

Welcome!

- Join us to learn more about SEKID's Water Quality Improvement Project (WQIP), talk with trustees and staff.
- You can also learn more at the SEKID website (www.sekid.ca).
- Email questions to info@sekid.ca or phone 250-861-4200

*Thank-you for
participating!*

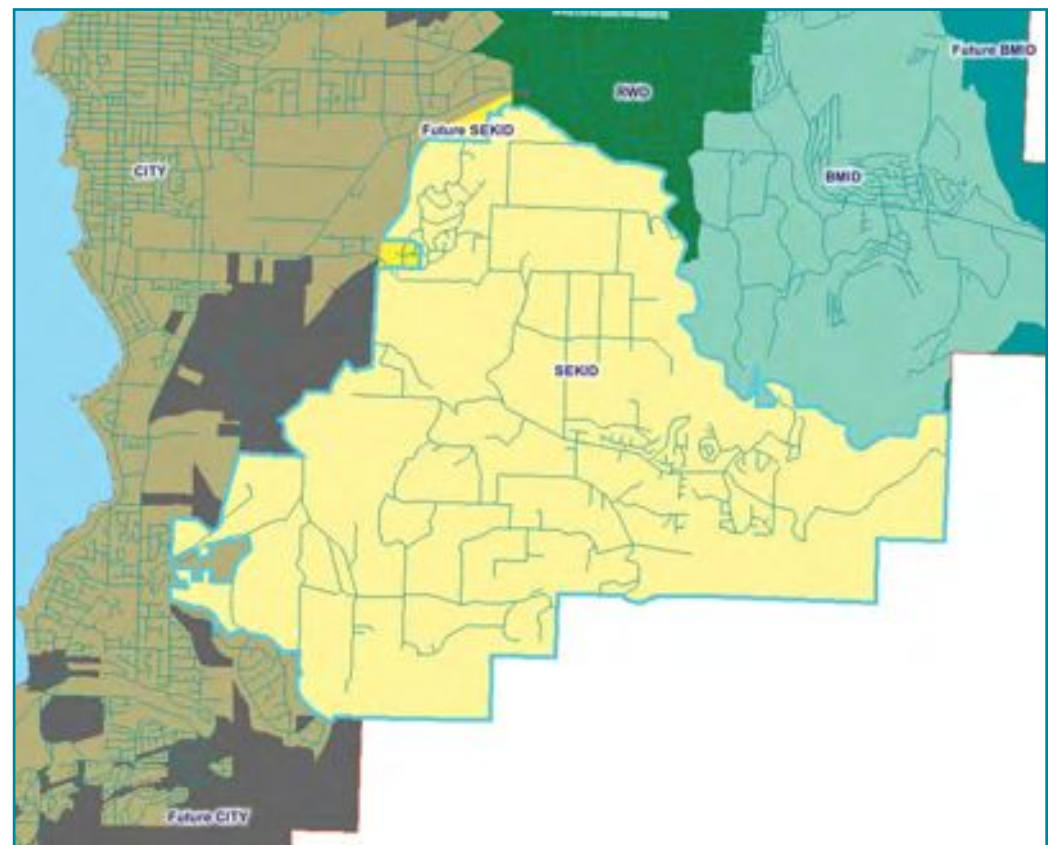




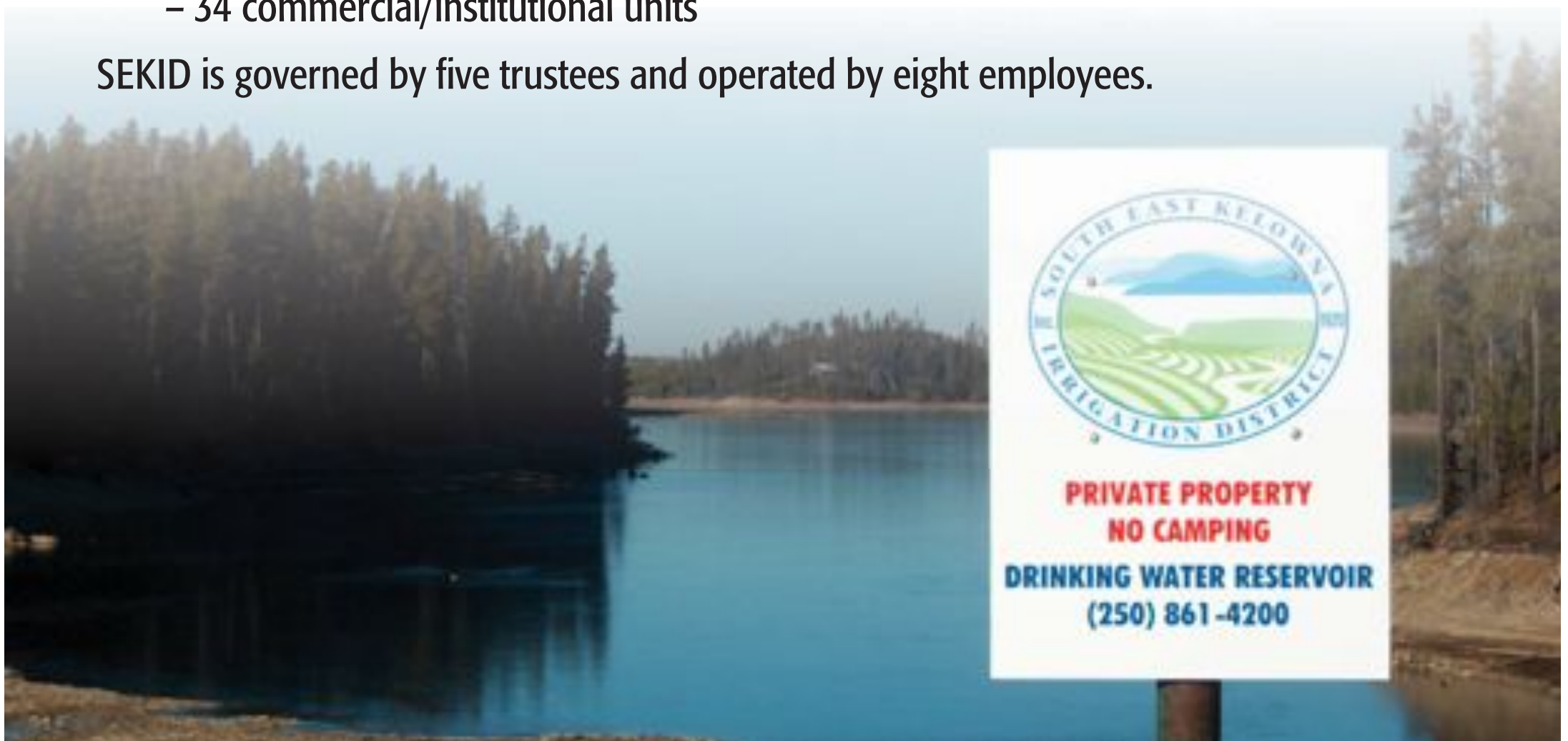
Water Quality Improvement Project

SEKID at a glance...

- SEKID was established in 1920 to divert water from Hydraulic Creek to South and East Kelowna primarily for agricultural use.
- Located on Kelowna's east bench and bordered on the north by Mission Creek, SEKID services 9,000 acres (20 percent of the City of Kelowna) and is BC's second largest improvement district.
- Most of SEKID's service area is supplied with chlorinated surface water and then diverted to domestic connections through a complex network of underground pipes. Hall Road customers receive groundwater from the O'Reilly Well, which is backed up by the surface water system.
- SEKID is one of five water utilities operating within City of Kelowna boundaries. It services:
 - 2,295 domestic units
 - 171 Hall Road customers
 - 450 agricultural connections
 - 34 commercial/institutional units



SEKID is governed by five trustees and operated by eight employees.





Water Quality Improvement Project

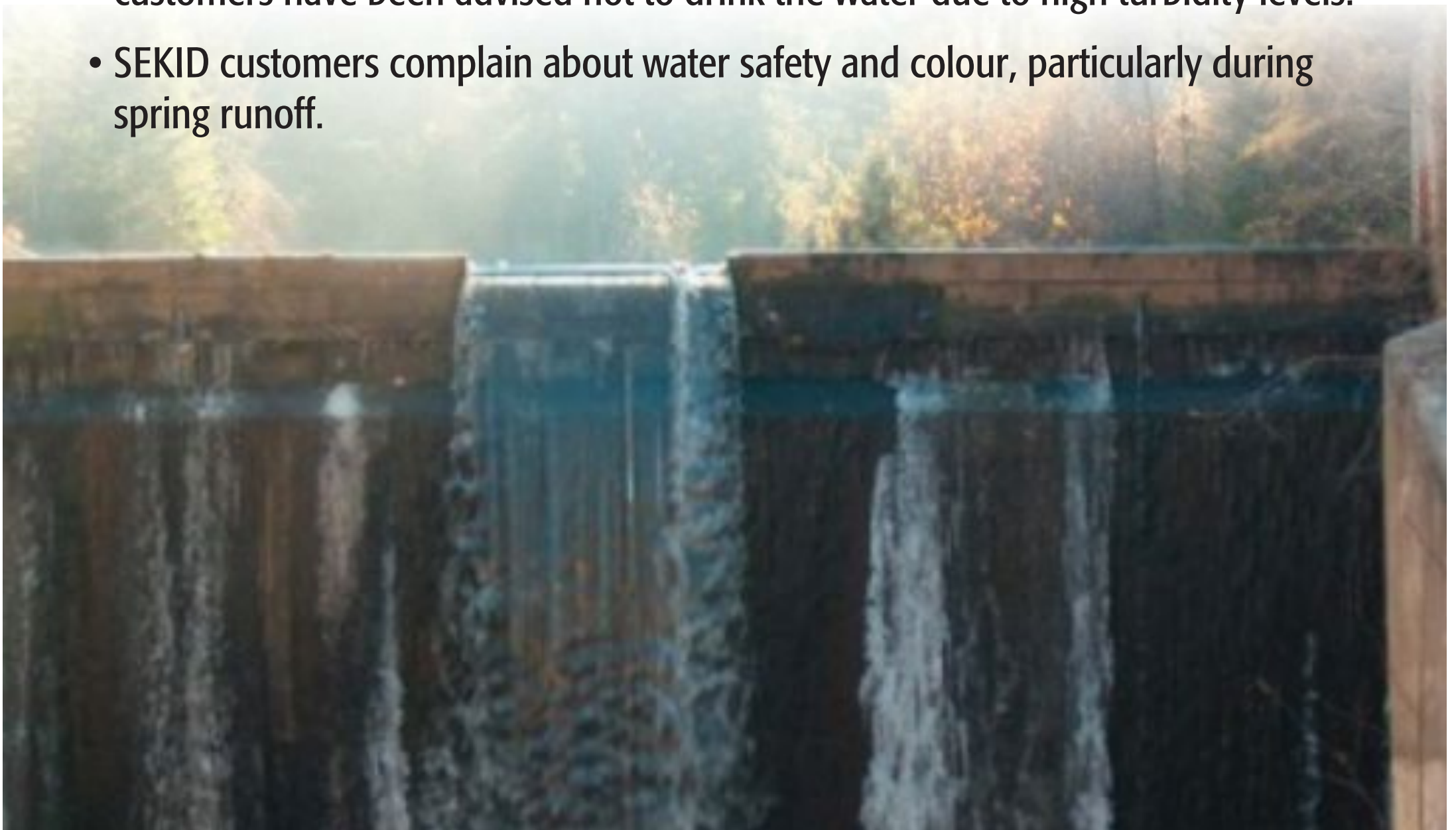
Why is SEKID proceeding with a Water Quality Improvement Project (WQIP)?

- Since it was first tapped in 1920, SEKID’s Hydraulic Creek surface water source has posed water quality challenges.
- SEKID still uses Hydraulic Creek as its source, but the resulting water – even after chlorination – does not meet current federal *Guidelines for Canadian Drinking Water Quality* or current provincial water quality standards or treatment guidelines.

Boil Water Notices associated with turbidity levels above 5

YEAR	FROM	TO	DAYS
2012	April 22	May 24	30
2013	April 4	June 4	61
2014	April 10	May 22	42
Total days since 2012			133

- To obtain its annual operating permit from Interior Health, SEKID must move toward full compliance with provincial requirements. The recommended Water Quality Improvement Project (WQIP) would meet the requirements and has received Interior Health support.
- SEKID is on a continual water quality advisory and experiences frequent boil water notices. Since 2012, there have been more than 130 days when SEKID customers have been advised not to drink the water due to high turbidity levels.
- SEKID customers complain about water safety and colour, particularly during spring runoff.





Water Quality Improvement Project

What are the provincial requirements?

- Provincial water quality standards and treatment objectives are public health measures to prevent waterborne disease.
- SEKID and all other **surface water** suppliers that serve more than 500 people are required to meet the *Drinking Water Treatment Objectives (Microbiological) for Surface Water Supplies in BC*. These include:
 - 4-log (99.99%) reduction or inactivation of viruses
 - 3-log (99.9%) reduction or inactivation of *Giardia* and *Cryptosporidium*
 - Two treatment processes for surface water
 - Less than or equal to one NTU (nephelometric turbidity unit) of turbidity
 - Zero *E. coli* and fecal coliforms.
- *Giardia* and *Cryptosporidium* – protozoa from wildlife and agricultural activity in the watershed
 - can cause serious gastro-intestinal illness, particularly in the very young and very old, and in people who are immuno-compromised (e.g., receiving treatment for diseases such as cancer).
- In SEKID's case, the suspended particles of clay and silt (turbidity) present during spring runoff can shield protozoa such as *Giardia* and *Cryptosporidium* from chlorine.
- Water quality is also compromised by natural events such as wildfires, landslides, and spring runoff.
- SEKID is on a constant Water Quality Advisory, meaning that people who are immuno-compromised should always protect themselves.
- The WQIP's **groundwater** supply system, on the other hand, will provide pristine water with none of the above-mentioned risks. And because groundwater requires only minimal disinfection with chlorine during distribution, treatment costs will be relatively low.





Water Quality Improvement Project

What is the Water Quality Improvement Project?

- Trustees began exploring options for improved water quality in 2007.
- In 2012, trustees recommended a Water Quality Improvement Project (WQIP) that met provincial requirements while responding to ratepayers' demands for safe, clean and reliable water.
- An Alternative Approval Process that same year showed that while ratepayers do not support borrowing for the project, they do approve of the technical solution recommended by trustees and staff.
- Knowing that SEKID is still required to meet health requirements, and taking into account feedback received during the 2012 consultation campaign, trustees have since explored non-borrowing options.
- Trustees' chosen funding plan requires no borrowing by constructing the new system in two phases (see next panel).
- As presented in 2012, the WQIP will supply treated groundwater (well water) from the Greater Kelowna Aquifer for domestic use and fire protection through a new delivery system, and untreated surface water from Hydraulic Creek for agricultural use through the existing distribution network.
- All domestic connections will be metered, as are all agricultural connections now. The benefits include water conservation and user-pay billing.





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What about the other options considered?

- In 2007, SEKID hired Associated Engineering to identify and analyze eight water quality improvement options.
- Water sources that were investigated include:
 - Okanagan Lake
 - City of Kelowna water utility
 - Canyon Lake/KLO Creek
 - Mission Creek
 - Other creeks
 - Groundwater well-field expansion.
- The groundwater solution is the most viable, as it provides an ample supply of high quality water that requires treatment only during distribution.





Water Quality Improvement Project

Why and how will the WQIP be phased?

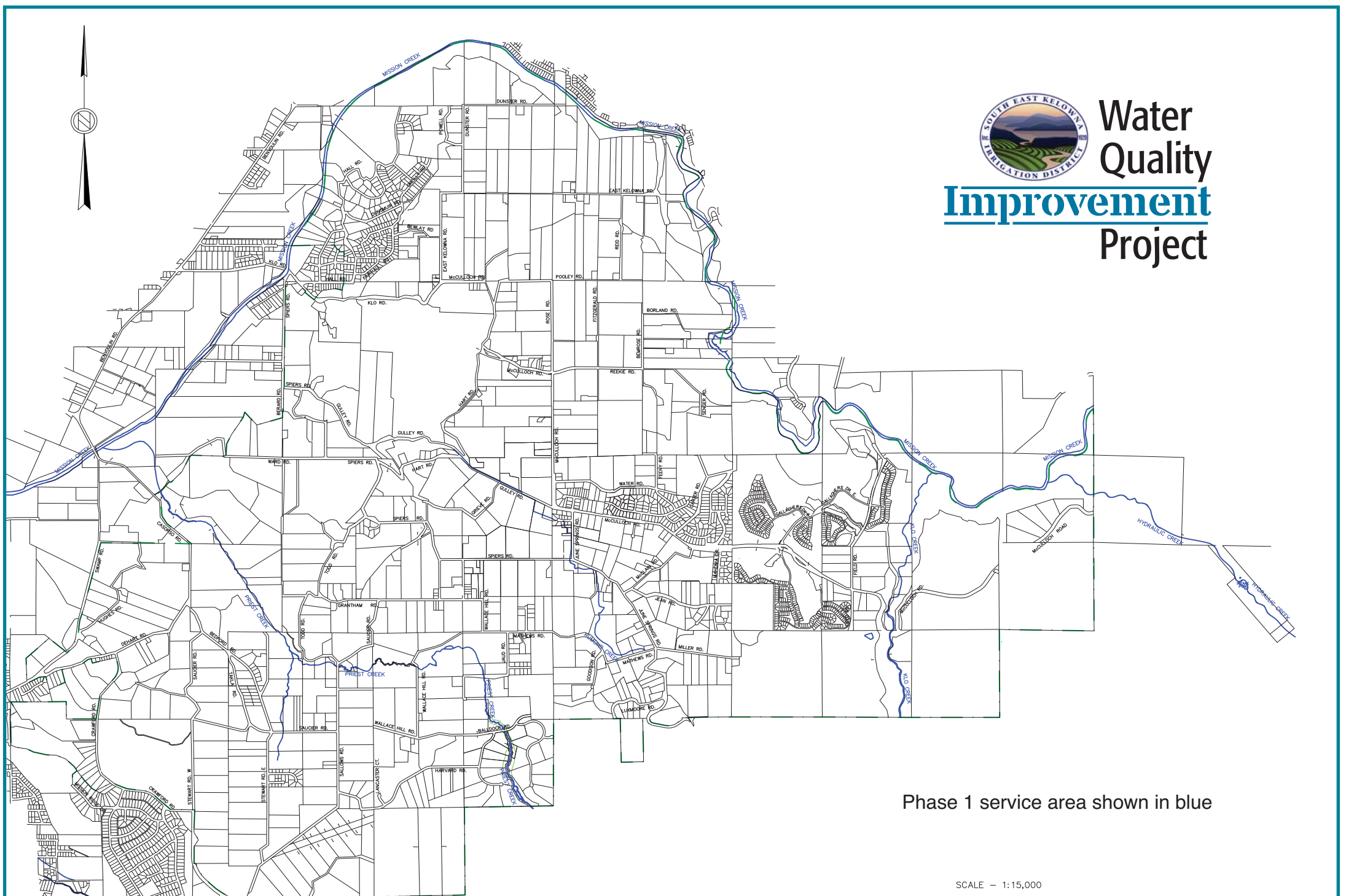
- In 2012, ratepayers rejected a borrowing bylaw to cover WQIP costs. Trustees then worked with a consultant to identify and assess non-borrowing options.
- WQIP construction is now divided into two phases, which eliminates the need for borrowing.

PHASE 1

- Includes the higher-density McCulloch corridor, Gallagher's Canyon and Hall Road areas.
- Starts in 2017 and is slated for completion in 2019.
- Includes developing two new wells, treatment facilities and distribution networks. These will serve as the basic infrastructure for the entire project.

PHASE 2

- Includes all other areas
- Starts when Phase 1 is done, with completion expected in 2033.
- Phase-2 customers will receive treated groundwater as the new distribution system is expanded into their areas.
- Any grant funding will be used to accelerate the project and could help reduce rates.





Water Quality Improvement Project

Why a “twinning” distribution system?

- In rural areas, the project would include a “twinning” or “dual” distribution system.
- Using groundwater for domestic purposes – and building a separate system to distribute it – is the best technical solution.
- A new system of underground water lines, built parallel to the existing distribution system, would deliver treated groundwater for domestic use in rural areas, while the existing distribution system would deliver surface water for agricultural use.
- This is the best technical, operational, and financial option for water distribution, and eliminates the potential for contamination caused by cross-connections and water main breaks.
- Given that only 20 percent of water used by SEKID customers is for domestic use, and 80 percent is for agricultural use, twinning reduces treatment costs.
- It’s a viable and cost-effective option for suppliers upgrading their systems, and has been introduced in other Okanagan communities such as the City of Penticton and the Town of Oliver. Construction is underway on twinned systems in Summerland, and is in the planning stages in Vernon.





Water Quality Improvement Project

Would all new connections be metered?

- Yes, all domestic units would be metered, as are all agricultural connections now.
- Metering enables and encourages water conservation. Since SEKID introduced metering to its 420 agricultural connections in 1993, water use has dropped 40 percent.
- Metering delays the need for costly infrastructure upgrades and expansions, because less water is being collected, treated, and distributed.
- Metering enables consumption-based billing (you pay for what you use), which is considered the most equitable form of payment.





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How will the WQIP be funded?

- The estimated cost of design and construction is \$23.7M for both phases.
- There are currently no senior government grants for SEKID water quality improvements. However, SEKID has been assured in writing by the Minister of Community, Sport and Cultural Development that the district would be eligible should funding become available.
- The Integrated Water Supply Plan developed by the Kelowna Joint Water Committee identified SEKID's WQIP as a priority project that will be first in line for eligible and available funding support.
- Knowing that SEKID is still required to meet provincial and Interior Health requirements and demands from rate payers for water improvements, trustees are moving forward with a non-borrowing solution that relies on existing reserve funds, revenue from land sales, tolls, taxes and a new water quality levy.
- If a grant were to be forthcoming, it could be used to accelerate project completion and could help reduce water rates.





Water Quality Improvement Project

How much will SEKID customers pay?

Water Quality Levy

The new monthly water quality levy will be staged, starting with Phase-1 properties, and then followed by Phase-2 properties until the project is complete.

PHASE-1 LEVY

- Starting July 2015, Phase-1 properties will pay \$20 per domestic unit per month until 2024.
- The Phase-1 levy will be reduced to \$10 per month in 2024 until the project is complete.

PHASE-2 LEVY

- Recognizing that Phase-2 customers will have to wait for new water, a monthly levy of \$10 will be applied when Phase 1 is complete and until that unit is on the new water system.
- Once Phase-2 properties receive new water, they will pay the same levy as Phase-1 properties until the project is complete.
- Any Phase-2 properties that have not received new water by 2024 will have the levy reduced to \$8 per month until they receive new water.

COMMERCIAL LEVY

- Phase-1 commercial customers, on the monthly billing cycle, will pay the \$20 per month levy per connection in addition to their regular flat-rate or consumption-based bills.

Water Tolls

Tolls will continue to increase 5% per year until both phases are complete. This worked out to about \$2.30 more per month in 2015.

Water Taxes

The annual water tax will also continue to increase 5% per year to the end of 2020, then decrease to 2% per year until the project is complete. This worked out to about \$3.80 more for all of 2015.

What would the average water bill be?

The quarterly water billing cycle effective July 1st for a single-family dwelling in Phase 1 will be \$202.95 plus the yearly water tax of \$79.20 per acre or parcel.





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What about Hall Road customers?

- Phase 1 includes Hall Road customers who currently receive well water, however, their system does not comply with regulatory requirements and must be updated as part of the WQIP.
- This well water supply is 'interruptible,' meaning that if the well shuts down, or if there is a fire in the area, affected residents would then receive water from Hydraulic Creek, which does not meet provincial health standards.
- Hall Road customers need to be assured that they will always receive safe, clean water.
- Hall Road customers will continue to receive water from the existing well on O'Reilly Road until the new system is developed in 2017, and then the well will be shut down.
- The levy that Hall Road users pay now will be eliminated July 1st, 2015 when the whole district comes under the new WQIP community system.
- The new levy will be \$20 per month starting July 1st, 2015.





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How do SEKID rates compare?

- The planned average rate for a typical SEKID residential user is \$74.25 per month.
- By way of comparison, average monthly rates in the Okanagan range from a low of about \$40 per month to a high of about \$130 per month.
- This is close to 28% less than the proposal presented in 2012. This substantial saving is mainly a result of phasing the construction, select land sales, increasing our capital reserves through tolls and taxes, and avoiding the interest charges on borrowing.
- Given the nature of SEKID's source (surface water from Hydraulic Creek) and distribution characteristics (large geographic area) the planned rate structure can be considered very reasonable.

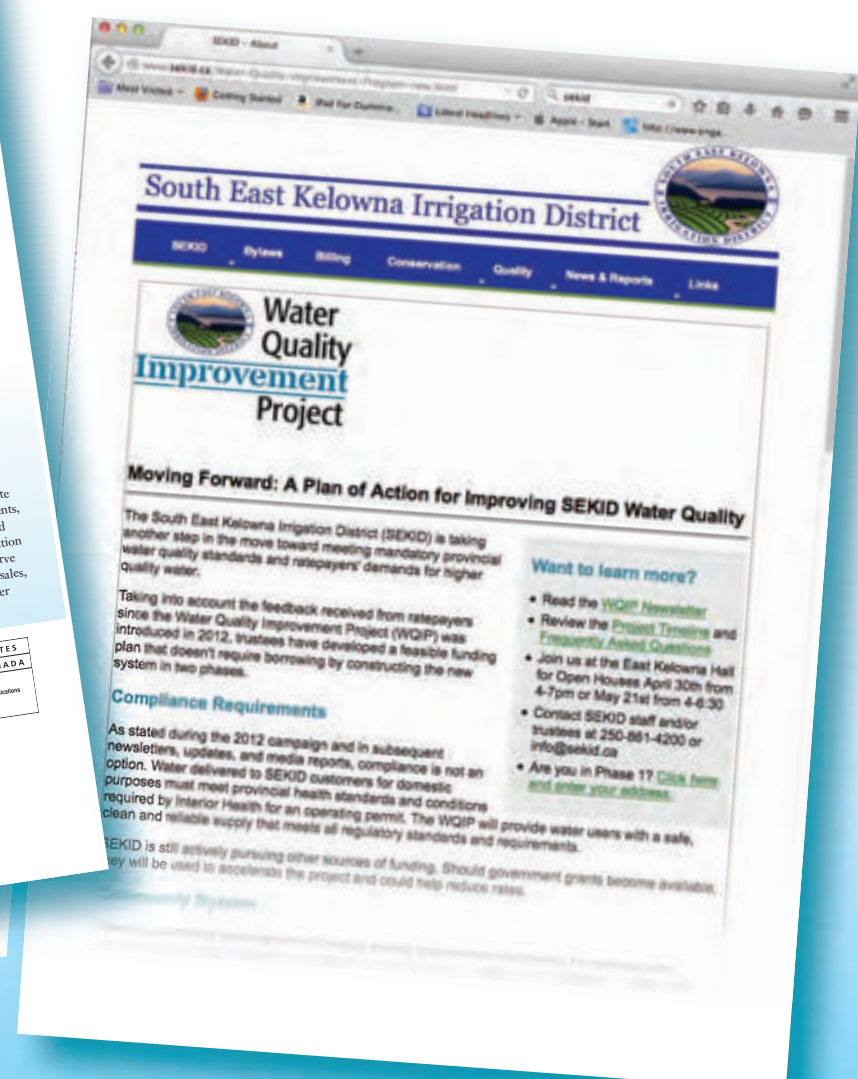




Water Quality Improvement Project

How was the decision made?

- Planning for how to finance the necessary improvements without borrowing, while meeting health requirements and customer demand, has been in the works since 2012.
- Trustees reviewed a number of detailed financial options presented by Econics Consulting and developed a set of principles to guide decision-making.
- Principles included:
 - Taking action now (not waiting for a grant)
 - Choosing an option that was financially viable
 - Choosing an option that was fair to the whole district
 - Receiving a grant could either accelerate the project and/or could reduce rates.
- As a result, this new action plan will cost SEKID customers about 28% less than the proposal presented in 2012. These substantial savings are mainly a result of phasing construction, selling district-owned land, increasing reserves through tolls and taxes, and avoiding interest charges on borrowing.
- SEKID has been keeping customers updated about its progress on the project since 2012 by way of regular newsletters sent via direct address Canada Post mail to every customer, as well as news releases and information on the website.





Water Quality Improvement Project

How has the WQIP evolved?

Project Timeline – April 2015

DATE	INFORMATION & EVENTS
2007	<ul style="list-style-type: none"> • Associated Engineering prepares report on technical options for water quality improvement
2008	<ul style="list-style-type: none"> • Trustees choose option #6 of the eight presented in the Associated Engineering report • SEKID introduces annual increases to tolls and taxes to boost reserve funds for future improvements
2010	<ul style="list-style-type: none"> • SEKID issues an RFP for a pre-engineering report with cost estimates
2012 Spring	<ul style="list-style-type: none"> • CTQ Consultants prepares pre-engineering report with cost estimates
2012 Fall	<ul style="list-style-type: none"> • WQIP consultation campaign is launched to determine level of ratepayer support for borrowing bylaw • WQIP newsletter is sent to all customers, posted on website, and available at front desk • Customers attend one of three open houses to learn more about proposed improvements to water quality and associated rate increases • Electoral ascent required for borrowing bylaw is not obtained. Interior health advises SEKID it must still work toward improvements • SEKID newsletter advises of AAP outcome, confirming the need for trustees to explore other funding models
2013 Spring	<ul style="list-style-type: none"> • SEKID newsletter reports that action to meet provincial standards and Interior Health permit conditions is required with or without funding • Econics is hired to provide detailed financial review • SEKID continues to build reserves through sale of revenue lands and gradual increases in tolls and taxes • SEKID continues to seek grant funding
2014 Spring/Summer	<ul style="list-style-type: none"> • SEKID newsletter reports that Kelowna Joint Water Committee members agreed that SEKID would be first in line for any eligible funding grants • Minister of Community, Sport and Cultural Development assures SEKID in writing that the district would be eligible should funding become available • SEKID assesses non-borrowing funding options • SEKID continues to build reserves through sale of revenue lands and gradual increases in tolls and taxes • SEKID continues to seek grant funding
2014/2015 Fall/Winter	<ul style="list-style-type: none"> • SEKID newsletter notes that the trustees are still exploring non-borrowing funding options to meet both Interior Health requirements and customer demands
2015 Spring	<ul style="list-style-type: none"> • SEKID announces a plan of action for improving water quality • SEKID launches a customer information campaign to build awareness about the WQIP and how it will meet Interior Health requirements and customer demands for clean, reliable and safe supply of drinking water • WQIP newsletter is sent to all customers providing information about the timing and cost of upgrades, and inviting residents to one of two open houses to learn more



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What are the next steps?

- Get IH sign-off
- Conduct an environmental impact assessment
- Get provincial approvals for the two new wells
- Develop an implementation strategy, construction schedule and communications plan
- Proceed with detailed project design.





Water Quality Improvement Project

How can you learn more?

- Visit the SEKID website at www.sekid.ca
- Pick up a copy of our current WQIP newsletter and our Frequently Asked Questions
- Send questions to info@sekid.ca or phone **250-861-4200**
- Watch for future copies of the SEKID newsletter

*Thank-you
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