# District of Peachland
# Annual Drinking Water Report – 2019

## INTRODUCTION

The District of Peachland is legally required by the *Drinking Water Protection Act* to provide an annual report on their water supply systems. The annual report will provide water system users with an overview of the system, a summary of all water tests performed and an update to any maintenance and/or improvements made to the system.

Facility Name/Number: District of Peachland Water Distribution System (#561)
EOCP Classification: Level III

Facility Name/Number: Peachland Creek Water Treatment Facility (#2288)
EOCP Classification: Level II

Facility Name/Number: Trepanier Creek Water Treatment Facility (#2289)
EOCP Classification: Level II

Facility Name/Number: Okanagan Lake Pumps Water Treatment Facility (#2290)
EOCP Classification: Level II

## WATER SOURCES

Water for the District of Peachland is supplied from three surface water sources;

- Peachland Creek
- Trepanier Creek
- Okanagan Lake

The Peachland Creek system supplies water to all properties accessed from Princeton Avenue. It also supplies the properties accessed from Ponderosa Drive and the downtown area as far north as 11$^{th}$ Street (approximately). The Trepanier system supplies water to the remainder of the properties in the District (from 11$^{th}$ Street north). When the Okanagan Lake pumps are operated in place of the Trepanier Creek Intake, the supply area is identical to the Trepanier system.

The majority of water is supplied from the Peachland Creek (PCI) system (approximately 2/3) with the remainder supplied by the Trepanier Creek (TCI) system (approximately 1/3) or the Okanagan Lake Pumps. The Okanagan Lake Pumps (LPH) are typically operated during spring freshet/runoff to supply less turbid water to the Trepanier system. In 2019, the Okanagan Lake Pumps were active from May 9 – May 28 (spring freshet).

## DISTRIBUTION SYSTEM

The District of Peachland currently uses chlorine gas as its primary disinfectant. Chlorine is injected using flow paced technology and is dosed to provide inactivation of bacteria, viruses and protozoan cysts which may be present within the surface water source. District staff maintain a first user residual ranging from 0.9 – 1.9 mg/L (depending on the time of year and clarity of the raw water). At the ends of the system, a chlorine residual target is set at 0.2 mg/L. A residual of chlorine remaining in the distribution system extends a measure of protection against any possible contamination entering the system after initial disinfection.

The distribution system and supply includes:

- 16 pressure reducing stations,
- 1 very high consequence dam (Peachland Lake)
- 1 high consequence dam (Silver Lake)
- 1 significant consequence dam (Glen Lake)
- 4 active reservoirs
- 6 active pump stations
- Approximately 81 km of pipeline

The Water Department is staffed by operators certified through the Environmental Operators Certification Program (EOCP – the association responsible for certification of system operators and classification of water distribution and treatment systems within British Columbia), with their certifications noted below;

- Director of Operations: Water Distribution Level IV / Water Treatment Level II
- Water Mechanic: Water Distribution Level II / Water Treatment Level II
- Water Mechanic: Water Distribution Level I

These operators have the capability to monitor the system at all times (24 hours per day, 365 days per year) through the use of the SCADA system (supervisory control and data acquisition). The system is set to alarm if it drifts beyond pre-determined set points, calling the standby operator to alert them. There is an operator on standby at all times.

## ROUTINE MAINTENANCE

Fire Hydrants

All municipally owned fire hydrants are inspected, pressure tested and flushed annually. Hydrants undergo a complete tear down and rebuild on an as-needed basis.

Main Valve Exercising

Main valves are exercised at least biennially or on an as-needed basis.

System Flushing

System flushing occurs annually during the fall. Hydrants and blowoffs are used to pass higher velocity water through the system in order to scour any sediment that may have settled in the system over the year.

Pressure Reducing Valves (PRVs)

PRV's are inspected monthly and repaired or rebuilt on an as-needed basis.

## WATER MASTER PLAN

In 2007, the sitting mayor and council adopted the Water Master Plan (WMP), a set of comprehensive upgrades that was anticipated to provide treated water to Peachland in its entirety by the years 2023/24. The WMP was amended in 2015 to include information on increased population growth and changes in drinking water legislation. If more in-depth information is desired, it is available at the District's website (http://www.peachland.ca/water-master-plan-2015)

This year saw construction beginning on the new Peachland Creek Water Treatment Plant (WTP). Maple Reinders, a company well known for successfully completing similar projects, was awarded the contract and they began breaking ground in early 2019. The new plant will be capable of a daily capacity of 25 MLD (expandable to 50 MLD) and include a 2500 $m^3$ treated water reservoir. The treatment process consists of clarification through the dissolved air flotation (DAF) process, multi-media filtration, ultraviolet (UV) disinfection and chlorination. In consultation with the EOCP, the plant has been pre-classified as a Level IV facility. Over the course of the year, the majority of concrete work was completed for the WTP and the upper reservoir. Work continues on schedule and the plant is anticipated to be nominally complete by late 2020.

Completion of the WTP will allow the District to exceed the minimum requirements of the Drinking Water Treatment Objectives for Surface Water Supplies in British Columbia. If minimum requirements are not met, water users can potentially be at increased risk of illness from protozoan pathogens.

To provide this treated water to the entire District a second project was added to the scope of construction; the installation of a large diameter water main to interconnect the Peachland Creek and Trepanier Creek systems. Over the course of 2019, the project moved forward through the completion of preliminary plans and acquisition of various statutory right-of-ways (SRW's). This project is also due to be completed by late 2020.

A summary of the anticipated project costs is noted below;

| | Total Cost | Grant | Borrowing | Reserves |
|---|---|---|---|---|
| **Water Treatment Plant** | $24 Million | $6.9 Million | $9.2 Million | $7.9 Million |
| **Trepanier Interconnect** | $4.9 Million | $4.9 Million | | |

## WATER SAMPLING

Drinking water samples are tested weekly for *E.Coli* and total coliforms by Caro Analytical Services in Kelowna. There were no positive bacteriological samples detected in 2019.

District employees monitor and record daily turbidity values along with pH and chlorine levels. Turbidity is one of the main parameters leading to a water quality advisory or a boil water notice. As the turbidity increases over 1 NTU, a water quality advisory is instituted. Similarly, as it increases over 5 NTU, a boil water notice is instituted. For ease of understanding and communication, if one of the sources exceeds the noted thresholds, the entire system is placed on an advisory/notice. Turbidity can affect the number and type of microorganisms that enter a surface water source. As surface waters experience increased flows (ie. spring runoff, major rainfall events, etc), turbidity can fluctuate dramatically and the public is notified accordingly. Records of average daily turbidity values can be found in Appendix IV.

Chlorine concentrations are continuously monitored at 4-5 stations throughout the system (depending on the time of year) as well as daily grab samples at a number of locations to ensure instrument accuracy, allowing CT values to be monitored.

Raw source water samples are also collected annually in order to perform a comprehensive analysis, giving an indication of any changes occurring within the water supplies. It should be noted that all raw sources tested are within the maximum allowable concentration (MAC) limits set out in the Guidelines for Canadian Drinking Water Quality. Lastly, trihalomethanes (THM`s) are also tested annually to provide an indication of the level of disinfection by-products present in the water supply system. The results from the comprehensive and THM analyses are included in Appendices I and II, respectively. The result sheets also indicate the limits or guidelines for each parameter listed.

## WATER QUALITY ADVISORIES / BOIL WATER NOTICES / DO NOT USE NOTICE

Water quality advisories and boil water notices are notifications designed to inform the public of possible public health threats. The decision to institute an advisory or notice is made in discussion with staff at the Interior Health Authority (IHA).

A water quality advisory (WQA) is the lowest-level notification and used in situations where the possible public health threat is modest. These advisories are instituted when the turbidity in the water source increases over a value of 1 NTU (nephelometric turbidity units). Details of WQA's issued over the past year are noted below.

A boil water notice (BWN) is a moderate-level notification used in situations where the possible public health threat is one that can be effectively addressed by boiling the water. These notices are typically instituted when the water source turbidity increases over 5 NTU or there is a failure in the disinfection system. Details of BWN's issued over the past year are noted below.

A do not use notice is the highest level of notification. It is used in situations where a significant public health threat exists (ie. Chemical spill, etc). There were no do not use notices issued in 2019.

April 10/19 - with turbidity increasing above 1 NTU, a WQA was implemented.

April 24/19 - a BWN was implemented in response to a chlorination system failure

April 29/19 - following system sampling and in consultation with IHA, the BWN was downgraded to a WQA

May 24/19 - with turbidity decreasing below 1 NTU, the WQA was rescinded.

## WATER CONSUMPTION

In 2019, there was a total of 2,273.22 ML passing through the District Intakes. A monthly summary of consumption per intake and a graphical percentage comparison is located in Appendix III.

**WORKS COMPLETED AND IN PROGRESS**

- Dam safety reviews and updates on the Peachland and Silver Lake dams
- Leak detection program
- Installation of new 1 ½-inch main valve, water main, and curbstops on Eyre Rd, replacing leaking galvanized line
- Water meter, pit installations.
- Trepanier Interconnect project initiated. Preliminary plans completed and reviewed and began process of acquiring necessary SRW's to facilitate construction
- Construction of the water treatment plant began. Some of the more pertinent items are listed below;
    - Maple Reinders and sub-contractors broke ground on new WTP
    - Substantial completion of 2500 $m^3$ reservoir
    - Completion of headwall and culverting of Spring Creek
    - Commenced work on subterranean level of WTP
    - Forming, pouring, and waterproofing outer walls.
    - Pouring clarified water channel and filter gallery walls
    - Pouring DAF and Floc tank walls
    - Forming footings for Chemical room and backwash channel

## Appendix I – Comprehensive Analyses (Peachland Creek Intake, Trepanier Creek Intake)

CARO ANALYTICAL SERVICES

# CERTIFICATE OF ANALYSIS

| | | | |
|---|---|---|---|
| **REPORTED TO** | Peachland, Corporation of the District of<br>5806 Beach Avenue<br>PEACHLAND, BC V0H 1X7 | | |
| **ATTENTION** | Shawn Grundy | **WORK ORDER** | N000568 |
| **PO NUMBER** | | **RECEIVED / TEMP** | 2019-10-29 12:55 / 7°C |
| **PROJECT** | General Potability | **REPORTED** | 2019-11-29 11:47 |
| **PROJECT INFO** | | **COC NUMBER** | B78229 |

**Introduction:**

CARO Analytical Services is a testing laboratory full of smart, engaged scientists driven to make the world a safer and healthier place. Through our clients' projects we become an essential element for a better world. We employ methods conducted in accordance with recognized professional standards using accepted testing methodologies and quality control efforts. CARO is accredited by the Canadian Association for Laboratories Accreditation (CALA) to ISO 17025:2005 for specific tests listed in the scope of accreditation approved by CALA.

*Big Picture Sidekicks*

You know that the sample you collected after snowshoeing to site, digging 5 meters, and racing to get it on a plane so you can submit it to the lab for time sensitive results needed to make important and expensive decisions (whew) is VERY important. We know that too.

*We've Got Chemistry*

It's simple. We figure the more you enjoy working with our fun and engaged team members; the more likely you are to give us continued opportunities to support you.

*Ahead of the Curve*

Through research, regulation knowledge, and instrumentation, we are your analytical centre for the technical knowledge you need, BEFORE you need it, so you can stay up to date and in the know.

*If you have any questions or concerns, please contact me at teamcaro@caro.ca*

**Authorized By:**

Team CARO
Client Service Representative

CARO ANALYTICAL SERVICES

# TEST RESULTS

| | | | |
|---|---|---|---|
| **REPORTED TO** | Peachland, Corporation of the District of | **WORK ORDER** | N000568 |
| **PROJECT** | General Potability | **REPORTED** | 2019-11-29 11:47 |

| Analyte | Result | Guideline | RL | Units | Analyzed | Qualifier |
|---|---|---|---|---|---|---|
| **Trepanier Creek - Raw (Weir Block) (N000568-01) \| Matrix: Water \| Sampled: 2019-10-29 07:45** | | | | | | |
| ***Anions*** | | | | | | |
| Chloride | 2.56 | AO ≤ 250 | 0.10 | mg/L | 2019-10-30 | |
| Fluoride | 0.12 | MAC = 1.5 | 0.10 | mg/L | 2019-10-30 | |
| Nitrate (as N) | < 0.010 | MAC = 10 | 0.010 | mg/L | 2019-10-30 | |
| Nitrite (as N) | < 0.010 | MAC = 1 | 0.010 | mg/L | 2019-10-30 | |
| Sulfate | 13.6 | AO ≤ 500 | 1.0 | mg/L | 2019-10-30 | |
| ***Calculated Parameters*** | | | | | | |
| Total Trihalomethanes | 0.0926 | MAC = 0.1 | 0.00400 | mg/L | N/A | |
| Hardness, Total (as CaCO3) | 113 | None Required | 0.500 | mg/L | N/A | |
| Langelier Index | 0.2 | N/A | -5.0 | | 2019-11-13 | |
| Solids, Total Dissolved | 64.6 | AO ≤ 500 | 1.00 | mg/L | N/A | |
| ***General Parameters*** | | | | | | |
| Colour, True | 6.4 | AO ≤ 15 | 5.0 | CU | 2019-11-08 | HT1 |
| Conductivity (EC) | 221 | N/A | 2.0 | µS/cm | 2019-11-04 | |
| Cyanide, Total | < 0.0020 | MAC = 0.2 | 0.0020 | mg/L | 2019-11-04 | |
| pH | 7.92 | 7.0-10.5 | 0.10 | pH units | 2019-11-04 | HT2 |
| Turbidity | 0.30 | OG < 1 | 0.10 | NTU | 2019-10-30 | |
| ***Microbiological Parameters*** | | | | | | |
| Coliforms, Total | 84 | MAC = 0 | 1 | CFU/100 mL | 2019-10-30 | |
| Background Colonies | > 200 | N/A | 200 | CFU/100 mL | 2019-10-30 | |
| E. coli | 11 | MAC = 0 | 1 | CFU/100 mL | 2019-10-30 | |
| ***Total Metals*** | | | | | | |
| Aluminum, total | 0.0120 | OG < 0.1 | 0.0050 | mg/L | 2019-11-02 | |
| Antimony, total | < 0.00020 | MAC = 0.006 | 0.00020 | mg/L | 2019-11-02 | |
| Arsenic, total | 0.00065 | MAC = 0.01 | 0.00050 | mg/L | 2019-11-02 | |
| Barium, total | 0.0249 | MAC = 1 | 0.0050 | mg/L | 2019-11-02 | |
| Boron, total | 0.0097 | MAC = 5 | 0.0050 | mg/L | 2019-11-02 | |
| Cadmium, total | 0.000013 | MAC = 0.005 | 0.000010 | mg/L | 2019-11-02 | |
| Calcium, total | 36.7 | None Required | 0.20 | mg/L | 2019-11-02 | |
| Chromium, total | < 0.00050 | MAC = 0.05 | 0.00050 | mg/L | 2019-11-02 | |
| Cobalt, total | < 0.00010 | N/A | 0.00010 | mg/L | 2019-11-02 | |
| Copper, total | 0.00129 | MAC = 2 | 0.00040 | mg/L | 2019-11-02 | |
| Iron, total | 0.039 | AO ≤ 0.3 | 0.010 | mg/L | 2019-11-02 | |
| Lead, total | < 0.00020 | MAC = 0.005 | 0.00020 | mg/L | 2019-11-02 | |
| Magnesium, total | 5.12 | None Required | 0.010 | mg/L | 2019-11-02 | |
| Manganese, total | 0.00732 | MAC = 0.12 | 0.00020 | mg/L | 2019-11-02 | |
| Mercury, total | < 0.000040 | MAC = 0.001 | 0.000040 | mg/L | 2019-11-02 | CT5 |
| Molybdenum, total | 0.0117 | N/A | 0.00010 | mg/L | 2019-11-02 | |
| Nickel, total | < 0.00040 | N/A | 0.00040 | mg/L | 2019-11-02 | |
| Potassium, total | 1.68 | N/A | 0.10 | mg/L | 2019-11-02 | |
| Selenium, total | < 0.00050 | MAC = 0.05 | 0.00050 | mg/L | 2019-11-02 | |

CARO ANALYTICAL SERVICES

# TEST RESULTS

| | | | |
|---|---|---|---|
| **REPORTED TO** | Peachland, Corporation of the District of | **WORK ORDER** | N000568 |
| **PROJECT** | General Potability | **REPORTED** | 2019-11-29 11:47 |

| Analyte | Result | Guideline | RL | Units | Analyzed | Qualifier |
|---|---|---|---|---|---|---|
| **Trepanier Creek - Raw (Weir Block) (N000568-01) \| Matrix: Water \| Sampled: 2019-10-29 07:45, Continued** | | | | | | |
| ***Total Metals, Continued*** | | | | | | |
| Sodium, total | 4.92 | AO ≤ 200 | 0.10 | mg/L | 2019-11-02 | |
| Strontium, total | 0.258 | 7 | 0.0010 | mg/L | 2019-11-02 | |
| Uranium, total | 0.00146 | MAC = 0.02 | 0.000020 | mg/L | 2019-11-02 | |
| Zinc, total | < 0.0040 | AO ≤ 5 | 0.0040 | mg/L | 2019-11-02 | |
| ***Volatile Organic Compounds (VOC)*** | | | | | | |
| Bromodichloromethane | 0.0046 | N/A | 0.0010 | mg/L | 2019-11-08 | |
| Bromoform | < 0.0010 | N/A | 0.0010 | mg/L | 2019-11-08 | |
| Chloroform | 0.0880 | N/A | 0.0010 | mg/L | 2019-11-08 | |
| Dibromochloromethane | < 0.0010 | N/A | 0.0010 | mg/L | 2019-11-08 | |
| *Surrogate: Toluene-d8* | *96* | | *70-130* | % | *2019-11-08* | |
| *Surrogate: 4-Bromofluorobenzene* | *63* | | *70-130* | % | *2019-11-08* | S02 |
| **Peachland Creek - Raw (Gabion) (N000568-02) \| Matrix: Water \| Sampled: 2019-10-29 08:00** | | | | | | |
| ***Anions*** | | | | | | |
| Chloride | 26.9 | AO ≤ 250 | 0.10 | mg/L | 2019-10-30 | |
| Fluoride | < 0.10 | MAC = 1.5 | 0.10 | mg/L | 2019-10-30 | |
| Nitrate (as N) | < 0.010 | MAC = 10 | 0.010 | mg/L | 2019-10-30 | |
| Nitrite (as N) | < 0.010 | MAC = 1 | 0.010 | mg/L | 2019-10-30 | |
| Sulfate | 17.9 | AO ≤ 500 | 1.0 | mg/L | 2019-10-30 | |
| ***Calculated Parameters*** | | | | | | |
| Total Trihalomethanes | 0.0732 | MAC = 0.1 | 0.00400 | mg/L | N/A | |
| Hardness, Total (as CaCO3) | 119 | None Required | 0.500 | mg/L | N/A | |
| Langelier Index | 0.2 | N/A | -5.0 | | 2019-11-13 | |
| Solids, Total Dissolved | 101 | AO ≤ 500 | 1.00 | mg/L | N/A | |
| ***General Parameters*** | | | | | | |
| Colour, True | < 5.0 | AO ≤ 15 | 5.0 | CU | 2019-11-08 | HT1 |
| Conductivity (EC) | 266 | N/A | 2.0 | µS/cm | 2019-11-04 | |
| Cyanide, Total | < 0.0020 | MAC = 0.2 | 0.0020 | mg/L | 2019-11-04 | |
| pH | 7.90 | 7.0-10.5 | 0.10 | pH units | 2019-11-04 | HT2 |
| Turbidity | 0.45 | OG < 1 | 0.10 | NTU | 2019-10-30 | |
| ***Microbiological Parameters*** | | | | | | |
| Coliforms, Total | 87 | MAC = 0 | 1 | CFU/100 mL | 2019-10-30 | |
| Background Colonies | > 200 | N/A | 200 | CFU/100 mL | 2019-10-30 | |
| E. coli | 8 | MAC = 0 | 1 | CFU/100 mL | 2019-10-30 | |
| ***Total Metals*** | | | | | | |
| Aluminum, total | 0.0102 | OG < 0.1 | 0.0050 | mg/L | 2019-11-02 | |
| Antimony, total | < 0.00020 | MAC = 0.006 | 0.00020 | mg/L | 2019-11-02 | |
| Arsenic, total | < 0.00050 | MAC = 0.01 | 0.00050 | mg/L | 2019-11-02 | |

CARO ANALYTICAL SERVICES

# TEST RESULTS

| | | | |
|---|---|---|---|
| **REPORTED TO** | Peachland, Corporation of the District of | **WORK ORDER** | N000568 |
| **PROJECT** | General Potability | **REPORTED** | 2019-11-29 11:47 |

| Analyte | Result | Guideline | RL | Units | Analyzed | Qualifier |
|---|---|---|---|---|---|---|
| **Peachland Creek - Raw (Gabion) (N000568-02) \| Matrix: Water \| Sampled: 2019-10-29 08:00, Continued** | | | | | | |
| ***Total Metals, Continued*** | | | | | | |
| Barium, total | **0.0597** | MAC = 1 | 0.0050 | mg/L | 2019-11-02 | |
| Boron, total | **0.0075** | MAC = 5 | 0.0050 | mg/L | 2019-11-02 | |
| Cadmium, total | < 0.000010 | MAC = 0.005 | 0.000010 | mg/L | 2019-11-02 | |
| Calcium, total | **36.8** | None Required | 0.20 | mg/L | 2019-11-02 | |
| Chromium, total | < 0.00050 | MAC = 0.05 | 0.00050 | mg/L | 2019-11-02 | |
| Cobalt, total | < 0.00010 | N/A | 0.00010 | mg/L | 2019-11-02 | |
| Copper, total | **0.00090** | MAC = 2 | 0.00040 | mg/L | 2019-11-02 | |
| Iron, total | **0.038** | AO ≤ 0.3 | 0.010 | mg/L | 2019-11-02 | |
| Lead, total | < 0.00020 | MAC = 0.005 | 0.00020 | mg/L | 2019-11-02 | |
| Magnesium, total | **6.48** | None Required | 0.010 | mg/L | 2019-11-02 | |
| Manganese, total | **0.00195** | MAC = 0.12 | 0.00020 | mg/L | 2019-11-02 | |
| Mercury, total | < 0.000040 | MAC = 0.001 | 0.000040 | mg/L | 2019-11-02 | CT5 |
| Molybdenum, total | **0.00687** | N/A | 0.00010 | mg/L | 2019-11-02 | |
| Nickel, total | < 0.00040 | N/A | 0.00040 | mg/L | 2019-11-02 | |
| Potassium, total | **2.15** | N/A | 0.10 | mg/L | 2019-11-02 | |
| Selenium, total | < 0.00050 | MAC = 0.05 | 0.00050 | mg/L | 2019-11-02 | |
| Sodium, total | **11.0** | AO ≤ 200 | 0.10 | mg/L | 2019-11-02 | |
| Strontium, total | **0.234** | 7 | 0.0010 | mg/L | 2019-11-02 | |
| Uranium, total | **0.00348** | MAC = 0.02 | 0.000020 | mg/L | 2019-11-02 | |
| Zinc, total | < 0.0040 | AO ≤ 5 | 0.0040 | mg/L | 2019-11-02 | |
| ***Volatile Organic Compounds (VOC)*** | | | | | | |
| Bromodichloromethane | **0.0033** | N/A | 0.0010 | mg/L | 2019-11-08 | |
| Bromoform | < 0.0010 | N/A | 0.0010 | mg/L | 2019-11-08 | |
| Chloroform | **0.0699** | N/A | 0.0010 | mg/L | 2019-11-08 | |
| Dibromochloromethane | < 0.0010 | N/A | 0.0010 | mg/L | 2019-11-08 | |
| *Surrogate: Toluene-d8* | *97* | | *70-130* | % | *2019-11-08* | |
| *Surrogate: 4-Bromofluorobenzene* | *63* | | *70-130* | % | *2019-11-08* | S02 |

**Sample Qualifiers:**

| | |
|---|---|
| CT5 | This sample has been incorrectly preserved for Mercury analysis |
| HT1 | The sample was prepared and/or analyzed past the recommended holding time. |
| HT2 | The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended. |
| S02 | Surrogate recovery outside of control limits. Data accepted based on acceptable recovery of other surrogates. |

CARO ANALYTICAL SERVICES

# APPENDIX 1: SUPPORTING INFORMATION

| | | | |
|---|---|---|---|
| **REPORTED TO** | Peachland, Corporation of the District of | **WORK ORDER** | N000568 |
| **PROJECT** | General Potability | **REPORTED** | 2019-11-29 11:47 |

| Analysis Description | Method Ref. | Technique | Location |
|---|---|---|---|
| Anions in Water | SM 4110 B (2017) | Ion Chromatography | Kelowna |
| Coliforms, Total in Water | SM 9222 B (2017) | Membrane Filtration / m-Endo Agar | Kelowna |
| Colour, True in Water | SM 2120 C (2017) | Spectrophotometry (456 nm) | Kelowna |
| Conductivity in Water | SM 2510 B (2017) | Conductivity Meter | Kelowna |
| Cyanide, SAD in Water | ASTM D7511-12 | Flow Injection with In-Line UV Digestion and Amperometry | Kelowna |
| E. coli in Water | SM 9222 G (2017) | Membrane Filtration / Nutrient Agar with MUG | Kelowna |
| Hardness in Water | SM 2340 B* (2017) | Calculation: 2.497 [total Ca] + 4.118 [total Mg] (Est) | N/A |
| Langelier Index in Water | SM 2330 B (2017) | Calculation | N/A |
| pH in Water | SM 4500-H+ B (2017) | Electrometry | Kelowna |
| Solids, Total Dissolved in Water | SM 1030 E (2017) | SM 1030 E (2011) | N/A |
| Total Metals in Water | EPA 200.2* / EPA 6020B | HNO3+HCl Hot Block Digestion / Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS) | Richmond |
| Trihalomethanes in Water | EPA 5030B / EPA 8260D | Purge&Trap / GC-MSD (SIM) | Richmond |
| Turbidity in Water | SM 2130 B (2017) | Nephelometry | Kelowna |

*Note: An asterisk in the Method Reference indicates that the CARO method has been modified from the reference method*

**Glossary of Terms:**

| | |
|---|---|
| RL | Reporting Limit (default) |
| < | Less than the specified Reporting Limit (RL) - the actual RL may be higher than the default RL due to various factors |
| > | Greater than the specified Result |
| AO | Aesthetic Objective |
| CFU/100 mL | Colony Forming Units per 100 millilitres |
| CU | Colour Units (referenced against a platinum cobalt standard) |
| MAC | Maximum Acceptable Concentration (health based) |
| mg/L | Milligrams per litre |
| NTU | Nephelometric Turbidity Units |
| OG | Operational Guideline (treated water) |
| pH units | pH < 7 = acidic, ph > 7 = basic |
| µS/cm | Microsiemens per centimetre |
| ASTM | ASTM International Test Methods |
| EPA | United States Environmental Protection Agency Test Methods |
| SM | Standard Methods for the Examination of Water and Wastewater, American Public Health Association |

CARO ANALYTICAL SERVICES

# APPENDIX 1: SUPPORTING INFORMATION

| | | | |
|---|---|---|---|
| **REPORTED TO** | Peachland, Corporation of the District of | **WORK ORDER** | N000568 |
| **PROJECT** | General Potability | **REPORTED** | 2019-11-29 11:47 |

**General Comments:**

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. This analytical report must be reproduced in its entirety. CARO is not responsible for any loss or damage resulting directly or indirectly from error or omission in the conduct of testing. Liability is limited to the cost of analysis. Samples will be disposed of 30 days after the test report has been issued unless otherwise agreed to in writing. The quality control (QC) data is available upon request

Results in **Bold** indicate values that are above CARO's method reporting limits. Any results that are above regulatory limits are highlighted **red**. Please note that results will only be highlighted red if the regulatory limits are included on the CARO report. Any Bold and/or highlighted results do not take into account method uncertainty. If you would like method uncertainty or regulatory limits to be included on your report, please contact your Account Manager:teamcaro@caro.ca

## Appendix II – Trihalomethane Analyses

CARO ANALYTICAL SERVICES

# CERTIFICATE OF ANALYSIS

| | | | |
|---|---|---|---|
| **REPORTED TO** | Peachland, Corporation of the District of<br>5806 Beach Avenue<br>PEACHLAND, BC V0H 1X7 | | |
| **ATTENTION** | Shawn Grundy | **WORK ORDER** | 9051285 |
| **PO NUMBER** | | **RECEIVED / TEMP** | 2019-05-14 12:00 / 9°C |
| **PROJECT** | Chemistry | **REPORTED** | 2019-05-22 15:17 |
| **PROJECT INFO** | | **COC NUMBER** | No Number |

**Introduction:**

CARO Analytical Services is a testing laboratory full of smart, engaged scientists driven to make the world a safer and healthier place. Through our clients' projects we become an essential element for a better world. We employ methods conducted in accordance with recognized professional standards using accepted testing methodologies and quality control efforts. CARO is accredited by the Canadian Association for Laboratories Accreditation (CALA) to ISO 17025:2005 for specific tests listed in the scope of accreditation approved by CALA.

*Big Picture Sidekicks*

You know that the sample you collected after snowshoeing to site, digging 5 meters, and racing to get it on a plane so you can submit it to the lab for time sensitive results needed to make important and expensive decisions (whew) is VERY important. We know that too.

*We've Got Chemistry*

It's simple. We figure the more you enjoy working with our fun and engaged team members; the more likely you are to give us continued opportunities to support you.

*Ahead of the Curve*

Through research, regulation knowledge, and instrumentation, we are your analytical centre for the technical knowledge you need, BEFORE you need it, so you can stay up to date and in the know.

*If you have any questions or concerns, please contact me at estclair@caro.ca*

**Authorized By:**

Eilish St.Clair, B.Sc., C.I.T.
Client Service Representative

CARO ANALYTICAL SERVICES

# TEST RESULTS

| | | | |
|---|---|---|---|
| **REPORTED TO** | Peachland, Corporation of the District of | **WORK ORDER** | 9051285 |
| **PROJECT** | Chemistry | **REPORTED** | 2019-05-22 15:17 |

| Analyte | Result | Guideline | RL | Units | Analyzed | Qualifier |
|---|---|---|---|---|---|---|
| **#1 Todd Rd Washroom (9051285-01) \| Matrix: Water \| Sampled: 2019-05-14 08:00** | | | | | | |
| ***Calculated Parameters*** | | | | | | |
| Total Trihalomethanes | **0.0581** | MAC = 0.1 | 0.00400 | mg/L | N/A | |
| ***Volatile Organic Compounds (VOC)*** | | | | | | |
| Bromodichloromethane | **0.0037** | N/A | 0.0010 | mg/L | 2019-05-21 | |
| Bromoform | < 0.0010 | N/A | 0.0010 | mg/L | 2019-05-21 | |
| Chloroform | **0.0544** | N/A | 0.0010 | mg/L | 2019-05-21 | |
| Dibromochloromethane | < 0.0010 | N/A | 0.0010 | mg/L | 2019-05-21 | |
| *Surrogate: Toluene-d8* | *98* | | *70-130* | % | *2019-05-21* | |
| *Surrogate: 4-Bromofluorobenzene* | *94* | | *70-130* | % | *2019-05-21* | |
| **#3 Swimbay Washroom (9051285-02) \| Matrix: Water \| Sampled: 2019-05-14 07:45** | | | | | | |
| ***Calculated Parameters*** | | | | | | |
| Total Trihalomethanes | 0.173 | MAC = 0.1 | 0.0130 | mg/L | N/A | |
| ***Volatile Organic Compounds (VOC)*** | | | | | | |
| Bromodichloromethane | **0.0045** | N/A | 0.0010 | mg/L | 2019-05-21 | |
| Bromoform | < 0.0010 | N/A | 0.0010 | mg/L | 2019-05-21 | |
| Chloroform | **0.168** | N/A | 0.0010 | mg/L | 2019-05-22 | |
| Dibromochloromethane | < 0.0010 | N/A | 0.0010 | mg/L | 2019-05-21 | |
| *Surrogate: Toluene-d8* | *115* | | *70-130* | % | *2019-05-21* | |
| *Surrogate: 4-Bromofluorobenzene* | *108* | | *70-130* | % | *2019-05-21* | |

CARO ANALYTICAL SERVICES

# APPENDIX 1: SUPPORTING INFORMATION

| | | | |
|---|---|---|---|
| **REPORTED TO** | Peachland, Corporation of the District of | **WORK ORDER** | 9051285 |
| **PROJECT** | Chemistry | **REPORTED** | 2019-05-22 15:17 |

| Analysis Description | Method Ref. | Technique | Location |
|---|---|---|---|
| Trihalomethanes in Water | EPA 5030B / EPA 8260D | Purge&Trap / GC-MSD (SIM) | Richmond |

**Glossary of Terms:**

| | |
|---|---|
| RL | Reporting Limit (default) |
| < | Less than the specified Reporting Limit (RL) - the actual RL may be higher than the default RL due to various factors |
| MAC | Maximum Acceptable Concentration (health based) |
| mg/L | Milligrams per litre |
| EPA | United States Environmental Protection Agency Test Methods |

**Guidelines Referenced in this Report:**

Guidelines for Canadian Drinking Water Quality (Health Canada, Feb 2017)

***Note: In some cases, the values displayed on the report represent the lowest guideline and are to be verified by the end user***

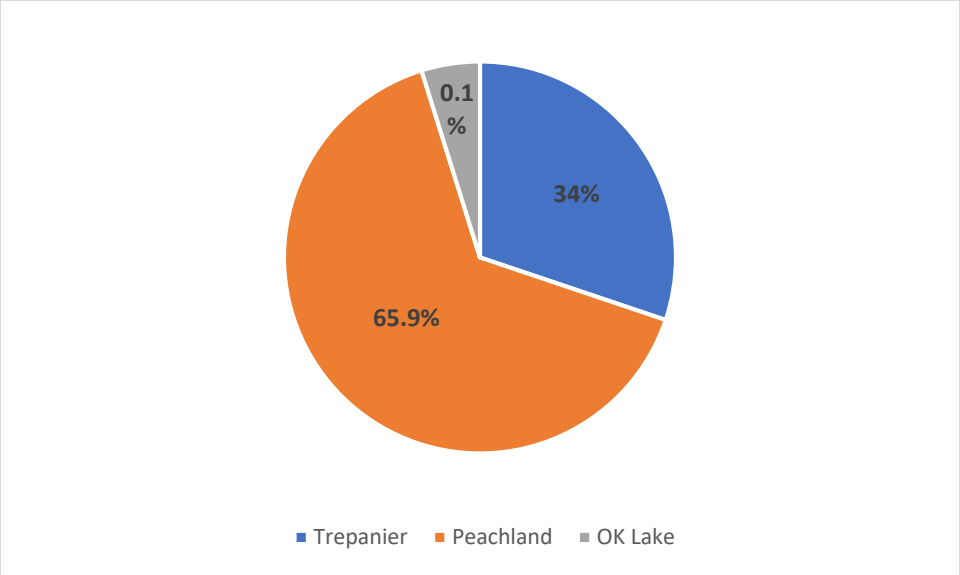
**General Comments:**

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. This analytical report must be reproduced in its entirety. CARO is not responsible for any loss or damage resulting directly or indirectly from error or omission in the conduct of testing. Liability is limited to the cost of analysis. Samples will be disposed of 30 days after the test report has been issued unless otherwise agreed to in writing. The quality control (QC) data is available upon request

Results in **Bold** indicate values that are above CARO's method reporting limits. Any results that are above regulatory limits are highlighted red. Please note that results will only be highlighted red if the regulatory limits are included on the CARO report. Any Bold and/or highlighted results do not take into account method uncertainty. If you would like method uncertainty or regulatory limits to be included on your report, please contact your Account Manager:estclair@caro.ca

## Appendix III – 2019 Water Consumption

| | Volume (UK Gal) | | | | Volume | |
|---|---|---|---|---|---|---|
| **Month** | **Trepanier Creek** | **Peachland Creek** | **Lake Pumps** | **Total** | **m3** | **ML** |
| January | 6,647,700 | 13,709,000 | | 20,356,700 | 92,543 | 92.54 |
| February | 5,957,000 | 13,450,000 | | 19,407,000 | 88,226 | 88.23 |
| March | 7,659,500 | 14,764,000 | | 22,423,500 | 101,939 | 101.94 |
| April | 9,069,900 | 17,280,000 | | 26,349,900 | 119,789 | 119.79 |
| May | 10,721,400 | 38,925,000 | 444,422 | 50,090,822 | 227,717 | 227.72 |
| June | 31,190,800 | 63,272,000 | | 94,462,800 | 429,436 | 429.44 |
| July | 27,662,200 | 43,620,000 | | 71,282,200 | 324,055 | 324.06 |
| August | 31,270,500 | 49,609,000 | | 80,879,500 | 367,685 | 367.69 |
| September | 21,776,400 | 29,742,000 | | 51,518,400 | 234,207 | 234.21 |
| October | 7,988,400 | 16,726,000 | | 24,714,400 | 112,354 | 112.35 |
| November | 5,495,100 | 14,764,000 | | 20,259,100 | 92,100 | 92.10 |
| December | 4,767,300 | 13,526,000 | | 18,293,300 | 83,163 | 83.16 |
| **TOTALS** | **170,206,200** | **329,387,000** | **444,422** | 500,037,622 | 2,273,216 | 2,273.22 |




Peachland water use by source (percentage)

## Appendix IV – Turbidity data

| | Daily Average Turbidity (NTU) | | |
|---|---|---|---|
| | **Peachland** | **Trepanier** | **OK Lake** |
| **01-Jan-19** | 0.5 | 0.51 | OFF |
| **02-Jan-19** | 0.54 | 0.52 | OFF |
| **03-Jan-19** | 0.48 | 0.5 | OFF |
| **04-Jan-19** | 0.46 | 0.48 | OFF |
| **05-Jan-19** | 0.46 | 0.52 | OFF |
| **06-Jan-19** | 0.48 | 0.51 | OFF |
| **07-Jan-19** | 0.49 | 0.53 | OFF |
| **08-Jan-19** | 0.45 | 0.56 | OFF |
| **09-Jan-19** | 0.49 | 0.63 | OFF |
| **10-Jan-19** | 0.51 | 0.55 | OFF |
| **11-Jan-19** | 0.52 | 0.6 | OFF |
| **12-Jan-19** | 0.51 | 0.61 | OFF |
| **13-Jan-19** | 0.5 | 0.58 | OFF |
| **14-Jan-19** | 0.5 | 0.59 | OFF |
| **15-Jan-19** | 0.48 | 0.6 | OFF |
| **16-Jan-19** | 0.48 | 0.53 | OFF |
| **17-Jan-19** | 0.5 | 0.55 | OFF |
| **18-Jan-19** | 0.54 | 0.66 | OFF |
| **19-Jan-19** | 0.51 | 0.68 | OFF |
| **20-Jan-19** | 0.52 | N/A | OFF |
| **21-Jan-19** | 0.53 | N/A | OFF |
| **22-Jan-19** | 0.5 | N/A | OFF |
| **23-Jan-18** | 0.51 | N/A | OFF |

| | Daily Average Turbidity (NTU) | | |
|---|---|---|---|
| | **Peachland** | **Trepanier** | **OK Lake** |
| **24-Jan-19** | 0.49 | N/A | OFF |
| **25-Jan-19** | 0.5 | N/A | OFF |
| **26-Jan-19** | 0.51 | N/A | OFF |
| **27-Jan-19** | 0.48 | N/A | OFF |
| **28-Jan-19** | 0.47 | N/A | OFF |
| **29-Jan-19** | 0.48 | N/A | OFF |
| **30-Jan-19** | 0.46 | N/A | OFF |
| **31-Jan-19** | 0.48 | N/A | OFF |
| **01-Feb-19** | 0.50 | 0.32 | OFF |
| **02-Feb-19** | 0.54 | 0.41 | OFF |
| **03-Feb-19** | 0.48 | 0.35 | OFF |
| **04-Feb-19** | 0.46 | 0.41 | OFF |
| **05-Feb-19** | 0.46 | 0.32 | OFF |
| **06-Feb-19** | 0.45 | 0.33 | OFF |
| **07-Feb-19** | 0.55 | 0.36 | OFF |
| **08-Feb-19** | 0.46 | 0.48 | OFF |
| **09-Feb-19** | 0.46 | 0.49 | OFF |
| **10-Feb-19** | 0.46 | 0.55 | OFF |
| **11-Feb-19** | 0.46 | 0.64 | OFF |
| **12-Feb-19** | 0.49 | 0.56 | OFF |
| **13-Feb-19** | 0.45 | 0.53 | OFF |
| **14-Feb-19** | 0.44 | 0.51 | OFF |
| **15-Feb-19** | 0.55 | 0.48 | OFF |

| | Daily Average Turbidity (NTU) | | |
|---|---|---|---|
| | **Peachland** | **Trepanier** | **OK Lake** |
| **16-Feb-19** | 0.53 | 0.5 | OFF |
| **17-Feb-19** | 0.5 | 0.48 | OFF |
| **18-Feb-19** | 0.47 | 0.5 | OFF |
| **19-Feb-19** | 0.44 | 0.45 | OFF |
| **20-Feb-19** | 0.45 | 0.44 | OFF |
| **21-Feb-19** | 0.46 | 0.45 | OFF |
| **22-Feb-19** | 0.47 | 0.42 | OFF |
| **23-Feb-19** | 0.44 | 0.4 | OFF |
| **24-Feb-19** | 0.49 | 0.42 | OFF |
| **25-Feb-19** | 0.48 | 0.39 | OFF |
| **26-Feb-19** | 0.46 | 0.4 | OFF |
| **27-Feb-19** | 0.39 | 0.4 | OFF |
| **28-Feb-19** | 0.42 | 0.4 | OFF |
| **01-Mar-19** | 0.47 | 0.51 | OFF |
| **02-Mar-19** | 0.48 | 0.52 | OFF |
| **03-Mar-19** | 0.42 | 0.5 | OFF |
| **04-Mar-19** | 0.4 | 0.48 | OFF |
| **05-Mar-19** | 0.41 | 0.52 | OFF |
| **06-Mar-19** | 0.44 | 0.51 | OFF |
| **07-Mar-19** | 0.49 | 0.53 | OFF |
| **08-Mar-19** | 0.49 | 0.56 | OFF |
| **09-Mar-19** | 0.49 | 0.63 | OFF |
| **10-Mar-19** | 0.49 | 0.55 | OFF |

| | Daily Average Turbidity (NTU) | | |
|---|---|---|---|
| | **Peachland** | **Trepanier** | **OK Lake** |
| **11-Mar-19** | 0.5 | 0.6 | OFF |
| **12-Mar-19** | 0.47 | 0.61 | OFF |
| **13-Mar-19** | 0.51 | 0.58 | OFF |
| **14-Mar-19** | 0.49 | 0.59 | OFF |
| **15-Mar-19** | 0.54 | 0.6 | OFF |
| **16-Mar-19** | 0.58 | 0.69 | OFF |
| **17-Mar-19** | 0.57 | 0.71 | OFF |
| **18-Mar-19** | 0.53 | 0.87 | OFF |
| **19-Mar-19** | 0.61 | 0.76 | OFF |
| **20-Mar-19** | 0.58 | 0.82 | OFF |
| **21-Mar-19** | 0.61 | 0.9 | OFF |
| **22-Mar-19** | 0.66 | 0.87 | OFF |
| **23-Mar-19** | 0.62 | 0.86 | OFF |
| **24-Mar-19** | 0.68 | 0.97 | OFF |
| **25-Mar-19** | 0.7 | 0.95 | OFF |
| **26-Mar-19** | 0.73 | 0.89 | OFF |
| **27-Mar-19** | 0.78 | 0.88 | OFF |
| **28-Mar-19** | 0.69 | 0.95 | OFF |
| **29-Mar-19** | 0.74 | 0.93 | OFF |
| **30-Mar-19** | 0.85 | 0.9 | OFF |
| **31-Mar-19** | 0.74 | 0.97 | OFF |
| **1-Apr-19** | 0.75 | 0.65 | OFF |
| **2-Apr-19** | 0.90 | 0.70 | OFF |

| | Daily Average Turbidity (NTU) | | |
|---|---|---|---|
| | **Peachland** | **Trepanier** | **OK Lake** |
| **3-Apr-19** | 0.85 | 0.79 | OFF |
| **4-Apr-19** | 0.92 | 0.73 | OFF |
| **5-Apr-19** | 0.98 | 0.84 | OFF |
| **6-Apr-19** | 0.95 | 0.59 | OFF |
| **7-Apr-19** | 0.89 | 0.48 | OFF |
| **8-Apr-19** | 0.8 | 0.81 | OFF |
| **9-Apr-19** | 0.81 | 0.91 | OFF |
| **10-Apr-19** | 0.88 | 1.09 | OFF |
| **11-Apr-19** | 0.91 | 1.12 | OFF |
| **12-Apr-19** | 0.87 | 1.26 | OFF |
| **13-Apr-19** | 0.78 | 1.23 | OFF |
| **14-Apr-19** | 0.72 | 1.23 | OFF |
| **15-Apr-19** | 0.73 | 1.65 | OFF |
| **16-Apr-19** | 0.72 | 1.26 | OFF |
| **17-Apr-19** | 0.82 | 1.29 | OFF |
| **18-Apr-19** | 0.69 | 1.93 | OFF |
| **19-Apr-19** | 0.81 | 3 | OFF |
| **20-Apr-19** | 1.24 | 2.82 | OFF |
| **21-Apr-19** | 1.23 | 1.47 | OFF |
| **22-Apr-19** | 1.0 | 1.34 | OFF |
| **23-Apr-19** | 0.86 | 1.17 | OFF |
| **24-Apr-19** | 0.9 | 1.65 | OFF |
| **25-Apr-19** | 1.0 | 1.12 | OFF |

| | Daily Average Turbidity (NTU) | | |
|---|---|---|---|
| | **Peachland** | **Trepanier** | **OK Lake** |
| **26-Apr-19** | 0.86 | 0.94 | OFF |
| **27-Apr-19** | 0.81 | 0.89 | OFF |
| **28-Apr-19** | 0.71 | 0.8 | OFF |
| **29-Apr-19** | 0.75 | 0.81 | OFF |
| **30-Apr-19** | 1.2 | 0.94 | OFF |
| 1-May-19 | 1.02 | 0.7 | OFF |
| 2-May-19 | 0.91 | 0.93 | OFF |
| 3-May-19 | 0.88 | 1.01 | OFF |
| 4-May-19 | 0.92 | 0.9 | OFF |
| 5-May-19 | 0.93 | 1.18 | OFF |
| 6-May-19 | 0.9 | 1.78 | OFF |
| 7-May-19 | 0.96 | 2.51 | OFF |
| 8-May-19 | 1.16 | 2.55 | OFF |
| 9-May-19 | 1.56 | 3.18 | OFF |
| 10-May-19 | 1.43 | OFF | 0.7 |
| 11-May-19 | 0.92 | OFF | 0.8 |
| 12-May-19 | 0.88 | OFF | 0.9 |
| 13-May-19 | 1.89 | OFF | 0.9 |
| 14-May-19 | 1.14 | OFF | 0.8 |
| 15-May-19 | 0.87 | OFF | 0.9 |
| 16-May-19 | 0.89 | OFF | 0.9 |
| 17-May-19 | 1.14 | OFF | 0.7 |
| 18-May-19 | 1.34 | OFF | 0.6 |

| | Daily Average Turbidity (NTU) | | |
|---|---|---|---|
| | **Peachland** | **Trepanier** | **OK Lake** |
| 19-May-19 | 0.98 | OFF | 0.8 |
| 20-May-19 | 0.89 | OFF | 0.8 |
| 21-May-19 | 0.87 | OFF | 0.9 |
| 22-May-19 | 0.86 | OFF | 0.9 |
| 23-May-19 | 0.85 | OFF | 1 |
| 24-May-19 | 0.83 | OFF | 1 |
| 25-May-19 | 0.8 | OFF | 1 |
| 26-May-19 | 0.79 | OFF | 0.9 |
| 27-May-19 | 0.82 | OFF | 0.9 |
| 28-May-19 | 0.85 | 0.8 | OFF |
| 29-May-19 | 0.87 | 0.8 | OFF |
| 30-May-19 | 0.88 | 0.49 | OFF |
| 31-May-19 | 0.92 | 0.45 | OFF |
| 1-Jun-19 | 0.86 | 0.45 | OFF |
| 2-Jun-19 | 0.85 | 0.45 | OFF |
| 3-Jun-19 | 0.87 | 0.48 | OFF |
| 4-Jun-19 | 0.81 | 0.52 | OFF |
| 5-Jun-19 | 0.85 | 0.44 | OFF |
| 6-Jun-19 | 0.8 | 0.54 | OFF |
| 7-Jun-19 | 0.78 | 0.56 | OFF |
| 8-Jun-19 | 0.75 | 0.56 | OFF |
| 9-Jun-19 | 0.72 | 0.58 | OFF |
| 10-Jun-19 | 0.74 | 0.5 | OFF |

| | Daily Average Turbidity (NTU) | | |
|---|---|---|---|
| | **Peachland** | **Trepanier** | **OK Lake** |
| 11-Jun-19 | 0.72 | 0.35 | OFF |
| 12-Jun-19 | 0.72 | 0.39 | OFF |
| 13-Jun-19 | 0.79 | 0.41 | OFF |
| 14-Jun-19 | 0.74 | 0.36 | OFF |
| 15-Jun-19 | 0.7 | 0.36 | OFF |
| 16-Jun-19 | 0.74 | 0.41 | OFF |
| 17-Jun-19 | 0.7 | 0.38 | OFF |
| 18-Jun-19 | 0.68 | 0.49 | OFF |
| 19-Jun-19 | 0.69 | 0.55 | OFF |
| 20-Jun-19 | 0.7 | 0.54 | OFF |
| 21-Jun-19 | 0.68 | 0.63 | OFF |
| 22-Jun-19 | 0.66 | 0.72 | OFF |
| 23-Jun-19 | 0.66 | 0.81 | OFF |
| 24-Jun-19 | 0.72 | 0.73 | OFF |
| 25-Jun-19 | 0.65 | 0.8 | 0.7 |
| 26-Jun-19 | 0.64 | 0.59 | 0.8 |
| 27-Jun-19 | 0.65 | 0.52 | 0.9 |
| 28-Jun-19 | 0.84 | 0.55 | 0.9 |
| 29-Jun-19 | 0.81 | 0.67 | 0.8 |
| 30-Jun-19 | 0.69 | 0.65 | 0.9 |
| 1-Jul-19 | 0.64 | 0.53 | 0.9 |
| 2-Jul-19 | 0.62 | 0.56 | 0.7 |
| 3-Jul-19 | 0.62 | 0.46 | 0.6 |

| | Daily Average Turbidity (NTU) | | |
|---|---|---|---|
| | **Peachland** | **Trepanier** | **OK Lake** |
| 4-Jul-19 | 0.62 | 0.36 | OFF |
| 5-Jul-19 | 0.59 | 0.34 | OFF |
| 6-Jul-19 | 0.66 | 0.34 | OFF |
| 7-Jul-19 | 0.63 | 0.29 | OFF |
| 8-Jul-19 | 0.58 | 0.26 | OFF |
| 9-Jul-19 | 0.6 | 0.26 | OFF |
| 10-Jul-19 | 0.58 | 0.31 | OFF |
| 11-Jul-19 | 0.82 | 0.32 | OFF |
| 12-Jul-19 | 0.78 | 0.28 | OFF |
| 13-Jul-19 | 0.7 | 0.28 | OFF |
| 14-Jul-19 | 0.62 | 0.3 | OFF |
| 15-Jul-19 | 0.62 | 0.38 | OFF |
| 16-Jul-19 | 0.63 | 0.41 | OFF |
| 17-Jul-19 | 0.64 | 0.48 | OFF |
| 18-Jul-19 | 0.61 | 0.55 | OFF |
| 19-Jul-19 | 0.58 | 0.63 | OFF |
| 20-Jul-19 | 0.57 | 0.71 | OFF |
| 21-Jul-19 | 0.59 | 0.8 | OFF |
| 22-Jul-19 | 0.58 | 0.7 | OFF |
| 23-Jul-19 | 0.57 | 0.23 | OFF |
| 24-Jul-19 | 0.66 | 0.3 | OFF |
| 25-Jul-19 | 0.65 | 0.2 | OFF |
| 26-Jul-19 | 0.63 | 0.21 | OFF |

| | Daily Average Turbidity (NTU) | | |
|---|---|---|---|
| | **Peachland** | **Trepanier** | **OK Lake** |
| 27-Jul-19 | 0.61 | 0.22 | OFF |
| 28-Jul-19 | 0.59 | 0.23 | OFF |
| 29-Jul-19 | 0.6 | 0.23 | OFF |
| 30-Jul-19 | 0.58 | 0.25 | OFF |
| 31-Jul-19 | 0.57 | 0.23 | OFF |
| 1-Aug-19 | 0.68 | 0.32 | OFF |
| 2-Aug-19 | 0.59 | 0.3 | OFF |
| 3-Aug-19 | 0.61 | 0.31 | OFF |
| 4-Aug-19 | 0.59 | 0.31 | OFF |
| 5-Aug-19 | 0.58 | 0.34 | OFF |
| 6-Aug-19 | 0.58 | 0.57 | OFF |
| 7-Aug-19 | 0.61 | 0.36 | OFF |
| 8-Aug-19 | 0.6 | 0.18 | OFF |
| 9-Aug-19 | 0.59 | 0.16 | OFF |
| 10-Aug-19 | 0.63 | 0.18 | OFF |
| 11-Aug-19 | 0.61 | 0.15 | OFF |
| 12-Aug-19 | 0.61 | 0.22 | OFF |
| 13-Aug-19 | 0.64 | 0.25 | OFF |
| 14-Aug-19 | 0.65 | 0.21 | OFF |
| 15-Aug-19 | 0.66 | 0.19 | OFF |
| 16-Aug-19 | 0.67 | 0.2 | OFF |
| 17-Aug-19 | 0.63 | 0.23 | OFF |
| 18-Aug-19 | 0.65 | 0.28 | OFF |

| | Daily Average Turbidity (NTU) | | |
|---|---|---|---|
| | **Peachland** | **Trepanier** | **OK Lake** |
| 19-Aug-19 | 0.69 | 0.37 | OFF |
| 20-Aug-19 | 0.6 | 0.28 | OFF |
| 21-Aug-19 | 0.72 | 0.39 | OFF |
| 22-Aug-19 | 0.64 | 0.15 | OFF |
| 23-Aug-19 | 0.67 | 0.15 | OFF |
| 24-Aug-19 | 0.61 | 0.13 | OFF |
| 25-Aug-19 | 0.73 | 0.15 | OFF |
| 26-Aug-19 | 0.7 | 0.16 | OFF |
| 27-Aug-19 | 0.77 | 0.15 | OFF |
| 28-Aug-19 | 0.74 | 0.17 | OFF |
| 29-Aug-19 | 0.65 | 0.17 | OFF |
| 30-Aug-19 | 0.66 | 0.17 | OFF |
| 31-Aug-19 | 0.75 | 0.22 | OFF |
| 1-Sep-19 | 0.73 | 0.23 | OFF |
| 2-Sep-19 | 0.84 | 0.27 | OFF |
| 3-Sep-19 | 0.75 | 0.26 | OFF |
| 4-Sep-19 | 0.77 | 0.18 | OFF |
| 5-Sep-19 | 0.76 | 0.18 | OFF |
| 6-Sep-19 | 0.68 | 0.17 | OFF |
| 7-Sep-19 | 0.71 | 0.17 | OFF |
| 8-Sep-19 | 0.8 | 0.18 | OFF |
| 9-Sep-19 | 0.82 | 0.16 | OFF |
| 10-Sep-19 | 0.84 | 0.21 | OFF |

| | Daily Average Turbidity (NTU) | | |
|---|---|---|---|
| | **Peachland** | **Trepanier** | **OK Lake** |
| 11-Sep-19 | 0.77 | 0.17 | OFF |
| 12-Sep-19 | 0.87 | 0.16 | OFF |
| 13-Sep-19 | 0.8 | 0.17 | OFF |
| 14-Sep-19 | 0.8 | 0.17 | OFF |
| 15-Sep-19 | 0.9 | 0.19 | OFF |
| 16-Sep-19 | 0.91 | 0.22 | OFF |
| 17-Sep-19 | 0.83 | 0.21 | OFF |
| 18-Sep-19 | 0.81 | 0.2 | OFF |
| 19-Sep-19 | 0.9 | 0.23 | OFF |
| 20-Sep-19 | 0.87 | 0.2 | OFF |
| 21-Sep-19 | 0.85 | 0.2 | OFF |
| 22-Sep-19 | 0.84 | 0.19 | OFF |
| 23-Sep-19 | 0.81 | 0.19 | OFF |
| 24-Sep-19 | 0.83 | 0.19 | OFF |
| 25-Sep-19 | 0.8 | 0.2 | OFF |
| 26-Sep-19 | 0.84 | 0.19 | OFF |
| 27-Sep-19 | 0.83 | 0.18 | OFF |
| 28-Sep-19 | 0.85 | 0.18 | OFF |
| 29-Sep-19 | 0.88 | 0.2 | OFF |
| 30-Sep-19 | 0.87 | 0.17 | OFF |
| 1-Oct-19 | 0.87 | 0.16 | OFF |
| 2-Oct-19 | 0.88 | 0.21 | OFF |
| 3-Oct-19 | 0.78 | 0.17 | OFF |

| | Daily Average Turbidity (NTU) | | |
|---|---|---|---|
| | **Peachland** | **Trepanier** | **OK Lake** |
| 4-Oct-19 | 0.72 | 0.16 | OFF |
| 5-Oct-19 | 0.7 | 0.14 | OFF |
| 6-Oct-19 | 0.7 | 0.14 | OFF |
| 7-Oct-19 | 0.74 | 0.2 | OFF |
| 8-Oct-19 | 0.77 | 0.19 | OFF |
| 9-Oct-19 | 0.8 | 0.21 | OFF |
| 10-Oct-19 | 0.82 | 0.25 | OFF |
| 11-Oct-19 | 0.83 | 0.19 | OFF |
| 12-Oct-19 | 0.81 | 0.26 | OFF |
| 13-Oct-19 | 0.77 | 0.45 | OFF |
| 14-Oct-19 | 0.89 | 0.81 | OFF |
| 15-Oct-19 | 0.85 | 0.74 | OFF |
| 16-Oct-19 | 0.88 | 0.77 | OFF |
| 17-Oct-19 | 0.87 | 0.89 | OFF |
| 18-Oct-19 | 0.73 | 0.89 | OFF |
| 19-Oct-19 | 0.66 | 0.75 | OFF |
| 20-Oct-19 | 0.67 | 0.76 | OFF |
| 21-Oct-19 | 0.7 | 0.81 | OFF |
| 22-Oct-19 | 0.72 | 0.7 | OFF |
| 23-Oct-19 | 0.85 | 0.78 | OFF |
| 24-Oct-19 | 0.83 | 0.72 | OFF |
| 25-Oct-19 | 0.78 | 0.71 | OFF |
| 26-Oct-19 | 0.75 | 0.72 | OFF |

| | Daily Average Turbidity (NTU) | | |
|---|---|---|---|
| | **Peachland** | **Trepanier** | **OK Lake** |
| 27-Oct-19 | 0.73 | 0.82 | OFF |
| 28-Oct-19 | 0.72 | 0.81 | OFF |
| 29-Oct-19 | 0.76 | 0.88 | OFF |
| 30-Oct-19 | 0.6 | 0.8 | OFF |
| 31-Oct-19 | 0.62 | 0.71 | OFF |
| 1-Nov-19 | 0.6 | 0.86 | OFF |
| 2-Nov-19 | 0.61 | 0.76 | OFF |
| 3-Nov-19 | 0.62 | 0.88 | OFF |
| 4-Nov-19 | 0.59 | 0.83 | OFF |
| 5-Nov-19 | 0.58 | 0.84 | OFF |
| 6-Nov-19 | 0.56 | 0.85 | OFF |
| 7-Nov-19 | 0.57 | 0.83 | OFF |
| 8-Nov-19 | 0.56 | 0.87 | OFF |
| 9-Nov-19 | 0.55 | 0.86 | OFF |
| 10-Nov-19 | 0.55 | 0.84 | OFF |
| 11-Nov-19 | 0.56 | 0.87 | OFF |
| 12-Nov-19 | 0.56 | 0.93 | OFF |
| 13-Nov-19 | 0.58 | 0.86 | OFF |
| 14-Nov-19 | 0.61 | 0.61 | OFF |
| 15-Nov-19 | 0.64 | 0.21 | OFF |
| 16-Nov-19 | 0.7 | 0.24 | OFF |
| 17-Nov-19 | 0.67 | 0.23 | OFF |
| 18-Nov-19 | 0.73 | 0.23 | OFF |

| | Daily Average Turbidity (NTU) | | |
|---|---|---|---|
| | **Peachland** | **Trepanier** | **OK Lake** |
| 19-Nov-19 | 0.74 | 0.17 | OFF |
| 20-Nov-19 | 0.75 | 0.15 | OFF |
| 21-Nov-19 | 0.7 | 0.18 | OFF |
| 22-Nov-19 | 0.76 | 0.18 | OFF |
| 23-Nov-19 | 0.8 | 0.15 | OFF |
| 24-Nov-19 | 0.86 | 0.12 | OFF |
| 25-Nov-19 | 0.86 | 0.15 | OFF |
| 26-Nov-19 | 0.79 | 0.16 | OFF |
| 27-Nov-19 | 0.66 | 0.14 | OFF |
| 28-Nov-19 | 0.62 | 0.11 | OFF |
| 29-Nov-19 | 0.58 | 0.11 | OFF |
| 30-Nov-19 | 0.55 | 0.11 | OFF |
| 1-Dec-19 | 0.63 | 0.11 | OFF |
| 2-Dec-19 | 0.9 | 0.15 | OFF |
| 3-Dec-19 | 0.99 | 0.17 | OFF |
| 4-Dec-19 | 0.65 | 0.15 | OFF |
| 5-Dec-19 | 0.62 | 0.14 | OFF |
| 6-Dec-19 | 0.64 | 0.13 | OFF |
| 7-Dec-19 | 0.6 | 0.13 | OFF |
| 8-Dec-19 | 0.56 | 0.13 | OFF |
| 9-Dec-19 | 0.57 | 0.13 | OFF |
| 10-Dec-19 | 0.56 | 0.14 | OFF |
| 11-Dec-19 | 0.59 | 0.11 | OFF |

| | Daily Average Turbidity (NTU) | | |
|---|---|---|---|
| | **Peachland** | **Trepanier** | **OK Lake** |
| 12-Dec-19 | 0.59 | 0.11 | OFF |
| 13-Dec-19 | 0.62 | 0.14 | OFF |
| 14-Dec-19 | 0.6 | 0.14 | OFF |
| 15-Dec-19 | 0.58 | 0.14 | OFF |
| 16-Dec-19 | 0.54 | 0.14 | OFF |
| 17-Dec-19 | 0.55 | 0.12 | OFF |
| 18-Dec-19 | 0.6 | 0.16 | OFF |
| 19-Dec-19 | 0.55 | 0.13 | OFF |
| 20-Dec-19 | 0.61 | 0.17 | OFF |
| 21-Dec-19 | 0.6 | 0.17 | OFF |
| 22-Dec-19 | 0.59 | 0.15 | OFF |
| 23-Dec-19 | 0.63 | 0.14 | OFF |
| 24-Dec-19 | 0.59 | 0.16 | OFF |
| 25-Dec-19 | 0.59 | 0.13 | OFF |
| 26-Dec-19 | 0.6 | 0.11 | OFF |
| 27-Dec-19 | 0.58 | 0.12 | OFF |
| 28-Dec-19 | 0.62 | 0.14 | OFF |
| 29-Dec-19 | 0.62 | 0.14 | OFF |
| 30-Dec-19 | 0.69 | 0.14 | OFF |
| 31-Dec-19 | 0.83 | 0.12 | OFF |
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