coastal plain to be the “most promising unexplored area in the United States for discovering supergiant oilfields,” largely because it is located between major oil bearing areas in both Canada and the United States. Because of this potential, Congress exempted the coastal plain from the wilderness designation given to eight million acres within ANWR. According to the report that section 1002 of ANILCA required the Department of Interior to prepare, there is a 95% chance that the coastal plain contains at least 4.8 billion barrels of oil and a 5% chance that it contains more than 29 billion barrels. The Secretary of the Interior estimates that there is a 19% chance of finding recoverable oil within the coastal plain, and the estimated quantity of economically recoverable oil ranges from 0.6 to 9.2 billion barrels, for a mean estimate of 3.2 billion barrels. Based on a 1987 estimate of future national needs, 3.2 billion barrels of oil will satisfy demand in the United States for only 195 days.

In a 1991 report (Overview), the Bureau of Land Management increased the estimated chance of recovery to 46% and the mean estimated quantity to 3.57 billion barrels. The Natural Resources Defense Council (NRDC) attacked the Overview in Natural Resources Defense Council v. Lujan, arguing that the Interior Department failed to comply with the Na-

25. FINAL LEIS, supra note 11, at 20. Alaska's Coastal Management Program defines “area which merits special attention” as geographic areas which are “sensitive to change or alteration and which, because of plans or commitments or because a claim on the resources within the area delineated would preclude subsequent use of the resources to a conflicting or incompatible use, warrants special management attention, or which, because of its value to the general public, should be identified for current or future planning, protection, or acquisition;... these areas include: areas of unique, scarce, fragile or vulnerable natural habitat, cultural value, historical significance, or scenic importance, [and] essential habitat for living resources.” ALASKA STAT. § 46.40.210(1) (1996).

26. OTA REPORT, supra note 15, at iii. An exploratory well was drilled by Chevron, but the results have not been revealed. Id. at 94. Winter seismic studies conducted between 1983-1985 also provided data on the Area's potential. FINAL LEIS, supra note 11, at 3.

27. OTA REPORT, supra note 15, at iii.

28. FINAL LEIS, supra note 11, at 56.

29. Id.

30. Id. at 178. The quantity of recoverable oil will depend partially upon the market price, which has dropped substantially since the Final LEIS was completed. See infra Part II.4.b. Should the price remain lower than originally anticipated, these estimates will be high. On the other hand, even more oil will be “recoverable” if the price rises. Id.

31. Booth, supra note 9, at 116-17.

32. Chase, supra note 10, at 49-50 (citing BUREAU OF LAND MANAGEMENT, OVERVIEW OF THE 1991 ARCTIC NATIONAL WILDLIFE REFUGE RECOVERABLE RESOURCE UPDATE (Apr. 8, 1991) [herein-after OVERVIEW]).
tional Environmental Policy Act (NEPA)\(^3\) because the Overview was not circulated for public comment before being issued.\(^4\) The court agreed and ordered the Department to circulate the Overview as a supplemental Environmental Impact Statement (EIS) because the changes it contained were significant.\(^5\) The NRDC was particularly concerned that the Overview did not list references, identify studies, or explain the bases for the Department's conclusions.\(^6\)

2. Wildlife

As a habitat for many resident and migrant species, the coastal plain is an ecologically sensitive area. It is the primary calving ground for nearly 200,000 Porcupine caribou, a nesting area for millions of migratory birds, and a habitat for polar bears, grizzly bears, muskoxen, and several other species.\(^7\)

The caribou arrive on the coastal plain in mid-May and remain until mid-July.\(^8\) Industry experts argue that they are "flexible" and will find another calving ground if operations interfere with their preferred location.\(^9\) Refuge proponents disagree and argue that the herd could decline by as much as forty percent.\(^10\) If true, this decline may be contrary to the intent Congress expressed when passing ANILCA: to "maint[ain] sound populations of . . . wildlife species of inestimable value."\(^11\)

It is likely that development will displace the herd to some extent.\(^12\) Because of the limited habitat available, this displacement may move the herd to the area with the greatest number of predators, reduce the availability of preferred forage during calving, and interfere with insect relief by restricting access to the coast.\(^13\) Because less than a five percent reduction in calf survival is sufficient to change the herd from one that is in-

\(^{35}\) Id. at 885-89. Because the Overview contained "significant" changes, it was subject to the same "notice and comment" requirements that the original report (the Final LEIS) was. Id.
\(^{36}\) Id. at 884.
\(^{37}\) OTA REPORT, supra note 15, at 21. Of the 135 species of birds known to use the coastal plain, 130 are protected by international treaties. See Walker, supra note 2, at 9.
\(^{38}\) OTA REPORT, supra note 15, at 6.
\(^{39}\) See Letter from Alaska Oil & Gas Assoc. to U.S. Fish and Wildlife Service (Feb. 4, 1987), in FINAL LEIS, supra note 11, app. at O-15.
\(^{41}\) 16 U.S.C. § 3101(b).
\(^{43}\) Id.
creasing to one that is in decline, this displacement could have a major, adverse impact on the herd.\textsuperscript{44}

Muskoxen are not migratory\textsuperscript{45} and are therefore the only large mammal present on the coastal plain the entire year.\textsuperscript{46} They were reintroduced to the Area in 1969 after being exterminated from the North Slope during the late 19th century.\textsuperscript{47} In the spring, when whales and caribou are not available, the muskoxen are a source of subsistence protein for the residents of Kaktovik.\textsuperscript{48} Because muskoxen are present all year, the impacts of oil and gas development upon these large mammals will be cumulative.\textsuperscript{49}

The impact of oil production on other species is less clear. Because development will take place onshore and will not involve shipment by tankers, its impact on marine mammals is expected to be minor.\textsuperscript{50} The recovering peregrine falcon has increased its nesting sites on the plain, and its status is still improving.\textsuperscript{51} The greatest threat to wolves and bears may be shooting and trapping by humans;\textsuperscript{52} the decline of both species in the Prudhoe Bay area suggests that they avoid humans more than other species do.\textsuperscript{53} Finally, the effects of development on the brackish coastal waters used by anadromous fish is also uncertain.\textsuperscript{54}

3. \textit{The Human Population}

The Gwich’in Athabascan is a native Alaskan tribe numbering 7,000 that relies on the Porcupine Caribou Herd for subsistence.\textsuperscript{55} They live in towns scattered along caribou migration routes in northeast Alaska and

\begin{itemize}
  \item \textsuperscript{44} Id. at 4-5.
  \item \textsuperscript{45} FINAL LEIS, supra note 11, at 27.
  \item \textsuperscript{46} LEIS REVIEW, supra note 42, at 5.
  \item \textsuperscript{47} FINAL LEIS, supra note 11, at 26.
  \item \textsuperscript{48} LEIS REVIEW, supra note 42, at 5. Up to 10 bulls may be taken each year. Id. See infra notes 65-69 and accompanying text regarding the people of Kaktovik.
  \item \textsuperscript{49} LEIS REVIEW, supra note 42, at 6. Development will create obstacles and reduce available forage. Both will increase the movement of the herd causing the animals to expend energy that is difficult to replace in the winter months. Id. Displacement may also reduce subsistence opportunities, id., contrary to the goals of ANILCA. See infra note 62 and accompanying text.
  \item \textsuperscript{50} LEIS REVIEW, supra note 42, at 9. The impacts will need to be reevaluated if development extends offshore. Id.
  \item \textsuperscript{51} Id. The falcon was removed from the threatened species list in November of 1994. Id.
  \item \textsuperscript{52} Id.
  \item \textsuperscript{53} OTA REPORT, supra note 15, at 58.
  \item \textsuperscript{54} LEIS REVIEW, supra note 42, at 12. Anadromous fish are those that are born in fresh water and live in the sea until returning to spawn in fresh water. Brackish water is salty water created by the mixing of fresh and salt water at river deltas and other estuaries. See Larry J. Bradfish, \textit{Recent Developments in Listing Decisions Under the Endangered Species Act and their Impact on Salmonids of the Northwest}, 3 HASTINGS W.-N.W. J. ENVTL. L. & POL’Y 77, 78 (1995).
  \item \textsuperscript{55} See Childers, supra note 40, at 14, 16.
\end{itemize}
Canada, and are dependant upon the caribou for food and other items.\textsuperscript{56} For the 120 tribe members that live in Arctic Village and have no salmon and few other animals to harvest, the herd is particularly important.\textsuperscript{57} If development interferes with the herd's migration to the coastal plain, the reduction in subsistence opportunities could be devastating for the tribe.\textsuperscript{58}

Even if the nutritional value of the caribou could be replaced, "the caribou form the basis of a complex cultural structure."\textsuperscript{59} As Robert Childers explains: "The caribou . . . plays a central role in stories, myths, and in how the Gwich'in perceive themselves and understand their place in the world. It is the symbolic glue for an ancient culture . . . ."\textsuperscript{60} Both ANILCA and other U.S. environmental laws recognize the importance of preserving cultural communities.\textsuperscript{61}

Arguably, the Gwich'in stand to lose more than other native tribes that rely on caribou for their subsistence because the loss will not be offset by an economic benefit from development. Instead of participating in the Alaska Native Claims Settlement Act, which vested mineral rights in newly created regional corporations\textsuperscript{62}, the Gwich'in retained their aboriginal rights to 1.8 million acres of land in ANWR.\textsuperscript{63} As a result, they have no subsurface rights in the coastal plain and will not receive a share of the revenue from production.\textsuperscript{64}

Unlike the Gwich'in, the Kaktovik Inupiat relinquished their aboriginal rights in exchange for a cash settlement and fee title to certain land.\textsuperscript{65} Consequently, their regional corporation has subsurface rights to 92,000 acres of land on the coastal plain.\textsuperscript{66} Notwithstanding this potential development-related economic benefit, oil production may have drawbacks for the Inupiat, because they also rely on subsistence activities for their food.\textsuperscript{67} Because Kaktovik is a coastal community that hunts both marine

\textsuperscript{56} Id.; Final Leis, supra note 11, at 38.
\textsuperscript{57} See Final Leis, supra note 11, at 40; Childers, supra note 40, at 16; Chase, supra note 10, at 47 & n.21.
\textsuperscript{58} Booth, supra note 9, at 114.
\textsuperscript{59} Chase, supra note 10, at 47-48.
\textsuperscript{60} Childers, supra note 40, at 16.
\textsuperscript{61} See ANILCA, 16 U.S.C. § 3111(1),(4) (1994) (stating that Congress finds continued subsistence use essential to the Natives' cultural existence and that it is necessary for Congress to protect and provide opportunities for continued subsistence use). Both the Marine Mammal Protection Act and the Endangered Species Act provide exceptions to their "taking" prohibitions when an Alaskan native takes for subsistence use. See 16 U.S.C. § 1371(b) and § 1539(e) (1994), respectively.
\textsuperscript{63} Chase, supra note 10, at 48.
\textsuperscript{64} Id.
\textsuperscript{65} Id.
\textsuperscript{66} Id.
\textsuperscript{67} See Final Leis, supra note 11, at 36-37.
mammals and fish, the residents seem particularly concerned about the effects of potential offshore development.

4. The Final LEIS

a. The Proposed Alternatives

The Legislative EIS and Report to Congress comprise a single document (Final LEIS) that describes the existing environment of the 1002 Area, the oil and gas potential of the Area, the proposed development, and the environmental consequences of five proposed alternatives. These alternatives are:

(A) full leasing of the entire Area;
(B) leasing limited to part of the Area;
(C) further exploration;
(D) maintaining the current protected status of the Area; or
(E) designating the Area as wilderness.

When the Final LEIS was issued, then Secretary of the Interior Donald Hodel described alternative A as the “preferred alternative.” Others, including Canada, most environmental groups, and two Congressmen, favored designating ANWR as wilderness. Although the current administration is opposed to oil drilling in ANWR, it is unclear which method of protection they favor.

b. Present Adequacy of the Final LEIS

The Final LEIS may no longer be accurate. At the very least, it is nearly ten years old, and new information has become available. Perhaps the most significant changes to take place since the issuance of the Final LEIS are to factors that affect the predicted oil and gas potential of the coastal plain. Both the price of oil and the mineral interest of the United

68. Id. at 38-39.
69. Chase, supra note 10, at 49. The residents should also be concerned about the impact that upland development may have on the coastal marine environment.
70. See generally Final LEIS. The structure and interagency character of the Final LEIS was obviously intended to satisfy the requirements of a NEPA EIS. Those requirements can be found at 42 U.S.C. § 4332(C),(E) (1994) and 40 C.F.R. §§ 1502.1 - 1502.25 (1996).
71. Final LEIS, supra note 11, at 97.
72. Id. at 189.
73. Booth, supra note 9, at 111.
74. See Arctic National Wildlife Refuge: Hearings Before the Senate Comm. on Energy and Natural Resources, 104th Cong., 1st Sess. 14 (1995) (prepared statement of Bruce Babbitt, Secretary of the Interior) [hereinafter Hearings]. Secretary Babbitt compared oil drilling in ANWR with geothermal drilling in Yellowstone National Park and hydropower dam construction in the Grand Canyon. Id. at 18. The unstated assumption, of course, is that both ideas are absurd.
States is less than originally expected. Thus, the United States will receive less revenue from development, weakening the economic justification for leasing.

When the Final LEIS was completed in 1987, oil prices were expected to be $38.60 per barrel in the year 2000. In 1995, oil was expected to be less than half that price by the year 2000. Because the economically recoverable quantity of oil is dependant upon its price, the 1987 estimate of 3.2 billion barrels seems overly optimistic. Furthermore, the interest of the United States is a percent royalty rather than a set figure per measurable quantity; thus, a lower price decreases the revenue received from the captured oil. Less oil will be “recoverable” and less revenue will be received from the oil that is recovered.

In addition to these changes, another uncertainty affects the economic benefit of leasing: the estimated federal revenue from leasing is based on an assumed fifty percent split with the State of Alaska, not the ten percent interest reserved to the federal government in the Alaska Statehood Act of 1958. The Department of the Interior maintains that Congress has the authority to change the original revenue sharing agreement, but Alaska disagrees and argues that the Statehood Act is a commitment that cannot be modified without the State’s consent. Thus, the original estimate of the economic benefit, which has already been reduced in recoverable volume and price, may be reduced further by a decrease in the federal revenue interest.

Environmentalists have challenged the adequacy of the Final LEIS, arguing that it was deficient when issued. These alleged deficiencies include the Secretary’s findings of fact and his construction of a summary that contradicts the body of the statement. However, because of the significant changes that have occurred since 1987, it should no longer be necessary for environmental groups to prove the original inadequacy of the Final LEIS.

75. *Hearings*, supra note 74, at 17.
76. *Id.* The price is reflected in 1995 dollars for ease of comparison. The year 2000 was used because production was predicted to begin on the coastal plain in that year. See *Final LEIS*, supra note 11, at 97.
77. *Hearings*, supra note 74, at 17. By the year 2000, oil was expected to command only $19.13 per barrel (in 1995 dollars). *Id.*
78. *Id.*
80. *Hearings*, supra note 74, at 17. Although the United States anticipated a $1.4 billion revenue over 5 years of production, it may realize as little as $28 million. *Id.*
82. *Id.*
83. For a discussion of these changes, see *supra* notes 28-36 and accompanying text.
PROTECTING ANWR

B. ANILCA

1. Generally

Congress enacted the Alaska National Interest Lands Conservation Act to preserve certain lands of national significance and value. 44 Included among these lands are those with “unrivaled scenic and geologic values,” undisturbed ecosystems, wilderness and recreation values, historic and archaeologic sites, and habitats for sound populations of wildlife. 45 Congress also intended to protect and preserve subsistence resources utilized by rural residents, 46 and to provide the proper balance between conservation and development, eliminating the need for further protective legislation. 47

ANILCA provides a framework for managing subsistence uses, 48 mining, timber harvesting, and oil leasing 49 on lands of declared significance in Alaska. 50 It was designed to regulate more than 100 million acres of public land, most of which is in either the National Park System or the National Wildlife Refuge System, under an “elaborate protective scheme.” 41 Of the sixteen national wildlife refuges regulated under ANILCA, the largest and arguably most significant (in both “value” and controversy) is ANWR. 42

2. Attempts by Congress to Alter the Existing Protection

Section 1003 of ANILCA prohibits oil and gas leasing and production in ANWR “until authorized by an Act of Congress.” 43 During the past decade, debates have raged in Congress over attempts to enlarge or eliminate this protection.

Between 1987 and 1988, the House and Senate considered alternate bills that would have either authorized leasing or designated the area as wilderness—all failed. 44 Another bill, authorizing only limited leasing,
made it out of the Senate Energy and Resources Committee to eventually fail as well.\textsuperscript{95} ANWR bills continue to be introduced; in 1996, the 104th Congress drafted two bills to designate the coastal plain as wilderness.\textsuperscript{96}

In addition to introducing bills intended solely for the purpose of altering the current status of ANWR, members of Congress have attempted to alter ANWR's protected status by adding provisions to "related" bills. For example, while Congress considered the various bills from which the Energy Policy Act of 1992 evolved, several attempts were made to affect the status of ANWR.\textsuperscript{97} To create Congressional consensus for the proposed bills, provisions opening ANWR to leasing were removed. Professor Jim Rossi calls this "making legislation by subtraction."\textsuperscript{98} Attempts to remove similar provisions from the 1996 congressional budgets were unsuccessful, but these budgets were vetoed by President Clinton.\textsuperscript{99}

This brief discussion is incomplete; congressional attempts to alter the status of ANWR could probably be the subject of an entire article. These examples merely illustrate the division and disagreement between members of Congress, and the persistent attempts of some members to repeal section 1003. Several factors will determine the fate of this protective provision: public distaste for conservation and dwindling domestic oil production;\textsuperscript{100} the "anti-environmentalist" sentiment generated by the 104th Congress;\textsuperscript{101} the Alaskan congressional delegation's positions of power on the House and Senate resource committees;\textsuperscript{102} the distance of the Refuge from most of America; and future Presidential elections. Other than the results of future elections, which are difficult to predict, these factors point toward the eventual leasing and development of ANWR.

The rich diversity and coexistence of wildlife and human populations within ANWR provide a glimpse of life not readily observable by most.

\textsuperscript{95} Id. (referring to S. 2214, 100th Cong., 1st Sess. (1988)).
\textsuperscript{98} Id. at 239-40. The CAFE (Corporate Average Fuel Economy) standards were killed alongside the ANWR provisions. Id. at 202. Including either would have lessened dependence on foreign oil.
\textsuperscript{100} See ENERGY FUTURE: REPORT OF THE ENERGY PROJECT AT THE HARVARD BUSINESS SCHOOL 3, 138 (Robert Stobaugh & Daniel Yergin et al., eds. 1979); U.S. Oil Import Rate Hits Record 51%, HOUS. CHRON., Jan. 16, 1997, at 2.
\textsuperscript{101} See Jeffrey A. Roberts, Senate Hopefuls Tangle Over Environmental Issues, DENVER POST, Sept. 6, 1996, at A8.
\textsuperscript{102} Allan Freedman, Alaska's Congressional Delegation Speaks Loudly, Carries a Big Stick, DALLAS MORNING NEWS, Jan. 1, 1997, at 43A.
Currently, ANWR is available to afford observers a unique understanding of mankind’s relationship to its natural surroundings. Opening ANWR to oil development could jeopardize this rare and unique opportunity.

III. OIL DEVELOPMENT

A. Processes and Technology

Most theorists agree that oil and natural gas deposits were formed over geologic time from organic matter.\(^\text{103}\) Compaction pressure, high temperature, bacterial action, and chemical reactions combined to transform this matter into hydrocarbons.\(^\text{104}\) Once the oil formed, pressure forced it to migrate upward from the source rocks (usually shale) into reservoirs of porous sedimentary rock.\(^\text{105}\)

Oil development includes exploration, production, and transportation—the steps necessary to get oil from a reservoir to a refiner. When seismic maps, core analyses, and other exploration methods have revealed a sufficient quantity of oil in a reservoir, production usually begins.\(^\text{106}\) The main drilling rig\(^\text{107}\) is transported to the drill site, raised to a vertical position over the hole, and assembled by attaching the rig components.\(^\text{108}\) This process is called "rigging up" and concludes when the rig is ready

\(^{103}\) James W. Amyx, et al., Petroleum Reservoir Engineering: Physical Properties 10 (1960). This "organic theory" assumes that petroleum evolved from decomposing vegetable and animal matter. Id. In contrast, the "inorganic theory" assumes oil is formed from reactions which do not depend on living organisms. Id. There is also a "hybrid theory." A recent article has cast some doubt on the organic theory; it seems that offshore reservoirs are not being depleted as quickly as expected. Malcolm W. Browne, Geochemist Says Oil Fields May be Refilled Naturally, N.Y. Times, Sept. 26, 1995, at C4. If, in fact, hydrocarbons are produced more quickly than proponents of the organic theory suggest, the earth could contain a virtually inexhaustible supply of oil. This theory will probably not get much support.


\(^{105}\) Id. Porosity, or the spaces in the rock, should not be confused with permeability, the interconnectedness of the spaces which allows the rock to transmit fluid; both are required to create and successfully develop a reservoir. See Rene Cosse, Ecole Nationale Superieure Du Petrole et Des Moterus, Basics of Reservoir Engineering: Oil and Gas Field Development Techniques 33 (1993).

\(^{106}\) See Cosse, supra note 105, at 116.

\(^{107}\) Exploratory rigs, including "rat hole rigs," may be used to obtain evaluative samples. The procedure for exploratory rigs, delineation drilling rigs, and main drilling rigs is similar regardless of the differences in scope and purpose. Exploratory rigs are usually isolated and shallow. Delineation rigs are used to determine the size of the reservoir and the feasibility of development. See generally Final Leis, supra note 11, at 8-85.

\(^{108}\) Owen L. Anderson, The Anatomy of an Oil and Gas Drilling Contract, 25 Tulsa L.J. 359, app. at 522 (1990). There are four components to a basic rotary drilling rig: power, housing, rotating, and circulating. Id. The power component requires fuel to operate, id. at 522-24, the spills and emissions of which may create pollution.
Hollow drill pipes form a drill string that ends in a bit. Drilling mud, a mixture of water, oil, clay, ballast, and chemicals, is pumped through the hollow pipe to lubricate the string and bit, flush away the drill cuttings, and help prevent blow-outs. The cuttings, used mud, and other fluids originating from the drilled hole are contained in a reserve pit next to the well. When the bit reaches "total depth," the operator will either plug the well or develop it as a producer. If the operator develops the well, perforated production casing will be placed below the producing formation, allowing the oil to enter the casing and rise to the surface. Once the raw crude is produced, it will be transported and refined into usable product.

The remoteness of ANWR presents significant obstacles to development. A camp must be built for workers, and gravel must be extracted and used to build airstrips, drilling pads, and roads. Other production infrastructure may include construction camps, storage pads, powerlines and powerplants, a water source, fuel storage tanks, and support facilities. A marine facility capable of supporting sea lifts of major equipment is also necessary. Not until these are built and gathering pipelines are installed, can production begin. The remoteness of the refuge also creates problems for transporting oil out. Although there are other options, most ANWR oil will probably be sent through the Trans-Alaska Pipeline System (TAPS); this will allow developers to avoid the frozen Arctic icepack.

109. Id. at 522.
110. Id. at 524.
111. Id. at 524-25. A blow-out is characterized by a "sudden, violent expulsion of oil, gas, drilling mud, and debris." Id. at 440. Mud helps prevent blow-outs by keeping downward pressure in the hole. If the mud stops circulating and the pressure cannot be successfully adjusted, high pressure valves called "blow-out preventers" will seal off the hole. Id. at 525-28.
112. Id. at 525, 527; FINAL LEIS, supra note 11, at 84. The pit is usually lined to prevent leaking. See Anderson, supra note 108, at 522. The hole is lined with well-casing. Id. at 528. Both liners are designed to prevent well fluids from contaminating the surrounding ground.
114. Id. at 531. If the bottom-hole pressure is insufficient, the oil may have to be pumped to the surface. Id.
115. FINAL LEIS, supra note 11, at 85. A permanent camp for as many as 1500 workers would be built as modular units and shipped in from the lower 48. Id.
116. Id. at 87.
117. Id. at 89.
118. Id. at 86. Exploration and field preparation may take 10 years under optimum circumstances, with production continuing for another 20-30 years. Id.
119. FINAL LEIS, supra note 11, at 90. Another method, for example, might be to transport the oil in "submarine" tankers that travel under the Arctic icepack. Id. Based on the TAPS' apparent inability to resist corrosion, the NRDC argues that the existing structure may need to be replaced before accommodating ANWR production. See NATURAL RESOURCES DEFENSE COUNCIL ET. AL, TRACKING
The difficult surroundings of a cold environment present another hurdle. In an area underlain with permafrost, special techniques must be used to successfully develop a field and assure the safety of personnel. All drilling rigs must be enclosed and heated, and special steel must be used to prevent brittleness. Well casing materials must be composed of special cold-resistant cement. Pipelines should be constructed of Arctic-grade steel and insulated to prevent increases in viscosity that would hinder the smooth flow of oil. They should also be suspended on vertical supports to insulate the permafrost from the warm fluids the pipelines transport; if the permafrost thaws, the ground will lose its load bearing capacity. Underground fuel tanks also need protection; because of the stress caused by freezing, they can begin leaking the day they are installed.

B. Impacts

The environmental impacts of accidental spills are well documented and beyond the scope of this article. However, pollution from oil field development is not limited to accidental discharges; normal accident-free production generates wastes. Waste disposal methods in ANWR would be typical and include recycling, landfilling, deep-well injection and reserve pit containment. The suspended drilling mud and cuttings placed in the reserve pit contain metals, aromatic hydrocarbons, and chemical additives. Excess reserve pit waste is disposed of on the tundra, on

ARCTIC OIL: THE ENVIRONMENTAL PRICE OF DRILLING IN THE ARCTIC NATIONAL WILDLIFE REFUGE
24 [hereinafter TRACKING ARCTIC OIL].
120. See OTA REPORT, supra note 15, at 9-10.
121. Id. at 37.
122. Id. at 39.
123. Id. at 37, 51.
124. Id. at 38. In the Arctic, a thick gravel pad is commonly built between the permafrost and the infrastructure. Id. Oil transported in a pipeline is heated to increase the rate of flow. See id. at 42.
127. OTA REPORT, supra note 15, at 52. These wastes can be categorized as liquids, solids, and air pollutants. Id.
128. Id. at 53.
129. Id. at 53-54.
roads, or injected beneath the surface. Environmental groups worry that injected wastes can migrate and contaminate aquifers and surface water. Industry argues that the permafrost will provide adequate protection against migration. Although the permafrost is impermeable to water (which accumulates on the surface in pools), other fluids can leach through it.

In addition to generating wastes and incidental pollution, development can affect ecosystems by altering topography and depleting available water. The size of the "footprint" will depend on the scope of development. "Substantial amounts of fresh water are used" in drilling and other production activities. In ANWR, where fresh water is limited, this impact can be severe. Because of this limited availability, water supply sources must be developed by flooding gravel pits, desalinating seawater, insulating non-fish-bearing lakes to prevent freezing, and melting trapped snow.

C. The Leasing Scheme

1. ANILCA

If Congress authorizes leasing and production on the coastal plain, developers will have to comply with the procedures set forth in ANILCA. These requirements are in addition to other applicable provisions of law, including the Mineral Leasing Act as amended by the Federal Onshore Oil and Gas Leasing Reform Act (FOOGLRA). If a NEPA EIS is not required, the Secretary of the Interior must decide whether to issue a lease within six months of receiving the application; if an EIS is required, the Secretary has three months after submission of the

130. Id. at 54.
131. Id. at 53.
132. Id.
133. Id. at 39-40.
134. The Final LEIS predicts that the impact of full development will be "moderate." Final LEIS, supra note 11, at 113. The report defines moderate as "local modification of considerable severity in landform, or surface appearance, or contamination of physical resources, lasting several tens of years; or widespread modification of lesser severity in surface appearance or other characteristics of physical resources, lasting from a few to several tens of years." Id. at 107.
135. OTA REPORT, supra note 15, at 55. Between 10 and 15 million gallons of fresh water are needed to drill a single exploratory well. Id. at 61.
136. Id. at 55.
137. 16 U.S.C. § 3149(a) (setting forth procedures for leasing of lands within an Alaskan unit of the National Wildlife Refuge System that are not "wilderness" areas).
138. Id. See infra Part III.C.2, for a discussion of FOOGLRA. Currently, ANWR is specifically excepted from leasing under the Mineral Leasing Act, but this would probably no longer be true if leasing is authorized by Congress. See, 43 C.F.R. § 3100.0-3(a)(2)(vi) (1995) (excepting ANWR from leasing under the Mineral Leasing Act of 1920); 16 U.S.C. § 3142(i) (1994) (exempting the coastal plain from operation of U.S. mineral leasing laws).
final version of the EIS. The Secretary must state the reasons he or she approved or denied the application to lease, and this statement must explain why a lease would be compatible or incompatible with the refuge.

2. FOOGRLA

Because petroleum extraction from ANWR is prohibited by section 1003 of ANILCA, the mineral leasing laws do not apply to the coastal plain. Although Congress may impose additional requirements, it will probably utilize the existing regime if it finally authorizes leasing. Thus, there is some value in examining the current regulatory structure.

Congress enacted FOOGRLA to cure perceived inadequacies in the Mineral Leasing Act and bring certainty and efficiency to the leasing of onshore federal lands. If the Secretary decides to offer leases for sale, the BLM will identify appropriate parcels of land. If these parcels are in an Alaskan wildlife refuge, the Fish and Wildlife Service (FWS) must determine that leasing is compatible with the refuge. Unless the lease contains a "no surface occupancy" (NSO) provision, a full EIS is required before leasing. Potential lessees bid competitively at an oral auction held at least forty-five days after the agency posts a notice of sale. If the minimum acceptable bid is met, the lease will be sold to the "highest responsible qualified bidder." Leasing units in Alaska are larger than those in other states and occupy 5,760 acres, although this

[139. 16 U.S.C. § 3149(c).
140. § 3149(b).
141. See § 3142(l).
145. 43 C.F.R. § 3120.4-1(a) (1995). Parcels may be identified on the basis of nominations. § 3120.3.
146. § 3101.5-3.
147. Conner v. Burford, 848 F.2d 1441 (9th Cir. 1988), cert denied, 489 U.S. 1012 (1989); see also Bob Marshall Alliance v. Hodel, 852 F.2d 1223 (9th Cir. 1988). But see Park County Resource Council v. United States Dept. of Agric., 817 F.2d 609 (10th Cir. 1987), where the Tenth Circuit reached a different conclusion. However, the facts of that case were unique, and ANWR is in the Ninth Circuit.
149. 30 U.S.C. § 226(b)(1)(A). Bids less than the minimum acceptable bid must be rejected, but if the minimum bid is not met, leases will be available non-competitively. Id. Because it is likely that an ANWR lease would command the national minimum bid, I will not address non-competitive leasing. Currently, the "minimum acceptable bid" is $2 per acre or portion thereof, 43 C.F.R. § 3120.1-2(c), but it could be higher for ANWR leases.
150. 30 U.S.C. § 226(b)(1)(A); 43 C.F.R. § 3120.2-3. The unit must be as compact as possible.
may not be true for units in ANWR.

Leases may be held only by United States citizens, including corporations, municipalities, and associations;\textsuperscript{151} aliens may only hold leases indirectly as stockholders of domestic corporations that hold leases.\textsuperscript{152} The leases are issued with a primary term of ten years\textsuperscript{153} and continue “so long as oil or gas is produced in paying quantities.”\textsuperscript{154} Competitive leases are subject to a minimum royalty of 12.5% and annual rentals of either $1.50 or $2 per acre, depending on how long the lessee has delayed production.\textsuperscript{155} The royalty is payable on the full acreage of the lease—it is not prorated when the United States owns a fractional interest.\textsuperscript{156} If the lease is held by low production, the royalty owed is equal to the rental otherwise due.\textsuperscript{157}

Once a lease is issued, surface operations will be regulated by the appropriate federal land management agency.\textsuperscript{158} Because the FWS has jurisdiction over wildlife refuges, operators attempting to develop within ANWR must obtain its approval. Applications for permits to drill (APDs) must describe the proposed operations and may not be approved until thirty days after the public is notified and the FWS has analyzed surface-disturbing activities.\textsuperscript{159}

Because FOOGGLRA does not currently apply to ANWR, a more detailed examination is unwarranted. Many important elements of the FOOGGLRA regulatory scheme, including conservation measures, bond requirements, and lease cancellations, terminations, and transfers, are noticeably absent from this discussion. If Congress opens the area to development and applies FOOGGLRA to coastal plain leases, further examination would be necessary.\textsuperscript{160}

\footnotesize{
\textsuperscript{151} 43 C.F.R. § 3102.1. Minors may not acquire or hold leases. § 3102.3.
\textsuperscript{152} 43 C.F.R. § 3102.2.
\textsuperscript{153} 30 U.S.C. § 226(e); 43 C.F.R. § 3120.2-1.
\textsuperscript{154} 30 U.S.C. § 226(i). If production ceases, commencing “reworking or drilling operations” within 60 days and conducting them with reasonable diligence will continue the lease. Id.
\textsuperscript{155} 30 U.S.C. §§ 226(b)-(d); 43 C.F.R. §§ 3103.2-2(a), 3103.3-1(a)(1). Rentals increase to $2 per acre after five years. 43 C.F.R. § 3103.2-2(a). There is no reason to think an individual lease could not be subject to a higher royalty, as long as notice of the royalty is provided to bidders before the sale.
\textsuperscript{156} 43 C.F.R. § 3103.3-2(b). This may be important because Alaska has claimed a 90% interest in minerals recovered from federal lands within the state. See supra notes 78-80 and accompanying text.
\textsuperscript{157} 30 U.S.C. § 226(d). See also 3 GEORGE CAMERON COGGINS & ROBERT L. GLICKSMAN, PUBLIC NATURAL RESOURCES LAW § 23.03[2][b][iv] (release #15, 1997).
\textsuperscript{158} 30 U.S.C. § 226(g).
\textsuperscript{159} 3 COGGINs & GLICKSMAN, supra note 157, at § 23.03[3][a]-[b] (release #9, 1995).
\textsuperscript{160} For a detailed discussion of FOOGGLRA, see Sansonetti & Murray, supra note 144, and Phillip R. Clark, The Federal Onshore Oil and Gas Leasing Reform Act of 1987: Christmas Present or Pandora’s Box, 34 ROCKY MTN. MIN. L. INST. 18-1 (1988).
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IV. LIMITING OR PREVENTING DEVELOPMENT WITHOUT SECTION 1003

If section 1003 of ANILCA is repealed, the language used by Congress will affect the impact of other laws. For example, an authorization to lease "notwithstanding any other provision of law" has a different effect than an authorization to lease "consistent with other federal and state laws." In order to preserve the potential application of the following material, this discussion assumes that a repeal would take the latter form. Although much of this discussion is necessarily speculative, the analysis does generally illustrate the potential conflict between mineral development and wildlife preservation on federal lands.

The reader should also be aware that this discussion ignores two important subjects. First, the protection of ANWR may depend upon issues other than the substantive requirements imposed by these environmental and resource management statutes, such as standing, the availability of judicial review, and a reviewing court’s deference to agency discretion. This article cannot give these topics the attention they deserve. Second, when drilling and production begin, pollution control statutes and the environmental protection provisions of resource management statutes will provide some protection. Notwithstanding the importance of these topics, this discussion is limited to devices that might keep ANWR free from development.

A. NEPA

The National Environmental Policy Act requires federal agencies to prepare a detailed statement of environmental impacts and irreversible commitments of resources for "major federal actions significantly affecting the quality of the human environment." Federal agency approval or regulation of a private action is considered a "federal action," and if the private project is significant, it is a "major federal action."

NEPA imposes no substantive requirements; instead, it imposes procedural requirements that force agencies to consider the environmental consequences of their actions. Unless the proposed action is exempt,
an agency must first prepare an "environmental assessment" (EA). If this assessment reveals that an EIS is not necessary, the agency must then prepare a "finding of no significant impact" (FONSI). However, if the agency determines that an impact statement is necessary, it must issue a "notice of intent" (NOI) to prepare and consider the required statement.

Plaintiffs typically attack agency decisions at two stages: first, they may attack the threshold determination that an EIS is not required, and second, they may attack the adequacy of an EA or an EIS.

A large body of case law interpreting NEPA has developed over the last twenty-five years. One area of dispute left to judicial resolution is the required timing of an EIS; the statute does not indicate the point at which an agency must prepare one. In the Ninth Circuit, a full EIS must be completed before the issuance of an onshore federal lease, unless the lease contains a "no surface occupancy" provision. At the very least, an EIS is required before the appropriate management agency approves a permit to drill. Those who advocate delaying the preparation of an EIS beyond the leasing stage argue that the imposition of onerous procedural requirements is unduly burdensome when most leases will never lead to drilling and the consequent environmental impacts. Because the potential for discovering oil and gas in ANWR is high, this rationale loses force.

Requiring an EIS before leasing on ANWR will not prevent develop-
ment if pro-development groups successfully argue that the Final LEIS satisfies the requirements of NEPA. However, this will be a difficult argument for pro-development groups to make; assuming for a moment that the Final EIS was adequate when written, it has probably lost its adequacy over time. Because the Final LEIS is subject to the same requirements as any EIS, it must be prepared in a draft and final version and the appropriate agency must provide an opportunity for public comment. Although the Final LEIS satisfied these requirements, NEPA imposes a continuing duty on agencies to supplement a previously issued EIS when certain significant new information becomes available.

In Natural Resources Defense Council v. Lujan, the District Court for the District of Columbia held that because the 1991 Overview issued by the Department of the Interior contained significant new information, it must be issued as a supplemental EIS. The court determined that the Department's failure to distribute the Overview for public comment was arbitrary and capricious. Because the court determined that a supplemental EIS was required, the Final LEIS was found to be inadequate. The inadequacy of the Final LEIS is an issue that has been fully litigated and decided, and cannot be relitigated. Other plaintiffs may be able to prevent the Department from asserting the adequacy of the LEIS.

176. It is unclear whether an EIS, if required, must be prepared for each decision to issue leases. At least one commentator, relying on ANILCA § 1009(b), suggests that a blanket EIS is insufficient. See Chase, supra note 10, at 64.
177. See supra Part II.A.4.b. Because the price of oil is lower than predicted, the financial benefits of leasing will also be less than predicted. Although the economic rationale may still be valid, the decision to recommend leasing must be reconsidered because it is based, in part, on an inaccurate assumption. Id.
179. Trustees for Alaska v. Hodel, 806 F.2d 1378, 1383-84 (9th Cir. 1986); see also NRDC v. Lujan, 768 F. Supp. at 889.
180. See 40 C.F.R. § 1502.9(c)(1)(ii). The information must be “relevant to environmental concerns and bear[ ] on the proposed action or its impacts.” Id. See also NRDC v. Lujan, 768 F. Supp. at 885.
181. NRDC v. Lujan, 768 F. Supp. at 885. See supra notes 32-36 and accompanying text discussing the Overview.
182. NRDC v. Lujan, 768 F. Supp. at 885.
184. See Blonder-Tongue Labs, Inc. v. University of Ill. Found., 402 U.S. 313, 349-50 (1971) (holding that a plaintiff patentee cannot bring an infringement action against a subsequent defendant once the validity of the patent has been litigated in a federal court and the court has declared the patent invalid).
185. See Parklane Hosiery Co. v. Shore, 439 U.S. 322, 332-33 (1979) (holding that because it
Apparently, the Department agrees that the Final LEIS is inadequate; the FWS has acknowledged that significant new information has been collected since the Final LEIS was completed.\textsuperscript{186} Furthermore, the FWS concluded in a subsequent report that ANWR is unique and would be irreparably altered by development.\textsuperscript{187} Because new information led to this changed conclusion, it will be difficult for the agency to "flip-flop" and argue that the Final LEIS is still adequate.

Although NEPA merely imposes procedural requirements, new information discovered while preparing future reports can trigger the substantive commands of other statutes. For example, if a future supplemental EIS reveals that ANWR is an area of "critical environmental concern," the Federal Land Policy and Management Act (FLPMA)\textsuperscript{188} may prohibit leasing.\textsuperscript{189} If a supplemental EIS reveals the presence of an endangered or threatened species, the Department of the Interior may designate the area off-limits to petroleum extraction.\textsuperscript{190} These are just two examples of how the procedures required by NEPA may ultimately halt development, rather than merely delay it. Although the substantive commands are from other statutes, the prohibitions would be imposed because information was discovered while satisfying the requirements of NEPA.

B. ANILCA’s Subsistence Use Protection

ANILCA declares that “except as otherwise provided,” the taking of refuge fish and wildlife for subsistence uses\textsuperscript{191} has priority over takings for other uses.\textsuperscript{192} Congress afforded this priority to subsistence uses on
ANILCA lands because, for the most part, no practical alternative food supply exists. In addition, subsistence use is considered essential to the physical, economic, traditional, and cultural existence of both natives and non-natives. Notwithstanding this, subsistence uses may be prohibited when necessary for public safety, administration, or preserving the continued viability of an animal population. Actions necessary to enforce the priority of subsistence uses may be filed in the United States District Court for the District of Alaska.

Before leasing land within an Alaskan wildlife refuge, the appropriate federal agency must evaluate the effect of the lease on subsistence uses and needs. If the lease is determined to "significantly restrict subsistence uses," the agency must give appropriate notice and hold a hearing in the vicinity of the involved area. To issue the lease, the agency must determine that the restriction on subsistence uses is necessary for the proper utilization of the public lands, and involves the smallest possible area of land that will accommodate the purpose of the lease. It must also determine that steps will be taken to minimize any adverse impacts on subsistence uses.

Oil development in ANWR poses at least two threats to subsistence uses: first, it may interfere with the calving and migration of the Porcupine Caribou Herd; and second, it may deplete rivers and lakes occupied by fish. The Gwich'in people rely on the caribou, and the Kaktovik Inupiat rely on fish. Because the Interior Department withdrew Alaska's subsistence use management certification in 1990, both uses (and all other subsistence uses in Alaska) are regulated and protected by the federal government.

§ 3102(18). Compare this with the definition in the ESA, 16 U.S.C. § 1532(19), which includes wound and harass. The difference is obviously one of focus; ANILCA is designed to preserve takings and the ESA is designed to prevent them.
194. § 3111(1).
195. 50 C.F.R. § 36.16(a). Adequate notice and a hearing is required unless the Refuge Manager determines that an emergency exists. § 36.16(a)-(b). These "emergency" closures are limited to 60 days. § 36.16(b).
196. 16 U.S.C. § 3117(a). This is the only available federal judicial remedy and may not be invoked until the plaintiff has exhausted any administrative remedies. § 3117(a),(c).
197. § 3120(a). If an EIS is otherwise required, this evaluation must be included as part of an EIS. § 3120(b).
198. § 3120(a)(1)-(2).
199. § 3120(a)(3)(A)-(B).
200. § 3120(a)(3)(C).
201. See supra notes 37-44 and accompanying text.
202. See supra notes 135-136 and accompanying text.
203. See supra Part II.A.3.
204. See Alaska v. Babbitt, 72 F.3d 698, 701 (9th Cir. 1995) cert denied 116 S. Ct. 1672 (1996)
Although there was some doubt, it is now clear that ANILCA protects subsistence fishing. When the Interior Department published its Final Subsistence Management Regulations, "public lands" was defined narrowly to exclude navigable waters. As a result, several lawsuits were filed by subsistence users to protect fishing rights that did not have preference under the regulations because they were not taking from "public lands." Alaska also filed a lawsuit challenging the agency's authority to regulate fishing. At oral argument, the federal government changed its position and argued that "public lands" includes waters in which it has a reserved water right. The Ninth Circuit found that protection of subsistence uses was one of the purposes for the reservation made by ANILCA; it also found that subsistence uses include fishing, and that fishing takes place on navigable waters. Therefore, it determined that the changed conclusion of the agency was reasonable and that "public lands" includes these reserved waters.

Congress has demonstrated its intent to preserve subsistence uses. Protecting them is a primary purpose of ANILCA, and an entire section of the statute is devoted to realizing this purpose. Other federal statutes also recognize the importance of protecting these uses. Both the Endangered Species Act and the Marine Mammal Protection Act except subsistence uses from their broad taking prohibitions. If these protective statutes, designed to prevent extinctions, recognize the cultural value (describing the withdrawal of Alaska's certification after the Alaska Supreme Court declared the state management act unconstitutional). See McDowell v. Alaska, 785 P.2d 1 (Alaska 1990) (holding the state management act violated the Alaska Constitution's ban on special privileges in the taking of fish and wildlife).

205. 57 Fed. Reg. 22,940, 22,942 (1992). The Secretary acknowledged comments that suggested most subsistence resources are in navigable waters and that Congress intended to protect subsistence rights as broadly as possible; but the Secretary nevertheless believed that the statute clearly limited "public lands" to that land and water in which the United States has title. Id. Because title to land beneath navigable waters belongs to the state, the U.S. normally does not have title to it and it is thus not "public land." See id.; see also Pollard v. Hagan, 44 U.S. (3 How.) 212 (1845).

206. See Alaska v. Babbitt, 72 F.3d at 701 (consolidating cases).

207. Consolidated with subsistence users' claims in Alaska v. Babbitt, 72 F.3d 698, 700 n.2 (noting district court decision upholding ANILCA's authorization of federal agencies to regulate subsistence use, and noting Alaska's stipulation to dismiss this issue, with prejudice).

208. Id. at 701. For a discussion of the reserved water rights doctrine, which gives the federal government a right to unappropriated water necessary to fulfill the purpose of a land reservation, see infra Part IV.E.2.

209. 72 F.3d at 701.

210. Id. at 704; see also 50 C.F.R. § 36.13.

211. 16 U.S.C. § 3101(c).

212. See § 3114.

of continued subsistence use, then the desire for a temporary supply of oil should not defeat this protection.

In *Amoco Production Co. v. Village of Gambell*, pro-development forces won a battle between subsistence use rights and oil, but this victory is more apparent than real. Reversing a Ninth Circuit injunction against the issuance of Outer Continental Shelf (OCS) leases, the Supreme Court found that ANILCA did not apply to the OCS because the shelf is not within Alaska. The Court also held that the plaintiffs failed to demonstrate that the harm they would suffer from leasing was irreparable, a necessary showing for the issuance of an injunction. However, both the district court and the court of appeals had found that the Alaska Native villages were likely to succeed on the merits of their case. If the villages had succeeded, the Secretary would have had to hold a hearing and make the necessary findings before conducting a lease sale. Because the Supreme Court decided the case on other grounds, it did not resolve whether the Secretary would have been subject to these requirements.

C. Preservation Statutes

1. The Wilderness Act

Because Congress probably will not authorize leasing and then designate the area as wilderness, using the Wilderness Act to prevent development after section 1003 is repealed should prove futile. Therefore, because it is more properly characterized as an alternative to repealing section 1003, rather than a means of preventing development after the repeal, it may seem inappropriate to include a discussion of the Wilderness Act in this article. However, because refuge supporters may secure a wilderness designation for ANWR, it is important to consider the effect of such a designation on leasing.

The Wilderness Act was designed to preserve and protect certain

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215. Id. at 546-55. By definition, the OCS begins at the seaward boundary of state lands (either 3 miles or 3 marine leagues, depending on the state). 43 U.S.C. § 1331(a) (1994); see also United States v. Maine, 420 U.S. 515 (1975) (holding that the United States has sovereign rights over the seabed beyond the 3-mile territorial limit reserved to the states). This boundary should not be confused with the 12-mile "territorial sea" or the 200-mile "exclusive economic zone."
216. 480 U.S. at 546. At least one commentator suggests that the injunction was reversed, in part, because congressional approval of leasing led to "substantial investment" by oil developers. See Chase, supra note 10, at 64. If true, congressional authorization for ANWR leasing could effectively eliminate subsistence use protection.
217. 480 U.S. at 539-41.
218. Id. at 540. The necessary findings are at 16 U.S.C. § 3120(A)-(C).
220. See supra Part II.B.2., discussing the continued introduction of wilderness bills in Congress.
lands in their natural condition and secure the benefits of wilderness for present and future generations of Americans.\textsuperscript{221} It instructs the Secretary of the Interior and the Secretary of Agriculture to recommend to the President areas suitable for designation as wilderness.\textsuperscript{222} To be considered for designation by the President, the area must satisfy both the objective and subjective definitions of "wilderness."\textsuperscript{223} It must be an area "untrammeled by man, where man himself is a visitor who does not remain."\textsuperscript{224} Of course, Congress can always designate an area that fails to satisfy the definition.\textsuperscript{225}

Once Congress approves of or designates an area as wilderness, certain prohibitions are triggered.\textsuperscript{226} Commercial enterprises, permanent roads, motor vehicles, installations, and structures are all forbidden.\textsuperscript{227} Although valid existing mineral rights may be protected, they are subject to regulation and appear limited to wilderness areas within national forests.\textsuperscript{228} Therefore, designating ANWR as wilderness will protect it from oil and gas leasing unless Congress creates an ad hoc exemption or a "window" in the designation.\textsuperscript{229}

2. The Refuge Act

The most effective protection for a wildlife refuge might seem to originate in the National Wildlife Refuge System Administration Act (Refuge Act),\textsuperscript{230} but this is not the case, because the Refuge Act permits uses that are compatible with the primary purposes of the refuge.\textsuperscript{231} Thus,

\begin{itemize}
  \item \textsuperscript{221} 16 U.S.C. § 1131(a).
  \item \textsuperscript{222} § 1132(b)-(c).
  \item \textsuperscript{223} See 2 COGGINs & GLICKSMAN, supra note 157, at § 14B.02[1][a][ii][ii] (release #12, 1996).
  \item \textsuperscript{224} It is unclear whether habitation by the Gwich'in would prevent a designation.
  \item \textsuperscript{225} See 2 COGGINs & GLICKSMAN, supra note 157, at § 14B.02[1][a][iii] (release #12, 1996).
  \item \textsuperscript{226} 16 U.S.C. § 1133(c).
  \item \textsuperscript{227} Id. Other prohibitions include no use of "motorized equipment or motor boats, no landing of aircraft, [and] no other form of mechanical transport . . . ." Id. Several of these activities are permitted when necessary for the administration of the wilderness area. Id.
  \item \textsuperscript{228} § 1133(d)(3) (preserving valid existing mineral rights in wilderness forests beyond 1983).
  \item \textsuperscript{229} See 2 COGGINs & GLICKSMAN, supra note 157, at 14.04[4][f] (release #14, 1996).
  \item \textsuperscript{230} 16 U.S.C. §§ 668dd-668ee (1994).
  \item \textsuperscript{231} § 668dd(d)(1). The Refuge Act is administered by the FWS, § 668dd(a)(1), and the imple-
wildlife refuges are “dominant use” areas, allowing multiple uses that do not interfere with the “ecological conservation and rehabilitation of wildlife.”

A primary purpose of ANWR is to “conserve fish and wildlife in their natural habitats and diversity.” This does not mean that steps toward oil development have not occurred within ANWR. Over twenty-one pages of the Code of Federal Regulations detail the requirements for exploring the coastal plain. Although exploratory drilling is prohibited, activities that may adversely affect ANWR are allowed if the adverse impact is not significant.

Generally, the Secretary has discretion to lease and allow oil production on refuges if these uses are compatible with a refuge. Judicial review of the Secretary’s decision is therefore limited to the abuse of discretion standard. If Congress repeals section 1003 and the FWS determines that development is compatible with ANWR, the Secretary could authorize leasing. Because of this relaxed standard of judicial review, environmental groups will have little success attacking the decision.

3. The Endangered Species Act

In an attempt to conserve threatened and endangered species and their habitats, Congress passed the Endangered Species Act (ESA) and declared that federal agencies “shall seek to conserve” endangered and threatened species. To “conserve” a species, an agency must use those measures necessary to improve the status of the species to a point where it no longer needs the protection of the ESA.

...
The ESA has been described as "elegantly simple in structure" and much of the agency discretion present in the Refuge Act is noticeably and deliberately absent from the ESA. The two main protective provisions are sections 9(a) and 7(a)(2). The first prohibits the "taking" of a listed species by "any person," and the latter imposes a duty on federal agencies not to jeopardize listed species. To satisfy this duty, each federal agency must "insure that any action authorized, funded, or carried out by [the] agency is not likely to jeopardize the continued existence” of an endangered or threatened species or “result in the destruction or adverse modification” of critical habitat. Thus, unless the Endangered Species Committee grants an exemption, the Interior Department cannot issue a lease that is likely to jeopardize the continued existence of a listed species or adversely modify its critical habitat.

If the FWS suspects the presence of an endangered or threatened species within an area to be leased, it must ask the leasing agency to perform a biological assessment. This required assessment is designed to determine the presence of a species listed or proposed for listing, and the possible effects of the proposed activity on the species and its habitat. Based on the discovered impacts, the FWS must consult with the leasing agency and issue either a "jeopardy" or "no jeopardy" biological opin-

§ 1533(c). A "listed species" is one designated by this list. 50 C.F.R. § 402.02 (1995).


247. See supra part IV.C.2.

248. See 2 COGGINS & GLICKSMAN, supra note 157, at § 15C.01[1] (release #15, 1997). One important exception is the discretion of the FWS to craft less rigorous regulations designed to protect those species that are "threatened" rather than "endangered." See id. at § 15C.02[1][a] (release #10, 1996). See also supra note 269 and accompanying text.


250. § 1536(a)(2).

251. § 1536(a)(2)(B). The ESA defines "take" broadly. See § 1532(19); see also supra note 192.

252. § 1536(a)(2). This is actually the second of two duties imposed on federal agencies: the first is an affirmative duty to conserve listed species. See supra text accompanying note 246.

253. 16 U.S.C. § 1536(a)(2). "Jeopardize the continued existence of" is defined as "engag[ing] in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species." 50 C.F.R. § 402.02 (1996). Basically, "critical habitat" is the area essential to the conservation of the species. See 16 U.S.C. § 1532(5)(A).

254. See Jared des Rosiers, Note, The Exemption Process Under the Endangered Species Act: How the “God Squad” Works and Why, 66 NOTRE DAME L. REV. 825, 826 (1991). The Endangered Species Committee, also known as the "God Squad," consists of six high-ranking government officials from various federal departments and one member from "each affected state." See 16 U.S.C. § 1536(e)(3). However, the members from the affected states have only one collective vote. 50 C.F.R. § 453.05(b)(d). See infra notes 263-267 and accompanying text regarding the exemption process.

255. 16 U.S.C. § 1536(c)(1).

256. Id.; 50 C.F.R. § 402.12(a).
Because the Ninth Circuit refuses to equate the onshore leasing process with the segmented procedures of the Outer Continental Shelf Lands Act, decisions to lease must specifically preclude development unless an adequate biological opinion has been rendered.

“No jeopardy” opinions must contain mitigation measures that, if followed, will immunize an “incidental” take from liability under section 9. This leaves the developer free to proceed without the threat of liability, even though the project may harm a listed species. If the FWS issues a “jeopardy” opinion, the project is stopped unless the Endangered Species Committee grants an exemption.

The Committee may grant an exemption if the benefits of a qualifying project “clearly outweigh” the benefits of alternatives consistent with conserving the species. At least five of the seven members must approve the exemption after being satisfied that reasonable measures to mitigate the adverse effects of development are in place. As long as an EIS has been prepared at an earlier point in the process, the Committee’s decision is not a “major federal action” requiring an additional environmental impact statement. The public has a “right to attend Committee meetings, participate in all Committee hearings, and have access to all Committee records . . . .” The decision to exempt a project is appealable as a final agency action.

Because the Arctic Peregrine Falcon was removed from the threatened list in 1994, there are currently no known threatened or endangered

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260. Good & Mitchell, supra note 257, at § 7.02[2][v]. If the developer complies with mitigation measures and approved development plans, it may also be immune from liability for takings under section 10(a), which allows the developer to obtain an incidental take permit if the take will occur while engaged in an otherwise lawful activity. See id.; 16 U.S.C. § 1539(a).
261. See 2 COGGINS & GLICKSMAN, supra note 157, at § 15C.04[1]-[2] (release #14, 1996). When issuing a “jeopardy” opinion, the FWS must include alternatives or state that there are none. 16 U.S.C. §1536(b)(3)(A); 50 C.F.R. § 402.14(h)(3).
262. 16 U.S.C. § 1536(h)(1)(A). Qualifying projects are those that have regional or national significance and present no reasonable or prudent alternatives. Id. In addition, the agency or the developer must not have made an irretrievable commitment of resources. Id. Congress obviously wanted to prevent the “momentum factor” from influencing the Committee.
264. § 1536(k).
265. Portland Audubon Soc’y v. Endangered Species Comm., 984 F.2d 1534, 1542 (9th Cir. 1993). The controversy and litigation surrounding the Northern Spotted Owl defies capsule summary. In this case, the court held, in part, that the exemption process (which culminated in an exemption) was subject to the ban on ex parte communications. Id. at 1550.
266. 16 U.S.C. § 1536(h)(1).
animals on the coastal plain. However, there may be up to thirty types of plants that qualify for listing. If the presence of a threatened or endangered species is confirmed, the ESA may prevent leasing. Even this restrictive act, however, provides at least three ways to avoid the strict prohibitive provisions: 1) a species may be listed as merely threatened and thus subject to less restrictive regulations; 2) a “no jeopardy” opinion may be issued with adequate mitigation measures; and 3) a “God Squad” exemption may be granted. The ultimate protection afforded by the ESA is too fact dependant to predict.

4. The Wild and Scenic Rivers Act

The Wild and Scenic Rivers Act (WSRA) will probably not protect ANWR from the effects of leasing and development. First, the WSRA specifically preserves the application of mineral leasing laws to the WSRA river components where claims have not been “perfected;” for these areas, the WSRA requires only compliance with regulations designed to effectuate the purposes of the WSRA. Second, although the WSRA does withdraw the beds and banks of perfected components from appropriation for a specified time, it prohibits leasing only when the United States has title to the bed or bank. Because title to the beds of Alaska’s navigable rivers passed to Alaska when it entered the Union, the leasing prohibition extends only to the limited area called the “bank” and slightly beyond. Finally, the relevance of this entire discussion assumes that a river on the coastal plain is subject to designation, which may not be true.

One further point deserves mentioning. Congress enacted the WSRA to preserve the “free-flowing condition” that state water law regimes failed to recognize. Regulations issued under the WSRA must effectuate its purposes. Therefore, the regulations should prohibit leasing if explora-
tion or development withdraws water from a river within the system, even if the proposed leasing is not within a protected corridor.

There are two problems with this argument. First, water must be withdrawn from a designated river for the argument to apply, and, as alluded to above, there are no designated rivers on the coastal plain. Furthermore, if Congress authorizes leasing, it probably would not then designate a river that is needed to develop a leased area. Second, a court may find that this attempted prohibition exceeds the authority delegated to the Interior Department under WSRA; Congress clearly limited the geographic application of WSRA to the corridors surrounding the rivers.279

D. Section 404 of the Clean Water Act

Oil development is among the “activities most likely to generate water pollution on the federal lands.” To restore and maintain the integrity of the nation’s waters,281 Congress gradually enacted what has become today’s Clean Water Act (CWA).282 Section 404 of the CWA283 prohibits the discharge of dredged or fill material into the waters of the United States without an Army Corps of Engineers (Corps) permit.284 Most wetlands are included within the definition of “waters of the United States,”285 and ninety-nine percent of the coastal plain is classified as wetlands.286 Thus, if the wetlands on the coastal plain are legal wetlands within the meaning of section 404, and oil development activities discharge dredged or fill material, developers will need a permit to engage in the offending activities.

Both the Corps and EPA define wetlands as “areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence

279. See e.g., 16 U.S.C. § 1274(b). The issue is whether the Department may regulate only activity in the corridor, or activity that affects the corridor.
284. § 1344(a).
285. See United States v. Riverside Bayview Homes, Inc., 474 U.S. 121, 135 (1985) (upholding the Corps’ inclusion of wetlands “adjacent” to “waters of the United States” within the definition of “waters of the United States”); see also Hoffman Homes, Inc. v. EPA, 999 F.2d 256, 261 (7th Cir. 1993) (agreeing with the EPA that “isolated” wetlands used by migratory waterfowl are included within “waters of the United States”).
286. Final LEIS, supra note 11, at 13.
of vegetation typically adapted for life in saturated soil conditions. A287
Wetlands subject to the Corps' CWA jurisdiction include interstate wetlands, wetlands that will affect interstate or foreign commerce if degraded, and wetlands adjacent to other waters of the United States. A288 Although any one category is sufficient to give the Corps jurisdiction, the wetlands of the coastal plain fall within all three. A289

A redeposit of excavated material dredged during mechanized land-clearing is a "discharge of dredged material" and prohibited absent an appropriate permit. A290 The deposit of material designed to create the dry-land environment needed to build structures is also prohibited. A291 Although the discharge of dredged or fill material includes other activities, these two seem particularly applicable to oil operations on the coastal plain.

As previously mentioned, a discharge of dredged or fill material is not strictly prohibited; if consistent with the public interest, the Corps will issue an individual permit. A292 When evaluating the probable impacts of granting a permit, the Corps must balance the reasonably expected public benefits of the proposed activity against any reasonably foreseeable detriments. A293 The Corps must give priority to processing applications for activities associated with energy projects. A294

In addition to this "public interest review" process, the Corps must comply with EPA guidelines issued under section 404(b)(1), A295 and withstand the EPA's authority to veto permits. A296 These guidelines prohibit the issuance of a permit when a practicable alternative to the proposed discharge is available. A297 Although practicable alternatives are presumed to be available because oil development is not a "water dependant" activi-

288. 33 C.F.R. § 328.3(a). "Adjacent" means "bordering, contiguous, or neighboring," and includes wetlands separated from other waters by man-made and natural barriers. § 328.5(c). This jurisdiction extends to the limit of the wetland. § 328.4(c)(2)-(3).
289. The wetlands border Canada and are therefore "interstate;" they border the Beaufort Sea and are therefore "adjacent;" they are used by migratory waterfowl and therefore "affect interstate commerce if degraded." See supra note 285.
290. 33 C.F.R. §§ 323.2(c),(d)(1)(iii), 232.3.
291. 33 C.F.R. § 323.2(e)-(f).
292. See 33 C.F.R. pt. 323. The Corps is also authorized to issue general permits on a state, regional, or nationwide basis for categories of activities that are "similar in nature" and will cause only "minimal adverse environmental effects." 33 U.S.C. § 1344(e)(1). The nationwide permit for oil and gas structures is limited to offshore facilities. See 33 C.F.R. pt. 330, app. A.
293. 33 C.F.R. § 320.4(a). This review process is called a "public interest review." § 320.1(a)(1).
294. § 320.4(n).
295. See 33 C.F.R. § 320.4(a)(1) (referring to 33 U.S.C. § 1344(b)(1)).
296. 33 U.S.C. § 1344(c). The EPA may veto permits that will have an unacceptable adverse impact on wildlife, fish, recreational areas, municipal water supplies, and shell fish beds. Id.
297. 40 C.F.R. § 230.10(a). This is commonly referred to as the "practicable alternatives test." See Town of Norfolk v. United States Army Corps. of Engineers, 968 F.2d 1438, 1448 (1st Cir. 1992).
ty, the overwhelming percentage of wetlands on the coastal plain may enable developers to "clearly demonstrate otherwise." In 1989, the EPA announced a "no net loss" policy for wetlands. Although this may appear to prohibit activities that degrade or destroy a wetland, it merely requires some form of mitigation.

Because of the extensive wetlands on the coastal plain, developers will need to obtain discharge permits, but the Corps and the EPA will probably issue the necessary permits, requiring only adequate environmental protection and mitigation measures. It is unlikely that the EPA will use its section 404 veto authority to prevent development.

E. Alaska State Law

The ultimate effect of Alaska law may depend on the position of the state government. If Alaska favors leasing, the agencies charged with administering the following laws may use their discretion to avoid imposing prohibitive requirements on developers. At least one author suggests that the state's official position "supporting" leasing is limited, and conditioned upon adequate safeguards for fish and wildlife.

1. Alaska's Coastal Zone Management Program

The Federal Coastal Zone Management Act (CZMA) influences the location and development of energy-related facilities through a consistency determination. If a state has a federally approved coastal management program, no federally permitted or licensed activity that affects a land or water use or the natural resources of the "coastal zone" can commence until the state determines that the applicant's activity is consistent with its program. An activity is consistent if it complies with enforce-

298. 40 C.F.R. § 230.10(a)(3). Water dependant activities are those that "require access or proximity to or sitting within" an aquatic site to fulfill their basic purpose (such as a marina). See id.

299. This is the required showing to defeat the presumption that no practicable alternatives are available. Id.

300. 54 Fed. Reg. 51,319, 51,320 (1989) (this policy is now codified at 33 U.S.C. § 2317(a)(1)).

301. See JOSEPH J. KALO ET AL., COASTAL AND OCEAN LAW, at 141-42 (2d ed. 1994).


able policies of a state program. These are defined in CZMA as "[s]tate policies which are legally binding through constitutional provisions, laws, regulations, land use plans, ordinances, or judicial and administrative decisions, by which a [s]tate exerts control over private and public land and water uses and natural resources in the coastal zone."

Although a federal wildlife refuge is never located within the "coastal zone," Congress made it clear that the consistency requirement applies to activities conducted outside the zone. The zone extends seaward to the limit of state land, and the necessary distance upland to control the shorelands and those areas vulnerable to sea level rise. Thus, the proposed siting of facilities will determine whether the action affects the coastal zone.

Notwithstanding this, there are several reasons why Alaska’s coastal management program will not protect ANWR from leasing and development. First, most onshore activities will not require a consistency determination because they will not have an impact on this limited area. Second, the state’s “veto” power is more apparent than real; the Secretary of Commerce may find that the activity is “consistent with the purposes and objectives of the Act” and override the state’s determination. Third, a 1980 Alaska Attorney General Opinion suggests that federal preemption may prohibit a local coastal zone program from affecting federal on-shore oil leases. Finally, because Alaska’s management program recognizes the national need for a continuing supply of energy, it is unlikely the decision to lease would be considered inconsistent with the program.

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308. § 1453(6a).
309. See § 1453(1), which excludes from the coastal zone “lands the use of which is by law subject solely to the discretion of or which is held in trust by the Federal Government, its officers, or agents.”
310. § 1456(c)(3)(A). The CZMA was amended in 1990 to include the words “or outside the coastal zone” after the Supreme Court suggested, in Secretary of the Interior v. California, 464 U.S. 312 (1984), that only activities “in” the coastal zone were subject to the consistency requirements. See Coastal Zone Act Reauthorization Amendments of 1990, Pub. L. No. 101-508, § 6208(a), 104 Stat. 1388-299, -307 (1990).
311. 16 U.S.C. § 1453(1).
313. See 15 C.F.R. § 930.121(a)-(d) (1996) for the findings required to make such a determination.
314. See 16 U.S.C. § 1456(c)(3)(A). This finding will authorize the issuance of the federal permit or license notwithstanding the inconsistency with the state program; it will not act as a substitute finding of consistency. See 15 C.F.R. § 930.120.
315. See Op. Att’y Gen. (May 12, 1980), cited in ALASKA STAT. § 46.40.010 (1996) (annot.). However, because the 1990 amendments to CZMA made it clear that federal activities outside the zone must be consistent with the state’s program, see supra note 312, this opinion is questionable and probably no longer held.
2. Alaska’s Water Law

Generally, the federal government defers to state law for the allocation of water, and the Supreme Court has confirmed this federal policy in at least two notable cases. However, this deference is not absolute. First, the United States has the power to secure the uninterrupted navigability of navigable waters, even by preventing obstructions to non-navigable portions of those waters. Second, the United States may have a federal reserved water right.

A federal reserved water right has priority from the date the land is reserved, and includes only the amount of water necessary to fulfill the purpose of the reservation. ANILCA expressly preserves the existing federal-state water rights regime. Thus, the creation of ANWR impliedly reserved enough water to accomplish its four purposes, including the conservation of fish and wildlife in their natural habitats and diversity, and the protection of an adequate water quantity and quality.

To obtain the substantial quantity of water needed to produce oil, an ANWR developer will face at least two obstacles: Alaska’s Water Use Act and the federal reserved water right. Because development must be consistent with ANWR, the United States will not implicitly relinquish its reserved right when it authorizes leasing.

Alaska is a “prior-appropriation” state and ANILCA expressly preserves this regime. Priority of appropriation gives a right to use wa-
ter to the person that files an application to appropriate before others file.327 Alaska’s Commissioner of Natural Resources must issue a permit to appropriate if water is available, the means of diversion are adequate, the proposed use is beneficial, and the “proposed appropriation is in the public interest.”328 Fish and wildlife, maintenance of water quality, recreation, and mining are all beneficial uses.329 The Alaska Water Use Act also authorizes the reservation of water to maintain instream flows.330

The United States’ ability to reserve the amount of water necessary to protect fish and wildlife may limit the water available for developing oil on the coastal plain. In Tulkisarmute Native Community Council v. Heinze,331 the Alaska Supreme Court reversed an extension of existing placer mining permits by the State Department of Natural Resources.332 The Council had argued, among other things, that the mining interfered with fish habitat by reducing stream flow.333 The Department failed to follow the advice of its own experts, and the court found the decision to extend the permits was unsupported by substantial evidence.334 Although the Department originally extended the permits at the expense of the fish, this case demonstrates that plaintiffs might successfully sue to preserve stream flows. Of course, it also demonstrates that the State Department of Natural Resources has, on at least one occasion, been willing to support development before it protects wildlife.

F. International Law335

1. Treaties in Force

Congress established ANWR, in part, to fulfill international treaty obligations.336 When the President enters into an international treaty with the advice and consent of the Senate, that treaty becomes law and all those subject to United States law are bound by it.337 If Congress authorizes

327. See ALASKA STAT. § 46.15.050. This is commonly referred to in western water law as “first in time, first in right.”
328. § 46.15.080(a)(1)-(4).
329. § 46.15.260(3). The word “mining” probably refers to placer mining rather than oil and gas development. See generally §§ 46.16.10 - 46.16.100. However, the definition is not exhaustive, so oil development may be (and probably is) considered a beneficial use. See § 46.15.260(3).
330. § 46.15.145(a).
332. Id. at 953.
333. Id. at 946-948.
334. Id. at 948.
335. For a comprehensive discussion of the international law obligations of the United States, see generally Walker, supra note 2. Much of the information in this section was taken from that article.
337. U.S. CONST. art. II, § 2, cl. 2; art. VI, cl. 2.
leasing of the coastal plain, it may violate several binding treaties, including the Convention for the Protection of Migratory Birds and the Agreement on the Conservation of Polar Bears. The Department of the Interior has determined that 130 species of birds known to use the Coastal Plain are protected by various treaties.

Canada is a party to the migratory bird and polar bear treaties and opposes leasing on the coastal plain. Responding to the draft version of the LEIS, Canada urged the United States to designate the area as wilderness and cooperate to protect this unique and irreplaceable ecosystem. If the breach of a treaty is minor, the non-breaching party may determine that the violation is not actionable. However, Canada has advised the United States that “long-term losses of fish and wildlife resources” are the “inevitable consequence” of oil and gas development. It has urged the United States to recognize the serious implications of leasing, and would probably determine that the harm resulting from development is an actionable breach.

The possible breach of a treaty would not prevent leasing and development, but it may create the need to pay some form of restitution. Although this would decrease the public benefit of repealing section 1003, it will only prevent development if Congress considers that cost in the decision to lease.

2. Customary International Law

In both ANILCA and the Final LEIS, the United States acknowledged that the Porcupine Caribou Herd is a significant international resource. Because this herd is an international resource, the United

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338. See generally Walker, supra note 2, at 5-31.
342. The migratory bird treaty was signed by the United Kingdom on behalf of Canada. See id. at 8.
343. FINAL LEIS, supra note 11, app. at F-2.
344. Id. at F-2, F-6.
345. Walker, supra note 2, at 9 (citing RESTATEMENT (THIRD) OF THE FOREIGN RELATIONS LAW OF THE UNITED STATES, § 335 cmt. b (1986)).
346. FINAL LEIS, supra note 11, app. at F-5.
347. Id.
348. See Walker, supra note 2, at 15.
349. Id.
350. See 16 U.S.C. § 3145(a); FINAL LEIS, supra note 11, at 21.
States has a customary international law obligation to protect it,\textsuperscript{351} and a resulting duty to negotiate with Canada when it fails to.\textsuperscript{352} However, this obligation to negotiate does not arise until there is an injury,\textsuperscript{353} and an injury will not occur until development begins. Thus, customary law will not prevent leasing, and should not be relied upon to protect the coastal plain from development.

V. CONCLUSION

ANILCA’s section 1003 is an unambiguous provision that provides effective protection for ANWR. If section 1003 is repealed, leasing and development will begin on the coastal plain, unless Congress designates the area as wilderness. Absent that, limited protection may be available in the ESA. A NEPA challenge may temporarily delay development, but unless the plaintiffs enjoin development, and even preparations toward development, the “momentum factor” will be difficult to overcome.\textsuperscript{354}

Other statutes examined in this article provide little or no protection, partially because they lack the certainty and clarity of the current prohibition provided by section 1003. When confronted with the suggestion that general federal land management statutes will protect endangered species, Professor Oliver Houck observed the following:

Any practitioner or teacher of natural resource law knows that the federal land management statutes, because of inevitable compromises forged in their enactment, are so self-conflicted in their goals and so discretionary in their requirements that they stand little chance of redirecting federal programs and private industries that both benefit from and influence the execution of these laws.\textsuperscript{355}

Without a clear and specific statutory provision that prohibits the development of oil on the coastal plain, it seems inevitable that a future administration will eventually lease the “greatest unexplored potential for discov-

\begin{footnotesize}
\textsuperscript{351} Walker, \textit{supra} note 2, at 41.
\textsuperscript{352} Id. at 43. According to Mr. Walker, disputes between the United States and Canada over shared natural resources give rise to an obligation to negotiate because that is how they have generally resolved conflicts, and this practice is generally accepted within the international community. \textit{See id.} at 42-43.
\textsuperscript{353} Id. at 44.
\textsuperscript{354} \textit{See} 2 \textsc{Coggins & Glicksman}, \textit{supra} note 157, at 10G.04[4][b] (release #15, 1997). \textit{See also} Village of False Pass v. Clark, 733 F.2d 605, 619 (9th Cir. 1984) (Canby, J., dissenting). A God Squad ESA exemption is prohibited when there has been an irretrievable commitment of resources. 16 U.S.C. § 1536(h)(1). This represents an acknowledgment by Congress that the momentum factor could interfere with an appropriate decision.
\end{footnotesize}
ering a supergiant oil field.\textsuperscript{356}