



This information is the first of two articles intended to provide residents with ERWS history and background, options and fisheries benefits. This article looks at the history and development of the future water supply for our community. The second article, which will appear in Thursday's PQB News, provides current information on the project.

We hope you will review this information and bring your questions to a public information session on May 19 (Parkville) or May 20 (Nanose). These articles will also be available on the ERWS website.

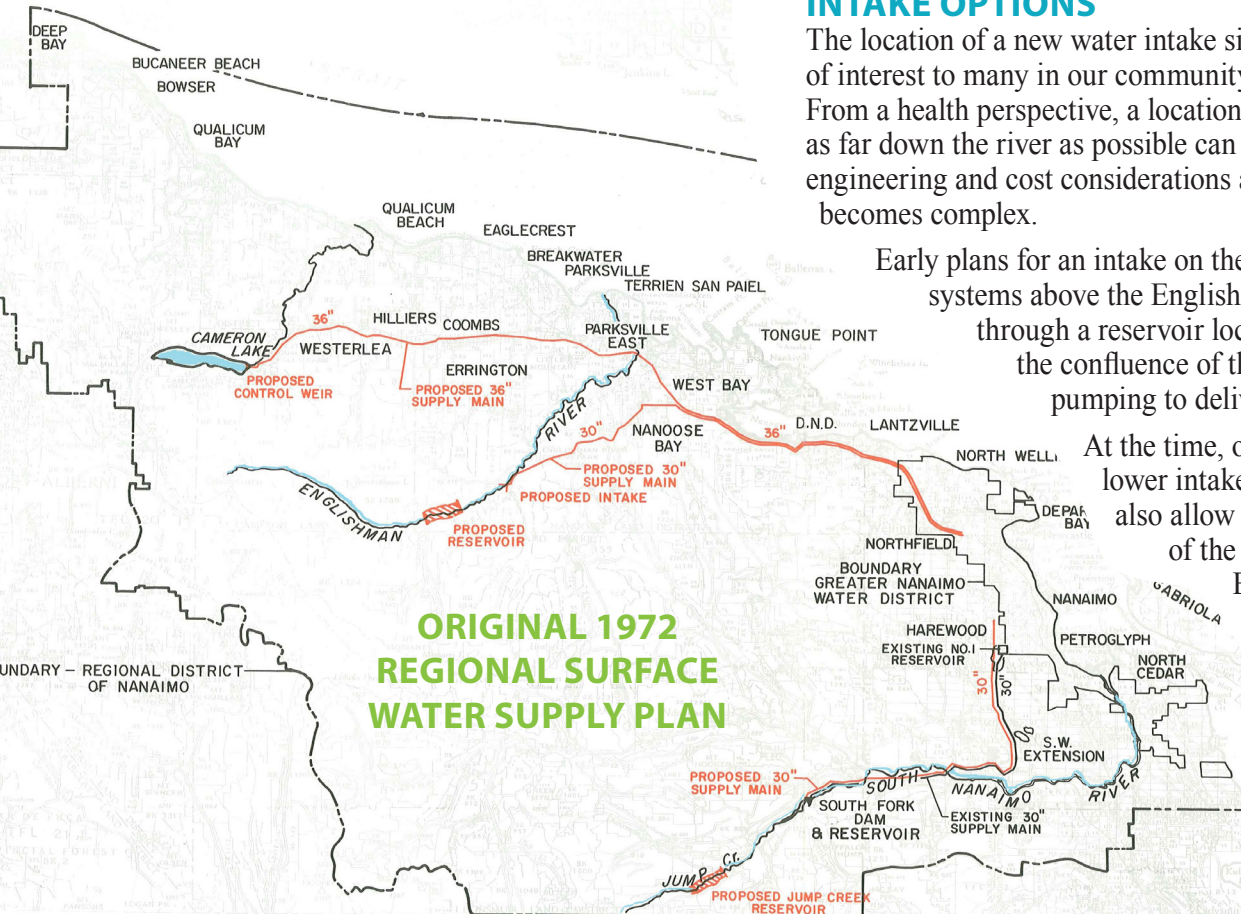
INTAKE OPTIONS

The location of a new water intake site is a major piece of the water supply puzzle. The location is of interest to many in our community and First Nations people have a traditional link to the river. From a health perspective, a location further up the watershed is seen as beneficial while an intake as far down the river as possible can be viewed as the most beneficial approach for fisheries. When engineering and cost considerations are taken into consideration, the choice for the location of an intake becomes complex.

Early plans for an intake on the Englishman River developed several options based on gravity systems above the Englishman River Falls which would deliver water to the community through a reservoir located on Little Mountain. Another intake option located below the confluence of the South Englishman River and Englishman River would require pumping to deliver water to the community.

At the time, options were discussed with fisheries agencies who determined a lower intake would have less impact on fish. The lower intake location would also allow for additional fisheries enhancements such as the construction of the side channel spawning hatchery located on the west side of the Englishman River at the confluence of the South Englishman River.

In 1997, a conditional water licence was issued authorizing the construction of the Arrowsmith Dam and storage of 9 million cubic meters. Half the volume was to be reserved for fisheries enhancements with the remaining storage for the community's drinking water. This conditional licence required the flow in the river to be maintained at 1.6 cubic meters per second, a rate significantly above the summer flow rates seen in the past and which also required the City of Parkville to continue to use their existing water intake until the new intake was built.



COMMUNITY SURFACE WATER OPTIONS

The first formal regional water study commenced in 1972 and incorporated all the Regional District of Nanaimo's water supply needs ranging from Bowser to Cedar. Three sources of future surface water supply were identified as Cameron Lake, Englishman River and Jump Creek/South Nanaimo River.

Between 1982 and 1994 several other studies were prepared concluding the City of Nanaimo should be served by the Jump Creek and Nanaimo River water sources. With future water supply determined for the City of Nanaimo, the province focused the Oceanside region local governments on the possibility of a joint venture partnership to consider the Englishman River as a single surface water supply from Lantzville to Qualicum Beach as a "win - win" for both future water supply and fisheries enhancements. At this time, the Englishman River was one of the most endangered fishery rivers in BC lending interest to the concept of combining community water needs with those of a threatened fishery.

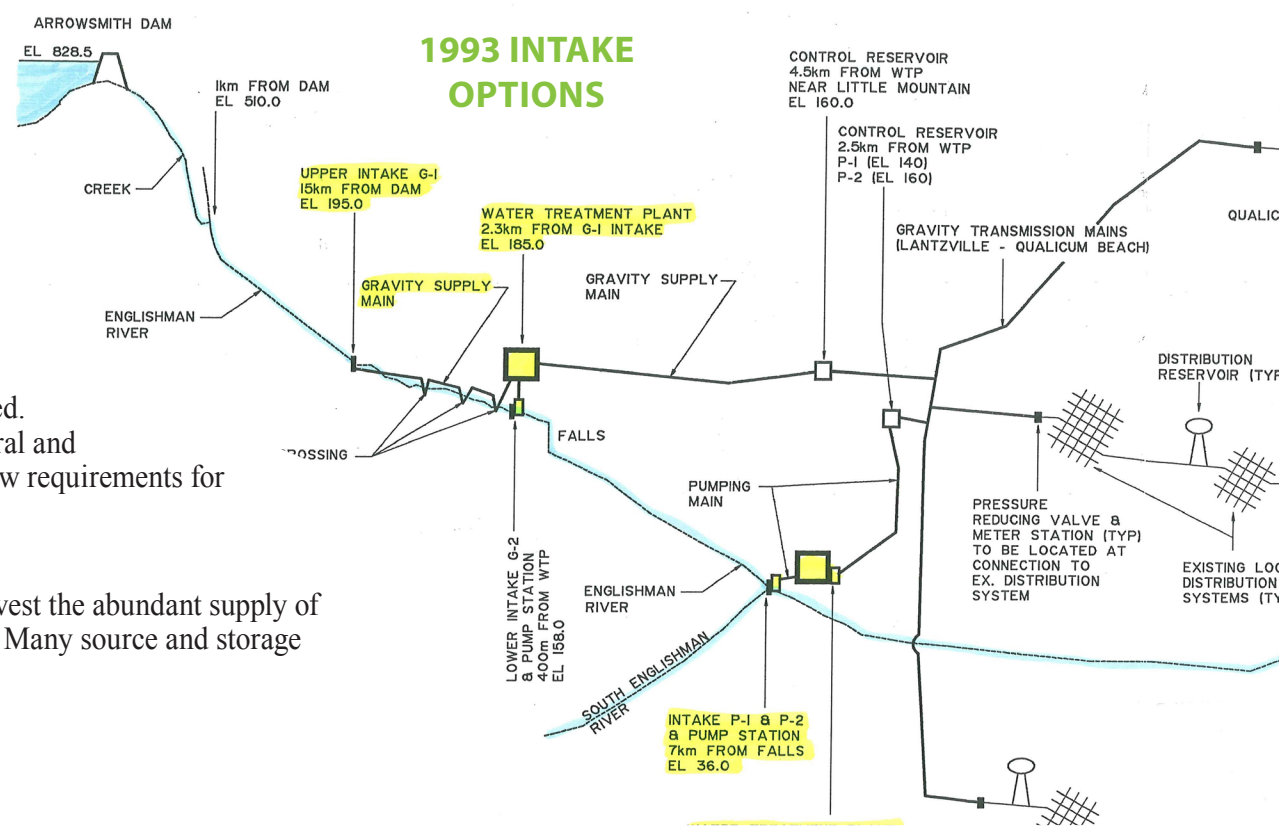
Given that all the water withdrawal licensed allocations were used in the Englishman River, water storage by means of constructing a dam was the only way to ensure an additional drinking water licence for withdrawal from the Englishman River would be granted. Given the threat to the fishery existing at the time, federal and provincial fisheries agencies ensured the storage and flow requirements for this licence included water for fish.

WATER STORAGE OPTIONS

The purpose of constructing a dam for storage is to harvest the abundant supply of winter water for use in the critical dry summer months. Many source and storage options have been studied over the years including:

- » Hidden Lake
- » Mid Englishman River
- » Shelton/Healy Lakes
- » Arrowsmith Lake
- » Fishtail Lake
- » Cameron Lake
- » Bonell Creek

An environmentally sensitive use of water to improve fish habitat and domestic water supply.
www.englishmanriverwaterservice.ca www.placespeak.com/englishmanriver



Arrowsmith Lake was chosen because it could provide the required storage and the geography of the area allowed for the construction of a dam. It is interesting to note Arrowsmith Lake represents about 1.5% of the total Englishman River watershed area. With the dam in place, the lake now provides a much larger proportion of river water flows during the summer.



FISHERIES BENEFITS

Today the Arrowsmith Dam and resulting summer flow augmentation has made significant fisheries improvements to the Englishman River and will continue to do so after the fully licensed amount is being used. This will allow for benefits to the river fishery and community water supply to extend well into the future. Regardless of the intake location, the flow requirements laid out in the licence will be met along the entire length of the river with the continued benefit to fish and our community.

PROPOSED INTAKE LOCATION

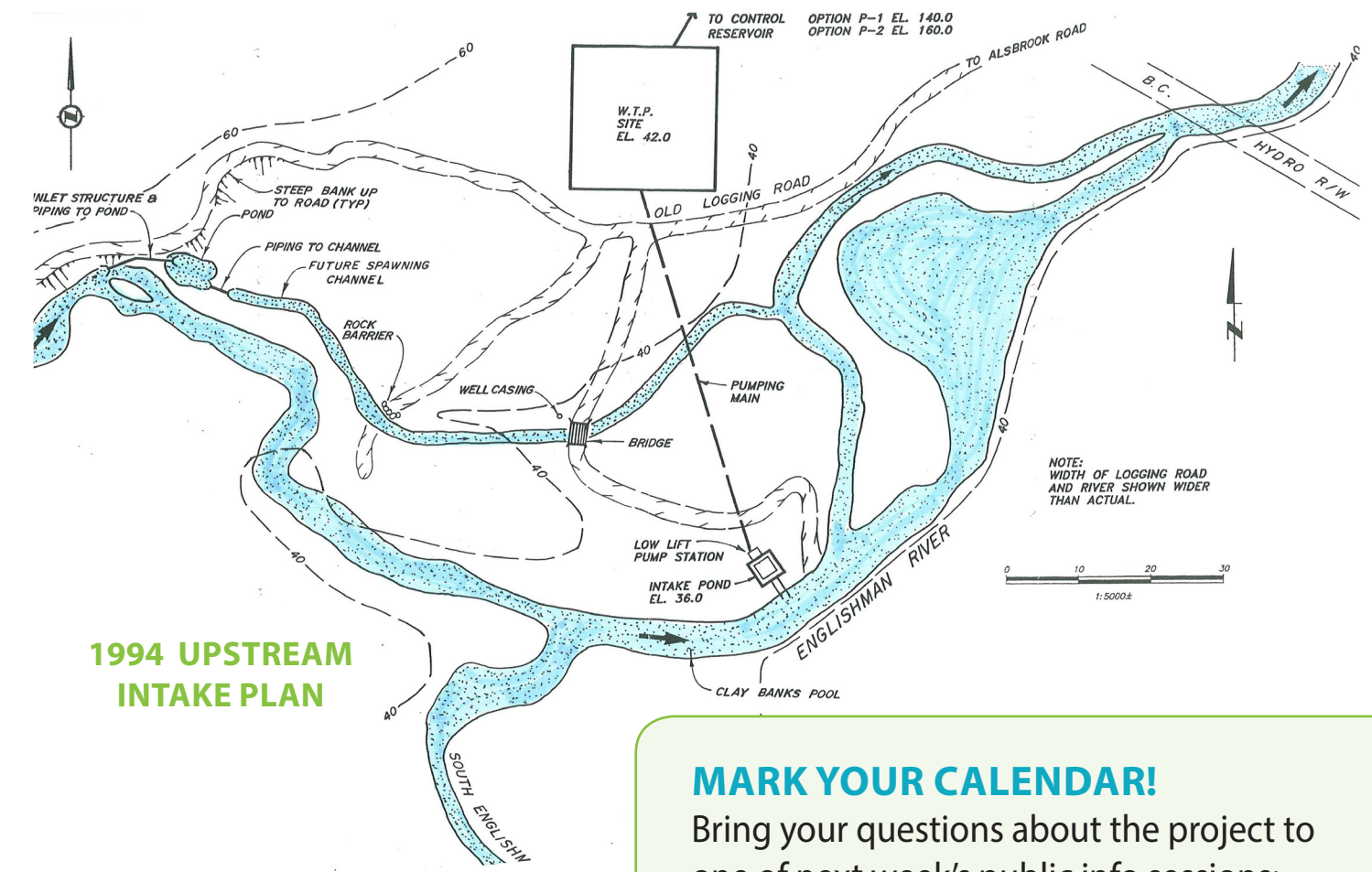
Between 2000 and 2005, engineering studies were commissioned focusing on the future water intake location. This work took into account a sustainable approach weighing environmental, financial and social factors with the best location downstream of the originally proposed intake at the confluence of the South Englishman River. Meetings were held with health authorities, DFO and provincial fisheries and regulators to discuss this option. In 2011, Associated Engineering (BC) Ltd. finalized the report and concluded the best location for the downstream intake location is just above the Highway 19 Bridge. The report also concluded both future water supply and fisheries flow requirements can be achieved by the release of additional flows from the Arrowsmith Dam during critical summer months.

In 2012, a change of works application was approved by the province to locate the water intake just above Highway 19 on the right bank in Top Bridge Park owned by the City of Parkville. The proposed intake is a river side inlet structure.

INTAKE STRUCTURES

Many different technologies and structures were reviewed to best determine the most suitable for operating, ease of withdrawal and environmental impact. These intake structures were reviewed:

- » River side inlet (chosen inlet type)
- » Obermeyer weir
- » Coanda screens
- » Riverbank filtration wells
- » Submerged intake
- » River bottom infiltration gallery
- » River side intake pond
- » River side infiltration gallery



1994 UPSTREAM INTAKE PLAN

MARK YOUR CALENDAR!

Bring your questions about the project to one of next week's public info sessions; staff and consultants will be available to respond to your concerns.

ERWS Hosted Public Info Sessions

- » **May 19, 3-7 pm** (City of Parkville)
Parkville Community and Conference Centre
- » **May 20, 7 pm** (Regional District of Nanaimo)
Nanose Place

Parkville Council Hosted Town Hall Meeting
(Comments only please)

- » **May 28, 7 pm**
Knox United Church, 345 Pym Street

We welcome questions and comments:

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