

EROM QA Report For: VPU = 08 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	106	2.8261	2.8468	16.210	2.8468	16.210	2.8100	16.058	2.8100	16.058		
JAN	121	2.9889	3.0887	34.232	3.0887	34.232	2.9863	25.049	2.9863	25.049		
FEB	121	3.0024	3.0878	26.908	3.0878	26.908	3.0048	17.873	3.0048	17.874		
MAR	121	3.0263	3.1197	31.589	3.1197	31.589	3.0214	23.208	3.0214	23.208		
APR	121	3.0030	3.0499	24.559	3.0499	24.559	3.0265	22.957	3.0265	22.957		
MAY	122	2.8589	2.8900	30.544	2.8900	30.544	2.8699	29.729	2.8699	29.729		
JUN	120	2.6527	2.6362	31.567	2.6362	31.567	2.6656	32.055	2.6656	32.053		
JUL	121	2.4106	2.3913	57.759	2.3913	57.759	2.4845	66.819	2.4845	66.818		
AUG	123	2.2901	2.1617	82.109	2.1617	82.109	2.3658	85.288	2.3658	85.289		
SEP	125	2.2790	2.0367	105.98	2.0367	105.98	2.3921	85.367	2.3921	85.367		
OCT	118	2.2729	1.9400	118.83	1.9400	118.83	2.3344	62.612	2.3344	62.605		
NOV	117	2.6401	2.4566	79.342	2.4566	79.342	2.4947	71.035	2.4947	71.016		
DEC	117	2.9133	2.9744	27.808	2.9744	27.808	2.8876	24.329	2.8876	24.329		

Table 2: Statistics For Sequestered Gages:

Period	N	Gage			Seq. Gages	
		Qbar	Qbar	SEE		
MA	22	2.9870	2.9480	16.290		
JAN	25	2.9154	2.9182	29.393		
FEB	25	2.8796	2.8912	24.791		
MAR	25	2.8872	2.8644	19.794		
APR	25	2.9950	3.0375	31.565		
MAY	25	2.6448	2.6505	27.698		
JUN	24	2.3571	2.3289	24.732		
JUL	25	2.3736	2.4642	57.753		

AUG		25		2.2900		2.2467		62.795	
SEP		25		2.0965		2.0655		2094.2	
OCT		24		2.1943		2.2445		78.532	
NOV		24		2.6055		2.5225		47.059	
DEC		24		3.1039		3.1004		18.778	

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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	21	2.4594	2.5000	13.004	2.5000	13.004	2.4612	8.9896	2.4612	8.9896		
JAN	21	2.6706	2.7896	34.553	2.7896	34.553	2.6784	19.510	2.6784	19.510		
FEB	21	2.6830	2.7760	24.199	2.7760	24.199	2.6854	10.356	2.6854	10.356		
MAR	21	2.6710	2.7827	30.699	2.7827	30.699	2.6762	15.458	2.6762	15.458		
APR	21	2.6593	2.6904	14.476	2.6904	14.476	2.6626	12.520	2.6626	12.520		
MAY	21	2.4986	2.5229	14.440	2.5229	14.440	2.5025	13.314	2.5025	13.314		
JUN	21	2.2774	2.2678	22.817	2.2678	22.817	2.2880	22.739	2.2880	22.739		
JUL	21	2.0382	2.0474	55.928	2.0474	55.928	2.0851	55.061	2.0851	55.061		
AUG	21	1.9098	1.8394	79.014	1.8394	79.014	1.9931	78.327	1.9931	78.327		
SEP	21	1.9896	1.7256	105.72	1.7256	105.72	2.0572	70.225	2.0572	70.225		
OCT	21	2.0406	1.6588	149.33	1.6588	149.33	2.1016	70.195	2.1016	70.195		
NOV	21	2.2876	2.2480	57.374	2.2480	57.374	2.3365	52.803	2.3365	52.803		
DEC	21	2.5828	2.6744	27.767	2.6744	27.767	2.5893	17.451	2.5893	17.451		

Table 4: Reference Gage Log-Log Regression Statistics:

Period	N	a	b	BCF	R2	SER
MA	21	-0.054	1.0055	1.0040	0.9894	0.0409
JAN	21	-0.200	1.0291	1.0182	0.9592	0.0879
FEB	21	-0.160	1.0244	1.0053	0.9877	0.0471
MAR	21	-0.179	1.0243	1.0120	0.9720	0.0699
APR	21	-0.063	1.0121	1.0078	0.9809	0.0568
MAY	21	-0.026	1.0009	1.0091	0.9768	0.0604
JUN	21	-0.046	1.0249	1.0248	0.9391	0.1019

JUL		21		-0.337		1.1601		1.1149		0.7971		0.2307	
AUG		21		-0.216		1.1554		1.2138		0.6916		0.3055	
SEP		21		0.1289		1.0782		1.1703		0.6872		0.2824	
OCT		21		0.6603		0.8324		1.1511		0.5553		0.2823	
NOV		21		0.5785		0.7602		1.1191		0.6498		0.2206	
DEC		21		-0.075		0.9939		1.0151		0.9601		0.0788	

N = Number of Reference Gages

a , b = regression coefficients; BCF = Bias Correction

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

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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