

**BEFORE THE CITY COUNCIL  
FOR THE CITY OF HOOD RIVER, OREGON**

**Resolution No. 2015-19**

**A Resolution adopting a new water system development charge schedule for new or existing developments requesting connection to or increasing the connection to the City's water utility and repealing all prior water system development charge schedules and resolutions**

The Hood River City Council finds as follows:

**WHEREAS**, ORS Chapter 223 authorizes cities to assess System Development Charges (SDCs) to finance capacity increasing system improvements needed to serve development; and

**WHEREAS**, the City of Hood River recently revised its SDC regulations and consolidated all such regulations into Chapter 12.07 of the Hood River Municipal Code addressing SDCs for transportation, sanitary sewer, water, stormwater and park systems; and

**WHEREAS**, the City has implemented its authority from ORS Chapter 223 by the adoption of HRMC Chapter 12.07 (System Development Charges), pursuant to which it has adopted, and from time to time amended, a water SDC methodology; and

**WHEREAS**, the City's has adopted the *Water Master Plan* (Bell Design Company July 3, 2013) which presents the list of needed capital improvements and their cost; and,

**WHEREAS**, Economic & Financial Analysis prepared *Update Water System Development Charge* (April 2015); and

**WHEREAS**, the City Council reviewed the *Update Water System Development Charges*, a copy of which is attached as Exhibit A and incorporated herein by this reference; and

**WHEREAS**, at its August 24, 2015 regular City Council meeting the City Council deliberated on the recommendations in *Water Master Plan* and *Update Water System Development Charge* that together comprise the Findings.

**NOW, THEREFORE**, based on the foregoing Findings, the Hood River City Council resolves that all prior Water SDC resolutions are hereby repealed and rescinded.

**BE IT FURTHER RESOLVED** that *Update Water System Development Charge*, dated April 2015, attached hereto as Exhibit A and incorporated herein by this reference, is hereby adopted and approved as the basis for the calculation and assessment of Water System Development Charges for all development in the City seeking connection to or expansion of its connection to the water utility.

**Approved** this 24<sup>th</sup> day of August 2015 by a majority of the Hood River City Council and effective October 1, 2015.



\_\_\_\_\_  
Paul Blackburn, Mayor

ATTEST:



\_\_\_\_\_  
Jennifer Gray, City Recorder

Approved as to form:



\_\_\_\_\_  
Daniel Kearns, City Attorney

EXHIBIT A

City of Hood River, Oregon

## **UPDATE WATER SYSTEM DEVELOPMENT CHARGE**

Prepared by:

### **ECONOMIC & FINANCIAL ANALYSIS**

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April 2015



**ECONOMIC & FINANCIAL ANALYSIS**

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## INTRODUCTION

Economic & Financial Analysis (EFA) was retained by City of Hood River to prepare an update of the City’s water system development charge (SDC), which was last updated in 2009. EFA updates the water SDC using the City of Hood River *Water Master Plan*, July 3, 2013, by Bell Design Company.

The State of Oregon Revised Statutes (ORS) 223.297 provides a uniform framework for establishing and updating SDCs. ORS 223.297 contains four major provisions: methodologies for calculating the SDC, policies that allow for credits against the SDC, restrictions on the use of SDC revenues, and accounting and management procedures.

This report addresses the calculation of the SDC. The City already has the other provisions in effect.

## CALCULATION OF THE WATER SYSTEM DEVELOPMENT CHARGE

The water SDC contains three separate fees: a reimbursement fee, an improvement fee, and an optional administrative fee. EFA bases the reimbursement and improvement fees on the growth of equivalent residential units (ERUs). An ERU equals the monthly water consumption of the average occupied single-family house. In calendar year 2011, 2,492 single-family ERUs consumed an average 6,900 gallons per month. From the City’s billing records, EFA determined that non-single-family residential customers consumed as much water as 2,254 single-family residences. The sum of single-family ERUs and the number of non-single-family ERUs equals 4,734 ERUs in 2011.

The *Water Master Plan* was developed to meet the water consumption of this growing population. EFA assumes that the number of ERUs will increase at the same growth rate as population, which is 2%/year. EFA uses the ERUs to determine the reimbursement and improvement fees.

Table 1. Population and ERU growth

Year	Population	ERUs	% Δ	Avg. ann. % Δ
2011	8,842	4,734		
Growth	5,878	3,107		
2036	14,720	7,841	65.6%	2.0%
Growth	8,364	4,400		
2058	23,084	12,241	56.1%	2.0%

Sources: *Wastewater Facilities Plan*, pp. 2–12, and City utility billing records for calendar year 2011.

### Reimbursement Fee

The reimbursement fee equals the value of unused capacity in the existing water system (defined as the water source, treatment, transmission, and distribution of water). The water system is composed of 53.3 miles of pipes ranging in size from ¾-inch diameter to 16-inch diameter and 16 pressure-reducing valves. A complete description is in the *Water Master Plan*. The City's water source is adequate to serve development through 2058, and the recently completed main water line from the source to the City's first reservoir was designed to meet increased consumption.

EFA uses the book value (i.e., the original cost of constructing the system less accumulated depreciation) of existing fixed assets as the cost basis for the reimbursement fee. The City records all improvements to the system at the time of construction, and its auditor uses straight-line depreciation of the assets based on the asset's expected useful life. In general, the pipelines are depreciated over a fifty-year period.

The auditor also books assets purchased with grants that are not eligible for the reimbursement fee. Table 3 shows the calculation of costs to calculate the reimbursement fee. After deducting the grant and accumulated depreciation, the City-purchased portion of fixed assets amounts to \$18.8 million. The basic reimbursement fee for one ERU is the book value divided by the number of ERUs at build out, \$1,535/ERU.

Table 2. Book value of water system, June 30, 2014

	2010 2011	2011 2012	2012 2013	2013 2014
Capital assets not being depreciated	\$806,813	\$69,128	\$128,153	\$205,799
Capital assets being depreciated	\$4,789,831	\$9,731,685	\$9,540,737	\$27,461,564
Total capital assets	\$5,596,644	\$9,800,813	\$9,668,890	\$27,667,363
Grants received	\$178,388	\$69,865	\$3,675,302	\$5,028,641
Accumulated grants	\$178,388	\$248,253	\$3,923,555	\$8,952,196
Less accumulated depreciation of grant		-\$3,568	-\$4,965	-\$78,471
Net grants				\$8,873,725
Total capital assets less net grants				\$18,793,638

Source: City of Hood River, Annual Financial Report for the year ending June 30, 2014, p. 12.

### Improvement Fee

The improvement fee is based on the list of capital improvements from chapter 9 of the *Water Master Plan* that is summarized in Table 3. Eighteen of the sixty-four identified projects are specifically related to growth. All the short-term project numbers beginning with "ST" and lead

joint replacement (“LJ”) projects are remedial (existing problems that are unaffected by growth). The long-term project numbers (beginning with “LT”) will be constructed to meet the needs of growth. Project number NTSR-1 is included in the improvement fee, because growth may require the Wilson reservoir to be replaced.

The 2015 cost of these improvement fee projects is \$28 million or about 61% of the total cost of all planned capital improvements. These projects will provide the capacity in the water system to accommodate growth to the year 2058 or for 12,241 ERUs. The 2015 cost of the improvement fee projects divided by the number of 12,241 ERUs equals the basic improvement fee: \$2,290/ERU.



## Update Water System Development Charge

April 2015

Table 3. Capital improvements list

Project no.	Project	Total		Number of ERUs	\$/ERU
		cost 2013 \$s	cost 2015 \$		
STSR-1	Storage reservoir improvements	\$34,000	\$36,000	-	\$0.00
STS-1	Source improvements	\$4,000	\$4,000	-	\$0.00
STM-1	Inventory and maintenance	\$177,000	\$185,000	-	\$0.00
STWM-1	Water conservation and management plan	\$154,000	\$161,000	-	\$0.00
STWS-1	Water system survey	\$24,000	\$25,000	-	\$0.00
STES-1	Engineering standards	\$4,000	\$4,000	-	\$0.00
STP-1	DI line (Belmont-Ice Fm); Ice Fountain line; PRV/bypass (EL480-NAVD88, 30th St.); PRV telemetry	\$714,000	\$748,000	-	\$0.00
STP-2	PRV/bypass (Rand Rd.); PRV telemetry; PVC (Rand-Cascade, Timberline-Country Club, Sierra Ln.-Country Club)	\$558,000	\$584,000	-	\$0.00
STP-3	PRV/bypass (Hazel Ave.-Eugene); PRV telemetry; Serpentine zone PRVs; open valve (Eugene/2nd St. stairs)	\$151,000	\$158,000	-	\$0.00
STP-4	PRV/bypass (EL378-NAVD88); PRV telemetry; PVC line (Creekside-Mt. Adams)	\$365,000	\$382,000	-	\$0.00
STP-5	PRV (EL143-NAVD88); PRV telemetry; PVC (Front-2nd); DI (State-2nd-Bridge-Hwy. 35)	\$2,420,000	\$2,534,000	-	\$0.00
STP-6	Replace 2" and 4" galvanized and lead jointed pipes with 8" PVC along 4th, 9th, 7th, Montello Ave, and Serpentine Rd.	\$587,000	\$615,000	-	\$0.00
STP-7	Replace 2" galvanized pipe with 8" PVC along 9th St., 13th St., and Sherman Ave.	\$196,000	\$205,000	-	\$0.00
STP-8	Replace 4" lead jointed and abandoned pipes with 8" PVC along East 2nd, 5th, 6th, State, Sherman, and Front	\$210,000	\$220,000	-	\$0.00
STP-9	Replace 4" lead jointed pipe with 8" PVC along 7th, 8th, 9th, 11th,	\$573,000	\$600,000	-	\$0.00

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Project no.	Project	Total cost 2013 \$s	Total cost 2015 \$	Number of ERUs	S/ERU
	12th, Pine, Marion, and Wilson				
STP-10	Replace 4" line with 8" PVC along Taylor between 13th and 18th	\$697,000	\$730,000	-	\$0.00
STP-11	Decrease mainline pressure zone to 720 static HGL	\$0	\$0	-	\$0.00
STP-12	Install 6" PRV w/2" bypass at EL 486 NAVD 88 along Marian between 9th and Wilson	\$91,000	\$95,000	-	\$0.00
STP-13	Replace 4" lead jointed line with 8" PVC along 8th between Montello and May	\$949,000	\$994,000	-	\$0.00
STP-14	Decrease Coe pressure zone to 408 static HGL	\$0	\$0	-	\$0.00
STP-15	Replace 4" lead jointed and 4" CI with 8" PVC along Lincoln between 10th and 13th	\$426,000	\$446,000	-	\$0.00
STP-16	New 8" PVC line connecting Oak with Cascade near 15th	\$20,000	\$21,000	-	\$0.00
STP-17	Replace 2" line with 8" PVC along Hull between 10th and hydrant	\$105,000	\$110,000	-	\$0.00
STP-18	Replace 4" lead jointed with 8" PVC along Eugene east of 17th	\$147,000	\$154,000	-	\$0.00
STP-19	Replace 6" CI with 8" PVC along B Street west from 18th to hydrant	\$142,000	\$149,000	-	\$0.00
STP-20	Replace 6" CI with 8" PVC on Avalon Court east of Avalon St.	\$113,000	\$118,000	-	\$0.00
STP-21	Replace 4" CI with 8" PVC along 21st between May and hydrant	\$347,000	\$363,000	-	\$0.00
STP-22	Install new 10" PVC along Brookside from 12th to line west of Sterling Loop (connect at Sterling)	\$335,000	\$351,000	-	\$0.00
STP-23	Replace 6" CI with 8" PVC along Montello between 2nd and 4th	\$176,000	\$184,000	-	\$0.00
STD-1	Install new 8" PVC line to connect Rocky Rd. with Nina Ln.	\$213,000	\$223,000	-	\$0.00
NTSR-1	Feasibility study to replace Wilson Reservoir	\$30,000	\$31,000	12,241	\$2.53
NTSR-2	Install flow meter with vault and bypass at Coe Reservoir	\$68,000	\$71,000	-	\$0.00
NTS-1	New 10" Sensus accuMAG meter with Sensus FlexNet SmartPoint M2	\$119,000	\$125,000	-	\$0.00

**Update Water System Development Charge**

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Project no.	Project	Total		Number of ERUs	\$/ERU
		cost 2013 \$\$	cost 2015 \$		
	Model 520M—Pit Set transceivers				
NTRS-1	Conduct a feasibility study of alternative sources to determine the potential of supplying the city with approximately 1,400 gpm	\$137,000	\$143,000	-	\$0.00
NTT-1	Provide telemetry to all reservoirs, reservoir flow meters, control valve, and PRV vaults	\$1,500,000	\$1,571,000	-	\$0.00
NTP-1	Replace 6" CI line with 8" PVC along 16th from Avalon Court to Hydrant	\$172,000	\$180,000	12,241	\$14.70
NTP-2	Install new 8" PVC from just north of 20th Street PRV to Cascade Commons	\$27,000	\$28,000	-	\$0.00
NTD-1	Replace 8" DI with 10" PVC along Country Club from the intersection of "New" Country Club and "Old" Country Club to Intertie with I.F.	\$257,000	\$269,000	12,241	\$21.98
NTD-2	Install new 8" PVC line from 18th and Hope to Jaymar	\$221,000	\$231,000	12,241	\$18.87
LTRS-1	Option A: Well development	\$1,744,000	\$1,826,000	12,241	\$149.17
LTM-1	Install blowoffs or fire hydrants at all dead end lines	\$89,000	\$93,000	12,241	\$7.60
LTP-1	Install new 8" PRV w/3" bypass at EL 480 NAVD 88 on Frankton	\$2,197,000	\$2,301,000	12,241	\$187.97
LTP-2	Rehabilitate or install line from 24" transmission line in Belmont	\$642,000	\$672,000	12,241	\$54.90
LTP-3	Install new 10" PVC along Brookside from Indian Creek to 10" line west of Sterling (STP-22)	\$1,269,000	\$1,329,000	12,241	\$108.57
LTSR-1	Replace existing Wilson Reservoir with two new 1 MG reservoir	\$4,308,000	\$4,511,000	12,241	\$368.52
LTSR-2	Option 1: Install new 3 MG reservoir near existing Riverdale reservoir	\$5,465,000	\$5,723,000	12,241	\$467.53
LTP-4	Acquire the 8" Ice Fountain line from Country Club under freeway and west along Westcliff Dr.	\$1,683,000	\$1,762,000	12,241	\$143.94
LTP-5	Acquire the Ice Fountain lines west of Frankton within the Stonegate Dr., Parsons Rd., and Toms Dr. area	\$2,400,000	\$2,513,000	12,241	\$205.29
LTP-6	Acquire the Ice Fountain lines East of Westside School to Indian	\$4,013,000	\$4,202,000	12,241	\$343.27

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Project no.	Project	Total cost 2013 \$\$	Total cost 2015 \$	Number of ERUs	\$/ERU
	Cliff/Hood View Court				
LTP-7	Acquire the 6" Ice Fountain line from 8th and Eliot to the end of Cameo	\$473,000	\$495,000	12,241	\$40.44
LTD-1	Install new 8" PVC from Belmont north to long-term development south of 25th	\$145,000	\$152,000	12,241	\$12.42
LTD-2	Install New 10" PVC from intersection of Frankton and Post Canyon east to Belmont	\$1,310,000	\$1,372,000	12,241	\$112.08
LTD-3	Install new 10" PVC along Country Club from Frankton to 10" line near current intertie with I.F.	\$350,000	\$367,000	12,241	\$29.98
LJ-1	Reconnect services from 4" L.J. line to parallel 10" line along 13th between Columbia and Oak	\$87,000	\$91,000	-	\$0.00
LJ-2	Replace 6" lead Jointed with 8" PVC along 6th between Cascade and State	\$567,000	\$594,000	-	\$0.00
LJ-3	Replace 4" lead Jointed with 8" PVC along Columbia between 8th and 10th	\$573,000	\$600,000	-	\$0.00
LJ-4	Replace 4" lead Jointed with 8" PVC along 2nd between Montello and Prospect	\$504,000	\$528,000	-	\$0.00
LJ-5	Replace 6" lead Jointed with 10" PVC along May between 4th and Park	\$522,000	\$547,000	-	\$0.00
LJ-6	Replace 4" lead jointed with 8" PVC along 12th between Eugene and Prospect	\$418,000	\$438,000	-	\$0.00
LJ-7	Replace 4" lead jointed with 8" PVC along 7th between May and Pine	\$557,000	\$583,000	-	\$0.00
LJ-8	Replace 4" and 6" lead jointed with 8" PVC along C Street between 12th and 17th	\$483,000	\$506,000	-	\$0.00
LJ-9	Replace 4" lead jointed with 8" PVC along A Street between 12th and 17th	\$478,000	\$501,000	-	\$0.00

**Update Water System Development Charge**

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Project no.	Project	Total		Number of ERUs	\$/ERU
		cost 2013 \$\$	cost 2015 \$		
LJ-10	Replace 6" lead jointed with 8" PVC along State between 6th and 12th	\$405,000	\$424,000	-	\$0.00
LJ-11	Replace 4" and 6" lead jointed with 8" PVC along Columbia between 18th and hydrant near 12th	\$541,000	\$567,000	-	\$0.00
Totals		\$43,686,000	\$45,745,000		\$2,289.76

Note: The 2013 costs were escalated to 2015 dollars using a cost-inflation index published in *Engineering News Record (ENR)* published by Dodge Data & Analysis. The index number was 9,542 (July 2013), and the current index number is 9,992 (March 2015); an increase of 4.72%.

## Implementation of the water System Development Charge

The water SDC equals the sum of the reimbursement fee and the improvement fee—\$3,812 for the basic SDC. Currently the City applies the SDC to a development based on the size water meter to be installed at the property. This update continues that policy.

The basic water SDC is applied to the smallest size water meter installed in Hood River: a ¾-inch diameter meter. More than 85% of all meters installed in Hood River are ¾ inches. Larger meter sizes supply more water, and EFA assumes that most of that water enters the water system. Developments that need meters larger than ¾ inch are multiple-family apartments, large commercial businesses, and industry. The more water they consume, the more it costs the City to provide the water, storage, and distribution system.

Since 2009 when the SDC was last updated, water meter technology has improved, and the City has been replacing its old meters with ones that can deliver more water per inch of meter diameter. Table 4 shows the differences between the current SDC meter capacities and the current standards used by the City. EFA applies the 2015 meter standards to the SDC as shown in table 5. Table 6 shows the change in the water SDC from 2009. The basic SDC for a ¾-inch diameter meter up to 2 inches in diameter increased 48%. The larger percentage increases for the meters larger than 2 inches in diameter results from the increase in meter capacities. For example, the capacity of the 4-inch meter increased 100%, resulting in a 111% increase in the SDC.

Table 4. Current and new water meter capacities

Meter size	2009 meters		2015 meters		Change	
	Meter capacity (gpm)	¾-inch equivalents	Meter capacity (gpm)	¾-inch equivalents	gpm	%
¾	25	1.00	30	1.00	5	20%
1	42	1.67	50	1.67	8	19%
1 1/2	83	3.33	100	3.33	17	20%
2	133	5.33	160	5.33	27	20%
3	292	11.67	500	16.67	208	71%
4	500	20.00	1,000	33.33	500	100%
6	1042	41.67	2,000	66.67	958	92%
8	1500	60.00	2,700	90.00	1,200	80%

Source: American Water Works Association (AWWA) standards for cold-water meters—displacement type, AWWA C700–15, table 1.

Note: gpm = gallons per minute.

Table 5. 2015 water system development charge by meter size

Meter size	Meter capacity (gpm)	3/4-inch equivalents	Reimbursement	Improvement	Total
3/4	30	1.00	\$1,535	\$2,290	\$3,825
1	50	1.67	\$2,559	\$3,817	\$6,376
1 1/2	100	3.33	\$5,118	\$7,633	\$12,751
2	160	5.33	\$8,188	\$12,213	\$20,401
3	500	16.67	\$25,588	\$38,167	\$63,755
4	1,000	33.33	\$51,177	\$76,333	\$127,510
6	2,000	66.67	\$102,354	\$152,667	\$255,021
8	2,700	90.00	\$138,177	\$206,100	\$344,277

Table 6. Comparison of 2009 and 2015 water SDCs

Meter size	Total	Total	Change in SDC	
			\$	%
3/4	\$2,585	\$3,825	\$1,240	48%
1	\$4,309	\$6,376	\$2,067	48%
1 1/2	\$8,616	\$12,751	\$4,135	48%
2	\$13,786	\$20,401	\$6,615	48%
3	\$30,159	\$63,755	\$33,596	111%
4	\$51,700	\$127,510	\$75,810	147%
6	\$107,709	\$255,021	\$147,312	137%
8	\$155,100	\$344,277	\$189,177	122%