

EROM QA Report For: VPU = 09 Runid = 0001
 ETFRACT1 = 0.3 ETFRACT2 = 0.5
 Gage Sequestration Proportion = 0.2
 See Page 3 for a brief explanation of the values in the tables.

N = Number of Gages
 Qbar = Log10 Mean Flow (cfs)
 SEE = Standard Error of the Estimate in percent;
 2/3 of the Flow Estimates will have errors that are within one SEE

Table 1: Statistics For All Gages:

Period	N	Gage			Runoff		Excess ET		RefGage Reg		PlusFlowAR	
		Qbar	Qbar	SEE	Qbar	SEE	Qbar	SEE	Qbar	SEE	Qbar	SEE
MA	62	2.0004	1.8023	64.798	1.8023	64.798	1.9610	40.905	1.9610	40.905		
JAN	66	0.9136	1.3042	281.41	1.3042	281.41	1.0113	172.81	1.0113	172.81		
FEB	66	1.0976	1.2242	198.93	1.2242	198.93	1.2510	209.02	1.2510	209.02		
MAR	68	1.9291	2.0300	100.64	2.0300	100.64	1.9699	103.47	1.9699	103.47		
APR	69	2.4921	1.9512	407.43	1.9512	407.43	2.5545	84.500	2.5545	84.500		
MAY	69	2.2234	2.0889	60.916	2.0889	60.916	2.2507	50.112	2.2507	50.112		
JUN	69	1.9669	2.1008	94.178	2.1008	94.178	2.0159	80.248	2.0159	80.248		
JUL	69	1.9242	2.0182	113.02	2.0182	113.02	2.0337	106.53	2.0337	106.53		
AUG	69	1.5445	1.9026	220.83	1.9026	220.83	1.7239	128.83	1.7239	128.83		
SEP	69	1.4554	1.8327	329.78	1.8327	329.78	1.6367	203.80	1.6367	203.80		
OCT	62	1.5816	1.7917	163.17	1.7917	163.17	1.7671	172.59	1.7671	172.59		
NOV	62	1.5180	1.6252	82.198	1.6252	82.198	1.7123	121.33	1.7123	121.33		
DEC	62	1.2215	1.2736	138.61	1.2736	138.61	1.1993	134.48	1.1993	134.48		

Table 2: Statistics For Sequestered Gages:

Period	N	Gage			Seq. Gages	
		Qbar	Qbar	SEE		
MA	13	2.2678	2.2922	32.814		
JAN	14	0.5317	0.6266	137.75		
FEB	14	0.7173	0.8345	388.74		
MAR	14	2.2561	2.1341	37.642		
APR	14	2.7946	2.7246	53.802		
MAY	14	2.1226	2.0899	43.508		
JUN	14	1.9247	1.9978	76.163		
JUL	14	1.6398	1.7754	125.11		

AUG		14		1.4096		1.5664		141.26	
SEP		14		1.7925		1.8605		96.670	
OCT		13		1.4058		1.3719		105.15	
NOV		13		0.9184		1.0517		91.103	
DEC		13		1.0325		1.1801		92.638	

Page 1

Table 3: Statistics For Reference Gages:

Period	N	Gage			Runoff		Excess ET		RefGage Reg		PlusFlowAR	
		Qbar	Qbar	SEE	Qbar	SEE	Qbar	SEE	Qbar	SEE		
MA	14	1.6963	1.5650	58.502	1.5650	58.502	1.7403	46.937	1.7403	46.937		
JAN	13	0.5985	1.1237	315.73	1.1237	315.73	0.8233	142.04	0.8233	142.04		
FEB	14	0.8067	0.9757	135.34	0.9757	135.34	0.9823	146.80	0.9823	146.80		
MAR	16	1.7049	1.7396	70.737	1.7396	70.737	1.7490	56.124	1.7490	56.124		
APR	16	2.3371	1.6465	705.31	1.6465	705.31	2.3829	48.876	2.3829	48.876		
MAY	16	1.9838	1.8523	58.376	1.8523	58.376	2.0272	47.415	2.0272	47.415		
JUN	16	1.6636	1.8726	107.51	1.8726	107.51	1.7631	85.479	1.7631	85.479		
JUL	16	1.6343	1.7946	129.26	1.7946	129.26	1.7785	121.56	1.7785	121.56		
AUG	16	1.2609	1.6615	255.71	1.6615	255.71	1.4141	139.27	1.4141	139.27		
SEP	16	1.1175	1.6200	516.68	1.6200	516.68	1.3788	275.90	1.3788	275.90		
OCT	13	1.3625	1.7402	194.88	1.7402	194.88	1.6911	186.43	1.6911	186.43		
NOV	13	1.2965	1.4022	56.577	1.4022	56.577	1.4498	85.236	1.4498	85.236		
DEC	13	0.8562	1.0894	143.26	1.0894	143.26	1.0265	126.57	1.0265	126.57		

Table 4: Reference Gage Log-Log Regression Statistics:

Period	N	a	b	BCF	R2	SER
MA	14	0.2502	0.9259	1.1061	0.9485	0.2061
JAN	13	-0.723	1.0573	2.0528	0.8356	0.6587
FEB	15	-0.376	1.0844	1.9723	0.7560	0.7251
MAR	16	0.3837	0.7597	1.1073	0.8425	0.2400
APR	16	1.4266	0.5560	1.1117	0.9065	0.2094
MAY	16	0.2390	0.9427	1.1048	0.9457	0.2049
JUN	16	-0.415	1.1098	1.2551	0.8778	0.3298

JUL		16		-0.419	1.1429		1.3983		0.8022		0.4175	
AUG		16		-0.903	1.2957		1.4306		0.7992		0.4718	
SEP		16		-0.886	1.2270		1.8548		0.6878		0.6571	
OCT		14		-1.355	1.4748		2.9239		0.7942		0.7499	
NOV		14		-0.522	1.1849		2.0018		0.8190		0.7205	
DEC		13		-0.193	0.9426		1.5576		0.8834		0.4857	

N = Number of Reference Gages

a , b = regression coefficients; BCF = Bias Correction

R2 = R-Squared of the regression; SER = Standard Error of the Regression

Page 2

Summary of contents of the QA Report:

Two statistics are used for measuring how well the different flow estimates performed in relation to the gage flows:

1. The log10 mean gage flow as compared to the log10 mean flow estimates at the gages.
2. The Standard Error of the Estimate (SEE) in percent; 2/3 of the flow estimates will be within one SEE.

Six flow values are calculated in EROM:

- A - Cumulative runoff based on the runoff grids
- B - The application of Excess ET to the cumulative runoff
- C - The flow adjustments from the Reference Gage Regression
- D - The application of the PlusFlowAR additions and removals
- E - Gage adjustment, in which the flows at the gage and a distance upstream are adjusted to match the actual gage flow. Statistics for this flow are not presented because all gages are adjusted, therefore the statistics would perfectly match the gage values.
- F - The gage adjustment statistics with a randomly selected proportion of the gages removed (typically 0.2);

this process is referred to as Gage Sequestering. The Gage Sequestering provides a method to estimate

the accuracy of the flows after the gage adjustment.

There are four tables in the EROM QA Report:

Table 1 reports statistics for all gages for flows A, B, C, and D described above.

Table 2 reports the statistics for only the sequestered gages from the sixth flow estimate

Table 3 reports the statistics for the Reference gages.

Table 4 presents the statistics used in the Reference Gage Regression step;

these values are the log-log regression coefficients

and the associated R2 and Standard Error of the Regression.

The tables report values for Mean Annual (MA) and each month that has been run.

See the NHDPlus User Guide for more information