

## A Summary of Alaska Biological Research (ABR) Conservation and Sustainability Practices (June 2008)

### Transportation

- In all offices we support carpooling, alternative transportation (\$3.50/day for each vehicle off the road)
- In Alaska, we have purchased gas-electric hybrids for company fleet.
- We provide a \$1,500 subsidy to any employee buying a hybrid vehicle (6 so far).
- In Alaska, we have made efforts to use survey aircraft that create fewer emissions: fixed wing instead of helicopter; R44 helicopter instead of Jet-fueled helicopters.
- In Oregon, we have replaced Ford F250s/Campers for radar labs with more efficient Vans.

### Recycling and Waste Reduction

- In Oregon, our office recycles glass, paper, tin, aluminum
- In our Anchorage office we generally recycle all paper, glass, and plastic. In Fairbanks, Alaska we are limited because there is a lack of support services for recycling, so we are limited mostly to paper recycling: we had used our waste and cardboard paper for fuel pellets at Eielson AFB. We also accepted and transported paper to the holding facility for 25 households.
- In Fairbanks, Alaska, we also recycle tin and aluminum. We make an effort to compost lunch waste.
- Toner cartridges are returned to Xerox in prepaid UPS box and in turn refurbish those cartridges. The Xerox copiers use Xerox cartridges, which we send back in their own prepaid UPS box, they in turn re-use those cartridges one they have been refurbished.
- One-sided paper is collected in-house and from off site sources (e.g., UAF) and used for draft copies of reports.
- Secondary waste stream products such as used petroleum products, alcohol, paints, etc. are brought to the North Star Borough's Hazardous Waste Facility.
- We purchase recycled paper products with hi-level post-consumer percentages and we try to purchase 'green office products' (see below).
- We try to use soy ink products in our marketing productions (business cards, newsletter, etc.).
- Computers are a big resource expense for our company, both in regard to energy expenditures and regular replacement. Therefore, we make sure all of our computers are recycled by giving them to other parties with needs less than ours and/or returning computers to approved recycling sources (ABR provides volunteer and financial support for the Fairbanks Electronics Recycling Days.)
- Additional tools and equipment that can't be sold and may have some value are brought to transfer stations where it may be picked up by local citizens.
- We try to limit hard copies of marketing materials (e.g., biannual newsletters), replacing with 'e-copies' on our website.

### Energy Conservation

- See transportation practices above.
- Both of our Fairbanks offices were built with energy conservation as premier characteristics.
- We have upgraded our heating systems in Oregon and Alaska. In Oregon, we replaced baseboard electric heaters with a heat exchange system, reducing fuel costs and providing a better working environment. In both offices we have thermostats set at 69 degrees that lower energy use after hours and on weekends. We also try to use times on as many appliances and lights as possible. We try to use timers on many appliances including lighting in bathrooms to the kitchens and outdoor lighting.
- We have replaced nearly all incandescent lights with more efficient florescent lighting including low-mercury bulbs. Old florescent bulbs are stored and shipped outside to a certified waste handler. We are beginning to make the move toward LED lighting in some offices.
- Flat screens are recommended for computer use, reducing energy demands for each computer.
- With the exception of a few integral computers, computers are not left on over night and should be turned off at powerboards.
- We continue to upgrade offices in both Oregon and Alaska: improved windows and insulation in Oregon, audit and improvements of window seals on opening windows, new insulation for floor and ceilings of Oregon office. We installed a solar array in our Oregon office.

### Office Equipment and Purchases

- We purchase *energy star* qualified printers and appliances
- We make concerted efforts to purchase green products: cleaning products, recycled papers, etc. This is policy.
- Some of our office furniture is purchased second hand, but we are increasing purchases from reputable green producers (e.g., Herman Miller) that use high-recycled content materials. Substantially higher costs due to shipping and lack of inventory in Alaska often limit our optimal purchases.
- Computers are a big resource expense in all of our offices. We are striving to buy monitors and CPUs from companies with good track records in being socially and environmentally responsible. In addition we try to recycle outdated and dead units by shipping back to the company (at expense of 35-50 dollars per unit). (We are making an effort to send dead units back to the company, often at a cost of 35-50 dollars per box. Those companies claim to safely recycle parts and pieces. Alternatively, we've gotten quite a few shipped out during Electronics Recycling in Fairbanks.)

### **Social and Environmental Investing**

- Our retirement account is entirely invested in SRI portfolios, including *Portfolio 21*.
- We have made low to no interest loans to organizations such as NAEC, Habitat for Humanity, ACCION International, and Calvert Foundation Community Investments.
- We annually donate ~7.5% of profits to community, national, and international environmental and humanitarian groups.
- We match employee donations up to \$250/year to environmental and humanitarian aid groups.
- We support volunteer time by matching up to 4 hours per month of volunteer time with paid time (allowing 8 hours per month donated to group of their choice). We have one employee, Pam Seiser, who participates on Greenstar using this volunteer time as well as other general support.
- We have worked closely with Breadline (non-profit serving meals daily to needy persons) to provide monthly server support at Stone Soup for 15 years.
- At Thanksgiving we furnish up to 20 households a complete cooked meal with all the trimmings and leftovers.
- Many employees participate in Santa's Clearing House and Big Brothers' and Big Sisters programs.
- In 2003 we initiated a sabbatical program whereby our regular employees will be given the opportunity to get financial support (e.g., partial salary, travel expenses) to help with research and humanitarian projects outside the mainstream of support.
- Many of our research personnel are active in education including visiting local schools for seminars in their fields of expertise, supporting local science fairs by helping to organize and judge, working with native summer science programs.
- In 2003, we initiated support for a 'Green Intern' who will help us with self-auditing, acts as a liaison for us with Greenstar, the school district and other local groups to expand our level of 'conservation' influence. For example in 2003, one of his duties was to help reestablish paper recycling in the School District.

### **Carbon Accounting: ABR's efforts to Measure, Reduce, and Mitigate our Energy Use**

The 1997 Kyoto Protocol created a set of goals focused on reducing or holding steady the emissions of carbon dioxide (CO<sub>2</sub>) and methane (CH<sub>4</sub>)—the two greenhouse gases that are the primary drivers of global warming. In addition to reducing the amounts of these gases entering the atmosphere, strategies to sequester CO<sub>2</sub>, or separate it from the atmosphere and store it, are being appraised. Recognizing that our use of fossil fuels emits greenhouse gases, ABR is assessing ways to quantify, characterize, and, hopefully, mitigate or reduce the negative effects of emissions created by our companies operations. In the early stages, we are calling this '*carbon accounting*'. First, we needed to quantify all sources and amounts of fossil fuels that we used in our business operations. For ABR, an environmental consulting firm, that meant adding up our annual fuel consumption from all the jet airplane, small charter aircraft, and helicopters—our major fuel expenses—as well as energy use for lighting, heating and local transportation. The next step was to convert these units of fossil fuel used into units of CO<sub>2</sub> (tons). Numerous resources are available to guide you through these conversions. The final product is an estimated total annual CO<sub>2</sub> output..

The next step in *carbon accounting* is evolving. It will include strategies we will employ to mitigate or offset our CO<sub>2</sub> output. A prime example of mitigation used elsewhere, is to plant trees that will sequester CO<sub>2</sub> and store it in the woody material of a tree. Although in 2001, ABR tallied its CO<sub>2</sub> output and paid to have trees planted in the Pacific Northwest, we are investigating other more promising ways to mitigate our impacts. In 2002, we teamed up with the EPA and a local renewable energy installer to develop a pilot solar project at a local middle school. The goal of this project was to educate students about the potential for this renewable energy source, even in Fairbanks, Alaska. We also have purchased two gas-electric hybrid automobiles for company use that greatly reduce our CO<sub>2</sub> production, supported *Native Energy* in its development of windfarm facilities, and provided a '\$1500 rebate' to any employee purchasing a hybrid vehicle.

Our *carbon accounting* program is in its infancy, but the bottom line is that we will make greater efforts to identify and reduce the impacts of our own energy use. We consider this effort a challenging, but inherent responsibility of our business. In an ideal world, these actions would leave ABR with a zero carbon balance for the year: for every ton of CO<sub>2</sub> we put into the air, enough trees would be planted to use (or store) one ton of CO<sub>2</sub>.

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