

### Water Quality Monitoring in the Distribution System

In 2020 a total of **53** treated water samples were drawn from dedicated sample locations throughout the distribution system on a weekly basis and analyzed by an accredited laboratory for Total Coliforms and *Escherichia coli* bacteria. All of the samples drawn in 2020 had no detections for Total Coliforms or E.coli.



In addition to the weekly bacteriological samples, field tests were conducted for free chlorine residuals, temperature, pH, conductivity and turbidity. The treated water from the City of Penticton already has a chlorine residual however, re-chlorination of the water at the Booster Station occurs during times of low water use to ensure adequate residuals throughout the distribution system.

Sampling Location	Unit	Avg	Min	Max	Number of Results
Hyslop Dr	mg/L	0.57	0.33	0.86	14
Lambert Dr	mg/L	0.83	0.23	1.25	13
Sunglo Dr	mg/L	1.02	0.75	1.37	13
Veteran Dr	mg/L	0.89	0.66	1.08	13

2020—Distribution Free Chlorine Residuals

### Water System Notices

- No water quality related system notices were issued in 2020 for the West Bench water system.

### Plans for 2021

- Upgrade the Supervisory Control and Data Acquisition (SCADA) system. This will include network upgrades and new software. See page 3 for more information on the SCADA systems.

### IHA's Role

The Interior Health Authority's team of drinking water officers are responsible for providing the oversight to ensure compliance and drinking water safety. The IHA is responsible for issuing Permits to Operate to drinking water systems. IHA has four levels of water notifications.

#### **WATER QUALITY ADVISORY (WQA)**

There is some level of risk associated with consuming the water, but a boil water notice is not needed. The risk is elevated for people with weakened immune systems.

#### **BOIL WATER NOTICE (BWN)**

There are organisms in the water that can make you sick. To safely consume the water, you must bring it to a rolling boil for at least 60 seconds, or use a safe alternate source of water.

#### **DO NOT CONSUME (DNC)**

There are harmful chemicals or other bad things in the water that can make you sick if you consume (swallow) it. You cannot make the water safe by boiling it. You can bath, shower, and water plants and gardens with the water.

#### **DO NOT USE WATER (DNU)**

There are known microbial, chemical, or radiological contaminants in the water and that any contact with the water, with the skin, lungs, or eyes can be dangerous. Do not turn on your tap for any reason and do not use your water. You CANNOT make the water safe by boiling it.

## Coliform Counts

Total Coliforms and *E.coli* are indicator organisms used to assess bacteriological quality of the water (i.e. the effectiveness of the treatment and safety of the water within the distribution system).



## Free Chlorine

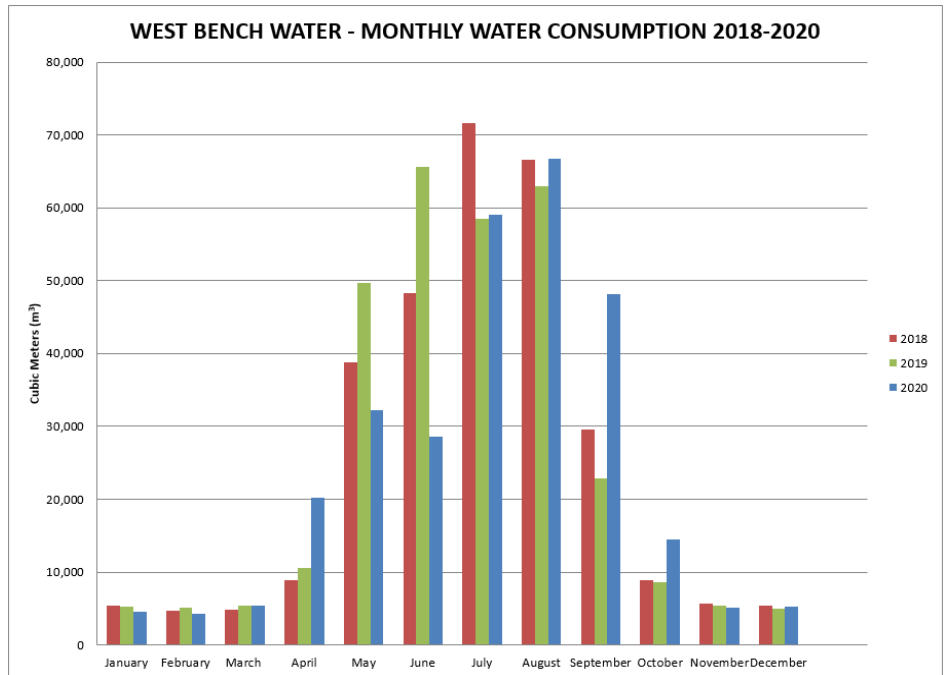
Free chlorine residuals in the distribution system add a level of protection to the treated water as it moves through the distribution network. Free chlorine residuals are required to be maintained between 0.2 mg/L and 2.0 mg/L free chlorine.

## City of Penticton Water Treatment

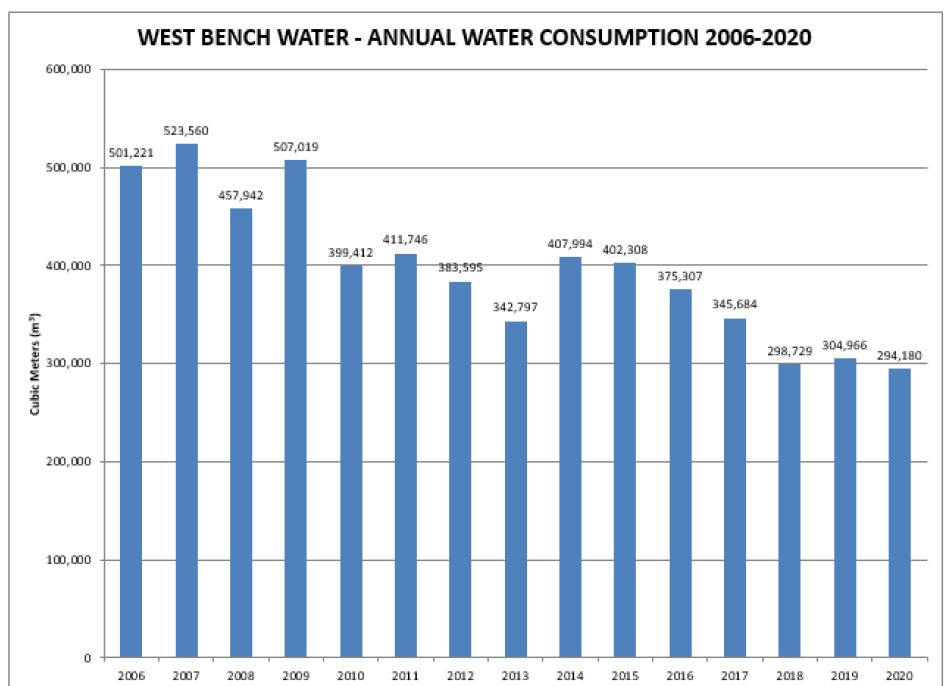
The City of Penticton sources water from both Penticton Creek and Okanagan Lake. The blend of these two sources can change throughout the year based on drought levels and water demands. The source waters undergo an extensive treatment process, starting with flocculation which causes small particles and microorganisms to clump together into a floc. Dissolved Air Flootation (DAF) is used to bring the floc to the surface where it can be removed. The water is then filtered and finally disinfected with chlorine before entering the distribution system.

## 2020 Annual Water Consumption

The West Bench water system receives treated water from the City of Penticton for all domestic, agricultural and commercial uses. A total of 294,180 cubic meters of water was pumped from the City of Penticton through the West Bench Booster Station in 2020, down slightly from the 304,966 cubic meters in 2019.



Monthly Water Consumption 2018-2020



Annual Water Consumption 2006-2020

## Water Metering

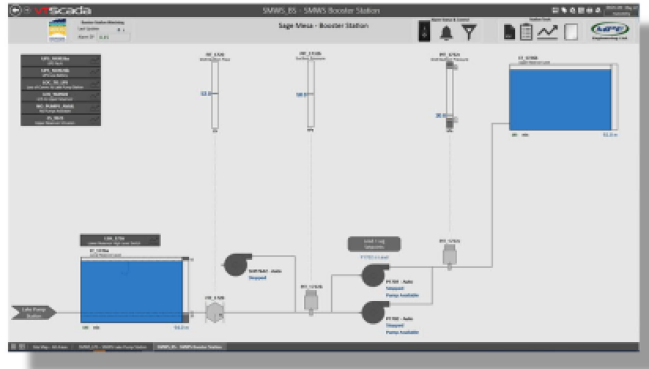
The West Bench is the first RDOS water system to have universal water metering. Universal metering is where, all service connections within a service area are required to have a water meter. The RDOS continues to have a comprehensive leak detection program by identifying any new leaks through the monthly meter reading process. With identification and repair of leaks everyone benefits.

- Property owners are not billed for unused water
- Electrical costs are reduced for the RDOS at the Booster Pump Station
- Pressure on the City of Penticton's Water Treatment Plant is reduced
- Wasted water is not creating dangerous sink holes or destabilizing the ground; a concern as some of the land on the West Bench is prone to sloughing or moving.



## Supervisory Control and Data Acquisition (SCADA) System

A SCADA system is an integral part of a modern water system. It is comprised of sensors, programmable controllers, communications and network devices installed at pump stations and treatment facilities. The SCADA system controls equipment such as pumps and monitors system operations while storing important data such as intake turbidity levels, pumping flow rates, and storage reservoir levels. The system also provides for efficiencies in operation and the response to system failures. This is achieved by the ability to monitor and view the system remotely through a software package along with the generation of alarms that will notify the system Operators when there is a problem or failure within a system.



In 2020 the RDOS had a consultant develop a SCADA Master Plan. This plan will assist with upgrades to the existing SCADA network along with providing a detailed plan on how to move forward into the future in an efficient manner.

## Standards for Potable Water

The *British Columbia Drinking Water Protection Act (DWPA)* and supporting Regulation along with the *Federal Guidelines for Canadian Drinking Water Quality (GCDWQ)* define parameters for potable water in BC. These include Aesthetic Objectives (AO) and Maximum Allowable Concentrations (MAC) for numerous water quality parameters.



## Certified Water Operators

The *British Columbia Environmental Operators Certification Program (BC EOCP)* is responsible for the classification of water systems in BC. The EOCP is also responsible for certification of all water system Operators.

All RDOS Operators are certified through the *BC EOCP*. Operators may hold certification in the disciplines of Water Distribution and/or Water Treatment with 4 levels of certification achievable within each discipline.

Annually, RDOS Operators attend courses and seminars and complete online training required to maintain and augment their levels of certification.

# Provincial Drought Levels vs. Water Restrictions

It can be confusing when Provincial Drought Levels are circulated in the media and appear to contradict local Water Restriction Stages. They are two different rating systems.

Provincial Drought Levels are based on 'environmental flow needs' in creeks and rivers. BC River's Forecast Centre monitors volumes of water and water levels in order to insure water levels are adequate to support fish as they move through their life cycle. Fish are indicators of the overall health of the creek ecosystem, especially in times of increasing water scarcity during a drought. The Province developed a system to rate Drought Levels, and the response actions required at each incremental stage.

Regional Water (sprinkling) Restrictions relate to the capacity of each individual water system to provide potable water to users. Restrictions are required in times of heavy use or water scarcity (drought) and may not be at the same stage for all water systems.

The RDOS's *Regional Water Use Regulation Bylaw* and *Regional Water Conservation Strategy* are used to regulate the water use within the nine water systems that the RDOS owns/operates.

Restrictions begin at *Stage Normal* which represents normal (average) conditions for a local area and are in effect year round unless a higher stage (Stages 1 to 4) are in effect.



## Water Conservation

New for 2021

**RESIDENTIAL Outdoor Water Use Restrictions**

RDOS WATER USE REGULATIONS

Hand held garden hose up to Stage 2 any day, anytime

**NO watering on Mondays**

**STAGE NORMAL WATERING SCHEDULE:**

<b>EVEN</b> numbered civic address	<b>TUE</b>	<b>THU</b>	<b>SAT</b>
	6-10am & 6-10pm		

**AUTOMATIC residential irrigation:**  
12:01 am to 6am on your watering day

<b>ODD</b> numbered civic address	<b>WED</b>	<b>FRI</b>	<b>SUN</b>
	6-10am & 6-10pm		

**3 Days / Week**

**MAKE WATER WORK for you!**

- Water plants not pavement
- Low water plants save you money
- Wash the car on the lawn

[www.rdos.bc.ca/restrictions](http://www.rdos.bc.ca/restrictions)

For more info, call Public Works 250.492.0237

4 x 6 Magnet

These handy little reminders were provided to all property owners in RDOS owned or operated water systems. The hanger can be attached to exterior hose bibs, and the magnets to any metal surface like fridges, filing cabinets, or metal garage doors. If your property is a rental, please insure they are delivered to tenants, and all outdoor irrigation is set to align with regulations.

### MAKE WATER WORK FOR YOU

2 x 3 outdoor faucet (hose bib) hanger

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See reverse for sprinkling regulations

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For the complete Water Use Restriction Stages visit: [Water Restrictions](http://Water Restrictions)

For more water wise tips visit : [www.makewaterwork.ca](http://www.makewaterwork.ca)

## Water Quality Complaints

If you have a water quality complaint or concern or would like to request further information regarding any of the RDOS water systems please contact the following:

Public Works Department  
RDOS Environmental Technologist  
Toll Free: 1-877-610-3737  
Phone: 250-490-4106  
Email: [info@rdos.bc.ca](mailto:info@rdos.bc.ca)



## Additional Resources

RDOS Water System Home Page  
[Water Systems | RDOS](#)

Interior Health Authority Drinking Water Homepage  
[Home \(interiorhealth.ca\)](#)

Federal Guidelines for Drinking Water Quality  
[Water Quality - Reports and Publications - Canada.ca](#)

## Water Connections

During regular business hours water related emergencies, questions regarding applications for water service and water service turn on/off requests can be directed to the following:

Public Works Department  
Administrative Assistant  
Toll Free: 1-877-610-3737  
Phone: 250-490-4135  
Email: [info@rdos.bc.ca](mailto:info@rdos.bc.ca)

## AFTER-HOURS WATER EMERGENCIES

For all after-hours water related emergencies please call:  
Regional Dispatch  
250-490-4141

### Be Safe—Be Informed—Be Involved In Your Community

#### SIGN UP TO RECEIVE IMPORTANT RDOS WATER SYSTEM NOTIFICATIONS



To ensure the residents and property owners of the Regional District of Okanagan-Similkameen are safe, informed and up-to-date with community activities, the RDOS has implemented a mass communication service called CivicReady. This system allows the RDOS to communicate out routine and emergency messages through email, text and/or phone call.

To sign up and or learn more about CivicReady go to: [www.rdos.bc.ca](http://www.rdos.bc.ca) & look for the alarm button or sign up link on the right-hand side



#### Routine Notifications:

- Community Events
- Water & Sewer System Alerts
- Curbside Pick Up & Landfill Hours
- Regional Recreation
- Land Use Changes
- And More...

#### Emergency Notifications:

- EOC Updates
- Sandbag Pick-Up Locations
- ESS Locations
- Wildfire Updates
- Dangerous Animals in the Area

Regional District of Okanagan-Similkameen

101 Martin St, Penticton,  
BC V2A 5J9

T- 250.492.0237 TF- 1.877.610.3737

Web Site - [www.rdos.bc.ca](http://www.rdos.bc.ca)