

Appendix S – Rate Study

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RESOLUTION NO. 1846

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF BONNEY LAKE,
PIERCE COUNTY, WASHINGTON, APPROVING THE 2008 WATER CAPITAL
FACILITIES PLAN.**

WHEREAS, the City of Bonney Lake Comprehensive Water System Plan (CWSP) was completed in February 2008; **and**

WHEREAS, the City Council has reviewed and accepted the CWSP as written; **and**,

WHEREAS, DOH requires City Council review and approval of the projects contained in the CWSP;

NOW THEREFORE, be it resolved; that the City Council of the City of Bonney Lake, Washington, does hereby approve the 2008 Water Capital Facilities Plan for the 10 and 20 year proposed water system improvements.

PASSED by the City Council this 13th day of May, 2008.



Neil Johnson Jr., Mayor

ATTEST:



Harwood T. Edvalson, CMC
City Clerk

APPROVED AS TO FORM:



James Dionne, City Attorney

**Table 9-4
Proposed Improvements Implementation Schedule (20-Year CIP)**

No.	Description	Water Main Priority	Estimated Cost (2007 \$)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Water Main Improvements													
WM14	8" Replacement - 36th St. E.	29	\$189,000	\$ 189,000									
WM15	8" Replacement - Jenk's Point Way	29	\$227,000	\$ 227,000									
WM16	8" Replacement - 189th Ct. E.	28	\$340,000	\$ 340,000									
WM17	8" Replacement - Banker's Island	28	\$567,000		\$ 567,000								
WM18	8" Replacement - 184th Ave. E.	26	\$189,000		\$ 189,000								
WM19	8" Replacement - 43rd St. E./183rd Ave E.	26	\$265,000		\$ 265,000								
WM20	8" Replacement - 185th Ave. E.	25	\$227,000		\$ 227,000								
WM21	8" Replacement - Bonanza Drive	24	\$851,000		\$ 851,000								
WM22	8" Replacement - La Rita Drive/107th St. E.	24	\$624,000			\$ 624,000							
WM23	8" Replacement - West Tapps Drive	22	\$1,153,000			\$1,153,000							
WM24	12" Replacement - Myers Road	22	\$1,423,000				\$1,423,000						
WM25	8" Replacement - 58th St./59th Street E.	20	\$567,000					\$ 567,000					
WM26	8" Replacement - 193rd Ave Ct. E.	20	\$284,000					\$ 284,000					
WM27	8" Replacement - 202nd Ave E.	18	\$662,000						\$ 662,000				
WM28	8" Replacement - 108th Street E.	18	\$473,000							\$ 473,000			
WM29	8" Replacement - 178th Avenue E.	18	\$567,000							\$ 567,000			
WM30	8" Replacement - Bonney Lake Boulevard	18	\$1,474,000								\$1,474,000		
WM31	8" Replacement - West Tapps Highway	18	\$567,000									\$ 567,000	
WM32	8" Replacement - Church Lake Road	18	\$567,000									\$ 567,000	
WM33	8" Replacement - 206th Ave E.	18	\$567,000									\$ 567,000	
WM34	8" Replacement - Locust Ave E.	18	\$1,134,000										\$1,134,000
WM35	12" Replacement - Sumner Tapps Hwy E	15	\$378,000										\$ 378,000
	0	0	\$0										
Supply Improvements													
WS	Wholesale Supply - Block 2		\$10,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
WS	Wholesale Supply - Block 3		\$0	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Storage Improvements													
ST9	Repainting Program		\$0	\$1,100,000	\$ 500,000				\$ 300,000				\$ 300,000
			\$0										
Facility Improvements													
F10	Water Quality Treatment Program		\$1,000,000									\$1,000,000	
F11	Grainger Springs Pump Station Rebuild		\$1,000,000		\$1,000,000								
F12	Victor Falls Pump Station Rebuild		\$1,000,000					\$1,000,000					
F13	Pump Replacement Program		\$100,000						\$ 50,000				\$ 50,000
F14	Public Works Shop Building		\$500,000			\$ 500,000							
Planning and Operational Improvements													
P7	Reclamation and Reuse Program		\$1,000,000	\$1,000,000									
P8	Telemetry and Control System Upgrades		\$100,000								\$ 100,000		
P9	Wellhead Protection Program		\$500,000				\$ 500,000						
P10	Security System Improvements		\$0										
P11	Comprehensive Water System Plan Update		\$400,000				\$ 200,000						\$ 200,000
Annual Programs													
A1	Flushing Program		\$200,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000
A2	Valve and Fire Hydrant Program		\$100,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000
A2	Tank Cleaning Program		\$300,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000
A4	Annual Leak Detection Program		\$450,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 45,000	\$ 45,000
A5	Annual Water Meter Replacement Program		\$500,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000
Total Estimated Project Costs			\$31,545,000	\$2,911,000	\$4,754,000	\$3,432,000	\$3,278,000	\$3,006,000	\$2,167,000	\$2,195,000	\$2,729,000	\$3,856,000	\$3,217,000

City of Bonney Lake
Proposed Improvements Implementation Schedule (10-Year CIP)

CIP No.	Description	Location	Size	Replaced		Estimated 2007 Cost	Year	Annual Totals
				Length of Water Main	Cost			
ST1	15 MG Peaking Storage Tank (completion)					\$2,290,000	2007	
ST2	Peaking Storage Booster Pump Station (completion)					\$1,610,000	2007	
ST3	Lakeridge Water Tank Recoating					\$260,000	2007	
LM1A	Leaky Mains PWTF (Deer Island)		6,750 LF	6,750 LF	\$130/LF	\$877,500	2007	
S1	Wholesale Supply Study					\$100,000	2007	
WS	Supply - TWD Purchase (installment payment #2)					\$650,000	2007	
A	Tank Cleaning Program					\$30,000	2007	
A	Leak Detection Program					\$45,000	2007	
A	Meter Replacement Program					\$40,000	2007	\$5,902,500
ST4	Lakeridge 810 Zone Water Tank (purchase land)	Lakeridge				\$200,000	2008	
S2	Supply - TWD Interite BPS	System Wide				\$1,676,000	2008	
S3	Supply - TWD Interite Water Main	System Wide	5,750 LF		\$246/LF	\$1,414,500	2008	
WM1	192nd Water Main Replacement		2,800 LF	2,800 LF	\$176/LF	\$492,800	2008	
LM1B	Leaky Mains PWTF - 95th Loop and 181st Ave E		3,800 LF	3,800 LF	\$145/LF	\$551,000	2008	
F1	Public Works Facility (design)	System Wide				\$540,000	2008	
LM2A(d)	Leaky Mains PWTF Phase 2a (design)		13,100 LF		\$15/LF	\$196,500	2008	
F2	Pressure Relief Stations		2 each		\$26,000/ea	\$52,000	2008	
P1	EPA Updated Rule Compliance	System Wide				\$50,000	2008	
WM2	Eastown Water Main		4,900 LF		\$176/LF	\$862,400	2008	
WM3	184th Avenue East Water Main Replacement		1,100 LF		\$185/LF	\$203,500	2008	
P2	Valve and Fire Hydrant Inventory and Mapping					\$150,000	2008	
P3	Establish Flushing Program					\$30,000	2008	
WS	Supply - TWD Purchase (installment payment #3)					\$650,000	2008	
A	Tank Cleaning Program					\$30,000	2008	
A	Leak Detection Program					\$45,000	2008	
A	Meter Replacement Program					\$40,000	2008	\$7,183,700
F3	Public Works Facility (construction)	System Wide				\$6,000,000	2009	
PZ1	Northwest Plateau Pressure Zone Improvements		2 each		\$20,000/ea	\$40,000	2009	
LM2A(c)	Leaky Mains PWTF Phase 2a (construction)		13,100 LF	13,100 LF	\$140/LF	\$1,834,000	2009	
LM2B(d)	Leaky Mains PWTF Phase 2b (design)		8,800 LF		\$15/LF	\$132,000	2009	
ST5	Lakeridge 810 Zone Water Tank					\$3,840,000	2009	
WM4	89th, 90th and 186th Water Main Replacement					\$333,000	2009	
WM5	SR 410 Central Business District Water Main Extension					\$335,000	2009	
WS	Supply - TWD Purchase (installment payment #4)					\$650,000	2009	
A	Flushing Program					\$20,000	2009	
A	Valve and Fire Hydrant Program					\$10,000	2009	
A	Tank Cleaning Program					\$30,000	2009	
A	Leak Detection Program					\$45,000	2009	
A	Meter Replacement Program					\$40,000	2009	\$13,309,000
F4	Tacoma Point ASR Improvements					\$50,000	2010	
PZ2	Southwest Plateau Pressure Zone Improvements		1 each		\$20,000/ea	\$20,000	2010	
PZ3	BPS - Lakeridge 810 Zone (South End)					\$2,000,000	2010	
LM2B(c)	Leaky Mains PWTF Phase 2b (construction)		8,800 LF	8,800 LF	\$140/LF	\$1,232,000	2010	
LM2C(d)	Leaky Mains PWTF Phase 2c (design)		8,200 LF		\$15/LF	\$123,000	2010	
PZ4	12" Replacement - 182nd Ave. E & 84th Street East		2,000 LF	2,000 LF	\$170/LF	\$340,000	2010	
P4	Security System Improvements	System Wide				\$100,000	2010	
WS	Supply - TWD Purchase (installment payment #5)					\$650,000	2010	
A	Flushing Program					\$20,000	2010	
A	Valve and Fire Hydrant Program					\$10,000	2010	
A	Tank Cleaning Program					\$30,000	2010	
A	Leak Detection Program					\$45,000	2010	
A	Meter Replacement Program					\$40,000	2010	\$4,660,000
LM2C(c)	Leaky Mains PWTF Phase 2c (construction)		8,200 LF	8,200 LF	\$140/LF	\$1,148,000	2011	
LM2D(d)	Leaky Mains PWTF Phase 2d (design)		11,100 LF		\$15/LF	\$166,500	2011	
WS	Supply - TWD Purchase (installment payment #6)					\$650,000	2011	
WM6	16" Replacement - BPA Alignment		5,400 LF	5,400 LF	\$263/LF	\$1,418,000	2011	
A	Flushing Program					\$20,000	2011	
A	Valve and Fire Hydrant Program					\$10,000	2011	
A	Tank Cleaning Program					\$30,000	2011	
A	Leak Detection Program					\$45,000	2011	
A	Meter Replacement Program					\$40,000	2011	\$3,527,500
P5	Comprehensive Water Plan Update	System Wide				\$150,000	2012	
LM2D(c)	Leaky Mains PWTF Phase 2d (construction)		11,100 LF	11,100 LF	\$140/LF	\$1,554,000	2012	
P6	Security System Updates	System Wide				\$250,000	2012	
ST6	Tacoma Point 748 Zone Water Tank Upsizing		3.2 MG		\$1.20/gal	\$3,840,000	2012	
F5	Victor Falls Watershed Fencing	Rhodes				\$550,000	2012	
WS	Supply - TWD Purchase (installment payment #7)					\$650,000	2012	
A	Flushing Program					\$20,000	2012	
A	Valve and Fire Hydrant Program					\$10,000	2012	
A	Tank Cleaning Program					\$30,000	2012	
A	Leak Detection Program					\$45,000	2012	
A	Meter Replacement Program					\$40,000	2012	\$7,139,000
WM7	12" Replacement - Myers Road	System Wide	4,000 LF	4,000 LF	\$213/LF	\$850,000	2013	
WS	Supply - TWD Purchase (installment payment #8)					\$650,000	2013	
A	Flushing Program					\$20,000	2013	
A	Valve and Fire Hydrant Program					\$10,000	2013	
A	Tank Cleaning Program					\$30,000	2013	
A	Leak Detection Program					\$45,000	2013	
A	Meter Replacement Program					\$40,000	2013	\$1,645,000
WM8	Tacoma Point/Driftwood Point Water Main Easement Crossing		100 LF	100 LF	\$300/LF	\$300,000	2014	
WM9	Inlet Island Lakebed Water Main Crossing		600 LF	600 LF	\$300/LF	\$180,000	2014	
ST7	Lakeridge 748 Zone Water Tank		1.5 MG		\$120/gal	\$1,800,000	2014	
WS	Supply - TWD Purchase (installment payment #9)					\$650,000	2014	
A	Flushing Program					\$20,000	2014	
A	Valve and Fire Hydrant Program					\$10,000	2014	
A	Tank Cleaning Program					\$30,000	2014	

DATE: May 5, 2008

ORIGINATOR: Dan Grigsby

TITLE: Public Works Director

SUBJECT: Adopt Updated Water Capital Facilities Plan.

The City's 2008 Comprehensive Water System Plan (CWSP) is now complete. Part of the CWSP includes a list of projects that are needed to support future growth in our water service area.

City Council approval of the Water Systems Capital Facilities Plan is necessary to obtain DOH review and approval.

ORDINANCE/RESOLUTION: 1846

REQUEST OR RECOMMENDATION BY ORIGINATOR:

ISSUE AND DOCUMENTS HAVE BEEN REVIEWED AND APPROVED BY THE
FINANCE DIRECTOR _____
CITY ATTORNEY _____

<u>2008 Budget Amount</u>	<u>Required Expenditure</u>	<u>Impact</u> N/A	<u>Remaining Balance</u>
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COMMITTEE ACTION: RECOMMEND APPROVAL TO COUNCIL

	DATE	APPROVED	DISAPPROVED
James Rackley, Chairman	<u>5-5-08</u>		
David Bowen	<u>5-5-08</u>		
Dan Decker	<u>5-5-08</u>		

COMMITTEE COMMENTS: _____

COMMITTEE'S RECOMMENDATION TO FORWARD TO:
CITY CLERK
CITY ATTORNEY

Please schedule for City Council Meeting date of: May 13, 2008

Consent Agenda: Yes No

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ORDINANCE NO. 1276

AN ORDINANCE OF THE CITY OF BONNEY LAKE, PIERCE COUNTY, WASHINGTON, AMENDING CHAPTER 13.04 OF THE BONNEY LAKE MUNICIPAL CODE AND ORDINANCE NOT. 1221, 1220, 1192, 1100, 1094, 1083, 1073, 968, 919, 828, 763, 692a, 692, AND 588 RELATING TO THE WATER SYSTEM DEVELOPMENT CHARGE AMOUNT AND APPLICATION.

NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF BONNEY LAKE, WASHINGTON DO ORDAIN AS FOLLOWS:

WHEREAS, the City has determined that certain fees charged for connecting to City water services are in need of adjustment so that new users connecting to the system will pay their equitable share of the cost of the system and in order to accommodate future development and build the capital projects needed to sustain and improve upon current levels of service; and

WHEREAS, the City has determined that water rates should be adjusted on an annual basis in accordance with the Construction Cost Index instead of the Consumer Price Index;

NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF BONNEY LAKE WASHINGTON DO ORDAIN AS FOLLOWS:

Section 1. BLMC section 13.04.070 and the corresponding portions of Ordinance Nos, 1221 § 2; 1220 § 1; 1192 § 1; 1100 § 1; 1094 § 1; 1083 § 1; 1073 § 1; 968 § 1; 919 § 1; 828 § 2; 763 § 1; 692A §§ 1, 2; 692 § 2; and 588 § 5 are hereby amended to read as follows:

13.04.070 Water service application.

C. Water Service Connection Charges. All connections to the water system of the city and the charges to be paid by the property owner toward the construction thereof shall be as provided in this subsection:

1. Installation Charge. The following installation charges will be paid by the property owner as part of their connection charge at the time application is made for water service.

Meter Size	Meter Set Only	Meter Set and Service Line
5/8" or 3/4"	\$200.00	\$1,000*
1"	\$300.00	\$1,100*
1-1/2" or larger	Actual time and materials plus indirect costs. If installation involves work underneath the roadway surface, the fee shall be according to the actual time and materials plus 20 percent for indirect costs.	

2. Charge for Equitable Share of System. Each new connection to the water system shall pay as part of their connection charges their equitable share of the cost of the system according to the following schedule:

a. Residential System Development Charge (SDC).

i. Single-Family.

Meter Size	City and County SDC Charge
5/8" or 3/4"	\$ 7,700
1"	\$17,175
1-1/2" or larger	To be determined on each individual case, based on the projected amount of usage and peaking expected from the customer. These charges shall reflect residential equivalence (RE) values used for individual residential customers.

ii. Duplex Units. If a single meter or two meters are installed, an SDC rate of \$13,630 (100% for first unit and 77% of the single family rate for the second unit) will be charged for the duplex when those meters are either 5/8" or 3/4". SDC charge for larger meters shall be determined on each individual case, based on the projected amount of usage and peaking expected from the customer. These charges shall reflect residential equivalence (RE) values used for individual residential customers.

iii. Accessory Dwelling Units (ADU). If no additional meter is required, no SDC will be charged. If a second meter is required, an SDC of \$5,930 (77% of the single family rate) will be charged when that new meter is 5/8" or 3/4". An SDC of \$13,225 (77% of the single family rate) will be charged if the new, second meter is a 1" meter. If the existing meter is replaced with a larger meter, the difference in the SDC rates for the two meters will be charged.

iv. Multifamily and Mobile Home Parks.

1. Each unit shall be charged \$5,930 (77 percent of the SDC charged to single family units).
2. SDC charges for meters larger than 2-inches shall be determined on each individual case, based on the projected amount of usage and peaking expected from the customer. These charges shall reflect residential equivalence (RE) values used for individual residential customers.
3. There shall be only one water meter installed for each building housing multiple residential units.

b. Nonresidential System Development Charge (SDC).

Meter Size	City and County SDC Charge
5/8"	\$ 9,790
3/4"	\$12,950
1"	\$19,260
1-1/2" or larger	To be determined on each individual case, based on the projected amount of usage and peaking expected from the customer. These charges shall reflect residential equivalence (RE) values used for individual residential customers.

c. Irrigation Only System Development Charge (SDC).

Meter Size	City and County SDC Charge
5/8"	\$ 6,310
3/4"	\$ 9,470
1"	\$15,790
1-1/2" or larger	To be determined on each individual case, based on the projected amount of usage and peaking expected from the customer. These charges shall reflect residential equivalence (RE) values used for individual residential customers.

d. The charges set out in this subsection (C)(2) shall not be applicable to an Accessory Dwelling Unit (ADU) permitted pursuant to BLMC 18.22.090, so long as a second or larger water meter is not required by applicable codes or requested by the owner. Should the property upon which an accessory dwelling unit is located be sold, platted or otherwise segregated from the property upon which the primary residence is located, and, because of the exemption provided for in this subsection, the owner of the accessory dwelling unit did not previously pay a full, separate connection charge including equitable share charge for the accessory dwelling unit, then the following shall apply:

i. If no additional connection charge was paid for the accessory dwelling unit, the owner of the segregated accessory dwelling unit shall be required to pay a connection charge, including single-family equitable share charge, in the amounts provided for in this section at the time of segregation. A new water meter will be provided.

ii. If a reduced connection charge was paid for a second or larger meter and/or connection for the accessory dwelling unit, the owner of the segregated accessory dwelling unit shall be required to pay the difference between that reduced charge and the amount of the connection charge, including single-family equitable share charge, provided for in this section at the time of segregation. A new water meter will be provided if necessary.

e. Annual Adjustment. Beginning January 1, 2009, and for every year thereafter, the installation and connection charges listed in this section shall be updated annually at a rate adjusted in accordance with the Engineering News Record (ENR) Construction Cost Index (CCI) for the Seattle area, using a November-November annual measure to establish revised fee schedules effective January 1st of each year.

f. These charges are to apply in all cases where distance from the water main to the meter location does not exceed 60 feet. In such cases where the distance is over 60 feet there shall be an additional fee, based on cost of labor and materials.

g. Property Owner's Responsibility. Property owners are responsible for all leaks or damage due to leaks from privately installed and owned water lines. The property owner shall install and maintain at his own expense all water service from the water meter to the place of use.

Section 2. This Ordinance shall take effect thirty (30) days after its passage, subject to prior approval by the Mayor and prior publication for five days as required by law.

PASSED by the City Council and approved by the Mayor this 13th day of May, 2008.



Neil Johnson, Jr., Mayor

ATTEST:


Harwood T. Edvalson, CMC, City Clerk

APPROVED AS TO FORM:


James J. Dionne, City Attorney

Passed: 5/13/08
Valid: 5/13/08
Published: 5/15/08
Effective Date: 6/12/08



Memorandum From
Daniel L. Grigsby, P.E.
Director, Public Works Department

5 May 2008

To: Mayor, City Council, City Administrator

Topic: Review Comments on Water SDC Rate Analysis Policy Decision #3

On 15 April, City Council members requested clarification of the reasons why FCS Group recommended use of Policy Decision #3 to determine the new Water System Development Charge (SDC).

This policy decision focuses on how to account for future projects and application of the philosophy that growth pays for growth. Both FCS Group and our attorneys are consistent in indicating that the recommended policy causes the recommend SDC rate (\$7,704) to be conservative on this element. As future litigation and court rulings play themselves out, we can revisit this element of the water SDC rate again. Specifically, here are the points that this recommendation is based on:

1. To have growth pay for growth you would take total growth related capital and divide by the anticipated growth units of the system for the time period under review. That being said, there is a lot of grey area when it comes to identifying what portion of capital is growth related versus repair/replacement. For instance, it is difficult to say that any asset built does not benefit existing customers to some degree. The current approach uses this philosophy. Growth is paying its proportional share of future projects along with existing customers.
2. The approach that was used to calculate the proposed SDC presented on April 1 to Council is conservative. FCS GROUP uses this approach when calculating SDCs on the majority of their calculations for other customers. They also took into account the existing charge level, the environment (litigation pending) and if the calculated charge will move the City to such a large charge that additional litigation may be likely.
3. There is no explicit statutory authority for cities to use future projects in an SDC, and RCW 35.92.025 seems to specifically contemplate a methodology that includes valuing the current system as was used in this rate analysis.
4. There are some technical problems inherent in the future-projects-only approach that do not exist when one uses an approach that includes the current system.
5. Because this is not the methodology adopted by the trial court in the Palermo case, adopting the higher SDC would not as effectively "cure" the trial court's invalidation of the current SDC.
6. Being able to say Council did not choose to adopt the highest SDC possible will give you another argument to help you win if you are challenged on the new SDC rate, since it suggests a reasoned and temperate decision.

I recommend that City Council approve the proposed SDC increase from \$7,147 to \$7,700 per Equivalent Residential Unit (ERU). As I prepared ordinance D08-89, I rounded the SDC down from \$7,704 to \$7,700 to be conservative when calculating other rates based on this SDC.

Very Respectfully,
DAN

Exhibit A-1

City of Bonney Lake
 Charge for Equitable Share of System
 Example Charge Calculations

Customer Class	Meter Size	Base Charge	x	Meter Equivalents	+	Fire Base Charge	+	Required Fire Flow	x	Add'l Fire Charge	=	Total
Single-Family	5/8 inch	\$ 6,314.00	x	1	+	\$ 1,390.00	+	1,000 gpm	x	\$ 0.00	=	\$ 7,700
Single-Family	3/4 inch	\$ 6,314.00	x	1.5	+	\$ 1,390.00	+	1,000 gpm	x	\$ 0.00	=	\$ 10,860
Single-Family	1 inch	\$ 6,314.00	x	2.5	+	\$ 1,390.00	+	1,000 gpm	x	\$ 0.00	=	\$ 17,175
Single-Family	1 1/4 inch	\$ 6,314.00	x	3.5	+	\$ 1,390.00	+	1,000 gpm	x	\$ 0.00	=	\$ 23,490
Single-Family	1 1/2 inch	\$ 6,314.00	x	5	+	\$ 1,390.00	+	1,000 gpm	x	\$ 0.00	=	\$ 32,960
Single-Family	2 inch	\$ 6,314.00	x	8	+	\$ 1,390.00	+	1,000 gpm	x	\$ 0.00	=	\$ 51,900
Commercial	5/8 inch	\$ 6,314.00	x	1	+	\$ 1,390.00	+	2,500 gpm	x	\$ 0.83	=	\$ 9,790
Commercial	3/4 inch	\$ 6,314.00	x	1.5	+	\$ 1,390.00	+	2,500 gpm	x	\$ 0.83	=	\$ 12,950
Commercial	1 inch	\$ 6,314.00	x	2.5	+	\$ 1,390.00	+	2,500 gpm	x	\$ 0.83	=	\$ 19,260
Commercial	1 1/4 inch	\$ 6,314.00	x	3.5	+	\$ 1,390.00	+	2,500 gpm	x	\$ 0.83	=	\$ 25,570
Commercial	1 1/2 inch	\$ 6,314.00	x	5	+	\$ 1,390.00	+	2,500 gpm	x	\$ 0.83	=	\$ 35,050
Commercial	2 inch	\$ 6,314.00	x	8	+	\$ 1,390.00	+	2,500 gpm	x	\$ 0.83	=	\$ 53,990
Separate Irrigation	5/8 inch	\$ 6,314.00	x	1	+	\$ 0.00	+	0 gpm	x	\$ 0.00	=	\$ 6,310
Separate Irrigation	3/4 inch	\$ 6,314.00	x	1.5	+	\$ 0.00	+	0 gpm	x	\$ 0.00	=	\$ 9,470
Separate Irrigation	1 inch	\$ 6,314.00	x	2.5	+	\$ 0.00	+	0 gpm	x	\$ 0.00	=	\$ 15,790
Separate Irrigation	1 1/4 inch	\$ 6,314.00	x	3.5	+	\$ 0.00	+	0 gpm	x	\$ 0.00	=	\$ 22,100
Separate Irrigation	1 1/2 inch	\$ 6,314.00	x	5	+	\$ 0.00	+	0 gpm	x	\$ 0.00	=	\$ 31,570
Separate Irrigation	2 inch	\$ 6,314.00	x	8	+	\$ 0.00	+	0 gpm	x	\$ 0.00	=	\$ 50,510
Separate Irrigation	3 inch	\$ 6,314.00	x	16	+	\$ 0.00	+	0 gpm	x	\$ 0.00	=	\$ 101,020
Separate Irrigation	4 inch	\$ 6,314.00	x	25	+	\$ 0.00	+	0 gpm	x	\$ 0.00	=	\$ 157,850
Separate Irrigation	6 inch	\$ 6,314.00	x	50	+	\$ 0.00	+	0 gpm	x	\$ 0.00	=	\$ 315,700
Separate Irrigation	8 inch	\$ 6,314.00	x	80	+	\$ 0.00	+	0 gpm	x	\$ 0.00	=	\$ 505,120
Separate Irrigation	10 inch	\$ 6,314.00	x	125	+	\$ 0.00	+	0 gpm	x	\$ 0.00	=	\$ 789,250
Separate Fire Service	5/8 inch	\$ 0.00	x	1	+	\$ 1,390.00	+	1,000 gpm	x	\$ 0.00	=	\$ 1,390.00
Separate Fire Service	3/4 inch	\$ 0.00	x	1.5	+	\$ 1,390.00	+	1,000 gpm	x	\$ 0.00	=	\$ 1,390.00
Separate Fire Service	1 inch	\$ 0.00	x	2.5	+	\$ 1,390.00	+	1,500 gpm	x	\$ 0.46	=	\$ 2,085.00
Separate Fire Service	1 1/4 inch	\$ 0.00	x	3.5	+	\$ 1,390.00	+	2,000 gpm	x	\$ 0.70	=	\$ 2,780.00
Separate Fire Service	1 1/2 inch	\$ 0.00	x	5	+	\$ 1,390.00	+	2,000 gpm	x	\$ 0.70	=	\$ 2,780.00
Separate Fire Service	2 inch	\$ 0.00	x	8	+	\$ 1,390.00	+	2,500 gpm	x	\$ 0.83	=	\$ 3,475.00
Separate Fire Service	3 inch	\$ 0.00	x	16	+	\$ 1,390.00	+	2,500 gpm	x	\$ 0.83	=	\$ 3,475.00
Separate Fire Service	4 inch	\$ 0.00	x	25	+	\$ 1,390.00	+	2,500 gpm	x	\$ 0.83	=	\$ 3,475.00
Separate Fire Service	6 inch	\$ 0.00	x	50	+	\$ 1,390.00	+	3,500 gpm	x	\$ 0.99	=	\$ 4,865.00
Separate Fire Service	8 inch	\$ 0.00	x	80	+	\$ 1,390.00	+	3,500 gpm	x	\$ 0.99	=	\$ 4,865.00
Separate Fire Service	10 inch	\$ 0.00	x	125	+	\$ 1,390.00	+	3,500 gpm	x	\$ 0.99	=	\$ 4,865.00
	Current SDC	\$ 7,704.00				Fire Flow Base Charge		\$ 1,390				
	Base Charge	\$ 6,314.00				Additional Fire Flow Charge		\$ 1.39/(1 gpm > 1000 gpm)				

City of Bonney Lake, Washington
Council Agenda Bill (C.A.B.) Approval Form

Department/Staff Contact:
PW Director Dan Grigsby

Council/Wkshp Meeting Date:
13 May 2008

Agenda Item Number
AB08-89

Ordinance Number:
D08-89

Resolution Number:

Councilmember Sponsor:

BUDGET INFORMATION

2008 Budget Amount

Required Expenditure

Impact
N/A

Remaining Balance

Explanation:

Agenda Subject: Adopt Ordinance To Set New Water System Development Charge Rates

Administrative Recommendation:

Background Summary: Council is to consider adoption of new Water SDC rates utilizing the analysis provided by FCS Group. This rate incorporates the decisions made by Council to purchase 4 MGD (peak) additional water supply from Tacoma Public Utility and setting the Multi-Family rate at 77% of the single family rate. This results in a single family SDC rate of \$7,700 and a multi-family rate of \$5,930 per unit. Water SDC rates for duplexes and Ancillary Dwelling Units (ADU) have been reduced and clarified. Annual adjustments to the Water SDC are changed from the Consumer Price Index (CPI) to the Construction Cost Index (CCI).

Attachments: (To be placed in Appendix S of the 2008 CWSP notebook)

D08-89, Water SDC Rate Increase Ordinance

Response to question raised during workshop concerning Growth Project use in SDC Calculation

Large Meter SDC Rate Table Prepared by RH2 based on the \$7,700 per single family unit (21 APR08)

References: (To be placed in Appendix S of the 2008 CWSP notebook)

RH2 Analysis of Bonney Lake Multi-Family versus Single Family water consumption (2 April 2008)

FCS Group Memo, Multi-Family Customer Equivalency Factor Evaluation (2 Aug 2006)

PW Director Grigsby Memo, Fair Share of Water SDC for Multi-Family Units (23 January 2007)

FCS Group Memorandum on SDC baseline rate analysis (25 March 08)

FCS Group Memorandum on SDC comparative analysis of water supply purchase options (25 March 08)

FCS Group Presentation by Angie Sanchez (1 April 2008)

Council Committee Dates:

Finance Committee:

Commission Dates:

Planning Commission:

Board/Hearing Examiner Dates:

Park Board:

Public Safety Committee:

Civil Service Commission:

Hearing Examiner:

Community Development &

Planning Committee:

Council Workshop:

Council Action:

Council Call for Hearing:

Council Hearings Date:

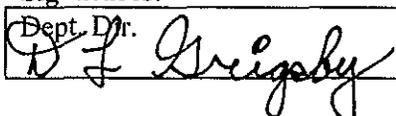
Council Referred Back to:

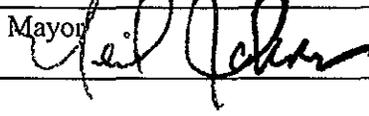
Workshop: 6Feb07, 1APR08, 15APR08 Committee:

Council Tabled Until:

Council Meeting Dates: 27Mar07, 12Feb08, 13May08

Signatures:

Dept. Dir.


Mayor


Date City Attorney reviewed

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ORDINANCE NO. 1277

AN ORDINANCE OF THE CITY OF BONNEY LAKE, PIERCE COUNTY, WASHINGTON, AMENDING CHAPTER 13.04 OF THE BONNEY LAKE MUNICIPAL CODE AND ORDINANCE NOS. 588, 692, 692A, 763, 828, 907, 1046, 1101 AND 1129, RELATING TO WATER RATES.

WHEREAS, the City has determined that certain rates charged for City water services are in need of increase in order to sustain and improve upon current levels of service; and

WHEREAS, the City has determined that water rates should be adjusted on an annual basis in accordance with the Consumer Price Index;

NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF BONNEY LAKE, WASHINGTON DO ORDAIN AS FOLLOWS:

Section 1. BLMC section 13.04.100 and the corresponding portions of Ordinance Nos. 588 § 9; 692A § 3; 763 § 2; 828 § 3; 907 § 1; 1046 § 1; 1101 § 1; and 1129 § 2 are hereby amended to read as follows:

13.04.100 Water rates.

A. Discount for Senior Citizens and Disabled Persons. Owners of single-family residences who have qualified for real estate property tax exemption through the Pierce County assessor-treasurer's office on the basis of age and/or disability, and who present proof thereof to the appropriate authority of the city, shall qualify and be entitled to a reduced water rate as may, from time to time, be set by the city council and established as a 50 percent reduction from the water availability charge.

B. ~~Water Availability Charge~~ Monthly Water Rates - Within City Limits.

[Existing table deleted.]

Water Availability Charge:

<u>Meter size</u>	<u>2008</u>
<u>5/8" - 3/4"</u>	<u>\$15.45</u>
<u>Qualified Senior, 5/8" - 3/4"</u>	<u>See subsection A.</u>
<u>1"</u>	<u>\$25.70</u>
<u>1-1/4"</u>	<u>\$51.05</u>
<u>1-1/2"</u>	<u>\$51.05</u>
<u>2"</u>	<u>\$81.70</u>
<u>3"</u>	<u>\$153.10</u>
<u>4"</u>	<u>\$255.00</u>
<u>6"</u>	<u>\$510.00</u>

The In addition, the consumption charge per 100 cubic feet (CCF), or any part thereof used, shall be as follows:

[Existing table deleted.]

<u>Winter (October 1st through May 31st)</u>	<u>2008</u>
<u>0-10 CCF per month</u>	<u>\$1.07</u>
<u>Over 10 CCF per month</u>	<u>\$2.12</u>

<u>Summer (June 1st through September 30th)</u>	
<u>0-10 CCF per month</u>	<u>\$1.07</u>
<u>Over 10 CCF per month</u>	<u>\$3.63</u>

C. ~~Water Availability Charge~~ Monthly Water Rates - Outside City Limits.

[Existing table deleted.]

Water Availability Charge:

<u>Meter size</u>	<u>2008</u>
<u>5/8" - 3/4"</u>	<u>\$20.00</u>
<u>Qualified Senior, 5/8" - 3/4"</u>	<u>See subsection A.</u>
<u>1"</u>	<u>\$33.30</u>
<u>1-1/4"</u>	<u>\$66.35</u>
<u>1-1/2"</u>	<u>\$66.35</u>
<u>2"</u>	<u>\$106.10</u>
<u>3"</u>	<u>\$199.00</u>
<u>4"</u>	<u>\$331.70</u>
<u>6"</u>	<u>\$646.80</u>

In Addition, the consumption charge per 100 cubic feet (CCF), or any part thereof used, shall be as follows.

[Existing table deleted.]

<u>Winter (November 1st through June 30th)</u>	<u>2008</u>
<u>0-10 CCF per month</u>	<u>\$1.55</u>
<u>Over 10 CCF per month</u>	<u>\$3.08</u>

<u>Summer (July 1st through October 31st)</u>	
<u>0-10 CCF per month</u>	<u>\$1.55</u>
<u>Over 10 CCF per month</u>	<u>\$5.27</u>

~~D. Commercial summer rates will be reflected on the bills covering July 1st through October 31st. Winter commercial rates will be reflected on the bills covering November 1st through June 30th.~~

~~E. Multiple Residential Units.~~

1. The water availability charge for a connection serving multiple residential units shall be the availability charge set forth above, multiplied by the number of dwelling units connected to the meter, as follows:

a. Each duplex unit will be billed as though separately connected to the water main, based on five-eighths- or three-quarters-inch meter rates.

b. In the case of apartment/trailer courts having one meter, each unit will be billed as though separately connected to the water main, occupied or not, based on five-eighths- or three-quarters-inch meter rates.

c. In the case of building lots which have been granted a conditional use permit to allow more than one dwelling on one service meter, each dwelling unit will be billed as though separately connected to the water main, based on five-eighths- or three-quarters-inch meter rates.

2. The consumption charge provided for in this section shall be applied to multiple residential units as provided for above, except that the lower consumption charge rate shall be applied to the first "X" CCF per month, where "X" is the number of units served by the connection multiplied by 10. All consumption greater than that threshold will be charged the higher consumption charge rate.

3. There shall be only one water meter for each building housing multiple residential units.

~~EF. Multiple Commercial and Industrial Buildings. Where all commercial or industrial buildings connected to a single service are used in the same business under single management, billing shall be made as for a single building.~~

~~FG. Demand Charge.~~

1. Private fire hydrants, stand pipes, fire sprinkler systems, etc., shall have a monthly charge of \$3.00.

2. Special purpose use of water from fire hydrants or stand pipes shall be \$10.00 plus \$1.00 per 100 cubic feet for all water used inside the city limits and \$14.00 plus \$1.44 for all water used outside the city limits.

3. Where the water meters are shut off, the monthly charge will be \$5.00 within the city limits and \$6.90 outside the city limits.

4. Where unusual circumstances prevent a meter reading, water consumption will be estimated at an average of 1,000 cubic feet per month.

GH. Leakage - Rate Reduction.

1. In the event that there is a leak in the water service line on the property owner's side of the water meter; and

2. That after the service line is repaired by the owner and upon written request by the property owner, the city water department will make an adjustment in the water bill;

3. The adjustment shall be two-thirds of that portion of the customer's water bill which is over the average normal water usage. The adjustment shall be limited to the period of 90 days prior to the repair of the leak and inspection thereof.

4. Only one leakage adjustment will be allowed in any two-year period. Additional leaks will require on-site inspection and verification of repairs.

HI. Irrigation Meters.

1. New multifamily (three or more units) and nonresidential connections shall be required to install a separate meter for irrigation use, effective January 1, 2005.

2. Existing multifamily (three or more units) and nonresidential connections shall be required to install a separate meter for irrigation use no later than January 1, 2007.

3. There shall be no availability charge applicable to irrigation meters. The commodity charge shall be 25 percent greater than the applicable commodity charge for non-irrigation usage that exceeds 10 CCF per month (the "tailblock").

Section 2. BLMC section 13.04.105 and Ordinance No. 692 § 4 are hereby amended to read as follows:

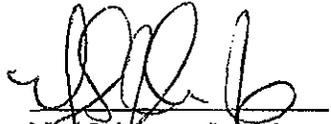
13.04.105 Annual rate ~~review~~ adjustment.

~~The city council shall conduct an annual review of the revenue requirements of the city water utility for the purpose of determining whether adjustments in the rates are necessary.~~

Effective January 1 of each year, beginning on January 1, 2009, the water rates listed in BLMC 13.04.100 shall be adjusted by the annual change in the most recent Seattle-Bremerton-Tacoma Consumer Price Index (Urban Consumers) published by the U.S. Department of Labor.

Section 3. This Ordinance shall take effect thirty (30) days after its passage, subject to prior approval by the Mayor and prior publication for five days as required by law; *provided*, that this Ordinance shall not take effect prior to July 1, 2008.

PASSED by the City Council and approved by the Mayor this 13 day of May, 2008.


Neil Johnson, Jr., Mayor

ATTEST:

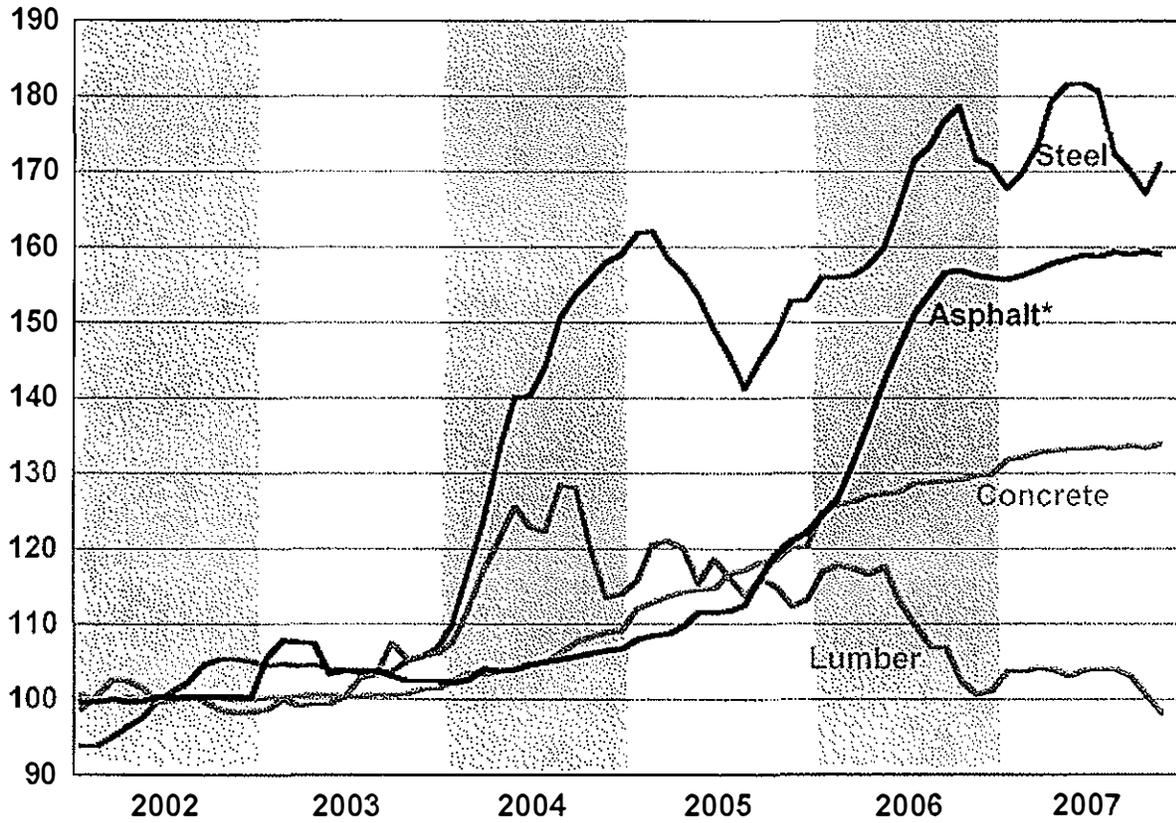

Harwood T. Edvalson, CMC, City Clerk

APPROVED AS TO FORM:


James J. Dionne, City Attorney

Passed: 5/13/08
Valid: 5/13/08
Published: 5/15/08
Effective Date: 7/1/08

Producer Price Indices Competitive Building Materials



* BLS series "Paving Asphalt" through 2003 (discontinued) then "Asphalt Paving Mixtures and Block"

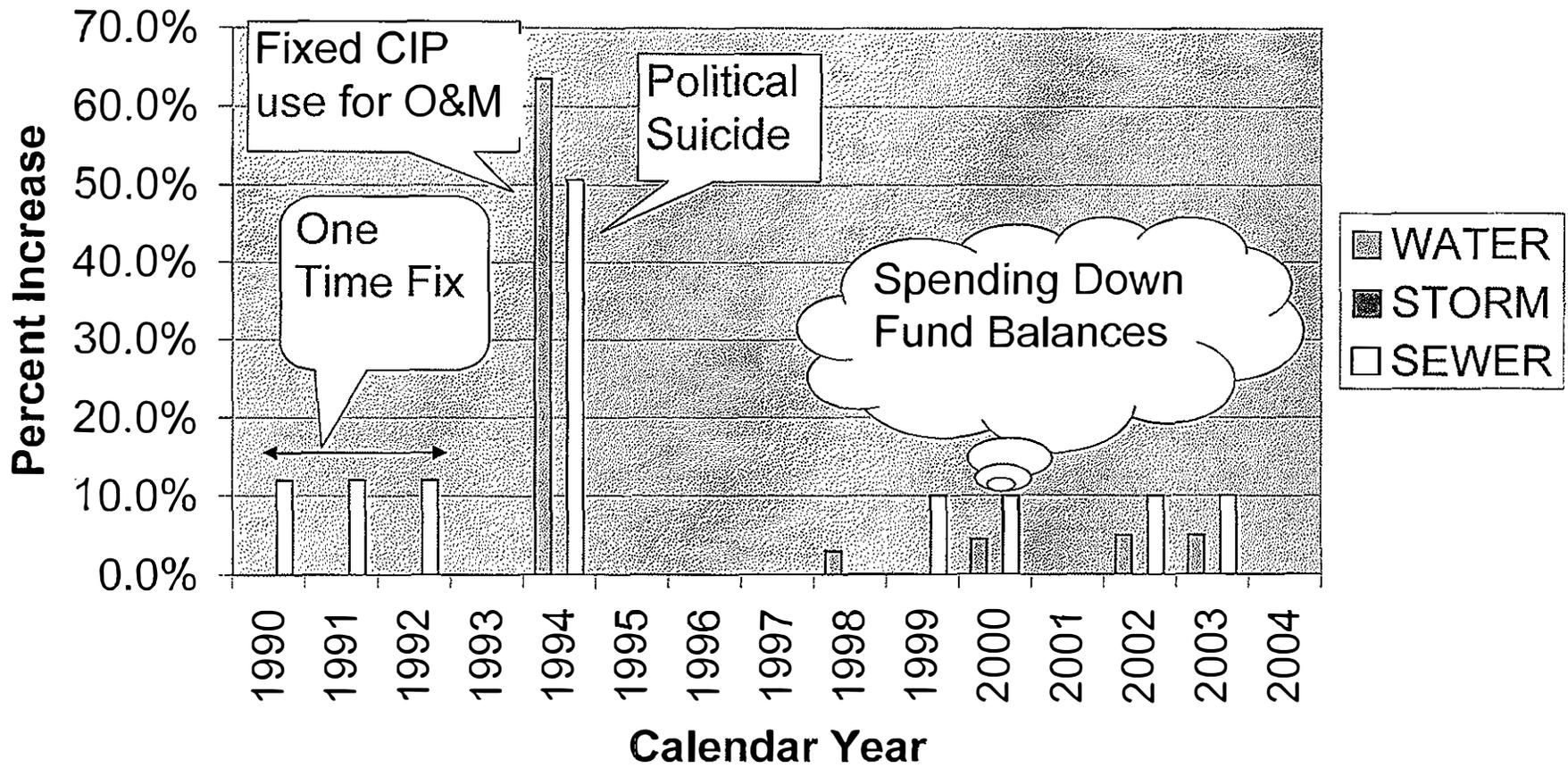
Base Year 2002 = 100

Last four months of data are preliminary.

Source: Bureau of Labor Statistics. Data rebased to 2002 by PCA Market Research

Utility Rate Increase History City of Bonney Lake

(4 October 2004)



Bonney Lake Utility Rates

<u>Year</u>	<u>Historic Water Rate</u>	<u>Water Increase</u>	<u>Sewer Increases</u>	<u>CPI</u>	<u>ENR CCI</u>	<u>Ordinance</u>
Jan-68	\$5.00			4.0%	7.5%	
Jan-69	\$5.00	0%		5.0%	9.9%	
Jan-70	\$5.00	0%		4.5%	8.8%	
Jan-71	\$5.00	0%		2.1%	14.5%	
Jan-72	\$5.00	0%		2.9%	10.9%	
Jan-73	\$5.00	0%		6.4%	8.1%	
Jan-74	\$5.00	0%		11.0%	6.6%	
Jan-75	\$5.00	0%		10.1%	9.5%	
Jan-76	\$5.00	0%		5.7%	8.5%	
Jan-77	\$5.00	0%		8.0%	7.3%	
Jan-78	\$7.20	44%		9.6%	7.8%	
Jan-79	\$7.20	0%		11.1%	8.2%	
Jan-80	\$7.20	0%		16.5%	7.8%	
Jan-81	\$7.20	0%		11.0%	9.2%	
Jan-82	\$8.40	17%		6.4%	8.2%	
Jan-83	\$8.40	0%		1.6%	6.3%	
Jan-84	\$8.40	0%		3.7%	2.0%	
Jan-85	\$8.40	0%		2.5%	1.2%	
Jan-86	\$8.40	0%		1.0%	2.4%	
Jan-87	\$8.80	5%		2.3%	2.6%	
Jan-88	\$8.80	0%		3.3%	2.6%	
Jan-89	\$8.80	0%		4.7%	2.1%	
Jan-90	\$8.80	0%	12.0%	7.4%	2.5%	
Jan-91	\$8.80	0%	12.0%	5.8%	2.2%	
Jan-92	\$8.80	0%	12.0%	3.7%	3.1%	
Jan-93	\$8.80	0%	0.0%	2.8%	4.5%	
Jan-94	\$14.08	60%	50.7%	3.4%	3.8%	
Jan-95	\$14.08	0%	0.0%	3.0%	1.2%	
Jan-96	\$14.08	0%	0.0%	3.4%	2.7%	
Jan-97	\$14.08	0%	0.0%	3.5%	3.6%	
Jan-98	\$14.53	3%	0.0%	2.9%	1.6%	
Jan-99	\$14.53	0%	10.0%	3.0%	2.3%	
Jan-00	\$15.18	4.5%	10.0%	3.7%	2.7%	
Jan-01	\$15.18	0.0%	0.0%	3.6%	2.0%	
Jan-02	\$15.94	5.0%	10.0%	1.9%	3.1%	
Jan-03	\$16.74	5.0%	10.0%	1.6%	2.4%	
Jan-04	\$16.74	0.0%	0.0%	1.2%	6.3%	
Jan-05	\$19.25	15.0%	2.0%	2.8%	4.7%	
Jan-06	\$22.14	15.0%	2.0%	3.7%	3.6%	
Jan-07	\$25.46	15.0%	2.0%	3.7%	3.6%	
40 year total		188%	133%	195%	208%	
Avg. per year		4.7%		4.9%	5.2%	

Historic Water Rate is based on the:
Flat rate for Water Availability PLUS Consumption of 10 CCF per month.
Also, resident winter rates are used.

COMMUNITY DEVELOPMENT COMMITTEE

7 April 2008 Notes

Start: 5:00 pm Finish: 6:05 pm

Discussion

Agenda Bill 08-104, Ordinance D08-104, Annual Adjustment to Monthly Water Rates
Agenda Bill 08-115, Ordinance D08-115, Annual Adjustment to Monthly Sewer Rates

PW Director Grigsby discussed the need to have an annual adjustment to our utility rates, just like we have for System Development Charges and Impact Fees in order to retain purchasing power. He indicated that in 2008, our labor rates have increased 3.8% and 3.96% (Represented/Non-Represented Employees); Benefit costs have increased 11.5% (Medical-Regence), 6.1% (Group Health); and Material costs, especially metal and oil based materials like asphalt and seal coats have increased sharply; and the cost of other supplies and material continues to increase steadily.

Reviewed the PROs and CONs of annual utility rate adjustments and the different methods available to apply them, if they should they be considered appropriate.

- a. Annual Fixed Rate Increases. Every 3, 4 or 5 years, set new rate increases, such as we did from 2005 to 2007 with 15% rate increases for water rates and 3% for sewer rates.
- b. Annual Variable Rate Increases. Use a national index that is calculated each November and made effective each January. Ensure that the new rates are presented to council prior to being publicized. If Council determines the rates are too high, they will indicate the acceptable rate increase to be used.
- c. Multi-Year Fixed Rate Increases. Every 4-5 years, have a new rate analysis prepared and increase rates at that time. This was considered to be the worst method due to the significant rate increases that would occur in a single year. It is better for customers to receive much smaller rate increases every year.

CDC members reached the following consensus:

- a. There should be annual rate adjustments to utility rates to offset annual maintenance and operation cost increases in labor, material, and equipment.
- b. They prefer to use the Variable Rate adjustment process. The main selling point is that an outside agency is indicating what the rate should be and that it reflects actual cost increases in the region, not just in Bonney Lake. They felt that this method was easier to explain to their constituents and that it was fairly conservative.
- c. Even with the annual rate adjustments, a reality check/true up analysis should be done every 4-5 years to ensure that rates are appropriate and consistent with actual costs.
- d. PW Director Grigsby will prepare an ordinance consistent with this guidance.

Attendees:

Chairperson – Council Member Rackley; Council Members: Bowen and Decker
PW Director Grigsby, P&CD Director Vodopich

AWC Personnel News - August 2007 (Plain Text Version)

[Return to Graphical Version](#)

In this issue:

[Task Force on Family Leave Insurance Begins Work](#)

[Latest CPI Data](#)

[A Very Brief CPI Refresher Course](#)

[LEOFF 2 Board Adopts Supplemental Rate Increase](#)

[Get Ready for Employee Performance Evaluations!](#)

[Compensation Tools Available Now](#)

[Plan to Attend the WAPELRA Fall Conference](#)

[FLSA Workshops Scheduled for October](#)

[Other Upcoming Workshops and Conferences](#)

A Very Brief CPI Refresher Course

The Consumer Price Index (CPI) is a measure of the average change over time in the prices paid by urban consumers for a fixed market basket of consumer goods and services.

The Consumer Price Index (CPI) is a measure of the average change over time in the prices paid by urban consumers for a fixed market basket of consumer goods and services. The CPI provides a way to compare what the market basket of goods and services costs this month with what the same market basket cost a month or a year ago.

Local governments in Washington use CPI data for a variety of purposes, most notably to determine annual wage increases for employees.

The CPI is calculated for two population groups: All Urban Consumers (CPI-U) and Urban Wage Earners and Clerical Workers (CPI-W). The CPI-U represents about 87 percent of the total U.S. population and is based on the expenditures of all families living in urban areas.

The CPI-W is a subset of the CPI-U and is based on the expenditures of families living in urban areas who meet additional requirements related to employment: more than one-half of the family's income has to be earned from clerical or hourly-wage occupations. The CPI-W represents about 32 percent of the total U.S. populations.

In addition to figures for the U.S. as a whole, the Bureau of Labor Statistics (BLS) publishes regional data along with data for a number of local areas. The U.S. index is published monthly. The Seattle-area index is published bi-monthly, in February, April, June, August, October, and December. The Portland-area index is published semi-annually. Semi-annual averages are also calculated for the US and Seattle indexes.

Local governments in our state may use the U.S. CPI-U and CPI-W, the local Seattle or Portland indexes, or the Western region index to calculate wage increases. Some even use the average of the U.S. index and a local index. The local area indexes are more volatile than the national index, and the BLS strongly encourages users to consider adopting the national index for use in contract escalator clauses. These indexes are more stable and subject to less sampling and other measurement error than the local area indexes, and are therefore more statistically reliable.

BLS offers a fact sheet that provides guidelines on how to use the CPI for contract escalation clauses at www.bls.gov/cpi/cpifact3.htm.

Ways to Obtain CPI Data

- **AWC website**
CPI information, updated each month after the newest CPI figures are released, is available on AWC's website. For a chart showing U.S., Seattle and Portland area data, go to www.awcnet.org/documents/cpidata.pdf.
- **Bureau of Labor Statistics website**
The Bureau of Labor Statistics provides free, easy, and continuous access to almost all published CPI data and press releases, although it's occasionally difficult to navigate through to find exactly what you are looking for. The web address is www.bls.gov/ro9/#info.
- **Technical assistance from BLS staff**
The BLS Economic Analysis & Information staff is available for phone assistance on weekdays from 9 to 11:30 am and from 1:30 to 4 pm at (415) 625-2270, menu option 4.

FINANCE COMMITTEE

DATE: April 22, 2008

ORIGINATOR: Dan Grigsby

TITLE: Public Works Director

SUBJECT: Water Rate Annual CPI Adjustment

This ordinance provides the annual rate adjustment for sewer services provided to our customers. It adjusts the prior year availability and consumption rates by an amount equal to the one year change in the Consumer Price Index (CPI). For the years 2005-2007, a 15% annual adjustment was made each year.

The cost of material, labor and equipment steadily increases in the marketplace. This has been aggravated by the rapid increase in the cost of oil and metal. Failure to adjust annual fees for services and utilities results in a reduction in the purchasing power of the revenue the City receives. This results in less maintenance and repair to the water system than should be provided. Use of smaller annual rate adjustments avoids much larger rate adjustments every 3-4 years. Staff will review annual adjustments with City Council prior to publishing.

2008 City of Bonney Lake Labor Rate Increase:

Represented Employees = 3.8%; Non-Represented Employees = 3.96%;

2008 Medical Benefit Cost Increases: Regence = 11.5%; Group Health = 6.1%

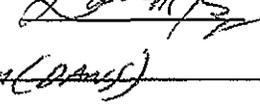
2008 CPI Recommended Rate Adjustment = 3.65%; To become effective 1 July 2008

ORDINANCE/RESOLUTION: D08-104

**REQUEST OR RECOMMENDATION BY ORIGINATOR:
ISSUE AND DOCUMENTS HAVE BEEN REVIEWED AND APPROVED BY THE
FINANCE DIRECTOR _____
CITY ATTORNEY _____**

<u>2008 Budget Amount</u>	<u>Required Expenditure</u>	<u>Impact</u>	<u>Remaining Balance</u>
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COMMITTEE ACTION: RECOMMEND APPROVAL TO COUNCIL

	DATE	APPROVED	DISAPPROVED
Deputy Mayor Dan Swatman Chairman	4-22-08		
James Rackley	4-22-08		
David Bowen <i>Kine</i>	4/22/08		

COMMITTEE COMMENTS: As to Form (DANS)

**COMMITTEE'S RECOMMENDATION TO FORWARD TO:
CITY CLERK
CITY ATTORNEY**

Please schedule for City Council Meeting date of: May 13, 2008

Consent Agenda: Yes No

City of Bonney Lake, Washington
Council Agenda Bill (C.A.B.) Approval Form

Department/Staff Contact:
PW Director Dan Grigsby

Council/Wkshp Meeting Date:
22 April 2008

Agenda Item Number
AB08-104

Ordinance Number:
D08-104

Resolution Number:

Councilmember Sponsor:

BUDGET INFORMATON

2008 Budget Amount

Required Expenditure

Impact
N/A

Remaining Balance

Explanation:

Agenda Subject: Water Rate Annual CPI Adjustment

Administrative Recommendation:

Background Summary: This ordinance provides the annual rate adjustment for water sold to our customers. It adjusts the prior year availability and consumption rates by an amount equal to the one year change in the Consumer Price Index (CPI). For the years 2005-2007, a 15% increase was made each year.

The cost of material, labor and equipment steadily increases in the marketplace. This has been aggravated by the rapid increase in the cost of oil and metal. Failure to adjust annual fees for services and utilities results in a reduction in the purchasing power of the revenue the City receives. This results in less maintenance and repair to the water system than should be provided. Use of smaller annual rate adjustments avoids much larger rate adjustments every 3-4 years. Staff will review annual adjustments with City Council prior to publishing.

2008 City of Bonney Lake Labor Rate Increase:

Represented Employees = 3.8%; Non-Represented Employees = 3.96%;

2008 Medical Benefit Cost Increases: Regence = 11.5%; Group Health = 6.1%

Recommended 2008 CPI Adjustment = 3.65%; To become effective 1 July 2008

Attachments:

Producer Price Indices – Competitive Building Materials

AWC – CPI Refresher Course

Utility Rate Increase History Table

Utility Rate Increase History Graph

7 April 2008 CDC Committee Notes on this subject

Council Committee Dates:

Finance Committee: 22APR08

Commission Dates:

Planning Commission:

Board/Hearing Examiner Dates:

Park Board:

Public Safety Committee:

Civil Service Commission:

Hearing Examiner:

Community Development &

Planning Committee: 7APR08

Council Workshop:

Council Action:

Council Call for Hearing:

Council Hearings Date:

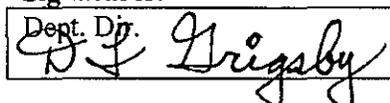
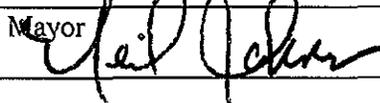
Council Referred Back to:

Workshop: Committee:

Council Tabled Until:

Council Meeting Dates: 13 May 2008

Signatures:

Dept. Dir. 	Mayor 
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Date City Attorney reviewed

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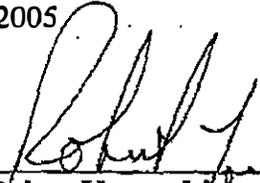
4

RESOLUTION NO. 1379

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF BONNEY LAKE, PIERCE COUNTY, WASHINGTON, AUTHORIZING A WHOLESALE WATER PURCHASE AND AN EMERGENCY INTERTIE AGREEMENT FOR INTERTIE #3 BETWEEN THE CITY OF BONNEY LAKE AND THE CITY OF TACOMA WATER DIVISION.

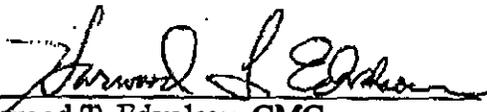
The City Council of the City of Bonney Lake, Washington, does hereby resolve that the Mayor is authorized to sign the two agreements attached hereto and incorporated herein by this reference.

PASSED by the City Council this 25th day of January 2005



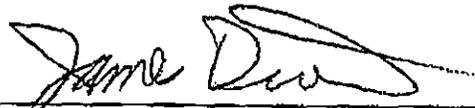
Robert Young, Mayor

ATTEST:



Harwood T. Edvalson, CMC
City Clerk

APPROVED AS TO FORM:



James Dionne, City Attorney

**WHOLESALE WATER AGREEMENT
BETWEEN TACOMA WATER
AND THE CITY OF BONNEY LAKE**

This wholesale water agreement ("Agreement") is made by and between the City of Tacoma, Department of Public Utilities, Water Division d/b/a Tacoma Water, a municipal corporation (hereafter "Tacoma"), and The City of Bonney Lake, a municipal corporation (hereafter "Bonney Lake"). Tacoma and Bonney Lake collectively shall be referred to as the "Parties" or either Tacoma or Bonney Lake may be referred to as "Party" when appropriate.

A. RECITALS:

WHEREAS, Tacoma has evaluated its wholesale projections in its demand forecast and has determined that adequate water resources are available under a constant use schedule to serve those projected demands; and

WHEREAS, the Parties are responsible for operating and maintaining their respective public water systems in accordance with federal, state and local laws and regulations; and

WHEREAS, the Parties further recognize that water resources are finite and valuable, and the prudent use and management of these resources requires cooperation among water utilities; and

WHEREAS, Bonney Lake has requested and Tacoma has agreed to provide a wholesale water supply to Bonney Lake, and Tacoma is able and willing to provide the requested quantity of water on the terms and conditions as herein provided, now therefore;

for and in consideration of the mutual covenants, conditions and payments to be made as set forth herein, the Parties hereto agree as follows:

B. DEFINITIONS:

The meaning of certain words or terms, when used in this Agreement, is as follows:

1. "Wholesale Service Connection" means a physical connection between water mains of the two Parties to this Agreement, at a specifically identified point or points, where water may be transferred from one Party's system to the transmission or distribution facilities of the other Party.

2. "Isolation Valve" means a positive shut off valve that shall be installed at the location in each water system that is used to accept or deliver water through the Wholesale Service Connection. Each Party has sole responsibility for operating their Isolation Valve.
3. "Wholesale Service Connection Capacity" means the maximum flow capacity for water to be delivered through a Wholesale Service Connection as agreed upon by the Parties to this Agreement. Wholesale service connection facilities shall be designed so as to be capable of conveying no less than the agreed upon Wholesale Service Connection Capacity.
4. "Tacoma Municipal Code (TMC)" means the City of Tacoma's municipal code.

C. CONDITIONS:

The responsibilities of the parties to this contract are set forth below:

1. General. Tacoma agrees to furnish the Wholesale Service Connection Capacity to Bonney Lake of a quality that will satisfy all requirements of the Federal Safe Drinking Water Act as amended, and shall be in accordance with the terms and conditions of this Agreement.
2. Wholesale Water Rates. Tacoma will supply Bonney Lake with water at the wholesale water service rate as identified in TMC Section 12.10.400, City of Tacoma Water Rates and Regulations. The water rates are periodically adjusted and shall be applicable as set forth in the rate schedule as adopted by the Public Utility Board and Tacoma City Council. The water supplied to Bonney Lake must be used on a year-around basis where the average summer day use divided by the average winter day use results in a summer/winter ratio of 2.5 or less, as set forth in TMC 12.10.400. The water supplied is not to be used on a peaking basis.
3. System Development Charge. Upon Bonney Lake's payment of the full charge or the initial time installment payment to Tacoma for Tacoma's System Development Charge (SDC) of \$5,776,598.00, Tacoma will commit and agrees to supply to Bonney Lake 935,000 gallons per day (gpd) of water for average day use, 2,000,900 gpd for peak day use and 1,800,810 gpd for four-day peak use. Bonney Lake agrees to pay at least twenty (20%) of the SDC amount within thirty (30) days of execution of this agreement, and the SDC balance shall be paid with interest over up to ten years as authorized by the Tacoma Municipal Code, as further set forth below.

Bonney Lake agrees to pay the SDC balance in ten annual installments commencing on January 1, 2006 the first annual anniversary date of this agreement. In addition to the annual SDC installment, Bonney Lake shall also pay interest, calculated on a monthly basis (the first day of every month) on the outstanding principal SDC balance amount at "prime" minus 2% interest rate, as reported by the Wall Street Journal ten days before the date that the monthly interest calculation is made. The interest amount paid by Bonney Lake shall be

paid to Tacoma along with the annual installment payment. Provided however, Bonney Lake may prepay (without penalty) a portion or all of the outstanding SDC amount, in which case the accrued interest to date of such prepayment shall also be paid to Tacoma.

4. Reliability. Tacoma agrees to supply wholesale water pursuant to this Agreement with the same degree of reliability and surety of supply as water provided by Tacoma to its existing customers.
5. Additional Water. Bonney Lake may purchase water on a short term basis from Tacoma if in Tacoma's sole discretion sufficient surplus water is available. Bonney Lake shall be entitled to purchase such water in accordance with the terms of this Agreement at the then current wholesale rate. TMC Section 12.10.310 currently provides that the SDC shall be adjusted if the customer's usage exceeds 110 percent of the anticipated average day use during a 12-month period. Therefore, an additional SDC may be applicable in accordance with the Tacoma Municipal Code provisions in effect at the time of any requested increase in water supply.
6. Connections. Bonney Lake agrees to pay to construct necessary facilities to allow wholesale water delivery off Tacoma's Pipeline 1 at a mutually agreed location. Until those facilities are in place, Bonney Lake agrees to pay to construct a short term two-year service from a location in the vicinity of 219th Avenue East (produced) at Connells Prairie Road East. This will include service piping and appurtenances, meter and vault. Bonney Lake will be responsible for extending Tacoma's distribution system from 222nd Avenue Court East west to this point in order to install their interim wholesale service in this area. This main will be constructed under the terms of Tacoma's standard private contract water main procedures.

Once wholesale service is transferred to the Pipeline 1 location, the Connells Prairie Road service will revert to an emergency intertie. The cost for materials and installation of the new Wholesale Service Connection (attached as Exhibit "A") to include water main, service pipe, automated remote valve shut off, meter(s), appurtenances and vaults shall be the responsibility of Bonney Lake. Tacoma shall be responsible for design, repair and maintenance of these facilities up to and including the outlet of the meter. The meter(s) shall be located as close to the service area boundaries of Tacoma as possible. Tacoma will coordinate the design and construction of the Wholesale Service Connection with Bonney Lake. All wholesale service connections with Tacoma are required to have automated meter reading (AMR) installed on them. Bonney Lake will be responsible for the costs of installing the phone connection for the AMR and the costs to install the equipment with the meter.

If an additional connection to Pipeline 1 is desired by Bonney Lake, Bonney Lake agrees to pay to construct necessary facilities.

7. Capital and Maintenance Costs. Bonney Lake agrees that Tacoma Water owns the isolation valve directly off of the Tacoma Water system, piping from the Tacoma Water isolation valve to the meter, the meter vault and the meter and telemetry equipment. Maintenance and operation costs for this equipment are Tacoma Water's responsibility. Any capital costs related to this equipment, including upgrades or replacement and renewal are Bonney Lake's responsibility.
8. Connections. The Wholesale Service Connection described in Exhibit "A" shall be governed by the terms of this Agreement. No future Wholesale Service Connections shall be permissible without a subsequent and separate written agreement between the Parties, which agreement may supplement this Agreement. Neither Party shall be obligated to agree to or execute any agreement or permit with the other Party to construct additional water Wholesale Service Connection(s).
9. Transferability. The rights and obligations of this Agreement are transferable to heirs, successors and assignees of the Parties.
10. Resale. Water provided under this Agreement may be resold to another water purveyor.
11. Conservation. As a requirement of wholesale service Bonney Lake commits to a water conservation program substantially equivalent to Tacoma's programs. If requested Tacoma will invite Bonney Lake to participate in the planning and implementation process for conservation programs as they are developed and will share available conservation resources where beneficial to both Parties. The Parties agree to meet every two years to review and evaluate operational experience with regards to water use and conservation.
12. Mutual Aid. Tacoma and Bonney Lake agree to provide mutual aid, to the extent possible, during times of extraordinary need and emergency operations experienced by either party.
13. Emergency. Bonney Lake acknowledges that during an emergency situation or a planned outage Tacoma may temporarily be unable to meet all or part of its wholesale service commitment. If Tacoma has a planned outage, Tacoma commits to give Bonney Lake a minimum of seven (7) days advance notice in writing. Tacoma and Bonney Lake will work together to identify mutually acceptable dates for planned outages.
14. Indemnification. Neither Party shall be monetarily liable to the other party or its respective customers for failure to supply and deliver water to the other at any time or for any reason. The Parties shall indemnify each other from any and all claims, lawsuits, or proceedings in arbitration resulting from any failure of either Party to supply and deliver water in accordance with the terms and conditions of this Agreement. However, each Party shall have the right to have this Agreement specifically enforced in equity. In the event that a major water shortage occurs and Bonney Lake fails to abide by the conservation and/or curtailment

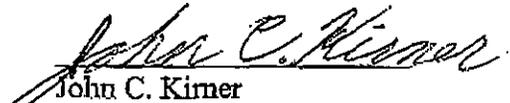
requirements as publicly announced by Tacoma, then Tacoma may terminate water supplied under this Agreement until such time as Bonney Lake agrees to abide by such requirements.

15. **Term.** This Agreement shall remain in effect so long as Tacoma remains in the business of providing water, or its successors in interest to its water system remain in the business of providing water, and so long as Bonney Lake meets the terms and conditions of this Agreement.
16. **Dispute Resolution.** In the event of a disagreement over any aspect of this Agreement, except as herein further provided, it is agreed that any dispute shall be submitted to binding arbitration pursuant to Chapter 7.04 RCW. The Parties shall agree upon who will arbitrate the dispute, and upon failure to reach agreement within a reasonable period of time, the presiding judge of the Pierce County Superior Court may be asked to appoint an arbitrator from one of the recognized dispute resolution services. The Party that substantially prevails in the arbitration proceeding shall be awarded its reasonable attorney fees and costs. If neither Party substantially prevails in the arbitration proceeding, the Parties shall each bear their respective costs and divide the mutual costs associated with the arbitration equally.
17. **Notice.** All notices, requests, demands and other communications hereunder shall be in writing and shall be deemed given if personally delivered or mailed, certified mail, return receipt requested, or sent by overnight carrier to the following addresses:
- | | |
|---|--|
| <p><u>If to Tacoma:</u>
 Mr. John C. Kirner
 Water Superintendent
 PO Box 11007
 Tacoma, WA 98411
 Phone: (253) 502-8738
 Fax: (253) 502-8694</p> | <p><u>If to Bonney Lake:</u>
 Daniel L. Grigsby, P.E.
 Public Works Director
 8720 184th Ave. East
 P.O. Box 7380
 Bonney Lake, WA 98390-0944
 Phone: (253) 447-4347
 Fax: (253) 826-1921</p> |
|---|--|
18. **Invalidity.** If any term of this Agreement is found to be void or invalid, such invalidity shall not affect the remaining terms of this Agreement, which shall continue in full force and effect. The parties shall agree that if any provisions are voided by a court or otherwise deemed not enforceable, the parties shall negotiate in good faith to develop replacement provisions that are as close as possible to the intent of the parties expressed in the invalid provisions.
19. **Counterparts.** This Agreement may be executed in any number of counterpart copies, each of which shall be deemed an original, but all of which together shall constitute a single instrument.

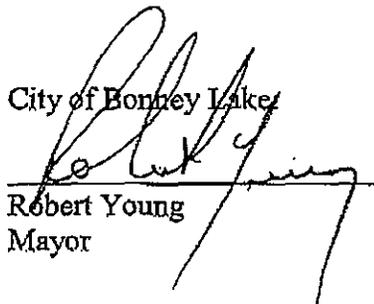
20. Authority to Bind. Each of the Parties to this Agreement certifies that the person signing this Agreement has authority to bind the respective governing bodies to all of the terms and conditions of the Agreement herein.

Dated this 1st day of February, 2005.

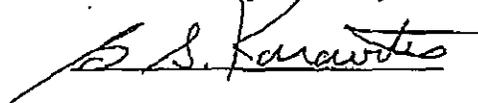
City of Tacoma:


John C. Kirner
Water Superintendent

City of Bonney Lake:


Robert Young
Mayor

Approved as to form & legality:
Assistant City Attorney



Approved as to form & legality:
City Attorney

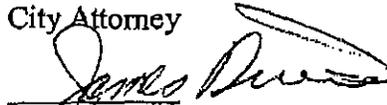

James Dionne

EXHIBIT "A"

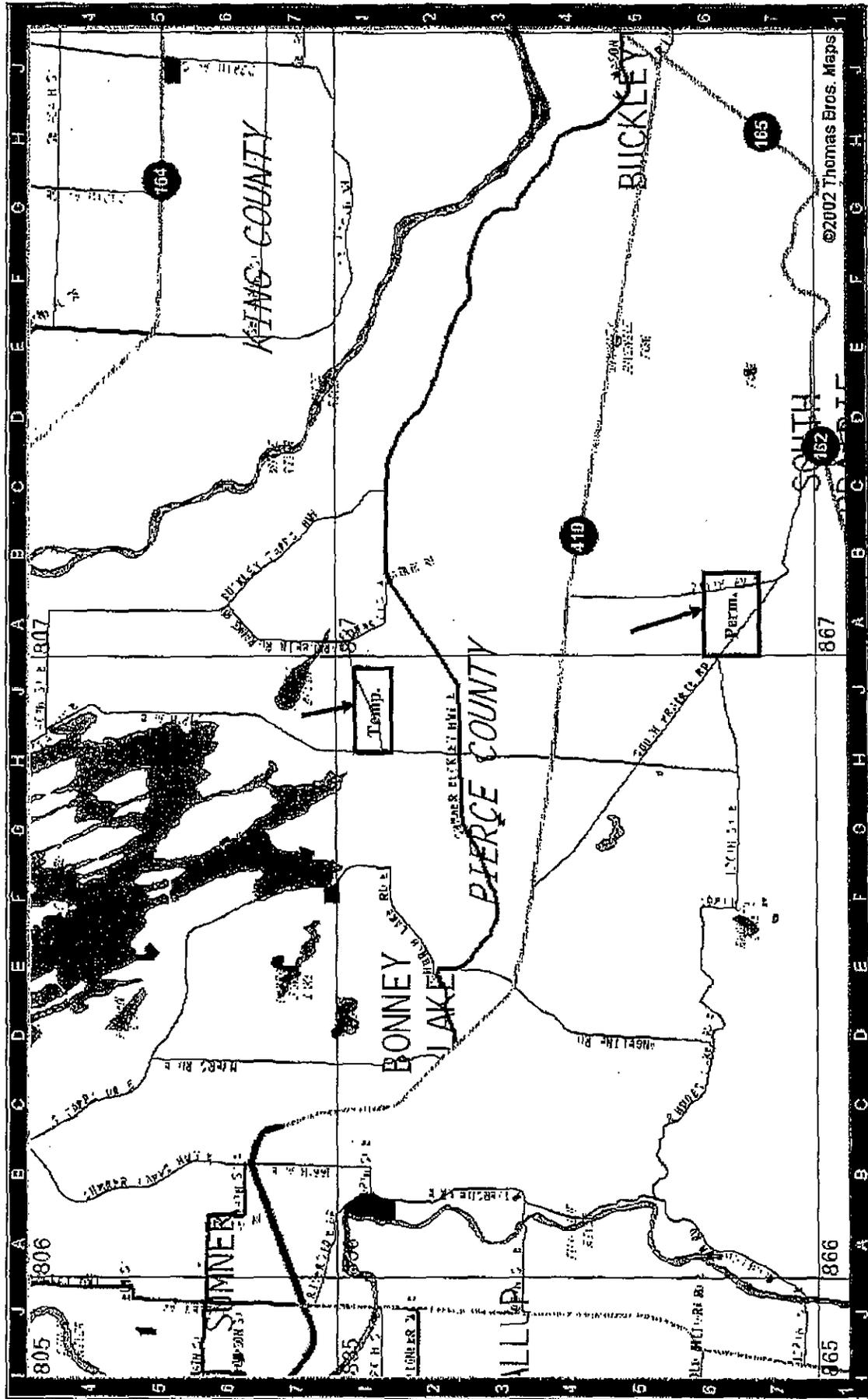
WHOLESALE SERVICE CONNECTIONS SPECIFICATIONS

Inter-tie Location	Connection Size	Meter Size	Static Elevation		Operating Pressure (psi)		Flow Capacity To/From Utility	Contracted ERU's	Contracted Volume (gpd)
			Tacoma	Bonney Lake	Tacoma*	Bonney Lake			
<u>Proposed Permanent Connection</u> Mutually agreed upon location off of TW Pipeline 1 at Pipeline Rd E									935,000 (ADD) 2,000,900 (Peak)
<u>Temporary Connection</u> Connell's Prairie Rd E at 219 th Ave. E (Produced)	8"	4"	810	??	MDD 71 ADD 94	??	550gpm	N/A	790,000 (Peak)

* At 222ND Ave Ct E

EXHIBIT B

GENERAL LOCATION OF WHOLESALE SERVICE CONNECTIONS



EXHIBIT_B

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RESOLUTION NO. 1841

5

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF BONNEY LAKE, PIERCE COUNTY, WASHINGTON, AUTHORIZING A WHOLESALE WATER PURCHASE AGREEMENT BETWEEN THE CITY OF BONNEY LAKE AND THE CITY OF TACOMA, DEPARTMENT OF PUBLIC UTILITIES.

WHEREAS, the City Council adopted the 2008 Water Capital Facilities Plan (WCFP) with Resolution 1846 on 13 May 2008; and,

WHEREAS, the 2008 WCFP included purchase of 4 MGD (Peak) water supply; and,

WHEREAS, the City of Tacoma, Tacoma Public Utilities is willing and able to sell a 4 MGD water supply in perpetuity to the City of Bonney Lake in the amount of \$11,548,000; and,

WHEREAS, the City of Tacoma, Tacoma Public Utilities is willing to finance this purchase with a loan that sets an interest rate of Prime minus two percent for ten years; and,

WHEREAS, the City of Bonney Lake has sufficient Water System Development Charge (SDC) funds available to make the 20% down payment of \$2,309,600 on the loan;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF BONNEY LAKE, WASHINGTON THAT:

The Mayor is hereby authorized to sign this agreement with the City of Tacoma for the purchase of 4 MGD (Peak) water supply in the amount of \$11,548,000.

PASSED by the City Council this 28th day of October, 2008.


Neil Johnson Jr., Mayor

ATTEST:


Harwood T. Edvalson, CMC
City Clerk

APPROVED AS TO FORM:


James Dionne, City Attorney

**CITY OF TACOMA
DEPARTMENT OF PUBLIC UTILITIES
WATER DIVISION
SDC CONTRACT PAYMENT SCHEDULE**

Purpose: To provide payment schedules based on a Prime Rate of 5%

Scenario 1: 20% down and Debt Service at Prime Rate minus 2%

	Prime Rate	Interest	Principal	Payment	Balance
SDC per agreement					\$11,548,000.00
20% down payment			\$ 2,309,600.00	\$ 2,309,600.00	9,238,400.00
12/1/2009	3.00%	\$ 277,152.00	923,840.00	1,200,992.00	8,314,560.00
12/1/2010	3.00%	249,436.80	923,840.00	1,173,276.80	7,390,720.00
12/1/2011	3.00%	221,721.60	923,840.00	1,145,561.60	6,466,880.00
12/1/2012	3.00%	194,006.40	923,840.00	1,117,846.40	5,543,040.00
12/1/2013	3.00%	166,291.20	923,840.00	1,090,131.20	4,619,200.00
12/1/2014	3.00%	138,576.00	923,840.00	1,062,416.00	3,695,360.00
12/1/2015	3.00%	110,860.80	923,840.00	1,034,700.80	2,771,520.00
12/1/2016	3.00%	83,145.60	923,840.00	1,006,985.60	1,847,680.00
12/1/2017	3.00%	55,430.40	923,840.00	979,270.40	923,840.00
12/1/2018	3.00%	27,715.20	923,840.00	951,555.20	-
Totals		\$1,524,336	\$11,548,000	\$13,072,336	

Wholesale Customer with Residential Load Using All System Components (formula)

Avg. Day SDC Cost	Estimated MGD x Avg. Day Demand Unit Cost
Peak Day SDC Cost	(Estimated MGD - ADD) x Peak Day Demand Unit Cost
4-Day Peak SDC Cost	(Estimated MGD -ADD) x 4-Day Peak Demand Unit Cost
Total SDC Cost	Avg. Day SDC Cost + Peak Day SDC Cost + 4-Day Peak SDC Cost

Requested Volume

Average Day Demand (Gals)	1,869,159
Peak Day Demand (Gals)	4,000,000
4-Day Peak Demand (Gals)	3,600,000

Calculation

	<u>Gallons</u>	<u>ADD</u>	<u>Unit Cost</u>	<u>Sums</u>
Avg. Day SDC Cost	1,869,159		\$3.17	\$5,925,234
Peak Day SDC Cost	4,000,000	1,869,159	\$0.34	\$724,486
4-Day Peak SDC Cost	3,600,000	1,869,159	\$2.83	\$4,898,280

Total SDC Cost \$11,548,000

	ADD	Peaking Factor	Peak Day	4-day Peak Factor	4-day Peak
Estimated requirement	1,869,159	2.14	4,000,000	0.90	3,600,000

<u>Demand Type</u>	<u>gpm/ERU</u>	<u>gpd/ERU</u>	<u>ERU</u>
ADD	0.20	284	3,275
PDD	0.42	608	3,273
PHD	0.77	1,107	3,268
ERU count is based on estimated 0.93MGD ADD			
Peaking Factors			
PDD/ADD	2.14		
PHD/PDD	1.82		
PHD/ADD	3.89		
Demand & peaking data provided by RH2			

AVERAGE DAY DEMAND

City of Bonney Lake
Wholesale Supply Projections
Average (or more typical year) with conservation

9-Jul-08

Year	TPU Wholesale Usage			PDD (MGD)	ERU see Note	
	Summer (ccf)	Winter (ccf)	Total (ccf)			
2008	-	-	-	-		
2009	-	-	-	-		
2010	-	-	-	-		
2011	-	-	-	-		
2012	-	-	-	-		
2013	-	-	-	-		
2014	-	-	-	-		
2015	-	-	-	-		
2016	-	-	-	-		
2017	-	-	-	-		
2018	797	635	1,432	0.2	275	
2019	7,513	5,986	13,499	0.5	648	
2020	15,236	26,601	41,837	0.7	1,032	<---Year BL's Qa is exceeded*
2021	20,773	56,713	77,487	0.9	1,264	
2022	26,910	86,769	113,679	1.0	1,499	
2023	33,360	117,063	150,423	1.2	1,737	
2024	40,252	147,474	187,726	1.4	1,980	
2025	47,483	178,114	225,598	1.6	2,225	
2026	54,993	209,053	264,046	1.7	2,475	
2027	63,001	240,079	303,080	1.9	2,729	
2028	71,431	271,277	342,708	2.1	2,986	<----need 2nd wholesale block
2029	80,505	302,434	382,939	2.3	3,247	
2030	90,170	333,613	423,784	2.5	3,513	
2031	99,462	362,285	461,747	2.6	3,759	
2032	109,135	391,105	500,240	2.8	4,009	
2033	119,396	419,874	539,270	3.0	4,263	
2034	130,153	448,691	578,844	3.2	4,520	
2035	141,838	477,131	618,969	3.3	4,780	
2036	154,141	505,513	659,654	3.5	5,044	
2037	166,700	534,206	700,907	3.7	5,312	
2038	179,722	563,012	742,734	3.9	5,584	
2039	193,307	591,837	785,145	4.1	5,859	<----need 3rd wholesale block
2040	207,529	620,617	828,147	4.3	6,139	

*Bonney Lake reaches its own water right limits (Qa) and will need to purchase more wholesale water than just necessary for peaking.

NOTE: Does not include savings from water conservation
Avg Family use = 700 GPD = 1 ERU
700 GPD = 0.0007 MGD
ADD - Average Day Demand

PEAK DAY DEMAND

**City of Bonney Lake
Wholesale Supply Projections
Hot & dry years with conservation**

9-Jul-08

Year	TPU Wholesale Usage			PDD (MGD)	ERU see note	
	Summer (ccf)	Winter (ccf)	Total (ccf)			
2008	-	-	-	-		
2009	-	-	-	-		
2010	-	-	-	-		
2011	-	-	-	-		
2012	-	-	-	-		
2013	5,352	4,264	9,616	0.5	658	
2014	12,320	9,815	22,135	0.7	965	
2015	20,577	16,394	36,971	0.9	1,280	
2016	30,212	58,130	88,342	1.1	1,603	<----Year BL's Qa is exceeded*
2017	42,088	108,202	150,290	1.4	1,935	
2018	55,093	158,752	213,845	1.6	2,275	
2019	68,848	210,200	279,048	1.8	2,623	
2020	83,950	261,994	345,944	2.1	2,981	<----need 2nd wholesale block
2021	93,643	292,582	386,225	2.2	3,197	
2022	103,691	323,429	427,119	2.4	3,416	
2023	114,227	354,410	468,636	2.6	3,682	
2024	125,198	385,588	510,786	2.8	3,954	
2025	136,647	416,930	553,577	3.0	4,230	
2026	148,800	448,220	597,020	3.2	4,511	
2027	161,242	479,883	641,124	3.4	4,795	
2028	173,873	512,028	685,900	3.6	5,084	
2029	186,817	544,541	731,358	3.8	5,377	
2030	200,156	577,353	777,509	4.0	5,675	
2031	212,729	607,675	820,404	4.2	5,951	<----need 3rd wholesale block
2032	225,862	638,036	863,898	4.4	6,232	
2033	239,347	668,650	907,998	4.6	6,516	
2034	253,137	699,576	952,712	4.8	6,805	
2035	267,406	730,645	998,051	5.0	7,097	
2036	282,095	761,926	1,044,021	5.2	7,394	
2037	297,093	793,539	1,090,632	5.4	7,695	
2038	312,468	825,426	1,137,893	5.6	7,999	
2039	328,503	857,310	1,185,814	5.8	8,308	
2040	344,877	889,525	1,234,402	6.0	8,622	

*Bonney Lake reaches its own water right limits (Qa) and will need to purchase more wholesale water than just necessary for peaking.

NOTE: Does not include savings from water conservation

Avg Family use = 700 GPD = 1 ERU

700 GPD = 0.0007 MGD

PDD - Peak Day Demand

**SECOND WHOLESALE WATER AGREEMENT
BETWEEN TACOMA WATER
AND THE CITY OF BONNEY LAKE**

This second wholesale water agreement (“Agreement”) is made by and between the City of Tacoma, Department of Public Utilities, Water Division d/b/a Tacoma Water, a municipal corporation (hereafter “Tacoma”), and The City of Bonney Lake, a municipal corporation (hereafter “Bonney Lake”). Tacoma and Bonney Lake collectively shall be referred to as the “Parties” or either Tacoma or Bonney Lake may be referred to as “Party” when appropriate.

A. RECITALS:

WHEREAS, Tacoma has evaluated its wholesale projections in its demand forecast and has determined that adequate water resources are available under a constant use schedule to serve those projected demands; and

WHEREAS, the Parties are responsible for operating and maintaining their respective public water systems in accordance with federal, state and local laws and regulations; and

WHEREAS, the Parties further recognize that water resources are finite and valuable, and the prudent use and management of these resources requires cooperation among water utilities; and

WHEREAS on or about February 1, 2005, Tacoma Water entered into an agreement to provide wholesale water supply to the City of Bonney Lake, (herein “Agreement”), pursuant to the authorization of Tacoma Public Utility Board Resolution No. U-9943 and City of Bonney Lake Resolution No. 1379, and

WHEREAS, Bonney Lake has determined that it requires additional amounts of wholesale water from Tacoma Water, and Tacoma Water desires to provide such water on the terms and conditions as herein provided, now therefore;

For and in consideration of the mutual covenants, conditions and payments to be made as set forth herein, the Parties hereto agree as follows:

B. DEFINITIONS:

The meaning of certain words or terms, when used in this Agreement, is as follows:

1. “Wholesale Service Connection” means a physical connection between water mains of the two Parties to this Agreement, at a specifically identified point or points, where water may be transferred from one Party’s system to the transmission or distribution facilities of the other Party.

2. "Isolation Valve" means a positive shut off valve that shall be installed at the location in each water system that is used to accept or deliver water through the Wholesale Service Connection. Each Party has sole responsibility for operating their Isolation Valve.
3. "Wholesale Service Connection Capacity" means the maximum flow capacity for water to be delivered through a Wholesale Service Connection as agreed upon by the Parties to this Agreement. Wholesale service connection facilities shall be designed so as to be capable of conveying no less than the agreed upon Wholesale Service Connection Capacity.
4. "Tacoma Municipal Code (TMC)" means the City of Tacoma's municipal code.

C. CONDITIONS:

The responsibilities of the parties to this contract are set forth below:

1. **General.** Tacoma agrees to furnish at the point of delivery the Wholesale Service Connection Capacity to Bonney Lake of a quality that will satisfy all requirements of the Federal and State drinking water regulations as amended and shall be in accordance with the terms and conditions of this Agreement.
2. **Wholesale Water Rates.** Tacoma will supply Bonney Lake with water at the wholesale water service rate as identified in TMC Section 12.10.400, City of Tacoma Water Rates and Regulations. The water rates are periodically adjusted and shall be applicable as set forth in the rate schedule as adopted by the Public Utility Board and Tacoma City Council. The water supplied to Bonney Lake must be used on a year-around basis where the average summer day use divided by the average winter day use results in a summer/winter ratio of 2.5 or less, as set forth in TMC 12.10.400. The water supplied is not to be used on a peaking basis.
3. **System Development Charge.** Upon Bonney Lake's payment of the full charge or the initial time installment payment to Tacoma for Tacoma's System Development Charge (SDC) of \$11,548,000, Tacoma will commit and agrees to supply to Bonney Lake 1,869,159 gallons per day (gpd) of water for average day use, 4,000,000 gpd for peak day use and 3,600,000 gpd for four-day peak use. Bonney Lake agrees to pay twenty percent (20%) of the SDC amount within thirty (30) days of execution of this agreement, and the SDC balance shall be paid with interest over up to ten years as authorized by the Tacoma Municipal Code, as further set forth below. The water volumes listed above are in addition to those agreed upon by Bonney Lake and Tacoma Water in its first Wholesale Water Agreement as authorized by Tacoma Public Utility Board Resolution No. U-9943 and City of Bonney Lake Resolution No. 1379 dated on or about February 1, 2005.

Bonney Lake agrees to pay the SDC balance in ten annual installments commencing on December 1, 2009 the first annual anniversary date of this agreement. In addition to the annual SDC installment, Bonney Lake shall also pay interest, calculated on a monthly basis (the first day of every month) on the outstanding principal SDC balance amount at "prime" minus two percent (2%) interest rate, as reported by the Wall Street Journal ten days before the date that the monthly interest calculation is made. The interest amount paid by Bonney Lake shall be paid to Tacoma along with the annual installment payment. Provided however, Bonney Lake may prepay (without penalty) a portion or all of the outstanding SDC amount, in which case the accrued interest to date of such prepayment shall also be paid to Tacoma.

4. Reliability. Tacoma agrees to supply wholesale water pursuant to this Agreement with the same degree of reliability and surety of supply as water provided by Tacoma to its existing customers.
5. Additional Water. Bonney Lake may purchase water on a short term basis from Tacoma if in Tacoma's sole discretion sufficient surplus water is available. Bonney Lake shall be entitled to purchase such water in accordance with the terms of this Agreement at the then current wholesale rate. TMC Section 12.10.310 currently provides that the SDC shall be adjusted if the customer's usage exceeds 110 percent of the anticipated average day use during a 12-month period. Therefore, an additional SDC may be applicable in accordance with the Tacoma Municipal Code provisions in effect at the time of any requested increase in water supply.
6. Connections. Bonney Lake agrees to pay to construct the necessary facilities to allow wholesale water delivery off Tacoma's Pipeline 1 at a mutually agreed to location. In order to assure the level of service delivery specified in Paragraph 4, Reliability, the necessary facilities to provide this second block of water would need to be located in the immediate vicinity of Tacoma's Fennel Creek Pump Station, located at 18002 Falling Water Blvd E. The necessary facilities can be located at other mutually agreed to locations such as the site proposed by Bonney Lake at 11710 Prairie Ridge Rd E. with the recognition that supply reliability may be slightly reduced due to Tacoma supply constraints. These locations are identified in exhibit "B" attached.

The cost for materials and installation of the new Wholesale Service Connection (attached as Exhibit "A") to include water main, service pipe, automated remote valve shut off, meter(s), appurtenances and vaults shall be the responsibility of Bonney Lake. Tacoma shall be responsible for design, repair and maintenance of these facilities up to and including the outlet of the meter. The meter(s) shall be located as close to the service area boundaries of Tacoma as possible. Tacoma will coordinate the design and construction of the Wholesale Service Connection with Bonney Lake. All wholesale service connections with Tacoma are required to have automated meter reading (AMR) installed on them. Bonney Lake will be

responsible for the costs of installing the phone connection for the AMR and the costs to install the equipment with the meter.

7. Capital and Maintenance Costs. Bonney Lake agrees that Tacoma Water owns the isolation valve directly off of the Tacoma Water system, piping from the Tacoma Water isolation valve to the meter, the meter vault and the meter and telemetry equipment. Maintenance and operation costs for this equipment are Tacoma Water's responsibility. Any capital costs related to this equipment, including upgrades or replacement and renewal are Bonney Lake's responsibility.
8. Connections. The Wholesale Service Connection described in Exhibit "A" shall be governed by the terms of this Agreement. No future Wholesale Service Connections shall be permissible without a subsequent and separate written agreement between the Parties, which agreement may supplement this Agreement. Neither Party shall be obligated to agree to or execute any agreement or permit with the other Party to construct additional water Wholesale Service Connection(s).
9. Transferability. The rights and obligations of this Agreement are transferable to heirs, successors and assignees of the Parties.
10. Resale. Water provided under this Agreement may be resold to another water purveyor.
11. Conservation. As a requirement of wholesale service Bonney Lake commits to a water conservation program substantially equivalent to Tacoma's programs. If requested Tacoma will invite Bonney Lake to participate in the planning and implementation process for conservation programs as they are developed and will share available conservation resources where beneficial to both Parties. The Parties agree to meet every two years to review and evaluate operational experience with regards to water use and conservation.
12. Mutual Aid. Tacoma and Bonney Lake agree to provide mutual aid, to the extent possible, during times of extraordinary need and emergency operations experienced by either party.
13. Emergency. Bonney Lake acknowledges that during an emergency situation or a planned outage Tacoma may temporarily be unable to meet all or part of its wholesale service commitment. If Tacoma has a planned outage, Tacoma commits to give Bonney Lake a minimum of seven (7) days advance notice in writing. Tacoma and Bonney Lake will work together to identify mutually acceptable dates for planned outages.
14. Indemnification. Neither Party shall be monetarily liable to the other party or its respective customers for failure to supply and deliver water to the other at any time or for any reason. The Parties shall indemnify each other from any and all

claims, lawsuits, or proceedings in arbitration resulting from any failure of either Party to supply and deliver water in accordance with the terms and conditions of this Agreement. However, each Party shall have the right to have this Agreement specifically enforced in equity. In the event that a major water shortage occurs and Bonney Lake fails to abide by the conservation and/or curtailment requirements as publicly announced by Tacoma, then Tacoma may terminate water supplied under this Agreement until such time as Bonney Lake agrees to abide by such requirements.

15. **Term.** This Agreement shall remain in effect so long as Tacoma remains in the business of providing water, or its successors in interest to its water system remain in the business of providing water, and so long as Bonney Lake meets the terms and conditions of this Agreement.

16. **Dispute Resolution.** In the event of a disagreement over any aspect of this Agreement, except as herein further provided, it is agreed that any dispute shall be submitted to binding arbitration pursuant to Chapter 7.04 RCW. The Parties shall agree upon who will arbitrate the dispute, and upon failure to reach agreement within a reasonable period of time, the presiding judge of the Pierce County Superior Court may be asked to appoint an arbitrator from one of the recognized dispute resolution services. The Party that substantially prevails in the arbitration proceeding shall be awarded its reasonable attorney fees and costs. If neither Party substantially prevails in the arbitration proceeding, the Parties shall each bear their respective costs and divide the mutual costs associated with the arbitration equally.

17. **Notice.** All notices, requests, demands and other communications hereunder shall be in writing and shall be deemed given if personally delivered or mailed, certified mail, return receipt requested, or sent by overnight carrier to the following addresses:

If to Tacoma:
Mr. John C. Kirner
Water Superintendent
PO Box 11007
Tacoma, WA 98411
Phone: 253-502-8738
Fax: 253-502-8694

If to Bonney Lake:
Daniel L. Grigsby, P.E.
Public Works Director
8720 184th Ave. East
P.O. Box 7380
Bonney Lake, WA 98390-0944
Phone: 253-447-4347
Fax: 253-826-1921

18. **Invalidity.** If any term of this Agreement is found to be void or invalid, such invalidity shall not affect the remaining terms of this Agreement, which shall continue in full force and effect. The parties shall agree that if any provisions are voided by a court or otherwise deemed not enforceable, the parties shall negotiate in good faith to develop replacement provisions that are as close as possible to the intent of the parties expressed in the invalid provisions.

19. Counterparts. This Agreement may be executed in any number of counterpart copies, each of which shall be deemed an original, but all of which together shall constitute a single instrument.
20. Authority to Bind. Each of the Parties to this Agreement certifies that the person signing this Agreement has authority to bind the respective governing bodies to all of the terms and conditions of the Agreement herein.

Dated this 28 day of October, 2008.

City of Tacoma:

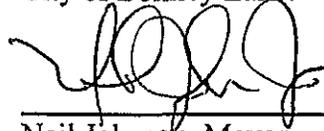
William A. Gaines, Director of Utilities

John C. Kirner, Water Superintendent

Approved as to form & legality:

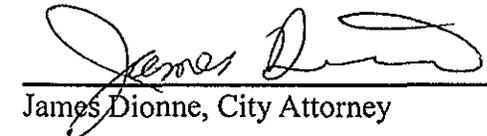
Assistant City Attorney

City of Bonney Lake:



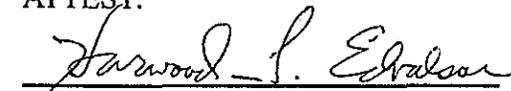
Neil Johnson, Mayor

Approved as to form & legality:



James Dionne, City Attorney

ATTEST:



Harwood T. Edvalson, CMC
City Clerk

EXHIBIT "A"
WHOLESALE SERVICE CONNECTIONS SPECIFICATIONS

Intertie Location	Connection Size	Meter Size	Static Elevation		Operating Pressure (psi)		Flow Capacity To/From Utility	Contracted Volume (gpd)
			Tacoma (1)	Bonney Lake	Tacoma (2)	Bonney Lake		
Pipeline #1 at 18002 Falling Water Blvd. E. (Fennel Creek Pump Station)								ADD-1,869,159 Peak Day-4,000,000 4-day Peak-3,600,000

- (1) Static elevation equals 576'
Normal operating elevation varies, elevation equals 580' to 660'
- (2) At Station E 605+25, elevation equals 480'
Operating pressure varies, 43 psi to 78 psi

**City of Bonney Lake, Washington
Council Agenda Bill (C.A.B.) Approval Form**

<u>Department/Staff Contact:</u> PW Director Grigsby	<u>Council/Wrkshp Mtg Date:</u> 28 October 2008	<u>Agenda Bill Number:</u> AB08-109
<u>Ordinance Number:</u>	<u>Resolution Number:</u> 1841	<u>Councilmember Sponsor:</u>

BUDGET INFORMATON

<u>2008 Budget Amount</u>	<u>Current Balance</u>	<u>Required Expenditure</u>	<u>Remaining Balance</u>
\$ 650,000	\$650,000	\$ 2,309,600	(\$1,659,600)

Explanation:

2008 Water SDC BARS number:

Funding for 20% down payment of loan for 4 MGD (peak) water supply purchase. (Total = \$11,548,000)
Funding is available in Water SDC fund balance. The \$650,000 was a placeholder pending negotiation of the actual amount with TPU in 2008. The actual amount is included in the current Water SDC rate.

Agenda Subject: Purchase Water Supply from Tacoma Public Utility (TPU)

Administrative Recommendation: Purchase in 2008 to avoid the new availability charge which TPU will begin to apply to all future water supply sales in January 2009.

Background Summary:

This purchase will lock in an additional 4 MGD water supply from TPU for the City in perpetuity at 2008 rates (Total TPU Supply = 6 MGD). The first of ten payments will occur in December 2009.

The requirement for this additional supply was addressed with City Council during the presentations made by RH2 and FCS Group prior to City Council approval of the updated Comprehensive Water System Plan and Water SDC earlier this year.

Discussions with the City's bonding agent Jim Nelson have occurred. He indicated that it would be more advantageous for the City to use a ten year TPU loan with a prime minus 2% interest rate than to obtain a new bond. If, in the future it is worth converting to a bond, that can be done.

Attachments: Resolution 1841

TPU Wholesale Water Supply Purchase Agreement (@ 8,622 ERUs = \$1,339 per ERU)

TPU SDC Contract Payment Schedule

RH2 Water Demand Projections (Average 4.3 MGD = 6,139 ERUs and Peak 6.0 MGD = 8,622 ERUs)

Council Committee Dates: Finance Committee: 27 OCT 08 Public Safety Committee: Community Development & Planning Committee: Council Workshops:	Commission Dates: Planning Commission: Civil Service Commission:	Board/Hearing Examiner Dates: Park Board: Hearing Examiner:
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Council Action:

Council Call for Hearing:

Council Hearings Date:

Council Referred Back to:
Council Tabled Until:

Workshop:
Council Meeting Dates: 27OCT08

Committee:

Signatures:

Dir. Authorization

Mayor

Date City Attorney Reviewed:

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Memorandum

TO: Lance Andree
Dionne & Rorick

FROM: Edward Cebren, Principal
FCS GROUP

RE: Bonney Lake Multi-Family Customer Equivalency Factor Evaluation

DATE: August 2, 2006

The purpose of this memorandum is to summarize the work and conclusions of our evaluation of the City of Bonney Lake's multi-family customer class equivalency factor for the purposes of estimating appropriate water utility System Development Charge for multi-family customers. Our study relied on multiple sources to estimate a reasonable range of factors that could be applied to the City's SDC to determine the appropriate charge that would apply to new multi-family customers.

The first part of this memorandum calculates the equivalency factor based on the factors that are specific to the City and were obtained from the City's planning and other documents such as the Comprehensive Water System Plan and the utility rate study. The second part of the memorandum summarizes the equivalency factors used by and obtained from various industry sources and other agencies.

Background

The City of Bonney Lake imposes a water general facilities charge (GFC) as a condition of new connection to the water system. This charge is structured to recover a pro rata share of the cost of the system, including both existing and planned facilities. The charge is imposed through a structure intended to provide charges proportional to demands, and thus cost burdens, on the system.

Most municipal water and sewer agencies impose some sort of GFC as a condition of service, although nomenclature, basis and structures vary widely. Most use a variation of an "equivalency" system to impose proportionate charges.

In many cases, this is simply based on water meter size, and related flow capacities as defined by American Water Works Association (AWWA) standards. The standard 5/8x3/4 inch meter is defined as 1 unit, and then larger meters are assigned higher multipliers. For example, a 2 inch meter is commonly assigned 8 equivalent units, and charged 8 times as much as a 5/8x3/4 inch meter, based on rated flow capacity of 160 gpm versus 20 gpm for the smaller meter.

In some communities, this structure applies uniformly to all connections. However, many systems distinguish residential connections from commercial connections in various ways. Most commonly, single family residences are uniformly assigned 1 equivalent unit, regardless of meter size. Multi-family residences are also often assigned an equivalency unit, typically ranging from 60% to 90% of the single family equivalent. [In some meter-based systems, this is imposed as an alternate minimum charge, in part to discourage deliberate undersizing of meters, which can understate demands (and related charges) and also subsequently cause service problems and complaints.]

Residential equivalency factors are ultimately linked to demands. In a traditional rate-setting approach, such as that employed in the City's water rate study, demands are measured in various ways, including total usage, peak usage or demand, fire protection requirements, and customer service requirements. While GFC structures often ignore these distinctions and are based on a single demand statistic, more sophisticated systems consider the relative proportionality (and cost) for each unique service element. Thus, strictly speaking, there is no single "correct" factor except as a composite, or weighted average, of several unique factors.

In the discussion below, we have considered several different perspectives for defining a basis for developing proportionate charges for multi-family development. These include: a) a factor based on unit occupancy used for planning; b) a factor based on unit occupancy derived from Census data; and c) a factor based on functional demands. We also provide a general discussion of factors considered and applied in other agencies.

City of Bonney Lake Multi-Family Customer Equivalency Factor

a) System Plan Demand Factors

As the basis of our calculation of this equivalency factor specific to the City, we used the household size data specified in the Comprehensive Water System Plan. According to this source, average owner-occupied household size, which can be interpreted as a proxy for single-family residences, is 2.96 persons per unit. The average renter occupied household size, which would represent mostly multi-family residential units, is 2.08 persons per unit (table 4-5, page 4-10 of the Comprehensive Water System Plan). These figures suggest that each unit in a multi-family residential building is equivalent to about 70% of single-family residences in terms of occupancy, and, subsequently, in terms of indoor base water demand and usage.

This type of factor is commonly used by both water and sewer utilities, although most commonly by sewer utilities. Both the literature and our own empirical experience confirm a clear relationship between household size and water usage. However, this relationship is strongest for indoor water usage, and may overstate the relative peak demands of multi-family units. Conversely, use of this factor also ignores other higher cost factors, such as fire protection, which are disproportionately higher for multi-family construction. Therefore, the simple statistic may be a reasonable balance of simplicity and rough equity.

b) Other Related Demand Factors

The US census data suggests an even higher renter-occupied to owner-occupied household size ratio of 0.88 for Pierce County (2.4 persons in renter occupied versus 2.7 persons in owner-occupied units). Unfortunately, the county-wide statistics were the finest resolution of data that we had available for this review). The resulting equivalency factor of 88% would be higher than documented in the City's water system plan. Reliance on this statistic, rather than the more specific City statistic, might be suspect due to its broader geographic basis.

However, we have also observed a trend in the Puget Sound region of convergence of multi-family and single-family housing stock, as multi-use and townhome developments have increased in popularity. These homes are typified by larger size, more plumbing fixtures and amenities, and more bedrooms. Ultimately, this convergence seems likely to extend to the occupancy and related water usage. From this perspective, the higher 88% factor may not be unreasonable.

c) Functional Service Demand Factors

While the household size ratio is a good indicator of base water demand of households, it does not show a full relative equivalency between customer classes because it does not account for other factors, such as differing peaking characteristics (irrigation, for example) and fire flow requirements. The functional service analysis attempts to account for these factors and demonstrate how a modified equivalency factor incorporating these class-specific characteristics would affect the multi-family class equivalency factor.

The Comprehensive Water and Sewer Rate Study (March 2005) provides a breakdown of the water utility's plant-in-service between the functional categories of Commodity (base demand), Capacity (peak demand), Customer (e.g. billing, meters & services, etc.), and Fire Protection. In other words, this breakdown describes what proportion of total investment in the existing utility assets serves that specific purpose. According to the study, 42.96% of the assets serve the Commodity function of the utility, 38.25% serve the Capacity function, 5.45% serve the Customer function, and 13.34% serve the Fire Protection function.

Our functional analysis estimates the differences in requirements in these functional categories between single-family and multi-family customer classes, and adjusts the base multi-family equivalency factor (70%) to account for such differences.

As mentioned above, the Commodity function of the utility reflects the "base", or indoor household demand, and is directly related to the household size. Therefore, we continue to use the household size ratio (70% of single-family) as a reasonable estimate of relative base demands and applied a multi-family equivalency ratio for this function.

The analysis of multi-family customer class peaking and fire protection characteristics relies on the information obtained from The City Comprehensive Water System Plan and Comprehensive Rate Study. The Comprehensive Water and Sewer Rate Study specifies peaking factors (peak to average month usage) for single family and multi-family customer classes. These peaking factors are 2.75 and 2.33, respectively. In other words, multi-family customers seasonal peaking is about 85% of single-family customer peaking. As a result, the capacity component of the plant-in-service is adjusted down to 85%. Since this peaking occurs from already lower base water usage (70% of single-family), the combined effect of lower base usage and lower peaking factor results in the multi-family equivalency factor of about 59.5% for the Capacity function.

The Customer function of the utility assets includes meters and services, with costs that increase with meter and service line size. It is assumed that the multi-family class equivalency for this function is proportionate to necessary meter sizes. The meter sizes in turn, at least theoretically, reflect the capacity requirement of each customer. For this reason, the capacity equivalency factor of 59.5% (see above) was also applied to the Customer function to determine the multi-family equivalency factor for this function.

According to the City's Comprehensive Water System Plan, the fire flow requirement of multi-family customers is twice as much as that of single-family customers, at 1,500 gallons per minute versus 750 gallons per minute respectively (2005 Comprehensive Water System Plan, page 4-18, table 4-13). The required duration of fire protection demand is also higher, at 60 minutes for multi-family customers as opposed to 45 minutes for single-family customers. The combined effect of fire flow volume and duration results in the fire flow equivalency factor of more than 2.5 for multi-family customers. However, the fire flow volume is a dominant factor in sizing transmission and distribution mains, while the duration requirement primarily affects storage requirements with lesser corresponding investment. For this reason, and in order to remain conservative in our estimates, we relied on the fire flow volumes only (gallons per minute) in determining the fire flow equivalency factor, which for multi-family customers equals twice the single-family fire flow requirements (2.0 factor). It should be noted that,

based on the standards generally used by other water utilities, the 1,500 gallons per minute fire flow requirement for multi-family customers is a very conservative estimate. In many instances non-single family residential customers have fire flow requirements that are at least twice that amount. If these higher fire flow requirements were to be used by the City of Bonney Lake, the multi-family fire flow equivalency factor would be much higher than the one calculated here.

It might also be noted that the fire protection requirement and related cost, while higher, are shared by multiple units. While this perspective has some merit, it does not alter our basis for applying the 2.0 factor, which is shared over all units. In reality, all system customers share the minimum residential fire flow, while only non-residential share the need for the higher flow requirements. When a more detailed analysis is constructed, this relationship would lead to an even higher multiplier effect, even when the number of multi-family units is factored into the analysis.

The following table summarizes the development of a composite equivalency factor based on these considerations:

Rate Study Allocation of Plant-in-Service	Commodity	Capacity	Customer	Fire	Total
	42.96%	38.25%	5.45%	13.34%	100.00%
Multi-Family Equivalency Factor	<i>70.27%</i>	<i>59.54%</i>	<i>59.54%</i>	<i>200.00%</i>	
Single Family GFC	\$ 2,792	\$ 2,486	\$ 354	\$ 867	\$ 6,500
Composite MF Equivalent GFC	\$ 1,962	\$ 1,480	\$ 211	\$ 1,734	\$ 5,388
Composite MF Equivalency Factor					82.9%

The equivalency factors for different functional categories, described above, are applied to respective functional categories of the utility plant, resulting in the overall multi-family customer equivalency factor of about 83% (relative to single-family customers). It is important to note that our methodology is based on certain assumptions and inferences that were dictated by the availability of data and the nature of this analysis. A more detailed study of the multi-family equivalency factor could certainly be undertaken, and could result in a slightly different calculated factor. However, this factor is unlikely to diverge significantly from the figure calculated in this study.

Multi-Family Customer Equivalency Factors of Other Agencies

This section summarizes multi-family customer equivalency factors used by other utilities and regulatory agencies. In most cases, equivalency factors specified for sewer utilities are cited, but because sewer usage volumes are practically a result of and a reflection of domestic base water consumption, the sewer equivalency factors also show a per-unit equivalency of multi-family and single-family residential customers.

The multi-family equivalency factor used by other agencies and utilities generally varies from around the same as the base demand factor (70%) for the City of Bonney Lake up to the equivalency of one with single-family customers. For example, North Bay/Case Inlet Sewer Utility in Mason County uses the same 0.70 factor to determine the multi-family equivalency. King County Metro’s regional sewer treatment utility’s equivalency factor varies between 0.64 and 0.80 depending on the total number of units in multi-family customers: the multi-family customers with four or less units are assigned a 0.80 equivalency per unit, while those with five or more units are subject to 0.64 factor per unit. County

Sanitation District No. 1 (California) uses an equivalency factor of 0.72 to calculate its sewer utility rates per dwelling unit.

Multiple governmental agencies, such as Washington State Department of Ecology and State Water Resources Control Board of the State of California prescribe design basis for new sewage works on a per person basis. This would imply that average occupancy statistic is an appropriate measure for determining the base equivalency factor for multi-family customers. New York State Department of Environmental Conservation prescribes flow rates based on the number of bedrooms in each unit (which could be interpreted as a proxy for household size), but does not even distinguish between single-family and multi-family customer classes. A comparative study by the USEPA found a MF factor of 1.0 as the most common factor in a limited survey.

Conclusions

A multi-family equivalency factor of 70% would be simple and consistent with basic planning data in the water system plan. An equivalency factor of 83% would be consistent with a composite of system plan and rate study information targeted at weighting various components of water service. A simple meter-based structure could also be used. Other factors, including some discussed in this paper and others not addressed here, may also have merit and relevancy.

Ultimately, we would again rely on the statutory guidance of RCW 35.92.025 that authorizes “such reasonable connection charge as the legislative body of the city or town shall determine proper” to conclude that the City Council may consider any or all of these potential approaches when establishing a water GFC and structure to equitably recover system costs.

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Public Works Department
Public Works Director
Daniel L. Grigsby, P.E.

Memo

Date : 23 January 2007
To : City Administrator, Mayor, City Council
From : Public Works Director
CC : City Engineer
Re : Fair Share of Water SDC for Multi-Family Units
Ref : (a) BLMC 13.04.070 (C) (2) (a) (ii)
(b) RCW 35.92.025

The information contained below is provided to clarify questions raised concerning the fair share of Multi-Family housing units when assessing System Development Charges (**SDC**). Specifically, why does the City use 80% versus 70%? The comprehensive plan prepared in 2004 used 70%. The SDC fee uses 80%. I submit that for comprehensive planning 70% may be appropriate while 80% is valid for SDC rate analysis of multi-family housing. They do not have to be the same. In fact, the next time our comprehensive plan is updated, I will promote using the higher percentage.

For 2007, BLMC 13.04.070 requires that single family residential units be charged \$6,895 for water SDC; the first multifamily unit is charged \$6,895; and each additional multifamily housing unit is charged \$5,569. The difference between the first and additional multifamily housing unit SDCs is 80.8 percent.

Historically and demographically, consultants the City has hired advise us that multifamily SDC charges have been in the 65-75% range. There are no fixed methods of calculating the amount of water actually needed for multi-family versus single family. Each family is different. Some multi-family units can and do use more than some single family units. Also, the methodology used to calculate the SDC actually charged should reflect Bonney Lake and Western Washington demographic and water use patterns instead of national or traditional methods.

RCW 35.92.025 allows individual communities to set SDCs as long as they are fair and equitable. Challengers to an SDC rate set by a municipality bear the burden of proving that elected officials who set rates have done so in an unfair and inequitable manner.

Here are some thoughts to be considered when determining whether or not 80-percent is a valid basis for setting multifamily SDC rates in Bonney Lake. Basically, it all comes down to what impact there

is during peak demand periods. There is no single right or wrong solution. The question to be determined is whether or not this would be fair and equitable in accordance with the RCW.

1. The Washington State Growth Management Act has limited the amount of land available for construction of new residential housing units. As a result, Western Washington land prices have sky rocketed in recent years compared to earlier years and other parts of the country. In order to keep housing affordable priced yet still offer attractive floor plans, builders and developers are putting homes on smaller parcel sizes. However, even this action has not provided enough affordable housing.
2. To address this market demand, builders and developers are now building larger multi-family houses. Families who in years past would have bought single family housing are now forced by economics to purchase multi-family housing so they get the most house for their money with the least land cost. Whether or not a residence is a single family or a multi-family housing unit, there are (internally) approximately the same number of fixtures. Internally, a two bedroom single family home is comparable to a two bedroom multi family home when comparing water consumption and determining the peak demand on our water system. Depending on family size and use patterns, either can use more or less water than the other.

The obvious difference is that multi-family units don't provide irrigation water. However, row-houses/town-house styles would still have sidewalks, possibly driveways, and decks that would be cleaned with water. Thus, multifamily housing should be charged more than the traditional 70% of a single family house SDC.

3. How do Bonney Lake demographics differ from other areas in Western Washington? Bonney Lake is rapidly growing with mostly new construction. Multi-family homes are newer and are being built bigger in the Bonney Lake water service area.
4. Since new multi-family housing units are required to have separate water meters and sprinkler systems for irrigation, the SDC for these water meters is billed separately. These new units do not demand as much water during peak a.m./p.m. periods as do single family homes which tend to water their yards and landscaped areas more during the peak use periods. Thus, a percentage less than 100 is valid.
5. Design of water systems is based on peak demand versus average demand. This ensures that water pressures remain constant and reservoirs are adequate regardless of what kind of weather occurs or customer demand is made. The cost of peak demand water is higher than water purchased for other periods of the day or year, because it requires new water supplies instead of just pumping more water from the existing wells/springs.
6. The first multi-family house is charged more than additional units to allow for fire fighting flow above the normal peak demand. Since the odds of all the units having a fire at the same time and during the peak demand period are less, this factor is only applied to one unit. Also, since walls are shared between units, it is reasonable to expect less would burn that would require water to fight.

7. Regardless of how much weight is given to each of the elements above, there are many factors that vary by family such as the number in the family, age of family members, and water conservation emphasis used by each family. Due to the uncertainty associated with multi-family units, the City needs to plan on the higher use for contingency purposes.

So, while a more rigorous analysis could be insightful, it would not necessarily provide a definitive method for the proper multi-family discount for SDC fees.

Other factors that need to be considered include:

8. Growth needs to pay for growth. New family housing units, whether or not they are single family or multi-family units need to contribute to the purchase of new water supplies. Existing customers should have a vested right to use existing water supplies. New customers should bear the full cost of supplying new water supplies. Since new water supplies are becoming rapidly more costly, the SDC needs to be increased similarly. Thus, a higher percent than what has been the historical SDC is warranted for multi family housing.
9. A Twenty Year versus Six Year Comprehensive Plan and Capital Facilities Plan should be used to calculate SDC charges.
 - a. Normally, the concept-planning-design-funding-construction period can take up most if not all of a six-year period. Without planning further out than six years, the City would continuously be in the catch-up mode. While it is true that the number of projects will increase when looking at a 20-year period, so will the growth in number of new customers that will pay for the SDCs. Comparable amounts would be charged whether a twenty or six year period is used.
 - b. During a 20-year period, there will be some project costs that are higher than others. To avoid financing costs or constantly changing SDC rates, the City tries to keep the SDC rate as constant as possible. Thus, some years a fund balance will exist because funding is being set aside for higher cost projects in future years. This does not mean the city has excess SDC funds or utility fund balances; rather, it is cash flow management. This also helps developers and builders plan for projects costs with fewer variables.

Based on the analysis provided above, it is fair and equitable, in accordance with reference (b), to set 80 percent as the amount that additional multi-family units would pay for their share of the water system. While no single criteria is strong enough to justify the use of 80-percent as fair and equitable, the combination of these factors provides overwhelming justification that this is valid.

Should developers disagree, the burden of proof to hold the City as being un-fair and/or non-equitable lies with the developers.

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To: Dan Grigsby, Public Works Director
From: Angie Sanchez Virnoche, Ed Cebron; FCS GROUP
RE Water Utility System Development Charge (SDC) Update

Date: March 25, 2008

This memorandum is intended to summarize the methodology, key inputs and conclusions of the water utility SDC update conducted for the City of Bonney Lake (City)

Introduction

SDCs are sources of funding used by utilities to support capital needs. SDCs are imposed on new customers connecting to the system as a condition of service. SDCs reflect capital contribution to system capacity; they do not reflect requirements for local facilities or costs of physical connection, each of which should be separately imposed. The underlying premise of the SDC is that new customers should pay for a pro rata share of the cost of providing system capacity, and through this mechanism offset growth-related costs that would not have been necessary in absence of customer base growth. Cities in Washington State are allowed to impose connection charges, of which SDCs are one type, under RCW 35.92.025.

General Overview

The purpose of the SDC is twofold: (1) to provide a funding source for capital construction; and (2) to recover an equitable portion of investment in the system from new customers. In the absence of this charge, growth-related costs would be borne by existing customers to a large extent. The SDC calculated for the City can be defined in three parts:

- 1. Existing facilities cost basis.** This is the existing cost of water system assets of general benefit to all customers. The assets are not depreciated, in order to fully recover the cost of future capacity already borne by existing customers. In our analysis we have removed and excluded water supply assets, addressing those through a separate analysis. In order not to overstate the existing asset value, a retirement provision is deducted from the existing assets to recognize that specific future assets (those not excluded under section 2 below) will be replacing existing assets. State law allows recovery of up to ten years' worth of interest on existing assets built to serve growth, at the interest rate prevailing at the time of construction. We have included this interest provision using the Bond Buyer index for municipal revenue bonds.
- 2. Future facilities cost basis.** This is the total cost of planned future improvements less water supply projects. Our analysis includes future projects planned using both a 6-year and 10-year timeframe. The future costs are represented in current dollars to establish an initial charge then consider appropriate escalation of the charge over time to remain consistent with changing costs. Separate from the retirement provision on existing facilities, those future projects that purely replace a project (100% renewal/replacement) have been excluded from the future cost basis.

3. **Water supply cost basis.** This is the cost of the City's existing water supply. Water supply asset costs, both existing and future, were separated from the rest of the utility's existing and future cost bases in order to better allocate these costs to the customers requiring these costs to be incurred. This approach avoids charging new customers for supply infrastructure and assets serving existing customers while at the same time, allocates the cost of new water supply incurred to serve growth to future customers. This method avoids dilution of the benefits of less expensive existing water supply costs over the entire utility customer base and recovers the higher cost of new water supply equitably from future customers. Construction costs to connect to new water supplies were adjusted for each alternative supply purchase. This comparative analysis is addressed separately.

Analysis

Existing Cost Basis

The original cost of plant in service as of 2007 was developed by completing an inventory of all physical assets and then determining each asset's original cost from either existing documentation or from estimation based on similar projects. Bills-of-sales and City records were used where they existed. Original costs for assets that were not supported by existing documentation were calculated based on the year they were brought in service, costs of similar projects, and adjustments based on the Engineering News Record (ENR) Construction Cost Index. Total original cost of the utility's existing assets as of year end 2007 is \$60.2 million. This value excludes the meters and services category since new customers are separately responsible for this cost thereby benefiting the individual parcel and not the greater utility system. In addition, the value excludes all water supply existing assets (\$11.8 million) along with the interest costs associated with the water supply assets (\$1.7 million). Water supply costs are calculated as a separate cost basis.

Retirement Provision - A retirement provision is deducted from the existing assets to recognize that specific future assets will be replacing existing assets. This provision is applied for any project included in the future cost basis which replaces an existing asset. It is not applied for projects excluded from the future cost basis. The future replacement facilities were identified (leaky mains, main replacements). The original cost amount to deduct was calculated by taking the cost of these replacement assets and estimating the original cost of these assets based on the Engineering News Record (ENR) construction cost index history and assumed life of 35 years. [Since the existing assets replaced by the Tacoma Tank were readily identifiable, the original cost listed was used and did not have to be calculated.] The retirement provision deduction for the 6-year period totals \$3.7 million. The 10-year retirement provision totals \$5.7 million.

Allowable Interest - The addition of allowable interest was determined by using the detailed existing asset listing that identified the original cost and year acquired. For each year, we first determined applicable age (the minimum between the actual age and 10 years), and interest rate at the time of construction (bond buyer's revenue bond index history was used for this purpose). The applicable age and interest rates were then applied to each yearly net asset

value. The aggregate interest cost eligible for recovery is \$14.1 million (does not include water supply interest).

Debt Adjustment - In recognition of the fact that some infrastructure has been or will be paid for by debt proceeds, and that debt will be repaid by rate revenues, it is advisable to deduct debt outstanding from the SDC cost basis so that new customers do not fully pay for this portion of costs through the SDC, and then comparably bear the cost through their ongoing rates. Net debt principal outstanding is deducted if the existing cash balances of the utility are not sufficient to meet outstanding principal. The outstanding debt principal net of ending cash balances of \$6.1 million is deducted from the existing cost basis.

The net existing cost basis accounting for each of the items discussed above total \$52.7 million for the 6-year period and \$50.8 million for the 10-year period (the difference reflecting differing retirement provisions related to CIP projects). The existing cost basis will be equally proportioned between the both the existing and future period (6-year or 10-year) customers.

Future Cost Basis

The total future cost basis is based on the future project needs identified in both the 2007 and 2008 City budget and the 6 year and 10 year capital improvement program (CIP). The total 6-year CIP is \$39.7 million and the 10-year CIP is \$49.1 million. The future facilities exclude \$13.4 million related to water supply costs. Water supply is calculated as a separate component.

Repair and Replacement Deduction - Each capital item listed identified if the project related to addressing capacity increasing needs or repair/replacement needs. The difficulty in allocating project costs in this manner is that replacement of aging infrastructure is typically accompanied by capacity and service enhancements such as replacing a 4" main with an 8" main. For this project, only those projects which purely replace a facility without upgrades have been deducted (100% repair/replacement related). Under the calculation methodology used, other projects are already pro rated between existing and future customers, with the majority of cost allocated to existing customers. The deduction of "pure" replacement projects is approximately \$2.2 million for the 6-year time period and \$3.7 million for the 10-year time period.

The total future cost basis for the 6-year period is \$24.2 million and \$32.1 million for the 10-year time period. The future cost basis will also be equally proportioned between the both the existing and future period (6-year or 10-year) customers.

Customer Base

The existing customer base of the City is 13,199 equivalent residential units (ERU) at end of year 2006.

6 year customer base - The 6-year customer growth of the system is projected to be 2,780 for a 2012 total of 15, 979 ERUs. Both of the existing and future cost bases will be divided by the total 2012 ERUs to calculate the customer equivalent charge.

10 year customer base - The extended 10-year customer growth period is projected to be 4,504 for a 2016 total of 17,703 ERUs. Both existing and future cost bases will be divided by the total 2016 ERUs to calculate the customer equivalent charge.

A summary of the existing and future cost basis (without water supply) is calculated below.

	6 Year Period 2012	10 Year Period 2016
Existing Cost Basis	\$52,733,486	\$50,807,211
Future Cost Basis	\$24,229,200	\$32,053,100
Total ERUs	15,979	17,703
Existing \$/ERU	\$3,300	\$2,870
Future \$/ERU	\$1,516	\$1,811
Total \$/ERU w/o water supply	\$4,816	\$4,681

Water Supply Cost Basis

\$18.8 million in water supply asset costs, both existing and future, were deducted from the rest of the utility's existing and future cost bases in order to better allocate these cost to the customers that are requiring these costs to be incurred. Water supply costs were identified as following;

- ✓ City of Tacoma water supply costs of \$6.4 million (\$5.776 million plus two years of interest).
- ✓ Wholesale intertie costs to connect to the Tacoma supply source of \$3.1 million.
- ✓ Peaking storage facility costs required to meet projected demands of \$9.3 million (\$3.9 million of future capital costs plus \$5.4 million existing capacity already constructed including applicable interest).

The water supply costs were valued by calculating the cost for each unit (ERU) of capacity. The supply capacity available from the two sources (Tacoma water supply and the peaking storage facility) is 2,550 gallons per minute. Using a demand factor of 0.486 gpm/ERU for peak day demand results in a supply capacity of 5,247 ERUs. Or a water supply cost basis of \$3,681 per ERU.

The three components: 1) existing cost basis, 2) future cost basis and 3) water supply cost basis comprise the total water SDC for the City.

	6 Year Period 2012	10 Year Period 2016
Existing Cost Basis \$/ERU	\$3,300	\$2,870
Future Cost Basis \$/ERU	\$1,516	\$1,811
Water Supply Cost Basis \$/ERU	\$3,574	\$3,574
Total \$/ERU with water supply	\$8,390	\$8,255

The 2008 SDC of the City is \$7,147. The 6-year and 10-year SDC calculation are very similar and represent a change from the existing charge of \$1,243 (17.4% increase) and \$1,108 (15.5% increase), respectively.

Policy Direction

The above represents FCS Group’s recommended SDC calculation based on our understanding of the City’s prior expressed policies for setting utility rates and charges, as well as our experience and view of the City’s funding needs and reasonable methodologies practiced in the industry. A change in any of these policy assumptions could change the resulting calculation. The following list will identify these key assumptions. The Council should consider each of the assumptions made before approving the proposed SDC. The comparisons shown below have used the 6-year SDC (\$8,390) to determine the impact of each policy change.

Policy Decision #1 – Grants and/or developer contributions have not been deducted as part of the existing cost basis. RCW 35.92.025 does not address deducting these contributions. These deductions represent approximately \$23 million. This deduction would result in lowering the SDC by \$1,440 to a total SDC of **\$6,950 (17.2% decrease)**. Including these projects reflects a policy choice by council to require new customers to “buy in” to the entire system at its existing value, instead of only requiring new customers to reimburse the system for those projects that the City paid for directly.

Policy Decision #2 – Outstanding debt has been deducted as part of the existing cost basis. RCW 35.92.025 does not address deducting these contributions, and there is not a consistent practice relating to this particular issue. The reason for deducting the outstanding debt is to avoid double counting. If debt has been used to fund capital facilities, the debt service will be collected via monthly user rates. A deduction of the outstanding debt of the existing cost basis avoids double charging customers – once in the SDC and again in the monthly user rate. This deduction represents approximately \$6.0 million. If we remove this deduction, it would increase the SDC by \$379 to a total SDC of **\$8,769 (4.5% increase)**. This deduction represents the policy preference to avoid what could be construed as double-counting.

Policy Decision #3 – Total future projects have been included in the future cost basis of the current charge. The total future projects are divided equally between the existing and future customer base of the water utility. An alternative approach to the SDC is to include only the growth related future projects and spread that costs among only the future customer units. As a reference point, total customer equivalents for the six year time period equal 15,979. The 6-year growth related portion of the customer base is 2,780 equivalent units. If we spread the growth related future projects \$24.2 million (of the total \$39.2 million) by the growth only customer equivalents (2,780) the SDC would increase by \$2,397 to a total SDC of **\$10,787 (28.6% increase)**. This would represent a policy of requiring growth to pay for growth-related projects.

Policy Decision #4 – The cost of supplying water to new customers has been computed as a separate component of the SDC. As discussed above, this recognizes that new water is more expensive than water from existing sources of supply, and seeks to recover the actual cost of new supply from new customers. An alternative approach would be to treat past and future supply costs as a shared cost to be distributed equally between old and new customers. If this alternative approach were taken, the SDC would decrease by \$2,002 to a total SDC of **\$6,388 (23.9% decrease)**. This would represent a policy decision to be less stringent in requiring growth to pay for growth, with a greater risk of current customers subsidizing growth.

We invite the council to consider each alternative and change direction from the proposed methodology as deemed appropriate after consultation with legal counsel regarding the risks and benefits of each approach. It is important to note that any change in the assumptions may result in the need to recalculate the analysis.

To: Dan Grigsby, Public Works Director
From: Angie Sanchez Virnoche, FCS GROUP
RE Impact to Rates and SDCs of Water Supply Alternatives

Date: March 25, 2008

The City of Bonney Lake (City) requested assistance from FCS GROUP with additional analysis that would calculate the monthly rate impact, the net present value and the system development charge impact under different water supply alternatives. The water supply alternatives included the following:

- ✓ Base Case or Status Quo – Existing water resources (includes Tacoma Public Utilities First Block)
- ✓ Tacoma Public Utilities (TPU) purchase of additional 2 Million Gallons per Day (MGD) – fixed monthly meter charge plus commodity charge and upfront SDC charge.
- ✓ Tacoma Public Utilities purchase of additional 4MGD – fixed monthly meter charge plus commodity charge and upfront SDC charge.
- ✓ Lakewood Water District (LWD) Purchase of 2MGD – fixed charge and commodity charge, requires use of TPU first block in 2019.
- ✓ Lakewood Water District Purchase of 4MGD – fixed charge and commodity charge.

The base case revenue requirement was first determined for comparison purposes. The calculation of projected water supply costs used the water demand projections supplied by RH2 and included in Appendix A. Changes from the base case included; purchased water costs (fixed and variable) from either TPU or LWD, capital costs from each alternative, and the TPU upfront system development charge applicable when additional capacity is purchased. Both the ongoing annual costs and on-time capital costs were evaluated for each scenario. Funding for capital costs used existing reserves first followed by new debt only after existing reserves were depleted.

Rate Impact Analysis

The rate impact analysis was completed by developing a revenue requirement for each of the alternative water supply options. A summary of the annual rate impacts, cumulative rate impacts, average monthly residential bill, cumulative change in residential bill and the fund balances of the operating, system development charge and capital funds is included in Appendix B. Appendix C through G include the detailed exhibits that support the base case analysis and the rate impact analysis for each water supply alternative.

Base Case - The base case scenario used revenue and operating and maintenance costs as contained in the City's 2007 - 2008 biennial budget. In addition to the budget, the following assumptions are incorporated: Utilize the existing water resources (wells and springs) along with existing water available from the TPU first block purchase. TPU commodity rates apply along with a monthly fixed meter charge applicable for a 4" meter. Capital costs from 2007 - 2016 were provided by RH2 from the current Water Comprehensive Planning efforts. Year 2017 – 2020 have assumed \$2.6 million per year in additional project costs as a placeholder. The TPU

Water Supply Alternatives

installment payments for the first block water purchase are assumed to be funded from system development charge revenue. No new debt funding has been assumed for the base case.

The results of the base case analysis show a cumulative rate increase of 19.08% from 2008 – 2020. This equates to an average of 1.5% increase per year. Under the current rates, an average residential customer using 10 CCF of water each month in the winter and 14 CCF of water each month in the summer has an average monthly bill of \$29.87. The base case alternative indicates over time, the average bill would increase to \$35.57 by 2020 or an increase of **\$5.70** per month over the 13 year period.

The operating fund, system development charge fund and capital fund ending balances were monitored for use and to ensure they are maintained at or above target levels. The operating fund is set at a minimum of 8% of annual operating expenses. The system development charge has no minimum; therefore funds can be depleted in any given year. The capital fund is set at a minimum of \$250,000. The detailed base case alternative is included in Appendix C.

TPU 2MGD (TPU 2nd Block) - This water supply alternative includes the purchase of an additional 2MGD from TPU. All operating and capital assumptions in the base case scenario remain. Other changes related to the TPU 2MGD purchase include; monthly fixed meter charge increases related to a 8” meter in 2010, additional \$5.774 million in system development charges (20% down and 10 year installments) paid for via system development charge revenue, capital costs totaling \$989,000 related to \$257,000 for booster pump and \$732,000 for transmission main. No additional debt has been assumed for the additional project costs under this scenario.

The results of the TPU 2MGD analysis show a cumulative rate increase of 19.27% from 2008 – 2020. This equates to an average of 1.5% increase per year. The average monthly residential bill increases from \$29.87 to \$35.62 by 2020 or an increase of **\$5.75** per month over the 13 year period.

The operating fund and capital fund balance are maintained at base case levels. The system development charge is decreased by \$12.2 million to pay for the installment payments of the TPU additional water purchase and to fund growth related capital needs. The detailed water supply alternative is included in Appendix D.

TPU 4MGD (TPU 3rd Block) - This water supply alternative includes the purchase of an additional 4MGD from TPU. All operating and capital assumptions in the base case scenario remain. Other changes related to the TPU 4MGD purchase include; monthly fixed meter charge increases related to a 12” meter in 2018, additional \$11.548 million in system development charges (20% down and 10 year installments) paid for via system development charge revenue, capital costs totaling \$1.374 million related to \$642,500 for booster pump and \$732,000 for transmission main. No additional debt has been assumed for the additional project costs under this scenario.

Water Supply Alternatives

The results of the 4MGD analysis show a cumulative rate increase of 19.38% from 2008 – 2020. This equates to an average of 1.5% increase per year. The average monthly residential bill increases from \$29.87 to \$35.66 by 2020 or an increase of **\$5.79** per month over the 13 year period.

The operating fund and capital fund balance are maintained at base case levels. The system development charge is decreased by \$23.3 million to pay for the installment payments of the TPU additional water purchase and to fund growth related capital needs. The detailed water supply alternative is included in Appendix E.

The rate impacts for the TPU essentially do not change when compared to the base case. The reason for this is that the significant cost changes (system development charge and the capital costs) are funded through the system development charge revenue and fund. The only operational increase is the increased meter charge for the larger meters.

LWD 2MGD (includes use of TPU 1st Block in 2019) - This water supply alternative includes the purchase of an additional 2MGD from Lakewood Water District. All operating and capital assumptions in the base case scenario remain. Other changes related to the LWD 2MGD purchase include; annual per MG fixed charge based on water demand nomination (\$182,000 - \$186,000 per MGD) plus commodity charges (\$0.65 to \$0.93 per CCF). This alternative assumes that LWD water would be used first before the TPU first block water purchased in 2005. Both the fixed and commodity charge for LWD water is recovered through monthly user rates. There is no system development charge for LWD water. TPU water costs include the fixed monthly meter charge for a 4" meter. Commodity charges for TPU do not apply until 2019. Capital costs for this option total \$14 million and relate to \$1.8 million for the booster pump and \$12.2 million for the transmission main. This alternative requires \$7.3 million in new debt. The additional debt adds a maximum of \$653,000 to the annual debt service obligations of the utility which is supported through rates.

The results of the LWD 2M D analysis show a cumulative rate increase of 29.23% from 2008 – 2020. This equates to an average of 2.25% increase per year. The average monthly residential bill increases from \$29.87 to \$38.58 by 2020 or an increase of **\$8.71** per month over the 13 year period.

The operating fund is maintained at or above base case levels. The system development charge is decreased by \$13.8 million to pay for growth related capital needs. The capital fund is decreased by \$455,000 to fund the capital needs of the system. The detailed water supply alternative is included in Appendix F.

LWD 4MGD Supply to 2028 - This water supply alternative includes the purchase of an additional 4MGD from Lakewood Water District. All operating and capital assumptions in the base case scenario remain. Other changes related to the LWD 2MGD purchase include; annual per MG fixed charge based on water demand nominations (\$182,000 - \$186,000 per MGD) plus commodity charges (\$0.65 to \$0.93 per ccf). Both the fixed and commodity charge for LWD water is recovered through monthly user rates. There is no system development charge for LWD water. This alternative assumes no use of the TPU first block water. TPU water costs only include the fixed monthly meter charge for a 4" meter. Capital costs for this option total \$16.2 million and relate to \$2.8 million for the booster pump and \$13.4 million for the transmission main. This alternative requires \$9.8 million in new debt. The additional debt adds a maximum of \$872,000 to the annual debt service obligations of the utility which is supported through rates.

Water Supply Alternatives

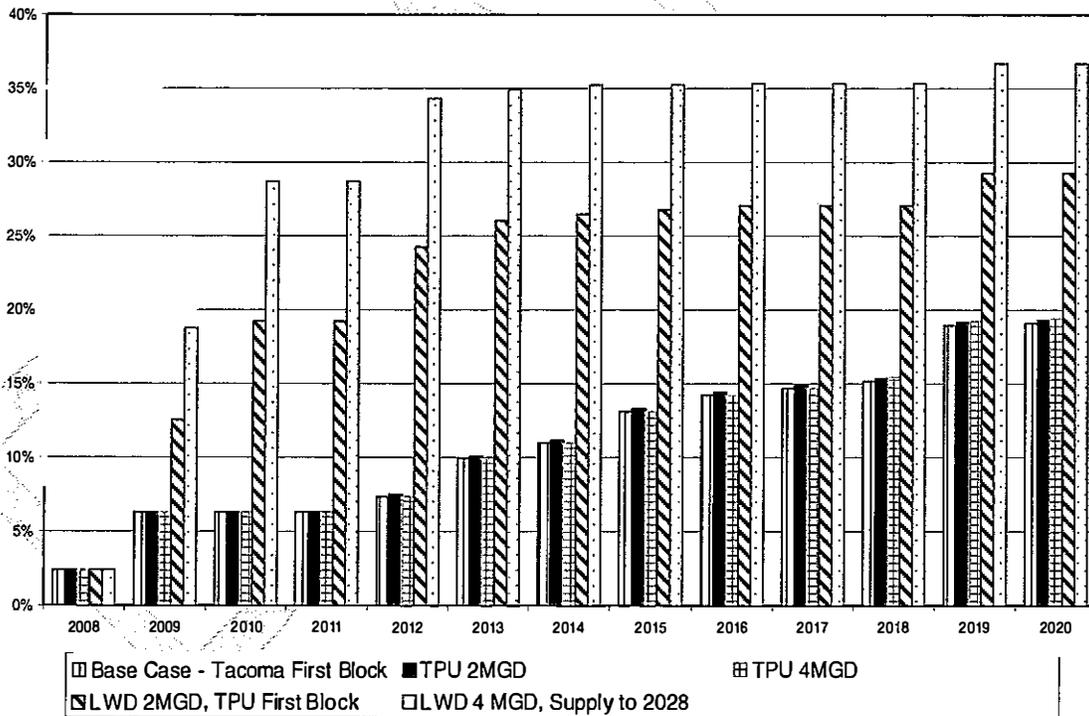
The results of the LWD 4MGD analysis show a cumulative rate increase of 36.65% from 2008 – 2020. This equates to an average of 2.82% increase per year. The average monthly residential bill increases from \$29.87 to \$40.81 by 2020 or an increase of **\$10.95** per month over the 13 year period.

The operating fund is maintained at or above base case levels. The system development charge is decreased by \$13.8 million to pay for growth related capital needs. The capital fund is decreased by \$455,000 to fund the capital needs of the system. The detailed water supply alternative is included in Appendix G.

The drivers for the LWD rate impacts include funding the fixed charge through the monthly rates and the need for new debt to meet the capital costs required. The capital costs are significantly higher under the LWD option.

A summary of the cumulative rate impacts of each water supply options is provided in the following graph.

**Bonney Lake Wholesale Water Supply Options
Cummulative Rate Impact**



Net Present Value Analysis

The net present value (NPV) is a standard method for the financial appraisal of long-term projects. It is commonly used for evaluating capital projects. The NPV analysis was based on the following for each water supply alternative: time period of 2008 through 2028, discount rate of 6.0%, capital costs inflated for the year of construction, applicable commodity charges, applicable fixed charges

Water Supply Alternatives

and applicable system development charges (TPU options only). The net present value analysis calculated the following values for each water supply alternative.

NPV	TPU - 2 MGD	TPU - 4 MGD	LWD - 2 MGD	LWD - 4 MGD
	\$ 9,909,240	\$ 15,411,666	\$ 19,859,211	\$ 25,621,127

The results indicate that both TPU options have a lower net present value than the LWD options. The NPV analysis is included in Appendix H.

System Development Charge (SDC) Impact

A separate memorandum has been provided to the City (*Water Utility System Development Charge (SDC) Update March 25, 2008*) that details the methodology, approach and key components included in the SDC calculation conducted for the City. Any change in the water supply alternative for the City will result in a change to the SDC. Therefore, the SDC impact was also evaluated under each of the water supply alternatives; TPU 2MGD – second block, TPU 4MGD – third block, LWD 2MGD and LWD 4 MGD.

In summary, the SDC methodology includes three components; existing, future and water supply. The existing cost basis takes the existing facilities asset value and deducts existing water supply, retirement provisions for future projects and net debt principal. Interest on non-contributed plant is added up to a maximum of 10 years.

The future component includes future projects anticipated during the planning period and deducts future water supply projects and identified repair and replacement projects. The additional costs for the TPU 2MGD alternative is \$6.763 million which includes the booster pump station, transmission main and the system development charge costs. The TPU 4MGD alternative includes \$12.922 million in capital costs. The LWD 2MGD alternative includes \$14.030 million for the booster pump and transmission main. The LWD 4MGD alternative includes \$16.191 million in capital costs.

The water supply component includes all existing and future water supply costs. The water supply component assigns a value to each equivalent residential unit (ERU) of water supply capacity. The ERU available changes based on the additional MGD purchased. 2MGD adds an additional 2,860 of ERU water supply capacity and 4MGD adds an additional 5,720 ERU capacity. The results of the SDC analysis are shown below. Summary tables are provided in Appendix I.

Water Supply Alternatives

Summary of the 6-Year (2012) SDC for Each Alternative Water Supply

	BASE	TPU 2MGD	TPU 4MGD	LWD 2MGD	LWD 4MGD
EXISTING COST BASIS					
Plant-in-Service	\$ 60,225,651	\$ 60,225,651	\$ 60,225,651	\$ 60,225,651	\$ 60,225,651
less: Existing Water Supply	(11,752,430)	(11,752,430)	(11,752,430)	(11,752,430)	(11,752,430)
less: Retirement Provision for Future Projects	(3,732,021)	(3,732,021)	(3,732,021)	(3,732,021)	(3,732,021)
plus: Interest on Non-Contributed Plant	14,047,421	14,047,421	14,047,421	14,047,421	14,047,421
less: Net Debt Principal Outstanding	(6,055,136)	(6,055,136)	(6,055,136)	(6,055,136)	(6,055,136)
TOTAL EXISTING COST BASIS	\$ 52,733,486				
FUTURE COST BASIS					
Total Future Projects Capital Improvement Plan	\$ 39,742,402	\$ 46,505,402	\$ 52,664,902	\$ 53,772,402	\$ 55,933,402
less: Future Supply Projects	(13,359,202)	(20,122,202)	(26,281,702)	(27,389,202)	(29,550,202)
less: Identified Repair & Replacement Projects	(2,154,000)	(2,154,000)	(2,154,000)	(2,154,000)	(2,154,000)
less: Contributed Future Upgrade & Expansion Assets	-	-	-	-	-
TOTAL FUTURE COST BASIS	\$ 24,229,200				
CUSTOMER BASE					
	ERU	ERU	ERU	ERU	ERU
Existing Equivalent Residential Units (ERU)	13,199	13,199	13,199	13,199	13,199
Future Equivalent Residential Units (Incremental)	2,780	2,780	2,780	2,780	2,780
TOTAL CUSTOMER BASE	15,979	15,979	15,979	15,979	15,979
RESULTING CHARGE					
	Total	Total	Total	Total	Total
Existing Cost Basis	\$52,733,486	\$52,733,486	\$52,733,486	\$52,733,486	\$52,733,486
Future Cost Basis	24,229,200	24,229,200	24,229,200	24,229,200	24,229,200
TOTAL EXISTING + FUTURE COST BASIS	\$76,962,686	\$76,962,686	\$76,962,686	\$76,962,686	\$76,962,686
TOTAL CUSTOMER BASE	15,979	15,979	15,979	15,979	15,979
TOTAL CHARGE PER ERU	\$ 4,816				
WATER SUPPLY COMPONENT					
Total Water Supply Costs (Existing + Future)	18,753,849	25,516,849	31,676,349	32,783,849	34,944,849
CUSTOMER BASE					
Supply Capacity ERU (Incremental)	5,247	8,107	10,967	8,107	10,967
TOTAL WATER SUPPLY CHARGE PER ERU	\$ 3,574	\$ 3,148	\$ 2,888	\$ 4,044	\$ 3,186
TOTAL CHARGE PER ERU 2008	\$ 8,390	\$ 7,964	\$ 7,704	\$ 8,860	\$ 8,002

Water Supply Alternatives

Summary of the 10-Year (2016) SDC for Each Alternative Water Supply

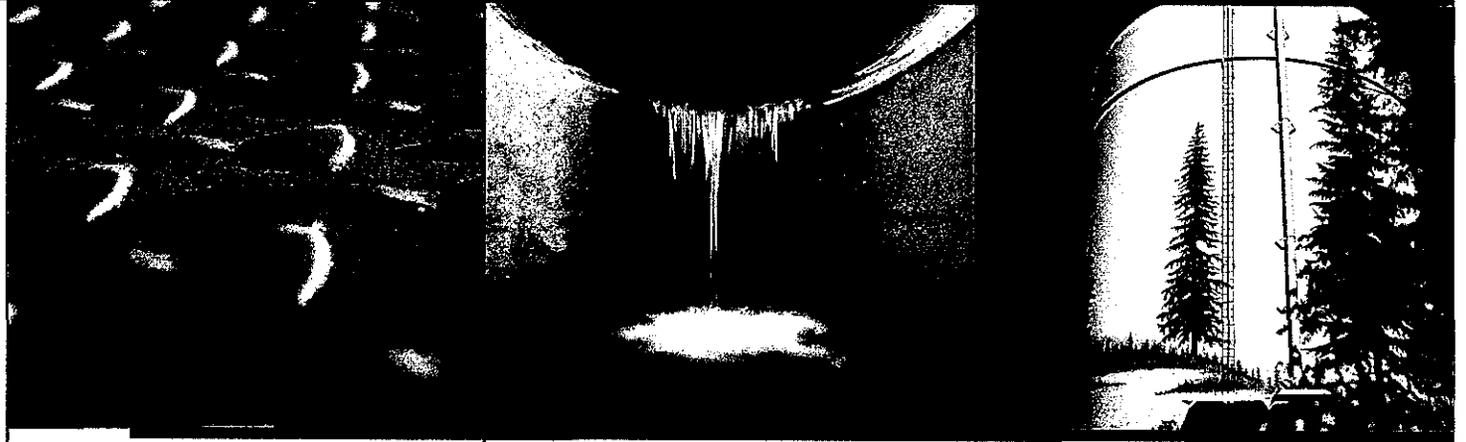
	BASE	TPU2MGD	TPU 4MGD	LWD 2MGD	LWD4MGD
EXISTING COST BASIS					
Plant-in-Service	\$ 60,225,651	\$ 60,225,651	\$ 60,225,651	\$ 60,225,651	\$ 60,225,651
less: Existing Water Supply	(11,752,430)	(11,752,430)	(11,752,430)	(11,752,430)	(11,752,430)
less: Retirement Provision for Future Projects	(5,658,095)	(5,658,095)	(5,658,095)	(5,658,095)	(5,658,095)
plus: Interest on Non-Contributed Plant	14,047,421	14,047,421	14,047,421	14,047,421	14,047,421
less: Net Debt Principal Outstanding	(6,055,136)	(6,055,136)	(6,055,136)	(6,055,136)	(6,055,136)
TOTAL EXISTING COST BASIS	\$ 50,807,411				
FUTURE COST BASIS					
Total Future Projects Capital Improvement Plan	\$ 49,076,302	\$ 55,839,302	\$ 61,998,802	\$ 63,106,302	\$ 65,267,302
less: Future Supply Projects	(13,359,202)	(20,122,202)	(26,281,702)	(27,389,202)	(29,550,202)
less: Identified Repair & Replacement Projects	(3,664,000)	(3,664,000)	(3,664,000)	(3,664,000)	(3,664,000)
less: Contributed Future Upgrade & Expansion Assets	-	-	-	-	-
TOTAL FUTURE COST BASIS	\$ 32,053,100				
CUSTOMER BASE					
	ERU	ERU	ERU	ERU	ERU
Existing Equivalent Residential Units (ERU)	13,199	13,199	13,199	13,199	13,199
Future Equivalent Residential Units (Incremental)	4,504	4,504	4,504	4,504	4,504
TOTAL CUSTOMER BASE	17,703	17,703	17,703	17,703	17,703
RESULTING CHARGE					
	Total	Total	Total	Total	Total
Existing Cost Basis	\$ 50,807,411	\$ 50,807,411	\$ 50,807,411	\$ 50,807,411	\$ 50,807,411
Future Cost Basis	32,053,100	32,053,100	32,053,100	32,053,100	32,053,100
TOTAL EXISTING + FUTURE COST BASIS	\$ 82,860,511				
TOTAL CUSTOMER BASE	17,703	17,703	17,703	17,703	17,703
TOTAL CHARGE PER ERU	\$ 4,681				
WATER SUPPLY COMPONENT					
Total Water Supply Costs (Existing + Future)	18,753,849	25,516,849	31,676,349	32,783,849	34,944,849
CUSTOMER BASE					
Supply Capacity ERU (Incremental)	5,247	8,107	10,967	8,107	10,967
TOTAL WATER SUPPLY CHARGE PER ERU	\$ 3,574	\$ 3,148	\$ 2,888	\$ 4,044	\$ 3,186
TOTAL CHARGE PER ERU 2008	\$ 8,255	\$ 7,829	\$ 7,569	\$ 8,725	\$ 7,867

The maximum difference between the system development charges for the water supply alternative is \$1156 per ERU. There are two main reasons for the changes in the SDC under each alternative. The first reason is the initial capital costs included in the base case to get the first block of TPU water to the City is much higher than the marginal cost required to get the additional water to the City. The second reason is the incremental ERUs. The more water capacity purchased the more units we have to spread the costs across. The water supply cost per ERU therefore goes down in some of the alternatives resulting in a lower overall charge.

We hope that the information provided under the rate impact analysis, net present value and system development charge analysis will assist the City gain a better understanding of the rate and charge impacts under each water supply alternative. If you have any questions, please give me a call.

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City of Bonney Lake

**Water System Development
Charge Update & Water Supply
Alternatives Evaluation**

April 1, 2008

 **FCS GROUP**
Solutions-Oriented Consulting

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Discussion Outline

- Overview of System Development Charges (SDCs)
- Methodology
- Cost Basis
- Policy Decisions/Direction
- Water Supply Alternatives Evaluation

SDC Introduction

- Charge imposed on new development or expanded connection to system as a condition of service
- Charge represents a prorated share of the cost of providing system capacity
 - ✓ Off set growth related costs that would not be necessary in absence of customer based growth-
“growth pays for growth”
- Charge Calculated based on intent and structure of Revised Code of Washington (RCW) statute.

Revised Code of Washington

For Cities

RCW 35.92.025

Authority to make charges for connecting to water or sewerage system -- Interest charges.

Cities and towns are authorized to charge property owners seeking to connect to the water or sewerage system of the city or town as a condition to granting the right to so connect, in addition to the cost of such connection, such reasonable connection charge as the legislative body of the city or town shall determine proper in order that such property owners shall bear **their equitable share of the cost of such system. The equitable share may include interest charges applied from the date of construction of the water or sewer system until the connection, or for a period not to exceed ten years, at a rate commensurate with the rate of interest applicable to the city or town at the time of construction** or major rehabilitation of the water or sewer system, or at the time of installation of the water or sewer lines to which the property owner is seeking to connect but not to exceed ten percent per year: PROVIDED, That the aggregate amount of interest shall not exceed the equitable share of the cost of the system allocated to such property owners. Connection charges collected shall be considered revenue of such system.



Legal Framework

- Cities RCW 35.92.025 provides little in the way of calculation framework
 - ✓ Maximum of 10 years of interest at prevailing rate on existing system costs.
 - ✓ Does not address allowance of future facilities
 - ✓ Does not address deduction of grants, developer contributions
- District RCW 57.08.005 legal framework is more specific
 - ✓ Explicitly allows inclusion of 10 years of planned future facilities costs (approved comprehensive plan)
 - ✓ shall not include those portions of the system which have been donated or which have been paid for by grants
- Common practice is a combination of Cities and District RCW

SDC Methodology: Key Issues

- Six and ten year future capital improvement projects (CIP) evaluated
- Three components in analysis – existing cost basis, future cost basis and water supply cost basis
- Used updated existing system asset values as of December 2006
- Contributed capital (developer and grants) included in the existing asset values
- Purchased water costs calculated separately
- ERU = Equivalent Residential Unit represents amount of water used by one single-family residence.
 - ✓ Demand of other customers expressed in terms of ERUs by dividing demand by other customers by the demand representing one ERU

■ Multi-family charge set at 77% of ERU for additional

Updated Calculation

Existing
Capacity

Allocable cost of
existing facilities



Total system capacity
(including growth)

Future
Improvements

Cost of future capital
improvements



Total system capacity
(including growth)

Water Supply
Requirements

Cost of future water
supply



Supply capacity



SDC per ERU

Existing Asset Valuation

- Existing water system assets of general benefit to all customers
- Determined complete inventory of physical assets as of year end 2006
- Water system Inventory (non water main) – 97% supported by documentation of City
 - ✓ 3% required additional research
- Water main inventory:
 - ✓ Bill of sale (35% of system); city records (28% of system); Engineering News Record (ENR) Construction Cost Index (CCI) (37% of system)
 - ✓ When ENR was used - identified year asset brought into service, compared to cost of similar project, adjusted for ENR CCI

Existing Cost Basis – Part 1 of 3

- Existing asset original cost value used as basis
 - ✓ Includes grants and developer donations
 - ✓ excludes meters and services
- Existing assets not depreciated to fully recover future capacity already borne by existing customers
- Water supply deducted; calculated independently
- Retirement provision used to deduct for any future asset that will replace existing assets
- Applied up to 10 years of interest on original cost of asset (Bond Buyers index for municipal revenue bonds)
- Deduction for outstanding debt service to recognize that some existing assets were paid for via debt proceeds and the related debt service will be recovered through rate revenue

Charge Calculation: Existing Component

Existing Cost Basis	6 Year CIP (2012)	10 Year CIP (2016)
PLANT-IN-SERVICE		
Utility Capital Assets	\$60,225,651	\$60,225,651
less: Existing Water Supply	(11,752,430)	(11,752,430)
less: Retirement Provision for Future Projects	(3,732,021)	(5,658,095)
plus: Interest on Non-Contributed Plant	14,047,421	14,047,421
less: Net Debt Principal Outstanding	(6,055,136)	(6,055,136)
TOTAL EXISTING COST BASIS	\$52,733,486	\$50,807,411

Customer Base	6 Year 2007 - 2012	10 Year 2007 - 2016
Existing Equivalent Residential Units - 2006	13,199	13,199
Future Equivalent Residential Units (Incremental)	2,780	4,504
TOTAL CUSTOMER BASE	15,979	17,703

Resulting Charge	6 Year CIP	10 Year CIP
Existing Cost Basis (\$ / ERU)	\$3,300	\$2,870

Future Cost Basis – Part 2 of 3

- Includes capital projects listed in
 - ✓ 2007/2008 biennial budget
 - ✓ 6 year and 10 year CIP identified in comprehensive plan update
- Many future projects that replace aging infrastructure also accompanied by capacity and service enhancements
- Only those projects that purely (100%) replace a facility (without upgrades) have been deducted
 - ✓ Examples include meter replacement program, tank cleaning, leak detection, tank recoating, flushing program, valve replacement, etc.
- Deduct future water supply costs – calculated independently

Charge Calculation: Future Component

Future Cost Basis	6 Year CIP (2012)	10 Year CIP (2016)
PLANT-IN-SERVICE		
Total Future Projects	\$39,742,402	\$49,076,302
less: Future Supply Projects	(13,359,202)	(13,359,202)
less: Identified Repair & Replacement Projects	(2,154,000)	(3,664,000)
TOTAL FUTURE COST BASIS	\$24,229,200	\$32,053,100

Customer Base	6 Year 2007 - 2012	10 Year 2007 - 2016
Existing Equivalent Residential Units - 2006	13,199	13,199
Future Equivalent Residential Units (Incremental)	2,780	4,504
TOTAL CUSTOMER BASE	15,979	17,703

Resulting Charge	6 Year CIP	10 Year CIP
Future Cost Basis (\$ / ERU)	\$1,516	\$1,811

Water Supply Cost Basis – Part 3

of 3

- Existing and future water supply costs separated
 - ✓ Avoids charging new customers for supply infrastructure and assets serving existing customers
 - ✓ Allocates cost of new water supply incurred to meet growth to new customers
 - ✓ Eliminates dilution of water supply costs
- Water supply costs include:
 - ✓ Tacoma Public Utilities (TPU) water supply costs
 - ✓ Wholesale intertie costs to connect to TPU source
 - ✓ Peaking storage facility costs
- Charge calculated by identifying cost per each unit of supply capacity
 - ✓ Total future supply capacity 2,550 gpd
 - ✓ 0.486 gpm/ERU demand factor
 - ✓ Total supply capacity available 5,247 ERUs

Charge Calculation: Water Supply Component

Water Supply Cost Basis

Tacoma Public Utilities Supply	\$6,368,702
Tacoma Public Utilities Intertie	3,090,500
Peaking Storage	9,294,647
TOTAL WATER SUPPLY COST BASIS	\$18,753,849

Supply Capacity

Supply Capacity GPM	2,550
ERU GPM Capacity Requirement	0.486
TOTAL ERU SUPPLY CAPACITY AVAILABLE	5,247

Resulting Charge

Supply Cost (\$ / ERU)	\$3,574
------------------------	----------------

Total System Development Charge

	6 Year CIP (2012)	10 Year CIP (2016)
Existing Cost Basis	\$3,300	\$2,870
Future Cost Basis	1,516	1,811
Water Supply Cost Basis	3,574	3,574
TOTAL SYSTEM DEVELOPMENT CHARGE (\$ / ERU)	\$8,390	\$8,255

Current 2008 Rate per ERU is \$7,147 - 17.4% increase compared to the 6 year charge and 15.5% increase compared to the 10 year charge

System Development Charge By Meter Size

6 Year CIP

Meter Size (inches)	First Unit	Additional Unit	5/8 - 3/4	1	1-1/4	1-1/2	2	3	4	6	
Residential/Single Family			\$8,390	\$13,554	\$11,819	\$32,272	To be determined on each individual case, based on the projected amount of usage and peaking expected from the customer. These charges shall reflect the value of the water for individual residential customers.				
MultiFamily and Mobile Home Park	\$8,390	\$6,460									
Non Residential			\$8,390	\$13,554	\$11,819	\$32,272					

10 Year CIP

Meter Size (inches)	First Unit	Additional Unit	5/8 - 3/4	1	1-1/4	1-1/2	2	3	4	6	
Residential/Single Family			\$8,255	\$13,336	\$11,629	\$31,751	To be determined on each individual case, based on the projected amount of usage and peaking expected from the customer. These charges shall reflect the value of the water for individual residential customers.				
MultiFamily and Mobile Home Park	\$8,255	\$6,356									
Non Residential			\$8,255	\$13,336	\$11,629	\$31,751					

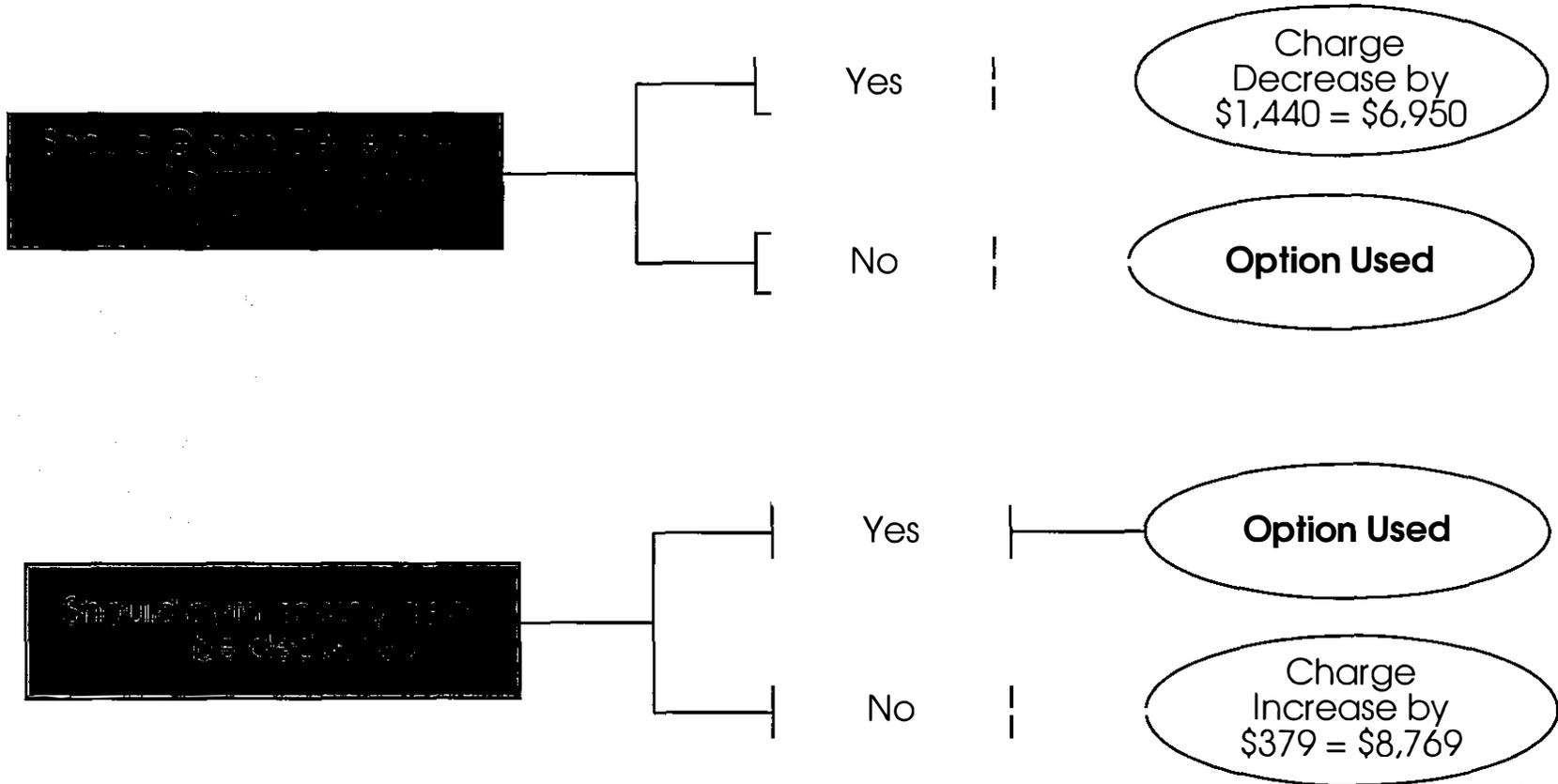
Multifamily additional unit charge set at 77% of residential/single family equivalent

System Development Charge Comparison

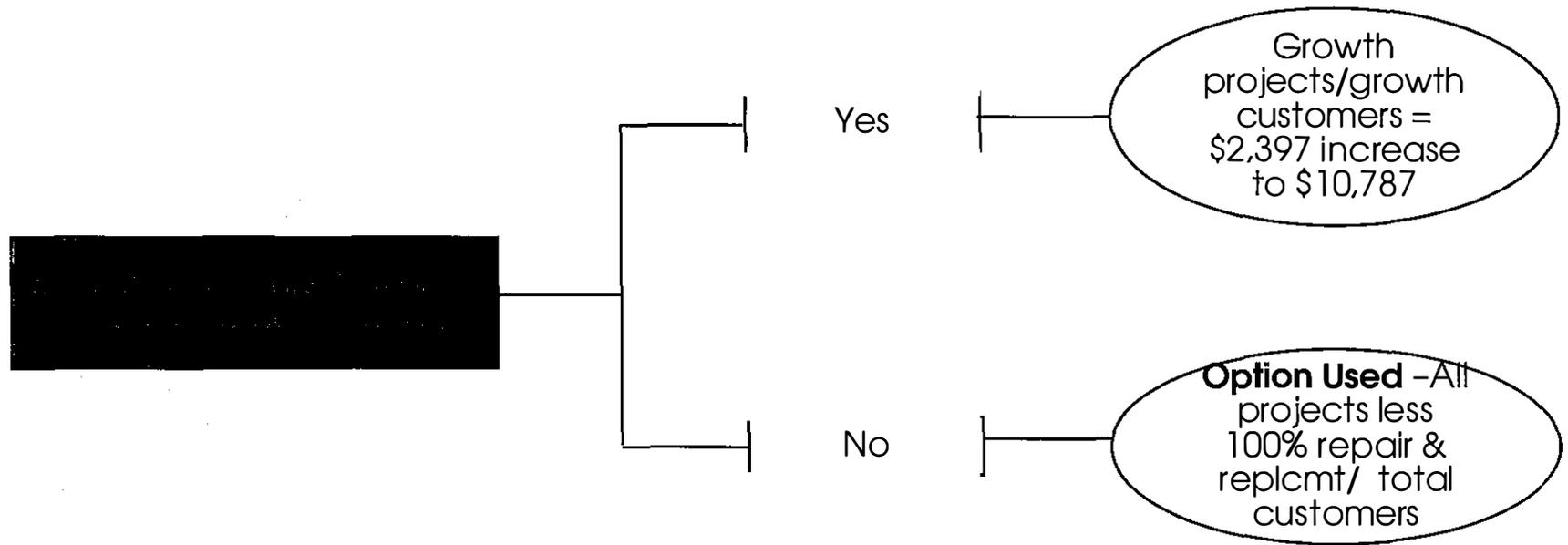
City	Population	2007 SDC	2008 SDC
Fife	7,180	\$5,275	[1]
Edgewood	9,560		\$1,750
Auburn	50,470	\$2,424	\$2,424
Puyallup	36,790	\$3,130	\$3,130
Tukwila - Allantown-phase 1 Duvamish		\$4,055	\$4,096
Marysville	36,210	\$4,490	\$4,490
Tukwila - Ryan Town		\$5,555	\$5,555
Bonney Lake	15,740	\$6,895	\$7,147
Covington	17,190	\$7,457	\$7,457
Tukwila - Allantown-phase 2		\$0	\$8,247
Issaquah	24,710	\$9,323	\$9,323

[1] Charge will increase on April 1, 2008, did not have number

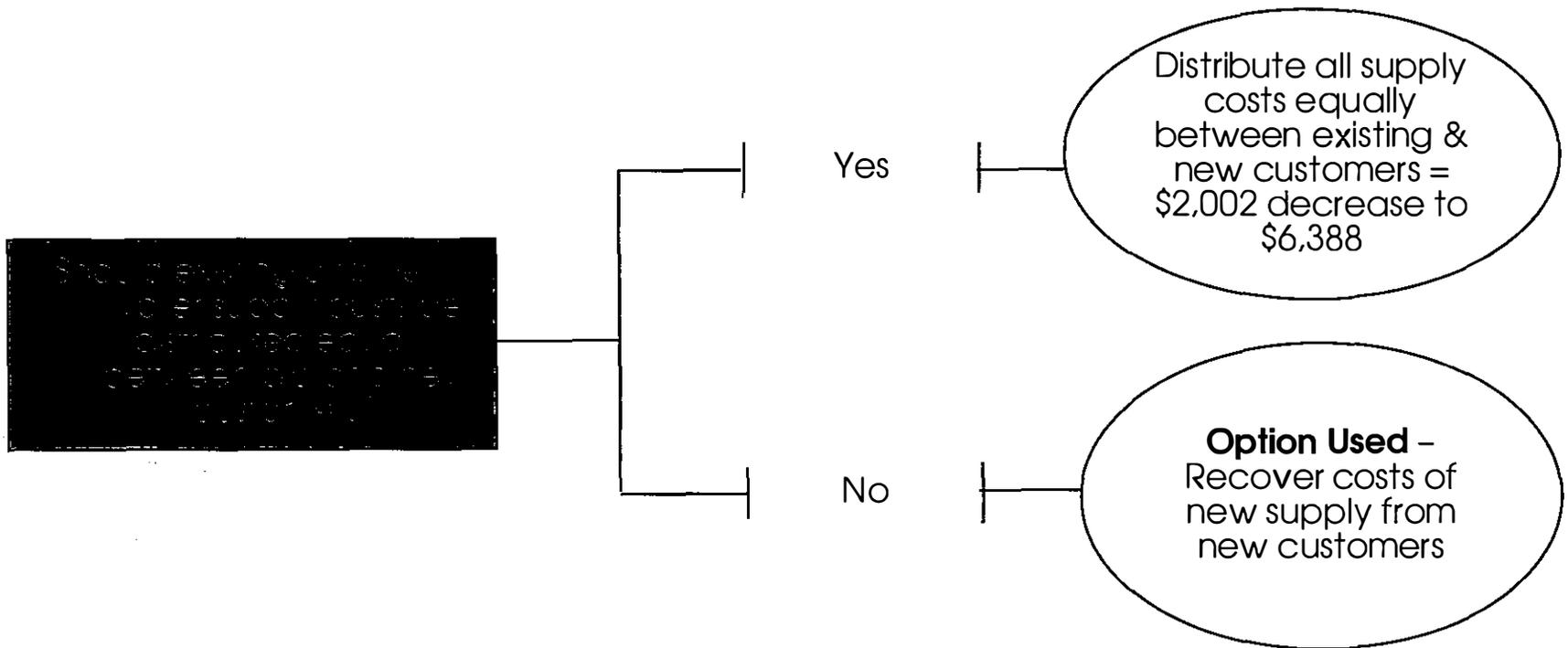
Policy Direction – Existing Cost Basis



Policy Direction – Future Cost Basis



Policy Direction – Water Supply Cost Basis



Recommendations

- FCS GROUP updated the system development charge under the methodology outlined in the presentation that supports either
 - ✓ \$8,390 per ERU charge using a 6 year CIP (2012)
 - ✓ \$8,250 per ERU charge using a 10 year CIP (2016)
- Policy decisions are required from Council in order to finalize analysis
- Policy decisions made may change the resulting charge

Alternative Water Supply Evaluation

- Four Water Supply Alternatives Evaluated
 - ✓ Tacoma Public Utilities (TPU) purchase of additional 2MGD (2nd block)
 - ✓ Tacoma Public Utilities purchase of additional 4MGD (3rd block)
 - ✓ Lakewood Water District (LWD) purchase of 2MGD
 - ✓ Lakewood Water District purchase of 4MGD

- Water demand projections supplied by RH2

Alternative Water Supply Evaluation – Annual Rate Impact

- Operating forecast developed for each alternative include;
 - ✓ Operating costs from 2007 – 2008 biennial budget
 - ✓ Existing water supply (wells & springs) plus Tacoma first block purchase
 - ✓ Additional costs include – capital costs related to each scenario
 - ✓ Additional water supply costs as appropriate – fixed charges, variable charges and SDC (only for TPU alternatives)
 - ✓ Additional debt service payments, if required.
- Key Changes –
 - ✓ TPU 2MGD – second block; Additional \$5.774 million in system development charge (SDC) paid via SDC revenue (over 10 years) and capital costs of \$989K
 - ✓ TPU 4MGD – third block; Additional \$11.548 million in SDC (over 10 years), capital costs of \$1.374 million
 - ✓ LWD 2MGD – annual per MGD fixed charge (\$182-\$186K) paid through rates, capital costs of \$14 million, new debt issue of \$7.3 million
 - ✓ LWD 4MGD – annual per MGD fixed charge (\$182-\$186K) paid through rates, capital costs of \$16.2 million, new debt issue of \$9.8 million



Alternative Water Supply Evaluation – Summary of Annual Rate Impacts

	2008	2009	2010	2011	2012	2015	2020
Base Case - Tacoma First Block							
ANNUAL RATE INCREASE	2.40%	3.81%	0.00%	0.00%	0.96%	1.92%	0.14%
CUMULATIVE RATE INCREASE	2.40%	6.30%	6.30%	6.30%	7.32%	13.09%	19.08%
Res Weighted Average Mo Bill (4mo summer, 8 winter)	\$30.58	\$31.75	\$31.75	\$31.75	\$32.06	\$33.78	\$35.57
Res Weighted Average Mo. Bill Cumulative Change	\$0.72	\$1.88	\$1.88	\$1.88	\$2.19	\$3.91	\$5.70
TPU 2MGD							
ANNUAL RATE INCREASE	2.40%	3.81%	0.00%	0.00%	1.11%	1.92%	0.14%
CUMULATIVE RATE INCREASE	2.40%	6.30%	6.30%	6.30%	7.48%	13.28%	19.27%
Res Weighted Average Mo Bill (4mo summer, 8 winter)	\$30.58	\$31.75	\$31.75	\$31.75	\$32.10	\$33.83	\$35.62
Res Weighted Average Mo. Bill Cumulative Change	\$0.72	\$1.88	\$1.88	\$1.88	\$2.23	\$3.97	\$5.75
TPU 4MGD							
ANNUAL RATE INCREASE	2.40%	3.81%	0.00%	0.00%	0.96%	1.92%	0.14%
CUMULATIVE RATE INCREASE	2.40%	6.30%	6.30%	6.30%	7.32%	13.09%	19.38%
Res Weighted Average Mo Bill (4mo summer, 8 winter)	\$30.58	\$31.75	\$31.75	\$31.75	\$32.06	\$33.78	\$35.66
Res Weighted Average Mo. Bill Cumulative Change	\$0.72	\$1.88	\$1.88	\$1.88	\$2.19	\$3.91	\$5.79
LWD 2MGD, TPU First Block							
ANNUAL RATE INCREASE	2.40%	9.89%	5.93%	0.00%	4.23%	0.25%	0.00%
CUMULATIVE RATE INCREASE	2.40%	12.53%	19.20%	19.20%	24.24%	26.79%	29.23%
Res Weighted Average Mo Bill (4mo summer, 8 winter)	\$30.58	\$33.61	\$35.59	\$35.59	\$37.09	\$37.85	\$38.58
Res Weighted Average Mo. Bill Cumulative Change	\$0.72	\$3.74	\$5.72	\$5.72	\$7.23	\$7.98	\$8.71
LWD 4 MGD, Supply to 2028							
ANNUAL RATE INCREASE	2.40%	15.96%	8.37%	0.00%	4.36%	0.03%	0.00%
CUMULATIVE RATE INCREASE	2.40%	18.74%	28.68%	28.68%	34.29%	35.25%	36.65%
Res Weighted Average Mo Bill (4mo summer, 8 winter)	\$30.58	\$35.46	\$38.43	\$38.43	\$40.11	\$40.39	\$40.81
Res Weighted Average Mo. Bill Cumulative Change	\$0.72	\$5.60	\$8.56	\$8.56	\$10.24	\$10.53	\$10.95

Alternative Water Supply Evaluation – SDC Evaluation

- The additional capital costs included for each alternative were used to update the SDC calculation – All TPU water costs are included in the SDC
- The six year CIP (2012) resulted in the following SDC charge under each alternative

	BASE	TPU 2MGD	TPU 4MGD	LWD 2MGD	LWD 4MGD
	Total	Total	Total	Total	Total
RESULTING CHARGE					
Existing Cost Basis	\$52,733,486	\$52,733,486	\$52,733,486	\$52,733,486	\$52,733,486
Future Cost Basis	24,229,200	24,229,200	24,229,200	24,229,200	24,229,200
TOTAL EXISTING + FUTURE COST BASIS	\$76,962,686	\$76,962,686	\$76,962,686	\$76,962,686	\$76,962,686
TOTAL CUSTOMER BASE	15,979	15,979	15,979	15,979	15,979
TOTAL CHARGE PER ERU	\$ 4,816				
WATER SUPPLY COMPONENT					
Total Water Supply Costs (Existing + Future)	18,753,849	25,516,849	31,676,349	32,783,849	34,944,849
CUSTOMER BASE					
Supply Capacity ERU (Incremental)	5,247	8,107	10,967	8,107	10,967
TOTAL WATER SUPPLY CHARGE PER ERU	\$ 3,574	\$ 3,148	\$ 2,888	\$ 4,044	\$ 3,186
TOTAL CHARGE PER ERU 2008	\$ 8,390	\$ 7,964	\$ 7,704	\$ 8,860	\$ 8,002

Alternative Water Supply Evaluation – SDC Evaluation

The six year CIP (2012) resulted in the following SDC charge under each alternative

	BASE	TPU 2MGD	TPU 4MGD	LWD 2MGD	LWD 4MGD
	Total	Total	Total	Total	Total
RESULTING CHARGE					
Existing Cost Basis	\$ 50,807,411	\$ 50,807,411	\$ 50,807,411	\$ 50,807,411	\$ 50,807,411
Future Cost Basis	32,053,100	32,053,100	32,053,100	32,053,100	32,053,100
TOTAL EXISTING + FUTURE COST BASIS	\$ 82,860,511	\$ 82,860,511	\$ 82,860,511	\$ 82,860,511	\$ 82,860,511
TOTAL CUSTOMER BASE	17,703	17,703	17,703	17,703	17,703
TOTAL CHARGE PER ERU	\$ 4,681	\$ 4,681	\$ 4,681	\$ 4,681	\$ 4,681
WATER SUPPLY COMPONENT					
Total Water Supply Costs (Existing + Future)	18,753,849	25,516,849	31,676,349	32,783,849	34,944,849
CUSTOMER BASE					
Supply Capacity ERU (Incremental)	5,247	8,107	10,967	8,107	10,967
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TOTAL CHARGE PER ERU 2008	\$ 8,255	\$ 7,829	\$ 7,569	\$ 8,725	\$ 7,867

City of Bonney Lake
 Mult-family vs. Single-family Evaluation

Criteria	Notes	MF	SF	MF/SF	Evaluation 1		Evaluation 2		Evaluation 3		Evaluation 4		Evaluation 5	
					Factor	Weighted	Factor	Weighted	Factor	Weighted	Factor	Weighted	Factor	Weighted
Fire Flow Suppression Requirement	1	2,500 gpm	1,000 gpm	250%	1	250%	0	0%	0.1	25%	0.1	25%	0	0%
Irrigation	2	Assume 0	PDD/ADD = 2.23	45%	1	45%	0	0%	0.1	4%	0.1	4%	0	0%
Plumbing Fixtures	3	19 fixture/unit	26 fixture/unit	74%	1	74%	2	147%	1	74%	5	368%	1	74%
Fife Usage (average)	4	144 gpd/unit	168 gpd/unit	86%	1	86%	1	86%	0.5	43%	1	86%	0	0%
Fife Usage (summer)	5	192 gpd/unit	246 gpd/unit	78%	1	78%	3	234%	1	78%	5	390%	1	78%
Occupancy	6	2.6 PPOHH	3.0 PPOHH	88%	1	88%	3	264%	1	88%	1	88%	1	88%
Bonney Lake (average consumption)	7	178 gpd/unit	232 gpd/unit	77%	1	77%	1	77%	0.5	38%	1	77%	0	0%
Average				100%	7	697%	10	808%	4.2	350%	13.2	1038%	3	240%
Weighted Average						100%		81%		83%		79%		80%

Notes:

- 1 City of Bonney Lake fire flow suppression requirement for Multi-family is 2,500 gpm for 45 minutes. (Table 4-14 CWSP)
 City of Bonney Lake fire flow suppression requirement for Multi-family is 2,500 gpm for 120 minutes. (Table 4-14 CWSP)
 This results in a MF volume of 300,000 gallons and a SF volume of 45,000 which is a MF/SF of 6.66
- 2 This assumes that there is no difference between winter MF usage and summer MF usage. This is an extremely conservative (in favor of MF) assumption and not supported by any data.
 Also, assumes that the system wide PDD/ADD factor of 2.23 applies directly to SF usage. (Table 4-13 CWSP)
 This is a conservative (in favor of MF) assumptions since system wide peaking factors include irrigation meters which skew the factor up relative to SF usage.
- 3 See Sheet 1 - Palermo fixture units and single family estimation
- 4 See Sheet 2
- 5 See Sheet 2
- 6 See Sheet 3 - OFM PPH occupancy stats from 2000 census
- 7 See Sheet 4 - based on 2004 & 2006 consumption records



**Palermo Fixture Units
Multi-family Units**

Building	Address	A unit	B unit	C unit	D unit	
1	7053 LINDSAY AVE SE	-	-	4	6	
2	7104 LINDSAY AVE SE	8	-	4	4	
3	1227 71ST ST SE	8	-	8	-	
4	1390 71ST ST SE	8	8	-	-	
5	1385 71ST ST SE	8	-	8	-	
6	7090 MARSHALL AVE SE	8	-	8	-	
7	7111 MARSHALL AVE SE	8	4	8	-	
8	7122 MARSHALL AVE SE	8	-	8	-	
9	7137 LINDSAY AVE SE	8	-	4	4	
10	7205 LINDSAY AVE SE	8	4	4	4	
11	7140 LINDSAY AVE SE	-	8	8	-	
12	1220 72ND ST SE	8	8	-	-	
13	1231 72ND ST SE	-	-	4	4	
14	1300 72ND ST SE	8	8	-	-	
15	7171 MARSHALL AVE SE	8	-	8	-	
16	7172 MARSHALL AVE SE	8	4	8	-	
17	7204 MARSHALL AVE SE	-	-	4	4	
18	1410 LAKE TAPPS DR SE	8	4	4	4	
19	1407 LAKE TAPPS DR SE	8	-	8	-	
20	1450 LAKE TAPPS DR SE	8	-	8	-	
21	1575 LAKE TAPPS DR SE	8	8	-	-	
22	1680 LAKE TAPPS DR SE	-	8	8	-	
23	1683 LAKE TAPPS DR SE	8	-	8	-	
Total Units		144	64	120	24	352
WSFU per unit		16.5	22.0	20.0	20.0	
Total WSFU		2376	1408	2400	480	6,664

WSFU per Unit	18.93
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A Unit WSFU*
 1 tub/shower 4.0
 1 clothes washer 4.0
 1 dishwasher 1.5
 1 lavatory 1.0
 1 kitchen sink 1.5
 1 watercloset (1.6 gpf) 2.5
Total WSFU per unit 16.5

B Unit WSFU*
 2 tub/shower 8.0
 1 clothes washer 4.0
 1 dishwasher 1.5
 2 lavatory 2.0
 1 kitchen sink 1.5
 2 water closet (1.6 gpf) 5.0
Total WSFU per unit 22.0

C Unit WSFU*
 1 tub/shower 4.0
 1 shower 2.0
 1 clothes washer 4.0
 1 dishwasher 1.5
 2 lavatory 2.0
 1 kitchen sink 1.5
 2 water closet (1.6 gpf) 5.0
Total WSFU per unit 20.0

D Unit WSFU*
 1 tub/shower 4.0
 1 shower 2.0
 1 clothes washer 4.0
 1 dishwasher 1.5
 2 lavatory 2.0
 1 kitchen sink 1.5
 2 water closet (1.6 gpf) 5.0
Total WSFU per unit 20.0

* per 2003 Uniform Plumbing Code

**Estimated
Single-family Units**

	Type 2 bath	Type 3 bath	
1 tub/shower 4.0	4	8	2 tub/shower 8.0
1 shower 2.0	2	2	1 shower 2.0
1 clothes washer 4.0	4	4	1 clothes washer 4.0
1 dishwasher 1.5	1.5	1.5	1 dishwasher 1.5
2 lavatory 2.0	2	3	3 lavatory 3.0
1 kitchen sink 1.5	1.5	1.5	1 kitchen sink 1.5
hose bid	2	2	hose bid
2 water closet (1.6 gpf) 5.0	5	7.5	3 water closet (1.6 gpf) 7.5
Total WSFU per unit 20.0	22	29.5	Total WSFU per unit 20.0
	average	25.75	

WSFU per household	25.75
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MF/SF	74%
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2006 & 2007 Consumption Data from the City of Fife

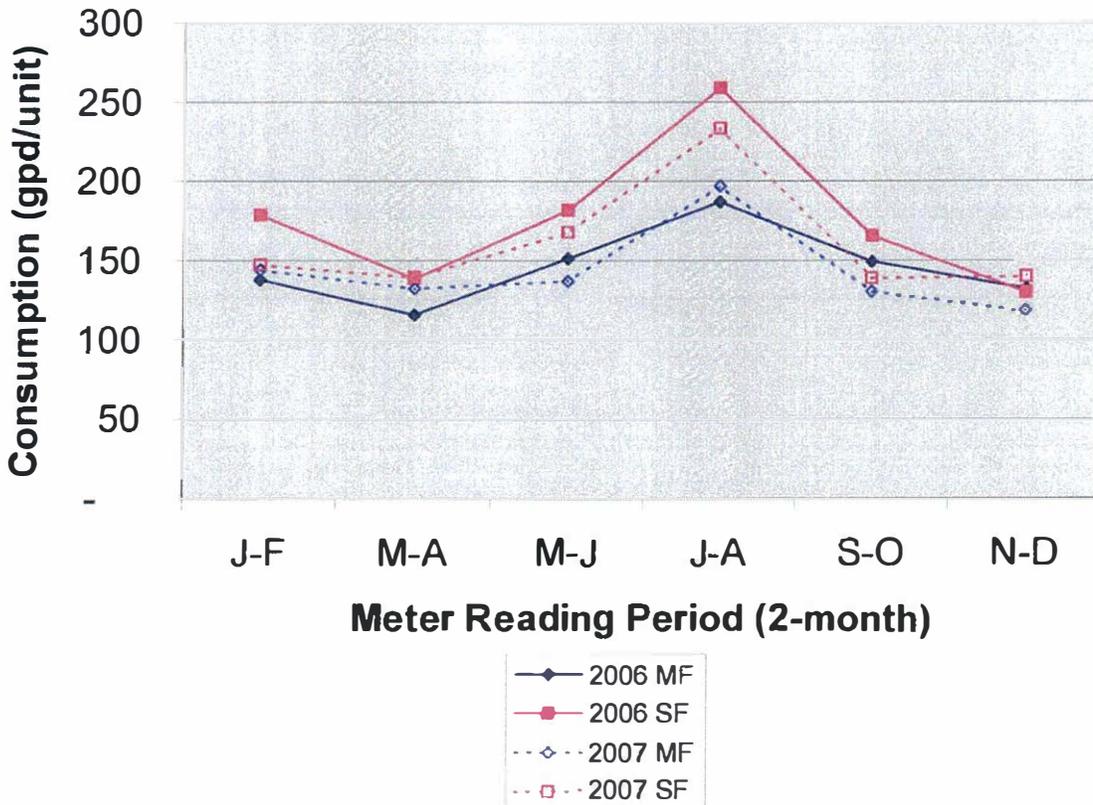
	J-F	M-A	M-J	J-A	S-O	N-D	Average
2006 MF	138	116	151	187	149	132	145
2006 SF	179	139	182	259	166	130	176
MF/SF	77%	84%	83%	72%	90%	102%	83%
2007 MF	144	132	137	197	130	118	143
2007 SF	147	139	168	233	139	140	161
MF/SF	98%	95%	82%	84%	94%	84%	89%

84.6% 82.9%

89.5% 88.9%

141	124	144	192	140	125	144
163	139	175	246	152	135	168
86%	89%	82%	78%	92%	93%	87%

MF and SF Consumption Comparison



Source:
 J:\Data\BON\507-036\Population
 OFM PPH-occupancy stats from 2000 census.xls

County FIPS	City Fips	Name	PPOH							
			Total	1-Unit	2-Unit	3/4 Unit	5+Unit	2+Unit	MH	Specials
53053		Unincorporated	2,811,846	2,922,171	2,501,223	2,562,950	2,313,371	2,404,050	2,620,714	1,835,214
53053	07170	Bonney Lake	2,964,483	3,086,310	3,071,429	3,742,857	2,376,812	2,888,364	2,253,363	#DIV/0!
		Average		3,004,24				2,645,207		
								82%		
								94%		
								88%		

Table 2. Office of Financial Management Official Base 2000 Population and Housing by Structure Type and Group Quarters Used for the Development of Population Estimates, Revised August 2004

1. Sample (SF3) housing and population data by type of structure are adjusted to match total housing and population counts in (SF1.)
2. Includes Bureau of the Census corrections to the 2000 census household and group quarters populations after the initial release. (Census corrections-PDF)
3. Includes annexations to cities and towns January 2, 2000 through April 1, 2000.
4. Special April 1, 2000 city censuses replace the federal figures for selected cities.
5. **5. Bold text identifies cities and counties with census corrections.**

Consumption Summary Data from City
Also, Table 4-1 and 4-2 from CWSP

2006						
Usage Classification	Type	Meter Reading	Usage	Connections	Usage/Connection	253 gpd/ERU* ERU's
Commercial/Public	1	80,714 CCF	60,374,072 gals/yr	148	1,118 gpd/con	655
Residential - Inside City	2	690,346 CCF	516,378,441 gals/yr	5232	270 gpd/con	5,605
Residential - Outside City	3	633,614 CCF	473,943,272 gals/yr	5497	236 gpd/con	5,144
Multi-Family - Inside City	4	22,850 CCF	17,091,800 gals/yr	99	473 gpd/con	186
Multi-Family - Outside City	5	49,515 CCF	37,037,220 gals/yr	272	373 gpd/con	402
Irrigation/Parks	6	142,884 CCF	106,877,232 gals/yr	109	2,686 gpd/con	1,160
Schools	7	22,087 CCF	16,506,116 gals/yr	16	2,826 gpd/con	179
		1,641,990 CCF	1,228,208,153 gals/yr	11,373	298 gpd/con	13,331
Unaccounted -for Water	6.2%	1,751,223 CCF				

2005						
Usage Classification	Type	Meter Reading	Usage	Connections	Usage/Connection	211 gpd/ERU* ERU's
Commercial/Public	1	83,713 CCF	62,617,324 gals/yr	141	1,217 gpd/con	680
Residential - Inside City	2	508,835 CCF	380,608,580 gals/yr	5002	208 gpd/con	4,131
Residential - Outside City	3	555,337 CCF	415,392,076 gals/yr	5314	214 gpd/con	4,509
Multi-Family - Inside City	4	19,995 CCF	14,956,260 gals/yr	92	445 gpd/con	162
Multi-Family - Outside City	5	40,082 CCF	29,981,338 gals/yr	242	339 gpd/con	325
Irrigation/Parks	6	97,713 CCF	73,089,324 gals/yr	97	2,064 gpd/con	793
Schools	7	18,869 CCF	12,618,012 gals/yr	16	2,161 gpd/con	137
		1,322,544 CCF	989,262,912 gals/yr	10,904	249 gpd/con	10,737
Unaccounted -for Water	14.4%	1,545,283 CCF				

2004						
Usage Classification	Type	Meter Reading	Usage	Connections	Usage/Connection	214 gpd/ERU* ERU's
Commercial/Public	1	79,035 CCF	59,118,180 gals/yr	139	1,165 gpd/con	642
Residential - Inside City	2	451,716 CCF	337,883,568 gals/yr	4708	197 gpd/con	3,667
Residential - Outside City	3	564,096 CCF	421,943,808 gals/yr	5022	230 gpd/con	4,580
Multi-Family - Inside City	4	20,722 CCF	15,500,058 gals/yr	80	531 gpd/con	168
Multi-Family - Outside City	5	35,553 CCF	26,593,644 gals/yr	210	347 gpd/con	289
Irrigation/Parks	6	82,793 CCF	61,929,164 gals/yr	89	1,906 gpd/con	672
Schools	7	22,279 CCF	16,664,692 gals/yr	15	3,044 gpd/con	181
		1,256,194 CCF	939,633,112 gals/yr	10,283	251 gpd/con	10,199
Unaccounted -for Water	18.4%	1,538,539 CCF				

2003						
Usage Classification	Type	Meter Reading	Usage	Connections	Usage/Connection	252 gpd/ERU* ERU's
Commercial/Public	1	85,019 CCF	63,594,212 gals/yr	148	1,177 gpd/con	690
Residential - Inside City	2	548,388 CCF	410,194,224 gals/yr	4593	245 gpd/con	4,452
Residential - Outside City	3	585,794 CCF	438,173,912 gals/yr	4615	260 gpd/con	4,758
Multi-Family - Inside City	4	17,488 CCF	13,081,024 gals/yr	53	676 gpd/con	142
Multi-Family - Outside City	5	39,337 CCF	29,424,076 gals/yr	167	483 gpd/con	319
Irrigation/Parks	6	49,115 CCF	36,738,020 gals/yr	81	1,243 gpd/con	399
Schools	7	32,306 CCF	24,164,888 gals/yr	14	4,729 gpd/con	262
		1,357,447 CCF	1,015,370,356 gals/yr	9,671	288 gpd/con	11,021
Unaccounted -for Water	9.0%	1,491,431 CCF				

Multi-Family						
Consumption	Accounts (yr end)	Accounts (mid end)	active units	gpd/unit	MF/SF	
2003 42,505,100 gals/yr	220					
2004 42,093,700 gals/yr	290	255	573	201	92%	2.25
2005 44,937,598 gals/yr	334	312	742	166	76%	2.38
2006 54,129,020 gals/yr	371	352.5	884	168	65%	2.51
				178	78%	

Single-Family					
Consumption	Accounts (yr end)	Accounts (mid end)	units	gpd/unit	1
2003 848,368,136 gals/yr	9,208		0		
2004 759,827,376 gals/yr	9,730	9,469	9,489	220	
2005 796,000,656 gals/yr	10,316	10,023	10,023	218	
2006 990,321,713 gals/yr	10,729	10,523	10,523	258	
				232	

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