



Agenda No: 9.2

Mtg. Date: Nov. 26, 2012

Regional Board Report

TO: Regional Board

FROM: Jim Roe, ASCT
Manager of Public Works

DATE: November 22, 2012

SUBJECT: Ownership of the Sunset Ranch Water and Sanitary Sewer Utilities

Prepared by: Michael Noga, ASCT – Engineering Technologist II

RECOMMENDATION:

THAT, subject to final approval from the five Sunset Ranch strata's to transfer ownership of their sanitary sewer and water systems, the Regional District agree to accept ownership of the sanitary sewer mains, manholes, water mains, water valves and fire hydrants that are located within the boundaries of Sunset Ranch strata subdivision phases 1 to 5: Strata KAS2471, KAS2623, KAS2814, KAS3281 and KAS3573.

AND FURTHER THAT, all future water and sanitary sewer works constructed on later phases of development become the property of the Sunset Ranch Water and Sewer Utilities that are currently owned by the Regional District.

Purpose:

To request approval from the Board, to allow staff to pursue to conclusion, the incorporation of the strata owned sanitary sewer mains, manholes, water mains and hydrants that are located within the boundaries of the five Sunset Ranch Strata properties, into the two existing Sunset Ranch utilities that are currently owned, operated and maintained by the Regional District.

IMPLICATIONS OF RECOMMENDATION:

Strategic Plan:

On-going assessment and impact of the utilities owned, operated and maintained by the Regional District contributes toward carrying out the Corporate Strategy and Department Program Plans/Current Year Initiatives as noted in '*The RDCO Strategic Plan – Vision 2020 – Planning for the Future.*'

General:

Public works has received several water service complaints, over the last few years, from Sunset Ranch residents pertaining to:

- Lack of pressure in their water service
- Staining of their plumbing fixtures (manganese)

To assist in controlling these concerns, Regional District staff would be able to implement a comprehensive flushing program to monitor manganese levels. As well, responsibility of the entire distribution system would provide staff access to all pressure zones and valves to better respond to pressure inquiries.

The strata's are currently not reserving adequate funds that would be used specifically for future capital replacement costs of the onsite water and sanitary sewer system. Bylaw 1268, adopted in July 2012 has included an asset renewal component to establish a water rate structure consistent with other RDCO water systems.

Although some coordination among the strata's has been achieved with respect to fire hydrant maintenance, complete maintenance of the water system (annual flushing, valve exercising, etc.) as well as complete maintenance of the sanitary sewer system (periodic flushing) has been neglected. Strata's do not have the training, or proficient working knowledge, for operation and maintenance of a large utility. Operation and maintenance activities that are performed on water and sanitary sewer collection systems are an important part of comprehensively managing the systems in order to optimize system performance, enhance program effectiveness, and reduce overall long-term costs and public health risks. The Regional District Public Works Department has the capacity to address operational, maintenance and emergency issues in a timely manner.

To reduce the risk to the strata corporations, Acorn Communities and the five strata presidents have requested that the Regional District take over the water and sanitary sewer utilities that are located within the boundaries of the strata properties.

A "Certificate of Public Convenience and Necessity", required by all private water utilities in BC in order to allow them to operate a private water utility, has not been issued by the Province to Sunset Ranch Development or Acorn Communities. As such, the Ministry of Environment's Water Stewardship Branch does not recognize Sunset Ranch Development nor Acorn Communities as the owner of any water utility within BC.

Organizational:

The acquisition will provide staff with clearly defined direction with respect to the utilities that the Regional District is responsible to operate and maintain.

Financial:

Economies of scale in utility ownership and maintenance will be realized. The Sunset Ranch utility rates have been adjusted in 2012. It is not anticipated that any increase in rates will be required as part of the acquisition of the two utilities.

Policy:

The Regional District of Central Okanagan Utility Acquisition Policy provides for the public utility to own all larger water distribution mains and sewer mains to the residential lot services.

The vision and values identified in the Ellison Official Community Plan Bylaw 1124, Section 9 – Utilities and Infrastructure would be supported.

Legal/Statutory Authority:

The following bylaws are already in place that would allow for a transfer of ownership between the strata's and the RDCO. These bylaws are:

- Regional District of Central Okanagan Sunset Ranch Water System Service Area Establishment Bylaw No. 981, 2002
- Regional District of Central Okanagan Sewer System Service Area 901 – Ellison Establishment Bylaw No. 982, 2002

If the Board accepts the recommendations of this report, each of the five strata's would still be required to obtain a minimum of 75% support from their respective property owners. Based on a public meeting that was held earlier this year at Sunset Ranch Golf Course, and based on input from each of the five strata presidents, it is likely that this support would be achieved.

The RDCO has a utility acquisition policy that provides a framework that will allow for a transfer of the affected assets. The RDCO has gone through several similar transfers, both in acquiring utilities and disposing of utilities, as was the case with the incorporation of the District of West Kelowna.

The RDCO will require the services of a lawyer to complete the necessary legal paper work and a legal surveyor to establish appropriate rights of way for circumstances where none exist. All affected assets will need to be within newly established rights of way so that future access and disturbance, to allow for repairs or replacement, will only be within areas that are legally protected in favour of the RDCO. The cost of lawyer and legal surveyor services will be paid by the rate payers of the sanitary sewer system and water system. The RDCO will pay the strata's a sum of \$1 for the transfer of ownership of the utilities. This nominal value is consistent with the RDCO's Utility Acquisition Policy.

Background:

In consultation with the five Sunset Ranch Strata's and Acorn Communities (Acorn Homes), the Environmental Services Department has been investigating the ownership structure of the water and sanitary sewer utilities that are located within the strata properties.

The Sunset Ranch Development is a bareland strata community which is approximately 50% built-out. Ultimate build-out of the development is expected to total 450 residential units within approximately ten strata subdivisions. The first phase of development began in about 2002 with further development taking place in stages as lot absorption and demand warranted.

Following is text that addresses the specifics of the existing water system. Similar issues, although not described in detail herein, are applicable to the sanitary sewer system.

The Regional District of Central Okanagan (RDCO) currently owns, operates and maintains the water supply system that delivers water to the boundary of each strata subdivision. This water supply system generally consists of:

- Two groundwater wells which are located on the golf course
- Control building which is located on the golf course
- Transmission main between the control building and upper reservoir

- Upper Reservoir complete with various mechanical components (pumps, chlorination equipment, instrumentation, etc.)
- Distribution main leading to strata boundaries

The ownership of water mains within the various strata subdivisions has been in question for the last several years. Up until this time, it has been understood by the RDCO that the water mains which go through one strata to feed another strata are the property of the RDCO. It has also been understood by the RDCO that water mains which feed only one strata are considered 'private' and fully owned by that particular strata. Based on our investigation of RDCO files, this understanding has been prevalent since early in the development of the raw property.

As more and more phases of subdivision have been approved, the ownership of the water system has become more complicated. For instance, a water main may feed only one strata now but this same watermain may need to be extended in the future to serve two or more strata subdivisions. The question then becomes: "If this watermain is 'private' at this point in time, what mechanism is available to transfer ownership to the RDCO in the future?"

In February of 2008, the five strata's approached the RDCO's Director of Engineering, with a request that the RDCO take ownership of all water works within the strata blocks. The RDCO has subsequently requested and received a letter, which is signed by all five strata presidents, that requests the RDCO to take ownership of all sanitary sewer and water infrastructure that is currently located within the strata properties. The ownership would extend up to and include the water service valve (curb stop) and sanitary service inspection chamber. Beyond these limits, the infrastructure would be owned by each particular bareland strata property owner, as the case may be. See appendix A.

Utilizing the RDCO Utility Acquisition Policy as a guide, Agua Consulting was retained by the RDCO to review the overall water system. An executive summary of the report is included as Appendix B, attached. It was determined by staff that it was not necessary to complete a similar assessment of the sanitary sewer system as the existing infrastructure only consists of gravity sewer mains which are all relatively new.

The Agua Report, among other findings, does make mention of some water quality concerns, most notably manganese in the water supply source. Although the levels of manganese are within acceptable Canadian Drinking Water Quality Guidelines, the manganese does create the potential for staining bathroom fixtures, creating odours and reducing pressures if the build-up of manganese begins to restrict the water service. Interior Health (IH) has been aware of this issue since the early stages of development. IH may require that a treatment system be installed in the future to address these water quality concerns. Because there are several more phases of development planned, it is currently anticipated that a filtration system could be installed as part of a later stage of development, if mandated by IH.

Conclusion:

The best long term ownership strategy for the water and sanitary sewer mains located within the strata boundaries is for the Regional District to acknowledge ownership and to assume the operation and maintenance of the systems. The Regional District has qualified operators who are experienced in the operation and maintenance of a water system and a sanitary sewer system. An operator is on call at all times, ready to respond to a utility incident should it arise.

As identified in Appendix A, the various strata's have requested that the RDCO accept ownership of the on-site water and sanitary sewer utilities. In discussions with Acorn Communities, it is evident that they would have no concerns with turning over the water and sanitary sewer systems that will be constructed as part of future phases to the Regional District.

The Environmental Services Department has also been in discussions with our Drinking Water Officer, from IH, who has indicated his preference that water systems within our jurisdictional boundaries be owned and operated by the RDCO. It is IH's mandate that Public Health issues be handled in the most effective manner, and with the least amount of risk to public health. IH has indicated to the RDCO that, because of the expertise and resources provided by a public water utility, they believe public ownership of water systems is the best model in regard to achieving IH's overall objective which is a reduction of risk to public health.

In regard to establishing an ownership arrangement between the Strata's and the RDCO, both parties agree that the ownership, as well as the long term operation and maintenance of the on-site water utility and sanitary sewer system, should belong to the RDCO. Although public ownership of a utility within a strata property may appear unusual, it is not without precedent in the region as it has been a policy of Black Mountain Irrigation District and the Glenmore Ellison Irrigation District that all new strata's must turn over the ownership of their on-site water utility, to these particular irrigation districts, at the conclusion of development construction.

This is for your consideration.

Submitted by:

Department Head Approval



Jim Roe, ASCT
Manager of Public Works



Chris Radford
Director, Environmental Services

Attachments:

- Appendix A – Letter from Strata Presidents
- Appendix B - Water System Overview, Sunset Ranch Water Utility report, dated October, 2012, prepared by Agua Consulting Inc. (Executive Summary)

Considerations not applicable to this report:

Alternatives

Approved for Board's Consideration



Paul Macklem, CAO

Appendix A

November 5, 2012

Regional District of Central Okanagan
1450 K.L.O. Road,
Kelowna, BC, V1W 3Z4

Attn: Mr. Jim Roe, Manager of Public Works

Dear Mr. Roe,

RE: Transfer of Ownership of Sunset Ranch Water and Sanitary Sewer Works to the Regional District of Central Okanagan

Please accept this letter as the formal request to transfer the ownership of the water and sanitary sewer works within the existing 5 stratas and any future stratas of Sunset Ranch; and within the boundaries of Lot 2 of Sunset Ranch from the SHA and the Stratas to the Regional District of the Central Okanagan.

The SHA and Stratas will work together with the RDCO to prepare and establish any additional Right of Way (ROW) documents that are required to complete the transfer. Currently there are ROW documents on file with the RDCO for the water and sanitary-sewer works throughout the development

Please find below the signatures of the Strata Presidents and the SHA President confirming this request.

Sincerely,



Al Keating
President, Sunset Homeowners Association

MJ Charman, President KAS2471



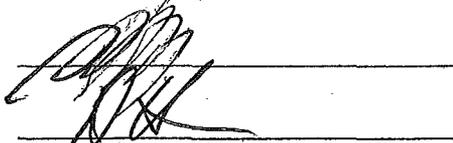
Al Keating, President KAS2623



Carol Schweder, President KAS2814



Shane Jaffary, President KAS3281



David Rother, President KAS3573



Appendix B

EXECUTIVE SUMMARY

GENERAL

The Sunset Ranch Development consists of 198 existing single family homes located above Sunset Ranch Golf Course. The Regional District of Central Okanagan has operated the water system for this development since its first phase in 2002. Since that time the development has progressed and is approximately half completed. The RDCO staff has requested that Agua Consulting address the following issues related to the water supply and distribution system:

- **Fire Protection Standards** Assess which portion of the system storage and infrastructure is required to maintain a safe level of water storage;
- **Consist Design Criteria** Provide recommendations regarding design criteria/standards, particularly with respect to water demands;
- **Water Quality Direction** Provide direction for improving well water quality;
- **Emergency Interconnections:** Determine where interconnections are viable to improve water system redundancy;
- **Water System Operations:** Review existing system operations and provide recommendations for ensuring that water source and distribution systems are maintained;
- **Administrative Issues:** Provide recommendations for ownership of the water infrastructure and the means of transitioning ownership of distribution mains in the strata areas over to the RDCO.

EXISTING WATER SYSTEM

The Sunset Ranch water supply system services 198 existing single family homes above Sunset Ranch Golf Course. The total build-out for the development is 450 units. There are two groundwater wells that provide the source water for the development. The two wells are located on the golf course west of the 10th fairway. Wells No. 1 and 2 both have 100 hp pumps and can produce flow in the range of 24 L/s. There are operational issues related to Well 2 that currently limit its use.

The wells pump water through a dedicated 250mm water main to the 1,530 m³ reservoir located at the 595m elevation. The groundwater is chlorinated just prior to entering the 595m elevation reservoir. At the reservoir site a pump station services the highest elevation lands around the reservoir and to the south that cannot be serviced directly from the reservoir by gravity.

FUTURE WATER DEMANDS

Presently there are 242 strata connections in place at Sunset Ranch. There are approximately 45 vacant lots that do not yet have homes constructed on them. With a total planned build-out of 450 development units, there is an additional 253 homes yet to be constructed. The water demand currently averages 50 m³/day during the winter months. During the summer months, with the outdoor water use, the water demand has reached 664 m³/day. Although this amount may seem excessive and wasteful, on a per person basis, the summer watering rate is much lower than for most of the Central Okanagan region. The smaller number is primarily due to the small irrigated lot areas within the development.

The recommendation for the RDCO is to reduce the per person design criteria for Sunset Ranch from 2,400 Litres/person/day down to 1,600 Litres/person/day. The lower design criteria is still well above the actual measured water usage for the area and it reinforces the concept of reduced allotted water to new development. If the 1,600 L/ca/day criteria is utilized, the existing reservoir and well capacity do not need to be expanded for development build-out. Without major expenditures in upgrading well capacity or reservoir storage, the focus for the developer during future development phases will be on water quality improvements and system redundancy and/or emergency supply.

SYSTEM DEFICIENCIES

During a site inspection held on May 24, 2012, 19 items were identified for upgrades. Some of the items were design deficiencies, some were construction deficiencies, and some require work by the RDCO water system Operators. The items are listed in Table 3.3 in this report. It is not expected that everything on the list will be corrected immediately, however the items should be with the highest priority items being corrected first.

EMERGENCY SUPPLY OPTIONS

Four emergency supply scenarios are considered and documented within the report.

1. **Groundwater Wells:** The first option is to develop an additional groundwater well. This option would provide additional capacity. Two wells, however, are already developed, each with sufficient capacity to meet the forecasted Maximum daily demand at build-out of the subdivision;
2. **Connect to BMID:** Connection to the BMID water system is viable, however pumps must be installed at the well building to raise the water from the BMID pressure zone in Scotty Creek to to the Sunset Ranch Reservoir. BMID has sufficient capacity to provide sufficient water to the development area from the north end of Scotty Creek Subdivision;
3. **Connect to GEID:** Interconnect to the GEID water system will be problematic. GEID has plans to separate the domestic and irrigation water distribution systems in the Ellison. Adding Sunset Ranch demands to the GEID plans will result in a substantially larger
4. **Emergency Power Supply at Wells 1 & 2:** The last option considered is to provide an emergency generator at the Well Building to provide emergency power to the well pumps. This option would consist of a 100 kw genset capable of running either well pump.

Of the four options considered, investment in the generator (Option 4) is recommended first. Following that, interconnection to BMID (Option 2) is the next viable option.

WATER TREATMENT PROCESS

It was known early on during the development phases that there were water quality issues with both wells at Sunset Ranch. In 2005, the developer was required by the Public Health to design a water treatment system to reduce hardness and reduce manganese in the groundwater source. Since that time, this has not been completed. There have been changes in staffing by Interior Health and the regulator has not forced this to occur.

Prior to the next phase of development, the developer should provide options and costs for water treatment of the groundwater supply. This information should be considered by the Regional District ***to see whether it is more cost effective to have the treatment installed or if connection to the adjacent utility is more economical.***

UTILITY OWNERSHIP

Currently 5 separate bare land strata areas exist within the Sunset Ranch Development. There are currently 246 lots with a build-out of the development set at 450 units. At build-out, there could be as many as 10 strata areas. This is not an issue except that water mains required to service strata lands furthest from the source are required to cross private strata lands.

With respect to ownership of the utility, the RDCO has confirmed that they own the major infrastructure facilities such as the groundwater wells, the control building, transmission mains to the reservoir, reservoir site, chlorination facilities and pumping facilities as well as the water mains to the strata boundaries. Without having ownership of water mains through the strata areas, the matter becomes more complicated. The RDCO cannot legally supply water through one strata to a further strata without legal access for the water mains. Legal access is accomplished through registration of a statutory right-of-way (SRW) on the property title. The SRW allows access rights from a third party or utility over a private lands. These have not been obtained through the course of development. Ownership of the infrastructure has not been made clear to the developer and strata councils who currently own the infrastructure within each development phase. To our knowledge, only limited SRWs exist in the development area for specific water infrastructure.

It is the opinion of Agua Consulting Inc. that the approving agencies (RDCO) should not defer risk and responsibility of drinking water infrastructure to groups that may not be trained or knowledgeable decision makers in the field of drinking water supply. For the reasons of public health protection, and to limit liability, all larger infrastructure should be owned and operated by the public water utility. SRWs should be obtained for the width of the roadway plus 0.5m behind the roadway curbs so that the larger water distribution mains and the service lines to the individual property shut-offs are owned by the RDCO. The transition of water infrastructure is listed with more detail in Section 5.0 of this report.

SUMMARY

Within Section 6 of this report we have provided 18 conclusions and 14 recommendations. The critical issues to resolve are related to correction of deficiencies, improving water quality, and resolving the issue of ownership of water mains.