FLOW METER ACCURACY TESTING

The following information is provided to assist in filling out the Flow Meter Accuracy Verification Form, Form No. LEG R.021.01 (04/09) and for conducting a flow meter accuracy test for submittal to the Southwest Florida Water Management District (District).

1. Documentation shall be submitted with this form showing that the manufacturer of the test equipment, or an entity approved or authorized by the manufacturer, has trained the operator to use the specific model test equipment used for testing.

2. Documentation shall be submitted with this form that includes a date of calibration of the testing equipment within the previous twelve months, and the test lab's National Institute of Standards and Testing (N.I.S.T.) traceability reference number. The calibration date is to be listed on the Flow Meter Accuracy Verification Form. The test equipment's water temperature shall be set to 72 degrees for ground water, and for other water sources the measured water temperature shall be used.

3. The Flow Meter Accuracy Verification Form, Form No. LEG R.021.01 (04/09) is required to be submitted to document flow meter testing. All information on this form shall be completed and provided to the District for each flow meter tested. Additional copies of this form can be obtained from the District's website (www.watermatters.org). If the test equipment provides a printout of inputted data this shall be submitted with the form.

4. To facilitate the review of the Flow Meter Accuracy Verification Form a simple diagram showing the precise location on the pipe where the testing equipment was mounted shall be completed on the form. This diagram is to include the pump, piping configuration, with all valves, tees, elbows, flow straightening vanes, or any other possible flow disturbing devices from the pump to the test location clearly noted with measurements between the items. The installed meter shall also be included on the diagram.

5. A picture(s) of the test location, including the pump, installed flow meter, and the measuring device, or for sites where the picture does not include all of the items listed above, a picture of the test site with a notation of distances to these items.

6. A minimum of two separate timed tests shall be performed for each meter. Both the measuring instrument and the flow meter being tested utilize timed tests. The flow meter being tested is timed while the measuring instrument performs the test.

7. Each timed test shall be a minimum of four minutes. If two tests do not yield consistent results, additional tests are required, each additional test for a minimum of eight minutes or longer until consistent results are obtained. If the installed meter has a rate of flow, or large multiplier that does not allow for consistent results to be obtained with four or eight minute tests, the duration of the test is lengthened as necessary to obtain accurate and consistent results. The results of two consistent tests are averaged, and will be considered the test result for the meter being tested. This result shall be expressed as a plus or minus percent (rounded to the nearest one-tenth percent) indicating the deviation (if any), of the meter being tested from the test meter.

Note: By District rule, flow meters that fail to meet the District's accuracy requirements must be repaired or replaced within 30 days. These meters are to be retested after the repair and the results submitted to the District within 30 days of the test.

SWFWMD - FLOW METER ACCURACY VERIFICATION FORM

Permittee: _____ WUP No: _____ District ID: _____
Address: _____ City: _____ St: ___ Zip: _____
Contact: _____ Ph. No: _____ Cell No: _____

FLOW METER INFORMATION:

Manufacturer: _____ Serial No: _____ Size: _____ Type: Saddle Tube Other
Reading: _____ x _____ Straight Run:_____ Vanes: Yes/No
Meter Multiplier

PIPE INFORMATION:

Material: _____ O.D. _____
Schedule/Class: _____

WALL THICKNESS:

Gauge: _____ Chart: _____
Test Meter: _____ Liner: _____

FLOW METER			TEST METER		
Elapsed Time (min)	Totalizer Reading (gal)	Total (gpm) **A**	Total (gpm) **B**	**A – B** (gpm) **C**	Percent Error **(C/B)*100**
	I. _____ II. _____ Total _____				
	I. _____ II. _____ Total _____				
	I. _____ II. _____ Total _____				
			AVERAGE		

COMMENTS:

Email:
County:

Test Site Diagram

(If needed use back of form for diagram)

District Well Tags: Yes / No **Tag ID Num: _____**

Test Meter No: _____ **Test Meter Calibration Date: _____**

Sound Speed: _____

Checked By: _____ _ **Date: _____**