Powder Mountain Resort
Bobcat Ridge Storm Water Report

Prepared For

Summit Powder Mountain

Prepared by

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CIVIL CONSULTANTS

August 2018

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1.0 INTRODUCTION

The Bobcat Ridge development is part of the master planned "Summit Village" core of Powder Mountain. Bobcat ridge is located on the south eastern part of "The Saddle" which Summit Village sits upon and is composed of 48 parcels. Talisman Civil Consultants, LLC was tasked to perform the planimetric and utility design for Bobcat Ridge. In addition to the planimetric layout of dry utilities, modeling software was integrated into the design process for wet utilities to dictate design and validate functionality. Models have been prepared for the following:

- Storm Drain System

2.0 METHODOLOGY

The hydraulic model for the storm drain system was developed using Bentley Haestad SewerGEMS modeling software. Unique parcel identities from Langvardt land use layout were utilized in the modeling process. CAD Design documents and modeling design information and nomenclature has been synchronized. This ensures the models accurately reflect the CAD utility designs. *Weber County Municipal Code Title 40* for storm drainage.

The storm water model utilizes SCS curve number methodology.

- The Soil Conservation Service Method (commonly known as SCS or TR-55 Method) was used for analyzing the hydrology of site.
- The basis of the curve number method is the empirical relationship between the retention (rainfall not converted into runoff) and runoff properties of the watershed and the rainfall. It accounts for most runoff producing watershed characteristics: soil type, land use/treatment, surface condition, and antecedent moisture condition.
- Composite Curve Numbers (CN Values) were developed by reviewing impervious, and pervious areas.

TCC utilized the following approach to calculate times of concentration:

- All catch basins have a minimum time of concentration of 10 minutes.
- The following time of concentration equation was used: $T=1.8*(1.1-c)D^{0.5}/S^{1/3}$
    - T is the time of concentration in minutes
    - Where C is a weighted dimensionless runoff coefficient based on hydrologic criteria of the site
    - D is the longest length of flow (ft)
    - S is the slope (ft/ft)

Precipitation intensity from NOAA Atlas 14 was used utilizing a latitude and longitude corresponding to Powder Mountain, Utah. The precipitation data was used to created SCS Type II storm distribution hydrograph curves. The NOAA precipitation data and hydrographs utilized in the model can be found in Appendix A.

Table 1 – NOAA Atlas 14 Eden Utah Precipitation Data

24 Hour Storm	1 Year	2 Year	5 Year	10 Year	25 Year	50 Year	100 Year
Rainfall (in)	2.34	2.88	2.52	3.47	4.66	5.20	5.76

3.0 ANALYSIS

Capacity requirements of the storm drain design are based on the *Weber County Municipal Code Title 40 – Storm Drainage,* and future build out conditions of Summit Village. To perform the drainage analysis, the development site has been divided into tributary areas of development. Existing impervious infrastructure was considered and an assumption of 4,500 square feet of impervious area planned parcel was incorporated into the analysis. This results in greater surface conveyance and ultimately, a more conservative model. An analysis has been performed on both the 10 year and 100 year storm events.

The SCS Type II unit hydrograph shows a sharp peak midway through the 24-hour storm duration. Because the of the utilization of these hydrographs in the model, run off peaks at 12 hours (720 minutes), or shortly thereafter. This is a critical time period for the system because it is during or shortly after this peak that the system is subject to the greatest flows and pipe capacities fully stressed, particularly in areas with significant amounts of impervious area. It is this peak time that dictates the conduit sizes. This peak is short, and flows subside within 0.5 hours.

A pre/post development flow rate analysis was performed to see whether the impervious area added due to the Bobcat Ridge development would have a statistically significant impact on naturally occurring flow rates.

3.0 SUMMARY OF RESULTS

Storm water is mitigated through a series of both drainage ditches and storm drain conduits. Conduits ranging from 18” to 24” have been implemented along Summit Pass, with 15” laterals to convey water from the catch basins to the main lines. The remainder of storm water mitigation along White Pine Road, Aspen Drive, and Meadow Drive is performed by a series of drainage ditches and culverts.

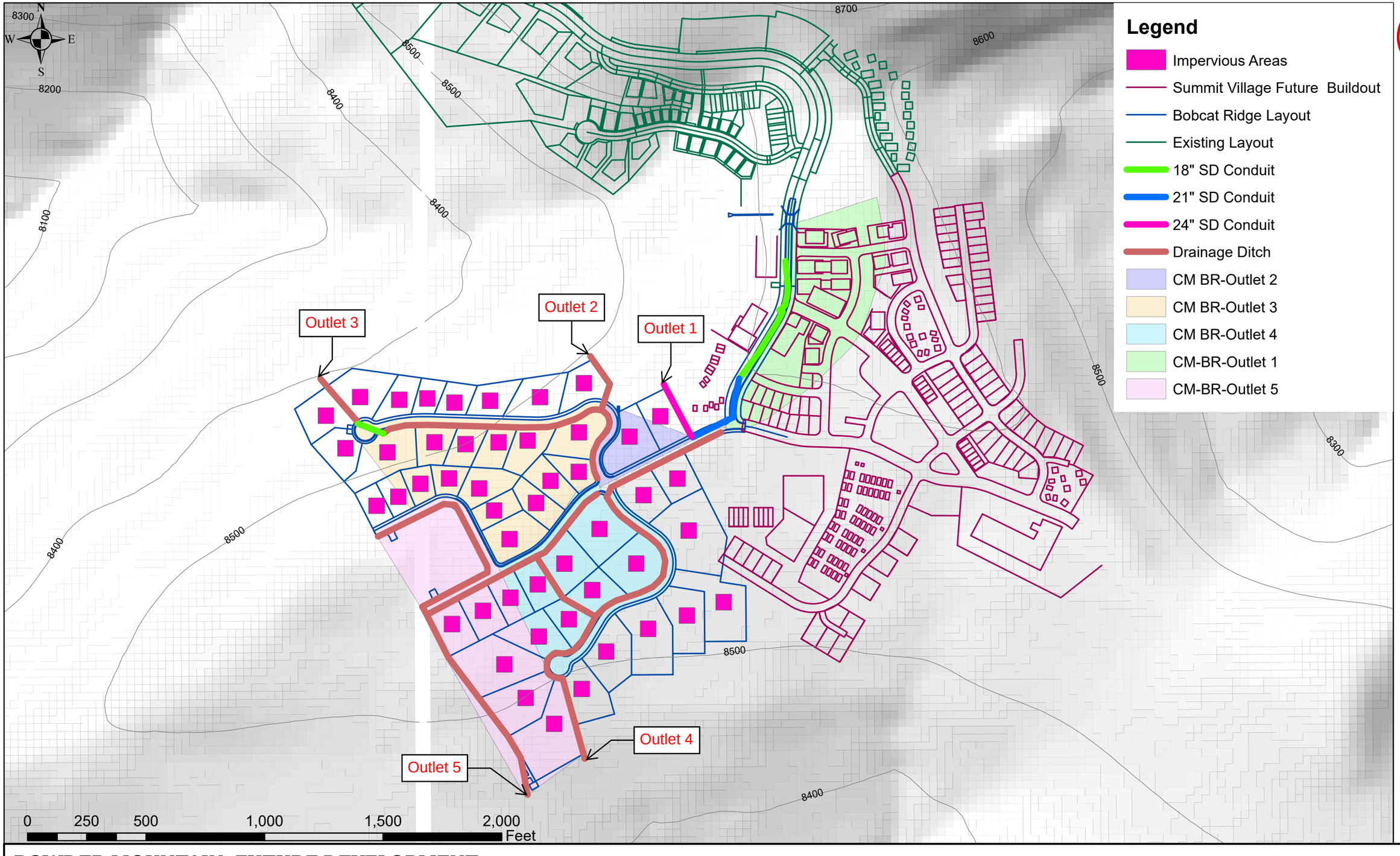
The conduits are sized for buildout conditions of Summit Village and adequately convey 10-year storm flows. The drainage ditches adequately convey the remainder of storm flows. Approximately 1/3rd of the development (Summit Pass, Aspen Drive) discharge down Lefty’s Canyon, while the remaining 2/3rds of the development (White Pine Drive and Meadow Drive) discharge down Gertsen Canyon. While the pre/post flow rate analysis naturally shows an increase in post development discharge, the Bobcat Ridge development alone was found to not significantly impact the pre-developed discharge rates of the Lefty’s and Gertsen Canyon tributary areas as a whole, and no storm water detention is required. However, storm water detention requirements may be subject to change as future development occurs.

Table 2 – Flow Rate Analysis Results

Outlet ID	Storm (years)	Pre-Developed Peak Discharge Rate (cfs)	Post Developed Peak DischargeRate (cfs)
Outlet 1	10	12.88	20.51
	100	26.43	31.30
Outlet 2	10	1.00	1.75
	100	2.03	2.84
Outlet 3	10	16.68	26.59
	100	34.06	44.16
Outlet 4	10	4.89	7.51
	100	9.63	12.77
Outlet 5	10	7.18	10.10
	100	14.53	18.42

See Appendix A for exhibits and model results regarding the storm drain system.

Appendix A - Exhibits & Figures



SD01

POWDER MOUNTAIN: FUTURE DEVELOPMENT

Storm Drain Exhibit 01 - Canyon Pre/Post Analysis (Tributary Areas)

August 2018

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FILENAME: N:\SLB0153\GIS\MXD\StormDrainMOB\D3MOBIntCBAreas.mxd

FlexTable: Catch Basin Table

Current Time: 720.00 min

Label	Elevation (Rim) (ft)	Elevation (Invert) (ft)	Flow (Captured) (cfs)
CB-BR-Culvert 1	8,536.00	8,531.00	2.15
CB-BR-Culvert 2	8,459.02	8,454.02	21.24
CB-SP-6	8,609.65	8,605.46	2.53
CB-SP-12	8,602.02	8,597.78	5.39
CB-SP-19	8,590.18	8,585.88	8.47
CB-WP-4	8,586.92	8,583.17	4.06

FlexTable: Catchment Table

Current Time: 720.00 min

Label	Outflow Element	Area (User Defined) (ft^2)	Time of Concentration (min)	Flow (Total Out) (cfs)	SCS CN
CM-BR-Culveret 1	CB-BR-Culvert 1	21,868.000	10.000	2.19	97.000
CM-BR-Culvert 2	CB-BR-Culvert 2	366,604.000	10.000	21.51	78.000
CM-SP-6	CB-SP-6	40,441.000	10.000	2.57	80.000
CM-SP-12	CB-SP-12	86,058.000	10.000	5.47	80.000
CM-SP-19	CB-SP-19	135,300.000	10.000	8.59	80.000
CM-WP-4	CB-WP-4	64,828.000	10.000	4.12	80.000

FlexTable: Conduit Table

Current Time: 720.00 min

Label	Length (Scaled) (ft)	Diameter (in)	Material	Flow (cfs)	Flow / Capacity (Design) (%)
CO-234	219.2	18.0	Concrete	2.55	12.0
CO-235	351.8	18.0	Concrete	7.98	41.3
BR Culvert 2	115.0	18.0	Concrete	26.59	83.5
CO-2	204.8	21.0	Concrete	16.48	90.4
CO-228	113.2	24.0	Concrete	20.53	83.7
Aspen Drive Ditch 2	247.3	42.0	Rough channel, with grass	26.59	10.7
BR Culvert 1	366.5	42.0	Rough channel, with grass	1.07	0.4
Meadow Drive Ditch 1	779.3	42.0	Rough channel, with grass	1.65	0.6
White Pine Drive Ditch 1	562.4	42.0	Rough channel, with grass	0.01	0.0
White Pine Drive Ditch 2	372.7	42.0	Rough channel, with grass	0.00	0.0
Aspen Drive Ditch 1	326.3	42.0	Rough channel, with grass	0.00	0.0
Aspen Drive Ditch 3	943.2	42.0	Rough channel, with grass	5.36	1.8
Aspen Drive Ditch 2	264.2	42.0	Rough channel, with grass	-0.03	0.0
White Pine Drive Ditch 3	522.3	42.0	Rough channel, with grass	0.97	0.4
Bobcat Drive Ditch 1	674.3	42.0	Rough channel, with grass	0.04	0.0
Bobcat Drive Ditch 2	350.7	42.0	Rough channel, with grass	8.45	2.5
Meadow Drive Ditch 2	420.5	42.0	Rough channel, with grass	8.88	4.2
Meadow Drive Ditch 3	18.3	42.0	Rough channel, with grass	7.51	3.6
Back Lot Ditch 1	819.9	42.0	Rough channel, with grass	16.24	6.4

NOAA Atlas 14, Volume 1, Version 5
Location name: Eden, Utah, USA*
Latitude: 41.3756°, Longitude: -111.7779°
Elevation: 8350.7 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.183** (0.161-0.209)	**0.232** (0.206-0.266)	**0.313** (0.275-0.357)	**0.384** (0.334-0.439)	**0.494** (0.422-0.569)	**0.595** (0.495-0.691)	**0.712** (0.575-0.838)	**0.851** (0.663-1.02)	**1.08** (0.794-1.34)	**1.30** (0.907-1.66)
10-min	**0.278** (0.245-0.318)	**0.353** (0.314-0.405)	**0.476** (0.418-0.543)	**0.584** (0.509-0.668)	**0.753** (0.643-0.867)	**0.905** (0.753-1.05)	**1.08** (0.876-1.28)	**1.30** (1.01-1.56)	**1.64** (1.21-2.04)	**1.97** (1.38-2.52)
15-min	**0.345** (0.304-0.394)	**0.438** (0.389-0.502)	**0.590** (0.519-0.673)	**0.725** (0.631-0.828)	**0.933** (0.797-1.07)	**1.12** (0.933-1.30)	**1.34** (1.09-1.58)	**1.61** (1.25-1.93)	**2.04** (1.50-2.53)	**2.44** (1.71-3.12)
30-min	**0.464** (0.409-0.531)	**0.589** (0.523-0.676)	**0.795** (0.698-0.907)	**0.976** (0.850-1.12)	**1.26** (1.07-1.45)	**1.51** (1.26-1.76)	**1.81** (1.46-2.13)	**2.16** (1.69-2.60)	**2.74** (2.02-3.40)	**3.29** (2.31-4.21)
60-min	**0.575** (0.506-0.657)	**0.729** (0.648-0.836)	**0.984** (0.864-1.12)	**1.21** (1.05-1.38)	**1.56** (1.33-1.79)	**1.87** (1.56-2.17)	**2.24** (1.81-2.64)	**2.68** (2.09-3.22)	**3.39** (2.50-4.21)	**4.08** (2.85-5.21)
2-hr	**0.772** (0.691-0.871)	**0.970** (0.865-1.09)	**1.25** (1.11-1.41)	**1.51** (1.32-1.70)	**1.92** (1.65-2.19)	**2.29** (1.93-2.64)	**2.73** (2.23-3.18)	**3.25** (2.56-3.87)	**4.08** (3.04-5.00)	**4.87** (3.46-6.12)
3-hr	**0.889** (0.805-0.991)	**1.10** (0.999-1.23)	**1.37** (1.23-1.53)	**1.62** (1.45-1.82)	**2.03** (1.78-2.28)	**2.40** (2.06-2.72)	**2.84** (2.38-3.27)	**3.34** (2.72-3.92)	**4.17** (3.23-5.03)	**4.93** (3.67-6.18)
6-hr	**1.26** (1.16-1.38)	**1.54** (1.42-1.69)	**1.86** (1.69-2.04)	**2.14** (1.94-2.36)	**2.57** (2.30-2.84)	**2.92** (2.58-3.26)	**3.32** (2.89-3.75)	**3.77** (3.21-4.31)	**4.63** (3.82-5.40)	**5.40** (4.34-6.45)
12-hr	**1.69** (1.55-1.86)	**2.07** (1.90-2.28)	**2.50** (2.27-2.76)	**2.88** (2.60-3.19)	**3.45** (3.08-3.85)	**3.92** (3.45-4.40)	**4.42** (3.83-5.02)	**4.96** (4.21-5.70)	**5.78** (4.77-6.79)	**6.43** (5.18-7.70)
24-hr	**2.34** (2.09-2.63)	**2.88** (2.57-3.23)	**3.47** (3.10-3.89)	**3.97** (3.53-4.45)	**4.66** (4.13-5.22)	**5.20** (4.59-5.82)	**5.76** (5.07-6.45)	**6.34** (5.55-7.09)	**7.13** (6.19-7.99)	**7.75** (6.67-8.71)
2-day	**2.90** (2.58-3.28)	**3.57** (3.18-4.04)	**4.31** (3.83-4.89)	**4.94** (4.37-5.59)	**5.80** (5.12-6.57)	**6.48** (5.69-7.34)	**7.19** (6.29-8.14)	**7.92** (6.88-8.97)	**8.91** (7.68-10.1)	**9.70** (8.29-11.0)
3-day	**3.39** (3.01-3.83)	**4.18** (3.72-4.73)	**5.08** (4.51-5.75)	**5.83** (5.16-6.60)	**6.88** (6.06-7.78)	**7.71** (6.76-8.72)	**8.57** (7.48-9.69)	**9.46** (8.21-10.7)	**10.7** (9.18-12.1)	**11.7** (9.93-13.3)
4-day	**3.88** (3.45-4.39)	**4.79** (4.26-5.42)	**5.84** (5.18-6.61)	**6.72** (5.95-7.61)	**7.95** (7.00-8.99)	**8.93** (7.82-10.1)	**9.95** (8.67-11.2)	**11.0** (9.53-12.5)	**12.5** (10.7-14.1)	**13.6** (11.6-15.5)
7-day	**4.93** (4.34-5.66)	**6.09** (5.37-7.00)	**7.41** (6.52-8.54)	**8.52** (7.47-9.82)	**10.1** (8.78-11.6)	**11.3** (9.81-13.0)	**12.5** (10.9-14.4)	**13.9** (11.9-16.0)	**15.7** (13.3-18.1)	**17.1** (14.4-19.8)
10-day	**5.71** (5.04-6.55)	**7.05** (6.23-8.08)	**8.52** (7.51-9.79)	**9.71** (8.55-11.2)	**11.3** (9.92-13.0)	**12.5** (11.0-14.4)	**13.8** (12.0-15.9)	**15.1** (13.0-17.3)	**16.7** (14.4-19.3)	**18.0** (15.4-20.9)
20-day	**7.59** (6.75-8.55)	**9.36** (8.32-10.5)	**11.2** (9.92-12.6)	**12.6** (11.2-14.2)	**14.5** (12.8-16.3)	**15.8** (13.9-17.8)	**17.2** (15.1-19.4)	**18.5** (16.2-20.9)	**20.2** (17.6-22.9)	**21.5** (18.6-24.4)
30-day	**9.30** (8.33-10.5)	**11.4** (10.2-12.9)	**13.6** (12.1-15.3)	**15.3** (13.6-17.2)	**17.5** (15.5-19.7)	**19.1** (16.9-21.5)	**20.7** (18.3-23.4)	**22.2** (19.6-25.2)	**24.2** (21.2-27.5)	**25.7** (22.4-29.2)
45-day	**11.8** (10.7-13.1)	**14.5** (13.1-16.1)	**17.2** (15.5-19.1)	**19.4** (17.4-21.5)	**22.1** (19.8-24.6)	**24.2** (21.6-26.9)	**26.3** (23.3-29.2)	**28.3** (25.0-31.5)	**30.9** (27.1-34.6)	**33.0** (28.7-37.0)
60-day	**13.8** (12.5-15.3)	**17.0** (15.3-18.8)	**20.1** (18.1-22.2)	**22.4** (20.2-24.9)	**25.5** (22.9-28.2)	**27.7** (24.8-30.8)	**29.9** (26.7-33.2)	**32.0** (28.5-35.6)	**34.7** (30.7-38.7)	**36.7** (32.3-41.1)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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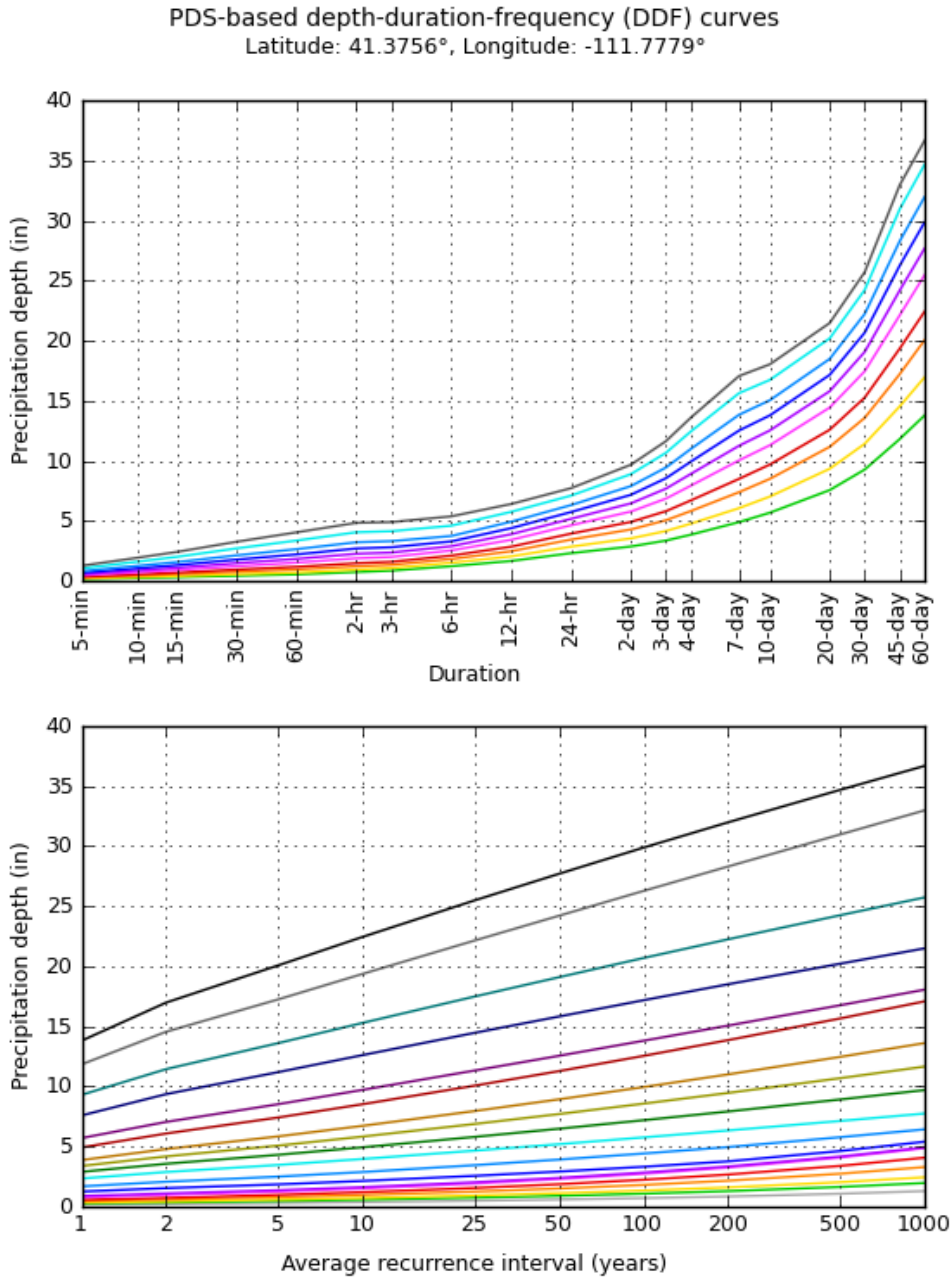
PF graphical



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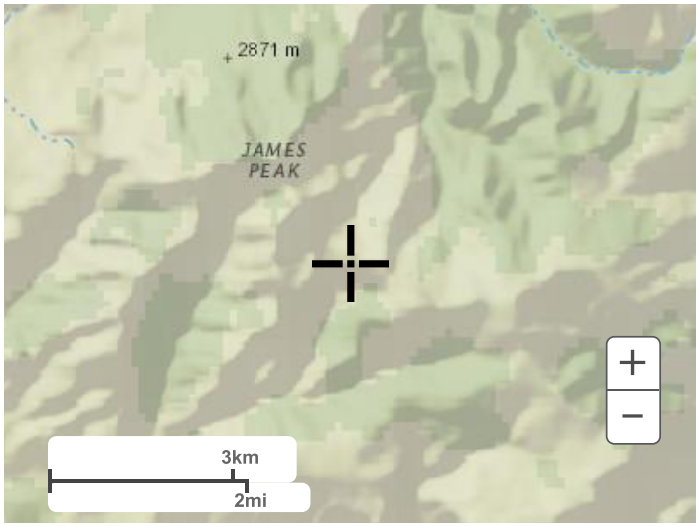
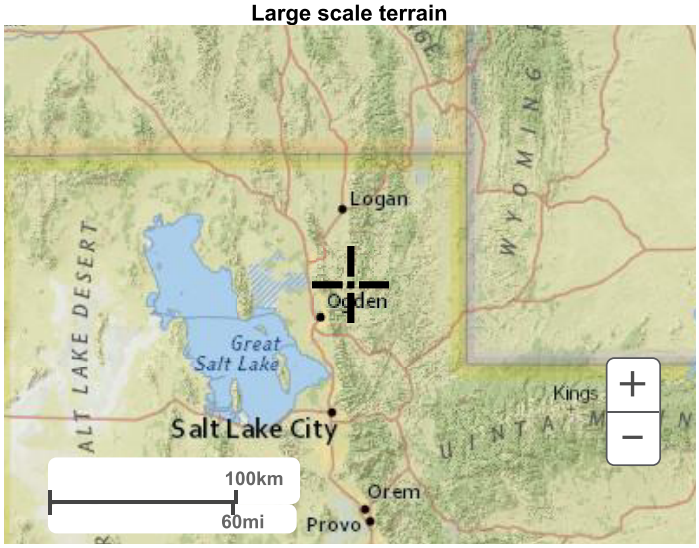
Maps & aerials

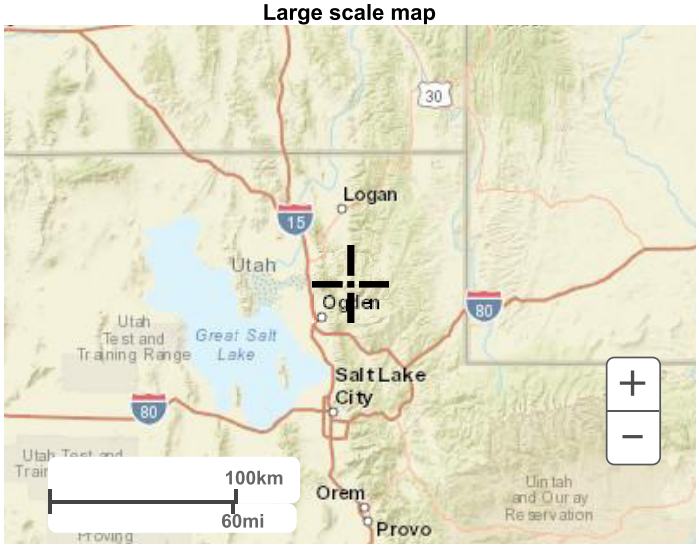
Small scale terrain



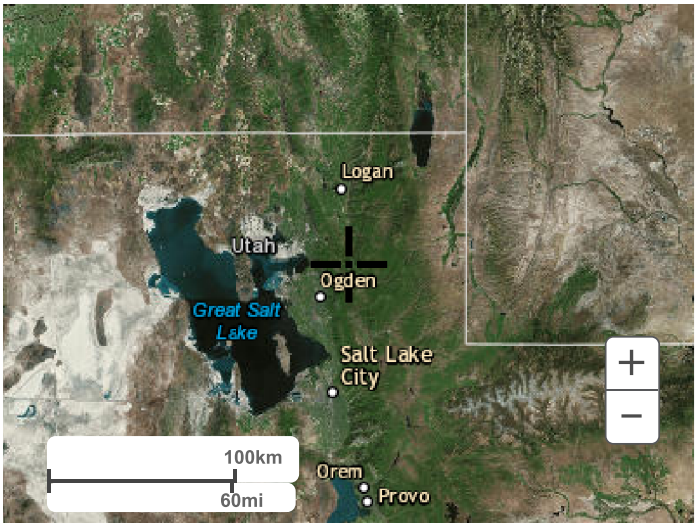
Large scale terrain



Large scale map



Large scale aerial



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National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

Storm Data Detailed Report: 10 Year Storm

Element Details			
ID	449	Notes	
Label	10 Year Storm		

10 year Storm			
Label	10 year Storm	End Time	1,440.000 min
Return Event	10 years	Depth	4.0 in
Start Time	0.000 min	Storm Event Depth Type	Cumulative
Increment	6.000 min		

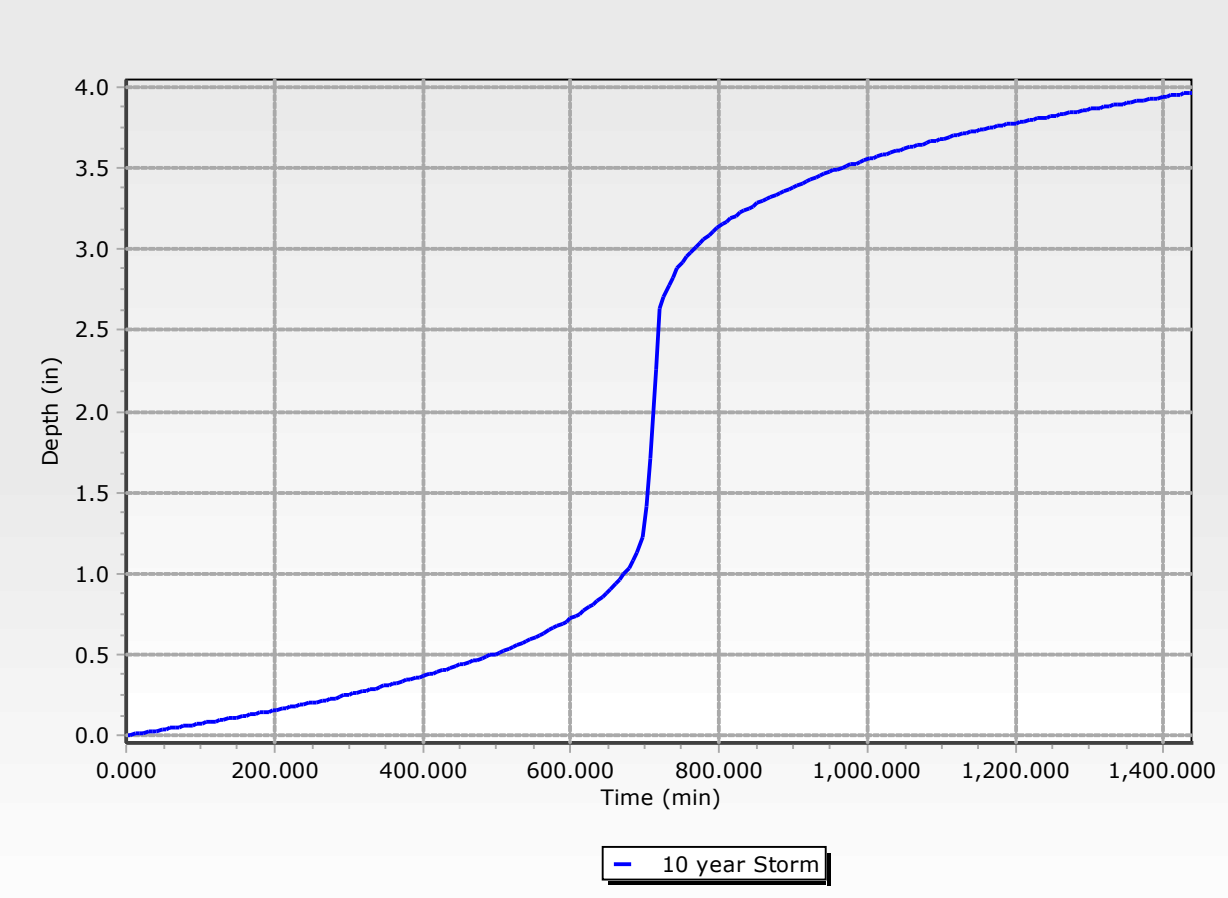
10 year Storm

Time (min)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0	0.0	0.0	0.0	0.0
30.000	0.0	0.0	0.0	0.0	0.0
60.000	0.0	0.0	0.1	0.1	0.1
90.000	0.1	0.1	0.1	0.1	0.1
120.000	0.1	0.1	0.1	0.1	0.1
150.000	0.1	0.1	0.1	0.1	0.1
180.000	0.1	0.1	0.1	0.2	0.2
210.000	0.2	0.2	0.2	0.2	0.2
240.000	0.2	0.2	0.2	0.2	0.2
270.000	0.2	0.2	0.2	0.2	0.2
300.000	0.3	0.3	0.3	0.3	0.3
330.000	0.3	0.3	0.3	0.3	0.3
360.000	0.3	0.3	0.3	0.3	0.3
390.000	0.4	0.4	0.4	0.4	0.4
420.000	0.4	0.4	0.4	0.4	0.4
450.000	0.4	0.4	0.5	0.5	0.5
480.000	0.5	0.5	0.5	0.5	0.5
510.000	0.5	0.5	0.5	0.6	0.6
540.000	0.6	0.6	0.6	0.6	0.6
570.000	0.6	0.7	0.7	0.7	0.7
600.000	0.7	0.7	0.8	0.8	0.8
630.000	0.8	0.8	0.9	0.9	0.9
660.000	0.9	1.0	1.0	1.0	1.1
690.000	1.1	1.2	1.4	1.7	2.3
720.000	2.6	2.7	2.8	2.8	2.9
750.000	2.9	3.0	3.0	3.0	3.0
780.000	3.1	3.1	3.1	3.1	3.2
810.000	3.2	3.2	3.2	3.2	3.2
840.000	3.3	3.3	3.3	3.3	3.3
870.000	3.3	3.3	3.4	3.4	3.4
900.000	3.4	3.4	3.4	3.4	3.4
930.000	3.4	3.5	3.5	3.5	3.5
960.000	3.5	3.5	3.5	3.5	3.5
990.000	3.5	3.5	3.6	3.6	3.6
1,020.000	3.6	3.6	3.6	3.6	3.6

Storm Data Detailed Report: 10 Year Storm

10 year Storm

Time (min)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
1,050.000	3.6	3.6	3.6	3.6	3.6
1,080.000	3.7	3.7	3.7	3.7	3.7
1,110.000	3.7	3.7	3.7	3.7	3.7
1,140.000	3.7	3.7	3.7	3.7	3.7
1,170.000	3.8	3.8	3.8	3.8	3.8
1,200.000	3.8	3.8	3.8	3.8	3.8
1,230.000	3.8	3.8	3.8	3.8	3.8
1,260.000	3.8	3.8	3.8	3.8	3.8
1,290.000	3.9	3.9	3.9	3.9	3.9
1,320.000	3.9	3.9	3.9	3.9	3.9
1,350.000	3.9	3.9	3.9	3.9	3.9
1,380.000	3.9	3.9	3.9	3.9	3.9
1,410.000	3.9	4.0	4.0	4.0	4.0
1,440.000	4.0	(N/A)	(N/A)	(N/A)	(N/A)



Storm Data Detailed Report: 100 Year Storm

Element Details			
ID	450	Notes	
Label	100 Year Storm		

100 Year Storm			
Label	100 Year Storm	End Time	1,440.000 min
Return Event	100 years	Depth	5.8 in
Start Time	0.000 min	Storm Event Depth Type	Cumulative
Increment	6.000 min		

100 Year Storm

Time (min)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
0.000	0.0	0.0	0.0	0.0	0.0
30.000	0.0	0.0	0.0	0.0	0.1
60.000	0.1	0.1	0.1	0.1	0.1
90.000	0.1	0.1	0.1	0.1	0.1
120.000	0.1	0.1	0.1	0.1	0.2
150.000	0.2	0.2	0.2	0.2	0.2
180.000	0.2	0.2	0.2	0.2	0.2
210.000	0.2	0.2	0.3	0.3	0.3
240.000	0.3	0.3	0.3	0.3	0.3
270.000	0.3	0.3	0.3	0.3	0.4
300.000	0.4	0.4	0.4	0.4	0.4
330.000	0.4	0.4	0.4	0.4	0.5
360.000	0.5	0.5	0.5	0.5	0.5
390.000	0.5	0.5	0.5	0.5	0.6
420.000	0.6	0.6	0.6	0.6	0.6
450.000	0.6	0.6	0.7	0.7	0.7
480.000	0.7	0.7	0.7	0.7	0.7
510.000	0.8	0.8	0.8	0.8	0.8
540.000	0.8	0.9	0.9	0.9	0.9
570.000	0.9	1.0	1.0	1.0	1.0
600.000	1.0	1.1	1.1	1.1	1.1
630.000	1.2	1.2	1.2	1.3	1.3
660.000	1.4	1.4	1.4	1.5	1.6
690.000	1.6	1.8	2.0	2.5	3.3
720.000	3.8	3.9	4.0	4.1	4.2
750.000	4.2	4.3	4.3	4.4	4.4
780.000	4.4	4.5	4.5	4.5	4.6
810.000	4.6	4.6	4.7	4.7	4.7
840.000	4.7	4.7	4.8	4.8	4.8
870.000	4.8	4.8	4.9	4.9	4.9
900.000	4.9	4.9	4.9	5.0	5.0
930.000	5.0	5.0	5.0	5.0	5.1
960.000	5.1	5.1	5.1	5.1	5.1
990.000	5.1	5.1	5.2	5.2	5.2
1,020.000	5.2	5.2	5.2	5.2	5.2

Storm Data Detailed Report: 100 Year Storm

100 Year Storm

Time (min)	Depth (in)	Depth (in)	Depth (in)	Depth (in)	Depth (in)
1,050.000	5.3	5.3	5.3	5.3	5.3
1,080.000	5.3	5.3	5.3	5.3	5.3
1,110.000	5.4	5.4	5.4	5.4	5.4
1,140.000	5.4	5.4	5.4	5.4	5.4
1,170.000	5.4	5.5	5.5	5.5	5.5
1,200.000	5.5	5.5	5.5	5.5	5.5
1,230.000	5.5	5.5	5.5	5.5	5.5
1,260.000	5.6	5.6	5.6	5.6	5.6
1,290.000	5.6	5.6	5.6	5.6	5.6
1,320.000	5.6	5.6	5.6	5.6	5.7
1,350.000	5.7	5.7	5.7	5.7	5.7
1,380.000	5.7	5.7	5.7	5.7	5.7
1,410.000	5.7	5.7	5.7	5.7	5.8
1,440.000	5.8	(N/A)	(N/A)	(N/A)	(N/A)