

# ENSURING SAFE, HIGH QUALITY DRINKING WATER



## Why a new system is needed

The Comox Valley Water System, which provides drinking water to 45,000 residents, relies solely on chlorination to treat our drinking water and does not comply with provincial guidelines introduced in 2008. We are the largest community in BC that does not have at least two forms of treatment.

We are moving forward with a new treatment system that will eliminate the need for turbidity-related boil water notices, remove the risk of viruses, parasites and bacteria in our drinking water, and meet provincial health standards.

<i>Treatment objectives for safe drinking water</i>	<i>Compliance Now</i>	<i>Compliance After 2021</i>
Inactivation of viruses	✓	✓
Protection against parasites	✗	✓
Two treatment processes	✗	✓
Less than or equal to 1.0 NTU (NTU measures turbidity)	✗	✓
No detectable bacteria (E. Coli, fecal coliform)	✓	✓

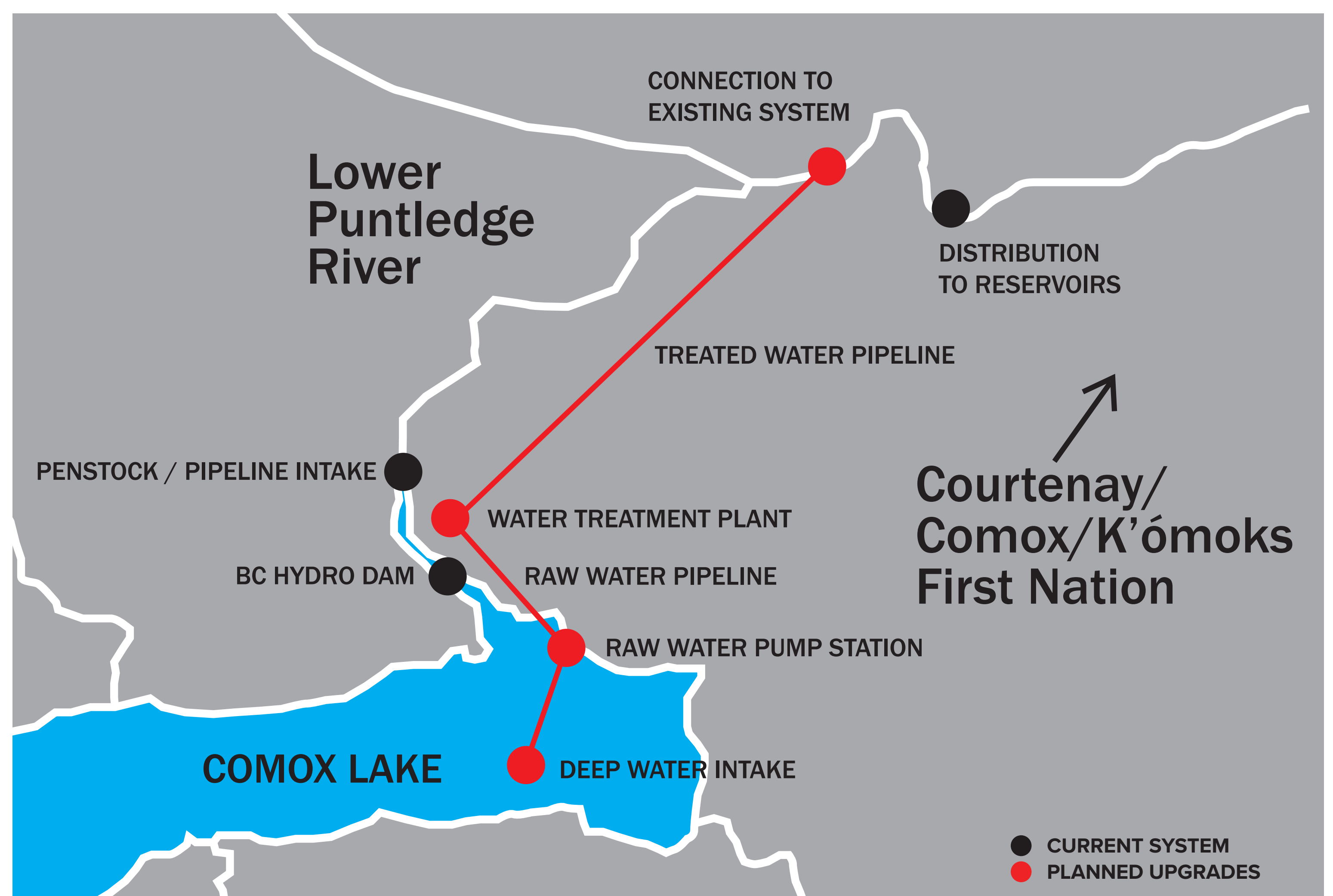
# DELIVERING A MODERN SYSTEM FOR RESIDENTS



### *What the new system looks like*

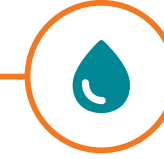
The five major components of the new system include:

1. Deep water intake to provide water security and conserve water for fish flows down the Puntledge River.
2. Raw water pumping station near the intake.
3. Raw water pipeline from pump station to the treatment plant.
4. Water Treatment Plant including filtration and disinfection.
5. Treated water pipeline from the plant to the distribution system.



*The current Comox Valley Water System and planned upgrades*

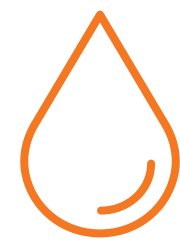
# INSTALLING UV TO REDUCE BOIL WATER NOTICES NOW



### *Providing a sensible interim solution*

Temporary ultraviolet (UV) treatment was installed at the existing chlorination treatment plant in January 2018. This is an interim measure until the new water treatment plant is built. When the plant is operational in 2021, turbidity-related boil water notices will be eliminated.

### *Quick Facts*



This added treatment will reduce the need for turbidity-related boil water notices by approximately 80%.



The new UV treatment system and installation cost under \$1 million.



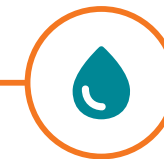
The equipment can be moved to the new water treatment facility once it is constructed, offering some cost savings.



UV treatment offers interim relief, but it is not a long-term solution. A new water treatment system is still required to provide a secure supply of reliable, high-quality drinking water.



# PRESERVING THE COMOX LAKE WATERSHED



### *A shared resource requiring collaboration*

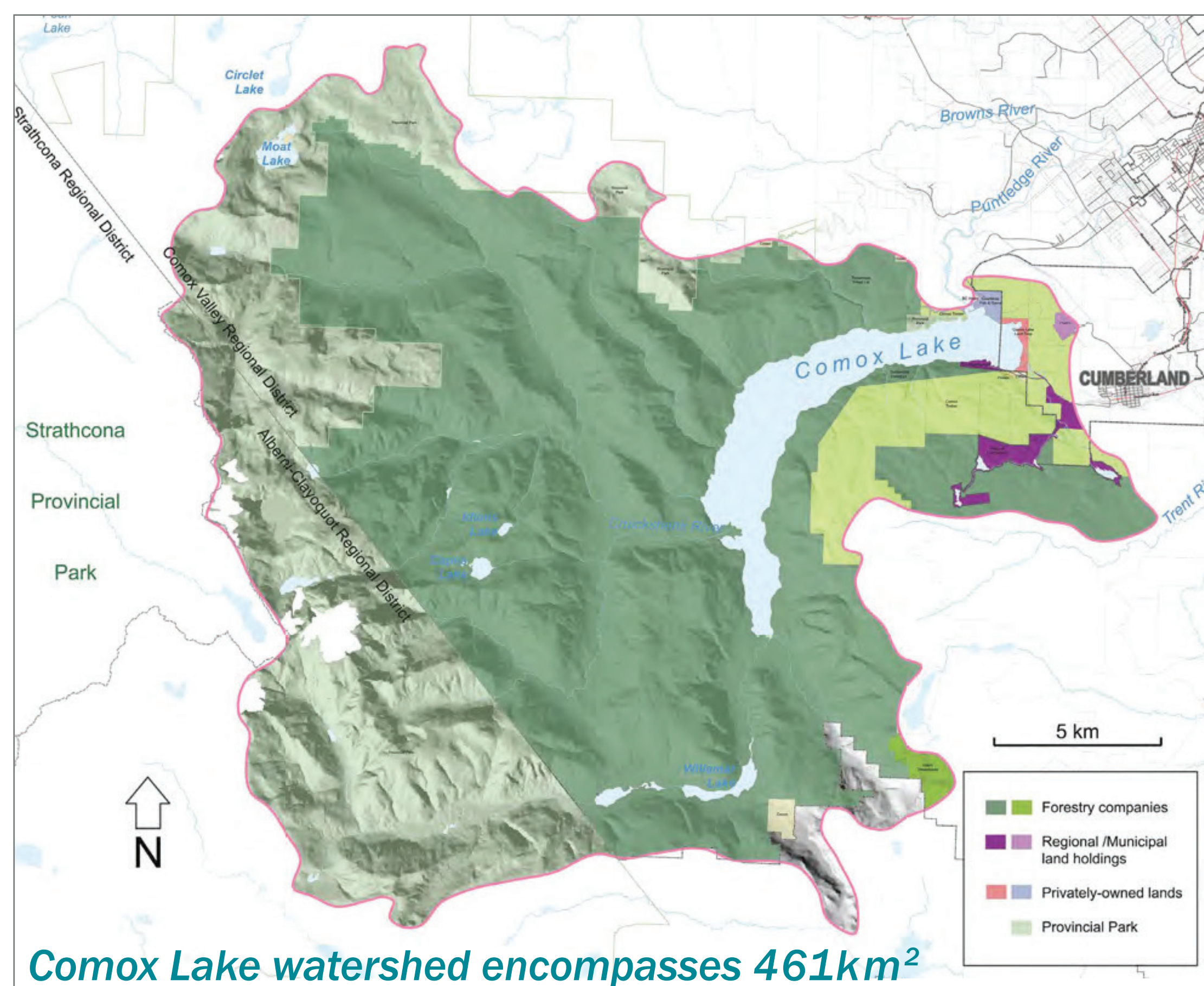
Ensuring high-quality drinking water into the future also requires preservation of our water at its source, which depends on a healthy eco-system. The Comox Lake watershed is a shared resource with multiple owners and stakeholders.

Balancing interests such as private ownership, active logging, recreation, and hydroelectric power generation, while sustaining critical fish and wildlife habitat, challenges watershed management.

To protect our water source, a Watershed Protection Plan has been created. Achievements to date include:

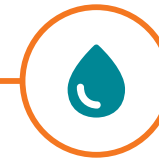
- Water quality monitoring
- Hydrodynamic modelling
- Stakeholder collaboration

Improving the treatment system for our drinking water is the next step.





# PROTECTING OUR WATER AT ITS SOURCE



### *Addressing turbidity in Comox Lake*

The Comox Lake watershed has experienced an increase in frequency and severity of extreme rain events over the last decade.

- Major storms have pushed the reservoir to record high water levels twice since 2009
- Extreme rain events cause tributaries to experience high erosion, carrying large amounts of sediment into Comox Lake
- While Perseverance Creek is a major turbidity source, other tributaries also contribute significantly
- Fixing Perseverance Creek alone will not solve our water quality issues but it is important for reducing infrastructure operational costs

*Perseverance Creek Outlet*



*Cruikshank River Outlet*



*Beech Creek Outlet*



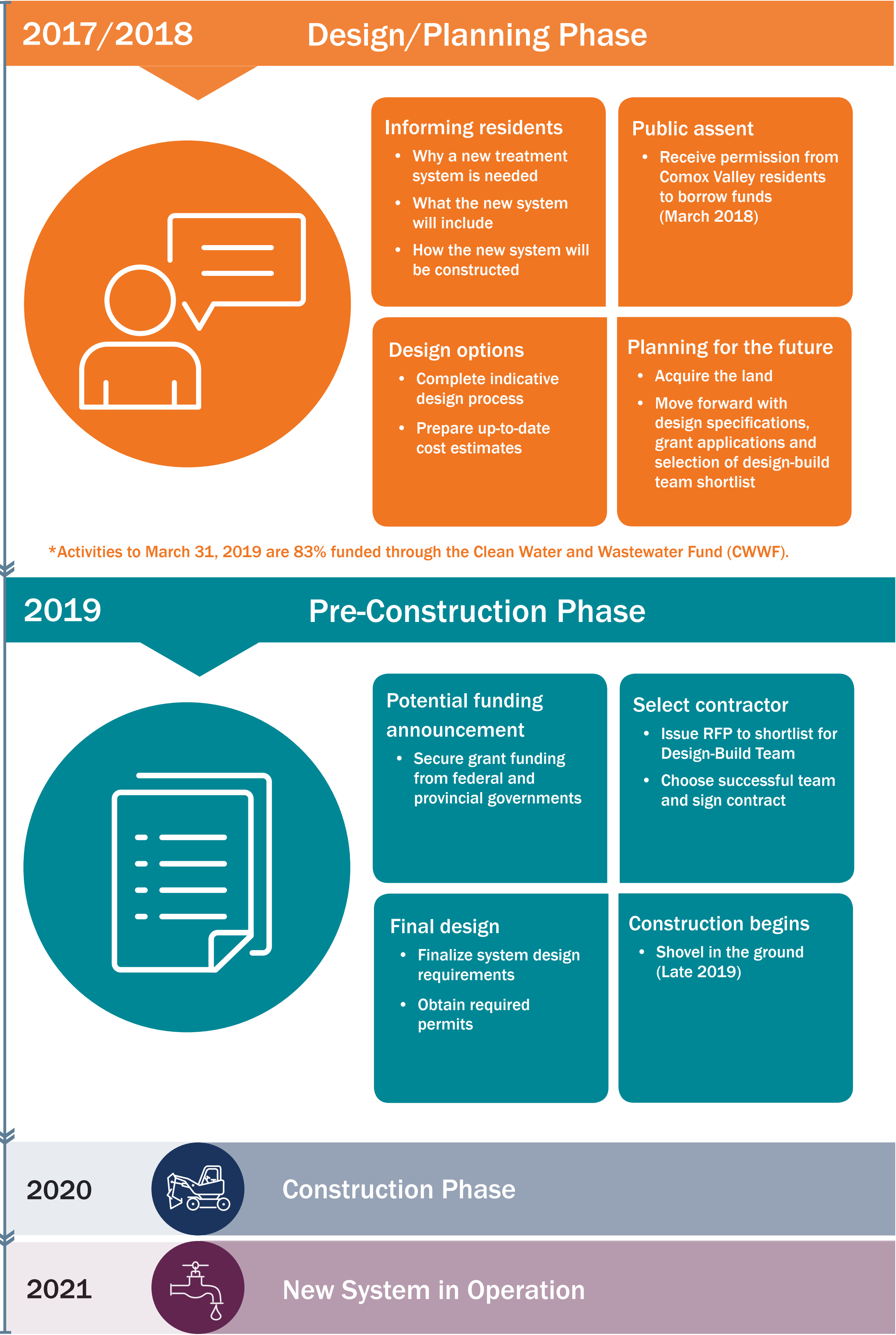


# MAKING A PLAN TO MOVE FORWARD



## The process and timeline for the new system

A project of this magnitude requires detailed planning and a comprehensive approach, including informing residents.



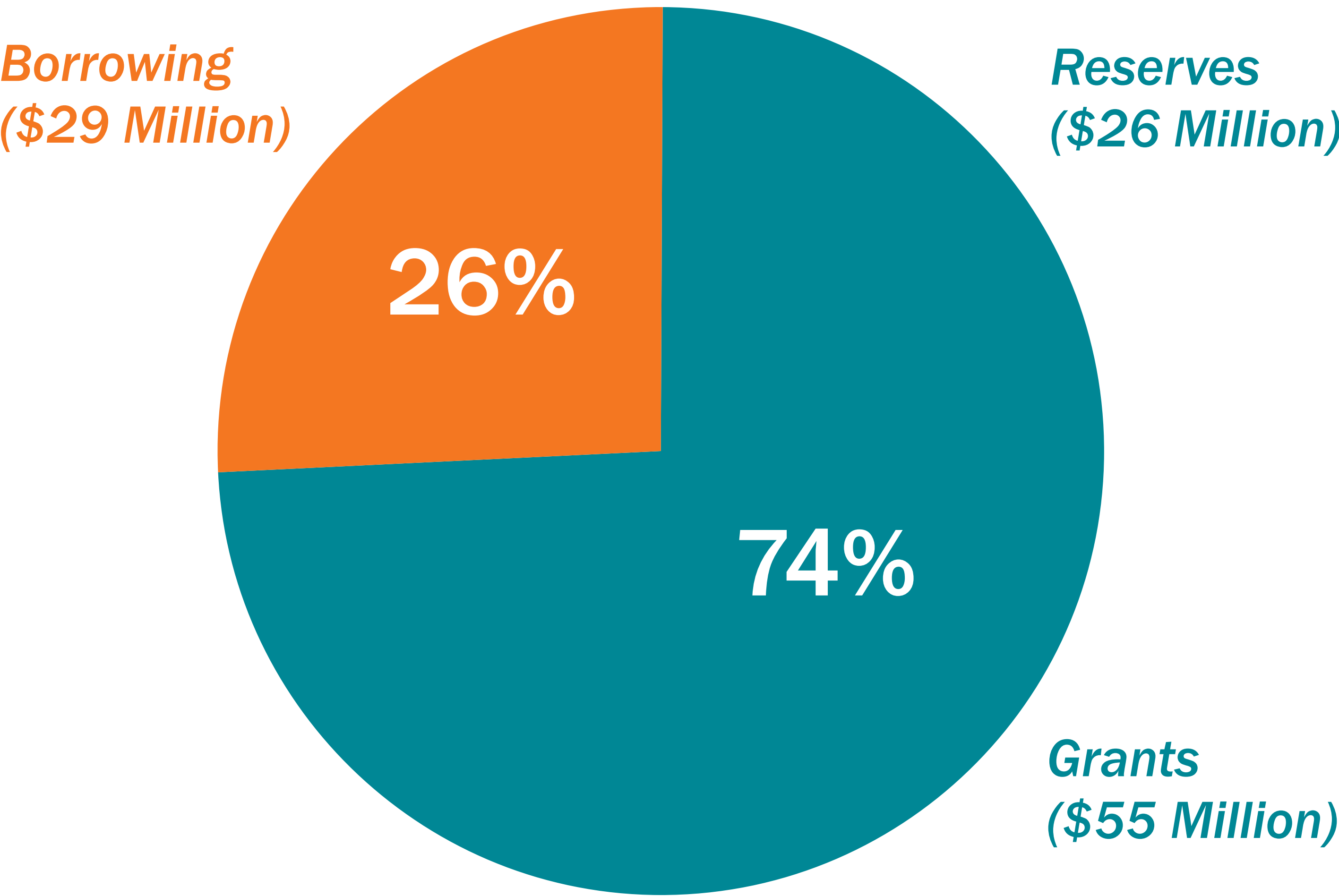
# ACTING NOW TO MAXIMIZE GRANT FUNDING



## *CVRD working to minimize costs for system users*

Construction of the new water treatment system is estimated at \$110 million. While at least 74% will be paid by reserves and grant funding, the CVRD must borrow up to \$29 million to pay for the remaining share of costs.

The CVRD is actively working with the provincial and federal governments to secure grant funding to offset at least 50% of the total project costs.



*Only those connected to the Comox Valley Water System will be responsible for paying for the new system, with the average cost estimated at \$86 per household, per year.*

# SEEKING YOUR APPROVAL TO BORROW



### *The Alternative Approval Process (AAP) explained*

#### WHY?

The CVRD requires the consent of Comox Valley residents to borrow the funds needed to construct our new water treatment system.

#### WHAT?

Residents will be asked to authorize borrowing of up to \$29 million to be re-paid over a maximum 25-year period.

#### HOW?

The CVRD will use the Alternative Approval Process (AAP). In an AAP, those who do not support the borrowing may complete an electoral response form. If fewer than 10% of electors submit forms by the deadline, the CVRD may proceed with borrowing the necessary funds.

#### WHO?

All residents of the Comox Valley (except residents of Cumberland) are eligible to participate in the AAP. However, only those connected to the Comox Valley Water System will pay for the new system.

#### HOW MUCH?

The average impact to Comox Valley Water System users is estimated at \$86 per household per year, for a maximum of 25 years.

#### WHEN?

Elector response forms will be available February 1, 2018. The deadline for delivering the signed elector response forms to the CVRD is 4:30 pm on Friday, March 16, 2018. The elector response forms may be delivered in person, by fax, or by email and must include the elector's signature.