

THE NORTHERN LINE

The Journal of the Northern Alaska Environmental Center

April 10, 2001

Volume XXIII, Number 2





Change in Seasons

by Arthur Hussey

Spring is coming, giving us the chance to welcome longer days, returning birds and the prospects of summer. Spring also means we say good-bye to some long-time acquaintances: the winter of 2001 (whatever there was of it), the election of 2000 and, for many of us, accumulated household detritus of a year.

Here at the Northern Center, we're also bidding farewell to two familiar features: 218 Driveway Street and the Intertie controversy. Both have been icons of the Center. Both have contributed enormously to our mission. And both are better off serving us as vibrant memories of our proud past rather than as demonstrations of our current priorities.

I'll start with the former, 218 Driveway Street, the green building across from the *News-Miner* that has been our home for the past two decades. It has nurtured us from the relatively young age of ten years old, when we were a much smaller, primarily volunteer organization of committed preservationist believers, to today's professional, broad-spectrum environmental agency. It has seen some of our most public efforts, from the Susitna dam campaign to the recent Intertie debate, as well as some of our less celebrated but just as important developments, such as sponsoring Camp Habitat and establishing our partnership with the Pogo mine.

But as we all know, development and change do not come without sacrifices. In

our case, the loss is 218 Driveway, our erstwhile home. This building, despite our best intentions, is too small (it provides barely 30% of the floor space our staff require), is aging (with heating bills equivalent to buildings of twice its size) and is unbecoming of our reality (appearing not only somewhat shabby but also wastefully energy-inefficient). Those who know our building will not quibble with me.

Therefore, the Center will be moving on July 1, 2001 to new premises at 830 College Road, near Creamer's Field. Our new home has about 50% more floor space on the ground floor than does all of 218 Driveway, plus two apartments and an associated outbuilding. It is also in markedly better condition and is closer to offices of our key partners, including Friends of Creamer's Field, the Boreal Forest Council and others. These characteristics, and others, leave us sure that it will serve us well for many years to come and stimulate even better programming from the staff.

On a more serious note, the Northern Center is also saying good-bye to its role as a litigant and plaintiff for the Northern Intertie. Doing so has been difficult, after all, no issue in recent years has so galvanized us, or Fairbanks. Externally, it has shaped public opinion about us, good and bad, and assisted the community to articulate issues of the wildlands/development dichotomy. Internally, it has focused our policies on public participation in state land use decisions and helped us reach out to non-traditional partners. All benefits, to be sure, but only means to the end, *the very important end*: the choice of the final route

of the Intertie.

That end, barring the unforeseen, has been reached after some eight years of application: the Intertie shall cross the wetlands known locally as simply "The Flats." This isn't the finale we wanted. But it is the decision. We accept it.

Contesting it is possible. But doing so would recall the expression, "When the elephants fight, it is the grass that suffers." Just remember the acrimonious debate and advertising that led up to Pourchot's announcement on March 1. No one needs a repeat of that, certainly not Fairbanks, our community. Instead, we will assist in reducing negative impacts of Intertie construction and operation, in part by visiting and reporting on the construction. But we will not contest the basic edict to build across the Flats or otherwise neglect our primary mission: to preserve, protect and improve all aspects of Northern Alaska, our home.

Therefore, as the Intertie issue fades, we'll renew our commitment to local issues, to assisting the educational community. We'll do this over the coming weeks by starting up the long-delayed Local Issues Program, in order to increase our capacity to respond to environmental issues of importance to Fairbanks. We'll also ramp up technical assistance to our forestry, education and mining partners. And of course we'll kick off the well-known Camp Habitat, the nature based day camp for children.

So if spring brings us some farewells, so too does it bring renewals, our two emerging fellows: a bright new home, and an enhanced focus and commitment to Interior and Arctic Alaska. Two fairly nice developments to look forward to as days lengthen and the sun returns.

THE NORTHERN LINE

Environmental News of Arctic and Interior Alaska

The Northern Line is published quarterly by the Northern Alaska Environmental Center, 218 Driveway St., Fairbanks, Alaska 99701, <info@northern.org>, <http://www.northern.org>. Copyright © 2001 by the Northern Center. All rights reserved. Subscription rate is \$30 annually and includes membership. We encourage letters and articles to be submitted for publication. We reserve the right to edit all submissions.

The Northern Center is a not-for-profit, environmental education and advocacy organization dedicated to preserving and protecting wilderness, natural habitats, and the quality of life in Interior and Arctic Alaska. The Northern Center has 1,150 members.

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The cover photo of a grizzly bear was taken by Charlie Ott.

The back page photo of the Arctic Ocean was taken by Beth Caissie.



Platinum Mine Proposed for Tangle Lakes

By Mara Bacsujlaky

What do Interior and South-central residents, mushers, winter sports enthusiasts, photographers, anthropologists, archeologists, poets, writers, fishers, hunters, and conservationists have in common? Right now, a growing alarm over the activities of M.A.N. Resources, a privately held exploration company, which, in conjunction with the Canadian Nevada Star Resources Corporation, controls over 90,000 acres (160 square miles) of mining claims on the southern flank of the Alaska Range. The area is divided into north and south claim blocks called, respectively, the Eureka Creek and Tangle Lakes Prospects. M.A.N. Resources is looking not for gold but for platinum and related platinum group elements—palladium, rhodium, ruthenium, iridium, and osmium.

The eponymous Tangle Lakes Prospect encompasses the Lakes and the Denali Highway, stretches from Paxson to the Maclaren Glacier, and extends north to the Alaska Range. It includes the central por-



Tangle Lakes is valued for its diverse landscape—first-class mountain lakes for fishing & boating, glacier-fed rivers, terminal moraines & sweeping mountain vistas.

tion of the Delta Wild and Scenic River Corridor, and the northern third of the Tangle Lakes Archeological District, which contains one of the densest concentrations of late Pleistocene and early Holocene archeological sites in the subarctic. A place of stunning beauty, the Tangle Lakes region is valued for its diverse landscape—from mountain lakes with first-class fishing and boating opportunities to its glacier-fed rivers, terminal moraines and sweeping mountain vistas. Residents and visitors berry pick, hunt, bike, ski, mush, snowmachine, fish, canoe and hike there. It is an important migration corridor for the Nelchina caribou herd, and a high-use area for subsistence hunters.

“World-Class Mineral Potential”

How did the Tangle Lakes area become the focus of platinum speculation? Over six years ago, Nevada Star Resources, a junior mining company registered in British Columbia, began acquiring claims held by the American Nickel and Copper Company—which had explored primarily for nickel and copper. Geological literature reviews suggested that certain types of rocks found in the Tangle Lakes region were similar to those elsewhere that hosted significant platinum and platinum group element mineralization. Good results from random field samples led to more in-

depth exploration, which eventually led to a partnership between Nevada Star and M.A.N. Resources. Over the past two years, M.A.N. Resources conducted preliminary exploration, including airborne magnetic surveys, on the prospects. An expanded drilling program is proposed for the 2001 season.

Mineral exploration in the Tangle Lakes region is certainly not new—prospectors and placer gold miners and the occasional large mining company have poked around in the hills and drainages for years. However, according to M.A.N. Resources’ web site, their assessment work has identified “an area potentially containing the largest undeveloped source of Platinum Group Elements in North America.” In the same hyperbolic vein, the company speculates that Tangle Lakes and Eureka Creek potentially contain the “world’s second largest supply of platinum group metals.” While their report is fashioned to attract investors, it is worth noting that local prospectors have found platinum nuggets in area creeks. This, coupled with the good accessibility of the prospects, and the significant amount of money that M.A.N. Resources has expended on preliminary exploration indicates that a future platinum mine in the Tangle Lakes—Eureka Creek region is not entirely “pie-in-the-sky” advertising.

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“Humans now move more earth by mining than is carried to the sea by all the world’s rivers.”
(Young and Sachs, 1994)

Hot New Metal

While it is a long road from drilling to mining, the economics for development are especially good now because platinum is selling at record highs. Averaging \$600 per ounce, the metal's value has increased because of uncertainty of supply due to unstable socio-economic conditions (90% of the world's platinum comes from Russia and South Africa) and increased demand (platinum is used in catalytic converters and computers). With gold at record lows, many junior mining companies that relied on gold prospects to sell stock are now beating the platinum drum in an effort to revive waning investor interest. With only one platinum producer in the United States—the Stillwater Mine in Montana—it seems inevitable that Tangle Lakes and Eureka Creek will receive plenty of interest from parties hoping to ride the platinum wave.

Mining Platinum

Although rare, platinum is mined like any other metal. It may be found as pure metal but is more likely to occur in sulfur compounds. Cooperite, braggite and laurite—obscure minerals bearing their discoverer's names, and never seen by most geologists—are the platinum group sulfides. Platinum and palladium can also occur within the more familiar iron sulfides, pyrite and pyrrhotite. Therefore, mining platinum requires not only excavating and concentrating the ore, but also separating, or smelting, the metals from the sulfides.

Were a platinum mine to be developed at Tangle Lakes, it would closely resemble Cominco's Red Dog zinc-lead mine near Kivalina, except that it would be an underground, not an open pit, mine. There'd be gigantic ore-crushing machines, and huge flotation tanks containing chemicals to froth and concentrate the ore. After skimming off the concentrate, the remaining rock slurry would be pumped to a tailings impoundment—likely a valley fill created by a dam at the base of a stream valley. There'd be waste rock dumps and, potentially, process water ponds formed by damming local streams, to provide the copious amounts of water that milling ore requires.

Acid mine drainage from mine activities would be a primary concern because the region is the cradle of several major river systems. Acid mine drainage is the generation of sulfuric acid from the reaction of air and water with sulfides in ore, waste and tailings. Acid mine drainage results in increased heavy metal leaching and acidification of ground and surface waters. Aquatic habitats and drinking water supplies can be poisoned; and as Acid mine drainage can continue for thousands of years, perpetual water treatment is often the only (and expensive) remedy.

What's Next?

For now, it appears that M.A.N. Resources is focused on raising money, continuing a moderate drilling program, and securing its land positions. The company lobbied state legislators and the Alaska Division of

Mining, Land and Water to ask for conveyance of state-selected lands within their holdings. Accordingly, the Denali Block, as it is called, has been moved to the priority list for 2001 and Bureau of Land Management has received a conveyance request from the state. Ruth McHenry of the Copper Country Alliance, located in Glenallen, is closely monitoring developments, and coordinating with local residents and users that are concerned about the fate of Tangle Lakes. She can be reached at (907) 822-3644.

For more information about M.A.N. Resources, for maps of the Tangle Lake and Eureka Creek Prospect locations, and to view reports on exploration activities visit their website at <www.manresources.com>. For general information on platinum mining see Stillwater Mining Company's website: <www.stillwatermining.com>.

Boreal Shorts

Buffer Zone Issue Reaches State Legislature

By Nancy Fresco

Recommendations for logging buffer zones along fish-bearing waters in the Interior have reached the state legislature. A consensus-based stakeholders' committee drafted the proposed changes to the Forest Practices Act this fall; the Northern Center took part in this group. The proposed changes would require buffers on all waters greater than three feet wide that contain anadromous or high-value resident fish (essentially any fish utilized by humans) at any time during a normal year. The proposed buffers vary in width—from 66 to 100 feet on each bank—according to land ownership and waterbody type.

The question of whether streams narrower than three feet should be buffered will be revisited during inter-agency field research this summer. The Northern Center has advocated for protecting these streams because they may provide refuge for fish during storms and floods, because we believe that ecosystem values other than fish habitat have been overlooked in this process, and because upstream ac-



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A small stream flows through the Tanana Flats wetlands.

tivities in small headwaters will inevitably affect downstream conditions.

The committee's recommendations were converted to legal language, and on February 16 the Governor introduced identical versions of the bill in both houses of the legislature as House Bill 131 and Senate Bill 98.

Wetlands, Woodlands & the Intertie Conclusion

By Nancy Fresco

On March 1, Commissioner Pourchot of the Alaska Department of Natural Resources officially selected the Rex/South route across the Tanana Flats as the site for the Northern Intertie powerline. This is an unfortunate choice of routes from the point of view of our landscape, our wildlife, and our quality of life here in Fairbanks. For all of us who have worked to protect the vast expanse of wetlands and forest between the Tanana River and the Alaska Range, it is a profound disappointment. Around the state—and around the world—wild lands have too often been devalued and defaced in the path of industrial progress, even when a better solution was available.



A lone powerline tower pokes up above black spruce along the Parks Hwy.

On the other hand, the level of debate and effort generated by this issue has been continually encouraging. This was essentially a local issue, a battle that Interior Alaskans fought for their own 100 miles of wild, wide-open space. Often, our representatives at the Federal level like to portray the denizens of the “last frontier” as a unified voice for consumption and exploitation, for development without foresight and growth without conservation. They would like to think that Alaskans are thwarted in this sort of Manifest Destiny only by “interference” from outside the state. But the hundreds of letters and phone calls, and the cumulative time that local residents spent working on the issue or talking about it over

the course of months and years indicate that many Alaskans still feel strongly—very strongly—about protecting our untrammeled wildlands. It is good to know how many people agree that development shouldn’t be planned by drawing a line across a map, by “hiding” ugly towers far from already-scarred areas, or by counting expediency as the only relevant value. The public made it abundantly clear in this case that many other values were at stake. We have good reason to believe that these efforts will cause other industries and other policy-makers to more thoroughly examine how they choose to build and operate in the future.

In addition, in the course of the public

process on this issue, over 40 stipulations were added to the construction plans, many of which were intended to mitigate the harmful effects of building in the Flats. Of course, these stipulations cannot possibly eliminate more than a fraction of the potential problems, but they nonetheless represent concessions that were made on the behalf of concerned citizens.

We hope that all who threw their energies into this issue will continue to work as stewards of the land—the forests, the rivers, the wetlands and tundra—because, as is obvious from the decision that has just been made, our voices still need to be heard.

Denali Watch

Preliminary Plans for Denali’s Backcountry

By Linda Paganelli



Early this year, the Denali National Park Planning Team distributed a special edition of ‘The Denali Dispatch’ to introduce the team’s preliminary efforts towards formulating a Draft Backcountry Management Plan. A specific backcountry agenda is deemed necessary in order to address the increasing number of visitors wishing to travel into the more remote re-

gions of the park, both on foot and by motorized means, and to confront potential impacts to natural resources.

Even though the comment period closed on March 15, there will be ample opportunity to provide feedback to the team throughout the planning process. The Draft Plan along with an Environmental Impact Statement will be available some-

time this autumn. The Final Plan will ultimately serve to amend the 1986 General Management Plan and will provide park managers with a more definitive approach to identifying and managing appropriate uses and level of users for the Denali Backcountry over the next 15 to 20 years.

Although this may, at first, appear to be a straightforward task, in reality assessing even these preliminary efforts has brought to light many complex and controversial facets that surround this effort. For more information on some of these subjects see related articles in this issue of the *Northern Line*.

Refuge Actions in Washington, DC

by Deb Moore

This past February, two new pieces of legislation were introduced into Congress that would directly affect the protected status of the Arctic Refuge coastal plain.

On February 23, Senator Murkowski introduced the National Energy Security Act of 2001 (S.388 and S.389) with twelve cosponsors (now up to 16). Despite its drastic impact on the US public's last great wilderness area, Senator Murkowski (R-AK) introduced this bill behind closed doors in Washington, DC. This bill joins another Arctic Drilling bill (HR.39) which was introduced by Rep. Don Young (R-AK) in early January and currently has 71 cosponsors.

Two days after Senator Murkowski's bill was introduced, Representatives Ed Markey (D-MA), Nancy Johnson (R-CT) and Senator Joseph Lieberman (D-CT) introduced legislation to permanently protect the Arctic Refuge coastal plain as wilderness. These bills, HR.770 and S.411 respectively, were introduced with great fanfare during an extremely well attended press conference in front of the capitol. Speakers during this press conference included the sponsors of the bills as well as Senator Hilary Rodham Clinton, Representative Richard Gephardt and eighteen other Senators and Representatives. Currently, the House bill has 136 cosponsors while the Senate bill has 25.

For a full list of cosponsors to the Arctic Wilderness Bills (HR. 770 & S. 411), the Arctic Drilling Bill (HR. 39) and the National Energy Security Act of 2001 (S. 388 & S. 389), see page 18 or visit <http://thomas.loc.gov>.



© NAEC File Photo

Just one of the slides from our travelling slide show which focuses on the habitat, wildlife, human uses and wilderness values of the Arctic Refuge as well as the oil industry and political battle surrounding the Refuge.

Take Action!

What you can do to help protect the coastal plain:

Please take the time to call or write your Senators and Representative to thank them for their support of the wilderness bills if they've signed on or to encourage them to cosponsor if they have yet to sign on. If your Senators or Representative has cosponsored the National Energy Security Act or the Arctic Drilling bill, please let them know that drilling in the Refuge is not an acceptable part of our nation's energy policy.

Let them know:

A new study released in February by the World Resources Institute (WRI) reveals that drilling for oil in the Arctic National Wildlife Refuge will not change the long-term outlook for the country's overwhelming and rapidly growing dependence on foreign oil sources.

Americans use more than 17 million barrels of oil every day. At this rate, the oil in the Arctic Refuge would never satisfy more than 2 percent of

our nation's oil demands at any given time. In fact, if the Refuge were America's only source of oil, the amount of recoverable oil would sustain America's consumption for less than 6 months. The wilderness values of the Arctic Refuge coastal plain are too precious to give away as a temporary bandage for our need for oil.

Oil development cannot be done in an "environmentally sensitive" manner. Since 1996, the Prudhoe Bay oil fields and trans-Alaska pipeline have caused an average of 427 spills annually on the North Slope—most commonly spills of diesel and crude oil. In fact, just since early February 2001, three large oil spills have occurred in the Prudhoe Bay area—resulting in over 13,000 gallons of spilled crude oil and drilling muds. The Arctic Refuge coastal plain is too precious to risk from spills such as these regardless of whether they were accidents or faulty maintenance. National Wildlife Refuges are the property of all Americans. The fate of the Arctic Refuge coastal plain lies in the hands of the American public, not the Alaskan delegation. Over 53% of the American people support permanent protection for the Arctic Refuge coastal plain.

You can contact your Senators and Representative at:

The Honorable _____
US Senate/ US House of Representatives
Washington, DC 20510/20515

or

(202) 224-3121

Other Actions to Take to Protect the Coastal Plain:

Writing to your Senators and Representative is just one way to help in the battle to protect the Arctic Refuge coastal plain. Here are some other important actions you can take.

- 🔊 **Lobby** locally or in Washington, DC. Make the commitment to meet with your Senators and Representative in person.
- 🔊 **Write** a letter to the editor of your local newspaper. Let your community know that you support protecting the Refuge and why. Encourage your friends and neighbors to write letters as well.
- 🔊 **Stage** a rally, organize a phone bank, start a petition, or set up an information/letter writing table at your school, office or local community center.
- 🔊 **Give** a slideshow presentation to your friends, neighbors or local club. The Northern Alaska Environmental Center has developed an Arctic Refuge slideshow kit to borrow or purchase for use in communities around the country. Simply contact Deb Moore at (907) 452-5021 or deb@northern.org for more information.
- 🔊 **Subscribe** to the Northern Center's free *Arctic Action* email alert system. This list will provide you with current information on what's happening in Alaska's Arctic as well as opportunities to become more actively involved.

Boreal Shorts

by Nancy Fresco



Governor Pushes Forward with Suit Against Roadless Area Protection

Alaska Governor Tony Knowles has been joined by the Alaska Forest Association and Chugach Alaska Corporation in the ongoing lawsuit against the U.S. Forest Service's road building ban. The Roadless Area Conservation Policy would protect the last remaining wild National Forest lands from road construction and most logging, except when needed to restore ecological integrity, protect habitat for endangered species, or reduce threats of catastrophic wildfire.

The litigants are seeking to exempt Alaska's National Forests—the Tongass and the Chugach—on the grounds that the existing management plan should be followed, and that jobs would be lost if roadless areas were protected. However, the current management plan still leaves spectacular wild areas—Emerald Bay, Cholmondeley, Little Seal Bay, and countless others—open for road building and logging. Furthermore, according to the U.S. Forest Service, approximately 85 percent of the revenue generated from America's National Forests

comes from recreational activities—more than five times the amount generated by logging. In fact, the U.S. treasury lost \$1 billion administering timber sales on National Forests during a recent five-year period.

In its planning stages, the proposal received more than 1.6 million public comments, and over 600 hearings were held nationwide. Prior to the drafting of the plan, nationwide polling showed strong bipartisan support for protecting remaining wild areas in National Forests; in fact, one poll showed that 58 percent of Americans oppose *all* extractive industry on *all* National Forest land, a far more radical change than the proposed policy.

Meanwhile, the Bush administration is stalling on putting into action any portion of the plan by delaying its implementation date until it has been "reviewed." Support in Congress will be essential to overcome these stalling tactics.

Earth Day Celebration!



Anne Wien
Elementary School
April 21, 2001
Noon-4 PM

Come celebrate Earth Day with Camp Habitat!

- 🔊 Suggested Donation \$3/child, \$5/adult, \$10/family
- 🔊 Music, food and fun Earth Day activities!
- 🔊 Silent auction fundraiser for Camp Habitat!
- 🔊 Information about summer activities and community groups throughout Fairbanks.

Contact Amy at (907) 452-5021 or amy@northern.org for more information.

"Traditional Activity" — What does it mean?

By Linda Paganelli



© GinnyWood

A skier makes her way through Denali National Park.

When Congress formulated the language for the Alaska National Interest Lands Conservation Act (ANILCA), it recognized that subsistence use of the land's resources should be allowed to continue in the newly created and expanded parks in Alaska in order to maintain a cultural precedent. ANILCA legislation "allows for snowmobile access for traditional activities or travel to and from villages and home sites and other valid occupancies or when lawfully engaged in subsistence activities." Thus because subsistence uses are deemed proper and motorized access guaranteed, ANILCA created a unique scenario within the Alaskan National Park System to guide management practices in the new parks and park additions.

One of the fundamental questions, to be addressed in deciding what uses are appropriate for Denali's backcountry, is to infer how the term "traditional activity" should be applied to the Old Park and to the new park additions and preserve lands. The basis for these decisions will be founded in part in historic administrative practices and in part by stipulating a definition for "traditional activity."

A "traditional activity" as defined for the Old Park has been determined to mean ONLY an activity that supports a con-

sumptive use of park resources so as to enable continuance of a traditional Alaskan lifestyle. A key feature of the definition avers that such activities must be confined to areas where they had previously occurred. ANILCA guarantees motorized access via snowmobiles, motorboats, and in some cases airplanes, for subsistence pursuits. To qualify under ANILCA, a "traditional means" or a "traditional activity" has to have been an established cultural pattern prior to 1978 when the unit was established. Since no subsistence uses or associated means of access were ever determined to have occurred in the Old Park, the new definition clarified the National Park Service's stand that ANILCA did not authorize snowmobile access into this region. In June of 2000, a special regulation formulated by the Park Service banned the use of snowmobiles in the two million acres constituting the Old Park. The Alaska State Snowmobile Association's lawsuit against the Park Service contesting the Service's definition of "traditional activity" as it applies to the Old Park still awaits litigation.

The National Park Service intends to define "traditional activity" for other ANILCA park areas in Alaska including the new Denali Park additions and has stated that this definition may be separate from that used to manage the Old Park because of the distinct administrative his-

stories. The conservation community strongly urges the Park Service to utilize a single definition for "traditional activity," as defined for the Old Park, to guide all management directives in Alaskan Parks. Other factions disagree arguing that traditional is not synonymous with utilitarian and thus recreational pursuits, including motorized access, are guaranteed. The dispute lies in the disparate interpretations of the legislative act.

The National Park Service has stated, "regardless of the definition of 'traditional activity' applied to the park additions the Draft Backcountry Management Plan will consider the appropriateness of [recreational] snowmobile use in parts of the park additions and preserve beyond that authorized in ANILCA." To allow such use would "require a special regulation since national park units are generally closed to snowmobile use, except as allowed by ANILCA."

Since 1980, unregulated recreational snowmobile use by Alaskans has become commonplace in the new additions. Numbers of users and areas of access have steadily grown. Escalation has been particularly significant in the popular Broad Pass—Cantwell Region where it has more than doubled during the last six years to an estimated 2000 users during March and April alone. Any attempts today to regulate or restrict use will be construed as a rescinding of rights which were assumed to be granted and were tolerated for two decades without interference.

Three administrations and five sessions of Congress, encompassing nine years of time, were devoted to developing the Alaska National Interest Lands Conservation Act. The Department of the Interior, as the agency most heavily involved with administering the affected lands, was given the responsibility to propose and to implement most of the legislation. How "traditional activity" is eventually defined will set a precedent for how ANILCA is interpreted. Decisions being made more than twenty years after the bill was enacted into law are shaping the present and ultimately the future of all Alaska National Park Lands.

The Natural Gas Dilemma

by Deb Moore

Over the past six months, there's been a lot of debate within the Alaska conservation community and within the Northern Center regarding the development of Alaska's North Slope natural gas resources. Is natural gas—development as well as production—in the best interests of the environment and Alaska? This has not been an easy debate, largely because of natural gas' characteristics themselves: for each asset, natural gas also has a liability. To cite some, natural gas is a cleaner burning fuel than either diesel or normal gasoline—giving off significantly less SO₂ and other pollutants. However, it is still a potent global warming gas and, used as a transportation fuel, produces global warming emissions nearly equivalent to gasoline. The Prudhoe Bay and surrounding fields of Alaska's North Slope contain over 35 trillion cubic feet of proven natural gas reserves. Removing this natural gas would require minimal additional exploration or development on the North Slope. However, once this natural gas can be easily transported to market (via pipeline), there will be tremendous pressure to *expand* development into the Arctic National Wildlife Refuge and the National Petroleum Reserve-Alaska. Natural gas is seen by many to be the necessary transition between polluting, unsustainable fossil fuels to clean, sustainable alternatives. However, people may lose sight of these future, potentially more expensive, non-fossil fuel goals once a less expensive fuel source is readily available.

In a perfect world, the United States and the world as a whole would move immediately away from fossil fuels to more sustainable, less polluting and less globally-warming alternatives. However, the "immediacy" of this shift is the biggest problem: such a fundamental shift takes considerable time and effort. Plus in reality, the decision whether or not to develop the North Slope natural gas resources won't be made by primarily environmental groups, but rather by consumers. The deciding factor is demand: if consumers' thirst for natural gas continues to grow, natural gas *will* be developed—it becomes not a question of if, but when.

In that case, the decision that we and other groups must make is how to respond to possible gas development strategies. The Northern Center has chosen to respond by neither opposing nor supporting natural gas development. We have done this because we believe that complete opposition has two distinct disadvantages: it adds to our unfortunate and inaccurate image of being anti-everything; and it eliminates any chance of having a say in *how* the development occurs. In other



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words, if the North Slope natural gas reserves are developed, the Northern Center believes that helping to steer the development into the least environmentally and economically damaging direction possible will better serve the environmental community than will spirited exhortations made in a vacuum. However, concurrently we will continue to advocate for the development of alternative energy sources and a marked improvement in national conservation efforts.

To guide our involvement in natural gas discussions, the Northern Center has developed the following list of stipulations:

I. The construction of a natural gas pipeline should follow an existing transportation corridor and not open up frontier wilderness areas such as onshore or offshore of the Arctic National Wildlife Refuge or the Yukon Flats National Wildlife Refuge. There are various transportation corridors already in existence. Staying within them also limits the impacts to the Porcupine Caribou herd and other important wildlife species.

II. Consideration should be given to all routes that are consistent with Alaska Constitution requirement that "Alaska's resources be developed for the maximum benefit of Alaska's people." Routes such as the Beaufort Sea and Dempster Lateral routes—which bypass Alaska's population centers and do not contribute to

Alaskan jobs, Alaskan revenue or the in-state availability of gas—are not consistent with these requirements and should be avoided.

III. The public must be involved in all stages of scoping, development and monitoring of the natural gas pipeline including the development of a new environmental impact statement with a full public process. Public process should not be abandoned (via expedited permits or regulatory short-cuts) in the interest of simply speeding up development. Any project worth developing should be capable of enduring public involvement. However, this is not to say that the permitting processes should be slowed down.

IV. A formal citizen advisory council for the gas line and trans-Alaska oil pipeline should be created and maintained through funding from the State of Alaska throughout the planning, construction and operating life of the pipeline.

V. To ensure that natural gas is truly a "transition" fuel rather than an endpoint to itself, a portion of the revenues derived from natural gas commercialization should be dedicated to alternative and renewable energy development, especially for rural Alaskan communities.

VI. *Full* funding for Dismantling, Removal and Restoration of the natural gas pipeline and for cleanup of the line and pumps stations should be placed in a separate account from the trans-Alaska pipeline dismantling, removal and restoration fund. In addition, this fund should be inflation-proofed.

The bottom line: Alaska's North Slope natural gas reserves may be developed in the next few years or may sit untouched for decades. If the fundamental shift to alternative fuels occurs without "transitioning" through natural gas, the Northern Center and the rest of the conservation community will have great cause to celebrate. However, if the North Slope natural gas *is* developed, we hope, through our participation in the development discussions to ensure that it is developed in the most environmentally sound and economically advantageous manner possible, in the interest of all Alaskans' futures.

Forest Facts—Death and Decay

By Nancy Fresco

For some residents of the boreal forest, trees aren't much use until they're dead, broken, rotting, or full of holes. While humans may speak of "overaged" stands—trees past their prime as desirable timber—nothing could be more appealing to a squirrel, a marten, or a woodpecker. In fact, in recent years ecologists have become increasingly aware of the myriad of ways in which healthy forest life is dependent on death.

Some areas within the boreal are prone to periodic burning; others are more fire-resistant. In either case, however, the natural forest pattern blends the dead with the living. Snags—dead standing trees—may remain after a fire has passed, since only in the hottest section of the blaze are trunks as well as crowns obliterated. But dead trees are common in unburned forest, too. Large snags occur in old-growth areas, where trees naturally senesce. In a younger forest, they may be a relic of natural thinning, when a tree is overshadowed by a sturdier, taller member of its own species. In boreal stands, quick-growing light-loving birch and aspen are typically overtaken by shade-tolerant white spruce as the stand ages, and an understory of dead birch may be the eventual result.

Trees may also be killed by insects or disease. Obviously, there is a happy medium between too little insect life and too much; the bark beetle epidemic in Southcentral Alaska showed what can happen in a se-



© Alaire Diamond

Fallen trees and rotting logs are crucial to the very lowest rungs of the food chain. Insects, fungus, and even small mammals such as mice help act as decomposers; not only do they obtain their own sustenance from the forest floor, they also enrich its composition.

vere infestation. On the other hand, it would be a mistake to eliminate all insect outbreaks and fungal infections in trees, even if we could. Fungal heart-rot is an enemy to loggers, because it makes a seemingly valuable tree economically worthless—but it is the perfect way to form hollow trees. Such trees are crucial habitat for flying squirrels, martens, and several species of bird. Perhaps not surprisingly, many cavity-nesting species prey on the insect pests that kill trees in the first place, thus achieving a tenuous balance.

Fallen trees and rotting logs are crucial to the very lowest rungs of the food chain. Insects, fungus, and even small mammals such as mice help act as decomposers; not only do they obtain their own sustenance from the forest floor, they also enrich its composition. Without a constant influx of organic debris, the humus would soon degrade, becoming compacted and nutrient-poor. Small mammals also rely on logs as shelter and protection from predators.

Thus, deadwood plays a fundamental role in forest ecology when it stays where it falls. But even in a wilderness setting, it doesn't always stay put—it plays another

role as well. Studies of the importance of logging buffers along rivers and streams show that large woody debris that falls into waterways is important in several ways: it slows, diverts, or changes channel flow; it provides hiding spots and habitat for fish; and it enriches the water as it breaks down.

Forests managed for timber often lack the degree and variety of decay found in wild forests. At the extreme end of the spectrum, some European forests were traditionally harvested and "cleaned" so assiduously—often for local firewood use—that not a twig was allowed to rot on the forest floor. Hundreds of years later, forest managers have realized how species-poor and nutrient-starved the forests have become, and are belatedly trying to rectify the matter—without complete success. In Interior Alaska, we still have the chance to do things right the first time. Cutting local birch at 70 years and spruce at 100, as preferred by the Alaska Division of Forestry, has the long-term potential to reduce habitat availability and diversity. Although current harvest levels are low enough to make the threat minimal, it is nevertheless a problem that should not be overlooked.

Coming Soon:

Northern Line on-line!

If you would prefer to receive the *Northern Line* electronically, send Beth an email <beth@northern.org>.

It will be sent to you as an attached Adobe pdf file.

Save Paper!
Conserve Trees!

Alternative Energies—Wind Energy Basics

by Deb Moore

The following is a shortened and slightly modified version of an article by the Department of Energy – Energy Efficiency and Renewable Energy program. The entire article can be found at <http://www.eren.doe.gov/wind/>.

Wind is a form of solar energy. Winds are caused by the uneven heating of the atmosphere by the sun, the irregularities of the earth's surface, and the rotation of the earth. Wind flow patterns are modified by the earth's terrain, bodies of water, and vegetation. This wind flow, or motion energy, when "harvested" by modern wind turbines can be used to generate electricity.

Wind turbines, like aircraft propeller blades, turn in the moving air and power an electric generator which supplies an electric current. Wind turbines are often grouped together into a single wind power plant or "wind farm" and generate bulk electrical power. Electricity from these turbines is fed into the local utility grid and distributed to customers just as it is with conventional power plants.

Wind energy is very abundant in many parts of the United States. Good wind resources which have an average annual wind speed of at least 13 miles per hour, are found along the east coast, the Appalachian Mountain chain, the Great Plains, the Pacific Northwest, and some parts of Alaska such as Kotzebue and Healy. North Dakota, alone, has enough energy from wind to supply 36% of the electricity of the lower 48 states. Wind speed is a critical feature of wind resources because a stronger wind means a lot more power.

Numerous public opinion surveys have consistently shown that the public prefers wind and other renewable energy forms over conventional sources of generation. Wind energy is a free, renewable resource, so no matter how much is used today, there will still be the same supply in the future. Wind energy is also a source of clean, non-polluting, electricity. Unlike conventional power plants, wind plants emit no air pollutants or greenhouse gases. In 1990, California's wind power plants

offset the emission of more than 2.5 billion pounds of carbon dioxide, and 15 million pounds of other pollutants that would have otherwise been produced. It would take a forest of 90 million to 175 million trees to provide the same air quality.

Although wind power plants have relatively little impact on the environment compared to other conventional power plants, there is some concern over the noise produced by the rotor blades, aesthetic (visual) impacts, and birds being killed by flying into the rotors. Most of these problems have been resolved or greatly reduced through technological development or by properly siting wind plants. Avian mortality remains an issue to be better understood and resolved.

The major challenge to using wind as a source of power is that it is intermittent and it does not always blow when electricity is needed. Wind cannot be stored (unless batteries are used); and not all wind can be harnessed to meet the timing of electricity demands. Further, good wind sites are often located in remote locations far from areas of electric power demand (such as cities).

Wind energy avoids the external or societal costs associated with conventional

resources, namely, the trade deficit from importing foreign oil and other fuels, the health and environmental costs of pollution, and the cost of depleted resources. Wind energy is a domestic, reliable resource that provides more jobs per dollar invested than any other energy technology—more than five times that from coal or nuclear power. In 1994, wind turbine and component manufacturers contributed directly to the economies of 44 states, creating thousands of jobs for Americans.

The wind energy industry has grown steadily over the last 10 years and American companies are now competing aggressively in energy markets across the nation and around the world. Wind energy has been the fastest growing source of electricity generation in the world in the 1990s. However, the majority of this growth has been in Europe, where government policies and high conventional energy costs favor the use of wind energy. The U.S. Department of Energy recently announced the Wind Powering America initiative with goals to power at least 5% of the nation's electricity with wind by 2020, increase the number of states with more than 20 megawatts of wind to 16 by 2005 and 24 by 2010, and increase federal use of wind energy to 5% by 2010.

From the Canary's Mouth

By Mara Bacsujlaky

Public Holidays Hinder Gold Production

As reported in *The Northern Miner*, South African gold production dramatically decreased in 2000—reaching its lowest annual output, 428 tonnes, in 50 years. The decline in production was related to the overall decrease in gold's value worldwide, as well as to South Africa's 13 public holidays. According to a Chamber of Mines report "The disruptive impact of public holidays has a major bearing on the ability of the industry to mine more, impacting pro-

duction, increasing costs, and undermining the industry."

South Africa, the world's largest gold producer, has the world's most dangerous mines. In the 100 years, since gold was discovered, over 70,000 workers—almost all of them black—have lost their lives in the mines, the deepest of which is two miles below the earth's surface.



Our Sustainable Future

By Amy Turner

Alaska has an abundance of natural wonders. From the waters and towering mountains of southeast to the tundra north of the Brooks Range, for many of us our “backyard” seems endless. Yet, how much has that changed in the last twenty years? As an educator I spend a lot of time working with and thinking about the future generation of Alaskans. Through all the work I do I continue to come back to the idea of sustainability. The underlying theme in all the work the Northern Center does is sustainability, but what exactly does sustainability mean?

To sustain means to support, or endure without failing or yielding. The main premise of sustainability is to achieve the balance where a resource can meet the present needs of a community without compromising the ability of that resource to reach the future needs of that community. Sustainability is personal to each community that faces this goal, and the idea of what practices are sustainable is often at the mercy of the person defining it. However, sustainability can also be measured scientifically, resource management plans that take into account the needs of multiple uses are a good beginning framework for managing our resources in a sustainable way. We are all humans living in the 21st century; we drive cars, we use plastics, and we live in wooden houses. Our demand continues to grow and yet sustainability is not a word most of us think of on a frequent basis. Consumption of environmentally harmful products is to some degree inevitable, but being aware of the rate and breadth of that consumption is key to our future sustainability on this planet. It is important to keep in mind how our decisions on land and resources affect future generations. Below is an example of some of the questions that can be asked to determine whether or not the use of a resource is sustainable.

Local forestry: A piece of forested land outside your community is under consideration for harvest. Here are some of the questions that may be asked by that community to determine whether or not the harvest would be sustainable:

- ◆ What species of trees, shrub, and herbs live in the forest?
- ◆ What are the natural disturbances that effect forest health/growth, i.e. fires, wind, drought, insects?
- ◆ How does the forest regenerate itself and in what length of time?
- ◆ What does the soil and terrain look like (is the soil loose, is the site on a slope)?
- ◆ What human uses already exist, recreation, logging, hunting, and fishing?
- ◆ What happens to the wood after it leaves the forest—is it milled and used locally?
- ◆ Given all the questions above how can humans use forest resources in a way that balances with economy, the needs of the community and the needs of the forest?

Although the concept may seem complex at first, sustainability is vital to everyday life. Making the decision to buy a locally produced item sustains your community, whereas buying something that is made elsewhere has only a very short-term effect. Finding locally made products is not always easy. In Alaska we don't have the plethora of locally produced fruits and vegetables year round as someone living in a more moderate climate.

Below are a few items from a checklist of six “principles of sustainable communities” that has been developed by the Northwest Policy Center in Seattle, Washington. How many of these principles does your community meet? What can you do to help your community meet the goals?

Promote Vitality

Vitality suggests a state of dynamic, healthy progress and change that can be sustained over time. It is a term that applies well to healthy communities, economies, and ecosystems. Vital communities focus on improving quality of life, consider environmental health, and encourage the involvement of all community members in decision-making.

- ◆ Residents buy goods and services within the community, local dollars continue

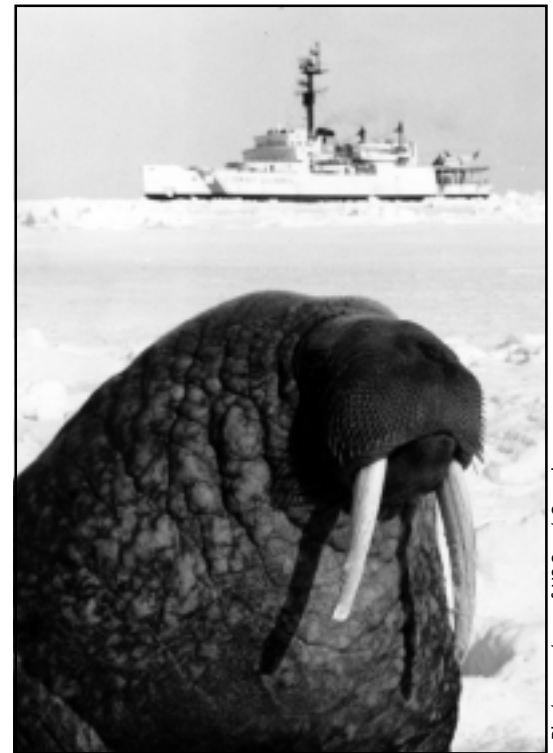


Photo courtesy of US Coast Guard

One element of the Northwest Policy Center's sustainability framework is that water quality and quantity are adequate to meet the needs for human consumption, industry, recreation, and fish and wildlife.

to re-circulate within the local economy.

- ◆ Local businesses are innovative, keeping pace with changing market demands and technologies, thus ensuring their continued vitality.
- ◆ The natural systems (lakes, rivers, forests, prairies, farm lands, etc.) that enrich the community are healthy from an environmental perspective.
- ◆ Businesses “add value” locally to renewable natural resources (fish, timber, farm products, etc.) to increase the local economic benefits from sustainable harvest levels.

Build Resilience

Resilience is the ability for economic, social, and ecological systems to withstand and recover from disturbances, such as natural disasters, market fluctuations, and new government regulations. Diversity is a key component of resilience and reduces community dependence upon any one business, agency, or element of the natural environment.

- ◆ Natural resource management practices maintain and promote native biological diversity, helping to maintain economic and ecological productivity over

the long term.

- ◆ There is sufficient diversity in the local economy to help it weather downturns in individual businesses or economic sectors.
- ◆ Organizations within the community have the capacity to help the community define and advance its economic, social, and environmental goals. Capacity includes effective leadership, broadened community involvement, and access to information and financial resources.
- ◆ There is adequate infrastructure (water, sewer, transportation, telecommunications) to protect public health and the environment, and to support desired social and economic development.

Act as Stewards

Stewards protect the environment, providing long-term economic benefits for the community and future generations. Stewardship means managing natural resources and ecosystems to maintain their long-term productivity and conserve the biological diversity they support. Stewardship also means using natural resources efficiently.

- ◆ Water quality and quantity are adequate

to meet the needs for human consumption, industry, recreation, and fish and wildlife.

- ◆ Productive natural resource lands (including farm, forest, and range lands) are protected from development to ensure continued economic and environmental benefits for future generations.
- ◆ Critical wildlife habitats and other environmentally sensitive lands (including wetlands, riparian areas, and habitat for rare, threatened or endangered species) have been identified, protected, and where necessary restored.
- ◆ There are opportunities for dialogue between citizens and owners or managers of natural resource lands whose management has significant ecological, economic, and social consequences for the community.

A full workbook written to help communities move towards sustainability can be purchased at http://depts.washington.edu/npcbox/O96_KJ5.html.

Source: Baker, Bryan. *A Framework for Sustainability*. Northwest Policy Center. 1996.

A Long and Winding Road

By David van den Berg

When contemplating a wild area destined to be developed, it is helpful to recall what it was like way back when. Then we can recognize the scale of conservation needed today. For instance, sixty years ago, there were no all-season roads in the Interior. Back then, you'd use different landmarks to describe the area east of Fairbanks bounded by the Richardson Highway to the south, the Yukon River to the north, the Steese Highway to the west and the Taylor Highway to the east. An educated guess at its size puts this wild remnant at about 6 million acres. None of it is wilderness in the legal sense, but it is "roadless," which is code for being wild.

With the imminent development of a huge gold deposit in the upper Goodpaster River, a road of some sort is in the offing. In its development plan for the Pogo mine, Teck Resources proposed to build a 49-mile, all-season road to the mine site that they would **remove**

at the end of the mine's life. The alignment as proposed by Teck would go up the Shaw Creek drainage, then cross the high country between Shaw Creek and the Goodpaster River, then down to the Goodpaster where it crosses right into the mine site. The reality is, however, that once a road is built, it will never be removed: the Alaska Department of Natural Resources has said that they could allow the road's removal as a legal matter, but as a matter of policy, no way—the road stays.

The Environmental Protection Agency is the lead agency preparing an Environmental Impact Statement to study the proposed Pogo mine owned and operated by Sumitomo and Teck Resources. One of the biggest issues to be considered by the environmental impact statement is how the mine will be accessed. Two options remain viable: a permanent all-season road—the longest built in the last 30 years—or an annual ice road that disappears at the end of each winter, and at

the end of the mine's life. Poof.

The chief environmental benefits of an all-season road are that it would likely minimize spills and would leave a smaller storage facility footprint at the mine site. Other than that, an all-season road is a menace. It would facilitate access to other, smaller mineralizations in the region: the plate of spaghetti effect. (This is something for which we have living precedent on the North Slope, where the Prudhoe Bay oil field financed capital projects that no smaller project could have, and smaller oil fields became economic due to the proximity of essential infrastructure). An all-season road could lead to increased timber sales in the area, and provide the basis to proceed with land disposals for subdivisions.

The chief environmental benefit of an ice road is that it leads to little further degradation of the area. It seems so simple, but where there was a means of overland travel, come April, there is none, and most of the collateral issues having to do with surface use are simply not in play. (Again, we have living examples of this with the Bettles Road and the Blair Lakes Road into the Tanana Flats.) An ice road has its problems though: an ice road makes for many, annual logistical preparations for the mine operator, and may cost more money. There may be accelerated timber sales in the area, but consider that the closest all-season access for such operations will still be the Richardson Highway, not 49 miles deeper into the country.

The EIS studying Teck's development proposal for the Pogo mine will reach the draft public comment period some time in May or June. To wind up with an ice road into Pogo, the EIS team simply has to conclude that there will be a smaller impact on the environment than with an all-season route. Altering Teck's development proposal to include an ice road is the only win-win scenario: the Pogo project can proceed with an ice road and have a truly minimal impact on the surrounding environment. When the mine is emptied of gold, the region can settle back into primordial slumber until another sufficiently large mineralization is found to support the expense of an annual ice road.



From the Woodpile...

by Ginny Hill Wood,
founding Northern Center member, and regular columnist

We pledge allegiance to the Republic of Oilalaska, and to British Petroleum for which it stands. One State, very divisible, with Growth, Corporate Profits from Arctic Oil, Species Cleansing, and the Permanent Fund Dividend for all. Ah, men!

As Pogo, the swamp sage in the funny papers of yore, proclaimed, "We have met the enemy and he is us"—especially in regard to the choices we make at the ballot box about whom we choose to govern us in Washington, DC, and Juneau, AK. Our votes may come back to haunt us.

I read in the newspapers that our perennially-elected senator, Frank Murkowski, is conducting "fact finding" flights over the coastal plain (the "1002 area") of the Arctic National Wildlife Refuge with groups of fellow lawmakers to convince them that:

- ♦ Little impact to the environment would occur in drilling for oil on this relatively small, desolate portion of the total Refuge. New technology allows oil development that leaves a smaller footprint and uses little land.
- ♦ In these dire times of energy shortages, we must pump the copious amounts of oil in the now locked up

"1002 area" in order to relieve the present energy crunch.

- ♦ We have to quench our dependence on foreign oil imports from "rogue" nations. (NOTE: Murkowski and Stevens successfully led the fight that overturned the legislation that prohibited the export of Alaskan oil abroad.)

What this "fact finding" junket will see of the "1002 area" in March and April is a bleak, windswept expanse of snow and ice with probably little or no living thing discernible from aloft, not even the snowy white Arctic foxes. With good visibility, they may spot a band of musk oxen, or a black wolf, although most of those in the Arctic are light colored. Then they will no doubt land at Prudhoe Bay to be wined, dined, and proselytized by British Petroleum which has now absorbed the majority of oil leases there.

What the group can't see now are the polar bear moms denning in snow caves with their new-born cubs; or seals or whales cavorting in the still ice-bound Beaufort Sea. They won't be able to observe the carpet of wildflowers that will erupt everywhere with the greening of the tundra; or hear the cacophony of the myriad of waterfowl and shore birds that migrate from the Lower 48, South America, and Asia to mate, and hatch and rear their chicks during the short twenty-four hour daylight summer before they must make their lengthy cross-continental migration south. They will also be too early to watch hawks, snowy owls, and jaegers swooping to catch rodents and hares for their young.

Buts most of all they will be too early to see the most awesome spectacular of all—the arrival of the 120,000 animals of the Porcupine caribou herd (named for a river that flows into the Yukon out of northwest Canada) to this special caribou calving ground. They have traveled hundreds of miles from their wintering habitat in the protective boreal forests of the Canadian Northwest and Yukon territory

Denali Watch

By Linda Paganelli

Northern Access Route for Denali National Park



In 1998, Senator Murkowski succeeded in getting a legislative rider passed that authorized Congress to allocate \$1.5 million for study and construction of a northern access route into Denali. Thus far, the state has failed to gain the matching funds, \$330,000, required to support the federal monies. The Alaska Department of Transportation requires local sponsorship for priority ranking and funding for projects. A Denali Borough Resolution and their relationship with Alaska Transportation Consultants have satisfied this requirement. The North Access Route is now listed as a High Priority Project in the pre-draft 2001-2003 Statewide Transportation Improvement Program.

Senator Gene Therriault of North Pole has now sponsored SB 3, which would appropriate the funds to study the proposed northern access route

into Denali. On February 9th, the Senate Transportation Committee voted to pass the bill onto the Senate Finance Committee. Committee members John Cowdery, Gary Wilken and Robin Taylor voted in favor of passage. Senator Kim Elton, the lone dissenter, cited that the bill needed further deliberation. On February 12th the bill gained two cosponsors, Senator Ward and Senator Robin Taylor. It has not, as of this publication, been scheduled for the hearing in the Senate Finance Committee.

The Northern Center firmly stands behind the National Park Service in declining to support this project. The project is speculative with no demonstrated demand. The money that this project would require could more wisely be spent elsewhere to promote better opportunities in and less controversial access to Denali Park and Preserve.

ries. No alternative area affords the topography, nutritional richness, and summer relief from insect hordes for this particular herd.

From the air during the winter, they will not see the 50-year old tracks left by vehicles during the building of the "White Alice" and "Dew-line" cold war warning installations, or notice the changes that occur in permafrost even where motorized vehicles have been forced to use ice roads across the tundra.

The decision to drill or not to drill for oil in the Refuge is fundamentally a matter of value systems and personal perspectives, and who has the political pull in Congress. My own perspectives have been formed by many summers of roving the Brooks Range and paddling the rivers that flow northward to the Arctic Ocean through the Refuge—this after a decade of flying over Alaska's spectacular landscapes as a commercial pilot. An aerial perspective can be awesome, but it doesn't replace the intimacy of using your own power to encounter the landscape and wildlife on its own terms unaltered by mankind's technology. A Posey sniffer? A fuzzy-fur lover? You betcha!

In reply to our Congressional delegation and the new President's claims, here are mine:

- ♦ The "1002 area" is a relatively small part of the total refuge acreage, but a very significant part—so is our heart's size compared to total body size. Both are equally vital to the health of the whole, whether body or ecosystem.
- ♦ Oil rigs may not take up more space than a football field, but you have to add to the impact the pipelines, air strips, roads, housing and dining halls for workers, equipment sheds—and gravel pads to build on (and where will this amount of gravel come from in the 1002 area?)
- ♦ Yes, the oil industry has improved its technology and environmental awareness to do a better job than previously, thanks to the environmental community's monitoring and insistence. But no technology or regulations are exempt from human error or carelessness. And for the oil corporations, profits are the bottom line—economics before ecology al-

ways! I have a huge folder of clippings from the *Fairbanks Daily News-Miner* that reveal instances of contamination and environmental impacts from oil spills—none equal that of the grounding of the Exxon Valdez in Prince William Sound in 1989, but cumulatively they are considerable. Note that only now are we getting the double-hulled tankers the oil industry promised to expedite following the Exxon Valdez disastrous spill.

- ♦ In regard to the 1002 area furnishing oil in sufficient quantities to alleviate our present energy crisis, oil has yet to be discovered there, and if it is, it will take at least 8 to 10 years to get it to market. By the most optimistic estimates, we can expect this to amount to one year's supply for the USA at our rate of consumption of petroleum.

Why the clamor from Frank, Ted, George W., and even from Alaska's pretty good governor, Tony Knowles, to drill in the Refuge when there is a much larger area

On March 30, over 300 Fairbanksans assembled outside of the University of Alaska Museum to greet Interior Secretary Gale Norton, Senator Frank Murkowski, Senator



Jeff Bingaman and Senator Mark Dayton. The ralliers showed that a considerable percentage of Alaskans support protection of the Arctic Refuge coastal plain.

© Photos by Beth Caisie

to the west, the National Petroleum Reserve-Alaska (NPR-A) which was just recently opened for oil development by the Clinton administration?

Why open up either when proven energy efficiency programs, more and better public transportation systems, like those Europe and Japan have created, alternative technology, and plain old conservation by consumers could save more energy sooner than could be pumped out of either the Refuge or NPR-A?

In the final analogy, what will our children and grandchildren do after the last oil well goes dry because this generation was too stupid, obstinately short-sighted, political and greedy to take the above steps now? What will happen to the world's oil supply when the Third World brings their petroleum consumption up to our standard of wastefulness?

It took the earth millions of years to create what mankind used up in a century of gluttony.

Seeds of Change Sprouting at Creamer's Field

By Amy Turner

It's just about time for another summer of exciting camp adventures! Our eleventh year will present a revitalized program with more focused sessions. Along with the campers participating in the Creamer's Field Historical Garden again, each session will be based on the campers answering an important question about our Interior ecosystems. For example: Water Striders will focus on all things aquatic: identification and life history of aquatic insects, the life cycle of salmon, etc. The Water Striders will then develop a natural history question in order to discover and understand aquatic ecosystems. The goal is for the campers to come up with answers for their question by the end of the week.

Registration began on March 19. Please come by the Northern Center or call Amy Turner at 452-5021 to acquire the brochure for 2001. Registration will be processed as it is received at the Northern Center, no registration will be taken over the phone, but feel free to cut out and mail in the registration form below.

Camp Habitat Registration Form 2001

Participant(s) Information

Camper #1:

Name _____

Birthdate _____ Age at start of Camp _____ Sex _____

Program _____ Cost _____

Camper #2:

Name _____

Birthdate _____ Age at start of Camp _____ Sex _____

Program _____ Cost _____

Parent/Guardian

Name _____

Address _____

City _____ State _____ Zip Code _____

Hm Phone _____ Wk Phone _____

Amount Enclosed \$ _____ Interested in Volunteering? YES NO

Make check payable to Camp Habitat

Send to: Northern Alaska Environmental Center
218 Driveway St, Fairbanks, Alaska 99701 452-5021

Camp Schedule

Nature Sprouts I (Ages 4-5)

June 11-15 \$95

9:00 AM-NOON

Nature Sprouts II (Ages 4-5)

June 18-22 \$ 95

9:00 AM-NOON

Refuge Adventurers (Ages 6-7)

July 9-13 \$170

9:00 AM - 4:00 PM

Nature Detectives (Ages 6-7)

July 16-20 \$170

9:00 AM - 4:00 PM

Water Striders (Ages 8-9)

July 16-20 \$185

9:00 AM-4:00 PM

w/campout Thurs. night

Introduction to Backpacking

(Ages 10-12)

FULL!

July 23-27 \$275

9:00 AM-4:00 PM (Mon. & Tues.)

(Wednesday-Friday on the trail)

White Mountains Explorers

(Ages 13-15 or Intro to Backpacking alumni)

July 30-August 4 \$300

9:00 AM-4:00 PM (Monday, Tuesday-Saturday on the trail)

Do you enjoy communicating ideas?

We are looking for volunteers to encourage and inspire fair visitors to get involved with the Northern Center.

Tanana Valley State Fair:
August 3-11, 2001.

We will have a training in May for interested volunteers.

Contact Vera for more information

vera@northern.org 452-5021

Conversation with Mardy Murie

By Debbie S. Miller

We sit by the fire surrounded by shelves of natural history books. With white hair framing her face, Mardy Murie's cheeks are still rosy, perhaps because of all the years spent exploring the wilderness. At 98 years, her speech has slowed, but her eyes are a window to the heart. She continues to love life and the natural world around her rustic log home in Moose, Wyoming.

While we sip our tea, snowflakes drift through the sky and chickadees flit by the feeder. We share stories about her beloved Arctic Refuge, the extraordinary place that we both cherish. With great passion and tireless devotion, she and her husband, Olaus, worked to establish the original Arctic Range. Without their vision and leadership in the 1950s, America's northernmost refuge may have never embraced the map.

Mardy asks me to recount my experience of being surrounded by caribou on the

coastal plain of the Arctic Refuge. I hold her warm hand, and she listens intently.

On that July day, I stood on the coastal plain along the Egaksrak River. The majestic Brooks Range loomed behind me, pressing the open tundra toward the ice-mantled Arctic Ocean. The rush of river, lilting song of the Lapland longspurs, and whine of mosquitoes filled the air. I watched a buff-colored sandpiper chick wobble through the grasses, snatching mosquitoes. It seemed a miracle that such a tiny fluff of life would later migrate thousands of miles to places like the coast of Venezuela.

Looking east beyond the chick and flower-specked tundra, the entire horizon wavered. At first I thought it was only a mirage, but soon realized it was not imaginary figures bubbling up from the tundra. Caribou by the tens of thousands were approaching. Shoulder to shoulder, they streamed across the tundra, a tide of flesh and blood. Within a few minutes, the endless procession of animals flooded the tun-

dra before me. There was barely a trace of ground through the mass and clutter of hooves.

Immersed within the herd, a steady chant of grunts, bleats and clicking hooves created a caribou symphony. I was close enough to hear calves pant from the heat and caribou teeth clip the tundra plants. Gradually the swarm of animals ebbed away from the river. Their voices grew muffled, then faint. Their bodies became distant silhouettes against the white, sparking sea ice. It was life in the Arctic, at its fullest moment of creation, in the wildest of landscapes.

Snowflakes still lace the sky, and Mardy studies them while she listens.

"I worry about the Arctic. What do you think will happen?" she asks in a concerned voice.

I explain that I'm optimistic, that many members of Congress want to protect the area, and the conservation fight is stronger than ever. More and more, Americans are learning about the Arctic and working to permanently protect it from oil development.

"We will win this fight," I say, in an effort to ease her mind.

"I need some kind of assurance," she replies.

"It's a promise. We will win and keep it wild."

I kiss her on the forehead and thank her for all her work to save the Arctic. She is an inspiration. Tears welling, I say goodbye and walk out the door.

"Go out and enjoy it all," she says enthusiastically.

Through the flurry of snow she waves goodbye near the window. I ponder over Mardy's love for the Arctic, and her passion to protect the area. We must win, I think. We *must* win.

For Mardy. For the wandering caribou and birds. For our children. And for the precious wilderness itself.

This essay appears in Arctic Refuge—A Circle of Testimony recently published by Milkweed Editions. It is available online www.worldashome.org, or at your local bookseller.



©NAEC File Photo

Aerial view of the construction of the True North underpass on the Steese Highway. The construction is now complete and ore hauling is scheduled to commence in early April.

Welcome to Our new Members...

...and welcome back to old friends. Thank you for supporting the Northern Center!

IN ALASKA

Martin Scharf, Tanana

Jim & Mary Gebhard, Fairbanks

Kent Schwaegerle, Fairbanks

Walter Weese, Fairbanks

Sue Steinacher & Glen Pardy, Fairbanks

Mike Gho, Fairbanks

Sunna Fesler & Russell de Forest,
Fairbanks

Jonathan Starr & Susan Schneider,
Fairbanks

Curt Madison, Bethel

Mark Conde, Fairbanks

Birch Pavelsky, Fairbanks

Nancy DeWitt, Fairbanks

Dave & Carol Norton, Fairbanks

Julie & Brenden Raymond-Yakoubian,
Fairbanks

Dave & Carol Norton, Fairbanks

Sandra Sedwarft, Fairbanks

Jean Balay, Denali Park

Clara Collins, Fairbanks

Gary Knuepfer, Fairbanks

Debbie & Dennis Miller, Fairbanks

Enid Cutler, Fairbanks

Roger & Sylvia Burns, Fairbanks

Jane Bechtel, Fairbanks

Rev. Richard Heacock Jr, Fairbanks

OUTSIDE OF ALASKA

Steve Giddings, Goleta CA

Malcolm McMichael, Basalt CO

John Barclay, Ashford CT

Adam Kolton, Washington DC

Geraldine Angel, Orlando FL

Andrea Fox, Northampton MA

David Salamie, Ann Arbor MI

June Jacobson, E. Lansing MI

Eric Bronner, Rutherford NJ

Bonnie Brooks & Michael McNamara,
High Bridge NJ

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Judith Slein, Rochester NY

Mark Golden, Williamsville NY

Sterling Newell Jr, Cleveland OH

Dave Rose, Oklahoma City OK

Marci Denison, Vernonia OR

Walt Hunner, Electric City WA

The following is a list of Senators and Representatives who have signed on to the various Arctic Refuge Wilderness and Drilling Bills. Updated information can be found at <http://thomas.loc.gov>.

Arctic Refuge Wilderness Bills

HR 770

Sponsors:

Edward Markey and
Nancy Johnson

Cosponsors:

Acevedo-Vila, Anibal
Ackerman, Gary L.
Allen, Thomas H.
Andrews, Robert E.
Baird, Brian
Baldacci, John Elias
Baldwin, Tammy
Barrett, Thomas M.
Bass, Charles F.
Berman, Howard L.
Bishop, Sanford D. Jr.
Blagojevich, Rod R.
Blumenauer, Earl
Bonior, David E.
Boucher, Rick
Brady, Robert
Brown, Corrine
Brown, Sherrod
Capps, Lois
Capuano, Michael E.
Cardin, Benjamin L.
Carson, Julia
Clay, Wm. Lacy
Conyers, John, Jr.
Costello, Jerry F.
Coyne, William J.
Crowley, Joseph
Cummings, Elijah E.
Davis, Jim
DeFazio, Peter A.
DeGette, Diana
Delahunt, William D.
DeLauro, Rosa L.
Deutsch, Peter

Engel, Eliot L.
Eshoo, Anna G.
Evans, Lane
Farr, Sam
Fattah, Chaka
Filner, Bob
Frank, Barney
Frelinghuysen, Rodney P.
Gephardt, Richard A.
Greenwood, James C.
Hall, Tony P.
Harman, Jane
Hastings, Alcee L.
Hinchey, Maurice D.
Hoeffel, Joseph M.
Holt, Rush D.
Honda, Michael M.
Hooley, Darlene
Inslee, Jay
Jackson, Jesse L., Jr.
Jones, Stephanie Tubbs
Kennedy, Patrick J.
Kildee, Dale E.
Kilpatrick, Carolyn C.
Klecza, Gerald D.
Kucinich, Dennis J.
Langevin, James R.
Lantos, Tom
Leach, James A.
Lee, Barbara
Levin, Sander M.
Lewis, John
Lofgren, Zoe
Lowey, Nita M.
Luther, Bill
Maloney, Carolyn B.
Maloney, James H.
Matsui, Robert T.
McCarthy, Karen
McCollum, Betty
McDermott, Jim
McGovern, James P.
McKinney, Cynthia A.

McNulty, Michael R.
Meehan, Martin T.
Meek, Carrie P.
Meeks, Gregory W.
Menendez, Robert
Miller, George
Mink, Patsy T.
Moakley, John Joseph
Moore, Dennis
Moran, James P.
Morella, Constance A.
Nadler, Jerrold
Napolitano, Grace F.
Neal, Richard E.
Norton, Eleanor Holmes
Obey, David R.
Olver, John W.
Pallone, Frank, Jr.
Pascarella, Bill, Jr.
Pastor, Ed
Payne, Donald M.
Pelosi, Nancy
Peterson, Collin C.
Phelps, David D.
Price, David E.
Rangel, Charles B.
Rivers, Lynn N.
Roemer, Tim
Rothman, Steve R.
Roybal-Allard, Lucille
Rush, Bobby L.
Sabo, Martin Olav
Sanders, Bernard
Saxton, Jim
Schakowsky, Janice D.
Schiff, Adam B.
Scott, Robert C.
Serrano, Jose E.
Shays, Christopher
Sherman, Brad
Slaughter, Louise McIntosh
Smith, Christopher H.
Snyder, Vic
Spratt, John M., Jr.
Stark, Fortney Pete
Tauscher, Ellen O.
Tierney, John F.

Towns, Edolphus
Udall, Mark
Udall, Tom
Velazquez, Nydia
Waters, Maxine
Watt, Melvin
Waxman, Henry A.
Weiner, Anthony D.
Wexler, Robert
Woolsey, Lynn C.
Wu, David

S.411 (Wilderness)

Sponsor: Joseph
Lieberman

Cosponsors:

Biden Jr., Joseph R.
Boxer, Barbara
Cantwell, Maria
Chafee, Lincoln D.
Clinton, Hillary Rodham
Corzine, Jon
Dodd, Christopher J.
Durbine, Richard J.
Edwards, John
Feingold, Russell D.
Graham, Bob
Harkin, Tom
Jeffords, James M.
Kennedy, Edward M.
Kerry, John F.
Kohl, Herb
Leahy, Patrick J.
Murray, Patty
Reed, Jack
Sarbanes, Paul S.
Schumer, Charles E.
Stabenow, Debbie
Torricelli, Robert G.
Wellstone, Paul D.
Wyden, Ron

HR 39—Arctic Drilling Bill

Sponsor: Don Young
Cosponsors:

Bachus, Spencer
Baker, Richard H.
Barton, Joe
Bonilla, Henry
Brady, Kevin
Brown, Henry E., Jr.
Bryant, Ed
Buyer, Steve E.
Callahan, Sonny
Calvert, Ken
Cannon, Chris
Carson, Brad
Chambliss, Saxby
Combest, Larry
Cooksey, John
Cubin, Barbara
Culberson, John Abney
DeLay, Tom
Doolittle, John T.
Duncan, John J., Jr.
Emerson, Jo Ann
Flake, Jeff
Gibbons, Jim
Goode, Virgil H., Jr.
Green, Gene
Hall, Ralph M.
Hansen, James V.
Hastings, Doc
Hayworth, J. D.
Herger, Wally
Hilleary, Van
Hostettler, John N.
Isakson, Johnny
Istook, Ernest J., Jr.
Kerns, Brian d.
Largent, Steve
LaTourette, Steve C.
Lewis, Jerry
Lucas, Frank D.
McCrery, Jim
Miller, Gary
Nethercutt, George R., Jr.
Northrup, Anne
Ortiz, Solomon P.
Otter, C. L. (Butch)
Oxley, Michael G.
Peterson, John E.

Pickering, Charles (Chip)
Pombo, Richard W.
Radanovich, George P.
Rehberg, Dennis R.
Reyes, Silvestre
Reynolds, Thomas M.
Riley, Bob
Rohrabacher, Dana
Ryun, Jim
Sandlin, Max
Schrock, Edward L.
Sessions, Pete
Simpson, Michael K.
Skeen, Joe
Smith, Lamar
Smith, Nick
Stump, Bob
Tancredo, Thomas G.
Tauzin, W. J. (Billy)
Terry, Lee
Thornberry, William (Mac)
Watkins, Wes
Watts, J. C., Jr.
Wicker, Roger F.

SR 388 & SR 389 Nat'l Energy Security Act (Drilling)

Sponsor: Frank Murkowski

Cosponsors:

Bennett, Robert F.
Breaux, John B.
Brownback, Sam
Burns, Conrad R.
Campbell, Ben Nighthorse
Craig, Larry E.
Domenici, Pete V.
Hagel, Chuck
Hutchinson, Y. Tim
Hutchinson, Kay Bailey
Inhofe, James M.
Lott, Trent
Shelby, Richard C.
Stevens, Ted
Thomas, Craig
Voinovich, George V.

Thanks to Our Hardworking Volunteers!

We could never do it without the undying support of our volunteers. The following folks have significantly contributed their time to the Northern Center in the past few months. Thank you!

When Senator Murkowski brought a few senators and Interior Secretary Gale Norton to town, the forces rallied to great them. Phil Wildfang, Sean McGuire, Frank Keim, Julie Raymond-Yakoubian, Debbie Miller, Ross Coen, Paul Ollig, Clarice Dukeminier, Nancy Fresco, Adeline Kari, Lou Brown, Sylvia Ward Schultz, Alice Mural, Sally Andersen, Sunna Fessler, Mike Gho, Karoline Frey, Jim Chumbley, Dana Durham, Patti Skondovitch, Patrick Kerber, and many more made calls to members and activists to ask them to attend the rally; the UAF police cooperated very nicely with us to make the evening run smoothly; Patrick Kerber videotaped the event; and Todd Burnside, Sean McGuire, John Lyle, Frank Keim, Phil Wildfang, Brendan & Julie Raymond-Yakoubian, Connie Huffman, Denali Miller, and many others helped make signs for the rally.

Camp Habitat would like to thank Susan Grace for helping with the health fair.

John Lyle stopped by to offer his slides and photographs for our use in publications—what a treat!

In conjunction with Senator Murkowski's visit, several folks took part in a meeting with the senators' staffers and aides. Ken Whitten, Lucy Beach, Virginia MacDonald, Richard Fineberg, David van den Berg, and Ann Rothe all offered their expertise on the Arctic National Wildlife Refuge.

Gar Pessel, Ann Swift, and Melody Wright have been preparing the Northern Center for our upcoming projects by databasing names and addresses of folks who want to help protect the Arctic Refuge.

In the last days of our intertie project, Stacey Fritz, Sean McGuire, Martha Moore, Jay Cable and many others helped by making phone calls, mailing letters, writing press releases, and boosting our morale with cookies.

Nancy Wainwright and Pam Miller were extremely helpful in assisting Deb with preparing for a water use panel.

When Melody Wright arrived to database we instead asked her to climb on to the roof to shovel all the snow off—thanks for helping to keep us dry!

New in the Northern Center Shop



Dinosaur Models

The best of Nature Writing Children's Games

Stop by or call for details (907) 452-5021

Our Arctic Refuge slide show has been so enthusiastically received that we've enjoyed the help of Michelle Murt, Tara Jahn, Martha Moore, & Adeline Raboff to assemble all the pieces.

Sandra Sedwarft, Sue Fellingham, Mike Gho, Gar Pessel and Natalie Cornforth helped with mailings on several occasions.

A small group of committed individuals has been meeting regularly to make sure Camp Habitat's Earth Day Festival runs without a blip. They are: Susan Grace, Lizanne Hansen, Tarika Lea, Karen Toland, Nancy Wood, John Carlson, Mark Ross, Frank Keim and Becky Hammer.

Special thank you to Ramey Wood for organizing Helen Caldicott's recent visit to Fairbanks—your efforts are commendable.

On April Fools Day, the staff and board met for a retreat. Thank you to Linda Benson for opening her home to us and for facilitating and thanks to Donna Galbreath for presenting

Fred came in to help with a mailing, and stayed to help fix a shelf, giving us much-needed storage space, and to re-install the bird feeder that used to hang from the much lamented Birch tree in front of the Center.

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Conservation Abstracts

by Florence Collins, member

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ALASKA HAS 58 "IMPAIRED" WATER BODIES with high enough toxins to harm humans and wildlife. Dumping toxic chemicals, pollution-discharge permits, and lack of oversight resulting from a cut in the Department of Environmental Conservation funding are factors. Military activities, mining, fish processing, and logging have polluted other water bodies as well. *ACAT Newsletter*, Winter 2000, p. 1, p. 10. <www.akaction.net>.

IN THE BARROW AREA, THE "OCEAN CURRENT HAS CHANGED. We are seeing species we've never seen before...porpoises, Greenland sharks, silver salmon, king salmon..." the mayor said. Barrow had its first thunderstorm in 2000. *Science News*, Jan. 6, 2001, p. 5 <www.sciencenews.org>; *FDNM*, Jan 28, p. A-1, A-12. <www.newsminer.com>.

A HABITAT-CONSERVATION MAP OF ALASKA is being worked on by the Nature Conservancy, and the "initial effort will span the next 5 years;" it is called the "Blueprint for Saving Great Places in the Great Land," and is a \$10 million campaign to which Phillips Alaska Inc. donated \$1 million. *Alaska Conservation Foundation flyer* received in late January, 2001, p. 21 <www.akcf.org>.

SHIPPING RECYCLED NUCLEAR WASTE from western Europe to Japan through the Northern Sea Route, which is close to the Alaska coastline, is called a "crazy idea" by the North Slope Borough mayor and Greenpeace. A Japanese news service said a test shipment will be done this year and the first full nuclear transport is scheduled for 2002. The material will be used to power up to 18 Japanese reactors by 2010. The "classified" material is inert, though it is "highly reactive;" it has a "relatively short half-life" of a few decades. Stopping the shipments would be difficult if the ships were beyond the 3-mile limit of U. S. jurisdiction. Russian icebreakers would be used to open a passage. *Fairbanks Daily News Miner (FDNM)*, Jan. 28, 2001, p. A-1, A-12. <www.newsminer.com>.

TRAILS HAVE A BIG ROLE TO PLAY in keeping communities healthy—health officials nationwide "are growing conversant in the language of the Transportation Equity Act for the 21st Century (TEA-2), and right-of-way law...[and are] actively encouraging people to get out and use them." "...A walking trail in a community can dramatically increase overall physical activity." *Rails to Trails*, Spring 2001, p. 16-19. <www.railtrails.org>.

RECYCLING AT EIELSON AFB TURNS TRASH INTO FUEL PELLETS, using about 120 tons of trash from the base and the North Star Borough each month. More than 75 tons of glass were pulverized, and it, with 1 million cubic yards of recycled asphalt were used for road construction. Barley straw was used in the power plant cooling pond, instead of chlorine, to control algae. Hazardous waste has been reduced by 550,000 pounds since 1992. *FDNM*, Jan. 30, 2001, p. (B-3). <www.newsminer.com>.

ALASKA RANKED WORST OF THE 50 STATES in amount of energy consumed per capita between 1970 and 1999, with LA and ND second and third; NY uses least, followed by HI and CA. *National Wildlife*, February-March 2001, p. 8. <http://nationalwildlife.org/natlwild/>

PLASTIC PELLETS USED TO MANUFACTURE PLASTIC products are becoming common in marine waters, where wildlife ingest them; the pellets often absorb toxics from the water, and long-weathered pellets have up to 1 million times the concentration of the toxics in the sea water. *Science News*, Feb. 3, 2001, p.79. <www.sciencenews.org>.

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