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Arctic National Wildlife Refuge (ANWR): New Directions in the 110th Congress

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Summary

One part of the ongoing energy debate has been whether to approve energy development in the Arctic National Wildlife Refuge (ANWR) in northeastern Alaska — and if so, under what conditions — or whether to continue to prohibit development to protect the area's biological, recreational, and subsistence values. ANWR is rich in fauna, flora, and oil potential. Its development has been debated for over 40 years, but sharp increases in energy prices from late 2000 to early 2001, terrorist attacks, more price increases in 2004-2007, and energy infrastructure damage from hurricanes have intensified debate. Few onshore U.S. areas stir as much industry interest as ANWR. At the same time, few areas are considered more worthy of protection in the eyes of conservation and some Native groups. Current law prohibits oil and gas leasing in the Refuge.

Changes in party control in the 110th Congress have encouraged those who seek wilderness protection for this portion of ANWR. However, any change from the status quo appears just as difficult for proponents of wilderness designation who seek to provide additional statutory protection as it did for development advocates in the 109th Congress.

In the first session of the 109th Congress, ANWR development was added to the conference report for the Defense appropriations bill (H.R. 2863). The House passed the conference report with the ANWR provision, but the ANWR title was removed from the bill (P.L. 109-148) after failure of a cloture motion in the Senate. In the second session, on March 16, 2006, the Senate passed S.Con.Res. 83, the FY2007 budget resolution. Its sole reconciliation instruction was to the Senate Committee on Energy and Natural Resources, and it assumed revenues from leasing in ANWR. On May 25, 2006, the House passed the American-Made Energy and Good Jobs Act (H.R. 5429), which would have opened ANWR to development. Neither was enacted into law.

Development advocates argue that ANWR oil would reduce U.S. energy markets' exposure to Middle East crises; lower oil prices; extend the economic life of the Trans Alaska Pipeline; and create jobs in Alaska and elsewhere in the United States. They maintain that ANWR oil could be developed with minimal environmental harm, and that the footprint of development could be limited to a total of 2,000 acres. Opponents argue that intrusion on such a remarkable ecosystem cannot be justified on any terms; that economically recoverable oil found (if any) would provide little energy security and could be replaced by cost-effective alternatives, including conservation; and that job claims are exaggerated. They maintain that development's footprints would have a greater impact than is implied by a limit on total acreage. They also argue that limits on footprints have not been worded to apply to extensive Native lands in the Refuge, which could be developed if the Refuge were opened.

Contents

Arctic National Wildlife Refuge (ANWR): New Directions in the 110th Congress

Most Recent Developments

On January 4, 2007, Representatives Markey and Ramstad introduced H.R. 39, to designate the Arctic Coastal Plain as wilderness. The bill was referred to the House Committee on Natural Resources. The President's FY2008 budget assumes legislation to open ANWR to development, and that the recoverable oil would be between 5.7 and 16 billion barrels. It assumes that the first sale would be held in FY2009, and would generate $7 billion in new revenues, to be shared equally with the state of Alaska.

Background and Analysis

The Arctic National Wildlife Refuge (ANWR) consists of 19 million acres in northeast Alaska. It is administered by the Fish and Wildlife Service (FWS) in the Department of the Interior (DOI). Its 1.5-million-acre coastal plain is viewed by development proponents as one of the most promising U.S. onshore oil and gas prospects. According to the U.S. Geological Survey (USGS), the mean estimate of *technically* recoverable oil on the federally owned land in the Refuge is 7.7 billion barrels (billion bbl), and there is a small chance that over 11.8 billion bbl could be recovered on the federal lands. The mean estimate of *economically* recoverable oil (at $55/bbl in 2003 dollars) on the federal lands is 7.14 billion bbl and there is a small chance that the federal lands could have over 10.7 billion bbl of *economically* recoverable oil. That amount would be nearly as much as the single giant field at Prudhoe Bay, found in 1967 on the state-owned portion of the coastal plain west of ANWR, now estimated to have held almost 14 billion bbl of economically recoverable oil.

Moreover, if Congress opens federal lands in ANWR to development, current law would also open Native lands. In addition, nearby onshore development would also make state lands (already legally open to development) along the coast more economically attractive, and as a result, these state lands might also become more attractive to industry. While only the federal lands would produce income from bonus bids, rents, and royalties, USGS figures show that when state and Native lands are considered, the mean estimates of economically recoverable oil rises to 9.7 billion bbl, and there is a small chance that economically recoverable oil in the three ownerships might total over 14.6 billion bbl. (See "Oil," below, for further discussion.)

The Refuge, especially the nearly undisturbed coastal plain, also is home to a wide variety of plants and animals. The presence of caribou, polar bears, grizzly bears, wolves, migratory birds, and other species in this wild area has led some to call

the area "America's Serengeti." Some advocates have proposed that the Refuge and two neighboring parks in Canada become an international park, and several species found in the area (including polar bears, caribou, migratory birds, and whales) are protected by international treaties or agreements. The analysis below covers, first, the economic and geological factors that have triggered interest in development, then the philosophical, biological, and environmental quality factors that have generated opposition to it.

The conflict between high oil potential and nearly pristine nature in the Refuge creates a dilemma: should Congress open the area for energy development or should the area's ecosystem continue to be protected from development, perhaps permanently? What factors should determine whether, or when, to open the area? If the area is opened, to what extent can damages be avoided, minimized, or mitigated? To what extent should Congress legislate special management to guide the manner of any development, and to what extent should federal agencies be allowed to manage the area under existing law?

Basic information on the Refuge can be found in CRS Report RL31278, *Arctic National Wildlife Refuge: Background and Issues*, coordinated by M. Lynne Corn (hereafter cited as CRS Report RL31278). For legal background, see CRS Report RL31115, *Legal Issues Related to Proposed Drilling for Oil and Gas in the Arctic National Wildlife Refuge (ANWR)*, by Pamela Baldwin (hereafter cited as CRS Report RL31115). State lands on the coastal plain are shown at [http://www.dog.dnr.state.ak.us/oil/products/maps/maps.htm]. An extensive presentation of development arguments can be found at [http://www.anwr.org], sponsored by a consortium of groups. Opponents' arguments can be found variously at [http://www.alaskawild.org/], [http://www.dfait-maeci.gc.ca/can-am/washington/shared_env/default-en.asp], [http://www.protectthearctic.com/], or [http://www.tws.org/OurIssues/Arctic/index.cfm?TopLevel=Home].

Legislative History of the Refuge

The energy and biological resources of northern Alaska have been controversial for decades, from legislation in the 1970s, to a 1989 oil spill, to more recent efforts to use ANWR resources to address energy needs or to help balance the federal budget. In November 1957, an application was filed to withdraw lands in northeastern Alaska to create an "Arctic National Wildlife *Range*." On December 6, 1960, after statehood, the Secretary of the Interior issued Public Land Order 2214, reserving the area as the *Arctic National Wildlife Range*. The potential for oil and gas leasing was expressly preserved at that time.

In 1971, Congress enacted the Alaska Native Claims Settlement Act (ANCSA, P.L. 92-203) to resolve all Native aboriginal land claims against the United States. ANCSA provided for monetary payments and created village corporations that received the surface estate to roughly 22 million acres of lands in Alaska, including some in the National Wildlife Refuge System. Under §22(g) of ANCSA, these lands in refuges were to remain subject to the laws and regulations governing use and development of the particular refuge. Kaktovik Inupiat Corporation (KIC, the Native village corporation in the ANWR area) received rights to three townships in the geographic coastal plain of ANWR (and a fourth was added later). ANCSA also

created regional corporations that could select subsurface rights to some lands and full title to others. Subsurface rights in refuges were not available.

The Alaska National Interest Lands Conservation Act of 1980 (ANILCA, P.L. 96-487) renamed the range as the Arctic National Wildlife Refuge, and expanded the Refuge, mostly south and west, to include another 9.2 million acres. Section 702(3) designated much of the original Refuge as a wilderness area, but not the coastal plain, nor the newer portions of the Refuge. Instead, Congress postponed decisions on the development or further protection of the coastal plain. Section 1002 directed a study of ANWR's "coastal plain" (therefore often referred to as the *1002 area*) and its resources. The resulting 1987 report (by FWS, USGS, and the Bureau of Land Management (BLM)) was called the *1002 report* or the Final Legislative Environmental Impact Statement (FLEIS). ANILCA defined the "coastal plain" as the lands specified on an August 1980 map — language that was later administratively interpreted as excluding many Native lands, even though these lands are *geographically* part of the coastal plain.[1]

Section 1003 of ANILCA prohibited oil and gas development in the entire Refuge, or "leasing or other development leading to production of oil and gas from the range" unless authorized by an act of Congress. (For more history of legislation on ANWR and related developments, see CRS Report RL31278; for legal issues, see CRS Report RL31115. For specific actions, including key votes, see CRS Report RL32838, *Arctic National Wildlife Refuge: Legislative Actions Through the 109th Congress, First Session*, by Anne Gillis, M. Lynne Corn, Bernard A. Gelb, and Pamela Baldwin.)

Actions in the 109th Congress. The ANWR debate took two basic routes in the 109th Congress: (a) reconciliation bills (S. 1932 and H.R. 4241) under the budget process, which cannot be filibustered; and (b) other bills (H.R. 6, an energy bill; H.R. 2863, Defense appropriations; and H.R. 5429, a bill to open the Refuge to development), which can be.[2] These bills all provided for an expedited opening of the Refuge to development to address national energy needs. For details of these bills, and of House and Senate actions on them, see CRS Report RL33523, *Arctic National Wildlife Refuge (ANWR): Controversies for the 109th Congress*. In the end, Congress did not send any of these bills to the President.

The Energy Resource

The developed parts of Alaska's North Slope suggest promise for ANWR's energy prospects. Oil-bearing strata extend eastward from structures in the National

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[1] This report will use *Coastal Plain* when referring to the area defined in statute, legislative maps, or regulation. It will use *coastal plain* when referring to the broad area sloping north to the Arctic Ocean from the foothills of the Brooks Range. The terms overlap but are not identical.

[2] For more on the budget process and budget enforcement, see CRS Report RS20368, *Overview of the Congressional Budget Process*; and CRS Report 98-815, *Budget Resolution Enforcement*, both by Bill Heniff, Jr. For ANWR and reconciliation, see CRS Report RS22304, *ANWR and FY2006 Budget Reconciliation Legislation*, by Bill Heniff, Jr., and M. Lynne Corn.

Petroleum Reserve-Alaska through the Prudhoe Bay field, and may continue into and through ANWR's 1002 area.

Oil. Estimates of ANWR's oil potential, both old and new, are based on limited data and numerous assumptions about geology and economics. Recent interest has centered especially on parts of the 1002 area west and north of the Marsh Creek anticline, roughly a third of the 1002 area. (See Figure 5 in CRS Report RL31278.) The most recent government geologic study of oil and natural gas prospects in ANWR, completed in 1998 by the USGS,[3] found an excellent chance (95%) that at least 11.6 billion bbl of oil are *present* on federal lands in the 1002 area. (For comparison, annual U.S. oil consumption from all sources is about 7.5 billion bbl.)

But the amount that would be economically recoverable depends on the price of oil, and crude oil prices have increased substantially in the last two years, bringing about $70/bbl in the futures market in late June 2006, and recently dropping into the $55-$65 range. In its latest economic assessment, USGS estimated that, at $55/bbl in 2003 dollars, there is a 95% chance that 3.9 billion bbl or more could be economically recovered and a 5% chance of 10.7 billion bbl or more on the federal lands.[4] These estimates reflect new field development practices, and cost and price changes since USGS's 1998 assessment. Moreover, as noted earlier, about one-third more oil may be under adjacent state waters and Native lands.[5] The state waters adjacent to the 1002 area are far from any support system or land-based development and any oil under them is not presently economic. If onshore development were to occur, allowing leases in state waters to benefit from onshore transportation systems (airstrips, haul roads, pipelines, etc.) and supply bases (gravel mines, water treatment plants, staging areas, etc.), these areas might become more attractive to industry. In addition, a lifting of the statutory prohibition on oil and gas development in the Refuge would not only lift the ban on Native lands but might make smaller fields on Native lands more attractive, if they were able to share facilities with nearby development, or if they became preferred locations for support facilities, due to fewer restrictions on surface development.[6]

The U.S. Energy Information Administration estimated that, at a relatively fast development rate, production would peak 15-20 years after the start of development, with maximum daily production rates of roughly 0.015% of the resource. Production at a slower rate would peak about 25 years after the start of development, at a daily rate equal to about 0.0105% of the resource. Peak production associated with a

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[3] U.S. Dept. of the Interior, Geological Survey (USGS), *The Oil and Gas Potential of the Arctic National Wildlife Refuge 1002 Area, Alaska*, USGS Open File Report 98-34 (Washington, DC: 1999). Summary and Table EA4.

[4] USGS, *Economics of 1998 U.S. Geological Survey's 1002 Area Regional Assessment: An Economic Update*, Open-File Report 2005-1359 (Washington, DC: 2005).

[5] According to the same USGS report, if state and Native lands are included, there is a 95% chance that 5.4 billion bbl or more could be economically recovered and a 5% chance that 14.6 billion bbl or more could be economically recovered at this price.

[6] For more detail on possible oil under Native lands and state waters, see CRS Report RS21170, *ANWR Oil: Native Lands and State Waters*, by Bernard A. Gelb.

technically recoverable resource of 5.0 billion bbl at the faster development rate would be 750,000 bbl per day, roughly 4% of current U.S. petroleum consumption (about 20.5 million bbl per day). (For economic impacts of development, see CRS Report RS21030, *ANWR Development: Economic Impacts*, by Bernard A. Gelb.)

Natural Gas. Large quantities of natural gas are also estimated to be in the 1002 area. Being able to sell this gas probably would enhance development prospects of the 1002 area and the rest of the North Slope — oil as well as gas. However, there currently is no way to deliver the gas to market. Higher gas prices in the last few years increased interest in the construction of a pipeline to transport natural gas from the North Slope to North American markets — directly and/or via shipment in liquified form in tankers. The 108th Congress acted to facilitate such a pipeline through loan guarantees (P.L. 108-324). (See CRS Report RL33716, *Alaska Natural Gas Pipelines: Interaction of the Natural Gas and Steel Markets*, by Steven Cooney and Robert Pirog, for more information.)

Advanced Technologies. As North Slope development proceeded after the initial discovery at Prudhoe Bay, oil field operators developed less environmentally intrusive ways to develop arctic oil, primarily through innovations in technology. New drilling bits and fluids and advanced forms of drilling — such as extended reach, horizontal, and "designer" wells — permit drilling to reach laterally far beyond a drill platform, with the current record being 7 miles at one site in China. (See CRS Report RL31022, *Arctic Petroleum Technology Developments*, by Bernard A. Gelb, M. Lynne Corn, and Terry R. Twyman, for more information.)

Reducing the footprints of development has been a major goal of development. Improved ice-based transportation infrastructure can serve remote areas during the exploratory drilling phase on insulated ice pads. However, for safety reasons, use of ice roads and pads may be limited in the more hilly terrain of the 1002 area: on a slope, gravel structures provide greater traction than ice structures, and have been permitted for exploration on state lands south of Prudhoe Bay. In addition to ice technology, industry has been experimenting with essentially modified offshore platforms mounted on supporting legs to hold exploration rigs above the tundra. These rigs may offer access for exploration in areas lacking sufficient water or too hilly to permit ice technology.

At the same time, warming trends in arctic latitudes have already shortened winter access across the tundra by 50% over the last 30 years and led to changes in the standards for use of ice roads. If these trends continue, heavy reliance on ice technology could be infeasible and might force greater reliance on gravel structures, with inherently longer-lasting impacts. Rigid adherence to ice technology (instead of gravel construction) might put some marginal fields out of reach due to the high cost of exploration, development, or operation. Moreover, fields that begin with few roads may expand their gravel road network as the field expands.

Because it is held as a model of modern development, the history of the Alpine field, located along the border of the National Petroleum Reserve-Alaska (NPRA) west of Prudhoe Bay, is relevant. Run by ConocoPhillips, it was considered innovative because of the short road connecting the two initial pads, and the lack of a road connection with the remainder of North Slope development, except in winter

via ice road. However, with the approval of five additional pads, the expansion of the field will add roughly 27.5 miles of gravel roads to the existing 3 miles of roads, and create 1,845 acres of disturbed soils, including 316 acres of gravel mines or gravel structures.[7] Approximately 150 miles of roads would be constructed if the field is fully developed. If ANWR development follows a similar pattern, it is unclear whether energy development could be held to a stringent limit on road or other gravel construction and still allow producers to have access to otherwise economic fields.

Proponents of opening ANWR note that these technologies would mitigate the environmental impact of petroleum operations, but not eliminate it. Opponents maintain that facilities of any size would still be industrial sites and would change the character of the coastal plain, in part because the sites would be spread out in the 1002 area and connected by pipelines and (probably) roads.

The Biological Resources

The FLEIS rated the Refuge's biological resources highly: "The Arctic Refuge is the only conservation system unit that protects, in an undisturbed condition, a complete spectrum of the arctic ecosystems in North America" (p. 46). It also said: "The 1002 area is the most biologically productive part of the Arctic Refuge for wildlife and is the center of wildlife activity" (p. 46). The biological value of the 1002 area rests on intense productivity in the short arctic summer; many species arrive or awake from dormancy to take advantage of this richness, and leave or become dormant during the remainder of the year. Caribou have long been the center of the debate over the biological impacts of Refuge development, but other species have also been at issue. Among the other species most frequently mentioned are polar bears, musk oxen, and the 135 species of migratory birds that breed or feed there. (For more information on biological resources of the 1002 area, see CRS Report RL31278.)

An updated assessment of the array of biological resources in the coastal plain was published in 2002 by the Biological Research Division of USGS.[8] The report analyzed new information about caribou, musk oxen, snow geese and other species in the Arctic Refuge, and concluded that development impacts would be significant. A follow-up memo[9] on caribou by one of the assessment's authors to the Director of USGS clarified that if development were restricted to the western portion of the refuge (an option that was being considered by the Administration), the Porcupine Caribou Herd (PCH) would not be affected during the early calving period, since the

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[7] See Figure 2.4.6-1, Alternative F, Preferred Alternative, in *Alpine Satellite Development Plan Fianl Environmental Impact Statement*, Appendix 3, and p. S-8, S-19, and S-30 of Summary (Sept. 2004). (Document available at [http://www.blm.gov/eis/AK/alpine/].) Figures given here do not represent full development of the field over the next 20 years.

[8] USGS, *Arctic Refuge Coastal Plain Terrestrial Wildlife Research Summaries*, Biological Science Report, USGS/BRD/BSR-2002-0001.

[9] Brad Griffith, Memorandum to Director, USGS, "Evaluation of additional potential development scenarios for the 1002 Area of the Arctic National Wildlife Refuge" (April 4, 2002).

herd is not normally found in the area at that time. Any impacts that might occur when the herd subsequently moves into the area were not discussed in the memo.

A March 2003 report by the National Academy of Sciences (NAS) highlighted impacts of existing development at Prudhoe Bay on arctic ecosystems.[10] Among the harmful environmental impacts noted were changes in the migration of bowhead whales, in distribution and reproduction of caribou, and in populations of predators and scavengers that prey on birds. NAS noted beneficial economic and social effects of oil development in northern Alaska and credited industry for its strides in decreasing or mitigating environmental impacts. It also said that some social and economic impacts have not been beneficial. The NAS report specifically avoided determining whether any beneficial effects were outweighed by harmful effects.

FWS recently proposed that polar bears should be listed as threatened under the Endangered Species Act (72 *Fed. Reg.* 1064, Jan. 9, 2007). Among the information to be considered in the proposal were the effects of accelerated polar climate change on polar bears and their prey (primarily seals), threats to denning habitat, and effects of oil and gas development. The listing of polar bears could have a significant impact on energy development in ANWR, since the FLEIS stressed the unusual importance of the 1002 area as a location for dens of pregnant female polar bears.[11]

In a larger context, many opponents of development see the central issue as whether the area should be maintained as an intact ecosystem — off limits to development — not whether development can be accomplished in an environmentally sound manner. In terms that emphasize deeply held values, supporters of wilderness designation argue that few places as untrammeled as the 1002 area remain on the planet, and fewer still on the same expansive scale. Any but the most transitory intrusions (e.g., visits for recreation, hunting, fishing, subsistence use, research) would, in their view, damage the integrity and the "sense of wonder" they see in the area. The mere knowledge that a pristine place exists, regardless of whether one ever visits it, can be important to those who view the debate in this light.

Major Legislative Issues in the 110th Congress

Some of the issues that have been raised most frequently in the current ANWR debate are described briefly below. In addition to the issue of whether development should be permitted at all, key aspects of the current debate include restrictions that might be specified in legislation, including the physical size — or footprints — of development; the regulation of activities on Native lands; the disposition of revenues; labor issues; oil export restrictions; compliance with the National Environmental Policy Act; and other matters. (References below to the "Secretary" refer to the Secretary of the Interior, unless stated otherwise.) The analysis below describes issues that have been raised repeatedly in past legislation.

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[10] National Research Council, *Cumulative Environmental Effects of Oil and Gas Activities on Alaska's North Slope* (March 2003), 452 p. (See [http://www.nas.edu/].)

[11] For more information, see CRS Report RS22582, *Polar Bears: Listing Under the Endangered Species Act*, by Eugene H. Buck.

Environmental Direction. If Congress authorizes development, it could address environmental matters in several ways. Congress could impose a higher standard of environmental protection because the 1002 area is in a national wildlife refuge or because of the fragility of the arctic environment, or it could legislate a lower standard to facilitate development. The choice of administering agency and the degree of discretion given to it could also affect the approaches to environmental protection. For example, Congress could make either FWS or BLM the lead agency (with many observers assuming that FWS management would give more support to protecting wildlife values). It could include provisions requiring use of "the best available technology" or "the best commercially available technology" or some other general standard. Congress could also limit judicial review of some or all of a development program, including standards and implementation. Or, Congress could leave much of the environmental direction to the Secretary.

The Size of Footprints. Newer technologies permit greater consolidation of leasing operations, which tends to reduce the size and the environmental impacts of development. One aspect of the debate in Congress has focused on the size of the footprints in the development and production phases of energy leasing. The term *footprint* does not have a universally accepted definition, and therefore the types of structures falling under a "footprint restriction" are arguable (e.g., the inclusion of exploratory structures, roads, gravel mines, port facilities, etc.).[12] In addition, it is unclear whether exploratory structures, or structures on Native lands, would be included under any provision limiting footprints.[13] The map accompanying S. 1932 (109th Congress) includes the Native lands in its definition of the Coastal Plain leasing area, but how the federal leasing program will apply to those lands is not clear. See "New Maps," below.

Development advocates have emphasized a limit on the acreage of surface disturbance, while opponents have emphasized the dispersal of not only the structures themselves but also their impacts over much of the 1.5 million acres of the 1002 area. One single consolidated facility of 2,000 acres (3.1 square miles) would not permit full development of the 1002 area. Instead, full development of the 1002 area would require that facilities, even if limited to 2,000 acres in total surface area, be widely dispersed. Dispersal is necessary due to the limits of lateral (or extended reach) drilling: the current North Slope record for this technology is 4 miles. If that record were matched on all sides of a single pad, at most about 4% of the Coastal Plain could be developed from the single pad. Even if the current world record (7 miles) were matched, only about 11% of the 1002 area could be accessed from a single compact 2,000-acre facility. In addition, drilling opponents argue that energy facilities have impacts on recreation, subsistence, vegetation, and wildlife well beyond areas actually covered by development.

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[12] See CRS Report RL32108, *North Slope Infrastructure and the ANWR Debate*, by M. Lynne Corn, for more information.

[13] For discussion of an acreage limit, see CRS Report RS22143, *Oil and Gas Leasing in the Arctic National Wildlife Refuge (ANWR): The 2,000-Acre Limit*, by Pamela Baldwin and M. Lynne Corn.

Native Lands. Generally, the Alaska Natives (Inuit) along the North Slope have supported ANWR development, while the Natives of interior Alaska (Gwich'in) have opposed it, though neither group is unanimous. ANCSA resolved aboriginal claims against the United States by (among other things) creating Village Corporations that could select surface lands and Regional Corporations that could select surface and subsurface rights as well. Kaktovik Inupiat Corporation (KIC) selected surface lands (originally approximately three townships) on the coastal plain of ANWR, but these KIC lands were administratively excluded from being considered as within the administratively defined "1002 Coastal Plain." A fourth township was added by ANILCA, and is within the defined Coastal Plain. The four townships, totaling approximately 92,000 acres, are all within the Refuge and subject to its regulations. The Arctic Slope Regional Corporation (ASRC) obtained subsurface rights beneath the KIC lands pursuant to a 1983 land exchange agreement. In addition, there are currently thousands of acres of conveyed or claimed individual Native allotments in the 1002 area that are not expressly subject to its regulations. Were oil and gas development authorized for the federal lands in the Refuge, development would then be allowed or become feasible on the nearly 100,000 acres of Native lands, possibly free of any acreage limitation applying to development on the federal lands, depending on how legislation is framed. The extent to which the Native lands could be regulated to protect the environment is uncertain, given the status of allotments and some of the language in the 1983 Agreement with ASRC. None of the current bills address development on the Native lands in ANWR. (See also CRS Report RL31115, and "New Maps," below.)

New Maps. During the 109th Congress, both the House and Senate created new maps of the "Coastal Plain" that would be subject to leasing. (See CRS Report RS22326, *Legislative Maps of ANWR*, by M. Lynne Corn and Pamela Baldwin, hereafter cited as CRS Report RL22326.) The Coastal Plain was defined in §1002 of ANILCA as the area indicated on an August 1980 map. An administrative articulation of the boundary was authorized by §103(b) of ANILCA, and has the force of law. The 1980 map is now missing. Since the 1980 map is missing, evaluating whether the administrative description properly excluded the Native lands is impossible, and, as noted, the fourth Native township (selected later) is not excluded from the Coastal Plain by that description. The legal description required under ANILCA was completed in 1983 (48 *Fed. Reg.* 16858, Apr. 19, 1983; 50 C.F.R. Part 37, App. I), but questions also surround this description. (See CRS Report RL31115.) The description excluded three Native townships from the articulated Coastal Plain. Some bills in various Congresses also have excluded these same Native lands by referring to the 1980 map and the administrative description.

Revenue Disposition. Another issue is whether Congress may validly provide for a disposition of revenues other than the (essentially) 90% state - 10% federal split mentioned in the Alaska Statehood Act. A court in *Alaska v. United States* (35 Fed. Cl. 685, 701 (1996)) indicated that the language in the Statehood Act means that Alaska is to be treated like other states for federal leasing *conducted under the Mineral Leasing Act* (MLA), which contains (basically) a 90%- 10% split. Arguably, Congress can establish a different, *non-MLA* leasing regimen — for example, the separate leasing arrangements that govern the National Petroleum Reserve-Alaska, where the revenue sharing formula is 50/50 — but this issue was not

before the court and hence remains an open issue. (For more on this issue, see CRS Report RL31115.)

Project Labor Agreements (PLAs). A recurring issue in federal and federally funded projects is whether project owners or contractors should be required, by agreement, to use union workers. PLAs establish the terms and conditions of work that would apply for the particular project, and may also specify a source to supply the craft workers. Proponents of PLAs, including construction and other unions, argue that PLAs ensure a reliable, efficient labor source, help keep costs down, and ensure access for union members to federal and federally funded projects. Opponents, including nonunion firms and their supporters, believe that PLAs inflate costs, reduce competition, and unfairly restrict access to those projects. There is little independent information to weigh the validity of the conflicting assertions.

Oil Export Restrictions. Export of North Slope oil in general, and any ANWR oil in particular, has been an issue, beginning at least with the authorization of the Trans Alaska Pipeline System (TAPS) and continuing into the current ANWR debate. The Trans Alaska Pipeline Authorization Act (P.L. 93-153, 43 U.S.C.§§1651 et seq.) specified that oil shipped through it could be exported internationally, but only under restrictive conditions. When California prices fell in the mid-1990s, causing complaints from both North Slope and California producers, Congress amended the MLA to provide that oil transported through the pipeline may be exported unless the President finds, after considering stated criteria, that exports are *not* in the national interest (P.L. 104-58, 30 U.S.C. §185(s)). North Slope exports rose to a peak of 74,000 bbl/day in 1999, or 7% of North Slope production. These exports ceased voluntarily in May 2000, and have since been minimal. If Congress wished to limit export of oil from the 1002 area by applying the restriction to oil transported through TAPS, the restriction might not be effective: oil shipment via tanker could become practical if current warming trends in the Arctic continue and if crude oil prices provide sufficient incentive.

NEPA Compliance. The National Environmental Policy Act of 1969 (NEPA, P.L. 91-190; 43 U.S.C. §§4321-4347) requires the preparation of an environmental impact statement (EIS) to examine major federal actions with significant effects on the environment, and to provide public involvement in agency decisions. The last full EIS examining the effects of leasing development in ANWR was completed in 1987, and some observers assert that a new EIS is needed to support development now. NEPA requires an EIS to analyze an array of alternatives, including a "no action" alternative. Some development supporters would like to see the process truncated, in light of past analyses and to hasten production. Development opponents, and NEPA supporters, argue that the 19-year gap and changed circumstances since the last analysis necessitates a thorough update, and stress the flaws they found in the 1987 FLEIS.

Compatibility with Refuge Purposes. Under current law for the management of national wildlife refuges (16 U.S.C.§668dd), and under 43 C.F.R. §3101.5-3 for Alaskan refuges specifically, an activity may be allowed in a refuge only if it is compatible with the purposes of the particular Refuge and with those of the Refuge System as a whole. Many past bills have addressed this issue by stating that the energy leasing program and activities in the coastal plain are deemed to be

compatible with the purposes for which ANWR was established and that no further findings or decisions are required to implement this determination. This language appears to eliminate the usual compatibility determination processes. The extent of leasing "activities" that might be included as compatible is debatable and arguably might encompass necessary support activities, such as construction and operation of port facilities, staging areas, and personnel centers.

Judicial Review. Leasing proponents urge that any ANWR leasing program be put in place promptly and argue that expediting, curtailing, or prohibiting judicial review is desirable to achieve that goal. Judicial review can be expedited through procedural changes such as reducing the time limits within which suits must be filed, avoiding some level(s) of review, curtailing the scope of the review, or increasing the burden imposed on challengers.

Special Areas. Some have supported setting aside certain areas in the Coastal Plain for protection of their ecological or cultural values. This could be done by designating the areas specifically in legislation, or by authorizing the Secretary to set aside areas to be selected after enactment. The FLEIS identified four special areas that together total more than 52,000 acres. The Secretary could be required to restrict or prevent development in these areas or any others that may seem significant, or to select among areas if an acreage limitation on such set-asides is imposed.

Non-Development Options. Several options are available to Congress that would either postpone or forbid development, unless Congress were to change the law. These options include allowing exploration only, designating the 1002 area as wilderness, and taking no action. Some have argued that the 1002 area should be opened to exploration first, before a decision is made on whether to proceed to leasing. Those with this view hold that greater certainty about any energy resources in the area would lead to a better decision about opening some or all of the 1002 area for leasing. This idea has had little support over the years because various interests see insufficient gain from such a proposal. (CRS Report RL31278 discusses the pros and cons of this approach.)

Another option is wilderness designation. Energy development is not permitted in wilderness areas, unless there are pre-existing rights or unless Congress specifically allows it or reverses the designation. Wilderness designation would tend to preserve existing recreational opportunities and related jobs, as well as the existing level of protection of subsistence resources, including the Porcupine Caribou Herd. H.R. 39 would designate the 1002 area as part of the National Wilderness System.

Under ANILCA and the 1983 Agreement, development of the surface and subsurface holdings of Native corporations in the Refuge is precluded as long as oil and gas development is not allowed on the federal lands in the Refuge. Because current law prohibits development unless Congress acts, the no action option also prevents energy development on both federal and Native lands. Those supporting delay often argue that not enough is known about either the probability of discoveries or about the environmental impact if development is permitted. Others argue that oil deposits should be saved for an unspecified "right time."

Legislation in the 110th Congress

H.R. 39 (Markey)

Would designate the Coastal Plain as wilderness. Introduced January 9, 2007; referred to Committee on Natural Resources.

For Additional Reading

CRS Report RL33716. *Alaska Natural Gas Pipelines: Interaction of the Natural Gas and Steel Markets*. Steven Cooney and Robert Pirog.

CRS Report RL33523. *Arctic National Wildlife Refuge (ANWR): Controversies for the 109th Congress*. M. Lynne Corn, Bernard A. Gelb, and Pamela Baldwin.

CRS Report RS22582. *Polar Bears: Listing Under the Endangered Species Act*. Eugene H. Buck.

National Academy of Sciences *Cumulative Environmental Effects of Oil and Gas Activities on Alaska's North Slope* (March 2003). 452 p. (See [http://www.nas.edu/].)

Nellemann, C. and R. D. Cameron. *Cumulative Impacts of an Evolving Oil-field Complex on the Distribution of Calving Caribou*. Canadian Jour. of Zoology. 1998. Vol. 76, p. 1425.

U.S. Department of the Interior. Bureau of Land Management. *Overview of the 1991 Arctic National Wildlife Refuge Recoverable Petroleum Resource Update*. Washington, DC, April 8, 1991. 2 maps.

U.S. Department of the Interior. Fish and Wildlife Service, Geological Survey, and Bureau of Land Management. *Arctic National Wildlife Refuge, Alaska, Coastal Plain Resource Assessment*. Report and Recommendation to the Congress of the United States and Final Legislative Environmental Impact Statement. Washington, DC, 1987.

U.S. Department of the Interior. Geological Survey. *The Oil and Gas Resource Potential of the Arctic National Wildlife Refuge 1002 Area, Alaska*. 1999. 2 CD set. USGS Open File Report 98-34.

U.S. Department of the Interior. Geological Survey. *Arctic Refuge Coastal Plain Terrestrial Wildlife Research Summaries*. Biological Science Report USGS/BRD/BSR-2002-0001.

U.S. Department of the Interior. Geological Survey. "Evaluation of additional potential development scenarios for the 1002 Area of the Arctic National Wildlife Refuge." Memorandum from Brad Griffith, Assistant Leader, Alaska Cooperative Fish and Wildlife Research Unit, to Charles D. Groat, Director, U.S. Geological Survey. April 4, 2002.

U.S. Department of the Interior. Geological Survey. *Economics of 1998 U.S. Geological Survey's 1002 Area Regional Assessment: An Economic Update*. USGS Open File Report 2005-1359. Washington, DC, 2005.

U.S. General Accounting Office. *Arctic National Wildlife Refuge: An Assessment of Interior's Estimate of an Economically Viable Oil Field*. Washington, DC. July, 1993. GAO/RCED-93-130.

U.S. National Energy Policy Development Group. *National Energy Policy*. Washington, DC. May, 2001.