Required QC Tests	Fail or Suspect	QC Tests, Part II	True/False	General QC Measures	QC Flags	
\$100	<mark>\$100</mark>	<mark>\$100</mark>	<mark>\$100</mark>	<mark>\$100</mark>	\$100	
<mark>\$200</mark>		Quality Control				
\$300		JEOPARD7				
\$400	<mark>\$400</mark>	<mark>\$400</mark>	<mark>\$400</mark>	<mark>\$400</mark>	\$400	
\$500	\$500	\$500	\$500	\$500	\$500	

Required QC Tests	Fail or Suspect	QC Tests, Part II	True/False	General QC Measures	QC Flags
\$100	<mark>\$100</mark>	\$100	<mark>\$100</mark>	\$100	\$100
\$200	<mark>\$200</mark>	<mark>\$200</mark>	<mark>\$200</mark>	\$200	\$200
<mark>\$300</mark>	\$300	\$300	\$300	\$300	\$300
<mark>\$400</mark>	<mark>\$400</mark>	<mark>\$400</mark>	<mark>\$400</mark>	\$400	\$400
\$5 00	\$500	\$500	\$500	\$500	\$500

Test which checks for the arrival of data.

Test which checks to ensure that the message is structured properly.

Test which checks for reasonable geographic location.

Test which checks for when a data point exceeds sensor or operator-selected min or max.

Test which checks if the data point falls within seasonal expectations.

Required QC Tests	Fail or Suspect	QC Tests, Part II	True/False	General QC Measures	QC Flags
\$100	<mark>\$100</mark>	\$100	<mark>\$100</mark>	\$100	<mark>\$100</mark>
\$200	<mark>\$200</mark>	\$200	<mark>\$200</mark>	<mark>\$200</mark>	\$200
\$300	\$300	\$300	\$300	\$300	<mark>\$300</mark>
\$400	<mark>\$400</mark>	<mark>\$400</mark>	<mark>\$400</mark>	\$400	<mark>\$400</mark>
\$500	\$500	\$500	\$500	\$500	\$500

Within a SYNTAX TEST: Data sentence can't be explained to provide a valid observation.

Within a LOCATION TEST: There is an unlikely platform displacement.

Within a GROSS RANGE TEST: Reported value is outside of sensor span.

Within a CLIMATOLOGY TEST: Reported value is outside of operator-identified climatology window.

Within a TIMING/GAP TEST: Data arrived outside of expected time window & has an incorrect time stamp.

Required QC Tests	Fail or Suspect	QC Tests, Part II	True/False	General QC Measures	QC Flags
<mark>\$100</mark>	<mark>\$100</mark>	\$100	<mark>\$100</mark>	<mark>\$100</mark>	<mark>\$100</mark>
<mark>\$200</mark>	<mark>\$200</mark>	<mark>\$200</mark>	<mark>\$200</mark>	<mark>\$200</mark>	\$200
\$300	\$300	<mark>\$300</mark>	<mark>\$300</mark>	\$300	<mark>\$300</mark>
<mark>\$400</mark>	<mark>\$400</mark>	<mark>\$400</mark>	\$400	<mark>\$400</mark>	<mark>\$400</mark>
\$500	\$500	\$500	\$500	\$500	\$500

QC Tests, Part II \$100

Variation of gross range test where seasonal extremes are adjusted monthly or at some other operator-selected time period.

QC Tests, Part II \$200

Tests that all sensors have limited output range; no values less than the minimum or greater than the maximum are accepted.

Test checks for that the reported latitude & longitude is within operator-defined limits.

Tests data messages that are received to see if messages are complete & structured properly without any indications of flawed transmissions.

QC Tests, Part II \$500

Test determines that the most recent data point has been measured & received within the expected time window & has the correct time stamp.

Required QC Tests	Fail or Suspect	QC Tests, Part II	True/False	General QC Measures	QC Flags
<mark>\$100</mark>	<mark>\$100</mark>	\$100	<mark>\$100</mark>	<mark>\$100</mark>	<mark>\$100</mark>
\$200	<mark>\$200</mark>	<mark>\$200</mark>	<mark>\$200</mark>	<mark>\$200</mark>	\$200
\$300	\$300	\$300	\$300	\$300	<mark>\$300</mark>
\$400	<mark>\$400</mark>	<mark>\$400</mark>	\$400	<mark>\$400</mark>	<mark>\$400</mark>
\$500	\$500	\$500	\$500	\$500	\$500

True or False \$100

Real-time quality control, such as gradual calibration changes or system responses (e.g., sensor drift) can't be detected or corrected.



Sensor drift is usually caused by bio-fouling, silt or sediment clogging. It affects different systems in different ways.

True or False \$300

Quality control flags set in real time should be changed, allowing historical documentation the option to be revised.

Some required quality control tests can be completed by just using the sensor; some thresholds can be defined within the configuration files.

True or False \$500

Testing the timely arrival and integrity of the data transmission is the last step when applying quality control tests.

Required QC Tests	Fail or Suspect	QC Tests, Part II	True/False	General QC Measures	QC Flags
<mark>\$100</mark>	<mark>\$100</mark>	\$100	<mark>\$100</mark>	<mark>\$100</mark>	<mark>\$100</mark>
<mark>\$200</mark>	<mark>\$200</mark>	\$200	<mark>\$200</mark>	<mark>\$200</mark>	\$200
\$300	\$300	\$300	\$300	\$300	<mark>\$300</mark>
\$400	<mark>\$400</mark>	<mark>\$400</mark>	<mark>\$400</mark>	<mark>\$400</mark>	\$400
\$500	\$500	\$500	\$500	\$500	\$500

Human involvement is important to ensure scientific principles are applied to data evaluation, so that good data aren't & bad data aren't _____.

Real-time water level data should have two main attributes: accurate & accurate _____ relative to a known reference.

Data are evaluated using quality control tests. The results of those tests are recorded by inserting ______ in the data files.

Quality control is dependent on proper thresholds, based on historical ______ derived from recently acquired data.

Quality control tests are required, but it is the who is responsible for deciding which tests are appropriate.

Required QC Tests	Fail or Suspect	QC Tests, Part II	True/False	General QC Measures	QC Flags
<mark>\$100</mark>	<mark>\$100</mark>	\$100	<mark>\$100</mark>	\$100	\$100
<mark>\$200</mark>	<mark>\$200</mark>	\$200	<mark>\$200</mark>	\$200	\$200
\$300	\$300	\$300	\$300	\$300	\$300
\$400	<mark>\$400</mark>	<mark>\$400</mark>	<mark>\$400</mark>	\$400	<mark>\$400</mark>
\$500	\$500	\$500	\$500	\$500	\$500



Data have not been QC tested, or the information on quality is not available.



Data are absent; use as a placeholder.

QC Flags \$300

Data were unsuccessful at one or more quality control checks. If data is disseminated, it should be apparent they aren't of acceptable quality.



Data were successful in quality control tests & are adequate for use as preliminary data.



Data are skeptical to data providers & users; they are flagged to draw further attention to them by operators.

Flag = Code Pass = 1 Not evaluated = 2 Suspect or of high interest = 3 Fail = 4 Missing data = 9

Required QC Tests	Fail or Suspect	QC Tests, Part II	True/False	General QC Measures	QC Flags
\$100	<mark>\$100</mark>	\$100	<mark>\$100</mark>	\$100	\$100
\$200	<mark>\$200</mark>	<mark>\$200</mark>	<mark>\$200</mark>	\$200	\$200
<mark>\$300</mark>	\$300	\$300	\$300	\$300	\$300
<mark>\$400</mark>	<mark>\$400</mark>	<mark>\$400</mark>	<mark>\$400</mark>	\$400	\$400
\$5 00	\$500	\$500	\$500	\$500	\$500

Test which checks for the arrival of data.

Timing/Gap

Test which checks to ensure that the message is structured properly.



Required QC Tests \$100

Test which checks for reasonable geographic location.

Location

Test which checks for when a data point exceeds sensor or operator-selected min or max. Gross Range

Required QC Tests \$100

Test which checks if the data point falls within seasonal expectations.

Climatology

Required QC Tests	Fail or Suspect	QC Tests, Part II	True/False	General QC Measures	QC Flags
\$100	<mark>\$100</mark>	\$100	<mark>\$100</mark>	\$100	<mark>\$100</mark>
\$200	<mark>\$200</mark>	\$200	<mark>\$200</mark>	<mark>\$200</mark>	\$200
\$300	\$300	\$300	\$300	\$300	<mark>\$300</mark>
\$400	<mark>\$400</mark>	<mark>\$400</mark>	<mark>\$400</mark>	\$400	<mark>\$400</mark>
\$500	\$500	\$500	\$500	\$500	\$500

Within a SYNTAX TEST: Data sentence can't be explained to provide a valid observation.



Within a LOCATION TEST: There is an unlikely platform displacement.

SUSPECT

Within a GROSS RANGE TEST: Reported value is outside of sensor span.



Within a CLIMATOLOGY TEST: Reported value is outside of operator-identified climatology window. SUSPECT

Within a TIMING/GAP TEST: Data arrived outside of expected time window & has an incorrect time stamp. FAIL

Required QC Tests	Fail or Suspect	QC Tests, Part II	True/False	General QC Measures	QC Flags
<mark>\$100</mark>	<mark>\$100</mark>	\$100	<mark>\$100</mark>	<mark>\$100</mark>	<mark>\$100</mark>
<mark>\$200</mark>	<mark>\$200</mark>	<mark>\$200</mark>	<mark>\$200</mark>	<mark>\$200</mark>	\$200
\$300	\$300	<mark>\$300</mark>	<mark>\$300</mark>	\$300	<mark>\$300</mark>
<mark>\$400</mark>	<mark>\$400</mark>	<mark>\$400</mark>	\$400	<mark>\$400</mark>	<mark>\$400</mark>
\$500	\$500	\$500	\$500	\$500	\$500

QC Tests, Part II \$100

Variation of gross range test where seasonal extremes are adjusted monthly or at some other operator-selected time period.

Climatology

QC Tests, Part II \$200

Tests that all sensors have limited output range; no values less than the minimum or greater than the maximum are accepted.

Gross Range

Test checks for that the reported latitude & longitude is within operator-defined limits.

Location

Tests data messages that are received to see if messages are complete & structured properly without any indications of flawed transmissions.



QC Tests, Part II \$500

Test determines that the most recent data point has been measured & received within the expected time window & has the correct time stamp.

Timing/Gap

Required QC Tests	Fail or Suspect	QC Tests, Part II	True/False	General QC Measures	QC Flags
<mark>\$100</mark>	<mark>\$100</mark>	\$100	<mark>\$100</mark>	<mark>\$100</mark>	<mark>\$100</mark>
\$200	<mark>\$200</mark>	<mark>\$200</mark>	<mark>\$200</mark>	<mark>\$200</mark>	\$200
\$300	\$300	\$300	\$300	\$300	<mark>\$300</mark>
\$400	<mark>\$400</mark>	<mark>\$400</mark>	\$400	<mark>\$400</mark>	<mark>\$400</mark>
\$500	\$500	\$500	\$500	\$500	\$500

True or False \$100

Real-time quality control, such as gradual calibration changes or system responses (e.g., sensor drift) can't be detected or corrected.

TRUE



Sensor drift is usually caused by bio-fouling, silt or sediment clogging. It affects different systems in different ways.



True or False \$300

Quality control flags set in real time should be changed, allowing historical documentation the option to be revised.



Some required quality control tests can be completed by just using the sensor; some thresholds can be defined within the configuration files.

True or False **\$500**

Testing the timely arrival and integrity of the data transmission is the last step when applying quality control tests.



Required QC Tests	Fail or Suspect	QC Tests, Part II	True/False	General QC Measures	QC Flags
<mark>\$100</mark>	<mark>\$100</mark>	\$100	<mark>\$100</mark>	<mark>\$100</mark>	<mark>\$100</mark>
<mark>\$200</mark>	<mark>\$200</mark>	\$200	<mark>\$200</mark>	<mark>\$200</mark>	\$200
\$300	\$300	\$300	\$300	\$300	<mark>\$300</mark>
\$400	<mark>\$400</mark>	<mark>\$400</mark>	<mark>\$400</mark>	<mark>\$400</mark>	\$400
\$500	\$500	\$500	\$500	\$500	\$500

Human involvement is important to ensure scientific principles are applied to data evaluation, so that good data aren't <u>discarded</u> & bad data aren't <u>distributed</u>.

Real-time water level data should have two main attributes: accurate <u>time</u> & accurate <u>elevation</u> relative to a <u>known reference</u>.

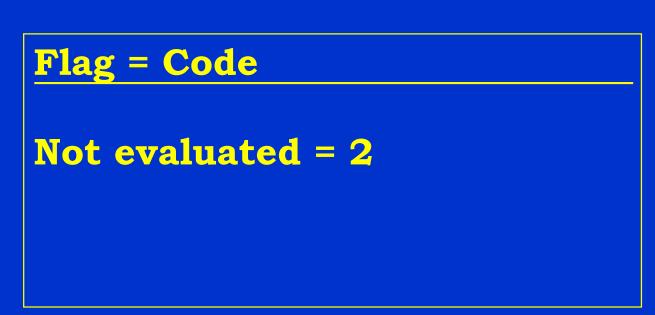
Data are evaluated using quality control tests. The results of those tests are recorded by inserting <u>flags</u> in the data files.

Quality control is dependent on proper thresholds, based on historical <u>knowledge</u> derived from recently acquired data. Quality control tests are required, but it is the <u>operator</u> who is responsible for deciding which tests are appropriate.

Required QC Tests	Fail or Suspect	QC Tests, Part II	True/False	General QC Measures	QC Flags
<mark>\$100</mark>	<mark>\$100</mark>	\$100	<mark>\$100</mark>	\$100	\$100
<mark>\$200</mark>	<mark>\$200</mark>	\$200	<mark>\$200</mark>	\$200	\$200
\$300	\$300	\$300	\$300	\$300	\$300
\$400	<mark>\$400</mark>	<mark>\$400</mark>	<mark>\$400</mark>	\$400	<mark>\$400</mark>
\$500	\$500	\$500	\$500	\$500	\$500



Data have not been QC tested, or the information on quality is not available.





Data are absent; use as a placeholder.



Missing data = 9



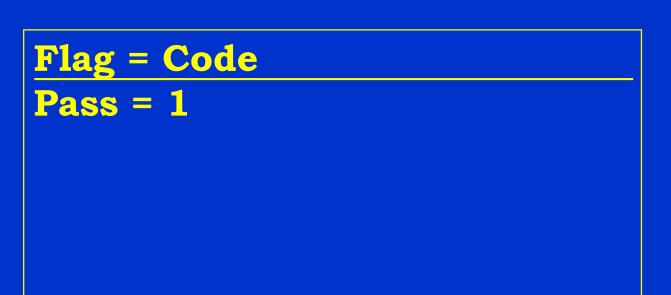
Data were unsuccessful at one or more quality control checks. If data is disseminated, it should be apparent they aren't of acceptable quality.

Flag = Code



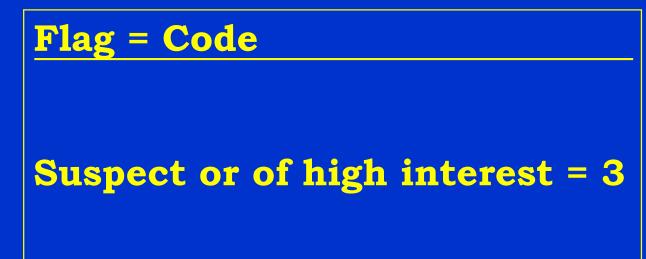


Data were successful in quality control tests & are adequate for use as preliminary data.





Data are skeptical to data providers & users; they are flagged to draw further attention to them by operators.



Required QC Tests	Fail or Suspect	QC Tests, Part II	True/False	General QC Measures	QC Flags
\$100	<mark>\$100</mark>	\$100	<mark>\$100</mark>	\$100	\$100
\$200	<mark>\$200</mark>	\$200	<mark>\$200</mark>	\$200	\$200
\$300	\$300	\$300	\$300	\$300	\$300
\$400	<mark>\$400</mark>	<mark>\$400</mark>	<mark>\$400</mark>	\$400	\$400
\$500	\$500	\$500	\$500	\$500	\$500

