



Aspen Skiing Company

# Sustainability Report

2000 - 2001





Aspen Skiing Company



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“The salvation of mankind  
lies only in making everything  
the concern of all.”

Alexander Solzhenitsyn



**Aspen** Skiing Company's 2000-2001 Sustainability Report is part of a continuous benchmarking of the company's progress toward sustainability. In our second report, we focus on calendar year 2000. For a better understanding of our environmental impacts and how we're addressing them, our two reports should be read in sequence. You can also visit [www.aspensnowmass.com/environment](http://www.aspensnowmass.com/environment) for background information.



We are at a challenging point in history. At the beginning of a new millennium, we face unprecedented environmental and social problems. Far from establishing sustainability, we are increasingly distancing ourselves from that goal. Perhaps the greatest threat—climate change—coupled with apparent inaction by our government, means we are squandering opportunities for ourselves and our children. Ironically, since September 11, fear of terrorism and war threatens to remove environmental concerns from our national agenda, but at the same time highlights inequity and human suffering, key obstacles to sustainable development.

What our country and the sustainability movement needs now is a profoundly optimistic gesture, something on the order of Armstrong's walk on the moon. Of course, such events are rare. But I believe we can create similar optimism through a series of small, positive actions. This report is an example. Its very premise is the possibility of a better world. And even though it is difficult to assess progress, we hope that our very attempt is progress.

Our first annual Sustainability Report (1999/2000) made quite an impact. Environmentalists and trade journals widely praised it for its honesty; the Vermont ski areas association distributed it statewide; and Williams College in Massachusetts plans to use it as a text in an environmental-management class. But the report's goal was not to achieve recognition, it was to benchmark our progress. So the important question in this second year of reporting is "How are we doing?"

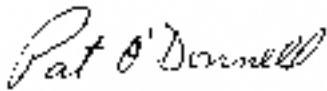
Well, to be frank, it's not totally clear. In some cases, results look excellent. Our numbers for hazardous-waste production, for example, show a declining curve. In this case, we can positively identify continuous improvement because we can accurately measure hazardous waste.

On the other hand, our solid waste and energy use baseline has been more difficult to gauge. We knew that implementing sustainable programs was challenging, but we're learning that measuring our success is even harder.

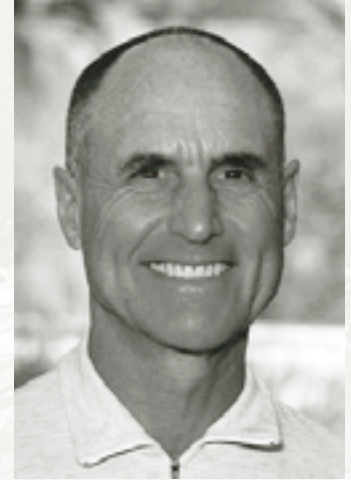
Regardless, I'm convinced that we continue to improve. Presently, ASC planners are designing the new Snowmass Club, which will not be a conventional building. Most of the development will be heated and cooled by a renewable resource—a nearby pond—using a system that is five times more efficient than the industry standard. And we are incorporating many other green features. Other success stories in this report speak for themselves.

It is important to reiterate that ASC's ownership, management, and employees remain 100 percent committed to stay the course. Environmental protection remains a key component of our company's guiding principles.

Sincerely,



Pat O'Donnell  
President/CEO



The rivers are getting dirty  
The wind is getting bad  
War and hate are killing off  
The only earth we have  
But the world all stopped to watch it  
On that July afternoon  
To watch a man named Armstrong  
Walk upon the moon

From the song "Armstrong," by John Stewart

# I. Company Profile

Aspen Skiing Company (ASC) attracts 1.3 million visitors each winter to almost 5,000 acres of skiable terrain on four mountains—Snowmass, Aspen Mountain, Buttermilk and Aspen Highlands—and year-round visitors to 15 restaurants and three hotels with 260 rooms. We employ 3,400 people in winter.

## ASC ENVIRONMENTAL AWARDS:

2001 Mountain Sports Media Golden Eagle Award for Overall Environmental Excellence in the Ski Industry

2001 Colorado Pollution Prevention Champion Award

The 2001 Commuter Choice Leadership Initiative Certificate of Recognition from the Environmental Protection Agency/ Department of Transportation for meeting the National Standard of Excellence for Employer-Provided Commuter Benefits

ASC's Environmental Programs Recognized in the Congressional Record by Rep. Mark Udall on September 5, 2001

2000 Tomorrow Magazine Special Mention of CEO Pat O'Donnell in the "Environmental Leadership" Issue

2000 Travel Industry Association of America Odyssey Award, Environment Category

2000 U.S. Congressional Record, Noted for Innovative Environmental Programs by Rep. Diana Degette

2000 Times Mirror Silver Eagle Award for Excellence in Energy Conservation

2000 Times Mirror Silver Eagle Award for Excellence in Water Conservation

1999 U.S. Green Building Council Leadership in Energy and Environmental Design Certification for the Sundeck Restaurant

1999 British Airways Tourism for Tomorrow Award for International Eco-tourism

1999 National Environmental Education and Training Foundation Award

1999 Times Mirror Golden Eagle Award for Overall Environmental Excellence in the Ski Industry

1999 Times Mirror Silver Eagle Award for Excellence in Environmental Education

1998 Times Mirror Golden Eagle Award for Overall Environmental Excellence in the Ski Industry

1998 Times Mirror Silver Eagle Award for Excellence in Community Outreach

1998 Times Mirror Silver Eagle Award for Excellence in Wildlife Habitat Protection

1994 Times Mirror Silver Eagle Award for Excellence in Environmental Education



# and Management

ASC's environmental policies are discussed in detail in last year's report. Here, we'll highlight new policies concerning climate, computer recycling, and oil and gasoline purchases.

## Policy Statement

### Corporate Position on Climate Change

April 19, 2001

Climate change is an issue of global concern. Aspen Skiing Company shares that concern. The scientific community has achieved consensus 1) that atmospheric CO<sub>2</sub> concentrations are increasing; 2) that the earth's surface temperature is warming; and 3) that the two phenomena are linked. Evidence suggests that the increase in CO<sub>2</sub> concentrations is caused by combustion of fossil fuels by humans.

#### After studying the issue, management has adopted the following policy statements:

1. Aspen Skiing Company acknowledges that climate change is of serious concern to the ski industry and to the environment.
2. Aspen Skiing Company believes that a proactive approach is the most sensible method of addressing climate change.

#### To this end, we commit to the following:

- Use of green design principles in new Aspen Skiing Company development
- Energy efficiency in old buildings through economically viable retrofits
- Continued support of mass transportation and local employee housing
- Annual accounting of greenhouse gas emissions
- A 10% reduction in greenhouse gas emissions by 2010 based on a 1999 baseline



ASC's "Guiding Principles," a publication for employees, communicates the company's purpose and values.

## Composting Chips and Gigs

On July 1, ASC adopted a computer recycling policy that prohibits used computers from being landfilled. Equipment no longer useful to the company will be reused, given away, or recycled at special facilities.

"We want to send a message to other businesses, even individuals, that computers are hazardous, should be recycled, and that it's easy to do," said Auden Schendler, director of Environmental Affairs. "Waste from the technology revolution is just coming onto people's radar. But it will be a huge issue in ten years. In fact, Hewlett-Packard and IBM have just implemented computer recycling programs."

U.S. companies retire over 35 million computers annually. Ninety-five percent of those end up in landfills or get shipped overseas. According to the Environmental Protection Agency, old computers account for over 13 million pounds of landfilled hazardous waste annually. Meanwhile, the lead and other metals in monitors and televisions tend to leak into groundwater faster than environmental regulations permit.

"It has long been our policy to sell or give away most of our computers," said Joe Zazzaretti, director of Information Technologies. "Occasionally we throw away a monitor or some components. Strictly speaking, the lead, cadmium and mercury this equipment contains is hazardous waste, albeit in very small quantities. This new policy will bring the environmental impact of this department down to almost zero."

Aspen Skiing Company uses approximately 300 computers. In 1998, 48 computers were donated to schools and police stations in Colorado.





ASC TAKES TWO NEW POLLUTION PREVENTION MEASURES:

## COMPANY SWITCHES TO ETHANOL BLENDED FUEL AND REREFINED OIL

In July, 2001, Aspen Skiing Company took two significant steps to reduce its impact on the environment. The company is switching to ethanol blended gasoline, which reduces tailpipe emissions, and will only use recycled motor oil in vehicle shops. Aspen Skiing Company uses approximately 7,500 gallons of motor oil and 108,746 gallons of gasoline each year.

Laboratory and field tests conducted by the Montana Department of Environmental Quality, the University of Denver, the U.S. Department of Energy, the Environmental Protection Agency, and the Southwest Research Institute showed that compared to the emissions of regular unleaded gasoline, ethanol blended fuel used in cars and snowmobiles:

- Reduces emissions of carbon monoxide by 9 - 38%
- Reduces unburned hydrocarbons by 13 - 38%
- Reduces fine particulate matter by 25 - 55%
- Reduces air toxins by 22%

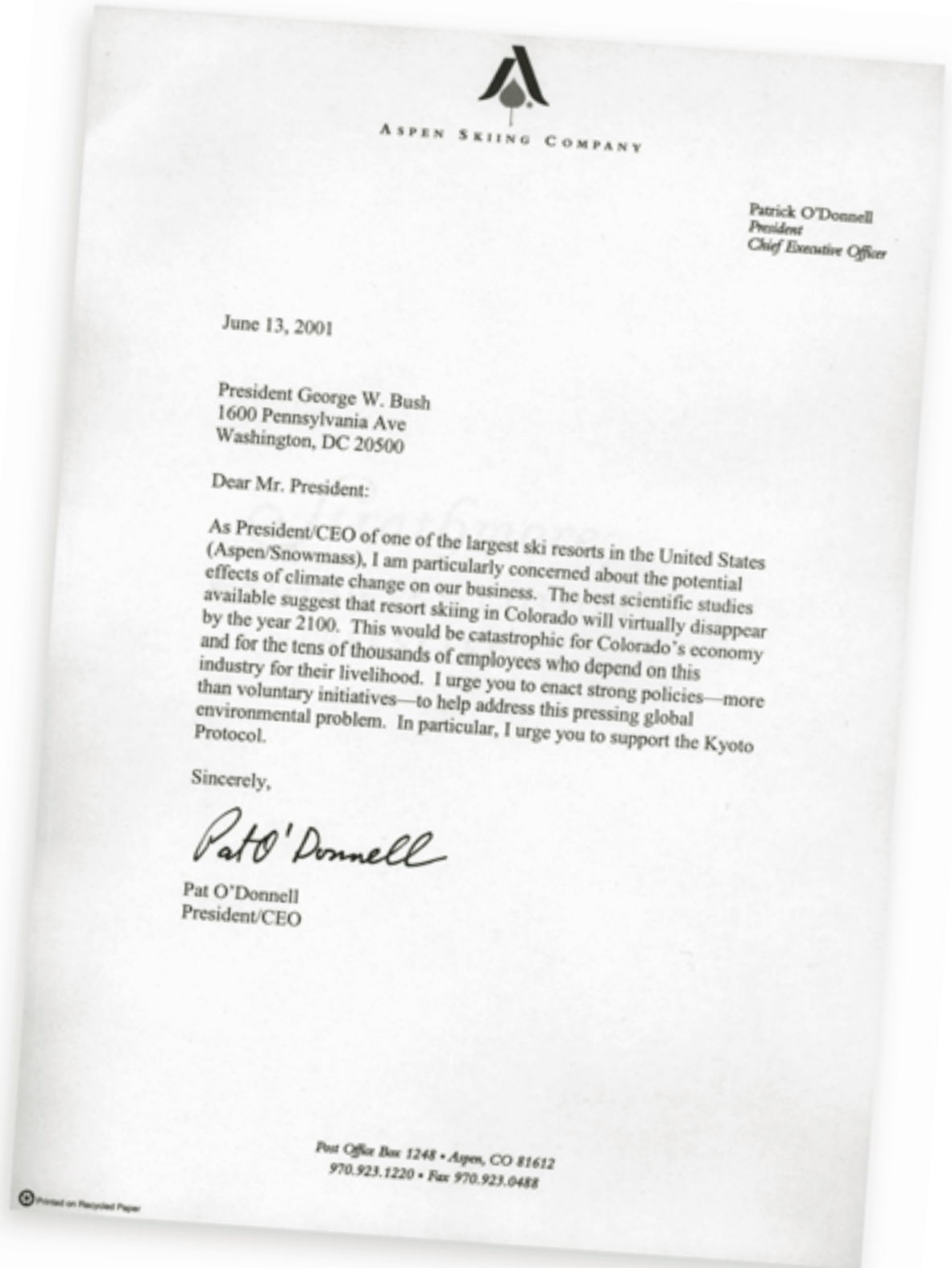
For these reasons, Denver mandates the use of ethanol blended fuel during smog season.

Rerefined motor oil—which is simply used oil that has been cleaned and reconditioned at the factory—performs just as well as virgin oil and meets all standards set by the American Petroleum Institute, at no additional cost. The United States generates 1.4 billion gallons of waste oil annually, or five gallons per person. Used oil accounts for 40 percent of the oil pollution in American harbors and waterways.

“If all the waste oil in the U.S. were rerefined,” points out Jim Ward, ASC director of purchasing, “we’d displace half the estimated oil supply in the Arctic National Wildlife Refuge. We’re drilling for oil in our waste stream, instead of where the caribou live.”

ASC shop manager Don Popish says there have been no problems with the new fuel in summer operations.

Regardless of what ASC does to reduce its own emissions, global warming will continue without government and industry action. That's why lobbying is a crucial component of our climate protection plan. CEO Pat O'Donnell sent this letter to President Bush in June. Other business leaders are encouraged to plagiarize!



# III. Compliance and

## Hazardous-waste Management

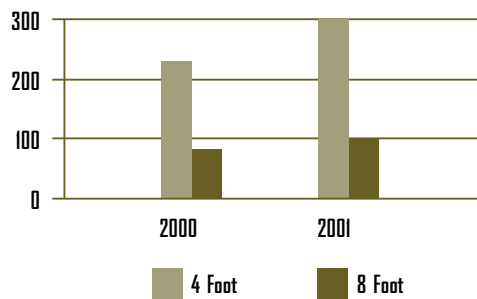
In 2000-2001, ASC was still operating with two solvent-based parts washers. These have been replaced with aqueous units, and in 2002 our hazardous waste should drop accordingly.

While overall hazardous-waste generation was low in 2000, the quantity increased in 2001 due to several drums of contaminated gasoline. In late 2001, ASC implemented a zero hazardous-waste policy. We plan to meet this goal by eliminating waste from solvent and oil-based paints through reuse and recycling. If the program is successful, ASC will become the first ski resort to entirely eliminate hazardous waste.

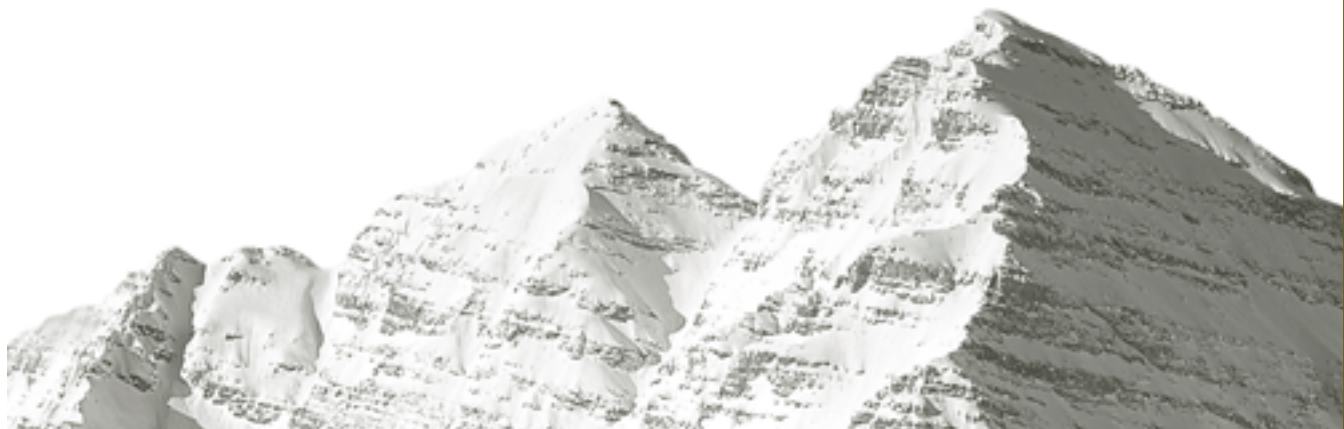
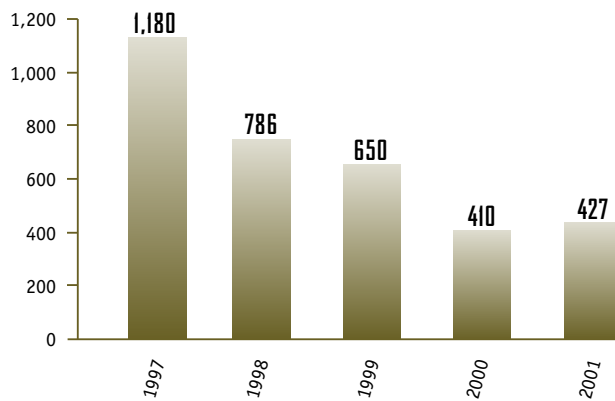


Shane Richard at ASC's sign shop took artistic license in labeling the Buttermilk hazardous waste storage area.

### Fluorescent Bulb Recycling



### ASC Hazardous-waste Generation (Gallons)



“Institutions that operate so as to capitalize all gain in the interests of the few while socializing all loss to the detriment of the many, are ethically, socially and operationally unsound. Yet that is precisely what far too many corporations demand and far too many societies tolerate. It must change.”

Dee Hock, founder, president and CEO emeritus of Visa

## Aspen Skiing Company 2000-2001 Consumption Baseline/CO<sub>2</sub> Emissions

CATEGORY	MEDIA	COST	UNITS	UNIT TYPE	CONVERSION	CO <sub>2</sub> (TONS)
FUEL (GAS+DIESEL)	FUEL-SM	180,342	145,240	GAL FUEL	.01 TONS CO <sub>2</sub> /GAL	1,452
	FUEL-AH	41,902	38,879	GAL FUEL	.01 TONS CO <sub>2</sub> /GAL	389
	FUEL-AM	89,708	122,166	GAL FUEL	.01 TONS CO <sub>2</sub> /GAL	1,222
	FUEL-BM	119,669	85,669	GAL FUEL	.01 TONS CO <sub>2</sub> /GAL	857
<b>SUB-TOTAL</b>		<b>431,621</b>	<b>391,955</b>			<b>3,920</b>
<b>SNOWMAKING</b>						
	WATER-AM	118,911	13,310,000			
	WATER-AH	9,297	18,593,000			
	WATER-BM	0	39,498,420			
	WATER-SM	29,825	59,650,800			
<b>SUB-TOTAL</b>		<b>158,033</b>	<b>131,052,220</b>	<b>GALLONS</b>	<b>.0000006308 TONS CO<sub>2</sub>/GAL</b>	<b>8</b>
ELECTRICITY	ELECTRIC-ASC	1,274,032	17,331,997			
	ELECTRIC-AM&AI	64,805	1,090,738			
	ELECTRIC-SMC	95,351	1,650,817			
	ELECTRIC-TLN	202,647	4,373,079			
<b>SUB TOTAL</b>		<b>1,636,835</b>	<b>24,446,631</b>	<b>KWH</b>	<b>1.99 LBS CO<sub>2</sub>/KWH</b>	<b>24,324</b>
<b>MUNICIPAL H2O</b>						
	WATER-ASC	49,455	24,727,500			
	WATER-TLN	2,487	23,323,000			
	WATER-SMC*	47,023	23,511,390			
	WATER-AM&AI	104	7,675,000			
<b>SUB TOTAL</b>		<b>15,847,378</b>	<b>79,236,890</b>	<b>GALLONS</b>	<b>.0000006308 TONS CO<sub>2</sub>/GAL</b>	<b>50</b>
<b>NATURAL GAS</b>						
	NAT. GAS-SMC	27,635	3843.47			
	NAT. GAS-ASC	118,388	16,465			
	NAT. GAS-TLN	65,991	9,178			
	NAT. GAS-OTHER	338,776	47,118	MMBTU	1MILL.BTU/.059TONSCO <sub>2</sub>	
<b>SUB-TOTAL</b>		<b>550,789</b>	<b>76,605</b>			<b>4,520</b>
PROPANE	PROPANE	2,487	2,764	GALLONS	.00637 TONS/GALLON	18
<b>TOTAL</b>		<b>\$18,627,143</b>				<b>32,840</b>
<b># OF SKIERS: 1,205,266</b>		<b>\$15.45 PER SKIER</b>			<b>TONS CO<sub>2</sub> PER SKIER 0.03</b>	

\*Because of construction, water figures were not available for the Snowmass Club for 1999-2000. We have used the previous year's numbers, though the year 2000's use was probably considerably less due to the absence of an entire building. New data will be available in the next report.

SM = Snowmass, AH = Aspen Highlands, AM = Aspen Mountain, BM = Buttermilk, ASC = Aspen Skiing Company, AM&AI = Aspen Meadows & Aspen Institute, SMC = Snowmass Club, TLN = The Little Nell

## IN GOD WE TRUST. ALL OTHERS BRING DATA.

When the 1999-2000 Sustainability Report went to press, we were still months from completing our solid-waste audit, the first in the company's history. We felt we had to make a rough estimate of solid waste and recycling quantities. We did so, and included a brief disclaimer. Unfortunately, our estimate of 4,367 tons total solid waste was egregiously, embarrassingly, wrong—by about 3,000 tons. In the spirit of this exercise, which is both to finally determine our environmental impact, and also to do that honestly, we make no excuses. We simply did not know how much waste we were producing, not even roughly. Now we do. That in itself is progress. This year, we have included summary data from 1999-2001. Assumptions and data sources are available from Environmental Affairs. The discrepancy between our original estimates, published in our first report, and the true numbers, raises disturbing questions. Why should the public trust any of our information given that the Sustainability Report is unaudited? Our hope is that by disclosing our information sources, we can at least partially address this thorny question.

The first year's data was compiled through our partnership with the Colorado Department of Public Health and Environment. Contact: Tetra Tech, Inc. (Michael Keefe, mkeefe@ttemi.com.) In other areas of this report, the Environmental Affairs Department can provide source data on request.

### Solid-Waste Generation

1999				2000			
WASTE				WASTE			
	Tonnage	Cost	Avg Cost/Ton		Tonnage	Cost	Avg Cost/Ton
BFI	159.44	\$24,102.02	\$151.17	BFI	130.17	\$22,711.06	\$174.47
Pitkin Co. Landfill	140.44	\$13,797.30	\$98.24	Pitkin Co. Landfill	27.03	\$3,538.00	\$130.89
WMI	639.82	\$46,375.00	\$72.48	WMI	739.27	\$22,151.99	\$29.96
Town of Snowmass	464.96	\$26,093.46	\$56.12	Town of Snowmass	399.50	\$35,956.05	\$90.00
<b>TOTAL:</b>	<b>1404.66</b>	<b>\$110,367.78</b>	<b>\$94.50</b>	<b>TOTAL:</b>	<b>1295.97</b>	<b>\$84,357.10</b>	<b>\$106.33</b>

1999				2000			
RECYCLING				RECYCLING			
	Tonnage	Cost	Avg Cost/Ton		Tonnage	Cost	Avg Cost/Ton
Pitkin Co. Landfill	25.64	\$753.00	\$29.37	Pitkin Co. Landfill	20.10	\$606.00	\$30.15
Town of Snowmass	65.24	n/a	n/a	Town of Snowmass	71.77	\$0.00	\$0.00
Wally's	209.35	\$16,890.00	\$80.68	Wally's	175.61	\$16,890.00	\$96.18
<b>TOTAL:</b>	<b>300.22</b>	<b>\$17,643.00</b>	<b>\$58.77</b>	<b>TOTAL:</b>	<b>267.48</b>	<b>\$17,496.00</b>	<b>\$65.41</b>

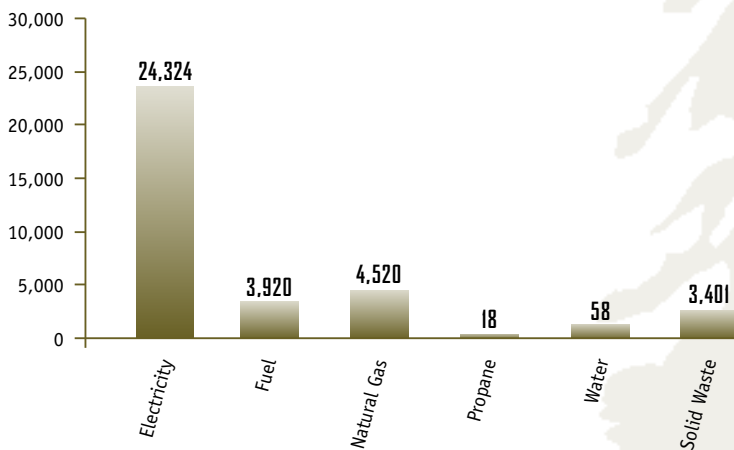
  

Diversion Rate:	17.61%	Diversion Rate:	17.11%
Cost savings/ton for recycling:	\$35.74	Cost savings/ton for recycling:	\$40.92
Total diversion savings:	\$10,728.94	Total diversion savings:	\$10,945.90

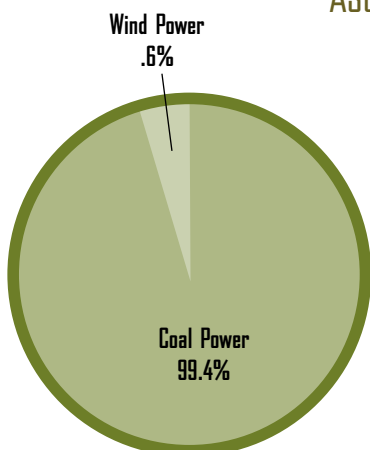
### Media Summary Data Chart

MEDIA	COST	UNIT NUMBER	UNIT TYPE	CO <sub>2</sub> (TONS)
Electricity	\$1,636,835	24,446,631	kWh	24,324
Fuel	\$431,621	391,955	gallons	3,920
Natural Gas	\$550,789	76,605	mmbtu	4,520
Propane	\$2,487	2,764	gallons	18
Water	\$16,005,411	210,289,110	gallons	58
Solid Waste	\$101,853	1563	tons	3,401
<b>TOTAL</b>	<b>\$18,728,997</b>			<b>36,241</b>

### CO<sub>2</sub> Emissions by Media (Tons)



### ASC Electricity Supply



Total kwh electricity usage: 24,446,631 kwh  
155,200 of total is wind

# V. Resource Efficiency



## THE LITTLE NELL LIGHTING RETROFIT

Sipping a good Fume Blanc with your Lobster Tarragon Brandade at the five-star Little Nell Hotel in Aspen, Colorado, the last thing on your mind is energy efficiency. But well-managed businesses like the Nell know that a dollar saved is as good as a dollar earned – in fact, it's better, because savings are pure profit. As a result, they can't ignore the utility bills any more than the latest offering from the Rothschild Vineyard. That's why this spring, deep below the wine room, in the Nell's Kafkaesque two-level basement garage, electricians changed out more than 100 inefficient incandescent light fixtures. Since the lights are on all the time, the savings are astronomical: \$10,600 annually from reduced energy and lamp replacement costs (the new fluorescent bulbs use two-thirds less energy and last twice as long) on a \$19,000 investment. And the lighting improved radically, increasing security and reducing the risk of accidents. After a \$5,000 grant from Aspen's Community Office for Resource Efficiency, the project offered a better than 75% return on investment, not too shabby given the state of the NASDAQ. And there's one more important result: through reduced electricity use, the retrofit will prevent the emission of 300,000 pounds of pollutants annually, forever.

In late 2000, ASC won a \$40,000 grant from the Department of Energy's Office of Energy Conservation for a comprehensive energy audit through Colorado State University's Industrial Assessment Center. The Center conducts in-depth efficiency audits of businesses, and provides cost-effective recommendations for improvements in energy efficiency, pollution prevention, and productivity. [www.engr.colostate.edu/me/program/outreach/iac/](http://www.engr.colostate.edu/me/program/outreach/iac/)

ASC received reports on snowmaking systems and buildings, and is currently analyzing opportunities to implement efficiency projects. Resource efficiency at ASC breaks down into green development, retrofits, and snowmaking efficiency. We are currently in the planning stage of two green development projects, both of which are replacement structures, and do not increase ASC's infrastructure or energy use.

## Climate Protection through Lighting Retrofits

ASC produced 36,241 tons of CO<sub>2</sub>, the primary greenhouse gas, in 2000. Much of those emissions come from electricity use. In order to reduce our emissions, ASC has undertaken an ambitious program of lighting retrofits, starting in the year 2000. In The Little Nell Garage, we swapped out 110 metal halide lamps with T-8 fluorescent fixtures. The retrofit will prevent the emission of 300,000 pounds of CO<sub>2</sub> annually, and saves ASC \$10,600 each year. This was our biggest retrofit to date. Others are listed below. (CFL stands for Compact Fluorescent Lamp.)

Retrofit Location	Conversion	CO <sub>2</sub> Reduction (lbs/yr.)
Spider Sabich Restaurant	T-12 to T-8	3,502
Ski School Administration	Halogen to CFL	27,648
Nell Garage	Metal Halide to T-8	300,000
Grizzlies Ski School	Incandescent to CFL	9,136
Two Creeks Lodge	Halogen to Genura CFLs	11,215
Bumps Restaurant	T-12 to T-8, halogen to CFL	11,482
Administration Building	Incandescent to CFL	1533
Sam's Knob Restaurant	T-12 to T-8	2,189
<b>TOTAL:</b>		<b>366,705</b>

In 2001, ASC will install an Energy Management System at the Little Nell which will cut energy use by 10 percent at a minimum. Watch for details in the next report. We will also retrofit 500 bulbs in non-guest areas. *Many thanks to Aspen's Community Office for Resource Efficiency for its support with these retrofits.*

## Focus on Snowmaking

Snowmaking continues to be one of our major impacts on wildlife habitat. But it is also, unfortunately, critical to the viability of the business. We can't stop making snow, but we can make snowmaking more efficient. ASC has identified and implemented several approaches to reduce the amount of water we use.

Snowboard halfpipes use a tremendous amount of water and energy. They are typically constructed by creating a mountain of snow four hundred feet long, 100 feet wide, and twenty feet deep. In the spring of 2000, ASC began exploring the possibility of reducing water- and energy-use by constructing halfpipes out of something other than snow. We first explored styrofoam forms. While these showed some promise because they would be moveable and are made without CFCs, we rejected the idea as waste generation. We

then considered using dirt, and discovered that other ski areas already doing this. (Mountain High, CA, and Waterville Valley, NH, for example.) After running the idea past our Community Environmental Advisory Committee, we built the first prototype on Snowmass Mountain. Based on estimates from Victor Gerdin in ASC's planning department, the earthworks should save 3 to 4 million gallons of water and roughly \$15,000 in energy costs. In a bad snow year, it is possible the water saved might be used elsewhere. While ASC can't guarantee that water use will decrease, that's certainly the hope, and in anything but a severe drought winter, that's what will happen.



## Water Storage

We're also creating water storage capacity. Why is this environmentally valuable? Snowmaking is most energy- and water-efficient at low temperatures because it requires less compressed air to turn water droplets into snow. So when a window of cold weather opens, it is most efficient to make snow continuously, at maximum flow rates. This rate drops with stream flows, and stops entirely at established minimum stream flows. On-hill reservoirs allow ski areas to make snow at much higher flow rates during extended periods of cold weather without reducing in-stream flow. Additionally, on-mountain reservoirs can be filled slowly during periods of warm weather, saving energy. Once the water is stored at high altitude, it can be released downhill, with gravity creating the high pressures needed for snowmaking. Meanwhile, storage provides cooler water, increasing efficiency again.



ASC currently has one 1.5-million-gallon reservoir at Snowmass. We are in the process of developing a 3-million-gallon reservoir (to be completed in the summer of 2002) and another reservoir of 500,000 gallons on Aspen Mountain, to be completed in summer 2003. The benefits of these storage ponds are enormous. Victor Gerdin notes that "annual energy costs (for snowmaking on Snowmass) are currently \$140,000, of which approximately 50 percent is required to pump water and 50 percent to compress air. The storage pond can reduce the air requirement by as much as one-third, cutting overall energy use by as much as 15 percent, or 700,000 kilowatt-hours annually."

Despite these important steps toward reducing water use on Snowmass, we will increase snowmaking by roughly 10 million gallons on Buttermilk to create terrain parks (jumps, halfpipes, and other snow features) necessary for the ESPN Winter X Games. Next year we hope to secure Forest Service approval to construct these features out of dirt, which will eliminate the additional 10 million gallons.

## Uniforms to Refugees

In 2000, ASC shipped a 14-foot truckload of ski uniforms to Hungarian refugees, thanks to Eugene Megygy, Honorary Consulate of Hungary. And in 2001 we will send 436 assorted pants, jackets and sweaters to Afghanistan.



# Participation and Accountability

ASC's Community Environmental Advisory Committee continues to meet quarterly with President/CEO Pat O'Donnell and Environmental Affairs Director Auden Schendler. The committee provides advice to ASC on environmental issues and serves as a sounding board for new projects.

## Members include:

Rick Lofaro, Roaring Fork Conservancy  
 Jack Hatfield, Pitkin County Commissioner  
 Randy Udall, Community Office for Resource Efficiency  
 Jamey Fidel, Aspen Wilderness Workshop  
 Lee Cassin, Aspen Dept. of Environmental Health  
 Miles Stotts, Pitkin County Natural Resource Manager  
 Jonathan Lowsky, Pitkin County Wildlife Biologist  
 Dale Will, Pitkin County Open Space and Trails  
 Michael Kinsley, Rocky Mountain Institute Economic Renewal Program  
 Alexis Karolides, Rocky Mountain Institute Green Development Services  
 Dawn Keating, former Snowmass wildlife biologist  
 Jim Stark, U.S. Forest Service  
 Dee Bellina, Watershed Coalition  
 Bob Schultz, Robert Schultz Consulting

## 2000 Employee Environment Foundation Grants



### Environment Foundation

founded by employees of Aspen Skiing Company

The Environment Foundation was established by Aspen Skiing Company employees four years ago to protect the places they live, work and play. Unique in the industry, the foundation raises money from employees through a payroll deduction that is matched by Aspen Skiing Company and again by Aspen Valley

Community Foundation. As of this writing, the foundation has donated more than \$360,000 to local environmental causes. In 2000, the Environment Foundation donated \$90,000 to a variety of projects:

Roaring Fork Outdoor Volunteers Hay Park Trail Restoration	<b>\$8,500</b>
Windstar Land Conservancy's Upland Slope Restoration	<b>\$5,000</b>
Community Office for Resource Efficiency's Ruedi Creek Hydropower Installation and Solar Hot Water Rebate Program	<b>\$5,000</b>
Forest Service's Study of Nitrates in High Altitude Lakes	<b>\$4,000</b>
Aspen Center for Environmental Studies' Habitat Restoration to the Upper Pond at the Hallam Lake Nature Preserve	<b>\$1,730</b>
Central Rocky Mountain Permaculture Institute Natural Weed Control Education	<b>\$7,500</b>
Roaring Fork Conservancy's River Experience Program	<b>\$5,628</b>
Aspen Wilderness Workshop's Summer 2000 Roadless Area Field Inventory	<b>\$3,000</b>
Independence Pass Foundation's Revegetation of Independence Pass	<b>\$3,000</b>
The Community Office for Resource Efficiency Educational Solar Installations	<b>\$7,000</b>
Trout Unlimited River Clean-up	<b>\$2,500</b>
The Roaring Fork Conservancy Educational Video "Watershed Wisdom"	<b>\$7,240</b>
Aspen Center for Environmental Studies Field Study Center	<b>\$7,500</b>
The Wildwood School Educational Nooks	<b>\$2,000</b>
The Windstar Land Conservancy Interpretive Nature Trail	<b>\$5,000</b>
The Science Outreach Center's JASON: Kids Teaching Kids Project	<b>\$4,000</b>
Western Colorado Congress Local Grassroots Environmental Office	<b>\$6,000</b>
Aspen Historical Society Educational Signs for Independence Ghost Town	<b>\$5,000</b>



## Adopt-a-Highway

### Highway Cleanup Bigger, Better than Ever

Aspen Skiing Company's Adopt-a-Highway program expanded this year, doubling its mileage—the company now collects trash between mile markers 48 and 52 on Independence Pass. On Friday, July 20, more than twenty people filled some fifteen bags completely full of old computers, tires, boots, men's and women's underwear, and other junk.



## Environmental Scholarships

Over the past two years, ASC has given away \$35,000 in college scholarships to high school seniors who have taken action to protect the local environment. The program rewards high school seniors who have demonstrated outstanding environmental stewardship through research, hands-on work, partnerships with local organizations or other environmental initiatives.

ASC President/CEO Pat O'Donnell said "We want to create environmental activists in the Roaring Fork Valley, and send them off to change the world. In the process, with our emphasis on action, we hope to see some local environmental benefits."

**INGRID GILLMING AND CHERENE VANIAN** of Glenwood Springs won for their four-year commitment to running the school environmental club.



Environmental Scholarship winners, left to right: Lindsay Leonard, Pat O'Donnell (ASC President/CEO), Ingrid Gillming and Devon Hutton. Missing is Chere Vanian.

**LINDSAY LEONARD** of Roaring Fork High School organized what she calls the Concerned Kid Campground Cleanup. On May 18 and 19, Lindsay and several volunteers cleared trash from the Thompson Creek campground, the Avalanche Creek area campgrounds, and the Prince Creek area campgrounds.

**DEVON HUTTON** of Basalt High School studied fecal coliform concentrations in the Roaring Fork watershed to determine the impact of human development and gauge the effectiveness of sewage treatment systems.

## CREEK POWER!

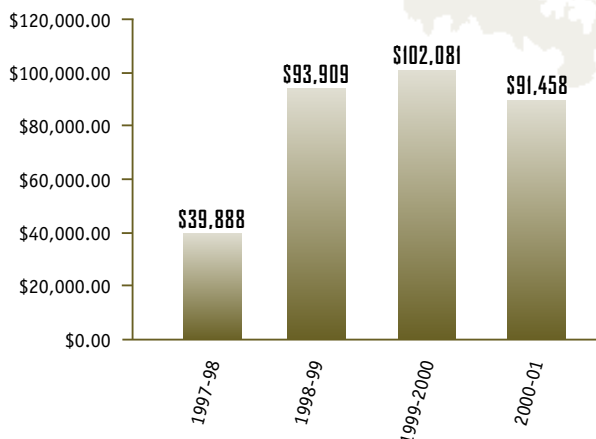
### An Environment Foundation Project

Hydroelectric power kills fish, damages ecosystems, and looks ugly. So why in the world would the Environment Foundation want to fund it? The answer is that not all hydro power is bad. A year ago, Tom Golec and Jerry Peters proposed a small installation on Ruedi Creek, near their homes. Their idea was to pipe water out of the stream into a turbine, then return the water not far downstream, avoiding dams, minimizing impact, and providing a new power source that's pollution-free! Thanks to Randy Udall at the Community Office for Resource Efficiency, Holy Cross Electric, and \$4,000 from the Environment Foundation, Golec and Peters formally completed the \$50,000-plus project on February 23 at a ribbon-cutting ceremony at the pumphouse, a discreet shed in the Ruedi Creek drainage. At the time, the project was generating 10 kilowatts of clean energy, or 7200 kilowatt-hours per month. (A typical house uses about 400 kwh/month.) At peak flow, production will increase to 25 kilowatts. The installation will keep more than a quarter of a million pounds of pollutants out of the air every year, forever.



Photo: Hydropower gurus Tom Golec and Jerry Peters sandwich Holy Cross Energy CEO Kent Benham at the Ruedi Creek pumphouse.

## Environment Foundation Contributions



## ENVIRO-CARDS

Our wallet-sized Enviro-Cards are a simple, easy way to educate guests. They list environmental actions visitors can take here in the Roaring Fork Valley and back home.



## THE GREENLETTER

First produced in January of 1998, our intra-company environmental newsletter heightens environmental awareness among employees. The Greenletter highlights employees who are making a difference, provides updates on current environmental issues, and solicits employee participation in improving our environmental performance. It's short, to the point, and designed to be posted at coffee-makers and water coolers to give busy employees a 30-second update.



ASC continues to partner with Aspen Center for Environmental Studies to run ski and snowshoe tours and the "Winter Wild Things" kids' program on Aspen Mountain and Snowmass. The chart on page 17 shows participation rates.

ASC's oft-stated goal is to help steer the industry (and the world) toward greener business. Environmental Affairs staff regularly present on environmental issues. The department has also published numerous articles on sustainable business. Meanwhile, ASC encourages the media to cover our environmental projects to further spread the word.

## Articles

"Greening the Sundeck," *Ski Area Management*, May 2000.

"Mine the Waste Stream, Not the Forest: The Aspen Skiing Co prevents the local landfill from doubling as a ski slope," article on building deconstruction and recycling in *Green@Work*, Sept/Oct 2000.

"Five Easy Ways to Go Green: Simple Conservation Measures Will Save Money and Resources," *Ski Area Management*, July, 2001.

"Toward a Sustainable Future," *The Aspen Times Weekly*, Nov. 4-5, 2000.

"Trouble in Paradise: The Rough Road to Sustainability in Aspen. How Failure can be the Next Great Tool in Sustainable Business." *Corporate Environmental Management*, November, 2001.

## Presentations

"Deconstructing and Recycling Buildings at Aspen Skiing Company," Recycling Council of British Columbia, Conference on Solid Waste Management in Resort Towns, April, 2000. Whistler, BC.

"Sustainable Business in Aspen," 1999 European Tourism Summit, Chamonix, France.

"Sustainable Design in the Ski Industry," Harvard Graduate School of Design, May, 2000. Cambridge, MA.

"Sustainable Slopes," National Ski Areas Association Annual Conference, Vail, March, 2000.

"Green Ski Resorts," Crested Butte Sustainability Symposium, September 1999, 2000, 2001.

"Riparian Impact of Ski Resorts," Colorado Riparian Association 14th Annual Conference, Glenwood Springs, Colo. October, 2001.

"Greening the Ski Industry," Sheep Mountain Alliance Annual Meeting, Telluride, Colo. December, 2001.

## Media Coverage

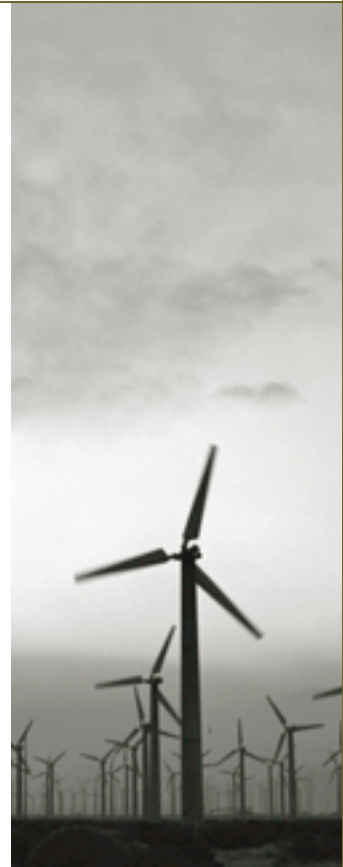
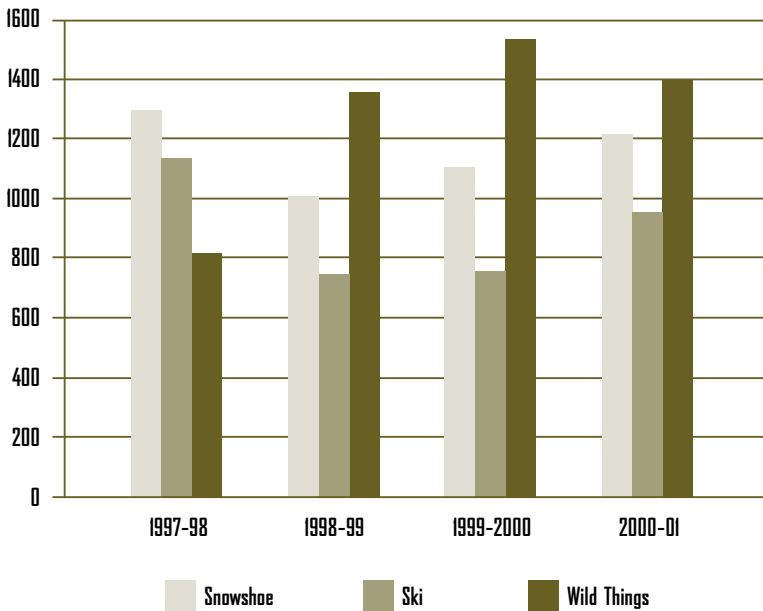
(features or mention of ASC environmental programs)

The Jim Lehrer News Hour	Aspen Times
The Washington Post	Tomorrow
Seattle National Public Radio	LOHAS Journal
Green@Work	NSAA Update
The Denver Post	Powder
Colorado Construction Review	SKI
Rocky Mountain News	Natural Home
Environmental Building News	Ski Area Management
Sojourner	E Magazine
Outside	Corporate Environmental Management
Vail Daily	Environmental Design and Construction

...and many other magazines and newspapers



## ACES/ASC On-Mountain Nature Tours



## A WIND-POWERED LIFT

The Cirque lift at Snowmass is the only wind-powered ski lift in the state. Not burning fossil fuels keeps 40,000 pounds of carbon dioxide — the primary greenhouse gas — out of the atmosphere. That's like planting 17 acres of trees, or not driving 95,000 miles. In fact, the Cirque lift began green. To protect wildlife, the lift was built between animal mating and nesting periods. To protect the tundra, workers drove backhoes only on snow, and carried equipment up the mountain on foot. No mechanical equipment ever touched the tundra. Workers carried dirt and rock off the mountain on their backs.

# Open-space Protection

ASC continues to implement wildlife-enhancement management plans and natural-resource management plans on all mountains. Much of this work, which includes erosion control and revegetation, is profoundly important to the ecology of the mountains. A snapshot of what this program looks like at Snowmass was prepared by Joey Woltemath of the summer trails crew (page 19).

Details on similar activities at other mountains are available from Environmental Affairs. Below, we will focus on a new effort: weed control. Water use for snowmaking, another major wildlife/habitat issues, was discussed under resource efficiency.

### Focus on Weeds

How do you grow a thistle? Dig a hole somewhere in Colorado and let it sit for a year—the abundant thistle seed in the air will take care of the rest. Thistle, and other weeds, are problems at virtually all ski resorts, because they tend to colonize land that has been disturbed. According to the Bureau of Land Management, weeds—non-native, ecologically damaging plants—spread to 4,000 new acres (over six square miles) each day in the U.S.

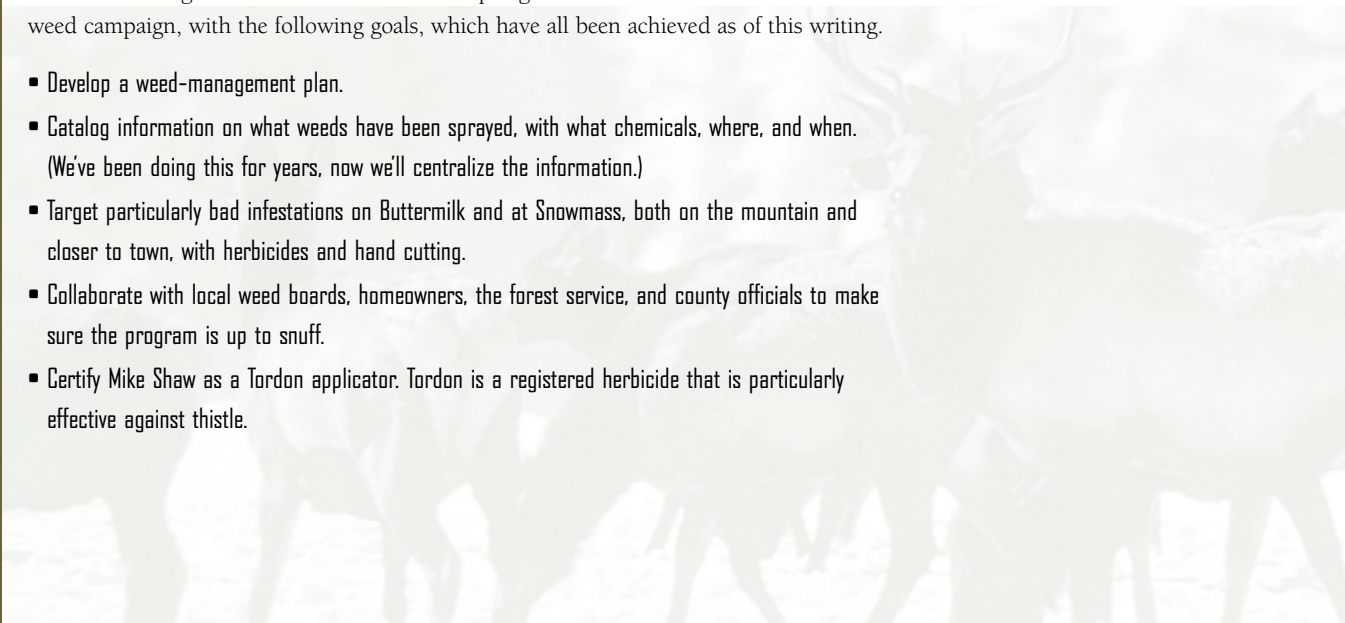
You might wonder why weeds are so bad. Isn't it best to let nature take its course? Here's some information that might change your mind.

#### WEEDS:

- Aren't part of the native ecology.
- Take over wildlife habitat, damage shelter and forage, and reduce the diversity and quantity of native plants.
- Don't always hold and protect the soil the way native plants do, increasing erosion, pouring sediment in streams, and damaging fish populations and water quality.
- Weeds are often less resistant to wildfire than native plants.
- Weeds reduce land value, damaging local economies. For example, weeds hurt ranching and agricultural operations because they can reduce production of forage and crops.

Aspen Skiing Company has a major weed problem. While we've been attacking them for years—every summer ASC weed guru Mike Shaw spends a month and a half on Buttermilk, Aspen Mountain and Aspen Highlands, and golf course manager Al Ogren has been battling weeds for a decade—in the spring of 2001 we formalized our anti-weed campaign, with the following goals, which have all been achieved as of this writing.

- Develop a weed-management plan.
- Catalog information on what weeds have been sprayed, with what chemicals, where, and when. (We've been doing this for years, now we'll centralize the information.)
- Target particularly bad infestations on Buttermilk and at Snowmass, both on the mountain and closer to town, with herbicides and hand cutting.
- Collaborate with local weed boards, homeowners, the forest service, and county officials to make sure the program is up to snuff.
- Certify Mike Shaw as a Tordon applicator. Tordon is a registered herbicide that is particularly effective against thistle.



## SUMMARY: 2000 SNOWMASS WILDLIFE ENHANCEMENTS PROJECTS

Environmentally, it's obviously not the best idea to spray weeds with herbicides. But after consulting with half a dozen experts and environmentalists, it's become clear that some level of application early in the spring is necessary at least for a year or two. All ASC employees using pesticides avoid streams and ponds, and spray only when wind and weather permit. On the Snowmass golf course, Al Ogren maintains vegetation buffers along water features so that pesticide is absorbed before it enters the watershed. In the Summer of 2001, ASC hit Plumeless and Canadian Thistle, Houndstongue, and other invasives on Snowmass and Buttermilk, using a combination of Tordon, 2-4-D and hand cutting. Mike Shaw worked for approximately two months on thistle control, and many others, including Rob Baxter, Auden Schendler, Gary Schultz, Greg Hettrich and Scott Engel contributed an additional 80 hours to weed control.

### PROBLEMATIC WEEDS ON ASC MOUNTAINS

Plumeless Thistle

Canada Thistle

Houndstongue

Burdock

Scentless Chamomile

Oxeye Daisy

Knappweed

Yellow Toadflax

Musk Thistle

ASC's Environmental Affairs department conducted extensive research on herbicides before application. The most objective source was E X T O X N E T, a Pesticide Information Project of the Cooperative Extension Offices of Cornell University, Oregon State University, the University of Idaho, the University of California at Davis and the Institute for Environmental Toxicology, Michigan State University. Information on the toxicology of Tordon, Roundup, and 2-4-D, the three herbicides most commonly used at ASC, can be found at <http://ace.orst.edu/cgi-bin/mfs/01/pips/ghindex.html>.



Because of their weed control efforts (and cool T-shirts that say "Thistle Wars 2001: Snowmass Ski Area") Environmental Affairs Director Auden Schendler, General Manager Doug MacKenzie, and Mountain Manager Rob Baxter will be featured in the 2003 Pitkin County Noxious Weed Calendar.

- We cleaned up blowdown of over 1,000 trees on the ground between Longshot and Campground trails to reduce fire hazard.
- With fallen trees, we built several wildlife habitats.
- On June 22nd, 40 people from the Snowmass Administration Building, Trail Crew, Lift Maintenance, Summer Rangers and Lift Operations picked up trash on the mountain. They also attended a wildlife educational talk by Kevin Wright from the Colorado Division of Wildlife.
- To help enforce the leash requirements at Snowmass, we put 21 dog leashes in our company trucks and made them available at the bottom of all lifts.
- We distributed 15 bear-proof trash cans around the mountain and outside the Administration Building. In order to further prevent bear/trash problems we installed a metal guard over our dumpster at the administration building.
- We completed several revegetation projects over 40 acres using 200,000 lbs. of hay and 2,000 lbs. of seed.



“We are challenged as mankind has never been challenged before to prove our maturity and our mastery, not of nature, but of ourselves.”

Rachel Carson

At Aspen Skiing Company, we often explain our environmental commitment by saying “It’s the right thing to do.” Most of the time, the “right thing” is obvious. But often, the line between right and wrong in the environmental movement is blurry.

Consider DDT, the notorious insecticide. Its widespread use was, arguably, one of the worst human-caused environmental disasters of the past century. DDT caused reproductive problems, drove species near extinction, and had an alarming propensity to accumulate in Eskimo mothers’ milk. Researchers implicated the chemical in cases of cancer and endocrine disruption. And DDT-resistant strains of mosquitoes thrived while their natural enemies died. It showed our lack of consideration for the big picture, and our ignorance of how natural systems operate.

And yet DDT saved 10 million lives. It reduced cases of malaria in India from 75 million to 5 million in ten years. Crops and livestock were radically more productive after spraying. So what was “the right thing to do?” Can we say, even now? Were the manufacturers and sprayers of this “miracle product” evil?

We run into similar complexity in our work here at ASC. Our weed campaign last year was a good example. For years, we’ve battled thistle—an invasive foreign species that crowds out native plants and damages agriculture, ranching, and the recreation industry. We have been ineffective in controlling the weed with “over the counter” herbicides and hand cutting. We found we had to use more herbicide, since we couldn’t cut every thistle by hand. Was this the right thing to do? What about impacts to the watershed? To other plants? To people? Unfortunately, there are few options. On the advice of local weed experts, we decided to use a more powerful, regulated herbicide, called Tordon. We put Mike Shaw, our company weed guru, through a certification course, and registered ASC as a limited commercial/public applicator. The weed problem is finally getting under control. We now use less pesticide, but it is arguably more dangerous. Is this a devil’s bargain? And are weeds, which hold soil in place and prevent erosion, actually all that bad?

Vague “solutions” abound. Aspen has serious air quality problems. In the summer, we keep the dust down on mountain roads by spraying magnesium chloride, a common road deicer and a very effective dust controller. But magnesium chloride can be contaminated by arsenic and other heavy metals, and its effects on vegetation are not well known. Alternatives exist, but they are more expensive, and could pull money from the very budget we use to revegetate slopes, or improve elk habitat. If we stop spraying, air quality becomes unacceptable.

Perhaps the most confusing conflict comes from the battle to be responsible citizens and to stay viable as a business. When we play radios at the base of lifts, is that noise pollution, or something we need to do to make younger guests happy? If we are not profitable, we have less money to spend on environmental initiatives. If we go out of business, will we be replaced by a cleaner, more responsible business, or nothing at all? What are the environmental consequences of that?



Even trying to measure our progress has been extremely complex. If you compare our electricity use from last year's Sustainability Report to this one, it appears we've cut demand by several hundred thousand kilowatts. Amazed by this possibility, I did some investigation. It turns out we used more accurate estimates of cost per kilowatt-hour this year. Which means energy use didn't drop as much as we had thought—if at all—but rather that our accounting has gotten better. We'll have to wait another year to see if our efficiency programs actually made a dent in the big picture. Meanwhile, our solid-waste numbers were embarrassingly off in last year's report, and we've added a much more detailed accounting this year. How can we expect the community to endorse what we're doing, when we can't even measure it? Is this Sustainability Report—and the time and resources that go into it, the right thing to do, given that there are other ways we could be spending our time?

The good news is that clear-cut successes are far from rare, and this report is a testament to that. I have always maintained that our mission—running our business profitably in a way that does not damage—and hopefully enhances—the natural world, is wildly complex. But complexity is the mark of healthy ecosystems. Instead of being discouraged by the conflicting ideas tossed at us from opposing factions, I am encouraged. This is healthy debate in a vibrant community. We will be scarred and bruised and battered as we move forward, and we will come out better for it.

Sincerely,



Auden Schendler  
Director of Environmental Affairs





Aspen Skiing Company

“The world is before you, and you need not take it or leave it as it was when you came in.” James Baldwin

ASC's 2000-2001 Sustainability Report is dedicated to those who lost their lives or loved ones in the terrorist attacks of September 11.

“...may I, composed like them of Eros and of dust, beleaguered by the same negation and despair, show an affirming flame.”

W.H. Auden, “September 1, 1939”

**SECOND EDITION**

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