

EROM QA Report For: VPU = 17 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		
MA	628	2.6321	2.6889	53.833	2.6889	53.833	2.6980	54.949	2.6866	53.051		
JAN	655	2.5876	2.1944	333.40	2.1944	333.40	2.4866	185.09	2.3749	680.75		
FEB	655	2.6093	2.2388	321.84	2.2388	321.84	2.5518	161.04	2.4504	582.53		
MAR	657	2.6434	2.4855	175.33	2.4855	175.33	2.6325	132.92	2.5823	249.70		
APR	659	2.7047	2.7527	75.417	2.7527	75.417	2.7893	77.182	2.7676	100.44		
MAY	667	2.7451	2.8544	74.728	2.8544	74.728	2.9174	87.215	2.9134	85.709		
JUN	674	2.6307	2.7596	81.047	2.7596	81.047	2.8008	91.365	2.7960	89.694		
JUL	673	2.3263	2.5984	130.68	2.5984	130.68	2.4582	101.06	2.4429	101.78		
AUG	673	2.0936	2.4105	177.74	2.4105	177.74	2.1618	120.76	2.1093	167.34		
SEP	674	2.0875	2.2591	139.44	2.2591	139.44	2.1302	124.00	2.0403	274.81		
OCT	666	2.1811	2.2858	114.58	2.2858	114.58	2.2248	110.41	2.1357	241.95		
NOV	660	2.4445	2.4560	93.483	2.4560	93.483	2.4826	94.281	2.4132	178.09		
DEC	659	2.5552	2.3153	159.27	2.3153	159.27	2.5143	124.29	2.4254	336.44		

Table 2: Statistics For Sequestered Gages:

Period	N	Gage Seq. Gages		
		Qbar	Qbar	SEE
MA	126	2.6993	2.7107	49.748
JAN	131	2.5881	2.5559	132.98
FEB	131	2.5740	2.5734	99.557
MAR	132	2.8101	2.8225	77.643
APR	132	2.6857	2.7626	51.471
MAY	134	2.7130	2.8455	93.122
JUN	135	2.6429	2.7253	64.209
JUL	135	2.2915	2.4028	101.11

AUG		135		1.9884		2.0608		112.03	
SEP		135		2.0234		2.1171		109.83	
OCT		134		2.1171		2.1464		97.862	
NOV		132		2.3251		2.3886		134.22	
DEC		132		2.5296		2.4891		130.64	

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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		176		2.4048		2.4132		23.346		2.4132		23.346		2.4152		23.067		2.4152		23.067	
JAN		178		2.4281		2.1881		122.44		2.1881		122.44		2.4837		82.635		2.4837		82.635	
FEB		178		2.4297		2.1901		130.46		2.1901		130.46		2.5245		70.992		2.5245		70.992	
MAR		180		2.4205		2.3382		95.061		2.3382		95.061		2.5172		83.364		2.5172		83.364	
APR		180		2.4857		2.4897		44.477		2.4897		44.477		2.5326		45.859		2.5326		45.859	
MAY		181		2.5299		2.5346		46.864		2.5346		46.864		2.5702		46.023		2.5702		46.023	
JUN		183		2.4063		2.4392		50.328		2.4392		50.328		2.4495		48.155		2.4495		48.155	
JUL		183		2.0736		2.2764		77.895		2.2764		77.895		2.1292		55.845		2.1292		55.845	
AUG		183		1.7938		2.0946		121.31		2.0946		121.31		1.8753		73.560		1.8753		73.560	
SEP		183		1.7948		1.9591		99.096		1.9591		99.096		1.8817		78.909		1.8817		78.909	
OCT		184		1.9586		2.0594		80.342		2.0594		80.342		2.0329		70.125		2.0329		70.125	
NOV		181		2.3328		2.3369		42.417		2.3369		42.417		2.3669		42.931		2.3669		42.931	
DEC		181		2.4227		2.2594		73.908		2.2594		73.908		2.4655		56.563		2.4655		56.563	

Table 4: Reference Gage Log-Log Regression Statistics:

Period	N	a	b	BCF	R2	SER							
MA		176		-0.070		1.0257		1.0243		0.9778		0.0993	
JAN		0		000000		000000		000000		000000		000000	
FEB		178		0.9091		0.6977		1.2435		0.8745		0.2642	
MAR		180		0.5489		0.8007		1.2517		0.8251		0.3088	
APR		180		0.0560		0.9758		1.1143		0.9242		0.1852	
MAY		181		-0.221		1.0854		1.0976		0.9299		0.1873	
JUN		183		-0.268		1.0964		1.1048		0.9335		0.1951	

JUL		183		-0.252		1.0215		1.1377		0.9169		0.2215	
AUG		183		-0.108		0.9073		1.2096		0.8610		0.2776	
SEP		183		0.1706		0.8282		1.2264		0.8264		0.2941	
OCT		184		0.2110		0.8481		1.1900		0.8538		0.2683	
NOV		181		0.0621		0.9716		1.0825		0.9452		0.1782	
DEC		179		0.4550		0.8698		1.1327		0.9275		0.2017	

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