System Development Charges

Portland Water Bureau

Prepared by: Mary Leung
Updated: April 15, 2019

Table of Contents

Why SDCs are important.

System Development Charges (SDCs), also known as impact fees, provide revenue to utilities from new user hook ups to recover costs of existing system capacity. New customers' use of the existing water system infrastructure reduces existing capacity and may also lead to the need for construction of new facilities. A common objective of SDCs is to have "growth pay for growth." From an economic perspective this is true, but unfortunately in the case of construction of new facilities, the burden of paying for new facilities falls mainly on the existing ratepayers in the near term as new customers join the utility gradually over the life of those new facilities.

Why the Water Bureau charges SDCs

Engineering studies, such as the Distribution Infrastructure Master Plan and the Water Management and Conservation Plan, show no significant constraints on future near term capacity. Therefore, the Bureau's SDCs are based on a "buy-in" to the water system (i.e., a reimbursement method) per Oregon Revised Statutes.

The Bureau pays for capital improvements in five ways:

- Uses cash on hand raised from user rates
- Sells bonds or debt financing
- Assesses SDCs for new development
- Requires up-front reimbursement from developers or customers who directly benefit from an improvement
- Uses interest earned on Construction Fund balances

SDCs are one-time charges paid by customers when they apply for a new water connection (or increase the size of an existing connection). By charging SDCs for new or larger connections to the system, the Bureau assigns the costs of capital improvements, at least in part, to those who may potentially cause an increase in demand rather than to existing customers through higher user charge rates. Money collected through SDCs from new customers for their share of the costs of capacity is more equitable than raising rates on all customers to pay for capital improvements that are needed primarily just to serve the new or increased demand.

Description of Methodology

The Bureau's SDC is a reimbursement fee calculated in accordance with the language and intent of the Oregon state legislation as specified in ORS 223.297 to 223.314. The Portland Water Bureau's SDC adheres to the definition in ORS 223.299(3) of a "Reimbursement fee means a fee for costs associated with capital improvements already constructed, or under construction when the fee is established, for which the local government determines that capacity exists."

The Bureau's buy-in SDC is essentially the "cost per equivalent meter unit" times the size of the meter (in equivalent units) added to the water system. Cost per equivalent meter unit is simply the net "value" of the water system divided by the total number of "equivalent meter units (5/8" meter = 1 equivalent meter unit)" served by the system.

The net value of the water system begins with the value of existing water facilities using estimated replacement cost, less accumulated depreciation (net replacement cost book value). Construction work in progress, current planned spending capital construction through year-end, and projected year-end fund cash balances, are added. Customer contributions and unpaid bond principal are deducted. The resulting total is the net "value" of the water system paid by ratepayers.

The equivalent meter unit is a ratio based on the capacity of larger meters as compared to the capacity of a base meter such as a typical residential customer's 5/8" meter (see details in Appendix).

Details of SDC Calculation

The details of the FY 2019-20 SDC reimbursement fee per Section 223-304 1(a) are as follows**:**

Net replacement cost book value of existing facilities *	$1,300,597,279
Add Estimated cost of facilities under construction in capital plan *	207,865,998
Less Contributions	(127,543,900)
Less Outstanding debt (principal only)	(594,035,000)
Add Fund cash balances (accrual)	134,456,600
Total System Net Value	921,340,977
Total Equivalent Meter Units *	300,882
Cost per Equivalent Meter Unit	$3,062

***** See Appendix for details

In effect, every retail customer using the system today (with a 5/8" meter = 1 equivalent meter unit) has an investment value of $3,062 in net replacement value terms for a share of the capacity of the system assets. Therefore, new customers pay a reimbursement fee that brings their investment in line with that of existing customers.

The next table lists the SDCs for 5/8" to 16" meters based on the unit cost and equivalency capacity ratios.

SDC Schedule for FY 2019-20

The cost per equivalent meter unit is multiplied by the equivalency ratio schedule.

Meter Size	Equivalent Capacity Ratio	FY 2019-20 SDC
5/8”	1	**$3,062**
¾”	1.5	**4,593**
1”	2.5	**7,655**
1 1/4”-1/2”	5	**15,311**
2”	8	**24,497**
3”	15	**45,932**
4”	25	**76,553**
6”	50	**153,107**
8”	80	**244,970**
10”	143.8	**440,334**
12”	231.3	**708,271**
16”	412.5	**1,263,129**
24”	750.0	**2,296,598**

Over the past 10 fiscal years, the SDC for a 5/8” meter has increased from $1,710 to $3,062. In FY 2010-11 the depreciation asset valuation was changed to match the City’s financial system.

Fiscal Year	Water SDC (5/8” Meter)
FY 2010-11	$1,710
FY 2011-12	$1,732
FY 2012-13	$1,817
FY 2013-14	$2,183
FY 2014-15	$2,185
FY 2015-16	$2,337
FY 2016-17	$2,400
FY 2017-18	$2,577
FY 2018-19	$2,808
FY 2019-20	$3,062

Comparison of Water SDC Charges

The FY 2019-20 Water SDC for a 5/8" meter ($3,062) is below the national average SDC rate of $3,252 reported in the AWWA 2019 Water and Wastewater Rate Survey (published semi-annually). The SDC rate is also less than rates charged by a sample of other Oregon municipal water utilities.

	Water SDC (5/8" Meter)	Notes
National average	$3,252	(1)
West Linn, City of	$11,645	(2)
Tigard, City of	$9,001	(2)
Lake Oswego, City of	$8,122	(2)
TVWD (Washington County)	$7,419	(2)
Beaverton, City of	$5,962	(2)
Gresham, City of	$4,618	(2)
Portland, City of	**$3,062**	
EWEB (Eugene)	$2,276	(2)

(1) RFC/AWWA 2019 Water and Wastewater Rate Survey
(2) City or Utility website or related fee schedule

SDC Revenue Funds Capital Improvements

Per ORS Section 223.307, SDC revenue is spent only on capital improvements associated with the water system. Details, including a description and forecast cost, of the capital improvements being funded with system development charge revenue are included in the capital improvement plan. The annual audit provides data on the cost of capital construction and capital funding sources.

Administrative Procedures

The Portland City Council adopted Ordinance 183448 amending City Code to adopt uniform policies for partial and full exemptions of SDCs for qualified affordable housing developments on July 1, 2010. In addition, City Council adopted Resolution 36766, directing the suspension of SDCs for construction or conversion of structures to accessory dwelling units until June 30, 2013. Since then, City Council has maintained the focus on affordable housing and increasing more affordable housing stock by extending SDC exemptions for ADUs. City Council adopted Ordinance 189323, effective December 19, 2018 waiving SDCs for temporary service or mass shelters, short-term housing, and certain ADUs. Refer to Ordinance 189323 and Portland City Code Sections 30.01.095, 30.01.096 and 17.14.070 for more information.

In accordance with ORS 223-302 and 223-304, interested persons may either object to the calculations or challenge an expenditure of SDC revenues under the Bureau's administrative review procedures.

The Bureau will maintain a list of interested parties. The Bureau may periodically delete names from the list, but at least 30 days prior to removing a name from the list, the Bureau shall notify the person whose name is to be deleted that a new written request for notification is required if the person wishes to remain on the notification list. Citizens on the list will receive notice of intent to modify the SDC at least 90 days prior to the first hearing. The methodology supporting the system development charge must be available at least 60 days prior to the first hearing.

Legal action intended to contest the methodology used for calculating a system development charge may not be filed after 60 days following adoption or modification of the system development charge ordinance or resolution by the City Council. A person requesting judicial review of the methodology used for calculating a system shall submit the request in writing to the Administrator.

To challenge SDC expenditures, interested parties must file with the Administrator of the Bureau within two years of the expenditure(s).

Conclusions

System Development Charges (SDCs) are one-time capital charges for new customer hook ups to compensate a utility and its existing ratepayers for existing investments and/or costs of anticipated growth. The Portland Water Bureau's SDC is a buy-in or reimbursement fee for all pertinent water infrastructure (including supply and transmission) because the water system continues to have unused capacity. Mainly for this reason and because Portland's system tends to be older than that of many other communities in Oregon, water SDCs paid in Portland are lower than the average charge assessed by cities in Oregon. When the time comes for development of new supply and transmission assets or other significant facilities, future SDCs may include a component for an improvement fee SDC. SDC annual revenue forecast for FY 2019-20 to FY 2023-24 averages $3.3 million or $0.2 million less than the $3.5 million from the previous five-year forecast**.**

Appendix

SDC Summary of Calculation

Net book value of Existing Facilities (1. below)		$1,300,597,279
Add Construction Project in Progress (1. below)	165,222,274	
Add Cost of Facilities in Capital Plan under construction (1. below)	42,643,724	207,865,998
Less Current Contributions		(127,543,900)
Less Outstanding Debt (principal only)		(594,035,000)
Add Fund cash balances (accrual)		134,456,600
Total System Net Value		921,340,977
Total Equivalent Meter Units (2. - 4. below)		300,882
Cost per Unit (System value/Equivalent Meters)		$3,062

1. The following table provides detail on the asset values. The cost basis of Existing Facilities is depreciated replacement cost. Assets under construction (WIP) and in the Current Capital Plan are at cost and estimated cost respectively. Contributions are inflated to current dollars.

Functional Description	Net book value	Construction Project in Progress	Facilities in Capital Plan under Construction	Current Contribution
Bull Run Watershed	$ 87,958,020	$7,012,147	$2,662,089	0
Conduits	84,482,507	973,841	934,545	0
Customer/Billing Meters	705,782	0	0	0
Distribution Storage	42,844,978	314,981	20,005,556	0
Distribution Transmission	16,714,104	23,015,476	3,169,806	0
Distribution/Direct Fire	88,043,180	1,929,116	0	(13,740,082)
Groundwater	49,679,786	2,067,955	920,385	0
Indirect	217,722,933	4,328,084	3,637,361	0
Pipe	470,592,024	7,034,686	7,879,840	(113,803,818)
Pumping	33,946,066	6,041,405	1,093,589	0
Terminal Storage	75,346,786	100,384,457	56,598	0
Transmission	3,377,350	0	0	0
Treatment	11,286,220	1,725,364	2,213,195	0
Terminal PB	117,897,543	10,394,762	70,759	0
Total	$ 1,300,597,279	$165,222,274	$ 42,643,724	$(127,543,900)

Total may not add due to rounding

2. Detail on the number of meters by size of meter in the system as of February 21, 2019.

Meters by Size	Total number of Meters
5/8”	137,151
¾”	22,285
1”	14,846
1 1/4”-1 1/2”	2,737
2”	3,276
3”	587
4”	499
6”	270
8”	81
10”	67
12”	0
16”	4
24”	1
Total	181,804

3. Engineering estimates of the capacity ratio of different meter sizes.

Meters by Size	Equivalency Capacity Ratio
5/8”	1.0
¾”	1.5
1	2.5
1 1/4” -1 1/2”	5.0
2”	8.0
3”	15.0
4”	25.0
6”	50.0
8”	80.0
10”	143.8
12”	231.3
16”	412.5
24”	750.0

4. Calculation showing numbers of meters (by size) times meter equivalency (by size) = Total equivalent meters.

Meters by Size	Total number of meters	Equivalent Unit Ratio	Total Equivalent Units (Meters X Ratio)
5/8”	137,151	1.0	137,151
¾”	22,285	1.5	33,428
1”	14,846	2.5	37,115
1 1/4”-1 1/2”	2,737	5.0	13,685
2”	3,276	8.0	26,208
3”	587	15.0	8,805
4”	499	25.0	12,475
6”	270	50.0	13,500
8”	81	80.0	6,480
10”	67	143.8	9,635
12”	0	231.3	0
16”	4	412.5	1,650
24”	1	750.0	750
Totals	181,804		300,882

5. Final SDC schedule

Meter Size	Equivalency Ratio Schedule	FY 2019-20 calculation
5/8”	1.0	$3,062
¾”	1.5	4,593
1”	2.5	7,655
1 1/4”-1 1/2”	5.0	15,311
2”	8.0	24,497
3”	15.0	45,932
4”	25.0	76,553
6”	50.0	153,107
8”	80.0	244,970
10”	143.8	440,334
12”	231.3	708,271
16”	412.5	1,263,129
24”	750.0	2,296,598