

EROM QA Report For: VPU = 16 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	183	1.6810	1.8443	129.20	1.8443	129.20	1.7141	107.20	1.7141	107.20		
JAN	193	1.3472	0.8581	562.55	0.8581	562.55	1.1447	304.61	1.1447	304.61		
FEB	193	1.3990	0.8814	790.57	0.8814	790.57	1.1399	368.92	1.1399	368.92		
MAR	194	1.5734	1.4615	217.22	1.4615	217.22	1.3983	202.53	1.3983	202.53		
APR	195	1.7666	2.0084	207.60	2.0084	207.60	1.8323	149.33	1.8323	149.33		
MAY	198	2.0305	2.2110	178.51	2.2110	178.51	2.2220	180.69	2.2220	180.69		
JUN	199	1.9603	2.1346	161.16	2.1346	161.16	2.1458	177.30	2.1458	177.30		
JUL	199	1.5996	1.9800	233.52	1.9800	233.52	1.7078	140.25	1.7078	140.25		
AUG	199	1.3356	1.7760	296.59	1.7760	296.59	1.3960	143.51	1.3960	143.51		
SEP	199	1.2288	1.5863	222.67	1.5863	222.67	1.2343	129.72	1.2343	129.72		
OCT	189	1.2379	1.4888	196.45	1.4888	196.45	1.1775	138.77	1.1775	138.77		
NOV	189	1.2668	1.3745	171.08	1.3745	171.08	1.1999	151.76	1.1999	151.76		
DEC	189	1.2741	1.0489	233.44	1.0489	233.44	1.1392	197.55	1.1392	197.55		

Table 2: Statistics For Sequestered Gages:

Period	N	Gage			Seq. Gages	
		Qbar	Qbar	SEE		
MA	37	1.7945	1.8815	74.930		
JAN	39	1.3228	1.2783	184.51		
FEB	39	1.4725	1.3199	146.27		
MAR	39	1.3815	1.4631	143.46		
APR	39	1.9031	1.7892	233.41		
MAY	40	2.0433	2.1692	84.827		
JUN	40	1.8606	2.0442	123.59		
JUL	40	1.7463	1.8589	79.858		

AUG		40		1.2369		1.3714		90.229	
SEP		40		1.4963		1.5178		146.20	
OCT		38		1.2763		1.2590		120.25	
NOV		38		1.1107		1.2582		131.67	
DEC		38		1.2720		1.2259		155.95	

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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	45	1.0770	1.2266	82.272	1.2266	82.272	1.1406	71.307	1.1406	71.307		
JAN	46	0.7264	0.1513	601.79	0.1513	601.79	0.7344	230.92	0.7344	230.92		
FEB	46	0.7565	0.2076	654.76	0.2076	654.76	0.8254	193.30	0.8254	193.30		
MAR	46	0.9288	0.8175	166.95	0.8175	166.95	1.0495	106.46	1.0495	106.46		
APR	45	1.2014	1.3868	119.40	1.3868	119.40	1.3269	100.25	1.3269	100.25		
MAY	47	1.4892	1.5998	117.28	1.5998	117.28	1.6122	118.85	1.6122	118.85		
JUN	48	1.3739	1.5231	103.39	1.5231	103.39	1.4874	97.673	1.4874	97.673		
JUL	48	0.9939	1.3348	151.03	1.3348	151.03	1.0850	91.569	1.0850	91.569		
AUG	48	0.7112	1.1220	194.65	1.1220	194.65	0.8200	98.949	0.8200	98.949		
SEP	48	0.6055	0.9191	166.02	0.9191	166.02	0.7186	105.52	0.7186	105.52		
OCT	47	0.6351	0.8331	150.96	0.8331	150.96	0.7451	112.25	0.7451	112.25		
NOV	46	0.7238	0.7218	115.56	0.7218	115.56	0.8075	79.930	0.8075	79.930		
DEC	47	0.6809	0.3833	228.62	0.3833	228.62	0.7867	109.64	0.7867	109.64		

Table 4: Reference Gage Log-Log Regression Statistics:

Period	N	a	b	BCF	R2	SER
MA	45	-0.066	0.9292	1.1654	0.7678	0.2886
JAN	41	0.7012	0.4193	1.4958	0.5248	0.4281
FEB	43	0.7331	0.3294	1.4876	0.4431	0.4289
MAR	46	0.4902	0.5373	1.3340	0.5530	0.3761
APR	46	-0.020	0.8137	1.6553	0.3127	0.7175
MAY	47	-0.110	0.9977	1.3380	0.6477	0.4093
JUN	48	-0.268	1.0759	1.3079	0.7521	0.3514

JUL		48		-0.310		0.9662		1.2636		0.7343		0.3733	
AUG		48		-0.310		0.8837		1.3573		0.6251		0.4265	
SEP		48		-0.136		0.7759		1.3726		0.5376		0.4449	
OCT		47		0.0473		0.6608		1.3986		0.3813		0.5358	
NOV		46		0.2865		0.5990		1.2349		0.6389		0.3234	
DEC		46		0.4886		0.5067		1.4467		0.4591		0.5138	

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