



Stormwater Utility

June 8, 2021

Prepared for:

City of Spring Lake Park

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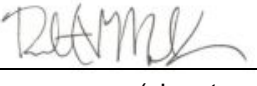


STORMWATER UTILITY

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Executive Summary

This document presents the rationale and methods that guided the creation of the City of Spring Lake Park Stormwater Utility (SWU). Implementing a stormwater utility creates a dedicated funding source for storm drainage improvements and maintenance. The funding created by a stormwater utility can also be used to implement the requirements of the MS4 permit.

This document includes a methods discussion for defining the "**Residential Equivalency Factor**" (REF), which is the basic unit for the fee structure. One REF represents the runoff volume generated by a typical low density residential lot. The utility assigns REFs to other properties based on their size and existing land use classification.

Since the volume of runoff varies according to rainfall amounts, the creation of the stormwater utility rate schedule contained herein is based on a 24-hour, 3.6-inch storm event (approximately a 5-year storm event).

In general, each low density residential parcel is assumed to have an equal benefit and will be charged as one REF. Parcels with land uses other than low density residential have a charge based on runoff relative to a typical low density residential parcel.



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INTRODUCTION

1.0 INTRODUCTION

1.1 PURPOSE OF A STORMWATER UTILITY

Municipalities create stormwater utilities so that dedicated funds are available to operate, maintain, manage, construct, and/or reconstruct their municipal stormwater systems. A stormwater utility is a dedicated revenue source intended to alleviate the burden on general funds. Essentially, the stormwater utility is identical to a water or sanitary sewer utility, in which the utility's users finance the utility's infrastructure costs. The stormwater utility charge is not associated in any way with property value, property taxes, or the owner's income.

The proposed stormwater utility for the City of Spring Lake Park defines a "user" as any property that contributes stormwater runoff to the storm drainage system. The users include all existing land use categories, with the exception of the following:

- City-owned property
- Delineated wetlands, lakes, and rivers
- Public rights-of-way
- Vacant, unimproved areas with ground cover

Typically, municipalities charge a stormwater utility fee to all users within the City based on the amount of runoff that each property generates and contributes to the stormwater system. As a rule, the runoff generated relates directly to the amount of hard surface, or impervious area, found on the property.

Hard surfaces such as rooftops, driveways, and parking lots prevent rainfall from infiltrating into the ground, thus increasing the amount of runoff that a property generates. Consequently, a property with more impervious area uses the system to a greater extent than a property with less hard surface. The existing land use and current parcel coverage within the City of Spring Lake Park used for the generation of the stormwater utility can be found as Figure 2-1, 2018 Existing Land Use, in the Spring Lake Park 2040 Comprehensive Plan. A copy of the map is attached to this report for reference purposes (Appendix A).

2.0 PROPOSED STORMWATER UTILITY FEES

2.1 PROPOSED FEE METHODOLOGY

Stormwater utility fees are based on the user's share of the costs to be funded by the utility. This is an equitable and practical means of financing these ongoing costs. Conceptually, users pay a stormwater



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PROPOSED STORMWATER UTILITY FEES

utility fee in proportion to the amount of stormwater runoff generated by their property during a defined design storm. The following criteria were used to determine the total runoff and fee structure:

Design storm: 3.6 inches in 24 hours (approximately a 5-year rainfall event)

Hydrologic soil group: HSG B

Typical low density residential lot: 0.275 acre, 38% impervious

The typical low density residential lot identified above defines the stormwater utility fee structure's basic unit, the "**Residential Equivalency Factor**" (REF). This typical low density residential lot is not representative of any particular lot and is used only as a means to calculate REFs per acre for properties with other existing land use designations.

The existing land use designations from the 2040 Comprehensive Plan are presented in Table 2.1. The different land use designations are defined to characterize all parcels within the City. As shown in Table 2.1, all low density residential properties are assigned 1 REF. For the other land uses, the REF per acre values are based on the amount of runoff generated by the various land uses compared to the amount generated by the typical low density residential lot.

A summary of the typical percent impervious values, REFs per acre, and current total number of REFs for each existing land use category in the City is presented in Table 2.1.



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PROPOSED STORMWATER UTILITY FEES

Table 1.1 – Approximate Residential Equivalency Factor Summary

Existing Land Use	Typical Curve Number Value	Typical % Impervious	REFs/ parcel	REFs/ acre	acres	Total REFs
Low Density Residential (1-3 units/acre) ¹	75	38%	1	--	--	1,807
Medium Density Residential (3-10 units/acre)	85	65%	--	5.6	23.99	134
High Density Residential (10+ units/acre) ²	85	65%	--	5.6	65.64	368
Commercial	92	85%	--	7.3	78.43	573
Commercial/Industrial	88	72%	--	6.3	74.26	468
Public/Semi-Public	88	72%	--	6.3	96.01	605
Parks/Open Spaces ³	61	0%	0	0	--	0
Right-of-Way ³	61	0%	0	0	--	0
Open Water, NWI Wetland ³	61	0%	0	0	--	0
Vacant, unimproved ³	61	0%	0	--	0	0
					Total	3,955

¹Individual townhomes will be assigned 1 REF if the townhomes are identified as separate parcels and the owners are billed separately for municipal utilities. If the townhome development is treated as one parcel and the townhome association is billed for utilities as a whole, the association will be treated as medium density residential.

²Includes Senior/Handicapped Residential.

³Exempt from the stormwater utility.

For parcels that do not appear to fit with the percent impervious assumptions identified above, a table identifying REF/acre values based on percent impervious coverage can be found in Appendix B. A site-specific REF determination for unique parcels can be made based on the Equivalent REF/acre figures in Appendix B.

2.2 PROPOSED FEE CALCULATION

The total estimated revenue collected each year is directly proportional to the utility charge per REF and the number of REFs. As noted in Table 2.1, there are an estimated 3,955 REFs in the City. As an example calculation using a monthly charge of \$2.00 per REF (quarterly charge of \$6.00 per REF), the total annual revenue generated by the stormwater utility is as follows:

Total annual revenue = Total number of REFs x Charge per REF = 3,955 x \$2.00 x 12 = \$94,920 per year



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Recommendations

2.3 IMPLEMENTATION

To implement the Spring Lake Park stormwater utility, the City will need to adopt an ordinance outlining the specifics of the stormwater utility. A stormwater utility ordinance establishes the user fee system as the principal funding mechanism for the City's stormwater management program.

Furthermore, it is recommended that the stormwater utility fee be added to each individual sewer and water utility bill as an additional line item on the bill. Properties that do not receive sewer and water bills should receive separate bills, possibly on a quarterly or annual basis.

2.4 SAMPLE PROPERTIES

To illustrate how the stormwater utility will be implemented the following shows how some sample properties will be charged.

<input type="checkbox"/>	Low Density Residential lot	1 REF for all Low Density lots
<input type="checkbox"/>	30-unit townhome development	30 REFs (1 REF per unit)
<input type="checkbox"/>	4.56-acre Medium Density Residential development	25.4 REFs (5.6 REFs per acre)
<input type="checkbox"/>	2.6-acre Commercial parcel	19.0 REFs (7.3 REFs per acre)
<input type="checkbox"/>	2.0-acre Commercial/Industrial parcel	12.6 REFs (6.3 REFs per acre)
<input type="checkbox"/>	0.7-acre vacant, unimproved parcel	0 REF (vacant parcels exempt)

3.0 RECOMMENDATIONS

The recommended actions necessary to proceed with the implementation and integration of the stormwater utility fee are as follows:

1. Adopt an ordinance establishing the stormwater utility.
2. Establish procedures to bill and collect the fees.

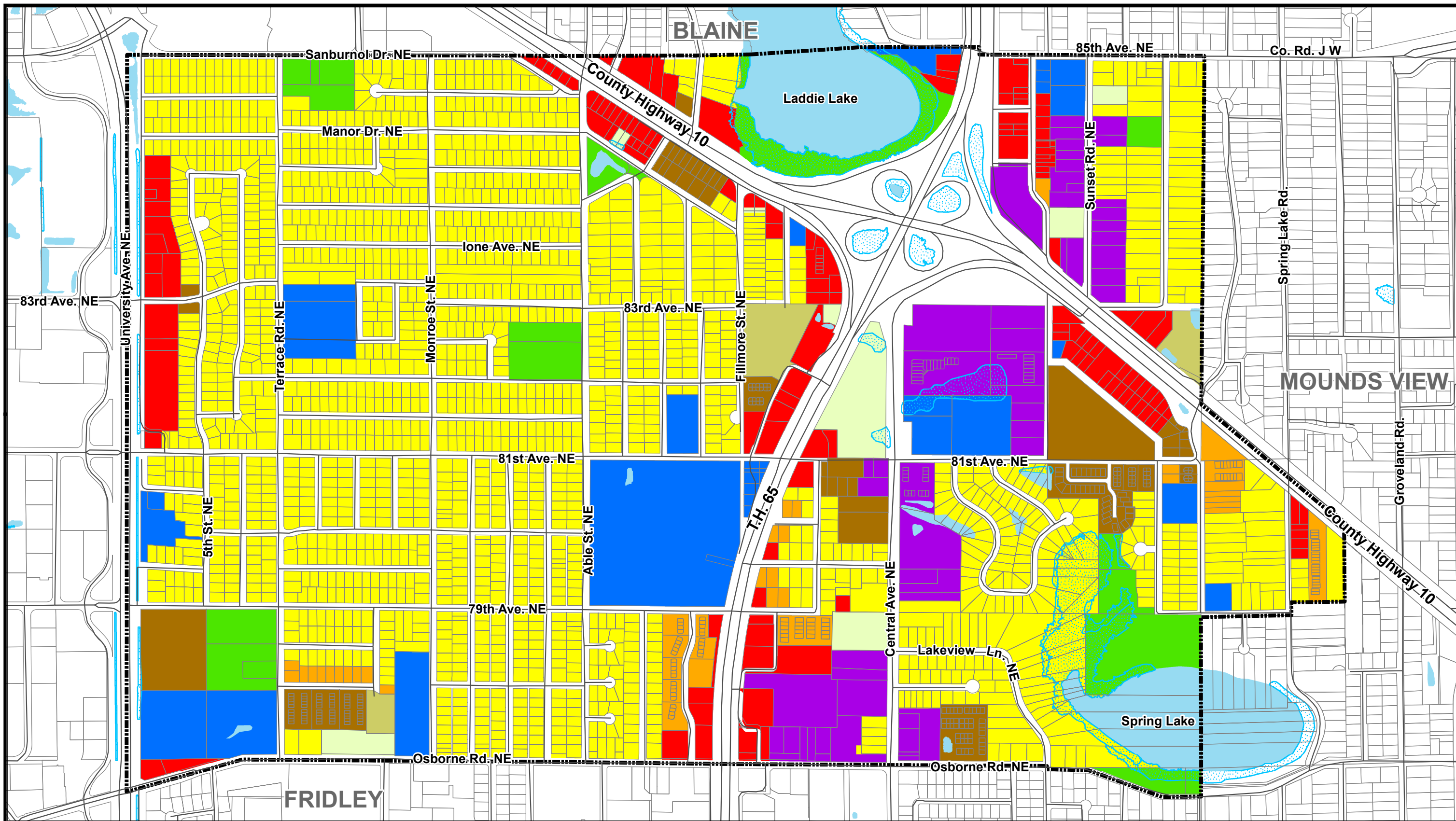
The recommended actions necessary to maintain the stormwater utility are:

1. Modify the charge for parcels in the system as specific development projects are approved.
2. Review and update the existing land use designations as necessary.
3. Review the stormwater utility charge rate annually as part of the annual budgeting process.
4. Periodically review and update the billing list as necessary.

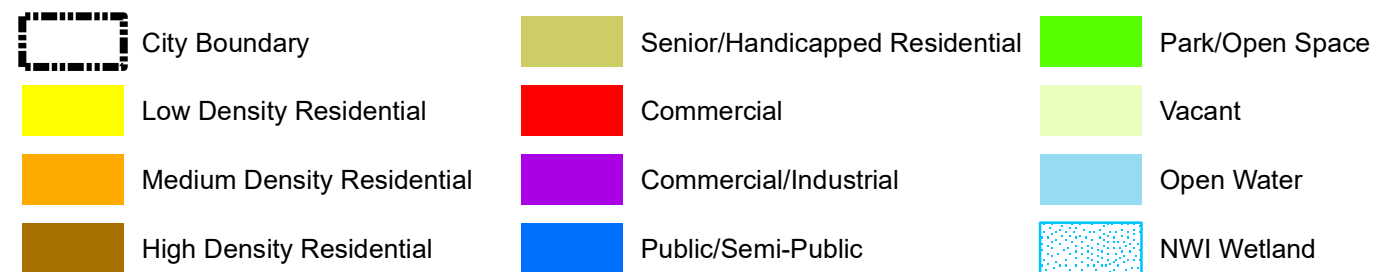


Appendix A EXISTING LAND USE MAP

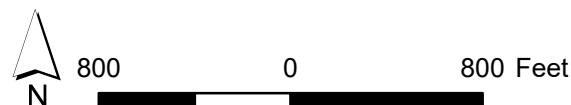




2018 Existing Land Use
Spring Lake Park 2040 Comprehensive Plan



Note: This is the existing land use in Spring Lake Park in 2018. Existing land use may differ from zoning and future land use.



April 16, 2019



Appendix B IMPERVIOUS PERCENTAGE AND REF PER ACRE CALCULATION

Impervious Coverage	Equivalent Composite CN value	3.6" Rainfall Runoff Depth	Equivalent REF/ac
0%	61	0.57	1.6
1%	61	0.59	1.7
2%	62	0.61	1.7
3%	62	0.63	1.8
4%	62	0.65	1.8
5%	63	0.67	1.9
6%	63	0.69	1.9
7%	64	0.70	2.0
8%	64	0.72	2.0
9%	64	0.74	2.1
10%	65	0.76	2.1
11%	65	0.78	2.2
12%	65	0.80	2.2
13%	66	0.82	2.3
14%	66	0.84	2.3
15%	67	0.86	2.4
16%	67	0.88	2.4
17%	67	0.90	2.5
18%	68	0.92	2.5
19%	68	0.94	2.6
20%	68	0.95	2.7
21%	69	0.97	2.7
22%	69	0.99	2.8
23%	69	1.01	2.8
24%	70	1.03	2.9
25%	70	1.05	2.9
26%	71	1.07	3.0
27%	71	1.09	3.0
28%	71	1.11	3.1
29%	72	1.13	3.1
30%	72	1.15	3.2
31%	72	1.17	3.2
32%	73	1.18	3.3
33%	73	1.20	3.3
34%	74	1.22	3.4
35%	74	1.24	3.4
36%	74	1.26	3.5
37%	75	1.28	3.5
38%	75	1.30	3.6



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Impervious Coverage	Equivalent Composite CN value	3.6" Rainfall Runoff Depth	Equivalent REF/ac
39%	75	1.33	3.7
40%	76	1.35	3.7
41%	76	1.38	3.8
42%	76	1.41	3.9
43%	77	1.43	4.0
44%	77	1.46	4.0
45%	78	1.49	4.1
46%	78	1.51	4.2
47%	78	1.54	4.3
48%	79	1.57	4.3
49%	79	1.59	4.4
50%	79	1.62	4.5
51%	80	1.65	4.6
52%	80	1.67	4.6
53%	81	1.70	4.7
54%	81	1.73	4.8
55%	81	1.75	4.9
56%	82	1.78	4.9
57%	82	1.81	5.0
58%	82	1.83	5.1
59%	83	1.86	5.2
60%	83	1.89	5.2
61%	84	1.91	5.3
62%	84	1.94	5.4
63%	84	1.97	5.5
64%	85	1.99	5.5
65%	85	2.02	5.6
66%	85	2.06	5.7
67%	86	2.09	5.8
68%	86	2.13	5.9
69%	87	2.16	6.0
70%	87	2.20	6.1
71%	88	2.23	6.2
72%	88	2.27	6.3
73%	88	2.30	6.4
74%	89	2.33	6.5
75%	89	2.36	6.5
76%	89	2.38	6.6
77%	90	2.41	6.7
78%	90	2.44	6.8
79%	90	2.47	6.8
80%	90	2.50	6.9
81%	91	2.53	7.0
82%	91	2.55	7.1



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Impervious Coverage	Equivalent Composite CN value	3.6" Rainfall Runoff Depth	Equivalent REF/ac
83%	91	2.58	7.1
84%	92	2.61	7.2
85%	92	2.64	7.3
86%	92	2.68	7.4
87%	93	2.72	7.5
88%	93	2.76	7.6
89%	94	2.80	7.8
90%	94	2.84	7.9
91%	94	2.88	8.0
92%	95	2.92	8.1
93%	95	2.96	8.2
94%	96	3.00	8.3
95%	96	3.04	8.4
96%	96	3.08	8.5
97%	97	3.12	8.7
98%	97	3.16	8.8
99%	98	3.20	8.9
100%	98	3.24	9.0

