

EROM QA Report For: VPU = 13 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	108	1.6216	2.1573	314.60	2.1573	314.60	1.9515	196.77	1.9515	196.77		
JAN	116	0.9754	1.4510	564.16	1.4510	564.16	1.1405	281.07	1.1405	281.07		
FEB	116	1.0595	1.4291	713.17	1.4291	713.17	1.2650	451.10	1.2650	451.10		
MAR	117	1.2502	1.6414	626.69	1.6414	626.69	1.9890	2967.6	1.9890	2967.6		
APR	118	1.4892	1.9815	670.75	1.9815	670.75	1.8838	527.51	1.8838	527.51		
MAY	123	1.7564	2.2310	418.32	2.2310	418.32	2.3228	746.40	2.3228	746.40		
JUN	123	1.7531	2.2229	325.81	2.2229	325.81	2.4316	1080.1	2.4316	1080.1		
JUL	123	1.4960	2.2644	937.59	2.2644	937.59	1.8460	248.52	1.8460	248.52		
AUG	123	1.4853	2.2619	885.24	2.2619	885.24	1.8291	207.08	1.8291	207.08		
SEP	123	1.4093	2.1202	609.63	2.1202	609.63	1.7777	212.59	1.7777	212.59		
OCT	112	1.2572	2.1338	1378.2	2.1338	1378.2	1.6471	248.81	1.6471	248.81		
NOV	113	1.1391	1.9755	1206.8	1.9755	1206.8	1.8388	1498.3	1.8388	1498.3		
DEC	112	1.0219	1.7313	1141.7	1.7313	1141.7	1.7722	2094.2	1.7722	2094.2		

Table 2: Statistics For Sequestered Gages:

Period	N	Gage			Seq. Gages	
		Qbar	Qbar	SEE		
MA	22	1.4035	1.6258	138.73		
JAN	24	0.8357	1.0332	692.33		
FEB	24	0.9202	1.1912	759.26		
MAR	24	1.2513	1.7499	499.90		
APR	24	1.3384	1.7007	613.42		
MAY	25	1.3704	1.7192	289.00		
JUN	25	1.7691	2.2329	284.61		
JUL	25	1.5179	1.8052	183.47		

AUG		25		1.3779		1.6442		127.53	
SEP		25		1.4320		1.6662		116.00	
OCT		23		0.9773		1.2352		205.26	
NOV		23		1.0799		1.5404		328.15	
DEC		23		0.8582		1.2254		544.10	

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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	16	1.2410	1.5448	102.57	1.5448	102.57	1.2926	54.839	1.2926	54.839		
JAN	14	0.8058	0.8960	96.355	0.8960	96.355	0.8527	52.345	0.8527	52.345		
FEB	14	0.9058	0.7453	160.59	0.7453	160.59	0.9442	72.873	0.9442	72.873		
MAR	14	1.0585	1.2584	235.34	1.2584	235.34	1.5092	541.31	1.5092	541.31		
APR	14	1.4157	1.6760	142.34	1.6760	142.34	1.5785	119.68	1.5785	119.68		
MAY	18	1.3111	1.6724	367.93	1.6724	367.93	1.5555	272.96	1.5555	272.96		
JUN	18	1.4139	1.6559	167.07	1.6559	167.07	1.6176	185.03	1.6176	185.03		
JUL	18	1.1998	1.6787	217.23	1.6787	217.23	1.2872	86.727	1.2872	86.727		
AUG	18	1.2371	1.6633	150.63	1.6633	150.63	1.2802	48.957	1.2802	48.957		
SEP	18	1.1055	1.4958	133.72	1.4958	133.72	1.1462	51.691	1.1462	51.691		
OCT	16	0.9502	1.5153	277.77	1.5153	277.77	1.0371	81.394	1.0371	81.394		
NOV	15	0.8600	1.5318	515.94	1.5318	515.94	1.1688	246.49	1.1688	246.49		
DEC	13	1.0310	1.3529	149.70	1.3529	149.70	1.2735	190.95	1.2735	190.95		

Table 4: Reference Gage Log-Log Regression Statistics:

Period	N	a	b	BCF	R2	SER
MA	16	-0.453	1.0846	1.1557	0.9089	0.2456
JAN	13	0.4537	0.4671	1.1297	0.5585	0.2388
FEB	13	0.6871	0.3760	1.1931	0.4690	0.2840
MAR	15	-0.749	1.2387	5.0314	0.5058	1.1070
APR	14	-0.267	0.9968	1.4962	0.7104	0.4345
MAY	18	-1.079	1.3991	1.8842	0.7307	0.6515
JUN	18	-1.091	1.4607	1.8617	0.7603	0.5960

JUL		18		-0.418	0.9579		1.2400		0.7744		0.3438	
AUG		18		-0.299	0.9195		1.1140		0.8804		0.2162	
SEP		18		-0.430	1.0163		1.1236		0.8839		0.2425	
OCT		16		-0.583	0.9982		1.2489		0.8128		0.3344	
NOV		16		-1.552	1.4970		2.6130		0.7352		0.6760	
DEC		14		-0.919	1.2884		2.8056		0.4275		0.9506	

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