

Version No: 03 Issue Date: 22/01/2015 Portfolio:	Horizons Regional Council	Section No: 21.11 Page: 1 of 2
horizons regional council 	Hydrology Operations Manual	 horizons regional council

Quality Code ADCP Gauging: Method Code (44 ADCP(RDI); 45 ADP(Sontek))

Overview:

This document follows the National Environmental Monitoring Standards NEMS (V1.1 June 2013) Quality Codes – Open Channel Flow and requirements to meet the NEMS standard (QC 600).

Providing the Annex D ADCP Moving Boat Estimation of the Quality Code, of NEMS has been completed for an initial quality code.

And the following initial criteria are met:

Quality Code	Criteria	NEMS Adopted
QC 600	<ul style="list-style-type: none"> Random error $\leq 5\%$, WL reference if rating applicable (flow relationship) WL measured through gauging (ESG, Logger) Gauging has reciprocal pairs Compass calibration/instrument diagnostics/configuration check complete 	
QC 500	<ul style="list-style-type: none"> Random error $5\% > x < 10\%$ Gauging is compromised in some way and is a fair representation of the monitored parameter Measured data does not meet operational standards/best practice at time of acquisition No WL reference if building relationship to flow No measured WL through gauging (ESG, Logger) Minimum Observation depth exceeds tolerance for ADCP 	
QC 400	<ul style="list-style-type: none"> Random error $\leq 10\%$ Vertical or verticals have $>10\%$ flow 	1/1/1994
QC 200	<ul style="list-style-type: none"> Un-calibrated/out of date calibrated instruments (>3yrs) Cannot locate digital Sontek file 	22/1/2015

Version No: 03 Issue Date: 22/01/2015 Portfolio:	Horizons Regional Council	Section No: 21.11 Page: 2 of 2
horizons regional council 	Hydrology Operations Manual	 horizons regional council

Quality Code ADCP Gauging: Method Code (44 ADCP(RDI); 45 ADP(Sontek))

The following derived decision matrix for the final quality code of ADCP gaugings to be completed upon review or archiving of the gauging *and if any of these parameters are not met* the maximum quality code for the gauging is given in the far right column:

NEMS (V1.1 June 2013) definitive requirements	Maximum QC for gauging if	
	Y	N
Compass Calibration		500
Sontek Moving Bed Test		500
Water Temperature and Salinity measured and recorded		500
WL reference if rating relationship		500
WL measured regularly throughout gauging		500
Gauging \leq 720 seconds		500
Calibrated Sensor		200

1. Add Quality Code to digital Hilltop Face card of Hydrometric Gauging (attached to the gauging card should be the River Surveyor print out and less permanently attached to the gauging card, a Hilltop Facecard copy)
2. Note Quality Code on front of physical gauging card in **pencil** with initials of who completed the check and date of check
3. Repeat for Hilltop Face card print out
4. Update Gauging Register with whom checked the gauging and select the checked box
5. Hand in to the Data Team to Archive