

R/W Left	100-Year, 24-hr Retention Volume																																																																							
	Rational C= Area (sq. ft.)= Area (ac.)= Infiltration (um/s)= Inf. Area (sq. ft.)= Infiltration (cfs)= 0.670 25026 0.57 7.50 3746 0.09 <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Storm (min)</th> <th>Precipitation (in)</th> <th>Intensity (in/hr)</th> <th>Peak Flow (cfs)</th> <th>Infiltration (cfs)</th> <th>Volume (cu. ft.)</th> </tr> </thead> <tbody> <tr><td>5</td><td>0.601</td><td>7.21</td><td>2.78</td><td>0.09</td><td>805</td></tr> <tr><td>10</td><td>0.914</td><td>5.48</td><td>2.11</td><td>0.09</td><td>1211</td></tr> <tr><td>15</td><td>1.13</td><td>4.52</td><td>1.74</td><td>0.09</td><td>1483</td></tr> <tr><td>30</td><td>1.53</td><td>3.06</td><td>1.18</td><td>0.09</td><td>1954</td></tr> <tr><td>60</td><td>1.89</td><td>1.89</td><td>0.73</td><td>0.09</td><td>2287</td></tr> <tr><td>120</td><td>2.17</td><td>1.09</td><td>0.42</td><td>0.09</td><td>2343</td></tr> <tr><td>180</td><td>2.25</td><td>0.75</td><td>0.29</td><td>0.09</td><td>2122</td></tr> <tr><td>360</td><td>2.52</td><td>0.42</td><td>0.16</td><td>0.09</td><td>1501</td></tr> <tr><td>720</td><td>3.16</td><td>0.26</td><td>0.10</td><td>0.09</td><td>397</td></tr> <tr><td>1440</td><td>3.62</td><td>0.15</td><td>0.06</td><td>0.09</td><td>-2948</td></tr> </tbody> </table> Volume Req'd (cu. ft.)= 2343						Storm (min)	Precipitation (in)	Intensity (in/hr)	Peak Flow (cfs)	Infiltration (cfs)	Volume (cu. ft.)	5	0.601	7.21	2.78	0.09	805	10	0.914	5.48	2.11	0.09	1211	15	1.13	4.52	1.74	0.09	1483	30	1.53	3.06	1.18	0.09	1954	60	1.89	1.89	0.73	0.09	2287	120	2.17	1.09	0.42	0.09	2343	180	2.25	0.75	0.29	0.09	2122	360	2.52	0.42	0.16	0.09	1501	720	3.16	0.26	0.10	0.09	397	1440	3.62	0.15	0.06	0.09	-2948
	Storm (min)	Precipitation (in)	Intensity (in/hr)	Peak Flow (cfs)	Infiltration (cfs)	Volume (cu. ft.)																																																																		
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	Rational C= Area (sq. ft.)= Area (ac.)= Infiltration (um/s)= Inf. Area (sq. ft.)= Infiltration (cfs)= 0.504 16324 0.37 7.50 3000 0.07 <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Storm (min)</th> <th>Precipitation (in)</th> <th>Intensity (in/hr)</th> <th>Peak Flow (cfs)</th> <th>Infiltration (cfs)</th> <th>Volume (cu. ft.)</th> </tr> </thead> <tbody> <tr><td>5</td><td>0.601</td><td>7.21</td><td>1.36</td><td>0.09</td><td>381</td></tr> <tr><td>10</td><td>0.914</td><td>5.48</td><td>1.04</td><td>0.09</td><td>566</td></tr> <tr><td>15</td><td>1.13</td><td>4.52</td><td>0.85</td><td>0.09</td><td>685</td></tr> <tr><td>30</td><td>1.53</td><td>3.06</td><td>0.58</td><td>0.09</td><td>874</td></tr> <tr><td>60</td><td>1.89</td><td>1.89</td><td>0.36</td><td>0.09</td><td>953</td></tr> <tr><td>120</td><td>2.17</td><td>1.09</td><td>0.20</td><td>0.09</td><td>812</td></tr> <tr><td>180</td><td>2.25</td><td>0.75</td><td>0.14</td><td>0.09</td><td>534</td></tr> <tr><td>360</td><td>2.52</td><td>0.42</td><td>0.08</td><td>0.09</td><td>-278</td></tr> <tr><td>720</td><td>3.16</td><td>0.26</td><td>0.05</td><td>0.09</td><td>-1834</td></tr> <tr><td>1440</td><td>3.62</td><td>0.15</td><td>0.03</td><td>0.09</td><td>-5503</td></tr> </tbody> </table> Volume Req'd (cu. ft.)= 953						Storm (min)	Precipitation (in)	Intensity (in/hr)	Peak Flow (cfs)	Infiltration (cfs)	Volume (cu. ft.)	5	0.601	7.21	1.36	0.09	381	10	0.914	5.48	1.04	0.09	566	15	1.13	4.52	0.85	0.09	685	30	1.53	3.06	0.58	0.09	874	60	1.89	1.89	0.36	0.09	953	120	2.17	1.09	0.20	0.09	812	180	2.25	0.75	0.14	0.09	534	360	2.52	0.42	0.08	0.09	-278	720	3.16	0.26	0.05	0.09	-1834	1440	3.62	0.15	0.03	0.09	-5503
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Total Volume Req'd (cu. ft.)=			3296																																																																					



NOAA Atlas 14, Volume 1, Version 5
Location name: Huntsville, Utah, USA*
Latitude: 41.2557°, Longitude: -111.7488°
Elevation: 4965.86 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](#)

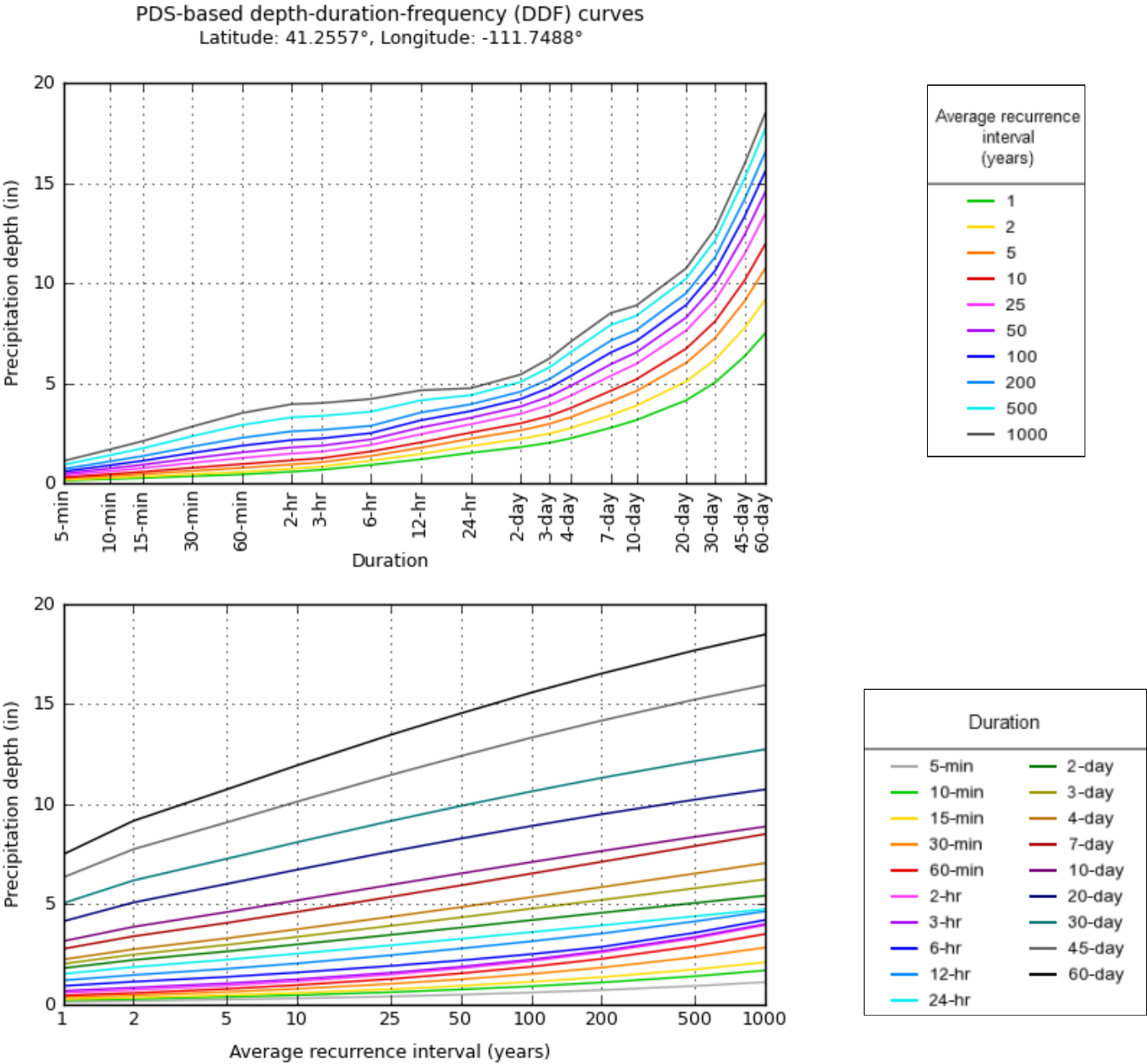
PF tabular

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	0.145 (0.127-0.168)	0.183 (0.162-0.212)	0.250 (0.218-0.288)	0.309 (0.268-0.358)	0.406 (0.344-0.473)	0.495 (0.407-0.582)	0.601 (0.479-0.715)	0.726 (0.557-0.880)	0.929 (0.673-1.16)	1.12 (0.772-1.44)
10-min	0.221 (0.193-0.255)	0.279 (0.246-0.323)	0.380 (0.332-0.438)	0.471 (0.408-0.545)	0.618 (0.523-0.719)	0.754 (0.620-0.886)	0.914 (0.728-1.09)	1.10 (0.847-1.34)	1.41 (1.02-1.77)	1.70 (1.18-2.19)
15-min	0.274 (0.239-0.316)	0.346 (0.305-0.400)	0.471 (0.412-0.543)	0.584 (0.506-0.675)	0.766 (0.648-0.892)	0.935 (0.769-1.10)	1.13 (0.903-1.35)	1.37 (1.05-1.66)	1.75 (1.27-2.19)	2.11 (1.46-2.71)
30-min	0.368 (0.322-0.426)	0.466 (0.411-0.539)	0.634 (0.555-0.731)	0.786 (0.682-0.909)	1.03 (0.873-1.20)	1.26 (1.03-1.48)	1.53 (1.22-1.82)	1.84 (1.41-2.24)	2.36 (1.71-2.95)	2.85 (1.96-3.65)
60-min	0.456 (0.398-0.527)	0.577 (0.509-0.667)	0.784 (0.686-0.905)	0.973 (0.843-1.13)	1.28 (1.08-1.49)	1.56 (1.28-1.83)	1.89 (1.50-2.25)	2.28 (1.75-2.77)	2.92 (2.12-3.65)	3.52 (2.43-4.51)
2-hr	0.591 (0.526-0.671)	0.737 (0.657-0.839)	0.954 (0.846-1.09)	1.16 (1.02-1.32)	1.50 (1.28-1.72)	1.81 (1.51-2.10)	2.17 (1.76-2.55)	2.61 (2.03-3.13)	3.31 (2.43-4.10)	3.96 (2.78-5.03)
3-hr	0.684 (0.616-0.766)	0.846 (0.763-0.949)	1.06 (0.948-1.19)	1.26 (1.12-1.42)	1.59 (1.38-1.80)	1.89 (1.61-2.16)	2.25 (1.87-2.61)	2.67 (2.15-3.16)	3.37 (2.58-4.11)	4.01 (2.95-5.08)
6-hr	0.931 (0.854-1.02)	1.14 (1.05-1.26)	1.38 (1.26-1.52)	1.60 (1.45-1.77)	1.93 (1.72-2.14)	2.20 (1.94-2.47)	2.52 (2.18-2.86)	2.88 (2.43-3.31)	3.58 (2.93-4.21)	4.22 (3.35-5.11)
12-hr	1.21 (1.11-1.33)	1.48 (1.36-1.63)	1.78 (1.63-1.97)	2.06 (1.86-2.27)	2.46 (2.20-2.74)	2.80 (2.47-3.14)	3.16 (2.74-3.59)	3.54 (3.01-4.08)	4.15 (3.42-4.90)	4.65 (3.73-5.60)
24-hr	1.53 (1.39-1.69)	1.87 (1.71-2.07)	2.24 (2.03-2.47)	2.54 (2.31-2.80)	2.96 (2.68-3.26)	3.28 (2.96-3.62)	3.62 (3.25-3.99)	3.95 (3.54-4.37)	4.41 (3.92-4.94)	4.76 (4.20-5.65)
2-day	1.82 (1.66-2.00)	2.23 (2.03-2.45)	2.65 (2.42-2.92)	3.00 (2.73-3.30)	3.48 (3.16-3.82)	3.84 (3.47-4.22)	4.21 (3.80-4.63)	4.58 (4.11-5.04)	5.07 (4.51-5.59)	5.44 (4.82-6.01)
3-day	2.04 (1.86-2.23)	2.49 (2.28-2.74)	2.98 (2.72-3.27)	3.38 (3.08-3.71)	3.93 (3.57-4.30)	4.35 (3.94-4.77)	4.79 (4.31-5.26)	5.22 (4.68-5.74)	5.80 (5.16-6.40)	6.25 (5.52-6.91)
4-day	2.25 (2.06-2.47)	2.76 (2.52-3.03)	3.31 (3.02-3.62)	3.76 (3.43-4.11)	4.38 (3.98-4.79)	4.86 (4.40-5.32)	5.36 (4.83-5.88)	5.86 (5.25-6.44)	6.54 (5.81-7.21)	7.06 (6.23-7.80)
7-day	2.78 (2.52-3.09)	3.41 (3.09-3.78)	4.08 (3.69-4.52)	4.63 (4.18-5.13)	5.37 (4.84-5.95)	5.95 (5.34-6.59)	6.54 (5.85-7.25)	7.13 (6.35-7.93)	7.91 (7.00-8.85)	8.51 (7.48-9.55)
10-day	3.16 (2.86-3.51)	3.88 (3.51-4.31)	4.61 (4.18-5.11)	5.20 (4.71-5.76)	5.97 (5.39-6.62)	6.54 (5.89-7.25)	7.11 (6.38-7.89)	7.66 (6.86-8.51)	8.37 (7.45-9.34)	8.88 (7.87-9.96)
20-day	4.15 (3.76-4.58)	5.10 (4.61-5.63)	6.02 (5.45-6.64)	6.73 (6.08-7.42)	7.63 (6.90-8.40)	8.28 (7.47-9.12)	8.91 (8.03-9.82)	9.50 (8.53-10.5)	10.2 (9.15-11.3)	10.7 (9.57-11.9)
30-day	5.05 (4.62-5.55)	6.20 (5.65-6.80)	7.27 (6.63-7.97)	8.10 (7.37-8.88)	9.16 (8.32-10.0)	9.91 (8.98-10.9)	10.6 (9.61-11.7)	11.3 (10.2-12.4)	12.1 (10.9-13.4)	12.7 (11.4-14.1)
45-day	6.34 (5.80-6.94)	7.75 (7.09-8.48)	9.09 (8.30-9.93)	10.1 (9.24-11.1)	11.4 (10.4-12.5)	12.4 (11.3-13.5)	13.3 (12.1-14.6)	14.2 (12.8-15.5)	15.2 (13.7-16.7)	15.9 (14.4-17.5)
60-day	7.49 (6.88-8.14)	9.17 (8.42-9.97)	10.7 (9.86-11.7)	11.9 (11.0-12.9)	13.5 (12.3-14.6)	14.5 (13.3-15.8)	15.6 (14.2-16.9)	16.5 (15.1-17.9)	17.7 (16.1-19.2)	18.5 (16.8-20.2)

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.

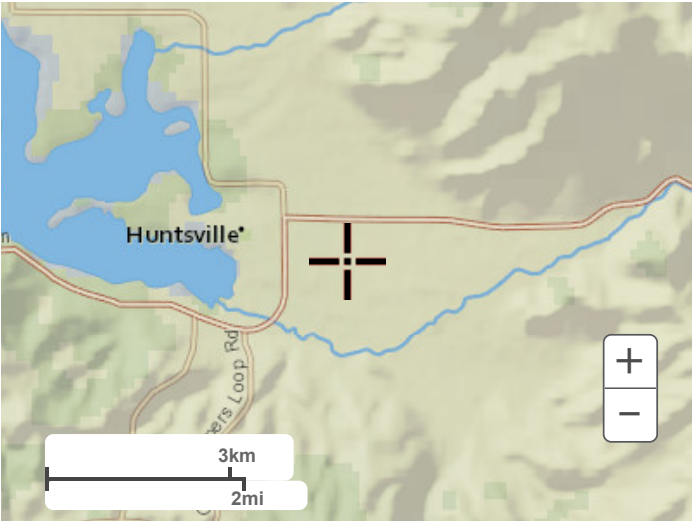
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PF graphical

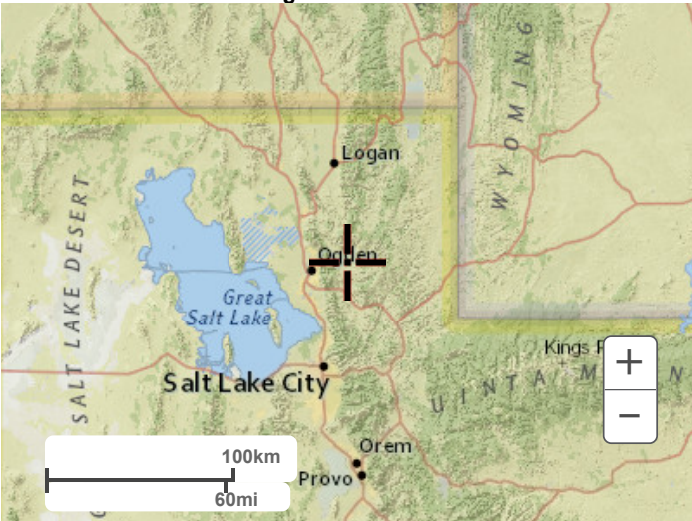


Maps & aerals

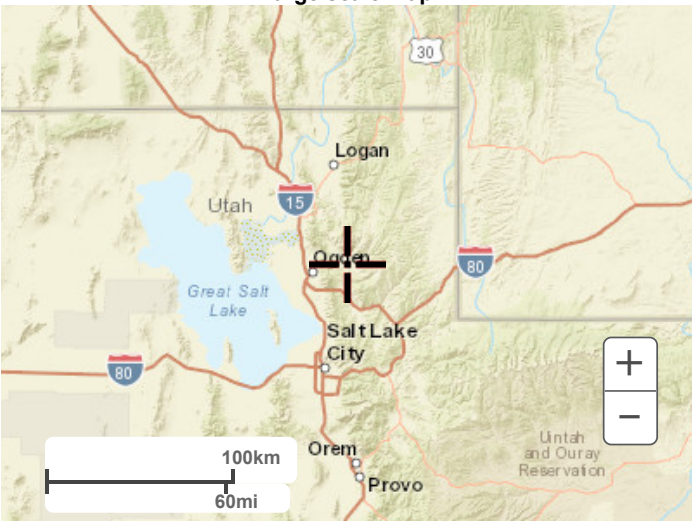
Small scale terrain



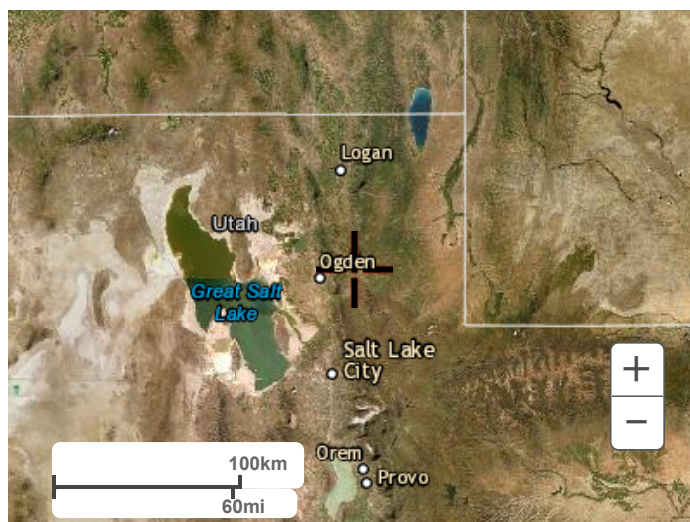
Large scale terrain



Large scale map



Large scale aerial



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[National Water Center](#)
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

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	Contour	Elevation Area (sq. ft.)	Increment (ft)	Incremental Volume (cu. ft.)	Cumulative Volume (cu. ft.)
Stage Storage	4,958.00	499.3	N/A	N/A	0
	4,958.10	527.02	0.1	51.32	51.32
	4,958.20	555.72	0.1	54.14	105.45
	4,958.30	585.42	0.1	57.06	162.51
	4,958.40	616.06	0.1	60.07	222.58
	4,958.50	647.72	0.1	63.19	285.77
	4,958.60	680.51	0.1	66.41	352.18
	4,958.70	714.42	0.1	69.75	421.93
	4,958.80	749.39	0.1	73.19	495.12
	4,958.90	785.43	0.1	76.74	571.86
	4,959.00	820.48	0.1	80.30	652.16
	4,959.10	842.11	0.1	83.13	735.29
	4,959.20	878.27	0.1	86.02	821.30
	4,959.30	915.42	0.1	89.68	910.99
	4,959.40	953.56	0.1	93.45	1004.44
	4,959.50	992.82	0.1	97.32	1101.76
	4,959.60	1,033.21	0.1	101.30	1203.06
	4,959.70	1,074.69	0.1	105.40	1308.45
	4,959.80	1,117.26	0.1	109.60	1418.05
	4,959.90	1,160.91	0.1	113.91	1531.96
	4,960.00	1,196.58	0.1	117.87	1649.83
	4,960.10	1,231.86	0.1	121.42	1771.26
	4,960.20	1,275.40	0.1	125.36	1896.62
	4,960.30	1,320.01	0.1	129.77	2026.39
	4,960.40	1,367.24	0.1	134.36	2160.75
	4,960.50	1,416.02	0.1	139.16	2299.92
	4,960.60	1,465.75	0.1	144.09	2444.01
	4,960.70	1,516.50	0.1	149.11	2593.12
	4,960.80	1,568.21	0.1	154.24	2747.35
	4,960.90	1,620.87	0.1	159.45	2906.81
	4,961.00	1,668.04	0.1	164.45	3071.25
	4,961.10	1,707.28	0.1	168.77	3240.02
	4,961.20	1,757.15	0.1	173.22	3413.24
	4,961.30	1,807.58	0.1	178.24	3591.48
	4,961.40	1,858.55	0.1	183.31	3774.78
	4,961.50	1,910.11	0.1	188.43	3963.22
	4,961.60	1,962.25	0.1	193.62	4156.84
	4,961.70	2,015.01	0.1	198.86	4355.70
	4,961.80	2,068.36	0.1	204.17	4559.87
	4,961.90	2,122.30	0.1	209.53	4769.40