

Wildlife and Drilling Don't Mix

Visualizing Speculative Development in the Coastal Plain

37 leading Arctic wildlife scientists have united in opposition to drilling in the coastal plain. "Based on our experience in the Arctic, we oppose oil exploration, development and production in the Arctic Refuge. Such activity would be incompatible with the purposes for which the refuge was established, including 'to conserve fish and wildlife populations and habitats in their natural diversity.'"

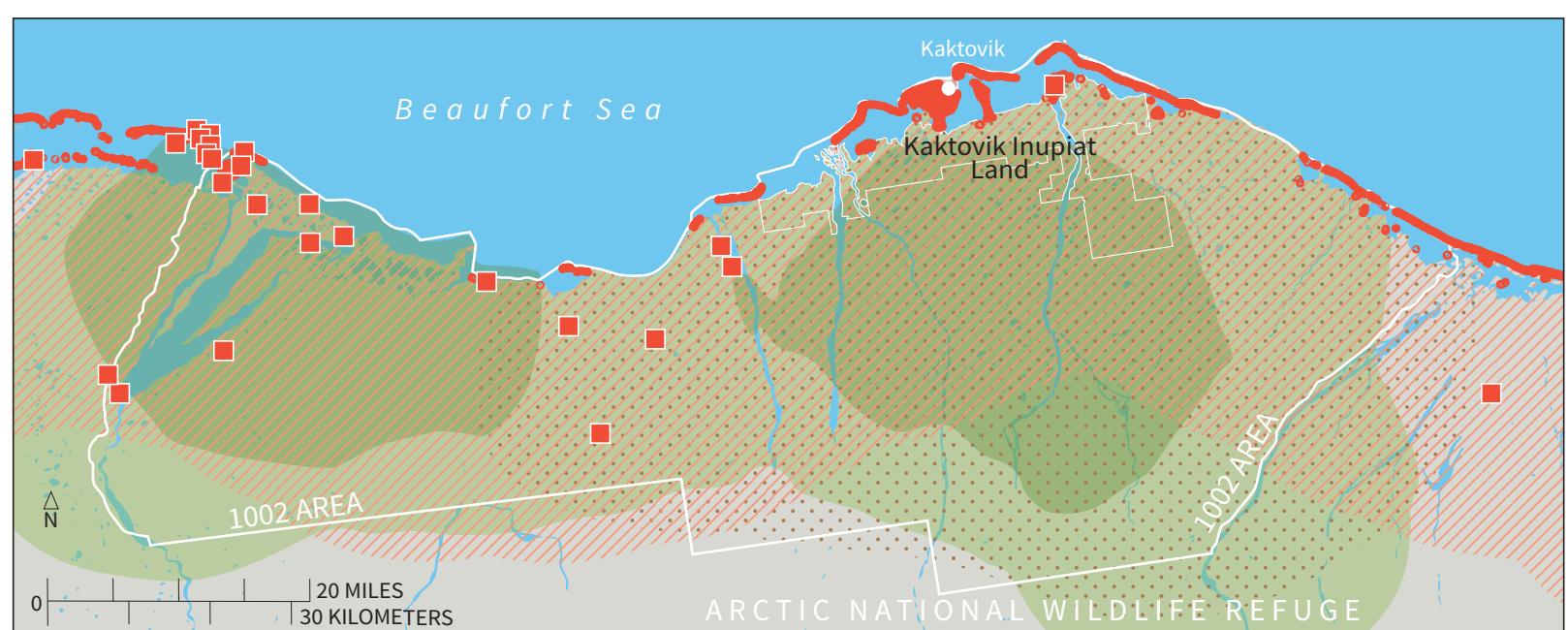
Every year 200 species of birds migrate through six continents and all 50 states to breed in the Refuge. The Arctic National Wildlife Refuge is an iconic American treasure on par with the Grand Canyon, Yellowstone and Yosemite. First protected by President Dwight D. Eisenhower, leaders from both parties have worked together for generations to stop attempts to open the biological heart of the Refuge—its pristine coastal plain—to oil and gas drilling. Senator Murkowski introduced legislation to open the Arctic Refuge to drilling in an effort to raise revenue and offset tax cuts as part of the tax package currently making its way through Congress. That bill claims to limit the drilling impact to 2,000 acres, which is a myth. Based on other Arctic oil and gas development, this graphic explains what could happen if we allow this bill to pass.

What is at risk?

Shorebird density
 moderate
 high
 Birds that depend on the Coastal Plain include American Golden-Plover, Dunlin, Semipalmented Sandpiper, Whimbrel and other shorebirds

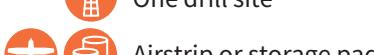
Polar bear habitat
 Barrier islands
 Maternal denning area
 Maternal dens 2000–2015

Caribou habitat
 Calving area



What is included in the 2,000-acre "limitation"

8 main production pads
 82 acres each
 Housing  Two drill sites
 Storage  Airstrip

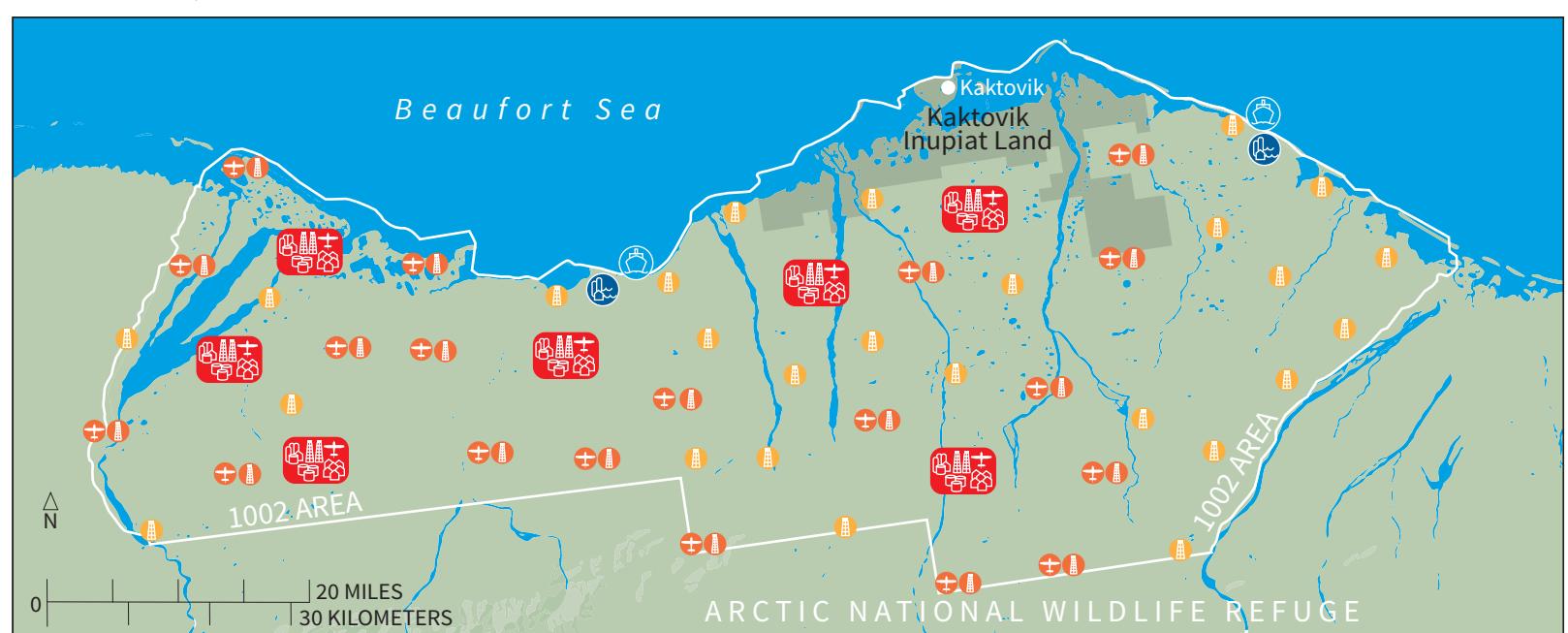
19 satellite fields
 37 acres each
 One drill site
 Airstrip or storage pad

26 satellite fields
 11 acres each

2 seawater treatment plants
 100 acres each

2 docks
 5 acres each

Support pads for pipeline
 0.008 acres per mile



What is NOT included in the 2,000-acre "limitation"

Road footprint (264 miles)
 1,119 acres
 In-field road, main road to docks, etc.

Pipeline footprint (428 miles)
 104 acres
 Main trunk and sales lines, feeder lines; except negligible amount for support posts (VSMs)

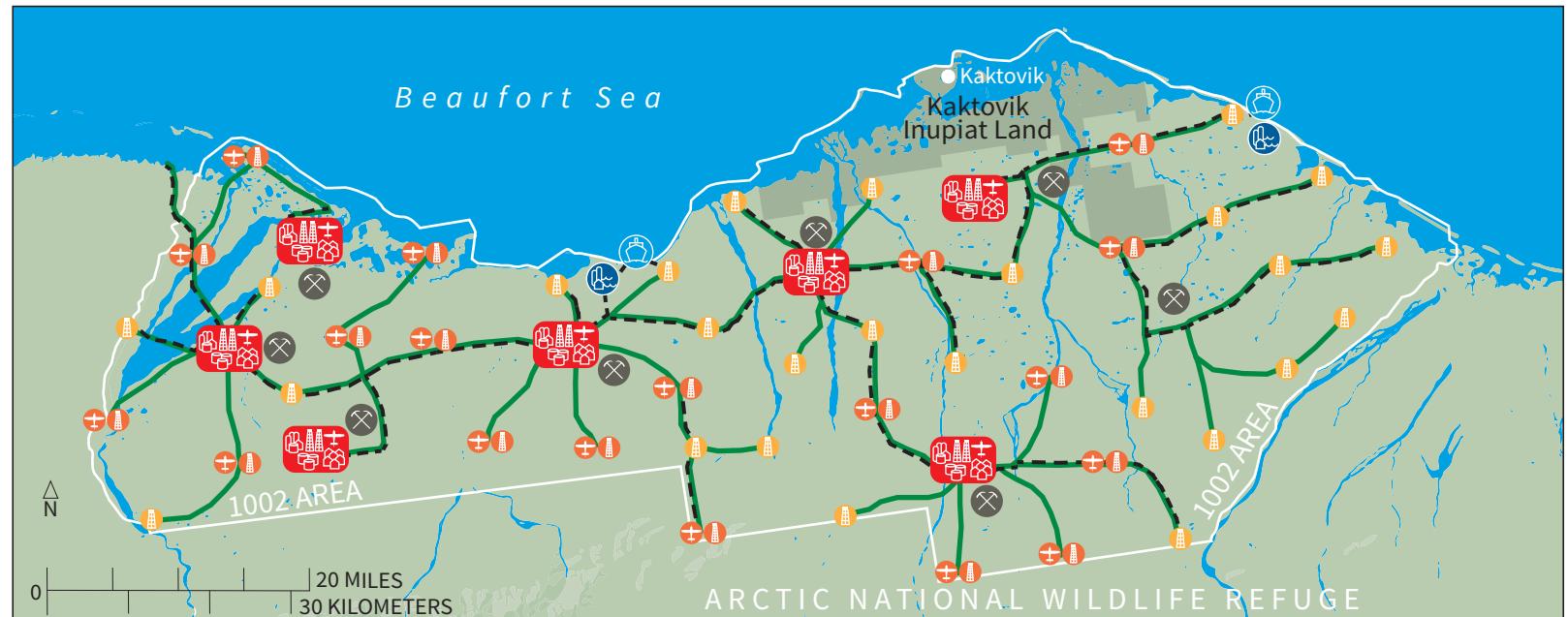
8 gravel mines
 150 acres each

Also not included
 Not included in "limitation" areas and not shown on map

Flooding 1,415 acres

Thermokarst 741 acres

Other effects 1,465 acres
 Dust fallout, fences, powerlines



2,000-acre “limitation” does not reflect the whole picture

ITEMS INCLUDED IN 2,000-ACRE “LIMITATION”

8 main production pads
82 acres each

19 satellite fields
37 acres each

26 satellite fields
11 acres each

Support pads for pipeline
0.008 acres per mile

2 docks
5 acres each

2 seawater treatment plants
100 acres each

INCLUDED FOOTPRINT 1,859 ACRES TOTAL

ITEMS NOT INCLUDED IN 2,000-ACRE “LIMITATION”

INCLUDED FOOTPRINT
1,869 ACRES TOTAL

Pipeline footprint⁽²⁾
104 acres

Road footprint⁽¹⁾
1,119 acres

NOT-INCLUDED FOOTPRINT
6,044 ACRES TOTAL

8 gravel mines
150 acres each

Flooding
1,415 acres

Thermokarst
741 acres

Other effects
1,465 acres
Dust fallout, fences, powerlines

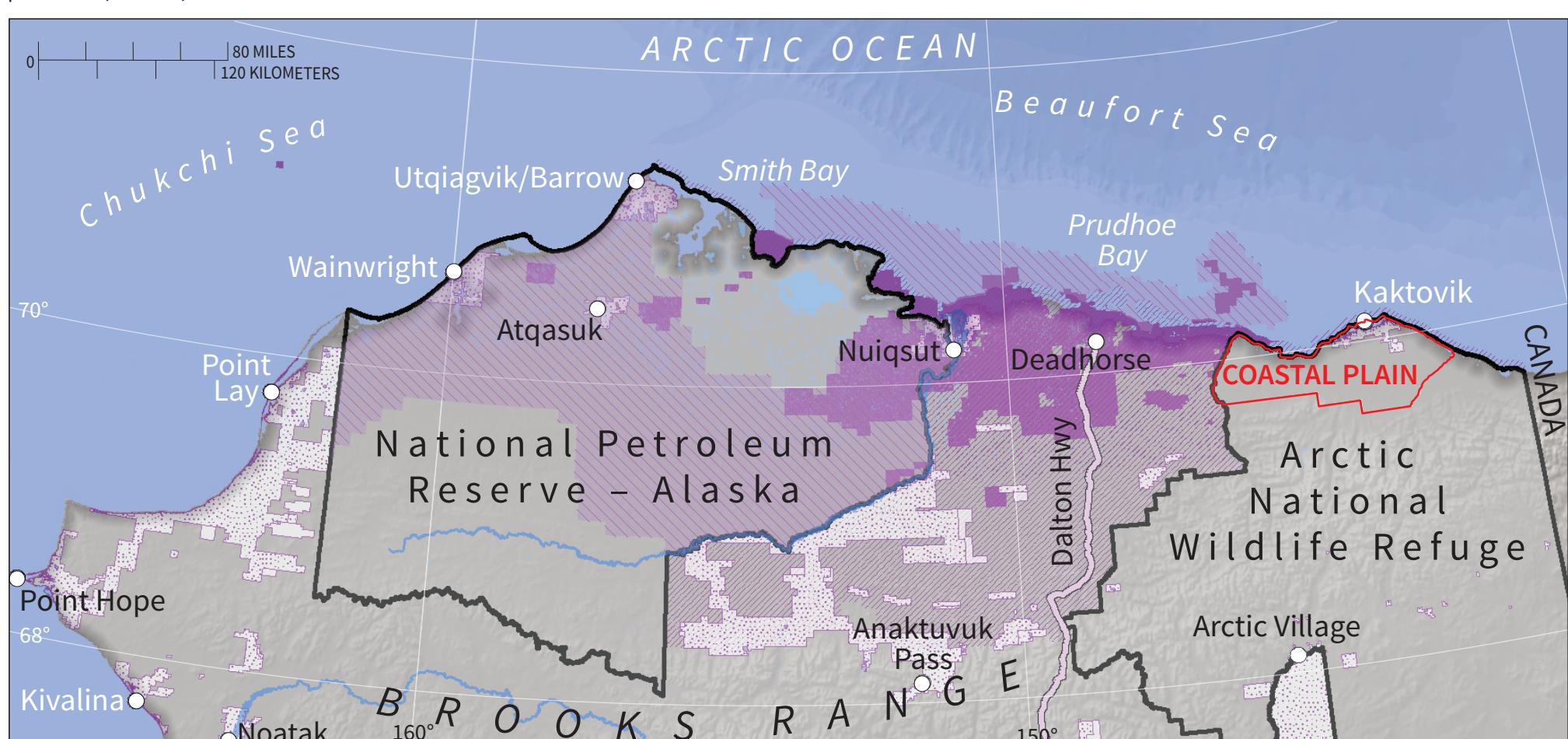
ACRES 1,000 2,000 3,000 4,000 5,000 6,000 7,000 8,000

TOTAL FOOTPRINT 7,903 ACRES TOTAL*

How much is enough?

Nearly all of the northern coast of Alaska is already open to drilling. The Arctic National Wildlife Refuge has been set aside for wildlife because it is the key to survival for birds, polar bears, caribou, and other wildlife.

Sold federal and state leases
Active state lease area
Active federal lease area
Conveyed federal lease area
Selected native lands



Included footprint calculations based on latest available documentation from Greater Moose's Tooth 1 Final SEIS (Bureau of Land Management 2014). Road gravel footprint calculation based on 32 foot crown width and pipeline footprint calculation based on 0.008 acres of vertical support member pad per mile of pipeline (Bureau of Land Management 2014). Pipeline included footprint based on average width of 2 feet, from Raynolds et al. (2014).

Not-included impacts based on methods in Raynolds et al. (2014), extrapolated to speculative development map's use of 1859 acres of direct footprint.

Raynolds, M. K., D. A. Walker, K. J. Ambrosius, J. Brown, K. R. Everett, M. Kanevskiy, G. P. Kofinas, V. E. Romanovsky, Y. Shur, and P. J. Webber. 2014. Cumulative geocological effects of 62 years of infrastructure and climate change in ice-rich permafrost landscapes, Prudhoe Bay Oilfield, Alaska. *Global Change Biology* 20:1211-1224.

Bureau of Land Management. 2014. Final Supplemental Environmental Impact Statement for the Alpine Satellite Development Plan for the Proposed Greater Moose's Tooth One Development Project. Department of the Interior, Anchorage, AK.

*This estimate doesn't include other immeasurable and significant indirect and cumulative effects on wildlife, subsistence, and other important values.

Tundra Swan
William Pohley/Audubon Photography Awards



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