

Cold Ground and Hot Air

Permafrost and Global Climate

R. Max Holmes



The Woods Hole Research Center





Alaska

August 25 - September 2





ALASKA
(United States)



© 2009 Ezilon.com All Right Reserved

ezilon.com

RUSSIA

ARCTIC CIRCLE

Chukchi Peninsula

Bering Strait

BERING SEA

Aleutian Basin

Aleutian Islands

PACIFIC OCEAN

BEAUFORT SEA

ARCTIC CIRCLE

Great Bear Lake

MACKENZIE MOUNTAINS

CANADA

ROCKY MOUNTAINS

JUNEAU

Gulf of Alaska

Queen Charlotte Islands

Prince George

CAUTION!

Alaska Department of
Fish & Game research shows
that brown and black bears
frequent this area
during salmon season.

To protect both bears and people,
BLM encourages users to make noise,
travel in groups, and carry
bear spray during salmon runs
(May through October).















































ALASKA
(United States)



© 2009 Ezilon.com All Right Reserved

ezilon.com

RUSSIA

ARCTIC CIRCLE

Chukchi Peninsula

Bering Strait

BERING SEA

Aleutian Basin

Aleutian Islands

PACIFIC OCEAN

BEAUFORT SEA

ARCTIC CIRCLE

Great Bear Lake

MACKENZIE MOUNTAINS

CANADA

ROCKY MOUNTAINS

JUNEAU

Gulf of Alaska

Queen Charlotte Islands

Prince George



Andreafski River
LODGE

Alaska's Outstanding River Resort

FISH. HIKE. CANOE. KAYAK

ST. MARY'S, ALASKA













BOREAL FISHERIES, INC.
WHERE SALMON IS
KING SINCE 1974

KWIK

KWIK







BOREAL FISHERIES INC.
WHERE SALMON IS
KING SINCE 1974



ALASKA
(United States)



© 2009 Ezilon.com All Right Reserved

ezilon.com

RUSSIA

ARCTIC CIRCLE

Chukchi Peninsula

Bering Strait

BERING SEA

Aleutian Basin

Aleutian Islands

PACIFIC OCEAN

BEAUFORT SEA

ARCTIC CIRCLE

Great Bear Lake

MACKENZIE MOUNTAINS

CANADA

JUNEAU

Gulf of Alaska

Queen Charlotte Islands

Whitehorse

Prince George

165°

150°

135°

120°

165°

150°

135°

120°

Barrow

Kotzebue

Nome

Mount McKinley

Yukon

Fairbanks

Anchorage

Kenai

Seward

Cardova

Kodiak

Sitka

Ketchikan

Frost















GLACIER

GLACIER

GLACIER

GLACIER

GLACIER

GLACIER

GLACIER

GLACIER

GLACIER

GLACIER

GLACIER

GLACIER

GLACIER

GLACIER

GLACIER

ALASKA

2015

GLACIER

United States

Special Representative Arctic Region

1509

Robert J. Page, Jr.
Special Representative Arctic Region



Next Steps - *Science*

Proposal to RAPID Program



Next Steps - *Policy*

Arctic Circle - Iceland, October

UN Climate Negotiations - France,
December

IPCC Special Report on Permafrost?

Next Steps - *Education*

Polaris - Yukon?

The Polaris Project

Research, Education, and Outreach in the Siberian Arctic





