

# Climate Change & Water IN THE OKANAGAN

What we can expect, and how we can respond.

## THE CHALLENGES WE WILL FACE

- Vulnerability to flood, drought, and water pollution.
- Less water available, but more demand from our growing population, thirsty crops and landscapes.
- Unpredictable weather: very wet years, very dry years, and intense storms.

### WEATHER: EXPECT THE UNEXPECTED

Storms will be infrequent but powerful, leading to risks of flood, erosion and landslides, damage to crops, and challenges with water treatment.

Our streams rely on snowpack and reservoir release to meet the needs of residents, farmers, and fish. They are vulnerable to turbidity in the spring and from storms.

As our climate warms, we will see winter snow replaced with more rain, and more intense storms.

Reservoirs in the uplands catch rain, but they are expensive to build and maintain.

With less snow, water managers need to slowly release water in summer, mimicking nature and melting snow.

### KEEPING WATER IN OUR ENVIRONMENT

Hotter, longer summers mean higher water demand by everyone. We may also have intense, multi-year droughts.

We rely on upland creeks and streams, but taking water out of them can cause problems for the animals and plants living in them or nearby.

Our environment also needs water. Ocean-going salmon are coming back to the Okanagan! They need a steady flow of cool, clean water in streams, as do the land-locked kokanee.

### FARMERS & AGRICULTURE

Long, hot summers = thirsty crops.

We may be able to grow new crops as our climate shifts, but they will need to be able to weather extremes, and wet and dry years.

We will need to get creative with water use on farms. Improved irrigation and reusing grey water will help reduce demand.

Dry year or wet year? We need to be ready for more of both.

Farmers who are flexible with what they grow, or work with the weather and available water, will have the advantage.

As our population grows, development will push to the edges of our Agricultural Land Reserve.

### INFRASTRUCTURE & WATER SOURCES

Groundwater is a valuable underground reservoir, often with excellent water quality and is the only source for some areas. Watch out for overuse, and be careful not to pollute.

Conserving water and being WaterWise is the cheapest and easiest way to make sure we have enough.

We may need to find ways to store water underground in aquifers, especially in wet years to meet the demand of dry years.

If we're to use more lake water, our electricity costs will increase as we pump more water uphill.

### OUR CITIES & LAKES

Our communities are growing! More people = more needs, especially if new homes have lawns and gardens. Build up, not out!

The changes we will likely see in our homes: landscaping more suited to our climate, increased home water metering, and more grey water reuse.

The main lakes of the Okanagan are a buffer to manage flows of water. They are also a primary source of water for the population.

Our lakes can be managed for high or low years, and have excellent water quality, but watch out for pollution & invasive species like zebra and quagga mussels.

Every water source is valuable - and every source is vulnerable.

## SOLUTIONS FOR A SECURE WATER FUTURE

- Monitor the water going in and coming out for better management at every level.
- Upgrade our infrastructure - reservoirs, dams, and water distribution systems - while ensuring the environment stays healthy.
- Keep all our waters as clean as possible.
- Enforce water regulations. That could mean penalties for wasting or polluting water, slowing water allocations, or easing residential irrigation demands.
- Water providers need drought response plans. Communication and collaboration between residents, businesses and government is essential, with everyone working together for a safe, sustainable water future.

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