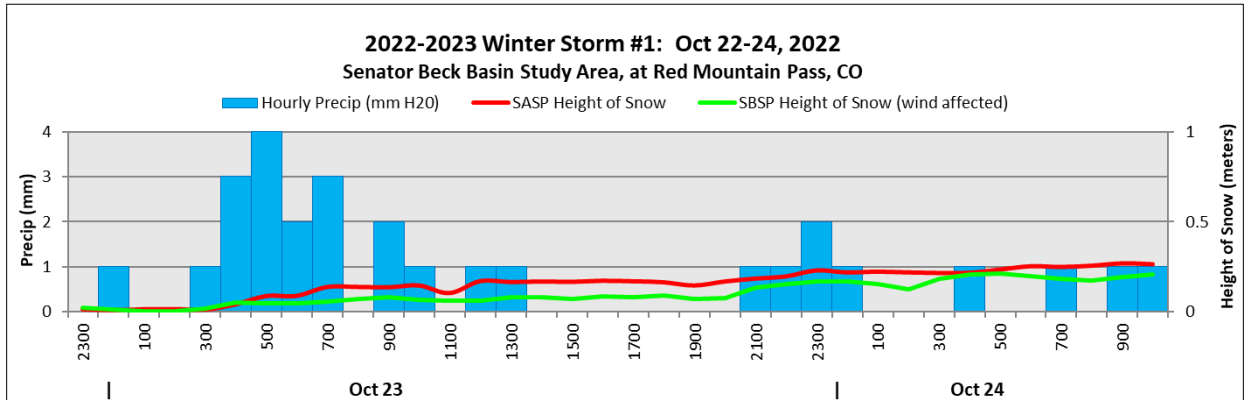
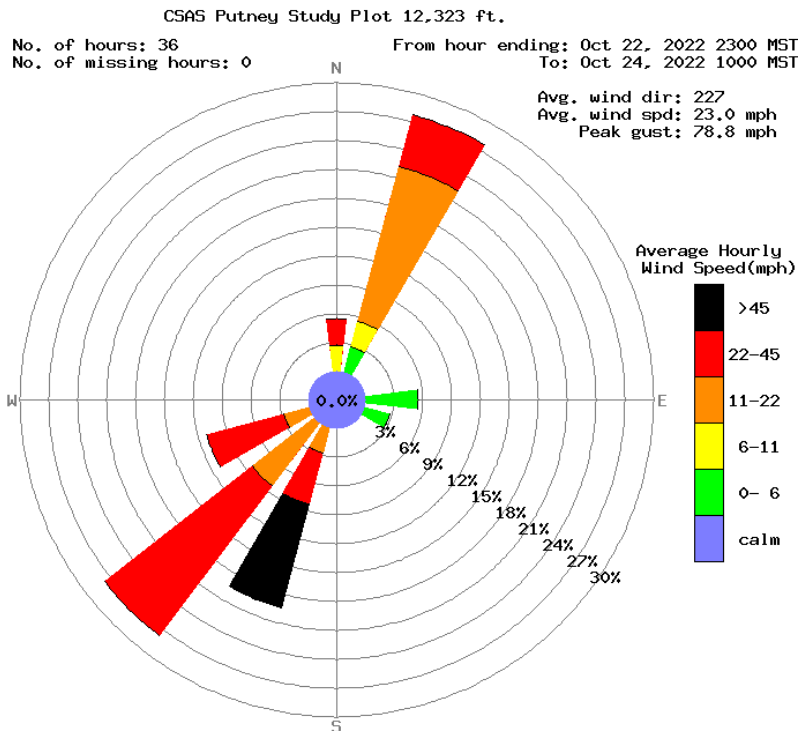


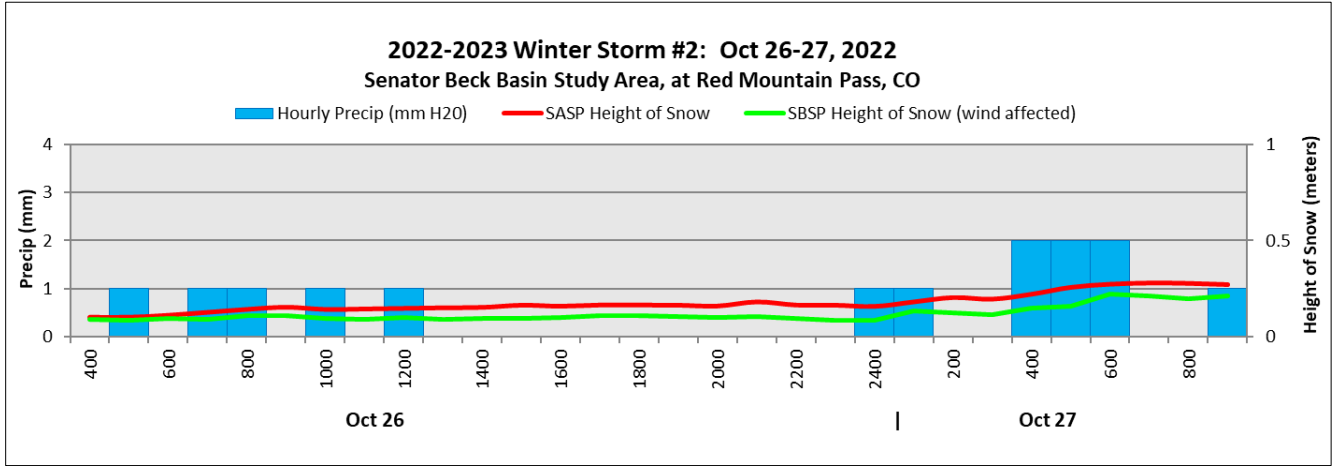
2022/23 WINTER STORM #1



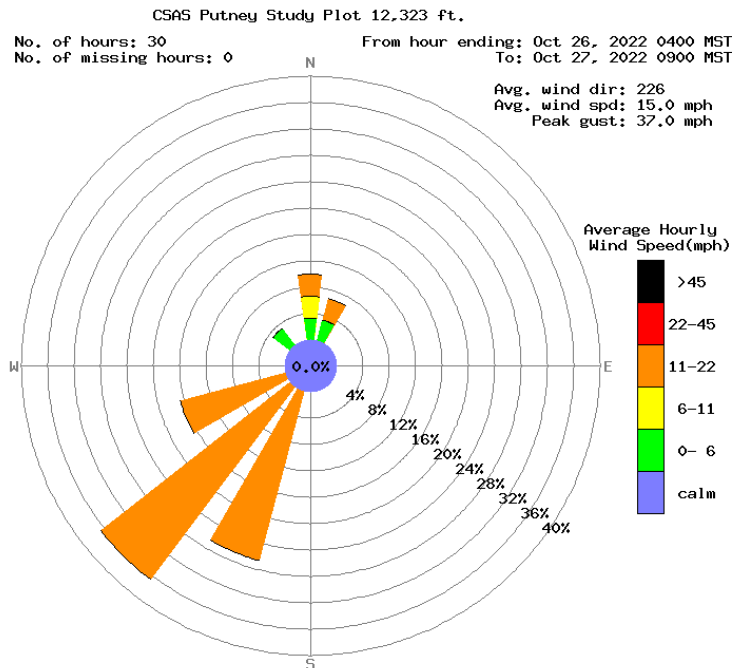
- Storm precipitation began:** 2300 – 2400 MST Sat, October 22, 2022 (DOY 295)
- Storm precipitation ended:** 1000 MST Mon, October 24, 2022 (DOY 297)
- Storm duration:** 36 hours
- Mean precipitation intensity:** 0.78 mm/hour
- Max precipitation intensity:** 4 mm/hour at 0500 on Sun, October 23, 2022
- Storm total water content at SASP:** 28 mm (1.1 inches)
- Max gain in snow depth at SASP:** 24.8 cm (9.8 inches)
- Max gain in snow depth at SBSP:** 18.8 cm (7.4 inches) *wind affected
- Peak gust at PTSP at:** 0110 MST Sun, October 23, 2022 (DOY 296)



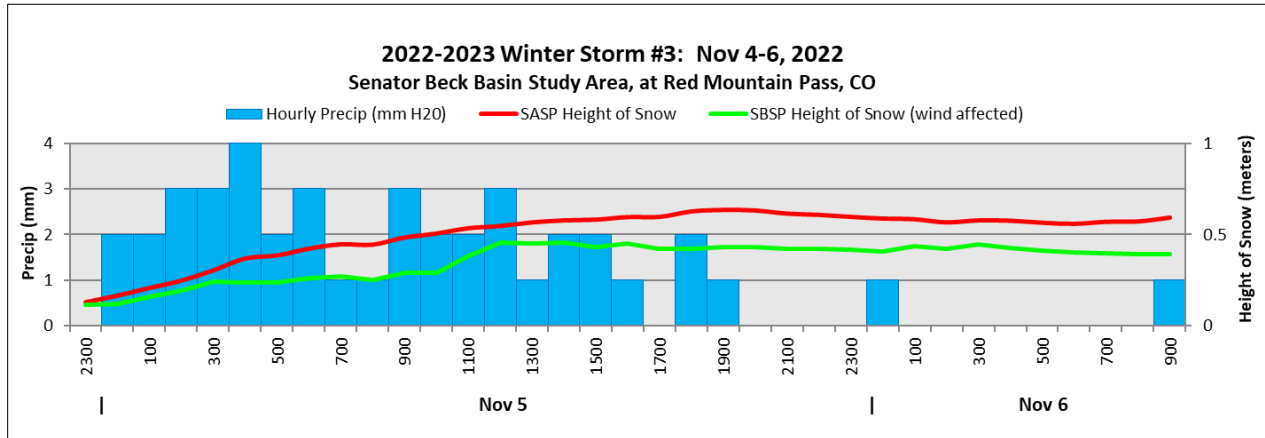
2022/23 WINTER STORM #2



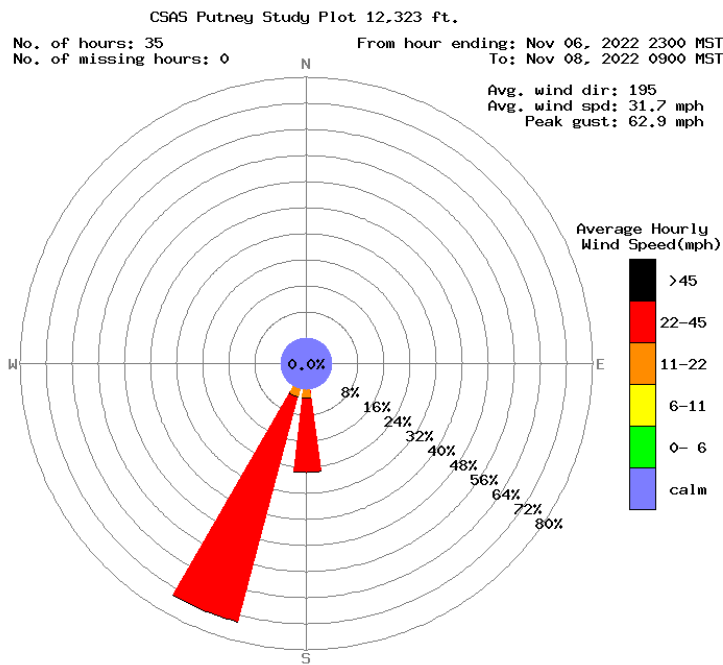
- Storm precipitation began:** 400-500 MST Mon, October 26, 2022 (DOY 299)
- Storm precipitation ended:** 0900 MST Tue, October 27, 2022 (DOY 300)
- Storm duration:** 30 hours
- Mean precipitation intensity:** 0.47 mm/hour
- Max precipitation intensity:** 2 mm/hour at 0600 on Tue, October 27, 2022
- Storm total water content at SASP:** 14 mm (0.6 inches)
- Max gain in snow depth at SASP:** 16.6 cm (6.5 inches)
- Max gain in snow depth at SBSP:** 12.3 cm (4.8 inches) *wind affected
- Peak gust at PTSP at:** 0113 MST Tue, October 27, 2022 (DOY 300)



2022/23 WINTER STORM #3

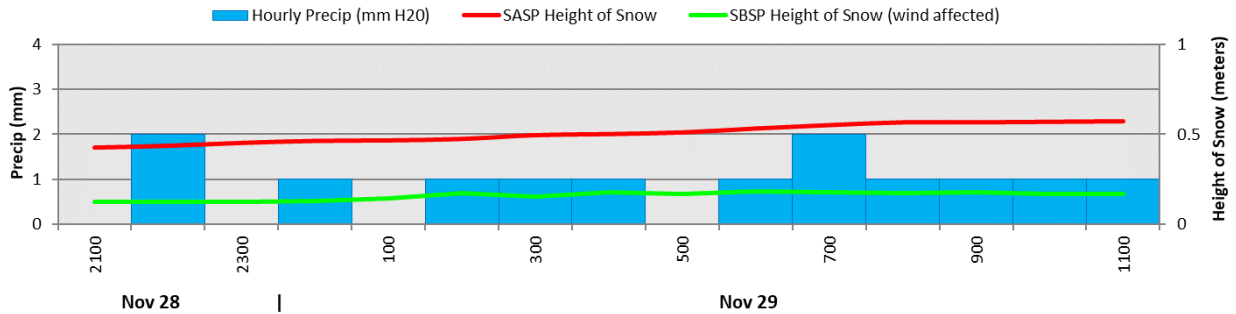


- Storm precipitation began:** 2300-2400 MST Fri, November 4, 2022 (DOY 306)
- Storm precipitation ended:** 0900 MST Sun, November 6, 2022 (DOY 308)
- Storm duration:** 35 hours
- Mean precipitation intensity:** 1.2 mm/hour
- Max precipitation intensity:** 4 mm/hour at 0400 on Sat, November 5, 2022
- Storm total water content at SASP:** 42 mm (1.7 inches)
- Max gain in snow depth at SASP:** 46.3 cm (18.2 inches)
- Max gain in snow depth at SBSP:** 27.7 cm (10.9 inches) *wind affected
- Peak gust at PTSP at:** 2213 MST Fri, November 4, 2022 (DOY 306)

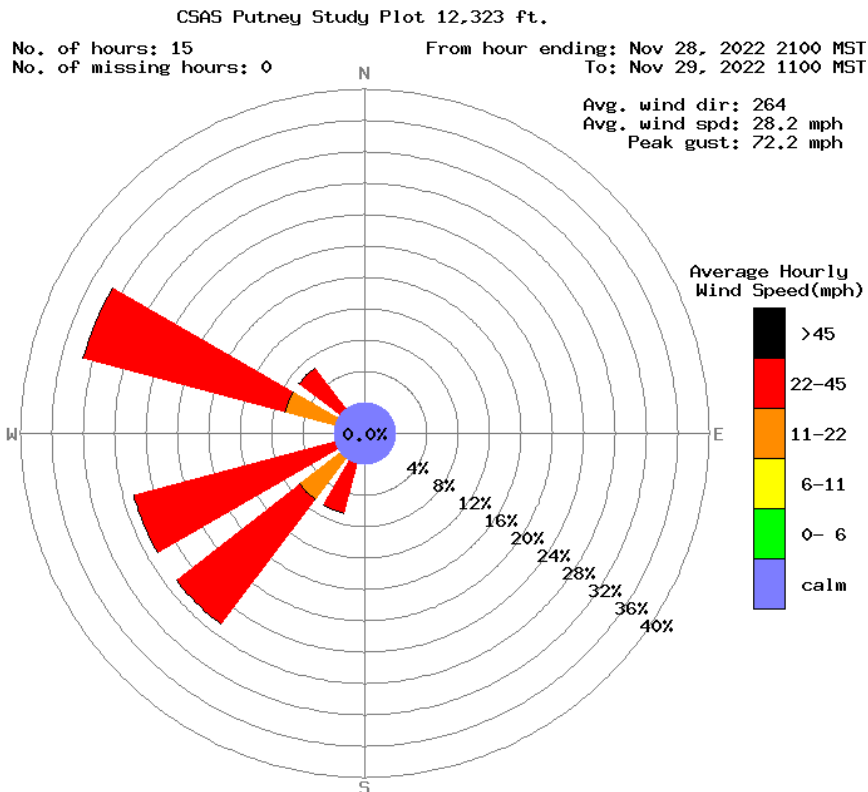


2022/23 WINTER STORM #4

2022-2023 Winter Storm #4: Nov 28-29, 2022
 Senator Beck Basin Study Area, at Red Mountain Pass, CO



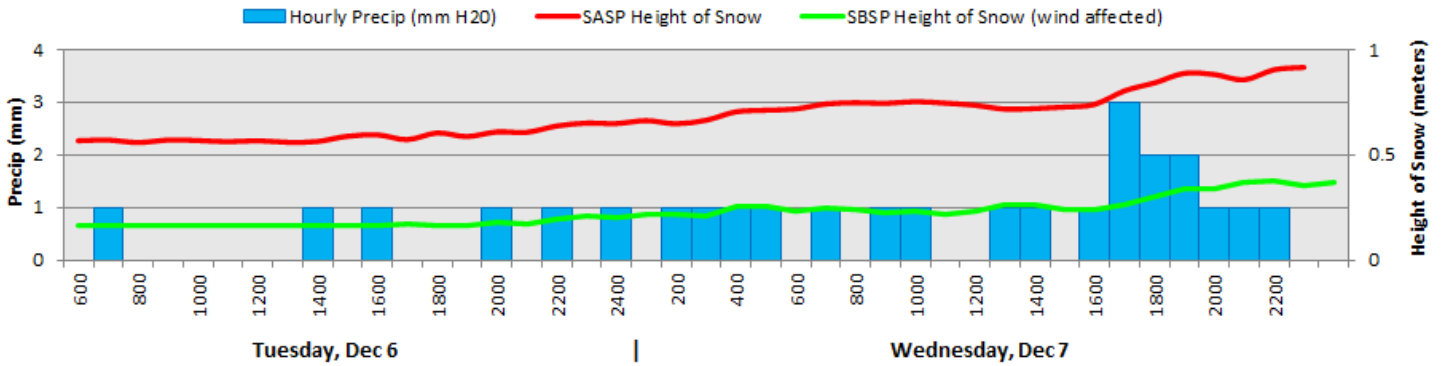
- Storm precipitation began:** 2100-2200 MST Mon, November 28, 2022 (DOY 332)
- Storm precipitation ended:** 1100 MST Tue, November 29, 2022 (DOY 333)
- Storm duration:** 15 hours
- Mean precipitation intensity:** 0.87 mm/hour
- Max precipitation intensity:** 2 mm/hour at 0700 on Tue, November 29, 2022
- Storm total water content at SASP:** 13 mm (0.5 inches)
- Max gain in snow depth at SASP:** 14.6 cm (5.7 inches)
- Max gain in snow depth at SBSP:** 4.4 cm (1.7 inches) *wind affected
- Peak gust at PTSP at:** 0446 MST Tue, November 29, 2022 (DOY 333)



2022/2023 WINTER STORM #5

2022-2023 Winter Storm #5: Dec 6-7, 2022

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



Storm Summary Statistics:

Storm precip began between 600 – 700 hrs MST Tuesday, December 6, 2022 (DOY 340)

Storm precipitation ended: 2300 hrs MST Wednesday, December 7, 2022 (DOY 341)

Storm duration = 28 hrs

Storm total water content at SASP = 26 mm (1.0 inches)

Mean precip intensity: 0.93 mm/hr

Max precip intensity: 3 mm/hour

Max gain in snow depth at SASP = 35.1 cm (13.8 inches)

Max gain in snow depth at SBSP (wind affected) = 20.4 cm (8.0 inches)

Peak gust at PTSP at: 2311 hrs MST Thursday, December 7, 2022 (DOY 341)

Storm Wind Rose (Putney Study Plot data)

CSAS Putney Study Plot 12,323 ft.

No. of hours: 29

No. of missing hours: 0

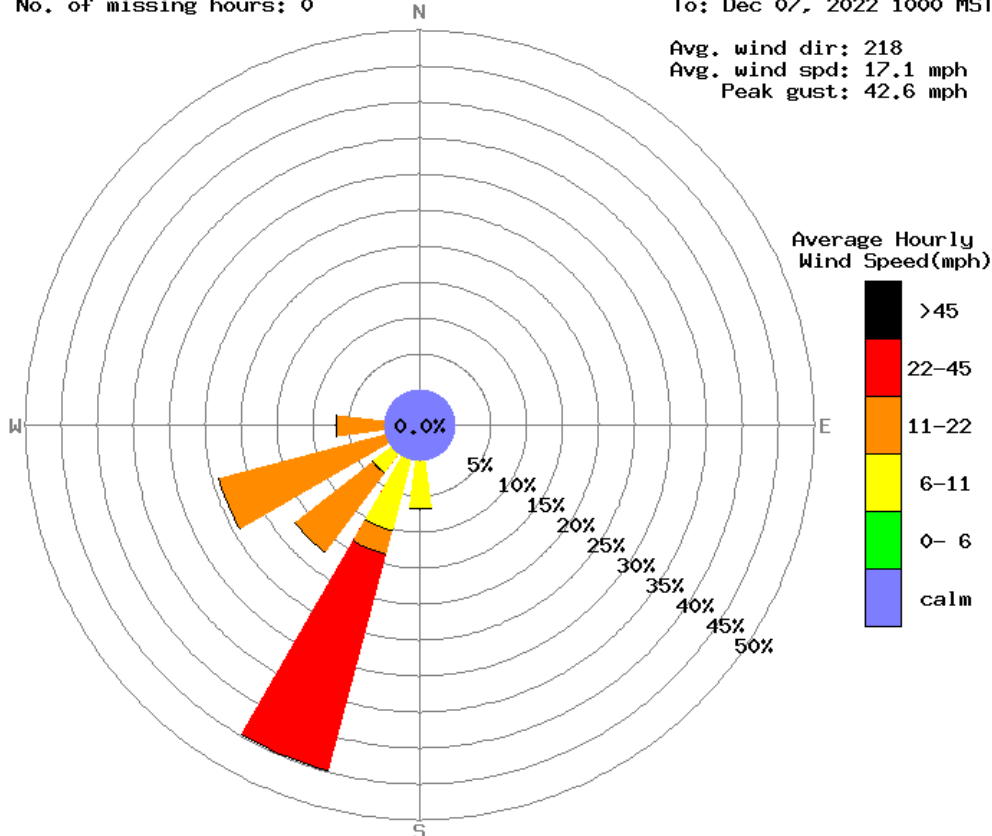
From hour ending: Dec 06, 2022 0600 MST

To: Dec 07, 2022 1000 MST

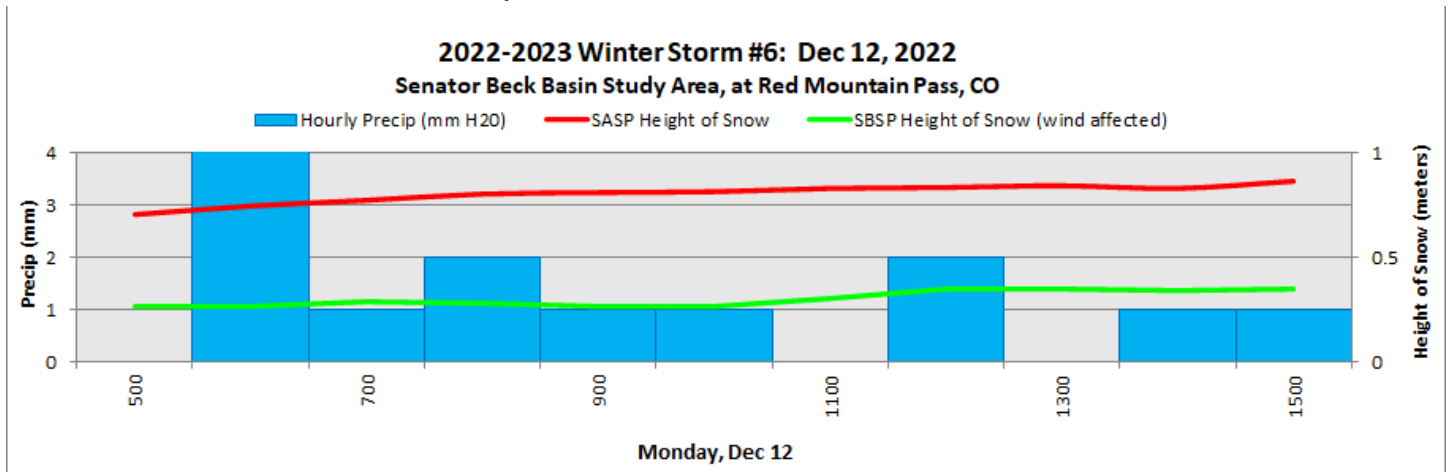
Avg. wind dir: 218

Avg. wind spd: 17.1 mph

Peak gust: 42.6 mph



2022/2023 WINTER STORM #6



Storm Summary Statistics:

Storm precip began between 500 – 600 hrs MST Monday, December 12, 2022 (DOY 346)

Storm precipitation ended: 1500 hrs MST Wednesday, December 12, 2022 (DOY 346)

Storm duration = 11 hrs

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

Mean precip intensity: 1.27 mm/hr

Max precip intensity: 5 mm/hour at 0600

Max gain in snow depth at SASP = 16 cm (6.3 inches)

Max gain in snow depth at SBSP (wind affected) = 8 cm (3.1 inches)

Peak gust at PTSP at: 726 hrs MST Monday, December 12, 2022 (DOY 346)

Storm Wind Rose (Putney Study Plot data)

CSAS Putney Study Plot 12,323 ft.

No. of hours: 11

No. of missing hours: 0

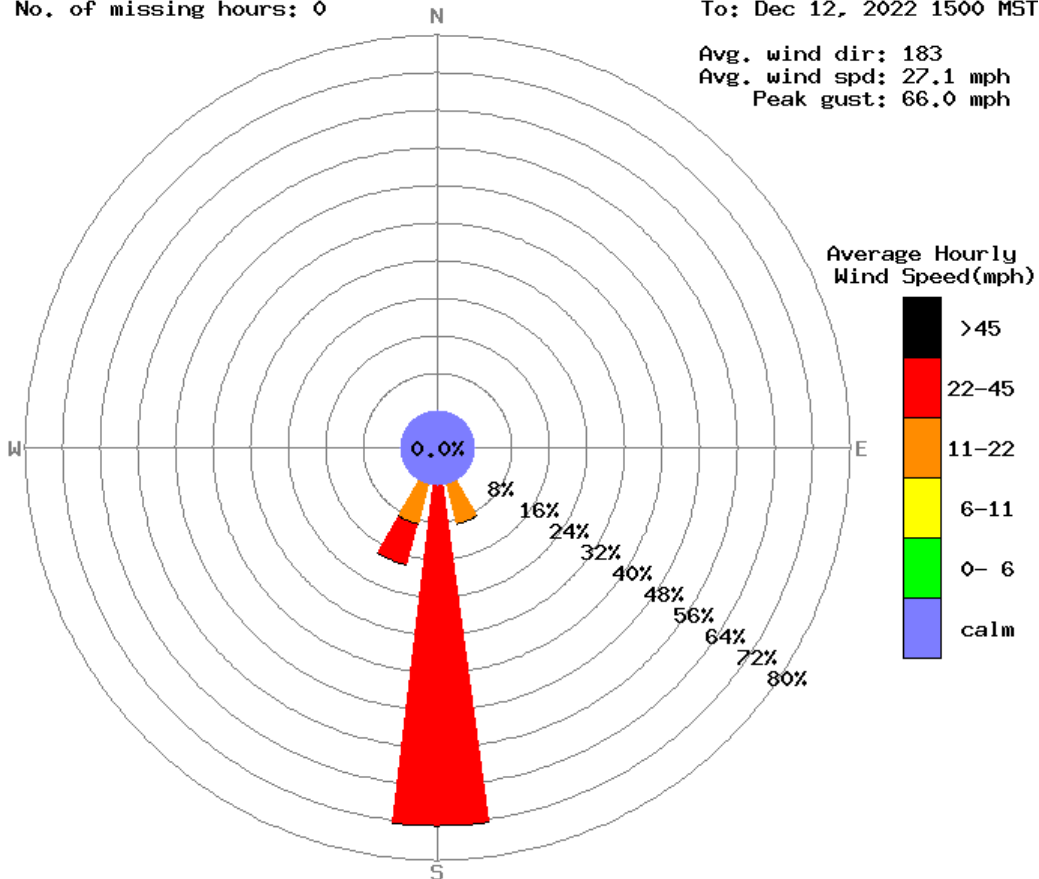
From hour ending: Dec 12, 2022 0500 MST

To: Dec 12, 2022 1500 MST

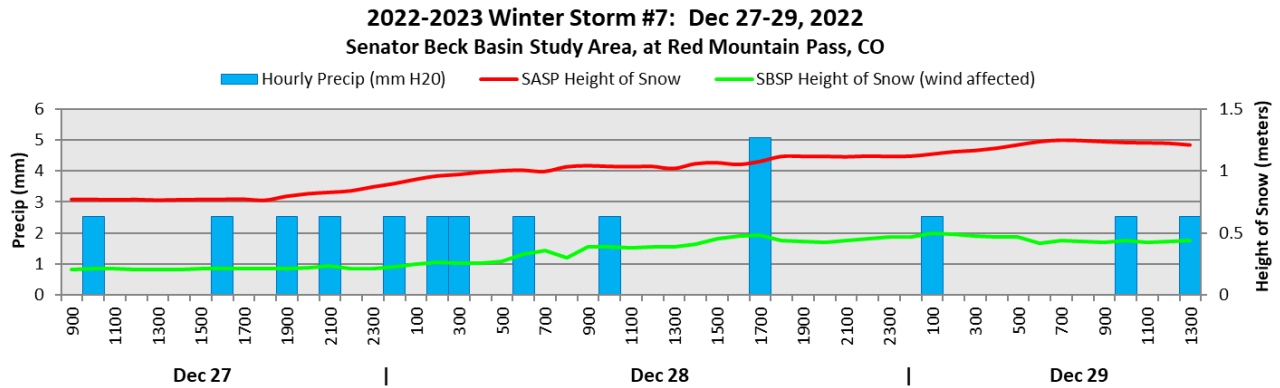
Avg. wind dir: 183

Avg. wind spd: 27.1 mph

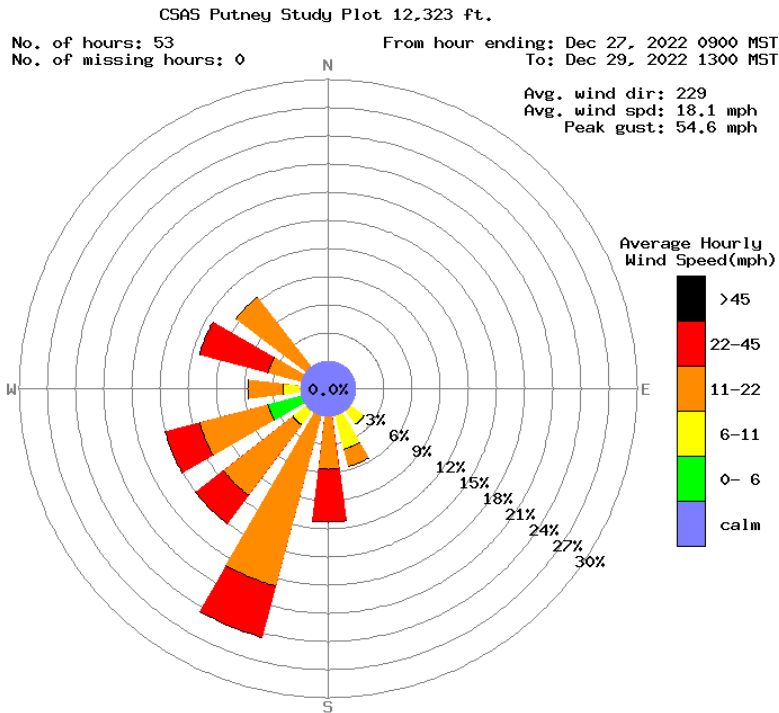
Peak gust: 66.0 mph



2022/23 WINTER STORM #7

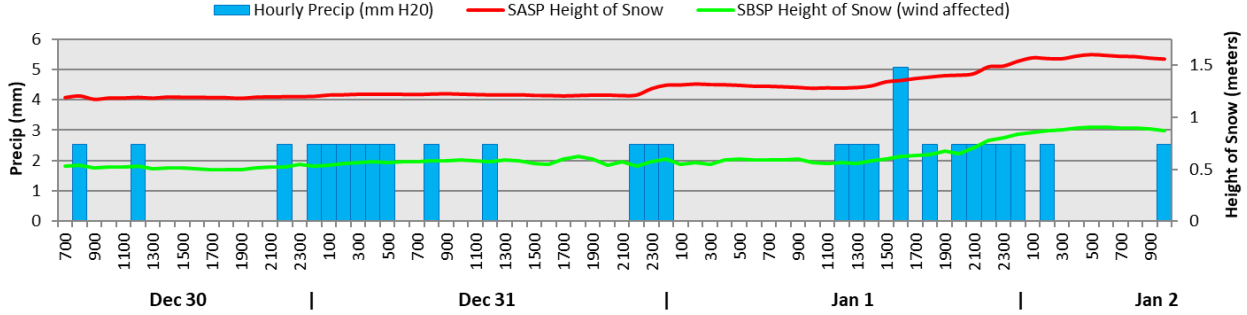


- Storm precipitation began:** 900-1000 MST December 27, 2022 (DOY 361)
- Storm precipitation ended:** 1300 MST December 29, 2022 (DOY 363)
- Storm duration:** 53 hours
- Mean precipitation intensity:** 0.67 mm/hour
- Max precipitation intensity:** 5.08 mm/hour at 1700 on December 28, 2022
- Storm total water content at SASP:** 36 mm (1.4 inches)
- Max gain in snow depth at SASP:** 44.1 cm (17.4 inches)
- Max gain in snow depth at SBSP:** 23.2 cm (9.1 inches) *wind affected
- Peak gust at PTSP at:** 1209 MST December 27, 2022 (DOY 361)

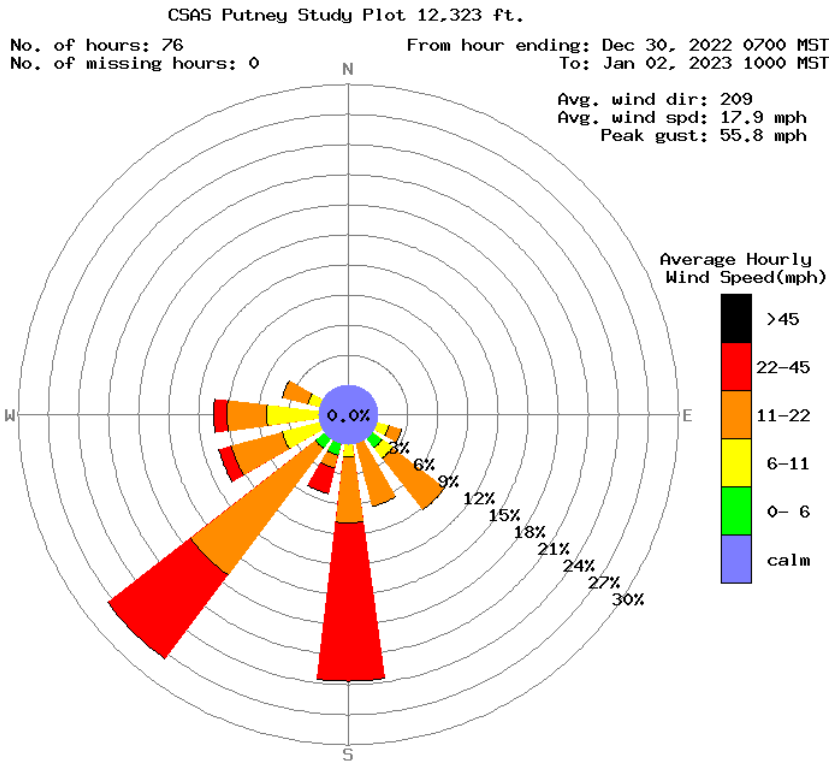


2022/23 WINTER STORM #8

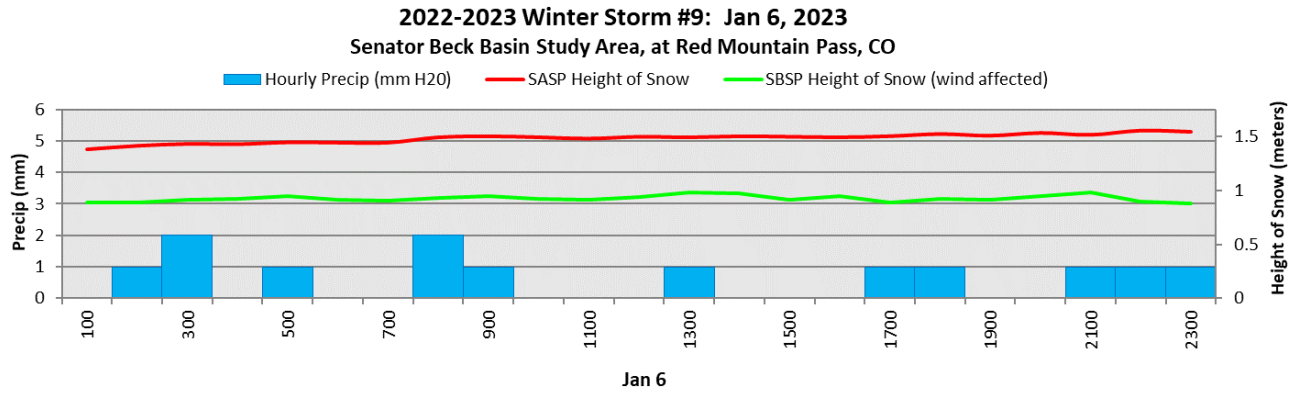
2022-2023 Winter Storm #8: Dec 30 - Jan 2, 2023
Senator Beck Basin Study Area, at Red Mountain Pass, CO



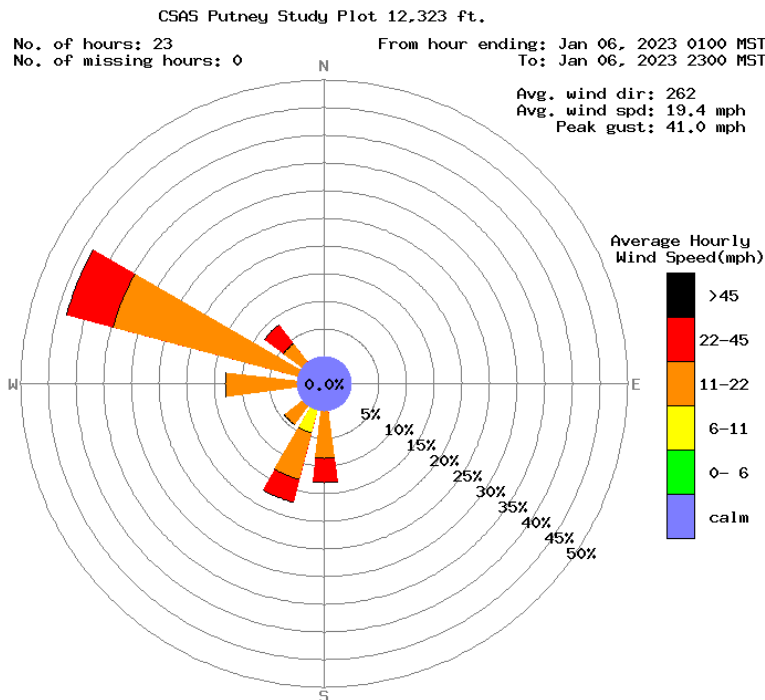
- Storm precipitation began:** 700-800 MST December 30, 2022 (DOY 364)
- Storm precipitation ended:** 1000 MST January 2, 2023 (DOY 2)
- Storm duration:** 76 hours
- Mean precipitation intensity:** 0.9 mm/hour
- Max precipitation intensity:** 5.08 mm/hour at 1600 on January 1, 2023
- Storm total water content at SASP:** 69 mm (1.4 inches)
- Max gain in snow depth at SASP:** 37.2 cm (14.6 inches)
- Max gain in snow depth at SBSP:** 34 cm (13.4 inches) *wind affected
- Peak gust at PTSP at:** 0026 MST January 2, 2023 (DOY 2)



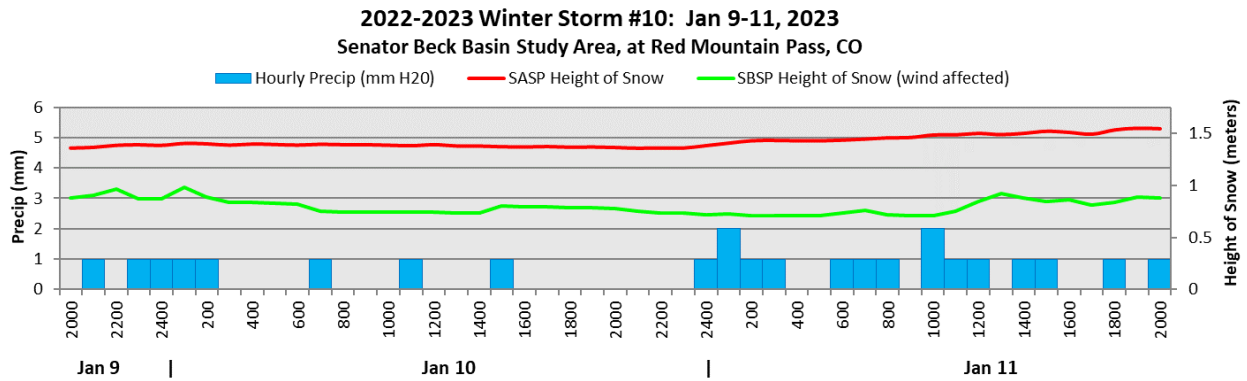
2022/23 WINTER STORM #9



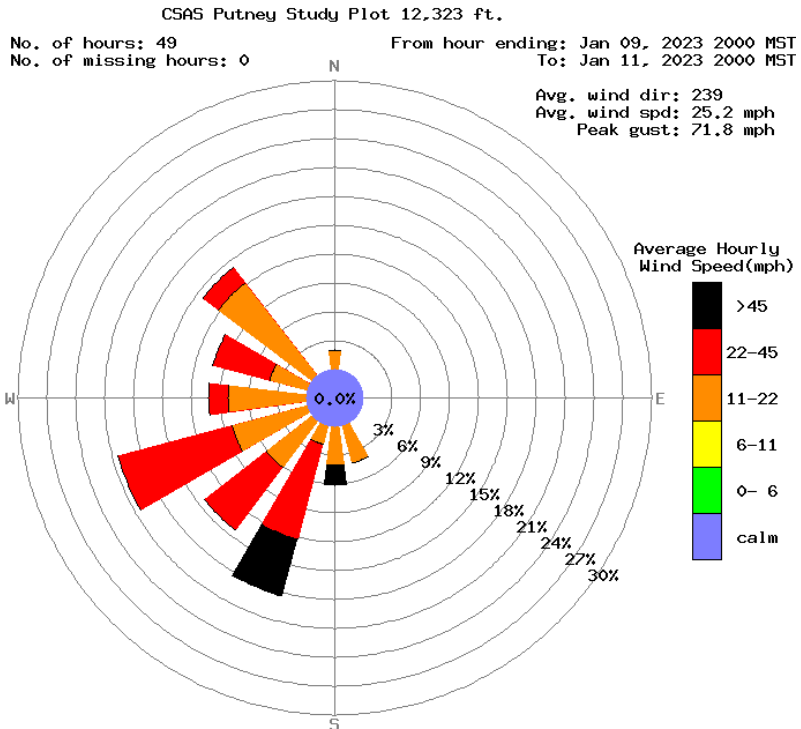
Storm precipitation began: 100-200 MST January 6, 2023 (DOY 6)
Storm precipitation ended: 2300 MST January 6, 2023 (DOY 6)
Storm duration: 23 hours
Mean precipitation intensity: 0.57 mm/hour
Max precipitation intensity: 2 mm/hour at 800 on January 6, 2023 (DOY 6)
Storm total water content at SASP: 13 mm (0.5 inches)
Max gain in snow depth at SASP: 16.8 cm (6.6 inches)
Max gain in snow depth at SBSP: 0 cm (0 inches) *wind affected
Peak gust at PTSP at: 1351 MST January 6, 2023 (DOY 6)



2022/23 WINTER STORM #10

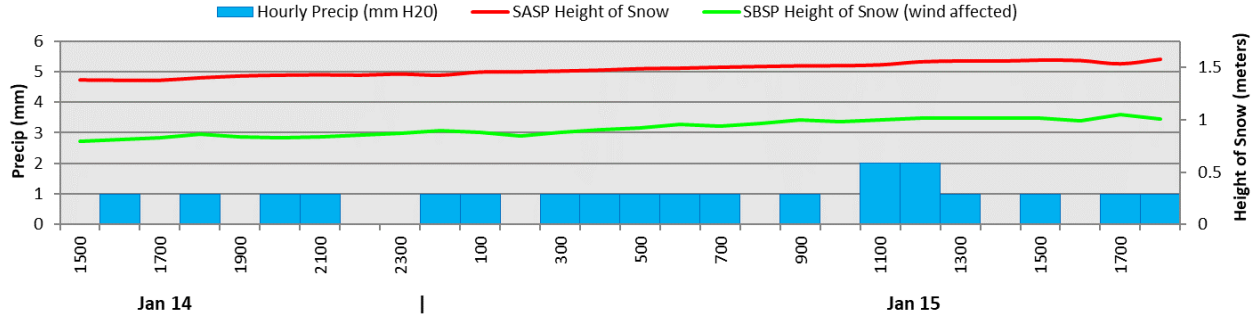


- Storm precipitation began:** 2000-2100 MST January 9, 2023 (DOY 9)
- Storm precipitation ended:** 2000 MST January 9, 2023 (DOY 9)
- Storm duration:** 49 hours
- Mean precipitation intensity:** 0.49 mm/hour
- Max precipitation intensity:** 2 mm/hour at 1000 on January 11, 2023 (DOY 11)
- Storm total water content at SASP:** 24 mm (0.9 inches)
- Max gain in snow depth at SASP:** 18.5 cm (7.3 inches)
- Max gain in snow depth at SBSP:** 0.3 cm (0.1 inches) *wind affected
- Peak gust at PTSP at:** 2109 MST January 10, 2023 (DOY 10)

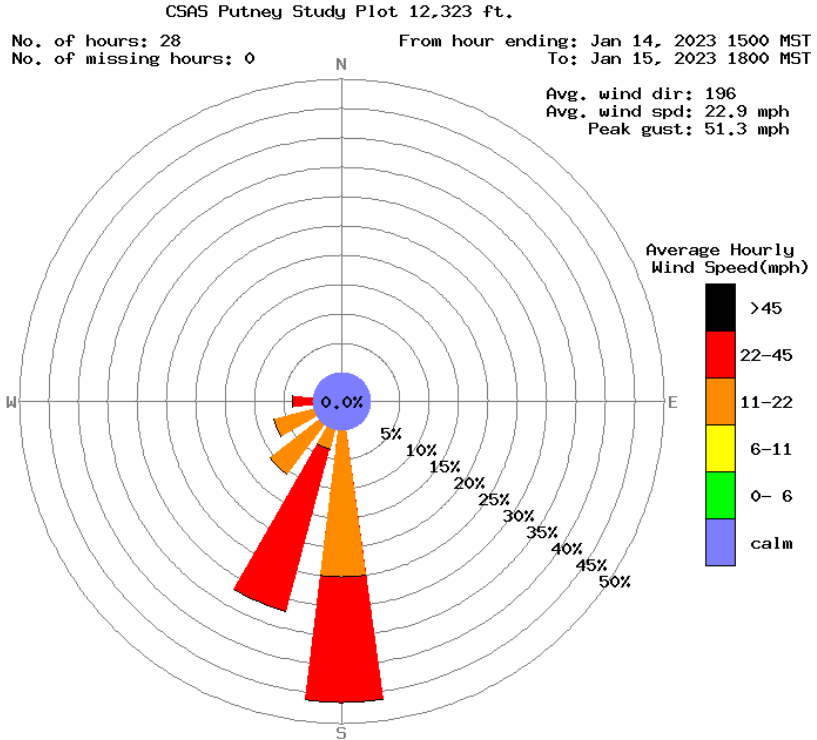


2022/23 WINTER STORM #11

2022-2023 Winter Storm #11: Jan 14-15, 2023
Senator Beck Basin Study Area, at Red Mountain Pass, CO

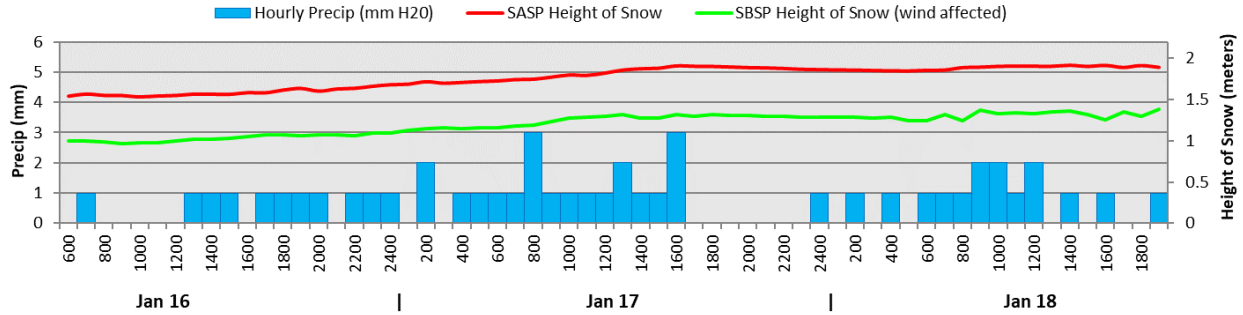


- Storm precipitation began:** 1500-1600 MST January 14, 2023 (DOY 14)
- Storm precipitation ended:** 1800 MST January 15, 2023 (DOY 15)
- Storm duration:** 28 hours
- Mean precipitation intensity:** 0.71 mm/hour
- Max precipitation intensity:** 2 mm/hour at 1200 on January 15, 2023 (DOY 15)
- Storm total water content at SASP:** 20 mm (0.8 inches)
- Max gain in snow depth at SASP:** 19.8 cm (7.8 inches)
- Max gain in snow depth at SBSP:** 21.6 cm (8.5 inches) *wind affected
- Peak gust at PTSP at:** 114 MST January 15, 2023 (DOY 15)

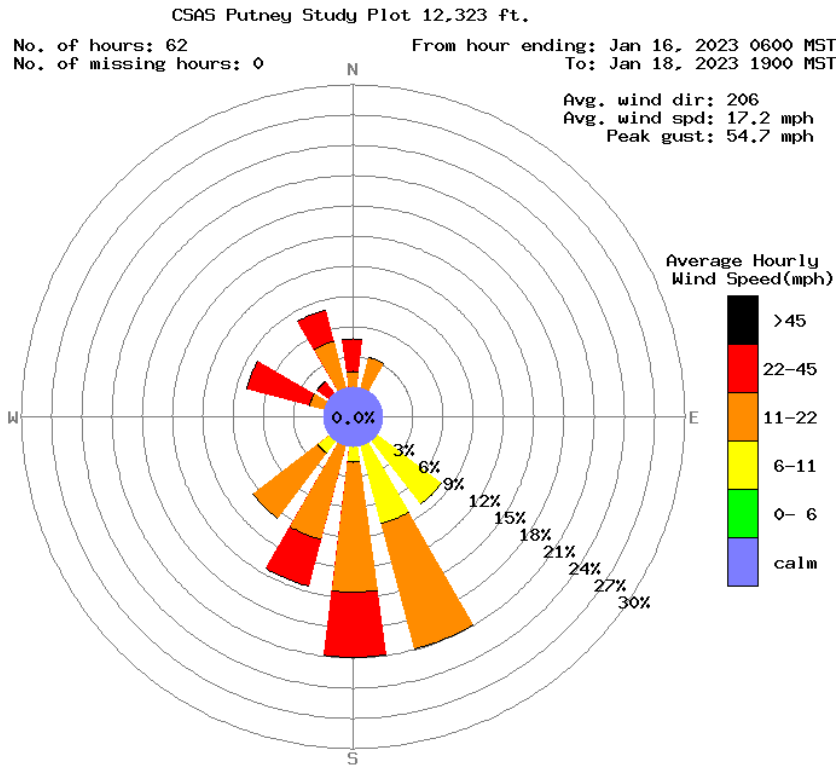


2022/23 WINTER STORM #12

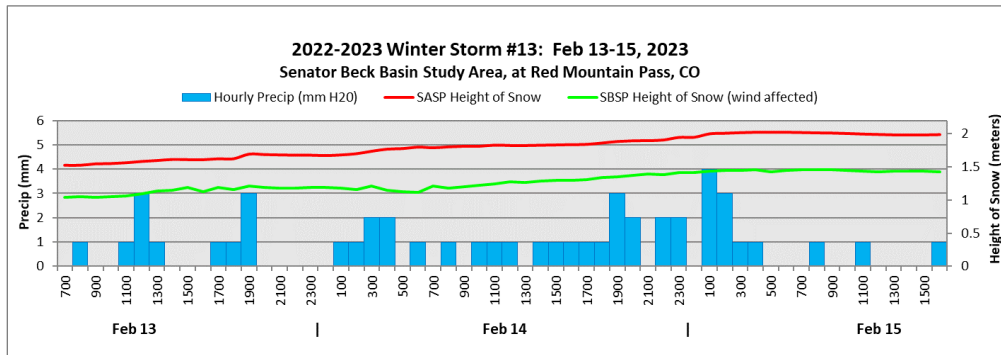
2022-2023 Winter Storm #12: Jan 16-18, 2023
Senator Beck Basin Study Area, at Red Mountain Pass, CO



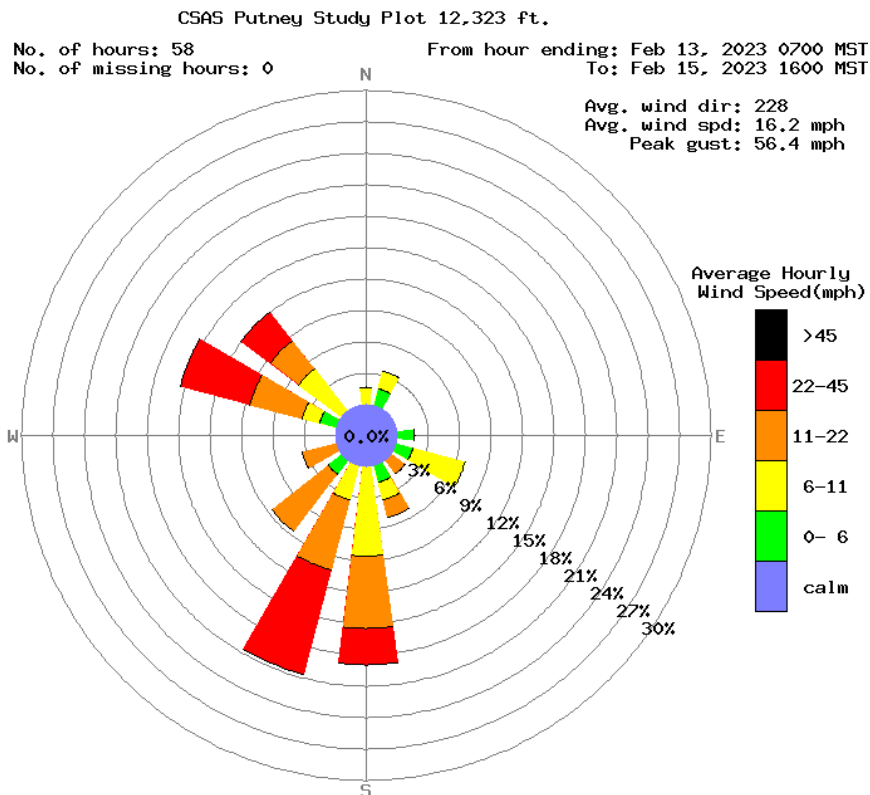
- Storm precipitation began:** 600-700 MST January 16, 2023 (DOY 16)
- Storm precipitation ended:** 1900 MST January 18, 2023 (DOY 18)
- Storm duration:** 62 hours
- Mean precipitation intensity:** 0.76 mm/hour
- Max precipitation intensity:** 3 mm/hour at 1600 on January 17, 2023 (DOY 17)
- Storm total water content at SASP:** 47 mm (1.9 inches)
- Max gain in snow depth at SASP:** 35.1 cm (13.8 inches)
- Max gain in snow depth at SBSP:** 38.1 cm (15.0 inches) *wind affected
- Peak gust at PTSP at:** 1141 MST January 17, 2023 (DOY 17)



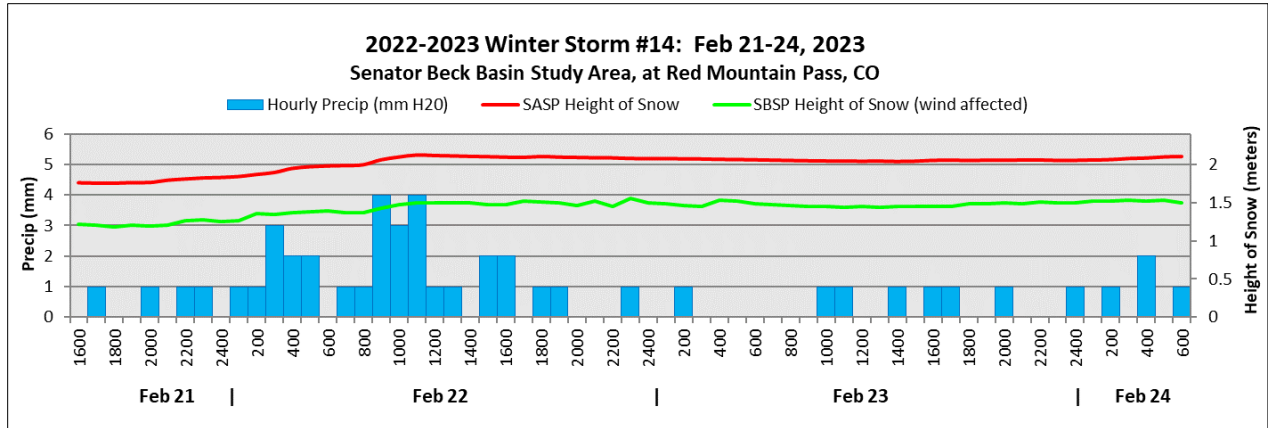
2022/23 WINTER STORM #13



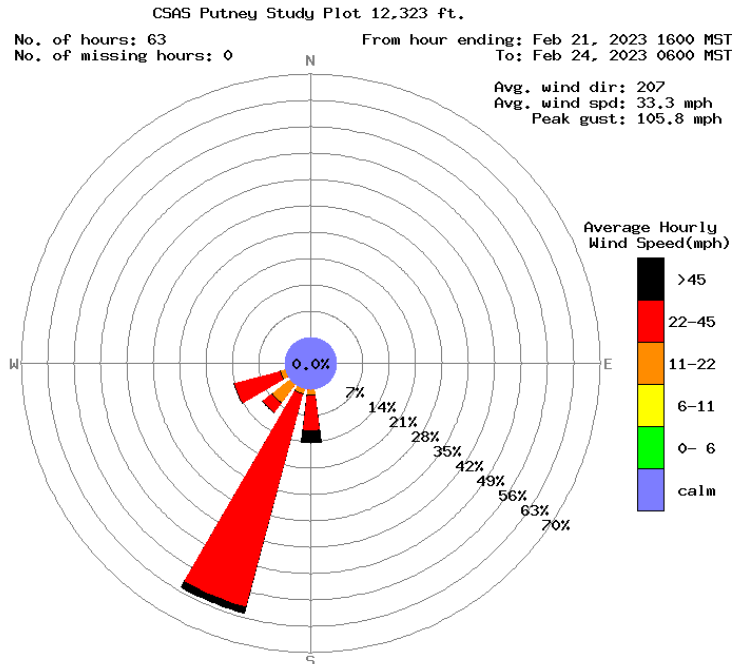
- Storm precipitation began:** 700-800 MST February 13, 2023 (DOY 44)
- Storm precipitation ended:** 1600 MST February 15, 2023 (DOY 46)
- Storm duration:** 58 hours
- Mean precipitation intensity:** 0.83 mm/hour
- Max precipitation intensity:** 4 mm/hour at 100 on February 15, 2023 (DOY 46)
- Storm total water content at SASP:** 48 mm (1.9 inches)
- Max gain in snow depth at SASP:** 45.8 cm (18.0 inches)
- Max gain in snow depth at SBSP:** 39.2 cm (15.4 inches) *wind affected
- Peak gust at PTSP at:** 444 MST February 15, 2023 (DOY 46)



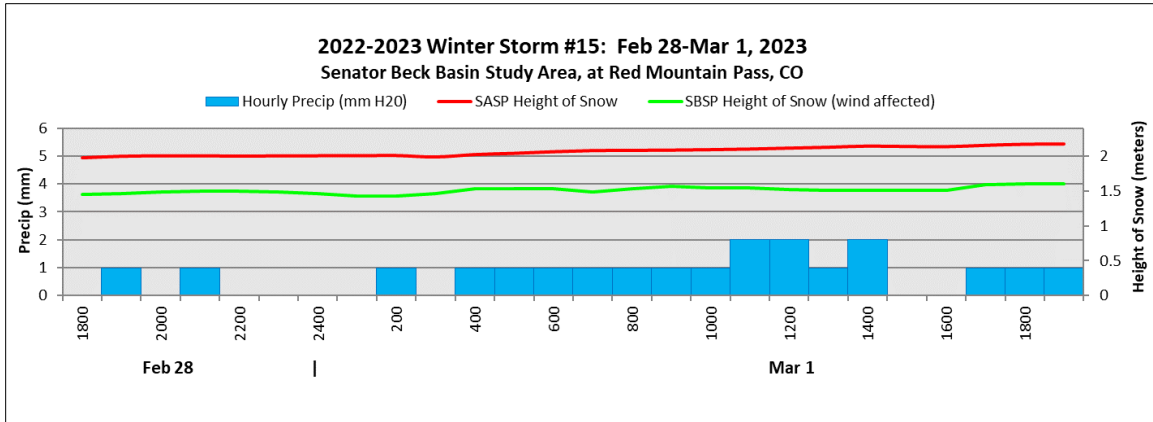
2022/23 WINTER STORM #14



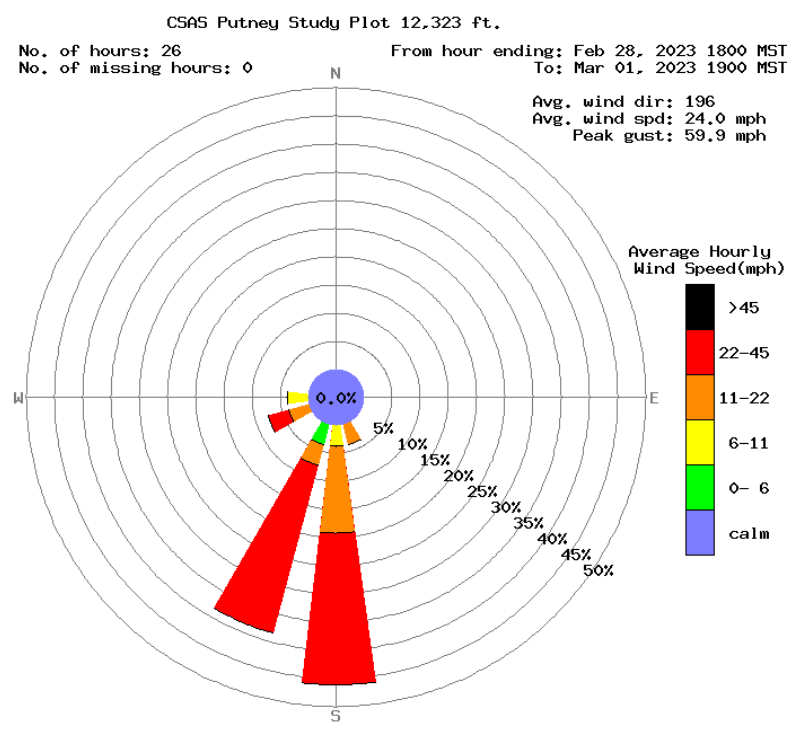
- Storm precipitation began:** 1600-1700 MST February 21, 2023 (DOY 52)
- Storm precipitation ended:** 600 MST February 24, 2023 (DOY 55)
- Storm duration:** 63 hours
- Mean precipitation intensity:** 0.75 mm/hour
- Max precipitation intensity:** 4 mm/hour at 1100 on February 22, 2023 (DOY 53)
- Storm total water content at SASP:** 47 mm (1.9 inches)
- Max gain in snow depth at SASP:** 34.9 cm (13.7 inches)
- Max gain in snow depth at SBSP:** 27.2 cm (10.7 inches) *wind affected
- Peak gust at PTSP at:** 958 MST February 22, 2023 (DOY 53)



2022/23 WINTER STORM #15



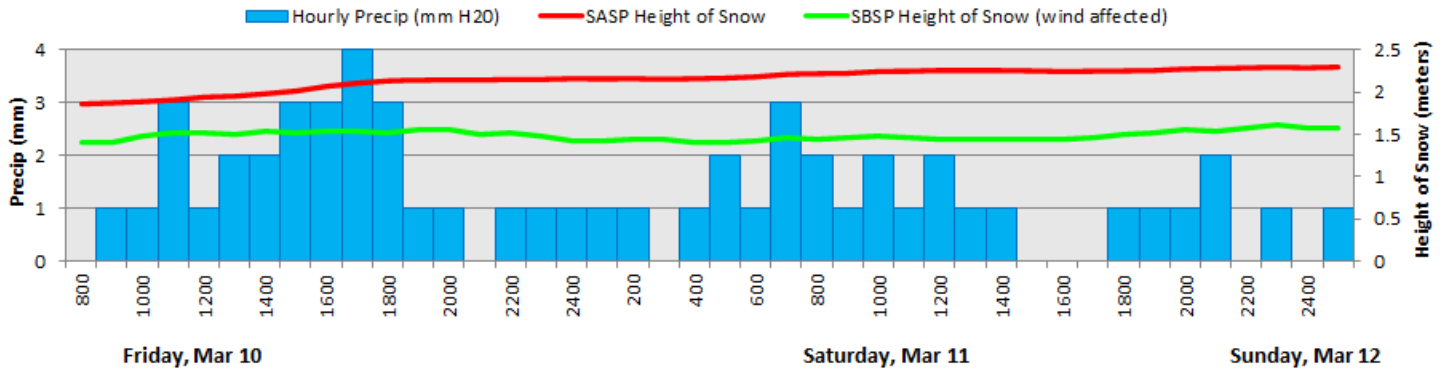
- Storm precipitation began:** 1800-1900 MST February 28, 2023 (DOY 59)
- Storm precipitation ended:** 1900 MST March 1, 2023 (DOY 60)
- Storm duration:** 26 hours
- Mean precipitation intensity:** 0.77 mm/hour
- Max precipitation intensity:** 2 mm/hour at 1400 on March 1, 2023 (DOY 60)
- Storm total water content at SASP:** 20 mm (0.8 inches)
- Max gain in snow depth at SASP:** 20.3 cm (8 inches)
- Max gain in snow depth at SBSP:** 15 cm (5.9 inches) *wind affected
- Peak gust at PTSP at:** 357 MST March 1, 2023 (DOY 60)



2022/2023 WINTER STORM #16

2022-2023 Winter Storm #16: March 10-12, 2023

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



Storm Summary Statistics:

Storm precip began between 800 – 900 hrs MST Friday, March 10, 2023 (DOY 69)

Storm precipitation ended: 100 hrs MST Sunday, March 12, 2023 (DOY 71)

Storm duration = 42 hrs

Storm total water content at SASP = 54 mm (2.1 inches)

Mean precip intensity: 1.29 mm/hr

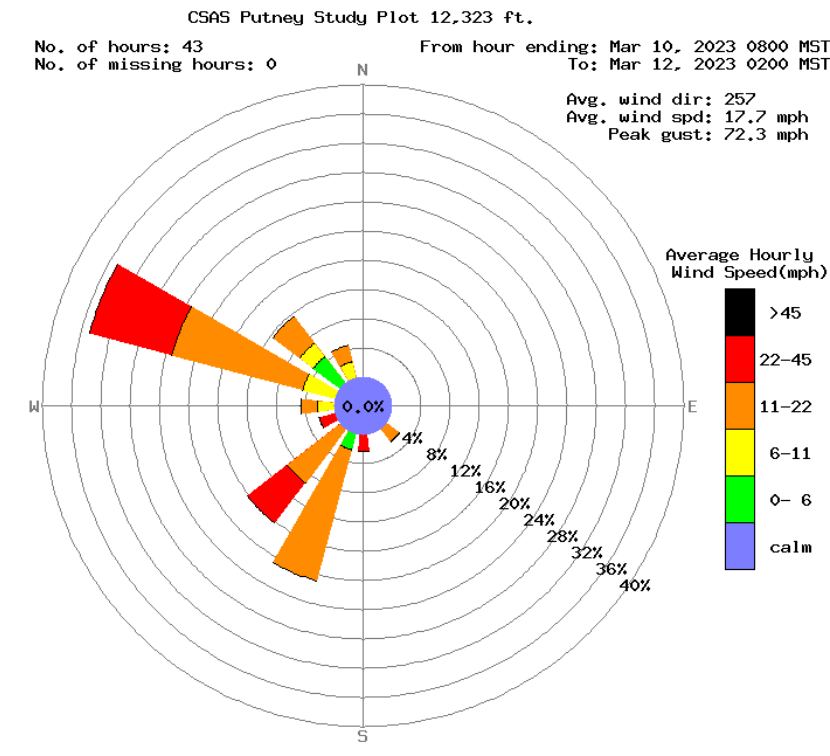
Max precip intensity: 4 mm/hour at 1700 on day 69

Max gain in snow depth at SASP = 42.2 cm (16.6 inches)

Max gain in snow depth at SBSP (wind affected) = 17.3 cm (6.8 inches)

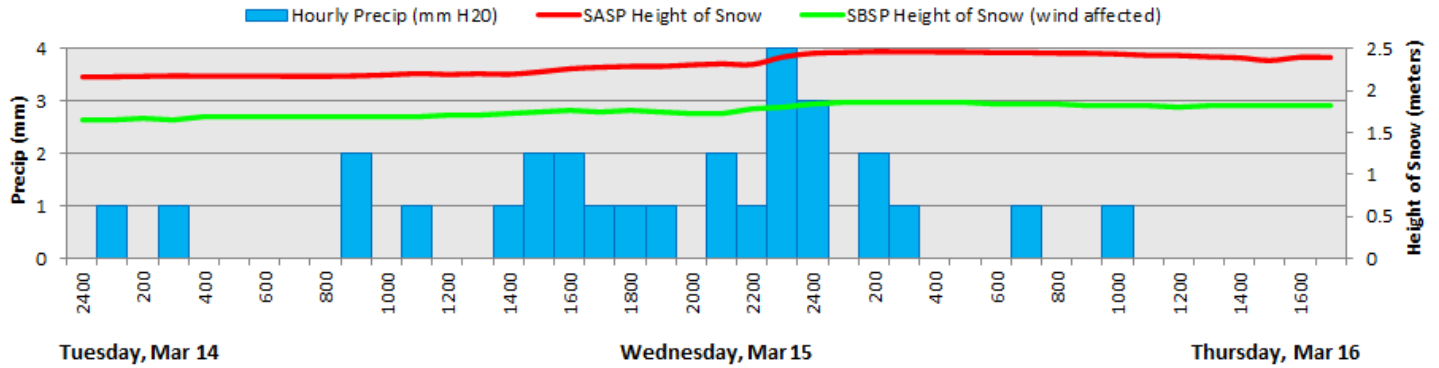
Peak gust at PTSP at: 400 hrs MST Saturday, March 11, 2023 (DOY 70)

Storm Wind Rose (Putney Study Plot data)



2022/2023 WINTER STORM #17

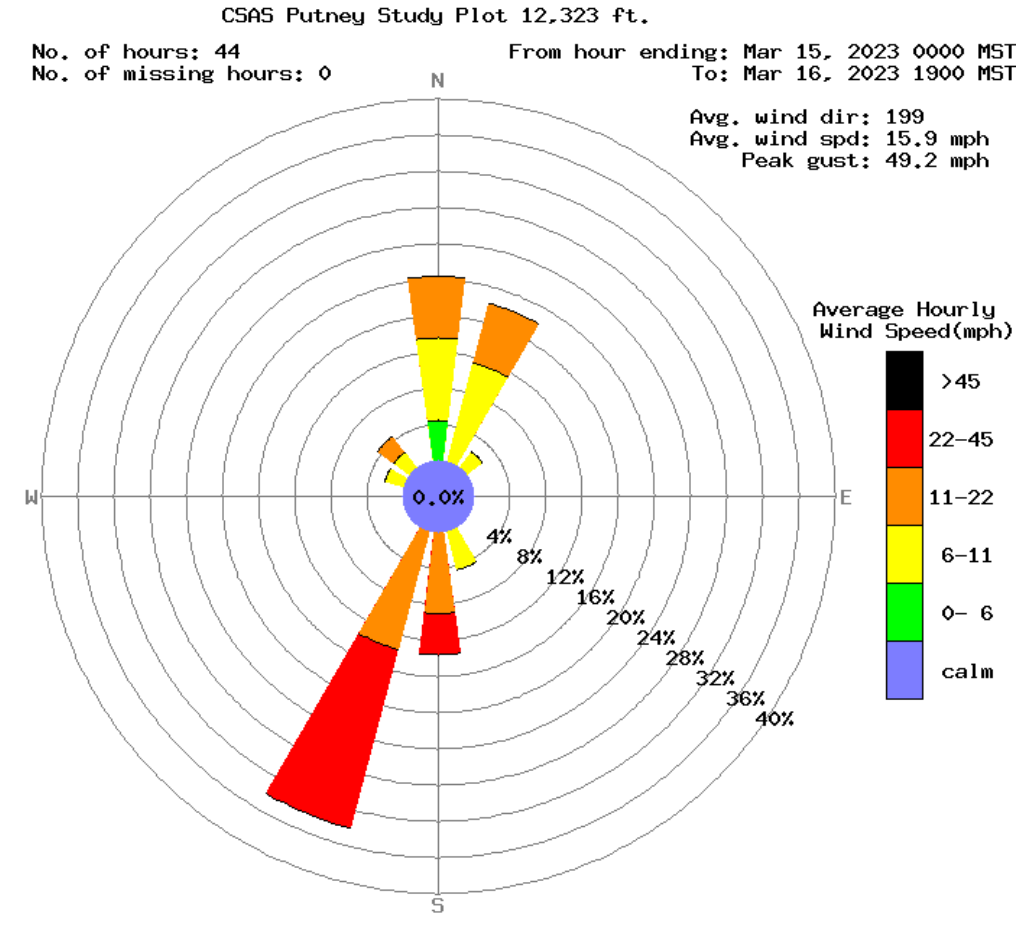
2022-2023 Winter Storm #17: March 14-16, 2023
 Senator Beck Basin Study Area, at Red Mountain Pass, CO



Storm Summary Statistics:

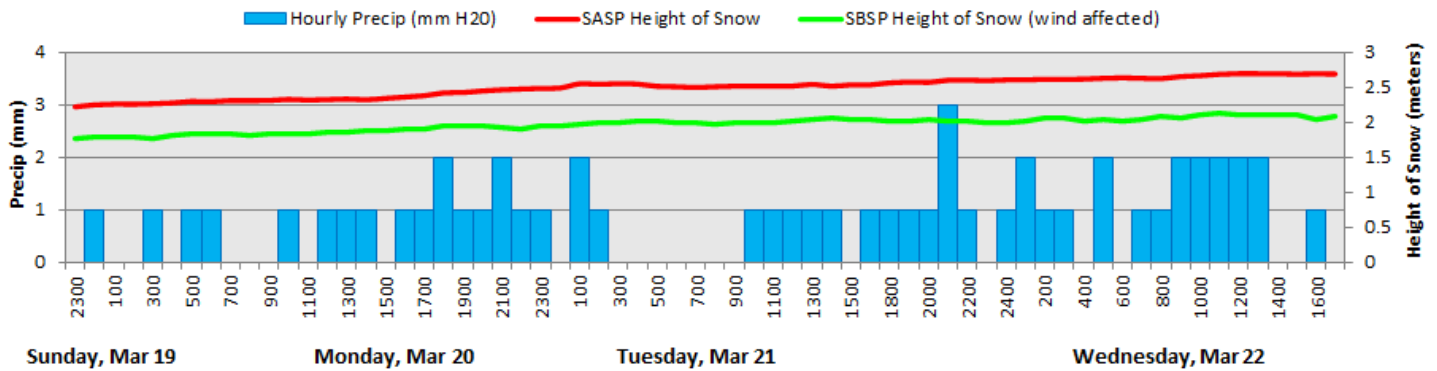
- Storm precip began between 2400 – 100 hrs MST Tuesday, March 14, 2023 (DOY 73)
- Storm precipitation ended: 1800 hrs MST Thursday, March 16, 2023 (DOY 75)
- Storm duration = 43 hrs
- Storm total water content at SASP = 29 mm (1.1 inches)
- Mean precip intensity: 0.67 mm/hr
- Max precip intensity: 4 mm/hour at 2300 on day 74
- Max gain in snow depth at SASP = 21.7 cm (8.5 inches)
- Max gain in snow depth at SBSP (wind affected) = 16.6 cm (6.5 inches)
- Peak gust at PTSP at: 2400 hrs MST Tuesday, March 14, 2023 (DOY 73)

Storm Wind Rose (Putney Study Plot data)



2022/2023 WINTER STORM #18

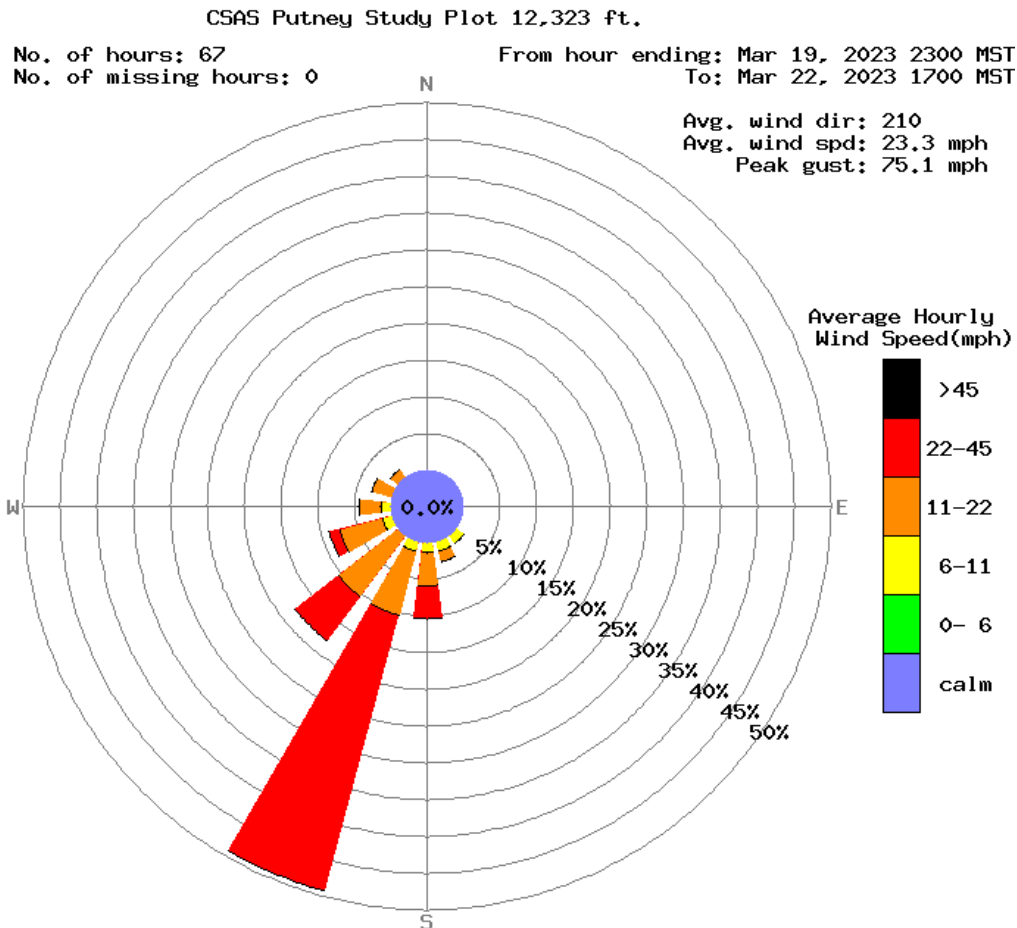
2022-2023 Winter Storm #18: March 19-22, 2023 Senator Beck Basin Study Area, at Red Mountain Pass, CO



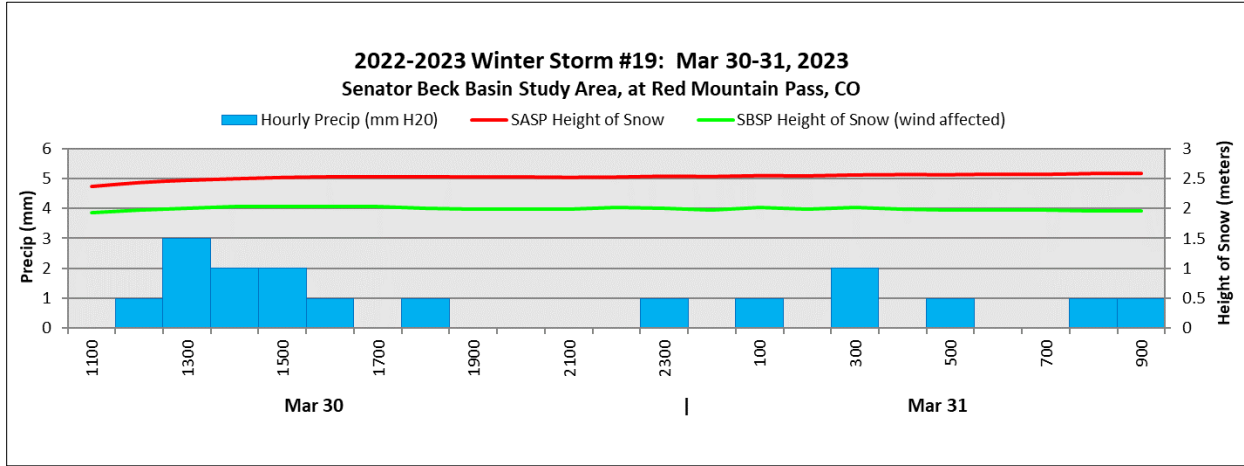
Storm Summary Statistics:

- Storm precip began between 2300 – 2400 hrs MST Sunday, March 19, 2023 (DOY 78)
- Storm precipitation ended: 1700 hrs MST Wednesday, March 22, 2023 (DOY 81)
- Storm duration = 67 hrs
- Storm total water content at SASP = 55 mm (2.2 inches)
- Mean precip intensity: 0.82 mm/hr
- Max precip intensity: 3 mm/hour at 2100 on day 80
- Max gain in snow depth at SASP = 46.2 cm (18.2 inches)
- Max gain in snow depth at SBSP (wind affected) = 32.0 cm (12.6 inches)
- Peak gust at PTSP at: 1236 hrs MST Wednesday, March 22, 2023 (DOY 81)

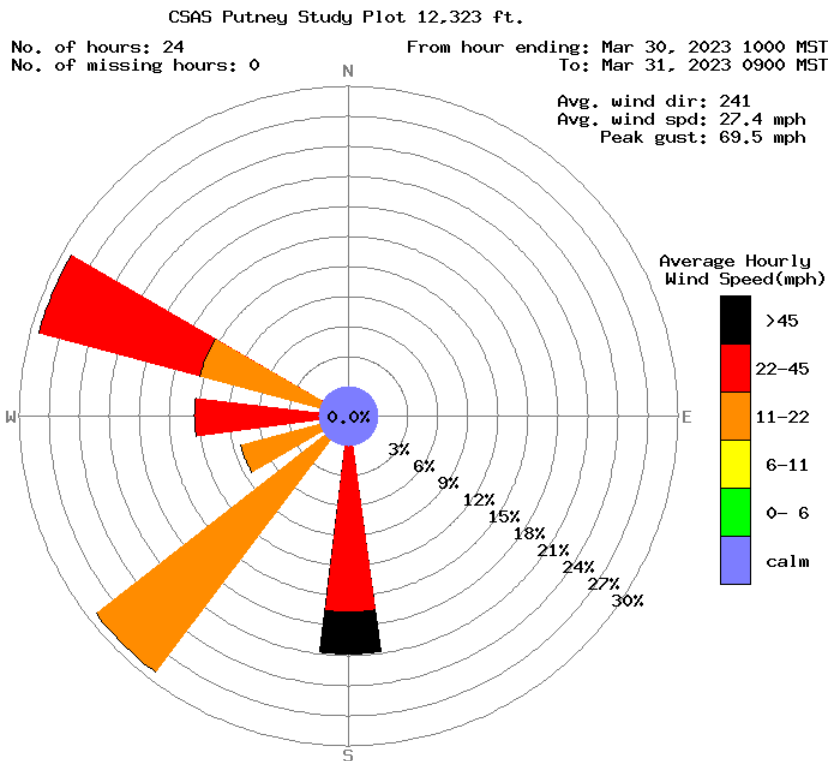
Storm Wind Rose (Putney Study Plot data)



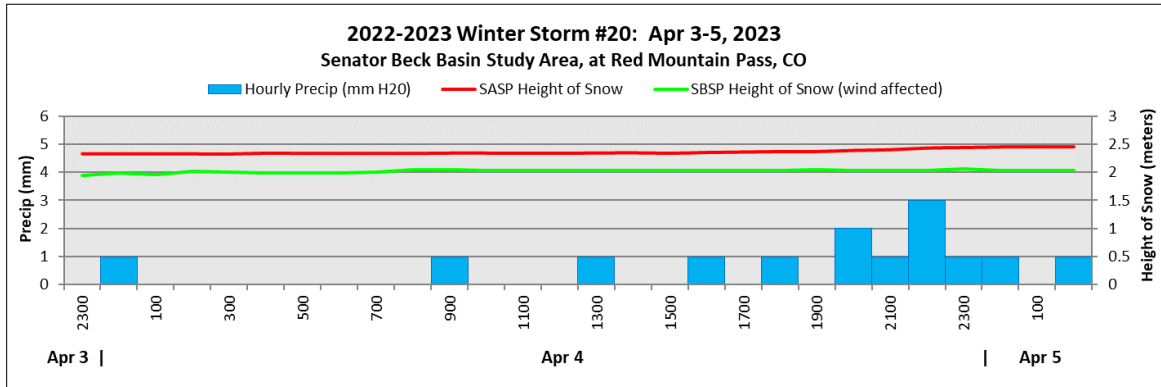
2022/23 WINTER STORM #19



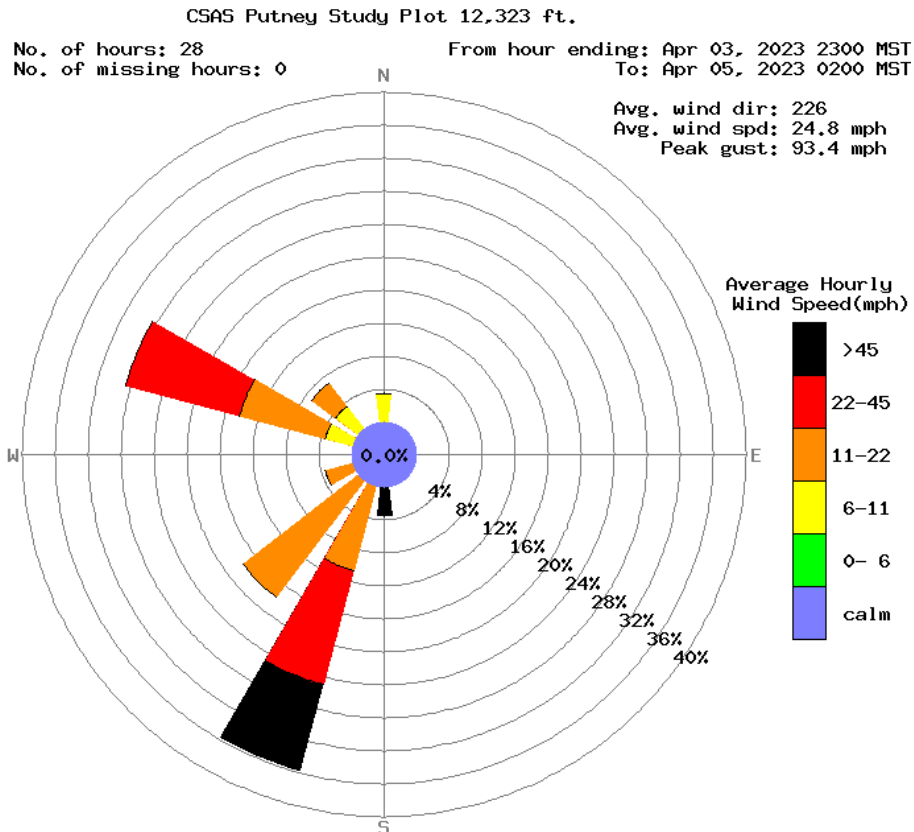
- Storm precipitation began:** 1000-1100 MST March 30, 2023 (DOY 89)
- Storm precipitation ended:** 900 MST March 31, 2023 (DOY 90)
- Storm duration:** 23 hours
- Mean precipitation intensity:** 0.74 mm/hour
- Max precipitation intensity:** 3 mm/hour at 1300 on March 30, 2023 (DOY 89)
- Storm total water content at SASP:** 17 mm (0.7 inches)
- Max gain in snow depth at SASP:** 21.4 cm (8.4 inches)
- Max gain in snow depth at SBSP:** 2.9 cm (1.1 inches) *wind affected
- Peak gust at PTSP at:** 1007 MST March 30, 2023 (DOY 89)



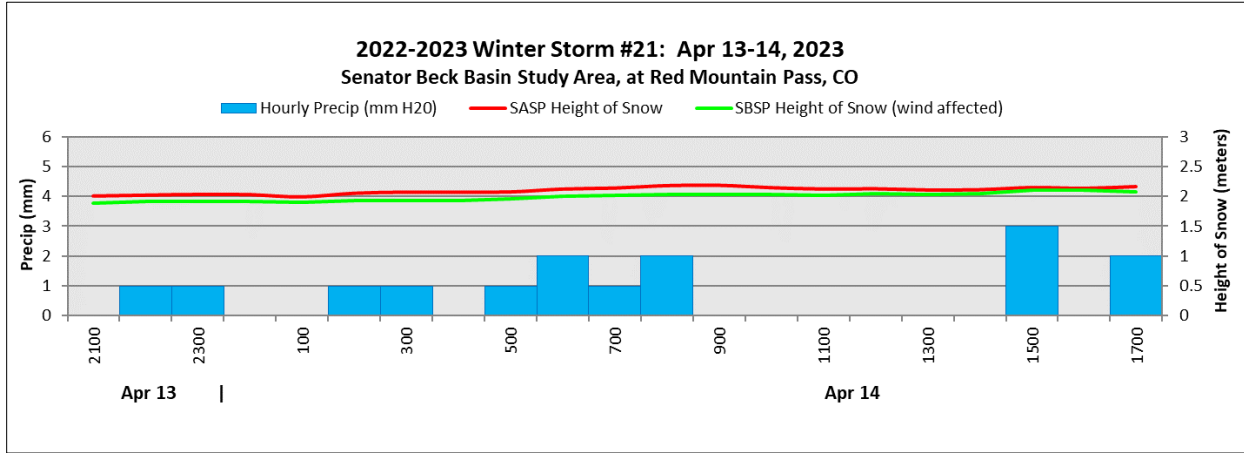
2022/23 WINTER STORM #20



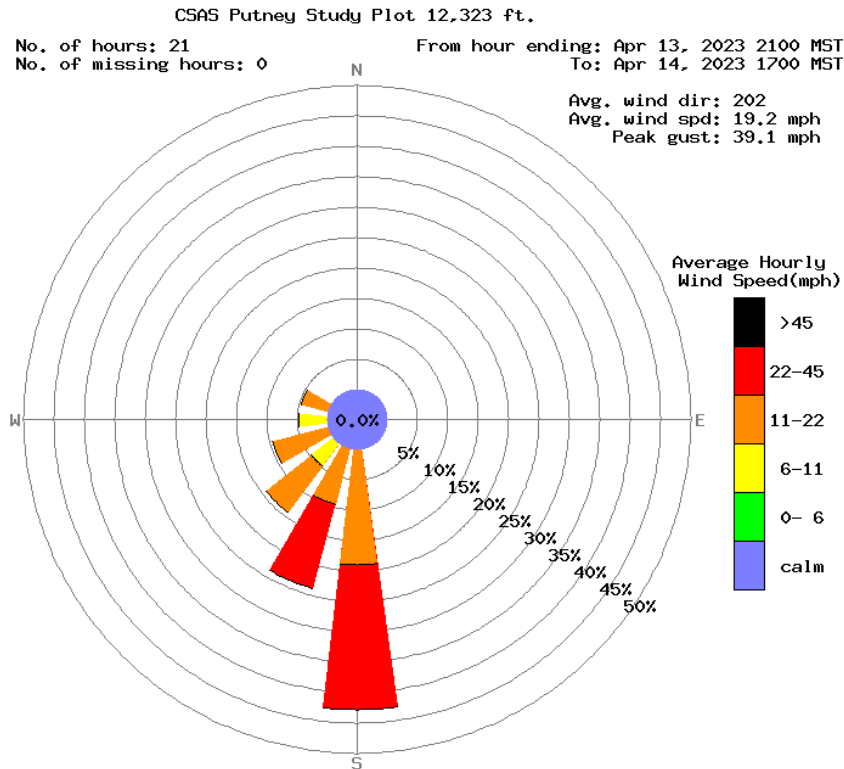
- Storm precipitation began:** 2300-2400 MST April 3, 2023 (DOY 93)
- Storm precipitation ended:** 0200 MST April 5, 2023 (DOY 95)
- Storm duration:** 28 hours
- Mean precipitation intensity:** 0.50 mm/hour
- Max precipitation intensity:** 3 mm/hour at 2200 on April 4, 2023 (DOY 94)
- Storm total water content at SASP:** 14 mm (0.6 inches)
- Max gain in snow depth at SASP:** 12.2 cm (4.8 inches)
- Max gain in snow depth at SBSP:** 9.3 cm (3.7 inches) *wind affected
- Peak gust at PTSP at:** 0042 MST April 4, 2023 (DOY 94)



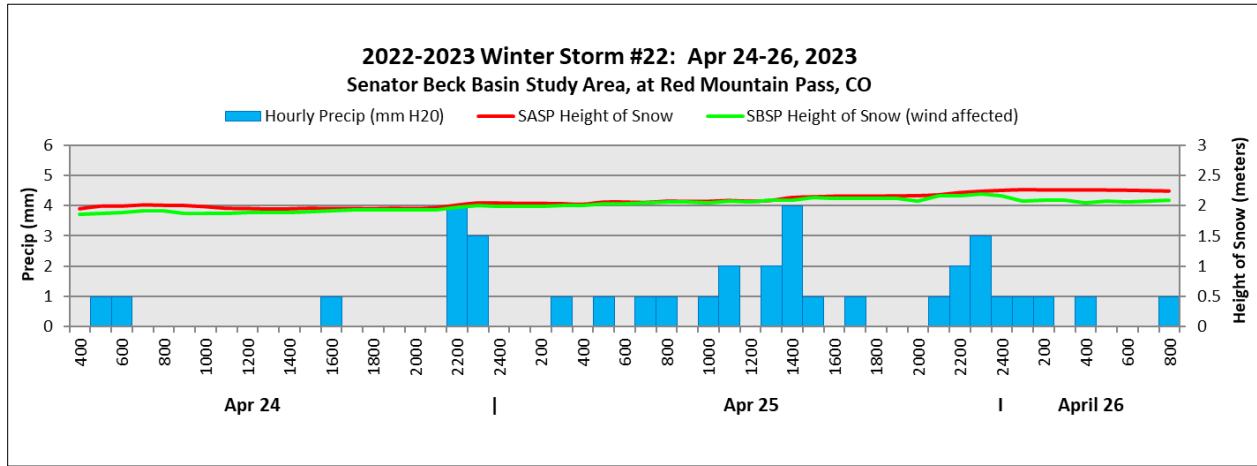
2022/23 WINTER STORM #21



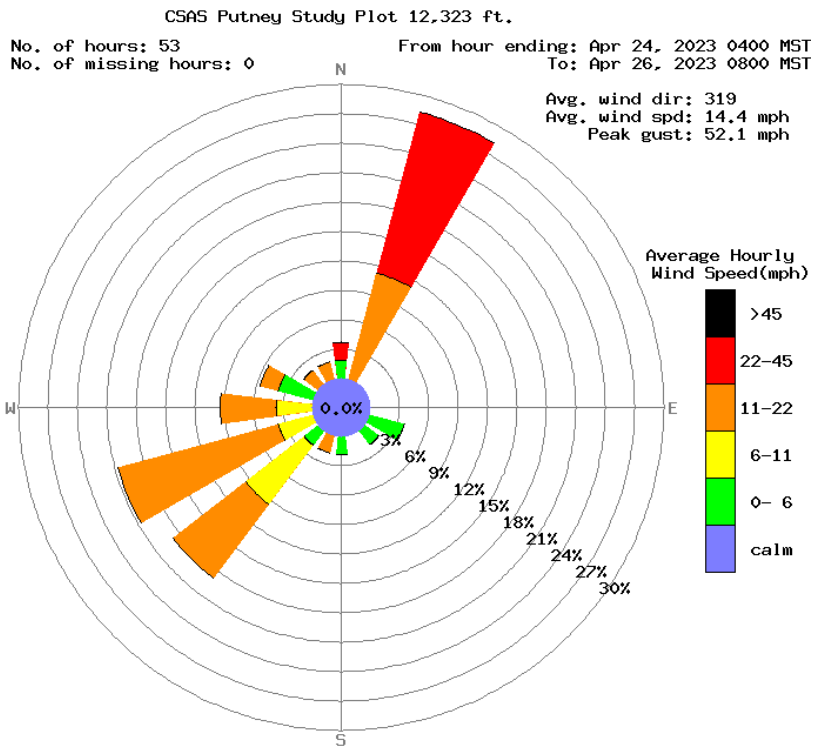
- Storm precipitation began:** 2100-2200 MST April 13, 2023 (DOY 103)
- Storm precipitation ended:** 1700 MST April 14, 2023 (DOY 104)
- Storm duration:** 21 hours
- Mean precipitation intensity:** 0.71 mm/hour
- Max precipitation intensity:** 3 mm/hour at 1500 on April 14, 2023 (DOY 104)
- Storm total water content at SASP:** 15 mm (0.6 inches)
- Max gain in snow depth at SASP:** 15.2 cm (6 inches)
- Max gain in snow depth at SBSP:** 18.8 cm (7.4 inches) *wind affected
- Peak gust at PTSP at:** 1627 MST April 4, 2023 (DOY 104)



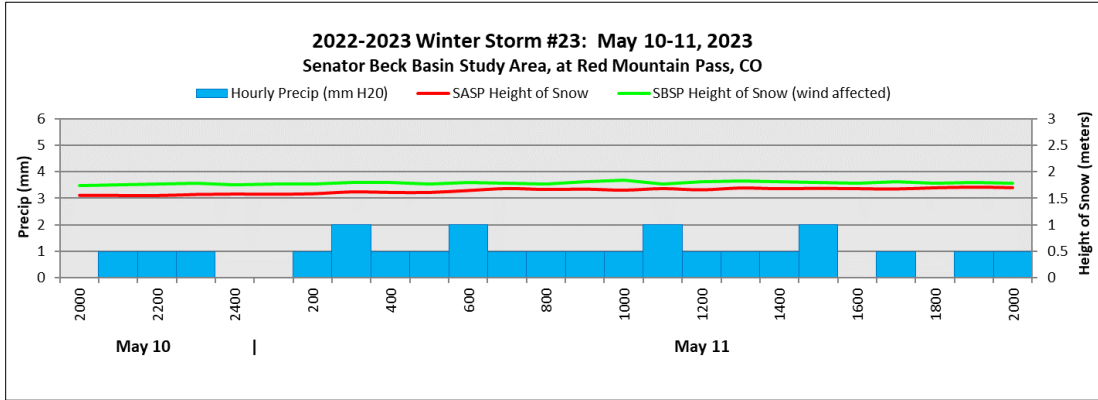
2022/23 WINTER STORM #22



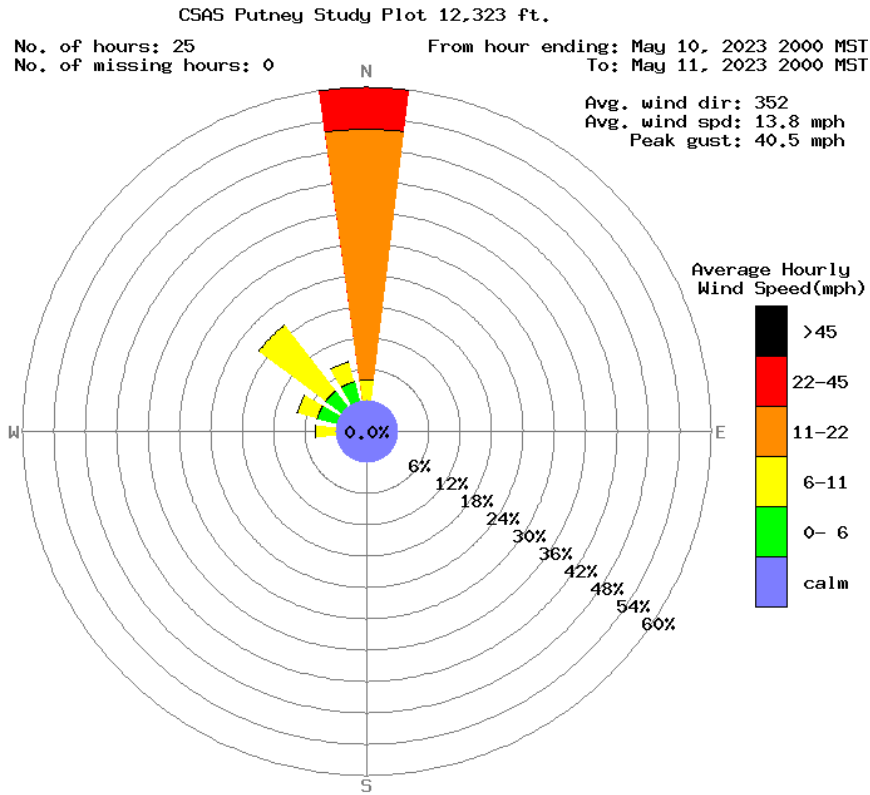
- Storm precipitation began:** 0400-0500 MST April 24, 2023 (DOY 114)
- Storm precipitation ended:** 0800 MST April 26, 2023 (DOY 116)
- Storm duration:** 53 hours
- Mean precipitation intensity:** 0.68 mm/hour
- Max precipitation intensity:** 4 mm/hour at 1400 on April 25, 2023 (DOY 115)
- Storm total water content at SASP:** 36 mm (1.4 inches)
- Max gain in snow depth at SASP:** 29.4 cm (11.6 inches)
- Max gain in snow depth at SBSP:** 23.3 cm (9.2 inches) *wind affected
- Peak gust at PTSP at:** 2122 MST April 24, 2023 (DOY 114)



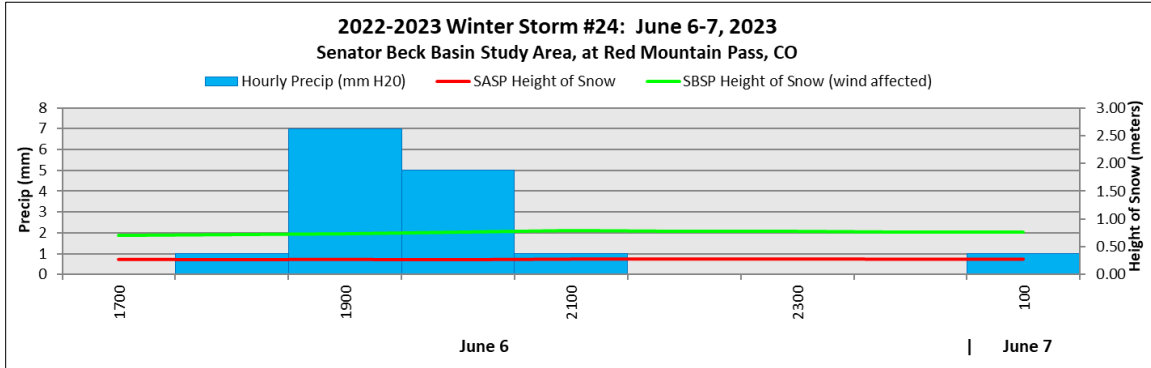
2022/23 WINTER STORM #23



- Storm precipitation began:** 2000-2100 MST May 10, 2023 (DOY 130)
- Storm precipitation ended:** 2000 MST May 11, 2023 (DOY 131)
- Storm duration:** 25 hours
- Mean precipitation intensity:** 0.96 mm/hour
- Max precipitation intensity:** 2 mm/hour at 1400 on May 11, 2023 (DOY 131)
- Storm total water content at SASP:** 24 mm (0.9 inches)
- Max gain in snow depth at SASP:** 14.5 cm (5.7 inches)
- Max gain in snow depth at SBSP:** 4.7 cm (1.9 inches) *wind affected
- Peak gust at PTSP at:** 40.5 MST May 11, 2023 (DOY 131)



2022/23 WINTER STORM #24



- Storm precipitation began:** 1700-1800 MST June 6, 2023 (DOY 157)
- Storm precipitation ended:** 0100 MST June 7, 2023 (DOY 158)
- Storm duration:** 9 hours
- Mean precipitation intensity:** 1.67 mm/hour
- Max precipitation intensity:** 7 mm/hour at 1900 on June 6, 2023 (DOY 157)
- Storm total water content at SASP:** 15 mm (0.6 inches)
- Max gain in snow depth at SASP:** 1.2 cm (0.5 inches)
- Max gain in snow depth at SBSP:** 6.0 cm (2.4 inches) *wind affected
- Peak gust at PTSP at:** 37.26 MST June 6 (DOY 157)

