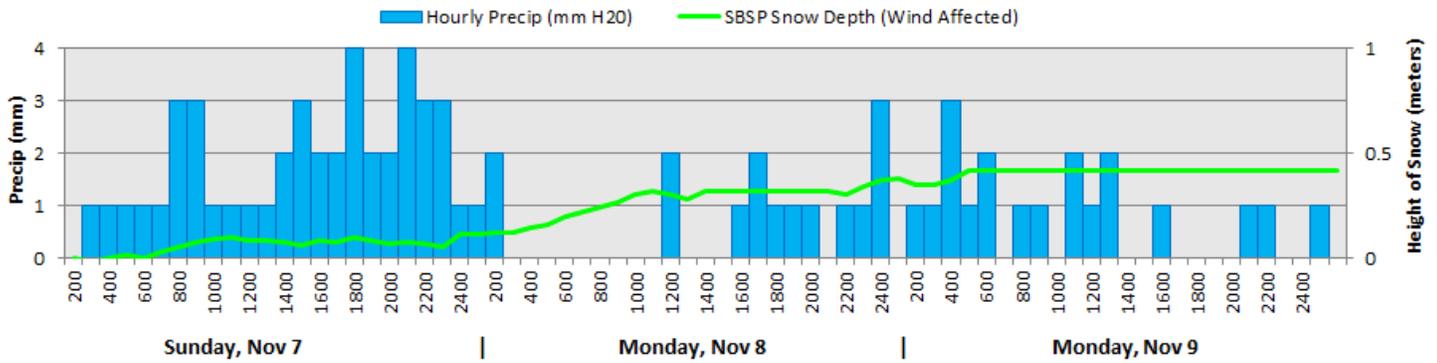


2020/2021 WINTER STORM #1

2020-2021 Winter Storm #1: Nov 7-9, 2020

Senator Beck Basin Study Area, at Red Mountain Pass, CO



Storm Summary Statistics:

Storm precip began between 200 – 300 hrs MST Saturday, November 7, 2020 (DOY 312)

Storm precipitation ended: 100 hrs MST Tuesday, November 10, 2020 (DOY 315)

Storm duration = 72 hrs

Storm total water content at SASP = 79 mm (3.1 inches)

Mean precip intensity: 0.94 mm/hr

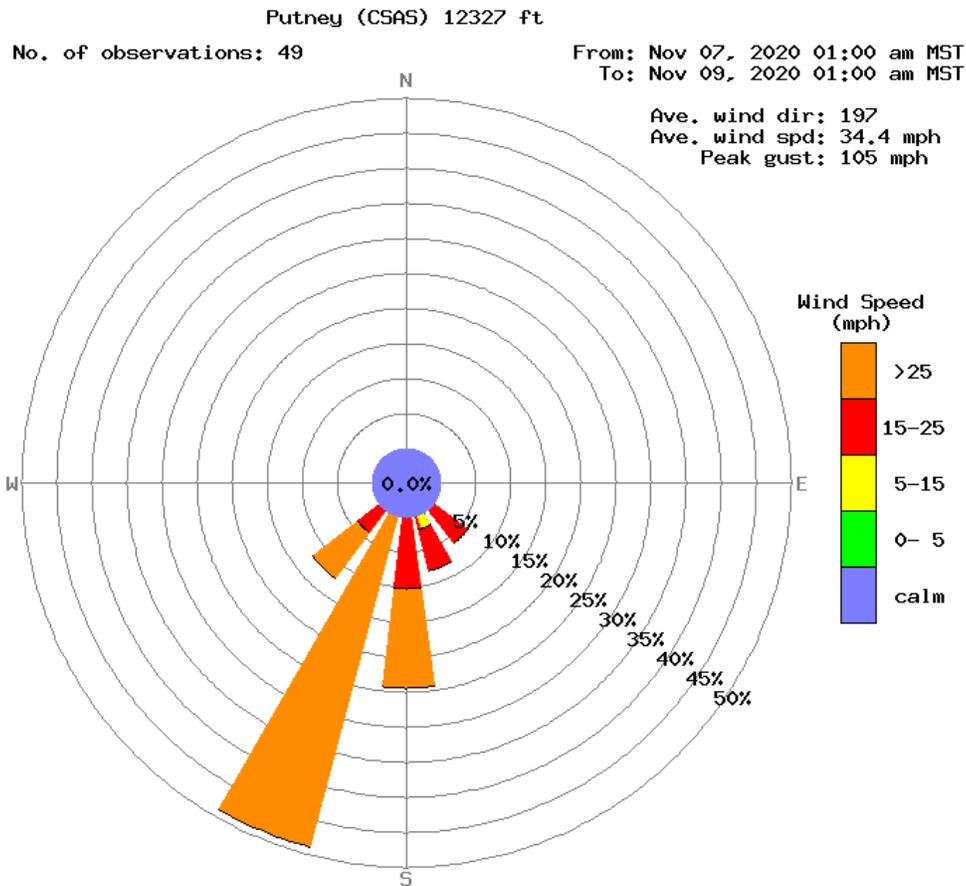
Max precip intensity: 4 mm/hour, multiple occasions

Max gain in snow depth at SASP = 76.2 cm (30 inches)

Max gain in snow depth at SBSP (wind affected) = 41.8 cm (16.5 inches)

Peak gust at PTSP at: 105.5 mph at 2335 hrs MST Saturday, November 7, 2020 (DOY 312)

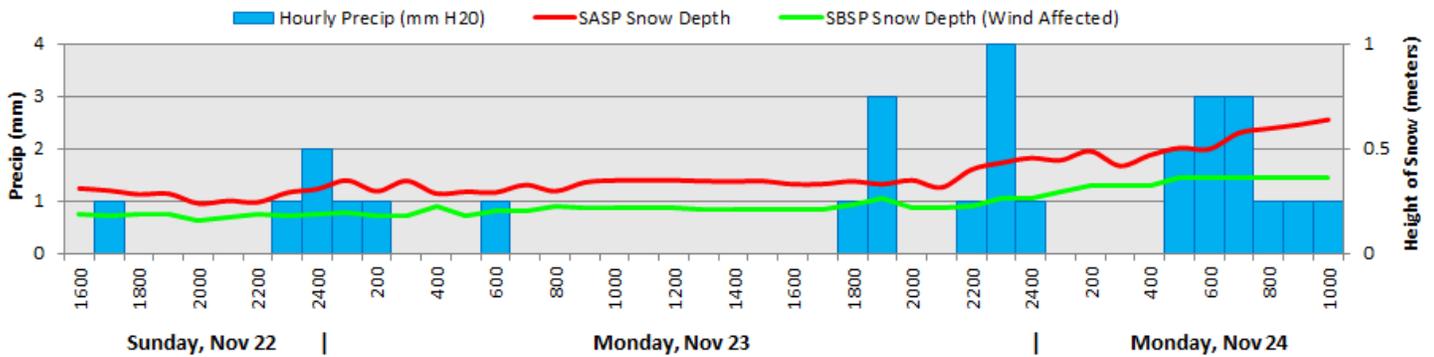
Storm Wind Rose (Putney Study Plot data):



2020/2021 WINTER STORM #2

2020-2021 Winter Storm #2: Nov 22-24, 2020

Senator Beck Basin Study Area, at Red Mountain Pass, CO



Storm Summary Statistics:

Storm precip began between 1600 – 1700 hrs MST Sunday, November 22, 2020 (DOY 327)

Storm precipitation ended: 1000 hrs MST Tuesday, November 24, 2020 (DOY 329)

Storm duration = 43 hrs

Storm total water content at SASP = 28 mm (1.1 inches)

Mean precip intensity: 0.65 mm/hr

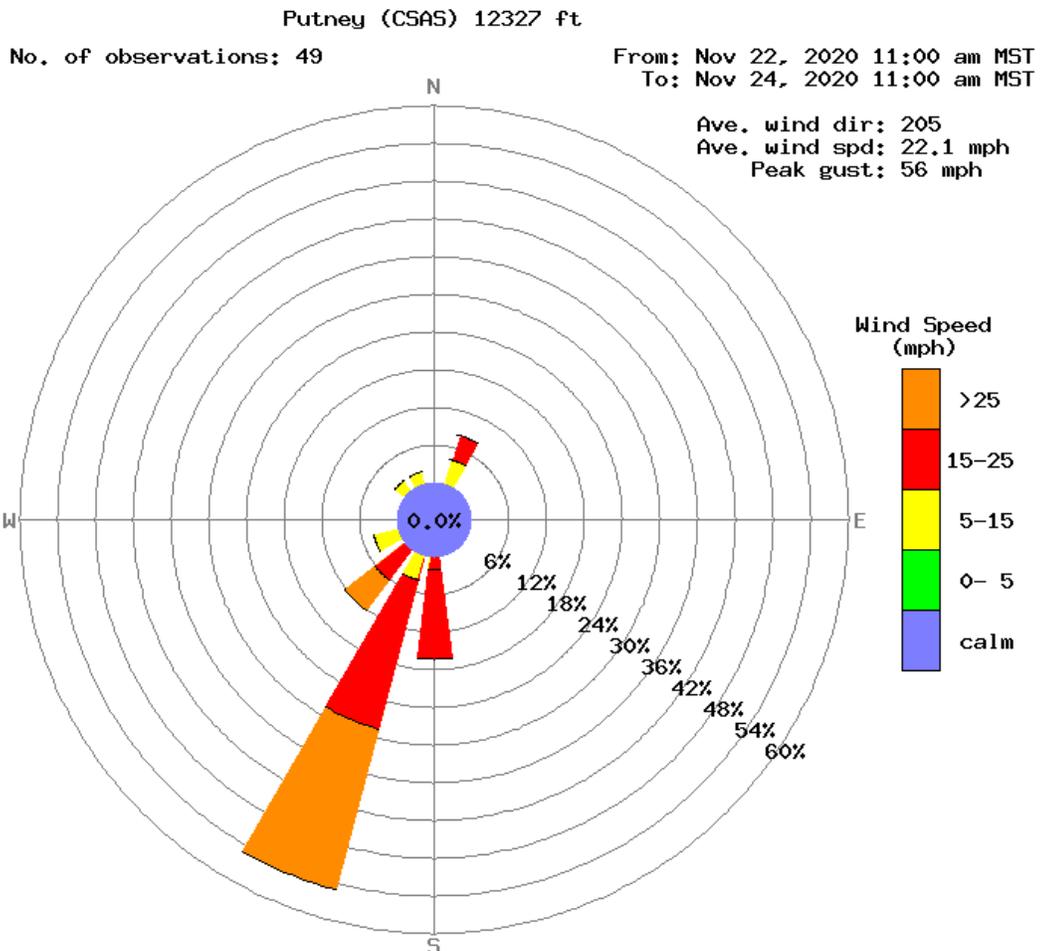
Max precip intensity: 4 mm/hour, on Monday, November 23 at 2300

Max gain in snow depth at SASP = 32.8 cm (12.9 inches)

Max gain in snow depth at SBSP (wind affected) = 17.1 cm (6.7 inches)

Peak gust at PTSP at: 56.3 mph at 0400 hrs MST Monday, November 23, 2020 (DOY 328)

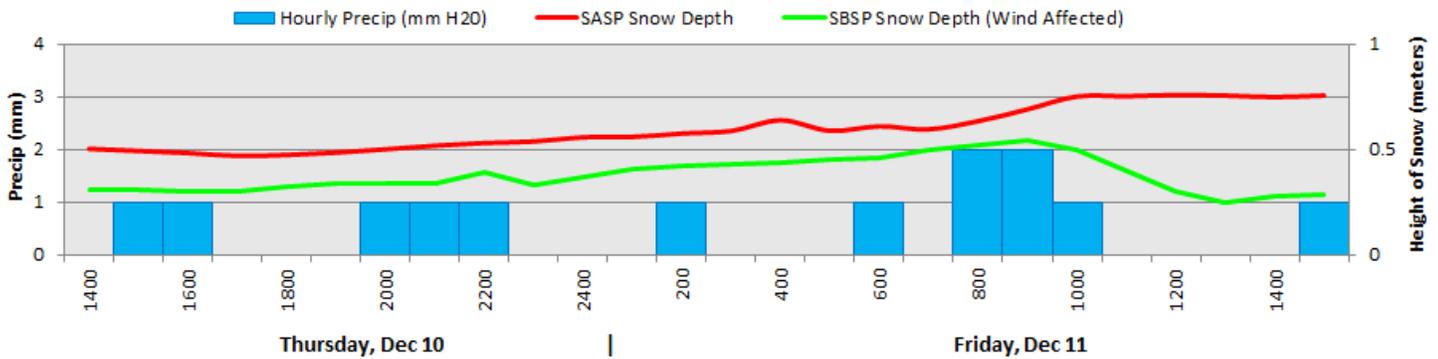
Storm Wind Rose (Putney Study Plot data):



2020/2021 WINTER STORM #3

2020-2021 Winter Storm #3: Dec 10-11, 2020

Senator Beck Basin Study Area, at Red Mountain Pass, CO



Storm Summary Statistics:

Storm precip began between 1400 – 1500 hrs MST Thursday, December 10, 2020 (DOY 345)

Storm precipitation ended: 1500 hrs MST Friday, December 11, 2020 (DOY 346)

Storm duration = 26 hrs

Storm total water content at SASP = 13 mm (0.5 inches)

Mean precip intensity: 0.5 mm/hr

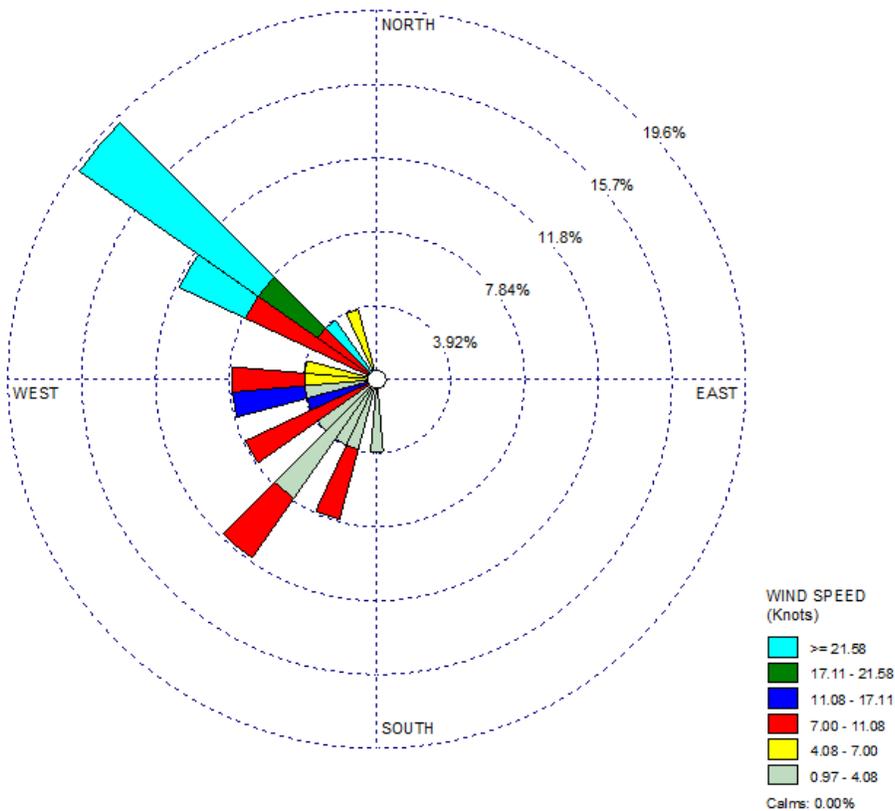
Max precip intensity: 2 mm/hour

Max gain in snow depth at SASP = 25.3 cm (10.0 inches)

Max gain in snow depth at SBSP (wind affected) = 0 cm (0 inches)

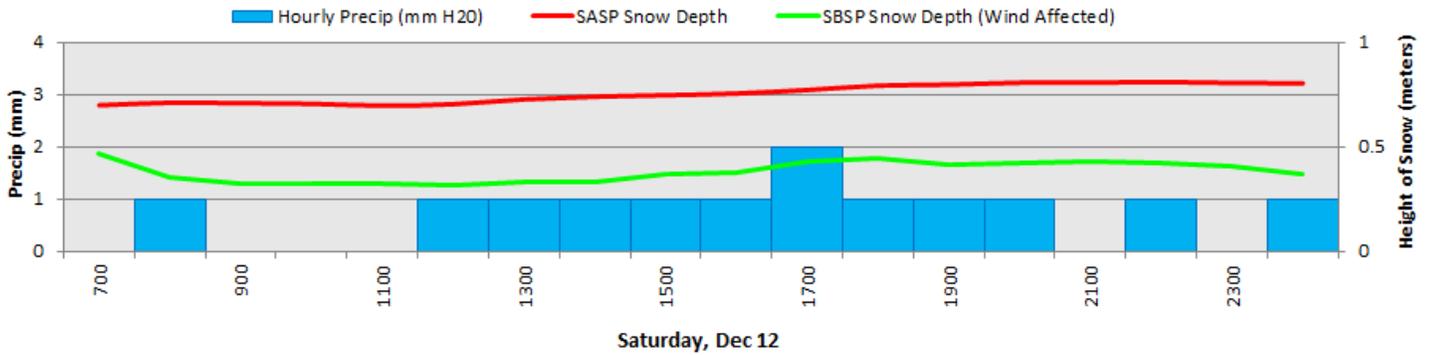
Peak gust at PTSP at: 48.3 mph at 1057 hrs MST Friday, December 11, 2020 (DOY 346)

Storm Wind Rose (Putney Study Plot data):



2020/2021 WINTER STORM #4

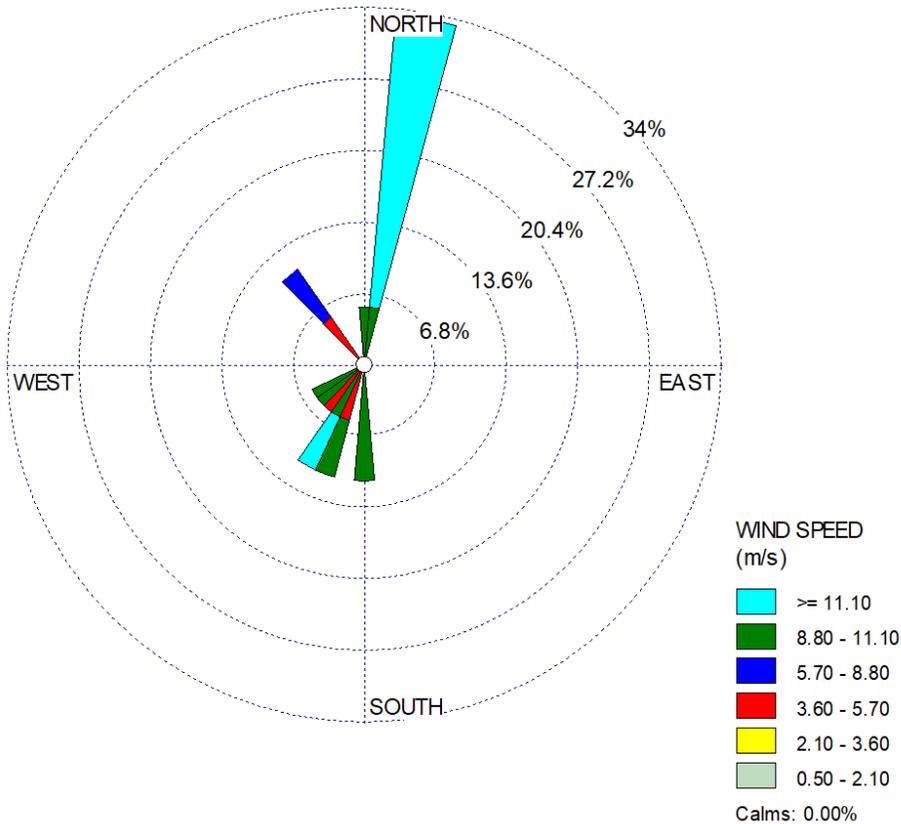
2020-2021 Winter Storm #4: Dec 12, 2020
 Senator Beck Basin Study Area, at Red Mountain Pass, CO



Storm Summary Statistics:

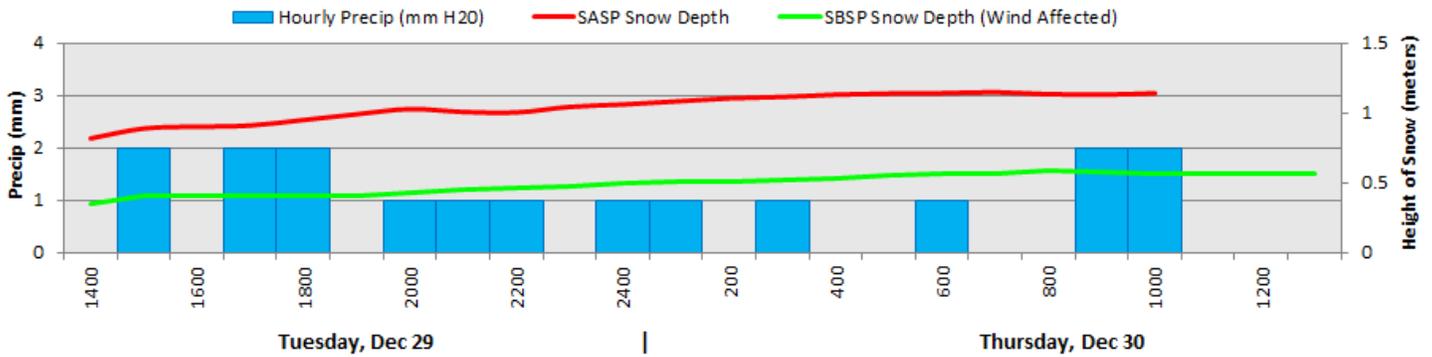
- Storm precip began between 700 – 800 hrs MST Saturday, December 12, 2020 (DOY 347)
- Storm precipitation ended: 2400 hrs MST Saturday, December 12, 2020 (DOY 347)
- Storm duration = 18 hrs
- Storm total water content at SASP = 13 mm (0.5 inches)
- Mean precip intensity: 0.72 mm/hr
- Max precip intensity: 2 mm/hour
- Max gain in snow depth at SASP = 10.5 cm (4.1 inches)
- Max gain in snow depth at SBSP (wind affected) = 0 cm (0 inches)
- Peak gust at PTSP at: 49.3 mph at 907 hrs MST Saturday, December 12, 2020 (DOY 347)

Storm Wind Rose (Putney Study Plot data):



2020/2021 WINTER STORM #5

2020-2021 Winter Storm #5: Dec 29-30, 2021
Senator Beck Basin Study Area, at Red Mountain Pass, CO



Storm Summary Statistics:

Storm precip began between 600 – 700 hrs MST Tuesday, December 29, 2020 (DOY 363)

Storm precipitation ended: 200 hrs MST Wednesday, December 30, 2020 (DOY 364)

Storm duration = 21 hrs

Storm total water content at SASP = 17 mm (0.7 inches)

Mean precip intensity: 0.81 mm/hr

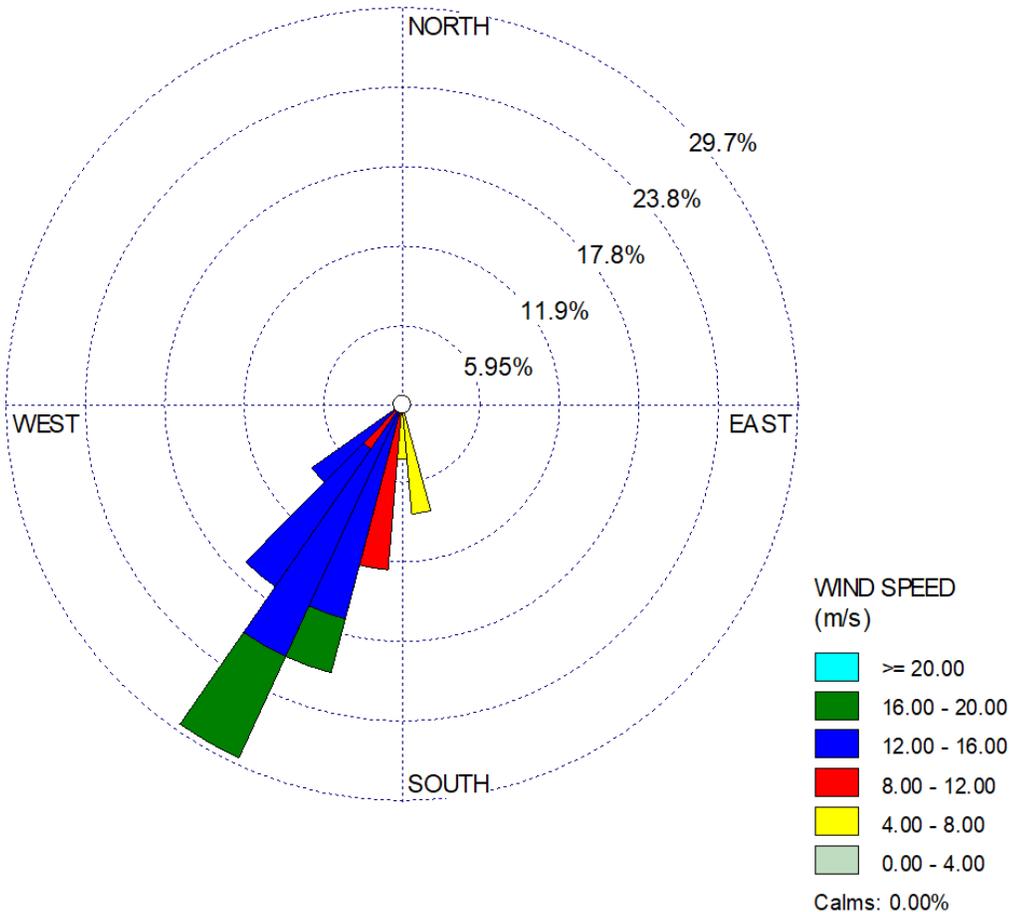
Max precip intensity: 2 mm/hour, multiple occasions

Max gain in snow depth at SASP = 32.3 cm (12.7 inches)

Max gain in snow depth at SBSP (wind affected) = 21.3 cm (8.4 inches)

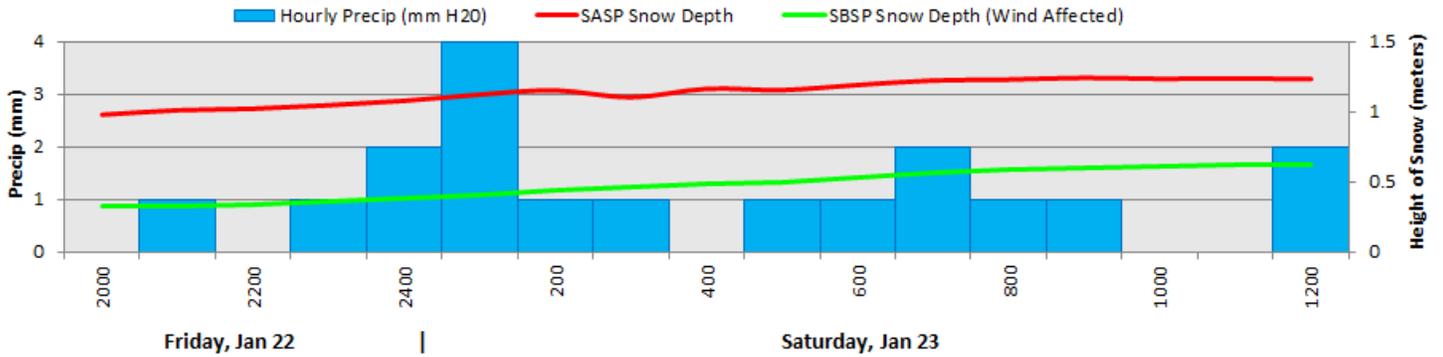
Peak gust at PTSP at: 65.2 mph at 1811 hrs MST Tuesday, December 29, 2020 (DOY 363)

Storm Wind Rose (Putney Study Plot data):



2020/2021 WINTER STORM #6

2020-2021 Winter Storm #6: Jan 22-23, 2021
 Senator Beck Basin Study Area, at Red Mountain Pass, CO



Storm Summary Statistics:

Storm precip began between 2000 – 2100 hrs MST Friday, January 22, 2021 (DOY 22)

Storm precipitation ended: 1200 hrs MST Saturday, January 23, 2021 (DOY 23)

Storm duration = 17 hrs

Storm total water content at SASP = 18 mm (0.7 inches)

Mean precip intensity: 1.06 mm/hr

Max precip intensity: 4 mm/hour, multiple occasions

Max gain in snow depth at SASP = 25.5 cm (10.0 inches)

Max gain in snow depth at SBSP (wind affected) = 29.9 cm (11.8 inches)

Peak gust at PTSP at: 52.9 mph at 2349 hrs MST Friday, January 22, 2021 (DOY 22)

Storm Wind Rose (Putney Study Plot data):

CSAS Putney Study Plot 12,323 ft.

No. of hours: 17

No. of missing hours: 0

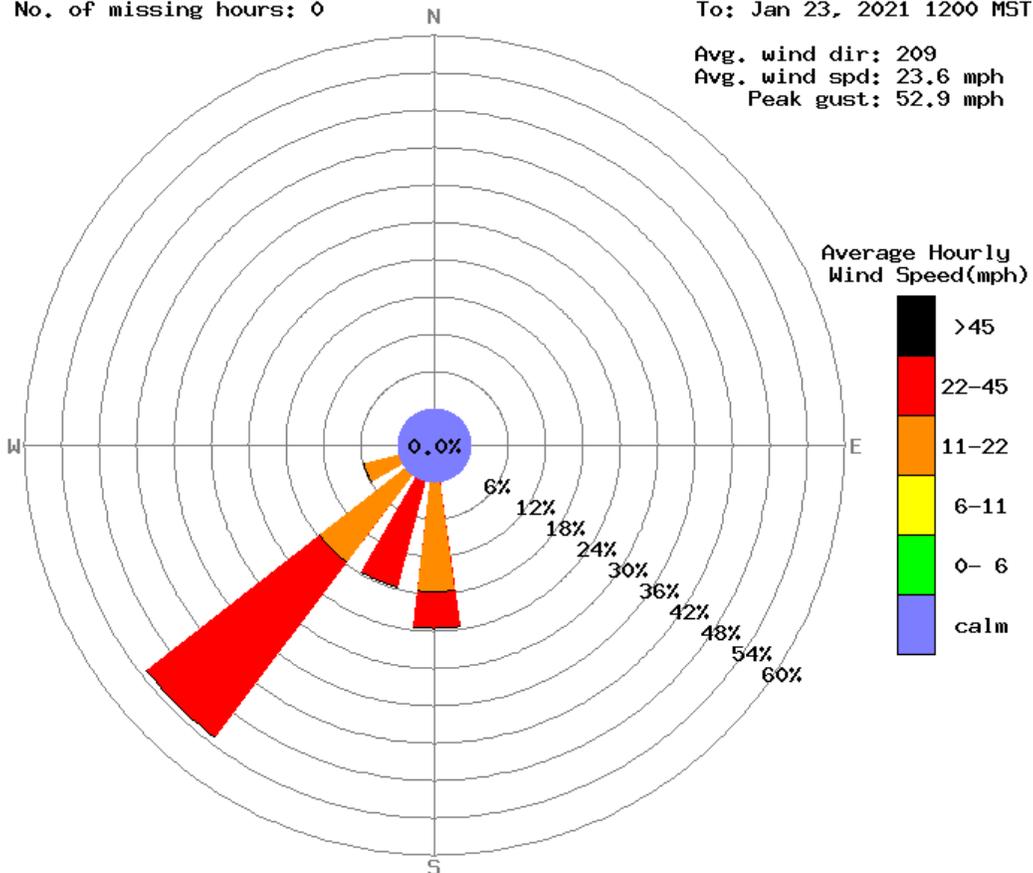
From hour ending: Jan 22, 2021 2000 MST

To: Jan 23, 2021 1200 MST

Avg. wind dir: 209

Avg. wind spd: 23.6 mph

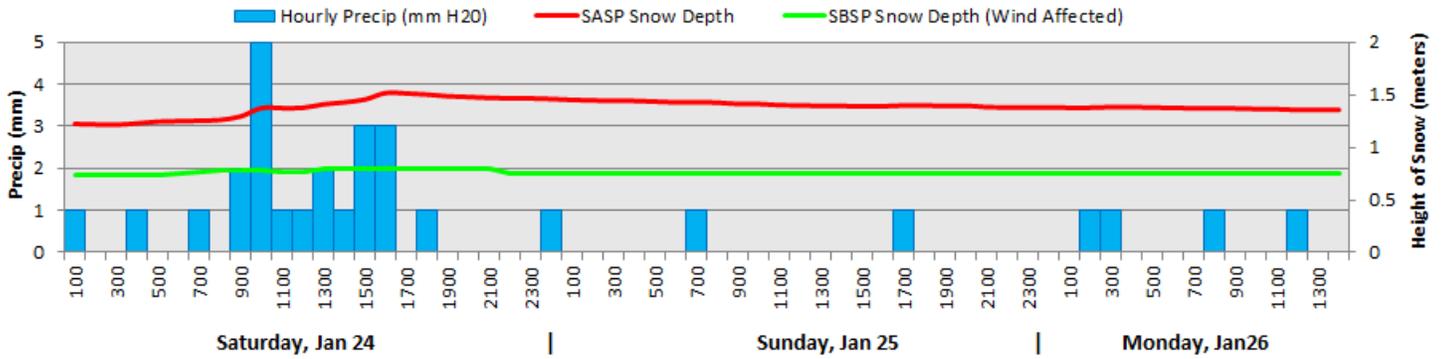
Peak gust: 52.9 mph



2020/2021 WINTER STORM #7

2020-2021 Winter Storm #7: Jan 24-26, 2021

Senator Beck Basin Study Area, at Red Mountain Pass, CO



Storm Summary Statistics:

Storm precip began between 0900 – 1000 hrs MST Sunday, January 24, 2021 (DOY 24)

Storm precipitation ended: 1700 hrs MST Tuesday, January 26, 2021 (DOY 26)

Storm duration = 65 hrs

Storm total water content at SASP = 28 mm (1.1 inches)

Mean precip intensity: 0.45 mm/hr

Max precip intensity: 5 mm/hour, at 1000 on January 24, 2021

Max gain in snow depth at SASP = 13.4 cm (5.3 inches)

Max gain in snow depth at SBSP (wind affected) = 2.5 cm (1.0 inches)

Peak gust at PTSP at: 45.8 mph at 1014 hrs MST Friday, January 24, 2021 (DOY 24)

Storm Wind Rose (Putney Study Plot data):

CSAS Putney Study Plot 12,323 ft.

No. of hours: 62

No. of missing hours: 0

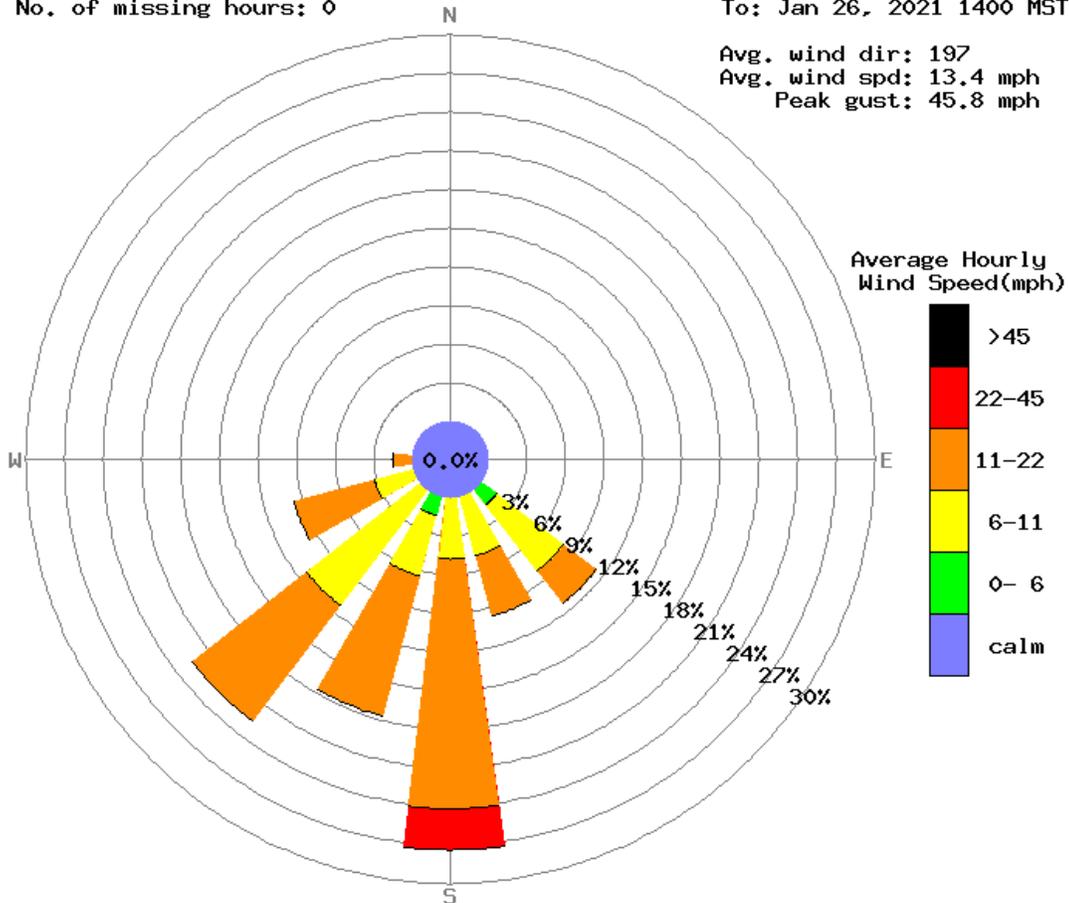
From hour ending: Jan 24, 2021 0100 MST

To: Jan 26, 2021 1400 MST

Avg. wind dir: 197

Avg. wind spd: 13.4 mph

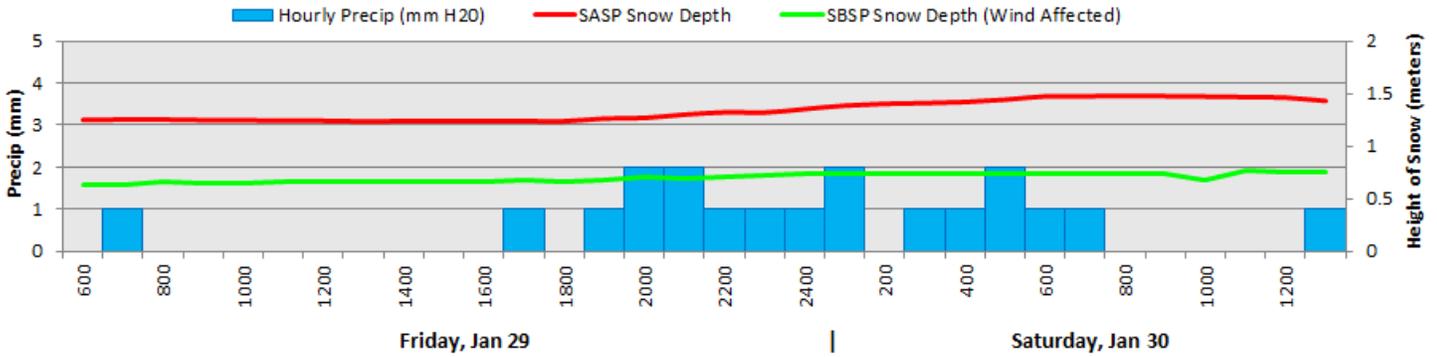
Peak gust: 45.8 mph



2020/2021 WINTER STORM #8

2020-2021 Winter Storm #8: Jan 29-30, 2021

Senator Beck Basin Study Area, at Red Mountain Pass, CO



Storm Summary Statistics:

Storm precip began between 0600 – 0700 hrs MST Friday, January 29, 2021 (DOY 29)

Storm precipitation ended: 1300 hrs MST Saturday, January 30, 2021 (DOY 30)

Storm duration = 32 hrs

Storm total water content at SASP = 19 mm (0.7 inches)

Mean precip intensity: 0.59 mm/hr

Max precip intensity: 2 mm/hour, multiple occasions

Max gain in snow depth at SASP = 18.1 cm (7.1 inches)

Max gain in snow depth at SBSP (wind affected) = 12.8 cm (5.0 inches)

Peak gust at PTSP at: 48.1 mph at 410 hrs MST Saturday, January 30, 2021 (DOY 30)

Storm Wind Rose (Putney Study Plot data):

CSAS Putney Study Plot 12,323 ft.

No. of hours: 32

No. of missing hours: 0

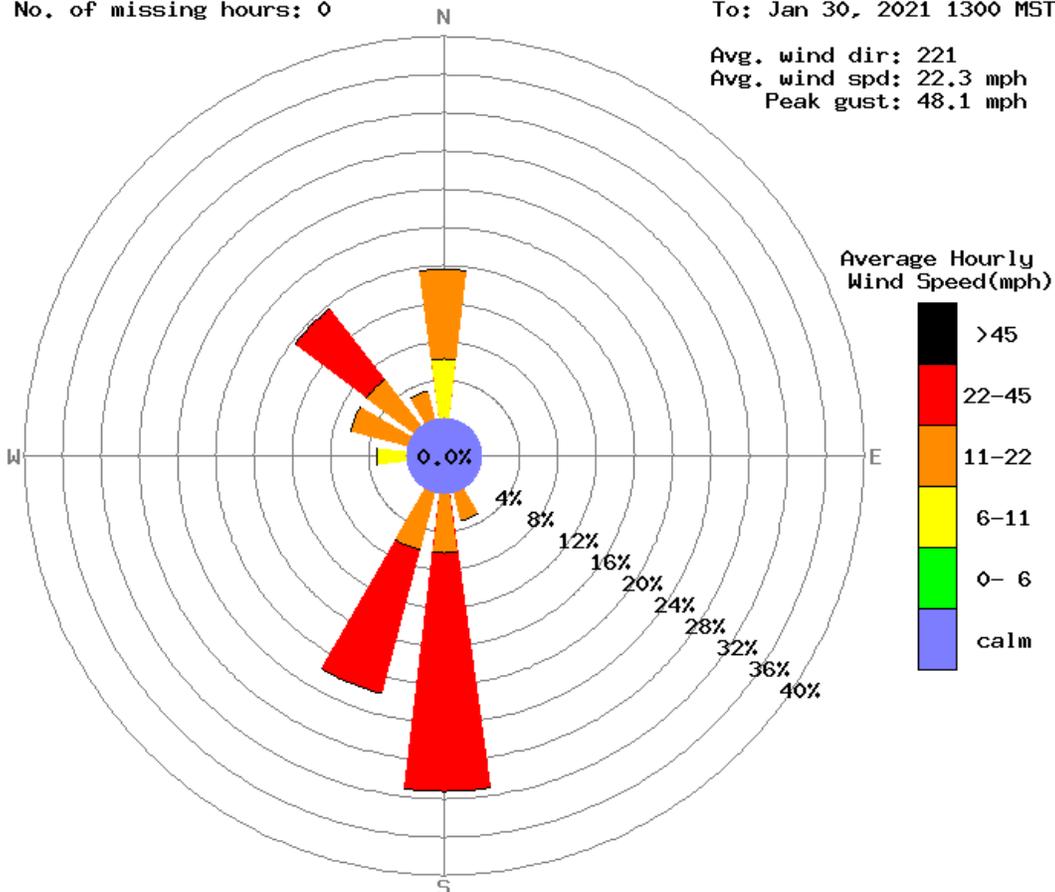
From hour ending: Jan 29, 2021 0600 MST

To: Jan 30, 2021 1300 MST

Avg. wind dir: 221

Avg. wind spd: 22.3 mph

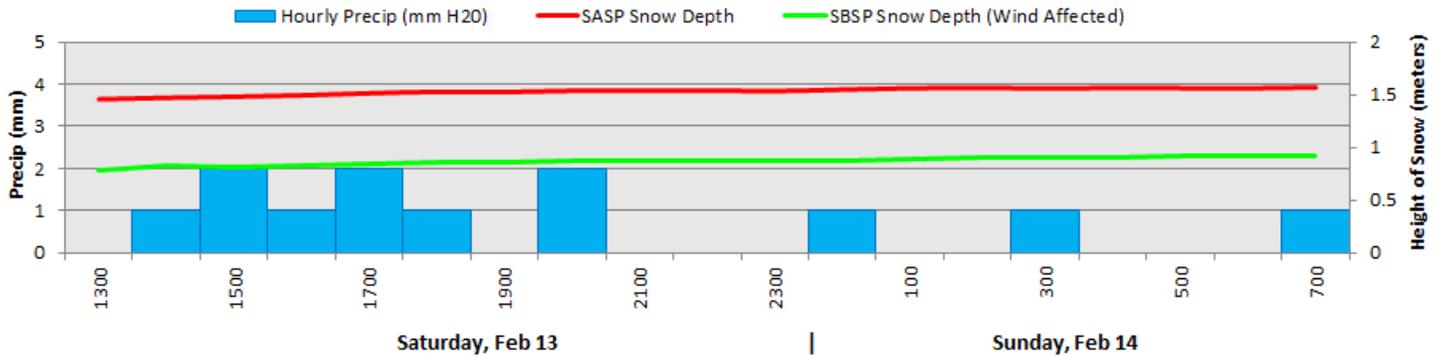
Peak gust: 48.1 mph



2020/2021 WINTER STORM #9

2020-2021 Winter Storm #9: Feb 13-14, 2021

Senator Beck Basin Study Area, at Red Mountain Pass, CO



Storm Summary Statistics:

Storm precip began between 1300 – 1400 hrs MST Saturday, February 13, 2021 (DOY 44)

Storm precipitation ended: 0700 hrs MST Sunday, February 14, 2021 (DOY 45)

Storm duration = 19 hrs

Storm total water content at SASP = 12 mm (0.47 inches)

Mean precip intensity: 0.63 mm/hr

Max precip intensity: 2 mm/hour, multiple occasions

Max gain in snow depth at SASP = 11.3 cm (4.4 inches)

Max gain in snow depth at SBSP (wind affected) = 14.6 cm (5.7 inches)

Peak gust at PTSP at: 52.0 mph at 1426 hrs MST Saturday, February 13, 2021 (DOY 44)

Storm Wind Rose (Putney Study Plot data):

CSAS Putney Study Plot 12,323 ft.

No. of hours: 19

No. of missing hours: 0

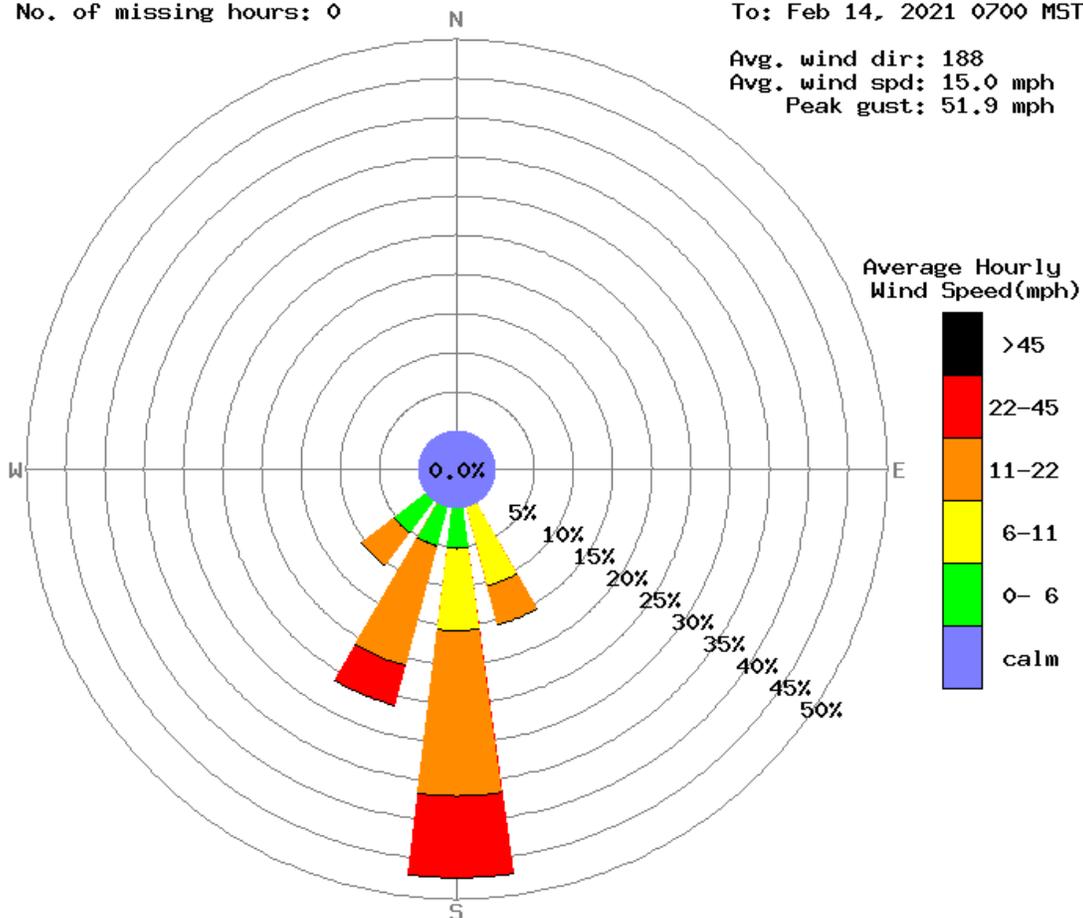
From hour ending: Feb 13, 2021 1300 MST

To: Feb 14, 2021 0700 MST

Avg. wind dir: 188

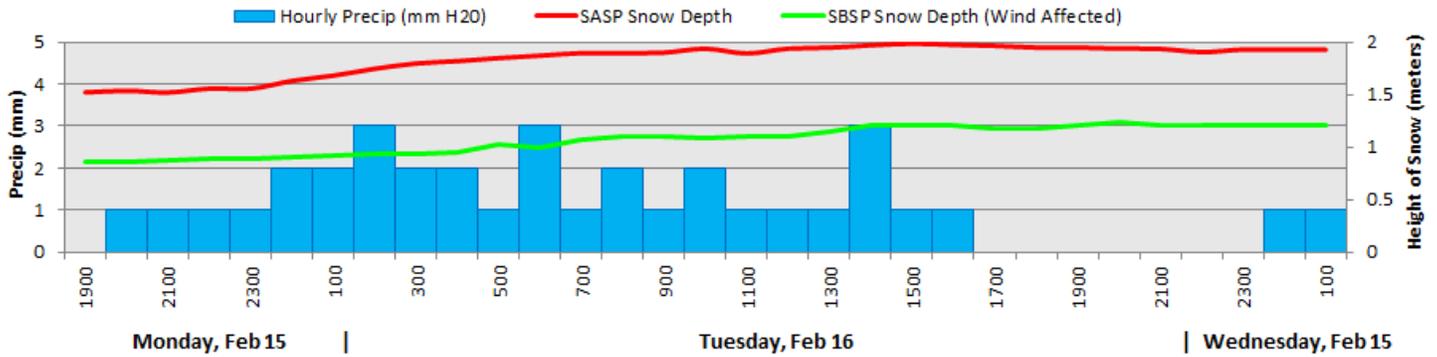
Avg. wind spd: 15.0 mph

Peak gust: 51.9 mph



2020/2021 WINTER STORM #10

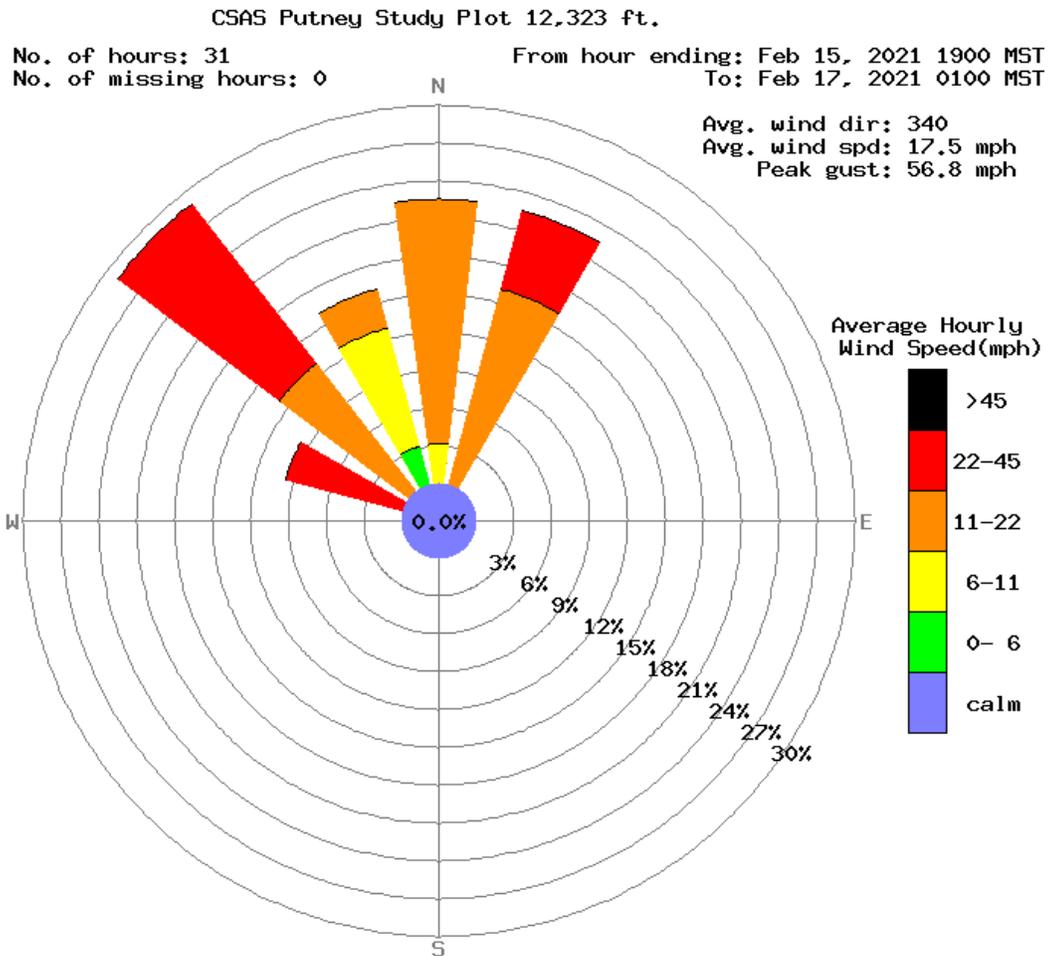
2020-2021 Winter Storm #10: Feb 15-17, 2021
 Senator Beck Basin Study Area, at Red Mountain Pass, CO



Storm Summary Statistics:

- Storm precip began between 1900 – 2000 hrs MST Monday, February 15, 2021 (DOY 46)
- Storm precipitation ended: 0100 hrs MST Wednesday, February 17, 2021 (DOY 48)
- Storm duration = 31 hrs
- Storm total water content at SASP = 35 mm (1.4 inches)
- Mean precip intensity: 1.13 mm/hr
- Max precip intensity: 3 mm/hour, multiple occasions
- Max gain in snow depth at SASP = 40.5 cm (15.9 inches)
- Max gain in snow depth at SBSP (wind affected) = 34.4 cm (13.5 inches)
- Peak gust at PTSP at: 56.8 mph at 201 hrs MST Monday, February 15, 2021 (DOY 46)

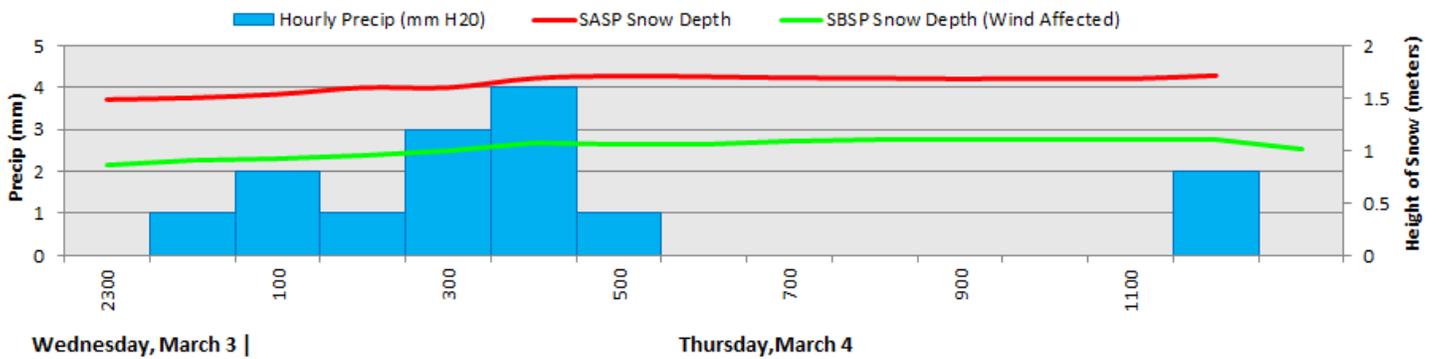
Storm Wind Rose (Putney Study Plot data):



2020/2021 WINTER STORM #11

2020-2021 Winter Storm #11: March 3-4, 2021

Senator Beck Basin Study Area, at Red Mountain Pass, CO



Wednesday, March 3 |

Thursday, March 4

Storm Summary Statistics:

Storm precip began between 2300 – 2400 hrs MST Wednesday, March 3, 2021 (DOY 62)

Storm precipitation ended: 1200 hrs MST Thursday, March 4, 2021 (DOY 63)

Storm duration = 14 hrs

Storm total water content at SASP = 14 mm (0.6 inches)

Mean precip intensity: 1.00 mm/hr

Max precip intensity: 4 mm/hour, at 0400 on March 4, 2021

Max gain in snow depth at SASP = 22.8 cm (9.0 inches)

Max gain in snow depth at SBSP (wind affected) = 13.9 cm (5.5 inches)

Peak gust at PTSP at: 43.5 mph at 1153 hrs MST Thursday, March 4, 2021 (DOY 63)

Storm Wind Rose (Putney Study Plot data):

CSAS Putney Study Plot 12,323 ft.

No. of hours: 14

No. of missing hours: 0

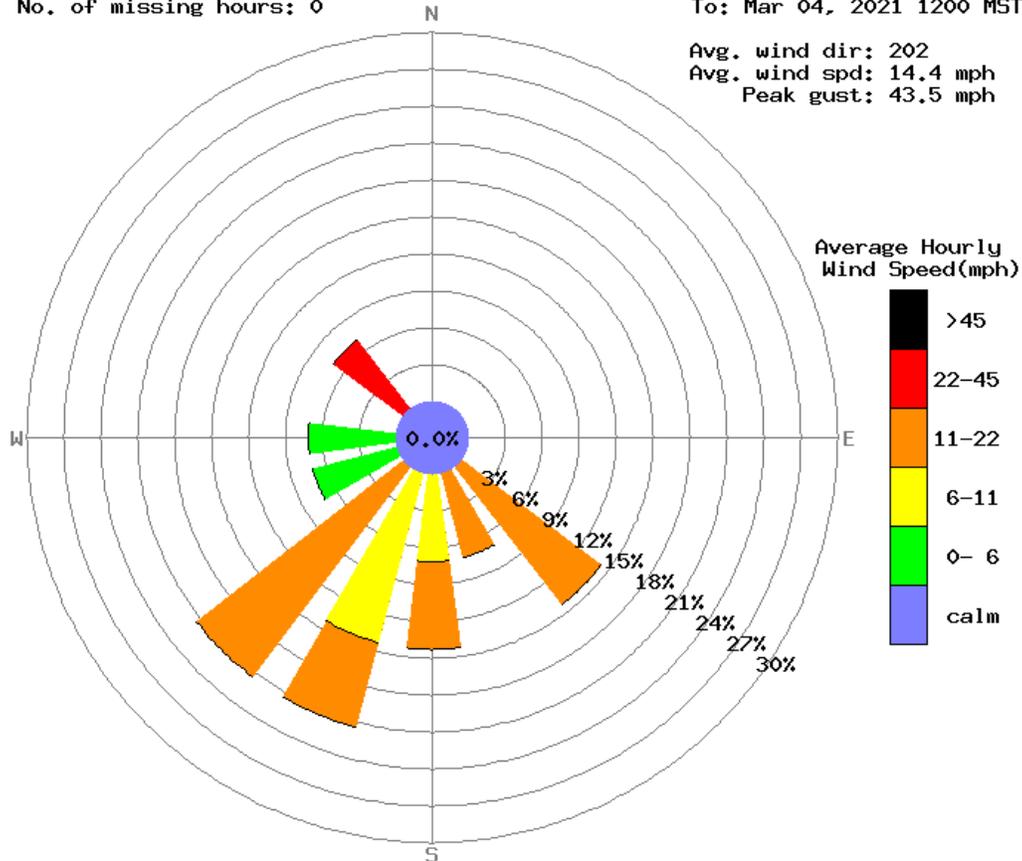
From hour ending: Mar 03, 2021 2300 MST

To: Mar 04, 2021 1200 MST

Avg. wind dir: 202

Avg. wind spd: 14.4 mph

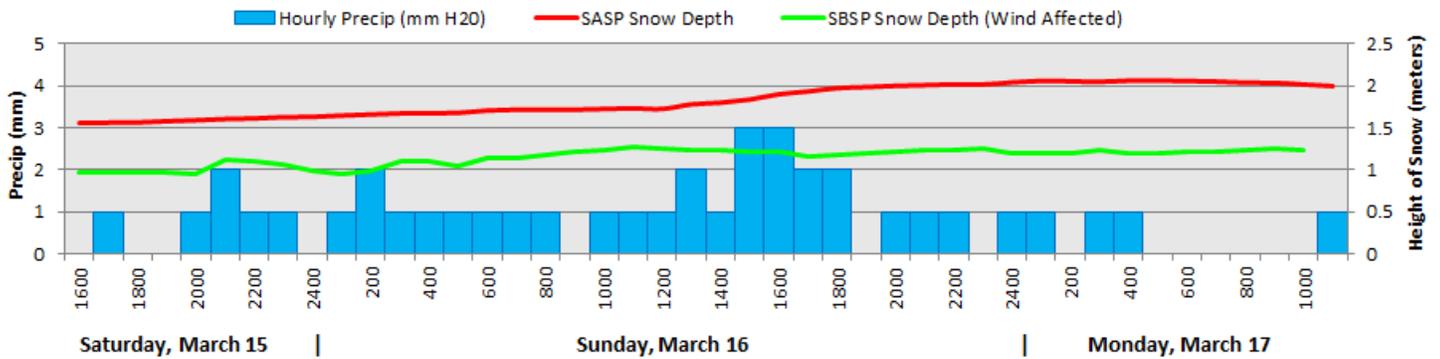
Peak gust: 43.5 mph



2020/2021 WINTER STORM #12

2020-2021 Winter Storm #12: March 13-15, 2021

Senator Beck Basin Study Area, at Red Mountain Pass, CO



Storm Summary Statistics:

Storm precip began between 1600 – 1700 hrs MST Saturday, March 13, 2021 (DOY 72)

Storm precipitation ended: 1100 hrs MST Monday, March 15, 2021 (DOY 74)

Storm duration = 44 hrs

Storm total water content at SASP = 39 mm (1.5 inches)

Mean precip intensity: 0.89 mm/hr

Max precip intensity: 3 mm/hour, multiple occasions

Max gain in snow depth at SASP = 44.0 cm (17.3 inches)

Max gain in snow depth at SBSP (wind affected) = 26.8 cm (10.6 inches)

Peak gust at PTSP at: 53.4 mph at 119 hrs MST Monday, March 15, 2021 (DOY 74)

Storm Wind Rose (Putney Study Plot data):

CSAS Putney Study Plot 12,323 ft.

No. of hours: 44

No. of missing hours: 0

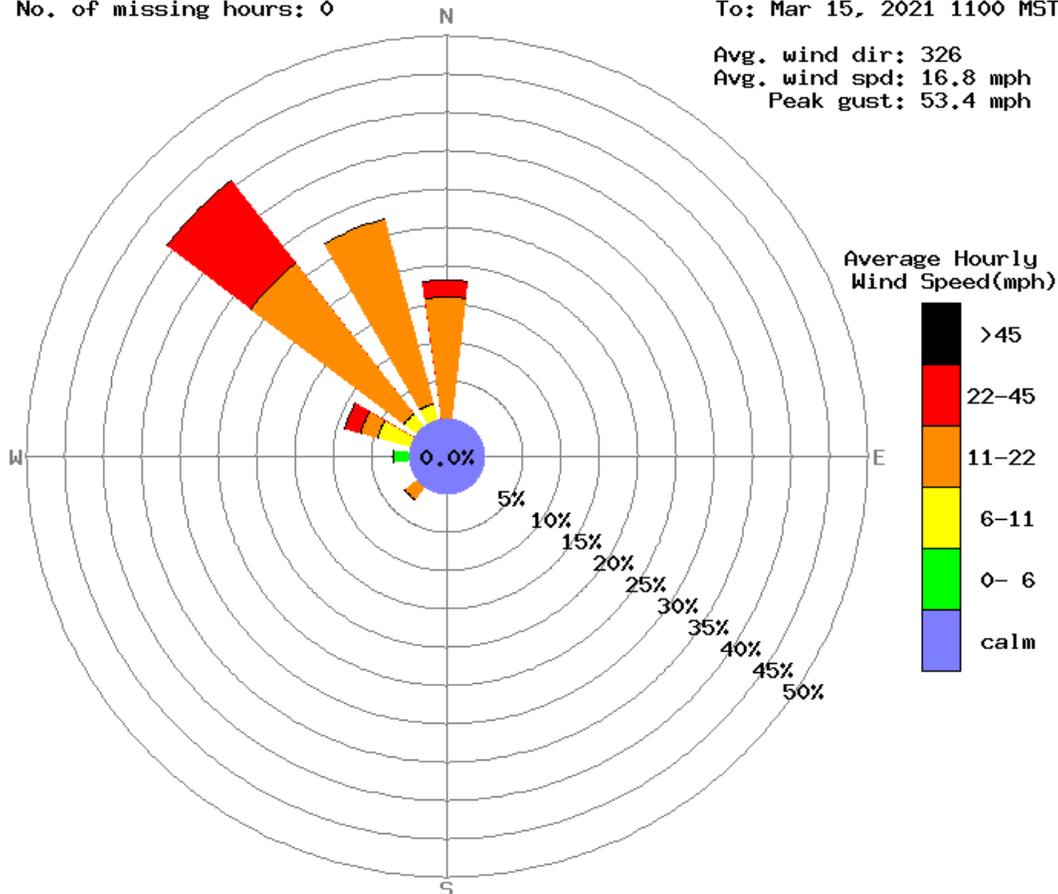
From hour ending: Mar 13, 2021 1600 MST

To: Mar 15, 2021 1100 MST

Avg. wind dir: 326

Avg. wind spd: 16.8 mph

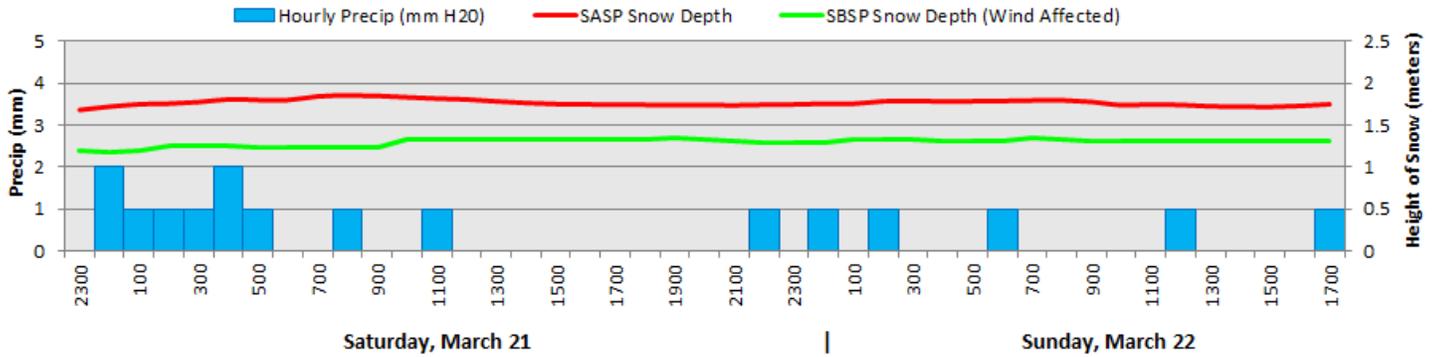
Peak gust: 53.4 mph



2020/2021 WINTER STORM #13

2020-2021 Winter Storm #13: March 20-22, 2021

Senator Beck Basin Study Area, at Red Mountain Pass, CO



Storm Summary Statistics:

Storm precip began between 2300 – 2400 hrs MST Saturday, March 20, 2021 (DOY 79)

Storm precipitation ended: 1700 hrs MST Monday, March 22, 2021 (DOY 81)

Storm duration = 43 hrs

Storm total water content at SASP = 16 mm (0.6 inches)

Mean precip intensity: 0.37 mm/hr

Max precip intensity: 2 mm/hour, multiple occasions

Max gain in snow depth at SASP = 6.8 cm (2.7 inches)

Max gain in snow depth at SBSP (wind affected) = 11.8 cm (4.6 inches)

Peak gust at PTSP at: 42.9 mph at 1617 hrs MST Sunday, March 21, 2021 (DOY 80)

Storm Wind Rose (Putney Study Plot data):

CSAS Putney Study Plot 12,323 ft.

No. of hours: 43

No. of missing hours: 0

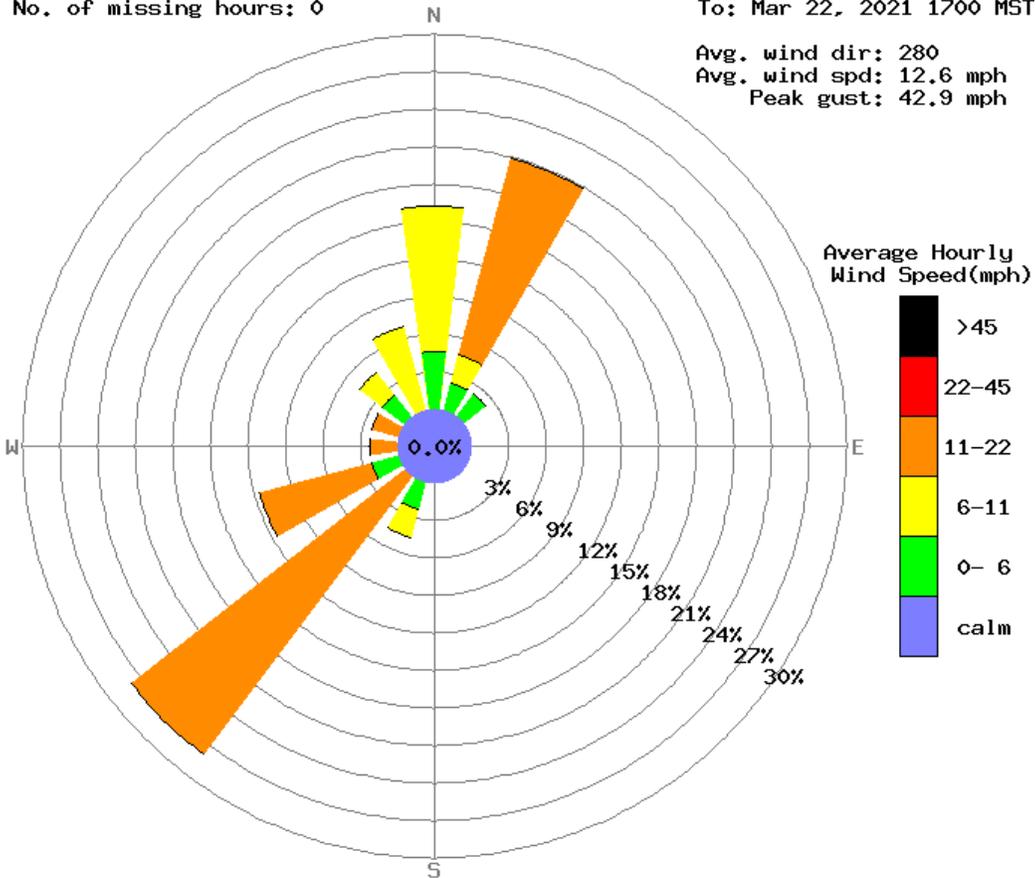
From hour ending: Mar 20, 2021 2300 MST

To: Mar 22, 2021 1700 MST

Avg. wind dir: 280

Avg. wind spd: 12.6 mph

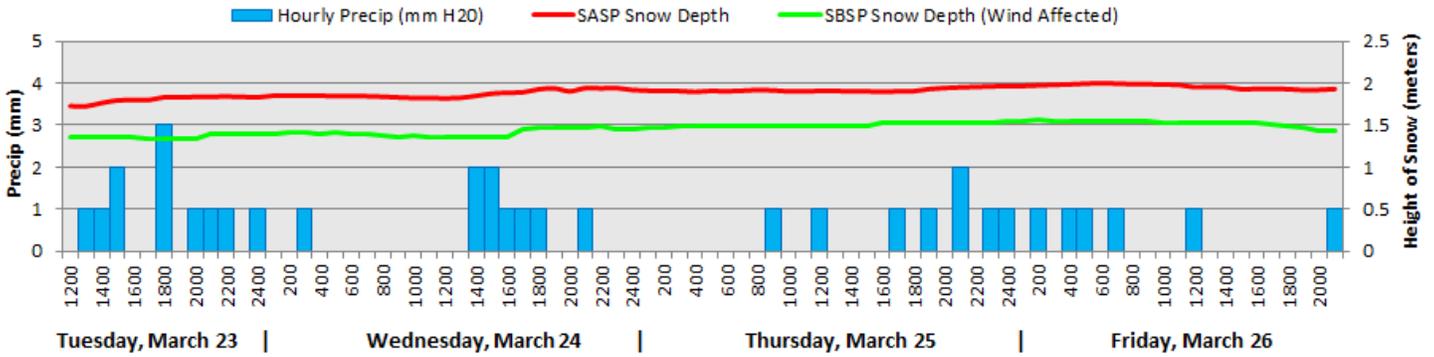
Peak gust: 42.9 mph



2020/2021 WINTER STORM #14

2020-2021 Winter Storm #14: March 23-26, 2021

Senator Beck Basin Study Area, at Red Mountain Pass, CO



Storm Summary Statistics:

Storm precip began between 1200 – 1300 hrs MST Tuesday, March 23, 2021 (DOY 82)

Storm precipitation ended: 2100 hrs MST Friday, March 26, 2021 (DOY 85)

Storm duration = 82 hrs

Storm total water content at SASP = 34 mm (1.3 inches)

Mean precip intensity: 0.41 mm/hr

Max precip intensity: 3 mm/hour, multiple occasions

Max gain in snow depth at SASP = 20.3 cm (8.0 inches)

Max gain in snow depth at SBSP (wind affected) = 7.8 cm (3.1 inches)

Peak gust at PTSP at: 44.4 mph at 1214 hrs MST Thursday, March 25, 2021 (DOY 84)

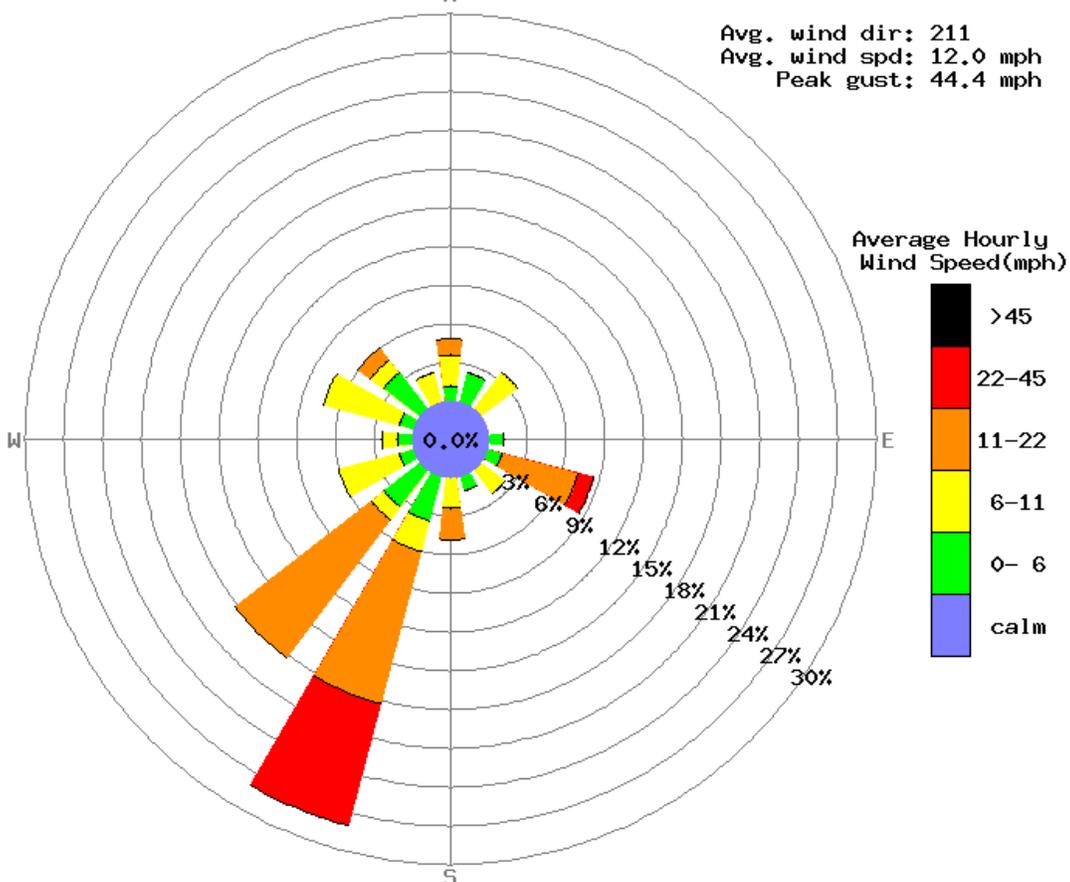
Storm Wind Rose (Putney Study Plot data):

CSAS Putney Study Plot 12,323 ft.

No. of hours: 82
No. of missing hours: 0

From hour ending: Mar 23, 2021 1200 MST
To: Mar 26, 2021 2100 MST

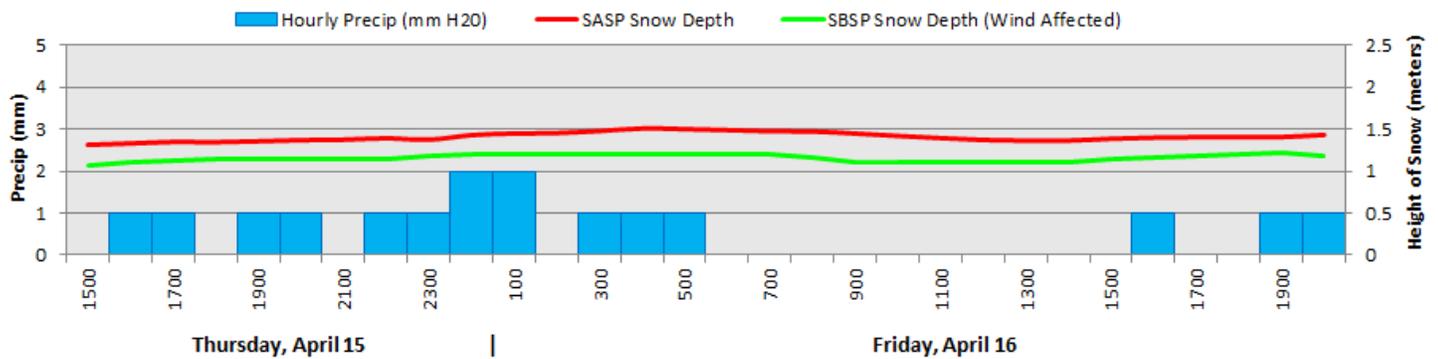
Avg. wind dir: 211
Avg. wind spd: 12.0 mph
Peak gust: 44.4 mph



2020/2021 WINTER STORM #15

2020-2021 Winter Storm #15: April 15-16, 2021

Senator Beck Basin Study Area, at Red Mountain Pass, CO



Storm Summary Statistics:

Storm precip began between 1500 – 1600 hrs MST Thursday, April 15, 2021 (DOY 105)

Storm precipitation ended: 2000 hrs MST Friday, April 16, 2021 (DOY 106)

Storm duration = 30 hrs

Storm total water content at SASP = 16 mm (0.6 inches)

Mean precip intensity: 0.53 mm/hr

Max precip intensity: 2 mm/hour, multiple occasions

Max gain in snow depth at SASP = 11.8 cm (4.6 inches)

Max gain in snow depth at SBSP (wind affected) = 11.2 cm (4.4 inches)

Peak gust at PTSP at: 44.3 mph at 1455 hrs MST Thursday, April 15, 2021 (DOY 105)

Storm Wind Rose (Putney Study Plot data):

CSAS Putney Study Plot 12,323 ft.

No. of hours: 30

No. of missing hours: 0

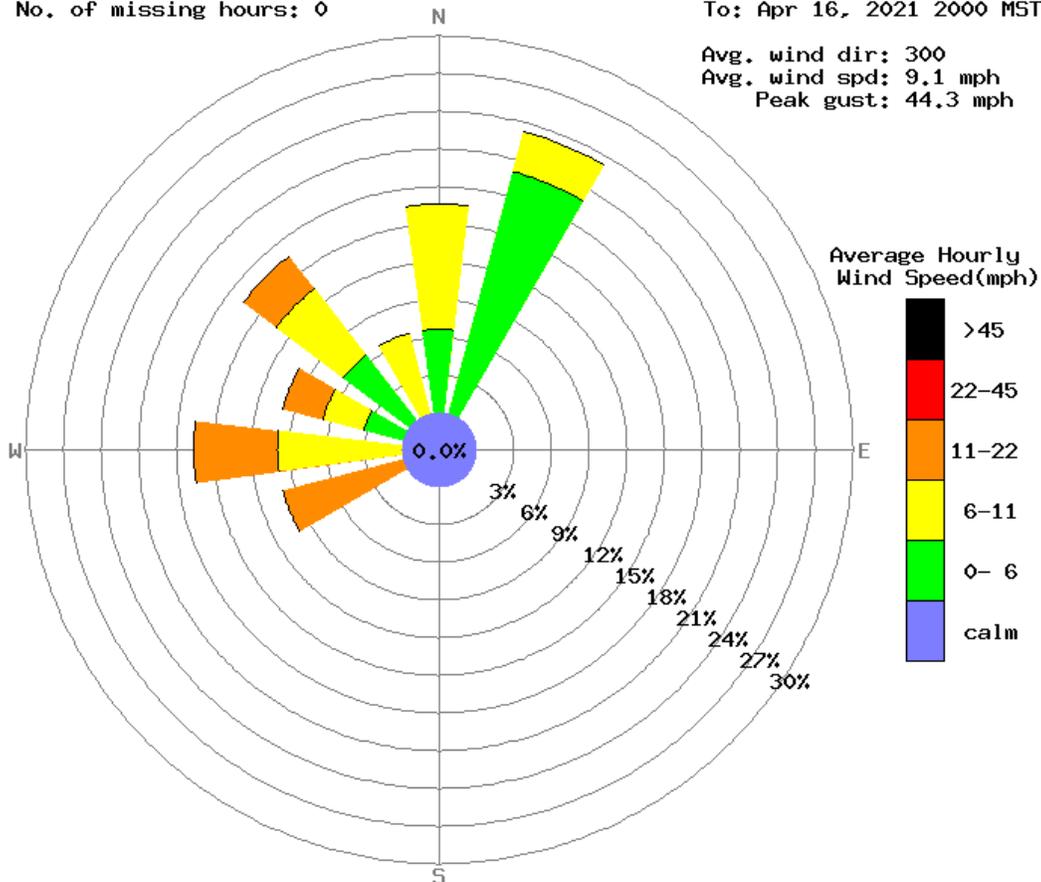
From hour ending: Apr 15, 2021 1500 MST

To: Apr 16, 2021 2000 MST

Avg. wind dir: 300

Avg. wind spd: 9.1 mph

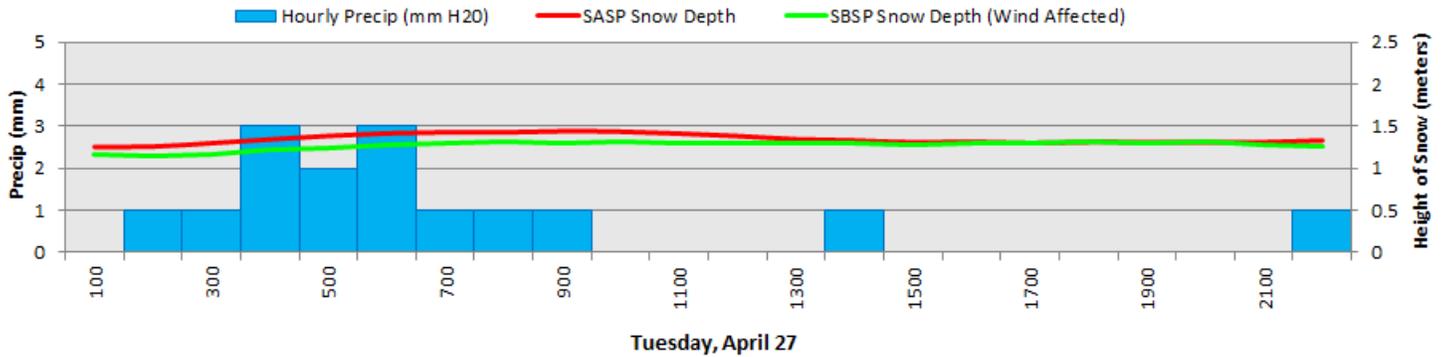
Peak gust: 44.3 mph



2020/2021 WINTER STORM #16

2020-2021 Winter Storm #16: April 27, 2021

Senator Beck Basin Study Area, at Red Mountain Pass, CO



Storm Summary Statistics:

Storm precip began between 100 – 200 hrs MST Tuesday, April 27, 2021 (DOY 117)

Storm precipitation ended: 2200 hrs MST Tuesday, April 27, 2021 (DOY 117)

Storm duration = 22 hrs

Storm total water content at SASP = 15 mm (0.6 inches)

Mean precip intensity: 0.68 mm/hr

Max precip intensity: 3 mm/hour, multiple occasions

Max gain in snow depth at SASP = 7.7 cm (3.0 inches)

Max gain in snow depth at SBSP (wind affected) = 10.2 cm (4.0 inches)

Peak gust at PTSP at: 40.6 mph at 235 hrs MST Tuesday, April 27, 2021 (DOY 117)

Storm Wind Rose (Putney Study Plot data):

CSAS Putney Study Plot 12,323 ft.

No. of hours: 22

No. of missing hours: 0

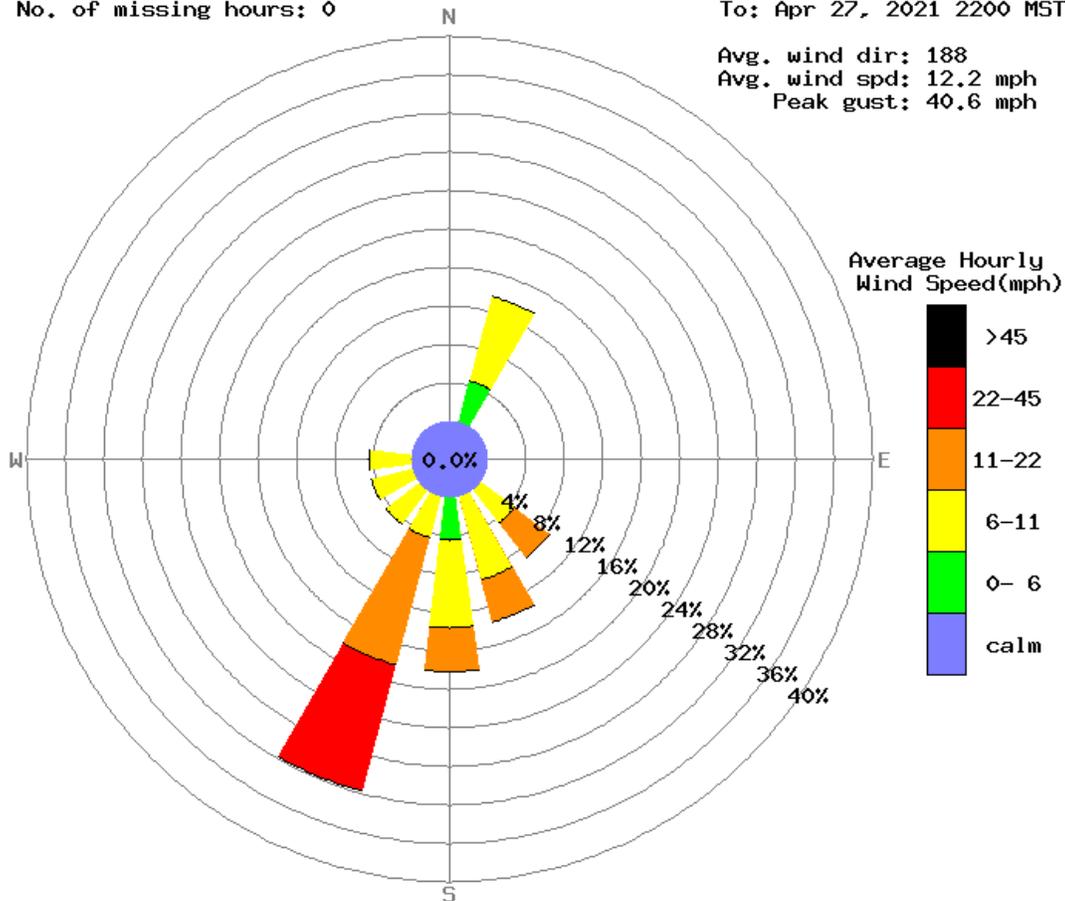
From hour ending: Apr 27, 2021 0100 MST

To: Apr 27, 2021 2200 MST

Avg. wind dir: 188

Avg. wind spd: 12.2 mph

Peak gust: 40.6 mph



Storm #17 – Intense 23 hour storm, Another dust event

Over a 23 hour period, starting on Friday May 21 at 2:00am thru midnight, Swamp Angel at Red Mt Pass observed 2.3" of precipitation that accumulated as slightly more than 1' of snow accumulation. At the Senator Beck site at 12,200' 1.2' snow accumulation was observed. Obviously this was a high intensity storm, over the 23 hours accumulation rates were typically 2-5 mm/hr. I took a quick glance at past storm reports and I don't think we saw similar accumulation rates since maybe 2019.

Being late spring the precip fell as wet snow at Red Mt Pass – and caught many drivers off guard. A little lower around Silverton the streets remained clear of snow with traces of accumulation in the nearby mountains that quickly turned to water.

Of course a very welcome hit of water in the parched Southwest Colorado. As a prelude, May 17-18 was also a storm event delivering 0.7" precipitation. Before that our last storm was April 27, 21 days with not much moisture during that time.

Storm reports will be posted to the [website](#) later this week as a power outage created a temporary glitch.

Yesterday evening dust imagery products showed dust in the Four Corners region and the NWS in Grand Junction observed airborne dust. The wet snow at higher elevations will quickly give way and allow this new dust to quickly meld with the already merged multiple dust layers on the snow surface. With this all dust layers will be merged near or at the surface of the remaining snowpack. We will be sampling this dust and providing observations this week.