



Sustainability Report

Introduction 2013-14

This year saw total visitor numbers rise again well past 400,000 to the highest levels since 2006. Maybe we're doing something right? Certainly, big projects are underway...

The popularity of the mountain bike terrain park –and trail network– both continue to grow. In summer 2013 we also added a hiking connector from the top of Hogsback Chair that leads to the legendary Pacific Crest Trail on its way north down the mountain; and we built a full 18-hole downhill disc golf course that ends at the base area.

Meanwhile, the largest capital project in recent times spanned June to November as we installed the long-awaited high-speed upgrade to the backside Jupiter Chair. A 20-minute journey now takes ten. It was pretty notable for the recycling involved too: all existing towers were left in place and refitted with new heads and wheels. The steel haul rope was spooled up for future re-use, and we might even install all the old 3-pack chairs on the frontside.

We still reckon that protecting and restoring the natural resources that have provided us our livelihood is the least we can do. Since 2007 we have chosen to focus on both reducing our carbon footprint and on overall sustainability. To us, it's simply the right thing to do. Not much meaningful action is happening at the federal level, so local climate solutions that can scale up are ever more important.

We aim tirelessly to live lighter on the fragile landscape while focusing on the triple bottom line.

- *Environment and Sustainability Program*

Purpose

This document describes our environmental philosophy, quantifies our annual impacts and consumption, identifies goals, and celebrates achievements big and small. Data are tracked by fiscal year: July 1-June30. To learn more about our sustainability work, visit www.StevensPass.com/Environment

Our Environmental Mission

To enrich the mountain environment for generations to come by living and working in a sustained, healthy manner that does as little harm as possible while providing a rewarding alpine recreational experience.

Awards

This year, we are thrilled to announce that we achieved the ultimate grade in the 2013 environmental performance survey by the non-profit advocacy group Ski Area Citizens' Coalition – we ranked **#1** in the entire country with 93.3% (out of 100)! Based on extensive surveying and public records research, the Coalition has assessed over 80 Western resorts annually for twelve years. And in May 2014, we won a national competition to secure a [consulting grant](#) from the National Ski Areas Association – this **\$5,000** award will help us prove the financial case for bigger and deeper sustainability retrofits. For more detail on recent awards, visit the 'Awards and Recognition' section at www.StevensPass.com/Environment

Climate Change & Mitigation

The strange weather variability in Washington State continues as climate change settles in. The Puget Sound area witnessed the wettest September in recorded history (that's 120 years), allowing the resort to open unusually early on November 16. But we had several days of rain closures soon afterwards. However, that same rain delayed other resorts' openings, and thus led to our busiest day ever on January 4, 2014 with 9,155 guests! The parking shortage reminded many that bussing might not be such a bad idea after all. After settling in to a far below-average snowpack at the end of January, we then enjoyed our second snowiest February in 50 years, gathering over 13 feet that month – the season ended at about normal.

The scientific literature tells us that the average April 1 WA snowpack is expected to decrease 28% by 2020. The average PNW temperature rose 1.5°F between 1920 and 2003, and the 2014 National Climate Assessment projects that by 2050, snowmelt is likely to shift three to four weeks earlier than the 20th century average. Unable to expand into higher terrain, we must broaden our options (e.g. summer operations), and plan for warmer shoulder seasons. We must also continue to do all that we can to reduce or mitigate our climate impacts from transportation and energy use. Stevens pays for carbon offsets that represent 100% of our annual electricity and propane use, and hundreds of guests buy their own vehicle emissions offsets through a voluntary program. The following table summarizes our major emissions; this year we are switching to metric tons.

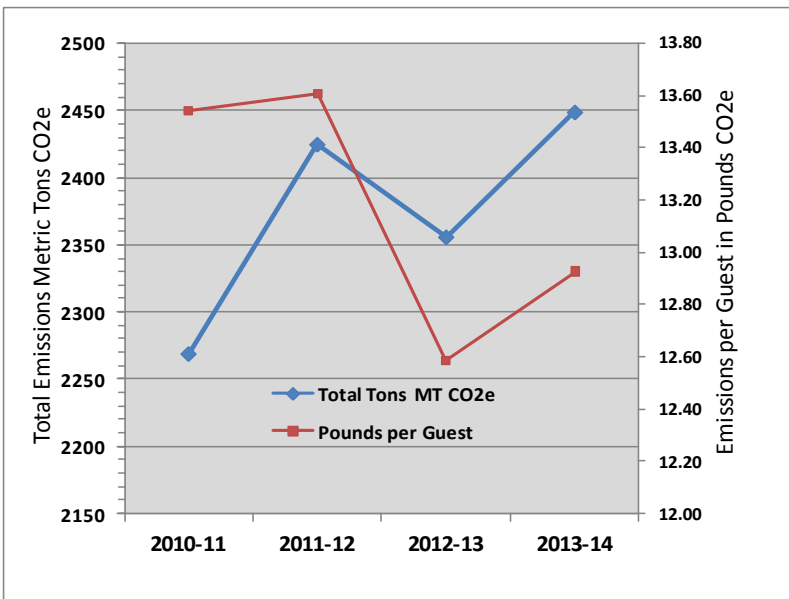
Annual CO₂e Emissions July 1 2013–June 30 2014

417,632 Visitors (includes Downhill, Nordic, Summer) (Ski season = 152 days)

Resource Category	Cost	Amount	Unit	Per Guest	CO ₂ Equiv in Metric Tons			
					2013-2014	2012-2013	2011-2012	2010-2011
Fuel Gas	\$81,308	21,096	Gals	0.27	188	132	149	110
Fuel Diesel ¹	\$351,959	92,171			935	949	969	935
Electricity ²	\$196,584	5,608,318	kWh	13.43	725	695	723	626
Propane ³	\$286,478	109,001	Gals	0.26	601	580	584	598
Water ⁴	\$119,219	4,537,000	Gals	10.86	n/a	n/a	n/a	n/a
TOTALS >>	\$1,035,548				2449	2356	2425⁵	2269⁶

Notes: ¹ Employee bus transit was 15% of total diesel use, but has been outsourced starting summer 2012; ² Most of WA electricity is hydropower; ³ Stevens Pass has no Natural Gas service; ⁴ Potable Water from our on-site water plant; ⁵ Twelve-month tracking began in 2011-12; ⁶ In 2010-11 (our inaugural report), emissions were tracked only during the ski season.

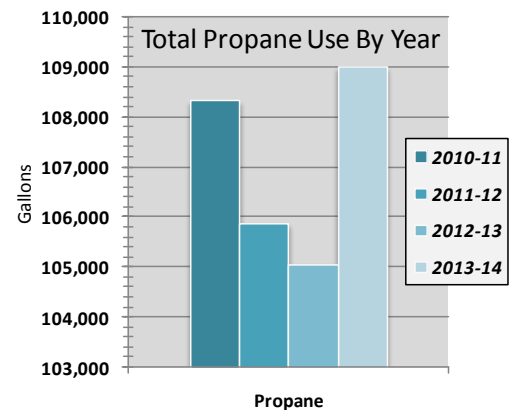
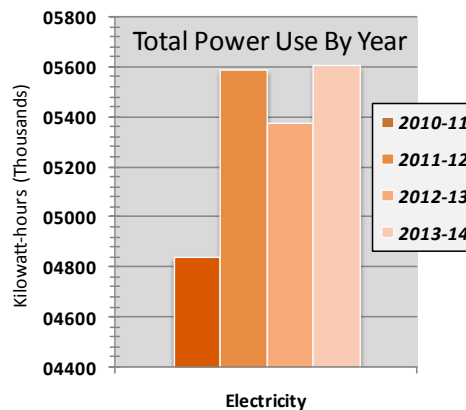
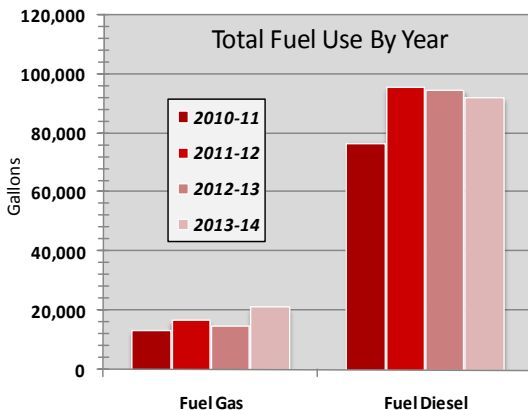
CO₂ Conversion Factors: Propane = 12.17lbs/gal; Gasoline = 19.6lbs/gal; Diesel = 22.38lbs/gal; Electricity (WA avg.) = 0.285lbs/kWh.



Since sustainability reporting began four years ago, we have seen a major increase in annual visitation, rising from 369,390 to 417,632 this year. Although this represents a gain of 13%, we have managed to reduce the per guest carbon emissions by a little over half a pound. More difficult however, has been decreasing the absolute amount of fuel and energy consumed, as revealed by the summary graph at left, and three consumption graphs below.

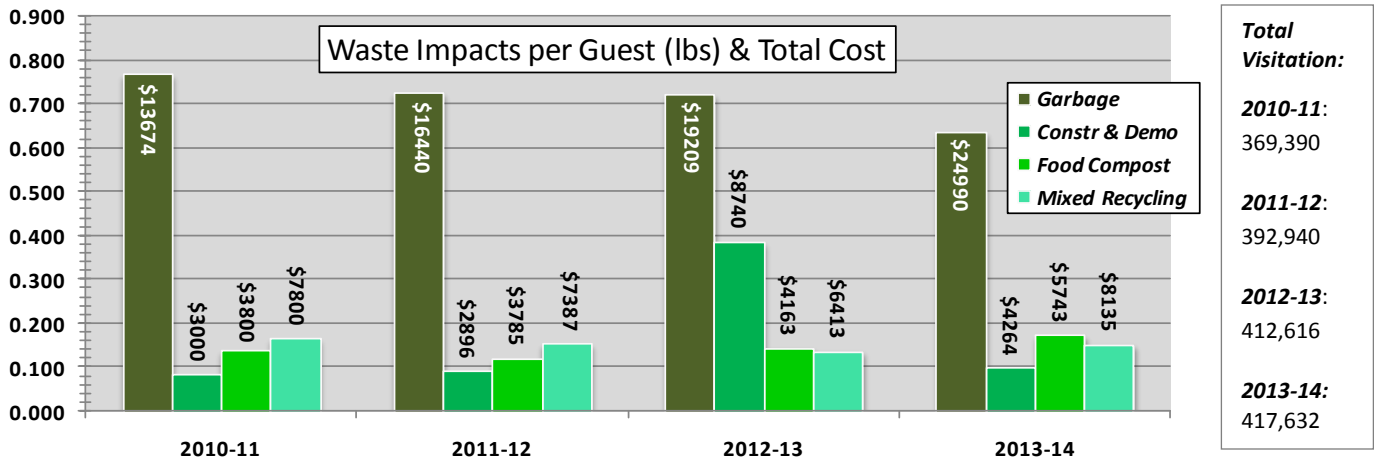
New operating protocols for gas and diesel machinery may slowly have an impact, but more concerted efforts will be needed to grow visitation and revenues, while simultaneously shrinking the resort's carbon footprint.

Some of the improvement in fuel consumption is likely attributable to outsourcing our employee transit during the peak winter months, although a single large construction project (namely, the Jupiter Chair upgrade) led to a 50% increase in gas usage during the summer months of 2013.



Note that the differences in annual consumption depicted by the electricity and propane graphs are actually quite small because the vertical axes do not begin at zero. In the case of the first two graphs, fuel and power use in fiscal year 2010-11 was tracked only during the ski season; for the following two years, year-round consumption was tracked. This was also the case for propane consumption, but since almost no propane is used in summer months, all three years of data can be reasonably compared.

Other ways that we minimize impacts involve our extensive recycling, composting, and reuse/surplus programs with outcomes summarized in the following table and graphs; we're always looking for new initiatives to try.



Thankfully, total garbage produced per guest notably decreased, while total compost and recycling per guest increased over last year – all good signs; and without a large remodel or renovation project in the last 12 months, construction and demolition dropped to more historic levels. As can be seen easily from the graph, total costs for all these programs have continued to climb over the years. However, we achieved a major milestone this year: we never needed to use the resort’s own garbage truck for excess volumes – all was collected by our contracted hauler, a far more efficient solution. This year we have added calculations of the significant GHG reductions resulting from our waste reduction and recycling programs, in the table below.

Annual Waste & Recycling FY2013–14								
417,632 Visitors (includes Downhill, Nordic, Summer) (Ski season = 152 days)								
Resource Category	Cost	Quant.	Unit	CO ₂ Equiv (metric ton)	Per Guest			
					2013-2014	2012-2013	2011-2012	2010-2011
Garbage ¹	\$24,990	132.75	tons	64	.636lbs	.722lbs	.727lbs	.768lbs
Construction Waste ⁸	\$4,264	20.42	tons	(-6)	.098lbs	.385 ² lbs	.091lbs	.083lbs
Food Compost	\$5,743	36.14	tons	(-29)	.173lbs	.144lbs	.119lbs	.138lbs
Mixed Recycling	\$8,135	31.58	tons	(-105)	.151lbs	.136lbs	.153lbs	.165lbs
Cardboard Recy. ³	-\$770	12.09	tons	(-43)	.058lbs	.070lbs	.077lbs	.086lbs
Rubber Recycling ⁴	\$163	126	items	(-0.5)	<.001	.001	<.001	n/a ⁶
Scrap Metal ³	-\$929	12.80	tons	(-57)	.061lbs	.072lbs	.069lbs	n/a ⁶
Cooking Oil ⁵	\$0	750	gal	n/a	.002gal	.002gal	.002gal	.002gal
Hazmat Liquids	\$1,545	705	gal	n/a	.002gal	.001gal	.003gal	.002gal
Hazmat Light Bulbs	\$190	184	bulbs	n/a	<.001	<.001	<.001	<.001
Hazmat Batteries	\$150	384	lbs	n/a	<.001lbs	<.001lbs	<.002lbs	<.001lbs
E-waste ⁷	\$100	24	items	(-1)	<.001	<.001	<.001	<.001

Total GHG reduction = (-177.5)

Table Notes: ¹In 2013-14, Waste Mgmt covered all service year-round; ²Included 52tons from several large construction & demolition projects; ³We sell our recycled cardboard & scrap metals; ⁴Includes tires & chairlift wheels; ⁵Waste cooking oil collected for free by a biodiesel refiner; ⁶n/a = not tracked previous report; ⁷Large electronics, computers, TV's, etc; ⁸Mixture of standard solid waste & unrecyclable plastics, drywall, unusable or treated lumber, broken furniture, remodel materials.
CO₂ Conversion Factors: derived from EPA Waste Reduction Model (WARM).

Fiscal Year 2013-2014 Sustainability Goals:

- 1) Complete our solar array and power it up after permitting
- 2) Identify additional equipment or facilities for gauging and monitoring pilots
- 3) Explore the feasibility of highly-efficient LED slope lighting
- 4) Launch our largest recycling project ever (retrofit of Jupiter Chair)
- 5) Pilot energy-performance software for large buildings
- 6) Assess if and how we met our 2012-13 sustainability performance targets.



Fiscal Year 2013-2014 Accomplishments

In the summer of 2014, we were able to receive final sign-off for our 8-module, 2-kilowatt demonstration solar array up at the top of the Skyline Chair and it is producing clean local energy. We researched opportunities to explore building-scale energy monitoring, and installed two new master water meters on the main lines (non-potable and potable) leading from our water plant to better understand consumption -data that were unavailable before. In March 2014, the Lifts Department acquired two LED 1000-watt equivalent slopelights for testing in advance of a possible all-mountain conversion to energy-saving lighting technology that is up to 75% more efficient than our current metal halide bulbs.

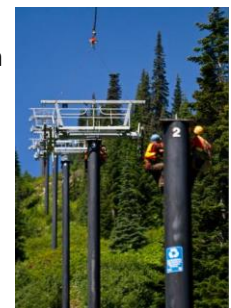
The much-anticipated retrofit of the Jupiter chair wrapped up in Nov 2013, just in time for the season: all existing towers were re-used in place and refitted with new heads and wheels, and many other components (wire rope, chairs) were saved for repurposing. We tested energy monitoring software in the Granite Peaks Lodge, which should reveal inconsistencies in consumption and allow early course-correction before problems get expensive. Finally, sustainability performance targets for the 2012-13 fiscal year were: a 2% reduction in fuel use (gas/diesel), 1% reduction in propane use, and 3% reduction in energy consumption. We calculated a 3.4% drop in fuel use, 0.8% drop in propane, and a 3.9% drop in electricity use. Encouraging results.

2013-14 Highlight Initiative: Summer Operations Sustainability

All of our significant construction occurs in a short summer window and must be efficiently planned and executed. Apart from the Jupiter Chair rebuild, the ongoing bike trail excavation required careful attention to erosion control, wetlands protection, and stream crossings.

Since 2010 we've been coordinating a volunteer slope clean up day with the Forest Service and the National Forest Foundation. Hundreds of pounds of garbage and recycling are found in all sorts of hiding places each summer.

Every few summers, we collect old uniforms for donation: this year that included almost 400 fleece or ski jackets, and about 300pounds of other company clothing.



Upcoming 2014-15 Sustainability Goals

In the next fiscal year, we intend to:

- Develop better ways to adapt to a changing climate, and continue to expand summer operations
- Install consumption gauges on individual building water inflows, and on our largest propane tank
- Implement extensive base area and slope light replacements with high efficiency LED lights
- Launch long-term planning for a plaza extension and new Ski Patrol building with sustainable architecture
- Reduce our carbon footprint by 180 metric tons (i.e. return to 2010-11 levels) via fuel & energy efficiency
- Reduce waste costs by 1 cent/pound via new centralized purchasing and source reduction efforts.

Learn more about our Environment & Sustainability Department at: www.stevenspass.com/environment