

EROM QA Report For: VPU = 14 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	312	1.7970	1.9569	85.982	1.9569	85.982	1.9539	86.691	1.9437	95.549		
JAN	333	1.1662	0.8185	299.79	0.8185	299.79	1.2082	377.15	1.1896	399.43		
FEB	333	1.2050	0.5982	489.47	0.5982	489.47	1.1428	266.15	1.1315	275.16		
MAR	334	1.3544	0.8506	337.31	0.8506	337.31	1.4248	150.44	1.4141	158.39		
APR	340	1.6826	1.5425	242.50	1.5425	242.50	1.7594	191.22	1.7473	202.20		
MAY	342	2.1401	2.1883	127.72	2.1883	127.72	2.3676	156.79	2.3646	156.10		
JUN	342	2.2238	2.2645	138.61	2.2645	138.61	2.5200	224.44	2.5187	223.77		
JUL	343	1.8467	2.2301	229.23	2.2301	229.23	2.1176	205.63	2.1137	206.07		
AUG	345	1.5241	2.0744	389.53	2.0744	389.53	1.6897	171.57	1.6804	179.92		
SEP	346	1.4214	1.9045	317.33	1.9045	317.33	1.5163	155.03	1.5070	161.65		
OCT	323	1.4410	1.8705	222.88	1.8705	222.88	1.4975	110.92	1.4881	116.87		
NOV	321	1.3395	1.5592	131.61	1.5592	131.61	1.3665	102.89	1.3569	108.39		
DEC	322	1.2333	1.1198	214.64	1.1198	214.64	1.1925	205.77	1.1813	213.23		

Table 2: Statistics For Sequestered Gages:

Period	N	Gage			Seq. Gages	
		Qbar	Qbar	SEE		
MA	63	1.7880	1.8134	107.31		
JAN	67	1.0668	1.0397	249.49		
FEB	67	1.2391	1.2429	158.28		
MAR	67	1.4437	1.5469	135.64		
APR	68	1.7523	1.8586	190.50		
MAY	69	2.0515	2.2462	102.96		
JUN	69	2.0938	2.3798	165.06		
JUL	69	1.7405	1.9242	119.78		

AUG		69		1.5013		1.5449		181.87	
SEP		70		1.4217		1.4883		144.52	
OCT		65		1.2052		1.3121		86.334	
NOV		65		1.5374		1.5403		75.265	
DEC		65		1.2312		1.2012		183.00	

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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	Qbar	SEE
MA	55	1.2971	1.3544	50.579	1.3544	50.579	1.3404	49.599	1.3404	49.599		
JAN	57	0.5556	0.2266	193.90	0.2266	193.90	0.9005	304.86	0.9005	304.86		
FEB	57	0.5717	-0.019	381.69	-0.019	381.69	0.6075	243.04	0.6075	243.04		
MAR	57	0.7247	0.1027	399.14	0.1027	399.14	0.8618	107.80	0.8618	107.80		
APR	57	1.1356	0.7889	276.15	0.7889	276.15	1.3257	156.50	1.3257	156.50		
MAY	58	1.7549	1.6529	76.201	1.6529	76.201	1.8302	73.582	1.8302	73.582		
JUN	58	1.8496	1.7791	92.433	1.7791	92.433	1.9621	93.433	1.9621	93.433		
JUL	58	1.4056	1.7213	151.18	1.7213	151.18	1.5315	102.56	1.5315	102.56		
AUG	58	1.0252	1.5301	222.88	1.5301	222.88	1.1047	78.360	1.1047	78.360		
SEP	58	0.8597	1.3311	182.83	1.3311	182.83	0.9157	61.481	0.9157	61.481		
OCT	55	0.8298	1.2307	133.48	1.2307	133.48	0.8612	44.236	0.8612	44.236		
NOV	55	0.7106	0.9080	78.038	0.9080	78.038	0.7606	55.493	0.7606	55.493		
DEC	55	0.5962	0.5127	107.49	0.5127	107.49	0.7172	112.51	0.7172	112.51		

Table 4: Reference Gage Log-Log Regression Statistics:

Period	N	a	b	BCF	R2	SER
MA	55	-0.082	1.0179	1.1076	0.8812	0.2058
JAN	53	0.4502	0.5324	2.9851	0.4714	0.5155
FEB	0	000000	000000	000000	000000	000000
MAR	57	0.6901	0.7160	1.3994	0.6177	0.3761
APR	57	0.6901	0.5706	1.5639	0.4641	0.4583
MAY	58	0.0940	1.0047	1.1912	0.7760	0.2824
JUN	58	-0.192	1.1469	1.3008	0.7797	0.3343

JUL		58		-0.571		1.1445		1.3537		0.7862		0.3614	
AUG		58		-0.631		1.0695		1.2410		0.8153		0.3298	
SEP		58		-0.558		1.0466		1.1827		0.8478		0.2930	
OCT		55		-0.409		0.9963		1.0891		0.9063		0.2029	
NOV		55		-0.146		0.9328		1.1386		0.8635		0.2408	
DEC		53		0.1577		0.8035		1.5085		0.7014		0.3838	

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