



City of Richmond

Report to Committee


To: Public Works and Transportation Committee **Date:** September 10, 2002
From: Dave Semple
Acting Director Public Works **File:** 6650-14
Re: Water Metering and Demand Management Strategy

Staff Recommendation

1. That a Water Metering & Demand Management Strategy (as recommended in the report dated September 10th 2002 from the Acting Director of Operations) be endorsed for implementation.



Dave Semple
Acting Director Operations

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Staff Report

Origin

In light of the growing concern over our utility rates, resource conservation, equity and the recent study that shows we are the second highest per capita users of water in the region, Staff have developed a Water Metering and Demand Management Strategy for Council's consideration.

Analysis

Drinking water is on the minds of most of our citizens today every time they turn on a tap, read a newspaper or hear an advertisement for bottle water. In the past this valuable resource has generally been taken for granted, undervalued, and consequently overused and abused. We must manage the need, as opposed to building, larger and very costly infrastructure to store, treat and distribute drinking water and conversely to collect and treat the resulting waste water.

A demand management strategy in Richmond will reduce the amount of water used and sewage to treat, which will lower the impact on our infrastructure demands. The Greater Vancouver Regional District "GVRD" has implemented a demand side management program to promote water conservation. A significant portion of infrastructure growth could be deferred and millions of tax dollars saved. Reducing the amount of water consumed allows funding that would otherwise be spent on expanding water supply infrastructure to be used for other projects such as seismic upgrades, the construction of filtration plants and operational costs included in the Drinking Water Treatment Program (DWTP).

With the implementation of City and GVRD programs for improved water quality, growing maintenance needs and demand growth of the delivery system, costs will continue to rise. The DWTP will be a significant contributor to increased costs, which are expected to rise 50% over the next 5 years. As outlined in 2001 infrastructure report to Council, it is expected that our own infrastructure replacement needs will be another driving force for increased water costs.

Approximately 80% of the water delivered to our customers is returned to our sanitary sewer system for treatment and disposal. Any reduction in water consumption will directly result in reduced sewer flows, which in turn may result in the deferral of the proposed sewer treatment plant upgrading. The other 20% is outside water usage which does not enter the sanitary sewage system. A 30% reduction in internal water usage may result in an approximate 24% reduction in sewage discharge.

Staff is proposing that Council should consider and endorse this Water Metering and Demand Management Strategy. The Key components would include:

1) Education Programs

Through education and development of programs to enable customers to conserve water, the City will help facilitate the customer's buy-in and develop a conservation attitude. This would assist the customers to conserve and reduce costs. Wasteful water usage could be reduced through the installation of water conservation devices for the home; education; possible rebates for purchasing and retrofitting existing plumbing fixtures; performing in-home water audits; and implementation of conservation programs.

2) Corporate Leadership

To ensure buy-in by our customers, the City must lead the way. Water conservation in our own facilities and in Parks is one example of how the City can lead by example. Metering our own facilities, promoting the retrofitting of low-flow fixtures, water-wise gardening and researching other opportunities, demonstrates corporate commitment and leadership.

3) Equitable Rate Structure

A fair system of collecting revenues based primarily on usage will provide incentive for the customer to reduce wasteful practices and place the control of costs in the hands of the customers. Alternative rate structures, such as seasonal rates will promote lower consumptions by increasing the rates during the summer when demand is high and lower winter rates when demand is low. The more water consumed the higher the volume price. Realistic water pricing would make our taxpayers conscious of the real value of the resource and delivery systems, and would reduce the demand on those systems, lead to water conservation and reduce pressure for costly water and sewer expansion.

4) All New Residential Construction To Be Metered

Currently all new residential construction is required to install meter pits at the property line without the meters. Under this strategy the developers would be required to install meters and residents would be charged the metered rate.

5) An Effective Universal Metering Program

Metering puts the customer in control of their water consumption and, as a measuring tool, facilitates a fair user pay rate structure. A fair rate structure is the incentive for our customers to save money by adjusting their water consuming practices. The question is not if we should meter, but how it should be implemented, i.e. voluntary, by age of building, multi-family units, or short or long implementation period.

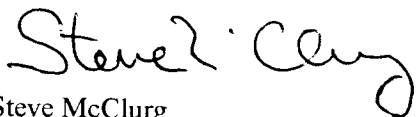
Universal Metering as a package has been very successfully implement in other cities under Private Public Partnerships (P3's). There are many options available under P3 contracts to make this option very attractive and cost efficient. All options will be reviewed and presented to Council in subsequent reports.

Financial Impact

This report is setting a direction for staff to explore and report back to Council. Associated costs will be included in further reports.

Conclusion

Water demand management has proven to be a highly effective way to reduce overall water consumption. Staff are asking for Council's endorsement of this strategy to allow for the exploration of the different options and report back with a recommended implementation strategy for each of the components of the strategy.



Steve McClurg
Manager, Water Services