



# Digging Our Way Out of the ANWR Morass: A Performance-Based Approach to Protecting Habitat and Managing Resources

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One of the more spirited debates over the use of public lands in recent years has focused on oil and gas exploration in the Arctic National Wildlife Refuge (ANWR) in Alaska. Opposing sides tend to take an absolutist view. The pro-development side claims that exploration of the ANWR is necessary for jobs and energy security, among other things. Environmentalists and other opponents believe that the arctic environment and its wildlife are too precious and fragile to risk what will inevitably be a significant ecological impact due to oil and gas development.

Arguments on the impact of oil and gas exploration in the ANWR are deeply divided. Some want to protect wildlife from harm using advances in technology to dramatically reduce the impact of drilling operations. Others argue that extracting oil and gas will endanger millions of birds and other wildlife, and that new technologies are not reliable in protecting the arctic environment.

To date this polarized debate has produced little more

than rancor, but with the results of the most recent election, it seems inevitable that some drilling will take place in the ANWR. And political battles aside, there is no doubt that the ANWR lies atop a rich oil field. Just how much oil and gas might be exploitable depends on uncertain geological measurements, fluctuating world oil prices, and the ever-changing state of technology. Current estimates (depending on oil prices) peg oil reserves at between 6 and 16 billion barrels, and the mean estimate for technically recoverable gas at 4.8 TCF (trillion cubic feet).

Nevertheless, the pertinent question to ask now is not whether drilling will take place or not, but what will be the extent of the drilling, and what will be the environmental effect of that drilling. The most important issue is how to realistically balance any exploration that does take place with an effort to minimize the environmental impacts of that exploration.

## Facts about the Arctic National Wildlife Refuge

- Total acreage of the ANWR is 19.8 million acres
- The 1.5 million-acre coastal plain of the ANWR, the 1002 Area, is the only area potentially open for development.
- Area 1002 of the ANWR was set aside as a possible exploration area by Congress in 1980.
- Within the 1002 Area, the USGS estimated in 1998 that there are between 15.6 billion and 42.3 billion barrels of oil in place, with a mean of 27.8 billion barrels. Of this, between 5.7 and 16.0 billion barrels, with a mean of 10.4 billion barrels, are estimated to be technically recoverable with the technology of the mid-90s. This 5.7 to 16 billion barrel range, with a mean of 10.4, is the range cited by industry.



## MANAGING OUTCOMES

Economically viability is crucial for industry. Environmental groups prioritize environmental protection. Government advocates encompass all sides. And even native groups are split—the Gwich'in have been opposed, while the Inupiat welcome development. Both groups obviously need to be a key part of the process. What is left for the middle ground is a tradeoff—a way to ensure that economically viable development also minimizes environmental and cultural impacts. And that means measuring performance.

If drilling in the ANWR must meet a set of environmental performance measures, then industry can use them as a basis to plan its operations, and environmental groups will have not only the assurance that a certain level of environmental protection will be met, but the leverage to hold industry and government to those standards. A list of some potential performance measures is listed below.

In addition, probably some of the revenues from developing the ANWR would go to conservation, much as they do on private land. This is the reason why some, such as the CATO Institute, have proposed turning over the ANWR to a conservation group, which, faced with the possible revenues, would almost surely allow for some drilling in the ANWR, but just as surely would demand that any contractors meet a high standard of environmental performance.

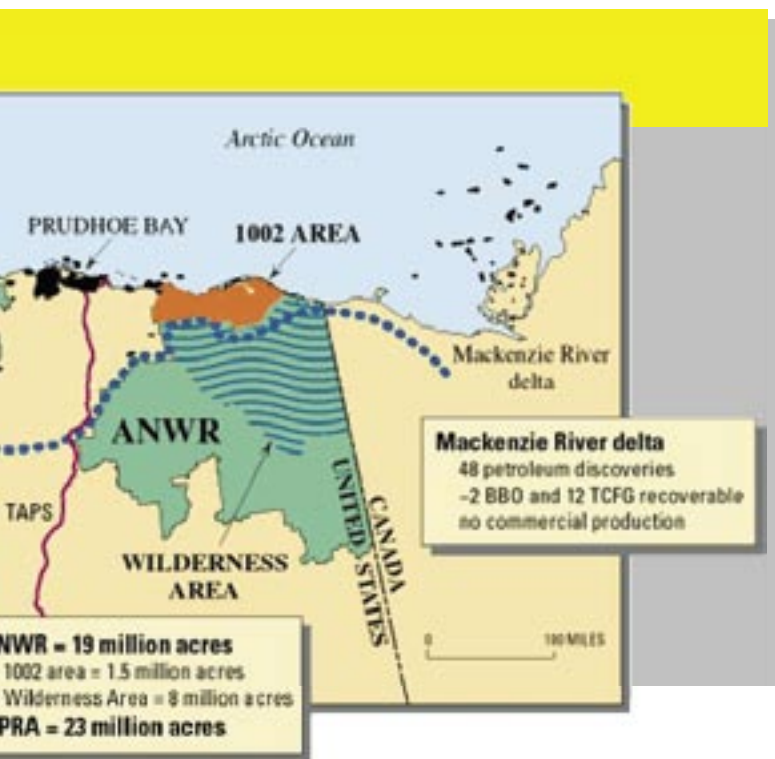
## PRIVATE LAND AS A MODEL FOR CONSERVATION THROUGH COMMERCE

Despite the rhetoric in politics and in the media demanding a choice between conservation and commerce, and despite what we so often read about loggers loathing owls and developers fighting every regulation in the book, conservation is happening out there. And it's going on amidst commercial activities, especially on private lands.

For every spotted owl controversy, there are thousands of cases where conservation and commerce happily get along, from ranchers protecting stream beds to the Louisiana Audubon Society operating oil and gas drills in one of their bird sanctuaries. The Audubon case is especially illuminating because it mirrors the ANWR controversy. On its own land, Louisiana Audubon understands the tradeoffs involved and the opportunity to turn oil and gas revenues into more conservation elsewhere. And it trusts itself to ensure that its land is developed responsibly.

### 1. The Rainey Wildlife Refuge

Deep in the marshes of Louisiana, oil and wildlife have mixed. The Paul J. Rainey Sanctuary's 26,000 acres of brackish and freshwater marshes are a rich feeding area



for wintering waterfowl. In fact, it is such an important bird sanctuary that even the public is not allowed to visit, but because they own the land, many years ago Audubon weighed the benefits of oil and gas development against the environmental hazards, and chose to go ahead. From the 1940s until drilling stopped in 1999, Louisiana Audubon took the precautions it thought were necessary to protect the birds.

In the early 1980s, gas wells in Rainey brought in close to a million dollars in revenues; money that could then be reinvested in protecting other sensitive areas. The wells at Rainey were in operation for decades, and the wildlife didn't seem to mind. The National Audubon Society now claims that canals built in the refuge caused permanent damage to their wetlands. That may very well be, but one wonders why they only mentioned it after over 50 years of operation.

On public lands National Audubon understands perfectly that it doesn't have the power to ensure that drilling is environmentally responsible, nor does it have the ability to turn some of the revenues from that drilling into other conservation projects. So National Audubon vehemently opposes any exploration of the ANWR. But the experience at Rainey shows that performance measures can work, and other examples like the Michigan Audubon Society's Baker Sanctuary do as well.

## 2. Oil and Gas Exploration on Other Public Lands

There is also significant oil and gas activity already taking place within the nation's system of federal wildlife refuges, but unfortunately there has been little or no measurement of the environmental performance of these activities. For example, a 2003 GAO report on oil and gas activity within the refuge system reported that approximately one-quarter (155 of 575) of all refuges either have or have had oil and gas activity. The GAO also found that "The Fish and Wildlife Service has not assessed the cumulative environmental effects of oil and gas activities on refuges" which range from negligible to substantial, and from temporary to long term. In fact, the GAO found that the U.S. Fish and Wildlife Agency didn't even know how many oil and gas wells were operating within its refuge system.

## ENLIBRA

One of the best templates for approaching environmental performance is a set of principles known as Enlibra, a made-up word that originated with an effort by the Western Governors Association to deal with the declining effectiveness of many federal environmental regulations. One of the leaders of this policy is Mike Leavitt, the former Governor of Utah and former U.S. EPA Administrator.

The idea behind Enlibra is that the low-hanging regulatory fruit has been picked, which means that stricter regulations often result in very little or even no improvement in environmental quality, while imposing much higher costs and regulatory burdens. Water pollution regulations, for example, initially targeted point sources of pollution. Cleaning up these large, single outfalls of industrial or municipal pollution greatly improved environmental quality. Now, however, most water pollution problems result from non-point sources, that is, a multitude of small inputs that add up to problems in a watershed. Because these sources are difficult to pinpoint or even measure effectively, regulatory approaches have been cumbersome, expensive, and far less effective.

In other words, Enlibra is an attempt to shift regulation to measuring results instead of inputs, and any efforts to impose performance measures on drilling in the ANWR should follow that same principle. Another important facet of Enlibra is its emphasis on depoliticizing science, something that is easier said than done, but separating subjective choices from objective data gathering is worth striving for.



## LEGISLATION

Representative Don Young (R-AK) introduced HR39—The Arctic Coastal Plain Domestic Energy Security Act of 2005—right at the start (January 4, 2005) of the 109th Congress. The bill is essentially the same as The Arctic Coastal Plain Domestic Energy Security Act of 2003, which was never voted on in the 108th Congress. The bill does contain some environmental safeguards, including, generally, to:

*... ensure the oil and gas exploration, development, and production activities on the Coastal Plain will result in no significant adverse effect on fish and wildlife, their habitat, and the environment. . . [And] . . . require the application of the best commercially available technology for oil and gas exploration, development, and production on all new exploration, development, and production operations.*

And more specifically that:

*Seasonal limitations on exploration, development, and related activities, where necessary, [should] avoid significant adverse effects during periods of concentrated fish and wildlife breeding, denning, nesting, spawning, and migration. [And] That exploration activities, except for surface geological studies, be limited to the period between approximately November 1 and May 1 each year and that exploration activities shall be supported by ice roads, winter trails with adequate snow cover, ice pads, ice airstrips, and air transport methods [to ensure] no significant adverse effect on the fish and wildlife, their habitat, and the environment of the Coastal Plain. unless the Secretary finds that there is a special circumstance.*

In March 2003, Interior Secretary Gail Norton testified on HR39 and emphasized these measures. It is important to note that the bill failed to reach the floor in the 108th



Congress, and that these measures are all negative. That is, they are all prohibitions on adverse effects, rather than positive measures such as population targets or habitat improvements that could come from the revenues generated, and which might do more to mollify opposition.

## CONCLUSION

It is time for the ANWR debate to move forward and leave the bickering behind. Uncertainties over just how many barrels of oil will be recovered or what new technologies may allow will never be resolved. We do, however, have the management/performance tools and the guiding principles of ENLIBRA to work with to ensure that whatever development does take place is done so in an environmentally responsible manner.

Environmentally responsible development is just the start, however. To really move things forward, all sides would benefit by making the correlation between commerce and conservation more explicit. Environmentalists often take the high road by claiming to have society's interests at heart, and environmental protection is indeed a good thing. But wealth creation is good for society too, and the fact that the United States today is a wealthy society is the reason we can afford to expend so much concern over environmental issues. Using revenues from oil and gas exploration on public lands to pay for measured environmental benefits—i.e., making that connection explicit—may be the only way to reach a compromise.

### Some Possible Performance Measures for ANWR (and other public lands)

Many performance measures are site specific, and the following list is very much a work in progress.

- Increases or decreases in specific species population numbers over time; likely species include porcupine caribou, musk ox, grizzly bears, wolves, and many species of birds;
- Well-defined recovery targets for these species, such as minimum population size over a specific area;
- Increases or decreases in other species that may be common or unthreatened, but which are often good indicators of overall ecological health;
- Increases or decreases in acreage of specific wildlife habitat types;
- Increases or decreases in invasive species over a specific area;
- Specific measures of water quality such as parts per million of nutrients such as phosphorus and nitrogen;
- Specific measures of pollution releases; and
- Percentages of targeted habitat that meets specific criteria for ecological health.

## ABOUT THE AUTHOR



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## RELATED STUDIES

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## FURTHER READING/RESOURCES

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American Petroleum Institute: "ANWR Resource

Estimates" [http://api-ep.api.org/issues/index.cfm?objectid=EA753DA1-91EA-11D5-BC6BooBoDoE15BF C&method=display\\_body&er=1&bitmask=B3460F57-7187-11D5-9F1B0008C7094D05](http://api-ep.api.org/issues/index.cfm?objectid=EA753DA1-91EA-11D5-BC6BooBoDoE15BF C&method=display_body&er=1&bitmask=B3460F57-7187-11D5-9F1B0008C7094D05)

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The Sierra Club on "Oil Development in the Arctic National Wildlife Refuge" [http://www.sierraclub.org/wildlands/arctic/oil\\_development.asp](http://www.sierraclub.org/wildlands/arctic/oil_development.asp)

Testimony of Secretary of the Interior Gale Norton Before the House Committee on Resources On the Arctic Coastal Plain Domestic Energy Security Act of 2003, March 12, 2003. Summary available at <http://www2.bren.ucsb.edu/~fd/courses/esm200/norton-testimony.txt>

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