WATER

Annual Report 2012

2012

Submitted by:

Town of Osoyoos
8707 Main Street
Box 3010
Osoyoos, BC V0H 1V0

Prepared by:

Ron Doucette
Director of Operational Services

February, 2013

Town of Osoyoos Water Annual Report

Water

Annual Report 2011

Submitted by:

Town of Osoyoos
8707 Main Street
Box 3010
Osoyoos, BC V0H 1V0

Prepared by:

Ron Doucette
Director of Operational Services

Table of Contents

System Description 1
Operator Certification 1
Bacteriological Summary 1
Capital Works Plan 2
Water Monitoring Plan 2
Water System Assessment 3
Water Master Plan 3
Water Consumption Summary 4
Well Monthly Summary 6
Monthly Chlorine Consumption 8
Charts 9
Chemical Analysis 10
Cross Connection Program 17

System Description

The Town of Osoyoos has a Class II Water Distribution System. The source of water comes from five different wells with three reservoirs. The water is untreated with one well equipped with a standby chlorinator if necessary. A cross connection program is in effect. Attached to the report is a copy of the up to date cross connection program that includes new services and existing facility survey status.

Operator Certification

The Town of Osoyoos has **five certified** operators:

Karl Fichter	Certificate #6840
Leigh Lougheed	Certificate #6846
David Stene	Certificate #6851
Mike Thomas	Certificate #3219
Frank Zandvliet	Certificate #5657

The Town of Osoyoos also has an Irrigation System with two lake inlets and one well that provide domestic water in the non-irrigation season; all irrigation water sources are treated. Chlorinator residual testing is done daily during the irrigation season and well testing during the non-irrigation season is done a minimum of twice a week.

Bacteriological Summary

The Town of Osoyoos collected 106 Coliform Samples for the Irrigation system.

The Town of Osoyoos collected 49 Coliform Samples for the Town System.

The Irrigation system also had Trihalomethane analysis done. Results are enclosed in the following reports from Caro. Attached for your perusal is various water reports taken for the Town of Osoyoos Water System.

Capital Works Plan

The following is an update for 2011 Capital Projects:

- Water Meters install on high end user including Park Irrigation
- GUDI Report soon to be complete
- 340 Reservoir schedule completion in spring of 2012
- Pumphouse #9 for the SO Irrigation District electrical upgrades scheduled completion for Spring of 2012
- Water Distribution Upgrades 74th to Curlew completed

The 2012 **proposed** Capital Projects for the Town of Osoyoos Water System include the following:

- Pilot test for Manganese Removal
- Improvements to the SCADA system

Water Monitoring Plan

The following is the Water Monitoring Schedule for the Town of Osoyoos Water System and the Town of Osoyoos System 8 & 9 Irrigation systems:

January 1 to Dec 31, 2012	Weekly Sampling for Bacterial Coliform and E-Coli
June 12, 2012	Nitrate/Nitrite/Hardness/Manganese
August 7, 2012	THM's System #8 & #9
September 11, 2012	Chemical and Bacterial Parameters for Well #8
September 12, 2012	Nitrate/Nitrite/Hardness/Manganese
December 4, 2012	THM's System #8 & #9
December 11, 2012	Nitrate/Nitrite/Hardness/Manganese

We will be doing weekly samples of the Beaches as outlined by Interior Health from July 3rd to September 4, 2012.

Water System Assessment

The Town of Osoyoos hired Western Water Associates Ltd. to undertake a GWUDI assessment of the Town's six municipal system water supply wells. The Town of Osoyoos submitted Phase 1 of the report to Interior Health in March of 2011 and followed up with a meeting in May of 2011.

The Town discussed with Interior Health Officials the scope of the work for Phase 2 assessment and the program. Western Water began the assessment in the summer and early fall of 2011. The GWUDI assessment final report is anticipated to be submitted to Interior Health in the spring of 2012.

The Town of Osoyoos applied for a capital grant for Phase 1 of the Twinning Program (south half of irrigation System #8) was made under Gas Tax Agreement's General Strategic Priorities Fund (GSPF) in April 2011. In January of 2012, the Town was advised that the application was not approved.

Water Master Plan

To date the Water Master Plan relating to Irrigation District Systems 8 & 9 has been completed and adopted by the Town. The master plan for the Irrigation systems recommends a twinning program 43210 compliance.

The master plan for the municipal water system has not been completed because of uncertainties related to GWUDI classification of the Town water supply wells. It is anticipated that finalization of the GWUDI assessment report by Western Water will provide the basis for developing 43210 compliance plans for each well and thereby enable completion of components of the water master plan which relate to the municipal water system.

Water Consumption Summary

Water Consumption - Town System			
Well #	**2011**	**2010**	**2009**
1	251,949 m^3	199,300 m^3	
3	1,004,705 m^3	961,295 m^3	399,375 m^3
4	134,513 m^3	79,312 m^3	613,735 m^3
5	368,432 m^3	311,375 m^3	666,174 m^3
6	66,902 m^3	118,968 m^3	140,065 m^3
8	332,527 m^3	436,625 m^3	601,205 m^3
Total	2,159,028 m^3	2,106,875 m^3	2,502,300 m^3

Water Consumption - Irrigation System			
	2011	**2010**	**2009**
System 8	4,097,360 m^3	3,719,939m^3	4,356,220 m^3
System 9	3,069,815 m^3	4,253,358m^3	3,102,082 m^3
Well #6	220,166 m^3	253,193m^3	254,054 m^3
Total	7,387,341 m^3	7,238,419 m^3	7,712,356 m^3
	Total Chlorine Used = 14530.8 kg		

Well #6 - Water Consumption 2011

Month	Hrs Ran	In Min	x gpm	m^3
January	386	23,160	516	45,283
February	337	20,220	518	39,689
March	349	20,940	517	40,983
April	236	14,160	514	27,560
May				
June				
July	165	9,900	501	18,792
August	220	13,200	505	25,230
September	84	5040	501	9558
October	117	7,020	501	13,322
November	309	18,540	511	35,861
December	262	15,720	517	30,790
Total	**2,465**	**147,900**	**510**	**287,068 m^3**
To Town Water System July, Aug, Sept and Oct =				66,902 **m^3**
To Irrigation System All Other Months =				220,166 **m^3**

System 8
Water Consumption 2011

Month	m^3
January	77,148
February	2,038
March	2,193
April	111,254
May	255,246
June	662,534
July	973,648
August	973,648
September	1,127,091
October	752,186
November	130,538
December	3,485
Total	**4,097,360 m^3**

System 9
Water Consumption 2011

Month	m^3
January	-
February	-
March	-
April	76,653
May	207,365
June	537,634
July	764,455
August	911,945
September	555,323
October	88,761
November	-
December	-
Total	**3,142,136 m^3**

Well Monthly Summary

Water Well #1
Consumption 2011

Month	m^3	Hrs Ran
January	3,421	48
February	2,058	25
March	3,194	44
April	14,001	198
May	42,134	595
June	44,684	655
July	44,450	745
August	43,708	738
September	38,640	652
October	13,341	221
November	2,319	39
December		
Total	**251,950 m^3**	**3,960**

Water Well #3
Consumption 2011

Month	m^3	Hrs Ran
January	77,614	547
February	58,697	414
March	67,492	476
April	85,845	607
May	101,731	743
June	101,773	719
July	104,886	744
August	104,341	716
September	102,087	721
October	90,098	636
November	55,462	391
December	54,678	385
Total	**1,004,705 m^3**	**7,099**

Water Well #4
Consumption 2011

Month	m^3	Hrs Ran
January	-	-
February	-	-
March	-	-
April	72	1
May	985	5
June	11824	61
July	43,258	218
August	50,978	262
September	27,383	138
October	-	-
November	13	-
December	-	-
Total	**134,513 m^3**	**685**

Water Well #5
Consumption 2011

Month	m^3	Hrs Ran
January	-	-
February	-	-
March	-	-
April	4,674	23
May	36,470	179
June	114,633	217
July	76,155	371
August	84,973	419
September	49,633	242
October	1,883	14
November	11	-
December	-	-
Total	**311,375 m^3**	**1,475**

Well #8 Water Consumption 2011

Month	m^3	Hrs Ran
January	-	-
February	-	-
March	-	-
April	-	-
May	-	-
June	51,129	317
July	99,133	629
August	101,712	660
September	67,193	442
October	12,231	80
November	277	2
December	852	6
Total	**332,527 m^3**	**2,136**

Monthly Chlorine Consumption

Station 8
Chlorine Consumption

Month	kg
January	-
February	-
March	-
April	204.5
May	509.1
June	1350
July	2040.9
August	2095.5
September	1354.5
October	340.9
November	4.5
December	-
Total	**7900.0 kg**

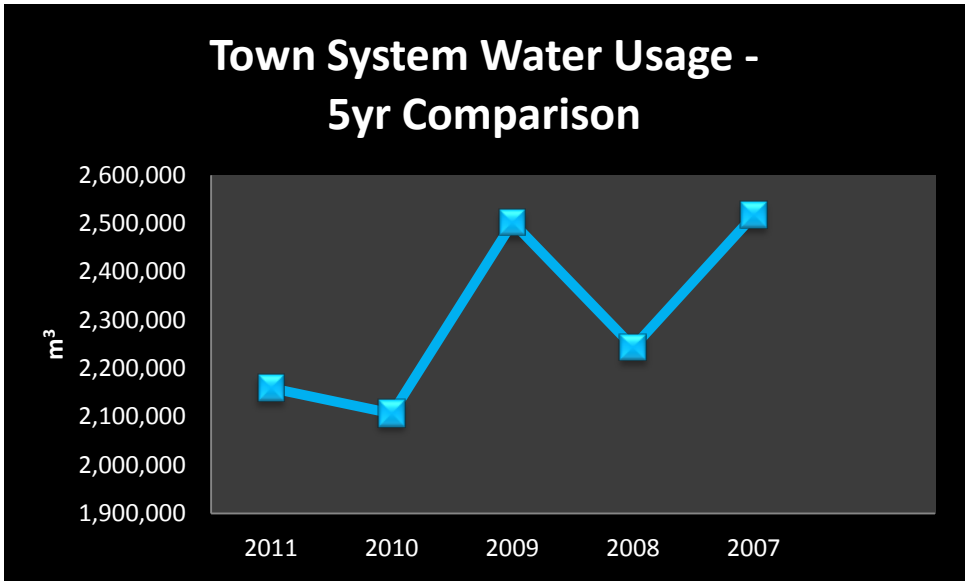
Station 9
Chlorine Consumption

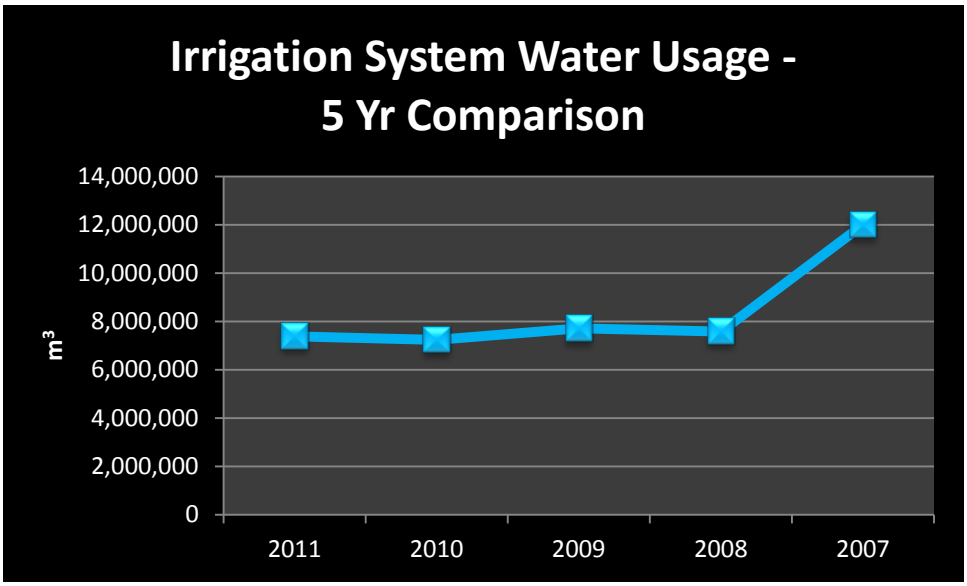
Month	kg
January	-
February	-
March	-
April	140.9
May	413.6
June	1095.5
July	1604.5
August	1695.5
September	1000
October	231.8
November	-
December	-
Total	**6181.8 kg**

Water Well #6
Chlorine Consumption

Month	**kg**
January	93.6
February	86.4
March	86.8
April	54.5
May	-
June	-
July	14.5
August	19.5
September	8.6
October	27.7
November	70
December	57.7
Total	**519.5 kg**

Charts


Town System Water Usage -
5yr Comparison
2,600,000
2,500,000
2,400,000
2,300,000
2,200,000
2,100,000
2,000,000
1,900,000
m3
2011
2010
2009
2008
2007


Irrigation System Water Usage -
5 Yr Comparison
14,000,000
12,000,000
10,000,000
8,000,000
6,000,000
4,000,000
2,000,000
0
m3
2011
2010
2009
2008
2007

Chemical Analysis

Cross Connection Program

The Town of Osoyoos currently has a Cross Connection program in place.

See the following pages for various reports that contain information on the Town's Cross Connection program.