

MEMORANDUM

Sampling Dates: September 27-December 2, 2010
 To: *Bear Creek Watershed Association*
 From: Russell N. Clayshulte, Manager
 Re: 2010 Bear Creek Reservoir Summary Data



Table 1 Reservoir Profile 9/27/2010

Site	Time	SC	DO	Temp	pH		
TCIn; 16a	9:35	2.42	8.41	13	7.63		
BCIn; 15a	10:12	0.219	8.82	12.4	7.99		
LBCout; 45	10:45	0.274	7.21	17.4	8.25		
BCReservoir	40a/40c					Secchi m	T Depth m
1m	12:17	0.268	7.16	18.1	8.36	0.8	10.5
2m		0.268	6.46	17.8	8.35		
3m		0.268	6.65	17.8	8.32		
4m		0.267	6.75	17.7	8.3		
5m		0.267	6.54	17.7	8.29		
6m		0.267	6.45	17.7	8.3		
7m		0.267	6.59	17.6	8.29		
8m		0.267	6.55	17.6	8.29		
9m		0.267	6.08	17.6	8.25		
10m		0.265	5.86	17.7	8.17		

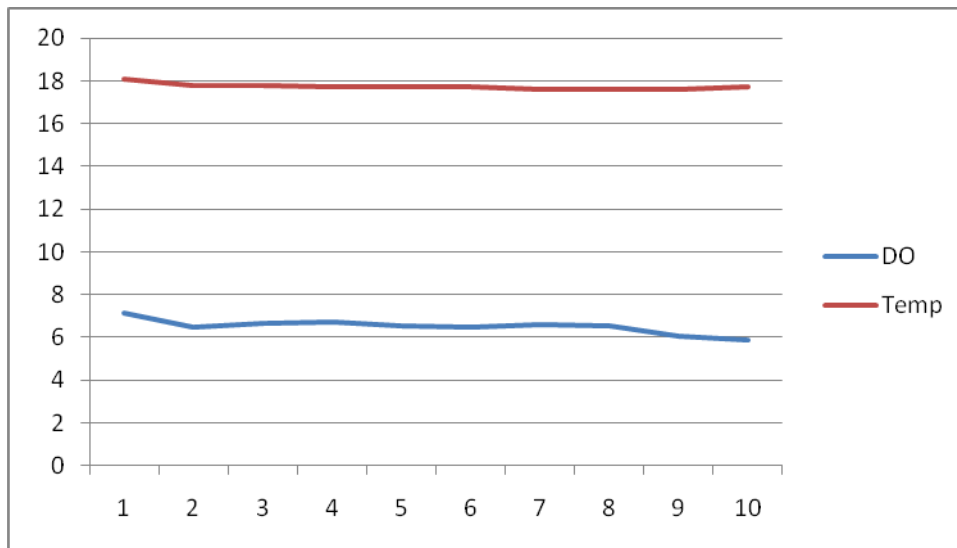


Figure 1 DO and Temperature Profile for 9/27/2010

Table 2 Coyote Gulch Field Data 9/27/10

	Time	SC	DO	Temp	pH	Flow
Upper Coyote	11:02	1.29	7.29	11.6	7.97	0.67 cfs
Lower Coyote	11:12	1.25	10.11	13.1	8.2	0.57 cfs

Table 3 Reservoir Profiles 9/27/2010

Site 41 (1)	Time	SC	DO	Temp	pH	Secchi m	T Depth m
1m	12:32	0.268	6.81	18	8.36	0.95	7.95
2m		0.268	6.61	17.8	8.35		
3m		0.268	6.45	17.8	8.35		
4m		0.268	6.43	17.7	8.34		
5m		0.268	6.36	17.7	8.31		
6m		0.268	6.17	17.7	8.29		
7m		0.269	5.91	17.7	8.22		
8m		0.27	4.95	17.6	8.12		
Site 42 (3)	Time	SC	DO	Temp	pH	Secchi m	T Depth m
1m	12:42	0.268	7.17	18.2	8.43	1	5
2m		0.268	6.49	17.9	8.45		
3m		0.268	6.75	17.8	8.4		
4m		0.268	6.64	17.8	8.4		
5m		0.268	6.17	17.7	8.33		
Site 43 (4)	Time	SC	DO	Temp	pH	Secchi m	T Depth m
1m	12:52	0.268	7.88	18.4	8.62	0.85	3.2
2m		0.268	7.49	18.3	8.59		
3m		0.269	7.45	18.3	8.59		
Site 44 (5)	Time	SC	DO	Temp	pH	Secchi m	T Depth m
1m	1:00	0.267	7.18	18.2	8.53	0.9	6.3
2m		0.267	7.25	18.2	8.56		
3m		0.267	7.08	18.2	8.58		
4m		0.267	7.26	18.1	8.57		
5m		0.267	7.28	18	8.56		
6m		0.265	6.48	17.5	8.51		

Table 4 Reservoir profiles 10/25-26/10

Date	10/25/2010	10/26/2010		reservoir			
Site	Time	SC	DO	Temp	pH		
TCIn; 16a	11:00	1.3	9.64	5.5	8.37		
BCIn; 15a	11:16	0.176	10.28	3.3	8.54		
LBCout; 45	12:05	0.309	9.12	11.3	8.77		
BCReservoir	40a/40c					Secchi m	T Depth m
1m	9:45	0.311	8.62	10	8.44	1.0	10.4
2m		0.317	8.52	9.9	8.36		
3m		0.311	8.42	9.9	8.24		
4m		0.311	8.34	9.9	8.24		
5m		0.312	8.3	9.9	8.18		
6m		0.312	8.28	9.9	8.17		
7m		0.312	8.19	9.9	8.15		
8m		0.311	8.24	9.9	8.13		
9m		0.311	8.32	9.9	8.12		
10m		0.311	8.11	9.9	8.11		

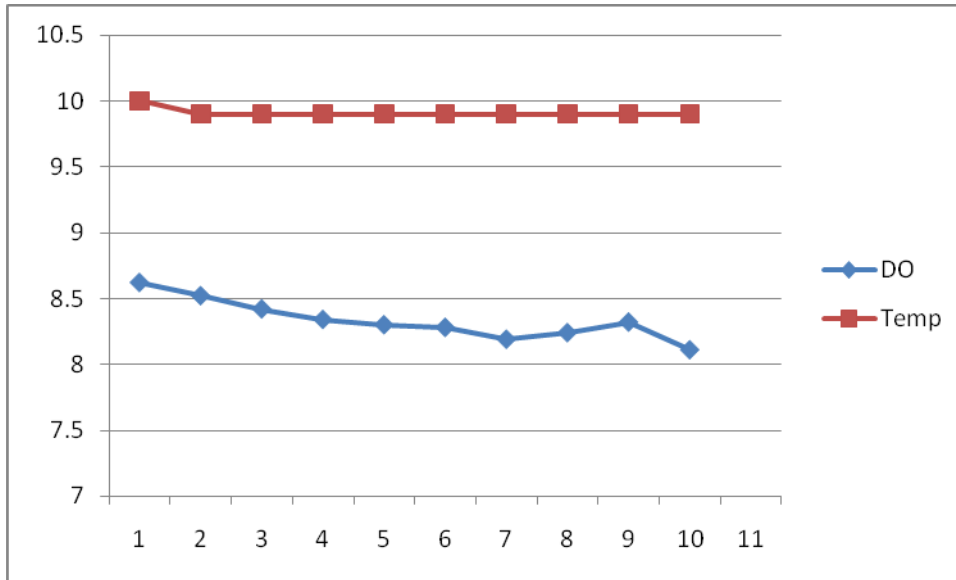


Figure 2 DO and Temperature Profile for 10/25-26/2010

Table 5 Coyote Gulch Field Data for 10/26/2010

	Time	SC	DO	Temp	pH	Flow
Upper Coyote	12:20	1.14	9.34	4.9	8.65	0.43 cfs
Lower Coyote	12:27	1.1	10.15	6.1	8.85	0.72 cfs

Table 6 Profiles 10/26/2010

Site	Time	SC	DO	Temp	pH	Secchi m	T Depth m
Site 41 (1)	1m	9:50	0.311	8.31	10	8.23	1.1
	2m		0.311	8.38	10	8.13	
	3m		0.311	8.24	10	8.16	
	4m		0.311	8.28	9.9	8.14	
	5m		0.311	8.07	9.8	8.12	
Site 42 (3)	1m	12:27	0.312	8.27	9.9	8.29	1
	2m		0.312	8.26	9.9	8.18	
	3m		0.312	8.04	9.9	8.18	
	4m		0.312	8.05	9.9	8.18	
	5m		0.312	7.82	9.9	8.15	
Site 43 (4)	1m	12:36	0.311	8.28	9.9	8.29	1.2
	2m		0.312	8.27	9.8	8.23	
	3m		0.314	8.07	9.7	8.22	
	4m		0.314	8.06	9.5	8.19	
Site 44 (5)	1m	12:47	0.311	8.31	10	8.31	1
	2m		0.31	8.33	10	8.26	
	3m		0.31	8.24	10	8.23	
	4m		0.31	8.24	10	8.24	
	5m		0.309	8.09	9.9	8.25	
	6m		0.305	8.03	9.9	8.22	

Site 39 Genesee

	Time	SC	DO	Temp	pH	Secchi m	T Depth m
1m	8:47	,174	6.68	11.2	7.77	2.3	>10
3m		0.174	6.39	11.2	7.73		
10m		0.174	6.85	11.2	7.78		

Table 7 Reservoir Profile 11/15/2010

Site	Time	SC	DO	Temp	pH		
TCIn; 16a	1:25	1.67	9.6	5.5	7.95		
BCIn; 15a	1:37	0.289	10.29	2.5	8.31		
LBCout; 45	1:50	0.345	9.09	7.5	8.5		
BCReservoir	40a/40c					Secchi m	T Depth m
1m	2:52	0.347	7.92	7.30	8.47	1.85	10.5
2m		0.349	7.44	7.10	8.4		
3m		0.351	7.44	7.10	8.35		
4m		0.35	7.20	7.10	8.22		
5m		0.348	7.36	7.10	8.28		
6m		0.349	7.31	7.00	8.24		
7m		0.349	7.34	7.00	8.22		
8m		0.349	7.07	6.90	8.19		
9m		0.349	7.07	6.60	8.2		
10m		0.349	7.22	6.60	8.16		
11m		0.35	7.14	6.60	8.15		

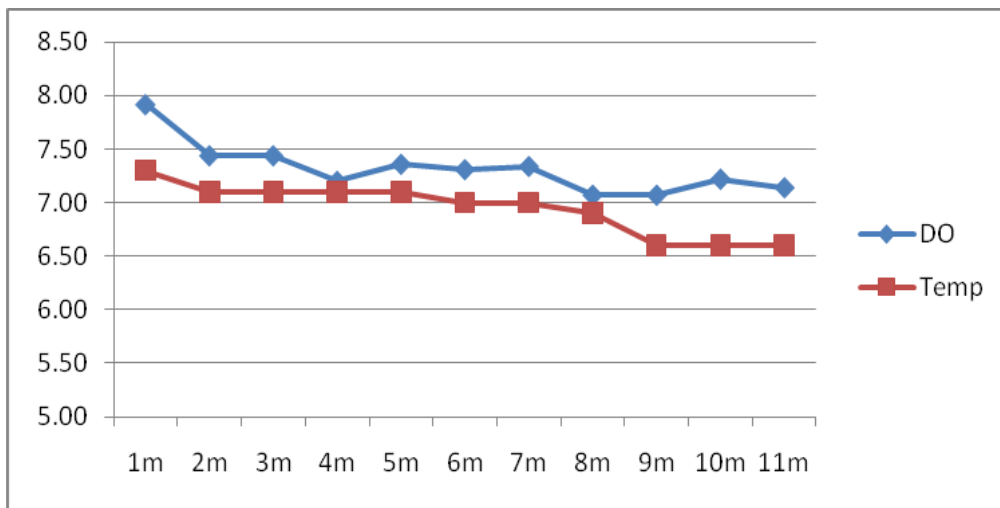


Figure 3 DO and Temperature Profile for 11/15/2010

Table 8 Coyote Gulch Field Data for 11/15/2010

	Time	SC	DO	Temp	pH	Flow
Upper Coyote	2:20	1.35	11	2.2	8.61	0.43 cfs
Lower Coyote	2:27	1.31	10.9	2.9	8.5	0.51 cfs

Table 9 Reservoir Profiles 12/2/2010

Site	Time	SC	DO	Temp	pH		
TClIn; 16a	9:30	1.85	10.41	3.2	7.15		
BCIn; 15a	9:45	0.598	10.38	3.4	7.5		
LBCOut; 45	10:10	0.36	11.6	4.2	8.2		
BCReservoir	40a/40c					Secchi m	T Depth m
1m	11:30	0.381	10.62	3.1	8.35	1.65	10.2
2m		0.381	10.55	3.2	8.31		
3m		0.382	10.5	3.2	8.27		
4m		0.382	10.4	3.2	8.26		
5m		0.383	10.21	3.2	8.33		
6m		0.382	10.11	3.3	8.34		
7m		0.385	10.12	3.4	8.35		
8m		0.389	10.02	3.4	8.37		
9m		0.394	9.96	3.4	8.34		
10m		0.444	8.3	3.6	8.17		

Table 10 Reservoir Profile 12/2/2010

Site 41 (1)	Time	SC	DO	Temp	pH	Secchi m	T Depth m
1m	11:42	0.381	11	2.9	8.45	1.5	7.85
2m		0.381	10.8	3	8.44		
3m		0.381	10.81	3.1	8.39		
4m		0.382	10.05	3.2	8.34		
5m		0.383	10.04	3.3	8.24		
6m		0.384	10	3.3	8.25		
7m		0.384	9.96	3.3	8.26		
8m		0.391	8.42	3.5	8.18		
Site 42 (3)	Time	SC	DO	Temp	pH	Secchi m	T Depth m
1m	11:51	0.382	10.88	2.6	8.26	1.5	4.5
2m		0.382	10.65	3.1	8.22		
3m		0.381	10.35	3.3	8.22		
4m		0.383	10.32	3.3	8.27		
Site 43 (4)	Time	SC	DO	Temp	pH	Secchi m	T Depth m
1m	12:00	0.382	11.11	3.3	8.56	1.5	3.5
2m		0.383	10.9	3.3	8.59		
3m		0.386	10.92	3.2	8.53		
Site 44 (5)	Time	SC	DO	Temp	pH	Secchi m	T Depth m
1m	12:05	0.381	10.52	3.4	8.37	1.45	5.1
2m		0.381	10.54	3.3	8.36		
3m		0.381	10.47	3.3	8.39		
4m		0.383	10.14	3.3	8.34		
5m		0.385	9.66	3.5	8.33		

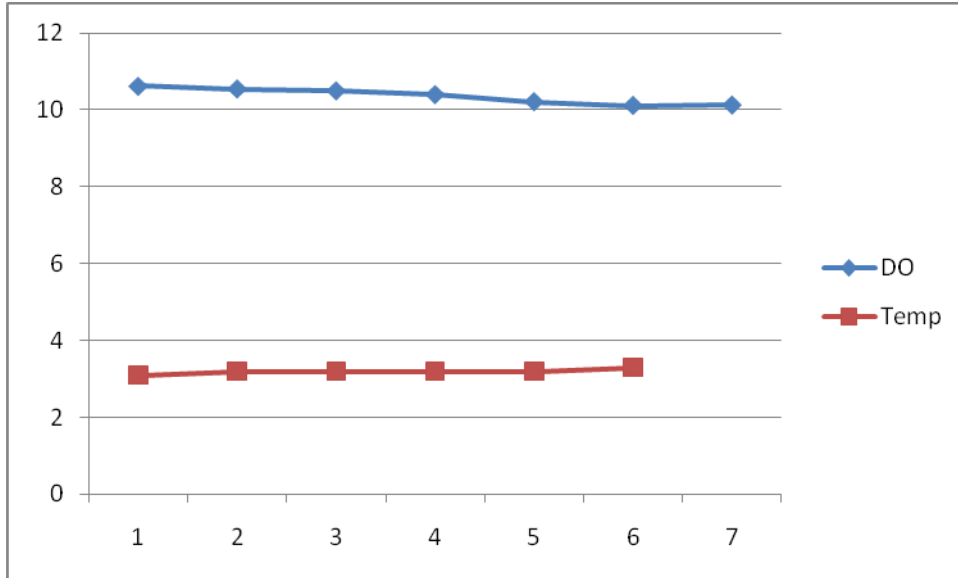


Figure 4 Temperature and DO Profiles 12/2/2010

Table Coyote Gulch Field Data for 11/15/2010

	Time	SC	DO	Temp	pH	Flow
Upper Coyote	10:30	1.37	10.28	0	7.9	0.71 cfs
Lower Coyote	10:45	1.34	12	0.5	7.81	0.55 cfs

Table 11 2010 Flows, cfs

SITE	25-Jan	22-Feb	29-Mar	26-Apr	24-May	29-Jun	13-Jul	26-Jul	8-Aug
Turkey Creek Inflow	3.2	1.8	13.5	164	46	9.2	4.1	2.9	3.6
Bear Creek Inflow	8.7	5.3	35.3	130	140	38.3	22.2	10.6	36.8
Lower Bear Creek	7.8	7.9	58.7	150	148	70.7	24.2	14.9	50

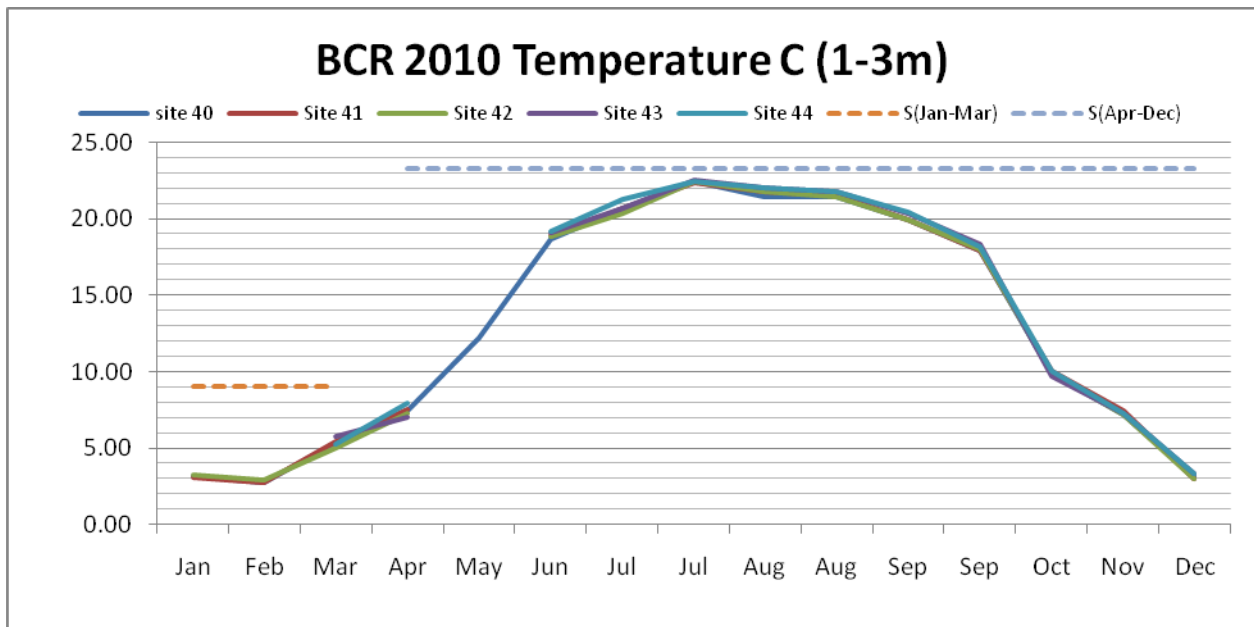


Figure 5 Bear Creek Reservoir Temperature Compliance

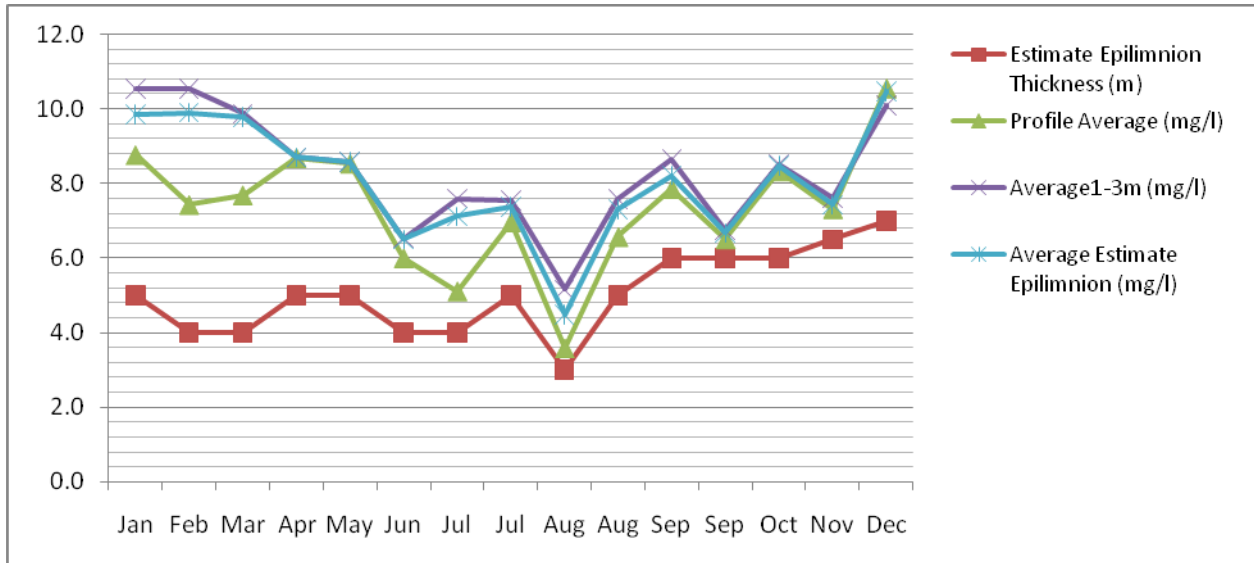


Figure 6 DO Compliance

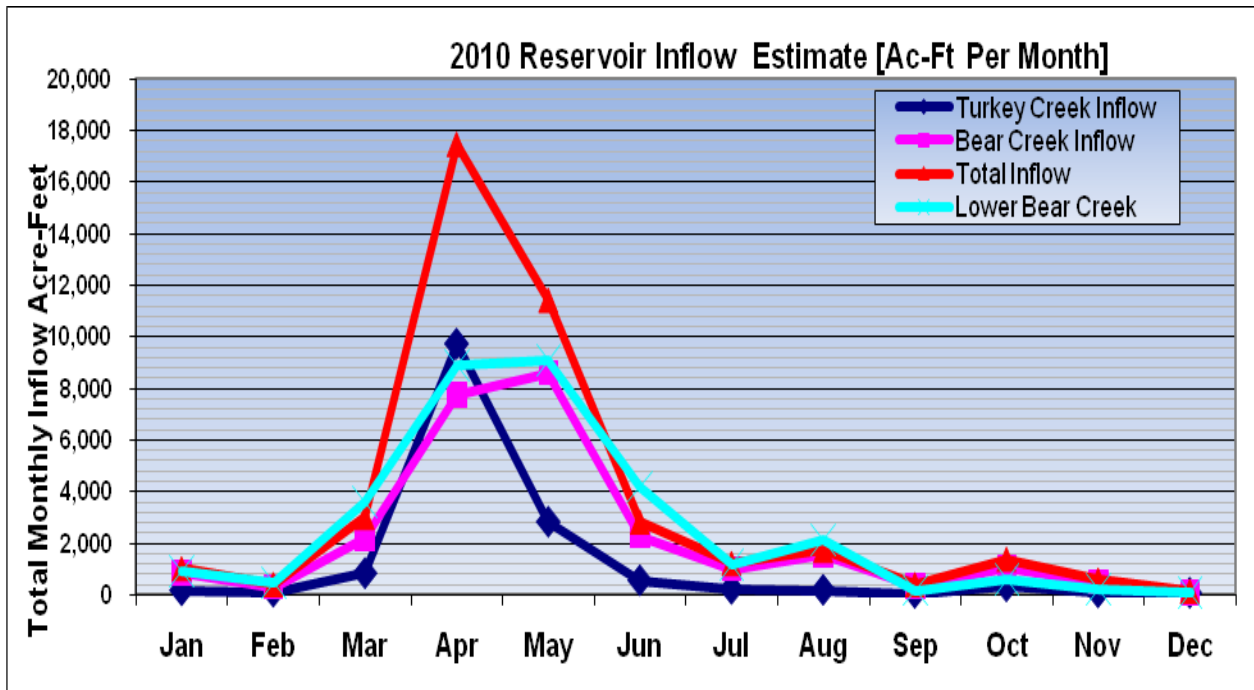


Figure 7 2010 Flow Estimate

Table 12 2010 Flow Estimate Ac-ft per month

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual ac-ft/yr
Turkey Creek	158	104	830	9,756	2,828	547	215	179	55	319	84	65	15,140
Bear Creek	861	305	2,170	7,734	8,606	2,278	1,008	1,555	349	1,067	491	74	26,498
Total Inflow	1,019	408	3,000	17,490	11,434	2,826	1,223	1,734	404	1,386	575	138	41,637
Site 45	922	454	3,608	8,924	9,098	4,206	1,174	2,155	181	616	232	93	31,663

