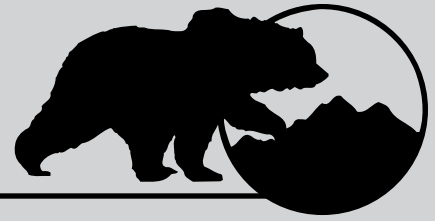


THE NORTHERN LINE



"If we can reverse the emission of greenhouse gases in time to save the Arctic from the most devastating impact of global warming, then we can spare untold suffering for hundreds of millions of people around the globe. Protect the Arctic and we save the planet. Use us in the Arctic as your early warning system."

— Sheila Watt-Cloutier, Chair, Inuit Circumpolar Conference



Coalescing on Climate Change...

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Calendar of Events

April 12

Northern Voices Series

7 p.m. @ the Noel Wein Library. Alaska's Poet Laureate John Haines spent more than twenty years homesteading in Interior Alaska. He has published numerous volumes and received numerous awards as well as two Guggenheim fellowships.

April 18

Tanana Valley Watershed Association Meeting

5:30-7:00 p.m. at Fairbanks City Hall.

For more info, email TVWatershed@gmail.com.

April 24-26

2007 Rural Energy Conference

Fairbanks. Sponsored by UAF, more information to be available soon, or check the website:
<http://www.uaf.edu/aetdl/2007%20Conference/2007%20Conference.html>.

April 21 and 28

Electronics Recycling Event

April 21, 10 a.m. - 4 p.m. @ Taku Parking Lot, UAF; April 28, 10 a.m. - 4 p.m. @ Lathrop High School. Accepted Items: Televisions, computer monitors, laptops, keyboards, mice, modems, external drives, small scanners, printer, copy machines, cables, VCRs, DVD players, stereos, radios, phones, fax machines, camcorders, electric typewriters, microwave ovens, floppies, CDs, DVDs, telephones, and cell phones. Fees for recycling range from \$5 to \$25. For more information contact: Interior Alaska Green Star or visit www.iagreenstar.org

April 21

Camp Habitat Earth Day Celebration

12 p.m. to 4 p.m. @ Joy Elementary School. Come celebrate Earth Day with Camp Habitat ... music, food and other fun Earth Day activities for families. There will be fun for all ages.

May 10

Northern Voices Series

7 p.m. @ the Noel Wein Library. Cultural Anthropologist, author, and radio host Richard Nelson is the author of a number of popular books including *The Island Within* and *Make Prayers to the Raven*. Nelson served as the Alaska State Writer in 1999-2001.

May 16

Tanana Valley Watershed Association Meeting

5:30-7:00 p.m. at Fairbanks City Hall. For more info, email TVWatershed@gmail.com.

May 23

Discovering Alaska - A Summer Lecture Series

7 p.m. @ Rasmuson Library 340. Roger Kaye, pilot and author of *Last Great Wilderness*, a chronicle of Olaus and Margaret Murie and their compatriots' fight for the protection of the Arctic Refuge will talk about his experiences in Alaska and how they have shaped his environmental view. Series presented by UAF Summer Sessions and the Northern Alaska Environmental Center's Northern Voices Program, in cooperation with the UAF Center for Research Services, the International Arctic Research Center, and the University of Alaska Geography Program. Admission is free.

THE NORTHERN LINE

Environmental News of Arctic and Interior Alaska

The Northern Line is published quarterly by the Northern Alaska Environmental Center (NAEC), 830 College Rd., Fairbanks, Alaska 99701, info@northern.org, www.northern.org. Copyright © 2006 by NAEC. All rights reserved. Subscription rate is \$33 annually and includes membership. We encourage letters and articles to be submitted for publication. We reserve the right to edit all submissions. The Northern Alaska Environmental Center is a 501 (c)(3) non-profit organization.

The Northern Alaska Environmental Center promotes conservation of the environment in Interior and Arctic Alaska through advocacy, education, and sustainable resource stewardship. The Northern Alaska Environmental Center has 1,000 members.

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Front Page photo: Aspen leaf miner; Fort Yukon Smoke: Pamela A. Miller, Drew Point-NPR-A: U.S. Fish and Wildlife Service

May 30

Discovering Alaska - A Summer Lecture Series

7 p.m. @ Rasmuson Library 340. Anne Hanley, Alaska Writer Laureate for 2002-2004, reflects on her 2006 experiences in Katmai National Park and Preserve. Series presented by UAF Summer Sessions and the Northern Alaska Environmental Center's Northern Voices Program, in cooperation with the UAF Center for Research Services, the International Arctic Research Center, and the University of Alaska Geography Program. Admission is free.

June 1

NAEC Annual Membership Meeting and BBQ

5 p.m. until ? at the NAEC offices, 830 College Rd. Come share some fine grilled food for both the omnivorous and vegetarians at our annual meet-and-greet for members, staff, and board. Side dishes are welcome, beverages, games and live music provided by NAEC. For more information call 452-5021 or contact info@northern.org.

June 6

Discovering Alaska - A Summer Lecture Series

7 p.m. @ Rasmuson Library. Ken Whitten, wildlife biologist, photographer, and woodworker shares his use of photography to enhance his enjoyment of the natural landscape. Series presented by UAF Summer Sessions and the Northern Alaska Environmental Center's Northern Voices Program, in cooperation with the UAF Center for Research Services, the International Arctic Research Center, and the University of Alaska Geography Program. Admission is free.

A Letter to our Members: Coalescing on Climate Change

By David van den Berg
Executive Director



The United Nations report from Paris on global climate confirmed that “warming of the climate system is unequivocal” and that humans are “very likely” the cause.

“The smoking gun is now there in terms of human contribution,” said John Walsh, a climate scientist at the University of Alaska Fairbanks, about the report by the International Panel on Climate Change (IPCC). “It’s going to be received as a call for action.”

Not a year has passed in the fight to protect the Arctic National Wildlife Refuge that we haven’t called on America to reduce its oil consumption in order to permanently protect the Refuge. We’ve joined with many other Alaskans and Alaskan organizations to reduce carbon emissions.

The Northern Center’s efforts to improve America’s energy security run the gamut: we’re reducing our carbon emissions by nearly 2,000 percent as we install a wood pellet boiler; within statewide coalitions, we’re working in Juneau to pass renewable energy legislation and keep abreast of the Alaska natural gas pipeline; in Washington, we’re waiting to name a winner among a welter of energy legislation (but so far we like Senator Barbara Boxer’s bill). Working together on local, state and federal levels, society will find the right mix of personal virtues and (economic and legal) structural changes to gradually reverse the habits that gradually took hold to warm Planet Earth.

The time is right to improve America’s energy security while mitigating for climate change. As New York Times columnist Tom Friedman noted January 26, “the president’s call to reform corporate average fuel economy (CAFE) mileage standards for U.S. cars ‘shifts the debate from whether to compel U.S. automakers to build more fuel-efficient vehicles to how much they should do so.’” In his report to Congress, Sir Nicholas Stern, former World Bank chief economist and head of the British Government Economic Service, estimated the costs of acting now to curb carbon emissions at about one percent of annual global gross domestic product. “That amount will not slow growth,” Stern said.

This is welcome news in Alaska, where we witness heat-induced changes in the land, and where many are already working to solve a problem that threatens us so directly. Alaska’s Senator Ted Stevens recently sponsored a bill to increase the CAFE of the U.S. automobile fleet. Conversion stories like his are newsworthy – and legion. Help is on the way.

A handwritten signature in black ink that reads "David" followed by a large, stylized flourish.

Alaskans Can Lead the Response to Global Warming

*By Nancy Fresco
Local Issues Coordinator*

Our houses are tilting and sinking as the icy soil thaws. Whole villages are in danger of being swept away by the sea. Polar bears are threatened, and other animals are altering their ranges. As Alaskans, we know that climate change is real. However, like other concerned individuals around the country, we don't have to helplessly wonder when the world will take action — we can lead the way.

Certainly a massive global problem can't be solved by Alaskans alone; it can't be solved by anyone alone. In the long run we desperately need effective national and international efforts. However, top-down approaches such as the Kyoto Protocol have become politically mired in the U.S. If the national government moves too slowly, we, the people, need to move more quickly.

Such motion is commencing in Alaska at the state and city levels. The Alaska Municipal League, representing 140 local governments, passed a policy that explicitly accepts responsibility for lowering emissions, and here in the North Star Borough a similar resolution was passed by the Assembly. In September, Mayor Mark Begich of Anchorage invited mayors from all over the U.S. to a conference on climate change at "ground zero." Several important bills addressing climate change and energy issues have been introduced in the Alaska State Legislature this session. NAEC is supporting a bill that would set up a Hydrogen Energy Partnership to work towards the development of a hydrogen fuel industry in Alaska; a bill that would require suppliers of electricity to disclose all sources of electricity to consumers; and a bill that would create a renewable energy fund.

At the community level, creative ideas are possible for adventurous carbon-cutters. For example, fuel used for heating and electricity can be reduced if loans or subsidies are offered to those who make improvements. Converting heating and electrical generation systems to renewable sources is no longer science-fiction. Although the potential for large-scale solar power is limited in Alaska, parts of the state, including the Interior, have excellent wind and waste biomass resources. Indeed, this year NAEC plans to install a heating system fired by wood pellets.

For individuals, burning less gas in our cars, using less fossil fuel for heating, and reducing our electrical usage are the most important ways to lessen our impact — and to save money. Some changes, such as switching to compact fluorescent light bulbs, inflating tires to the correct pressure, combining errands, or turning the thermostat down a couple of degrees, have very little up-front cost and can hardly be considered a sacrifice. Other possibilities — such as building homes that take advantage of passive solar heating — require significantly more foresight and investment. Since fossil fuels are used for almost all manufacturing and transport, buying less and buying locally produced products are reliable ways to reduce our emissions.

As Alaskans, we pride ourselves on facing challenges with fortitude, inventiveness, and good humor. If protecting the planet from additional climate change is not only a challenge but also an opportunity, we have nothing to lose by taking a bold lead. ☘

Certainly a massive global problem can't be solved by Alaskans alone; it can't be solved by anyone alone. In the long run we desperately need effective national and international efforts. However, top-down approaches such as the Kyoto Protocol have become politically mired in the U.S. If the national government moves too slowly, we, the people, need to move more quickly.

Renewable Energy Bills Shaping Up in Juneau

By Becky Baird
Community Organizer

Representative Harry Crawford introduced **House Bill 73**, which if passed, will appropriate \$24 million to build a wind turbine farm on Fire Island. Rep. Crawford states that this project will provide "an immediate way to slow the decline of natural gas reserves in Cook Inlet."

Representative Jay Ramras introduced **House Bill 28**, "An Act requiring retail suppliers of electricity to disclose sources of electricity to consumers." This would require retail electric suppliers overseen by the Regulatory Commission of Alaska to provide their customers with an annual report of the sources of their electricity, be it coal, diesel, wind etc. Rep. Ramras hopes that providing electric customers with this information will create an increased demand for renewable energy.

Representative Harry Crawford introduced **House Bill 56**, which supports the development of a hydrogen fuel industry in Alaska. This bill would position Alaska well for involvement in renewable energy research and development. Different versions of HB 56 have passed in the House in past sessions; the Senate has consistently voted the bill down. ♡

ACTION: Contact your Representative and urge them to support these bills.

Harris: 1-888-465-4859, Coghill: 1-877-465-3719, Kawasaki: 1-866-465-3466, Guttenberg: 1-800-928-4457, Kelly: 1-866-465-4976



What will Become of the Northern Forests?

By Nancy Fresco
Boreal Forest Campaign Coordinator

Climate, carbon, and Interior Alaska forests exist in a tenuous balance that may have already tipped.

Most scientists agree that it is likely the global boreal forest has served as a carbon sink for thousands of years – absorbing more carbon than it has released. The frozen peaty soils of the far north lock up vast stores of organic carbon, keeping it out of the atmosphere. But when these soils thaw, decay becomes much more rapid. Furthermore, hotter weather, especially if accompanied by dry springs, can cause unusually severe forest fires, while volatilize carbon from both trees and soils.

Some research, particularly that of UAF's Dr. Glenn Juday, predicts that warming and drying at the levels predicted by climate change models may turn some forested areas to grasslands.

My own research, using an adapted form of the Carbon Budget Model for the Canadian Forest Sector, predicted that a hundred years from now, if climate change continues as predicted, our forests may not be a carbon sink any longer. If so, climate change will be the cause of... yet more climate change. ♡



April 21 & 28

Electronics Recycling Event

April 21, 10 a.m. - 4 p.m. @ Taku Parking Lot, UAF;
April 28, 10 a.m. - 4 p.m. @ Lathrop High School.

Accepted Items: Televisions, computer monitors, laptops, keyboards, mice, modems, external drives, small scanners, printer, copy machines, cables, VCRs, DVD players, stereos, radios, phones, fax machines, camcorders, electric typewriters, microwave ovens, floppies, CDs, DVDs, telephones, and cell phones. Fees for recycling range from \$5 to \$25. For more information or to volunteer to help, please contact Interior Alaska Green Star at (907) 452-4251 or visit www.iagreenstar.org.



Tip of the Iceberg

Global Warming and the Arctic Refuge

By Pamela A. Miller
Arctic Coordinator

Will there be polar bears when I am 90?

Plus or minus a few years, my life expectancy could coincide with the disappearance of the polar bear's essential sea ice habitats. My adult life has focused on the protecting the wild ecosystem of the Arctic National Wildlife Refuge and now the need to find solutions to reduce global warming is increasingly part of the debate.

The polar bear embodies the spirit of the arctic as it roams the sea ice most of the year. The bears feed primarily on ringed seals but also bearded seals, walrus, beluga whales, and carcasses scavenged on the coast. One of the Arctic Refuge's specified purposes is to protect polar bears and their habitats. The Arctic Refuge coastal plain is the most important area for maternity dens on land in Alaska, and such land denning is increasingly the case, according to U.S. Geological Survey biologists.

Summer sea ice in the Arctic Ocean may disappear by 2040, including most of the arctic pack ice, according to a recent National Center for Atmospheric Research study. Because the polar bear's critical sea ice habitat may virtually disappear across their entire range, the U.S. Fish and Wildlife Service recently proposed listing the polar bear as threatened under the Endangered Species Act. Cumulative effects from other sources including contaminants, oil and gas development and other disturbances will further stress the bears. The Beaufort Sea polar bear population of 1,500 animals is declining, and their condition is poorer with lower weights, and reduced survival of young.

The dire condition for the polar bear needs our attention but more is at risk — the entire web of life in the Arctic Ocean as well as our human community.



The dire condition for the polar bear needs our attention
but more is at risk – the entire web of life in the Arctic ocean
as well as our human community.

The Arctic Refuge also shows other menacing signs of global warming. Permafrost temperatures warmed near Kaktovik about 2-3° C from 1985 to 2004, and on the coastal plain about 1.5-2° C from 1985 to 1998, according to a recent study. All the glaciers in the Arctic Refuge are melting. As the glaciers and pockets of snow in the mountains have disappeared, so have the caribou that used to rest upon them to avoid insects, said Matthew Gilbert an Arctic Village resident who collected Gwich'in traditional knowledge on global warming. The Porcupine Caribou Herd's migration timing and route has changed.

"Climate change is affecting every facet of Gwich'in life and is a threat," said Gilbert.

Are the polar bear and the Arctic simply doomed by the disappearing ice realm?

No, the recent study on accelerating loss of sea ice also

modeled greenhouse gas reductions scenarios. "One of the co-authors of the study recently re-emphasized that we have not crossed a tipping point yet, but rather, if we reduce greenhouse gases to 2000 levels, we can save the Ice Cap," notes Deborah Williams of Alaska Conservations Solutions.

This study said sea ice retreat would continue for another decade or two because of the effects of existing emissions, but that conditions could stabilize after that.

Fortunately, a seismic shift has taken place in Congress where global warming is the second hottest issue. We have a moral obligation to protect the Arctic Refuge for future generations and a key step is to find solutions that reduce global warming. This special place should not face the double jeopardy of global warming impacts and those caused by oil drilling and development, which in turn fuel more climate change and side-track development of clean, renewable energy. ♻

National Solutions

We are pressing the U.S. Congress to pass strong legislation to cap and trade greenhouse gas emissions and plow significant resources into renewable energy.

In the new Congress, Senators have already introduced two comprehensive global warming bills to reduce greenhouse gas emissions 15% by 2020 and more later, and Alaska's leaders penned some unexpected measures signaling the paradigm shift. The U.S. House set a new direction by passing H.R. 6 to end \$14-15 billion in giveaways to the oil and gas industry and redirect money into a new fund for investments in energy efficiency technologies and renewable power; action awaits in the Senate.

- **H.R. 39 (Rep. Ed Markey) Udall-Eisenhower Arctic Wilderness Act.** Designates the coastal plain of the Arctic National Wildlife Refuge as Wilderness. To protect the Arctic Refuge permanently would be a tangible symbol of our restraint and national commitment to developing real energy self-sufficiency that reduces greenhouse gas emissions.
- **S. 309 (Sanders-Boxer) Global Warming Pollution Reduction Act.** Requires a series of strategies, including cap and trade and increased energy efficiency standards and 20% renewable energy standard, with goal to achieve an 80% reduction in emissions below 1990 levels by 2050, the most ambitious long-term target level in Senate legislation.
- **S. 280 (Lieberman-McCain) Climate Stewardship and Innovation Act.** Pollution that causes global warming -- such as

carbon dioxide (CO₂) from smokestacks and tailpipes -- rises into the atmosphere and circulates globally. Therefore, a Cap and Trade system, that established This bill promotes many strategies, including cap and trade, increased energy efficiency and alternative energy, and subsidies to nuclear power, to achieve over a 65% reduction from 2004 levels by 2050.

- **S. 183 (Sen. Ted Stevens) Improved Passenger Automobile Fuel Economy Act of 2007.** Requires increase of a corporate average fuel economy (CAFÉ) standard for passenger automobiles up from 27 to 40 miles per gallon by 2017, if EPA determines that the benefits of this action outweigh the costs. "By increasing fuel efficiency, we will reduce greenhouse gases," said Senator Ted Stevens.
- **S. 298 (Sen. Lisa Murkowski) Renewable Energy, Fuel Reduction, and Economic Stabilization and Enhancement Act of 2007 ("REFRESH" ACT).** Provides incentives for renewable energy production, to increase fuel economy standards for automobiles, and to provide tax incentives for renewable energy production.

Take Action:

- Write Congress in support of the Arctic Wilderness bill.
- Ask Congress to support the strongest comprehensive mandatory legislation that reduces greenhouse gas emissions and increases support of renewable energy and energy efficiency. ♻

Goodbye, Old Pal

Remembering Gordon Wright

The Northern Center received a number of tributes to Gordon Wright, symphony conductor and ardent Alaskan conservationist, who passed away in February 2007. Below are memories of Gordon, submitted by his friends:

John Luther Adams

Gordon Wright was the friend of a lifetime. For some thirty years he and I shared our two great passions: music and nature. Gordon was my musical collaborator, my fellow environmentalist, and my next-door neighbor. Along with my dear wife Cindy, he was my best camping buddy.

Last spring at our annual tundra camp, Gordon and I talked as we always did about life and death, about the fate of our human species, and the meaning of it all. Gordon had little use for religion, which he held accountable for much of the intolerance and suffering of humanity. (I can't say that I disagree.) Yet although he might scoff at the notion, Gordon had faith.

Like the landscapes of the North that he loved so deeply, Gordon was expansive. He gave refuge. He embodied myth. His spirit lives on in so many ways, in so many people, in so many places. And I know he'll be with us again on the tundra this spring.

I wouldn't presume to speak for Gordon. But I offer these lines in his honor.

Credo
(in memory of Gordon Wright)

I believe in the mystery of being,
in the wholeness of life,
and the spirit in all things.

I believe in the tundra,
in the forests, in the rivers,
and the nameless mountains stretching to the sea.

I believe in the music
of the rising wind, the rushing water,
and the bell-tones of the hermit thrush ringing in the twilight.

I believe we are relatives
of the moose, and the swans,
of the birch, the cranberry, and the wild rose.

I believe that our destiny
is to know our place, to live in peace,
and to listen to the earth.

I believe that energy
cannot be created or destroyed,
that time and space, life and death are one.

And the music never ends.



Dennis Keeley

Birch Pavelsky

In 1982 or so Gordon and I flew via Larry's Air to a puddle of a lake high above the upper Charley River. We had Gordon's 6-Pygmy raft and maps, but no ground-truth.

The first load we toted to the river was the two raft bags and personal gear. We left nearly all the food at the lake. It was raining and we worked our way over big, lichen-covered boulders to the river, two hours below. We turned and climbed directly back. Near the top I saw that Gordon was fried. He sat down and was incoherent and weak. I went ahead and brought back food.

After he had eaten, he creaked to his full height and we humped up, fetched the rest, and humped down in the rain. Neither of us had an erg in us to erect the tent, but we did, and collapsed for 12 hours. Next day, as were about to launch into the high, muscular river, I said, "I've never rafted in white water before." "Me neither," Gordon said. We exchanged a poignant gaze.

Some ways down river I exclaimed at the beauty of yellow poppies along the bank. Gordon grunted. We camped on a sandy beach and had dinner. As I returned to the tent from washing up I spied a yellow poppy thriving three feet from the door. "Wow, Gordon, how did I miss this creature?" Gordon looked back at me without a smile or a word. He had secretly picked it and planted it there for me. That's Gordon.

Jim Hunter

"Speaking for myself Gordon was always my rock. He was the person I turned to, no matter how fierce the battle, nor how complicated the issue, nor how good or bad things seemed to be, or might have been, for a nod of guidance, or a look of approval. Gordon was absolutely the key figure around which the environmental center took shape. It was Ray Bane's idea, and it was my job to pick it up and run with it, but it was Gordon to whom we both went with it, and without whom it might never have worked as well as it did.

It was Gordon Wright, who brought a calmness and solidity, and a real dignity to those early meetings, to the ideas, to the battles which were many. It was Gordon Wright who would patiently listen to the rest of us spout and debate, and then suggest this or that. If we were the trumpets and cellos and kettle drums, he was indeed the conductor. Without him, I fear, we might not have set off on such a good foot; might not have written and performed such fine environmental "symphonies" as those we did. Might not have marched in such a successful direction. Of which we can all be so proud. I shall miss him greatly. As shall we all."



Northern Alaska
Environmental Center
Conservation's Northern Voice

ANNUAL REPORT 2006



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Board of Directors

As the Board of Directors looks back on 2006, particularly the small but significant victories in the fall elections, we find ourselves in a proactive position on the issues Northern Center members value including permanent protection of the Arctic National Wildlife Refuge, responsible mining policies, Global Warming solutions, and environmental education opportunities for youth.

As always, securing the financial future of the Center was the Board of Directors' main focus. Together, the Auction and the Major Donor Campaign brought in well over \$100,000, an increase of \$20,000 from the previous year. The balance on the building mortgage is down to \$71,000. Although we retained a two-month operating reserve throughout the year, we ran a deficit for 2006. Expenses for youth programming exceeded budget allocations, as did major building renovations (which are now completed). However, with countless volunteer hours spearheaded by board members Stan Justice and Bill Holman, the remodel costs were kept within reach. Furthermore, with the guidance of some key, long-time members of the Center, we are beginning work on a legacy giving program, our own version of the Permanent Fund (more on this soon).

Following the lead of our Executive Director, David van den Berg, we advanced our mission to protect the wilderness qualities of northern Alaska, a region of roughly 180 million acres that includes 18 national parks and wildlife refuges created in 1980 by the Alaska National Interest Land Conservation Act (ANILCA). We have further committed to comprehensive youth education programs for Interior Alaska. We also furthered our service to and visibility within the Fairbanks community, building local support and supporting national efforts for conservation.

Arctic

With Pamela A. Miller heading up our Arctic Program, we turned a corner this year in our long-term campaign for Wilderness protection for the Arctic National Wildlife Refuge. We also encouraged a nation-wide paradigm shift on the need to reduce greenhouse gas emissions to address Global Warming.

Through wave after wave of attempts to drill the Refuge, NAEC volunteers made nearly 2,000 calls to members and activists to generate a greater effort urging Congress to protect the Arctic Refuge. After the elections, we ended 2006 on course with plans to permanently protect the coastal plain and the Western Arctic and to advocate for curbing America's oil consumption.

Through media like *USA Today*, the *Philadelphia Inquirer*, and the *San Francisco Chronicle*, we helped

national audiences understand the laxity and carelessness among oil companies and regulators that allowed a record-breaking crude oil spill on Alaska's North Slope. When Secretary of the Interior Dirk Kempthorne visited Fairbanks for his very first "Listening Session on Cooperative Conservation," Alaska Native leaders, the Bishop of the Episcopal Church for Alaska, and Fairbanksans set a tone so forceful about protecting the Arctic Refuge, Teshekpuk Lake and sensitive areas in the Western Arctic that industry representatives opted not to testify.

In an effort to restore a balance between development and wildlife protection in Alaska's Western Arctic, NAEC and other groups mounted a media, grassroots and legal campaign to protect Teshekpuk Lake and other critical habitat in the National Petroleum Reserve-Alaska. We remained vigilant in the Western Arctic and advocated for basic protections for the region's wilderness and wildlife qualities.

As Global Warming topped the charts for household words this year, we encouraged understanding of the issues and new policy solutions through the media, comments to agencies and the Climate Impact Assessment Commission, and educational lectures to foster community, state, and national efforts to reduce greenhouse gas emissions. The Fairbanks North Star Borough passed a resolution that urged state and federal leaders to "...move forward on programs to cap or reduce greenhouse gas emissions."

Closer to home, we beat a small but terrible bill in Juneau that would have done more than its share to change the Arctic. Alaska State Senate Bill 85 would have opened the 450-mile long Dalton Highway to All Terrain Vehicles (ATVs). We beat this bad bill in the waning days of the session by a committee vote of 3-2.

Finally, we assumed the Arctic Gems website at the invitation of the groups who created it.

Youth Education Programs

The steady growth of our now year-round youth education programs is promising, because as we reach more young people, we also reach their families and share with them through their children the value of Interior Alaska's wild lands and natural history.

We brought stability and a greater capacity to support youth education, like *Camp Habitat* and *Camp Habitat After School*. In January, we cooperated with the Fairbanks North Star Borough School District to successfully launch the Camp Habitat After School Program at two elementary and two middle schools in Fairbanks. The program was so well received that we were invited back to do the program at six schools for the 2006-07 school year. We increased the staff from three to four instructors, retaining two from the pilot semester.



Our Mission

The Northern Alaska Environmental Center promotes conservation of the environment and sustainable resource stewardship in Interior and Arctic Alaska through advocacy and education.



In March Laenne Thompson came aboard to fill the new Youth Education Director position designed to achieve continuity from year-to-year with the summer camps, direct the after-school program, and secure funding for all youth programs. Katherine Helmuth, our VISTA volunteer, oriented Laenne and then departed in April after her year-long commitment came to an end.

Jenny Day was hired to direct Camp Habitat Summer Camps, including five week-long day camp sessions and two week-long backpacking trips, for 167 youth ages 4-18. She hired four day camp instructors, four junior counselors, and three backpacking instructors. Jenny will be back in 2007 as the Camp Habitat Summer Camps Director, and we are delighted to have this continuity for the first time in several years.

Susan Grace stepped down from the Camp Habitat Advisory Board in May after being the chairperson who devoted countless hours to support the popular summer programs she founded in 1991. Northern Center Board Member, Ritchie Musick, stepped in as chair to lead the Advisory Board as it continues to look after the integrity, curriculum, and financial sustainability of all Camp Habitat Programs. A big thanks to all Camp's devoted supporters!

Another highlight for the year was a new collaboration with Alaska Youth for Environmental Action, in which we support a Fairbanks chapter of local teens who work on educational and action campaigns related to global warming and recycling.

Mining

Throughout the state, high mineral prices drove a flood of hard rock mining exploration, much of it in Interior and Northern Alaska. At the Northern Center, we changed staff in our Mining Program when Shauna Mikelich replaced Meg Schlesinger in September.

The Northern Center supported mining reform legislation in Juneau and commented on numerous permits for existing northern mines to ensure the highest level of environmental protection. In coalition with Alaskans for Responsible Mining (ARM), we submitted comments on the National Pollutant Discharge Elimination System permit renewal at the Red Dog lead/zinc mine. We participated in the Red Dog Mine Closure and Reclamation meetings. We submitted comments on several permits for Nova Gold's Rock Creek Mine, currently under construction near Nome. With our allies from the Center for Science in Public Participation, we reviewed Nixon Fork reclamation plans and tendered comments on the proposed Fort Knox Walter Creek cyanide heap leach expansion.

The Northern Center commented on numerous

permits for possible locations of future mines in northern Alaska. Exploration projects Donlin Creek and the Tangle Lakes were foremost among the properties we reviewed. We now host the Save Tangle Lakes website.

The Donlin Creek mine underwent a feasibility study for power and infrastructure development, and we participated with Earthworks in an EPA review of mine mercury emission regulations. The Northern Center and UAF Natural Resources Department co-sponsored a Mining Panel that successfully showcased all sides of an exploration project prior to permitting and mine development. We tracked the BLM's plan for the Southern National Petroleum Reserve-Alaska and wrote critical reviews of feasibility studies on mining in the remote region.

Mining needs roads, so the Mining Program got up to speed on a large road and port-site pork barrel infrastructure project in the northwest Arctic called the Delong Mountain Terminal System expansion. We prepared comments for the Army Corps of Engineers on the expansion's Draft Environmental Impact Statement.

Local and Forestry

Nancy Fresco, our Forestry and Local Issues Coordinator, continued to improve our efforts in the Interior through advocacy, education, and participation in community activities. We focused on fostering sustainable multiple use of Interior Alaska forests; planning for Borough-wide comprehensive recycling; moving our own organization and others towards green energy sources in order to prevent climate change; and encouraging broader local participation in conservation issues. In particular, we strengthened our organization's role in the community by reaching out to our cadre of talented and willing volunteers.

We reached out to the community through a range of local events. Once again, we hosted a successful booth at the Tanana Valley State Fair, assisted with Earth Day festivities, and led sessions at UAF's Sustainable Living Conference. We also hosted a viewing of the Bill Moyer's film "Kids and Chemicals," gave school presentations on forest conservation, and partnered with Interior Alaska Green Star to hold the first local electronics recycling event.

As part of the Borough Recycling Task Force, we assessed the options available for creating a more comprehensive recycling program in the Fairbanks area. The advice of this group was presented to the Mayor in September and is now being incorporated into a larger plan that may include waste-to-energy generation.

With local logging taking place only at a small-scale level to support Alaskan markets, fire management and biomass energy are among the biggest forest is-



Our Vision

We envision a naturally thriving, biologically and culturally diverse, wildlands-rich, sustainable, inspiring and thoughtfully protected northern Alaska, forever.



sues in Interior Alaska. We are eager to wean our local economy—including our own building—off fossil fuels and are interested in the potential of using waste wood as a carbon-neutral fuel. Thus, we are forging ahead with a plan to replace our oil heating system with a wood pellet boiler.

Denali and Statewide

For three years, the Alaska Conservation Foundation has funded the Defend Alaska Now! legislative internship to increase the capacity of Alaska's three homegrown regional organizations to better engage in the state legislative session. The DAN! intern informed Northern Center members of legislative happenings and sought member action when citizen participation was in order.

We had a good year at the state level advancing the good and stopping the bad legislation despite an unfavorable legislature backstopped by Governor Murkowski. Working in concert with many Alaskan organizations, we helped to pass legislation creating the Climate Impact Assessment Commission whose job it is to catalog the impacts of global warming and recommend steps Alaska can take to adapt to the phenomenon. We helped to defeat a senselessly bad bill pushed by a powerful state senator that would have opened the 450-mile-long Dalton Highway to All Terrain Vehicles. The Northern Center served as fiscal sponsor of the Denali Citizens Council and worked with them to score a remarkable feat of removing \$8 million from the capital budget for construction of the Stampede Road. (In January 2007, the incoming Palin administration withdrew all funding for the project.)

Late in the year, we convened with many Alaska conservation organizations to select three legislative priorities for the coming session. (For the ongoing 2007 session, our statewide legislative priorities are: funding up to \$100 million for renewable energy, affix a reasonable and equitable tax on coal, and disallow discharges into salmon spawning areas.)

Annual report design and layout by Mary Zalar.

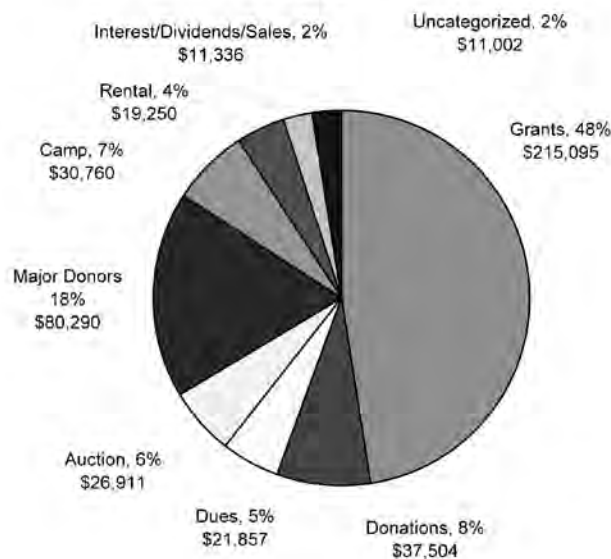
Cover photo of caribou crossing Angun River on the Arctic Refuge coastal plain is by Ken Whitten; inside photos of Golden Plover, wolverine, and wolf are by Ken Whitten; inside photos of Camp Habitat are by Laenne Thompson.

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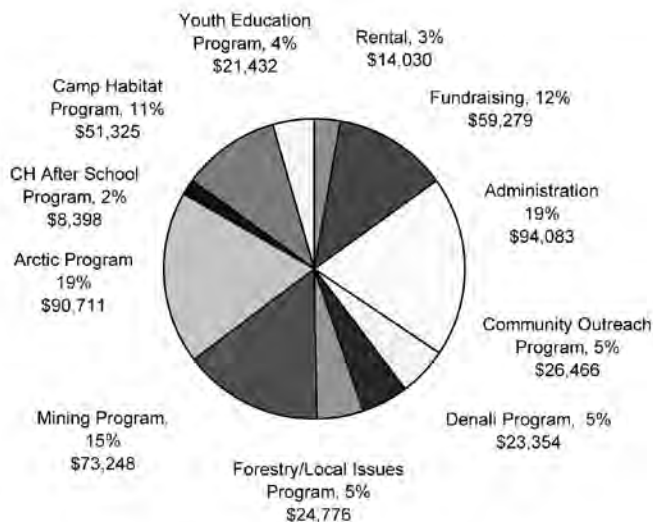


2006 Financial Report

2006 Income
\$454,004



2007 Expenses
\$490,317



Footnotes:

\$85,425	Mortgage balance as of January 1 st
\$71,179	Mortgage balance as of December 31 st
\$14,246	Total mortgage principal payments
\$27,562	Total remodel costs (included in expenses above)



Camp Habitat Summer Camps 2007

Nature Education & Ecology for Youth Ages 4–11 at Creamer's Migratory Waterfowl Refuge

Camp Habitat Schedule

PRE-SCHOOL PROGRAMS

Half-Day Program 9 a.m.–12 p.m.

Ages 4 – 5 \$110

Nature Sprouts I June 18 – 22

Nature Sprouts II. June 25 – 29

DAY CAMP PROGRAMS

Full-Day Program 9 a.m. – 4 p.m.

Ages 6 – 7 \$185

Nature Detectives I July 9 – 13

Nature Detectives II. July 16 – 20

Nature Detectives III July 23 – 27

Ages 8 – 9* \$235

Water Striders I July 9 – 13

Water Striders II July 16 – 20

Ages 10 -11* \$235

Refuge Adventurers July 16 – 20

*includes 1 overnight campout



Registration Information

A onetime registration fee of \$20 is required per family. Tuition and fees must be paid in full to secure your child's registration.

Register Three Easy Ways!

1. Phone: Complete Camp Habitat's registration form. Call Camp Habitat at (907) 452-5021.

Be prepared to give your Visa or MasterCard number.

2. Mail completed registration form to:

Camp Habitat

830 College Rd

Fairbanks, AK 99701

3. Online: Online registration is available

March 1 - June 1. Go to: www.northern.org

QUESTIONS?

Call (907) 452-5021 ext. 32 or

Email camphabitat@northern.org

NOW HIRING for SUMMER '07!

Camp Habitat is looking for *qualified Day Camp Instructors* (professional teachers, outdoor educators, college juniors & seniors) and **Junior Counselors** (high school juniors & seniors).

Please visit www.northern.org to view job descriptions and download applications.

Send all required application materials, including 3 references to 830 College Rd., Fairbanks AK 99701 or email to camphabitat@northern.org.

SCHOLARSHIPS available.

Call for more information. ☘

Reducing Energy Use is as Easy as 3-2-1!

by Jenni Moore
Fairbanks AYEa Co-Chair



Each year Alaska Youth for Environmental Action (AYEA) has a focus project carried out by AYEa chapters throughout the state. This year, AYEa is working on the 3-2-1 campaign. In this, group members collect pledges for people to:

- 3** Replace 3 regular incandescent light bulbs with compact fluorescent light bulbs
- 2** Turn their thermostat down 2 degrees, and
- 1** Unplug 1 electronic appliance, such as stereos or chargers, when not in use.

The overall goals of this campaign are to: 1) reduce household utility bills and 2) reduce Alaska's household energy consumption, which slows human contributions to climate change. The beauty of the 3-2-1 campaign is that it's easy for anyone to do. Small conservation steps like these can have a great effect on the overall health of our state and world. When you sign our pledge, you get a small sheet that states the terms of the agreement, which you can stick to your refrigerator as a reminder.

Our goal is to get 500 pledges in Fairbanks. By doing this, not only will we reduce Fairbanks' consumption, but we increase education. Many people aren't aware of the simplicity of conservation, and the repercussions of using as much energy as we do. We hope that as awareness of our campaign rises, so will awareness of the greater issue.

Save green and be green! Sign the 3-2-1 pledge at Fairbanks events, or sign it online at www.ayea.org.

Fairbanks Alaska Youth for Environmental Action (FAYEA) meets every other Wednesday at the Northern Alaska Environmental Center. For more information, call Laenne Thompson at (907) 452-5021 ext. 31. ♻



**3-2-1
EFFICIENCY!**

I pledge to

- 3**—Replace **3** incandescent (regular) light bulbs with **3** compact fluorescent bulbs* (saves 300 lbs. CO₂/year*)
- 2**—Keep my house **2** degrees colder in winter (2,000 lbs. CO₂)
- 1**—Unplug **1** electronic appliance (toaster, hair dryer, etc.) when not in use (1,000 lbs. CO₂)

* CO₂ statistics courtesy www.AlaskaConservationSolutions.com
CF bulb disposal: www.TotalReclaim.com

**BE
GREEN,
SAVE
\$GREEN\$**

907-339-3907/3980 fax
AYEA@nwf.org
www.AYEA.org

TEAR HERE

#

**YES! I'M TAKING
THE 3-2-1 PLEDGE!**

NAME

ADDRESS

CITY STATE ZIP

E-MAIL

PHONE

AGE/SCHOOL (if appropriate)

Coal and Infrastructure Expansion in America's Arctic

Arctic under pressure if America switches from oil to coal

By Shauna Mikelich
Mining Coordinator

For almost 30 years, no new coal fired power plants opened in the U.S. and recently 150-plus have been proposed throughout the country. Coal is seen as a cheap energy source with an abundant national supply and the Alaskan Arctic holds one third of all U.S. coal.

Our Arctic is under threat from coal development and, more importantly, the climate change that will follow this coal consumption.

Large deposits of low-sulfur bituminous and subbituminous coal lie beneath the western Arctic, particularly in regions of the National Petroleum Reserve-Alaska (NPR-A) and Arctic Slope Regional Corporation (ASRC) lands. Coal quality is based on a variety of factors, and in

order of decreasing power potential, ranges from anthracite to bituminous and subbituminous to lignite^{1,2}. Northern Alaskan reserves are thought to represent one-third of all bituminous coal reserves in the United States and about one-ninth of the world's reserves³. An estimated 400 billion to 4 trillion tons of high-quality coal underlies 30,000 square miles of northern Alaska, a huge resource⁴.

The NPR-A southern planning area is undergoing an environmental impact statement (EIS) process which, in addition to petroleum and gas, currently includes analysis of potential coal and hardrock development. Mining is presently prohibited and an act of Congress is required to open the NPR-A to mine development. While many pro-industry groups are encouraging the Bureau of Land Management to explore the southern planning area mineral resources, several Native groups are tacitly against NPR-A mine development due to concerns for the Western Arctic Caribou Herd calving grounds.

The ASRC has test-mined surface and underground deposits on their lands outside the NPR-A and recently contracted with BHP Billiton for a five-year coal exploration program. The area under exploration is estimated to be about 300 miles by 150 miles, in a remote location without infrastructure, making

development problematic. The current development scenario would include one or more mines near the Chukchi Sea coast with either a railway or an all weather road leading south to the DeLong Mountain Transportation System (DMTS) port, currently used exclusively by Red Dog Mine for lead/zinc concentrate export. However, before the port can be used to export coal it must be upgraded and expanded to allow for additional traffic.

The DMTS is currently undergoing the EIS process for a proposed expansion to create a deepwater channel and an extended docking facility. The

study, conducted by the Army Corps of Engineers (ACoE) and co-sponsored by the Alaska Department of Transportation and Public Facilities, was initiated by the Alaska Industrial Development and Export Authority (AIDEA). AIDEA owns the current DMTS and Red

Our Arctic is under threat from coal development and, more importantly, the climate change that will follow this coal consumption.

Dog Mine pays a usage fee throughout the life of the mine. The expansion and deep water port are touted as regionally beneficial for the following reasons: (1) reduce Red Dog concentrate spill potential, (2) cut loading time in half, (3) reduce weather related downtime, (4) extend the shipping season to December, (5) reduce operating cost of exports and imports like fuel oil, (6) improve the DMTS multi-purpose options so it can act as a regional hub for mineral and coal export. The expansion is estimated to cost \$240 million, roughly \$200 million from AIDEA/state funds and \$40 million federal. ☘

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¹ American Coal Foundation. 2002. Types of coal. <http://www.ket.org/Trips/Coal/AGSMM/agsmmmtypes.html>. Accessed 12 February 2007.

² Plafker, G., and H.C. Berg. 1994. "Coal in Alaska." The geology of Alaska. The Geology of North America G-1. Boulder, CO.

³ ASRC. 2001. Western Arctic coal. <http://www.asrc.com/lands/lands.asp?page=coal>. Accessed on 12 February 2007.

⁴ Dworsky, R.F., and J.H. Ducker. 1991. The National Petroleum Reserve-Alaska, a reader. BLM-AK-PT-91-004-1120-910-Rev 91. BLM, Alaska State Office.

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PETROLEUM

"Anchors fell off of two 941-foot oil tankers carrying Alaska crude oil "in heavy weather" from Alaska to Long Beach, California. They were "discovered missing when the tankers arrived at Long Beach" in late December. Each ship has two anchors but the remaining anchor on each ship was cracked." The owner "is flying four 15-ton anchors from Holland." *FDNM*, January 13, 2007.

ExxonMobil gave \$16 million to 43 "ideological" groups between 1998 and 2005, in an effort to mislead the public by discrediting the science behind global warming; according to the Union of Concerned Scientist; this "mirrors similar claims [of misleading publicity] by Britain's Royal Society." *FDNM*, January 4, 2007.

WILDLIFE

A ban on aerial wolf shooting has been approved for inclusion on the 2008 state ballot. *FDNM*, January 17, 2007.

Harbor seals in Glacier Bay National Park have declined "precipitously" recently, and biologists don't know why. *National Parks*, Winter 2007.

The Chilkat Bald Eagle Preserve had an increasing number of high-powered jet boat tours operating freely on the Chilkat River, and local environmental groups and Native leader have joined with Earthjustice to "challenge" the Dept. of Natural Resources' decision to let the boats continue. *Earthjustice 2007 Docket*.

POLLUTION

"Metals and pesticides (such as Roundup) at concentrations commonly found in streams can impair a salmon's sense of smell just as effectively as plugging its nostrils. They have the same effect on other organisms - even exposure on the order of hours...can interfere with olfaction."

Waterborne copper, from pesticides, agriculture, runoff, and wearing brake pads (on vehicles) also impair the senses of smell of many other fish and invertebrates. Increasing runoff from urban areas or from plowed fields, roads, storm drains, etc., can destroy the sense of smell and "may explain why salmon are disappearing from streams throughout the west." *Science News*, January 27, 2007.

Smog – ozone – is breathed in by nearly 160 million people in the U.S. mostly in cities on the east and west coasts. The EPA may recommend "tougher" standards for it, but Pres. Bush is recommending more use of ethanol, which generates more smog than gasoline. *FDNM*, January 16, 2007, p. A1, A5.

MISCELLANY

The U.S. Navy is again trying to "deploy its most intensive sonar system across 75 percent of the world's oceans; the sound travels more than 300 miles at levels that disturb marine organisms. At close range it "threatens" the survival of entire populations of whales and other marine mammals. The National Marine Fisheries Service is expected to decide on the system's use by July 2007. *Nature's Voice*, Jan-Feb'07.

There are 511,000,000 acres of public lands that are in "unacceptable condition and need to be better managed" by the U.S. Forest Service and Bureau of Land Management. They are leased "at less than fair market rates," most of them to special interests. "Water pollution is growing rapidly", with millions of tons of toxic chemicals being dumped into the nation's waterways, which has forced 46 states to issue bans warning people not to eat fish from over 4000 bodies of water. *National Wildlife*, received January 2007.



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