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HOW IMPORTANT IS CLEAN DRINKING WATER TO YOU?

The state of drinking water supplies can be quantified by four important characteristics: quality, quantity, reliability, and cost. Characteristics our District is committed to.



Canadians Are Fortunate

Water is a fundamental human need and the United Nations considers universal access to clean water a basic human right. Each person on Earth requires at least 20 to 50 liters of clean, safe water a day for drinking, cooking, and simply keeping themselves clean.

We're very fortunate in Canada. In developing countries, some 1.8 million people die every year of waterborne diseases like cholera. Tens of millions of others are seriously sickened by a host of water-related ailments—many of which are easily preventable.

Conservation-Oriented Pricing

This summer the District is moving all types of users to an inclined rate system similar to the one that single family dwellings have been subject to for several years.

The District is using a conservation-oriented pricing system because it makes sense from all perspectives, is fair to all users, and will enable us to provide water services that are financially, ecologically and socially sustainable. This type of system sets rates so that there is an incentive to use water more efficiently.

Typically, water utilities in Canada do not recover from their ratepayers the full cost of the service provided. As a result, the water rates are artificially low and the service must be subsidized in some other way to make up the shortfall. Regional districts and municipalities often use infrastructure grants for this purpose. As an improvement district, our District is not eligible for such grants; therefore, our rate structures must provide full cost recovery through both tolls and parcel taxes.

There is plenty of evidence that this type of strategic pricing works. When people pay for water by the volume used, they tend to use water much more efficiently than when they pay a flat rate. And despite the myth of freshwater abundance in Canada, many regions including Salt Spring have limited supplies and are vulnerable to both drought and climate change. We need to use water more efficiently and conservation-oriented pricing can help make that a reality. Another tool, outdoor watering restrictions, may be needed as well but is less effective and more costly to implement.

A conservation-oriented pricing system has three essential components:

1. A fully metered water system.
2. A volumetric rate structure (pay per volume used)
3. Appropriate (sufficiently high) rates

This approach is the only truly sustainable way to deliver water. It is financially sustainable because the full costs are recovered and can be re-invested in the system through maintenance, capital works, operations and source protection. It is ecologically sustainable because it leaves more water in the natural environment to perform critical ecosystem services. It is socially sustainable because it is fair and equitable. Not only will those who use the most pay the most, but it gives ratepayers a means of controlling their own costs. The rates can be set appropriately to encourage conservation in more prolific users but still causes little to no increase in cost for those who use the minimum amount of water required for basic domestic needs.

The importance of efficiency and conservation is emphasized in Bill 18, the new *Water Sustainability Act*, which will become effective in 2015. One of the most important changes to the legislation is the requirement that water use be "beneficial" which means it must be used "as efficiently as practicable". NSSWD and all other water licensees will be legally bound by this requirement.

For more information on conservation-oriented pricing, read *Worth Every Penny: A Primer on Conservation Oriented Water Pricing* at <http://poliswaterproject.org/publication/344>

Designing a water treatment plant takes expertise

We asked our Chairman about the responsibility of building a treatment plant.

“As a trustee, you must make prudent, educated decisions on behalf of those ratepayers.”



In 2013, after much discussion and the consideration of various design routes, the NSSWD Board engaged Kerr Wood Leidal Consulting Engineers (KWL) to develop the Preliminary Design for a new Dissolved Air Floatation (DAF) water treatment plant on the District's current St. Mary Lake site. It was completed and revealed to District ratepayers in the spring of 2014.

The development of the Preliminary Design was the culmination of a multi-year process. Board Chairman Marshall Heinekey shares his answers to some of our most recent questions about the project, the work involved both to-date and in the future, the decision making process and where we go from here.

Q - When did the Board first begin looking at the options for St. Mary?

MH - The process began back in 2007, before I joined the Board, and became very active back in 2011 as we began looking at the options for locating it, what studies were needed before planning could begin, etc. The need for an updated hydrology study came from this process.

Q - Some members of the community have stepped forward proposing an alternative design and the claim of huge cost savings to be had. In addition, they feel that they will or should have input on the design and construction process. What is your response to this?

MH - A recent letter to the Driftwood gave an example of a BC project that was reduced from \$18 million to \$4 million dollars. However, the claims of huge cost savings have not been substantiated in any way by our research. The project in question was a wastewater treatment plant in the Village of Harrison Hot Springs and the cost savings were due to a dramatic reduction in the scope of the project. Instead of building an entirely new treatment facility, upgrades were made to the

existing wastewater facility and a neighbouring district was excluded from joining the service area. This example is not comparable to the construction of a water treatment facility mandated by Island Health.

Our Board of Trustees take their roles and responsibilities very seriously. Board members are elected by the ratepayers to oversee the operation of the District. As a trustee, you must make prudent, educated decisions on behalf of those ratepayers. We have a knowledgeable and experienced Board and management team. Together, our team has extensive experience in the areas of civil and water resource engineering, major project construction, scientific research, education, management, consulting, and water treatment plant operation. As in any business organization, the Board and management cannot abdicate their responsibilities to well-meaning individuals who believe they have an alternative design. The consulting engineers we have engaged for the St. Mary DAF plant project are one of the most experienced firms in BC.

To date, the Board and Staff have had an excellent working relationship with all KWL personnel and feel confident and positive

about the project. In addition, the Board and Staff have worked very closely with the Ministry of Community, Sport and Cultural Development and Island Health on every step of the process to date and will continue to do so. Water purveyors like NSSWD are very much directed by regulations imposed from higher orders of government. Quite simply, there are rules in place that have to be followed whether everyone agrees or not.

Understanding the source capacity available from St Mary Lake will be integral to the final design capacity of the treatment plant. Recently, the Board committed to proceeding with the Detailed Design because we are confident in the design and must maintain the mandated timeline for completion. Identifying further cost savings will be a key part of the Detailed Design process. The design will incorporate the preliminary findings of the Hydrology Study and Water Budget prepared for St. Mary Lake. The initial results suggest we can substantially reduce the plant capacity which will also reduce costs. The Board is currently reviewing these preliminary findings.

When the detailed design is ready to go to tender, we will issue a "Request for Qualifications" and solicit bids from qualified contractors who have experience with similar projects, and are bondable and insurable.

Q - Why did you elect to go with this process?

MH - This is the conventional and conservative route which we believe the majority of ratepayers would

appreciate. In addition, the Detailed Design and a Fixed Price Contract are required to satisfy our lender. In any project, there is always a degree of uncertainty such as commodity prices, world or provincial economy and interest rates. A detailed design leaves as little as possible to uncertainty, defends against "scope creep" and provides bidders a level playing field.

Q - What about claims of greater flexibility in alternative approaches to reduce costs?

MH - The Board feels that there is a greater risk, more uncertainty and a loss of control when using less conventional practices. The greater part of a project like this requires universally accepted engineering practices, design criteria and existing rules and regulations. As an example, the Department of Fisheries and Oceans and Ministry of Environment hold all authority about what goes on in and around a lake. Access and egress are dictated by the Ministry of Transportation. The BC Building and Electrical Codes and WorkSafe BC also have standards and regulations that must be met in the design.

Also, a good comprehensive understanding of the operation of a water treatment plant means the design engineer can reduce operating costs over the life of the plant by capitalizing some costs in the initial design/construction phase. By this I mean that building quality to begin with instead of simply taking the route with lowest up-front costs will significantly reduce operations and maintenance costs over the useful life of a plant.

Moving Forward on the St. Mary Treatment Plant

The recent Alternative Approval Process (AAP) for Borrowing Bylaw 264 failed when 14% of the District's ratepayers voted against the motion. However, failure of the AAP doesn't mean that the District will not be building a new plant, just that we aren't yet authorized by our ratepayers to borrow money for it.

Why Does Borrowing Bylaw 264 ask for \$10.4 Million?

During the AAP we were asked "Why is the Board requesting approval for the borrowing of up to \$10.4 million in Borrowing Bylaw

264? Why do we need so much? Why is the plant going to cost so much?"

In fact, we don't expect that it will. We have already realized cost savings through a reduction in plant capacity, and the decision to pay for all of the Detailed Design from our reserve funds reduces our borrowing requirements. However, the Ministry of Community, Sport and Cultural Development requires us to ask for the maximum amount needed so that we only need to go through an approval process once. They expect Districts to hire a professional engineer to prepare

a preliminary design complete with contingencies before financing them. It is not a blank cheque, and we will only borrow what we need.

Board Committed to Savings

The Preliminary Design process determined that the maximum we would need, including a 10% contingency, is \$10.4 million. We are doing everything we can to reduce that cost without cutting corners. We are also actively seeking additional funding options, including grants, and will soon begin a fundraising campaign in which we hope to raise a \$1 million in tax-deductible donations. In addition, we continue to lobby the Ministry to grant us an exception to their "no grants for improvement districts" policy.

Your money is also our money as we are ratepayers too. We will continue to do our best to realize cost savings in order to pass along the least possible surcharge to our ratepayers.

Vote on August 19th

Moving forward the Ministry requires that a full voting referendum be held within 80 days of a failed Alternative Approval Process. Therefore, the voting referendum for Borrowing Bylaw 264 will be held on Tuesday, August 19th at the District office from 10:00 a.m. to 6:00 p.m. Advance polls will be held at the District office on Wednesday, August 6th from 9:00 a.m. to 5:00 p.m. and Wednesday, August 13th from 10:00 a.m. to 6:00 p.m.

To view a copy of Borrowing Bylaw 264 please visit the St. Mary DAF Plant section of our website or drop by the office for a copy.

Canadians are among the biggest users of water on the planet, which could result in significant regionalized environmental impacts.

DAF Plant Capacity Will Be Reduced

The Kerr Wood Leidel Hydrology Study and Water Budget for St. Mary Lake and watershed concludes that St. Mary Lake is now fully allocated.

In light of these findings, the proposed water treatment plant will be scaled back to match the current license without consideration of any further expansion. Although the amount is not fully known at this time, reduced plant capacity will have a positive impact on the overall plant cost.

The District will now move ahead with plans to raise the Duck Creek weir to 41.0 meters (above sea level), as required by the Ministry of Environment and Department of Fisheries and Oceans, as a condition of the water license. This will allow the District to withdraw their full allocation, provide the required fishery flows and a minimum of safety in the event of drought and climate variability.

The final hydrology report is due next month and the District will share its findings with islanders at that time.

Maxwell Watershed Protection



Maxwell Lake is a vital part of our island community, supplying water to many island homes, farms and businesses. As islanders you are helping to play a vital role in watershed protection by honouring the fact that it is private property and not open for swimming, picnicking, mountain biking or off-road vehicles such as motorbikes and ATVs.

These activities slowly degrade the watershed because the expansion of trails and pathways creates a direct route for nutrients and sediment to enter the lake

during the rainy season. This nutrient loading will negatively impact water quality in both the short and long term. The risk of wildfire during the summer months is significant and could cause devastating and permanent damage to the watershed.

A healthy and intact watershed helps to filter and purify runoff before it reaches the lake; damage to the watershed will directly result in decreased water quality and increased treatment costs in order to meet the appropriate standards and regulations for drinking water.

The efforts being made today to protect the lake and surrounding watershed may allow the District to defer or minimize the capital costs required to treat Maxwell Lake water in the future.

The District appreciates your cooperation in our ongoing efforts to preserve this valuable natural resource.

Introducing Inclined Toll Rates for All Users

One of the greatest benefits of conservation-oriented pricing is that it allows individuals much greater control over their water costs. Those who choose to conserve may actually see a decline in the amount they pay.

For the past several years, the District has been carefully monitoring the average usage of our customer groups in order to fully understand our water usage trends by season and customer type. This improved understanding of usage patterns will now enable us to alter our rate structure to promote conservation and provide greater fairness to all our ratepayers.

Under our current system, single family dwellings, our largest customer base, have had an inclined pricing structure for a number of years. Other types of users have been charged a rate that does not increase with the volume used. Some of these ratepayers use significant amounts of water and including them in an inclined rate structure is more equitable for everyone.

New Customer Classifications

To implement the new rate structure, we looked very carefully at user types. The end result is the creation of new classifications. The current four classifications: single family, multiple family, commercial and industrial have morphed into eight classifications. Remaining the same are single family and industrial.

The Multiple Family classification remains, but billing will now reflect the number of units in a complex, as will Commercial Class 2 as our accounting software allows a per unit calculation. Strata managers and commercial multiplex owners/managers are encouraged to contact our Office Manager to ensure we have the correct number of units for each complex.

Commercial has been split into two; single business and multi-family/multi-business, while Institutional has been split into two to reflect the difference between small non-profits, including subsidized seniors housing, and large institutions. To help promote sustainable agriculture on the island, a farm service category has also been created for users with a registered Farm Number.

Toll classifications are now:

1. Single Family Dwelling Service
2. Multiple Family Service
3. Commercial Service Class 1 – Basic Commercial Service
4. Commercial Service Class 2 – Commercial Multi-Family/ Multi-Business Service
5. Farm Service
6. Institutional Service Class 1
7. Institutional Service Class 2
8. Industrial Service

September invoices for the July/August billing period will reflect the new rates per Bylaw 265. As noted in the May newsletter, rates will increase by 2%. Current rates remain in place for the July billing of May/June consumption.

Complete details on the categories and rates can be found on the Regular Charges page on our website.

2014/15 rates			
Single Family, Multi (per unit), Commercial 1, Commercial 2 Multi (per unit), Institutional Class 2, Industrial			
Level Gallons	Per 100 gal.	Per m3	Level m3
0-7,000	\$0.98	\$2.15	0-31.83
7,001-15,000	\$1.02	\$2.24	31.84-68.2
15,001-25,000	\$1.49	\$3.29	68.21-113.66
25,001-40,000	\$2.00	\$4.37	113.67-181.86
40,001-100,000	\$2.06	\$4.49	181.87-454.63
100,000+	\$2.16	\$4.71	454.64+
Institutional Class 1, Farm Service			
0-20,000	\$0.98	\$2.15	0-90.93
20,001+	\$1.02	\$2.24	90.94+

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In January/February 2013 76% of all customers used 7,000 gallons of water or less, while 38.4% used 7,000 gallons or less in July/August, and another 32.5% used less than 15,000 gallons.