

# Town of Comox

## Water Metering Feasibility Study

### Schedule E

### Completion Report for Studies

<b>GMF number</b>	16486
<b>Name of lead applicant (municipality or other partner)</b>	Town of Comox 1809 Beaufort Ave, Comox BC V9M 1R9 Contact: Clive Freundlich (clive@comox.ca)
<b>Name, title, full address, phone, fax and e-mail address of lead technical contact for this Study</b>	Econics 4 <sup>th</sup> Floor – 777 Fort Street Victoria BC V8W 1G9 Contact: Kirk Stinchcombe (kirk@econics.com)
<b>Date of the report</b>	December 20, 2021

## 1. Introduction

The Town of Comox engaged the services of Econics as an independent contractor to perform a water metering feasibility study for the Town.

**Town of Comox:**

Shelley Ashfield, Director of Operations  
Clive Freundlich, Director of Finance

**Econics:**

4<sup>th</sup> Floor – 777 Fort Street, Victoria, BC V9W 1H2  
Kirk Stinchcombe, MES, MBA, PMP (Project Manager, Chief Executive Officer)  
J.P. Joly, BAsC (Project Specialist)

## 2. The Feasibility Study

- a) Describe the process that you undertook to make this feasibility study a reality, from concept, to council approval, to RFP, to final deliverable.

A serious and complicated issue of water billing inequity has developed since the Town embarked on installing water meters back in 2010. At this date, half the residents have water meters and are calling foul that on the half of Town residents that can use and abuse water unchecked. Complaints on water use abuse and billing inequities flow only logically from a partial installation of water meters. To address the growing complaints (and given the time since the initial implementation), the Council supported the initiative to move to universal water metering with a resolution to apply to FCM for their grant program, which initially required a feasibility study and communication plan. The studies are now complete, which provide a strong case for water conservation, not to mention the increasing complaints of inequity amongst residents.

As the studies are complete, the Town is actively trying to secure a grant to complete universal water metering in the Town of Comox and rectify the issue. The costs require the Town to partner with grant funding to move forward. FCM will be discussing this further with the Town this coming week on December 8, 2021.

- b) What were the objectives of the Feasibility Study (what was it seeking to determine)?

The feasibility study was to show that with universal water metering, the Town would reduce water initially by 15%, and with the communications plan, it would achieve a 20% water consumption reduction. In addition, universal water metering would remove the inequity amongst residents in the Town and create a single meaningful billing structure that reasonably charges for the water used.

- c) What approach (or methodology) was used in the Feasibility Study to meet these objectives?

The Town hired Econics, an Engineering firm that specializes in municipal water systems, to analyze the data and make recommendations. The Study clearly showed the need to complete the implementation of water meters that started in 2010 and has continued with annual installations to cover about 50% of residents (over ten years later).

Per Econics Statement of Limitations page # i.

The Study represented Econics best professional judgement based on the information available at its completion and as appropriate for the project scope of work. It provides a preliminary assessment of the costs and benefits of water metering for the Town of Comox. Results are based on desktop analysis of existing information provided by Town of Comox staff and other readily available sources. All costs cited are indicative only and subject to change. The report is intended only to provide cost and water savings estimates within an order of magnitude of accuracy to enable decision-making about moving to subsequent stages of investigation and project planning.

- d) Please describe any public consultations conducted as part of the Feasibility Study and their impact on the Study.

The Town did not do a public consultation at the time of the Study. However, the Study did receive samples of the letters of complaints and insights into the partially metered Town stress.

Attitudes toward metering and water services pricing came from a study of several 3<sup>rd</sup> party sources, including the 2018 BC Freshwater Public Opinion Insights (McAllister Opinion Research, 2018). See sources on page #2 in our Water Metering Communication Plan.

### 3. Feasibility Study Findings and Recommendations

- a) What were the environmental findings related to the options explored in the Feasibility Study? Please provide quantitative results and summary tables of these results (or the page numbers from the Feasibility Study report).

Page. 7. Water Metering Feasibility Study 2019 identifies potential ecological benefits including the following:

- reduced or avoided impacts from construction of new bulk supply and treatment infrastructure (e.g., dams, wells);
- reduced withdrawals from aquifers and groundwater;
- enhanced environmental flows for streams, fish and aquatic ecosystems;
- reduced sewage disposal to the environment; and
- reduced energy use and greenhouse gas emissions due to reductions in water treatment and pumping.

- b) What were the financial findings related to the options explored in the Feasibility Study (for example, results of a cost-benefit analysis, financial savings identified, and so on)? Please provide quantitative results and summary tables of these results (or the page numbers from the Feasibility Study report).

Per the Town's report 'Water Metering Feasibility report shows tables'

See P. 4 Benefits and Challenges of Water Metering

Authoritative sources typically estimate that demand reductions in the order of 10% to 30% will be achieved after the meeting installation program is complete.

See P. 14/15 Conservative Analysis for Town of Comox.

Between 15 and 20 percent (scenario 1 vs scenario 2) is achievable.

The quantities of water saved can be multiplied by the cost charged to the Town by the Regional District \$0.90/m<sup>3</sup>. Savings for the Town of Comox on the purchase of its water. The actual cost saving is higher when factoring in all the environmental impacts.

- c) Based on the environmental and financial findings above, what does the Feasibility Study recommend?

Universal water metering in feasible for the Town of Comox.

Page 20: Summary and Recommendations – Water Metering Feasibility Report, Water metering provides a range of ecological, social and financial benefits and is accepted and recommended best practice for utility management nationally and internationally.

Recommendations include funding availability, complete universal water metering of remaining residential accounts in Town of Comox and moving to volume-based pricing for all customers within three years.

#### 4. Lead Applicant's Next Steps

- a) Taking the Feasibility Study's recommendations into account, what next steps do you as the municipality plan to take? What potential benefits or internal municipal improvements would result from these next steps?

Council has approved the Universal Water Meter program subject to this grant funding.

##### Next Steps

- 1) complete the engineering study to put water meters along the service lines to the remaining Town properties that do not have meters.
- 2) Establish the universal tiered water meter rates based on volume of water used. This creates the necessary incentives to watch water use and removes the decade long inequitable billing practices at the Town.
- 3) Roll out the communications plan
- 4) Installation of water meters.

##### Benefits

- 1) As a result of only half the Town have water meters, the billing system is inequitable. Some residents with meter are billed on a volume basis (low end water users), some residents with meters are billed on a flat annual fee basis, and the half of residents that do not have water meters are billed on a flat annual fee. Those with water meters get a surcharge if they use over 450m<sup>3</sup> in a year; which is unfair given half the residents don't have water meters and they use whatever they want without the ability to measure and charge the additional usage. Moving to volume-based pricing (uniform and inclining block rates) for all users of the water system is equitable and encourages water conservations.

- P. iii of report 'Water Metering Feasibility'
- 2) Reduced water consumption
  - 3) Ability to charge by volume
  - 4) Improved control of non-revenue water, including leakage

#### 5. Lessons Learned

In answering the questions in this section, please consider all aspects of undertaking the Study — from the initial planning through each essential task until the Final Study was prepared.

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- a) What would you recommend to other municipalities interested in doing a similar Feasibility Study? What would you do differently if you were to do this again?  
The Town's RFP and ultimate hiring of the firm "Econics" was the appropriate decision to understand and appreciate all the benefits of implementing a universal water metering system in the Town of Comox.  
I would recommend the same RFP document that was used by the Town of Comox to find the expertise needed for the Study.
- b) What barriers or challenges (if any) did you encounter in doing this Feasibility Study? How did you overcome them?  
A lot of time was spent pulling a decade's worth of data from the existing accounting/water billing system. This time was needed (no shortcuts) but worth the ultimate results from the feasibility study.

## 6. Knowledge Sharing

- a) Is there a website where more information about the Feasibility Study can be found? If so, please provide the relevant URL.  
The feasibility and Communication Plan reports are only available by hard copy. However, contact information about water systems and the communities that depend on them are found at:  
<https://www.econics.com/>  
[Econics Services - Econics | Sustainability Specialists | Victoria, BC](#)
- b) In addition to the Feasibility Study results, has your Feasibility Study led to other activities that could be of interest to another municipality (for example, a new policy for sustainable community development, a series of model by-laws, the design of a new operating practice, a manual on public consultation or a measurement tool to assess progress in moving toward greater sustainability)? If so, please list these outcomes, and include copies of the relevant documents (or website links).  
The feasibility and communications plan reports will be vital to the communities (near to the Town of Comox) that do not utilize water meters. Should FCM grant funding be approved and the Town can move forward with its universal water metering program, it will be a beacon for other Northern Vancouver Island Communities to follow.

The preparation of this feasibility study was carried out with assistance from the Green Municipal Fund, a Fund financed by the Government of Canada and administered by the Federation of Canadian Municipalities. Notwithstanding this support, the views expressed are the personal views of the authors, and the Federation of Canadian Municipalities and the Government of Canada accept no responsibility for them."

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