Drinking Water Quality

2010 Annual Report

CITY OF VANCOUVER

CITY OF VANCOUVER

WATER QUALITY MISSION

To affordably and equitably provide our customers with a sustainable supply of high quality drinking water

EXECUTIVE SUMMARY

City of Vancouver residents and visitors enjoy high-quality drinking water delivered from a combination of three supply sources: the Capilano watershed, the Seymour watershed and the Coquitlam watershed. These mountainous watersheds are closed to the public and are protected and operated by the Greater Vancouver Water District (GVWD). To ensure the health, safety, and taste objectives are met, the drinking water is tested against standards set out in the B.C. Drinking Water Protection Regulation (BCDWPR) and Health Canada's Guideline Canadian Drinking Water Quality (GCDWQ).

The British Columbia Drinking Water Protection Act, enacted in April 2001, mandates a multi-barrier approach to protecting water quality. This involves safeguarding the supply source, water treatment, regular monitoring at the source and throughout the distribution systems, and public reporting of the monitoring results. In accordance with this, the Greater Vancouver Water District tests the source waters daily and treats the water before delivery to its member municipalities. The City of Vancouver further monitors and tests the drinking water quality throughout its water distribution system at fifty-three dedicated sampling locations.

This report details the results of the City of Vancouver Drinking Water Quality Monitoring Program for 2010. Highlights are summarized below:

- The bacteriological quality easily met health standards. No *E. coli* was detected, and total coliform and heterotrophic plate count (HPC) levels were well below guideline limits.
- The turbidity levels met the health-based guideline of around 1.0 Nephelometric turbidity unit (NTU) and not in excess of 5.0 NTU for more than 2 days in a 12-month period. Winter rainstorms in January caused elevated turbidity in the Greater Vancouver Water District's source water resulting in turbidity greater than 1.0 NTU in some areas of the City's water system but not more than 5 NTU.
- Water temperature met the aesthetic objective (AO) of less than 15^{o}C with the exception of some warmer months in late summer. Average water temperature was 16.5^{o}C in August and 16.0^{o}C in September 2010.
- Chlorine residuals were above the 0.2 mg/L minimum target for disinfection with the exception of some low flow sites located near distribution system end points.
- Haloacetic acids (HAAs) group, compounds formed as by-products from disinfection, were above the Guidelines for Canadian Drinking Water Quality at some sites in the second and third quarter during the commissioning of the Seymour-Capilano Filtration Plant. This was due to precautionary pre filtration chlorination conducted to safeguard against untreated water by-passing the plant.

ACRONYMS

AO – Aesthetic objective

BCDWPR - British Columbia Drinking Water Protection Regulation

CoV – City of Vancouver

DBP – Disinfection By-products

E-coli - *Escherichia coli*

GCDWQ – Guidelines for Canadian Drinking Water Quality

GVWD – Greater Vancouver Water District

HAA – Haloacetic acid

HPC – Heterotrophic plate count

MAC – Maximum Acceptable Concentration

NTU – Nephelometric turbidity unit

SCFP – Seymour-Capilano Filtration Plant

THM - Trihalomethane

WQMRP – Water Quality Monitoring and Reporting Plan

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1.0 INTRODUCTION

The City of Vancouver's drinking water must comply with the health standards set out by the BCDWPR. In addition, the City strives to meet Health Canada's GCDWQ.

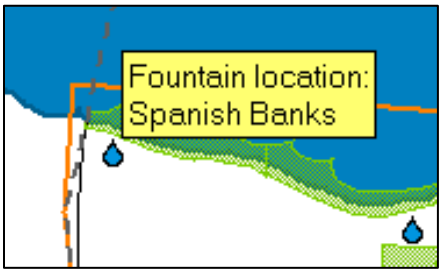
Delivering high quality drinking water that also meets taste and appearance expectations of Vancouver residents, businesses and visitors is a top priority for the City. The City's Water Quality Monitoring Program carries out regular testing of the water for quality, compliance and security monitoring. This program is guided by the Water Quality and Monitoring and Reporting Plan (WQMRP); a regional plan that was jointly developed by the lower mainland Medical Health Officers, Metro Vancouver and member municipalities.

In the WQMRP, the responsibilities of the water suppliers (purveyors) are detailed in accordance with the Drinking Water Protection Act. Each purveyor is required to hold an annual operating permit issued by the Medical Health Officer approving water potability, monitoring, reporting protocol and emergency response.

A summary of the City of Vancouver's Water Quality Monitoring Program and 2010 water quality results are presented in this report. Detailed analysis of the water quality test results are found in the appendices.

Mapping of Drinking Fountains

A number of local and regional initiatives are underway to make it easier for residents and visitors to find nearby drinking fountains. The City of Vancouver has added a drinking fountain layer to VanMap (http://vancouver.ca/Vanmap) to help residents locate public fountains online. The fountains are shown as colour coded water droplets to indicate whether they are Engineering or Parks Board maintained.



Drinking fountain data is also found on the Open Data Catalogue (http://data.vancouver.ca/) available in CSV, XLS, and KML formats or as one-click mapping in Bing and Google. Metro Vancouver has developed a regional online drinking water database that is available as a free phone app (http://www.metrovancouver.org/region/tapwater).

2.0 WATER QUALITY IMPROVEMENT PROJECTS

The City manages a number of ongoing programs that work to improve the water distribution system and safeguard the drinking water from contamination.

Infrastructure Replacement Program

The distribution system consists of 1,359 km of pipeline covering virtually every street in the City of Vancouver, carrying water from transmission pipelines to customer service pipes and fire hydrants. The City's water system infrastructure replacement program replaces aging water mains to minimize pipe breaks and maintain a reliable water service. A secondary benefit of this program is that it improves the quality of water by replacing aging unlined cast iron distribution mains with new cement lined pipes that are more resistant to corrosion.

The City's goal is to replace 0.8 per cent of water mains each year. In 2010, approximately 9170 meters of distribution pipeline were replaced or upgraded. This included two "looping" projects that connected dead end water mains to improve circulation and water quality. The looping projects were installed using trenchless horizontal directional drilling technology to minimize excavation volume, resource usage and material disposal.

Continuous Online Water Quality Monitoring

The City installed continuous online water quality monitoring instruments that test the water within the distribution system at 15-minute intervals and communicate real-time results through a computerized control system. This technology supports compliance monitoring with health standards and enables early detection of contaminants, providing the best level of assurance of water quality before delivery to residents.

Cross Connection Control Program

The City's Cross Connection Control Program works to ensure the potable water supply is protected from contamination in the event of back siphonage or back pressure. Working proactively with citizens, business and industry, the City ensures that the appropriate backflow assemblies are installed and tested on an annual basis as prescribed by the City of Vancouver Waterworks Bylaw 4848. In 2010, there was a 4% increase in the number of backflow assembly test reports, totaling 9,600 reports.

Contamination Prevention

A Cross Connection Program is a cooperative effort between the City's plumbing inspectors, Vancouver Coastal Health Authority, property owners and certified testers to establish and administer guidelines for safeguarding our drinking water system.

Drinking water is prevented from contamination or pollution by the installation of cross connection control assemblies. These devices ensure that water that has been used for washing, heating, and cooling within a facility or home is prevented from backflowing (mixing) into the drinking water supply.

Reduced Pressure Backflow Assembly

Common cross connections that require backflow assemblies are underground irrigation systems, commercial boiler systems, residential and commercial boiler systems with anti-freeze, and fire suppression systems. The backflow assembly requirements are established in the design/planning stage for construction permitting. Once the plumbing work is complete, a City plumbing inspector will give final approval. All backflow prevention assemblies must be tested by a certified backflow assembly tester on an annual basis.

Over the last several years, the City's Cross Connection Control Program has performed audits of private property systematically throughout the City. A Cross Connection Control Specialist works with the property owner or designate to enter a premises to assess potential risks to the City's water system. These risks are almost always the result of owner or tenant improvements subsequent to the initial construction of a building or improvements for which a permit was not obtained.

3.0 SOURCE WATER

The City of Vancouver purchases drinking water from the GVWD for delivery to over 94,000 service connections. The source waters are three mountainous watersheds protected and managed by GVWD – the Capilano, Seymour and Coquitlam watersheds. Closed to the public, these natural watersheds collect surface water from rain and snowmelt. No recreational, agricultural, or industrial activities are permitted in the watersheds, thus safeguarding the water against risk from human contamination.

The GVWD is responsible for source water quality monitoring and treatment to ensure high quality water before delivery to its member municipalities. Water treatment by disinfection destroys disease-causing or pathogenic organisms. GVWD uses chlorine disinfection at Capilano and Seymour watershed and ozone treatment at Coquitlam watershed. Secondary chlorine disinfection of the water can be required at facilities downstream of all three watersheds to maintain chlorine residual in the distribution system for the prevention of bacterial re-growth. Within the City of Vancouver there are three re-chlorination stations.

A summary of the 2010 source water quality laboratory results for Capilano, Seymour and Coquitlam watershed is found in Appendix A of the supporting document.

Figure 1: Cleveland Dam and the Capilano Reservoir in North Vancouver

Seymour-Capilano Filtration Plant Project

Metro Vancouver has built a water filtration plant that will treat most of Vancouver's water supply. The filtration plant is located in the Lower Seymour Conservation Reserve, downstream of the Seymour watershed. The filtration plant is currently treating water from the Seymour watershed and once underground tunnels are completed in 2013, it will filter the water from the Capilano watershed as well. The treatment process includes filtration, corrosion control and disinfection using ultraviolet radiation and chlorination.

The filtration process significantly reduces turbidity by removal of organics and sediment, removes *Giardia* and *Cryptosporidium* micro-organisms, and reduces the amount of chlorine required for disinfection. With less chlorine required and fewer organics in the water, the level of disinfection by-products will also be reduced. For Vancouverites, the filtration process has improved the taste and colour of the water.

4.0 WATER QUALITY MONITORING PROGRAM

The City of Vancouver's Water Quality Monitoring Program involves routine testing for microbiological indicators as well as physical and chemical water quality parameters. Drinking water samples are collected from fifty-three dedicated sampling stations located in representative locations across the City. Vancouver's drinking water must comply with BCDWPR standards and the City is committed to meeting Health Canada's Guidelines for Canadian Drinking Water Quality.

Routine sampling is conducted four days per week in addition to semi-annual testing for metals, quarterly sampling for disinfection by-products, and project-based water quality monitoring. In 2010, there were 2,060 samples collected for routine testing.

The physical and chemical parameters are tested on site for instantaneous results. Microbiological samples are collected at each site and submitted to the BC Centre for Disease Control for analysis. Microbiological results are reviewed within 24 hours by the Vancouver Coastal Health Officer and in the event of a positive result corrective action would be taken immediately. A complete list of the monitoring parameters and testing protocols are found in Table 1.

Table 1: City of Vancouver's Water Quality and Testing Program

PARAMETER	SAMPLE FREQUENCY
Temperature	4 days per week
Turbidity	4 days per week
Chlorine residual (total chlorine and free chlorine)	4 days per week
pH	4 days per week
Total coliform	4 days per week
E-coli	4 days per week
Aerobic heterotrophic microorganisms	4 days per week
Disinfection-by-products	Quarterly
Metals	Semi-annually

4.1 PHYSICAL PARAMETERS

Water in the distribution system is tested for the physical parameters of temperature and turbidity.

Temperature

Water temperature in the distribution system is directly related to source water seasonal temperature change. The Canadian Guidelines set the aesthetic objective at less than 15°C for drinking water temperature. Temperatures above 15°C enhance the growth of micro-organisms, which can impact aesthetic properties of taste, colour and odour, as well as accelerate corrosion.

Average water temperature in the distribution system remained well below the aesthetic maximum objective of 15°C throughout most of the year with the exception of the warm weather months of August and September as shown in Figure 2. The average water temperatures were 16.5°C in August and 16.0°C in September, 2010. Samples did not show an increase in bacteriological growth, indicating effective chlorine disinfection was achieved.

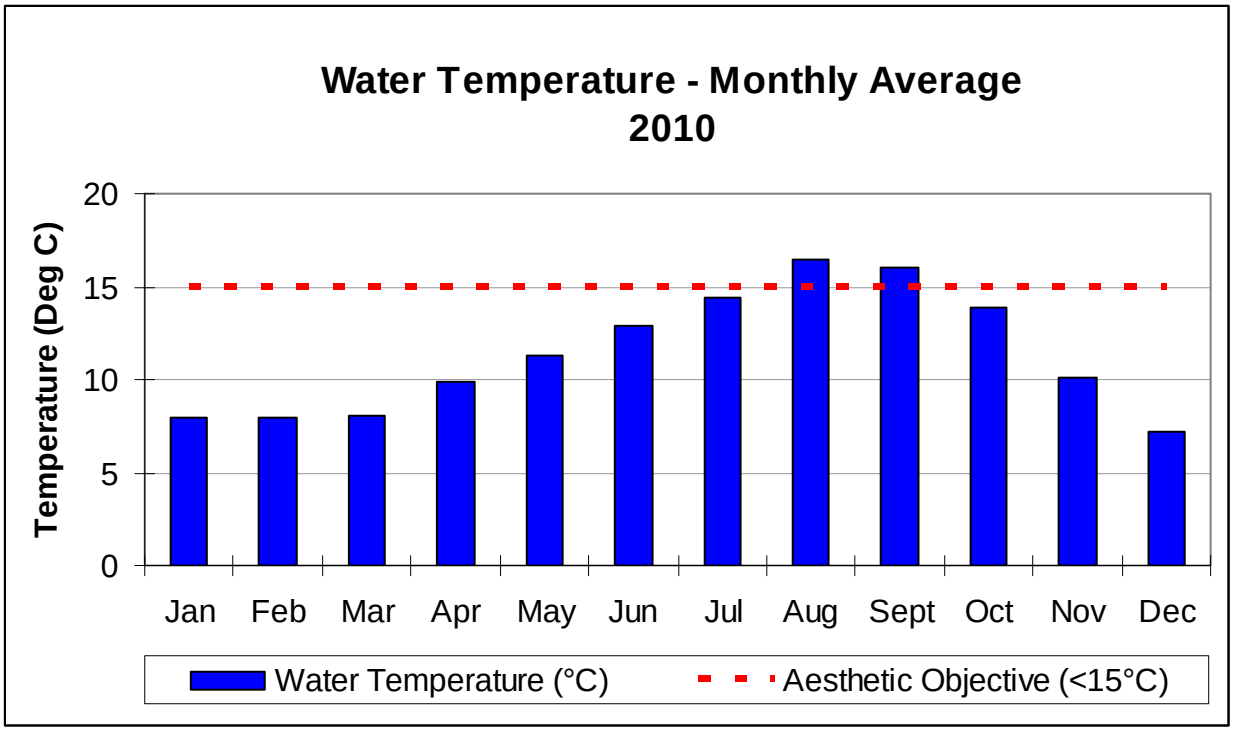


Figure 2: Monthly average water temperatures in the distribution system.

Turbidity

Turbidity is a measure of fine suspended matter in water caused mostly by clay, silt, and organics. Vancouver's water turbidity level is most often directly related to levels at the source where winter rainfall events can cause sediment and runoff to enter the watersheds. Localized turbidity events can also occur from water main flushing or hydrant works within the distribution system. Elevated turbidity events can pose an aesthetic concern for consumers and can limit the effectiveness of disinfection.

In March 2005, Health Canada introduced a guideline recommending that surface water sources be filtered unless it is demonstrated that the system has a history of acceptable microbiological quality and the water turbidity is around 1 NTU but does not exceed 5.0 NTU for more than 2 days in a 12-month period. The completion of the Seymour-Capilano Filtration Plant (SCFP) has significantly reduced turbidity levels of the Seymour source and will do the same for Capilano once it begins filtration in 2013. Water from the Coquitlam watershed will continue to be unfiltered with an early turbidity warning system to alert the GVWD of elevated turbidity levels and when to remove the source from service.

Winter rainstorms in January caused elevated turbidity in the GVWD's source water resulting in turbidity greater than 1.0 NTU in some areas of the City's water system but never exceeded the Canadian guideline of 5 NTU for more than 2 days in a 12-month period. Figure 3 shows the average monthly turbidity levels in Vancouver for 2010.

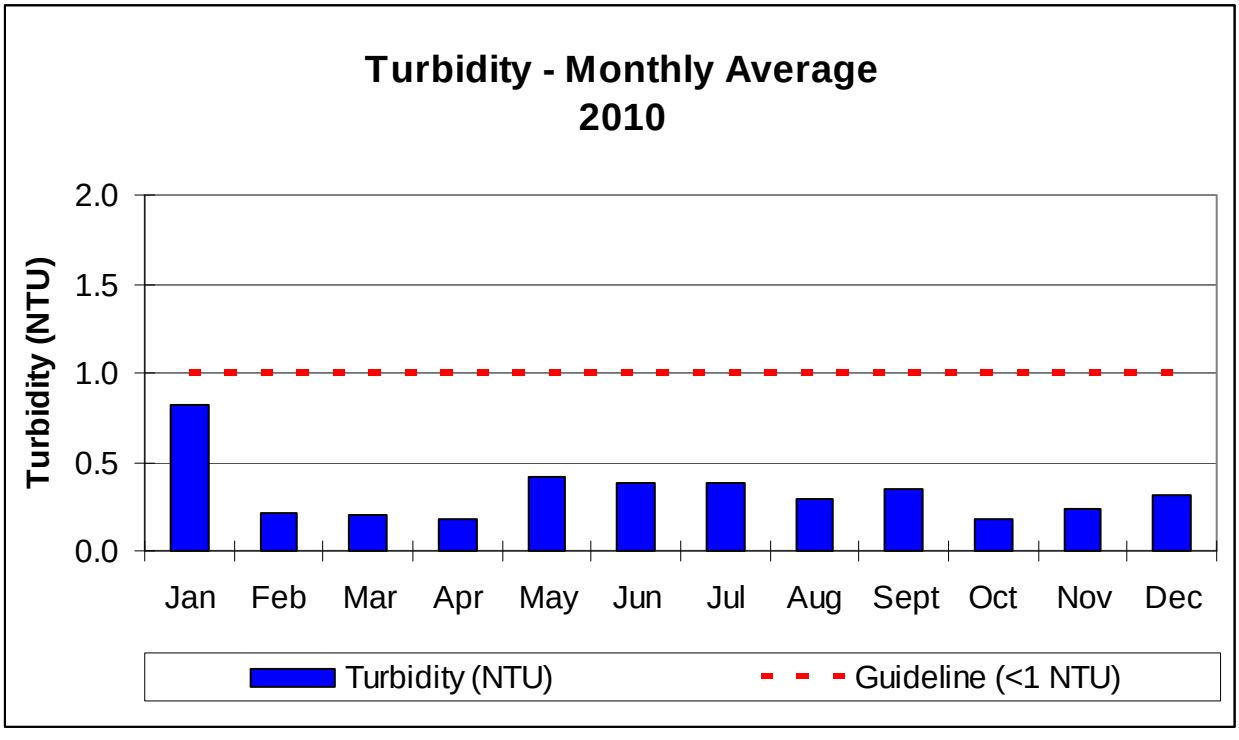


Figure 3: Monthly average turbidity levels in distribution system.

4.2 CHEMICAL PARAMETERS

Water in the distribution system is also tested for the chemical parameters of pH, metals, chlorine residual and disinfection by-products.

pH

Vancouver's drinking water is very soft (low amounts of dissolved calcium and magnesium) and slightly acidic. This is due to the source water originating as surface water from rainfall and snowmelt. The average pH of Vancouver's drinking water is 6.9. See Appendix A for GVWD source water pH levels.

To reduce the corrosiveness of the water and lengthen the service of plumbing systems, the GVWD has a pH adjustment program for corrosion control program. Lime (calcium hydroxide) and carbon dioxide are used at the SCFP.

Metals

The City's water consistently meets the Canadian Guidelines for metals in drinking water. In 2010, metal concentrations in the City's water distribution system were assessed on two separate occasions, once in the summer and again in the winter. These samples were collected by City staff and the analysis was performed by the GVWD laboratory. A complete summary of the results is found in Appendix C.

Metal concentrations in drinking water at consumers' taps can be affected by the age and materials used in household plumbing. In homes with metallic piping systems, leaching of metals can occur when Vancouver's naturally soft and slightly acidic water sits stagnant in the pipes.

To monitor the extent of dissolved metals in drinking water from household piping, the City in partnership with Vancouver Coastal Health conducted metals testing at the taps of sixty-seven homes over a four year period. The results consistently showed that running the water for 20 seconds significantly lowers dissolved copper and lead (from plumbing systems with lead based solder and brass faucets) to below the Canadian guideline levels.

Disinfection - Chlorine Residual Levels

Chlorine is used to disinfect the water and safeguard against any microbial re-growth or contamination in the distribution system. The Canadian Drinking Water Guidelines recommends a minimum 0.2 mg/L chlorine residual.

The average chlorine residual in the large majority of the City's distribution system continues to be at an acceptable level, with below target readings at a few locations. The lower chlorine residual levels at these sites is due to a combination of chlorine demand from turbidity plus relatively low water use which causes chlorine to dissipate as water sits in the pipe. All sampling stations identified with low chlorine residual have had no indication of microbiological impairment and are closely monitored by the City.

Disinfection By-products

Disinfection By-products (DBPs) are compounds formed by the interaction between chlorine and naturally occurring organic substances in the water, such as breakdown products of decaying leaves and vegetation. Two groups of DBPs are monitored within Vancouver's drinking water, trihalomethanes (THMs) and haloacetic acids (HAAs).

Within the THM group, chloroform is the compound found in the highest concentrations in drinking water, and as such has been most extensively studied with respect to health. Epidemiological investigations have suggested chloroform is a possible carcinogen to humans. For this reason, the total THM guideline is based on health risks linked to chloroform.

The Canadian Guidelines maximum acceptable concentration (MAC) for total THMs is 100 ppb (0.10 mg/L) and the MAC for HAAs is 80 ppb (0.080 mg/L). Both are based on locational running annual averages from quarterly samples. The guidelines are set conservatively and are based on a person consuming 1.5 litres of water per day over a 70 year lifetime.

The running locational averages for THMs in Vancouver's drinking water were below the guideline MAC. During the late December 2009 to July 2010 period, elevated HAAs levels were observed at individual samples sites receiving filtered water from the SCFP during its commissioning process. During this period, it was necessary for Metro Vancouver to disinfect water from the Seymour source at both Seymour Falls Dam and at the SCFP after filtration to safeguard against any potential for untreated water to bypass the filter plant and enter the distribution system. This was a precautionary measure to assure the drinking water met Health Canada's stringent guidelines for microbiological quality. The consequential elevated HAA level is considered negligible given Health Canada's Drinking water Guidelines for chemical characteristics are conservatively set and the short period of exposure. HAA levels on water from the Seymour source are now significantly lower than they were before filtration was in place, demonstrating in part the long-term benefit of the SCFP.

See Appendix D for a complete list of results by sampling location.

4.3 BACTERIOLOGICAL QUALITY

The bacteriological monitoring conducted regularly by the City of Vancouver includes testing for heterotrophic plate count (HPC), total coliform, and escherichia coli (*E.coli)*. HPC and total coliform are indicator tests that report specific groups of biological activity in a sample. HPC is a count of all heterotrophic micro-organisms and is a useful indicator for monitoring the effectiveness of disinfection and early signs of bacteria re-growth. Total coliform is a more specific test of all bacteria within the coliform group. The detection of total coliform indicates possible conditions for pathogen or parasite contamination. *E.coli* is an indicator test of fecal contamination that has been used in place of fecal coliform testing since April 2006. The *E.coli* group has a stringent standard of zero MAC. If *E.coli* is found in the water, a boil water advisory would be issued by the Chief Medical Health Officer and corrective action would be taken immediately.

Bacteriological testing of the water distribution system is required to meet the standards set out in the BC Drinking Water Protection Regulation. The standards, as listed in Table 2 below, are a legislated requirement under the Provincial Drinking Water Protection Act.

Table 2: BC Drinking Water Protection Act Bacteriological Quality Standards

Parameter:	**Standard:**
E.coli bacteria	No detectable e-coli bacteria per 100 ml
Total coliform bacteria	a) No more than 10% of the samples in a 30 day period should be positive for total coliform bacteria when more than one sample is collected b) No sample should contain more than 10 total coliform bacteria per 100 mL

Bacteriological sampling in 2010 had perfect compliance with BCDWPR standards. No samples were found to have total coliform or *E.coli*. Table 3 shows a summary of bacteriological compliance over the last 5 years.

Table 3: Summary of bacterial compliance results – 2005 to 2010

Year	# samples containing >10 total coliforms per 100mL	# samples containing >0 *E.coli* per 100mL
2006	0	n/a[1]
2007	0	0
2008	0	0
2009	0	0
2010	0	0

Greenest City by 2020: Clean Water Goal

In February 2010 Council adopted 10 long term goals to make Vancouver the Greenest City in the world by 2020. Goal #8 Clean Water, states 'Vancouver will have the best drinking water of any city in the world'. To achieve this, the targets are to:

- Meet or beat the strongest of British Columbian, Canadian and International drinking water quality standards and guidelines.
- Reduce per capita water consumption by 33% over 2006 levels.

Currently Vancouver's drinking water consistently meets the provincial water quality standards and Health Canada's guidelines. However, at an average daily residential consumption per capita of 320 litres (2006 figure), Vancouver is barely under the Canadian average of 329 litres[2].

Ensuring high quality drinking water for current and future generations of Vancouverites is critical. Fundamental to this is providing access to drinking water for the maintenance of public health and delivering conservation programs that secure our drinking water supply for future need.

Expanding the water supply has far-reaching financial and ecological impacts, and with climate change related effects on rainfall and snowfall in our watersheds, conservation is the best way to live within our means.

To find out more about the Greenest City Action Plan, visit talkgreenvancouver.ca

[1] Fecal coliform was used as the indicator prior to 2007. No fecal coliform was detected in 2006.
[2] "Wise Water Use", Environment Canada, accessed Sept 28, 2010, http://www.ec.gc.ca/eau-water/default.asp?lang=En&n=F25C70EC-1

5.0 CUSTOMER SERVICE

Due to the high elevations of the Capilano and Seymour reservoirs which supply most of the drinking water in Vancouver, the GVWD provides water of sufficient pressure to most areas without additional pumping. This allows the City of Vancouver significant financial savings compared to other municipalities which spend a sizable amount of their budget on energy for pumping. The gravity feed system also reduces the probability of a loss of service event due to power outages. Vancouver residents benefit from lower costs, lower water contamination risk and fewer interruptions to their water service.

The City makes every effort to provide the public with up to date water quality information and to provide timely follow-up to water quality inquiries. Water quality results are publicly reported on-line through monthly updates of sampling results on the City's water quality webpage at vancouver.ca/watermap. As well, a more comprehensive analysis of the City's compliance and water system improvement projects is made available on-line through this annual report.

Water quality inquiries are received most often by email and phone. In 2010, hundreds of calls and emails were received on a variety of water quality topics, with the most common being questions around turbidity and general information on drinking water treatment. 311 is three digit phone number callers within Vancouver can use to get answers to questions and requests for city services. Callers outside of Vancouver can dial 604-873-7000. To ensure timely follow-up on complaints and to help identify system definciencies, all water quality inquiries are logged into a customer relations database.

6.0 CONCLUSION

The City of Vancouver prides itself on delivering clean, safe and aesthetically pleasing drinking water to its customers. In 2010, the bacteriological and chemical quality of Vancouver's water continued to show high quality drinking water.

No *E.coli* or total coliform bacteria were found in the water system, and HPC levels were well below the guideline limits. The chlorine residuals were above the 0.2 mg/L minimum target, with the exception of some low flow sites located near distribution system end points. These sites had no indication of bacteriological impairment.

The haloacetic acids (HAAs) group, disinfection by-product compounds, was above the Guidelines for Canadian Drinking Water Quality at some sites in the second and third quarter during the commissioning of the Seymour-Capilano Filtration Plant. This was due to precautionary pre filtration chlorination conducted to safeguard against untreated water by-passing the plant. This brief period of elevated HAAs is not considered to present a significant factor to public health. Far more important was the maintenance of properly disinfected water supply.

Winter rainstorms in January caused elevated turbidity in the GVWD's source water resulting in turbidity greater than 1.0 NTU in some areas of the City's water system but never more than 5.0 NTU during this period. At no time was there impairment to microbiological quality. The City of Vancouver and GVWD remain committed partners in affordably and equitably providing a sustainable supply of high quality drinking water to the residents of and visitors to Vancouver.

Appendix A
Source Water Quality

Physical and Chemical Analysis of Water Supply

Greater Vancouver Water District

2010 - Capilano Water System

Parameter	Untreated Average	Treated Average	Treated Range	Treated Days Guideline Exceeded	Canadian Guideline Limit	Reason Guideline Established
Alkalinity as $CaCO_3$ (mg/L)	2.6	4.9	3.3-8.9		none	
Aluminium Dissolved (mg/L)	0.08	0.05	0.05		none	
Aluminium Total (mg/L)	0.1	0.07	0.07		none	
Antimony Total (mg/L)	<0.002				0.006	health
Arsenic Total (mg/L)	<0.001				0.010	health
Barium Total (mg/L)	0.003				1.0	health
Bromate (mg/L)		<0.01	<0.01	0	0.01	health
Bromide (mg/L)		<0.01	<0.01		none	
Boron Total (mg/L)	<0.02				5.0	health
Cadmium Total (mg/L)	<0.0005				0.005	health
Calcium Total (mg/L)	1.19	1.7	1.16-3.19		none	
Carbon Organic Dissolved (mg/L)	1.4	1.3	0.8-1.6		none	
Carbon Organic Total (mg/L)	1.43	1.34	0.77-1.65		none	
Chlorate (mg/L)		0.04	0.03-0.06	0	1.0	health
Chloride Total (mg/L)	0.5	2.5	1.9-3.7	0	≤ 250	aesthetic
Chromium Total (mg/L)	<0.001				0.05	health
Color Apparent (ACU)	12	5	3-8		none	
Color True (TCU)	11	4	2-6	0	≤ 15	aesthetic
Conductivity (umhos/cm)	11	18	16-38		none	
Copper Total (mg/L)	0.002				≤ 1	aesthetic
Cyanide Total (mg/L)	<0.02				0.2	health
Fluoride (mg/L)	<0.05	<0.05	<0.05	0	1.5	health
Hardness as $CaCO_3$ (mg/L)	3.57	4.84	3.44-8.60		none	
Iron Dissolved (mg/L)	0.05	0.05	<0.01-0.11		none	
Iron Total (mg/L)	0.09	0.09	0.02-0.22	0	≤ 0.3	aesthetic
Lead Total (mg/L)	<0.001				0.01	health
Magnesium Total (mg/L)	0.14	0.15	0.13-0.16		none	
Manganese Dissolved (mg/L)	0.005	0.004	<0.001-0.007		none	
Manganese Total (mg/L)	0.006	0.004	0.002-0.008	0	≤0.05	aesthetic
Mercury Total (mg/L)	<0.00005				0.001	health
Nickel Total (mg/L)	<0.001				none	
Nitrogen - Ammonia as N (mg/L)	<0.02	<0.02	<0.02		none	
Nitrogen - Nitrate as N (mg/L)	0.06	0.06	0.05-0.06	0	10	health
Nitrogen - Nitrite as N (mg/L)	<0.01	<0.01	<0.01	0	1.0	health
pH	6.4	6.6	6.2-7.0	3	6.5 to 8.5	aesthetic
Phenols (mg/L)	<0.005				none	
Phosphorus Total (mg/L)	<0.005	<0.005	<0.005		none	
Potassium Total (mg/L)	0.16				none	
Residue Total (mg/L)	15	19	19		none	
Residue Total Dissolved (mg/L)	14				≤ 500	aesthetic
Residue Total Fixed (mg/L)	11	13	13		none	
Residue Total Volatile (mg/L)	5	7	7		none	
Selenium Total (mg/L)	<0.001				0.01	health
Silica as SiO_2 (mg/L)	2.9	2.8	2.8		none	
Silver Total (mg/L)	<0.001				none	
Sodium Total (mg/L)	<0.5	1.8	1.8	0	≤200	aesthetic
Sulphate (mg/L)	0.8	1.25	0.8-2.6	0	≤500	aesthetic
Turbidity (NTU)	0.43	0.44	0.24-1.2			
UV254 (Abs/cm)	0.062	0.041	0.013-0.053		none	
Zinc Total (mg/L)	<0.002				≤ 5	aesthetic

These figures are average values from a number of laboratory analyses done throughout the year. Where the range is a single value no variation was measured for the samples analysed. Methods and terms are based on those of "Standard Methods of Water and Waste Water" 21st Edition 2005. Less than (<) denotes not detectable with the technique used for determination. Untreated water is from the intake prior to chlorination, treated water is from a sample line after 10 minutes chlorine contact time. Guidelines are taken from "Guidelines for Canadian Drinking Water Quality - Sixth Edition" Health and Welfare Canada 1996, updated to Dec 2010. Capilano source water is treated with sodium hypochlorite for disinfection. Capilano source was out of service from Jan 1-April 26, June 4-June 11, and Sep 22-Dec 31 due to high turbidity.

Physical and Chemical Analysis of Water Supply

Greater Vancouver Water District

2010 - Coquitlam Water System

Parameter	Untreated	Treated			Canadian Guideline Limit	Reason Guideline Established
	Average	Average	Range	Days Guideline Exceeded		
Alkalinity as $CaCO_3$ (mg/L)	1.7	11.4	9.3-13.5		none	
Aluminium Dissolved (mg/L)	0.06	0.06	0.05-0.07		none	
Aluminium Total (mg/L)	0.08	0.08	0.05-0.07		none	
Antimony Total (mg/L)	<0.002	<0.002	<0.002	0	0.006	health
Arsenic Total (mg/L)	<0.001	<0.001	<0.001	0	0.010	health
Barium Total (mg/L)	0.002	0.002	0.002	0	1.0	health
Boron Total (mg/L)	<0.02	<0.02	<0.02	0	5.0	health
Bromate (mg/L)		<0.01	<0.01	0	0.01	health
Bromide (mg/L)	<0.01	<0.01	<0.01		none	
Cadmium Total (mg/L)	<0.0005	<0.0005	<0.0005	0	0.005	health
Calcium Total (mg/L)	0.90	0.90	0.84-0.96		none	
Carbon Organic Dissolved (mg/L)	1.5	1.5	1.3-1.9		none	
Carbon Organic Total (mg/L)	1.57	1.52	1.28-1.84		none	
Chlorate (mg/L)		<0.01	<0.01	0	1.0	health
Chloride Total (mg/L)	0.5	2.0	1.7-4.1	0	≤ 250	aesthetic
Chromium Total (mg/L)	<0.001	<0.001	<0.001	0	0.05	health
Color Apparent (ACU)	12	2	1-3		none	
Color True (TCU)	10	1	1-2	0	≤ 15	aesthetic
Conductivity (umhos/cm)	9	32	23-38		none	
Copper Total (mg/L)	<0.002	<0.002	<0.002	0	≤ 1	aesthetic
Cyanide Total (mg/L)	<0.02	<0.02	<0.02	0	0.2	health
Fluoride (mg/L)	<0.05	<0.05	<0.05	0	1.5	health
Hardness as $CaCO_3$ (mg/L)	2.67	2.67	2.51-2.87		none	
Iron Dissolved (mg/L)	0.02	0.02	0.01-0.04		none	
Iron Total (mg/L)	0.05	0.05	0.03-0.08	0	≤ 0.3	aesthetic
Lead Total (mg/L)	<0.001	<0.001	<0.001	0	0.01	health
Magnesium Total (mg/L)	0.10	0.10	0.09-0.12		none	
Manganese Dissolved (mg/L)	0.004	0.003	0.002-0.004		none	
Manganese Total (mg/L)	0.005	0.004	0.003-0.005	0	≤ 0.05	aesthetic
Mercury Total (mg/L)	<0.00005	<0.00005	<0.00005	0	0.001	health
Nickel Total (mg/L)	<0.001	<0.001	<0.001		none	
Nitrogen - Ammonia as N (mg/L)	<0.02	<0.02	<0.02		none	
Nitrogen - Nitrate as N (mg/L)	0.10	0.10	0.08-0.15	0	10	health
Nitrogen - Nitrite as N (mg/L)	<0.01	<0.01	<0.01	0	1.0	health
pH	6.3	7.3	6.5-8.1	0	6.5 to 8.5	aesthetic
Phenols (mg/L)	<0.005	<0.005	<0.005		none	
Phosphorus Total (mg/L)	<0.005	<0.005	<0.005		none	
Potassium Total (mg/L)	0.12	0.12	0.11-0.12		none	
Residue Total (mg/L)	17	28	26-31		none	
Residue Total Dissolved (mg/L)	13	26	23-29	0	≤ 500	aesthetic
Residue Total Fixed (mg/L)	12	21	20-23		none	
Residue Total Volatile (mg/L)	5	8	6-9		none	
Selenium Total (mg/L)	<0.001	<0.001	<0.001	0	0.01	health
Silica as SiO_2 (mg/L)	2.5	2.4	2.1-2.6		none	
Silver Total (mg/L)	<0.001	<0.001	<0.001		none	
Sodium Total (mg/L)	<0.5	6.4	6.2-6.8	0	≤ 200	aesthetic
Sulphate (mg/L)	0.7	0.7	0.7-0.8	0	≤ 500	aesthetic
Turbidity (NTU)	0.47	0.40	0.21-0.97			
UV254 (Abs/cm)	0.067	0.020	0.013-0.041		none	
UV254 App. (Abs/cm)	0.075	0.023	0.016-0.045		none	
Zinc Total (mg/L)	0.004	<0.002	<0.002	0	≤ 5	aesthetic

These figures are average values from a number of laboratory analyses done throughout the year. Where the range is a single value no variation was measured for the samples analysed. Methods and terms are based on those of "Standard Methods of Water and Waste Water" 21st Edition 2005. Less than (<) denotes not detectable with the technique used for determination. Untreated water is from the intake prior to chlorination, treated water is from a single site in the Metro Vancouver distribution system downstream of chlorination. Guidelines are taken from "Guidelines for Canadian Drinking Water Quality - Sixth Edition" Health and Welfare Canada 1996, updated to Dec 2010. Coquitlam water is treated with ozone for primary disinfection, chlorine for secondary disinfection, and soda ash to increase pH and alkalinity.

Physical and Chemical Analysis of Water Supply

Greater Vancouver Water District

2010 - Seymour Water System (Treated results are post Filtration)

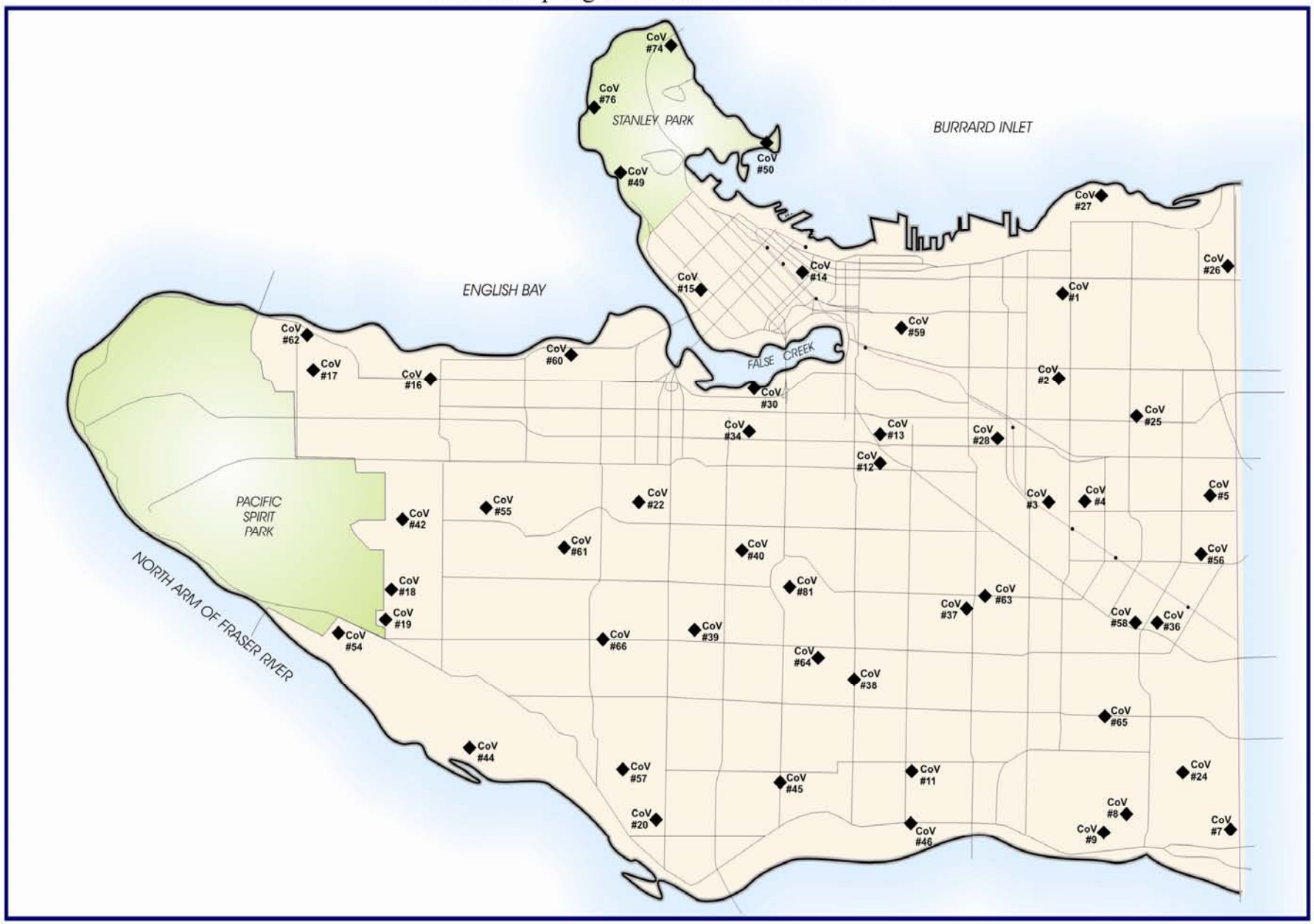
Parameter	Untreated Average	Treated Average	Treated Range	Treated Days Guideline Exceeded	Canadian Guideline Limit	Reason Guideline Established
Alkalinity as $CaCO_3$ (mg/L)	3.3	8.4	6.3-11.1		none	
Aluminium Dissolved (mg/L)	0.06	0.04	<0.01-0.08		none	
Aluminium Total (mg/L)	0.08	0.04	0.01-0.09	0	0.2	operational
Antimony Total (mg/L)	<0.002	<0.002	<0.002	0	0.006	health
Arsenic Total (mg/L)	<0.001	<0.001	<0.001	0	0.010	health
Barium Total (mg/L)	0.004	0.004	0.003-0.004	0	1.0	health
Boron Total (mg/L)	<0.02	<0.02	<0.02	0	5.0	health
Bromate (mg/L)		<0.01	<0.01	0	0.01	health
Bromide (mg/L)	<0.01	<0.01	<0.01		none	
Cadmium Total (mg/L)	<0.0005	<0.0005	<0.0005	0	0.005	health
Calcium Total (mg/L)	1.62	3.27	1.38-4.35		none	
Carbon Organic Dissolved (mg/L)	1.5	0.7	0.5-1.0		none	
Carbon Organic Total (mg/L)	1.59	0.72	0.49-0.96		none	
Chlorate (mg/L)		<0.01	<0.01	0	1.0	health
Chloride Total (mg/L)	<0.5	2.4	1.8-2.8	0	≤ 250	aesthetic
Chromium Total (mg/L)	<0.001	<0.001	<0.001	0	0.05	health
Color Apparent (ACU)	15	1	1-2		none	
Color True (TCU)	12	1	1-2	0	≤ 15	aesthetic
Conductivity (umhos/cm)	12	32	26-38		none	
Copper Total (mg/L)	<0.002	<0.002	<0.002	0	1.0	aesthetic
Cyanide Total (mg/L)	**<0.02**	**<0.02**	**<0.02**	**0**	**0.2**	**health**
Fluoride (mg/L)	<0.05	<0.05	<0.05	0	1.5	health
Hardness as $CaCO_3$ (mg/L)	4.64	8.77	3.67-11.5		none	
Iron Dissolved (mg/L)	0.07	<0.01	<0.01		none	
Iron Total (mg/L)	0.14	<0.01	<0.01	0	≤ 0.3	aesthetic
Lead Total (mg/L)	<0.001	<0.001	<0.001	0	0.01	health
Magnesium Total (mg/L)	0.14	0.15	0.12-0.17		none	
Manganese Dissolved (mg/L)	0.005	0.004	0.003-0.007		none	
Manganese Total (mg/L)	0.006	0.004	0.003-0.008	0	≤ 0.05	aesthetic
Mercury Total (mg/L)	<0.00005	<0.00005	<0.00005	0	0.001	health
Nickel Total (mg/L)	<0.001	<0.001	<0.001		none	
Nitrogen - Ammonia as N (mg/L)	<0.02	<0.02	<0.02		none	
Nitrogen - Nitrate as N (mg/L)	0.06	0.06	0.02-0.09	0	10	health
Nitrogen - Nitrite as N (mg/L)	<0.01	<0.01	<0.01	0	1.0	health
pH	6.4	7.1	6.4-7.4	1	6.5 to 8.5	aesthetic
Phenols (mg/L)	<0.005	<0.005	<0.005		none	
Phosphorus Total (mg/L)	<0.005	<0.005	<0.005-0.006		none	
Potassium Total (mg/L)	0.16	0.16	0.14-0.17		none	
Residue Total (mg/L)	16	24	13-31		none	
Residue Total Dissolved (mg/L)	15	22	11-28	0	≤ 500	aesthetic
Residue Total Fixed (mg/L)	10	18	9-25		none	
Residue Total Volatile (mg/L)	6	5	3-8		none	
Selenium Total (mg/L)	<0.001	<0.001	<0.001	0	0.01	health
Silica as SiO_2 (mg/L)	3.1	3.2	2.7-3.8		none	
Silver Total (mg/L)	<0.001	<0.001	<0.001		none	
Sodium Total (mg/L)	<0.5	3.1	1.3-6.9	0	≤ 200	aesthetic
Sulphate (mg/L)	1.2	3.0	1.8-5.5	0	≤ 500	aesthetic
Turbidity (NTU)	0.63	0.05	0.02-0.19			
UV254 (Abs/cm)	0.071	0.012	0.007-0.016		none	
Zinc Total (mg/L)	<0.002	<0.002	<0.002	0	≤ 5	aesthetic

These figures are average values from a number of laboratory analyses done throughout the year. Where the range is a single value no variation was measured for the samples analysed. Methods and terms are based on those of "Standard Methods of Water and Waste Water" 21st Edition 2005. Less than (<) denotes not detectable with the technique used for determination. Untreated water is from the intake prior to chlorination, treated water is from a single site in the Metro Vancouver distribution system downstream of chlorination. Guidelines are taken from "Guidelines for Canadian Drinking Water Quality - Sixth Edition" Health and Welfare Canada 1996, updated to Dec 2010. Seymour treated water is filtered, treated with UV light for primary disinfection, sodium hypochlorite for secondary disinfection, lime to increase pH and alkalinity and CO_2 to adjust pH. Treated water turbidities are based on on-line analyzer values.

Appendix B
Water Sampling Stations

CITY OF VANCOUVER

Water Sampling Sites - 53 Dedicated Stations



Feb 10/2009

N.T.S.

Appendix C
Metals Analysis

Metals Analysis at Distribution System – 2010 (Analysis provided by GVWD)

	COV - 9			COV - 19		COV - 26		COV - 34		COV - 39		Canadian Guideline
	22-Jun-10	24-Nov-10*	7-Dec-10	22-Jun-10	24-Nov-10	22-Jun-10	23-Nov-10	22-Jun-10	23-Nov-10	22-Jun-10	24-Nov-10	
Aluminum Total mg/L	0.06	2.68	0.04	0.1	0.05	0.07	0.06	0.07	0.07	0.07	0.08	0.2 (A/O)
Arsenic Total mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01
Barium Total mg/L	0	0.02	0	0	0	0	0	0	0	0	0	1
Boron Total mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	5
Cadmium Total mg/L	<0.0005	0.0006	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0006	<0.0005	<0.0005	0.005
Calcium Total mg/L	4.3	3.2	3.6	1.3	2.2	4.4	1.4	4	1.6	3.8	1	none
Chromium Total mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.05
Cobalt Total mg/L	<0.001	0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	none
Copper Total mg/L	<0.002	0.181	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	≤ 1.0 (A/O)
Iron Total mg/L	0.01	2.83	0.01	0.08	0.03	0.02	0.01	0.02	0.03	0.1	0.04	≤ 0.3 (A/O)
Lead Total mg/L	<0.001	0.094	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.01
Magnesium Total mg/L	0.15	0.29	0.16	0.15	0.09	0.15	0.05	0.15	0.06	0.15	0.05	none
Manganese Total mg/L	0.002	1.15	0.003	0.002	0.002	0.002	0.002	0.002	0.008	0.002	0.006	≤ 0.05 (A/O)
Molybdenum Total mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	none
Nickel Total mg/L	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	none
Selenium Total mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01
Silver Total mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	none
Sodium Total mg/L	1.4	1.4	1.5	2	1.7	1.4	<0.5	1.8	0.9	2.1	1.2	≤ 200 (A/O)
Zinc Total mg/L	<0.002	0.06	<0.002	0.003	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	≤ 5.0 (A/O)

A/O - aesthetic objective

* Anomalous results from a sample taken on November 24, 2011 at sample station Cov – 9. All other parameters were within acceptable range for this date and a resample was taken on December 7, 2011 which showed normal levels within the Canadian guidelines.

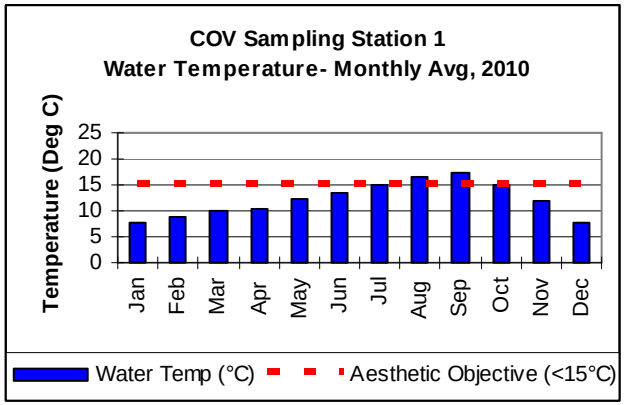
Appendix D
Disinfection By-product Results

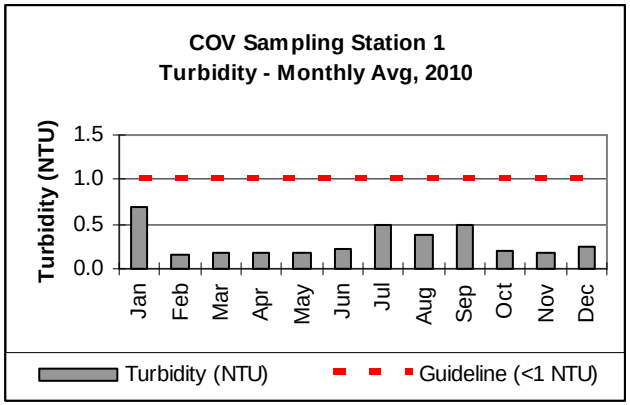
Sample	Date Sampled	THM (ppb)						HAA (ppb)						
		Bromodichloromethane	Bromoform	Chlorodibromomethane	Chloroform	Total Trihalomethanes	**Total THM Quarterly Average**	Dibromoacetic Acid	Dichloroacetic Acid	Monobromoacetic Acid	Monochloroacetic Acid	Trichloroacetic Acid	Total Haloacetic Acid	**Total HAA Quarterly Average**
COV-03	5/28/2009	<1	<1	<1	42	42		<0.5	22	<1	3	25	50	
	8/20/2009	<1	<1	<1	38	38		<0.5	10	<1	<2	32	42	
	11/26/2009	<1	<1	<1	41	41		<0.5	16	<1	4	69.5	89	
	1/28//2010	<1	<1	<1	45	45	**42**	<0.5	37	<1	10	35.6	83	**66**
	5/20//2010	<1	<1	<1	75	75	**50**	<0.5	59	<1	8	57	123	**84**
	9/16//2010	<1	<1	<1	33	33	**49**	<0.5	16	<1	3	48	68	**91**
	11/25/2010	<1	<1	<1	32	32	**46**	<0.5	12	<1	7	15	34	**77**
COV-07	5/28/2009	<1	<1	<1	59	59		<0.5	36	<1	6	46	88	
	8/20/2009	<1	<1	<1	31	31		<0.5	24	<1	13	26	63	
	11/26/2009	<1	<1	<1	25	25		<0.5	35	<1	9	39.2	84	
	1/28//2010	<1	<1	<1	39	39	**39**	<0.5	26	<1	13	20.4	60	**66**
	5/20//2010	<1	<1	<1	72	72	**42**	<0.5	64	<1	14	59	136	**84**
	9/16//2010	1	<1	<1	24	26	**41**	<0.5	20	<1	15	24	60	**85**
	11/25/2010	<1	<1	<1	26	26	**41**	<0.5	11	<1	9	12	32	**72**
COV-24	5/28/2009	<1	<1	<1	62	62		<0.5	22	<1	2	23	47	
	8/20/2009	1	<1	<1	43	44		<0.5	30	<1	6	41	77	
	11/26/2009	<1	<1	<1	60	60		<0.5	38	<1	4	58.3	100	
	1/28//2010	<1	<1	<1	60	61	**57**	<0.5	43	<1	18	67.7	130	**89**
	5/20//2010	<1	<1	<1	66	66	**58**	<0.5	36	<1	10	52	97	**101**
	9/16//2010	1	<1	<1	19	20	**52**	<0.5	14	<1	13	12	40	**92**
	11/25/2010	<1	<1	<1	20	21	**42**	<0.5	12	<1	13	13	39	**77**
COV-28	6/2/2009	<1	<1	<1	54	54		<0.5	27	<1	3	35	65	
	8/20/2009	<1	<1	<1	42	42		<0.5	22	<1	3	29	54	
	11/26/2009	<1	<1	<1	68	68		<0.5	48	<1	8	48.6	100	
	1/28//2010	<1	<1	<1	56	56	**55**	<0.5	38	<1	<2	37.4	75	**74**
	5/20//2010	<1	<1	<1	87	87	**63**	<0.5	60	<1	8	58	127	**89**
	9/16//2010	<1	<1	<1	37	37	**62**	<0.5	30	<1	4	54	89	**98**
	11/25/2010	<1	<1	<1	23	23	**51**	<0.5	8	<1	7	9	24	**79**

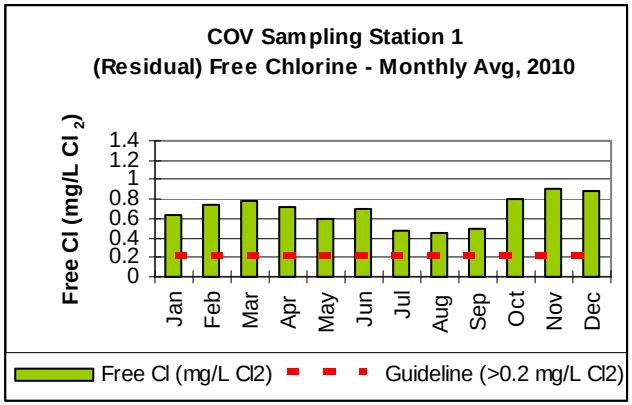
Sample	Date Sampled	THM (ppb)						HAA (ppb)						
		Bromodichloromethane	Bromoform	Chlorodibromomethane	Chloroform	Total Trihalomethanes	**Total THM Quarterly Average**	Dibromoacetic Acid	Dichloroacetic Acid	Monobromoacetic Acid	Monochloroacetic Acid	Trichloroacetic Acid	Total Haloacetic Acid	**Total HAA Quarterly Average**
COV-30	5/28/2009	<1	<1	<1	54	54		<0.5	20	<1	2	15	37	
	8/20/2009	<1	<1	<1	20	20		<0.5	15	<1	3	13	31	
	11/26/2009	<1	<1	<1	64	64		<0.5	63	<1	6	52.2	120	
	1/28//2010	<1	<1	<1	55	55	**48**	<0.5	36	<1	<2	31.9	68	**50**
	5/20//2010	<1	<1	<1	30	30	**42**	<0.5	34	<1	3	29	66	**47**
	9/16//2010	<1	<1	<1	22	22	**43**	<0.5	31	<1	8	33	72	**47**
	11/25/2010	<1	<1	<1	20	20	**32**	<0.5	12	<1	25	12	49	**58**
COV-46	5/28/2009	<1	<1	<1	56	56								
	8/20/2009	<1	<1	<1	29	29								
	11/26/2009	<1	<1	<1	37	37								
	1/28//2010	<1	<1	<1	32	32	**39**							
	5/20//2010	<1	<1	<1	66	66	**41**							
	9/16//2010	1	<1	<1	18	19	**39**							
	11/25/2010	<1	<1	<1	19	19	**34**							
COV-54	5/28/2009	0.4	<1	<0.5	45	45		<0.5	18	<1	2	16	36	
	8/20/2009	<1	<1	<1	27	27		<0.5	18	<1	2	21	41	
	11/26/2009	<1	<1	<1	48	48		<0.5	36	<1	7	48.4	92	
	1/28//2010	<1	<1	<1	46	46	**42**	<0.5	32	<1	6	40	78	**62**
	5/20//2010	<1	<1	<1	58	58	**45**	<0.5	44	<1	4	50	99	**78**
	9/16//2010	<1	<1	<1	30	30	**46**	<0.5	27	<1	4	46	77	**87**
	11/25/2010	<1	<1	<1	28	28	**41**	<0.5	9	<1	11	10	30	**71**
COV-55	6/2//2009	<1	<1	<1	48	48		<0.5	27	<1	2	29	58	
	8/20/2009	<1	<1	<1	33	33		<0.5	22	<1	3	22	47	
	11/26/2009	<1	<1	<1	47	47		<0.5	50	<1	8	47.2	110	
	1/28//2010	<1	<1	<1	51	51	**45**	<0.5	34	<1	9	31.2	74	**72**
	5/20//2010	<1	<1	<1	34	34	**41**	<0.5	40	<1	2	42	83	**79**
	9/16//2010	1	<1	<1	22	23	**39**	<0.5	18	<1	10	19	47	**79**
	11/25/2010	<1	<1	<1	21	21	**32**	<0.5	9	<1	13	11	34	**60**

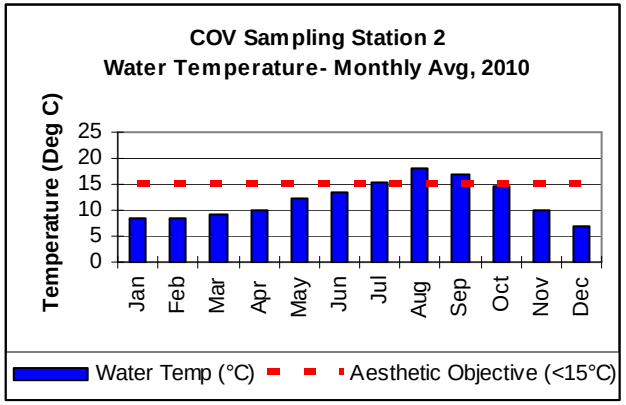
Sample	Date Sampled	THM (ppb)						HAA (ppb)						
		Bromodichloromethane	Bromoform	Chlorodibromomethane	Chloroform	Total Trihalomethanes	**Total THM Quarterly Average**	Dibromoacetic Acid	Dichloroacetic Acid	Monobromoacetic Acid	Monochloroacetic Acid	Trichloroacetic Acid	Total Haloacetic Acid	**Total HAA Quarterly Average**
COV-58	5/28/2009							<0.5	31	<1	3	32	66	
	6/23/2009	<1	<1	<1	39	39								
	8/20/2009	1	<1	<1	46	47		<0.5	28	<1	5	37	70	
	11/26/2009	<1	<1	<1	46	46		<0.5	39	<1	12	43.1	95	
	1/28/2010	<1	<1	<1	39	39	**43**	<0.5	35	<1	9	29.5	74	**76**
	5/20/2010	<1	<1	<1	77	77	**52**	<0.5	59	<1	10	73	142	**95**
	9/16/2010	1	<1	<1	20	21	**46**	<0.5	23	<1	17	17	56	**92**
	11/25/2010	<1	<1	<1	23	23	**40**	<0.5	10	<1	21	7	38	**78**
COV-62	5/28/2009	<1	<1	<1	79	79								
	8/20/2009	<1	<1	<1	33	33								
	11/26/2009	<1	<1	<1	53	53								
	1/28//2010	<1	<1	<1	46	47	**53**							
	5/20//2010	<1	<1	<1	42	42	**44**							
	9/16//2010	1	<1	<1	26	27	**42**							
	11/25/2010	<1	<1	<1	28	29	**36**							

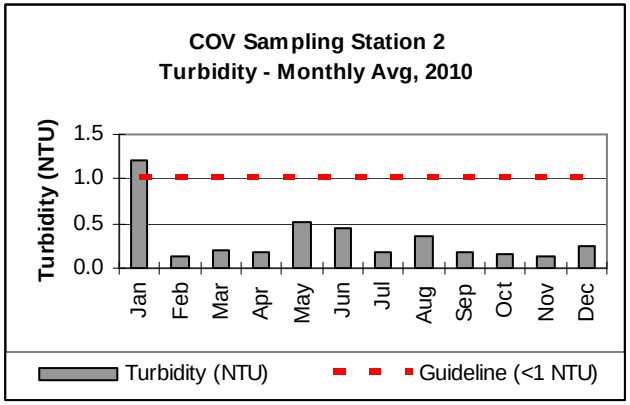
Appendix E
Sampling Site Characterization

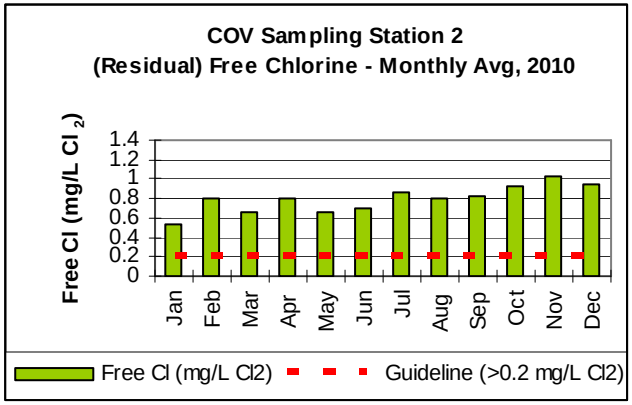

COV Sampling Station 1
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

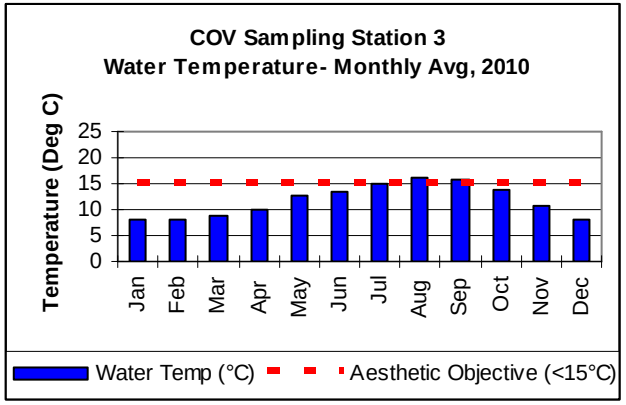

COV Sampling Station 1
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Turbidity (NTU)
Guideline (<1 NTU)

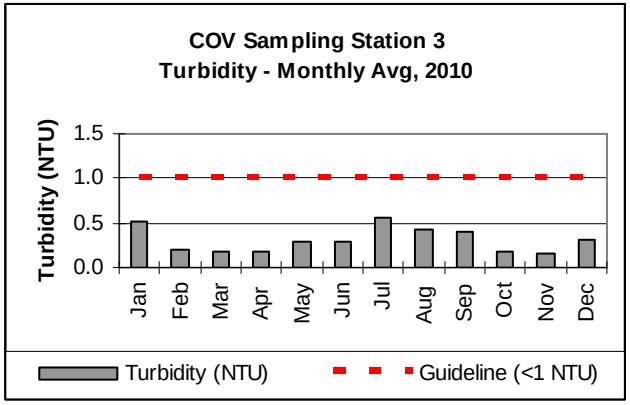

COV Sampling Station 1
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

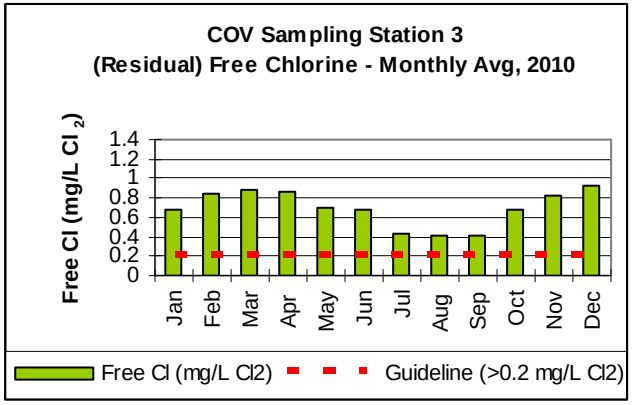

COV Sampling Station 2
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

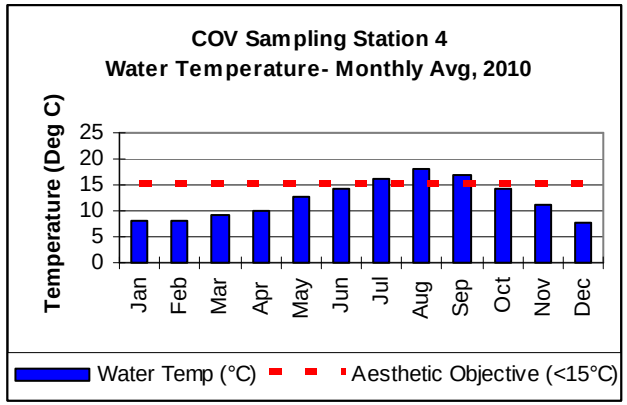

COV Sampling Station 2
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Turbidity (NTU)
Guideline (<1 NTU)

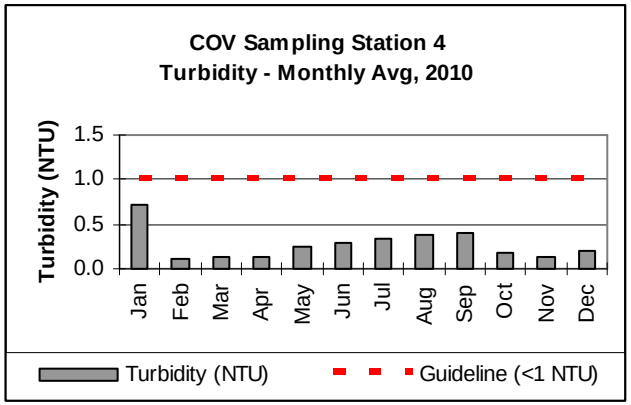

COV Sampling Station 2
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

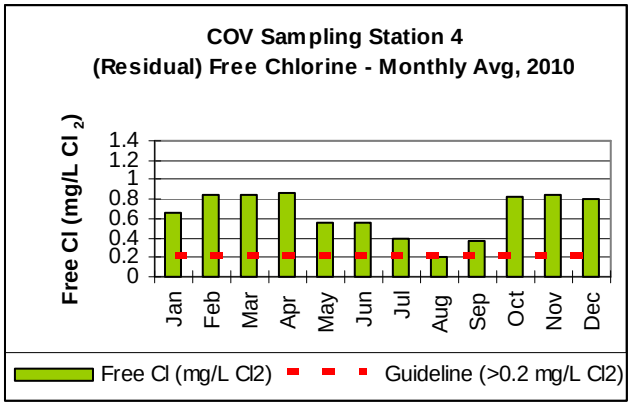

COV Sampling Station 3
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

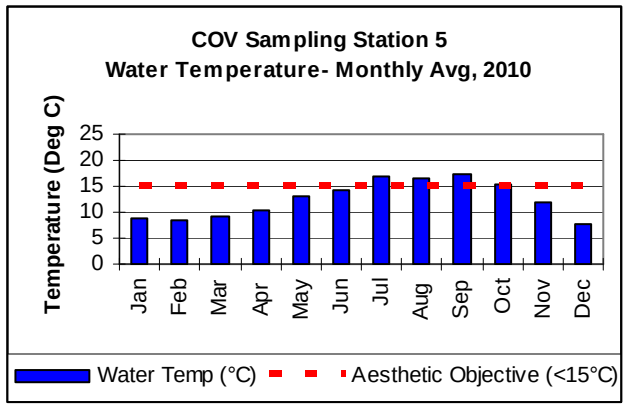

COV Sampling Station 3
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Turbidity (NTU)
Guideline (<1 NTU)

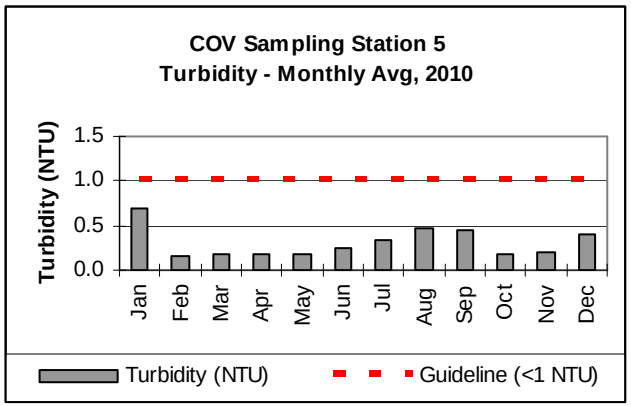

COV Sampling Station 3
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

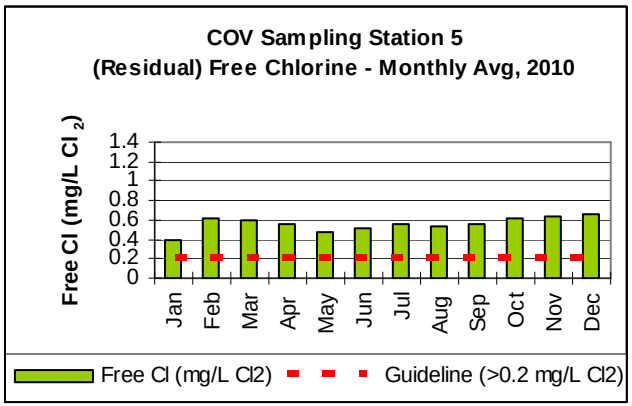

COV Sampling Station 4
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

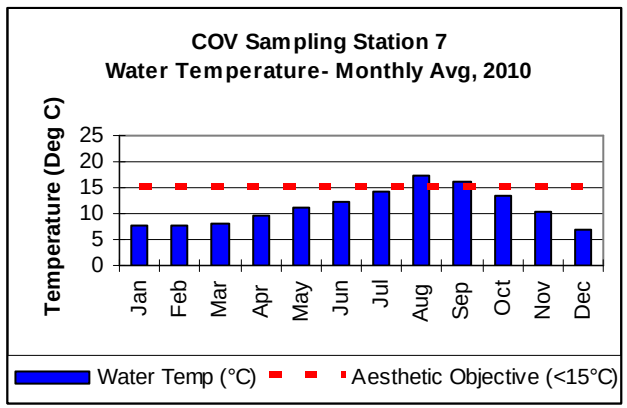

COV Sampling Station 4
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Turbidity (NTU)
Guideline (<1 NTU)

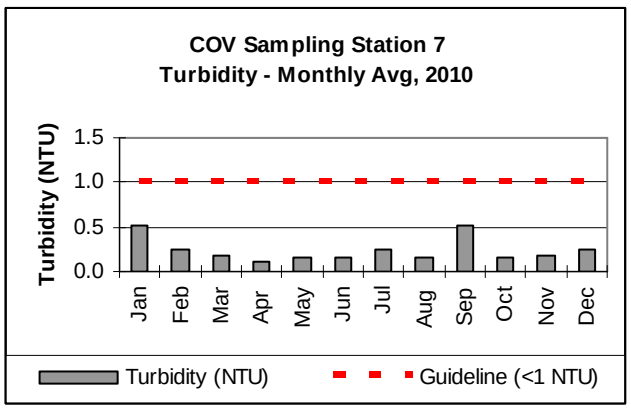

COV Sampling Station 4
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

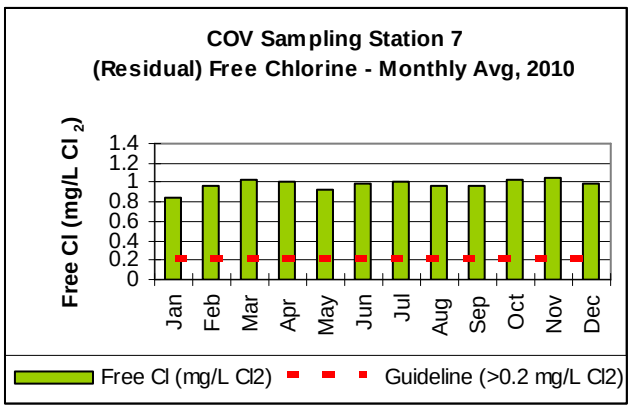

COV Sampling Station 5
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

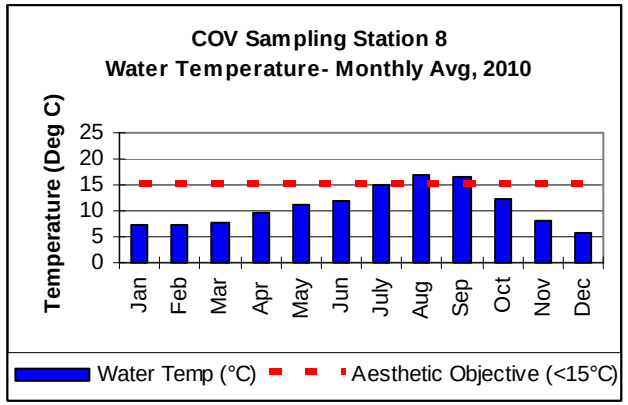

COV Sampling Station 5
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Turbidity (NTU)
Guideline (<1 NTU)

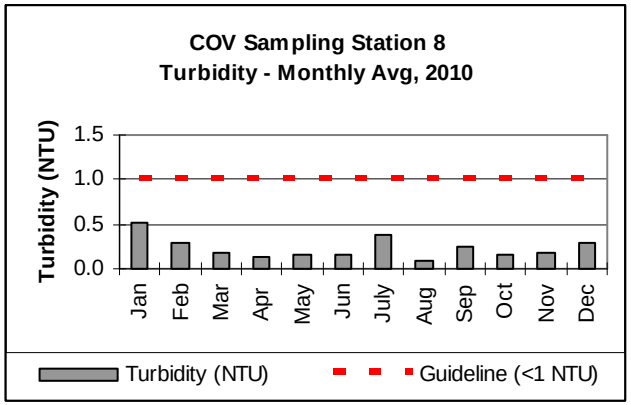

COV Sampling Station 5
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

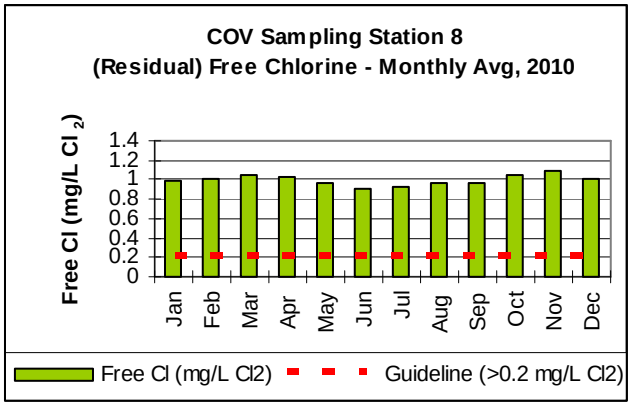

COV Sampling Station 7
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

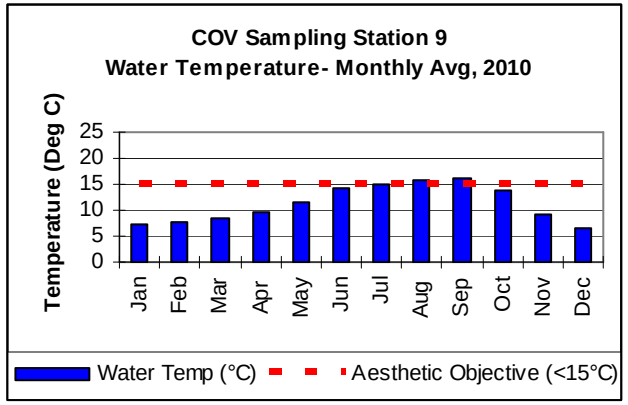

COV Sampling Station 7
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Turbidity (NTU)
Guideline (<1 NTU)

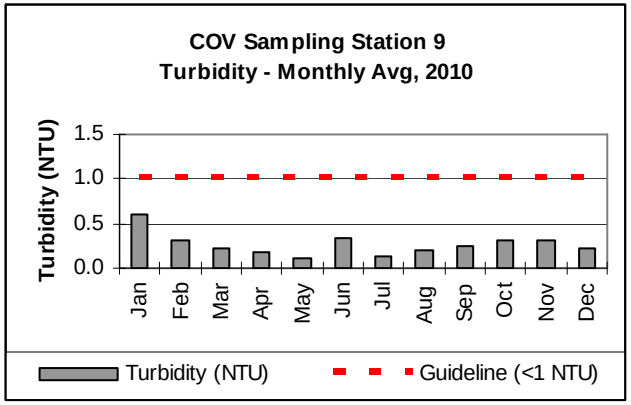

COV Sampling Station 7
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

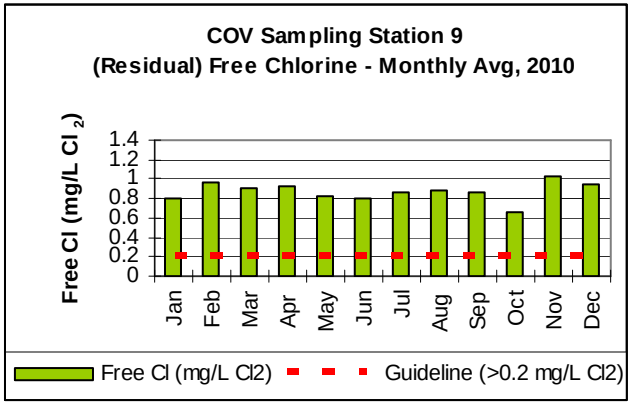

COV Sampling Station 8
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan Feb Mar Apr May Jun July Aug Sep Oct Nov Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

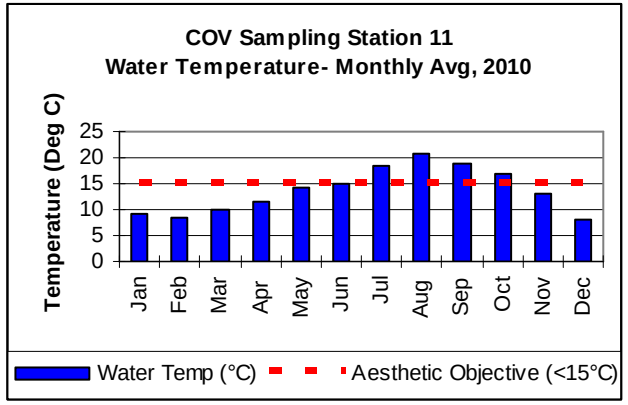

COV Sampling Station 8
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan Feb Mar Apr May Jun July Aug Sep Oct Nov Dec
Turbidity (NTU)
Guideline (<1 NTU)

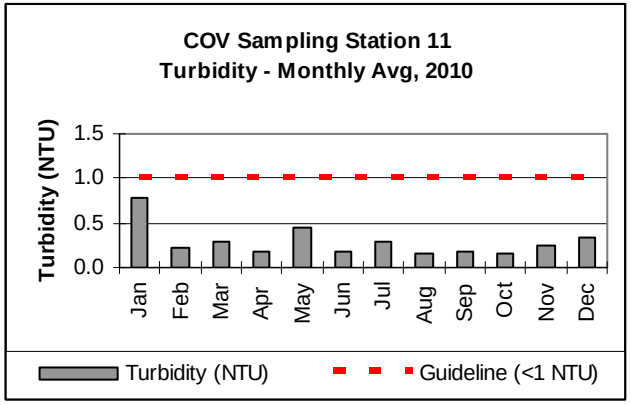

COV Sampling Station 8
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

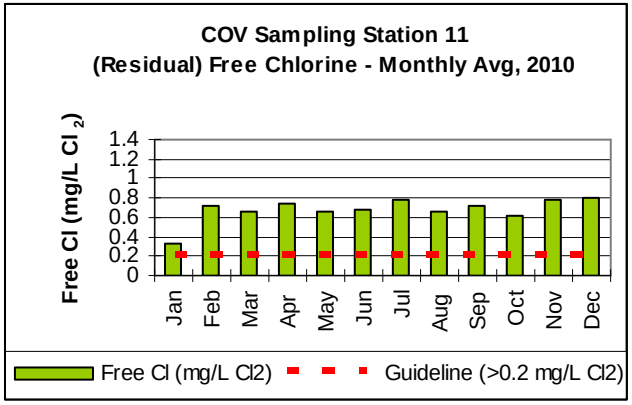

COV Sampling Station 9
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

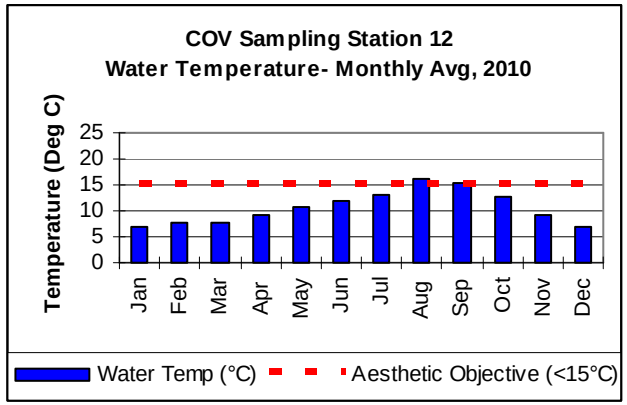

COV Sampling Station 9
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Turbidity (NTU)
Guideline (<1 NTU)

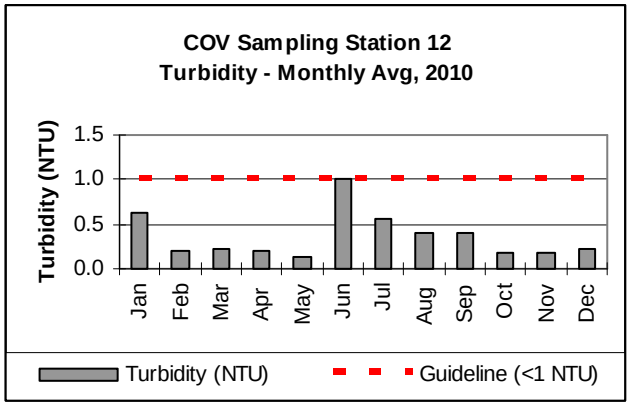

COV Sampling Station 9
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

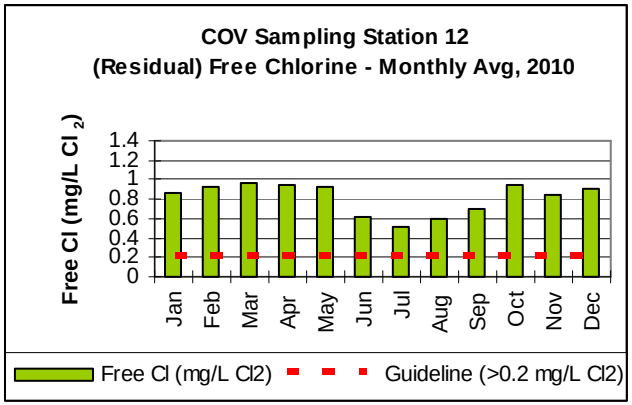

COV Sampling Station 11
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

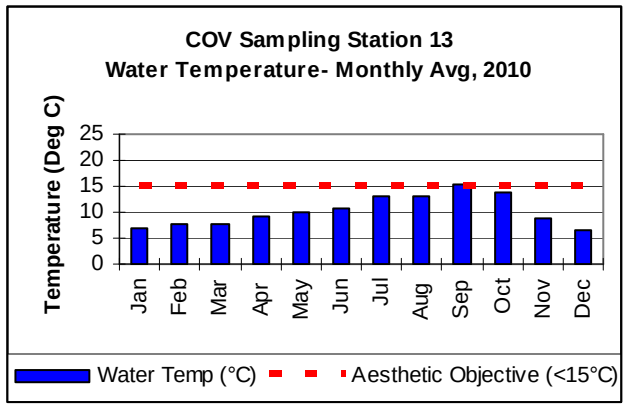

COV Sampling Station 11
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Turbidity (NTU)
Guideline (<1 NTU)

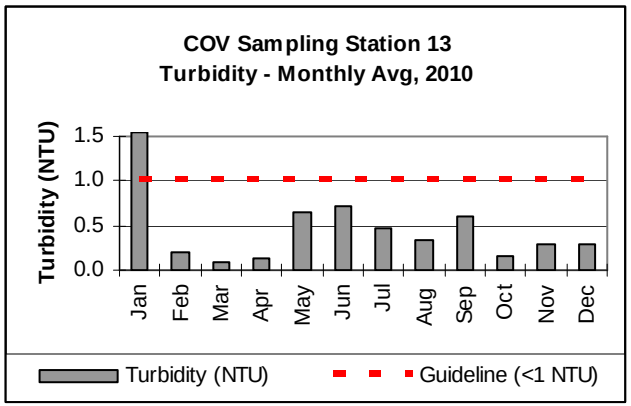

COV Sampling Station 11
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

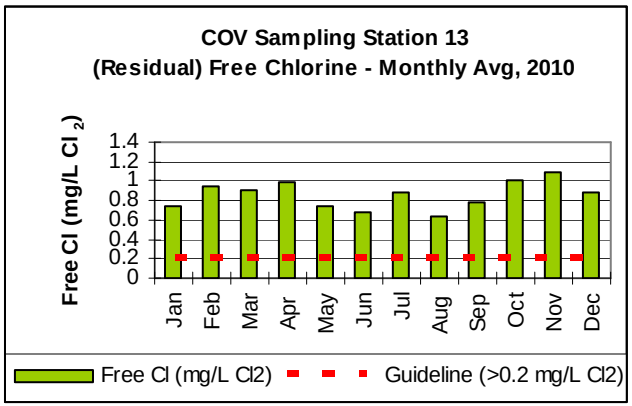

COV Sampling Station 12
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

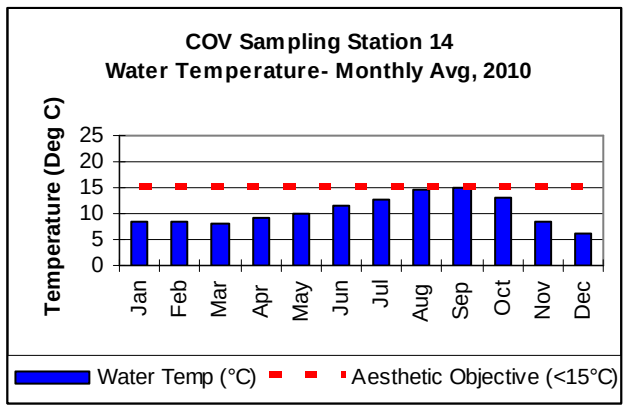

COV Sampling Station 12
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Turbidity (NTU)
Guideline (<1 NTU)

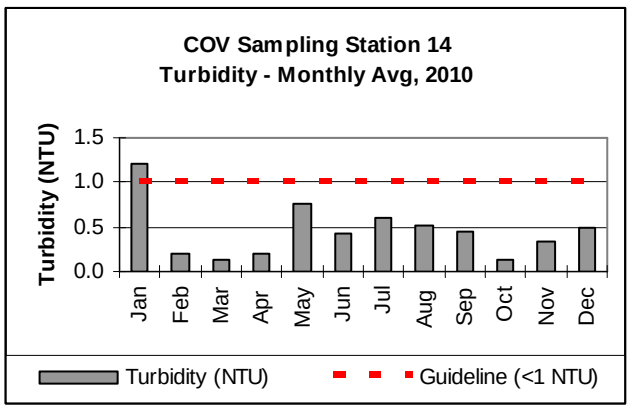

COV Sampling Station 12
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

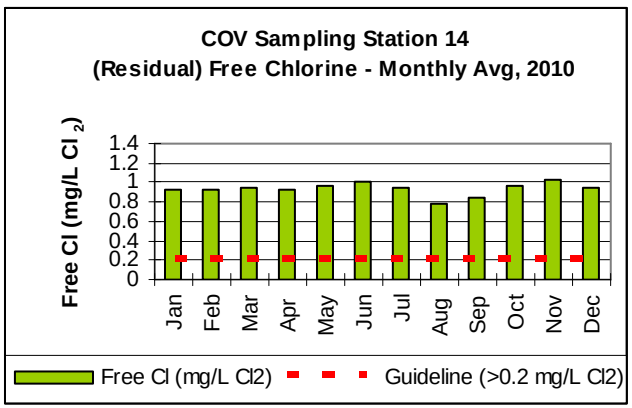

COV Sampling Station 13
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

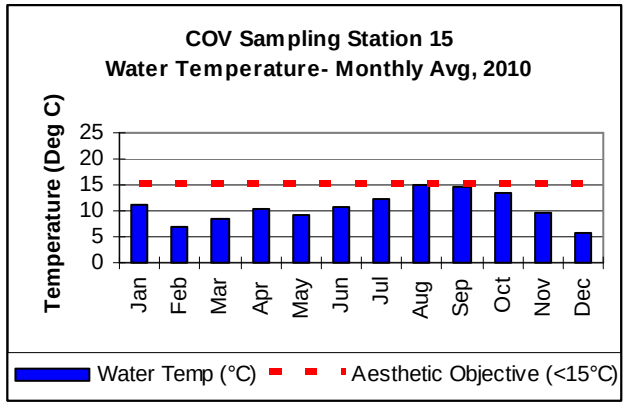

COV Sampling Station 13
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Turbidity (NTU)
Guideline (<1 NTU)

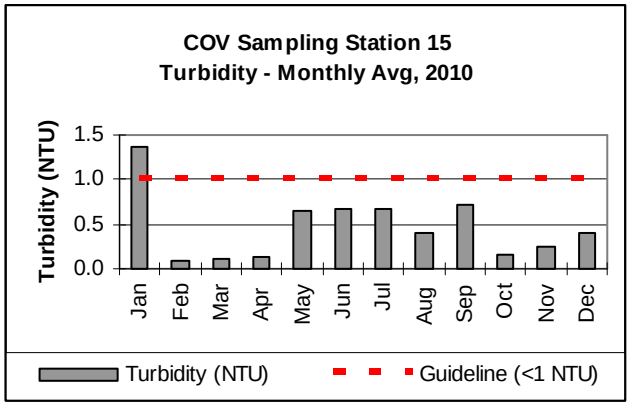

COV Sampling Station 13
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

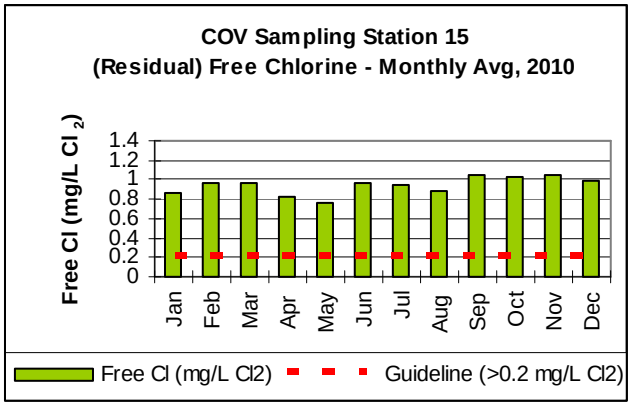

COV Sampling Station 14
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

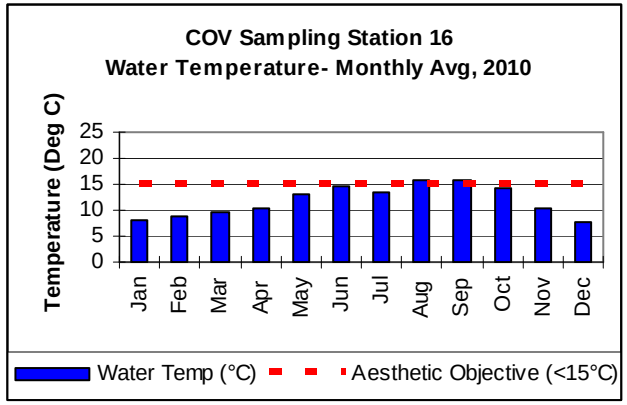

COV Sampling Station 14
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Turbidity (NTU)
Guideline (<1 NTU)

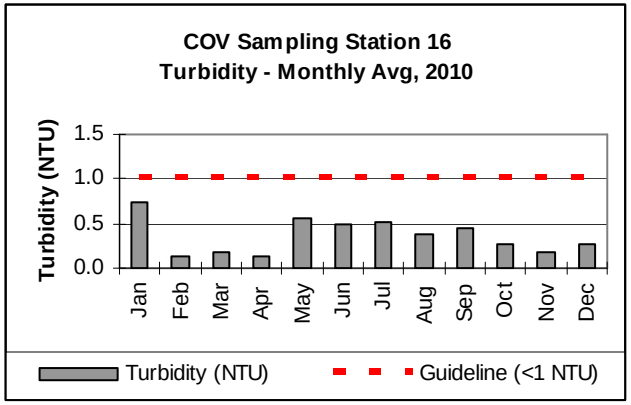

COV Sampling Station 14
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

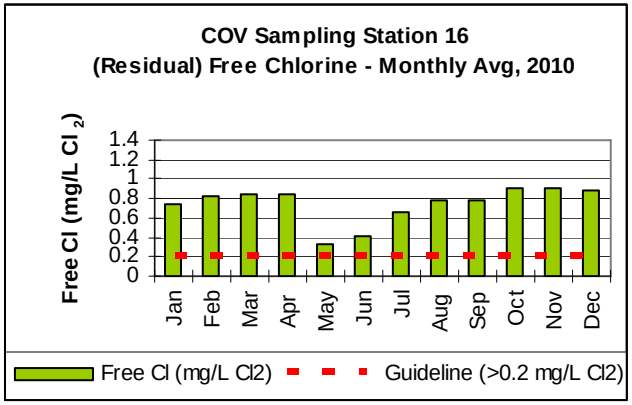

COV Sampling Station 15
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

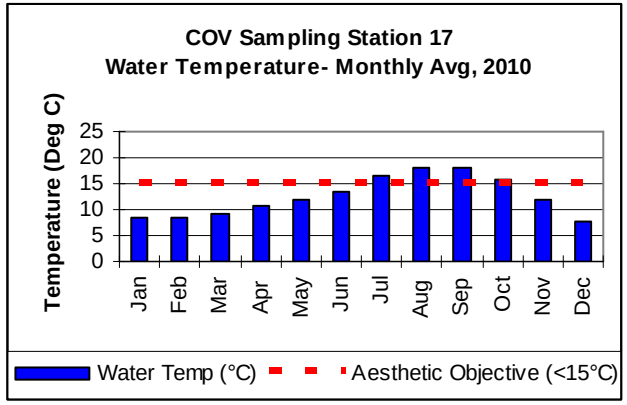

COV Sampling Station 15
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Turbidity (NTU)
Guideline (<1 NTU)

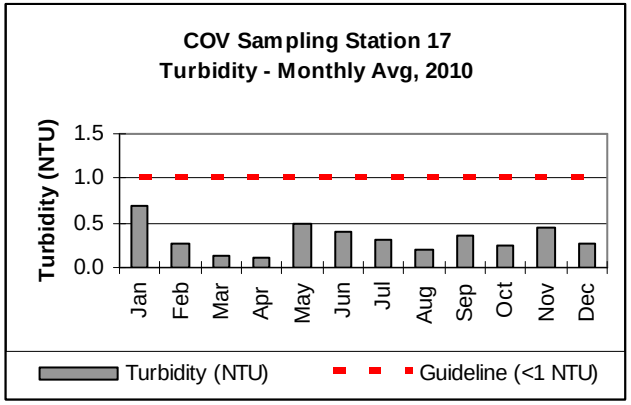

COV Sampling Station 15
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

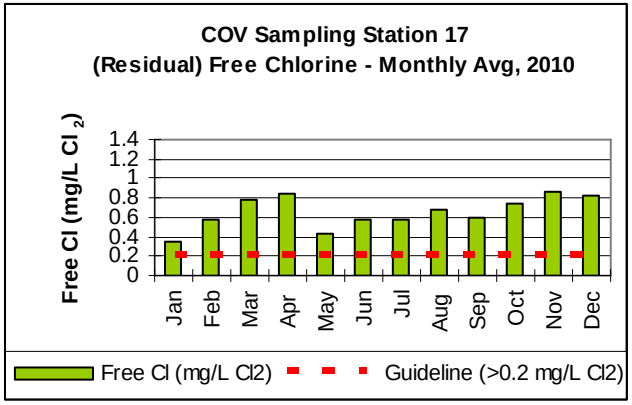

COV Sampling Station 16
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

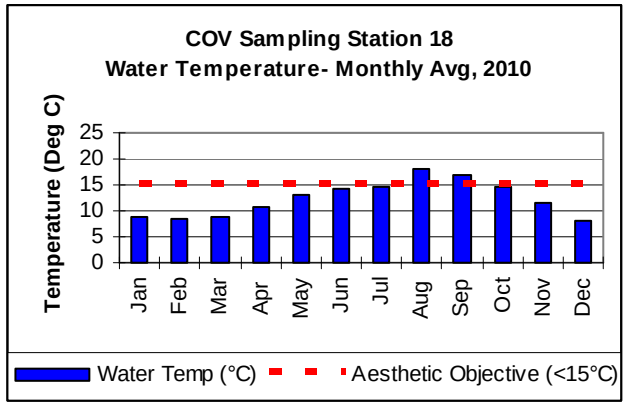

COV Sampling Station 16
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Turbidity (NTU)
Guideline (<1 NTU)

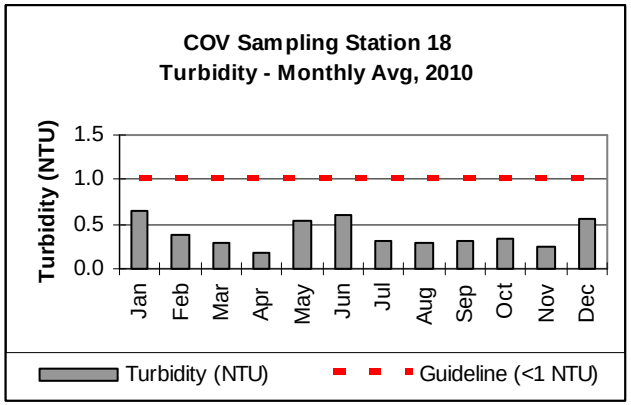

COV Sampling Station 16
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

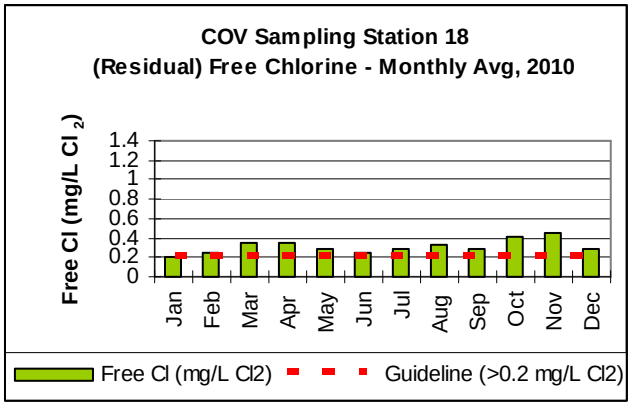

COV Sampling Station 17
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

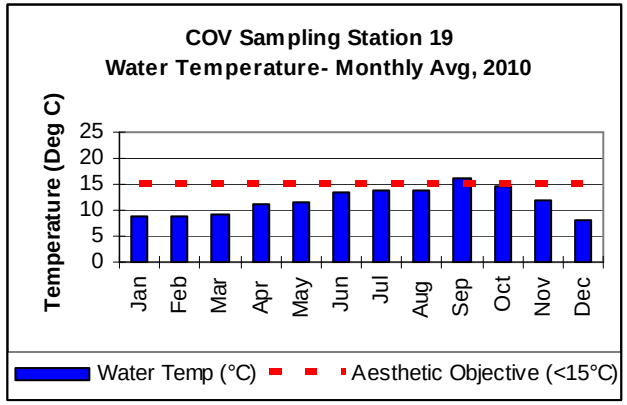

COV Sampling Station 17
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Turbidity (NTU)
Guideline (<1 NTU)

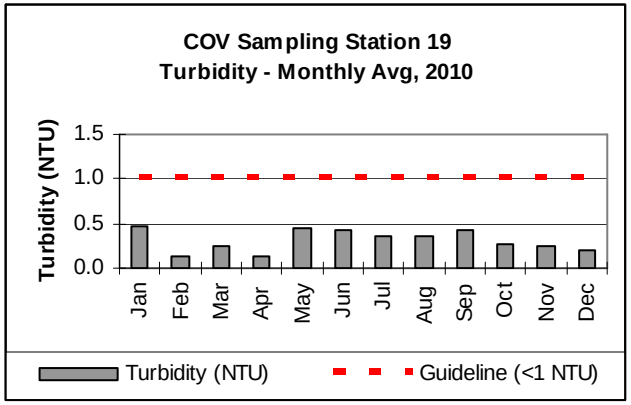

COV Sampling Station 17
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

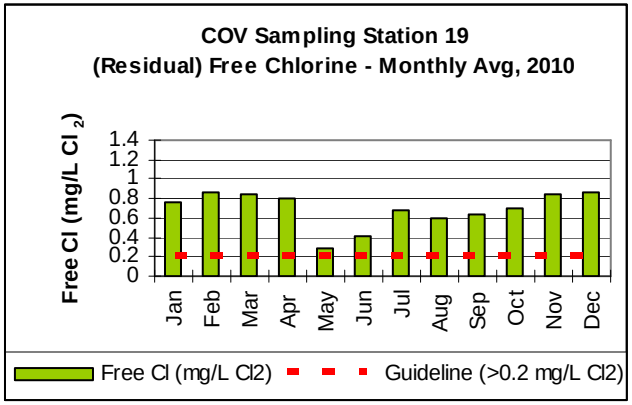

COV Sampling Station 18
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

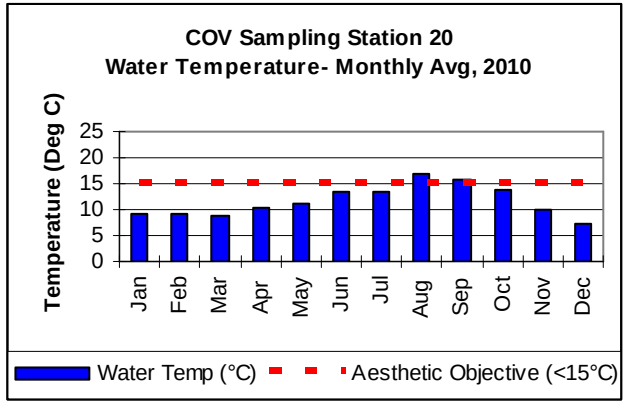

COV Sampling Station 18
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Turbidity (NTU)
Guideline (<1 NTU)

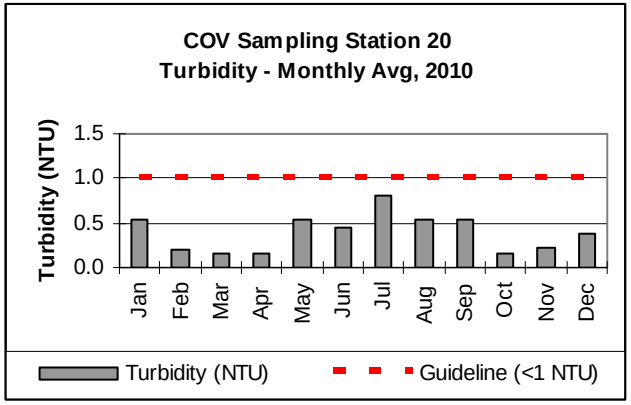

COV Sampling Station 18
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

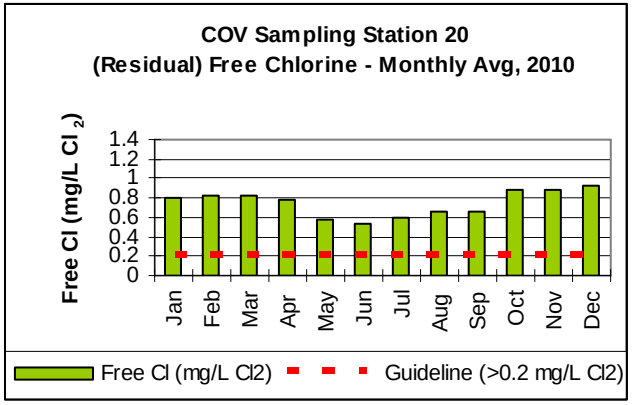

COV Sampling Station 19
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

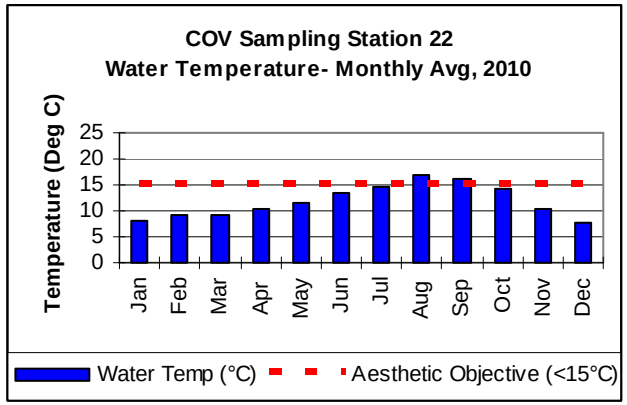

COV Sampling Station 19
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Turbidity (NTU)
Guideline (<1 NTU)

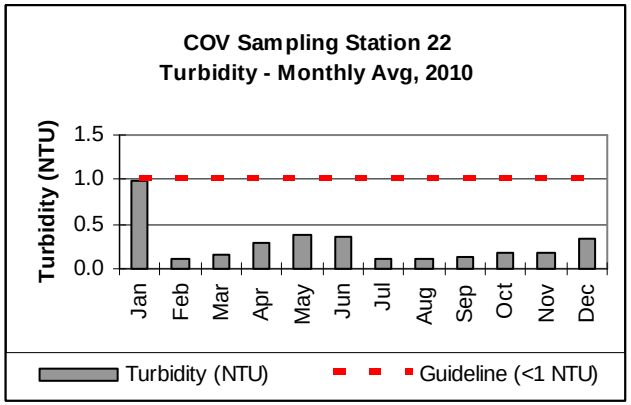

COV Sampling Station 19
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

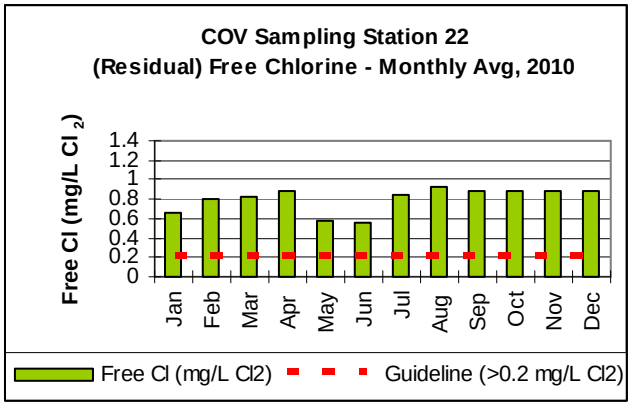

COV Sampling Station 20
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

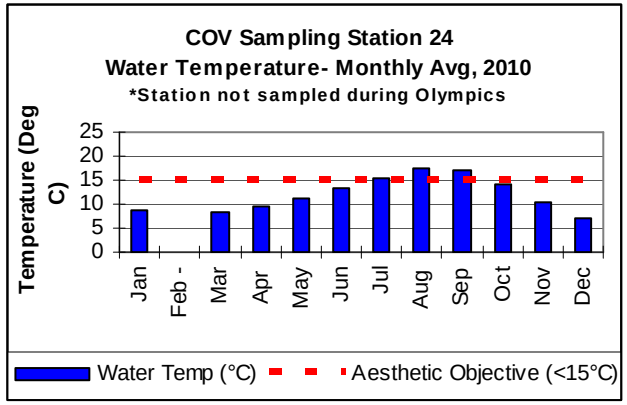

COV Sampling Station 20
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Turbidity (NTU)
Guideline (<1 NTU)

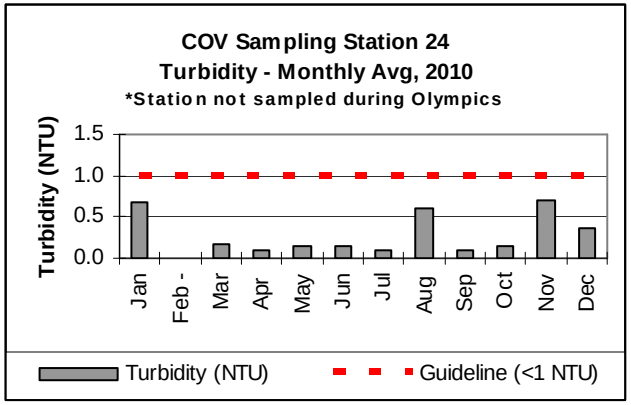

COV Sampling Station 20
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

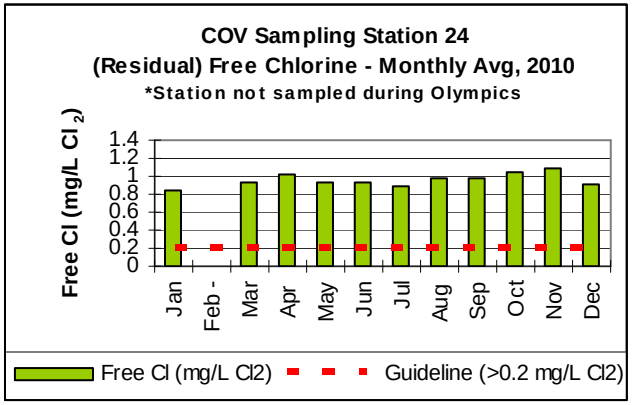

COV Sampling Station 22
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

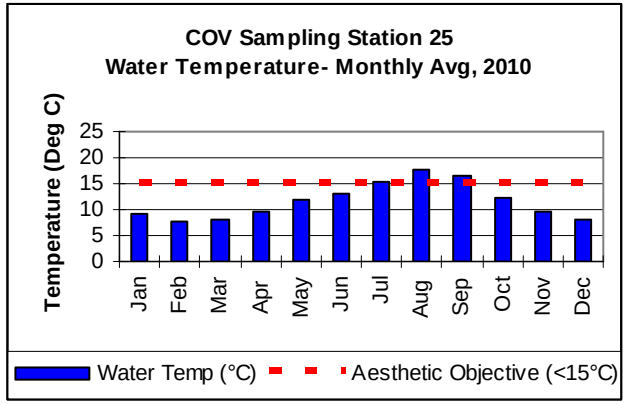

COV Sampling Station 22
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Turbidity (NTU)
Guideline (<1 NTU)

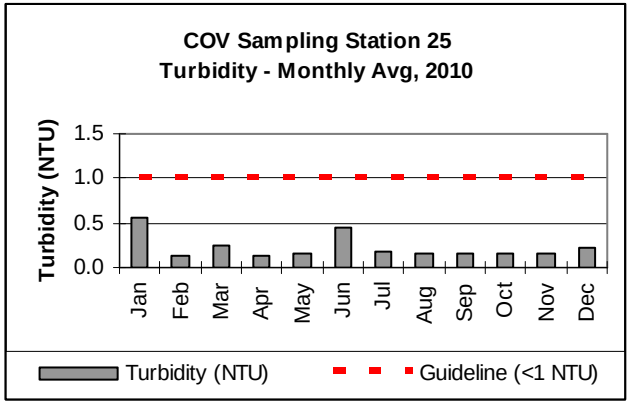

COV Sampling Station 22
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

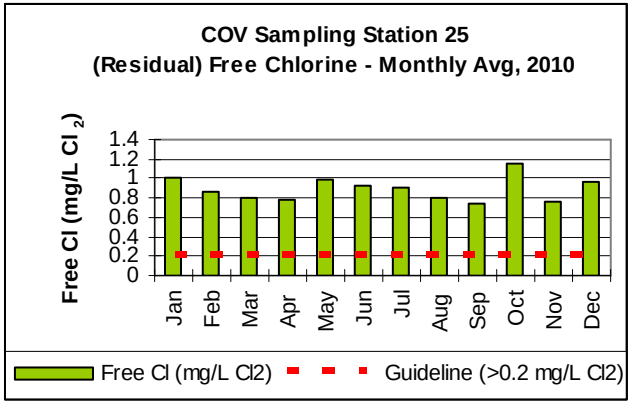

COV Sampling Station 24
Water Temperature- Monthly Avg, 2010
*Station not sampled during Olympics
Temperature (Deg C)
25
20
15
10
5
0
Jan
Feb -
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

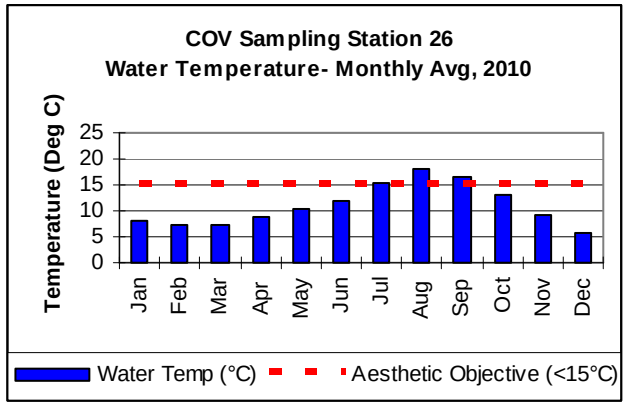

COV Sampling Station 24
Turbidity - Monthly Avg, 2010
*Station not sampled during Olympics
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan
Feb -
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Turbidity (NTU)
Guideline (<1 NTU)

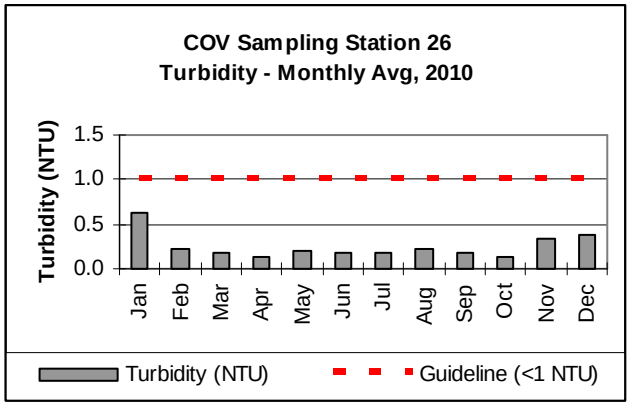

COV Sampling Station 24
(Residual) Free Chlorine - Monthly Avg, 2010
*Station not sampled during Olympics
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan
Feb -
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

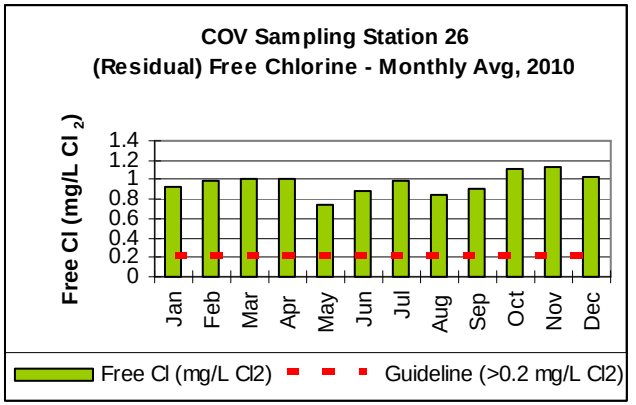

COV Sampling Station 25
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

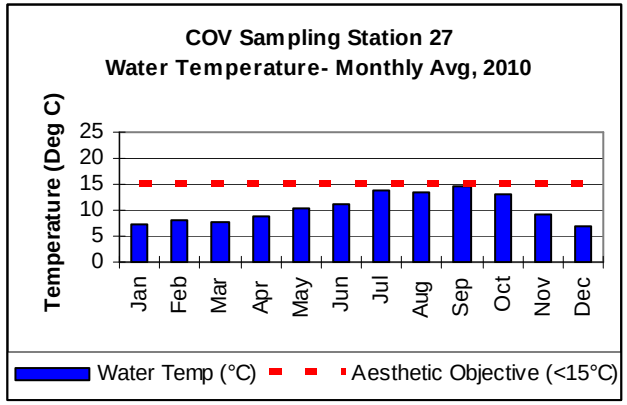

COV Sampling Station 25
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Turbidity (NTU)
Guideline (<1 NTU)

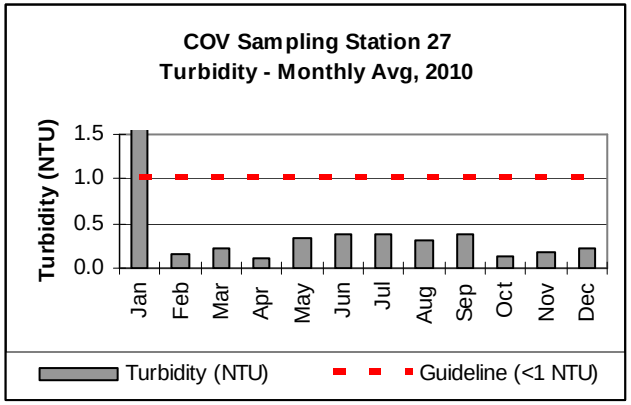

COV Sampling Station 25
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

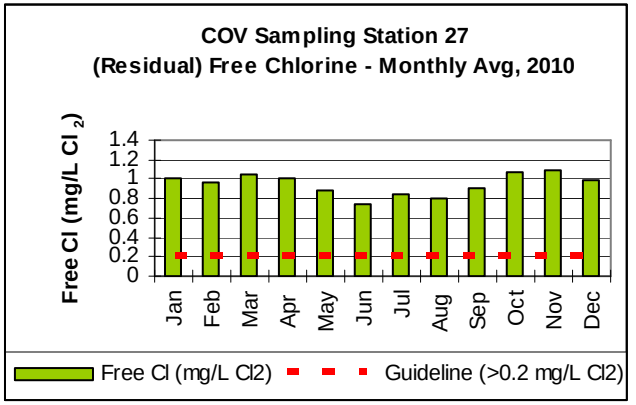

COV Sampling Station 26
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

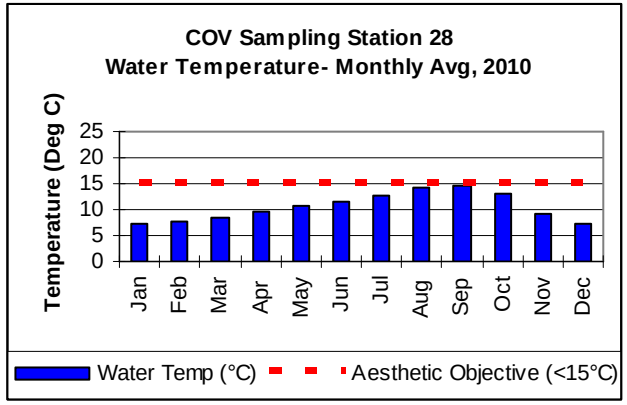

COV Sampling Station 26
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Turbidity (NTU)
Guideline (<1 NTU)

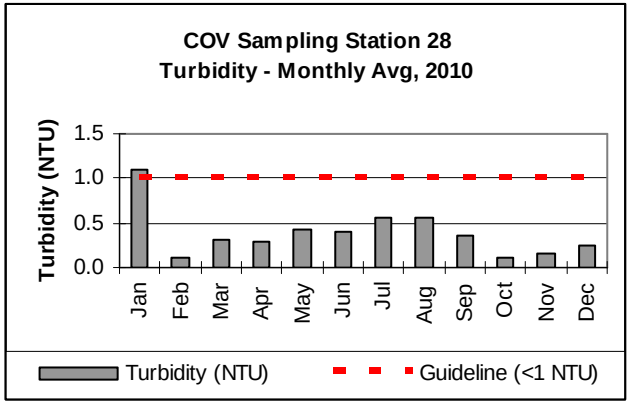

COV Sampling Station 26
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

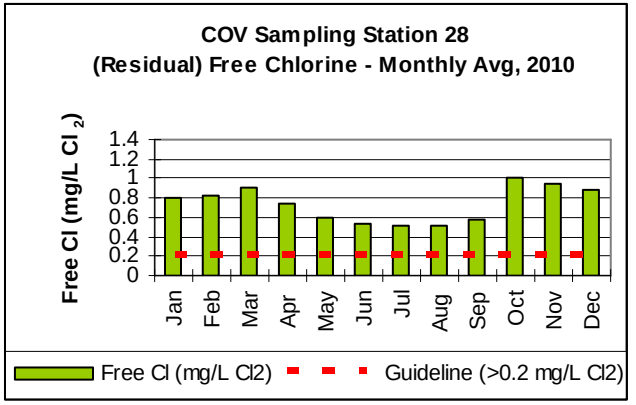

COV Sampling Station 27
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

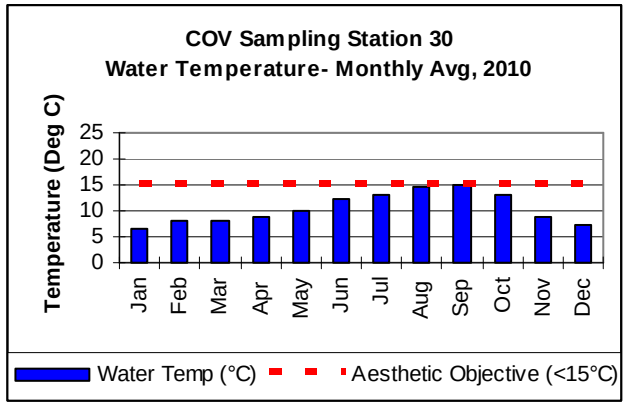

COV Sampling Station 27
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Turbidity (NTU)
Guideline (<1 NTU)

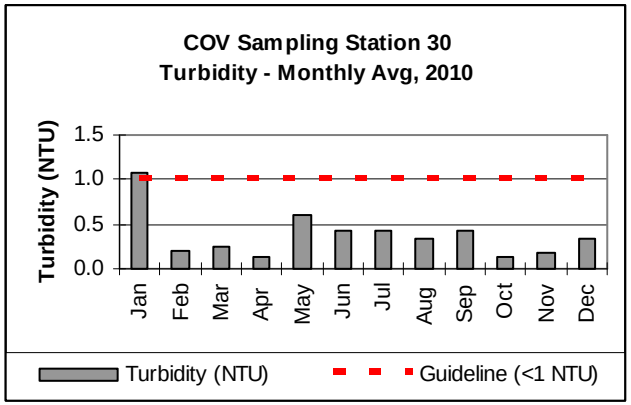

COV Sampling Station 27
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

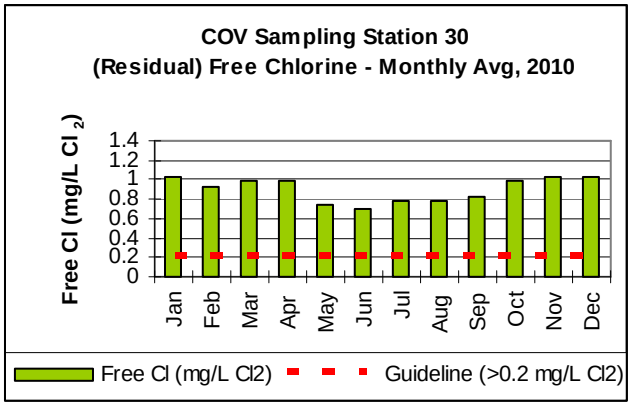

COV Sampling Station 28
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

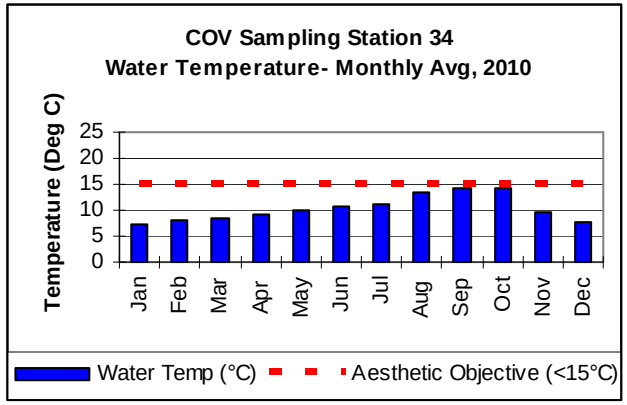

COV Sampling Station 28
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Turbidity (NTU)
Guideline (<1 NTU)

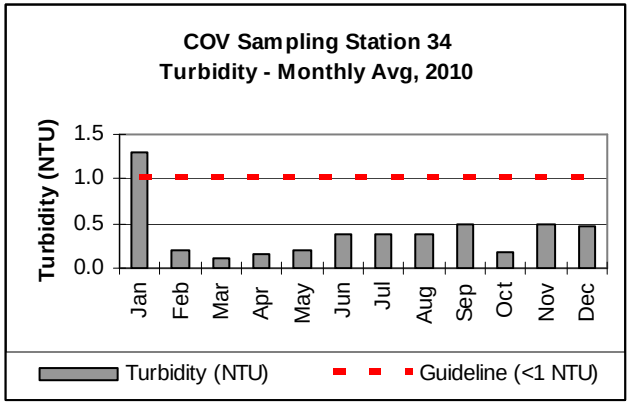

COV Sampling Station 28
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

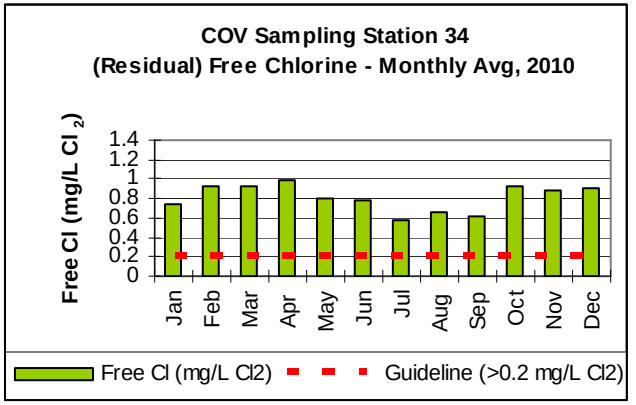

COV Sampling Station 30
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

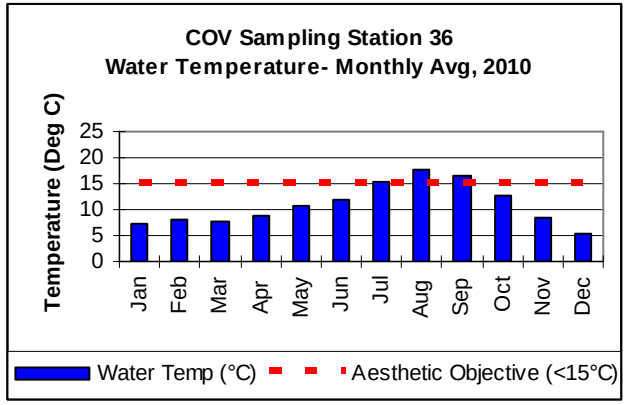

COV Sampling Station 30
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Turbidity (NTU)
Guideline (<1 NTU)

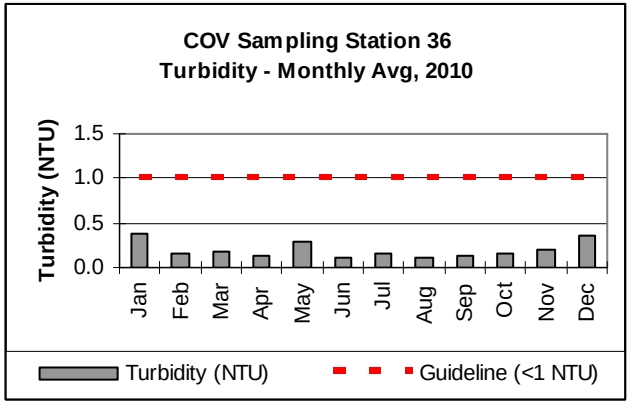

COV Sampling Station 30
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

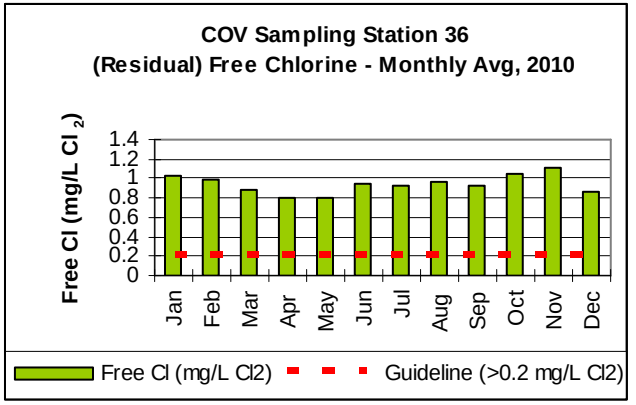

COV Sampling Station 34
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

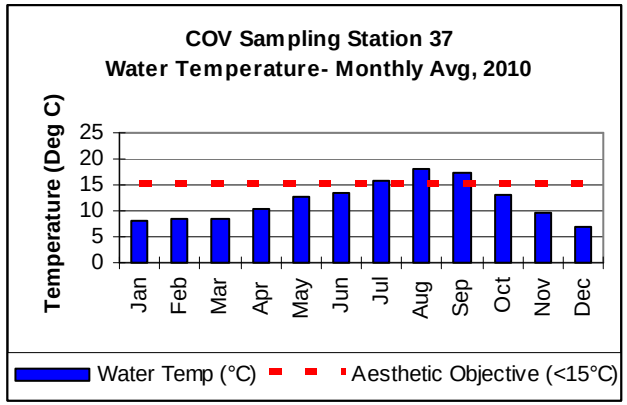

COV Sampling Station 34
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Turbidity (NTU)
Guideline (<1 NTU)

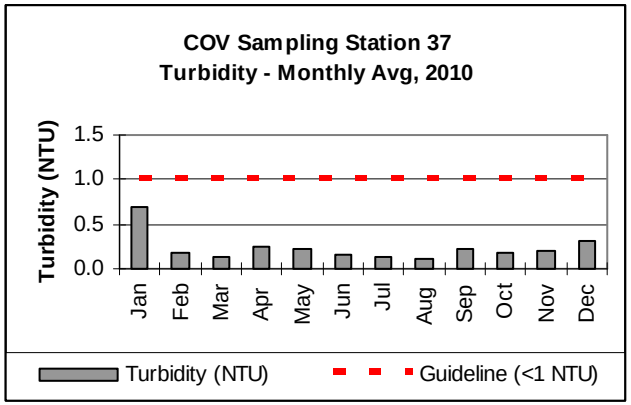

COV Sampling Station 34
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

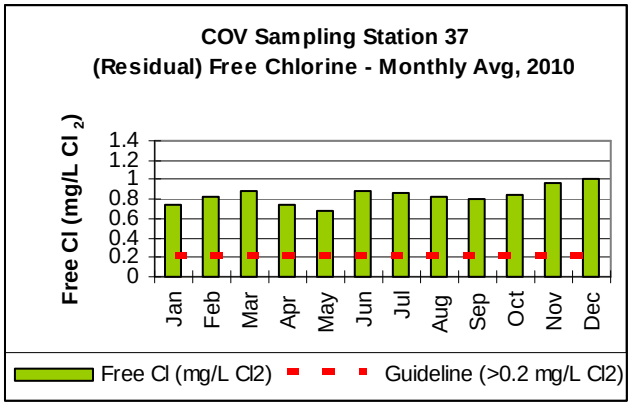

COV Sampling Station 36
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

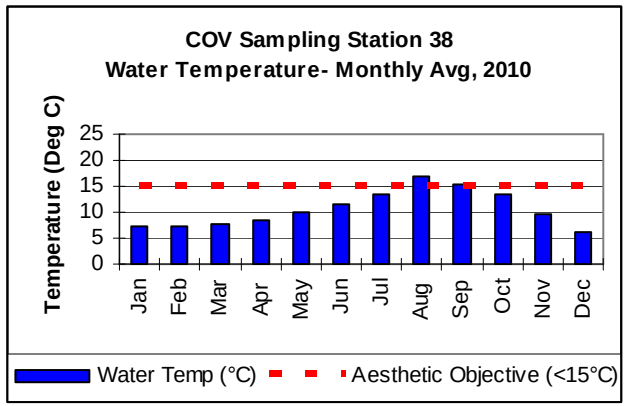

COV Sampling Station 36
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Turbidity (NTU)
Guideline (<1 NTU)

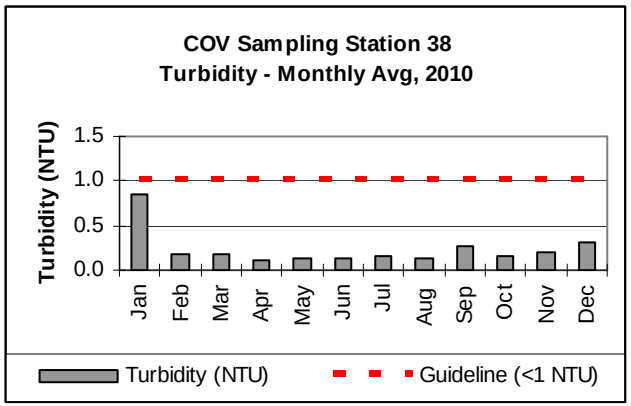

COV Sampling Station 36
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

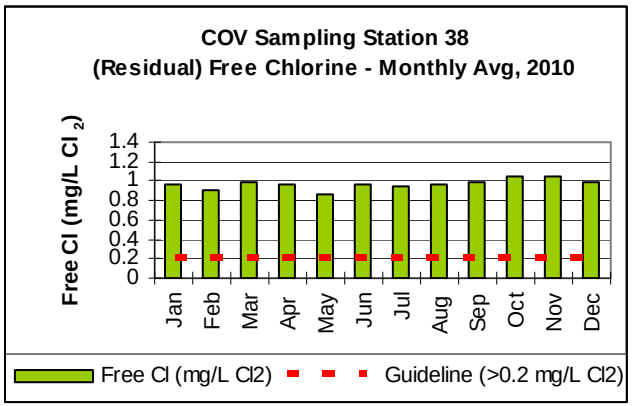

COV Sampling Station 37
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

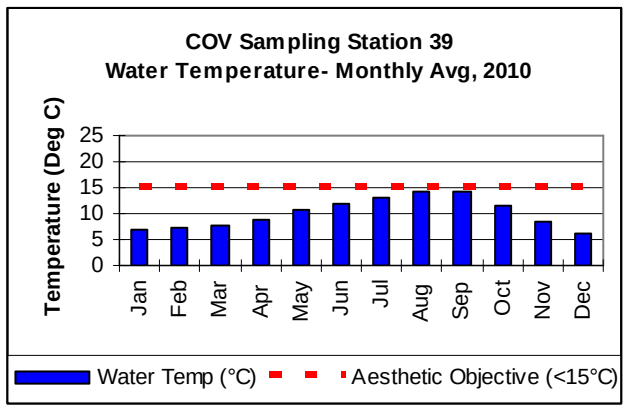

COV Sampling Station 37
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Turbidity (NTU)
Guideline (<1 NTU)

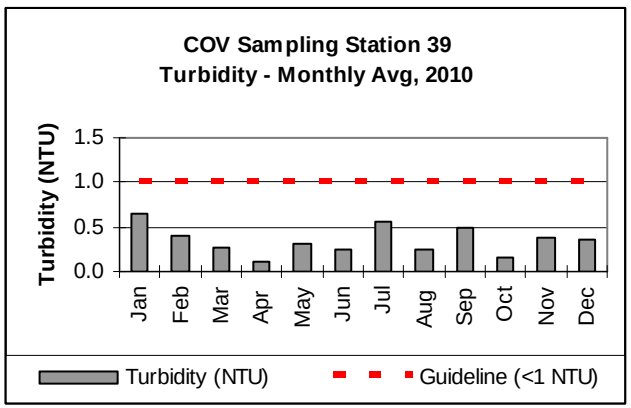

COV Sampling Station 37
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

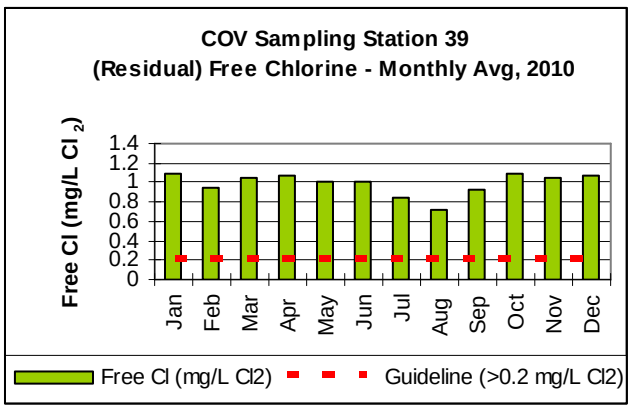

COV Sampling Station 38
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

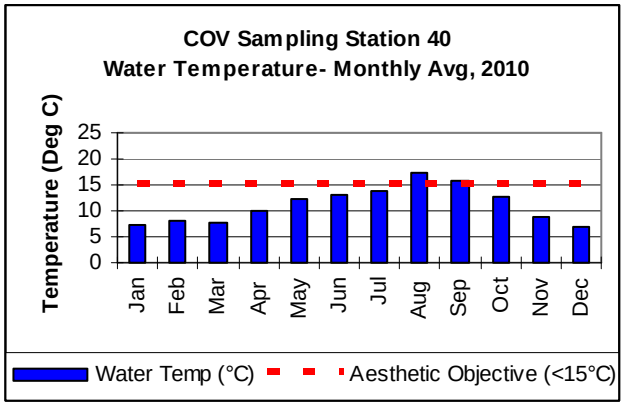

COV Sampling Station 38
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Turbidity (NTU)
Guideline (<1 NTU)

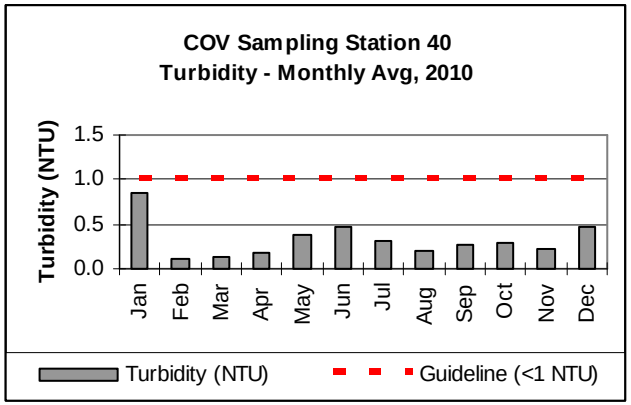

COV Sampling Station 38
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

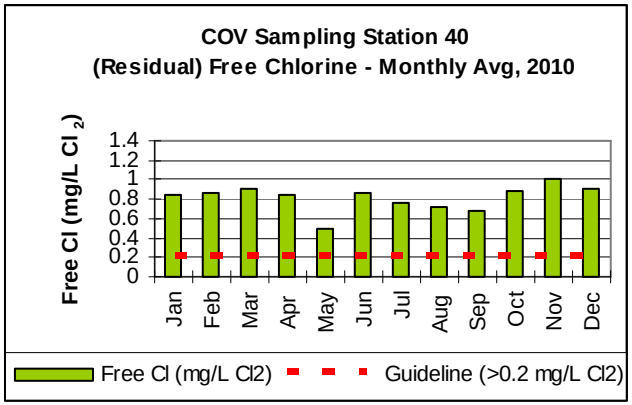

COV Sampling Station 39
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

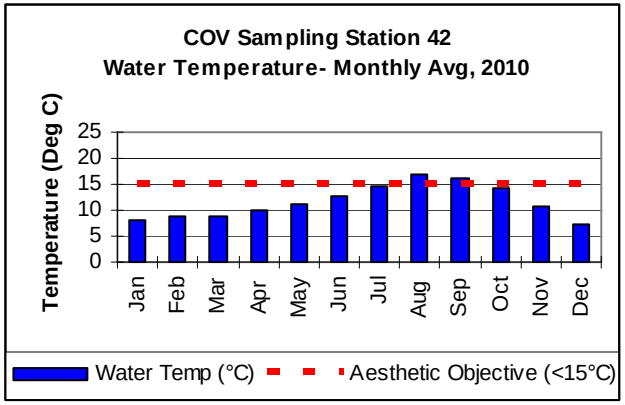

COV Sampling Station 39
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Turbidity (NTU)
Guideline (<1 NTU)

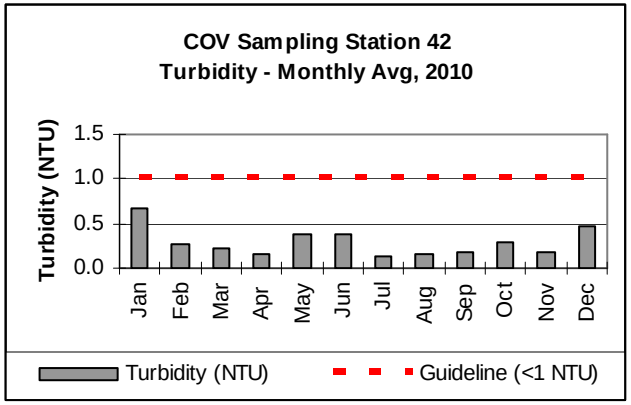

COV Sampling Station 39
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

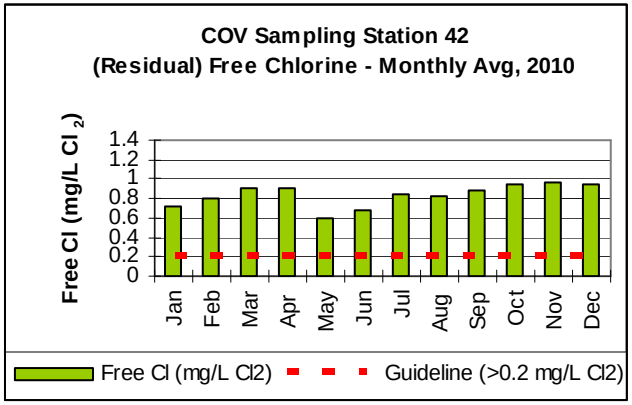

COV Sampling Station 40
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

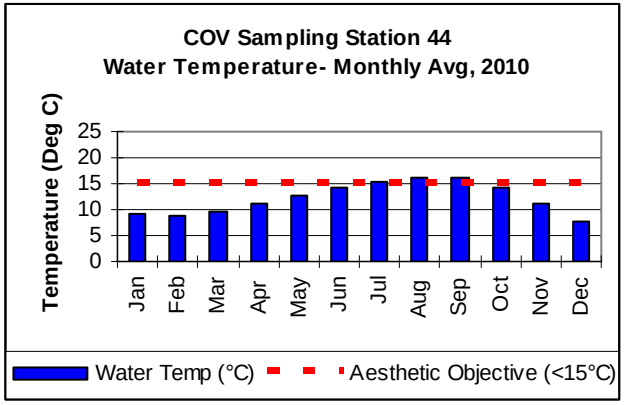

COV Sampling Station 40
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Turbidity (NTU)
Guideline (<1 NTU)

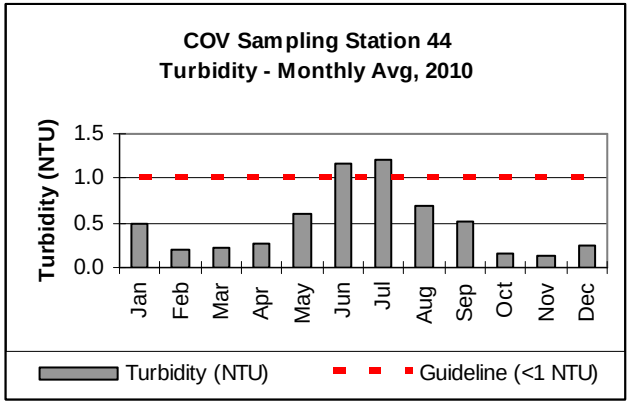

COV Sampling Station 40
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

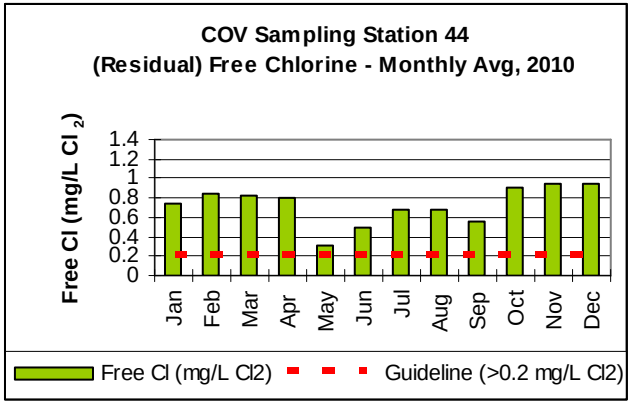

COV Sampling Station 42
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

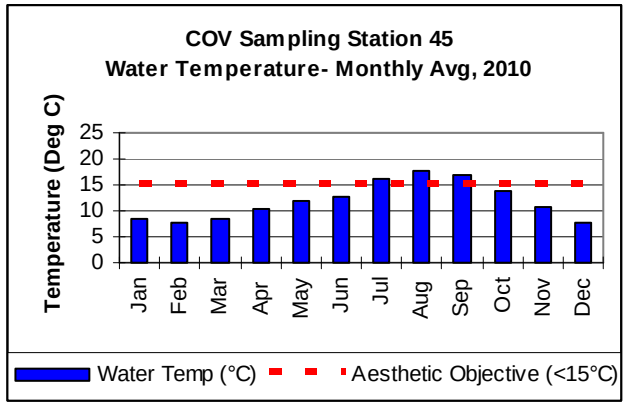

COV Sampling Station 42
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Turbidity (NTU)
Guideline (<1 NTU)

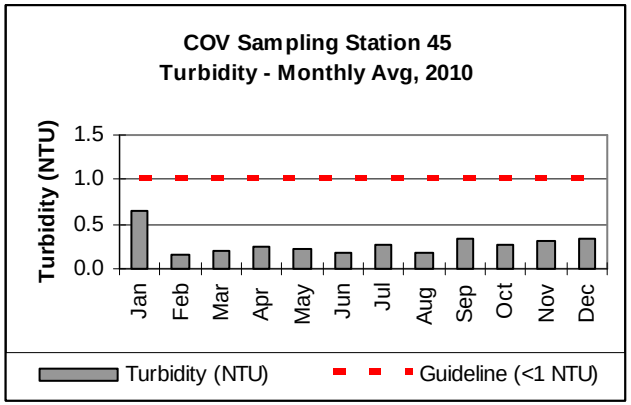

COV Sampling Station 42
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

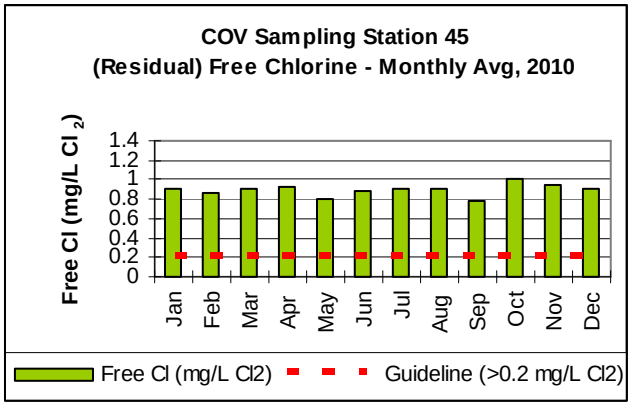

COV Sampling Station 44
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

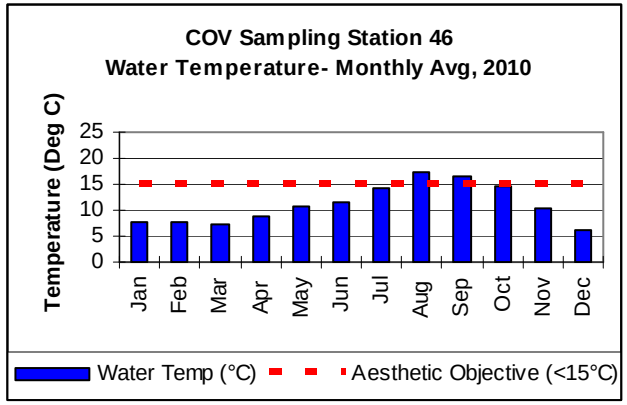

COV Sampling Station 44
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Turbidity (NTU)
Guideline (<1 NTU)

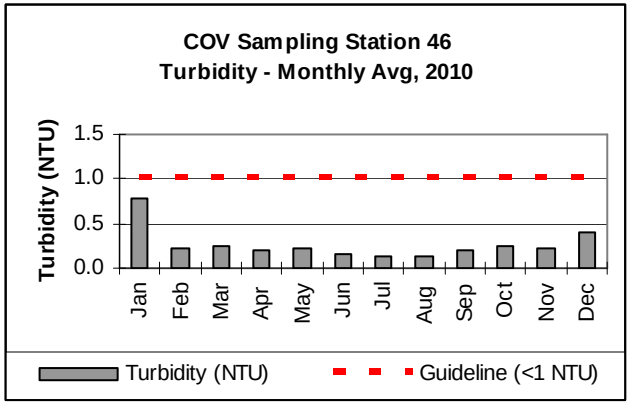

COV Sampling Station 44
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

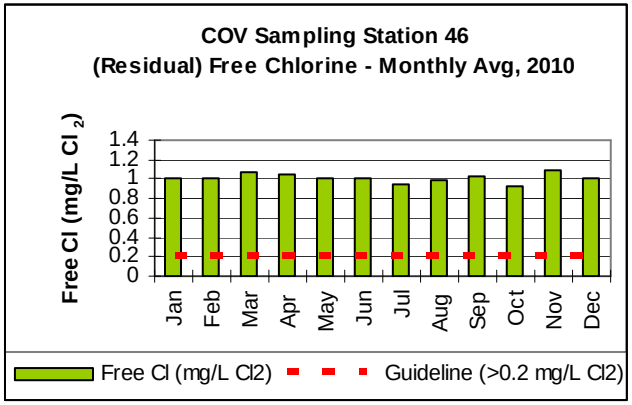

COV Sampling Station 45
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

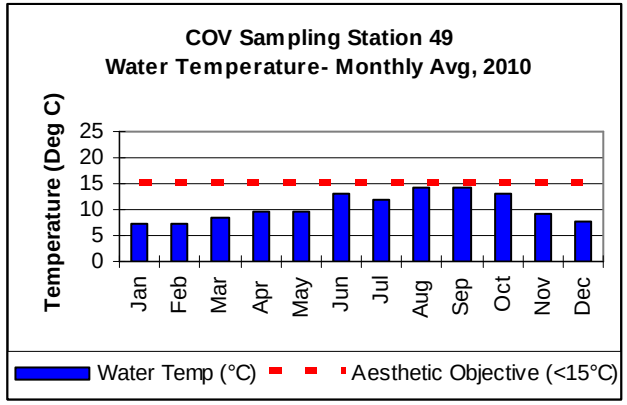

COV Sampling Station 45
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Turbidity (NTU)
Guideline (<1 NTU)

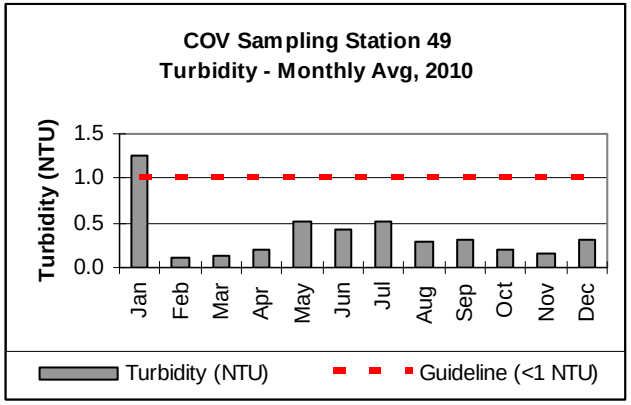

COV Sampling Station 45
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

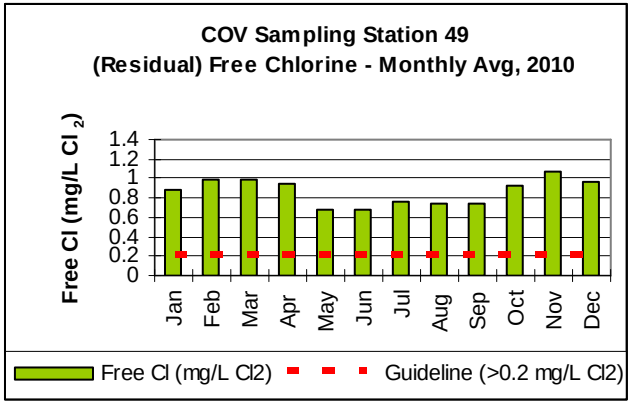

COV Sampling Station 46
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

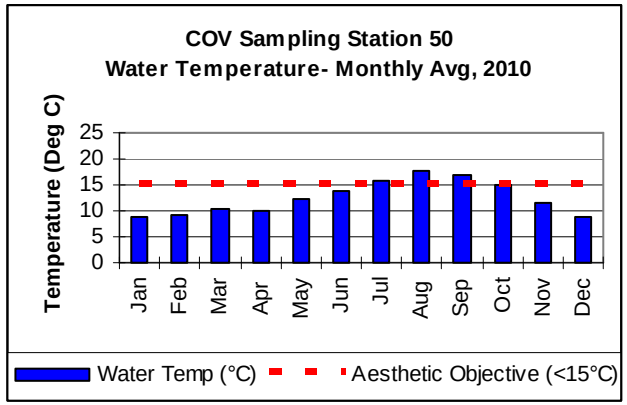

COV Sampling Station 46
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Turbidity (NTU)
Guideline (<1 NTU)

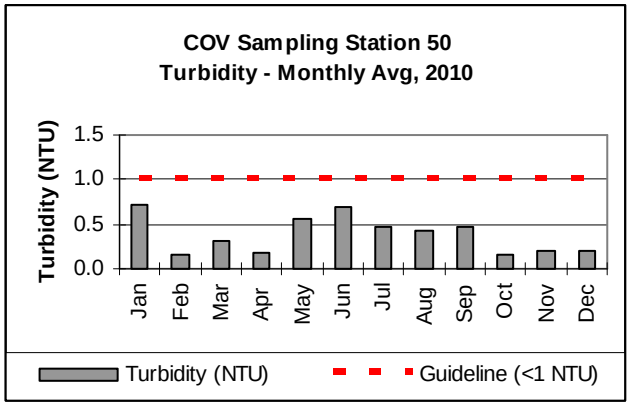

COV Sampling Station 46
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

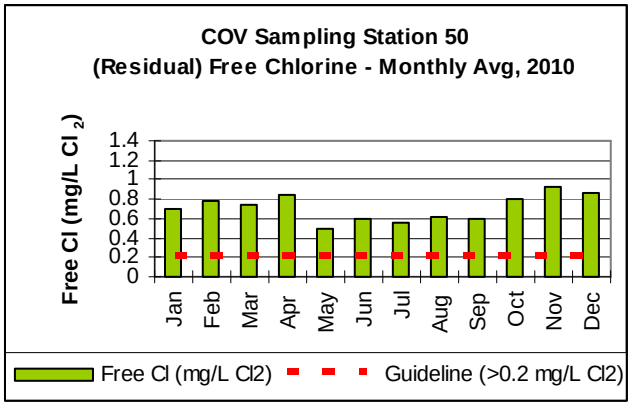

COV Sampling Station 49
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

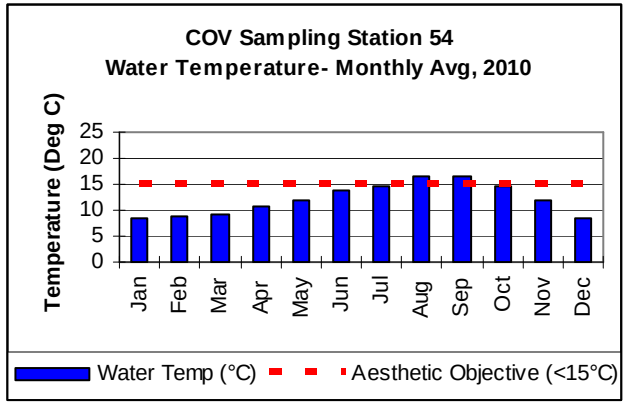

COV Sampling Station 49
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Turbidity (NTU)
Guideline (<1 NTU)

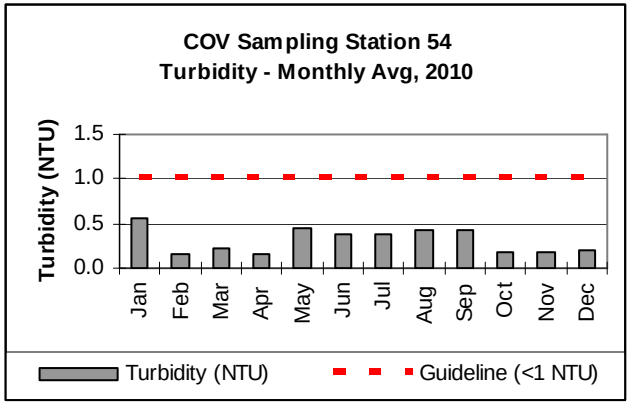

COV Sampling Station 49
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

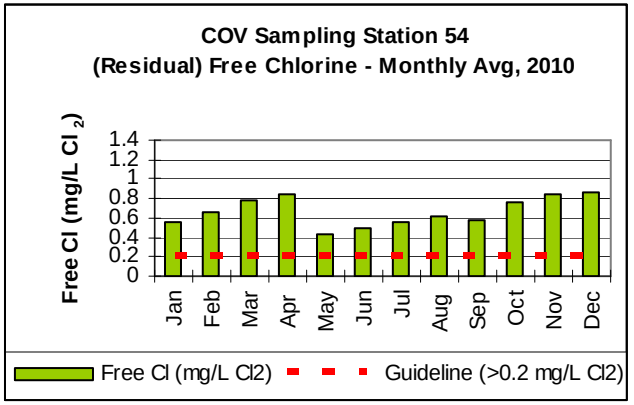

COV Sampling Station 50
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

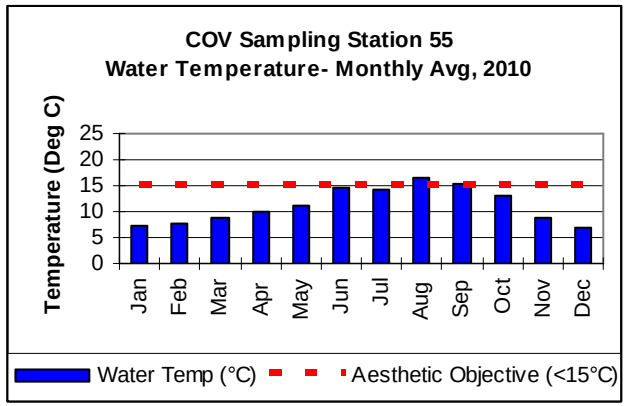

COV Sampling Station 50
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Turbidity (NTU)
Guideline (<1 NTU)

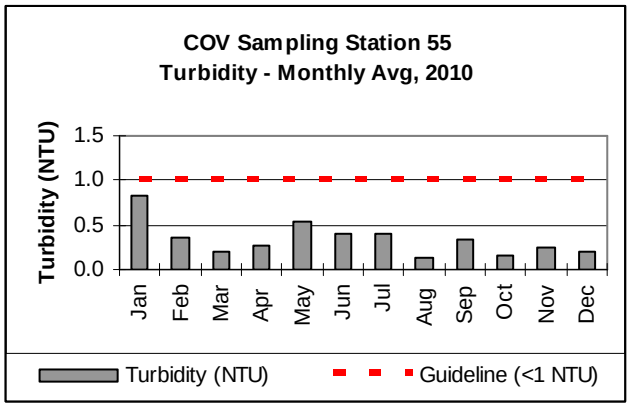

COV Sampling Station 50
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

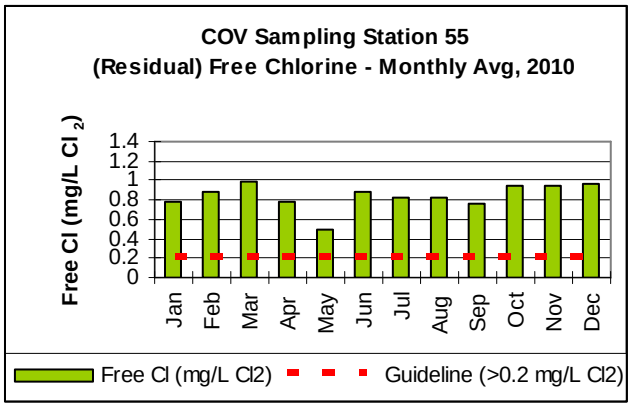

COV Sampling Station 54
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

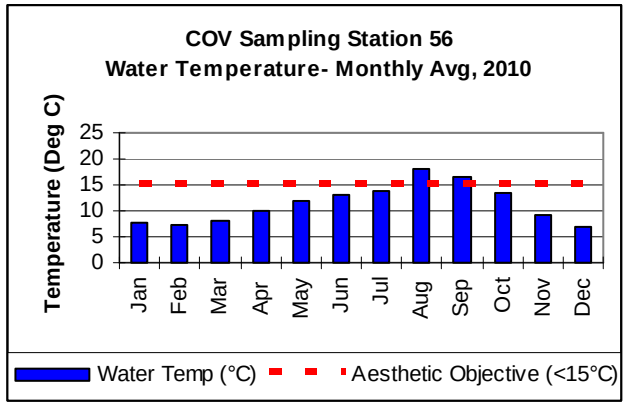

COV Sampling Station 54
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Turbidity (NTU)
Guideline (<1 NTU)

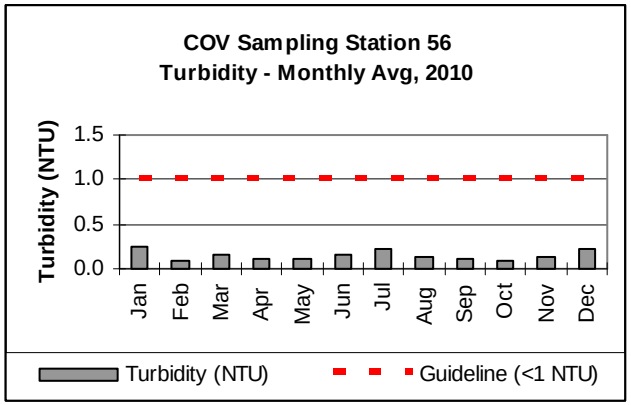

COV Sampling Station 54
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

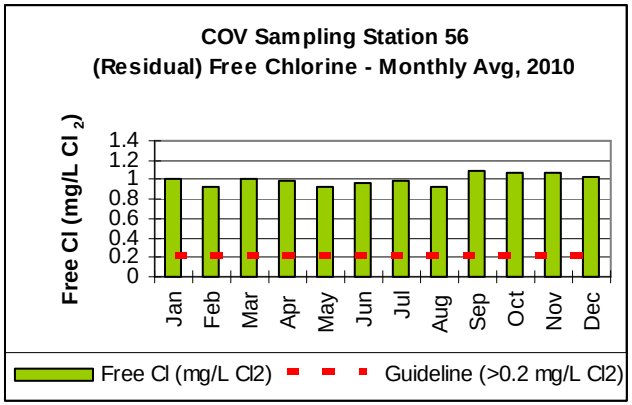

COV Sampling Station 55
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

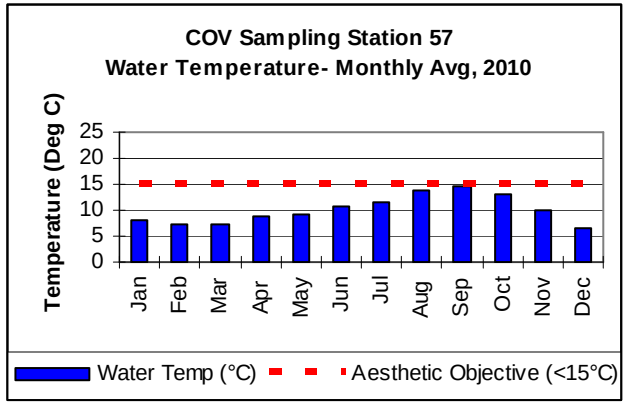

COV Sampling Station 55
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Turbidity (NTU)
Guideline (<1 NTU)

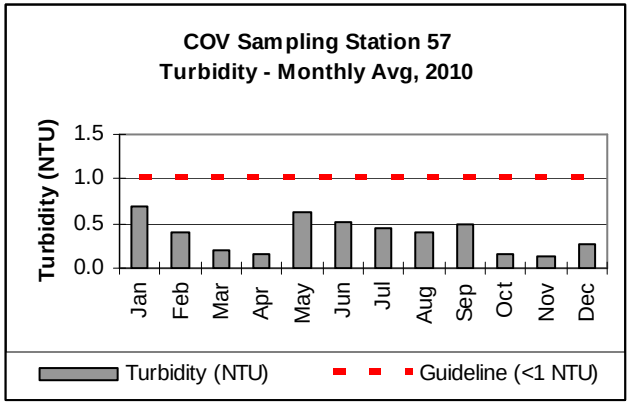

COV Sampling Station 55
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

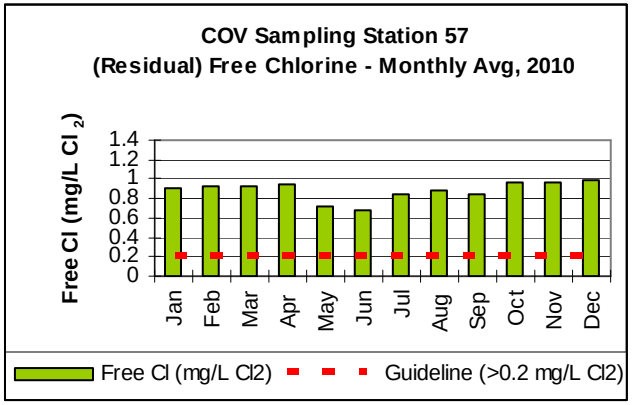

COV Sampling Station 56
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

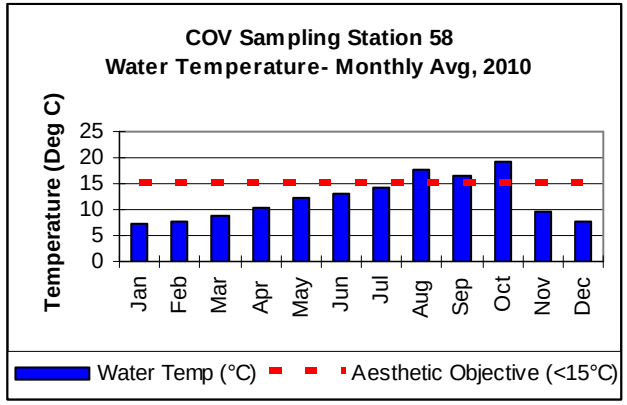

COV Sampling Station 56
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Turbidity (NTU)
Guideline (<1 NTU)

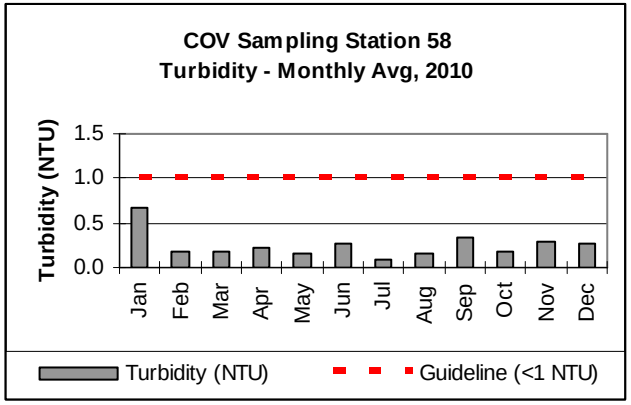

COV Sampling Station 56
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

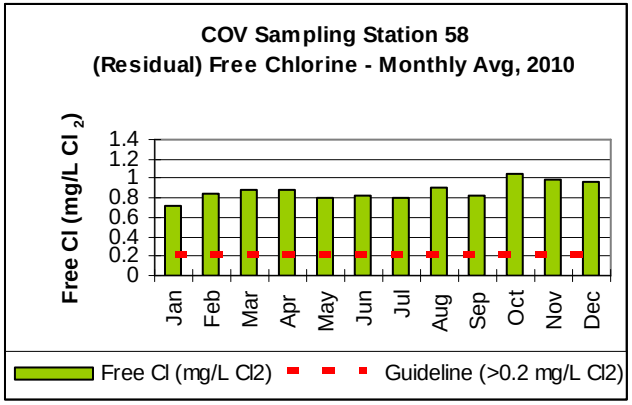

COV Sampling Station 57
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

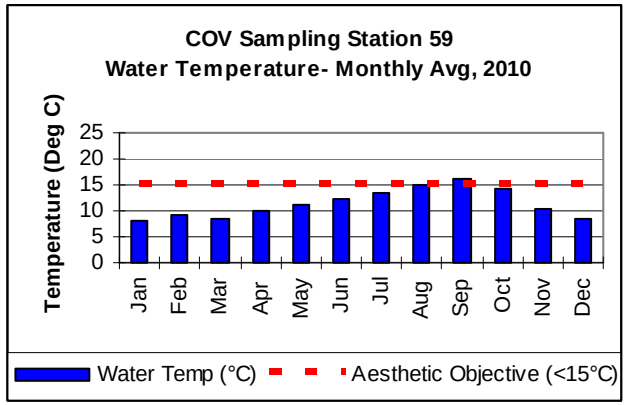

COV Sampling Station 57
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Turbidity (NTU)
Guideline (<1 NTU)

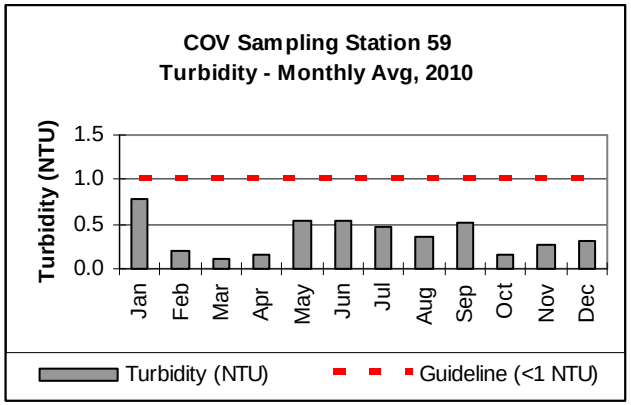

COV Sampling Station 57
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

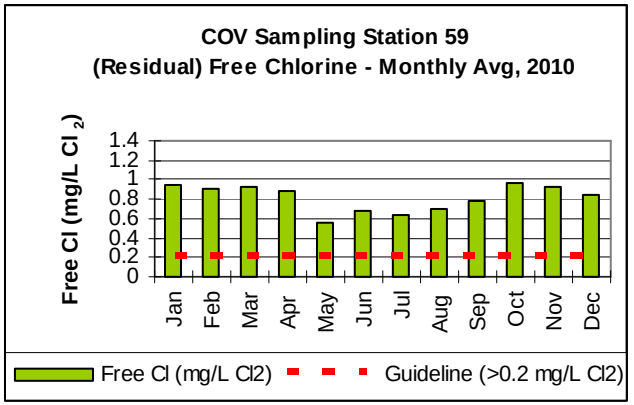

COV Sampling Station 58
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

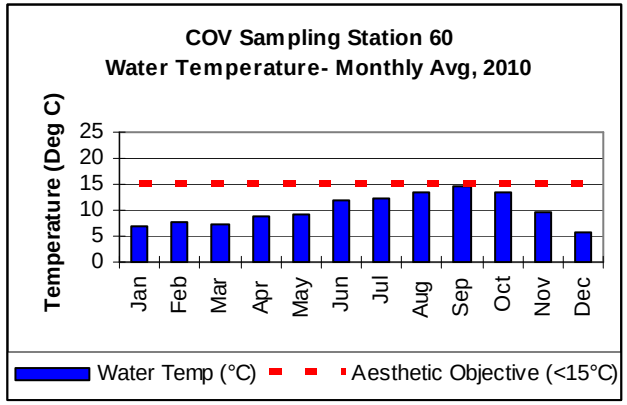

COV Sampling Station 58
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Turbidity (NTU)
Guideline (<1 NTU)

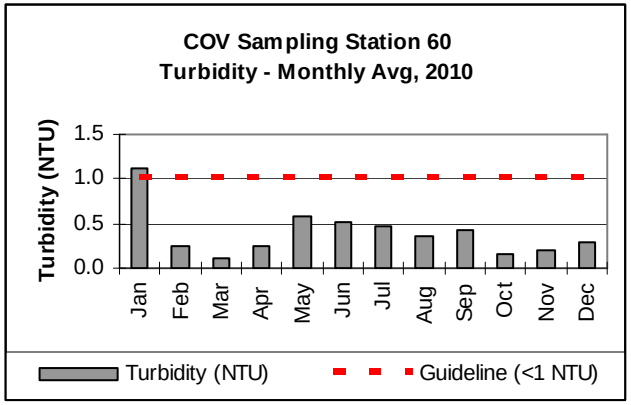

COV Sampling Station 58
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

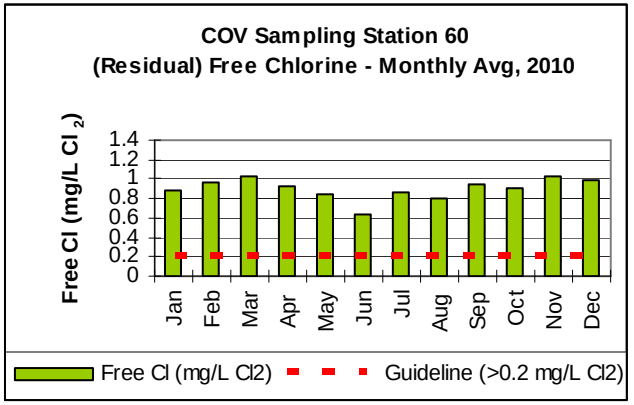

COV Sampling Station 59
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

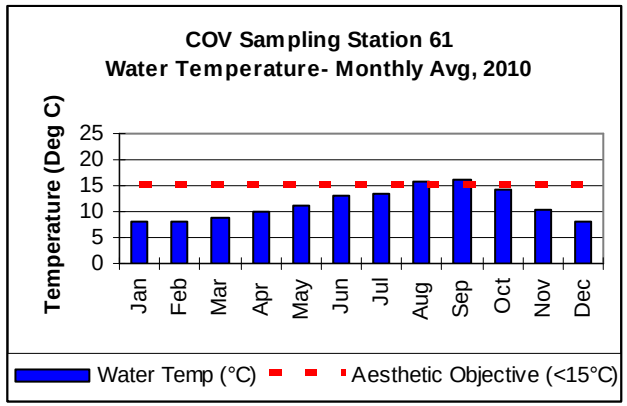

COV Sampling Station 59
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Turbidity (NTU)
Guideline (<1 NTU)

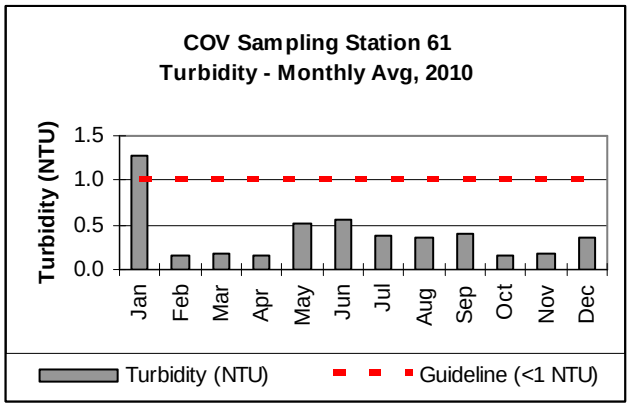

COV Sampling Station 59
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

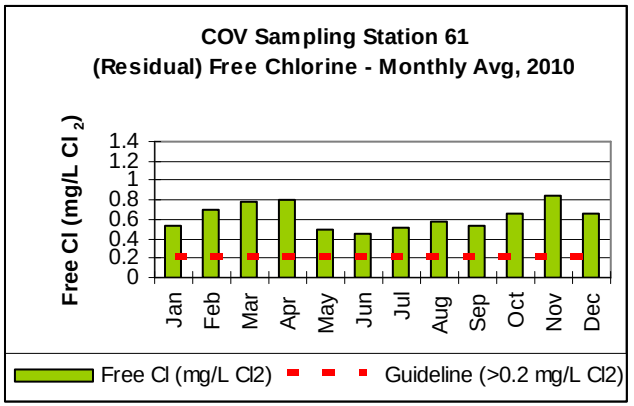

COV Sampling Station 60
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

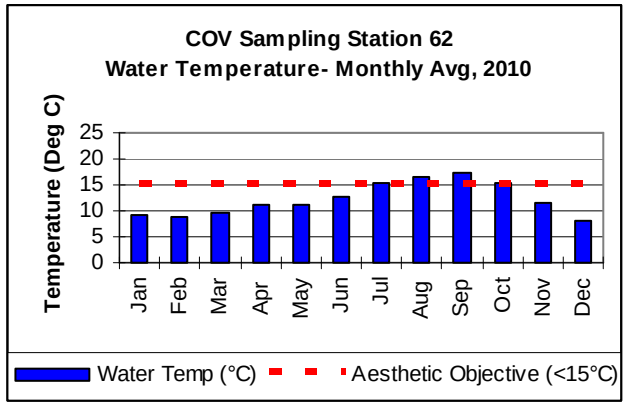

COV Sampling Station 60
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Turbidity (NTU)
Guideline (<1 NTU)

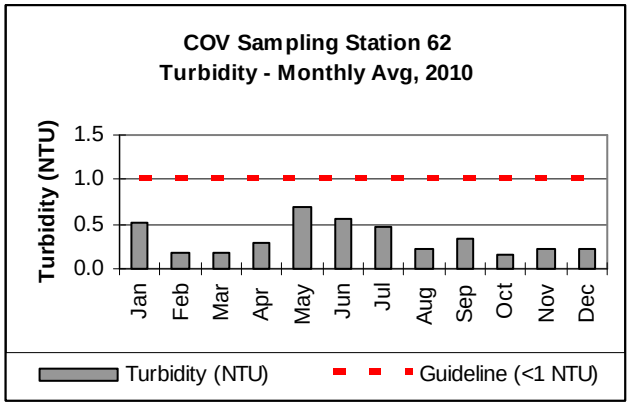

COV Sampling Station 60
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

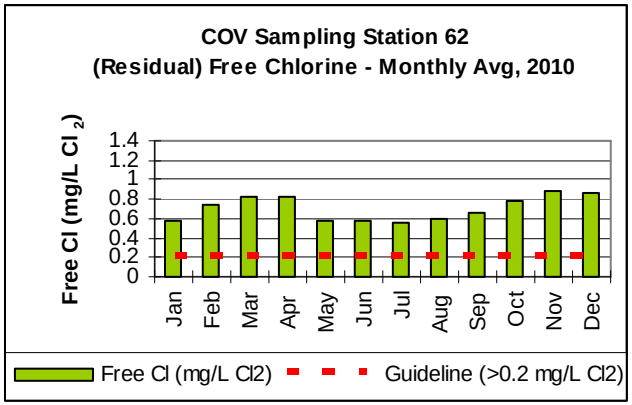

COV Sampling Station 61
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

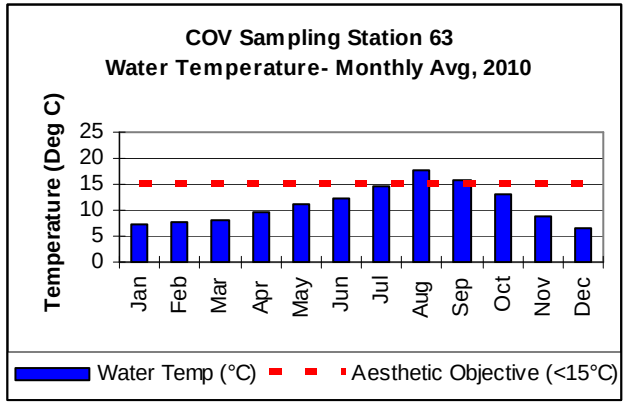

COV Sampling Station 61
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Turbidity (NTU)
Guideline (<1 NTU)

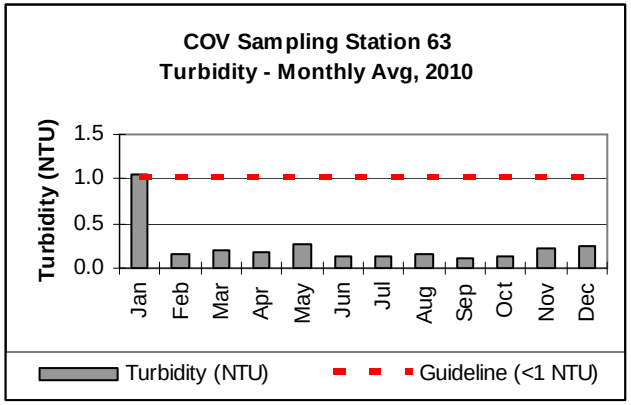

COV Sampling Station 61
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

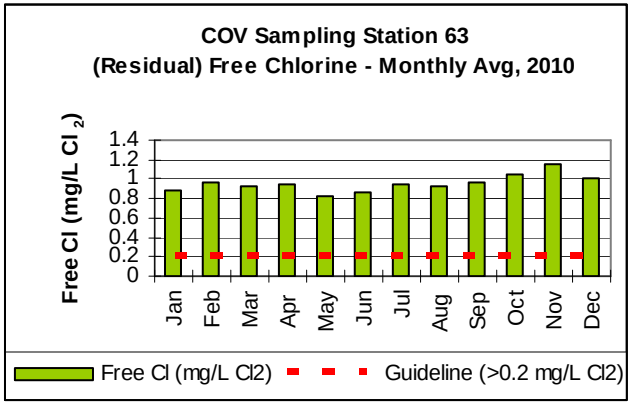

COV Sampling Station 62
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

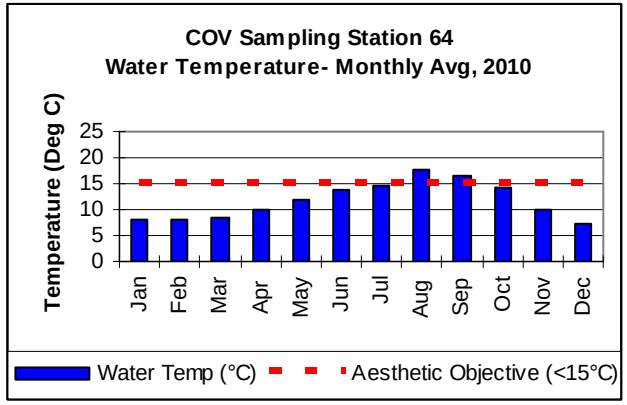

COV Sampling Station 62
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Turbidity (NTU)
Guideline (<1 NTU)

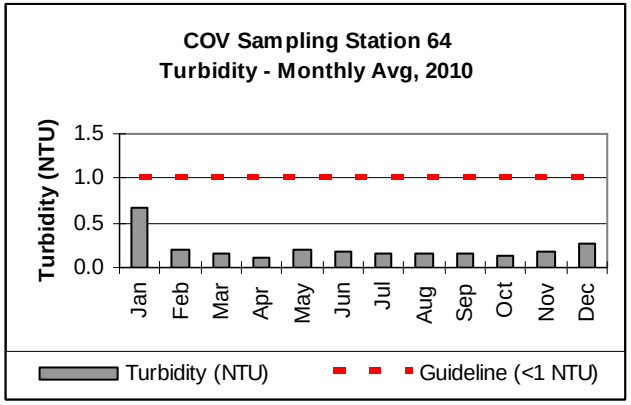

COV Sampling Station 62
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

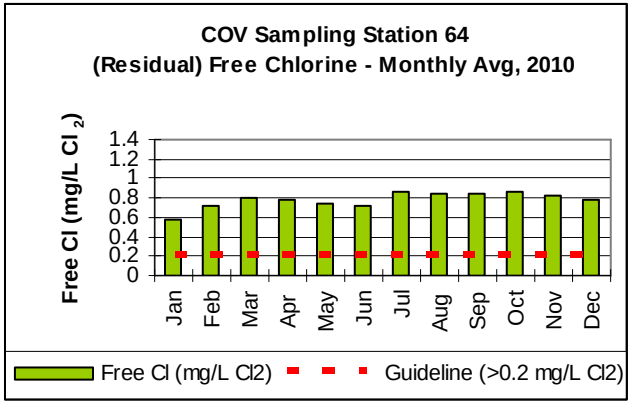

COV Sampling Station 63
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

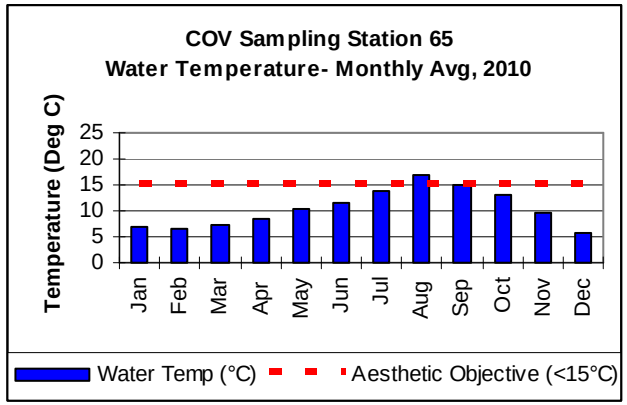

COV Sampling Station 63
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Turbidity (NTU)
Guideline (<1 NTU)

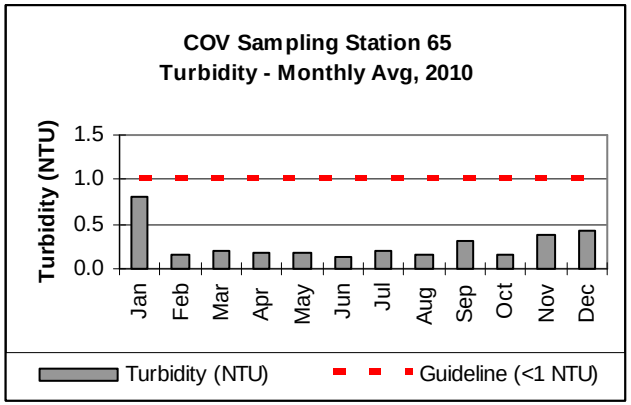

COV Sampling Station 63
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

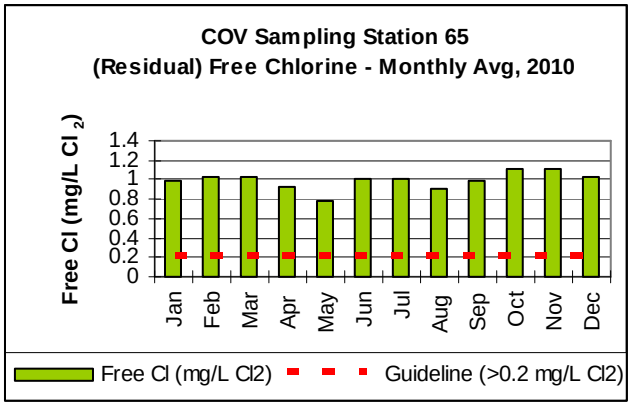

COV Sampling Station 64
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

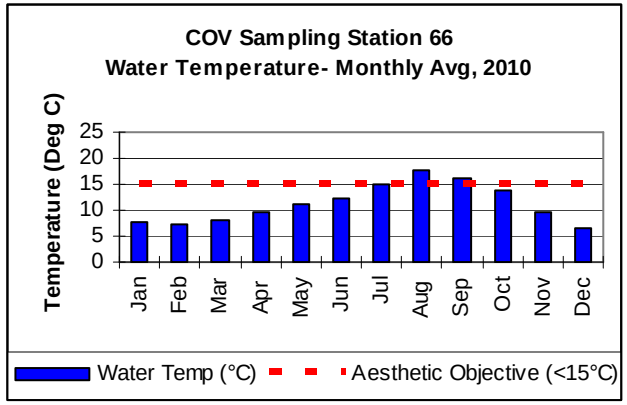

COV Sampling Station 64
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Turbidity (NTU)
Guideline (<1 NTU)

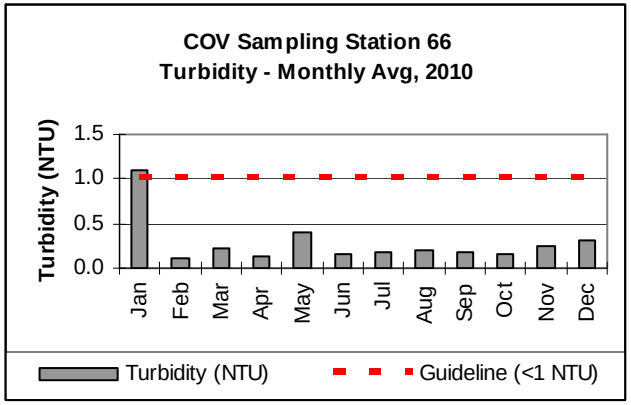

COV Sampling Station 64
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

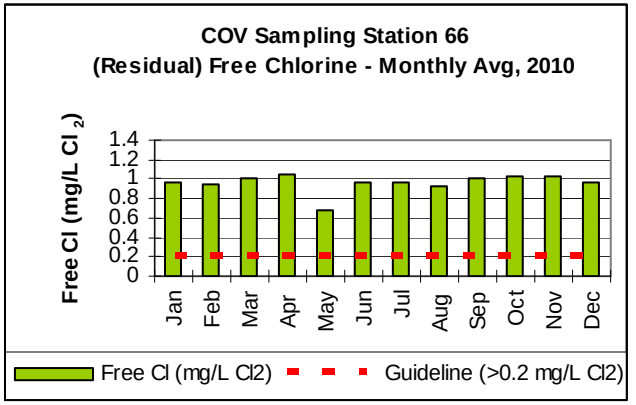

COV Sampling Station 65
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

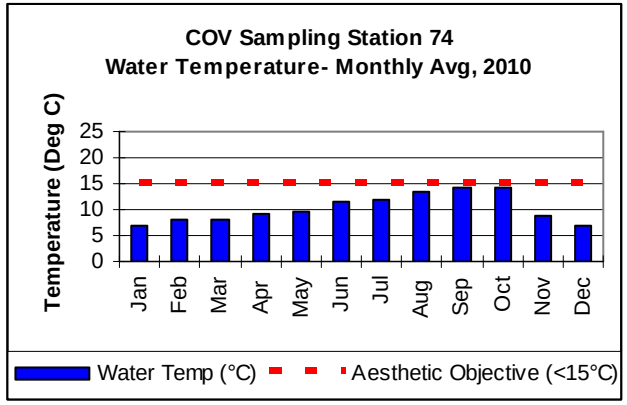

COV Sampling Station 65
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Turbidity (NTU)
Guideline (<1 NTU)

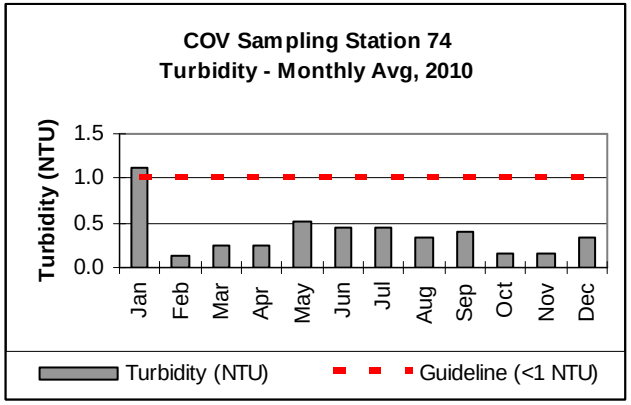

COV Sampling Station 65
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

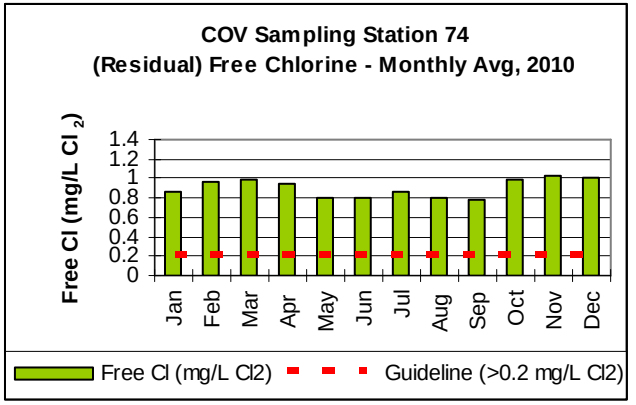

COV Sampling Station 66
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

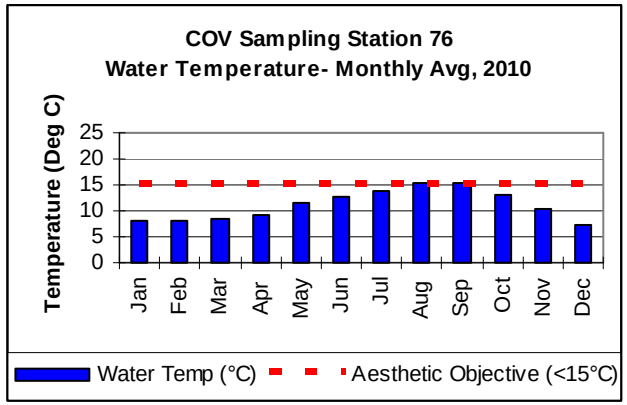

COV Sampling Station 66
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Turbidity (NTU)
Guideline (<1 NTU)

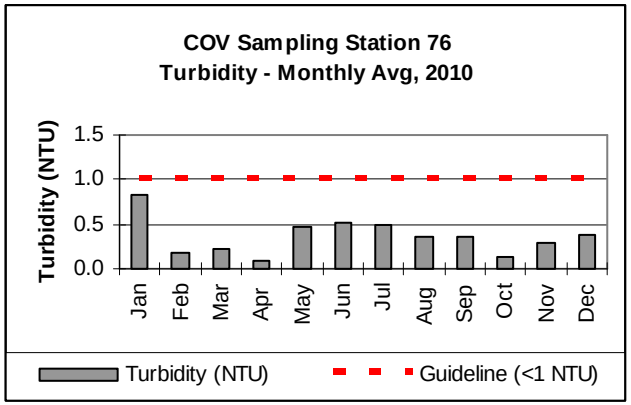

COV Sampling Station 66
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

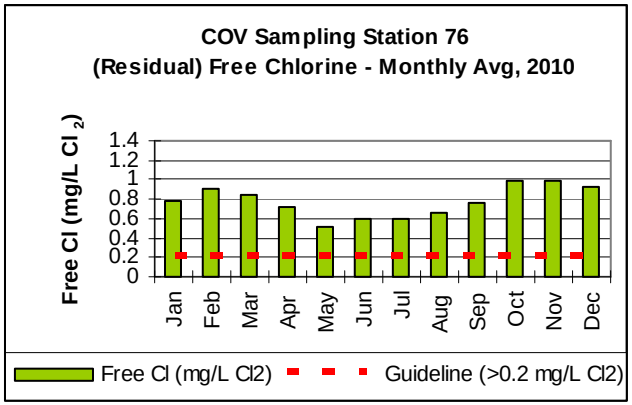

COV Sampling Station 74
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Water Temp (°C)
Aesthetic Objective (<15°C)

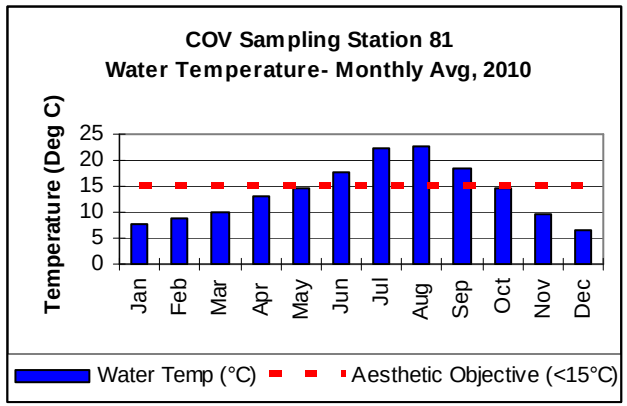

COV Sampling Station 74
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Turbidity (NTU)
Guideline (<1 NTU)

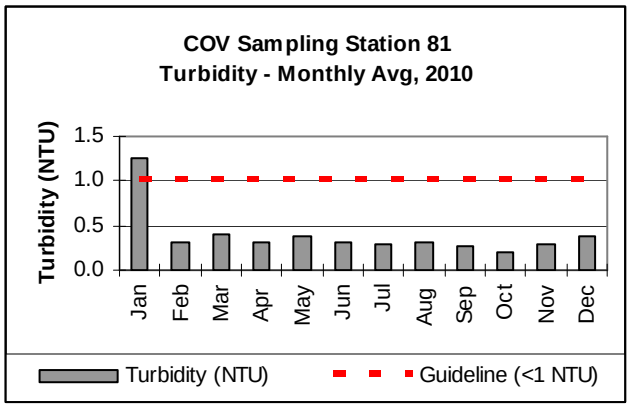

COV Sampling Station 74
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)

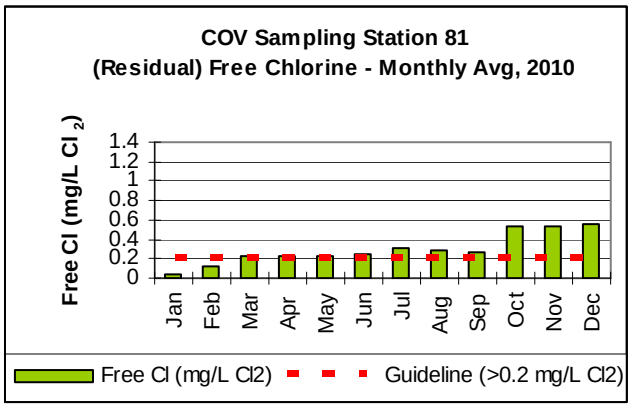

COV Sampling Station 76
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Water Temp (°C)
Aesthetic Objective (<15°C)


COV Sampling Station 76
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Turbidity (NTU)
Guideline (<1 NTU)


COV Sampling Station 76
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)


COV Sampling Station 81
Water Temperature- Monthly Avg, 2010
Temperature (Deg C)
25
20
15
10
5
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Water Temp (°C)
Aesthetic Objective (<15°C)


COV Sampling Station 81
Turbidity - Monthly Avg, 2010
Turbidity (NTU)
1.5
1.0
0.5
0.0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Turbidity (NTU)
Guideline (<1 NTU)


COV Sampling Station 81
(Residual) Free Chlorine - Monthly Avg, 2010
Free Cl (mg/L Cl 2)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Free Cl (mg/L Cl2)
Guideline (>0.2 mg/L Cl2)