

EROM QA Report For: VPU = 12 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	318	2.1061	2.0283	107.37	2.0283	107.37	2.1601	96.622	2.1601	96.622		
JAN	329	1.9350	1.9190	178.68	1.9190	178.68	2.1132	189.49	2.1132	189.49		
FEB	329	2.0696	2.0589	180.97	2.0589	180.97	2.2652	190.25	2.2652	190.25		
MAR	329	2.0390	2.0687	174.94	2.0687	174.94	2.2038	179.00	2.2038	179.00		
APR	330	2.0711	2.0333	179.79	2.0333	179.79	2.2326	185.30	2.2326	185.30		
MAY	330	2.2524	2.1398	142.72	2.1398	142.72	2.2881	123.04	2.2881	123.04		
JUN	329	2.2618	2.0412	182.92	2.0412	182.92	2.3661	149.39	2.3661	149.39		
JUL	330	1.7964	1.7643	168.46	1.7643	168.46	1.9247	174.61	1.9247	174.61		
AUG	331	1.6600	1.8059	178.71	1.8059	178.71	1.9011	198.74	1.9011	198.74		
SEP	331	1.7828	1.8806	164.36	1.8806	164.36	1.9676	189.24	1.9676	189.24		
OCT	324	2.0469	1.9159	147.04	1.9159	147.04	2.1860	144.46	2.1860	144.46		
NOV	323	1.9363	1.7713	200.44	1.7713	200.44	2.0718	210.70	2.0718	210.70		
DEC	324	2.0157	1.9048	194.02	1.9048	194.02	2.1435	186.87	2.1435	186.87		

Table 2: Statistics For Sequestered Gages:

Period	N	Gage			Seq. Gages	
		Qbar	Qbar	SEE		
MA	64	2.2039	2.1763	87.122		
JAN	66	1.7466	1.9936	225.98		
FEB	66	1.9417	2.1490	208.27		
MAR	66	2.0405	2.1869	201.46		
APR	66	2.0669	2.1240	124.35		
MAY	66	2.1664	2.2237	173.68		
JUN	66	2.1892	2.2802	98.441		
JUL	66	1.8515	1.8908	190.90		

AUG		67		1.5100		1.6994		168.28	
SEP		67		1.7860		1.9251		165.56	
OCT		65		2.0478		2.0892		97.719	
NOV		65		1.9173		1.8979		163.64	
DEC		65		2.0051		2.0767		190.48	

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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	63	1.6592	1.5417	102.68	1.5417	102.68	1.7625	96.109	1.7625	96.109		
JAN	64	1.4234	1.4216	239.00	1.4216	239.00	1.6717	281.55	1.6717	281.55		
FEB	63	1.5952	1.5224	221.22	1.5224	221.22	1.8015	235.80	1.8015	235.80		
MAR	64	1.5482	1.5247	158.24	1.5247	158.24	1.7425	174.80	1.7425	174.80		
APR	64	1.5986	1.5380	167.76	1.5380	167.76	1.7870	185.53	1.7870	185.53		
MAY	64	1.8095	1.6874	109.17	1.6874	109.17	1.9173	103.73	1.9173	103.73		
JUN	64	1.8475	1.6084	165.99	1.6084	165.99	1.9942	143.09	1.9942	143.09		
JUL	64	1.3296	1.3388	149.09	1.3388	149.09	1.5250	171.10	1.5250	171.10		
AUG	64	1.3052	1.3998	146.06	1.3998	146.06	1.5126	165.58	1.5126	165.58		
SEP	64	1.3664	1.4554	136.91	1.4554	136.91	1.5193	145.37	1.5193	145.37		
OCT	64	1.6391	1.4607	119.95	1.4607	119.95	1.7409	108.46	1.7409	108.46		
NOV	64	1.3771	1.3495	245.54	1.3495	245.54	1.5998	284.16	1.5998	284.16		
DEC	64	1.5197	1.4361	221.08	1.4361	221.08	1.7433	244.95	1.7433	244.95		

Table 4: Reference Gage Log-Log Regression Statistics:

Period	N	a	b	BCF	R2	SER
MA	63	0.4003	0.8164	1.2712	0.6234	0.3436
JAN	64	0.1371	0.8866	1.8882	0.4704	0.7035
FEB	64	0.2013	0.8635	1.9364	0.3431	0.8265
MAR	64	0.2518	0.8474	1.5838	0.5462	0.4996
APR	64	0.2115	0.8993	1.5607	0.4983	0.5196
MAY	64	0.4264	0.8196	1.2836	0.5366	0.3624
JUN	64	0.4646	0.8593	1.4070	0.4313	0.4462

JUL		64		0.0690		0.9393		1.5833		0.4516		0.4838	
AUG		64		-0.038		0.9567		1.6317		0.4473		0.4709	
SEP		64		-0.173		1.0540		1.4429		0.4913		0.4672	
OCT		64		0.2117		0.9771		1.2675		0.5424		0.3784	
NOV		64		-0.180		1.1177		1.8765		0.3028		0.8155	
DEC		64		0.2797		0.8521		1.7440		0.4387		0.6371	

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