

EROM QA Report For: VPU = 01 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	257	2.3087	2.2872	15.339	2.2872	15.339	2.3163	14.397	2.3151	12.293		
JAN	261	2.2866	1.8974	121.33	1.8974	121.33	2.2743	33.835	2.2728	32.739		
FEB	261	2.2943	1.6534	320.49	1.6534	320.49	2.2727	53.756	2.2709	53.050		
MAR	261	2.4958	1.9219	390.29	1.9219	390.29	2.7154	155.41	2.7151	155.07		
APR	261	2.6227	2.5338	71.249	2.5338	71.249	2.8863	104.74	2.8862	104.56		
MAY	261	2.4459	2.6335	58.659	2.6335	58.659	2.5106	36.971	2.5100	36.475		
JUN	261	2.2218	2.4113	67.865	2.4113	67.865	2.1461	43.356	2.1427	44.376		
JUL	261	1.9570	2.1537	65.330	2.1537	65.330	1.8777	44.944	1.8714	49.991		
AUG	261	1.8855	1.9583	52.241	1.9583	52.241	1.7717	58.466	1.7655	64.102		
SEP	261	1.8899	1.9235	62.234	1.9235	62.234	1.7577	67.533	1.7512	72.958		
OCT	258	2.1300	2.2031	38.959	2.2031	38.959	2.0704	34.366	2.0677	33.473		
NOV	258	2.2582	2.3776	36.821	2.3776	36.821	2.2905	23.987	2.2893	22.228		
DEC	258	2.3205	2.1817	46.946	2.1817	46.946	2.3580	33.264	2.3570	32.198		

Table 2: Statistics For Sequestered Gages:

Period	N	Gage			Seq. Gages	
		Qbar	Qbar	SEE		
MA	52	2.2695	2.2595	13.748		
JAN	53	2.2882	2.2983	27.011		
FEB	53	2.2549	2.2659	42.383		
MAR	53	2.4408	2.6084	118.58		
APR	53	2.5573	2.8144	96.640		
MAY	53	2.4225	2.4761	32.396		
JUN	53	2.1635	2.0934	40.402		
JUL	53	1.9124	1.8787	41.467		

AUG		53		2.0445		1.9536		47.911	
SEP		53		2.0515		1.9857		53.507	
OCT		52		2.0120		1.9404		38.793	
NOV		52		2.2649		2.2530		16.928	
DEC		52		2.3413		2.3805		23.543	

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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	56	1.8371	1.8025	13.727	1.8025	13.727	1.8397	10.842	1.8397	10.842		
JAN	57	1.7982	1.4097	116.44	1.4097	116.44	1.8093	23.505	1.8093	23.505		
FEB	57	1.7786	1.1598	283.04	1.1598	283.04	1.8084	42.868	1.8084	42.868		
MAR	57	2.0436	1.2793	803.14	1.2793	803.14	2.2260	148.40	2.2260	148.40		
APR	57	2.2216	2.0000	93.054	2.0000	93.054	2.2987	67.317	2.2987	67.317		
MAY	57	2.0362	2.1734	47.954	2.1734	47.954	2.0598	33.916	2.0598	33.916		
JUN	57	1.7397	1.9836	82.561	1.9836	82.561	1.7734	40.904	1.7734	40.904		
JUL	57	1.4700	1.7352	81.920	1.7352	81.920	1.4960	35.294	1.4960	35.294		
AUG	57	1.3873	1.5585	64.990	1.5585	64.990	1.4204	40.435	1.4204	40.435		
SEP	57	1.3911	1.5459	74.119	1.5459	74.119	1.4409	51.303	1.4409	51.303		
OCT	56	1.6600	1.7680	35.122	1.7680	35.122	1.6685	19.733	1.6685	19.733		
NOV	56	1.8081	1.8943	26.857	1.8943	26.857	1.8145	17.427	1.8145	17.427		
DEC	56	1.8417	1.6745	45.468	1.6745	45.468	1.8504	20.245	1.8504	20.245		

Table 4: Reference Gage Log-Log Regression Statistics:

Period	N	a	b	BCF	R2	SER
MA	56	0.0648	0.9832	1.0059	0.9951	0.0479
JAN	57	0.4591	0.9516	1.0260	0.9726	0.1023
FEB	57	0.6987	0.9360	1.0712	0.9183	0.1795
MAR	57	1.0770	0.7586	1.5235	0.5272	0.4399
APR	57	0.0211	1.1004	1.1946	0.8811	0.2591
MAY	57	-0.094	0.9799	1.0561	0.9640	0.1442
JUN	57	0.0088	0.8721	1.0815	0.9442	0.1717

JUL		57		-0.117		0.9135		1.0631		0.9603		0.1513	
AUG		57		0.0149		0.8794		1.0813		0.9467		0.1711	
SEP		57		0.0918		0.8396		1.1239		0.9161		0.2109	
OCT		56		0.0261		0.9238		1.0200		0.9844		0.0867	
NOV		56		-0.058		0.9852		1.0147		0.9874		0.0764	
DEC		56		0.1673		1.0003		1.0200		0.9812		0.0885	

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