Map 3.2.4-1
Major Rivers, Hydrologic Units and Physiographic Provinces

Sources: Wahrhaftig, 1965
USGS- NHD, 2010
USDOI-BLM & USGS, 2010

Stream Gauges

Physiographic Provinces

Watershed Boundary
4th level HUC (8-digit)

NPR-A Boundary

0 6 12 24 36 48 Miles

Projection: Albers Conic Equal Area
referencing NAD83

Bureau of Land Management - Alaska
National Petroleum Reserve - Alaska
Final IAP/EIS

160°W 155°W 70°N 68°N

ARCTIC OCEAN
Chukchi Sea
Beaufort Sea
Point Barrow
Barrow
Tangent Point
Dease Inlet
Cape Simpson
Smith Bay
Pitt Point
Cape Halkett
Harrison Bay
Atigaru Point
Point Franklin
Point Belcher
Peard Bay
Wainwright
Admiralty Bay
Teshekpuk Lake
Icy Cape
Lagoon
Kasegaluk
Tunalik River
Utukok River
Kuk River
Isisaruk
Kaolak
Avalik River
Meade River
Maru River
Kugrua River
Atqasuk
Admiralty Bay-Dease Inlet
Ikpikpuk River
Harrison Bay
Nuiqsut
Kealok Creek
Inigok Creek
Fish Creek
Itkillik River
Kilikrorak River
Kogosukruk River
Price River
Tialuk River
Maybe Creek
Awuna River
Colville River
Umiat
Lower Colville River
Upper Colville River
Killik River
Chandler-Anaktuvuk Rivers
Anaktuvuk Pass
Oumalik Creek
East Fork Chandler River
Etivluk River
Middle Noatak River
Kuk River
Utukok River
Kokolik River
Meade River
Ikpikpuk River
Admiralty Bay-Dease Inlet
Lower Colville River
Upper Colville River
Killik River
Chandler-Anaktuvuk Rivers
Middle Noatak River
Arctic Coastal Plain Province
Arctic Foothills Province
Arctic Foothills Province
Arctic Mountains Province

Map 3.2.5-1

Bedrock Geology

Sources: Beikman, 1980

Bedrock Geology Unit within NPR-A

JP	Jurassic, Triassic, and Permian Rocks
JPvm	Jurassic, Triassic, and Permian Mafic Volcanic Rocks
KJ	Cretaceous and Jurassic Rocks
M	Mississippian Rocks
MzPz	Mesozoic and Paleozoic Rocks
TR	Triassic Rocks
lK	Lower Cretaceous
lKc	Lower Cretaceous Continental Deposit
uK	Upper Cretaceous
uKc	Upper Cretaceous Continental Deposit
uT	Upper Tertiary Rocks

NPR-A Boundary

0 6 12 24 36 48 Miles

Projection: Albers Conic Equal Area referencing NAD83

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Map 3.2.5-2

Mineral Terranes & Alaska Resource Data File (ARDF) Locations

Sources: ARDF- USGS, 2008.
Terranes- Resource Data Inc., Alaska Earth Science, and US Bureau of Mines.

Alaska Resources Data File

- Occurrence
- Prospect

Mineral Terrane

NPR-A Boundary

0 6 12 24 36 48 Miles

Projection: Albers Conic Equal Area
referencing NAD83

Bureau of Land Management - Alaska
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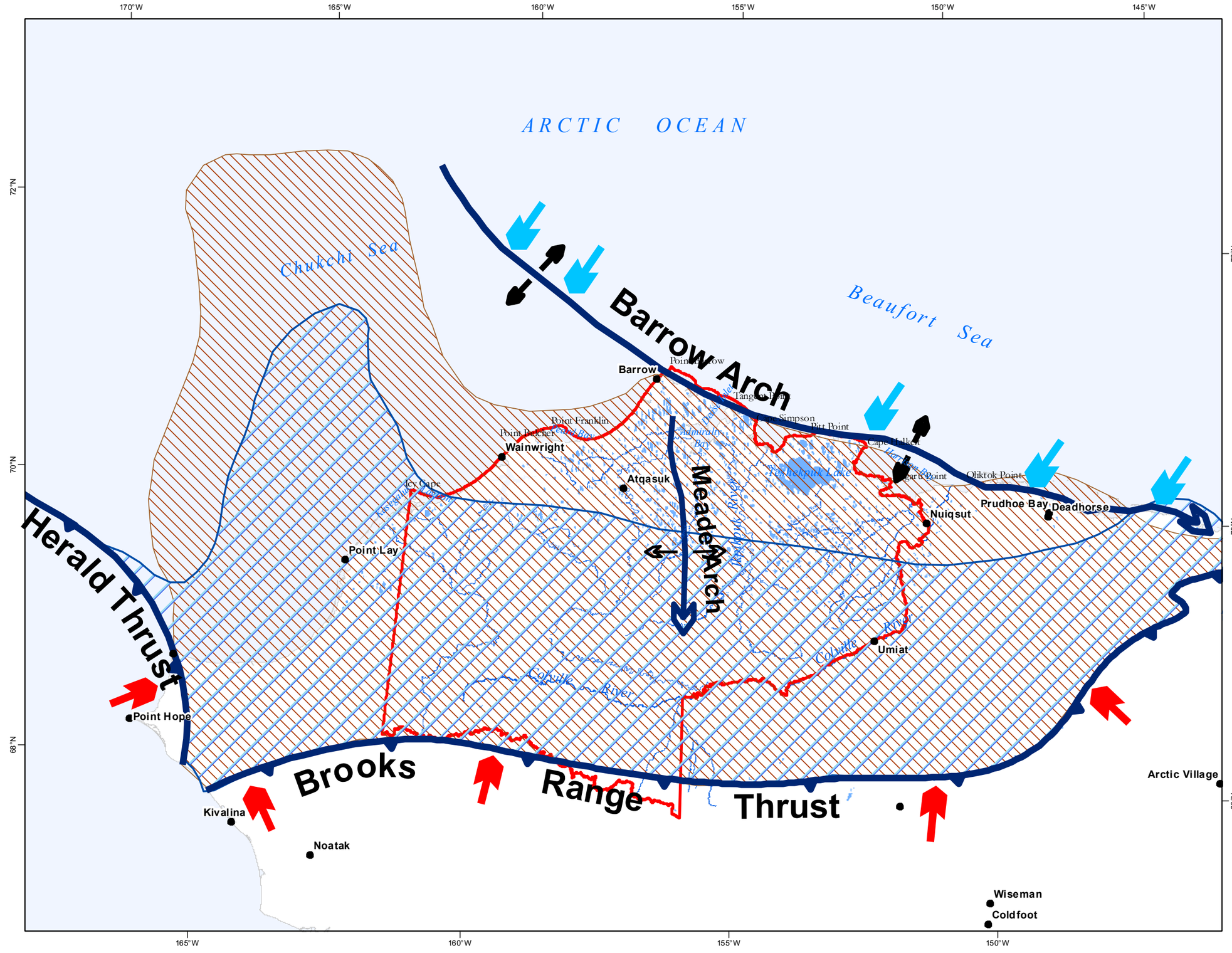
160°W 155°W 70°N 68°N

ARCTIC OCEAN
Chukchi Sea
Beaufort Sea
Point Barrow
Barrow
Tangent Point
Dease Inlet
Admiralty Bay
Smith Bay
Cape Simpson
Pitt Point
Cape Halkett
Harrison Bay
Atigaru Point
Point Franklin
Point Belcher
Peard Bay
Wainwright
Icy Cape
Lagoon
Kasegaluk
Tuvalik River
Ivisaruk River
Kuk River
Kugrua River
Maru River
Atqasuk
Alaktak River
Teshekpuk Lake
Nuiqsut
Kachemach Creek
Ingnok Creek
Fish Creek
Judy Creek
Ikpikpuk River
Ublutuoch (Chipp) River
Kikiakrorak River
Kogosukruk River
Unnamed (near Kukpowruk River)
Meade River
Awuna River
Maybe Creek
Colville River
Umiat
Coville River
Chandler River
Schrader Bluff
Unukok River
Inaccessible Ridge
Kagvik Creek
Ginny Creek
Avan Hills
Avan River
Kugrurok River
Kugrurok River Chromite
Nimiuktuk
Drenchwater Creek
Rolling Pin Creek
Drenchwater--West
Drenchwater--East
Twistem Creek barite
Bion Tuck
Abby Creek Stack
Mt. Bupto
Ekakevit Unnamed
Story Creek
Safari Creek South
Sunktanneyak Mtn.
Siniklanneyak--East
Whimbee Creek
Kivliktort Mountain--East, East Kivliktort
West Kivliktort Otuk Creek
Koiyaktot Mountain--West
Koiyaktot Mountain--East
Ivotuk Hills
Nigu River
East Fork Etivluk River
Etivluk River
Kurupa River Southwest
Kady
Middle Kakivilak Creek
Outwash Creek Southeast
Kiruktagiak River Monitis Creek
Chandler Lake
Jiglukpuk Creek
Nanushuk River
Anaktuvuk Pass
Cockedhat Mountain
Anaktuvuk River
Unnamed
Kiviviik
SCB
SBS
VOP
IMA
IUM
SPS
SCG



Map 3.2.6-1

Major Sedimentary Basins and Tectonic Features

Sources:

- Arctic Alaska Basin (Ellesmerian Strata, Devonian-Jurassic)
- Colville Basin [>3 km] (Brookian Strata, Cretaceous)
- Geologic Arch
- Thrust Fault System
- Arctic Alaska Basin Sediment Supply
- Colville Basin Sediment Supply
- NPR-A Boundary

Projection: Albers Conic Equal Area referencing NAD83

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Map 3.2.6-2

Oil & Gas Fields and Wells of the North Slope

Sources: AOGCC, 2011
BOEMRE & AK-DNR

Selected NPR-A Well Locations

- Gas well, U S NAVY
- Oil Well, Husky
- Oil Well, Private industry
- Oil Well, US Navy
- Chukchi Wells
- Plugged & Abandoned

- --- --- Anticlines

Oil & Gas Fields

- Gas
- Oil
- Oil and Gas

Active Oil and Gas Units

- Not Producing
- Producing

- BOEMRE OCS Lease Tracts 2002 -2007
- Trans-Alaska Pipeline
- Dalton Highway
- Well Locations
- NPR-A Boundary

0 6 12 24 36 48 Miles

Projection: Albers Conic Equal Area
referencing NAD83

Bureau of Land Management - Alaska
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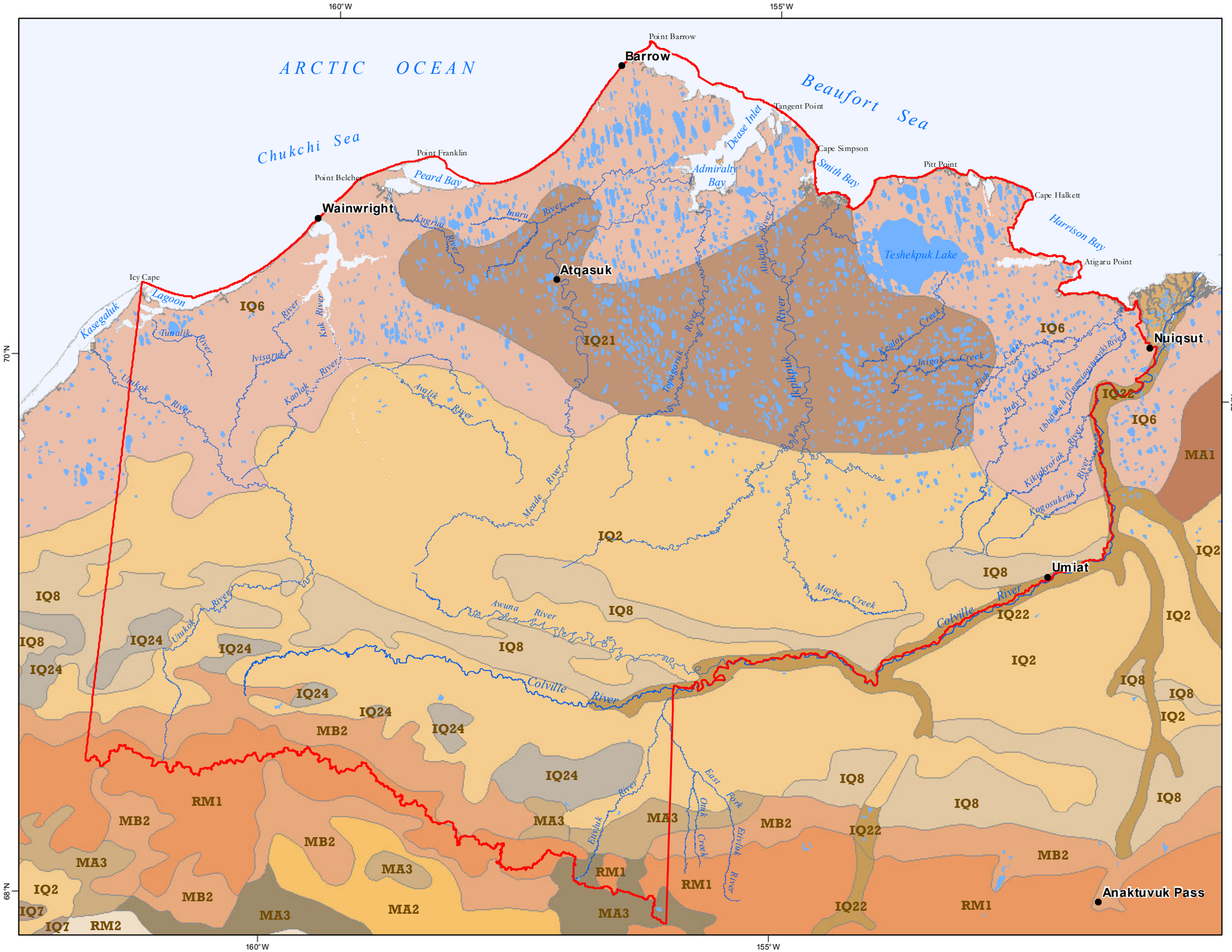
ARCTIC OCEAN
Chukchi Sea
Beaufort Sea
POPCORN
CRACKERJACK
BURGER
DIAMOND
KLONDIKE
East Barrow
South Barrow
Barrow
Walakpa
IKO 1
TULAGEAK 1
W DEASE 1
Simpson Seeps
E SIMPSON TEST WELL 1
CAPE HALKETT 1
KUVANAK 1
PEARD TEST WELL 1
S MEADE 1
KUGRUA 1
IKPIKPUK 1
TUNALIK 1
KOLUKTAK 1
SEABEE 1
AWUNA 1
Wainwright
Point Lay
Noatak
Atqasuk
Meade
Nuiqsut
Umiat
East Umiat
Gubik
Square Lake
Wolf Creek
Teshekpuk Lake
Colville River
Beechey Point
Milne Point
Nikaitchuq
Ooguruk
Dewline
Liberty
Duck Island
Sandpiper
Point Thompson
Hammerhead
Kuvlum
Flaxman Island
Stinson
Badami
Sourdough
Yukon Gold
Mikkelsen
Hemi Springs
Rock Flour
Kuparuk River
Arctic Fortitude
Prudhoe Bay
Bear Tooth
Greater Mooses Tooth
Arctic National Wildlife Refuge
see Inset

Inset- NE NPRA
N KALIKPIK 1
Colville River
Bear Tooth
S HARRISON BAY 1
W FISH CK 1
SCOUT 1
LOOKOUT 1
N INIGOK 1
CARBON 1
SPARK 1A
MOOSE TOOTH C
Greater Mooses Tooth

Map 3.2.8-1

Soils

Source: Natural Resource Conservation Service 1979, 1994.



Soil Unit within NPR-A

IQ2	Typic Histoturbels
IQ6	Typic Histoturbels - Typic Fibristels
IQ21	Typic Aquiturbels - Typic Psammoturbels
IQ8	Typic Histoturbels- Typic Aquiturbels
MB2	Typic Molliturbels - Typic Aquiturbels
IQ24	Typic Aquiturbels - Typic Gelorthents
RM1	Rough mountainous land
MA3	Typic Aquiturbels - Typic Molliturbels
MA3	Typic Aquiturbels - Typic Haplogelolls
IQ22	Fluvaquentic Aquorthels

NPR-A Boundary

0 6 12 24 36 48 Miles

Projection: Albers Conic Equal Area referencing NAD83

Bureau of Land Management - Alaska

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Map 3.2.9-1

Surficial Geology

Sources: Karlstrom 1964

Surficial Geology Unit within NPR-A

- Qcb — Modern coastal beach deposits (sand to silt)
- Qcc — Older coastal deposits of alluvial and marine sediments (sand to silt)
- Qe — Silt more then 5-feet thick (silt)
- Qfp — Modern floodplains (sand to silt)
- Qm1 — Remnants of highly modified glacial moraines and associated drift
- Qm3 — Prominent, slightly modified, glacial moraines and associated drift
- Qra — Dominantly course rubbly deposits associated with steep-sloped mountains with higher percentage of bedrock exposures (talus slopes with course grained sand to boulders)
- Qrb — Course and fine-grained deposits associated with moderate to steep-sloped mountains and hills with bedrock exposures largely restricted to upper slopes and rubble on crestlines (course grained sand to boulders)
- Qrc — Fine-grained deposits associated with gently sloping hills with rare bedrock exposures (sand to silt)

NPR-A Boundary

0 6 12 24 36 48 Miles

Projection: Albers Conic Equal Area referencing NAD83

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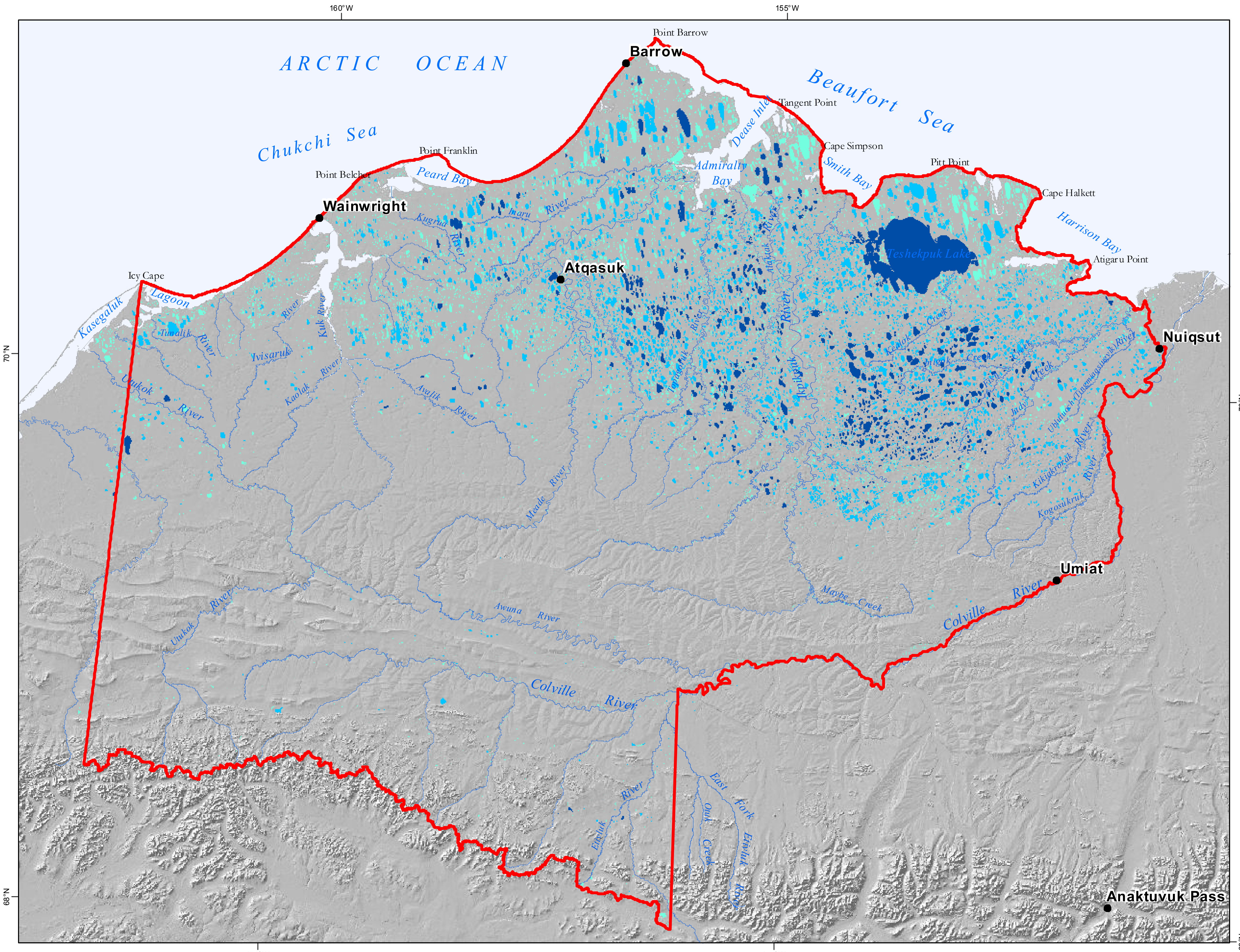

Map 3.2.10-1

Lake Depth

Source: Mellor, 1985

Lake Depth (m)

- < 1.6 m
- 1.6 m - 4 m
- > 4 m

NPR-A Boundary

0 6 12 24 36 48 Miles

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Projection: Albers Conic Equal Area referencing NAD83

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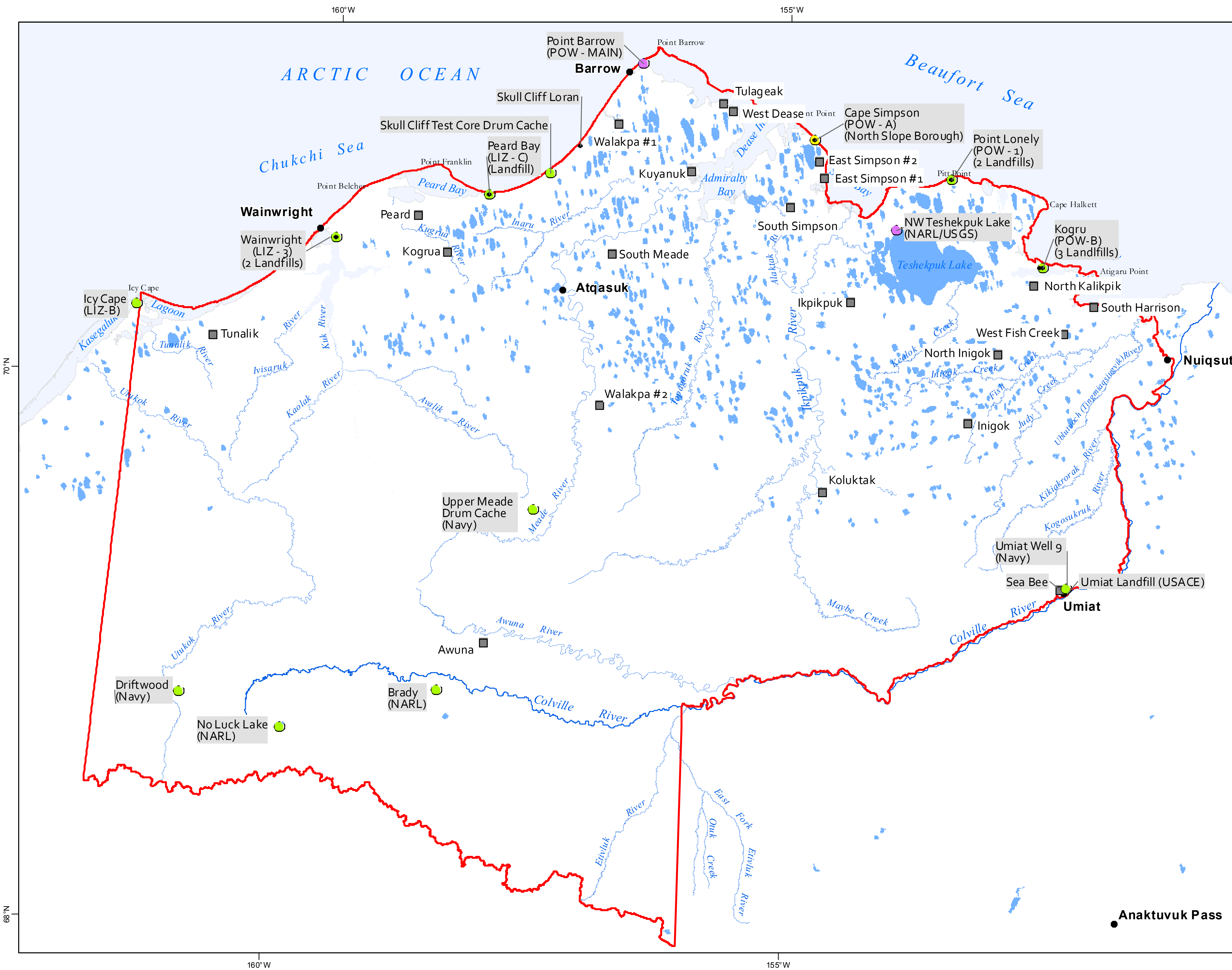

Map 3.2.11-1
Existing Hazards

Source: BLM, 2011

Existing Hazard Locations

- Landfill
- Currently Used
- Formerly Used Defense Site
- Privately Owned
- Reserve Pit

NPR-A Boundary

0 6 12 24 36 48 Miles

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Projection: Albers Conic Equal Area referencing NAD83

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