

Question and Answer Sheet

Regional District of Okanagan-Similkameen

Sewerage & Water – Electoral Area “E” OCP Review

March 30, 2022

Sewerage

Q1: Would you agree that the liquid wastewater management plan (LWMP) is the most critical component of moving a potential sewer forward? When do you think that will be completed?

A1: The LWMP is our guiding document, so yes. We are just finishing stage one of a three stage process that typically takes a total of 18 to 24 months.

Q2: Is the project a fait accompli? Should the liquid waste water management plan (LWMP) be completed before public consultation is done?

A2: It is assumed that the specific project being referred to is the repurposing of the grant to a new sewer and treatment system in Naramata. This project is not going ahead as the decision was just received that the repurposing request was not supported. Even if the project did move ahead, public consultation would have been included in the work and linked into the LWMP. Public consultation is a vital component.

Q3: So, nothing will go ahead in terms of decisions made on the sewage system until the liquid waste management plan is finalized, is that correct?

A3: The liquid management plan will continue as planned. If funding had been repurposed from the Province, certain portions of the LWMP would have been accelerated to get public consultation for various important decisions. Given the timeline for the grant, the project could have been built prior to the actual finalization of the LWMP. At this time developers are required to install their own private mini systems.

Q4: Do you have to guarantee the demand that all existing houses have to be connected to the sewer system in Naramata Village, or can the existing houses still use their own septic tank and septic field? Do you have the authority to force people to connect?

A4: The specifics on connection requirements will be determined in the LWMP process. Some specific circumstances where connection would be required include future development in an existing service area and properties with a failing septic system instead of installing a new system.

Q5: Where are you planning to have the treatment system in Naramata, which is the best suited area to put a treatment plant without impacting people nearby?

A5: No decisions have been made for the location of the system yet. A few sites have been identified as being open and available.

Stage two of the LWMP will further evaluate the suitability of the sites identified. Every possible location will be looked at for a future plant. The stage one plan that we are working on right now still needs to be approved by the ministry before we can progress to stage two. Odor control is one of the most important factors in a LWMP plan and is being considered in this process. At this point in the study we do not have any specifics about the technology being used.

Q6: Where are you going to put the effluent output from the system?

A6: We would have guidelines in the LWMP that would dictate how much effluent and the quality of that effluent that goes out. We operate a system in OK Falls that has very little if any smell and during many times of the year, the effluent that goes out is cleaner than the river water.

That is what the process of the liquid waste management plan does. We explore all of the technical options, including the best locations in the area, and what happens with the treated effluent.

Q7: Will the system being used be ultra-violet light, which will clean the water better, but be more costly? Will putting the water in the lake in the warm weather create bacteria?

A7: Those are technology choices that would come out of the liquid waste management plan recommendations on what type of system will be used, but that is not something we have explored yet. We don't have a lot of the answers to the specific technology to be used at this time.

Q8: Are people going to have the option to opt into the system if they are in the village and on septic?

A8: This will be determined during the LWMP process as indicated in Q4 above.

Q9: Will parcels 1 ha or less be required to connect to a community sewer system?

A9: This would be determined during the LWMP what would apply to the existing properties. For future subdivisions, if a property owner wants to create new parcels under 1 ha in size, then those must connect to community sewer.

Q10: Is the LWMP only for the village? Will the hilltops and Arawana be addressed later?

A10: Yes, the study area for this LWMP is only the village. The rest of the residential areas will be assessed in a future LWMP.

Q11: Will each one of those processes take 1 year to 18 months? Are we a ways away from getting answers about those areas?

Q11: Yes.

Q12: Will the development by private developers going on right now, in the village, drive a public septic or sewage system, and will their needs take precedent over the LWMP?

A12: The LWMP is a project that is being undertaken by the RDOS now and is separate from everything else. It is essentially an OCP for liquid waste management. It is meant to investigate and plan for the future. The grant that was mentioned was a possible opportunity for the

community to benefit from a more centralized approach to wastewater. This is no longer an option as the province did not approve the repurposing of the grant funds to Naramata. The developers in the village will likely move forward with their own private systems at this point of their planning.

Q13: In the meantime will people undertaking development in the village have to have their own plan in place for a septic system or wait till ours is done?

Q13: Yes, if there is not a community sewer, then developers will need to create their own sewerage system. These types of private plants are not regulated by the Regional District, but by the Province through separate regulations.

Our LWMP is a plan to develop a sanitary system, or whatever option comes out as the best recommendation, for the next 20 years.

Q14: Are private systems such as what outlook has considered a community system and are we calling both privately run and RDOS systems community sewer systems?

A14: Yes, both use the same name. Community sewer systems are basically multiple users of the same system. Under the definition of a community system, an organizations such as provincial, local, and federal governments can operate these systems, as well as private corporations and strata corporations. Essentially a separate entity has to operate a community system, not an individual.

There is a difference in governance between private and public systems. We have found that publicly owned systems, which have local government ownership typically operate better, and have less instances of poor water quality or issues.

Q15: Has the lake been tested for contamination?

A15: Yes, there was a recent study done to test the contamination of the foreshore in Naramata. We found that there is higher than allowable levels in a few select sites, and generally the whole shoreline area is seeing impact as a result of sewage septic systems leaching into the groundwater.

Q16: What costs do other communities experience when transitioning to sewer systems? How will a sewer system impact density in the village?

A16: Right now, only properties zoned and designated as Naramata Village Center or Residential Medium Density can have townhouses and apartment buildings up to approximately 3 stories tall or 10-12 meters, depending on the zone. There are very few properties with these zonings the first 3 blocks or so of Robson and the existing townhouses and seniors' housing. We would not see more apartments or townhouses throughout the village without changes to the OCP and zoning for those properties.

All properties in the village that are under one hectare could have more density if a sewer system were built. Right now, properties under 1 ha cannot have an accessory dwelling unless on a community sewer. Most properties in the village can have a suite, but it has to be on the same septic system as the rest of the main house. We could see more suites and carriage houses, because they are already allowed with in the zoning with the condition that they have to be connected to a community system.

Regarding costs, septic systems are not on a day to day costly, but do require pumping and maintenance will require high costs when they eventually fail. A community sewer system will have a connection cost and/or DCC to connect at the beginning, and then lower maintenance costs in annual taxes and no risk of a high-cost replacement.

Q17: Can Medium density be developed on institutional land i.e. Naramata center?

A17: The Naramata Centre does have dorms and they could have more dorms for tourists and visitors, but they could not have housing unless they rezoned and sold parts of the land.

Q18: If hooking up is optional will it be user pays? How will capital costs long term be funded?

A18: The funding structure is something that will be decided in stage three of the plan, so at this time we do not know how the money will be collected to pay for the operation. It will be discussed at stage 3 and likely will involve a connection fee and/or DCC.

Q19: Once the Outlook subdivision comes on board would we take that and tie it into the upcoming system or would we have two systems? Could it be bigger?

A19: That is too far into the future to speculate. They are quite far from the village and that would be a different project completely. They are a private operation and are not regulated by the RDOS.

If your question is would we take that system over, then we would have to assess it and review it, just like we would review any other service we would potentially take over. At this time there are no plans or suggestions to do this.

Q20: Do the private funds and the grant cover the cost of the system in the village? Will everyone be taxed or only those who want to connect to the system?

A20: This needs to be looked at further at this point. The funds could cover a small plant and some pipe. A recommendation for the size and type of system has not yet been made, nor has such a system been designed. Costs and funding structure will be determined once there is a recommended system.

Only those connected into the system would be paying for the operations and maintenance costs. There would be DCC and latecomer fees likely in place. The grant and developer contributions would provide for the initial treatment plant and collection system. As residents wish to connect, there would be a buy in fee - the DCC fee - and then they would be included in the cost for the operations and maintenance.

However, at this time the project using funds from developers and the available grant will not be proceeding.

Q21: Why haven't we looked at installing a community sewer system sooner?

A21: A sewer system was not put in earlier because the LWMP from 1998 did not recommend a centralized system, as septic was working fine.

This LWMP was put into our work plan at the RDOS and budgeted for before this opportunity came up for repurposing funds. The LWMP was moving forward no matter what because it needed to be updated.

If some citizens and businesses are already planning on putting in larger private systems, then it makes sense for them to join in with the grant money and build one. Based on current

zoning community systems will pop up because that is what is allowed in some zoning. For example, BC housing had provided an opportunity to put housing in the Naramata Center, but they did pull out because there was no sewer system and the costs of doing their own were too high.

Q22: It seems to me that we are already at the point where we must look at a sewage system given the results of the study which demonstrate contaminants in the lake. Can we carry on with septic tanks?

A22: There are many long term benefits to having a community sewer system and will likely be more cost effective in the long term. Phase one of the LWMP already identifies that status quo is not an option.

Q23: You said, "The grant and developer contributions would provide for the initial treatment plant and collection system." Are you saying that the entire cost of a sewer system will be covered by developers and grants? Also, how is it possible to choose to build a sewer system prior to completing the LWMP and the public input it requires?

A23: It was expected that the entire cost of the treatment plant and collection system to service their lots would have been covered by their contributions and the available grant. The developers would have been required to also build extended and excess works as there are properties in between their specific properties. This means the developers would have installed extra capacity for the infrastructure that is of benefit for the community. These extra expenses would be recovered as part of the buy-in/DCC fees.

This project with the developers providing funding for the initial system with the available grant is not proceeding as the grant repurposing was not approved.

Q24: Could you also address the issue of putting in a sewer system prior to completing a LWMP and all the public input that it requires? Doing that would negate a large part of purpose of a LWMP.

A24: The repurposing of the \$6M provided an opportunity to put in some initial infrastructure. Developers are required to put in their own small systems, so linking them together with a common treatment plant made good sense for a longer term community benefit. However, the Province did not accept our request at repurposing the \$6M grant to a Naramata sewer and treatment project. So this means at this time, the community will not be receiving these funds and the developers will build their own private systems.

If the funds had been approved, there would have been a few things that would be discussed with the community – such as the technology to be used, strict odour controls, discharge and reuse options and location of the treatment plant. These were to be discussed prior to final decisions on these items being made.

All of these items will still be discussed in the normal LWMP process, just at a later time than they could have been if the grant was approved for Naramata.

Q25: As most of the village properties are less than a half-acre and would not have space for a second field and are also mostly of the age needing replacement, wouldn't a LWMP pretty much have to dictate that properties under 1/2 acre will need to migrate to a community system or install a level 2 or 3 system?

A25: Yes, for systems that are failing and/or coming to the age of replacement on small properties, they will either need to install an expensive, small footprint sewerage system, like a type 2 or type 3, or connect to a potential community sewer.

Q26: Why is the LWMP not considering other options like connecting to the Summerland system?

A26: The pipeline to Summerland was an idea when a large amount of capacity was still available in their system. There are several reasons this was not included at this time including their lack of capacity. It could be incorporated into the LWMP for discussion.

Q27: The last LWMP plan (28 years ago) resulted in a do nothing recommendation. Is there agreement at the local government and IHA level that "do nothing" is not an acceptable result this time? I am not sure why we would have a plan that allows people to continue to replace septic systems on lots that we would not allow building on today without installing Level 2 or 3 systems. How do we ensure that we get a plan that addresses the issue and isn't just driven by citizens concern about avoiding the cost of proper treatment?

A27: Yes, the Ministry of Environment who oversees the LWMP process stated they would not accept a 'status quo' / do nothing option. The LWMP will not include a do nothing recommendation. Having said this, there are options identified in phase one that are between 'do nothing' and full community sewer system for entire village community.

Q28: What were the results of the water/septic study that was done recently? Can you share the report to all the OCP committee members? https://www.obwb.ca/wcqi_project/impact-of-on-site-wastewater-systems-on-the-naramata-shoreline/

A28: See Q15 above. This will be provided during the LWMP process to the community

Q29: Are there some comparable villages that we can look at to get an idea of what are system would look like and costs? I know there is more to it than that. Something or anything to reference?

A29: Costs can have a large range depending on specific circumstances. The amount can range depending on whether grants are available or not. Typically these cost about \$20-30k per lot to bring in a community sewer system, but it depends on many project specifics.

Q30: Where are the *possible, suitable* sites or locations for a community Wastewater Treatment Plant?

A30: This will be addressed during the LWMP process.

Q31: The OCP suggests to ensure that water, sewer and drainage systems meet recognized standards of service. Does this apply to RDOS systems only? How about privately owned, operated, and maintained systems? Do community sewer systems, belonging to strata corporations or incorporated companies, discharging into streams above Naramata present serious risks of contamination or financial commitments in the event of failure or default?

A31: There are required levels of service for any type of system, RDOS owned or privately owned. There are engineering standards that apply in any case, but typically the RDOS owned systems have more stringent standards that what a strata would be required to install, unless the private system was expected to be taken over by the RDOS.

All failing systems that are leaching into streams and/or ground water pose risks as this water leads to the lake.

Q32: The OCP suggests to Ensure that DCCs applicable to new developments are sufficient to cover the costs of the sequential upgrades. How is this achievable in the absence of an overall, cumulative, comprehensive development plan for the service area?

A32: This is achievable within a defined service area, but becomes challenging with petitions to expand the system to areas that were not included in the original design. A recommendation of the OCP could be to do conduct a comprehensive review and future plan for the Naramata Water System including the maximum service area and upgrades required.

Resources:

- <https://drinkingwaterforeveryone.ca/>
- <https://www2.gov.bc.ca/gov/content/data/geographic-data-services/web-based-mapping/imapbc>
- <https://www.interiorhealth.ca/health-and-wellness/environmental-health-and-hazards/sewerage-subdivisions-and-healthier-industries#locate-an-on-site-sewage-record-ubdivisions-and-healthier-industries#locate>

Water

Q1: Is the Regional board discussing with the province and the plan area water purveyors to ensure an overall coordinated water management strategy for water management and quality.

A1: We do talk regularly with the Okanagan Basin Water Board and Interior Health related to water quality. There are standards related to regular water sampling throughout all our water systems, and we produce an annual water report on waters systems.

Large Water Systems, such as Naramata, work closely with Interior Health Drinking Water Officers and any changes to equipment, distribution system, reservoirs, and operational changes must be approved by Interior Health

Q2: Will a staged program where users incur the full cost of the water and one sector does not unjustifiably subsidize another exist?

A2: When a developer comes into the system we require engineering reviews to be done on the system. For example, water modeling is conducted to see if what they are constructing will impact the system. Any negative impacts would need to be rectified and paid for by the developer through infrastructure upgrades that benefit the whole system.

Q3: What is the capacity of the treatment and delivery of our system given underdeveloped lots? How close is the water system to its maximum capacity? Is there a fifth reservoir being developed, and is that due to capacity issues?

A3: Reservoirs are primarily for fire protection. They do allow for balancing of water systems, but it is not necessarily a capacity issue. We are within our water licensing and will be for quite a while. One thing we are going to be conducting, through the water model, is to answer the questions that you are asking. What is the amount of water needed for full build out? It is one of those extreme scenarios, but it is a scenario we need to run.

Q4: Given the water licenses, is there enough water to continue with 1.5% population growth per year in addition to continuing agriculture?

A4: Yes, at this time there is lots of unused water available in the licenses. We have gone 20 years with little growth. In fact, we have had a decline in growth. When looking at the federal census. Naramata was around 2000 people in 1996, but in 2011 Naramata was down to 1844 people. This started to come back in 2016 to 1903 people, and now in 2021 we have increased to 2015 people – roughly the same as 1996.

There are lots are being built on now, which means we could see some growth going forward.

Q5: If the growth accelerates due to a substantial increase in housing in the village, then how can the growth be slowed? The population growth of full time residents is one thing but the number of part time residents in new houses is probably over the 1.5%.

A5: As stated above, the population has not been growing at this rate. The 2021 census shows the population is back at 1996 levels. This was an increase of approximately 1.2% per year over the last five years.

However, this is the permanent population in the village. We do know that many homes are owned by people out of town for vacation purposes, which would not be included in the permanent residences in the census. This is one of the reasons why water use peaks in the summer in addition to irrigation.

Housing tenure (who owns the property and who lives there, if any one) cannot be controlled by the Regional District. It is possible to encourage the Province to use tools like the empty homes tax to try and discourage vacation home ownership.

Water systems are designed based on the premise that you put a pipe in the ground and that the water will be used. For water quality chlorine is put in the system and at times water needs to be released in areas where there may not be enough water use, because secondary homes are not being used enough. This could also impact septic systems too.

Q6: Should we consider 2 categories of growth? For example, a population growth rate and an housing growth rate, because of the increase in the number of houses, but not people?

A6: Yes, this is an option for the projections in the OCP. The potential for housing under current zoning is quite high, because of under developed lots. That may or may not result in population growth depending on whether they will be second homes or principal homes.

There is an Land Use Inventory report and associated Infill Map coming soon that explores these numbers in more detail.

Q7: Where does the statistic of 40% of people not living here but owning here come from?

A7: That comes from our property statistics from BC Assessment. We queried the addresses that people have on title, and if their address is not an address in the community they were considered out of town owners. There may have been some changes in where people live, but the data is fairly current.

Q8: How will the board promote increased efficiency of irrigation water management, and could there be incentives for orchardists?

A8: A piolet project has been to put meters in various orchards and residents are metered now, which allows the regional district and the property owners to see how much they are using. The water operators are working with water users in Naramata to promote more efficient use of water, but there is no program happening at the moment. Leak detection is

important in both orchards and houses. Situations have existed where there has been lots of water wasted that was not caught until systems were replaced. Meters help with leak detection.

Q9: What is the maximum amount of water that can be delivered by the current system?

A9: Currently, the annual total water usage (2020) is 1,428,857 cubic metres. The total amount water licenses is 2,225,000 cubic metres. It is possible for water licensing to change based on needs in the community.

Q10: If water is limited, then the types of crops grown could possibly be forced to change. How do we maintain a sustainable irrigation system at the same time allow continued growth?

A10: At this time, there is sufficient water for the housing being built and the irrigation being conducted for agriculture. New connections to the system include connection costs for the infrastructure and DCCs. Any potential new developments that want to connect to the system will require water modelling to assess any impacts on the system.

Q11: Can you give a brief history of some of the key issues or projects that have occurred in the past several decades of the Naramata Water System?

A11: 1995

- In September 1995 the Naramata Irrigation District (NID) was dissolved and its services were assigned to the RDOS. The water system was on a permanent Boil Water Advisory. As part of the conversion, the RDOS assumed all assets as well as all liabilities.
- A law suit concerning the Blackwell development occurred as a result of the actions of NID in 1994 where an agreement regarding development between the developer and NID was breached. The developer sued for damages with the NID.
- Without sufficient funds to cover the legal costs or the pending payment that would be required, the NID asked the RDOS to assist and take over the services NID provided.
- The law suit was resolved in 2000 at the Supreme Court of BC.
- The RDOS borrowed over \$3.2M to cover the award to the developer and the legal costs.
- All properties in the Naramata water system were required to pay \$4,065 towards the borrowed funds.

2008:

- Completed the \$8.6M construction of a water treatment system, pump house, water mains, SCADA, power upgrades, and road upgrades. \$5.3M was covered by a provincial & federal grant.
- Uplands water rights were secured as part of the project for 40 years by cabinet order.
- Stonebrook water reservoir was installed by a developer.
- Asset management plan was created and a pipe replacement plan was initially prepared.

2011:

- Dam safety reviews for the 4 dams in Naramata were conducted for \$40k.
- Capital Plan and DCC Review were completed for \$47k.
- Replaced signage at Naramata Dams.

2012:

- Metering pilot project was initiated with \$200,000 in gas tax funds.

- Water main replacement of 750 meters was completed on Mill road for about \$400k.
- Geotechnical investigation for Big Meadow Dam and piezometer installation was conducted for \$50k.
- Topographical survey of all 4 dams was completed.

2013:

- About 1.2 km of water main was replaced on Arawana Road to Upper Debeck Rd, Spruce Drive, Ponderosa Drive, for about \$650k.

2014:

- Five fire hydrants were installed in various areas around water system for \$70k.
- A 360 meter section of a critical pumping main to the Juniper reservoir was replaced by directional drilling for about \$160k.

2016:

- Decommissioned old south pump house as it was no longer usable for \$50k.

2017:

- \$3.68M in Clean Water and Wastewater Program grant funding was used for the \$4.86M project to replace water mains on Naramata Road from Arawana Rd to Gawne Rd, Hyde Rd, LittleJohn Rd, Sammet Rd, McPhee Rd, Hayman Road, and a portion of Juniper Road to the reservoir.
- Generators were added to the raw water pump station, the water treatment plant and the Juniper pump station. The total cost was \$1.2M and a borrowing bylaw of \$1.0M was approved to cover a portion of the project; \$950K was borrowed for the project.
- Emergency replacement of sections of water main on Mill Rd that was exposed from Flood waters was completed by directional drilling. For \$210k (received \$180k from provincial disaster relief claim).

2020:

- In preparation of future grant applications design work was completed (or is almost completed) on several water main sections: Gawne Rd, Smethurst link from Juniper reservoir, Upper Debeck, portion of Salting and Partridge, and North Naramata Rd.
- Naramata Water System was included as a main contributor in the SCADA Master Plan

2021:

- Dam safety reviews completed for 4 Naramata Dams and geotechnical investigations completed for dams except Big Meadow
- Predesign was completed on a Juniper Reservoir expansion for a grant application.
- Source Water Protection Plan completed in 2021 – one of the first steps in a provincial filtration exclusion policy and process.
- SCADA Master Plan components were completed in Naramata - \$28k for replacement of two main controls – PLCs for the Water Treatment Plant and the Chlorine generator; also migration to a new SCADA platform was done for all RDOS water and sewer systems.

2022:

- Modeling is continuously being updated as infrastructure changes and is helping determine priority areas for replacement.

- Design for water main replacement to be completed for Langedoc Rd with a loop to Mill Road, and Salting to North Naramata Road.