

Form ES1 Piped takes, water meter, datalogger installation/commissioning and verification



Post to:
 Environment Southland
 Private Bag 90116
 Invercargill 9840
 Attn: Compliance Water Metering

or Email to:
 escompliance@es.govt.nz

Phone: 0800 76 88 45
 www.es.govt.nz

This form must be completed by the equipment installer

What is this form for: Installation certificate Water meter verification

Consent number:			
Well number(s):			
Name of consent holder:			Phone:
Address of consent holder:			Email:
GPS location of meter (NZTM format):	Easting:	Northing:	
GPS location of take (NZTM format):	Easting:	Northing:	
Location of take (written description):			

Water meter details

Make:		Meter size (mm diameter):	
Model:		Pulse output?	<input type="radio"/> Yes <input type="radio"/> No
Serial number:		Volume per pulse:	m ³ /pulse
(Start) meter reading volume:	m ³ (state units if different)	Type of meter (e.g. electromagnetic, mechanical):	
Time meter read:			
Installer:			

Datalogger details

Installed?	<input type="radio"/> Yes <input type="radio"/> No	Installer:	
Make:		Model:	
Serial number:		Telemetry installed for consent compliance?	<input type="radio"/> Yes <input type="radio"/> No
Data hosted by:		Telemetered daily to ES?	<input type="radio"/> Yes <input type="radio"/> No

Installation details

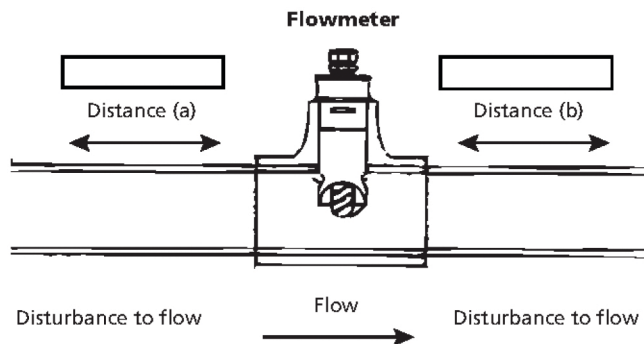
Pipe external diameter:	mm
Pipe wall thickness:	mm
Pipe material (eg. polyethylene, PVC, aluminium, mild steel, ductile iron, other) :	
Distance of straight, unobstructed pipe upstream of water meter:	mm (distance (a) in Figure 1)
Distance of straight, unobstructed pipe downstream of water meter:	mm (distance (b) in Figure 1)

Is there a straight unobstructed accessible pipe in the system of at least 15 diameters length to verify the flow with a clamp-on water meter?

Yes No

Location of meter in the system (e.g. 2m from bore):

Figure 1: Installation diagram - Please mark any disturbances upstream of the water meter e.g. pipe size reduction, gate valves, pipe bends. Refer to Figure 2 for an example of a good installation.



Insertion meters only

Insertion depth:

K-factor:

Ultrasonic meters only

Transducer size:

Transducer spacing:

Transducer mounting:

(V = Reflect or Z = Direct)

Accuracy details

Do you have a water meter calibration certificate?

Yes No

(If yes, please submit the certificate)

Has the meter been checked against a portable water meter?

Yes No

Verification details

Is a clamp-on water meter used for verification?

Yes No

If no, describe the method used e.g. reservoir/time calculation, volumetric etc

Verification flow meter brand and type:

Last calibration date of the flow meter used for verification:

DD / MM / YYYY

Calibration certificates must be sent in (once) to the Environment Southland, after every required calibration

Verification parameters

Pipe diameter (mm):

Pipe wall thickness (mm):

Pipe material (eg. polyethylene, PVC, aluminium, mild steel, ductile iron, other):

Location in system where the clamp-on was attached:

Yes No

Measured flows

Undertake three separate observations, and record and average the results in the table below. Verification flows should be taken at or around the consented flow rate and/or the flow rate the well is usually pumped at. If flows don't verify within 5% a second clamp-on location can/should be attempted.

	Location 1 Observation 1	Location 1 Observation 2	Location 1 Observation 3	Location 2 Observation 1	Location 2 Observation 2	Location 2 Observation 3	Average
Installed meter flow (L/s):							
Verification flow meter (L/s):							
% Difference:							

Certification

(Select one):

- I/we certify that the above water meter/measuring device has been verified and the measured flow is within 5% of the verification device.
- I/we have found that the installed water meter/measuring device deviates more than 5% from the verified flow.

Recommend remedial action:

If unable to be verified at the time of the installation/commission please advise date this will be completed by:

I/we certify that the above water meter and datalogger have been installed in accordance with Environment Southland and Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 requirements and that:

a water meter calibration certificate from the manufacturer is attached to this form

a picture or photo of the installation is attached to this form.

Verified by:

Signed:

Company:

Date of verification:

DD / MM / YYYY

Figure 2: An example of an Ideal installation of a water meter, including obstructions in pipework.

