

## **RAIN TANK WATER METERING TRIAL FOR FIXED/VOLUMETRIC WASTEWATER CHARGING**

### **SUMMARY OF FINDINGS**

**June 2013**

#### **1. Background**

In September 2012, Watercare agreed to undertake a six-month trial to assist with successful implementation of the rain tank metering process; this decision was endorsed by the Auckland Council.

The purpose of the rain tank metering trial was to seek more information on the costs, both to Watercare and customers, and to refine a process for implementation.

In addition, the trial was intended to assist Watercare to understand rain tank water consumption; this would also help customers to make an informed decision when choosing whether or not to move to a rain tank meter and volumetric charging.

During the trial – which ran from December 2012 to May 2013 – a total of 17 Rodney households (one to four persons) tested the use of rain tank water meters.

Watercare arranged for water meters to be installed at each property in an easily accessible walk-up location for the meter readers. These customers were transferred from the fixed wastewater charge (\$582 per year) to volumetric charging (a combination of fixed \$190 and volumetric \$2.281 per 1000 litres based on 78.5% of meter water use) based on the water flowing through their rain tank water meter.

#### **2. Findings of the trial**

##### ***The water meter and installation***

Watercare's standard Elster Kent 20mm water meter was used as it is well proven, robust and reliable and each meter is certified to international accuracy standards. Watercare will require this meter is used on rain tanks to protect the interests of Watercare and the customer and to ensure consistency for meter readers across the network. Watercare has negotiated with suppliers for the Kent meter to be made available at a significantly discounted price. To ensure the integrity of the water meter and installation is maintained and the household safety is protected, Watercare has specified requirements for the meter installation process including the use of Watercare approved plumbers.

##### ***Installation costs***

The trial found that the cost of water meter installation varies depending on the location of the pump, relative to the meter placement and the rain tank plumbing system. The cost of a water meter, filter and installation by a certified plumber ranged from approximately \$400 to \$650 depending on the complexity of the installation requirements. In some instances it was found that additional installation costs may be incurred if the customer's private plumbing needed upgrading. These costs were not included in the above figures. Watercare will also charge an application processing fee of \$50, however this was not charged for the trial.

**Wastewater charges based on rain tank metering**

Monthly meter readings were undertaken during the trial and interim results for the six months to 30 May confirm the original assumption that low to moderate water users could benefit from moving to volumetric charging based on rain tank metering.

The following table projects the metered water use over the trial into annual wastewater charges.

Full Project		Projected annual wastewater charges based on fixed/volumetric tariff		
Household Occupancy	No. Households	Average	Minimum	Maximum
1	5	\$ 248	\$ 211	\$ 286
2	9	\$ 329	\$ 211	\$ 422
3	1	\$ 321	\$ 321	\$ 321
4	2	\$ 495	\$ 366	\$ 623
<b>Total</b>	<b>17</b>			

As a result of the record dry summer and customer feedback, Watercare believes rain tank water-use over the trial was lower than normal. Comparisons based on water use for the month of April 2013 may provide more accurate guidance to customers considering whether to move to volumetric metering. Due to the low number of 3 person households participating, Watercare also recommends that three-person households also consider the data from a four-person household when considering whether or not to move to a rain tank meter to obtain a more realistic assessment of their likely charges and benefits.

April usage only		Projected annual wastewater charges based on fixed/volumetric tariff		
Household Occupancy	No. Households	Average	Minimum	Maximum
1	5	\$261	\$215	\$316
2	9	\$358	\$215	\$442
3	1	\$341	\$341	\$341
4	2	\$556	\$367	\$745
<b>Total</b>	<b>17</b>			

**Other findings**

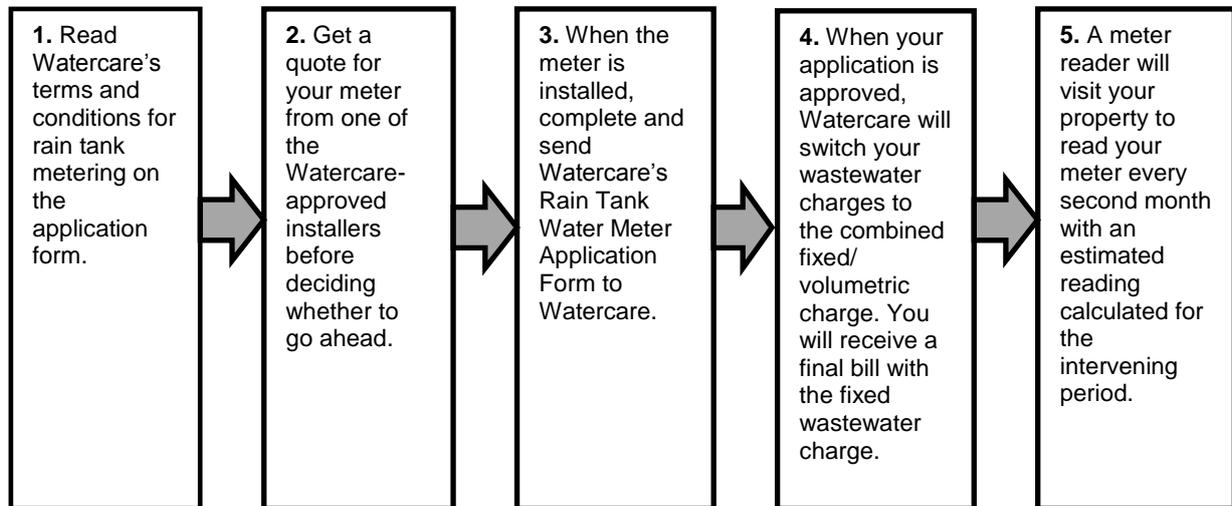
Installation of the water meters during the trial highlighted that some rain tank plumbing systems were of poor quality. In two instances plumbing repairs were required before the water meter could be installed.

The meter location was also an important consideration for easy walk up access for the meter readers. A number of water pumps were located inside or under buildings requiring the plumbing to be extended so the meter could sit outside for easy access by the meter reader.



### 3. Summary

Watercare has used information from the trial as well as feedback from customers to refine the process for implementing rain tank metering. The process from a customer perspective is as follows:



There are nearly 8300 customers who pay the fixed charge for their wastewater-only connection. Before deciding to transfer to volumetric wastewater charging, those customers would need to consider the benefits of potentially lower wastewater charges against installation costs. Customers will be provided with quotes for installation by the Watercare approved installers.

Customers will be notified of the opportunity for rain tank metering by mail. Applications to transfer to fixed/volumetric charging based on rain tank metering will be accepted from 1 July 2013.