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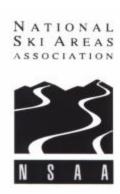
JULY, 2005

THE ENVIRONMENTAL CHARTER

FOR SKI AREAS

Sustainable Slopes Annual Report 2005

Prepared by



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The NSAA wishes to thank the following resorts for their time and dedication in completing the self-assessment process:

Alpine Meadows Ski Resort

Alta Ski Area Arizona Snowbowl Blue Mountain Ski Area Bogus Basin Mountain Resort Bretton Woods Mountain Resort

Bridger Bowl Ski Area Bromley Mountain Resort

Bryce Resort

Cataloochee Ski Area

Copper

Crested Butte Mountain Resort

Crystal Mountain Crystal Mountain, Inc. Deer Valley Resort Company Durango Mountain Resort

Gore Mountain Grand Targhee Resort Greek Peak Mountain Resort Heavenly Mountain Resort

Hunter Mountain

Jackson Hole Mountain Resort

Keystone Resort

Kirkwood Mountain Resort

Mammoth

Massanutten Ski Resort

Mission Ridge

Mountain High Resort Mt. Bachelor, Inc.

Mt. Hood Meadows Ski Resort

Mt. Rose – Ski Tahoe

Pats Peak

Powderhorn Resort

Sierra-at-Tahoe Ski Resort Snowbird Ski & Summer Resort

Snowshoe

Squaw Valley USA Steamboat Ski & Resort

Stevens Pass

Stowe Mountain Resort

Stratton

Sugar Bowl Resort Sugarbush Resort Sunburst Ski Area Taos Ski Valley, Inc.

Telluride Ski & Golf Resort Timberline Four Seasons Resort

Tremblant

Wachusett Mountain Ski Area Waterville Valley Resort

Whiteface Winter Park Wintergreen Resort

Wisp at Deep Creek Mountain Resort

2005 HIGHLIGHTS

The National Ski Areas Association (NSAA) is pleased to present this fifth *Annual Report* on the Sustainable Slopes Environmental Charter for Ski Areas. The Environmental Charter, commonly known as Sustainable Slopes, was adopted in June 2000 as a collection of environmental best practices for ski area owners and operators (visit www.nsaa.org for information on the Environmental Charter). The purposes of this *Annual Report* are to provide information on resorts' progress in implementing the Environmental Principles of the Charter, highlight the contributions of our partners, and set goals for the future.

To date, 178 resorts have endorsed the Environmental Charter, representing about 75 percent of the ski resorts nationally by skier visits. Upon endorsing the Charter, these resorts have identified an environmental contact person, assessed their policies and operations against the Environmental Principles in the Charter, and have taken steps toward improved environmental performance. Given variances in size, technical expertise, financial resources, and geographic location, resorts are at different starting points with respect to their environmental programs and implementation of the Environmental Principles. The challenge of this *Annual Report* is to collectively report on resorts' progress to date despite these differences.

NSAA is fortunate to have a committed group of Partnering Organizations — those organizations that support the Environmental Principles and are committed to working with resorts to help implement them — on board with the Charter. The Partnering Organizations are helpful in gathering environmental data on resorts, providing expertise and educating resorts on environmental practices and opportunities, and supporting our Sustainable Slopes outreach campaign. More detailed information on the contributions of the Partnering Organizations is presented in Chapter 3.

Consistent with past seasons, NSAA used an environmental "Assessment Tool" aimed at gathering data from resorts relating to the Principles of the Environmental Charter. This year's tool, like last year's, focused on quantitative, rather than qualitative, data collection. For a sample copy of the 2005 Assessment Tool, visit www.nsaa.org and click on "Environmental Charter." The Assessment Tool results are the factual basis for this *Annual Report*. A total of 54 resorts completed it this year. Over the past five years, the Assessment Tool has helped us identify general industry trends and collective results regarding our progress under the Principles. Additionally, the tool is useful to resorts on an individual basis in helping them identify successes and opportunities for improvement, setting priorities for the future, and in benchmarking their progress against other resorts.

A number of resorts participated in this year's Sustainable Slopes Outreach Campaign on February 26th to highlight the Charter and to educate guests and the public on their role in helping us make sustainable

Vision:

To be leaders among outdoor recreation providers through managing our businesses in a way that demonstrates our commitment to environmental protection and stewardship while meeting the expectations of the public.

use of natural resources. Similar to past years, the 2005 campaign theme was "Keep Winter Cool," highlighting the issue of global warming. Through the campaign, resorts raised public awareness of the potential impacts of climate change on skiing, snowboarding and winter recreation and highlighted solutions for addressing it. New this year, we released a series of public service announcements (PSAs) starring Olympic Gold medalist Picabo Street and three top riders: Dave Downing, Jeremy Jones, and Romain De Marchi. The PSAs feature breathtaking scenery and encourage the public to do their part in keeping winter cool. The PSA project was a collaboration among Resort Sports Network (RSN), Burton and Rossignol Snowboards, Natural Resources Defense Council (NRDC) and NSAA. We distributed DVDs with the PSAs to all endorsing resorts prior to Sustainable Slopes Day. The RSN network and Fuel TV ran the PSAs this past season. In addition to the PSAs, we now feature on-line athlete testimonials about how to help fight global warming on the NSAA (www.nsaa.org) and Keep Winter (www.keepwintercool.org) websites.

SKI Magazine ran an ad with the Keep Winter Cool message in its February 2005 issue to raise the visibility of the campaign. Together with our partners in Keep Winter Cool, NRDC, we distributed a variety of Keep Winter Cool outreach materials (table tents, stickers, fridge magnets, drink coasters) that were well received by resort guests and helped boost the energy of the campaign. The Keep Winter Cool website (www.keepwintercool.org) continues to highlight the problem of global warming and provides answers on solutions for addressing it.

While Sustainable Slopes Day has been successful in raising public awareness of environmental issues, we decided this year that a change is in order to make messages like Keep Winter Cool more of a season-long endeavor. For that reason, there will not be a designated Sustainable Slopes Day next season. A special thanks is due to all of the resorts and partners that have made Sustainable Slopes Day a success in the past.

Resorts continue to do their part in addressing climate change in their operations. About 30 resorts are now supporting renewable energy by purchasing or using pollution-free green energy in their operations. As a result of the joint efforts of NRDC and NSAA, seventy-one (71) resorts in 21 states endorsed the McCain/Lieberman Climate Stewardship Act (S. 342) and the companion bill introduced in the House this spring (H.R. 759). The bill would place caps on emissions of global warming pollutants for certain industries and is backed by a market-based trading system that minimizes costs and rewards companies for technological innovation. The bill, amended to include nuclear power and other incentives, ultimately was voted down as an amendment to the comprehensive energy bill in the Senate in June. We will continue to work in support of mandatory limits on CO₂ to address the important problem of global A copy of the industry's support letter for the McCain/Lieberman bill is posted at www.keepwintercool.org and the Sustainable Slopes section of NSAA's website at www.nsaa.org.



NSAA's SWAG, or Sharing Warmth Around the Globe, program continues to succeed and offers a unique opportunity for resorts to demonstrate their commitment to sustainability. Through the SWAG program, NSAA distributes retired ski resort uniforms and winter garments that would otherwise be discarded to those in need in cold weather countries throughout the world. Since the program's inception, more than 85,000 (more than 11,000 in 2005 alone) uniforms and winter garments have been shipped to communities in need in Nepal, Kosovo, Tajikistan, Mongolia, Afghanistan, Sweden, Tibet, Hungary, Tanzania, Poland, Romania, Peru, Iran, Iraq, and Albania.

NSAA continues to highlight ski area environmental programs through the web-based "Green Room." To access the Green Room, visit www.nsaa.org and click on "Environmental Charter." The Green Room is available to the media and public for information on innovative actions that resorts are taking under the 21 Environmental Principles — from water quality to wildlife habitat to energy conservation. Resort contact information is provided for each project or program, as well as links to resort websites and environmental web pages. Resorts are using the database as a resource in environmental decision-making and to share ideas on tested programs or projects that will enhance environmental performance. The Green Room also identifies those resorts that have received Golden and Silver Eagle Awards for environmental excellence.

Finally, the Sustainable Slopes program was featured on Resort Sports Network's (RSN) "Winter People" series this past season. We appreciate RSN's help in raising the visibility of the program. As Sustainable Slopes becomes more visible, it can serve as a model for ski areas in other countries. This year alone, we were contacted by ski industry representatives in Australia, Argentina, Canada (non-members of NSAA) and Spain interested in developing similar programs in their countries.

"We are
succeeding in
taking collective
steps toward
proactive
environmental
stewardship."

We have learned a great deal since the adoption of the Environmental Charter five years ago. As a result, we plan to institute a number of changes to the Charter and the Sustainable Slopes program this year. NSAA is now in the process of updating the Environmental Charter document with help from NSAA's Environmental Committee, the Partnering Organizations and other interested parties. We are developing a "template" annual report for resorts to use in issuing their own individual environmental reports. NSAA will offer training on the "template" annual report during our winter conferences in 2006. Finally, we will implement a new tiering approach to endorsement and implementation of the Charter principles that will provide more transparency, recognize the contributions of individual resorts, and provide more incentives for resorts to improve their environmental Through all of these changes, we hope to improve the Sustainable Slopes program and ultimately improve the industry's environmental performance across the board.

2005 Highlights

On behalf of ski areas across the country, NSAA would like to thank all of the individuals, organizations, and agencies outside the industry that have supported Sustainable Slopes with resources, expertise, and input. Together we can be proud of the accomplishments made over the past five years. Your participation encourages us to do better and your support is critical in meeting the challenges before us.

Michael Berry

National Ski Areas Association President July 2005



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1.0 THE SUSTAINABLE SLOPES ENVIRONMENTAL CHARTER

1.1 HISTORY AND PURPOSE OF THE CHARTER

Every year, millions of people visit ski areas across North America to enjoy snow sports and to experience the natural beauty of the mountain environment. These visitors place a high priority on environmental concerns. In order to continue to offer quality recreational experiences that complement the natural and aesthetic qualities that draw these visitors to the mountains, the National Ski Area Association (NSAA) and its member resorts have committed to improving environmental performance in ski area operations and management. This commitment is detailed in the Sustainable Slopes Environmental Charter for Ski Areas adopted in June 2000.

1.2 OVERVIEW OF ENVIRONMENTAL CHARTER

The Environmental Charter promotes sound environmental stewardship and, more importantly, offers a comprehensive set of 21 Environmental Principles that enable ski area operators to make sustainable use of natural resources. The Principles are key to the Environmental Charter and address the following topics:

1. Planning, Design, and Construction

- 2. Water Use for Snowmaking
- 3. Water Use in Facilities
- 4. Water Use for Landscaping and Summer Activities
- 5. Water Quality Management
- 6. Wastewater Management
- 7. Energy Use for Facilities
- 8. Energy Use for Snowmaking
- 9. Energy Use for Lifts
- 10. Energy Use for Vehicle Fleets
- 11. Waste Reduction
- 12. Product Re-use
- 13. Recycling
- 14. Potentially Hazardous Wastes
- 15. Fish and Wildlife Management
- 16. Forest and Vegetative Management
- 17. Wetlands and Riparian Areas
- 18. Air Quality
- 19. Visual Quality
- 20. Transportation
- 21. Education and Outreach

Understanding that ski areas have some unavoidable impacts, the Principles encourage ski areas to adopt the "avoid, minimize, mitigate" approach to natural resource management.

To see the Charter and its Principles in their entirety, visit the NSAA web site at www.nsaa.org.

For each of the 21 Environmental Principles, the Charter identifies a range of "Options for Getting There" that resorts can implement to achieve the Principles. These "Options for Getting There" serve as a menu of realistic actions ski areas can and are taking, all or in part as their resources allow, to continually improve their operations. The "Options for Getting There" are detailed for each of the 21 Principles in the Charter document available at www.nsaa.org.

Because not all resorts have the same concerns and resources, the Charter is designed to allow resorts to use the Principles as a framework and then choose the "Options for Getting There" that make the most sense given their individual circumstances and capacities. We hope that each resort continues to take the challenge to achieve the greatest possible results individually for greater conservation collectively.

It is important to note that the Charter's Principles are voluntary, and in adopting them, resorts have committed to going beyond regulatory compliance in those areas where improvements make environmental sense and are economically feasible. Ski areas already should be meeting all applicable federal, state, and local environmental requirements. The Principles are the means by which the industry can collectively *improve environmental performance*. There are many incentives for going beyond compliance, including reduced environmental impacts, increased monetary savings, reduced regulatory liability, and increased positive public image. Good environmental practices are good business, and quite simply are expected by resort customers, the Partnering Organizations in the Charter, and other key stakeholders.

1.3 PARTNERING ORGANIZATIONS

The Environmental Charter was developed through a collaborative process where input and awareness, not necessarily consensus on every issue or by every group, were the goals. This process was facilitated by the Keystone Center, an independent non-profit public policy and education organization. Input came from a variety of interests, including federal, state, and local government agencies; environmental and conservation groups; other outdoor recreation groups; and academia. The 14 Partnering Organizations listed below support the ski industry's Environmental Principles and are committed to working with the industry to implement the Principles.

- Bonneville Environmental Foundation (BEF)
- Colorado Department of Public Health & Environment (CDPHE)
- Conservation Law Foundation (CLF)
- U.S. Department of Energy (DOE)
- U.S. Environmental Protection Agency (EPA)



- USDA Forest Service (USFS)
- Leave No Trace Inc. (LNT)
- The Mountain Institute (TMI)
- National Fish & Wildlife Foundation (NFWF)
- National Park Service Concession Program (NPS)
- New York State Department of Environmental Conservation (NYSDEC)
- Teton County, Wyoming (TC)
- Trust for Public Land (TPL)
- Wildlife Habitat Council (WHC)

1.4 ENDORSING RESORTS

On an individual basis, ski areas take their stewardship role seriously and continue to take innovative steps each year to address environmental challenges. The Charter represents a collective step toward meeting these challenges. To date, 178 ski areas have endorsed the Charter and are committed to implementing its Principles. (See Appendix A for a complete list of endorsing resorts. This list is also available online and can be sorted by resort name or State/Province location at www.nsaa.org.) Of the endorsing ski areas, 54 (30.3 percent) participated in the data collection exercise that is the basis for this *Annual Report*. This is 8 resorts fewer than the 62 resorts that participated in last year's annual reporting. Chapter 4 addresses NSAA's plans to improve endorsing resort participation as the Environmental Charter moves into the future.

1.5 MEASURING PROGRESS TOWARD THE PRINCIPLES

To help resorts measure their progress under the Environmental Charter, in 2005 NSAA used the same streamlined Assessment Tool used in 2004. Using a version of the Tool identical to the previous year was intended to promote resorts' response rates in two ways. First, the resorts were more familiar with the data requested by the tool given its use in 2 consecutive years. Second, by requesting the same data, all endorsing resorts were aware of the information they would need to collect in advance of the ski season. The endorsing resorts first received the 2005 Assessment Tool packet in the fall of 2004; the resorts again received the Assessment Tool packet in April of 2005. For the April distribution, NSAA updated the examples of completed forms and sample savings calculations from individual projects in the Assessment Tool Instructions. Once again, each resort had the option of completing the Assessment Tool on-line at the NSAA web site or submitting a hard copy by fax or mail. As in the past,



the results were aggregated across all participating ski resorts and analyzed according to geographic regions.

In its fifth year, the Assessment Tool continues to be an evolving tool. We continue to incorporate feedback from resorts, Partnering Organizations, and previous years' reports so that the tool improves with each successive year (see Chapter 4). For example, the sample savings calculations updated in the 2005 Tool Instructions and the repeated use of the 2004 version of the tool were two ideas suggested by resorts to increase participation and understanding of the tool. This year's tool had been previously streamlined so that resorts no longer reported qualitatively on the 177 best management practices across the 21 Principles of the Charter, reducing the number of questions resorts had to answer by over 200 compared to versions of the tool prior to 2004. Resorts continued to indicate that the qualitative best management portion of the Assessment Tool is a valuable method for internal benchmarking. For this reason, this information continues to be available on the NSAA web site, but data from this portion were again not compiled and analyzed as part of this Annual Report.

The quantitative measurements of this year's Environmental Indicators Form 1 again focused on savings or reductions from individual projects. Reporting was specific to projects of water savings (consumptive/nonconsumptive), electric energy savings, renewable generation and purchases, waste recycling and reduction, and transportation demand reduction. Based on their responses in these categories, resorts were given feedback on the climate change impacts of their efforts to put the savings from their projects into perspective. For example, the resorts' climate change impacts were compared to benefits of tree planting, carpooling, shutting down ski lifts when not in use, and avoiding air travel. Our overall goal continues to be tracking all of these issues as Environmental Indicators. These responses allow us to quantify some basic metrics associated with core Environmental Principles. We asked that resorts provide numbers that reflect using certain resources in their individual operations. The intent of these numbers remains the same to allow better year-to-year comparisons. Similar to past years, many resorts reported that certain numbers on Form 1 are difficult for them to provide. As a result, many "o" figures again appear in this year's data.

1.6 "KEEP WINTER COOL" AND GLOBAL WARMING

Global warming, caused by heat-trapping pollution, has the potential to affect ski resorts in many ways, including fewer ski days and less snow. Because of these potential impacts, ski resorts and NSAA have taken proactive steps to address climate change and global warming. Seventy-one ski resorts from 21 states supported pioneering bi-partisan legislation introduced in the 109th U.S. Congress to control global warming pollution. In 2003, together with the Natural Resources Defense Council (NRDC), NSAA introduced a global warming campaign entitled "Keep Winter Cool." This campaign highlights the effects of global warming on winter recreation, as well as the opportunities both resort operators and their

For more information on "Keep Winter Cool," visit www.keepwinter cool.org.



guests have to start solving the problem. More information on the campaign is available at www.keepwintercool.org, including details about the global warming impacts on resorts, climate facts, how ski resorts are addressing global warming issues, and what resort guests can do about global warming. During the 2004-2005 season, the campaign received support from NRDC Senior Attorney Robert F. Kennedy, Olympic Champion Picabo Street, and professional snowboarders Dave Downing, Jeremy Jones, and Romain De Marchi. New this season, we released a series of public service announcements (PSAs) in DVD format featuring Picabo Street, Dave Downing, Jeremy Jones, and Romain De Marchi. The PSAs feature breathtaking scenery and encourage the public to do their part in keeping winter cool. The PSA project was a collaboration among Resort Sports Network (RSN), Burton and Rossignol Snowboards, Natural Resources Defense Council (NRDC) and NSAA. network and Fuel TV ran the PSAs this past season. In addition to the PSAs, we now feature on-line athlete testimonials about how to help fight global warming on the NSAA (www.nsaa.org) and Keep Winter Cool (www.keepwintercool.org) websites. Appendix C contains materials related to the campaign.

Many of the measures implemented by resorts as part of the Environmental Charter are directly related to this campaign and are beneficial for reducing global warming, particularly in the areas of managing energy, using renewable energy, reducing transportation demands, reducing solid waste, and recycling. In order to integrate the results of the Assessment Tool with this campaign, resorts were asked again this year to provide certain information to estimate climate change impacts, along with the other estimated industry-wide Environmental Indicators. For example, resorts were asked to indicate the breakdown of vehicle types (e.g., gas, diesel, hybrid electric, etc.) involved in their various transportation demand reduction strategies. The Assessment Tool then used this information to automatically convert the miles reduced into pounds of equivalent carbon dioxide (CO₂), a unit used to measure climate change impacts. Overall, data reported for climate change impacts focused on electric energy savings, renewable generation/purchases, waste reduction/recycling, and transportation demand reduction. As with the other Environmental Indicators previously discussed, some resorts reported that factors related to climate change impacts on Form 1 are difficult for them to provide.

1.7 "SHARING WARMTH AROUND THE GLOBE" PROGRAM

For more
information on
"Sharing Warmth
Around the
Globe," visit
www.swagusa.org

As previously noted, principles reducing waste, re-using products, and recycling are key to the Environmental Charter. NSAA's "Sharing Warmth Around the Globe" (SWAG) program incorporates these key principles with the social aspects of sustainability. SWAG is dedicated to distributing retired ski resort uniforms to those in need in cold weather countries throughout the world. NSAA's partners in the SWAG program are listed below:

1.7 "Sharing Warmth Around the Globe" Program

- U.S. Department of Defense
- Humanitarian International Services Group
- Catholic Relief Services
- Project C.U.R.E.
- Vision International
- Asia Foundation
- Eagle Creek Travel Gear
- International Mountain Explorers Connection
- Assist International
- Boojum Expeditions
- H.E.L.P. International
- Samaritans Purse
- Heuga Center
- Snowboard Outreach Society
- Colorado Business Roundtable/Cap Logistics
- Nepalese Youth Opportunity Fund
- Hungarian Counsel

SWAG has been distributing donations around the world since 2000. The 2004-2005 distributions helped people all over the world:

- Mongolia: approximately 8,200 pieces donated
- Russia: 3,000 pieces donated
- Poland: 6,000 winter uniforms distributed to 19 organizations, including orphanages, homes for the disabled, and centers for the elderly
- Tanzania: 300 winter jackets made available to porters for climbs of Mount Kilimanjaro
- Hungary and Romania: approximately 4,000 winter garments distributed to orphanages, homes for the elderly, and women's shelters
- Romania: 5,000 winter uniforms distributed
- Peru: 1,000 winter uniforms transported
- Nepal: 70 winter uniform coats donated
- Iran: 3,500 uniforms distributed to earthquake victims in Bam
- Albania: approximately 2,500 winter garments, 300 pairs of skis,
 50 wheelchairs and miscellaneous winter clothing pieces distributed
- Iraq: 2,000 pieces distributed in the northern part of the country



- Mongolia and Armenia: 2,700 winter garments distributed
- Romania and Nepal: 2,500 winter garments distributed

Ski areas that participate in SWAG include the following:

Aspen Airport Base Operations Powderhorn Recreation and Development

Aspen Mountain Sierra at Tahoe Bear Valley Mountain Resort Sierra Summit

Beaver Creek Resort Smugglers Notch Resort Bogus Basin Snow Creek Ski Area

Breckenridge Ski Resort Snow Summit Mountain Resort

Buttermilk Mountain Solitude

Copper MountainSquaw Valley USACrested ButteStowe MountainCrystal MountainSugar Bowl Ski ResortGrand TargheeSugarbush Resort

Heavenly Ški Resort Sugarloaf

Jackson Hole Mountain Resort Sundown Mountain Ski and Snowboard Resort

Jay Peak Resort Taos Ski Valley

Keystone Resort Telluride Ski & Golf Resort

Kirkwood Mountain Resort Titcomb Mountain Mammoth Mountain Vail Mountain

Monarch Ski and Snowboard Area Wachusett Mountain Ski Area
Osler Bluff Ski Club Willamette Pass Ski Corporation

Park City Mountain Resort Windham Mountain

For more information on how to participate in the program and contacts for the program, visit the program's website at www.swagusa.org.



2.0 CHARTER PROGRESS AND CHALLENGES

A total of 54 resorts from 22 U.S. states and 2 Canadian Provinces completed the Assessment Tool in 2005 and have reported on their progress toward achieving the goals of the Charter. Chapter 4 outlines NSAA's future plans to create sources of new momentum for this maturing voluntary program while also continuing efforts to aggregate meaningful data in support of industry benchmark developments.

2.1 SUMMARIES OF RESORT PROGRESS

Alta Ski Area Utah

Alta Ski Area continues its dedication to sustainable environmental practices. Last year, the resort published Alta's Environmental Report and made it available to employees, guests, and the public on alta.com. This year, Alta included environmental education as part of employee orientations to challenge everyone to keep improving.

In addition, Alta Ski Area participated in Sustainable Slopes Day and set up information booths at the resort's two mid-mountain restaurants. At these booths, employees distributed Alta Environmental Reports and provided information to guests on reducing greenhouse gas emissions. The following day, Alta hosted Ski For Nature with The Nature Conservancy and donated a portion of its ticket sales to the Utah chapter.

Some of the resort's latest efforts are described below:

- Conducted an EnergyFin Answer Program (audit) with Utah Power
- Worked with the Town of Alta to include #1 and #2 plastic in the recycling program
- Purchased 30 percent recycled office paper
- Planted 1,200 native trees and shrubs
- Coordinated with Salt Lake Public Utilities in placing interpretative trail, pedestrian, and highway signs for the "Keep It Pure" watershed management program

Future goals at Alta include the following:

- Replace the Watson mid-mountain restaurant with a building that meets many Leadership in Energy and Environmental Design (LEED) parameters
- Expand and improve on recycling efforts



- Implement Energy Audit recommendations
- Plant an additional 1,200 native trees and shrubs

Alpine Meadows Ski Resort California

Alpine Meadows continues its efforts toward environmental sustainability and stewardship. The resort is in its final year of a 4-year Best Management Practices/stormwater mitigation program. The program developed by the resort, a regional water quality agency, the Department of Fish and Game, and the USFS, is devised to minimize and mitigate stormwater runoff and effluents from the resort parking lots. Alpine Meadows has spent close to \$300,000 to divert stormwater into settling ponds and storage areas, which will keep sediment from affecting local streams.

In addition, during the summer Alpine Meadows remodeled its main dining area, retrofitting the entire area with efficient compact fluorescent lighting and renovating restrooms by upgrading to water-saving fixtures. The resort also has stopped purchasing Styrofoam products and continues to aggressively recycle cardboard and paper products. Also, Alpine Meadows continues to purchase bio-diesel, maintains an Eco Trail, and hosts an Environmental Awareness Day with local environmental agencies and preservation groups.

Arizona Snowbowl Arizona

Arizona Snowbowl will be adding a solar-powered, portable parking lot and special event lighting system this summer, as well as a solar-powered, off-the-grid composting toilet system for use at the top (elevation 11,500 feet) of its summer chairlift ride system. In addition, pending final approval of the resort's Environmental Impact Statement, Arizona Snowbowl will begin to install its snowmaking system using 100 percent grade A+ reclaimed water purchased from the City of Flagstaff. The system will not be completed for this season but is planned to be on line by November of 2006.

Blue Mountain Ski Area Ontario, Canada

The environmental emphasis during the 2004-2005 year at Blue Mountain Resort revolved around waste management and initiatives to reduce transportation demands. The resort's waste management program aims to reduce and, where possible, eliminate waste through rethinking, recycling, and re-use initiatives. Great efforts have been made to improve the infrastructure available for staff members and guests to recycle, as well as adding and improving signage. Projects that have contributed immensely to the success of this program include an industrial composting program, as well as source separation of recyclables. Blue Mountain has introduced a new outdoor recycling look by adding outdoor multi-sort recycling bins. The units were constructed from recycled milk jugs, which help to complete the recycling circle and create markets that will keep recycling programs working.

Alpine Meadows has spent close to \$300,000 to keep sediment from affecting local streams.



In addition, the resort's staff carpooling program continues to be a success and continues to attract new participants. Traditionally, the carpooling program has been a winter-based program; however, this past spring the resort made the decision to run the program year-round.

Blue Mountain's goals and projects for the upcoming year include the following:

- Continuing to improve and refine the waste management program
- Drafting a purchasing policy that incorporates resort environmental priorities
- Exploring energy efficiency opportunities
- Implementing an anti-vehicle/bus idling campaign

Bogus Basin Mountain Resort Idaho

The Nordic Group of the Bogus Basin Foundation, in conjunction with REI and other community partners, is in the process of lighting 5.5 kilometers (km) of Nordic trail. This system is a solar lighting system using photovoltaic/battery collectors and high-intensity halogen lights. Each light is only a 10-watt bulb and is designed to provide light for Nordic skiing and Nordic lessons. There will be over 100 poles with several lights per pole and 8 solar arrays to provide the power. The system will be operational for the 2005-2006 season.

Evening cross-country skiing and snowshoeing will have educational impacts, both for skiing and for the future of other solar projects, while providing a great venue to exercise and train at the end of the day for working people and students.

Bretton Woods Mountain Resort New Hampshire

Bretton Woods Mountain Resort continues to set the standard for proper stewardship of the environment through independent programs and by observing the principles established by NSAA's Sustainable Slopes Environmental Charter.

Bretton Woods Recycles has continued to be one of the resort's greatest programs, and it keeps getting better. This year, Bretton Woods is focusing its energy on involving more of its lodging establishments in the program, as well as working with vendors to find better solutions to resort purchasing needs. For example, the goals are to buy products with less packaging, buy in bulk containers, use environmentally friendly cleaning products, and purchase products made from post-consumer recycled materials.

During this summer, the resort will continue to develop a new 5-acre, spring-fed lake at the base of the ski area. In addition to serving as a water source for snowmaking, the lake will be designed primarily as a

Bogus Basin
Mountain Resort
will be lighting
5.5 km of Nordic
trail using a
photovoltaic/
battery system.

wildlife habitat and summer recreation site. Lake Carolyn will offer open water, marsh areas, emergent wetlands, riparian buffers for natural filtration, and gravel bars for trout-spawning habitat.

Conscientious forestry and vegetative practices are paramount at Bretton Woods. The resort's seasoned trail crew continues its revegetation efforts throughout the property. Whether they are putting the finishing touches on a new trail, sprucing up an old favorite, or helping out on one of the many projects around the property, they know that the environment must be preserved. These crewmembers are true stewards of the environment in every way.

Bretton Woods' Outdoors Center and new interactive tours will lead the way in educating guests about proper environmental stewardship. Resort employees are aware of how important the environment is to today's guests, and recognize the importance of preserving the experience for all future guests.

Bridger Bowl Ski Area Montana

This year, Bridger Bowl replaced three older snowmobiles with three 4-stroke snowmobiles. The new machines are much quieter, more fuel efficient, and much more environmentally friendly than the older 2-stroke machines. These benefits are especially desirable for injured guests being pulled on sleds behind the new 4-stroke ski patrol machine, as they no longer are subject to the 2-stroke fumes.

Bromley Mountain Resort Vermont

During 2004, Bromley continued to maintain existing water saving equipment and added to the number of low-flow fixtures installed at the resort. In addition, the electrical load management system was fully operational throughout the year, yielding an additional 2 percent total kilowatt-hour (kWh) savings over the previous year and a 7 percent reduction in kWh from use prior to load management. Unfortunately, the resort did not meet its waste reduction and recycling goals because of unfavorable conditions. However, during the 2004 calendar year, Bromley reduced fuel consumption for snowmaking by approximately 13,000 gallons largely by using tower guns and more efficient air compressors.

Bryce Resort

Virginia

During the past ski season, Bryce Resort has improved the energy efficiency for its track lighting system in the children's ski school building and cafeteria. A total of 37 incandescent bulbs rated at 100 watts and 1,000 lumens light output were exchanged for 23-watt compact fluorescent bulbs. The life expectancy of a 23-watt fluorescent bulb with 1,000 lumens light output is 8,000 hours. By replacing these lights during the 92-day ski season, the resort saved an average of 2,621 kWh.



Cataloochee Ski Area North Carolina

Cataloochee Ski Area has worked hard over the last year to institute a recycling program that has reduced the amount of waste taken to the landfill. Over the next year, the resort will add more energy-saving snow guns to its system. In addition, the resort currently is planning a lodge expansion and is exploring ways to incorporate renewable energy sources into its design.

Crystal Mountain, Inc. Washington

Crystal continues to expand water conservation efforts that began in 1985. The resort estimates that it saves water at the rate of 7 gallons per skier visit by converting conventional flush toilets to low-flow models that only use 1.5 gallons per flush. Crystal also has eliminated broadcasting over 5,600 yards of road sand annually since 2001 by using a chemical de-icing agent on 6 miles of the access road. This change has improved vehicle traction and has reduced accidents from an average of 60 to less than 3 per year. It also has reduced unwanted sediment in nearby Silver Creek by 233 tons per year.

Deer Valley Resort Company Utah

One of Deer Valley's biggest achievements is implementing the Blue Sky Program in conjunction with Utah Power. Following is a quote from Resort President and General Manager, Bob Wheaton:

"Obviously, by virtue of the fact that we are a ski resort in the mountains with multiple buildings, we affect the local environment, but we take our responsibility as stewards of the land very seriously. Aside from efforts we already make, such as re-vegetation, re-seeding, implementing a comprehensive Forest Service management plan, monitoring and testing downstream water discharge, preserving open space within new resort developments, and a substantial recycling effort, we've learned about Utah Power's Blue Sky program and embrace the concept whole-heartedly."

In addition to implementing the Blue Sky Program, Deer Valley continues to enhance its efforts regarding snowmaking reservoirs. The largest of these reservoirs holds 15 million gallons of water. This pond also has an established wetland habitat for wildlife.

Durango Mountain Resort Colorado

Durango Mountain Resort continues to set the mark for environmental conservation efforts in southwest Colorado by upgrading and streamlining programs under the direction of the Environmental Practices Committee. As a result, the resort was a finalist for two Silver Eagle awards, one for Visual Impact, one for Water Conservation, and a finalist for the Golden Eagle for Overall Environmental Excellence.

Durango Mountain Resort used 19,000 gallons of B20 biodiesel in on-mountain machinery and bus fleets. During the 2004-2005 winter season, Durango began using biodiesel in on-mountain machinery, as well as in the bus fleet. In total, the resort used 19,000 gallons of B20 biodiesel. This 20 percent (B20) biodiesel blend reduces particulates, carbon monoxide, and hydrocarbons by approximately 20 percent compared to petroleum diesel.

Other resort efforts to reduce greenhouse gas emissions include purchasing four 4-stroke snowmobiles this year. Durango will continue to phase in the cleaner running machines over the next 5 years to complete the changeover.

The greatest gains in preventing greenhouse gas emissions were seen in Durango's bus and carpool programs. An extra bus was added midday, and the carpool program tripled in size. Last year, the resort awarded over 1,350 vouchers to drivers with 3 or more people per vehicle. During the 2004-2005 season, the resort awarded more than 4,450 vouchers, totaling 1,402,650 vehicle miles traveled (VMT).

In the past year, snowmaking conservation saved 884,130 gallons of water (approximately 3 percent). Other resort operations saved 571,000 gallons of water. By purchasing improved hardware for the snowmaking system, including pumps, nozzles, and hoses, Durango used water much more efficiently. Also, resort policies have been streamlined and staff members more expertly trained about water use around the resort, including housekeeping practices.

In other conservation efforts, Durango's state-of-the-art air quality monitoring system (likely the only one of its kind in Colorado) continues to ensure the San Juan Mountains maintain some of the cleanest air in the country.

Gore Mountain New York

Gore Mountain continues to make environmental progress through environmental education and interpretive programs, continued watershed monitoring, analysis and implementation of operational and energy efficiencies, and continued incorporation of best practices in strategic planning. As an example, new snowmaking pumps that will be installed in the near future will be capable of producing power in the off-season via reverse flow from snowmaking reservoir. Gore Mountain won a Silver Eagle Award for Environmental Excellence in Environmental Education in 2005.

Grand Targhee Resort Wyoming

Recycling took a quantum leap in efficiency as Grand Targhee joined Headwaters Cooperative with the local community recycling group in Teton Valley to market recyclables. In addition, the Green Team is working with housekeeping to improve its capture of recyclables. By turning off the heat in unoccupied buildings in the off season, the resort saved \$22,000, or 360,000 kWh, in heating costs. In addition, the resort

Grand Targhee
Resort has joined
the Headwaters
Cooperative to
market recyclables
in the
Teton Valley.



took an active role in protecting its Douglas fir stands by tacking antiaggression pheromone packets to 20 acres of Douglas fir. Grand Targhee's winter ecology snowshoe programs reached 295 local grade school students, and the employee-driven Environmental Foundation awarded \$6,000 in grants for environmental projects to non-profit organizations in Teton Valley. The resort also provided weekly incentives for employees to ride the bus to work. And finally, Grand Targhee has contracted to increase its green power use to operate its main lift (450,000 kWh) and is developing the infrastructure to use lio-diesel beginning this summer.

Greek Peak Mountain Resort New York

Greek Peak Mountain Resort continues to practice sustainability by maintaining a level of performance in implemented Charter Principals that is reviewed weekly. The resort continues to replace fixtures and equipment with more efficient devices as an on-going process. In addition, Greek Peak is giving careful consideration to Green Building concepts in any new construction project planning.

Heavenly Mountain Resort California

During the past year, Heavenly undertook the following projects that implemented one or more of the Environmental Charter Principles:

- Installed Phase 2 of the 3-phase state-of-the-art water quality treatment system in the Boulder Lodge parking lot.
- Completed initial design for the California Main Lodge parking lot water quality treatment system.
- Designed a 2-acre wetland restoration project to accompany a lift replacement project for the North Bowl lift.
- Served as the annual site for a local wildland fire hazard reduction and composting program known as "Compost Your Combustibles." Local residents and second home owners clean up their properties and bring all woody debris, pine needles, slash, and other landscape wastes to Heavenly's Boulder Lodge parking lot where they can drop it off for free instead of setting it out for the local refuse company to pick up. The materials are sorted for use by the resort for erosion control efforts on the mountain. In 2004, over 150 tons of material were diverted from the waste stream and re-used to help protect watersheds that drain into the world-famous Lake Tahoe, renowned for its exceptional clarity and deep blue color.
- Began a new source separation recycling program for guests and employees for beverage containers using a grant received by El Dorado County from the State of California.

Heavenly served as the site for a local wildland fire hazard reduction and composting program and used the resulting landscape wastes for erosion control.

- Provided complimentary shuttle bus service for over 442,000 guests and employees to and from the resort.
- Participated in an Interagency Partnership with Mt. Rose Ski Area, the USFS, and the Tahoe Regional Planning Agency to study and genetically classify the Tahoe draba, a sensitive high-alpine cushion plant found in the Carson Range of the Sierra Nevada.
- Hosted the annual Earth Day celebration in South Lake Tahoe at the base of the Heavenly Village gondola.
- Continued to replace older, noisy air-water fan guns with new more energy-efficient and quieter fan guns along the East Bowl run.
- Began a new demonstration project to mulch ski runs and remove large downed logs and rock obstacles to protect soil resources from erosion while allowing the runs to open with significantly less snow (i.e., reducing electricity and water consumption).

Hunter Mountain New York

At Hunter Mountain, a new energy-efficient pump house for snowmaking saved nearly 600,000 kWh of electricity for the season while delivering improved snowmaking quality and quantity. It also contributed to faster start-ups and shutdowns, saving wasted efforts associated with weather changes. The resort is working hard to introduce bio-fuel oil into its heating mix and bio-diesel into its grooming equipment and other diesel fuel uses. The resort expects these changes to be in place by next winter.

Jackson Hole Mountain Resort Wyoming

Over the past 2 years, Jackson Hole Mountain Resort (JHMR) has made tremendous progress toward fulfilling its environmental commitment under the Sustainable Slopes Charter. As evidence of its hard work, the resort won the NSAA 2005 Silver Eagle Award for Visual Impact and the 2003 Silver Eagle Award for Energy Conservation. JHMR's innovative projects include donating to community environmental organizations, recycling solid and hazardous wastes, reducing energy consumption and single person transportation, and reducing air and water pollution and visual impacts. Currently, JHMR is developing an extensive environmental management system (EMS) covering 10 operations departments, a first for a North American ski resort of its size (under 400,000 annual skier visits). This EMS will establish JHMR as an environmental leader and will help the resort develop a system for continual, resort-wide environmental improvement.

Keystone Resort Colorado

Keystone continued to move forward with recycling and waste reduction by expanding its composting program to include two new locations, including an on-mountain dining facility at 11,400 feet. Keystone also Jackson Hole
Mountain Resort is
developing an
environmental
management
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its kind for a North
American ski
resort with under
400,000 annual
skier visits.



more than tripled its commitment to renewable energy for the 2004-2005 ski season by offsetting 707,000 kWh of electrical use by purchasing green certificates. The 707,000 kWh was enough to offset the electricity required by the resort's night ski lights and the lifts that run for night skiing for the entire season. In addition, Keystone performed lighting upgrades in several buildings that are estimated to save 175,000 kWh per year, and performed snowmaking and night ski light upgrades that are estimated to save close to 850,000 kWh. An upgrade to the Keystone Laundry will save over 1 million gallons of water per year, and Keystone's public transportation serves over 400,000 riders annually and saves over 900,000 VMT. Also, Keystone tested biodiesel during the winter of 2004-2005, but had problems with gelling and had to postpone any further testing. And finally, the resort continues to move forward with developing an invasive weed management plan for the mountain and the resort area.

Kirkwood Mountain Resort California

Kirkwood Mountain Resort purchased 10 new high-efficiency snow guns for the 2004-2005 season to replace obsolete snow guns. Kirkwood also relies on electric air compressors for snowmaking to help preserve higher air quality that would be compromised by diesel air compressors. The higher efficiency guns reduced the amount of compressed air needed for snowmaking and reduced electrical consumption by over 24,000 kWh compared to the previous year. Kirkwood also made a conscious decision to curtail snowmaking efforts when temperatures were marginal, which lowered the average hourly water flows compared to the previous seasons. The resort intends to purchase eight more high-efficiency snow guns for the 2005-2006 season to reduce energy consumption even further. In addition, Eldorado County has begun a partnership with Kirkwood by providing recycling stations for separating plastic, glass, and aluminum waste. Kirkwood staff members are transporting the recycled material, along with collected white paper from Kirkwood offices, directly to a local recycling center.

Mammoth California

This past year's progress at Mammoth includes introducing biodiesel into all off-road equipment (soon into all on-road equipment as well) and realizing more improvements in the area of increased energy efficiencies within existing facilities. The resort also adopted a new 5-minute vehicle idling time limit policy for all motor vehicles on Mammoth Mountain property, resulting in immediate fuel savings and emissions reductions. Additionally, Mammoth is planning a new lodge facility as a Silver LEEDs-certified building with a geothermal snowmelt and radiant heating system. The resort also worked with other community members to create new energy efficiency language for the Town of Mammoth Lake's general plan update. This group moved on to create the new nonprofit High Sierra Energy Foundation. These efforts were recognized this year with a Silver Eagle Award for Energy Conservation and Renewable Energy.

Mammoth
Mountain Ski Area
adopted a new
5-minute vehicle
idling time limit
policy resulting in
fuel savings and
emissions
reductions.

Massanutten Ski Resort Virginia

Massanutten's recycling program continues to grow and remains its best performer under the Charter. This year's improvements include purchasing a new waste oil furnace for the vehicle maintenance shop and switching to a bio-diesel blend for the grooming fleet. The furnace provides heat for the shop, reduces electricity, and provides a disposal service for the community. The resort efficiently burned nearly 600 gallons of used motor oil this winter. By using the bio-diesel blend, the resort avoided using nearly 2000 gallons of diesel in its grooming operations. Additionally, the blended fuel burned with noticeably less odor. Next year, Massanutten will continue these programs and looks toward expanding its employee shuttle service.

Mission Ridge Washington

Mission Ridge recently added a solar power-generating unit in cooperation with the Public Utility District to supply solar power in a fund-raising effort for the Special Olympics.

Expanded snowmaking at Mission Ridge will allow the resort to divert water during periods of low demand and convert it to snow. Snowmaking snow has a higher water density, which causes it to melt slower and, in turn, stabilize the amount of runoff during periods of high demand as well as increasing the amount of run off. During low snow pack years like this one, this expanded system will allow the resort to recharge or add to the ground water supply, thereby increasing the amount of water flowing into the downhill streams. In addition, a new reservoir will store the natural snow pack in that area, which can be used for fire fighting during extreme drought conditions.

Mountain High Resort California

The Environmental Charter set forth by NSAA has led to three major areas of conservation at Mountain High Resort. The first area of conservation is related to producing snow. Mountain High has reduced its demand for energy by installing energy- efficient fan guns. These same fan guns also convert approximately 20 percent more water to snow than traditional air-water snowmaking guns. This increased conversion rate of water to snow is Mountain High's second area of conservation. The third area of conservation is how the resort deals with the byproduct from its oil-water separators. By changing the way it handles the waste, Mountain High has reduced the amount of waste generated each year. Mountain High Resort is committed to moving forward with projects that benefit the environment and resort guests.

Mt. Bachelor, Inc.

Oregon

Already operating a successful transportation system, and without the benefits of new construction or the need for retrofitting, Mt. Bachelor had found itself stagnant in its environmental conservation efforts. The resort set a goal this season of finding new, measurable ways to reduce CO₂



emissions. One of these ways was partnering with the Bonneville Environmental Foundation (BEF) in the resort's new Green Energy initiative, which involves selling Green Tags and powering some lifts with clean, renewable wind power. With this program operating during the 2004-2005 season, Mt. Bachelor reduced CO₂ emissions by 35,133 pounds.

Mt. Hood Meadows Ski Resort Oregon

During the past year, Mt. Hood Meadows continued its innovative and progressive approach toward sustainability. The resort implemented a number of creative environmental actions while constructing the new Vista Express Chairlift, planted vegetative screening to improve visual qualities, and increased its commitment to and purchase of clean wind energy. Additionally, on the social side of the sustainability model, the resort forged an expanded relationship with the Confederated Tribes of the Warm Springs, which included creating voluntary huckleberry restriction areas, huckleberry outings for tribal members, and a free ski day for tribal youth.

Next year, the resort hopes to create a model for the industry in terms of design, construction, and environmental responsibility for an expanded snowmaking system.

Pats Peak New Hampshire

Pats Peak, built some 45 years ago, continues to employ the Best Management Practices going forward. The resort initially tackled the big energy users by modernizing its lift, snowmaking, and lighting systems as funds allowed. Pats Peak reconfigured lifts with DC motors and scrutinized operational use more closely. In addition, snowmaking at the resort received an infusion of capital to purchase and install energy-efficient HKD snow guns and variable frequency drives (VFDs) for pumps. The resort also converted lighting from quartz halogen to metal halide.

Focus has turned to the base facilities, where the resort has paid particular attention to water use and heating as it modernizes its infrastructure. Even though the facilities are larger because of expansion, by modernizing electrical and heating systems, updating insulation, and installing water conservation equipment, Pat's Peak incurred no additional energy use.

Sierra-At-Tahoe Ski Resort California

Sierra at Tahoe strives to improve its recycling efforts, and experienced two very dramatic and positive changes for the 2004-2005 season.

• Sierra nearly doubled the amount of renewable (green) electric energy it purchased during the season. The resort went from using 1,687,500 renewable kWh to 3,269,912 renewable kWh.

Mt. Hood Meadows
Ski Resort has
expanded its
relationship with
the Confederated
Tribes of the
Warm Springs,
cooperating on a
number of events
for the tribes.

• Sierra increased eight-fold the amount of avoided VMT by increasing its bus fleet and scheduled routes. The resort went from 78,149 VMT to 632,016 VMT in just one season.

As stewards of the Eldorado National Forest, Sierra-at-Tahoe guests and employees show great commitment to the resort's recycling and re-use initiatives.

Snowshoe

West Virginia

Snowshoe Mountain has implemented an EMS. This EMS requires that the resort establish an appropriate strategic environmental policy that commits to maintaining or exceeding regulatory compliance, pollution prevention, and continual improvement. Snowshoe also is benchmarking with Green Globe 21 and starting the process toward certification.

In partnership with the U.S. Fish and Wildlife Services, Snowshoe's Habitat Conservation Plan, the first ever completed in the state of West Virginia, helps protect the two endangered species found on resort property — the Northern Flying Squirrel and the threatened Cheat Mountain Salamander.

And finally, once the resort is 100 percent open, Snowshoe limits snowmaking to conserve water and energy.

Squaw Valley USA California

Squaw Valley USA is involved in a variety of programs that meet the criteria outlined in the Sustainable Slopes Program. Squaw's primary focus areas are forest and vegetative management, water quality, and efficient energy use. During the summer, Squaw Valley revegetates disturbed areas to reduce erosion and maintain water quality. In an effort to increase natural vegetation, Squaw Valley plants hundreds of pounds of seed each summer to disturbed areas. Staff members also plant thousands of shrubs and seedlings. In addition, the resort has reduced energy use by installing systems such as a new drive motor in the Cable Car (which is 96.85 percent more energy efficient), revolutionary heat exchangers in the Children's Center facility and at High Camp, plus an incinerator to dispose of waste.

Additional efforts include adding mulch to lift terminals and towers to maintain soil quality, seeding and eradicating unused portions of road, controlling erosion and preserving water quality by maintaining wetlands and riparian areas, lining runoff channels with rock, and installing sediment basins. Other programs include a highway cleanup program; a comprehensive recycling program including paper, aluminum, glass, and vehicle fluids; sponsorship of the Tahoe Trolley service; and participation on the Truckee River Watershed Council. Squaw Valley USA won a Silver Eagle Award for Environmental Excellence in Stakeholder Relations in 2005.



Steamboat Ski & Resort Corporation's Environmental Fund awarded \$14,000 in grants to local non-profit organizations for environmental projects.

Steamboat Ski & Resort Colorado

Steamboat is working hard to achieve the goals of the Environmental Charter in a variety of important ways:

- Steamboat is a proud member of the EPA's Green Power Partnership earned by purchasing renewable energy.
- The resort's Environmental Fund awarded over \$14,000 in grants this past summer to non-profit organizations in the community to fund environmental projects.
- The ski area continues to convert its snowmobile fleet to fourstroke engines, which pollute less.
- In an effort to educate guests about reducing CO₂ emissions, skiers/riders who either carpooled or rode mass transit to the ski area on Sustainable Slopes Day received rewards. Prizes included a snowboard, powder clinics, and Specialty Ski Clinics.
- The Resort recycled 150 tons of waste this past year.
- The USFS and Steamboat have mutually benefited in many ways as a result of their ongoing partnership. An example is the Pine and Spruce Bark Beetle suppression programs, which have been ongoing for 6 years. Using a comprehensive and integrated approach, thousands of trees have been surveyed and treated in an attempt to curtail the epidemic proportion of bark beetles and to protect trees that are important to the ski area.
- The resort hosts a number of environmental education/ interpretation programs. Among them are the Guided Nature Ski Tours and the Nature Den exhibit.

Stevens Pass Washington

Stevens Pass will continue its highly successful employee transit program, now operating for more than a decade. High gas prices have made the program even more popular with staff members. Lower numbers this season only reflect a shorter season rather than a drop in staff interest.

In addition, recycling continues to grow in company-wide participation. Even though overall numbers dropped this year as a result of the shorter season, participation increased.

As in past seasons, Stevens Pass donates a bill surcharge to ts utility provider, supporting the locally produced wind and solar power. The resort's next goal is to install a 1,000-watt solar system on a day lodge roof. Also, the company expects to increase its subsidy of wind and solar power next year. This last season, Stevens Pass customers were able to purchase mini green tags from the Bonneville Environmental Foundation



when they purchased their lift tickets. These purchases support the creation of wind and solar power in the Northwest.

Stowe Mountain Resort Vermont

Stowe Mountain Resort continued to make progress this year under the Environmental Charter. As the construction continues on Spruce Peak at Stowe, the first stage of Mountain Cabins (6,000-square-feet structures) has been awarded a Five-Star Energy Rating to designate high energy-efficient buildings. Upgrades throughout the resort have resulted in significantly reduced energy use. In addition, over 35 percent of the resort's electricity is now purchased from renewable sources. All structures being removed as a result of implementing the Master Plan have been recycled, and a large volume of building materials has been re-used.

A large portion of the new Spruce Peak stormwater collection system is now installed, and water from this system is being collected and re-used for snowmaking. Also, this year the resort will complete its new 18-hole golf mountain course that will be managed using little or no pesticides or fungicides. The resort also will continue to construct more energy efficient new base buildings and residential structures.

In addition, Stowe Mountain has implemented extensive erosion and sediment control measures for both on-mountain and base real estate improvements to protect water quality during construction. And finally, the resort completed a stream restoration project on a 210-foot stream channel located in the Spruce base area.

Stratton

Vermont

Stratton's biggest success this season was the lighting and lift terminal heating upgrade that took place. All of the resort's large electricity-consuming outlets, such as retail stores, sports center base lodge, and country club, received the newest and most efficient technology that met the lighting needs of the venue. The measure greatly reduced electricity consumption in 2004.

The second part of this initiative was upgrading the lift terminal heating. The electricity savings of this measure are only estimated because there was no metering before the upgrade. The lift terminals used to be heated via forced-air heaters. The upgrade includes replacing these old heaters with infrared heaters that heat the equipment rather than the surrounding air and generally consume significantly less electricity.

Sugar Bowl Resort California

This year was a progressive and environmentally active year for Sugar Bowl. Since committing to the Charter, the resort has learned about the benefits, economic and ecological, of enforcing environmental stewardship. Sugar Bowl is improving its recycling program daily, and is now recycling vehicle fluids, such as oil and antifreeze. Mechanically, the

Stowe Mountain Resort now purchases over 35 percent of its energy from renewable sources.



resort is using improved snowmaking guns that eliminate the need for diesel compressors and save up to 70 percent of energy otherwise lost to heat.

Sugar Bowl is located at the headwaters of the South Yuba River, and the resort has a responsibility to ensure the safety of this watershed. For this reason, the resort is engaged in proactive solutions for preventing pollution to the river. The resort is diligent in enforcing its Stormwater Pollution Prevention Plan (SWPPP), particularly during runoff and construction seasons. Sugar Bowl has state-of-the-art drainage systems, such as sand-oil separators and sediment basin treatment, for treating all parking lot runoff before it enters the groundwater and nearby waterways. The SWPPP also addresses the rehabilitation of eroding slopes to protect against non-point source pollution. Sugar Bowl is actively planning a strategy to restore a particular slope that is severely eroding by using the most economic and environmentally sound practices. The resort, along with the USFS, is responsible for and alert to healthy forests, clean water, and minimal impacts to this portion of the Tahoe National Forest and private lands. Sugar Bowl practices avid recycling (summer months too), manages and protects its wetlands and watersheds, and is sensitive to local habitats and its impacts upon them.

Sugarbush Resort Vermont

Sugarbush Resort is continuously looking for areas to improve its operations using renewable resources. Through the Mt. Ellen Biodiesel Pilot Project, the resort reduced its greenhouse gas emissions and implemented a renewable fuel stock that has numerous environmental benefits. The primary goal was to document performance of biodiesel in a challenging winter environment. In addition, Sugarbush is striving to become a pioneer in using biodiesel and to become one of Vermont's environmental leaders. The combination of the harsh winter environment and the number of hours resort machines operate made a fuel switch to biodiesel an interesting pilot program to run. Prior to this season, all of the snow grooming and snow removal equipment at the Mount Ellen and Lincoln Peak ski areas were run on conventional diesel. This winter season at Mount Ellen (2004-2005), four groomers and one loader ran on Sugarbush Resort's primary goal for this biodiesel B20 biodiesel. implementation project is to put a renewable fuel source to work during the most critical time of the year. The resort hopes to share its experience with other resorts that may not view biodiesel as a viable fuel source.

Sunburst Ski Area Wisconsin

Sunburst continues to be a recycling leader in Wisconsin by encouraging customers to participate in its recycling program using visible recycling containers.

Telluride Ski and Golf Resort Colorado

Telski continues to move forward with environmental initiatives, and new resort ownership has pledged a commitment to sustainability. Renewable



energy generation at the resort is being studied and designed in conjunction with Mountain Village in the hopes of reducing resort demands on the already overloaded regional power lines. In addition, the resort is considering an on-mountain transfer station to refine recycling operations, and Telski is participating in a countywide effort to create a composting facility for the region. The resort also has begun to replace the lighting in all of its facilities with more energy-efficient fixtures and bulbs by retrofitting approximately three sites a year. And finally, the resort's extensive water quality monitoring and environmental education programs continue to build upon their successes, and community alliances for a sustainable future are growing.

Timberline Four Seasons Resort West Virginia

Timberline hopes to install VFD devices on all its snowmaking main pumps. This enhancement will help the resort continue to conserve water and reduce labor costs.

Tremblant Quebec, Canada

In 2004, Tremblant expanded its recycling program, which resulted in a 40 percent increase in the tonnage of recycled material. The resort also conducted an energy audit over all the resort. The resort carried out twenty-six energy conservation projects (lighting and thermostat retrofits, insulation, etc.) during the fall of 2004, leading to a 7- to -20 percent economy in electricity costs from November 2004 to April 2005. Tremblant also developed emergency procedures in case of accidental spills and implemented training in various departments. The resort studied wooded areas between slopes in the summer of 2004, which pinpointed short and longer term measures to maintain a sustainable forest. Construction of the Versant Soleil real estate project (2,000 units), including creating a 5.7-acre lake, was started in September 2004. This project requires close environmental follow-up, as well as creating an environmental regional committee to oversee its development.

In 2005-2006, the resort will implement another set of energy conservation measures to reduce electricity consumption for lift operations. Two compensation projects related to the Versant Soleil project also will begin in 2005: creating wetlands on the golf courses and enhancing fish habitat. Finally, the resort will be closely involved in creating a water basin environmental agency for the Diable River.

Wachusett Mountain Ski Area Massachusetts

This past year, Wachusett focused on assessing and reworking its recycling efforts. These improvements should significantly increase the amounts of aluminum, glass, and plastic recycled at the resort. Many of these changes occurred late in 2004; therefore, their results should be more readily quantifiable in 2005. Other areas of focus during 2004 were more construction-related, and are no longer tracked by the NSAA Assessment Tool.



The resort has designed and will install a new EMS for the main base lodge in the summer of 2005, which should result in significant energy savings. Wachusett's focus in 2005 will include stormwater improvements and additional energy savings from snowmaking system.

Waterville Valley Resort New Hampshire

The biggest accomplishment at Waterville Valley this year was cleaning up the dump (the bone yard). The resort removed up to 350 yards of metal, plastic, and wood debris that had accumulated over the last 25 years. The resort intends to continue this effort from year to year.

Whiteface New York

Whiteface's primary achievement was reducing its electricity demand by using new low-energy guns and refurbishing older models for better efficiency. The resort also established an environmentally friendly snow sports school program, which involves planting a seedling/tree for each child who participates in a snow sports school youth program. The New York State Department of Environmental Conservation provides the trees, which are planted along trails that will, in time, provide windbreaks, thus reducing the amount of snow that blows off the trails during and after snowmaking. Consequently, additional electricity savings may be realized and children have an opportunity to learn more about their environment and trees.

Winter Park Colorado

This year, Winter Park expanded its commitment to reduce electrical consumption. AreaNet, an integrated computer program designed to manage electrical power consumption at the resort, was expanded to include four additional lifts, two skier services buildings, four maintenance shop buildings, and block heaters for snow cats and other fleet vehicles. In addition to the expanded AreaNet program, Winter Park replaced 95 percent of the T12 fluorescent fixtures in its base area facilities with T8 fixtures.

Wintergreen Resort Virginia

Wintergreen donates used appliances and furniture from its facilities to local charities.

Wisp at Deep Creek Mountain Resort

Wisp is expanding its skiable terrain in the 2005-2006 season. The resort will fully consider efficiency options, particularly those related to snowmaking and electrical use, as part of its expansion. The resort also will consider additional recycling options as part of the expansion.



2.2 ENVIRONMENTAL INDICATORS

In 2005, NSAA used the same four Environmental Indicators as was used in 2004 to characterize the environmental state of the industry for the fifth Annual Report: (1) water conservation; (2) electric energy savings, renewable generation, and renewable purchases; (3) waste diversion through recycling and material use reduction; and (4) transportation demand reduction. Similar to 2004, resorts were asked to report information on a project specific basis (total utility use and waste generation were again not requested this year). Indicators normalized according to skier visits have proven to be the most relevant and useful information for ski resorts. Resorts can use normalized Indicators to compare their own performance against other industry-wide and regional norms. As such, this year's report focuses on the development and discussion of these normalized Indicators. This year's Assessment Tool also continues to consider climate change impacts based on resort actions. Climate change results are discussed in detail in Section 2.3.

The Assessment Tool again breaks out water conservation into two categories: snowmaking operations (non-consumptive) and all other operations (consumptive). By definition, non-consumptive water use indicates the resource is *returned to the watershed* following its use, as opposed to treated before release to the watershed. Energy savings also are broken down into savings related to electric energy efficiency, generating onsite renewable energy, and purchasing certified renewable energy from a utility or through a program such as Green Tags.

The Environmental Charter encourages resorts to establish systems for routinely quantifying both their environmental impacts (in terms such as resource use and waste generation) and their avoided impacts (such as transportation demand reduction) through their collective projects. At the same time, the Charter continues to recognize that measuring detailed resource consumption takes expertise and resources that may not be available for all resorts. As discussed in Chapter 4, NSAA will continue to work with Partnering Organizations to maximize opportunities for resorts to report meaningful information regarding their progress toward the Environmental Charter goals.

Aggregated Industry Data

Table 2-1 summarizes the quantitative results in the Assessment Tool using the high and average responses from reporting resorts for each indicator.



Table 2-1 **Environmental Indicators Response Summary**

Environmental Indicator	High	Average
Snowmaking Operations Water Savings (gallons)	48,479,500	4,366,000
Consumptive Water Savings (gallons)	12,431,000	628,222
Electric Energy Savings (kWh)	5,200,000	650,801
Renewable Energy Generated (kWh)	937,700	17,467
Renewable Energy Purchased (kWh)	3,269,912	302,454
Waste Diverted (tons)	1,380	146
Avoided VMT	16,350,871	781,225

It is interesting to note that Table 2-1 emphasizes the importance of water savings from snowmaking at ski resorts. The average of this indicator exceeds that of consumptive water savings by a factor of approximately seven.

The data normalized per skier visits (e.g., energy savings/skier visits, etc.) is not affected by the number of reporting resorts and allows for direct comparison with the 2005 data. The industry-wide normalized factors (detailed in Table 2-2) for each Indicator reflect the following:

- Resorts are conserving approximately 11.6 gallons of water in snowmaking operations per skier visit, an estimated 20 percent decrease from 2004.
- Resorts are conserving approximately 1.7 gallons of water for consumptive uses per skier visit, a 6 percent decrease from 2004.
- Resorts are saving approximately 1.8 kWh of electric energy per skier visit, a 5 percent increase over 2004.
- Resorts are generating approximately 0.05 kWh of renewable electric energy per skier visit, a 16 percent increase over 2004.
- Resorts are purchasing approximately 0.8 kWh of renewable electric energy per skier visit, a 60 percent decrease over 2004.
- Resorts are diverting approximately 0.8 pound of solid waste per skier visit, either through reduced use or recycling, an 11 percent increase over 2004.
- Resorts are avoiding approximately 2.1 VMT per skier visit, a 7 percent increase from 2004.

Overall, on a per skier basis, improvements were observed in four areas: electric energy savings, renewable energy generation, solid waste diversion, and reduced VMT.



Analysis by Region

In addition to looking for overall trends, we analyzed the data collected by geographic region. The regions used for this analysis are defined below:

Northeast (NE) Mid-Atlantic (MA)

MainePennsylvaniaVermontMarylandNew HampshireNew JerseyConnecticutNew York

Massachusetts

Rhode Island Northern Rockies (NR)

Southeast (SE)

Virginia

West Virginia

Utah

North Carolina

South Carolina Pacific Northwest (PN)

Tennessee
Georgia
Washington
Oregon
Alaska

Midwest (MW)

North Dakota
South Dakota
Nebraska
California

Nebraska Nevada Nevada Arizona

Missouri

Wisconsin Canada (CN)

Illinois Indiana <u>Central Rockies (CR)</u>

Michigan Colorado
Ohio New Mexico

Table 2-2 displays the normalized Environmental Indicators of the 2005 Assessment Tool by geographic region.



Table 2-2 Normalized Environmental Indicators by Region

Environmental										All
Indicator	CR	CN	MA	MW	NE	NR	PN	SE	SI	Resorts
Snowmaking Operations Water Savings (gallons/skier visit)	3.6	2.1	33.7	6.9	6.0	18.1	22.4	72.5	0.4	11.6
Consumptive Water Savings (gallons/skier visit)	0.63	1.58	0.85	0.33	2.41	0.77	3.5	11.11	0.78	1.70
Electric Energy Savings (kWh/skier visit)	1.7	2.0	4.8	0.7	1.5	2.5	0.4	2.3	0.8	1.80
Renewable Energy Generation (kWh/skier visit)	0.00079	0	0	0	0	0	0	0	0.17507	0.04725
Renewable Energy Purchased (kWh/skier visit)	0.205	0.000	0.087	0.052	1.372	0.663	2.808	0.000	1.606	0.818
Waste Diverted (pounds/skier visit)	0.78	0.66	0.65	0.84	0.22	2.45	0.20	1.49	0.42	0.79
Avoided VMT (VMT/skier visit)	0.79	0.69	3.01	0.06	0.15	1.27	5.93	1.33	4.28	2.11

When comparing the normalized 2005 results of Table 2-2 to 2004 data, all regions reported improvement in at least one Environmental Indicator. The following list presents the improvements related to Indicators for each region:

- CR: consumptive water savings and renewable energy generation
- CN: consumptive water savings, electrical energy savings, waste diverted, and avoided VMT
- MA: electrical energy savings
- MW: electrical energy savings, renewable energy purchased, and waste diverted
- NE: renewable energy purchased
- snowmaking operations water savings, electrical energy savings, renewable energy purchased, and waste diverted
- PN: snowmaking operations water savings, consumptive water savings, electrical energy savings, renewable energy purchased, waste diverted, and avoided VMT
- SE: waste diverted
- SI: electrical energy savings, renewable energy purchased, waste diverted, and avoided VMT



Interpreting the Data

Although the quantitative aspects of the Assessment Tool are approximate, the results do offer some useful information. Table 22 quantifies savings indices based on skier visits for each of the Assessment Tool questions. Endorsing resorts can use these indices to compare their own performance against other industry-wide and regional norms.

For example, the normalized indicator of water savings in snowmaking operations for the Central Rockies (CR) region is 3.6 gallons per skier visit. A resort in that region with approximately 200,000 skier visits is projected to save approximately 720,000 gallons of water each year for snowmaking operations. Actual savings quantities then can be applied to determine if the resort's efforts are greater than or less than this benchmark.

2.3 CLIMATE CHANGE IMPACTS

We made order of magnitude estimates to measure climate change impacts related to the following:

- Conserving electrical energy, generating renewable energy, and purchasing renewable energy
- Reducing waste and recycling
- Reducing transportation demands

To determine climate change impacts related to electrical energy conservation, we applied the respective statewide CO₂ emission factor (from the DOE's Energy Information Administration) to the resorts' estimated energy (kWh) savings or use of renewable energy (through onsite generation or purchase). For waste reduction and recycling, we asked resorts to estimate the percentages of materials (office paper, cardboard, etc.) that either were reduced or recycled to account for the total amount of diverted waste. We then applied the relevant equivalent CO₂ emission factors (updated for 2005) related to recycling or reducing the various materials (based on data from the EPA). transportation demand reduction, we asked resorts to indicate the breakdown of vehicle type (gas trucks, diesel buses, hybrid electric cars, etc.) involved in their various transportation demand reduction strategies. We then applied fuel efficiency factors (miles per gallon [MPG]) and equivalent CO₂ emission factors (also updated for 2005) related to the fuel type to determine reduced pounds of CO₂ resulting from transportation measures.

Table 2-3 summarizes the overall results of resort responses related to climate change impacts. This table indicates the high, average, and total response for each associated environmental indicator.



Table 2-3 **Climate Change Impacts Summary**

Climate Change Impacts of Environmental Indicators	High	Average	Total
Electric Energy Savings, Renewable Generation, Green Purchases (lbs CO ₂ reduction)	10,015,200	1,072,445	57,912,027
Waste Reduced/Recycled (equivalent lbs CO ₂ reduction)	10,988,102	1,285,544	69,419,399
Avoided Vehicle Miles Traveled (VMT) (equivalent lbs CO ₂ reduction)	51,284,063	1,912,011	103,248,583

Collectively, reporting resorts are reducing their impacts on climate change by reducing the following:

- 57,912,027 pounds CO₂ emissions by conserving electrical energy and generating or purchasing renewable energy
- 69,419,399 equivalent pounds of CO₂ emissions by reducing waste and recycling
- 103,248,583 equivalent pounds of CO₂ emissions by reducing transportation demands
- 230,580,009 total pounds of CO₂ emissions from all energy, waste, and transportation reduction measures

These results show that avoided VMT efforts nearly outweigh efforts related to waste and energy combined. Therefore, how skiers arrive at resorts is at least equally as important as on-mountain operations in terms of climate change.

To add perspective to the CO₂ reductions quantified above, consider the following:

- Eliminating 25 pounds of CO₂ emissions each year is equal to planting one tree. Collectively, the reporting resorts' total efforts are equal to planting almost 9 million trees.
- Eliminating 1,750 pounds of CO₂ emissions each year is equivalent to shutting down one 250-horsepower ski lift for one day. Collectively, the reporting resorts' total efforts are equal to shutting down over 126,000 ski lifts for one day.
- Eliminating 2,530 pounds of CO₂ emissions is equivalent to avoiding one round-trip airplane flight from New York to San Francisco. Collectively, the reporting resorts' total efforts are equal to avoiding over 87,000 round-trip flights between New York and San Francisco.



Analysis by Region

In addition to looking at overall CO₂ emission reduction, we also analyzed the data collected by geographic region. Table 2-4 displays these results normalized by skier visits.

Table 2-4
Normalized Climate Change Impacts by Region

Climate Change Impact	CR	CN	MA	MW	NE	NR	PN	SE	SI	All Resorts
Electric Energy Saved, Renewable Energy Generated, Green Energy Purchased (lbs CO ₂ /skier visit)	3.8	0.2	4.2	1.2	1.0	6.1	0.9	4.6	2.0	2.9
Waste Reduced/Recycled (equivalent lbs CO ₂ /skier visit)	2.54	1.84	4.29	2.96	1.26	10.19	1.7	7.41	2.45	3.48
Avoided Vehicle Miles Traveled (VMT) (equivalent lbs CO ₂ /skier visit)	1.7	0.8	0.2	0.3	0.3	3.4	21.5	2.7	11.9	5.2
Total of All Impacts (equivalent lbs CO ₂ /skier visit)	8.0	2.9	8.6	4.5	2.5	19.7	24.1	14.7	16.3	11.5

According to Table 24, nearly all regions demonstrated improvement related to the normalized climate change Indicators when compared to 2004 data. The following list presents the specific Indicators that resulted in improvements for each region:

- CN: avoided VMT
- MA: electrical energy saved, renewable energy generated, green energy purchased
- MW: avoided VMT
- NE: wasted reduced/recycled
- NR: electrical energy saved, renewable energy generated, green energy purchased, waste reduced/recycled
- PN: electrical energy saved, renewable energy generated, green energy purchased, avoided VMT
- SE: waste reduced/recycled, avoided VMT
- SI: electrical energy saved, renewable energy generated, green energy purchased

3.0 CONTRIBUTIONS OF PARTNERING ORGANIZATIONS

NSAA and the endorsing resorts are fortunate to have outside organizations playing a key role in Sustainable Slopes. Our Partnering Organizations, which are listed in Section 1.3, were instrumental in the initial development of the Environmental Charter, and continue to provide their expertise and perspectives as the program evolves.

3.1 WHY PARTNERING ORGANIZATIONS ARE PARTICIPATING IN SUSTAINABLE SLOPES

There are several common reasons why the Partnering Organizations are involved in Sustainable Slopes:

- The Charter fits in well with the mission and goals of the Partnering Organizations.
- The Charter provides a vehicle for Partnering Organizations to get their environmental information and technical assistance out to those who may benefit.
- Partnerships and collaboration are a large part of how many of the Partnering Organizations do business.

However, the number one reason for supporting Sustainable Slopes, expressed either directly or indirectly by all Partnering Organizations, is that it leads to improved environmental performance. As Mark Sinclair of CLF noted from the start, "Regulations can prevent the worst in the ski industry, but they can't bring out the best."

Testimonials on motivations for partnering are provided below.

Getting Their Message Out

Having relationships with ski areas through the Sustainable Slopes program allows us access to potentially millions of consumers who, independent of their electric utility or their geographic location, will be able to support alternative energy resources through our programs.—(BEF).

Without the Sustainable Slopes program, most resorts would not be able to learn about and take advantage of EPA's voluntary programs and other available assistance.— (EPA).

The Charter offers a vehicle for us to get our Responsible Use message out to visitors who enjoy these destination spots.—(LNT).

...the number one reason for supporting Sustainable Slopes...is that it leads to improved environmental performance.

3.1 Why Partnering Organizations Are Participating

The Sustainable Slopes program is an efficient way to communicate with hundreds of resorts whose land holdings include important wildlife habitat.—(WHC).

Fitting in with Their Missions and Goals

The concepts fit in well with our own missions and goals (TC).

Sustainable Slopes as a concept is on point and on mission with what we are trying to promote where we work in mountain communities (TMI).

We are very interested in seeing the process because we are building our program ground up now too. The Charter also is very consistent with the NPS mission of protecting the environment and developing evaluation tools that can be applied to our winter sport programs (NPS).

Energy is a thread that touches almost all aspects of ski areas' operations. This certainly fits within our strategic plan of leading the nation in the research, development, and deployment of affordable, advanced, clean energy (DOE).

The NYSDEC supports the NSAA and the application of the Environmental Charter's Principles at ski areas in New York because it fits in with the mission of building partnerships that foster an understanding of how to use and protect the environment and how to work to become better stewards of land, infrastructure, and natural resources (NYSDEC).

The principles encouraging enhancement and restoration of wildlife habitat are consistent with our organization's mission to increase the overall amount and biological value of wildlife habitat on private land (WHC).

Improving Environmental Performance

Improved environmental performance by resorts using cleaner energy sources and reducing CO₂ emissions is an important step toward improved sustainability (BEF).

Improved environmental performance by ski areas translates into improved environmental and health benefits to citizens and the state (CDPHE).

The Charter allows us to move away from our historical regulatory battles with the industry to a more cooperative dialogue. Regulations can prevent the worst in the ski industry, but they cannot bring out the best. The Charter raises the bar for environmental performance beyond compliance toward true sustainability (CLF).

Whatever we can contribute to help the ski industry improve its environmental performance directly benefits us because these efforts help

"The Charter raises the bar for environmental performance beyond compliance toward true sustainability" (CLF).



to maintain high environmental quality on national forest service lands that are permitted to ski areas (USFS).

EPA's mission is to protect human health and the environment. Actions a ski area takes through Sustainable Slopes help to achieve this goal. With greater participation and effort, the ski industry is capable of reducing its impacts in a measurable and significant way. The ski industry could play an exemplary role for improved, quantified environmental performance both nationally and worldwide for the tourism and recreation industry. The Sustainable Slopes partnership and this *Annual Report* are a step toward that end (EPA).

WHC is interested in pursuing a demonstration project with members of NSAA as ski areas typically own or operate large tracts of land featuring high biodiversity and/or conservation value. One such demonstration program could involve habitat certification. WHC offers a Corporate Habitat Certification/International Accreditation Program recognizes commendable wildlife habitat management and environmental education programs at individual sites. WHC certification adds value to programs by providing third-party credibility and an objective evaluation of projects. Individual ski areas could work with WHC biologists to achieve Habitat Certification under this proposal. A second opportunity for ski area collaboration with WHC is enrollment in the Corporate Campaign for Migratory Bird Conservation. The fundamental goal of this program is to increase migratory bird populations by expanding habitat through engaging corporations and other private landowners in conservation activities. This is an important conservation effort since birds perform a variety of functions vital to maintaining ecosystem vitality, including roles in seed dispersal, pest control, and pollination. Furthermore, birds are an important link in the trophic (food) chain. Moreover, bird populations serve as highly visible indicators of habitat quality; the presence or absence of an assemblage of bird species can be used to gauge overall ecosystem health. When management activities create, restore, or maintain indigenous habitat types for birds, many other species benefit as well.

Collaboration is the Key

BEF's partnership with the NSAA is intended to help build public awareness for the Sustainable Slopes program and to promote support for clean, alternative energy (commonly referred to as green power) among participating ski areas and their guests (BEF).

Our whole charter is to embrace and underwrite public/private partnerships on both public and private lands (NFWF).

In our partnering with other industries, we have seen excellent results when this type of proactive visioning occurs (DOE).

WHC collaborates with a number of different entities to accomplish its objectives and broaden the understanding of wildlife values, including



120 corporations, more than two-dozen conservation organizations, and individuals dedicated to enhancing and restoring wildlife habitat (WHC).

3.2 HOW PARTNERING ORGANIZATIONS ARE GETTING INVOLVED

Not only do Partnering Organizations have valuable expertise to share, they are providing other key services as well:

- Resources
- Direct technical assistance to resorts
- Training
- Communication/education/outreach
- Referrals to relevant programs and resources
- Integration of Charter Principles into development reviews
- Initiation of regional and resort-level projects
- Improving the Sustainable Slopes Program

A brief summary describing the contributions made by Partnering Organizations to Sustainable Slopes is provided below.

Resources

The **USFS** provided a grant to NSAA to support the 2003 Assessment Tool data collection and self-assessment effort that form the basis for this *Annual Report*. The USFS also helped fund the initial stakeholder process that NSAA instituted to develop the Environmental Charter in 1999 and 2000.

NFWF provided grants to NSAA for the 2000/2001 and 2001/2002 seasons to develop and implement the data collection and self-assessment process that serves as the basis for this *Annual Report*. NFWF also participated in the Sustainable Slopes Outreach Campaign in Colorado in 2002.

DOE partnered with Aspen Skiing Company, Jiminy Peak Ski Area, and NSAA to sponsor the educational Public Broadcast System (PBS) show "Spotlight On: The Environment," which featured Sustainable Slopes and aired on 300 PBS stations for 3 months during the 2001 ski season. The show aired 991 times and was seen by 5 million viewers.

DOE's Office of Industrial Technologies funded a study in 2004 to explore the role that distributed energy resources (DER) can play in optimizing energy management at ski resorts. The study, completed by The Brendle Group, Inc. and Spirae, Inc., was based on a compilation of existing DER practices across the industry as well as a more targeted analysis of potential opportunities for two Colorado ski resorts: Aspen Skiing Company and Vail Mountain. The study was aimed at examining adopting mature DER technologies within ski area operations.

"In partnering with other industries, we've seen excellent results when this type of proactive visioning occurs" (DOE).

Direct Technical Assistance to Resorts

CDPHE and the Colorado Governor's Office of Energy Management and Conservation (OEMC) partnered to assist small- and medium-sized businesses, including ski resorts, with energy efficiency through its *State Partners for Energy and the Environment* program. This program resulted in completed energy assessment of Beaver Creek Resort, Sunlight and Keystone Resorts. More information on the program can be found at http://www.state.co.us/oemc/programs/commercial/index.htm.

Additionally, **CDPHE**, with joint funding from the **EPA**, has provided direct technical assistance to two Colorado ski resorts, Arapahoe Basin and Aspen Skiing Company, through a multi-year pilot program. The pilot program included a top to bottom audit of resort practices and analyses for improving environmental performance and efficiencies. The results of the project were compiled in the *Greening Your Ski Area* -A *Pollution Prevention Handbook* and disseminated to the industry nationally through NSAA last year. (A link to a copy of the *Handbook* is available on NSAA's website at www.nsaa.org. Click on "Environmental Charter" to find it. Hard copies are available through NSAA by emailing katep@nsaa.org.)

With assistance from CDPHE, Tetra Tech EM Inc., and The Brendle Group, NSAA provided training to resorts on the *Handbook* during the Eastern and Western Winter Conferences in January 2002, and also through a special training workshop hosted by Keystone Resort in April 2002. The training sessions were well received and have sparked further progress toward improving environmental performance in the industry.

The *Handbook* includes chapters on most of the on-mountain aspects of the Charter, including Lift Operations, Snowmaking, Vehicle Maintenance, Buildings, and Construction. It also offers guidance on program elements, such as setting performance goals and metrics, marketing successes, and conducting public relations. Finally, the *Handbook* details demonstrated cost savings by the participating resorts in an unprecedented manner.

DOE's Office of Industrial Technologies has provided energy audits at Aspen Skiing Company and Stratton Mountain Ski Resort in conjunction with the **CDPHE** pilot program. The goal was to provide the industry with two case-specific audits. Contacts for the ski industry have been provided to DOE's regional offices for alternative fuel vehicle programs (Clean Cities). DOE's regional offices will continue to provide front-end support to ski resorts interested in deploying alternatively fueled vehicles and purchasing wind power.

Although it has not worked directly with ski resorts yet, **TMI** has technical expertise available for hire on a contract basis. TMI's mission and expertise is three-fold: (1) protecting habitat, (2) protecting culture, and (3) advancing the economics of the regions. TMI is poised to help



resorts with an objective outside environmental audit or to help design a constructive program around the three principles listed above. TMI's services include auditing, planning, and fine-tuning environmental programs.

NYSDEC collaborated with White Face in 2005 on a school program focused on environmentally friendly snowsports. NYSDEC provided a tree for planting for every child who participated in the resort's snowsports school youth program. The trees were planted along trails to provide windbreaks and reduce the amount of snow that blows off trails during and after snowmaking. The program educates kids and provides energy savings as well.

BEF has a mission of supporting and developing new sources of alternative energy, including wind, solar, and biomass power. BEF supplies clean, alternative energy products to utilities, individuals, and corporations located across the United States, including 11 ski areas. BEF encourages all ski areas to consider supporting alternative energy as part of their broader goals related to sustainability.

Training

DOE conducted training seminars for ski areas during NSAA's 2000 Fall Education Seminars. The training sessions were held in eight regions across the country and helped resorts identify opportunities for becoming more energy efficient and for applying clean energy technology.

EPA conducted training workshops on waste reduction, energy and water efficiency for resorts, and EMS in conjunction with NSAA's Eastern and Western Winter Conferences in January of 2001.

CDPHE, as part of its joint project with **EPA** (see description under technical assistance above), shared the results of its project with the rest of the industry in resort training workshops held in conjunction with NSAA's Eastern and Western Winter Conferences in January of 2002.

NYSDEC developed a training video this year for ski areas entitled "Pollution Prevention for New York State Ski Areas: Doing Your Part." The video addresses four areas of environmental performance: (1) Energy Conservation and Use, (2) Habitat Protection, (3) Waste Management, and (4) Water Resources. It addresses principles of pollution prevention that ski areas can use to ensure sound environmental stewardship. The training video addresses simple as well as technical operational procedures that can improve overall environmental performance and contribute to cost savings, and it reinforces many of the Principles laid out in the Sustainable Slopes Charter. Copies of the training video (in VHS or DVD format) are available through the NYDEC Pollution Prevention Unit at (518) 402-9469.



Communication/Education/Outreach

BEF partnered with deven (11) ski areas in the Pacific Northwest in the 2004/05 season to address global warming through a regional Green Tags program. The resorts (Cooper Spur, Hoodoo, Mission Ridge, Mt. Ashland, Mt. Bachelor, Mt. Hood Meadows, Timberline Lodge, Ski Anthony Lakes, Stevens Pass, Schweitzer Mountain and Summit at Snoqualmie), are purchasing green energy for their operations as well as making "mini green tags" available for purchase by resort customers. Green Tags enable consumers everywhere, independent of their electric utility or their geographic location, to be able to support alternative energy resources and the environmental benefits that result from reducing our reliance of burning fossil fuels to produce electricity. Visit www.skigreen.org for more information.

LNT provides materials on outdoor ethics to resorts for Sustainable Slopes Day each February. In March 2003, LNT participated in Ski For Nature Day with several Utah resorts to benefit the Utah Chapter of the Nature Conservancy. In the future, LNT would like to create some educational pieces (booklets, hang tags, signage, etc.) that more actively present the sustainability message to the end user. This could be done in partnership with NSAA or even with particular resorts in a more customized fashion.

EPA sponsored environmental outreach materials for the Sustainable Slopes Outreach Campaign in February 2001.

BEF, CDPHE, EPA, TPL, and USFS are judges for the Golden and Silver Eagle Awards for Environmental Excellence. This national award program recognizes resorts that have excelled in particular areas of environmental concern.

NYSDEC supports the efforts of its Pollution Prevention Unit, which is advocating the Charter Principles within the agency through its outreach programs to ski areas and through its partnership with the statewide ski area association, Ski Areas of New York (SANY).

The **USFS** celebrated its Centennial in 2005. In conjunction with this celebration, the USFS raised the visibility of its longstanding partnership with the ski industry in protecting natural resources and its support of the Sustainable Slopes program.

Referrals to Programs and Resources

During training at NSAA's 2001 conferences, EPA highlighted four programs that can provide direct technical assistance to ski resorts: (1) WAVE (water alliance for voluntary efficiency — www.epa.gov); (2) Energy Star program, which has a broad array of energy efficiency information, software tools, product lists, and a certification program; (3) Waste Wise, which is a waste reduction and recycling technical assistance program; and (4) EMS, a tool for identifying, prioritizing, and

...four EPA
programs that can
provide direct
assistance to
ski resorts:

- WAVE
- Energy Star
- Waste Wise
- EMS



addressing environmental impacts. EMS is the holistic tool that can provide a systematic structure for resorts to completely implement the Environmental Charter. These are just four of EPA's voluntary programs; there are many other resources and programs available to resorts through the EPA.

Integration of Environmental Principles into Development Reviews

Teton County uses the Environmental Charter as a guide in interacting with ski resorts on its Master Development Plans.

The **USFS** continually works with public land resorts on planning new developments, and provides its specialized expertise to enhance the environmental performance of these specific projects. In September 2002, NSAA and the **USFS** renewed a national Memorandum of Understanding on their partnership, highlighting the agency's support of the Sustainable Slopes program. The USFS anticipates that a case-by-case learning tool on resort environmental practices can be used and distributed by NSAA to the member organizations.

Initiation of Regional-level Projects

As mentioned above, **BEF** partnered with eleven (11) ski areas in the Pacific Northwest in the 2004/05 season to address global warming through a regional Green Tags program. This was the first regional effort of its kind. The resorts (Cooper Spur, Hoodoo, Mission Ridge, Mt. Ashland, Mt. Bachelor, Mt. Hood Meadows, Timberline Lodge, Ski Anthony Lakes, Stevens Pass, Schweitzer Mountain and Summit at Snoqualmie), are purchasing green energy for their operations as well as making "mini green tags" available for purchase by resort customers. Visit www.skigreen.org for more information.

CLF and the **NFWF** hope to get more involved in partnering with eastern resorts on climate change-related projects.

The **USFS** is represented on the steering committee of a unique ski area environmental partnership among the Sierra Business Council, Lahontan Regional Water Quality Control Board, Alpine Meadows, Heavenly, Mammoth Mountain, and Northstar-at-Tahoe resorts in California. The goal of the partnership is to reduce soil erosion and improve water quality at ski areas in the Sierra Nevada.

Improving the Sustainable Slopes Program

BEF, CDPHE and **EPA** provided useful feedback on how to improve the Sustainable Slopes Program. Their insights and suggestions were invaluable in helping the industry overhaul the Sustainable Slopes program through its five-year review.



3.3 FUTURE WORK WITH PARTNERING ORGANIZATIONS

While the contributions outlined in Section 3.2 are impressive, another major benefit from Partnering Organizations' involvement in Sustainable Slopes comes from putting their expertise to work as we continue to improve the Charter and the Assessment Tool. Many of the Partnering Organizations have more to offer:

- Direct experience with developing voluntary environmental programs for other industries
- A long history of working with ski resorts and/or mountain communities on environmental issues
- Technical expertise in specific subject areas covered by the Environmental Principles

In combination, this experience is invaluable toward improving the Sustainable Slopes program. NSAA also wants to encourage new Partnering Organizations to join in the Sustainable Slopes program.



4.0 GOALS FOR THE FUTURE

This year marks the 5-year anniversary for Sustainable Slopes. As indicated in last year's annual report, the Environmental Charter will be updated this year to ensure that our Principles are current and incorporate the latest technology to foster continuing improvement in environmental performance. This effort is largely being led by NSAA's Environmental Committee with input from our Partnering Organizations and other interested parties. Several of these organizations were recognized in Chapter 3 for their contributions toward updating the Environmental Charter.

Looking to other industry-led environmental programs as examples, we see the 5-year update to the Environmental Charter as an important opportunity to enhance other aspects of Sustainable Slopes, mainly in the areas of improving accountability and providing more incentives for improved environmental performance.

The NSAA Environmental Committee is exploring a range of options for both these topics. The main goals of any proposed Sustainable Slopes enhancements are outlined below:

- Create sources of new momentum for a maturing voluntary program
- Recognize higher levels of performance while encouraging broad participation across the industry
- Encourage quality annual reports from endorsing resorts
- Aggregate meaningful data to support the development of industry benchmarks
- Coordinate participation in Sustainable Slopes with nationally recognized certification programs
- Continue to emphasize climate protection through the "Keep Winter Cool campaign"

NSAA plans to finish updating the Charter and complete the associated program enhancements in the following timeframe:

- Complete Environmental Charter update: Late summer 2005
- Identify program enhancements: September 2005
- Implement enhancements into program guidance documents: December 2005



- Provide training on program enhancements: NSAA Winter Trade Shows
 - Killington, Vermont: February 6-7, 2006Squaw Valley, California: March 6-7, 2006
- Conduct annual reporting: Late spring 2006

Ultimately, NSAA sees its role as the facilitator and coordinating body for an industry-led initiative to raise the collective environmental performance of the ski industry. In this role, partner and resort feedback remains critical to the success of Sustainable Slopes. We welcome your input as we work with our environmental committee, board of directors, and Partnering Organizations to enhance the program in the coming months. Specifically, NSAA commits to serve our endorsing resorts in the following areas:

- We will continue to make improvements to the Assessment Tool and our data collection process in response to partner and resort feedback.
- We also will improve the support provided to resorts so that they will be equipped to fulfill their commitments as endorsing resorts as the program requirements evolve.
- We will continue our efforts to recruit more resorts to endorse the Charter and to participate in our annual reporting process.
- We will continue to look to Partnering Organizations to generate pilot program ideas; foster better sharing of learning; and provide more training, direct technical assistance, and resources to endorsing resorts.

NSAA remains extremely pleased with the progress made to date under the Sustainable Slopes program. Resort environmental programs continue to exceed expectations. Resorts have been highly successful in implementing the Environmental Principles and can set goals for future improvement using the results of this and past years' assessments. As always, we welcome further input and participation as we continue to improve the Sustainable Slopes program.



APPENDIX A LIST OF ENDORSING RESORTS AND CONTACT INFORMATION

Endorsing Resort	State	Charter Contact Person	Contact Phone	Contact Email
49 Degrees North Mountain Resort	WA	John Eminger	(509) 935-6649 x614	ski49n@ski49n.com
Alpine Meadows Ski Resort	CA	Matt Janney	(530) 583-4232 x311	mjanney@skialpine.com
Alpine Meadows Ski Resort	CA	Ed Lahr	(530) 583-4232 x333	edlahr@skialpine.com
Alta Ski Area	UT	Onno Wieringa	(801) 359-1078 x260	onnow@alta.com
Alta Ski Area	UT	Mark Pollish	(801) 359-1078	markp@alta.com
Alyeska Resort	AK	David Wilson	(907) 754-1111	dwilson@alyeskaresort.com
Angel Fire Resort	NM	Jon Mahanna	(505) 377-4281	jmahanna@angelfireresort.com
Arapahoe Basin	CO	Debbie Fritz	(970) 496-7041	debf@a-basin.net
Arapahoe Basin	CO	Alan Henceroth	(970) 496-7022	alanh@a-basin.net
Arizona Snowbowl	AZ	Eric Borowsky	(928) 779-1951 x119	
Arizona Snowbowl	AZ	Kim Clark	(928) 779-1951 x113	kclark@arizonasnowbowl.com
Ascutney Mountain Resort	VT	John Plausteiner	(802) 484-7711	
Aspen Highlands	CO	Auden Schendler	(970) 925-1220 x7152	aschendler@aspensnowmass.com
Aspen Mountain	СО	Auden Schendler	(970) 925-1220 x7152	aschendler@aspensnowmass.com
Attitash	NH	Tom Chasse	(603) 374-2603	tchasse@attitash.com
Attitash	NH	Alex Kaufman	(603) 374-2368	akaufman@attitash.com
Attitash	NH	Russ Van Deursen	(603) 374-2604	rvandeursen@attitash.com
Balsams Wilderness	NH	Richard Harris	(603) 255-3120	psiadix 03576@yahoo.com
Bear Creek Ski & Recreation Area	PA	Mark Schroetel	(610) 682-7100 x332	marks@skibearcreek.com
Bear Mountain Resort	CA	Brent Tregaskis	(909) 584-0201	brent@bearmtn.com
Beaver Creek Resort	СО	Jim Funk	(970) 949-5750	jfunk@vailresorts.com
Beaver Mountain Ski Area	UT	Travis Seeholzer	(435) 753-0921	beaver@cache.net
Belleayre Mountain	NY	Patricia McVitty	845) 254-5600 x447	pgmcvitt@gw.dec.state.ny.us
Big Mountain Resort	MT	Jami Phillips	(406) 862-1940	jamip@bigmtn.com
Big Mountain Resort	MT	Judith Ross	(406) 862-1900	wsiexec@bigmtn.com
Big Sky Resort	MT	Madeleine Bessire	(406) 995-5000	
Black Mountain of Maine	NH	John Fichera	(603) 383-4490	johnf@blackmt.com
Blacktail Mountain Ski Area	MT	Steve Spencer	(406) 844-0999	skiing@blacktail.com
Blue Mountain Ski Area	ON	Krystin Rennie	(705) 445-0231 x6243	krennie@bluemountain.ca
Bogus Basin Mountain Resort	ID	Steve Shake	(208) 332-5305	steve@bogusbasin.com
Bolton Valley Resort	VT	Mike Gallas	(802) 434-3444 x1049	mgallas@boltonvalley.com
Boreal Mountain Resort	CA	John Booth	(530) 426-3666	castle@thegrid.net
Boston Mills/Brandywine Ski Resort	ОН	Kent Graham	(330) 467-2242 x3000	kgraham@bmbw.com
Boston Mills/Brandywine Ski Resort	ОН	Sue Kananen	(330) 467-2242	skananen@bmbw.com
Breckenridge Ski Resort	CO	Cat Blackman	(970) 453-5000	
Bretton Woods Mountain Resort	NH	Jason Doyle	(603) 278-3302	jdoyle@brettonwoods.com
Bridger Bowl Ski Area	MT	Randy Elliott	(406) 587-2111	bridgerbowl@imt.net
Brighton Ski Resort	UT	Zane R. Doyle	(801) 532-4731	rdoyle@skibrighton.com

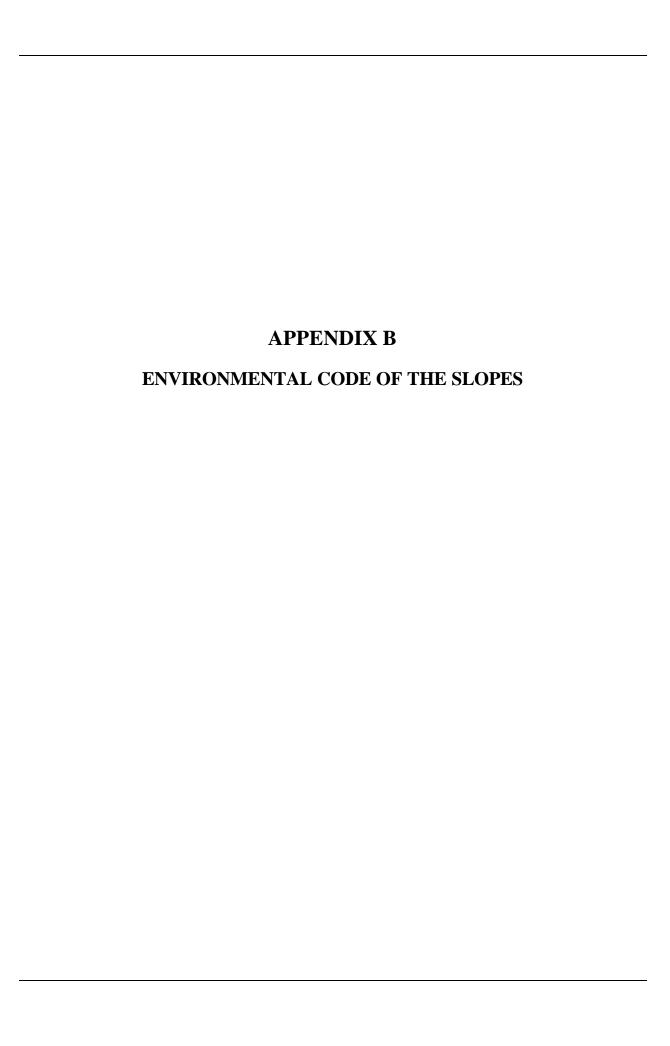
Endorsing Resort	State	Charter Contact Person	Contact Phone	Contact Email
Bristol Mountain Winter Resort	NY	Daniel Fuller	(585) 374-1130	dfuller@bristolmt.com
Brodie Mountain Resort	MA	Jim Van Dyke	(413) 443-4752	jvandyke@jiminy.com
Bromley Mountain Resort	VT	John Cueman	(802) 824-5522	jcueman@bromley.com
Brundage Mountain Resort	ID	Larry Shake	(208) 634-4151 x223	larrys@brundage.com
Bryce Resort	VA	Horst Locher	(540)856-2121 x228	skiinfo@bryceresort.com
Bryce Resort	VA	Scott Rao	(540)856-2121 x221	Manager1@bryceresort.com
Buttermilk	СО	Auden Schendler	(970) 925-1220 x7152	aschendler@aspensnowmass.com
Camelback Ski Area	PA	Richard Wiseman	(570) 629-1661	wiseman@skicamelback.com
Cannon Mountain	NH	Lorri Souza	(603) 823-8800 x721	lsouza@dred.state.nh.us
Cascade Mountain Ski & Snowboard Area	WI	Rob Walz	(608) 742-5588	robwalz@cascademountain.com
Cataloochee Ski Area	NC	Chris Bates	(828) 926-0285	cbates@cataloochee.com
Copper Mountain Resort	CO	Chris Colman	(970) 968-238 x38811	colmanc@coppercolorado.com
Copper	CO	Patricia O'Dowd	(970) 968-2318 x38807	odowdp@coppercolorado.com
Copper	CO	Steve Paccagnan	(970) 968-2318 x38812	paccagnans@coppercolorado.com
Cranmore Mountain	NH	Erik Nelson	(603) 356-5543 x281	enelson.mc@boothcreek.com
Crested Butte Mountain Resort	СО	Mary Jo Somrak	(970) 349-2333	msomrak@cbmr.com
Crested Butte Mountain Resort	СО	Roark Kiklevich	(970) 349-2273	rkiklevich@cbmr.com
Crystal Mountain Resort	MI	Michael Call	(231) 378-2000	michaelcall@crystalmountain.com
Crystal Mountain, Inc.	WA	Lorna Fluegel	(360) 663-2265	mainoffice@skicrystal.com
Crystal Mountain, Inc.	WA	Bill Steel	(360) 663-3006	bill@skicrystal.com
Dartmouth Skiway	NH	Bill Ulinski	(603) 795-2143	
Deer Valley Resort Company	UT	Chista Graff	(435) 645-6522	christa@deervalley.com
Deer Valley Resort Company	UT	Bob Wheaton	(435) 645-6669	bwheaton@deervalley.com
Devil's Head Resort & Convention Center	WI	Joe Vittengl	(608) 493-2251	joe@devilsheadresort.com
Devil's Head Resort & Convention Center	WI	Rob Scheibel	(608) 493-2251	rob@devilsheadresort.com
Discovery Ski Area	MT	Peter Pitcher	(406) 563-2184	peter@skidiscovery.com
Dodge Ridge Ski Area	CA	Frank M. Helm, Jr.	(209) 965-4444 x306	frankhelm@dodgeridge.com
Durango Mountain Resort	CO	James Hards	(970) 385-2176	jhards@durangomountain.com
Durango Mountain Resort	CO	Mike McCormack	(970) 385-2148	mmcormack@durangomountain.com
Eaglecrest Ski Area	AK	Gary Mendivil	(907) 586-5284	gary mendivil@ci.juneau.ak.us
Eldora Mountain Resort	CO	Rob Linde	(303) 440-8700 x243	rob.linde@eldora.com
Gore Mountain	NY	Michael Pratt	(518) 251-2411 x100	mike@goremountain.com
Gore Mountain	NY	Kurt Wisell	(518) 251-2411 x101	kurt@goremountain.com
Grand Targhee Resort	WY	Larry Williamson	(307) 353-2300 x1300	lwilliamson@grandtarghee.com
Grand Targhee Resort	WY	Andy Steele	(307) 353-2300	asteele@grandtarghee.com
Greek Peak Mountain Resort	NY	W. Scott King	(607) 835-6111 x134	sking@greekpeak.net
Gunstock Area	NH	J. Douglas Irving	(603) 293-4341 x106	doug@gunstock.com

Endorsing Resort	State	Charter Contact Person	Contact Phone	Contact Email
Heavenly Mountain Resort	NV	Andrew Strain	(775) 586-2313	astrain@vailresorts.com
Hidden Valley Ski Area	MO	Tim Boyd	(636) 938-5373 x3311	timboyd@direcpc.com
Holiday Valley Resort	NY	Jane Eshbaugh	(716) 699-2345	jeshbaugh@holidayvalley.com
Holiday Valley Resort	NY	Dennis Eshbaugh	(716) 699-2345	deshbaugh@holidayvalley.com
Hoodoo Ski Area	OR	Chuck Shepard	(541) 811-3799	umbrella96@aol.com
Hunter Mountain	NY	Scott Berwick	(518) 263-4223	sberwick@huntermtn.com
Hyland Ski and Snowboard Area	MN	Fred Seymour	(763) 694-7805	fseymour@threeriversparkdistrict.org
Jackson Hole Mountain Resort	WY	Tom Spangler	(307) 733-2292	toms@jacksonhole.com
Jackson Hole Mountain Resort	WY	Jerry Blann	(307) 733-2292	jerryb@jacksonhole.com
Jiminy Peak Mountain Resort	MA	Jim Van Dyke	(413) 738-5500 x3700	jvandyke@jiminy.com
Keystone Resort	CO	David November	(970) 496-3645	dnovember@vailresorts.com
Killington Resort	VT	John Cole	(802) 422-3333	jcole@killington.com
Kirkwood Mountain Resort	CA	Dave Myers	(209) 258-6000	davemyers@kirkwood.com
Liberty Mountain Resort	PA	Lonny Whitcomb	(717) 642-8282 x3388	lwhitcomb@skiliberty.com
Lookout Pass Ski Area	ID	Phil Edholm	(208) 744-1301 x10	phil@skilookout.com
Loon Mountain Recreation Corporation	NH	Ralph Lewis	(603) 745-8111 x5641	rlewis.lm@boothcreek.com
Lost Trail Ski Area, Inc.	MT	Bill Grasser	(406) 821-3742	ski@losttrail.com
Loveland Ski Area, Inc.	CO	Ken Abrahamson	(303) 571-5580 x135	kena@skiloveland.com
Mammoth	CA	Rusty Gregory	(760) 934-0731	rusty@mammoth-mtn.com
Mammoth	CA	Lisa Isaacs	(760) 934-2571 x3443	lisaacs@mammoth-mtn.com
Massanutten Ski Resort	VA	Steven Showalter	(540) 289-4950	sshowalter@massresort.com
Mission Ridge	WA	Michael Bourton	(509) 663-6543 x217	mbourton@nwi.net
Mohawk Mountain	CT	Carol Lugar	(860) 672-6100 x11	mmtn2@mohawkmtn.com
Monarch Ski and Snowboard Area	СО	Rich Moorhead	(719) 530-5000	rich@skimonarch.com
Mont Orford Int'l Tourist Area	PQ	Marc Beaudoin	(819) 843-6548	mbeaudoin@orford.com
Mont Ste-Marie Resort	PQ	Pascale-Isabelle Godin	(819) 467-5200	
Montana Snowbowl	MT	Bradley Morris	(406) 549-9777	brad@montanasnowbowl.com
Mount Bohemia	MI	Jim Rempel	(906) 487-9757	bear@up.net
Mount Snow/Haystack Ski Resort	VT	Scott Reeves	(802) 464-1100 x4494	sreeves@mountsnow.com
Mount Snow/Haystack Ski Resort	VT	Gina Sarlo	(802) 464-3333	gsarlo@mountsnow.com
Mount Snow/Haystack Ski Resort	VT	Heath Woods	(802) 464-1100 x4331	hwoods@mountsnow.com
Mount Sunapee Resort	NH	Jay Gamble	(603) 763-2356 x168	jgamble@mtsunapee.com
Mount Tone Ski Area	PA	Ray Handley	(570) 842-2544	
Mount Washington Alpine Resort	ВС	Don Sharpe	(250) 334-5739	donsharpe@mountwashington.ca
Mountain Creek	NJ	Michael Renfrew	(973) 827-3900	mrenfrew@mountaincreek.com
Mountain Creek	NJ	Shannon McSweeney	(973) 827-3900	smcsweeney@mountaincreek.com

Endorsing Resort	State	Charter Contact Person	Contact Phone	Contact Email
Mountain High Resort	CA	Paul Bauer	(760) 316-7806	pbauer@mthigh.com
Mt. Ashland	OR	Jeff Hanson	(541) 482-2897	jhanson@mtashland.com
Mt. Bachelor, Inc.	OR	Chris Johnston	(541) 382-2442	cjohnston@mtbachelor.com
Mt. Bachelor, Inc.	OR	Dan Rutherford	(541) 382-2442	drutherford@mtbachelor.com
Mt. Hood Meadows Ski Resort	OR	David Riley	(503) 337-2222 x259	driley@skihood.com
Mt. Hood Meadows Ski Resort	OR	Jodie Mears	(503) 337-2222	jmears@skihood.com
Mt. Hood Meadows Ski Resort	OR	Stuart Wilson	(503) 337-2222	swatson@gore.com
Mt. Hood Skibowl	OR	H. Todd Wheeler	(503) 936-6080	htodd@aol.com
Mt. Hood Skibowl	OR	Kirk Hanna	(503) 272-3206	khanna@skibowl.com
Mt. La Crosse	WI	Todd Schini	(608) 788-0044	info@mtlacrosse.com
Mt. Rose – Ski Tahoe	NV	Mike Pierce	(775) 849-0704	mp@skirose.com
Mt. Rose – Ski Tahoe	NV	Paul Senft	(775) 849-0704	ps@skirose.com
Mt. Shasta Board & Ski Park	CA	Gary Nordell	(530) 926-8600	skipark@snowcrest.net
Mt. Spokane Ski & Snowboard Park	WA	Brad McQuarrie	(509) 238-2220 x207	bradmcquarrie@mtspokane.com
Northstar-at-Tahoe	CA	Terri Viehmann	(530) 562-2235	tviehmann.ns@boothcreek.com
Northstar-at-Tahoe	CA	John Loomis	(530) 562-2213	jloomis.ns@boothcreek.com
Nub's Nob Ski Area	MI	James Bartlett	(231) 526-2131 x10	bart@nubsnob.com
Okemo Mountain Resort	VT	Pam Cruickshank	(802) 228-4041	pamc@okemo.com
Otis Ridge	MA	Al Hewett	(413) 269-4444	ahewitt@otisridge.com
Panorama Mountain Village	ВС	Gordon Ahrens	(604) 343-6941	gahrens@intrawest.com
Paoli Peaks, Inc.	IN	Felix Kagi	(812) 723-4696	fkagi@tds.net
Park City Mountain Resort	UT	Peter Curtis	(435) 649-8111	peterc@pcski.com
Pats Peak	NH	Kris Blomback	(603) 428-3245 x107	kris@patspeak.com
Pebble Creek Ski Area	ID	Mary Reichman	(208) 775-4452	info@pebblecreekskiarea.com
Pebble Creek Ski Area	ID	Dana Barrow	(208) 775-4452	info@pebblecreekskiarea.com
Peek 'n Peak Resort & Conference Center	NY	Brad Gravink	(716) 355-4141	skiinfo@pknpk.com
Pomerelle Mountain Resort	ID	A.W. Anderson	(208) 673-5599	andrwood@atcnet.net
Powder Ridge Ski Area	CT	Kenneth Leavitt	(860) 349-3454 x330	leavittkr@aol.com
Powderhorn Resort	CO	W. Steven Bailey	(970) 268-5700 x2028	sbailey@powderhorn.com
Powderhorn Resort	CO	Jim O'Loughlin	(970) 268-5700 x2081	jimo@powderhorn.com
Red Lodge Mountain Resort	MT	Rob Ringer	(406) 446-2610 x109	
Red River Ski Area, Inc.	NM	Mike VanOrmer	(505) 754-2223	redriver@newmex.com
Saddleback, Inc.	ME	Tom McAllister	(207) 864-5671	tom@saddlebackmaine.com
Seven Springs Mountain Resort	PA	Scott Bender	(814) 352-2035	sbender@7springs.com
Shawnee Peak Ski Area	ME	Chet Homer	(207) 647-8444	cehiii@aol.com
Sierra Summit Mountain Resort	CA	Richard Kun	(909) 866-5766	rck@snowsummit.com
Sierra-at-Tahoe Ski Resort	CA	Evan MacClellan	(530) 543-3113	emacclellan.st@boothcreek.com
Ski Anthony Lakes	OR	Amy Barnes	(541) 856-3277 x16	abarnes@anthonylakes.com

Endorsing Resort	State	Charter Contact Person	Contact Phone	Contact Email
Ski Bluewood	WA	Bruce Goodell	(509) 382-4725	bruce@bluewood.com
Ski Cooper	CO	Clint Yant	(719) 486-3684	anned@skicooper.com
Ski Cooper	CO	Anne Dougherty	(719) 486-2277	anned@skicooper.com
Ski Denton	PA	Joyce Knefley	(814) 435-2115	skidentn@penn.com
Ski Plattekill Mountain Resort	NY	Laszlo Vajtay	(607) 326-3500	laszlo@plattekill.net
Ski Plattekill Mountain Resort	NY	Ed Dalski	(607) 326-3500	
Ski Roundtop	PA	Gayle Kosy k	(717) 432-9631 x3712	gkosyk@skiroundtop.com
Ski Roundtop	PA	Lonny Whitcomb	(717) 432-9631	lwhitcomb@skiliberty.com
Ski Snowstar Winter Sports Park	IL	Ed Meyer	(309) 798-2666	snowstar@qconline.com
Ski Wenworth	NS	Leslie Wilson	(902) 895-9281	ljwilson@kerrcontrols.ca
Sleepy Hollow Sports Park, Inc.	IA	Rick Flatt	(515) 262-4100	
Smugglers' Notch Resort	VT	Mark Delaney	(802) 644-8851	mdelaney@smuggs.com
Smugglers' Notch Resort	VT	Tom McGrail	(802) 644-8851	tmcgrail@smuggs.com
Snow Creek Ski Area	MO	David Grenier	(816) 640-2200	dgrenier@skisnowcreek.com
Snow Summit Mountain Resort	CA	Richard Kun	(909) 866-5766 x120	rck@snowsummit.com
Snowbasin, A Sun Valley Resort	UT	Michael Jenkins	(801) 620-1000	mjenkins@snowbasin.com
Snowbasin, A Sun Valley Resort	UT	Denzel Rowland	(801) 620-1000	drowland@snowbird.com
Snowbird Ski & Summer Resort	UT	Jim Baker	(801) 933-2222	jbaker@snowbird.com
Snowmass	CO	Auden Schendler	(970) 925-1220 x7152	aschendler@aspensnowmass.com
Snowshoe	WV	Bruce Pittet	(304) 572-5611	bpittet@snowshoemtn.com
Snowshoe	WV	Ruth Bachman	(304) 572-5601	rbachman@snowshoemtn.com
Soda Springs Ski Area	CA			
Solitude Mountain Resort	UT	David L. DeSeelhorst	(801 536-5706	dave@skisolitude.com
SolVista Basin	CO	Marise Cipriani	(970) 887-0506 x380	mcipriani@solvista.com
Spirit Mtn. Recreational Area	MN	Rick Certano	(218) 628-8501	rcertano@spiritmt.com
Squaw Valley USA	CA	Katja Dahl	(530) 583-6985	kdahl@squaw.com
Steamboat Ski & Resort	CO	Lyn Halliday	(970) 871-5454	lhalliday@steamboat.com
Stevens Pass	WA	Chester Marler	(206) 812-4510 x4244	cmarler@stevenspass.com
Stowe Mountain Resort	VT	Robert Apple	(802) 253-3000	rapple@stowe.com
Stratton	VT	Sky Foulkes	(802) 297-4242	sfoulkes@intrawest.com
Sugar Bowl Resort	CA	Janell Adams	(530) 426-9000	
Sugar Bowl Resort	CA	Chris Parker	(530) 426-6705	cparker@sugarbowl.com
Sugar Bowl Resort	CA	Sara Taddo	(530) 426-9000	staddo@sugarbowl.com
Sugarbush Resort	VT	Margo Mears	(802) 583-6300	mmears@sugarbush.com
Sugarbush Resort	VT	Bob Ackland	(802) 583-6301	backland@sugarbush.com
Sugarloaf USA	ME	Kimberly Truskowski	(207) 237-2000	ktruskowski@sugarloaf.com
Sunburst Ski Area	WI	James Engel	(262) 626-8404	jim@skisunburst.com
Sundance	UT	Mary Morrison	(801) 225-4107	mmorrison@sundance-utah.com

Endorsing Resort	State	Charter Contact Person	Contact Phone	Contact Email
Sundance	UT	Chrissy Merrick	(801) 225-4107	cmerrick@sundance-utah.com
Sunday River Ski Resort	ME	Marvin Collins	(207) 824-3000	mcollins@sundayriver.com
Sunlight Mountain Resort	CO	Thomas Jankovsky	(970) 945-7491 x205	tomj@sunlightmtn.com
Swain Ski & Snowboard Center	NY	Jon Gorton	(607) 545-6511	swain@infoblvd.net
Taos Ski Valley, Inc.	NM	Gordon Briner	(505) 776-2291 x1222	gbb@newmex.com
Telluride Ski & Golf Resort	CO	Deanna Belch	(970) 728-6900	dbelch@tellurideskiresort.com
Tenney Mountain Ski Area	NH	Albert Bronander	(603) 536-4125	abronander@snowmagic.com
The Canyons Resort	UT	F. Scott Pierpont	(435) 615-3302	spierpont@thecanyons.com
The Homestead	MI	Adriene Kokowicz	(231) 334-5000	akokowicz@thehomesteadresort.com
The Summit At Snoqualmie	WA	Trevor Kostanich	(425) 434-7669	tkostanich.sl@boothcreek.com
The Summit At Snoqualmie	WA	Dan Brewster	(425) 434-7669	dbrewster.sl@boothcreek.com
The Temple Mountain Ski Area	NH	Thomas Dill	(603) 924-6949	templemtnskiarea@monad.net
Timberline Four Seasons Resort	WV	Tom Blanzy	(304) 866-4801	tomblanzy@yahoo.com
Timberline Lodge & Ski Area	OR	Jon Tullis	(503) 622-0707	jtullis@timberlinelodge.com
Timberline Lodge & Ski Area	OR	Eric Merritt	(503) 622-7979	emerritt@timberlinelodge.com
Tremblant	PQ	Michel Aubin	(819) 681-2000	maubin@intrawest.com
Tremblant	PQ	Christine Tremblay	(819) 681-2000	ctrembla@intrawest.com
Triple M-Mystical Mountain	NM	Chris Sparling	(505) 682-3698	rcs@hauns.com
Vail Mountain	CO	Luke Cartin	(970) 476-5601	lcartin@vailresorts.com
Wachusett Mountain Ski Area	MA	Tim McGuire	(978) 464-2300	tim@wachusett.com
Waterville Valley Resort	NH	Rob Batchelder	(603) 236-8311 x3172	rbatchelder.wv@boothcreek.com
Welch Village Ski Area, Inc.	MN	Leigh Nelson	(651) 222-7079 x21	welchvillage@usinternet.com
Whistler Blackcomb	BC	Allana Hamm	(604) 938-7080	ahamm@intrawest.com
Whistler Blackcomb	BC	Arthur DeJong	(604) 932-3141	adejong@intrawest.com
White Pass Ski Area	WA	Kevin McCarthy	(509) 672-3101	kevin@skiwhitepass.com
Whiteface	NY	Jay Rand	(518) 946-2223 x201	jrand@whiteface.com
Whitetail Mountain Resort	PA	Mike Schuman	(717) 328-9400 x3558	mschuman@skiwhitetail.com
Wildcat Mountain Ski Area & Summer Gondola	NH	Tom Caughey	(603) 466-3326 x211	tomc@skiwildcat.com
Willamette Pass Ski Corp.	OR	Charles Wiper, III	(541) 345-7669	cw3@willamettepass.com
Williams Ski Area	AZ			
Windham Mountain	NY	Daniel Frank	(518) 734-4300 x1250	dfrank@skiwindham.com
Winter Park Resort	СО	Gary DeFrange	(303) 316-1510	gdefrange@skiwinterpark.com
Winter Park Resort	CO	Doug Laraby	(303) 316-1509	dlaraby@skiwinterpark.com
Wintergreen Resort	VA	Bob Ashton	(434) 325-2200	bashton@wintergreenresort.com
Wintergreen Resort	VA	Frankee Love	(434) 325-2200	flove@wintergreenresort.com
Wisp at Deep Creek Mountain Resort	MD	Jerry Geisler	(301) 387-4911 x2173	jgeisler@skiwisp.com
Wolf Creek Ski Area	CO	Davey Pitcher	(970) 264-5826	







The environmental charter for ski areas

WHAT YOU CAN DO

6 Steps To Sustainable Slopes

1. PACK IT IN — PACK IT OUT Leave nature how you found it.

2. RESPECT WILDLIFE

by observing trail closures and ski area boundaries.

3. share a ride

so we can breathe fresh air and see the views.

4. BE CONSIDERATE

of others' experiences and let nature's sounds prevail.

5. GET INVOLVED

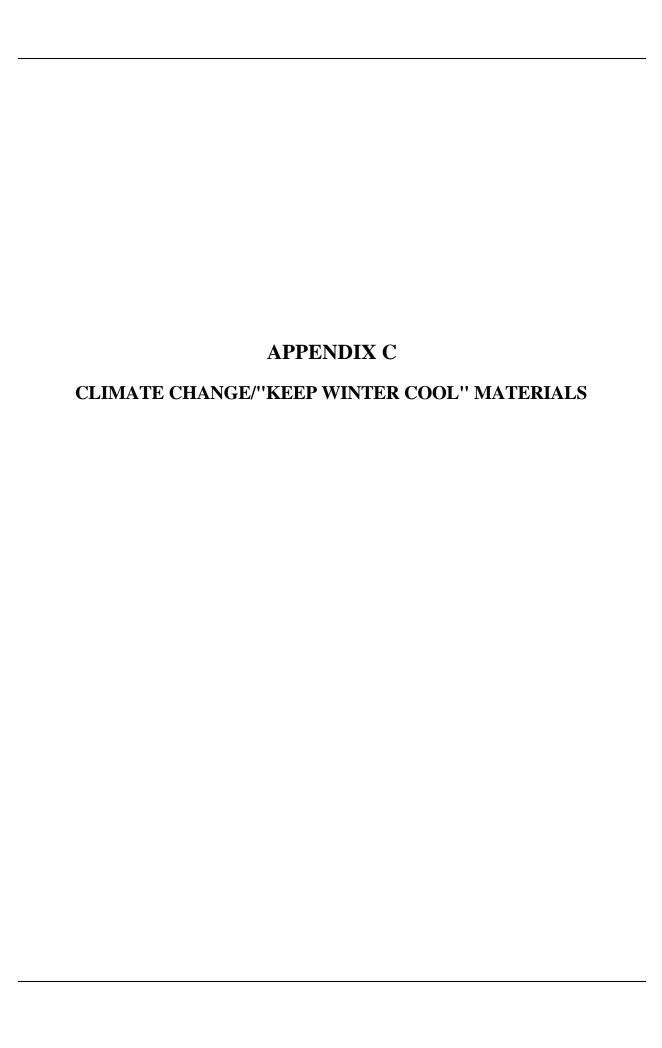
in your local resort or community's environmental programs.

6. SPREAD THE WORD

to your liftmates, friends and family.

www.nsaa.org

Get online at www.insaa.org for participating resorts and events that promote Sustainable Slopes.





CLIMATE CHANGE POLICY

Ski areas across the country adopted an Environmental Charter in 2000 to address the environmental concerns of our industry. The Charter, commonly referred to as "Sustainable Slopes," identifies climate change as a potential threat to the environment and our business. Although we are not a major source of greenhouse gas (GHG) emissions, many resorts across the country already are taking steps to reduce their own, limited GHG emissions.

To collectively address the long-term challenges presented by climate change and continue our commitment to stewardship under the Sustainable Slopes program, we hereby adopt this climate change policy. Through this policy, we aim to raise awareness of the potential impacts of climate change on our weather-dependent business and the winter recreation experience; reduce our own greenhouse gas emissions; and encourage others to take action as well. We are committed to working toward solutions that will keep both the environment and economy healthy and preserve quality of life. To this end, we will take the following actions:

- Educate the public and resort guests about the dependence of winter sports on natural ecosystems and the potential impacts of climate change on the winter recreation experience; educate guests on how they can help reduce GHG emissions.
- Raise policy maker awareness of the dependence of winter sports on natural ecosystems and the potential impacts of climate change on the winter recreation experience.
- Advocate the national reduction of GHG emissions through legislative, regulatory or voluntary measures.
- Support sound, science-based solutions to climate change, including the use of renewable energy technologies.
- Partner with appropriate organizations and agencies to assess opportunities to reduce resort emissions and increase energy efficiency; invest in new, more efficient products, practices and technologies; and measure our emission reductions.





KEEP WINTER COOL.

FIGHT GLOBAL WARMING. WINTER'S SHORT ENOUGH ALREADY.

If you wipe out on the slopes, you just dust yourself off and start over. But global warming isn't so simple. It's a pretty big deal for the planet. For skiers and snowboarders, it may mean shorter seasons. Good news is, we can fix the problem—by reducing the pollution that comes from burning fossil fuels. But we need to start now. Find out what you can do to fight global warming at **www.KeepWinterCool.org** **













Reduce global warming pollution with cleaner technology and political action.

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If you wipe out on the slopes, you just dust yourself off and start over. But global warming isn't so simple. It's a pretty big deal for the planet. For skiers and snowboarders, it may mean shorter seasons. Good news is, we can fix the problem—by reducing the pollution that comes from burning fossil fuels. But we need to start now. Find out what you can do to fight global warming at **www.KeepWinterCool.org** **













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FIGHT GLOBAL WARMING.