

EROM QA Report For: VPU = 15 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 Qbar	Runoff Qbar	SEE	Excess ET Qbar	SEE	RefGage Reg Qbar	SEE	PlusFlowAR Qbar	SEE
MA	137	1.8363	2.1603	170.70	2.1603	170.70	2.1671	187.81	2.1669	187.61
JAN	149	1.7828	1.8862	270.66	1.8862	270.66	1.8807	402.85	1.8738	420.57
FEB	149	1.9010	2.0666	247.84	2.0666	247.84	2.1057	276.79	2.1044	278.22
MAR	148	2.0033	2.2911	197.38	2.2911	197.38	2.3230	210.01	2.3229	209.99
APR	147	1.7396	2.1106	330.95	2.1106	330.95	2.1207	344.41	2.1206	344.30
MAY	150	1.4098	1.9058	571.55	1.9058	571.55	1.8308	604.30	1.8307	604.01
JUN	151	1.1147	1.7541	1068.3	1.7541	1068.3	1.4840	598.18	1.4839	597.70
JUL	151	1.3533	2.0848	880.18	2.0848	880.18	1.8947	662.15	1.8946	661.86
AUG	152	1.5045	2.1050	478.69	2.1050	478.69	1.8537	241.96	1.8534	241.77
SEP	151	1.3980	1.9126	401.27	1.9126	401.27	1.8402	395.54	1.8401	395.39
OCT	150	1.5292	1.9164	298.26	1.9164	298.26	1.8658	270.56	1.8657	270.42
NOV	151	1.3974	1.8379	441.83	1.8379	441.83	1.6901	313.73	1.6894	313.96
DEC	151	1.6245	1.7698	315.72	1.7698	315.72	1.8452	573.38	1.8395	593.60

Table 2: Statistics For Sequestered Gages:

Period	N	Gage Qbar	Seq. Gages Qbar	SEE
MA	28	1.8607	2.1256	141.36
JAN	30	1.5362	1.8091	378.47
FEB	30	2.0474	2.2281	224.03
MAR	30	1.9918	2.2289	130.81
APR	30	1.9136	2.1020	96.958
MAY	30	1.5232	1.7374	235.91
JUN	31	1.1573	1.3196	291.26
JUL	31	0.9742	1.3501	274.30

AUG		31		1.3854		1.6219		114.26	
SEP		31		1.6378		1.9197		187.26	
OCT		30		1.4201		1.8223		289.40	
NOV		31		1.4868		1.6285		164.41	
DEC		31		1.7112		2.0462		407.53	

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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	29	1.1953	1.3597	125.88	1.3597	125.88	1.3212	120.52	1.3212	120.52		
JAN	29	1.3623	1.2574	217.46	1.2574	217.46	1.5438	144.22	1.5438	144.22		
FEB	29	1.4899	1.4913	141.05	1.4913	141.05	1.6691	141.31	1.6691	141.31		
MAR	29	1.5773	1.6801	114.38	1.6801	114.38	1.7168	119.09	1.7168	119.09		
APR	29	1.2730	1.3495	69.740	1.3495	69.740	1.3377	68.302	1.3377	68.302		
MAY	29	0.8350	1.0881	143.67	1.0881	143.67	0.8839	93.692	0.8839	93.692		
JUN	30	0.3417	0.9252	501.10	0.9252	501.10	0.5154	187.55	0.5154	187.55		
JUL	31	0.5756	1.2314	512.81	1.2314	512.81	0.8419	179.79	0.8419	179.79		
AUG	30	0.8432	1.2785	218.96	1.2785	218.96	1.0163	121.81	1.0163	121.81		
SEP	31	0.6584	1.0661	230.84	1.0661	230.84	0.8653	150.85	0.8653	150.85		
OCT	29	0.9663	1.1429	111.91	1.1429	111.91	1.0824	102.71	1.0824	102.71		
NOV	29	0.9054	1.0740	129.30	1.0740	129.30	1.0506	116.79	1.0506	116.79		
DEC	29	1.1447	1.0162	340.16	1.0162	340.16	1.4952	313.86	1.4952	313.86		

Table 4: Reference Gage Log-Log Regression Statistics:

Period	N	a	b	BCF	R2	SER
MA	29	-0.275	1.0567	1.4433	0.6261	0.5444
JAN	29	0.7110	0.5244	1.5315	0.5536	0.4460
FEB	29	0.3558	0.7589	1.5246	0.6352	0.4418
MAR	29	-0.093	0.9921	1.3931	0.7491	0.4069
APR	28	-0.128	1.0308	1.1793	0.8957	0.2789
MAY	27	-0.551	1.1778	1.2680	0.8849	0.3195
JUN	29	-0.956	1.1781	2.1158	0.4855	0.8942

JUL		31		-1.054		1.2458		2.1847		0.6868		0.5745	
AUG		30		-0.495		1.0181		1.5933		0.7201		0.4550	
SEP		31		-0.634		1.1598		1.7791		0.7119		0.5181	
OCT		29		-0.205		1.0134		1.3412		0.7898		0.3744	
NOV		29		0.0001		0.8353		1.4295		0.7138		0.4016	
DEC		29		0.7194		0.4368		2.2887		0.3804		0.6077	

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