

## **The Facts About Your Water Supply... Englishman River Water Service Project**

As part of our ongoing efforts to inform, update and engage the community about future plans for your community water system and to present the facts, this information was published in the August 12 issue of the Parksville Qualicum Beach News. Erroneous information related to the Englishman River Water Service (ERWS) project has unfortunately been circulated by groups and individuals not directly responsible for the project. Information other than the truth does a disservice to the community and can jeopardize the health and safety of existing and future water supply.

The Englishman River Water Service is a joint venture between the City of Parksville and the Regional District of Nanaimo. As a public water purveyor, we have full and legal health responsibility for those receiving our water from source to tap. Operations, maintenance and capital plans are at full disclosure to the public and may be viewed at <http://englishmanriverwaterservice.ca>

### **HISTORY AND BACKGROUND**

The original water supply systems developed by each jurisdiction were springs and drilled wells and at the time were the most cost effective means to supply water. With continued increases in water demand, changes in regulation, concerns with groundwater yield, declining aquifers and aesthetic water qualities such as taste and odour, the region looked at the ability to further augment groundwater supply with surface water available from local rivers and lakes. The Englishman River, Little Qualicum River, Bonell Creek and Cameron Lake were all identified as possible good candidates of surface water supply.

Surface water extraction is regulated and licensed by the provincial government and through consultation, the region was directed to look to the Englishman River for additional water storage (impoundment) for the purpose of providing additional flow in the river for both fisheries benefits and potable water extraction. The river supports all species of salmon and trout and at the time was considered one of the most valuable but also most endangered rivers in the province. This “win – win” scenario secured a water licence extraction for the future and has provided a substantial increase in salmon stock since the construction of the Arrowsmith Dam. Today we are fortunate to have two sources of water supply and are proud to be partners with the provincial and federal governments for fisheries enhancements to the Englishman River.

Clean, safe and reliable drinking water is essential to a healthy community and is our single most sustainable resource. The ERWS is a joint venture between the City of Parksville and the Regional District of Nanaimo for a cooperative regional water supply system as both parties need additional intake capacity by 2016. Planning for a regional surface water supply goes back over 20 years and originally envisioned a phased approach over 30 years to reduce the financial burden to residents, businesses and future development:

- Phase 1 – Water supply storage (Arrowsmith Lake reservoir, built 1999)
- Phase 2 – New water intake
- Phase 3 – Water filtration and treatment

As part of the phased construction approach, an interim bulk water supply agreement between the City of Parksville and the RDN has been in place since 2001 to allow sharing of water between Parksville and the RDN. The Nanoose Bay Peninsula Water Service receives bulk water from the Englishman River during summer months. The purpose of the interim agreement is to bridge the gap until full infrastructure (new intake and water treatment) is constructed.

In 2009, the new water regulatory treatment standard imposed by the Vancouver Island Health Authority (now Island Health) accelerated our plan and the new intake and water treatment will now be constructed at the same time. To comply with the water system operating permit changes, ERWS must provide full water treatment by December 2016. The ERWS currently supplies water to 18,000 individuals in Parksville and the Nanoose Bay Peninsula, as well as a seasonal influx of tourist population of 10,500.

## **COMMUNITY BENEFITS**

- Improved water quality will reduce the risk of surface water contamination and increase our ability to avoid boil water advisories and associated costs.
- Increased water supply capacity means we will be able to meet future demands and provide redundancy.
- Reduced operating costs include improved pump efficiencies, new infrastructure versus existing deteriorating facilities, enhanced supervisory control and water quality.
- Provide certainty with provision of water supply to meet demands and support economic tourism growth.

## **WHAT IS THE PLAN?**

We have retained professional experts in water treatment, supply, distribution, geology, hydrogeology and environmental engineering to establish an efficient, reliable and cost-effective treatment and distribution system which will meet needs now and into the future. Project components include:

- New river water supply intake to withdraw water from the Englishman River – carefully designed and located to consider the needs of river users and protect aquatic habitat.
- New water treatment plant and distribution system to meet Island Health’s drinking water quality standards.
- Aquifer storage and recovery system to balance seasonal water supply, demand and reduce river extraction.
- Phased design and construction to meet community growth and ensure affordability.

### **New water intake and treatment**

The ERWS is planning for the next 50 years. The water supply strategy developed by our professional experts recommends we phase in components of water treatment which will balance our needs for water while considering capital and operational costs. The first phase of treatment will allow 24,000 cubic meters of water to be treated. When needed, the final phase will add an additional 24,000 cubic meters. For some of the components, including river intake and supply mains, it makes environmental and economic sense to build once for full capacity and in these cases we will do so.

The region’s topography is relatively flat and the majority of the urban development is longitudinal along the foreshore and we do not have the luxury of vast amounts of potable surface water (lakes) and mountainous regions nearby for storage and supply of water by means of gravity. Also, the east coast of Vancouver Island receives the majority of precipitation in the winter when regional water demands are low. During the summer, water demands increase dramatically; our aquifer levels drop and the Englishman River flows diminish. This creates a challenge to harvest, treat and distribute potable water to the community. As a result, water supply for the community requires pumps to elevate it to storage reservoirs which are used for balancing water demands and fire suppression. Without mechanical pumps, we would not have water in this community. It is more cost effective and environmentally beneficial to use the Englishman River as a natural conduit to convey water from the Arrowsmith Lake reservoir to a downstream intake rather than constructing a watermain from the Arrowsmith reservoir to the community.

Even if the ERWS could afford to purchase the entire Englishman River watershed, naturally occurring biological organisms are present (always will be) and pose a threat to our water supply. Regardless of watershed ownership, ERWS is mandated by the province to treat the surface water supply.

**Aquifer storage and recovery (ASR)**

ASR is defined as the storage of water in a suitable aquifer through a well during times when water is available and the recovery of water from the same well during times when it is needed. ASR is a small component of the overall project and budget and it has the potential to become a significant water management strategy which will help mitigate the impact of climate change and ensure minimum fisheries flows are maintained in the Englishman River during critical summer water demands when the flows are low. Other benefits include:

- Alternative water supply source or “third water supply”.
- More cost effective than conventional above ground water storage facilities.
- Reduce pressure on the treatment plant during peak demand and help defer second phase of the treatment facility.

We are currently evaluating the feasibility of using ASR to reduce overall project costs and improve reliability. As a popular tourist destination, our demand increases significantly over the summer and becomes very challenging for the water system to react. ASR will help these seasonal water supply/demand peaks to be balanced while reducing the water extraction from the Englishman River.

**WHAT ARE THE COSTS OF THE PROJECT?**

The actual project costs known to date are shown here:

Water intake, pump station and raw water main	\$ 4.2 million
Water treatment and site servicing	18.8 million
Aquifer storage and recovery	2.6 million
Region joint transmission main upgrades	.8 million
City of Parksville supply system upgrades	5.6 million
RDN – Nanoose supply system upgrades	1.7 million
Design, tendering, construction administration	3.2 million
<b>Total:</b>	<b>\$ 36.9 million</b>

The costs of the intake, joint distribution and treatment plant will be shared between the City (74 per cent) and RDN (26 per cent) according to the ERWS joint venture partnership. Each partner is entitled to their allotted proportion of water – no more, no less. Costs associated with distribution systems benefiting one partner will be borne solely by the benefiting partner. Should ASR prove economically beneficial, those benefits will flow to both partners and the costs will be shared.

**HOW CAN WE FUND THIS PROJECT?**

Given the accelerated project schedule, it is clear the financial requirements of the project are beyond the City’s capacity and it would not be fiscally responsible to proceed with the project at this time without significant senior government support. At the July 7 City Council meeting, several funding scenarios were presented for consideration. Council recognized potential hardships to residents and recommended a delay in borrowing until government funding is secured.

We have met with local provincial and federal staff and elected officials on several occasions to make them aware of our project and to seek grant funding. We have been successful in obtaining two grants; \$1.33 million for ASR investigation and \$400,000 for engineering services. No significant government funding has yet been made available for the infrastructure components. In order to qualify for certain grants, the project needs to be sufficiently progressed to the state of being “shovel ready” for construction. Our project is now at the stage where we can confidently submit and be eligible for a grant. The federal government has announced the New Building Canada Fund and applications will be accepted through an agreement with the province yet to be finalized. In anticipation, a business case proposal for our project was sent to federal and provincial agencies and the federal and provincial governments are aware of our need for shared funding.

## GOING FORWARD

- The deadline has passed for the City and RDN to include a borrowing referendum as part of municipal elections and although residents will not be asked to approve borrowing for the project in November, the City and RDN will continue to seek funding for this project.
- We have finalized and submitted a detailed business case grant proposal to provincial and federal officials responsible for grant applications.
- ERWS has notified Island Health that without significant senior government financial support, we are not in a financial position to meet the required deadline of December 2016 for enhanced water treatment – their formal reply is pending.
- ERWS is proceeding based on the original phased approach of constructing the new intake in 2016 and phasing in the water treatment filtration when funding assistance becomes available.
- Project design engineering is well-advanced and includes a value engineering process.
- We will continue our ongoing efforts to engage the community in the project.

## COMMUNITY INVOLVEMENT

The ERWS has provided the facts and engages the public in this project in many ways:

- The website is a resource for detailed background, reports, operating structure, future plans, board meeting minutes and updates.
- PlaceSpeak as a location-based online platform provides an opportunity to learn about the project and contribute opinions.
- A working group, representative of the community, worked directly with the project team providing input and advice during the design process.
- Information sessions, open houses and presentations to community and stakeholder groups as well as annual mailings to residents are ongoing.
- Consultation with various provincial ministries, Department of Fisheries and Oceans, Island Health, the Nanoose First Nations and Members of the Legislature and Members of Parliament.

We welcome your questions and comments. Residents wishing more information on the ERWS project should contact:

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