CITY OF KELOWNA

MEMORANDUM

File:	1826-02 Water Rates & 5600-08 Water Smart & Bylaw 9554
Date:	January 15th 2007
To:	City Manager
From:	Water Drainage Manager
Subject:	**2007 Water Rates/ Water Smart Program Delivery**

Recommendation:

THAT Council approves an overall water revenue increase of 6% to meet all water utility program requirements and to ensure water use reduction targets adopted by Council are achieved;

AND THAT Council adopt the attached Water Utility Sustainability Action Plan to set a framework to achieve these water reduction objectives;

AND THAT Council authorize staff to enter into a 5 year contract with H2Okanagen, at an annual cost of $198,648, to administer the City's Water Smart Program that will deliver programs to ensure the Water Sustainability Action Plan objectives are met;

AND THAT Council approves the 2007 water rates to be effective with the first billing cycle in April, 2007;

AND FURTHER THAT the necessary bylaw be advanced for reading consideration by Council.

Background:

In 2006, staff brought forward a report to Council and received approval to develop an action plan that would reduce water consumption within the utility service area by an additional 15% over the next 5 years. Since the utility's conservation program began in 1998 a 20% reduction in overall water consumption has been achieved as a result of metering, extensive public education, social marketing and modifications to the utility water rate structure.

The importance of water conservation and the need for further reductions in water use continues to be emphasized by Council and has also been identified as one of the highest community priorities with respect to community sustainability. Customer feedback also confirms that the City's Water Smart Program currently being delivered by H2Okanagan continues to provide innovative approaches to reducing water use within the community and that this program strikes a good balance between customer education and technical solutions to assist in reducing water use. Prior to awarding the previous 2 year contract to H2Okanagan the utility had gone out for proposals and determined that there were no other companies that could provide the level of service required and the community interaction that H2Okanagan is able to provide. A 5 year contract award to H2Okanagan is therefore being proposed to ensure a consistent approach with the 5 year water reduction targets adopted by Council. The current water utility base budget has sufficient funds to cover the annual costs of $198,648, incurred by H2Okanagan for each of the next 5 years. The program continues to be well suited to meeting the water reduction objectives adopted by Council and our customers have also confirmed that this "social marketing" program approach must also be balanced with an effective user pay rate structure to achieve the desired results.

Water reduction goals and ensuring financial viability of the utility will be achieved by balancing the value of water through rate revisions, ensuring actual cost of service to the utility is achieved wherever possible and by providing a combination of technical and social marketing solutions through the Water Smart Program. Responsible users and those that take advantage of programs and services won't be penalized for their efforts while at the same time high users will experience higher rates through the rate block structure to create incentives for them to reduce consumption. This approach will continue to reduce peak demand on our system and will also allow the utility to potentially reduce design standards for water system sizing and defer major capital expenditure for system upgrades that are ultimately driven by this system demand.

In order to meet these water reduction targets and to ensure financial commitments for the utility are met recognizing the significant increases in capital costs for new works, an overall revenue increase of 6% is required for 2007. As part of this review, a detailed cost of service analysis for each customer class was completed to determine any inequities in rates and charges between classes. The cost of service analysis identified the need to reallocate water service costs among the customer classes. For example, the residential class is paying more than its proportionate share of costs, while all other classes are paying less than their proportionate share of cost of service. Historically, the City has not set the rates for irrigation and agricultural customers in proportion to the high peak demand these customers place on the water system. As a result these customers are paying significantly less than true cost of service. The table found in Schedule A (attached) illustrates the cost of service in relation to existing rate revenue and presents the cost of service shifts required among the customer classes to achieve a 6% increase that is recommended.

Monthly Service Charges

A slight increase in the monthly service charge for single family residential customers and a decrease in the charge for multiple family and commercial customers occurs.

Volume Charges

Residential - Reduce the current over-recovery of costs from the residential class over time, the parcel tax is phased out and other customer classes are phase-in to cost of service. It is important to note that individual customers will be impacted differently by the change in the rate structure, depending upon their individual water usage. Low to moderate water users could see a decrease in their monthly bill, while high water users will experience a significance increase in their water bill. This is consistent with the City's goal to reduce summer period water usage.

Commercial / Multi-Family - Phase in to cost of service volume charges evenly over the next 5 years achieving full cost of service by 2011. This results in an overall 2007 increase of about 6.3% for the multi-family class and 3.5% for the commercial class. Again, individual customers will be impacted differently depending on their water usage.

Flat Rate Charges

Irrigation / Agricultural - Irrigation and agricultural customers currently pay a flat rate per acre per year of $110.00 and $48.00, respectively. These rates significantly under-recover cost of service for these classes. To mitigate the increases required to bring these users to full cost of service, this plan recommends phasing in to 50% of full cost of service for the irrigation class and to 25% of full cost of service for the agricultural class by 2011. To accomplish this, revenue increases of approximately 50% per year over 5 years will be implemented for the irrigation and agricultural customer classes. The most significant impact of this rate change will be on the Parks Division. A $62,500 increase to their operating budget, funded from taxation, will be required for 2007.

Private Fire - Phase in to the cost of service fixed monthly charge evenly over the five-year period, achieving full cost of service by 2011. This strategy under-recovers customer class costs in the near-term, with a proposed 2007 increase of about 6.5%.

Parcel Tax – The existing $50 annual parcel tax is scheduled to remain in place until 2010 and then be reduced by $10 per year to phase the charge out over a five year period.

A revenue needs assessment indicates that annual increases of approximately 5% are necessary in each of the next five years (2007-2011) to meet the financial obligations of the water utility. With the parcel tax reduction the actual revenue increase for 2010 and 2011 reduces to approximately 3% in those years. Potential rates for the next five years and sample 2007 water charges are included in Schedules B – E.

Approved for inclusion:

Don Degen,
Water Drainage Manager

John Vos,
Director of Works and Utilities

Attach: Residential Rate Comparison
City of Kelowna Water Sustainability Action Plan

cc: Financial Planning Manager

Schedule A

Customer Classes	Cost of Service	Existing Rate Revenue	$ Difference	Indicated increase/ (decrease)
Residential	$ 2,192,044	$ 2,905,194	$ (713,149)	(24.5)
Multi-Family	743,709	642,901	100,808	15.7
Commercial	1,068,755	1,057,851	10,904	1.0
Irrigation	901,049	65,301	835,748	1279.8
Agricultural	41,795	1,322	40,473	3062.2
Private Fire Protection	38,611	31,171	7,440	23.9
Total	$ 4,985,963	$ 4,703,739	$ 282,224	6.0

Schedule B

Customer Class	Meter Size	Meter Service Charge - $/Month					
		Existing	2007	2008	2009	2010	2011
Residential	5/8	$ 6.00	$ 6.22	$ 6.44	$ 6.65	$ 6.87	$ 7.09
	3/4	6.00	6.22	6.44	6.65	6.87	7.09
	1	6.00	6.22	6.44	6.65	6.87	7.09
	1-1/2	-	n/a	n/a	n/a	n/a	n/a
	2	-	n/a	n/a	n/a	n/a	n/a
	3	-	n/a	n/a	n/a	n/a	n/a
	4	-	n/a	n/a	n/a	n/a	n/a
	6	-	n/a	n/a	n/a	n/a	n/a
	8	-	n/a	n/a	n/a	n/a	n/a
Multi-Family	5/8	$ 7.84	$ 7.69	$ 7.54	$ 7.39	$ 7.24	$ 7.09
	3/4	7.84	7.79	7.74	7.70	7.65	7.60
	1	16.10	14.71	13.31	11.92	10.52	9.13
	1-1/2	35.50	30.63	25.77	20.90	16.03	11.16
	2	57.50	49.35	41.21	33.06	24.91	16.76
	3	158.34	138.27	118.21	98.14	78.08	58.01
	4	267.46	228.63	189.79	150.96	112.12	73.29
	6	573.46	480.55	387.65	294.74	201.84	108.93
	8	716.00	602.73	489.47	376.20	262.94	149.67
Commercial	5/8	$ 10.16	$ 9.55	$ 8.93	$ 8.32	$ 7.70	$ 7.09
	3/4	15.52	13.94	12.35	10.77	9.18	7.60
	1	20.86	18.51	16.17	13.82	11.47	9.13
	1-1/2	45.99	39.02	32.06	25.09	18.13	11.16
	2	74.50	62.95	51.41	39.86	28.31	16.76
	3	171.55	148.84	126.13	103.43	80.72	58.01
	4	283.74	241.65	199.56	157.47	115.38	73.29
	6	609.45	509.35	409.24	309.14	209.04	108.93
	8	737.75	620.13	502.52	384.90	267.29	149.67

Customer Class	Meter Size	Water Quality Reserve Charge - $/Month					
		Existing	2007	2008	2009	2010	2011
All Classes	5/8	$ 1.32	$ 1.32	$ 1.32	$ 1.32	$ 1.32	$ 1.32
	3/4	1.32	1.32	1.32	1.32	1.32	1.32
	1	2.71	2.71	2.71	2.71	2.71	2.71
	1-1/2	5.98	5.98	5.98	5.98	5.98	5.98
	2	9.68	9.68	9.68	9.68	9.68	9.68
	3	22.69	22.69	22.69	22.69	22.69	22.69
	4	37.52	37.52	37.52	37.52	37.52	37.52
	6	83.95	83.95	83.95	83.95	83.95	83.95
	8	210.87	210.87	210.87	210.87	210.87	210.87

Customer Category		Volume Charge - $/cubic meter					
		Existing	2007	2008	2009	2010	2011
Residential	0-30	$ 0.250	$ 0.230	$ 0.240	$ 0.247	$ 0.260	$ 0.276
	31-80	0.330	0.304	0.317	0.326	0.343	0.365
	81-125	0.360	0.460	0.480	0.494	0.520	0.553
	>125	0.500	0.920	0.960	0.988	1.041	1.105
Multi-Family		0.178	0.198	0.218	0.238	0.258	0.278
Commercial		0.152	0.177	0.202	0.227	0.252	0.276
Bulk Water		0.140	0.177	0.202	0.227	0.252	0.276

Customer Category	Private Fire Line Charge - $/Month					
	Existing	2007	2008	2009	2010	2011
All Line Sizes	$ 13.90	$ 14.79	$ 15.69	$ 16.58	$ 17.48	$ 18.37

Customer Category	Flat Rate - $/Acre per Year					
	Existing	2007	2008	2009	2010	2011
Irrigation	$ 110.00	$ 220.00	$ 315.04	$ 501.56	$ 676.63	$ 839.06
Agricultural	$ 48.00	96.00	157.52	250.78	338.32	419.53

Customer Category	Parcel Tax - $/Parcel per Year					
	Existing	2007	2008	2009	2010	2011
City	$ 50.00	$ 50.00	$ 50.00	$ 50.00	$ 40.00	$ 30.00
Swick Road	n/a	n/a	n/a	n/a	n/a	n/a
Beaver Lake Road	867.00	867.00	867.00	867.00	867.00	867.00

Schedule C

Comparison of Sample Residential Water Bills

Line No.		Monthly Usage m3	Existing Monthly Bill (a) $	Proposed Rates Estimated Monthly Bill (b) $	Proposed Rates $ incr(decr) from Existing $	Proposed Rates % incr(decr) from Existing %
1		10	13.99	14.00	0.02	0.1%
2		20	16.49	16.30	(0.18)	-1.1%
3	Block 1 Max	30	18.99	18.60	(0.38)	-2.0%
4		**41**	22.62	21.94	(0.67)	-3.0%
5		50	25.59	24.68	(0.91)	-3.6%
6		60	28.89	27.71	(1.17)	-4.1%
7		70	32.19	30.75	(1.44)	-4.5%
8	Block 2 Max	80	35.49	33.78	(1.70)	-4.8%
9		90	39.09	38.38	(0.70)	-1.8%
10		100	44.08	42.98	(1.09)	-2.5%
11		110	47.68	47.58	(0.09)	-0.2%
12		120	51.28	52.18	0.91	1.8%
13	Block 3 Max	125	53.08	54.48	1.41	2.7%
14		135	58.08	63.68	5.61	9.7%
15		150	65.58	77.48	11.91	18.2%
16		160	70.58	86.68	16.11	22.8%
17		170	75.58	95.88	20.31	26.9%
18		180	80.58	105.08	24.51	30.4%
19		190	85.58	114.28	28.71	33.5%
20		200	90.58	123.48	32.91	36.3%

(a) Water quality charge + parcel tax ($50/12) + service charge +
of $0.25 per m3 [0-30 m3], $0.33 per m3 [31-80 m3], $0.36 per m3 [81-125 m3], $0.5 per m3 over 125 m3.

(b) Water quality charge + parcel tax ($50/12) + service charge + usage charge
of $0.23 per m3 [0-30 m3], $0.304 per m3 [31-80 m3], $0.46 per m3 [81-125 m3], $0.92 per m3 over 125 m3.

Schedule D

Comparison of Sample Multi-Family Water Bills

Line No.	Meter Size inches	Monthly Usage m3	Existing Monthly Bill (a) $	Proposed Rates: Estimated Monthly Bill (b) $	Proposed Rates: $ incr(decr) from Existing $	Proposed Rates: % incr(decr) from Existing %
1	5/8	50	22.23	23.08	0.85	3.8%
2	5/8	80	27.57	29.02	1.45	5.3%
3	5/8	100	31.13	32.98	1.85	6.0%
4	5/8	150	40.03	42.88	2.86	7.1%
5	5/8	200	48.93	52.79	3.86	7.9%
6	5/8	300	66.73	72.59	5.86	8.8%
7	1	100	40.78	40.00	(0.78)	-1.9%
8	1	200	58.58	59.80	1.23	2.1%
9	1	250	67.48	69.70	2.23	3.3%
10	1	400	94.18	99.41	5.23	5.6%
11	1	800	165.38	178.63	13.25	8.0%
12	1 1/2	200	81.25	77.12	(4.13)	-5.1%
13	1 1/2	800	188.05	195.95	7.90	4.2%
14	1 1/2	1,000	223.65	235.56	11.91	5.3%
15	1 1/2	1,500	312.65	334.58	21.94	7.0%
16	2	500	160.35	158.52	(1.82)	-1.1%
17	2	800	213.75	217.94	4.19	2.0%
18	2	1,500	338.35	356.57	18.23	5.4%
19	2	2,000	427.35	455.60	28.25	6.6%

(a) Water quality charge + parcel tax ($50/12) + service charge + usage charge of $0.178/m3.

(b) Water quality charge + parcel tax ($50/12) + service charge + usage charge of $0.198 per m3.

Schedule E

Comparison of Sample Commercial Water Bills

Line No.	Meter Size inches	Monthly Usage m3	Existing Monthly Bill (a) $	Proposed Rates: Estimated Monthly Bill (b) $	Proposed Rates: $ incr(decr) from Existing $	Proposed Rates: % incr(decr) from Existing %
1	5/8	25	19.45	19.45	0.01	0.0%
2	5/8	50	23.25	23.88	0.63	2.7%
3	5/8	75	27.05	28.30	1.25	4.6%
4	5/8	100	30.85	32.72	1.88	6.1%
5	5/8	150	38.45	41.57	3.12	8.1%
6	5/8	200	46.05	50.41	4.37	9.5%
7	5/8	250	53.65	59.26	5.61	10.5%
8	1	100	42.94	43.08	0.14	0.3%
9	1	200	58.14	60.77	2.63	4.5%
10	1	300	73.34	78.46	5.12	7.0%
11	1	400	88.54	96.15	7.61	8.6%
12	1	500	103.74	113.84	10.10	9.7%
13	1 1/2	250	94.14	93.40	(0.74)	-0.8%
14	1 1/2	300	101.74	102.24	0.50	0.5%
15	1 1/2	500	132.14	137.62	5.48	4.2%
16	1 1/2	750	170.14	181.84	11.71	6.9%
17	2	300	133.95	129.87	(4.08)	-3.0%
18	2	500	164.35	165.25	0.90	0.5%
19	2	750	202.35	209.47	7.13	3.5%
20	2	1,000	240.35	253.70	13.35	5.6%
21	3	300	244.01	228.77	(15.24)	-6.2%
22	3	500	274.41	264.15	(10.26)	-3.7%
23	3	1,000	350.41	352.60	2.19	0.6%
24	3	1,500	426.41	441.05	14.64	3.4%

(a) Water quality charge + parcel tax ($50/12) + service charge + usage charge of $0.152/m3.

(b) Water quality charge + parcel tax ($50/12) + service charge + usage charge of $0.177 per m3.

City of Kelowna Water Sustainability Action Plan

The following initiatives outline a Water Sustainability Action Plan for the City of Kelowna. This plan is an integral part of the corporate Sustainability Action Plan and is in keeping with city council's goal to reduce water consumption by a further 15% by 2012. Each of the elements listed represent a call for action corporately over the next 5 years, as well as throughout the community.

1. **Require, Implement and Track Demand Side Management Programs (DSM)**

   Implement the City Council endorsed water reduction strategy by reducing overall water consumption by a further 15% by 2012.

   Track internal and external customer consumption data to ensure consumption patterns are in keeping with reduction targets.

   Build relationships with the community and help guide the planning and implementation of DSM programs that require citizen participation.

   Work with all corporate customers to develop DSM reduction plans that reflect the overall corporate reduction objectives.

   Monitor and adapt DSM programs over the long term and plan for water sustainability beyond 20 years.

2. **Enhance Customer Education through Effective Social Marketing Programs**

   Continue to implement permanent water conservation programs and resource these with staff that possess technical skills and understanding in the fields of economics and customer education.

   Develop relationships with high water users in all customer classes and work with these users to develop reduction strategies.

   Develop incentive-based social marketing programs designed to reduce outdoor water use.

   Provide direct assistance to all customers who need to reduce water use.

   Provide leadership and innovation in outdoor water conservation research.

   Work with all other water purveyors within Kelowna to ensure a consistent approach is applied throughout the community.

3. **Link Water Conservation to Development Approvals**

   Make Development Permit approval contingent upon demand management planning that provide demonstrated outcome.

   Require that all new developments and retrofits of existing facilities and homes make use of the best available water conservation technologies.

   Require water sensitive Urban Design by limiting "green sprawl".
   Develop mandatory landscaping standards that demonstrate water use reduction and ensure installations occur as part of final inspection processes.

   Encourage the provincial government to tie major infrastructure funding to demonstrated water conservation planning.

4. **Ensure Effective Full Cost Pricing with Volume Based Pricing Structures**

   Implement full cost pricing with volume based pricing structures.

   Reflect the importance and value of water to promote conservation and ensure equitable access through water rates.

   Target high and excessive users and send a strong signal during peak demand periods.

   Promote revenue neutrality and provide incentives by penalizing heavy users and rewarding low users.

   Review opportunities for alternate metering technologies as part of meter replacement programs.

   Work with all other water purveyors within Kelowna to ensure a consistent approach to full cost pricing is applied throughout the community.

5. **Reduce Water System Leakage That Results in Water Loss**

   Confirm percentage of water system losses as part of the utility's overall unaccounted for water formula. Identify costs associated with delivery and lost revenue.

   Enhance the current leak detection program by identifying priority areas and completing leak detection surveys.

   Develop a 5 year revolving plan to rectify system leakage.

   Work with all other water purveyors within Kelowna to ensure a consistent approach to water system leakage is being applied.

6. **Promote and Ensure the Use of Water Efficient Fixtures**

   Review existing fixture bylaws to ensure they reflect the latest technology available and reconfirm that all new development continues to be installed using mandatory water efficient fixtures.

   Work with all internal departments in 2007 to identify water use reduction opportunities within all city owned facilities.

   Develop 2 year plans that require fixture retrofits to all facilities beginning in 2008.

7. **Explore and Develop Water Reuse Opportunities**

   Identify water reuse opportunities within existing city divisions.

   Explore retrofits or new installation potential where water reuse makes sense.