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# District of Lantzville

## REPORT TO CAO

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Special Council Meeting Closed (In Camera) Agenda Item  
December 14, 2015

File No. 5600-08

Q: Reports/2015/2009 reportonwateroptions

**AUTHOR:** Fred Spears, Director of Public Works  
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**SUBJECT:** Review of 2009 Report on Water Options

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### RECOMMENDATION(S):

THAT pursuant to Section 117 of the *Community Charter*, Council authorizes the release to the public of the December 14, 2015 special Council meeting closed meeting staff report entitled "Review of 2009 Report on Water Options".

### PURPOSE

The purpose of this report is to inform Council of a report that was created by a consultant on behalf of the District of Lantzville in 2009 regarding two water options:

1. The "City Option"; and
2. The "Well Option".

### ATTACHMENT(S):

None.

### Background

In 2009, District of Lantzville staff provided a report outlining a potential direction to attain water for the municipality. After reviewing information presented by Staff, Council requested an outside review of 2 (two) identified water options in order to provide an independent opinion as the best course of action for the municipality. Staff moved forward with the request from Council and sought the services of a contractor. A contractor was hired shortly after to produce a report regarding potential water options that were before the District at that time, those options being whether to move forward on the Lantzville / Nanaimo Agreement (the "City Option") or to move forward on the "Well option". The 2009 report was to lay out both options and provide Council an opinion from an outside source.

### Discussion

### GENERAL DATA

Throughout the report references are made to two options, due to the confidentiality of one of the parties staff will refer to the options as either "the City" or "the Well".

The report provides a background on the District’s current system supply and use as well as potential future development demands. The report stated that there were 920 properties currently serviced by a community water system, leaving a remainder of 450 properties that were without connection. Of the 450 properties not serviced by the community water system the majority were in upper Lantzville. A full buildout using the OCP as a guide was estimated to be 3000 connections. Table 1 provides a review of existing and future connections compartmentalized by Area:

**Table 1: Existing and Future Connections by Areas**

	Upper Lantzville	Lower Lantzville	Total Connected
Existing Properties	225	695	920
Future Development			
Foothills	590		590
Projects*		220	220
Others	1097	195	1292
Total OCP	1912	1110	3022

The report also speaks to a technical water deficit. Due to the District standards for the amount of water allocated for each connection being 3400 liters per day, a deficit is sited due to the lack of supply.

**OPTIONS EXPLORED BY THE REPORT**

**1. “The City” Option**

The report provides an overview of the *City option* and begins with the City of Nanaimo and the District of Lantzville entering into a Memorandum of Understanding (MOU) in 2005 when the City agreed to supply emergency water to the District. The MOU would see the District and the City start negotiations for a permanent connection between the two water systems.

The overview also talks about a draft Agreement that was developed in September 2008. In the overview a comment is made that the City of Nanaimo was not prepared to supply water exclusively for new development however, given the costs associated with buying in to the City’s system, the City has agreed to an approach that would limit the District’s outlay. Next, the City would allow the District to use city water initially to meet the current and future needs of upper Lantzville, including the Foothills project. The Harby Road source would be used to supply existing connections in Lower Lantzville with some additional connections added in. The report stated that only 90 extra connections would be available in Lower Lantzville and this would not be enough to supply even the Lantzville Projects development. This statement is made due to use of the theoretical deficit which is reviewed at the beginning of this report.

The *City Option* was looked at from the City of Nanaimo’s ability to supply the District of Lantzville with the quantity and quality of water needed to which no technical issues were identified however some considerations regarding both governance and cost. The report cites that the City of Nanaimo would be able to provide the quantity and quality of water required for the existing and future needs.

Next, the report speaks of a “buy-in” charge. Initially the buy-in rate was in-line with the Development Cost Charge (DCC) rate at the time of \$1,755 per connection. It was known at that time by the District of Lantzville that the City of Nanaimo’s DCC rate was under review. The increase in the rate now in front of the District (\$5,912) was higher than the District anticipated. The buy-in charge for new development would be collected as a DCC charge. The District would need to decide on how it recovered the cost of the “buy-in” charge from existing properties.

The report then commented on cost sharing in Future Capital projects, in that the City of Nanaimo expected the District of Lantzville to cost share in system wide upgrades. The author goes on to state that *“it is hard to know the implications of this condition because the timing and nature of the improvements is not stated”*.

The initial outlay by the District would be \$2.83 million, which would allow water to flow to Upper Lantzville customers. A cost of \$1.3 million would be paid by the District of Lantzville for the initial “buy-in” and \$1.5 million associated with other capital costs of attaching to the Nanaimo water source.

In order to extend the system to include Lower Lantzville, if required or requested, the District would be required to pay the buy-in charge at \$4.11 million having the total buy-in for the Districts existing system being \$6.94 million which includes the capital tie in costs. The remainder of the cost outlined in the report would be borne by new development over time as per the OCP. The report reviews the total cost of the buy-in charge that includes DCC’s for new development. To summarize this portion of the report, this section takes in taking into account the entire cost should the District use Nanaimo water to accommodate full OCP build-out of both Upper and Lower Lantzville. This proposed ation was projected to take 40 years running at 2% per year population increase, and would cost approximately to \$18 million.

At the time of the report (2009), bulk water rates were yet to be set however, staff from the City stated they would not recommend a charge lower than the retail charge to the City of Nanaimo residents and the rate charged to the Snuneymuxw. The annual cost for water per resident (2009) was \$287 , slightly higher than the charge to Lantzville residents. It is expected that the annual charge for bulk water is going to be in the \$60-70k total range.

Some of the conditions outlined by the City in the draft Agreement include the requirement that Lantzville cost-share in three other services.. The three services are the Port Theatre, Tourism, and Economic Development. The total costs of supporting these services as per the draft Agreement was between \$40- \$50k per year.

Other conditions include conservation methods must be equal or more stringent that those in place in the City of Nanaimo and the need to request from the City of Nanaimo a material increase of water supply over and above the current Lantzville OCP.

## 2. “The Well” Option

During the course of discussion with the City of Nanaimo, the District of Lantzville became aware of another potential source of water for the community. The source was located outside of the District boundaries in Area C. To access the well the District would be granted an right-of-way over private lands.

Staff on behalf of the District entered into discussions with the property owner regarding the terms and conditions for accessing the well. Staff believed an agreement could be reached but at the time of the report no formal draft agreement was in place.

Attempts to purchase the land were unsuccessful and, therefore the land surrounding the well could not be regulated.

The volume of water that could be extracted from the field surrounding the well was yet to be proven. The pump test on the existing well showed 450 usgpm. From this information, the one well was not enough to satisfy the full build-out of the OCP, further drilling was needed to confirm total volume that can be consistently supplied.

Additionally, the report raises concerns that:

1. no additional water will be found near the existing well due to the property owner's willingness to only provide ½ acre for a right-of-way;
2. Interference from new wells may cause production issues. Comments of, "even if an adequate volume is found, the wells could run dry over time or be depleted by other wells that tap into the same source ", arise from the 2009 report.

As per the report, the capital costs for the proposed well is as follows:

- The District has agreed to make a one-time payment for the right-of-way and well sites of \$50k, close to the appraised value of the land.
- In addition, the District will have to incur up-front costs to develop the wellhead and lay pipes to convey the water to the District reservoir. These costs are estimated to be in the order of \$4.1 million. Some or all of these costs may be recoverable from developers. Indeed, work may not begin on connecting the new source until developer contributions have been secured.
- Following these initial investments, no further capital contribution would be required.
- Should the Vancouver Island Health Authority (VIHA) require the water to be treated with UV, this could add \$50-\$100k to up-front costs.

The annual cost of an access fee was \$50k for 15 years with periodic adjustments. The formula for adjustments has not been established; neither has the process for resolving dispute over price. Ongoing operating costs of the system are unknown but were very likely to be considerably lower than the bulk water costs levied in the draft Agreement.

Uncertainties surrounding the well option include various approvals from Ministry of Environment, Agriculture Land Commission, Ministry of Transportation, and likely receive consent from the RDN because the property in question lies within Area C within the RDN. Another issue is the possibility that the annual payment by the District to the property could be construed as a type of "assistance to business" that is not authorized by the *Community Charter*.

A summary comparison of the two options is present in **Table 3** using the criteria established by prior Lantzville District Council:

**Table 3: Capital Cost of Joining City System (\$ million)**

Criterion	City Option	Well Option
Quantity of Water	<ul style="list-style-type: none"> <li>Adequate to meet Lantzville’s needs under current OCP and beyond;</li> <li>Secure Supply.</li> </ul>	<ul style="list-style-type: none"> <li>Total volume unproven at this time;</li> <li>Test well very encouraging but inadequate to supply OCP needs;</li> <li>Some doubt that additional wells on a small ½ acre site would produce significantly more water;</li> <li>Other wells in same area could drain supply.</li> </ul>
Quality of Water	<ul style="list-style-type: none"> <li>Adequate now – New Treatment Plant being built.</li> </ul>	<ul style="list-style-type: none"> <li>Adequate – not known if VIHA will require UV treatment.</li> </ul>
Threats to Water Source	<ul style="list-style-type: none"> <li>Few – large managed watershed;</li> <li>The City is responsible for ensuring water quality.</li> </ul>	<ul style="list-style-type: none"> <li>Some degree of risk associated with activities on surrounding properties;</li> <li>The District of Lantzville in responsible for ensuring water quality.</li> </ul>
Capital Costs	<ul style="list-style-type: none"> <li>Initial up-front investment of \$2.8 million to serve existing Upper Lantzville;</li> <li>Buy-in charge associated of \$5,912 with each property added;</li> <li>Total combined investment to achieve build-out is \$19.4 million.</li> </ul>	<ul style="list-style-type: none"> <li>Initial up-front investment of \$4.2 million.</li> </ul>
Operating Costs	<ul style="list-style-type: none"> <li>Bulk water charges to the City based on volume consumed;</li> <li>Initial connections add \$60-70k to District costs. These will increase with each connection in Upper Lantzville.</li> </ul>	<ul style="list-style-type: none"> <li>Annual access fee to property owner initially set at \$50,000;</li> <li>Some additional operating costs associated with expanded supply and treatment system.</li> </ul>
Other Conditions	<ul style="list-style-type: none"> <li>Annual contributions to Port Theatre and Economic Development service expected;</li> <li>Incremental costs in the range of \$40-50k annually.</li> </ul>	None
Ability to achieve OCP	<ul style="list-style-type: none"> <li>Possibility that growth will be constrained by the capital payment required for connections in Lower Lantzville.</li> </ul>	<ul style="list-style-type: none"> <li>Depends on water volume available</li> </ul>
Ability to modify OCP	<ul style="list-style-type: none"> <li>Wording of agreement should be clarified;</li> <li>Changes to the OCP must be consistent with the Regional Growth Strategy over which the City has influence on the Regional Board.</li> </ul>	<ul style="list-style-type: none"> <li>Changes to OCP must be consistent with the Regional Growth Strategy over which the City has influence through the Regional Board</li> </ul>
Equal Access for Upper and Lower Lantzville	<ul style="list-style-type: none"> <li>Possibly that extension to Lower Lantzville will be constrained by capital payment required.</li> </ul>	<ul style="list-style-type: none"> <li>No restrictions</li> </ul>
Timing of water delivery	<ul style="list-style-type: none"> <li>Agreement could be signed soon and would clear the way for development. However, actual timing of connection strongly influenced by readiness of developers to invest.</li> </ul>	<ul style="list-style-type: none"> <li>Approvals have to be received from multiple agencies including RDN and an agreement has to be concluded with the property owner;</li> <li>All approval and agreements unlikely to be in place before 2011.</li> </ul>
Sewer/Water requirement	<ul style="list-style-type: none"> <li>City wants to see phase III sewer development proceed before water is connected to that area.</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>

## SUMMARY FINDINGS/DIRECTION

The report conclusions begin with the statement “ *if a decision had to be made today, there is only one real option, join the City’s water supply system. Until it is shown that an adequate volume of water is available the well option cannot be seriously considered*”.

The author continues by stating, “*selecting the well option today, based on the single well drilled, would certainly allow for some limited development to proceed but would not guarantee enough capacity to support all the development and new connections contemplated in the OCP. In contrast, the City option provides access to a secure long-term supply of surface water adequate to support the current OCP and beyond*”.

Additionally, the author states, “ *there is a strong argument for delaying the decision until the volume of the well can be determined*”. It then lists the arguments being;

- Costs
- Extension of Service to Lower Lantzville
- Unrelated Conditions
- Control
- Timing

However, the author hedges his statement with the following “*Equally, there is a strong argument against waiting, based on the following inherent weakness of the well option*”. and lists the arguments as follows:

- Security of Supply
- Water Quantity and Quality
- The City’s Response
- Risks

Finally, a concluding statement is provided:

*“I understand staff’s recommendation to drop the well option and to conclude an agreement with the City (of Nanaimo). The City’s system has very strong attributes (water volume and quality) is in place and the option can be executed in a timely fashion. Once in place, a significant impediment to development will have been removed. In contrast, the well option faces a significant number of uncertainties and will take longer to put in place. Investing more time and effort in the well option may simply be a waste.” However, I cannot agree that the suggestion that the City option is a lower cost option. While there could be some small differences in the near term, it is unlikely that either option will be implemented without up-front developer contributions. Over the longer term, the City option is considerably more than the well option and this cost may severely constrain expansion of service in Lower Lantzville”.*

Based on the above noted statement, the author makes the following recommendation(s):

1. Undertake further test drilling on the well option. This testing may not bear fruit however it may provide an alternative water source.
2. Return to the bargaining table with the City to clarify any remaining points of uncertainty (e.g. bulk water rate; payment for economic development; wording of the OCP section) and

to explore whether some of the significant negative elements in the proposed arrangements can be modified (e.g. whether a more graduated payment plan can be reached for the buy-in charge associated with water to existing properties in Lower Lantzville).

3. If drilling results are not positive, proceed to finalize the agreement with the City.
4. If the results of the well drilling are positive, formally inform the City of the Districts intention to examine the feasibility of an alternate supply and indicate the timelines for a decision by the District. This may or may not prompt a negative response from the City and they may be unwilling to open the offer. If so, the District will have to reconsider its options but it will do so with the knowledge of another potential supply source is available.
5. If the City is willing to keep its option open, the District should take the time needed to see whether the necessary approvals associated with well option would be forthcoming and to see how any concerns with water contamination could be mitigated. A formal draft agreement with the property owner would also be developed.
6. With all the information available on the two options, Council would make a final decision.

### **Summary**

Staff have provided a summary regarding the 2009 in camera report detailing options between pursuing an agreement with Nanaimo or doing further exploratory work. Staff note this report has aged somewhat and that factors and costs may have changed due to the passage of time.

Respectfully submitted

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**Fred Spears**  
**Director of Public Works**  
**District of Lantzville**

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**Brad McRae**  
**Chief Administrative Officer**  
**District of Lantzville**

Reviewed By:

CAO		Dir. Fin. Serv.		Dir. Corp. Adm.	
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