

Department of Natural Resources

Division of Mining, Land and Water
Water Resources Section

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Water Use Act

- Under the Alaska constitution, all surface and subsurface water reserved for common use, except mineral and medicinal water, are subject to appropriation under state law.



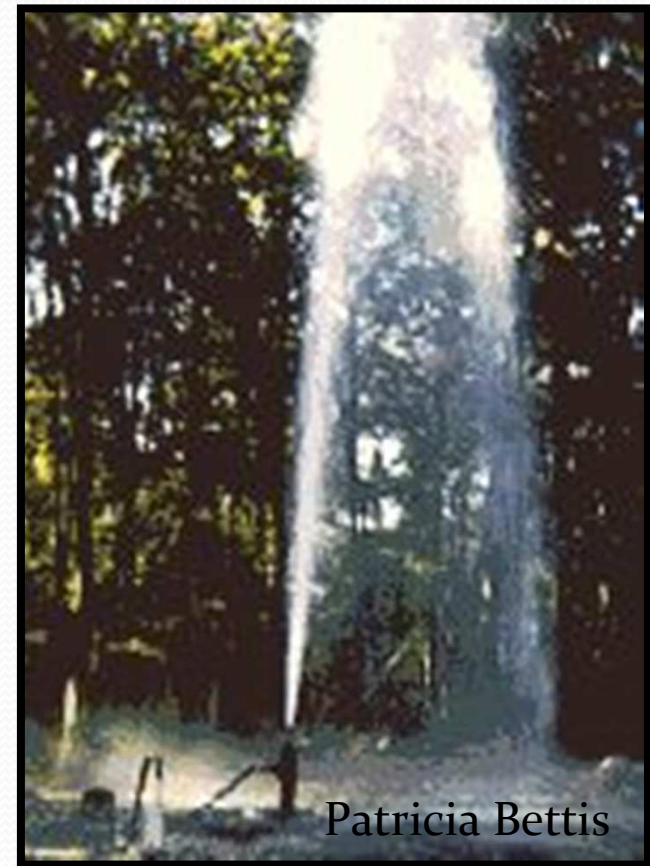
Significant Amount of Water

(11 AAC 93.035)

- (1) the consumptive use of more than 5,000 gallons per day from a single source in a single day;
- (2) the regular daily or recurring consumptive use of more than 500 gallons per day from a single source for more than 10 days per calendar year;
- (3) the non-consumptive use of more than 30,000 gallons per day (0.05 cubic feet per second) from a single source;
- (4) any water use that may adversely affect the water rights of other appropriators or the public interest.

Management of Water Resources

- Permitting/Adjudication
- Maintain water use and source databases
- Evaluation of production and exploration expansions
- Requirement of source data and studies



Permitting/Adjudication

- Temporary Water Use Authorization
- Permit to Appropriate Water
- Water Right Certificate of Appropriation
- Certificate of Reservation



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Temporary Water Use Authorization

- May be issued for up to a five-year period;
- May have up to five sources per TWUP;
- No extension of time allowed;
- No water right or priority is established by a TWUP;
- Permittee will coordinate water withdrawal with other companies using the same source.

Permit to Appropriate Water

- Establishes a priority date for water use;
- Allows for timely development of water source and use;
- May be issued for a specific period of time based on the quantities of water requested;
- May be extended once.

Certificate of Appropriation

- Property right (Right of Use);
- Conveyed along with title;
- Continues in effect for as long as water is beneficially used.

Certificate of Reservation

- In-Stream Flow Reservation
 - Protection of Fish and Wildlife Habitat, Migration and Propagation;
 - Recreation and Park Purposes;
 - Navigation and Transportation Purposes;
 - Sanitary and Water Quality Purposes.

Certificates: Sag River and Kuparuk

Pending Applications: Sadlerochit, Tamayariaka,
Akutoktak & Itkilyariak

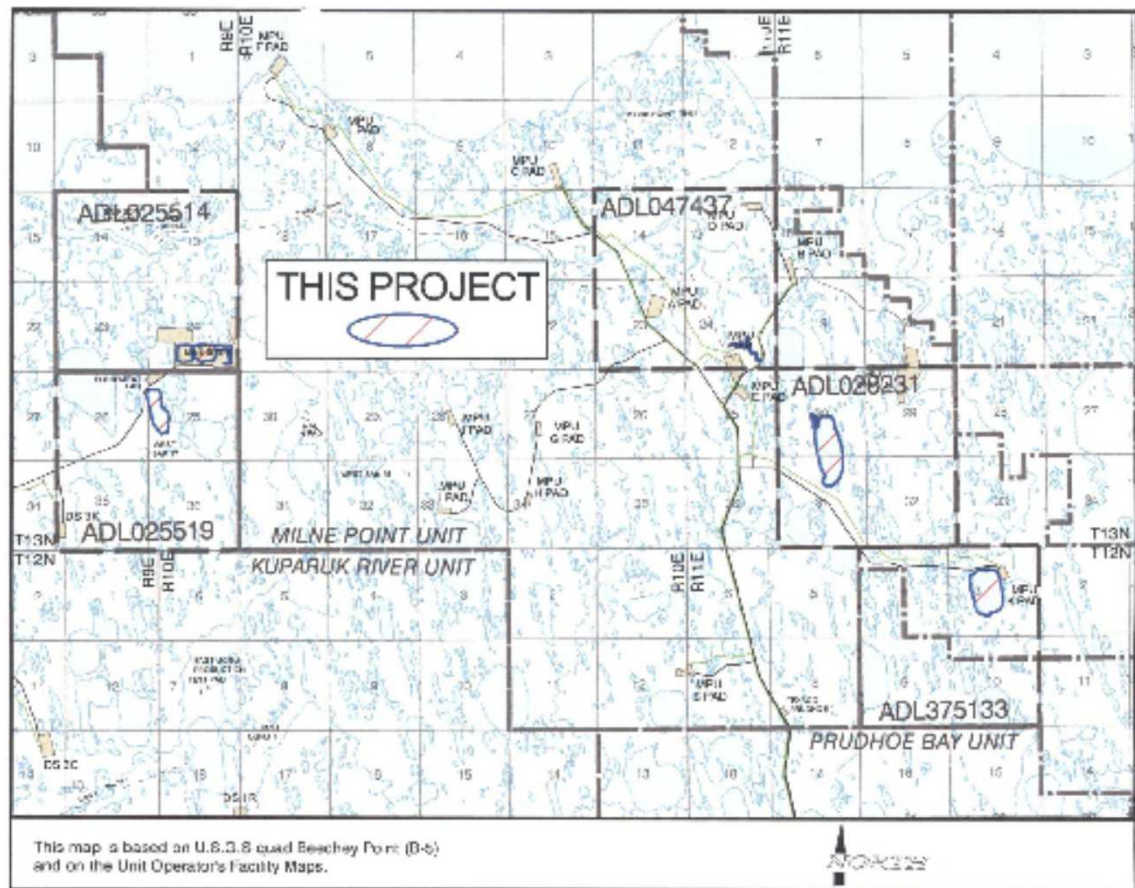


Goals of North Slope Permitting

- Management of a sustainable resource
- Assurance that each use is:
 - Reasonable and beneficial;
 - Will not interfere with any presently existing legal water uses;
 - Minimizes potential environmental effects;
- Ascertain that unappropriated water is available.

Permitting Process

- Completed Application along with associated fee
 - Include area map (MTRS)
 - Sources
 - Water Use Area



Permitting Process Cont.

- Source Data
 - Lakes & Reservoirs:
 - Depth
 - Area
 - Approximate volume
 - Under ice volume
 - Fish Present or Absent (type of fish)
 - River or Streams (Summer Use Only)
 - Flow (cfs)
 - Width & Depth
- Water Use Volumes
- Coastal Project Questionnaire

Lake M0812

Other Names: Field Identifier: A0827
Location: 66.36496°N 152.24990°W
USGS Quad Sheet: Umial B-4: T1S R2W, Sec. 12
Habitat: Tundra Lake
Area: 20 acres
Maximum Depth: 7.2 feet
Active Outlet: No
Total Lake Volume: 23.72 million gallons (Aug 1, 2008 data)
Water Volume Under 4 ft of ice: 2.07 million gallons
Water Volume Under 5 ft of ice: 0.34 million gallons
Water Volume Under 7 ft of ice: 0.00 million gallons

Potential Ice Aggregate: 11.3 acres (water depth 4 ft or less)
 0.684 million gallons

Maximum Recommended Under-ice Removal: 4,744 million gallons
 (20% of lake volume)

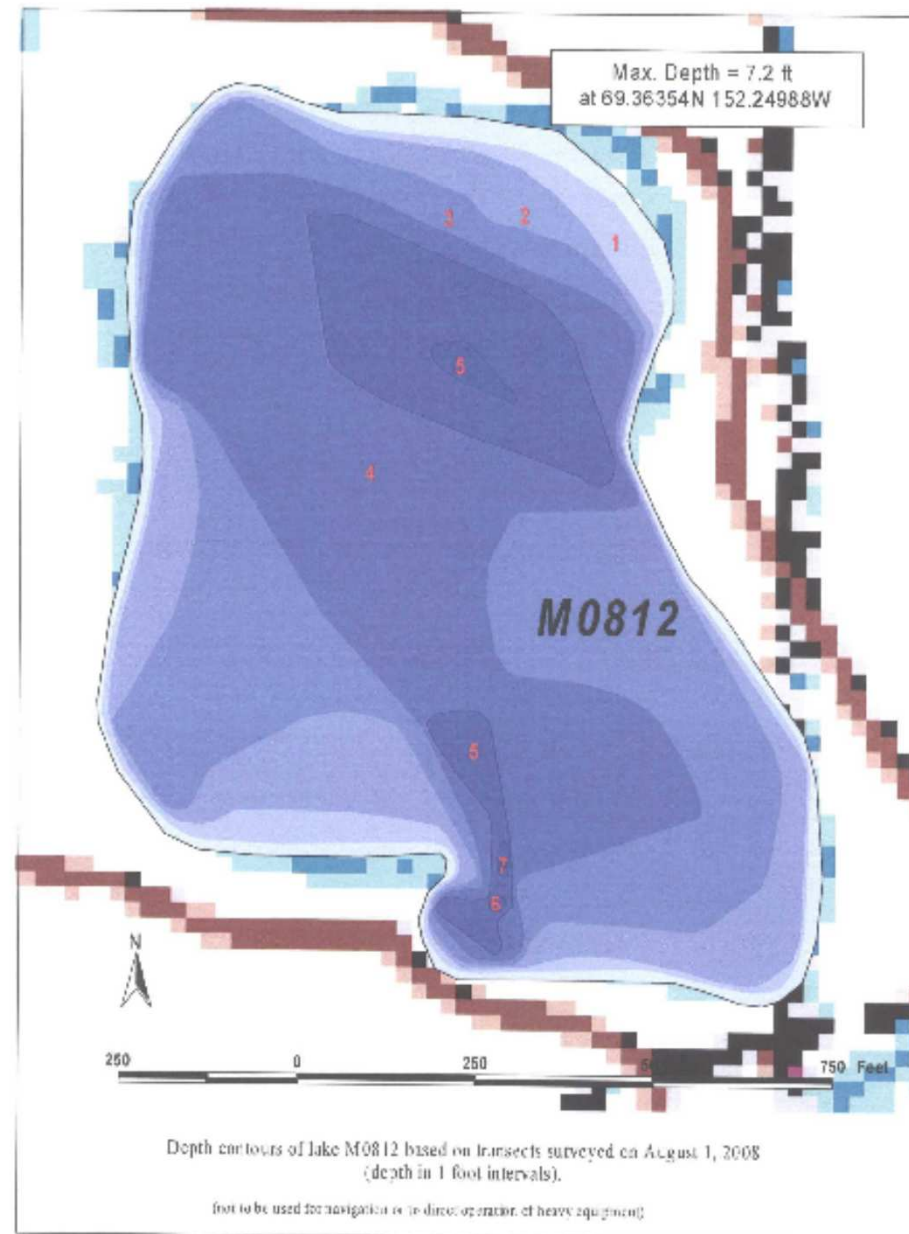
Water Chemistry:

Year of Test	Calcium (mg/l)	Magnesium (mg/l)	Sodium (mg/l)	Chloride (mg/l)	Total Hardness [CaCO ₃] (mg/l)	Specific Conductance (microS/cm)	Turbidity (NTU)	pH	Source
2008	3.63	1.72	1.40	1.10	16.1	34.6	4.7	7.61	1. Moulton

Catch Record:

Gear	Date	Effort (hours)	Species	Number Caught
Gill Net	Aug 1 08	4.7	none	0
Minnow trap	Aug 1 08	7.0	none	0
Seine	Aug 1 08	3 hauls	none	0

Bathymetry Studies are important for determining water quantities and available water under ice.



Permitting Process Cont.

- Review Application Packet
 - Input into data base
 - Makes searchable to the Public
 - Identifies Multiple Users for the Sources
 - Source with Multiple Users
 - Review the submitted Source Data and Compare to other's Source Data – looking for variations, bathymetry studies, fisheries studies, water quality parameters, etc.
 - Determine if a Water Right is on the Source
- Agency Notice
 - Application Packet is sent to:
 - Coastal Resource District, ADF&G Division of Habitat, DNR Division of Oil and Gas, DNR Land Section (NRO), ADEC

Winter Permittalbe

Volume of Water

- Fish Bearing Lakes
 - 15 percent of the calculated volume of water under seven feet of ice for lakes deeper than 7 feet that contain species sensitive fish.
 - 30 percent of the calculated volume of water under five feet of ice for those lakes with depths between five and seven feet deep that contain only ninespine stickleback and Alaska blackfish
- Non-Fish Bearing Lakes (Pothole lakes less than 6 feet in depth)
 - 20 percent total volume

Competitive Uses of Water

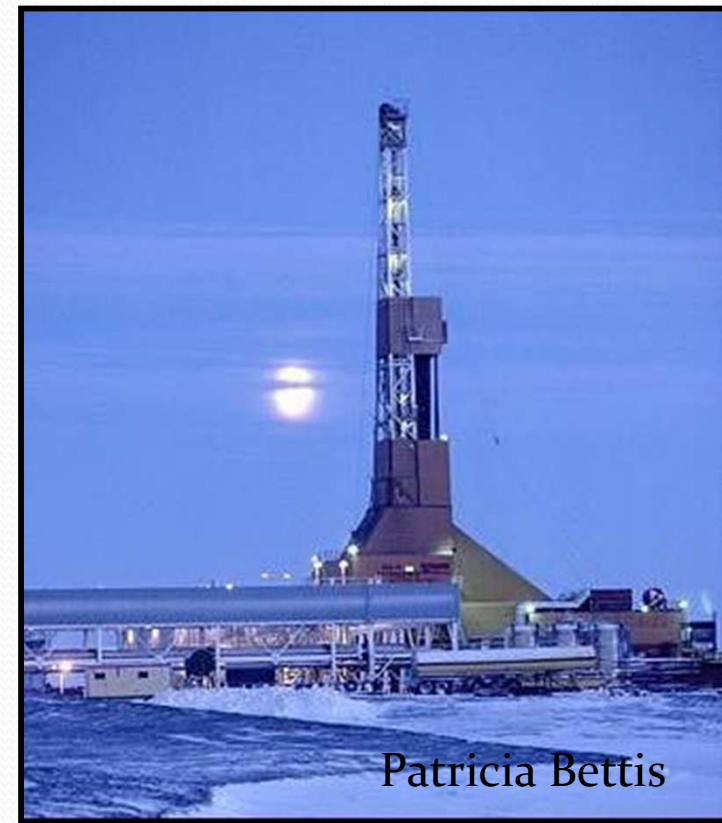
- Dewatering for gravel extraction.
- Withdrawal of water for beneficial uses, e.g., ice road construction, camp supply, etc.



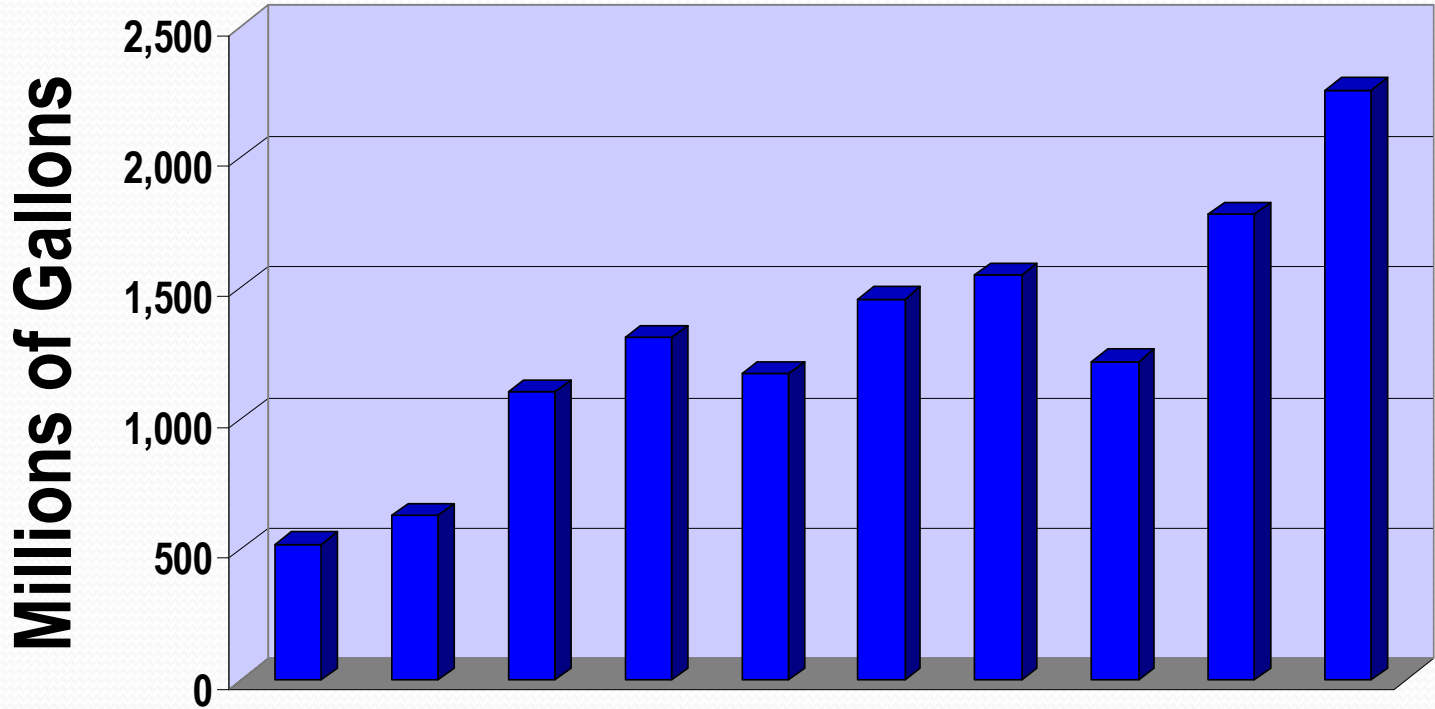
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Competitive Uses of Water Cont.

- Drilling and Support
- Ice Road and Pad
- Enhanced Oil Recovery

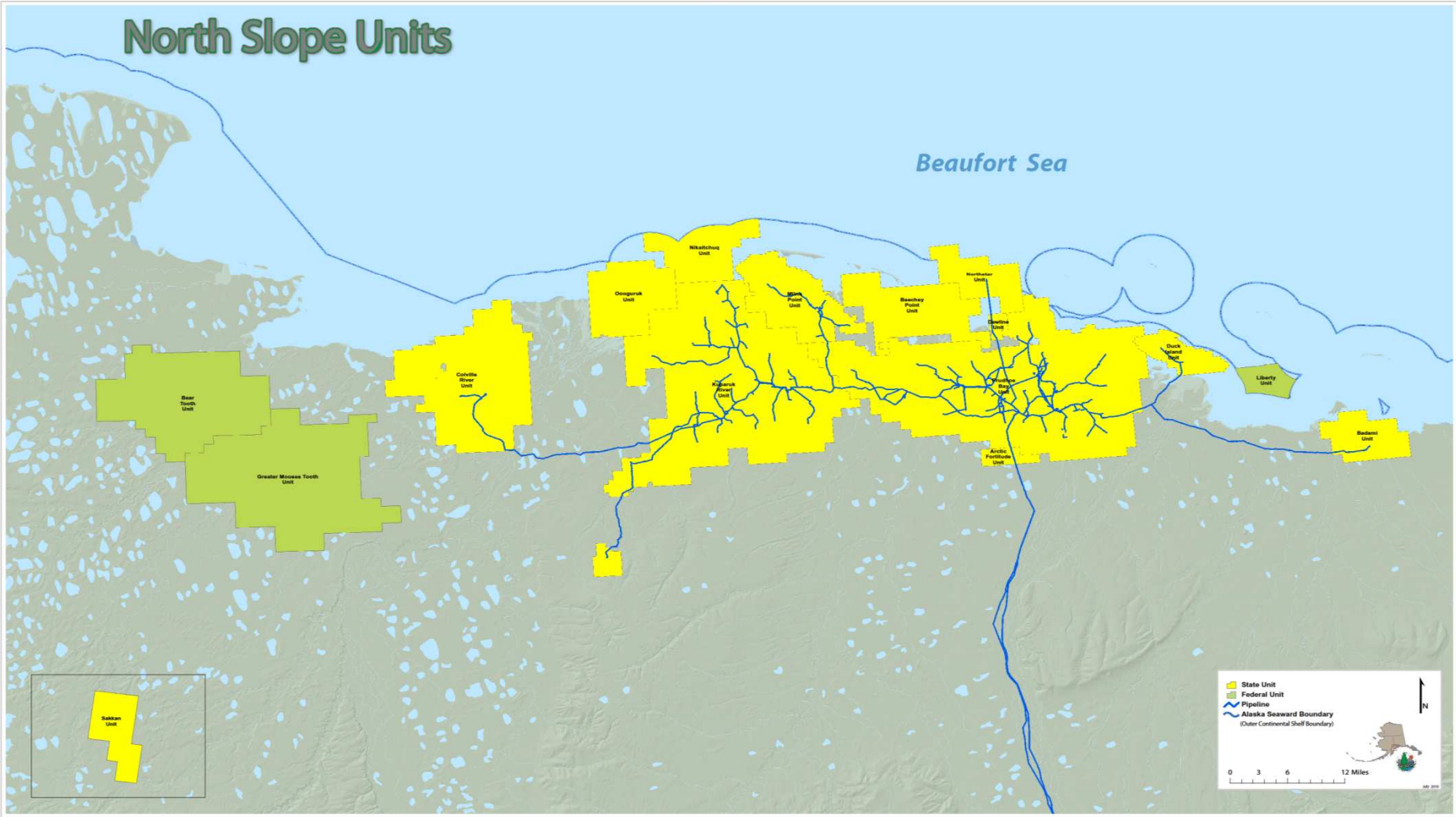


Water Use on the North Slope

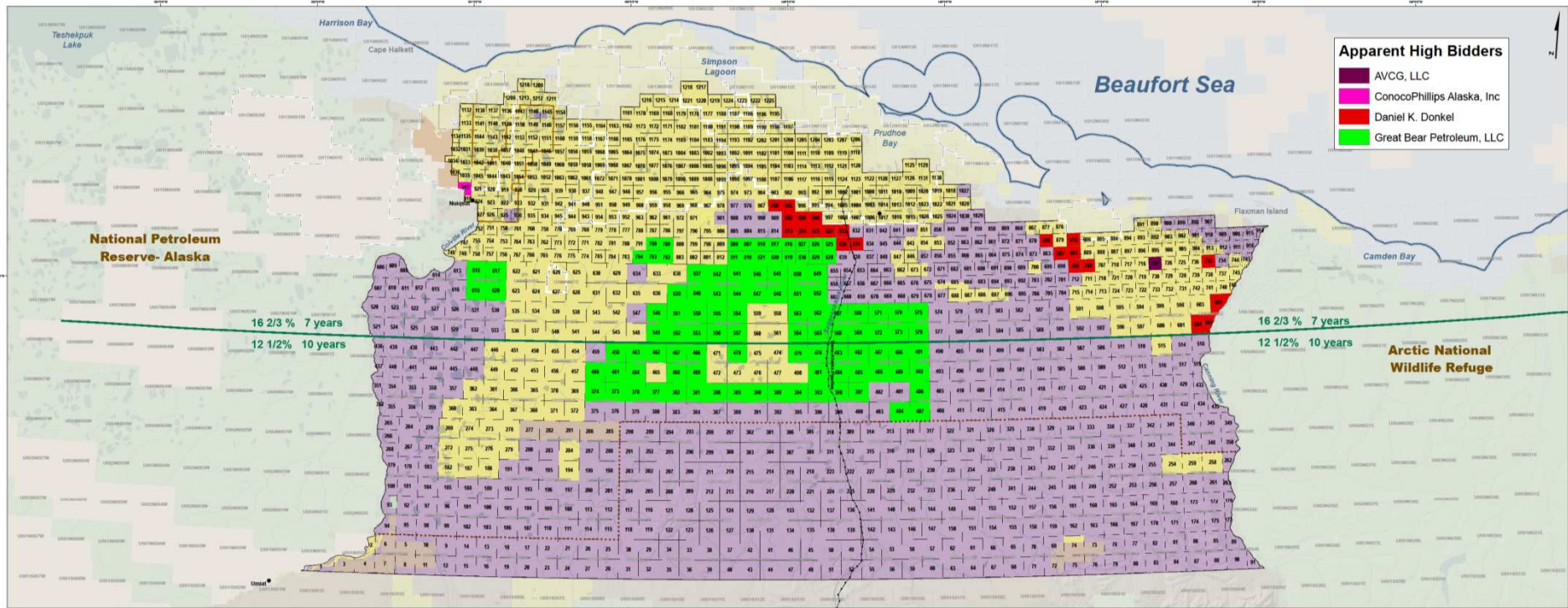


1995 through 2004 Water Withdrawal

Current North Slope Units



Oil and Gas Lease Sale North Slope Areawide 2010



Apparent High Bidders

- AVCG, LLC
- ConocoPhillips Alaska, Inc
- Daniel K. Donkel
- Great Bear Petroleum, LLC

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*Bidders are solely responsible for determining the availability of acreage prior to submitting a bid.



Preliminary Sale Results Apparent High Bidders October 28, 2010



- Available Tracts
- Leased Tracts
- Federal Land
- Native Land
- Deferred Tracts
- Units
- ASRC Settlement Boundary
- Alaska Seaward Boundary
- Gravel Consideration Boundary
- Royalty Boundary

DATA SOURCES

Base map data, including hydrologic data, village and town locations, land status and boundaries, etc. are from the State of Alaska Statewide Land Research Information System (SLRIS). Oil and gas wells are from the Alaska Division of Oil and Gas (ADOG) and are categorized from the Alaska Oil and Gas Conservation Commission database. Land status is derived from the Federal Bureau of Land Management's general land status dataset.

Information on this map is derived only at a township or section level resolution. For detailed information regarding any specific area, interested individuals may consult the land records of one or more of the following agencies:

The State of Alaska, Dept of Natural Resources
The Federal Bureau of Land Management
The Federal Minerals Management Service
Arctic Slope Regional Corporation

Discrepancies in boundary agreements are the result of merging multiple data sets from a number of different sources.

Conservative Management

- Bathymetry Studies
- Snow Surveys & Drainage Basin Studies



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Conservative Management Cont.

- Fish Studies
- Water Quality Parameters
 - Dissolved Oxygen
 - Conductivity



Winter Water Withdrawal Colville River

- Conditions
 - Water Chemistry
 - Depth Profiles
 - No Grounding

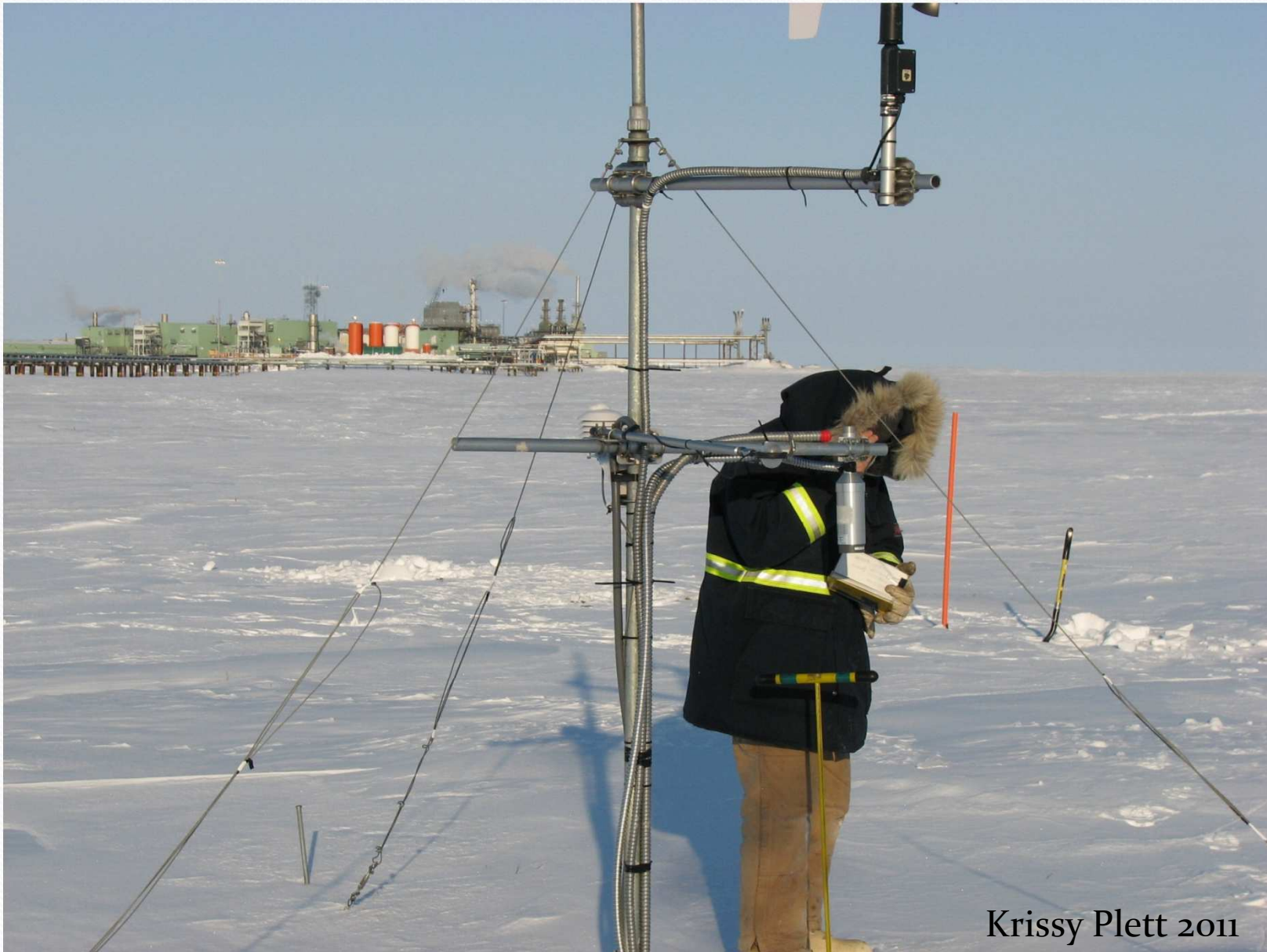


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Off Road Travel for Field Studies

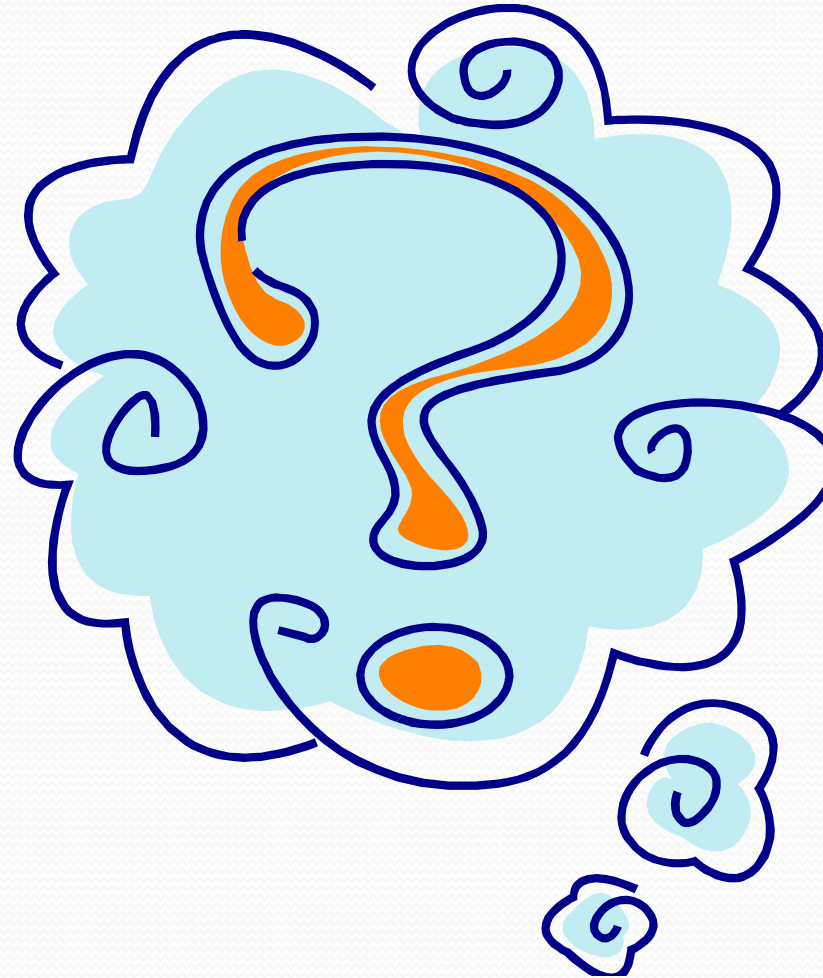


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Questions





<http://dnr.alaska.gov/>

<http://dnr.alaska.gov/mlw/water/wrfact.htm>