

EROM QA Report For: VPU = 18 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	536	1.7877	2.0734	138.89	2.0734	138.89	1.9279	114.75	1.9279	114.75
JAN	576	1.9460	2.2035	182.12	2.2035	182.12	2.1378	159.84	2.1378	159.84
FEB	575	2.0844	2.3911	198.25	2.3911	198.25	2.2485	160.24	2.2485	160.24
MAR	576	2.0788	2.4540	209.97	2.4540	209.97	2.2610	157.08	2.2610	157.08
APR	578	1.8255	2.2378	249.61	2.2378	249.61	2.0793	192.00	2.0793	192.00
MAY	585	1.6361	2.0199	255.18	2.0199	255.18	1.9451	230.42	1.9451	230.42
JUN	583	1.3978	1.7722	296.56	1.7722	296.56	1.8176	328.26	1.8176	328.26
JUL	590	1.1243	1.5472	380.53	1.5472	380.53	1.4394	294.55	1.4394	294.55
AUG	594	0.9220	1.3327	459.02	1.3327	459.02	1.0769	301.99	1.0769	301.99
SEP	593	0.8896	1.1973	381.47	1.1973	381.47	1.1628	363.80	1.1628	363.80
OCT	568	0.9629	1.2347	329.82	1.2347	329.82	1.1745	318.25	1.1745	318.25
NOV	565	1.3235	1.5793	269.44	1.5793	269.44	1.5981	280.02	1.5981	280.02
DEC	561	1.5677	1.8543	242.98	1.8543	242.98	1.7985	208.53	1.7985	208.53

Table 2: Statistics For Sequestered Gages:

Period	N	Gage Qbar	Seq. Gages Qbar	SEE
MA	108	1.8427	1.8687	94.280
JAN	116	2.0154	2.1564	94.941
FEB	115	2.1254	2.2851	176.33
MAR	116	1.9957	2.1314	128.37
APR	116	1.7751	1.9684	177.51
MAY	117	1.7903	1.9987	148.97
JUN	117	1.3486	1.7092	295.25
JUL	118	1.2397	1.5042	209.70

AUG		119		0.8853		1.0564		338.65	
SEP		119		1.0141		1.2215		329.28	
OCT		114		0.8830		1.1730		626.73	
NOV		113		1.3760		1.6338		262.48	
DEC		113		1.5309		1.7209		151.66	

Page 1

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	91	1.6045	1.8306	96.497	1.8306	96.497	1.6591	67.413	1.6591	67.413		
JAN	95	1.8272	1.9937	107.20	1.9937	107.20	1.9335	98.171	1.9335	98.171		
FEB	95	1.9752	2.1977	109.22	2.1977	109.22	2.0502	85.763	2.0502	85.763		
MAR	95	1.9651	2.2451	118.40	2.2451	118.40	2.0317	76.883	2.0317	76.883		
APR	95	1.7416	2.0238	124.76	2.0238	124.76	1.8343	82.501	1.8343	82.501		
MAY	95	1.4873	1.7876	170.72	1.7876	170.72	1.6481	117.29	1.6481	117.29		
JUN	95	1.1686	1.5201	217.58	1.5201	217.58	1.5107	191.30	1.5107	191.30		
JUL	96	0.7879	1.2739	348.41	1.2739	348.41	1.1371	239.55	1.1371	239.55		
AUG	92	0.5611	1.0676	299.23	1.0676	299.23	0.7723	152.01	0.7723	152.01		
SEP	92	0.4741	0.8954	266.43	0.8954	266.43	0.8479	237.38	0.8479	237.38		
OCT	88	0.6051	0.9458	229.08	0.9458	229.08	0.8488	190.16	0.8488	190.16		
NOV	91	1.1463	1.3042	134.16	1.3042	134.16	1.3193	136.94	1.3193	136.94		
DEC	92	1.4401	1.5945	108.36	1.5945	108.36	1.5595	99.984	1.5595	99.984		

Table 4: Reference Gage Log-Log Regression Statistics:

Period	N	a	b	BCF	R2	SER
MA	91	-0.416	1.1019	1.1407	0.8989	0.2778
JAN	95	-0.119	0.9745	1.2866	0.8380	0.3615
FEB	95	-0.276	1.0233	1.1945	0.8290	0.3311
MAR	95	-0.489	1.0924	1.1682	0.8610	0.2961
APR	95	-0.545	1.1285	1.2427	0.8749	0.3082
MAY	95	-0.724	1.2335	1.4613	0.8598	0.3834
JUN	95	-0.651	1.1889	2.2391	0.8280	0.4591

JUL		96		-0.648		1.0872		2.4765		0.6920		0.6374	
AUG		93		-0.723		1.1165		1.9304		0.7390		0.5690	
SEP		92		-0.550		1.0427		2.8889		0.6788		0.6338	
OCT		89		-0.569		1.1281		2.2093		0.6422		0.6938	
NOV		91		-0.185		1.0129		1.5274		0.8254		0.4419	
DEC		92		-0.032		0.9208		1.3298		0.8668		0.3606	

N = Number of Reference Gages

a , b = regression coefficients; BCF = Bias Correction

R2 = R-Squared of the regression; SER = Standard Error of the Regression

Page 2

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