



UNDERSTANDING THE SCIENCE OF STEAMBOAT'S CHAMPAGNE POWDER® SNOW

History Shows Powder Piles Up In Steamboat, Where Conditions Create Pure Fun

STEAMBOAT SPRINGS, CO-WINTER 2010/2011-Snow piling up is a common occurrence in Ski Town, U.S.A.® and we wouldn't have it any other way. With two 400+ inch seasons in the past three years and 349 inches of powder annually, finding pure Champagne Powder snow on the slopes of Steamboat isn't difficult.

"Steamboat is continually recognized for its abundance of incredible signature snow," said Chris Diamond, president & chief operating officer for Steamboat Ski & Resort Corporation. "Steamboat's location makes for the lightest snow around, and one that carries its very own trademark-Champagne Powder snow."

Every skier worth his weight in Gore-Tex knows the thrill of floating through Steamboat's Closet Glades in a foot of untracked powder. OK, maybe not *every* skier; but even strangers to Steamboat know that the resort gets some of the best snow anywhere.

So does Steamboat's legendary snowfall have a basis in scientific facts or is it just a local folktale? The abundant snowfall is a result of Steamboat's location within the Park Range, which is the first significant barrier in the Northern Colorado Rockies to storms arriving from the Pacific according to scientists who operate the Storm Peak Laboratory, one of the country's highest climate laboratories located at 10,568 feet atop Mt. Werner.

"Steamboat gets the snow with the lowest water content in the United States," says Ian McCubbin, Manager of Steamboat's Storm Peak Laboratory, which conducts ongoing snow studies. Steamboat's powder averages six percent density. Translation: Ten inches of melted snow from the 'Boat produced a mere six-tenths of an inch of water. Compare that to the 15-percent density of other location's snowpack, where 10 inches of melted snow produces an inch and a half of water. "Other places may get more snow," says McCubbin. "But Steamboat really does have the greatest snow on the planet."

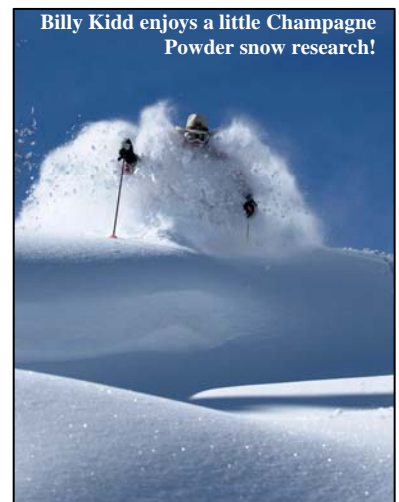
Here's a look at how Mother Nature turns water into something worth celebrating.

Water for Champagne: Wintertime northwesterly storms blow in from the Pacific and hitch a ride on predominant winds. The storm clouds are saturated with "supercooled water" that remains liquid even though it is below the freezing point. (The water is essentially looking for particles to freeze to.)

The Long Haul: The Pacific Northwest storms travel about 1,200 miles east, moving across northern Oregon, Idaho, Nevada, and Utah. Along the way, these wet clouds encounter cold temperatures in the lower part of the troposphere—roughly five degrees Fahrenheit at 2,000 to 5,000 feet above the earth's surface—where moisture attaches to dust or tiny frozen drops and begin to form a large lace-like snowflake known as the (dreamy) stellar dendrite.

Steamboat: The Eye of the Storm: Steamboat is actually a micro mountain range that includes Mount Werner and Storm, Sunshine, Thunderhead, and Christie Peaks. The Park Range rises up smack in the flight path of these Pacific-born storms. When the clouds encounter the mountains, they first lift, then cool, and ultimately lose their ability to hold moisture. Down come the (dreamy) stellar dendrites, better known as Champagne Powder; out come the fat boards and the petty excuses to skip work—even if you're the boss.

What's in Store for 2010/2011? Climate data supports optimism for a snowy 2010/11 winter. "We're expecting a strong La Niña, and the last strong La Niña treated Steamboat pretty well," National Weather Service meteorologist Joe Ramey said. That was the winter of 2007/08, when the Steamboat Ski Area recorded a record 489 inches of Champagne Powder® snow at mid-mountain. La Niña's influence on weather patterns in North America is driven by cooling of



ocean temperatures at the surface in the east-central Pacific. La Niña weather patterns tend to favor the Northern Rockies with winter precipitation, with Steamboat and the Park Range are just far enough north to catch the southern end of the La Niña storm track.

Over the past 30 years, Steamboat has stacked up several snow milestones including hitting the 400-inch mark seven times or in local terms, four-wire winter. Yampa Valley ranchers traditionally measure the severity of a Routt County winter by how high the snow stacks up against their four fence wires. Currently, the top-three season snow totals for Steamboat include 489 in 2007/08; 447.75 in 1996/97; and 447.5 in 1983/84.

Unique Snow Facts:

Champagne Powder® snow is a trademark of the Steamboat Ski & Resort Corporation. Local rancher Joe McElroy coined the phrase before the ski area opened. Out skiing one sunny day in the early fifties on what terrain that eventually would be the ski area, he turned to a few friends and said the stuff tickled his nose like champagne...Champagne Powder snow. No other ski resort has its snow trademarked and there's no other place you'll find Champagne Powder snow!

Storm Peak Laboratory: Steamboat is home to one of the country's highest climate laboratories located at 10,568 feet atop Mt. Werner. Scientists and students from around the world have used the Storm Peak Lab over the past 25 years to study snowfall patterns, climate change and weather movements. What better place to study snow and climate than the home of Champagne Powder snow? www.stormpeak.dri.edu

Pioneer Ridge Beacon Basin: Steamboat's avalanche beacon basin training area makes it easier for powderhounds to learn about using personal avalanche transmitters in a controlled environment. Located at the Patrol Yurt at the top of the Pony Express, the Pioneer Ridge Beacon Basin currently features 4 transmitters wired to a central control panel. One, or any combination up to all 4 transmitters, may be configured in varying orientations and depths. Steamboat's Pioneer Ridge Beacon Basin joins a growing number of Beacon Training Parks across nine states in the United States as well as numerous locations across Canada and Europe, including Steamboat's sister resorts-Winter Park and Whistler. Avalanche conditions across Colorado are forecasted on a daily basis by the [Colorado Avalanche Information Center](#).

On Film: For nearly three decades, Steamboat unique location and signature Champagne Powder snow has captured the cinematic attention of legendary filmmakers, Warren Miller Entertainment. The resort has appeared in 13 films since 1982, most recently making an appearance in the 60th installment, Dynasty, last year. Warren Miller is the most respected name in action sports cinematography, capturing the best of winter sports.

Holiday Delight: Steamboat will grace the cover of the upcoming 2010 Eddie Bauer Holiday catalogue in November, 2010. Savor holiday images of Ski Town, U.S.A.; meet unique individuals from across the Yampa Valley and knock off all your holiday presents at once. Better yet, spend the holidays in Steamboat, the perfect place to put all your Eddie Bauer gifts to the test in heaps of Champagne Powder® snow.

International Appeal: This was the 10th year Ellis Brigham, the United Kingdom's leading mountain sports company, has shot its annual ski and snowboard catalogues in Steamboat. Why do they choose Ski Town, U.S.A.®? "The snow conditions continue to be epic and the hospitality ever warmer and we can honestly say that there is no finer place to take a snowsports holiday!" says Ellis Brigham's Dave Whitlow.

Winter Driving School: Learning to handle your car on snow-packed roads is possible at the Bridgestone Winter Driving School. The school teaches the theory and practice of skillful, confident driving on ice and snow, with the latest models of Toyota vehicles. Located in Steamboat Springs, Colorado, the school is America's first and foremost institution to teach safe winter driving techniques. There's not another school like this in the United States!

CHAMPAGNE POWDER SNOW STATS							
TOP 5 SEASONS		DAYS SNOWED		MOST POWDER DAYS (4+)"		BIGGEST MONTHS	
2007/08	489.00"	1992/93	109	1996/97	61 days	October	27.0"
1996/97	447.75"	2007/08	106	2007/08	58 days	November	83.0"
1983/84	447.50"	1996/97	104	2005/06	58 days	December	165.5"
1995/96	441.25"	2005/06	99	2008/09	55 days	January	216.5"
2005/06	432.00"	1997/98	95	1992/93	51 days	February	110.5"
		2008/09	94	1999/00	50 days	March	83.0"
		2002/03	91			April	60.0"
							2006
							2005
							1983
							1996
							1993
							1991
							1993
400+ SEASONS		350+ SEASONS		300+ SEASONS			
2007/08	489.00	1981/82	383.75	2002/03	344.00		
1996/97	447.75	1999/00	369.00	1987/88	333.50		
1983/84	447.50	1989/90	364.25	1994/95	320.50		
1995/96	441.25			2006/07	316.00		
2005/06	432.00						
1992/93	423.50						
2008/09	405.00						

STEAMBOAT SNOWFALL STATISTICS

MID MOUNTAIN

Season	October inches/cm	November inches/cm	December inches/cm	January inches/cm	February inches/cm	March inches/cm	April inches/cm	Totals inches/cm	Rank
2009/10	15.5/39.37	25.5/64.77	55.25/140.34	39.25/99/7	51/129.54	35/88.9	40.25/102.24	261.75/664.85	23
2008/09	4.75/12.1	35.25/89.5	100/254	109/276.9	47.25/120	72.25/183.5	36.5/92.7	405/1028.7	7
2007/08	17/43.2	23/58.4	126/320.0	129/327.7	104/264.2	79/200.66	11/27.94	489/1242.06	1
2006/07	27/68.6	49/124.5	49/124.5	41/104.1	97.5/247.7	42.5/108.0	10/25.4	316/802.6	14
2005/06	15/38.1	83/210.8	105/266.7	95/241.3	53/134.62	64.75/164.46	16.25/41.28	432/1097.28	5
2004/05	13.5/34.3	54.5/139.5	32/89.9	49/125.4	49/125.4	63/161.3	13/33.3	274/701.4	22
2003/04	3/7.68	74/189.4	76/194.6	44/112.6	58/148.5	36.5/93.4	3.25/8.3	294.75/754.6	16
2002/03	16/41	52/133.1	69/176.6	43.5/111.4	93/238.1	50.5/129.3	20/51.2	344/880.6	11
2001/02	4/10.2	49/125.4	67/171.5	71.5/183	58/148.5	39/99.8	3/7.7	291.5/740.4	18
2000/01	0/0	30/76.8	78/199.7	47/120.3	49/125.4	54/138.2	18/46.1	276/706.6	21
1999/00	0/0	21/53.8	76/197.6	119/304.6	86/220.2	52/133.1	15/38.4	369/944.6	9
1998/99	0/0	13/33.3	50/128	108/276.5	70/179.2	25/64	26/66.6	292/747.5	17
1997/98	0/0	34/87.0	40/102.4	77.5/198.4	65/166.4	60/153.6	14.25/36.5	291/744.9	19
1996/97	26.5/67.8	78/199.7	108/276.5	119.75/306.6	36/92.2	24/61.4	55.5/142.1	447.75/1146.2	2
1995/96	0/0	42.5/107.9	33.75/86.4	216.5/546.6	81.25/208	46.75/199.7	20.5/52.5	441.25/1120.8	4
1994/95	0/0	33.5/85.7	61.5/157.4	93/238.1	59.5/152.3	55.75/142.7	17.25/44.2	320.5/820.5	13
1993/94	0/0	28/71.1	67.25/170.8	57.25/145.4	57.5/146.1	27/68.6	18/45.7	255/647.7	24
1992/93	0/0	22.25/56.9	85/217.6	93/238.1	110.5/282.9	52.75/135	60/152.4	423.5/1075.7	6
1991/92	0/0	19/48.3	28.25/71.6	50/128	48.25/123.5	27/69.1	0.25/0.63	172.75/438.8	28
1990/91	0/0	26/66.0	68.75/174.6	77/197.1	45/114.3	83/210.8	0/0	299.75/761.4	15
1989/90	0/0	27/69.1	133.5/341.8	53.5/137	74/189.4	71.25/182.4	5/12.8	364.25/932.5	10
1988/89	0/0	19/48.6	48.25/123.5	66/169	66.5/170.2	33.25/85.1	21/53.8	254/650.2	25
1987/88	0/0	10.25/26.24	63.75/163.2	105/268.8	84.5/216.3	67/171.5	3/7.68	333.5/853.8	12
1986/87	0/0	1/2.56	16.75/42.9	54.5/139.5	39.5/101.1	43.75/112	11.25/28.8	166.75/426.9	29
1985/86	0/0	43.25/110.7	50/128	21.5/55	75.5/72.9	38/97.3	15.25/39	243.5/623.4	26
1984/85	0/0	61/156.2	53.25/136.3	75/192	43.5/111.4	40.25/103	15.25/39	288.25/737.9	20
1983/84	0/0	55.25/141.4	165.5/423.7	46/117.8	58/148.5	78.75/201.6	44/112.6	447.5/1145.6	3
1982/83	0/0	8/20.5	55.25/141.4	33.5/85.8	64.75/165.8	56.75/145.3	17.5/44.8	235.75/603.5	27
1981/82	0/0	13/33.3	113.5/290.7	124/317.4	44.25/113.3	69.25/177.3	19.75/50.6	383.5/981.8	8
1980/81	0/0	0/0	1/2.56	17/43.5	50.75/129.9	53.5/137	11/28.2	133.25/341.1	30
1979/80	0/0	0/0	10/25.6	88.75/227.2	54.5/139.5	71.25/182.4	32/81.9	256.5/656.6	23

Averages	October inches/cm	November inches/cm	December inches/cm	January inches/cm	February inches/cm	March inches/cm	April inches/cm	Totals inches/cm
2-Year Avg.	10.13/25.72	30.38/77.15	77.63/197.17	74.13/188.28	49.13/124.78	53.63/136.21	38.38/97.47	333.38/846.77
3-Year Avg.	12.42/31.45	27.92/70.91	93.75/238.13	92.42/234.74	67.42/171.24	62.08/157.69	29.25/74.30	385.25/978.54
4-Year Avg.	16.06/40.80	33.19/84.30	82.56/209.71	79.56/202.09	74.94/190.34	57.19/145/26	24.44/62.08	367.94/934.56
5-Year Avg.	15.85/40.26	43.15/109.60	87.05/221.11	82.65/209.93	70.55/179.20	58.70/149.10	22.80/57.91	380.75/967.11
10-Year Avg.	11.58/29.40	48.33/122.75	75.73/192.34	66.83/169.74	65.98/167.58	53.65/136.27	17.13/43.50	339.20/861.57
15-Year Avg.	9.48/24.09	44.80/113.79	71.00/180.34	87.27/221.66	66.53/168.99	49.62/126.03	201.7/51.22	348.87/886.12
20-Year Avg.	7.11/18.07	40.04/101.70	68.79/174.72	83.96/213.23	65.94/167.48	49.49/125.70	19.90/50.55	335.23/851.47
All-Year Avg.	4.59/11.66	33.50/85.09	67.31/170.96	76.26/193.70	63.69/161.78	52.02/132.14	19.13/48.59	308.23/782.89