2016 FACT SHEET

ENGINEERING
WATER UTILITY

The Water Utility net 2016 budget is $28,728,000

WHAT IS THE WATER UTILITY?

The Saanich water system includes 547 km of water mains, 29,700 water services, 4 reservoirs, 18 pump stations, 7,916 valves and 2,260 fire hydrants. Consumption at all residential, commercial and institutional services is metered. The water mains and pumps that convey treated water purchased from the CRD to businesses, residences, and fire protection systems within Saanich are maintained, repaired and constructed annually.

DID YOU KNOW WE PROVIDE?

Administration & Field Operations:
Overall management and administrative support for clerical services, public engagement and communications and advertising. Support includes administering daily time records, municipal equipment tracking, purchase reconciliation, and the provision of equipment and safety training, and project management.

Net cost $661,900

Engineering & Public Works Administration:
Recoveries are provided to Engineering, Public Works and General Administration for capital planning and project management, drafting and design services, space rental, corporate services support, after hours emergency response and site maintenance.

Net cost $1,312,000

Water Purchases:
This budget is for the expected water purchases from the CRD for the year. It is based on the average of the last five year's volume purchased times current rate.

Net cost $8,120,000

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Water System Leak Repairs:

Water mains and services are tested for leaks and repaired annually. Water mains range in size from 100mm to 600mm and are classified as either transmission or distribution. Transmission mains are large diameter mains designed to carry water from source to the distribution mains and typically have only a few side connections. Distribution mains carry water to the various neighbourhoods through smaller diameter, interconnected pipes. Distribution mains have many tapped side connections called services. These services convey the water from the distribution mains to the individual properties.

In 2015, 28 major water main failures and 242 service leaks were repaired.

Net cost	**$672,700**

Storage, Pumping/Flow Maintenance:

Due to the range of elevation within Saanich, water pressure must be managed to maintain safe working pressures. This is achieved by isolating an area (pressure zone) and controlling the flow into the zone. Saanich has 33 pressure zones fed by 50 reducing stations and 85 separate valves. Screens must be cleaned and settings checked regularly so that pressures do not increase beyond safe levels.

In higher areas of Saanich water pressure must be increased by booster pumps, either directly to users or indirectly by pumping to reservoirs for added capacity during peak flows. Pump stations and reservoirs are also visited on a regular schedule to ensure proper operation and to maintain the building structures.

Revenues	**$88,300**
Expenditures	**$753,300**
Net cost	**$668,000**

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Valve Maintenance:

Line valves are installed at strategic locations throughout the system so that water mains can be isolated for service upgrades, flushing or repairs. On an ongoing basis, valves are located, marked and exercised to confirm proper operation. If a valve is found to be un-operable it is repaired or replaced.
In 2015 3,110 valves were serviced, 8 valves repaired, and 14 valves replaced.

Net cost **$306,600**

Hydrant Maintenance:

The entire fire hydrant inventory is serviced annually, to ensure optimal operation in case of fire or related emergency. This program includes routine inspection, servicing, brush removal and minor parts replacement.

Net cost **$177,600**

Meter Housing Maintenance:

Miscellaneous repairs to meter boxes and lids, vegetation removal and re-reads of those meters that water meter reading staff are unable to obtain on their scheduled routes.

Net cost **$73,300**

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Meter Maintenance:

Meters are used to measure consumption at individual properties. Meters are divided into two categories; large (75mm to 250mm), and small meters (16mm to 50mm). Large meters are tested on site and small meters' period to period consumptions are compared to determine performance. If below industry standard the meter is replaced and the old meter tested prior to disposal.
In 2015 1,365 small meters were replaced, 28 large meters tested, and 16 large meters replaced.

Net cost	**$248,400**

Water Quality & System Flushing:

Unidirectional flushing is a systematic method of removing sediment by restricting flow to increase velocities. Flushing begins near supply sources such as CRD supply mains, transmission mains, pump stations and/or reservoirs. Closing valves in a prescribed sequence creates one-way flow as hydrants are opened to scour sediment and biofilm from the walls of the pipes. Approximately 360 km of main is flushed annually.

Revenues	**$28,300**
Expenditures	**$341,400**
Net cost	**$313,100**

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Billing & Collection:

Utility billing is responsible for the reading, recording and billing of all water meters in the District. Over 30,000 residential and non-residential accounts are billed and collected three times per year. In 2015 there were approximately 1,600 requested special readings performed.

Net cost **$546,600**

Contingency:

Funds are set aside in case of major infrastructure failure, such as unexpected damage to a water pump station or reservoir, or series of water main breaks where repair is no longer feasible.

Net cost **$450,000**

Capital Program:

The replacement of water mains, pump stations and reservoirs is based on an established multi year program. Focus remains on upgrading the Rithet Reservoir and the replacement of asbestos cement mains which make up 25% of the system.

Net cost **$15,177,800**

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