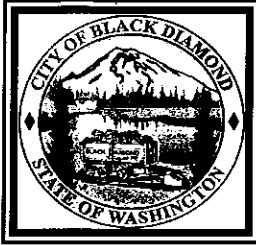


CITY OF BLACK DIAMOND
June 6, 2013 Workstudy Agenda
25510 Lawson St., Black Diamond, Washington

Workstudies are meetings for Council to review upcoming and pertinent business of the City. Public testimony is only accepted at the discretion of the Council.

5:30 P.M. – CALL TO ORDER, ROLL CALL

- 1.) Utilities Rate Study – Mr. Emery, Peninsula Financial Consulting
- 2) Adjournment



CITY OF BLACK DIAMOND

Interoffice Memorandum

TO: MAYOR OLNESS, CITY COUNCIL
FROM: MARK HOPPEN, CITY ADMINISTRATOR *MH*
SUBJECT: UTILITY RATES WORKSTUDY
DATE: MAY 28, 2013

During the 2013 budget development process last year, Council was briefed on the potential of a water utility fund rate increase. At that time, the previous City Administrator proposed that any increases be delayed until a future rate study was conducted to document the possible amount and need for the increases. He also noted that a rate study should review the water, sewer and stormwater funds.

On April 4, 2013, Council approved Resolution No. 13-864 authorizing Mr. Ashley M. Emery, owner of Peninsula Financial Consulting, to conduct a rate for the water, sewer and stormwater funds.

Mr. Emery has developed computer models outlining the need for a water rate increase and reviewing the adequacy of the current sewer and stormwater rates.

At the June 6, 2013, Workstudy meeting, Mr. Emery will help Council review interactive enterprise funds rate scenarios for the next five years. Each utility fund is required to set rates needed to cover its own maintenance and operating costs, debt service requirements, as well as capital improvements.

Mr. Emery's computer models will allow Council to quickly see how different rate increases, timing of debt or capital improvements, or other scenarios can affect rates. Finance and Public Works staff will also be available to answer questions.

In addition, I have included with this memo the last rate study prepared for the City by PacWest Engineering in 2008. In that study they recommended a three year rate increase which would have ended in 2011.

City of Black Diamond Water User Rates Study

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BACKGROUND & PURPOSE

PacWest Engineering has been retained by the City to complete a water rate study and recommend updated rates for adoption by the City Council. The City is currently operating under a development moratorium which is anticipated to be lifted in late 2008. Significant growth is anticipated to occur within the City following the removal of the moratorium. The City desires to adopt updated water rates to ensure that the City's water rates adequately cover existing and projected costs associated with operating a water utility and providing adequate water service to its customers.

The City's water rates are comprised of two components: 1) User rates based on monthly meter rates as well as charges based on actual water consumption; and 2) Connection charges (also known as capital facility charges) which fund system improvements required as a result of new growth. This report analyzes the City's Water User Rates. An analysis of the City's Water Connection Charges is covered in a separate report.

ANALYSIS METHODOLOGY

Water rates have been analyzed for a three year period from 2009 to 2011. Since there are many assumptions incorporated into these rates based on projections of new development, it is recommended that a rate study be conducted in the future for years beyond this planning period.

A water billing consumption history for the period of June 2006 through May 2007 was utilized in developing user rate revenue assumptions. It is assumed that this time period is representative of the City of Black Diamond's water use and does not include lower than average or higher than average use due to irregular weather patterns or use consumptions.



An annual population growth rate of 2.85% has been utilized for growth projections within the existing developed City for the period following the removal of the moratorium. Additionally, the addition of new customers has been projected based on conversations with Yarrow Bay due to the fact that significant development is anticipated to occur within the City of Black Diamond during the period of analysis covered by this Water Rate Study.

Growth projections for new development are based on conversations with Yarrow Bay regarding potential build rates for development that is anticipated to occur within the City of Black Diamond. A two-year delay in projected growth has been included to provide for a more realistic assumption in projected revenues. Projections for growth have assumed a water consumption rate of 230 gallons per day per single family residence, as this is the established amount calculated for one ERU (equivalent residential unit) in the agreements between developers and the City of Black Diamond. It is assumed that connections to the system will be made in one calendar year and user rates will be charged for the new ERU's in the following year. No credit for partial years has been assumed.

ERU Type	2008	2009	2010	2011
ERU's (with connection charge credit)	0	0	0	0
ERU's (without connection charge credit)	0	33	34	35
TOTAL NEW ERU'S	0	33	34	35

WATER FUNDS STRUCTURE & RESERVE RECOMMENDATIONS

The City of Black Diamond currently operates with three water-related funds, as follows: Fund 401 – Water Fund; Fund 402 – Water Supply & Facility Fund; and Fund 404 – Water Reserve Fund.

It is recommended that the City restructure their water funds into the following three funds: Operating Fund; Capital Fund; and Developer Contribution Fund. The Operating and Capital funds should maintain a reserve within the fund rather than as a separate fund.

Operating Fund: The Operating Fund shall be funded by monies collected for Water User Rates and shall fund the City's Water Operations and Maintenance Program. The State requires that the City maintain a minimum reserve equivalent to 1/8 of its annual operating budget which is the equivalent of 1.5 months reserve. It is recommended that the City maintain an operating reserve that is equivalent to three months. The City currently has sufficient cash on hand to meet this reserve recommendation. This reserve helps balance cash flows due to lower revenues during winter months.

Capital Fund: The Capital fund shall be funded primarily by Water Connection Charges and shall fund expenditures related to the City's Water Capital Improvements Program. Additional funding sources such as grants and loans may supplement connection charges. Also, transfers from the Operating fund should occur to support those capital projects deemed to benefit the existing rate base.



The State requires an Emergency reserve that is equivalent to the City's most vulnerable water system facility component. The City of Black Diamond has an insurance policy which covers the transmission main crossing the Green River (the most vulnerable component of the system), which is sufficient to meet the emergency reserve requirement. In addition to the emergency reserve, the Capital fund should also maintain a reserve based on any outstanding debt service. It is recommended that a capital reserve in the amount of 50% of the annual debt service requirements be maintained in the capital fund.

Developer Contribution Fund: The City currently maintains a developer contribution fund (Fund 402 – Water Supply & Facility Fund). It is recommended that this fund be utilized to receive developer contributions for capital projects, but that the contributed funds be transferred to the capital fund as needed in support of the capital project for which the funds were contributed.

CURRENT RATES

The City's current rates are a flat structure rate and do not promote conservation by the customers. The City of Black Diamond's current user rates are as shown below:

Meter Size	Meter Rate	Meter Rate per Additional Unit	Commodity Charge per 100 CF
5/8" or 3/4"	\$15.55	\$13.00	\$1.58
1"	\$19.65	\$13.00	\$1.58
1 1/2"	\$21.20	\$13.00	\$1.58
2"	\$37.00	\$13.00	\$1.58
3"	\$44.88	\$13.00	\$1.58
4"	\$84.30	\$13.00	\$1.58

BUDGET REQUIREMENTS

The following are the projected budget requirements for a three year period. They have been developed based on the City's draft 2009 budget, which includes forecasts for 2010 and 2011. It should be noted that there are significant increases in the projected Operations and Maintenance budget over this time period. A portion of these increases is due to an additional staff person that is projected to be assigned half-time to the water system starting in 2011.

The City of Black Diamond is estimated to have approximately \$1,000,000 in reserve funds between the three existing water funds at the beginning of 2009. It is recommended that the City assign \$81,000 of the existing reserves as the three-month Operations and Maintenance reserve. Unless specified otherwise in the description of the alternatives, the remaining balance of the existing reserve funds are recommended to be placed in the Capital fund to augment the City's water connection charges in paying off debt and funding

capital projects. The revenue generated by these water user rates is intended to fund system operational costs only.

	2009	2010	2011
Operations, Maintenance, & Administration	\$324,000	\$344,000	\$404,000
Project costs / Transfer to Capital Fund (improve existing deficiencies)	\$0*	\$0*	\$0*
O&M Reserve	\$0 **	\$5,000	\$15,000
Debt Service	\$243,000	\$241,000	\$239,000
Yarrow Bay PWD Reimbursement	-\$36,000***	-\$38,000***	-\$40,000***
TOTAL – O&M FUND REQ.	\$567,000	\$590,000	\$658,000
* Proposed project improvements have been included in the City's Water System Plan (draft). Costs have not been included in the water rate budget requirements as it is recommended that these projects improvements be delayed and be completed as funds are available.			
** The initial O&M reserve balance of \$81,000 recommended to be funded by existing reserve funds and preserved. Amounts shown reflect the necessary annual increase.			
*** The reimbursement for Public Works Director salary expenses is included for informational purposes only. This credit has not been included in the water user rate establishment as it is a temporary credit that will soon expire. It is recommended that these funds be utilized to fund capital projects to address existing deficiencies.			

USER RATES ANALYSIS

The Municipal Water Law was passed by the Washington State Legislature in 2003 and included language that all municipal water suppliers must use water more efficiently in exchange for water right certainty and flexibility to help them meet future demands. The City of Black Diamond is required to develop and monitor a Water Use Efficiency (WUE) program. One component of the City's Water Use Efficiency Program is to evaluate rate structures that promote water savings.

Several alternative water rates were evaluated for the City of Black Diamond. Details regarding each of the alternatives considered, as well as a summary of projected revenue for each alternative are listed on the following pages:



Alternative "A" – Debt Service (Fixed Rates & Commodity Rates increase at same percent – Constant increase over 3 years):

Alternative "A" evaluated a 27% increase in rates for each of the three years. The increase was applied to all components of the user rate calculations (meter rate, meter rate per additional unit, and commodity charges). Alternative "A" meets the City's Operation and Maintenance budget needs and also addresses debt service requirements. It is a "rate predictable" alternative. Alternative "A" does not encourage conservation by the customers.

Meter Size	Meter Rate	Meter Rate per Additional Unit	Commodity Charge per 100 CF
5/8" or 3/4"	\$19.75	\$16.51	\$2.01
1"	\$24.96	\$16.51	\$2.01
1 1/2"	\$26.92	\$16.51	\$2.01
2"	\$46.99	\$16.51	\$2.01
3"	\$57.00	\$16.51	\$2.01
4"	\$107.06	\$16.51	\$2.01
6"	\$276.86	\$16.51	\$2.01

Year	% Increase (Meter Rates)	% Increase (Commodity Charge)
2008 to 2009	27%	27%
2009 to 2010	27%	27%
2010 to 2011	27%	27%

	2009	2010	2011	2009 - 2011
Anticipated Revenue	\$354,000	\$366,000	\$379,000	\$1,099,000

	2009	2010	2011	2009 - 2011
Anticipated Revenue	\$450,000	\$590,000	\$775,000	\$1,815,000
Budget Requirements	\$567,000	\$590,000	\$658,000	\$1,815,000
Difference	-\$117,000	\$0	\$117,000	\$0



Alternative "B" – Conservation Rates + Debt Service (Fixed Rates & Commodity Rates increase at same percent – Constant increase over three years):

Alternative "B" evaluated a tiered commodity rate system to encourage conservation efforts. Base meter rates and rates for additional units increased at the same percentage (23%) as the first tier for commodity charges (0-600 CF). Meter rates and commodity charge rates continue to increase at this same rate for the subsequent two years. Subsequent tiers increase at a 15% increase per tier in order to generate sufficient revenue to fund current debt service payments. It is assumed that existing reserve funds would be utilize to fund debt service costs initially and these monies would be repaid as rate revenues were received.

Meter Size	Meter Rate	Meter Rate per Additional Unit	Commodity Charge per 100 CF (0-600 CF)	Commodity Charge per 100 CF (601 – 1,200 CF)	Commodity Charge per 100 CF (1,200+ CF)
5/8" or 3/4"	\$19.13	\$15.99	\$1.94	\$2.23	\$2.57
1"	\$24.17	\$15.99	\$1.94	\$2.23	\$2.57
1 1/2"	\$26.08	\$15.99	\$1.94	\$2.23	\$2.57
2"	\$45.51	\$15.99	\$1.94	\$2.23	\$2.57
3"	\$55.20	\$15.99	\$1.94	\$2.23	\$2.57
4"	\$103.69	\$15.99	\$1.94	\$2.23	\$2.57
6"	\$268.14	\$15.99	\$1.94	\$2.23	\$2.57

Year	% Increase (Meter Rates)	% Increase (Commodity Charge – Tier 1)
2008 to 2009	23%	23%
2009 to 2010	23%	23%
2010 to 2011	23%	23%

Year	% Increase (Tier 1 to Tier 2)	% Increase (Tier 2 to Tier 3)
2009	15%	15%
2010	15%	15%
2011	15%	15%

	2009	2010	2011	2009 - 2011
Anticipated Revenue	\$467,000	\$594,000	\$754,000	\$1,815,000
Budget Requirements	\$567,000	\$590,000	\$658,000	\$1,815,000
Difference	-\$100,000	\$4,000	\$96,000	\$0



Alternative "C" – Conservation Rates + Debt Service (Fixed Rates & Commodity Rates increase at same percent – Constant Increase over three years – Debt service partially subsidized by existing fund balance):

Alternative "C" is similar in structure to Alternative "B", with the exception that \$243,000 of the debt service is assumed to be funded by the existing fund balance over the three year period. This results in an annual increase of 15% in order to generate sufficient funds. Any additional monies, such as revenues for growth beyond that which is assumed, or the funding of the Public Works Director could also be used to help fund the debt service.

Meter Size	Meter Rate	Meter Rate per Additional Unit	Commodity Charge per 100 CF (0-600 CF)	Commodity Charge per 100 CF (601 – 1,200 CF)	Commodity Charge per 100 CF (1,200+ CF)
5/8" or 3/4"	\$17.88	\$14.95	\$1.82	\$2.09	\$2.40
1"	\$22.60	\$14.95	\$1.82	\$2.09	\$2.40
1 1/2"	\$24.38	\$14.95	\$1.82	\$2.09	\$2.40
2"	\$42.55	\$14.95	\$1.82	\$2.09	\$2.40
3"	\$51.61	\$14.95	\$1.82	\$2.09	\$2.40
4"	\$96.95	\$14.95	\$1.82	\$2.09	\$2.40
6"	\$250.70	\$14.95	\$1.82	\$2.09	\$2.40

Year	% Increase (Meter Rates)	% Increase (Commodity Charge – Tier 1)
2008 to 2009	15%	15%
2009 to 2010	15%	15%
2010 to 2011	15%	15%

Year	% Increase (Tier 1 to Tier 2)	% Increase (Tier 2 to Tier 3)
2009	15%	15%
2010	15%	15%
2011	15%	15%

	2009	2010	2011	2009 - 2011
Anticipated Revenue	\$437,000	\$519,000	\$616,000	\$1,572,000
Budget Requirements	\$486,000	\$509,000	\$577,000	\$1,572,000
Difference	-\$49,000	\$10,000	\$39,000	\$0



Comparison of Alternatives:

	2009	2010	2011	2009-2011
"A"	\$450,000	\$590,000	\$775,000	\$1,815,000
"B"	\$467,000	\$594,000	\$754,000	\$1,815,000
"C"	\$437,000	\$519,000	\$616,000	\$1,572,000

Alternative	Meet O&M Budget Needs	Meet Exist. Deficiency Budget Needs	Max of 10% Increase +/-	Funds Debt Service	Encourage Conservation
"A"	Yes	No	No	Yes	No
"B"	Yes	No	No	Yes	Yes
"C"	Yes	No	No	Yes	Yes

USER RATE RECOMMENDATIONS

It is recommended that the City of Black Diamond adopt updated water user rates as outlined in Alternative "C" above. Alternative "C" represents a 15% annual increase across the board (meter rates, meter rates per additional units, and commodity charges).

Alternative "C" will provide sufficient revenue from user rates to support the City's project Operations and Maintenance budget needs, as well as to pay off debt. This alternative also promotes conservation with a 15% increase between tiers on the commodity charges.

Alternative "C" does not address funding of projects to address existing system deficiencies. However, none of the alternatives considered generate sufficient revenue. Revenues collected in excess of budget expenses can be dedicated to capital projects and may allow for an opportunity to begin early design or construction of some projects. The City has not raised their rates in quite some time and a larger increase would be required in order to fully fund all system needs. However, due to the financial effects on customers, it is recommended that the City push back some of these improvement projects to later years or utilize reserve funds and adopt these lower rates and continue to adjust the rates as necessary in order to eventually have the water user rates be in line with the budgetary needs.

The revenue assumptions included in this study are conservative in that they assume only residential users with a single meter. In reality, there is a mix of user types which will result in increased revenues due to higher meter rates for larger meter sizes, as well as the additional revenues associated with meter rates for additional units. These conservative assumptions help to offset any reductions in anticipated revenues due to a reduction in water use. A tiered water rate system which encourages conservation could result in a decrease of water use typically in the range of two to five percent.



Meter Size	Meter Rate	Meter Rate per Additional Unit	Commodity Charge per 100 CF (0-600 CF)	Commodity Charge per 100 CF (601 – 1,200 CF)	Commodity Charge per 100 CF (1,200+ CF)
5/8" or 3/4"	\$17.88	\$14.95	\$1.82	\$2.09	\$2.40
1"	\$22.60	\$14.95	\$1.82	\$2.09	\$2.40
1 1/2"	\$24.38	\$14.95	\$1.82	\$2.09	\$2.40
2"	\$42.55	\$14.95	\$1.82	\$2.09	\$2.40
3"	\$51.61	\$14.95	\$1.82	\$2.09	\$2.40
4"	\$96.95	\$14.95	\$1.82	\$2.09	\$2.40
6"	\$250.70	\$14.95	\$1.82	\$2.09	\$2.40

BUDGET ANALYSIS

The water user rates that have been recommended for the City of Black Diamond are adequate to meet anticipated budget expenses as summarized in the following table. It should be noted that the revenue predictions are a conservative estimate and assume that all future growth will be single family residential growth. Any multi-family or commercial growth will result in additional revenue generated. It is recommended that the rates be re-evaluated in the future should actual growth vary greatly from these assumptions.

Alternative	2009	2010	2011	2009-2011
Operations, Maintenance, & Administration Expenses	\$324,000	\$344,000	\$404,000	\$1,072,000
O&M Reserve funded by Rates*	\$0	\$5,000	\$15,000	\$20,000
Debt Service	\$243,000	\$241,000	\$239,000	\$723,000
Subtotal Expenses	\$567,000	\$590,000	\$658,000	\$1,815,000
Anticipated Revenue	\$437,000	\$519,000	\$616,000	\$1,572,000
Debt Service Revenue funded by Existing Fund Balance	\$130,000	\$71,000	\$42,000	\$243,000
Revenue less Expenses	\$0	\$0	\$0	\$0
*Initial balance of \$81,000 recommended to be funded by existing reserve funds and preserved. The amounts shown reflect the necessary annual increase.				



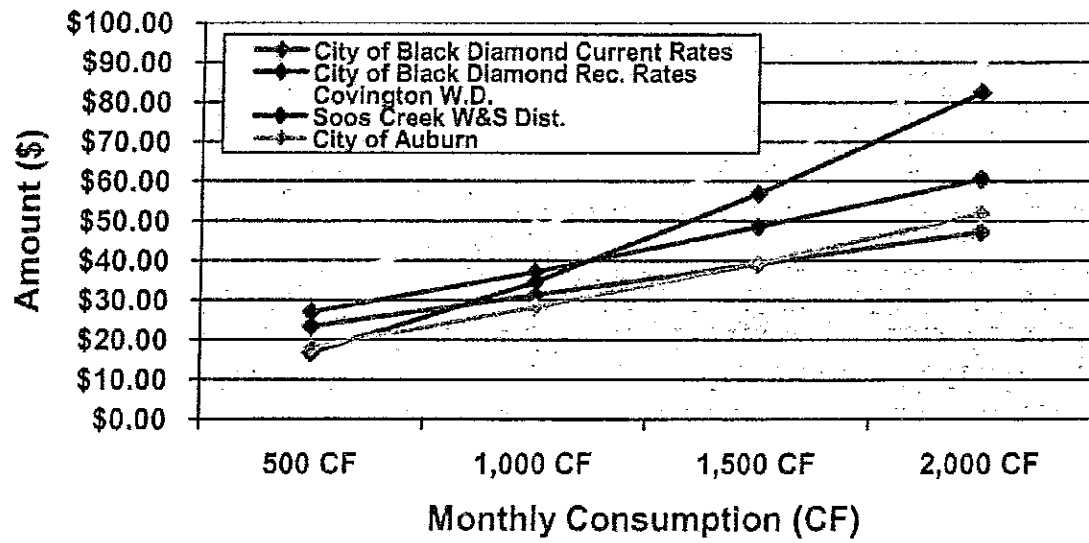
It is recommended that the City dedicate any excess funds that may be collected from water user rates towards capital project expenses that address existing system deficiencies and are not typically funded by connection charges. Additionally, it is recommended that the temporary Yarrow Bay Reimbursement of the Public Works Director salary be dedicated towards capital project expenses as well. Should a lower amount of revenue be collected than anticipated, these excess funding will also be available to fund Operations and Maintenance expenses if necessary. These funds are able to cover any fluctuations in rate collections.

JURISDICTIONAL COMPARISON OF USER RATES

The water user rates that have been recommended for the City of Black Diamond are consistent with rates that have been adopted by nearby jurisdictions of similar size. The City of Black Diamond is in the middle of the range for low consumption users for both the current user rates and the recommended user rates. With the current rates, the City of Black Diamond is at the bottom of the range for high users. With the recommended rates, the City will be in the middle of the range for high users, while still significantly below Covington Water District and Soos Creek Water and Sewer District. The following table provides a comparison of monthly water user rates between a typical single family residential user for various levels of consumption.

	City of Black Diamond (Current Rates)	City of Black Diamond (Rec. Rates)	Covington Water (Summer Rates)	Soos Creek (Summer Rates)	City of Auburn
Meter Base Rate	\$15.55	\$17.88	\$25.00	\$8.85	\$9.08
Consump. Rate for 500 CF	\$1.58	\$1.82	\$2.15	\$1.58	\$1.80
Consump. Rate for 1,000 CF	\$1.58	\$2.09	\$3.15	\$3.56	\$2.21
Consump. Rate for 1,500 CF	\$1.58	\$2.40	\$3.15	\$4.46	\$2.21
Consump. Rate for 2,000 CF	\$1.58	\$2.40	\$5.45	\$5.10	\$2.50
500 CF	\$23.45	\$26.98	\$35.75	\$16.75	\$18.08
1,000 CF	\$31.35	\$37.16	\$48.50	\$34.55	\$28.31
1,500 CF	\$39.25	\$48.54	\$64.25	\$56.85	\$39.36
2,000 CF	\$47.15	\$60.54	\$89.20	\$82.35	\$51.86





Current Rates vs. Proposed Rates

These sample bills assume that all customers are residential users with a single meter unless otherwise noted. These sample bills are based on consumption data for July 2008.

	Number of Customers	Total Monthly Consumption	Average Consumption
0-1,000 CF	496	237,338	479
,001-1,500 CF	150	182,512	1,217
1,500+ CF	199	529,795	2,662

	Monthly Bill with Current Rates	Monthly Bill with Proposed Rates	Increase
Average "Low Consumer" (479 CF)	\$23.17	\$26.60	\$3.43
Average "Medium Consumer" (1,217 CF)	\$34.78	\$41.75	\$6.97
Average "High Consumer" (2,662 CF)	\$57.61	\$76.43	\$18.82

	Monthly Bill with Current Rates	Monthly Bill with Proposed Rates	Increase
Single Family Residential	\$0.00	\$13.00	\$13.00
Duplex	\$0.00	\$26.00	\$26.00
Triplex	\$0.00	\$39.00	\$39.00
Commercial (10,000 SF)	\$0.00	\$52.00	\$52.00

Commercial (\$13.00 / ERU); 1 ERU = 2,500 SF impervious surface