

## **APPENDIX N**

### **Vernon – 1D Dual Flow Analysis Tables and Figures**

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Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - American Shad spawning persistent and persistent quality habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	130.27	130.26	130.19	129.86	128.79	127.66	126.65	125.54	123.79	120.79	118.47
1800	138.13	138.11	137.99	137.63	136.49	135.31	134.20	132.95	130.81	127.19	124.59
2000	145.70	145.69	145.54	145.15	143.92	142.62	141.37	139.92	137.45	133.28	130.46
2250	154.81		154.55	154.06	152.62	151.12	149.66	147.99	145.17	140.42	137.37
2500	162.86		162.50	161.91	160.25	158.54	156.88	154.98	151.90	146.78	143.55
2750	169.97		169.54	168.83	166.95	165.04	163.22	161.16	157.89	152.56	149.17
3000	176.36		175.86	175.01	172.93	170.87	168.92	166.75	163.34	157.82	154.24
3500	186.44		185.93	184.91	182.61	180.38	178.30	175.96	172.31	166.43	162.59
4000	194.34		194.09	192.99	190.55	188.20	185.98	183.49	179.63	173.46	169.45
5000	207.13			206.44	203.81	201.28	198.89	196.19	192.06	185.41	181.20
6000	217.54				215.38	212.70	210.18	207.33	202.93	195.87	191.50

Base Flows	Base Flow AWS	Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	111.13	111.12	111.05	110.73	109.16	107.72	106.49	105.17	103.15	98.93	96.12
1800	118.37	118.35	118.23	117.87	116.24	114.75	113.42	111.96	109.57	104.74	101.66
2000	125.81	125.80	125.65	125.26	123.53	121.92	120.46	118.81	115.99	110.63	107.35
2250	134.00		133.75	133.26	131.32	129.53	127.86	125.99	122.83	116.93	113.42
2500	142.11		141.75	141.17	139.02	137.02	135.16	133.07	129.67	123.32	119.64
2750	148.55		148.13	147.43	145.08	142.88	140.87	138.63	135.05	128.51	124.68
3000	153.75		153.26	152.43	149.88	147.55	145.41	143.07	139.37	132.55	128.54
3500	160.88		160.39	159.40	156.64	154.16	151.90	149.30	145.37	138.21	133.97
4000	166.05		165.81	164.73	161.85	159.25	156.86	154.11	149.90	142.48	138.10
5000	175.11			174.44	171.37	168.60	166.04	163.09	158.63	150.78	146.22
6000	183.68				181.07	178.14	175.45	172.27	167.46	159.25	154.54

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	0	0	0	1	2	3	4	5	7	9
1800	0	0	0	0	1	2	3	4	5	8	10
2000	0	0	0	0	1	2	3	4	6	9	10
2250	0	0	0	0	1	2	3	4	6	9	11
2500	0	0	0	1	2	3	4	5	7	10	12
2750	0	0	0	1	2	3	4	5	7	10	12
3000	0	0	0	1	2	3	4	5	7	11	13
3500	0	0	0	1	2	3	4	6	8	11	13
4000	0	0	0	1	2	3	4	6	8	11	13
5000	0	0	0	0	2	3	4	5	7	10	13
6000	0	0	0	0	1	2	3	5	7	10	12

Base Flows	% at Base Flow	% Loss Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	0	0	0	2	3	4	5	7	11	14
1800	0	0	0	0	2	3	4	5	7	12	14
2000	0	0	0	0	2	3	4	6	8	12	15
2250	0	0	0	1	2	3	5	6	8	13	15
2500	0	0	0	1	2	4	5	6	9	13	16
2750	0	0	0	1	2	4	5	7	9	13	16
3000	0	0	0	1	3	4	5	7	9	14	16
3500	0	0	0	1	3	4	6	7	10	14	17
4000	0	0	0	1	3	4	6	7	10	14	17
5000	0	0	0	0	2	4	5	7	9	14	16
6000	0	0	0	0	1	3	4	6	9	13	16

Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - CR American Shad spawning persistent and persistent quality habitat.

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	140.08	140.05	139.90	139.37	137.57	135.51	133.48	131.40	128.61	124.93	122.59
1800	148.07	148.04	147.86	147.29	145.43	143.33	141.20	138.99	135.86	131.66	129.15
2000	155.77	155.75	155.55	154.97	153.04	150.87	148.65	146.24	142.82	138.19	135.51
2250	164.99		164.75	164.10	161.99	159.65	157.27	154.67	150.86	145.74	142.90
2500	173.11		172.77	172.03	169.75	167.22	164.63	161.81	157.76	152.38	149.36
2750	180.26		179.88	179.04	176.55	173.85	171.13	168.20	164.04	158.49	155.26
3000	186.70		186.28	185.34	182.73	179.96	177.16	174.16	169.87	164.14	160.66
3500	197.68		197.34	196.32	193.55	190.62	187.69	184.52	180.02	173.93	170.14
4000	207.25		207.07	205.98	203.09	200.06	197.02	193.72	189.00	182.52	178.50
5000	192.47			191.87	189.29	186.53	183.64	180.42	175.73	168.87	164.80
6000	237.79				235.22	231.80	228.40	224.66	219.22	211.37	206.88

Base Flows	Base Flow AWS	CR Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	114.34	114.31	114.16	113.64	111.11	108.38	105.93	103.26	100.28	95.60	93.01
1800	120.75	120.72	120.54	119.97	117.39	114.61	112.08	109.27	105.97	100.80	98.05
2000	127.43	127.41	127.21	126.63	123.98	121.14	118.51	115.51	111.78	106.21	103.31
2250	135.20		134.95	134.31	131.48	128.48	125.69	122.50	118.40	112.39	109.33
2500	143.75		143.42	142.68	139.69	136.50	133.52	130.12	125.81	119.41	116.18
2750	149.76		149.39	148.56	145.37	142.03	138.92	135.43	131.01	124.48	121.05
3000	154.40		154.00	153.08	149.78	146.37	143.21	139.64	135.13	128.28	124.61
3500	161.11		160.79	159.81	156.37	152.82	149.52	145.66	140.96	133.76	129.84
4000	167.02		166.84	165.79	162.24	158.59	155.19	151.21	146.17	138.64	134.50
5000	178.43			177.73	173.99	170.16	166.57	162.35	157.00	148.75	144.36
6000	189.52				186.28	182.26	178.50	173.97	168.11	159.33	154.75

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	0	0	1	2	3	5	6	8	11	12
1800	0	0	0	1	2	3	5	6	8	11	13
2000	0	0	0	1	2	3	5	6	8	11	13
2250	0		0	1	2	3	5	6	9	12	13
2500	0		0	1	2	3	5	7	9	12	14
2750	0		0	1	2	4	5	7	9	12	14
3000	0		0	1	2	4	5	7	9	12	14
3500	0		0	1	2	4	5	7	9	12	14
4000	0		0	1	2	3	5	7	9	12	14
5000	0			0	2	3	5	6	9	12	14
6000	0				1	3	4	6	8	11	13

Base Flows	% at Base Flow	% Loss CR Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	0	0	1	3	5	7	10	12	16	19
1800	0	0	0	1	3	5	7	10	12	17	19
2000	0	0	0	1	3	5	7	9	12	17	19
2250	0		0	1	3	5	7	9	12	17	19
2500	0		0	1	3	5	7	9	12	17	19
2750	0		0	1	3	5	7	10	13	17	19
3000	0		0	1	3	5	7	10	12	17	19
3500	0		0	1	3	5	7	10	13	17	19
4000	0		0	1	3	5	7	9	12	17	19
5000	0			0	2	5	7	9	12	17	19
6000	0				2	4	6	8	11	16	18



Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - Fallfish fry persistent and persistent quality habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	95.05	78.95	39.28	28.56	15.93	9.74	6.36	4.07	1.81	0.08	0.00
1800	95.90	83.81	43.14	32.18	18.64	11.72	7.86	5.15	2.25	0.12	0.00
2000	95.22	87.54	46.26	34.80	20.50	13.06	8.83	5.73	2.47	0.16	0.00
2250	92.25		49.76	36.84	21.78	14.01	9.49	6.06	2.62	0.18	0.00
2500	88.73		51.75	38.57	23.08	14.91	10.05	6.42	2.81	0.25	0.01
2750	84.84		53.81	40.31	24.18	15.55	10.54	6.74	2.97	0.29	0.02
3000	81.94		56.41	42.42	25.61	16.65	11.32	7.21	3.26	0.38	0.04
3500	77.01		61.02	46.12	28.24	18.59	12.64	8.10	3.80	0.63	0.15
4000	70.94		64.27	48.87	30.52	20.29	13.92	9.10	4.47	0.92	0.25
5000	61.77			54.46	34.57	23.35	16.31	10.93	5.56	1.42	0.54
6000	54.70				39.13	27.09	19.33	13.13	7.08	2.29	1.08

Base Flows	Base Flow AWS	Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	74.13	56.67	15.08	10.88	3.51	1.09	0.13	0.00	0.00	0.00	0.00
1800	73.67	60.32	17.43	13.16	5.05	2.11	0.54	0.00	0.00	0.00	0.00
2000	72.19	63.43	19.78	15.23	6.44	3.02	1.26	0.00	0.00	0.00	0.00
2250	67.58		22.77	17.04	7.78	4.16	1.95	0.00	0.00	0.00	0.00
2500	62.07		23.67	17.86	8.14	4.43	2.09	0.00	0.00	0.00	0.00
2750	55.99		24.70	18.74	8.58	4.70	2.23	0.00	0.00	0.00	0.00
3000	51.17		25.84	19.67	9.07	4.97	2.39	0.00	0.00	0.00	0.00
3500	43.99		29.12	21.42	10.08	5.53	2.82	0.00	0.00	0.00	0.00
4000	36.61		31.37	23.18	11.47	6.36	3.26	0.12	0.00	0.00	0.00
5000	31.05			27.45	13.28	7.59	4.01	0.50	0.00	0.00	0.00
6000	29.16				17.37	10.03	5.24	1.02	0.11	0.00	0.00

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	17	59	70	83	90	93	96	98	100	100
1800	0	13	55	66	81	88	92	95	98	100	100
2000	0	8	51	63	78	86	91	94	97	100	100
2250	0		46	60	76	85	90	93	97	100	100
2500	0		42	57	74	83	89	93	97	100	100
2750	0		37	52	71	82	88	92	96	100	100
3000	0		31	48	69	80	86	91	96	100	100
3500	0		21	40	63	76	84	89	95	99	100
4000	0		9	31	57	71	80	87	94	99	100
5000	0			12	44	62	74	82	91	98	99
6000	0				28	50	65	76	87	96	98

Base Flows	% at Base Flow	% Loss Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	24	80	85	95	99	100	100	100	100	100
1800	0	18	76	82	93	97	99	100	100	100	100
2000	0	12	73	79	91	96	98	100	100	100	100
2250	0		66	75	88	94	97	100	100	100	100
2500	0		62	71	87	93	97	100	100	100	100
2750	0		56	67	85	92	96	100	100	100	100
3000	0		50	62	82	90	95	100	100	100	100
3500	0		34	51	77	87	94	100	100	100	100
4000	0		14	37	69	83	91	100	100	100	100
5000	0			12	57	76	87	98	100	100	100
6000	0				40	66	82	96	100	100	100

Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - CR Fallfish fry persistent and persistent quality habitat.

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	137.14	116.18	56.80	40.73	22.25	13.70	8.97	5.63	2.67	0.12	0.00
1800	137.53	122.58	61.70	45.29	25.64	16.13	10.81	7.04	3.28	0.18	0.00
2000	136.15	127.87	66.13	48.94	28.19	17.96	12.11	7.82	3.63	0.24	0.00
2250	131.49		69.40	51.27	29.74	19.01	12.84	8.21	3.88	0.28	0.00
2500	126.19		72.01	53.46	31.36	20.10	13.50	8.68	4.15	0.39	0.02
2750	119.80		74.34	55.46	32.53	20.74	13.98	9.06	4.36	0.45	0.03
3000	115.48		78.19	58.52	34.59	22.26	15.12	9.89	4.91	0.65	0.08
3500	107.94		84.68	63.37	37.91	24.63	16.87	11.15	5.68	0.95	0.22
4000	98.78		89.11	66.80	40.49	26.63	18.39	12.23	6.32	1.25	0.35
5000	84.20			73.49	45.08	30.07	20.93	14.09	7.43	1.83	0.69
6000	74.00				51.18	34.78	24.78	16.91	9.28	2.87	1.41

Base Flows	Base Flow AWS	CR Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	113.12	87.45	23.28	16.54	5.26	1.59	0.20	0.00	0.00	0.00	0.00
1800	111.41	92.64	26.43	19.58	7.27	2.83	0.79	0.00	0.00	0.00	0.00
2000	108.26	97.17	29.84	22.61	9.31	4.16	1.83	0.00	0.00	0.00	0.00
2250	100.71		32.78	24.86	11.26	5.83	2.85	0.00	0.00	0.00	0.00
2500	92.12		34.07	26.02	11.79	6.22	3.05	0.00	0.00	0.00	0.00
2750	82.23		35.38	27.30	12.42	6.61	3.24	0.00	0.00	0.00	0.00
3000	75.60		37.48	28.99	13.32	7.18	3.48	0.00	0.00	0.00	0.00
3500	64.22		42.55	31.67	15.03	8.19	4.23	0.00	0.00	0.00	0.00
4000	54.94		46.51	34.40	16.99	9.41	4.82	0.23	0.00	0.00	0.00
5000	45.84			40.34	19.35	10.85	5.60	0.49	0.00	0.00	0.00
6000	42.41				23.10	12.66	7.04	0.91	0.13	0.00	0.00

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	15	59	70	84	90	93	96	98	100	100
1800	0	11	55	67	81	88	92	95	98	100	100
2000	0	6	51	64	79	87	91	94	97	100	100
2250	0		47	61	77	86	90	94	97	100	100
2500	0		43	58	75	84	89	93	97	100	100
2750	0		38	54	73	83	88	92	96	100	100
3000	0		32	49	70	81	87	91	96	99	100
3500	0		22	41	65	77	84	90	95	99	100
4000	0		10	32	59	73	81	88	94	99	100
5000	0			13	46	64	75	83	91	98	99
6000	0				31	53	67	77	87	96	98

Base Flows	% at Base Flow	% Loss CR Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	23	79	85	95	99	100	100	100	100	100
1800	0	17	76	82	93	97	99	100	100	100	100
2000	0	10	72	79	91	96	98	100	100	100	100
2250	0		67	75	89	94	97	100	100	100	100
2500	0		63	72	87	93	97	100	100	100	100
2750	0		57	67	85	92	96	100	100	100	100
3000	0		50	62	82	91	95	100	100	100	100
3500	0		34	51	77	87	93	100	100	100	100
4000	0		15	37	69	83	91	100	100	100	100
5000	0			12	58	76	88	99	100	100	100
6000	0				46	70	83	98	100	100	100

Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - Fallfish spawning persistent and persistent quality habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	53.07	47.69	25.87	16.66	7.39	3.60	1.96	1.02	0.32	0.00	0.00
1800	55.19	51.41	28.71	18.90	9.02	4.83	2.97	1.74	0.56	0.00	0.00
2000	57.65	55.67	32.06	21.70	10.96	6.22	4.00	2.43	0.79	0.00	0.00
2250	60.92		36.76	25.49	13.58	8.07	5.35	3.29	1.15	0.00	0.00
2500	64.24		41.77	29.51	16.52	10.26	6.95	4.37	1.78	0.00	0.00
2750	66.96		46.56	33.40	19.60	12.64	8.76	5.70	2.54	0.01	0.00
3000	68.47		50.56	36.85	22.45	14.97	10.44	6.89	2.93	0.04	0.00
3500	69.37		57.29	42.90	27.43	18.71	12.73	8.05	3.37	0.12	0.00
4000	67.51		61.85	46.92	30.24	20.61	13.92	8.82	3.79	0.25	0.02
5000	61.02			53.33	34.69	23.78	16.35	10.53	4.79	0.66	0.20
6000	51.51				37.55	26.19	18.33	11.96	5.61	0.99	0.35

Base Flows	Base Flow AWS	Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	37.93	32.55	10.79	4.33	1.25	0.12	0.00	0.00	0.00	0.00	0.00
1800	39.37	35.05	12.22	4.71	1.44	0.12	0.00	0.00	0.00	0.00	0.00
2000	39.26	37.71	13.76	5.95	2.20	0.43	0.00	0.00	0.00	0.00	0.00
2250	42.51		17.16	7.90	3.35	0.97	0.00	0.00	0.00	0.00	0.00
2500	46.47		22.39	11.85	6.14	3.02	0.35	0.00	0.00	0.00	0.00
2750	48.84		26.01	14.49	8.32	4.80	0.70	0.00	0.00	0.00	0.00
3000	51.23		29.57	17.28	10.20	6.41	1.53	0.00	0.00	0.00	0.00
3500	53.38		37.81	24.27	15.85	10.97	4.24	0.00	0.00	0.00	0.00
4000	48.94		42.21	28.04	17.97	12.25	5.00	0.15	0.00	0.00	0.00
5000	39.92			34.17	20.81	14.22	6.42	0.73	0.00	0.00	0.00
6000	32.51				23.00	16.05	7.93	1.91	0.13	0.00	0.00

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	10	51	69	86	93	96	98	99	100	100
1800	0	7	48	66	84	91	95	97	99	100	100
2000	0	3	44	62	81	89	93	96	99	100	100
2250	0		40	58	78	87	91	95	98	100	100
2500	0		35	54	74	84	89	93	97	100	100
2750	0		30	50	71	81	87	91	96	100	100
3000	0		26	46	67	78	85	90	96	100	100
3500	0		17	38	60	73	82	88	95	100	100
4000	0		8	30	55	69	79	87	94	100	100
5000	0			13	43	61	73	83	92	99	100
6000	0				27	49	64	77	89	98	99

Base Flows	% at Base Flow	% Loss Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	14	72	89	97	100	100	100	100	100	100
1800	0	11	69	88	96	100	100	100	100	100	100
2000	0	4	65	85	94	99	100	100	100	100	100
2250	0		60	81	92	98	100	100	100	100	100
2500	0		52	75	87	93	99	100	100	100	100
2750	0		47	70	83	90	99	100	100	100	100
3000	0		42	66	80	87	97	100	100	100	100
3500	0		29	55	70	79	92	100	100	100	100
4000	0		14	43	63	75	90	100	100	100	100
5000	0			14	48	64	84	98	100	100	100
6000	0				29	51	76	94	100	100	100

Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - CR Fallfish spawning persistent and persistent quality habitat.

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	79.34	71.74	39.50	25.44	11.24	5.58	3.05	1.59	0.48	0.00	0.00
1800	82.67	77.30	43.75	28.74	13.58	7.33	4.50	2.64	0.84	0.00	0.00
2000	86.48	83.65	48.71	32.82	16.29	9.30	5.99	3.64	1.20	0.00	0.00
2250	91.43		55.57	38.23	19.88	11.97	7.96	4.89	1.72	0.00	0.00
2500	96.24		62.70	43.76	23.97	15.08	10.23	6.46	2.65	0.00	0.00
2750	100.02		69.43	49.01	28.24	18.38	12.79	8.37	3.76	0.02	0.00
3000	102.01		74.96	53.70	32.17	21.66	15.22	10.13	4.35	0.07	0.00
3500	102.88		84.41	62.11	39.13	27.01	18.51	11.79	5.01	0.19	0.00
4000	99.99		91.26	68.17	43.22	29.80	20.25	12.96	5.66	0.40	0.03
5000	89.87			77.89	49.90	34.55	23.84	15.39	7.07	1.05	0.33
6000	75.31				54.38	38.17	26.79	17.59	8.34	1.58	0.60

Base Flows	Base Flow AWS	CR Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	57.21	49.32	16.24	6.35	1.84	0.18	0.00	0.00	0.00	0.00	0.00
1800	59.54	53.11	18.44	6.89	2.12	0.18	0.00	0.00	0.00	0.00	0.00
2000	59.44	57.14	20.73	8.71	3.22	0.63	0.00	0.00	0.00	0.00	0.00
2250	64.52		25.96	11.56	4.90	1.41	0.00	0.00	0.00	0.00	0.00
2500	70.17		33.32	16.95	8.99	4.42	0.52	0.00	0.00	0.00	0.00
2750	73.55		38.52	20.63	12.17	7.03	1.03	0.00	0.00	0.00	0.00
3000	76.87		43.35	24.32	14.92	9.37	2.24	0.00	0.00	0.00	0.00
3500	79.37		54.70	33.79	22.71	16.01	6.19	0.00	0.00	0.00	0.00
4000	71.36		60.51	38.68	25.46	17.88	7.29	0.21	0.00	0.00	0.00
5000	55.39			46.65	29.10	20.52	9.20	1.06	0.00	0.00	0.00
6000	44.04				31.89	22.97	11.25	2.79	0.20	0.00	0.00

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	10	50	68	86	93	96	98	99	100	100
1800	0	6	47	65	84	91	95	97	99	100	100
2000	0	3	44	62	81	89	93	96	99	100	100
2250	0		39	58	78	87	91	95	98	100	100
2500	0		35	55	75	84	89	93	97	100	100
2750	0		31	51	72	82	87	92	96	100	100
3000	0		27	47	68	79	85	90	96	100	100
3500	0		18	40	62	74	82	89	95	100	100
4000	0		9	32	57	70	80	87	94	100	100
5000	0			13	44	62	73	83	92	99	100
6000	0				28	49	64	77	89	98	99

Base Flows	% at Base Flow	% Loss CR Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	14	72	89	97	100	100	100	100	100	100
1800	0	11	69	88	96	100	100	100	100	100	100
2000	0	4	65	85	95	99	100	100	100	100	100
2250	0		60	82	92	98	100	100	100	100	100
2500	0		53	76	87	94	99	100	100	100	100
2750	0		48	72	83	90	99	100	100	100	100
3000	0		44	68	81	88	97	100	100	100	100
3500	0		31	57	71	80	92	100	100	100	100
4000	0		15	46	64	75	90	100	100	100	100
5000	0			16	47	63	83	98	100	100	100
6000	0				28	48	74	94	100	100	100

Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - Longnose Dace fry persistent and persistent quality habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	59.35	50.63	22.43	14.64	7.29	2.71	0.47	0.11	0.01	0.00	0.00
1800	62.83	56.13	25.77	17.08	8.74	3.47	0.55	0.11	0.01	0.00	0.00
2000	65.61	61.30	28.77	19.43	10.06	4.02	0.61	0.11	0.01	0.00	0.00
2250	68.46		33.48	22.45	11.57	4.51	0.67	0.11	0.01	0.00	0.00
2500	70.24		37.42	25.10	12.96	4.92	0.80	0.11	0.01	0.00	0.00
2750	70.43		40.78	27.45	14.08	5.29	0.92	0.12	0.01	0.00	0.00
3000	70.40		44.49	30.10	15.22	5.82	1.15	0.15	0.01	0.00	0.00
3500	68.20		50.96	34.69	17.48	6.86	1.63	0.27	0.01	0.00	0.00
4000	62.49		55.17	37.66	19.11	7.80	2.21	0.46	0.01	0.00	0.00
5000	51.63			42.94	22.80	10.14	3.42	0.95	0.07	0.00	0.00
6000	42.71				26.77	12.60	5.03	1.82	0.30	0.00	0.00

Base Flows	Base Flow AWS	Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	36.44	28.46	4.31	1.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	39.98	34.52	6.70	2.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	42.61	39.43	8.76	4.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2250	45.70		12.17	6.44	0.13	0.00	0.00	0.00	0.00	0.00	0.00
2500	47.74		16.12	8.32	0.54	0.00	0.00	0.00	0.00	0.00	0.00
2750	48.28		19.56	10.80	1.27	0.00	0.00	0.00	0.00	0.00	0.00
3000	47.97		23.08	12.36	1.82	0.00	0.00	0.00	0.00	0.00	0.00
3500	46.07		29.34	16.71	3.75	0.00	0.00	0.00	0.00	0.00	0.00
4000	40.97		33.79	18.98	4.66	0.00	0.00	0.00	0.00	0.00	0.00
5000	30.74			22.79	6.47	0.93	0.00	0.00	0.00	0.00	0.00
6000	23.27				9.14	1.60	0.13	0.00	0.00	0.00	0.00

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	15	62	75	88	95	99	100	100	100	100
1800	0	11	59	73	86	94	99	100	100	100	100
2000	0	7	56	70	85	94	99	100	100	100	100
2250	0		51	67	83	93	99	100	100	100	100
2500	0		47	64	82	93	99	100	100	100	100
2750	0		42	61	80	92	99	100	100	100	100
3000	0		37	57	78	92	98	100	100	100	100
3500	0		25	49	74	90	98	100	100	100	100
4000	0		12	40	69	88	96	99	100	100	100
5000	0			17	56	80	93	98	100	100	100
6000	0				37	71	88	96	99	100	100

Base Flows	% at Base Flow	% Loss Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	22	88	96	100	100	100	100	100	100	100
1800	0	14	83	93	100	100	100	100	100	100	100
2000	0	7	79	90	100	100	100	100	100	100	100
2250	0		73	86	100	100	100	100	100	100	100
2500	0		66	83	99	100	100	100	100	100	100
2750	0		59	78	97	100	100	100	100	100	100
3000	0		52	74	96	100	100	100	100	100	100
3500	0		36	64	92	100	100	100	100	100	100
4000	0		18	54	89	100	100	100	100	100	100
5000	0			26	79	97	100	100	100	100	100
6000	0				61	93	99	100	100	100	100

Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - CR Longnose Dace fry persistent and persistent quality habitat.

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	87.37	75.48	32.56	20.64	10.01	4.10	0.71	0.17	0.01	0.00	0.00
1800	92.24	83.47	37.12	23.76	11.95	5.17	0.84	0.17	0.01	0.00	0.00
2000	96.23	91.14	41.34	26.95	13.93	6.06	0.95	0.17	0.01	0.00	0.00
2250	99.94		46.76	30.70	16.06	6.77	1.06	0.17	0.01	0.00	0.00
2500	102.04		51.97	34.46	18.09	7.39	1.28	0.17	0.01	0.00	0.00
2750	101.70		56.25	37.48	19.59	7.88	1.46	0.18	0.01	0.00	0.00
3000	101.76		62.07	41.62	21.45	8.78	1.87	0.24	0.01	0.00	0.00
3500	97.52		71.38	48.11	24.73	10.30	2.53	0.39	0.01	0.00	0.00
4000	88.74		77.87	52.52	27.10	11.56	3.24	0.69	0.01	0.00	0.00
5000	72.73			60.30	32.01	14.57	4.84	1.32	0.09	0.00	0.00
6000	60.54				37.81	18.07	7.09	2.68	0.60	0.00	0.00

Base Flows	Base Flow AWS	CR Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	56.24	44.14	6.37	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	61.83	53.61	9.87	4.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	66.37	61.51	12.88	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2250	71.23		17.49	9.32	0.20	0.00	0.00	0.00	0.00	0.00	0.00
2500	73.45		22.34	12.08	0.80	0.00	0.00	0.00	0.00	0.00	0.00
2750	73.60		26.80	15.35	1.86	0.00	0.00	0.00	0.00	0.00	0.00
3000	72.65		31.95	17.45	2.66	0.00	0.00	0.00	0.00	0.00	0.00
3500	68.12		41.13	23.37	5.47	0.00	0.00	0.00	0.00	0.00	0.00
4000	60.01		48.61	27.13	6.93	0.00	0.00	0.00	0.00	0.00	0.00
5000	45.19			33.58	9.59	1.41	0.00	0.00	0.00	0.00	0.00
6000	35.14				13.61	2.46	0.20	0.00	0.00	0.00	0.00

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	14	63	76	89	95	99	100	100	100	100
1800	0	10	60	74	87	94	99	100	100	100	100
2000	0	5	57	72	86	94	99	100	100	100	100
2250	0		53	69	84	93	99	100	100	100	100
2500	0		49	66	82	93	99	100	100	100	100
2750	0		45	63	81	92	99	100	100	100	100
3000	0		39	59	79	91	98	100	100	100	100
3500	0		27	51	75	89	97	100	100	100	100
4000	0		12	41	69	87	96	99	100	100	100
5000	0			17	56	80	93	98	100	100	100
6000	0				38	70	88	96	99	100	100

Base Flows	% at Base Flow	% Loss CR Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	22	89	96	100	100	100	100	100	100	100
1800	0	13	84	93	100	100	100	100	100	100	100
2000	0	7	81	90	100	100	100	100	100	100	100
2250	0		75	87	100	100	100	100	100	100	100
2500	0		70	84	99	100	100	100	100	100	100
2750	0		64	79	97	100	100	100	100	100	100
3000	0		56	76	96	100	100	100	100	100	100
3500	0		40	66	92	100	100	100	100	100	100
4000	0		19	55	88	100	100	100	100	100	100
5000	0			26	79	97	100	100	100	100	100
6000	0				61	93	99	100	100	100	100

Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - Sea Lamprey spawning persistent and persistent quality habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	4.30	4.09	3.15	1.75	0.11	0.00	0.00	0.00	0.00	0.00	0.00
1800	5.40	5.22	4.15	2.49	0.22	0.00	0.00	0.00	0.00	0.00	0.00
2000	6.57	6.47	5.24	3.34	0.36	0.00	0.00	0.00	0.00	0.00	0.00
2250	8.13		6.75	4.54	0.59	0.00	0.00	0.00	0.00	0.00	0.00
2500	9.81		8.43	5.89	0.94	0.02	0.00	0.00	0.00	0.00	0.00
2750	11.61		10.12	7.23	1.38	0.05	0.00	0.00	0.00	0.00	0.00
3000	13.23		11.69	8.42	1.88	0.12	0.00	0.00	0.00	0.00	0.00
3500	16.31		14.58	10.55	2.94	0.44	0.00	0.00	0.00	0.00	0.00
4000	18.22		17.08	12.55	4.12	0.98	0.01	0.00	0.00	0.00	0.00
5000	18.91			16.22	6.41	1.95	0.10	0.00	0.00	0.00	0.00
6000	16.53				7.61	2.54	0.49	0.05	0.00	0.00	0.00

Base Flows	Base Flow AWS	Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2250	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2500	0.14		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2750	0.60		0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3000	1.12		0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3500	2.28		1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4000	3.00		2.19	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5000	4.09			2.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6000	5.04				0.73	0.00	0.00	0.00	0.00	0.00	0.00

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	5	27	59	97	100	100	100	100	100	100
1800	0	3	23	54	96	100	100	100	100	100	100
2000	0	2	20	49	95	100	100	100	100	100	100
2250	0		17	44	93	100	100	100	100	100	100
2500	0		14	40	90	100	100	100	100	100	100
2750	0		13	38	88	100	100	100	100	100	100
3000	0		12	36	86	99	100	100	100	100	100
3500	0		11	35	82	97	100	100	100	100	100
4000	0		6	31	77	95	100	100	100	100	100
5000	0			14	66	90	99	100	100	100	100
6000	0				54	85	97	100	100	100	100

Base Flows	% at Base Flow	% Loss Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	0	0	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0	0	0
2250	0		0	0	0	0	0	0	0	0	0
2500	0		100	100	100	100	100	100	100	100	100
2750	0		76	100	100	100	100	100	100	100	100
3000	0		60	100	100	100	100	100	100	100	100
3500	0		33	100	100	100	100	100	100	100	100
4000	0		27	90	100	100	100	100	100	100	100
5000	0			27	100	100	100	100	100	100	100
6000	0				86	100	100	100	100	100	100

Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - CR Sea Lamprey spawning persistent and persistent quality habitat.

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	6.52	6.18	4.74	2.60	0.16	0.00	0.00	0.00	0.00	0.00	0.00
1800	8.19	7.90	6.26	3.74	0.33	0.00	0.00	0.00	0.00	0.00	0.00
2000	9.98	9.82	7.94	5.04	0.53	0.00	0.00	0.00	0.00	0.00	0.00
2250	12.34		10.23	6.88	0.88	0.00	0.00	0.00	0.00	0.00	0.00
2500	14.87		12.76	8.92	1.40	0.03	0.00	0.00	0.00	0.00	0.00
2750	17.56		15.29	10.93	2.07	0.10	0.00	0.00	0.00	0.00	0.00
3000	19.98		17.64	12.70	2.84	0.23	0.00	0.00	0.00	0.00	0.00
3500	24.57		21.98	15.91	4.50	0.75	0.00	0.00	0.00	0.00	0.00
4000	27.54		25.84	18.98	6.39	1.67	0.02	0.00	0.00	0.00	0.00
5000	28.99			24.94	10.23	3.37	0.25	0.00	0.00	0.00	0.00
6000	25.97				12.50	4.57	1.02	0.12	0.00	0.00	0.00

Base Flows	Base Flow AWS	CR Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2250	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2500	0.20		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2750	0.87		0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3000	1.63		0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3500	3.33		2.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4000	4.37		3.19	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5000	5.98			4.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6000	7.67				1.06	0.00	0.00	0.00	0.00	0.00	0.00

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	5	27	60	97	100	100	100	100	100	100
1800	0	4	24	54	96	100	100	100	100	100	100
2000	0	2	20	49	95	100	100	100	100	100	100
2250	0		17	44	93	100	100	100	100	100	100
2500	0		14	40	91	100	100	100	100	100	100
2750	0		13	38	88	99	100	100	100	100	100
3000	0		12	36	86	99	100	100	100	100	100
3500	0		11	35	82	97	100	100	100	100	100
4000	0		6	31	77	94	100	100	100	100	100
5000	0			14	65	88	99	100	100	100	100
6000	0				52	82	96	100	100	100	100

Base Flows	% at Base Flow	% Loss CR Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	0	0	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0	0	0
2250	0		0	0	0	0	0	0	0	0	0
2500	0		100	100	100	100	100	100	100	100	100
2750	0		76	100	100	100	100	100	100	100	100
3000	0		60	100	100	100	100	100	100	100	100
3500	0		33	100	100	100	100	100	100	100	100
4000	0		27	90	100	100	100	100	100	100	100
5000	0			27	100	100	100	100	100	100	100
6000	0				86	100	100	100	100	100	100



Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - Smallmouth Bass fry persistent and persistent quality habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	26.94	18.84	7.28	4.81	2.84	1.46	0.83	0.54	0.30	0.14	0.09
1800	26.61	20.56	8.02	5.35	3.16	1.64	0.89	0.59	0.34	0.18	0.13
2000	26.11	22.05	8.54	5.79	3.34	1.72	0.96	0.65	0.39	0.23	0.17
2250	25.45		9.89	6.49	3.68	1.93	1.10	0.76	0.50	0.33	0.26
2500	24.80		10.69	6.98	3.96	2.13	1.25	0.91	0.64	0.45	0.37
2750	24.08		11.30	7.38	4.20	2.33	1.39	1.05	0.77	0.55	0.47
3000	23.02		12.03	7.89	4.53	2.60	1.60	1.23	0.92	0.68	0.58
3500	20.24		13.38	8.87	5.28	3.20	2.13	1.64	1.25	0.89	0.71
4000	17.00		14.60	9.85	6.05	3.85	2.71	2.03	1.52	0.98	0.76
5000	13.89			11.80	7.72	5.24	3.79	2.81	1.90	1.18	0.91
6000	12.49				9.39	6.44	4.71	3.38	2.20	1.32	1.02

Base Flows	Base Flow AWS	Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	5.13	3.97	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	5.83	5.04	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	6.90	6.37	0.28	0.15	0.14	0.00	0.00	0.00	0.00	0.00	0.00
2250	7.57		0.29	0.15	0.14	0.00	0.00	0.00	0.00	0.00	0.00
2500	7.64		0.29	0.16	0.14	0.00	0.00	0.00	0.00	0.00	0.00
2750	8.08		0.30	0.17	0.14	0.00	0.00	0.00	0.00	0.00	0.00
3000	7.55		0.30	0.17	0.14	0.00	0.00	0.00	0.00	0.00	0.00
3500	4.82		0.66	0.53	0.14	0.00	0.00	0.00	0.00	0.00	0.00
4000	0.93		0.70	0.57	0.14	0.00	0.00	0.00	0.00	0.00	0.00
5000	0.77			0.74	0.31	0.11	0.00	0.00	0.00	0.00	0.00
6000	1.40				0.91	0.26	0.15	0.00	0.00	0.00	0.00

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	30	73	82	89	95	97	98	99	99	100
1800	0	23	70	80	88	94	97	98	99	99	100
2000	0	16	67	78	87	93	96	98	98	99	99
2250	0		61	74	86	92	96	97	98	99	99
2500	0		57	72	84	91	95	96	97	98	99
2750	0		53	69	83	90	94	96	97	98	98
3000	0		48	66	80	89	93	95	96	97	97
3500	0		34	56	74	84	89	92	94	96	96
4000	0		14	42	64	77	84	88	91	94	96
5000	0			15	44	62	73	80	86	92	93
6000	0				25	48	62	73	82	89	92

Base Flows	% at Base Flow	% Loss Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	23	97	100	100	100	100	100	100	100	100
1800	0	14	98	100	100	100	100	100	100	100	100
2000	0	8	96	98	98	100	100	100	100	100	100
2250	0		96	98	98	100	100	100	100	100	100
2500	0		96	98	98	100	100	100	100	100	100
2750	0		96	98	98	100	100	100	100	100	100
3000	0		96	98	98	100	100	100	100	100	100
3500	0		86	89	97	100	100	100	100	100	100
4000	0		25	39	85	100	100	100	100	100	100
5000	0			4	59	86	100	100	100	100	100
6000	0				35	81	89	100	100	100	100

Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - CR Smallmouth Bass fry persistent and persistent quality habitat.

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	36.94	27.85	9.27	5.26	2.74	1.80	1.03	0.67	0.39	0.20	0.14
1800	36.43	30.22	9.94	5.61	2.96	1.96	1.09	0.72	0.44	0.25	0.18
2000	35.82	32.35	10.38	5.90	3.14	2.08	1.19	0.81	0.52	0.33	0.26
2250	34.74		11.31	6.40	3.42	2.30	1.39	0.98	0.69	0.48	0.41
2500	33.49		11.96	6.86	3.73	2.56	1.62	1.20	0.90	0.68	0.59
2750	32.28		12.50	7.22	3.96	2.77	1.81	1.39	1.08	0.82	0.72
3000	30.29		13.31	7.77	4.34	3.11	2.13	1.70	1.36	1.07	0.93
3500	24.95		14.65	8.73	5.09	3.78	2.76	2.24	1.83	1.35	1.10
4000	19.27		15.96	9.71	5.89	4.51	3.43	2.82	2.26	1.51	1.22
5000	14.44			11.77	7.64	5.98	4.67	3.79	2.77	1.78	1.43
6000	11.93				8.96	6.88	5.40	4.29	3.12	2.02	1.61

Base Flows	Base Flow AWS	CR Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	9.35	8.20	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	10.96	10.21	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	12.80	12.38	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2250	14.29		0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2500	14.19		0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2750	14.65		0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3000	13.25		0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3500	7.94		0.49	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4000	1.01		0.52	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5000	0.61			0.59	0.32	0.21	0.00	0.00	0.00	0.00	0.00
6000	1.15				0.80	0.21	0.00	0.00	0.00	0.00	0.00

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	25	75	86	93	95	97	98	99	99	100
1800	0	17	73	85	92	95	97	98	99	99	99
2000	0	10	71	84	91	94	97	98	99	99	99
2250	0		67	82	90	93	96	97	98	99	99
2500	0		64	80	89	92	95	96	97	98	98
2750	0		61	78	88	91	94	96	97	97	98
3000	0		56	74	86	90	93	94	95	96	97
3500	0		41	65	80	85	89	91	93	95	96
4000	0		17	50	69	77	82	85	88	92	94
5000	0			19	47	59	68	74	81	88	90
6000	0				25	42	55	64	74	83	86

Base Flows	% at Base Flow	% Loss CR Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	12	97	100	100	100	100	100	100	100	100
1800	0	7	98	100	100	100	100	100	100	100	100
2000	0	3	98	100	100	100	100	100	100	100	100
2250	0		98	100	100	100	100	100	100	100	100
2500	0		98	100	100	100	100	100	100	100	100
2750	0		98	100	100	100	100	100	100	100	100
3000	0		98	100	100	100	100	100	100	100	100
3500	0		94	97	100	100	100	100	100	100	100
4000	0		49	74	100	100	100	100	100	100	100
5000	0			3	48	66	100	100	100	100	100
6000	0				31	82	100	100	100	100	100

Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - Smallmouth Bass spawning persistent and persistent quality habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	52.01	36.11	13.17	9.82	6.26	3.87	2.49	1.70	1.12	0.66	0.49
1800	46.58	36.55	13.49	10.11	6.48	4.06	2.67	1.85	1.25	0.75	0.57
2000	41.77	37.02	13.81	10.40	6.73	4.28	2.86	2.03	1.39	0.86	0.67
2250	36.42		14.21	10.77	7.06	4.57	3.12	2.27	1.59	1.02	0.82
2500	31.51		14.53	11.05	7.35	4.84	3.37	2.52	1.76	1.18	0.96
2750	27.55		14.87	11.36	7.66	5.12	3.63	2.77	1.94	1.34	1.12
3000	24.79		15.26	11.70	7.98	5.40	3.91	3.01	2.14	1.52	1.26
3500	20.90		16.13	12.49	8.66	5.99	4.45	3.49	2.58	1.90	1.61
4000	18.88		17.07	13.33	9.33	6.57	4.99	4.00	3.06	2.31	1.99
5000	16.90			15.18	10.91	8.04	6.39	5.31	4.26	3.41	3.00
6000	16.98				13.57	10.43	8.53	7.26	6.12	5.13	4.60

Base Flows	Base Flow AWS	Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	28.62	11.50	0.83	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	20.87	11.74	0.83	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	16.93	11.80	0.83	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2250	10.90		0.83	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2500	6.77		0.83	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2750	5.00		0.88	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3000	3.25		0.88	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3500	1.79		0.97	0.21	0.04	0.04	0.04	0.04	0.04	0.00	0.00
4000	1.17		1.04	0.24	0.04	0.04	0.04	0.04	0.04	0.00	0.00
5000	0.37			0.29	0.04	0.04	0.04	0.04	0.04	0.00	0.00
6000	0.25				0.07	0.04	0.04	0.04	0.04	0.00	0.00

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	31	75	81	88	93	95	97	98	99	99
1800	0	22	71	78	86	91	94	96	97	98	99
2000	0	11	67	75	84	90	93	95	97	98	98
2250	0		61	70	81	87	91	94	96	97	98
2500	0		54	65	77	85	89	92	94	96	97
2750	0		46	59	72	81	87	90	93	95	96
3000	0		38	53	68	78	84	88	91	94	95
3500	0		23	40	59	71	79	83	88	91	92
4000	0		10	29	51	65	74	79	84	88	89
5000	0			10	35	52	62	69	75	80	82
6000	0				20	39	50	57	64	70	73

Base Flows	% at Base Flow	% Loss Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	60	97	99	100	100	100	100	100	100	100
1800	0	44	96	99	100	100	100	100	100	100	100
2000	0	30	95	99	100	100	100	100	100	100	100
2250	0		92	98	100	100	100	100	100	100	100
2500	0		88	98	100	100	100	100	100	100	100
2750	0		82	97	100	100	100	100	100	100	100
3000	0		73	95	100	100	100	100	100	100	100
3500	0		46	88	98	98	98	98	98	100	100
4000	0		11	80	96	96	96	96	96	97	100
5000	0			23	88	89	89	89	89	90	100
6000	0				73	83	83	83	85	100	100

Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - CR Smallmouth Bass spawning persistent and persistent quality habitat.

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	52.01	36.11	13.17	9.82	6.26	3.87	2.49	1.70	1.12	0.66	0.49
1800	46.58	36.55	13.49	10.11	6.48	4.06	2.67	1.85	1.25	0.75	0.57
2000	41.77	37.02	13.81	10.40	6.73	4.28	2.86	2.03	1.39	0.86	0.67
2250	36.42		14.21	10.77	7.06	4.57	3.12	2.27	1.59	1.02	0.82
2500	31.51		14.53	11.05	7.35	4.84	3.37	2.52	1.76	1.18	0.96
2750	27.55		14.87	11.36	7.66	5.12	3.63	2.77	1.94	1.34	1.12
3000	24.79		15.26	11.70	7.98	5.40	3.91	3.01	2.14	1.52	1.26
3500	20.90		16.13	12.49	8.66	5.99	4.45	3.49	2.58	1.90	1.61
4000	18.88		17.07	13.33	9.33	6.57	4.99	4.00	3.06	2.31	1.99
5000	16.90			15.18	10.91	8.04	6.39	5.31	4.26	3.41	3.00
6000	16.98				13.57	10.43	8.53	7.26	6.12	5.13	4.60

Base Flows	Base Flow AWS	CR Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	28.62	11.50	0.83	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	20.87	11.74	0.83	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	16.93	11.80	0.83	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2250	10.90		0.83	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2500	6.77		0.83	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2750	5.00		0.88	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3000	3.25		0.88	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3500	1.79		0.97	0.21	0.04	0.04	0.04	0.04	0.04	0.00	0.00
4000	1.17		1.04	0.24	0.04	0.04	0.04	0.04	0.04	0.00	0.00
5000	0.37			0.29	0.04	0.04	0.04	0.04	0.04	0.00	0.00
6000	0.25				0.07	0.04	0.04	0.04	0.04	0.00	0.00

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	31	75	81	88	93	95	97	98	99	99
1800	0	22	71	78	86	91	94	96	97	98	99
2000	0	11	67	75	84	90	93	95	97	98	98
2250	0		61	70	81	87	91	94	96	97	98
2500	0		54	65	77	85	89	92	94	96	97
2750	0		46	59	72	81	87	90	93	95	96
3000	0		38	53	68	78	84	88	91	94	95
3500	0		23	40	59	71	79	83	88	91	92
4000	0		10	29	51	65	74	79	84	88	89
5000	0			10	35	52	62	69	75	80	82
6000	0				20	39	50	57	64	70	73

Base Flows	% at Base Flow	% Loss CR Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	60	97	99	100	100	100	100	100	100	100
1800	0	44	96	99	100	100	100	100	100	100	100
2000	0	30	95	99	100	100	100	100	100	100	100
2250	0		92	98	100	100	100	100	100	100	100
2500	0		88	98	100	100	100	100	100	100	100
2750	0		82	97	100	100	100	100	100	100	100
3000	0		73	95	100	100	100	100	100	100	100
3500	0		46	88	98	98	98	98	98	100	100
4000	0		11	80	96	96	96	96	96	97	100
5000	0			23	88	89	89	89	89	90	100
6000	0				73	83	83	83	85	100	100

Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - White Sucker fry persistent and persistent quality habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	286.23	212.35	105.86	80.94	60.20	50.02	43.91	39.43	35.92	33.17	31.78
1800	268.61	215.57	107.97	82.66	61.74	51.38	45.15	40.58	37.05	34.24	32.77
2000	250.83	218.12	109.61	84.01	62.93	52.53	46.15	41.55	37.99	35.07	33.59
2250	229.78		113.51	86.29	64.72	54.23	47.59	42.83	39.22	36.20	34.59
2500	211.12		115.62	88.08	66.35	55.62	48.92	44.15	40.41	37.23	35.55
2750	195.46		117.49	89.68	67.78	56.84	50.11	45.23	41.38	38.01	36.29
3000	180.60		120.08	91.83	69.59	58.47	51.51	46.53	42.51	39.07	37.32
3500	158.79		124.64	95.75	72.91	61.53	54.35	49.13	44.87	41.29	39.48
4000	141.82		128.06	98.78	75.45	63.72	56.41	51.12	46.81	43.14	41.27
5000	116.35			103.16	78.98	67.07	59.71	54.34	49.92	45.99	43.95
6000	99.79				82.86	70.50	62.76	57.01	52.23	48.05	45.84

Base Flows	Base Flow AWS	Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	250.71	173.23	78.28	62.52	49.99	39.88	35.97	33.22	30.34	28.26	27.13
1800	228.17	174.60	78.48	62.68	50.16	40.02	36.10	33.32	30.43	28.34	27.21
2000	207.97	178.34	81.52	65.41	52.59	42.44	37.88	35.10	32.20	29.44	28.31
2250	185.32		83.54	66.67	53.73	43.53	38.87	36.08	33.16	30.31	29.07
2500	169.48		85.93	68.76	55.78	44.99	40.18	37.40	34.35	31.04	29.77
2750	156.01		88.67	71.17	58.00	46.89	42.07	39.05	35.90	32.44	31.14
3000	146.35		91.32	73.73	60.38	49.14	44.23	40.99	37.56	34.03	32.57
3500	127.83		95.82	77.66	63.85	52.23	47.20	43.75	40.11	36.44	34.92
4000	109.96		98.75	80.42	66.07	54.31	49.17	45.52	41.86	38.13	36.49
5000	92.26			84.66	69.87	58.10	52.93	49.22	45.46	41.20	39.31
6000	84.22				73.10	60.99	55.67	51.58	47.36	42.73	40.60

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	26	63	72	79	83	85	86	87	88	89
1800	0	20	60	69	77	81	83	85	86	87	88
2000	0	13	56	67	75	79	82	83	85	86	87
2250	0		51	62	72	76	79	81	83	84	85
2500	0		45	58	69	74	77	79	81	82	83
2750	0		40	54	65	71	74	77	79	81	81
3000	0		34	49	61	68	71	74	76	78	79
3500	0		22	40	54	61	66	69	72	74	75
4000	0		10	30	47	55	60	64	67	70	71
5000	0			11	32	42	49	53	57	60	62
6000	0				17	29	37	43	48	52	54

Base Flows	% at Base Flow	% Loss Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	31	69	75	80	84	86	87	88	89	89
1800	0	23	66	73	78	82	84	85	87	88	88
2000	0	14	61	69	75	80	82	83	85	86	86
2250	0		55	64	71	77	79	81	82	84	84
2500	0		49	59	67	73	76	78	80	82	82
2750	0		43	54	63	70	73	75	77	79	80
3000	0		38	50	59	66	70	72	74	77	78
3500	0		25	39	50	59	63	66	69	71	73
4000	0		10	27	40	51	55	59	62	65	67
5000	0			8	24	37	43	47	51	55	57
6000	0				13	28	34	39	44	49	52

Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - CR White Sucker fry persistent and persistent quality habitat.

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	197.99	132.37	50.89	35.55	26.13	21.93	19.69	18.64	17.82	17.17	16.84
1800	181.96	136.15	52.88	37.00	27.34	22.99	20.66	19.61	18.76	18.07	17.73
2000	166.40	139.36	54.64	38.32	28.41	24.01	21.65	20.55	19.66	18.95	18.60
2250	148.04		57.91	40.21	29.78	25.30	22.87	21.74	20.83	20.11	19.75
2500	132.66		59.96	41.85	31.19	26.54	24.09	22.95	22.01	21.26	20.89
2750	120.88		61.35	42.95	32.11	27.41	24.92	23.75	22.78	21.98	21.59
3000	109.83		64.41	45.32	34.12	29.34	26.82	25.61	24.60	23.76	23.33
3500	94.84		69.06	48.95	37.14	32.16	29.40	28.05	26.90	25.97	25.52
4000	83.82		73.44	52.70	40.31	34.87	31.96	30.53	29.30	28.29	27.78
5000	66.30			57.23	43.74	38.04	35.07	33.56	32.26	31.16	30.61
6000	56.38				46.75	40.41	37.10	35.45	34.11	32.99	32.43

Base Flows	Base Flow AWS	CR Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	153.97	95.28	29.45	23.96	21.48	17.61	16.26	15.12	14.78	14.20	14.03
1800	134.36	97.19	29.62	24.12	21.62	17.65	16.29	15.15	14.80	14.20	14.03
2000	118.68	99.06	30.48	24.53	21.81	17.82	16.45	15.30	14.94	14.34	14.17
2250	104.41		31.56	24.64	21.86	17.85	16.47	15.32	14.96	14.36	14.19
2500	93.44		33.71	26.25	23.42	19.16	17.59	16.44	16.08	15.28	15.11
2750	86.35		36.71	28.78	25.69	21.23	19.64	18.27	17.90	17.10	16.93
3000	79.37		40.36	32.33	29.10	24.56	22.94	21.36	20.78	19.95	19.54
3500	64.55		44.30	35.50	31.86	27.23	25.53	23.86	23.17	22.25	21.82
4000	55.06		48.58	39.54	35.29	30.52	28.69	26.75	26.03	25.07	24.53
5000	46.32			43.39	38.63	33.85	31.99	30.02	29.23	28.20	27.63
6000	44.06				40.62	35.60	33.67	31.56	30.74	29.70	29.11

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	33	74	82	87	89	90	91	91	91	91
1800	0	25	71	80	85	87	89	89	90	90	90
2000	0	16	67	77	83	86	87	88	88	89	89
2250	0		61	73	80	83	85	85	86	86	87
2500	0		55	68	76	80	82	83	83	84	84
2750	0		49	64	73	77	79	80	81	82	82
3000	0		41	59	69	73	76	77	78	78	79
3500	0		27	48	61	66	69	70	72	73	73
4000	0		12	37	52	58	62	64	65	66	67
5000	0			14	34	43	47	49	51	53	54
6000	0				17	28	34	37	39	41	42

Base Flows	% at Base Flow	% Loss CR Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	38	81	84	86	89	89	90	90	91	91
1800	0	28	78	82	84	87	88	89	89	89	90
2000	0	17	74	79	82	85	86	87	87	88	88
2250	0		70	76	79	83	84	85	86	86	86
2500	0		64	72	75	79	81	82	83	84	84
2750	0		57	67	70	75	77	79	79	80	80
3000	0		49	59	63	69	71	73	74	75	75
3500	0		31	45	51	58	60	63	64	66	66
4000	0		12	28	36	45	48	51	53	54	55
5000	0			6	17	27	31	35	37	39	40
6000	0				8	19	24	28	30	33	34

Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - White Sucker spawning persistent and persistent quality habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	19.59	18.26	8.78	3.79	0.04	0.00	0.00	0.00	0.00	0.00	0.00
1800	23.18	22.04	11.01	4.78	0.09	0.00	0.00	0.00	0.00	0.00	0.00
2000	26.39	25.71	13.12	5.79	0.21	0.00	0.00	0.00	0.00	0.00	0.00
2250	29.75		15.57	7.04	0.40	0.00	0.00	0.00	0.00	0.00	0.00
2500	32.52		17.73	8.29	0.56	0.00	0.00	0.00	0.00	0.00	0.00
2750	34.47		19.76	9.59	0.79	0.00	0.00	0.00	0.00	0.00	0.00
3000	35.44		21.79	10.97	1.17	0.01	0.00	0.00	0.00	0.00	0.00
3500	35.67		26.15	13.83	2.15	0.08	0.00	0.00	0.00	0.00	0.00
4000	33.96		29.56	16.36	3.07	0.22	0.00	0.00	0.00	0.00	0.00
5000	26.36			19.53	4.58	0.88	0.10	0.00	0.00	0.00	0.00
6000	17.67				6.88	1.96	0.44	0.02	0.00	0.00	0.00

Base Flows	Base Flow AWS	Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	7.25	6.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	9.55	8.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	11.99	11.37	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2250	14.17		0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2500	18.07		1.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2750	20.44		3.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3000	20.47		4.01	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3500	19.63		7.86	2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4000	15.39		11.00	4.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5000	10.76			7.35	0.11	0.00	0.00	0.00	0.00	0.00	0.00
6000	6.68				2.00	0.00	0.00	0.00	0.00	0.00	0.00

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	7	55	81	100	100	100	100	100	100	100
1800	0	5	53	79	100	100	100	100	100	100	100
2000	0	3	50	78	99	100	100	100	100	100	100
2250	0		48	76	99	100	100	100	100	100	100
2500	0		45	75	98	100	100	100	100	100	100
2750	0		43	72	98	100	100	100	100	100	100
3000	0		39	69	97	100	100	100	100	100	100
3500	0		27	61	94	100	100	100	100	100	100
4000	0		13	52	91	99	100	100	100	100	100
5000	0			26	83	97	100	100	100	100	100
6000	0				61	89	97	100	100	100	100

Base Flows	% at Base Flow	% Loss Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	16	100	100	100	100	100	100	100	100	100
1800	0	11	100	100	100	100	100	100	100	100	100
2000	0	5	98	100	100	100	100	100	100	100	100
2250	0		94	100	100	100	100	100	100	100	100
2500	0		90	100	100	100	100	100	100	100	100
2750	0		84	100	100	100	100	100	100	100	100
3000	0		80	99	100	100	100	100	100	100	100
3500	0		60	88	100	100	100	100	100	100	100
4000	0		29	69	100	100	100	100	100	100	100
5000	0			32	99	100	100	100	100	100	100
6000	0				70	100	100	100	100	100	100

Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - CR White Sucker spawning persistent and persistent quality habitat.

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	29.87	27.85	13.36	5.75	0.05	0.00	0.00	0.00	0.00	0.00	0.00
1800	35.30	33.56	16.69	7.19	0.14	0.00	0.00	0.00	0.00	0.00	0.00
2000	40.19	39.15	19.86	8.67	0.34	0.00	0.00	0.00	0.00	0.00	0.00
2250	45.33		23.51	10.53	0.67	0.00	0.00	0.00	0.00	0.00	0.00
2500	49.54		26.67	12.42	0.99	0.00	0.00	0.00	0.00	0.00	0.00
2750	52.50		29.72	14.45	1.40	0.00	0.00	0.00	0.00	0.00	0.00
3000	54.00		32.86	16.71	2.04	0.03	0.00	0.00	0.00	0.00	0.00
3500	54.47		39.89	21.44	3.67	0.17	0.00	0.00	0.00	0.00	0.00
4000	52.24		45.54	25.63	5.35	0.46	0.00	0.00	0.00	0.00	0.00
5000	36.94			27.24	6.26	1.22	0.14	0.00	0.00	0.00	0.00
6000	29.58				12.47	3.95	1.05	0.08	0.00	0.00	0.00

Base Flows	Base Flow AWS	CR Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	10.58	8.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	13.94	12.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	17.68	16.77	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2250	21.41		1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2500	27.88		2.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2750	31.59		4.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3000	31.65		5.86	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3500	30.83		12.51	4.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4000	24.39		17.70	7.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5000	18.02			12.90	0.47	0.00	0.00	0.00	0.00	0.00	0.00
6000	12.50				3.95	0.00	0.00	0.00	0.00	0.00	0.00

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	7	55	81	100	100	100	100	100	100	100
1800	0	5	53	80	100	100	100	100	100	100	100
2000	0	3	51	78	99	100	100	100	100	100	100
2250	0		48	77	99	100	100	100	100	100	100
2500	0		46	75	98	100	100	100	100	100	100
2750	0		43	72	97	100	100	100	100	100	100
3000	0		39	69	96	100	100	100	100	100	100
3500	0		27	61	93	100	100	100	100	100	100
4000	0		13	51	90	99	100	100	100	100	100
5000	0			26	83	97	100	100	100	100	100
6000	0				58	87	96	100	100	100	100

Base Flows	% at Base Flow	% Loss CR Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	16	100	100	100	100	100	100	100	100	100
1800	0	11	100	100	100	100	100	100	100	100	100
2000	0	5	98	100	100	100	100	100	100	100	100
2250	0		94	100	100	100	100	100	100	100	100
2500	0		91	100	100	100	100	100	100	100	100
2750	0		85	100	100	100	100	100	100	100	100
3000	0		81	99	100	100	100	100	100	100	100
3500	0		59	87	100	100	100	100	100	100	100
4000	0		27	68	100	100	100	100	100	100	100
5000	0			28	97	100	100	100	100	100	100
6000	0				68	100	100	100	100	100	100



Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - Walleye fry persistent and persistent quality habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	16.96	12.72	9.28	8.21	6.33	4.24	3.00	1.95	1.11	0.50	0.29
1800	16.58	13.05	9.54	8.48	6.54	4.42	3.17	2.10	1.24	0.57	0.36
2000	16.35	13.40	9.82	8.73	6.76	4.63	3.36	2.28	1.37	0.67	0.46
2250	16.03		11.17	9.28	7.01	4.87	3.59	2.48	1.52	0.80	0.53
2500	15.65		11.47	9.56	7.26	5.09	3.81	2.68	1.65	0.93	0.54
2750	15.45		11.77	9.85	7.52	5.32	4.02	2.86	1.77	0.96	0.54
3000	15.12		12.10	10.14	7.80	5.58	4.24	3.04	1.90	0.97	0.54
3500	15.00		13.14	11.08	8.67	6.18	4.69	3.38	2.14	1.02	0.59
4000	15.36		14.47	12.26	9.73	6.75	5.10	3.62	2.23	1.10	0.68
5000	15.85			14.74	11.62	7.75	5.68	4.11	2.70	1.46	0.94
6000	16.19				13.03	8.84	6.68	5.07	3.39	2.00	1.43

Base Flows	Base Flow AWS	Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	12.09	8.48	6.56	5.68	4.18	2.89	1.57	0.66	0.23	0.10	0.02
1800	11.84	8.77	6.80	5.93	4.37	3.07	1.75	0.81	0.39	0.10	0.02
2000	11.61	9.07	7.05	6.15	4.57	3.28	1.95	1.00	0.43	0.10	0.02
2250	11.57		8.23	6.43	4.65	3.36	2.02	1.07	0.44	0.10	0.02
2500	11.73		8.57	6.76	4.98	3.69	2.35	1.40	0.71	0.36	0.02
2750	11.85		8.82	7.00	5.09	3.79	2.46	1.47	0.75	0.37	0.02
3000	12.14		9.55	7.72	5.80	4.50	3.00	1.98	1.25	0.37	0.02
3500	11.85		10.03	8.19	6.10	4.74	3.24	2.22	1.44	0.37	0.02
4000	11.67		10.54	8.70	6.53	5.16	3.40	2.37	1.44	0.37	0.02
5000	12.06			11.51	8.48	5.64	3.76	2.67	1.74	0.63	0.02
6000	12.48				8.93	5.84	3.95	2.85	1.85	0.66	0.04

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	25	45	52	63	75	82	88	93	97	98
1800	0	21	42	49	61	73	81	87	93	97	98
2000	0	18	40	47	59	72	79	86	92	96	97
2250	0		30	42	56	70	78	85	91	95	97
2500	0		27	39	54	68	76	83	89	94	97
2750	0		24	36	51	66	74	82	89	94	97
3000	0		20	33	48	63	72	80	87	94	96
3500	0		12	26	42	59	69	77	86	93	96
4000	0		6	20	37	56	67	76	85	93	96
5000	0			7	27	51	64	74	83	91	94
6000	0				19	45	59	69	79	88	91

Base Flows	% at Base Flow	% Loss Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	30	46	53	65	76	87	95	98	99	100
1800	0	26	43	50	63	74	85	93	97	99	100
2000	0	22	39	47	61	72	83	91	96	99	100
2250	0		29	44	60	71	83	91	96	99	100
2500	0		27	42	58	69	80	88	94	97	100
2750	0		26	41	57	68	79	88	94	97	100
3000	0		21	36	52	63	75	84	90	97	100
3500	0		15	31	49	60	73	81	88	97	100
4000	0		10	25	44	56	71	80	88	97	100
5000	0			5	30	53	69	78	86	95	100
6000	0				28	53	68	77	85	95	100

Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - CR Walleye fry persistent and persistent quality habitat.

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	10.37	6.71	5.69	5.48	4.30	2.98	2.35	1.80	1.20	0.54	0.28
1800	10.03	6.92	5.88	5.66	4.47	3.11	2.47	1.89	1.29	0.56	0.30
2000	9.81	7.11	6.05	5.83	4.61	3.24	2.59	1.99	1.35	0.58	0.32
2250	9.58		7.36	6.33	4.77	3.38	2.71	2.11	1.40	0.61	0.34
2500	9.35		7.54	6.50	4.92	3.50	2.82	2.22	1.43	0.63	0.36
2750	9.31		7.70	6.67	5.06	3.60	2.93	2.28	1.45	0.66	0.36
3000	9.12		7.88	6.82	5.21	3.71	3.02	2.32	1.48	0.66	0.36
3500	8.87		8.05	6.96	5.28	3.76	3.07	2.37	1.52	0.66	0.36
4000	8.75		8.30	7.16	5.39	3.82	3.11	2.41	1.54	0.67	0.37
5000	8.83			8.23	6.28	4.64	3.86	3.06	2.16	1.26	0.95
6000	9.62				8.04	6.26	5.37	4.52	3.43	2.40	1.98

Base Flows	Base Flow AWS	CR Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	6.91	3.77	3.10	3.09	2.29	1.80	1.23	0.85	0.28	0.12	0.03
1800	6.80	4.05	3.38	3.37	2.55	2.05	1.48	1.07	0.49	0.12	0.03
2000	7.17	4.33	3.66	3.65	2.84	2.33	1.75	1.32	0.54	0.12	0.03
2250	7.04		5.22	4.03	2.94	2.44	1.84	1.41	0.56	0.12	0.03
2500	6.77		5.32	4.12	3.03	2.53	1.93	1.50	0.56	0.12	0.03
2750	6.98		5.59	4.40	3.11	2.61	2.01	1.53	0.56	0.12	0.03
3000	7.24		5.92	4.70	3.42	2.91	2.29	1.76	0.77	0.12	0.03
3500	7.19		6.22	5.00	3.49	2.96	2.34	1.81	0.82	0.12	0.03
4000	7.06		6.34	5.11	3.53	2.98	2.35	1.82	0.82	0.12	0.03
5000	5.74			5.13	3.53	2.98	2.35	1.82	0.82	0.12	0.03
6000	4.93				3.84	3.18	2.55	2.02	0.92	0.22	0.13

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	35	45	47	59	71	77	83	88	95	97
1800	0	31	41	43	55	69	75	81	87	94	97
2000	0	28	38	41	53	67	74	80	86	94	97
2250	0		23	34	50	65	72	78	85	94	96
2500	0		19	30	47	63	70	76	85	93	96
2750	0		17	28	46	61	69	76	84	93	96
3000	0		14	25	43	59	67	75	84	93	96
3500	0		9	21	40	58	65	73	83	93	96
4000	0		5	18	38	56	64	73	82	92	96
5000	0			7	29	47	56	65	76	86	89
6000	0				16	35	44	53	64	75	79

Base Flows	% at Base Flow	% Loss CR Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	46	55	55	67	74	82	88	96	98	100
1800	0	41	50	51	62	70	78	84	93	98	100
2000	0	40	49	49	60	67	76	82	93	98	100
2250	0		26	43	58	65	74	80	92	98	100
2500	0		21	39	55	63	71	78	92	98	100
2750	0		20	37	55	63	71	78	92	98	100
3000	0		18	35	53	60	68	76	89	98	100
3500	0		14	31	51	59	68	75	89	98	100
4000	0		10	28	50	58	67	74	88	98	100
5000	0			11	39	48	59	68	86	98	100
6000	0				22	35	48	59	81	95	97

Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - Walleye spawning persistent and persistent quality habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	14.68	14.50	13.36	12.31	10.47	8.59	7.26	5.41	3.03	1.43	0.65
1800	16.45	16.34	14.91	13.75	11.60	9.55	8.06	6.04	3.42	1.70	0.87
2000	18.55	18.48	16.67	15.21	12.78	10.51	8.88	6.66	3.84	2.01	1.14
2250	21.30		19.04	17.27	14.35	11.79	9.95	7.50	4.44	2.47	1.52
2500	23.94		21.63	19.62	16.24	13.37	11.34	8.58	5.22	3.06	2.01
2750	26.47		24.18	22.03	18.29	15.17	12.75	9.76	6.15	3.77	2.59
3000	28.91		26.81	24.58	20.56	16.99	14.33	11.12	7.27	4.55	3.27
3500	34.14		32.56	30.11	25.52	21.35	18.25	14.69	10.24	6.64	5.19
4000	39.39		38.60	36.07	31.09	26.51	23.04	19.08	13.90	9.36	7.66
5000	50.14			48.77	43.39	38.35	34.29	29.34	21.92	15.63	13.18
6000	60.65				56.13	50.67	45.43	38.66	29.30	21.33	18.29

Base Flows	Base Flow AWS	Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	0.56	0.56	0.42	0.14	0.14	0.00	0.00	0.00	0.00	0.00	0.00
2000	2.32	2.30	1.49	0.75	0.16	0.00	0.00	0.00	0.00	0.00	0.00
2250	4.92		3.98	2.88	1.12	0.15	0.00	0.00	0.00	0.00	0.00
2500	6.98		5.81	4.24	2.06	0.31	0.16	0.15	0.00	0.00	0.00
2750	9.58		8.29	6.60	3.71	1.76	0.31	0.15	0.00	0.00	0.00
3000	11.49		10.20	8.47	5.39	2.50	0.87	0.29	0.14	0.00	0.00
3500	15.47		14.49	12.63	9.17	5.43	2.50	1.84	0.91	0.13	0.00
4000	16.95		16.59	14.71	11.09	7.11	3.46	2.64	1.52	0.13	0.00
5000	24.25			22.96	19.14	14.66	10.22	8.50	6.20	2.37	0.27
6000	33.88				30.86	25.65	19.03	14.45	10.50	4.37	1.57

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	1	9	16	29	41	51	63	79	90	96
1800	0	1	9	16	29	42	51	63	79	90	95
2000	0	0	10	18	31	43	52	64	79	89	94
2250	0		11	19	33	45	53	65	79	88	93
2500	0		10	18	32	44	53	64	78	87	92
2750	0		9	17	31	43	52	63	77	86	90
3000	0		7	15	29	41	50	62	75	84	89
3500	0		5	12	25	37	47	57	70	81	85
4000	0		2	8	21	33	42	52	65	76	81
5000	0			3	13	24	32	41	56	69	74
6000	0				7	16	25	36	52	65	70

Base Flows	% at Base Flow	% Loss Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	100	100	100	100	100	100	100	100	100	100
1800	0	0	26	75	75	100	100	100	100	100	100
2000	0	1	36	68	93	100	100	100	100	100	100
2250	0		19	42	77	97	100	100	100	100	100
2500	0		17	39	70	96	98	98	100	100	100
2750	0		14	31	61	82	97	98	100	100	100
3000	0		11	26	53	78	92	97	99	100	100
3500	0		6	18	41	65	84	88	94	99	100
4000	0		2	13	35	58	80	84	91	99	100
5000	0			5	21	40	58	65	74	90	99
6000	0				9	24	44	57	69	87	95

Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - CR Walleye spawning persistent and persistent quality habitat.

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	19.71	19.53	17.97	16.62	14.51	12.31	10.62	8.12	4.62	2.24	1.04
1800	22.46	22.34	20.34	18.81	16.25	13.79	11.85	9.09	5.23	2.67	1.40
2000	25.69	25.61	23.00	21.05	18.05	15.25	13.10	10.06	5.88	3.16	1.81
2250	29.94		26.60	24.18	20.44	17.20	14.74	11.35	6.80	3.86	2.39
2500	34.06		30.63	27.83	23.34	19.64	16.88	13.04	8.01	4.76	3.12
2750	38.06		34.65	31.59	26.53	22.42	19.08	14.89	9.45	5.86	4.00
3000	41.91		38.74	35.55	30.04	25.25	21.54	17.01	11.18	7.03	5.01
3500	49.78		47.40	43.89	37.56	31.90	27.50	22.47	15.64	10.07	7.77
4000	57.54		56.37	52.76	45.98	39.74	34.78	29.12	21.08	13.98	11.31
5000	73.47			71.60	64.40	57.52	51.64	44.41	32.62	22.89	19.16
6000	90.11				84.11	76.66	68.77	58.31	43.36	31.22	26.64

Base Flows	Base Flow AWS	CR Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	0.82	0.82	0.61	0.21	0.21	0.00	0.00	0.00	0.00	0.00	0.00
2000	3.39	3.38	2.19	1.10	0.23	0.00	0.00	0.00	0.00	0.00	0.00
2250	7.22		5.84	4.23	1.65	0.22	0.00	0.00	0.00	0.00	0.00
2500	10.34		8.63	6.32	3.02	0.45	0.23	0.21	0.00	0.00	0.00
2750	14.40		12.41	9.92	5.45	2.58	0.45	0.21	0.00	0.00	0.00
3000	17.34		15.34	12.77	8.01	3.67	1.27	0.42	0.21	0.00	0.00
3500	23.42		21.87	19.01	13.67	8.06	3.66	2.69	1.33	0.19	0.00
4000	25.48		24.94	22.05	16.47	10.51	5.06	3.85	2.21	0.19	0.00
5000	36.43			34.37	28.43	21.68	14.98	12.42	9.06	3.46	0.40
6000	52.45				47.71	39.71	29.08	21.35	15.35	6.38	2.30

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	1	9	16	26	38	46	59	77	89	95
1800	0	1	9	16	28	39	47	60	77	88	94
2000	0	0	10	18	30	41	49	61	77	88	93
2250	0		11	19	32	43	51	62	77	87	92
2500	0		10	18	31	42	50	62	76	86	91
2750	0		9	17	30	41	50	61	75	85	89
3000	0		8	15	28	40	49	59	73	83	88
3500	0		5	12	25	36	45	55	69	80	84
4000	0		2	8	20	31	40	49	63	76	80
5000	0			3	12	22	30	40	56	69	74
6000	0				7	15	24	35	52	65	70

Base Flows	% at Base Flow	% Loss CR Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	100	100	100	100	100	100	100	100	100	100
1800	0	0	26	75	75	100	100	100	100	100	100
2000	0	1	36	68	93	100	100	100	100	100	100
2250	0		19	41	77	97	100	100	100	100	100
2500	0		17	39	71	96	98	98	100	100	100
2750	0		14	31	62	82	97	99	100	100	100
3000	0		12	26	54	79	93	98	99	100	100
3500	0		7	19	42	66	84	89	94	99	100
4000	0		2	13	35	59	80	85	91	99	100
5000	0			6	22	40	59	66	75	91	99
6000	0				9	24	45	59	71	88	96

Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - Tessellated Darter persistent and persistent quality habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	35.66	32.30	16.71	10.93	4.42	1.08	0.01	0.00	0.00	0.00	0.00
1800	39.64	37.07	19.92	13.34	5.52	1.53	0.03	0.00	0.00	0.00	0.00
2000	43.44	42.00	23.34	15.79	6.64	1.98	0.07	0.00	0.00	0.00	0.00
2250	47.86		27.81	18.76	8.03	2.56	0.17	0.00	0.00	0.00	0.00
2500	51.75		32.09	21.59	9.54	3.29	0.27	0.00	0.00	0.00	0.00
2750	54.63		35.87	24.27	11.09	3.84	0.35	0.00	0.00	0.00	0.00
3000	56.33		39.48	26.97	12.64	4.30	0.50	0.00	0.00	0.00	0.00
3500	57.98		46.17	32.43	15.37	5.43	0.97	0.08	0.00	0.00	0.00
4000	57.15		51.65	36.74	17.47	6.56	1.49	0.21	0.00	0.00	0.00
5000	50.43			42.50	20.65	8.32	2.49	0.64	0.01	0.00	0.00
6000	41.07				24.20	10.91	3.96	1.33	0.17	0.00	0.00

Base Flows	Base Flow AWS	Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	18.42	15.58	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	22.19	19.42	2.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	25.95	23.70	4.99	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2250	29.17		8.74	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2500	34.86		13.61	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2750	38.10		17.61	4.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3000	39.85		21.06	6.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3500	41.92		28.39	12.84	0.13	0.00	0.00	0.00	0.00	0.00	0.00
4000	39.35		32.92	16.24	0.68	0.00	0.00	0.00	0.00	0.00	0.00
5000	30.44			22.26	2.70	0.00	0.00	0.00	0.00	0.00	0.00
6000	19.95				5.17	0.89	0.00	0.00	0.00	0.00	0.00

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	9	53	69	88	97	100	100	100	100	100
1800	0	6	50	66	86	96	100	100	100	100	100
2000	0	3	46	64	85	95	100	100	100	100	100
2250	0		42	61	83	95	100	100	100	100	100
2500	0		38	58	82	94	99	100	100	100	100
2750	0		34	56	80	93	99	100	100	100	100
3000	0		30	52	78	92	99	100	100	100	100
3500	0		20	44	73	91	98	100	100	100	100
4000	0		10	36	69	89	97	100	100	100	100
5000	0			16	59	84	95	99	100	100	100
6000	0				41	73	90	97	100	100	100

Base Flows	% at Base Flow	% Loss Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	15	95	100	100	100	100	100	100	100	100
1800	0	10	88	100	100	100	100	100	100	100	100
2000	0	6	80	99	100	100	100	100	100	100	100
2250	0		70	97	100	100	100	100	100	100	100
2500	0		61	93	100	100	100	100	100	100	100
2750	0		54	88	100	100	100	100	100	100	100
3000	0		47	83	100	100	100	100	100	100	100
3500	0		32	69	100	100	100	100	100	100	100
4000	0		16	59	98	100	100	100	100	100	100
5000	0			27	91	100	100	100	100	100	100
6000	0				74	96	100	100	100	100	100

Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - CR Tessellated Darter persistent and persistent quality habitat.

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	54.97	49.75	25.74	16.72	6.71	1.64	0.01	0.00	0.00	0.00	0.00
1800	61.08	57.07	30.61	20.33	8.30	2.30	0.04	0.00	0.00	0.00	0.00
2000	66.87	64.60	35.76	23.94	9.91	2.96	0.10	0.00	0.00	0.00	0.00
2250	73.39		42.33	28.11	11.88	3.81	0.26	0.00	0.00	0.00	0.00
2500	79.02		48.49	32.04	14.03	4.92	0.45	0.00	0.00	0.00	0.00
2750	83.02		53.82	35.86	16.30	5.78	0.61	0.00	0.00	0.00	0.00
3000	85.15		58.91	39.76	18.56	6.52	0.85	0.01	0.00	0.00	0.00
3500	86.79		68.59	47.83	22.65	8.32	1.64	0.16	0.00	0.00	0.00
4000	85.30		76.90	54.45	25.99	10.18	2.55	0.38	0.00	0.00	0.00
5000	75.64			63.76	31.33	13.04	4.21	1.13	0.02	0.00	0.00
6000	62.29				37.09	17.20	6.59	2.38	0.36	0.00	0.00

Base Flows	Base Flow AWS	CR Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	27.78	23.50	1.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	32.95	29.38	3.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	38.65	35.94	7.46	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2250	44.71		13.06	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2500	53.81		20.66	3.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2750	58.12		26.07	6.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3000	60.05		30.44	10.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3500	61.90		40.57	18.53	0.19	0.00	0.00	0.00	0.00	0.00	0.00
4000	58.14		47.66	23.83	0.99	0.00	0.00	0.00	0.00	0.00	0.00
5000	45.06			33.79	4.63	0.00	0.00	0.00	0.00	0.00	0.00
6000	31.93				9.02	1.45	0.00	0.00	0.00	0.00	0.00

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	9	53	70	88	97	100	100	100	100	100
1800	0	7	50	67	86	96	100	100	100	100	100
2000	0	3	47	64	85	96	100	100	100	100	100
2250	0		42	62	84	95	100	100	100	100	100
2500	0		39	59	82	94	99	100	100	100	100
2750	0		35	57	80	93	99	100	100	100	100
3000	0		31	53	78	92	99	100	100	100	100
3500	0		21	45	74	90	98	100	100	100	100
4000	0		10	36	70	88	97	100	100	100	100
5000	0			16	59	83	94	99	100	100	100
6000	0				40	72	89	96	99	100	100

Base Flows	% at Base Flow	% Loss CR Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	15	95	100	100	100	100	100	100	100	100
1800	0	9	88	100	100	100	100	100	100	100	100
2000	0	6	80	99	100	100	100	100	100	100	100
2250	0		71	97	100	100	100	100	100	100	100
2500	0		62	93	100	100	100	100	100	100	100
2750	0		55	88	100	100	100	100	100	100	100
3000	0		49	83	100	100	100	100	100	100	100
3500	0		34	70	100	100	100	100	100	100	100
4000	0		18	59	98	100	100	100	100	100	100
5000	0			25	90	100	100	100	100	100	100
6000	0				72	95	100	100	100	100	100

Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - Macroinvertebrates persistent and persistent quality habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	21.82	21.45	19.70	18.45	16.39	14.72	13.50	12.41	11.20	10.00	9.38
1800	26.61	26.31	24.32	22.94	20.60	18.71	17.31	15.91	14.27	12.64	11.81
2000	31.59	31.42	29.26	27.74	25.20	23.10	21.35	19.65	17.54	15.38	14.29
2250	37.95		35.66	34.04	31.30	28.73	26.58	24.40	21.64	18.79	17.44
2500	44.19		42.00	40.29	37.29	34.24	31.63	28.91	25.36	21.91	20.30
2750	50.37		48.33	46.52	43.15	39.66	36.60	33.11	28.80	24.77	22.89
3000	56.29		54.44	52.47	48.70	44.89	41.15	37.01	32.04	27.43	25.28
3500	67.38		65.90	63.46	59.11	54.45	49.51	44.18	38.13	32.48	29.83
4000	76.48		75.67	72.99	68.10	62.69	56.76	50.57	43.54	36.84	33.62
5000	87.13			85.59	79.83	73.60	66.61	59.28	50.51	42.05	38.11
6000	92.17				87.27	80.35	72.75	64.67	54.86	45.53	41.14

Base Flows	Base Flow AWS	Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	4.54	3.38	1.14	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	6.36	5.36	1.99	1.27	0.14	0.00	0.00	0.00	0.00	0.00	0.00
2000	7.46	6.91	3.24	2.26	1.00	0.42	0.00	0.00	0.00	0.00	0.00
2250	8.80		4.85	3.85	2.15	0.82	0.00	0.00	0.00	0.00	0.00
2500	11.06		7.30	6.17	4.24	2.61	0.00	0.00	0.00	0.00	0.00
2750	13.25		10.14	8.74	6.60	4.84	0.68	0.00	0.00	0.00	0.00
3000	15.34		12.92	11.36	8.95	6.88	1.51	0.00	0.00	0.00	0.00
3500	21.64		20.86	17.75	14.62	11.45	3.99	0.10	0.00	0.00	0.00
4000	28.01		27.24	23.09	19.91	16.53	8.19	2.32	0.00	0.00	0.00
5000	31.98			30.69	27.49	23.90	14.92	6.83	1.22	0.00	0.00
6000	33.13				30.91	26.85	17.40	7.86	1.64	0.00	0.00

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	2	10	15	25	33	38	43	49	54	57
1800	0	1	9	14	23	30	35	40	46	53	56
2000	0	1	7	12	20	27	32	38	44	51	55
2250	0		6	10	18	24	30	36	43	50	54
2500	0		5	9	16	23	28	35	43	50	54
2750	0		4	8	14	21	27	34	43	51	55
3000	0		3	7	13	20	27	34	43	51	55
3500	0		2	6	12	19	27	34	43	52	56
4000	0		1	5	11	18	26	34	43	52	56
5000	0			2	8	16	24	32	42	52	56
6000	0				5	13	21	30	40	51	55

Base Flows	% at Base Flow	% Loss Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	26	75	88	100	100	100	100	100	100	100
1800	0	16	69	80	98	100	100	100	100	100	100
2000	0	7	57	70	87	94	100	100	100	100	100
2250	0		45	56	76	91	100	100	100	100	100
2500	0		34	44	62	76	100	100	100	100	100
2750	0		23	34	50	63	95	100	100	100	100
3000	0		16	26	42	55	90	100	100	100	100
3500	0		4	18	32	47	82	100	100	100	100
4000	0		3	18	29	41	71	92	100	100	100
5000	0			4	14	25	53	79	96	100	100
6000	0				7	19	47	76	95	100	100

Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - CR Macroinvertebrates persistent and persistent quality habitat.

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	33.10	32.54	29.80	27.83	24.57	21.93	20.03	18.35	16.46	14.57	13.60
1800	39.69	39.23	36.08	33.90	30.18	27.22	25.02	22.85	20.27	17.70	16.40
2000	46.36	46.09	42.66	40.25	36.24	32.94	30.21	27.54	24.21	20.83	19.15
2250	54.74		51.11	48.54	44.23	40.20	36.81	33.39	29.07	24.66	22.63
2500	62.89		59.39	56.70	52.02	47.19	43.12	38.90	33.41	28.19	25.79
2750	70.87		67.62	64.83	59.56	54.06	49.34	43.98	37.48	31.48	28.71
3000	78.47		75.56	72.54	66.61	60.68	54.98	48.72	41.33	34.57	31.46
3500	92.60		90.33	86.55	79.82	72.71	65.36	57.49	48.71	40.70	36.98
4000	103.88		102.65	98.53	91.16	83.21	74.49	65.52	55.52	46.22	41.78
5000	116.13			113.84	105.70	96.96	87.08	76.78	64.69	53.23	47.84
6000	121.81				115.13	105.79	95.33	84.22	70.91	58.24	52.22

Base Flows	Base Flow AWS	CR Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	6.78	4.97	1.67	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	9.53	7.96	2.91	1.87	0.21	0.00	0.00	0.00	0.00	0.00	0.00
2000	11.24	10.34	4.84	3.31	1.46	0.61	0.00	0.00	0.00	0.00	0.00
2250	13.09		7.19	5.63	3.14	1.20	0.00	0.00	0.00	0.00	0.00
2500	16.39		10.76	9.01	6.19	3.82	0.00	0.00	0.00	0.00	0.00
2750	19.71		15.02	12.78	9.64	7.07	0.99	0.00	0.00	0.00	0.00
3000	22.99		19.32	16.77	13.14	10.06	2.21	0.00	0.00	0.00	0.00
3500	33.84		32.65	27.18	22.26	17.14	5.82	0.15	0.00	0.00	0.00
4000	43.64		42.41	35.19	30.18	24.73	11.96	3.40	0.00	0.00	0.00
5000	48.12			45.87	40.83	34.95	21.18	9.77	1.78	0.00	0.00
6000	48.12				44.59	38.10	23.83	10.74	2.40	0.00	0.00

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	2	10	16	26	34	39	45	50	56	59
1800	0	1	9	15	24	31	37	42	49	55	59
2000	0	1	8	13	22	29	35	41	48	55	59
2250	0		7	11	19	27	33	39	47	55	59
2500	0		6	10	17	25	31	38	47	55	59
2750	0		5	9	16	24	30	38	47	56	59
3000	0		4	8	15	23	30	38	47	56	60
3500	0		2	7	14	21	29	38	47	56	60
4000	0		1	5	12	20	28	37	47	56	60
5000	0			2	9	17	25	34	44	54	59
6000	0				5	13	22	31	42	52	57

Base Flows	% at Base Flow	% Loss CR Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	27	75	88	100	100	100	100	100	100	100
1800	0	16	69	80	98	100	100	100	100	100	100
2000	0	8	57	71	87	95	100	100	100	100	100
2250	0		45	57	76	91	100	100	100	100	100
2500	0		34	45	62	77	100	100	100	100	100
2750	0		24	35	51	64	95	100	100	100	100
3000	0		16	27	43	56	90	100	100	100	100
3500	0		4	20	34	49	83	100	100	100	100
4000	0		3	19	31	43	73	92	100	100	100
5000	0			5	15	27	56	80	96	100	100
6000	0				7	21	50	78	95	100	100



Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) and Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) CR  
 GHC Deep-Fast persistent habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	37.34	37.34	37.34	37.34	37.34	37.34	37.34	37.34	37.34	37.34	37.34
1800	45.20	45.20	45.20	45.20	45.20	45.20	45.20	45.20	45.20	45.20	45.20
2000	50.39	50.39	50.39	50.39	50.39	50.39	50.39	50.39	50.39	50.39	50.39
2250	66.29	66.29	66.29	66.29	66.29	66.29	66.29	66.29	66.29	66.29	66.29
2500	88.01	88.01	88.01	88.01	88.01	88.01	88.01	88.01	88.01	88.01	88.01
2750	99.87	99.87	99.87	99.87	99.87	99.87	99.87	99.87	99.87	99.87	99.87
3000	117.77	117.77	117.77	117.77	117.77	117.77	117.77	117.77	117.77	117.77	117.77
3500	158.03	158.03	158.03	158.03	158.03	158.03	158.03	158.03	158.03	158.03	158.03
4000	184.76	184.76	184.76	184.76	184.76	184.76	184.76	184.76	184.76	184.76	184.76
5000	238.25	238.25	238.25	238.25	238.25	238.25	238.25	238.25	238.25	238.25	238.25
6000	280.06	280.06	280.06	280.06	280.06	280.06	280.06	280.06	280.06	280.06	280.06

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	63.11	63.11	63.11	63.11	63.11	63.11	63.11	63.11	63.11	63.11	63.11
1800	74.01	74.01	74.01	74.01	74.01	74.01	74.01	74.01	74.01	74.01	74.01
2000	80.48	80.48	80.48	80.48	80.48	80.48	80.48	80.48	80.48	80.48	80.48
2250	98.79	98.79	98.79	98.79	98.79	98.79	98.79	98.79	98.79	98.79	98.79
2500	123.46	123.46	123.46	123.46	123.46	123.46	123.46	123.46	123.46	123.46	123.46
2750	135.99	135.99	135.99	135.99	135.99	135.99	135.99	135.99	135.99	135.99	135.99
3000	151.77	151.77	151.77	151.77	151.77	151.77	151.77	151.77	151.77	151.77	151.77
3500	177.52	177.52	177.52	177.52	177.52	177.52	177.52	177.52	177.52	177.52	177.52
4000	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72	198.72
5000	246.57	246.57	246.57	246.57	246.57	246.57	246.57	246.57	246.57	246.57	246.57
6000	287.26	287.26	287.26	287.26	287.26	287.26	287.26	287.26	287.26	287.26	287.26

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	0	0	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0	0	0
2250	0	0	0	0	0	0	0	0	0	0	0
2500	0	0	0	0	0	0	0	0	0	0	0
2750	0	0	0	0	0	0	0	0	0	0	0
3000	0	0	0	0	0	0	0	0	0	0	0
3500	0	0	0	0	0	0	0	0	0	0	0
4000	0	0	0	0	0	0	0	0	0	0	0
5000	0	0	0	0	0	0	0	0	0	0	0
6000	0	0	0	0	0	0	0	0	0	0	0

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	0	0	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0	0	0
2250	0	0	0	0	0	0	0	0	0	0	0
2500	0	0	0	0	0	0	0	0	0	0	0
2750	0	0	0	0	0	0	0	0	0	0	0
3000	0	0	0	0	0	0	0	0	0	0	0
3500	0	0	0	0	0	0	0	0	0	0	0
4000	0	0	0	0	0	0	0	0	0	0	0
5000	0	0	0	0	0	0	0	0	0	0	0
6000	0	0	0	0	0	0	0	0	0	0	0

Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) and Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) CR  
 GHC Deep-Slow persistent habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	304.11	281.76	148.97	120.73	74.63	57.51	50.10	43.85	35.51	32.87	32.17
1800	299.11	283.91	149.87	121.43	75.00	57.88	50.47	44.22	35.81	33.18	32.48
2000	297.49	286.84	152.53	123.24	76.48	58.76	51.35	45.10	36.69	34.06	33.36
2250	284.76		154.36	124.51	77.76	60.04	51.91	45.66	37.25	34.62	33.92
2500	267.31		157.19	126.66	79.57	61.85	53.40	47.15	38.74	36.10	34.80
2750	257.29		158.59	128.06	80.12	62.27	53.82	47.57	38.88	36.25	34.94
3000	242.43		160.51	129.45	81.14	63.29	54.84	48.59	39.90	37.26	35.96
3500	208.21		163.79	132.15	82.93	65.09	56.63	50.38	41.69	39.06	37.75
4000	188.38		166.96	134.34	84.45	66.52	58.02	51.77	43.08	40.44	38.87
5000	151.76			139.12	87.99	69.16	59.98	53.64	44.95	42.14	40.56
6000	130.68				93.48	74.51	65.33	58.99	49.65	46.80	45.22

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	193.47	167.11	65.26	45.29	23.07	16.88	15.31	13.93	13.60	13.58	13.58
1800	186.92	170.24	66.44	46.19	23.48	17.29	15.72	14.35	13.72	13.70	13.70
2000	184.10	172.82	68.64	47.57	24.38	18.19	16.62	15.25	14.62	14.61	14.61
2250	169.45		70.36	48.45	25.25	19.06	17.01	15.64	15.01	14.99	14.99
2500	150.21		73.46	50.19	26.51	20.33	17.79	16.41	15.79	15.77	15.77
2750	140.01		74.72	51.45	27.09	20.71	18.17	16.80	15.79	15.77	15.77
3000	128.76		77.59	53.55	28.51	22.13	19.59	18.22	17.20	17.19	17.19
3500	112.06		82.28	57.27	30.00	23.62	21.08	19.71	18.70	18.68	18.68
4000	100.41		85.97	59.50	31.26	24.50	21.76	20.39	19.37	19.36	19.36
5000	75.76			64.23	34.14	26.72	23.52	21.76	20.74	20.54	20.54
6000	58.10				35.59	27.97	24.77	23.01	21.80	21.40	21.40

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	7	51	60	75	81	84	86	88	89	89
1800	0	5	50	59	75	81	83	85	88	89	89
2000	0	4	49	59	74	80	83	85	88	89	89
2250	0		46	56	73	79	82	84	87	88	88
2500	0		41	53	70	77	80	82	86	86	87
2750	0		38	50	69	76	79	82	85	86	86
3000	0		34	47	67	74	77	80	84	85	85
3500	0		21	37	60	69	73	76	80	81	82
4000	0		11	29	55	65	69	73	77	79	79
5000	0			8	42	54	60	65	70	72	73
6000	0				28	43	50	55	62	64	65

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	14	66	77	88	91	92	93	93	93	93
1800	0	9	64	75	87	91	92	92	93	93	93
2000	0	6	63	74	87	90	91	92	92	92	92
2250	0		58	71	85	89	90	91	91	91	91
2500	0		51	67	82	86	88	89	89	90	90
2750	0		47	63	81	85	87	88	89	89	89
3000	0		40	58	78	83	85	86	87	87	87
3500	0		27	49	73	79	81	82	83	83	83
4000	0		14	41	69	76	78	80	81	81	81
5000	0			15	55	65	69	71	73	73	73
6000	0				39	52	57	60	62	63	63

Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) and Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) CR  
 GHC Shallow-Fast persistent habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	6.01	4.57	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	8.59	7.61	3.29	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	13.15	12.42	7.78	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2250	17.41		11.66	4.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2500	22.98		15.69	7.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2750	29.84		21.47	11.89	0.27	0.00	0.00	0.00	0.00	0.00	0.00
3000	35.68		27.42	17.18	0.45	0.00	0.00	0.00	0.00	0.00	0.00
3500	46.54		39.30	27.51	3.91	0.00	0.00	0.00	0.00	0.00	0.00
4000	51.90		47.48	35.15	9.09	0.26	0.00	0.00	0.00	0.00	0.00
5000	51.86			44.28	14.14	2.62	0.00	0.00	0.00	0.00	0.00
6000	48.74				19.61	5.78	1.13	0.00	0.00	0.00	0.00

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	8.98	6.69	1.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	12.94	11.50	4.81	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	19.71	18.64	11.36	2.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2250	26.44		17.23	6.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2500	35.52		23.62	11.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2750	46.21		32.82	17.98	0.39	0.00	0.00	0.00	0.00	0.00	0.00
3000	55.84		42.59	26.78	0.65	0.00	0.00	0.00	0.00	0.00	0.00
3500	72.94		61.53	43.46	6.31	0.00	0.00	0.00	0.00	0.00	0.00
4000	81.52		74.61	55.96	15.04	0.39	0.00	0.00	0.00	0.00	0.00
5000	80.94			70.76	24.19	4.48	0.00	0.00	0.00	0.00	0.00
6000	77.53				34.02	11.13	1.87	0.00	0.00	0.00	0.00

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	24	82	100	100	100	100	100	100	100	100
1800	0	11	62	91	100	100	100	100	100	100	100
2000	0	6	41	86	100	100	100	100	100	100	100
2250	0		33	74	100	100	100	100	100	100	100
2500	0		32	66	100	100	100	100	100	100	100
2750	0		28	60	99	100	100	100	100	100	100
3000	0		23	52	99	100	100	100	100	100	100
3500	0		16	41	92	100	100	100	100	100	100
4000	0		9	32	82	99	100	100	100	100	100
5000	0			15	73	95	100	100	100	100	100
6000	0				60	88	98	100	100	100	100

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	26	83	100	100	100	100	100	100	100	100
1800	0	11	63	92	100	100	100	100	100	100	100
2000	0	5	42	86	100	100	100	100	100	100	100
2250	0		35	75	100	100	100	100	100	100	100
2500	0		34	67	100	100	100	100	100	100	100
2750	0		29	61	99	100	100	100	100	100	100
3000	0		24	52	99	100	100	100	100	100	100
3500	0		16	40	91	100	100	100	100	100	100
4000	0		8	31	82	100	100	100	100	100	100
5000	0			13	70	94	100	100	100	100	100
6000	0				56	86	98	100	100	100	100

Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) and Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) CR  
 GHC Shallow-Slow persistent habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	176.59	155.88	90.68	73.76	43.78	29.46	21.09	14.96	8.93	6.40	5.86
1800	171.92	156.64	91.44	74.38	44.26	29.46	21.09	14.96	8.93	6.40	5.86
2000	164.18	157.05	91.85	74.72	44.26	29.46	21.09	14.96	8.93	6.40	5.86
2250	157.93		93.01	75.88	45.42	29.46	21.09	14.96	8.93	6.40	5.86
2500	148.16		93.08	75.88	45.42	29.46	21.09	14.96	8.93	6.40	5.86
2750	139.73		93.35	76.01	45.56	29.46	21.09	14.96	8.93	6.40	5.86
3000	131.26		93.78	76.43	45.98	29.46	21.09	14.96	8.93	6.40	5.86
3500	115.64		95.04	77.70	46.89	29.73	21.09	14.96	8.93	6.40	5.86
4000	103.96		95.63	78.29	47.47	30.01	21.09	14.96	8.93	6.40	5.86
5000	88.14			79.31	48.42	30.87	21.77	14.96	8.93	6.40	5.86
6000	72.14				50.02	32.48	23.31	15.10	8.93	6.40	5.86

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	242.38	213.63	116.61	94.24	56.14	30.69	18.94	11.63	6.15	4.75	4.03
1800	234.39	213.96	116.93	94.57	56.47	30.69	18.94	11.63	6.15	4.75	4.03
2000	224.55	214.54	117.51	94.86	56.47	30.69	18.94	11.63	6.15	4.75	4.03
2250	214.15		117.51	94.86	56.47	30.69	18.94	11.63	6.15	4.75	4.03
2500	199.94		117.80	94.86	56.47	30.69	18.94	11.63	6.15	4.75	4.03
2750	187.51		118.39	94.86	56.47	30.69	18.94	11.63	6.15	4.75	4.03
3000	173.35		118.39	94.86	56.47	30.69	18.94	11.63	6.15	4.75	4.03
3500	148.72		119.91	96.39	57.16	31.07	18.94	11.63	6.15	4.75	4.03
4000	131.63		120.94	97.42	58.19	31.46	18.94	11.63	6.15	4.75	4.03
5000	109.60			98.02	58.46	31.88	19.90	11.63	6.14	4.74	4.03
6000	92.44				60.93	33.88	20.97	11.73	6.15	4.75	4.03

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	12	49	58	75	83	88	92	95	96	97
1800	0	9	47	57	74	83	88	91	95	96	97
2000	0	4	44	54	73	82	87	91	95	96	96
2250	0		41	52	71	81	87	91	94	96	96
2500	0		37	49	69	80	86	90	94	96	96
2750	0		33	46	67	79	85	89	94	95	96
3000	0		29	42	65	78	84	89	93	95	96
3500	0		18	33	59	74	82	87	92	94	95
4000	0		8	25	54	71	80	86	91	94	94
5000	0			10	45	65	75	83	90	93	93
6000	0				31	55	68	79	88	91	92

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	12	52	61	77	87	92	95	97	98	98
1800	0	9	50	60	76	87	92	95	97	98	98
2000	0	4	48	58	75	86	92	95	97	98	98
2250	0		45	56	74	86	91	95	97	98	98
2500	0		41	53	72	85	91	94	97	98	98
2750	0		37	49	70	84	90	94	97	97	98
3000	0		32	45	67	82	89	93	96	97	98
3500	0		19	35	62	79	87	92	96	97	97
4000	0		8	26	56	76	86	91	95	96	97
5000	0			11	47	71	82	89	94	96	96
6000	0				34	63	77	87	93	95	96

Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) Co-occurring mussels persistent and persistent quality habitat.

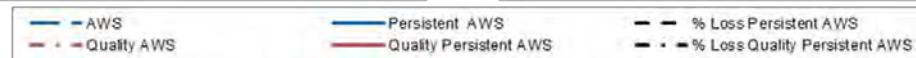
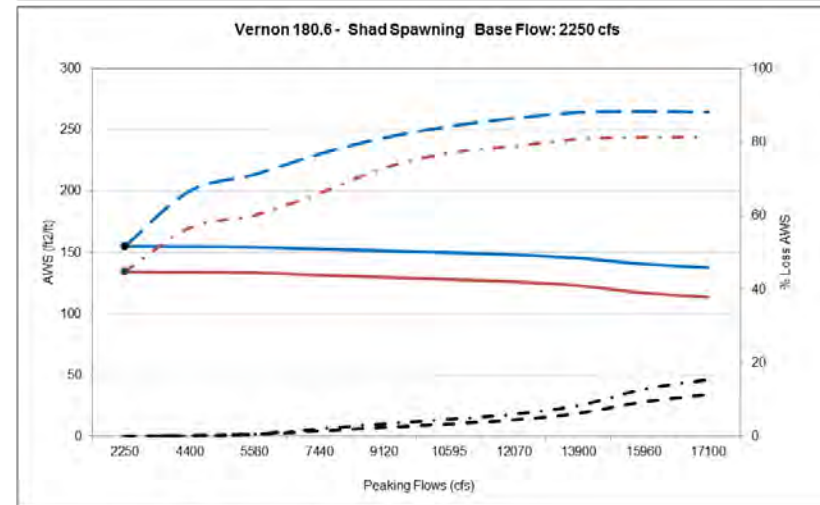
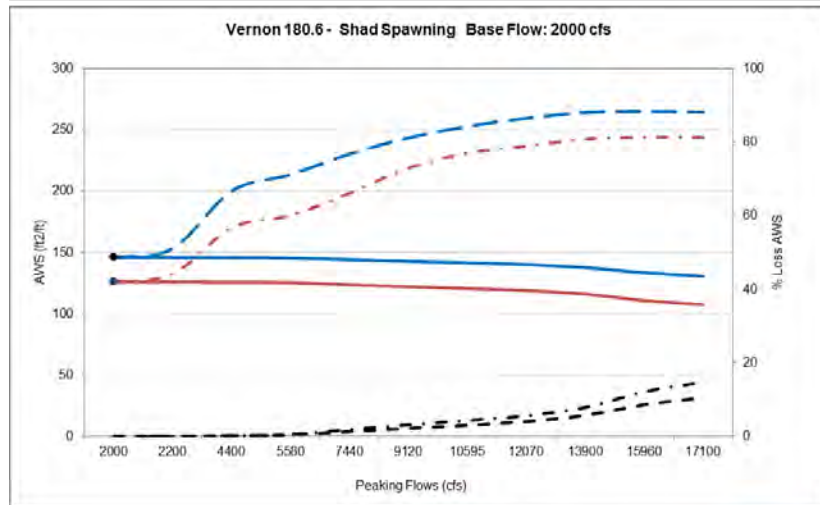
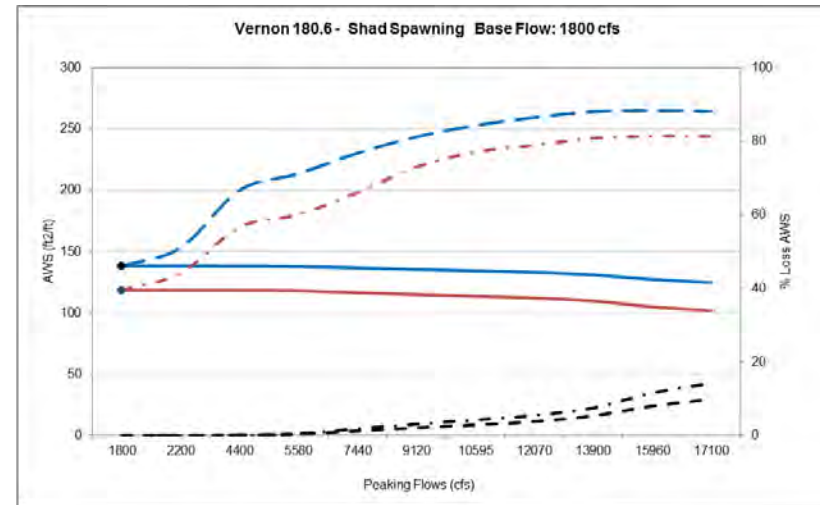
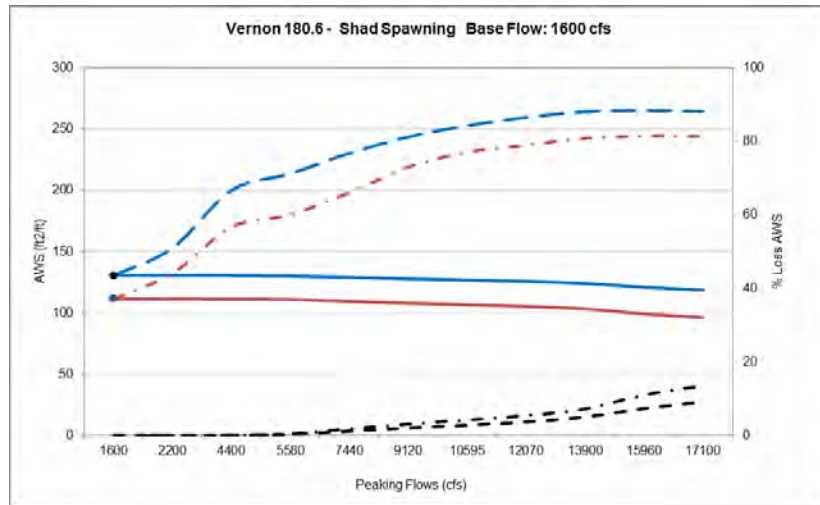
Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	145.60	133.35	108.95	97.01	79.50	66.13	56.71	49.06	40.80	35.22	32.49
1800	144.83	136.79	111.46	99.17	81.28	67.63	58.04	50.27	41.88	36.26	33.50
2000	143.69	139.90	113.75	101.20	83.01	69.08	59.37	51.52	43.04	37.39	34.60
2250	142.72		116.49	103.62	84.90	70.69	60.85	52.91	44.39	38.72	35.87
2500	142.11		119.14	105.94	86.69	72.28	62.27	54.29	45.70	40.00	37.08
2750	141.92		121.81	108.29	88.44	73.80	63.68	55.64	46.98	41.23	38.27
3000	141.72		124.37	110.54	90.20	75.35	65.11	57.02	48.28	42.41	39.42
3500	141.08		129.53	115.02	93.74	78.42	67.96	59.76	50.84	44.86	41.79
4000	139.43		134.11	119.07	97.00	81.24	70.63	62.32	53.10	47.05	43.95
5000	133.84			126.02	102.81	86.34	75.52	66.73	57.04	50.91	47.74
6000	125.25				107.05	90.34	79.13	69.99	60.00	53.75	50.48

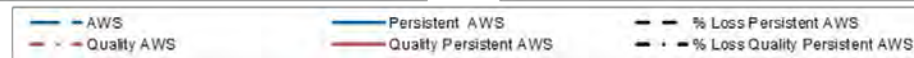
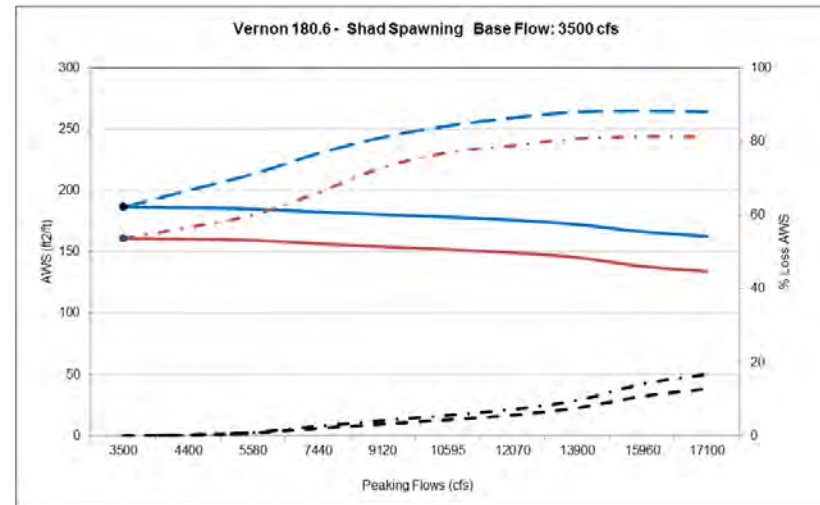
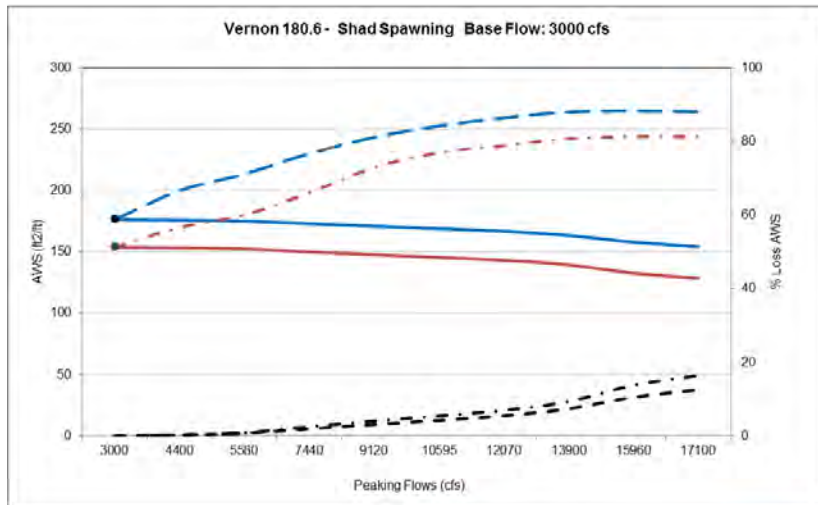
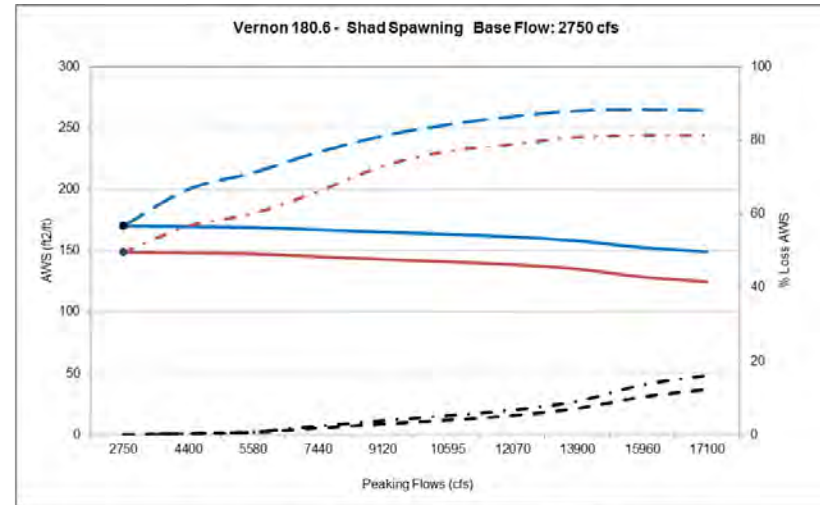
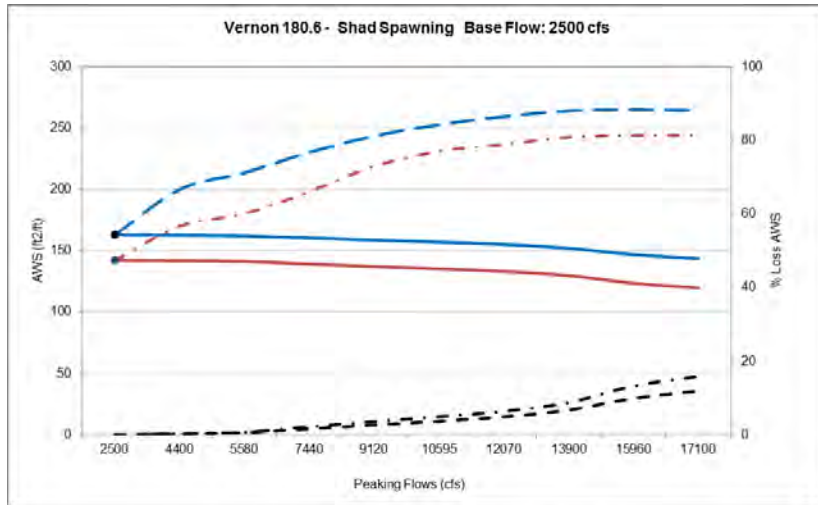
Base Flows	Base Flow AWS	Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	88.88	79.17	58.24	46.29	30.17	15.86	9.26	7.83	5.19	3.86	3.19
1800	88.53	81.81	59.36	47.16	30.92	16.59	9.77	8.23	5.44	4.11	3.45
2000	87.01	83.33	60.13	47.86	31.28	16.68	9.85	8.30	5.49	4.16	3.48
2250	85.50		61.60	49.10	31.99	17.24	10.40	8.57	5.77	4.43	3.75
2500	83.12		62.47	49.87	32.23	17.35	10.49	8.66	5.84	4.49	3.81
2750	79.72		63.39	50.57	32.70	17.80	10.93	9.09	6.11	4.75	4.07
3000	78.11		64.35	51.38	33.03	18.10	11.23	9.38	6.38	5.03	4.35
3500	78.83		70.00	56.25	36.24	21.22	14.33	12.46	9.15	7.80	7.11
4000	79.18		75.83	61.35	39.99	24.76	17.79	15.88	12.05	10.69	9.98
5000	76.25			69.26	45.98	29.67	22.52	20.44	15.76	14.41	13.67
6000	68.07				49.23	32.76	25.23	22.80	18.03	16.68	15.67

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	8	25	33	45	55	61	66	72	76	78
1800	0	6	23	32	44	53	60	65	71	75	77
2000	0	3	21	30	42	52	59	64	70	74	76
2250	0		18	27	41	50	57	63	69	73	75
2500	0		16	25	39	49	56	62	68	72	74
2750	0		14	24	38	48	55	61	67	71	73
3000	0		12	22	36	47	54	60	66	70	72
3500	0		8	18	34	44	52	58	64	68	70
4000	0		4	15	30	42	49	55	62	66	68
5000	0			6	23	35	44	50	57	62	64
6000	0				15	28	37	44	52	57	60

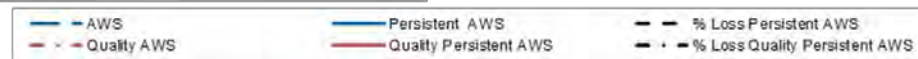
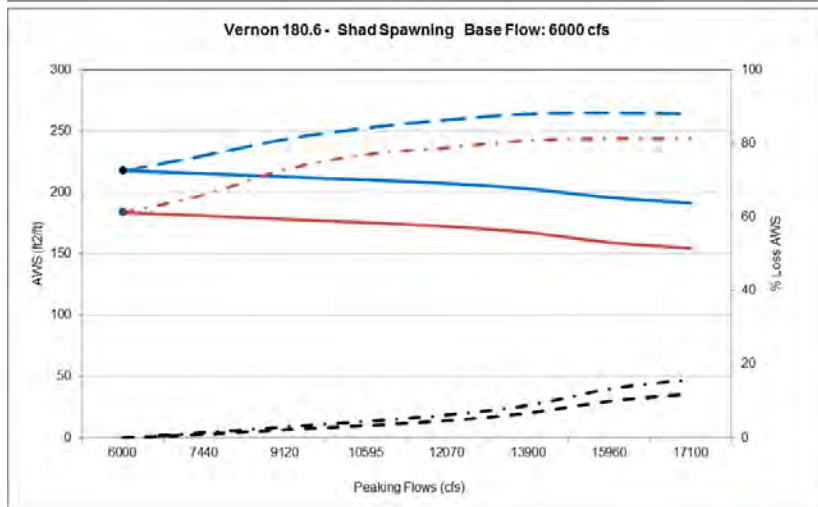
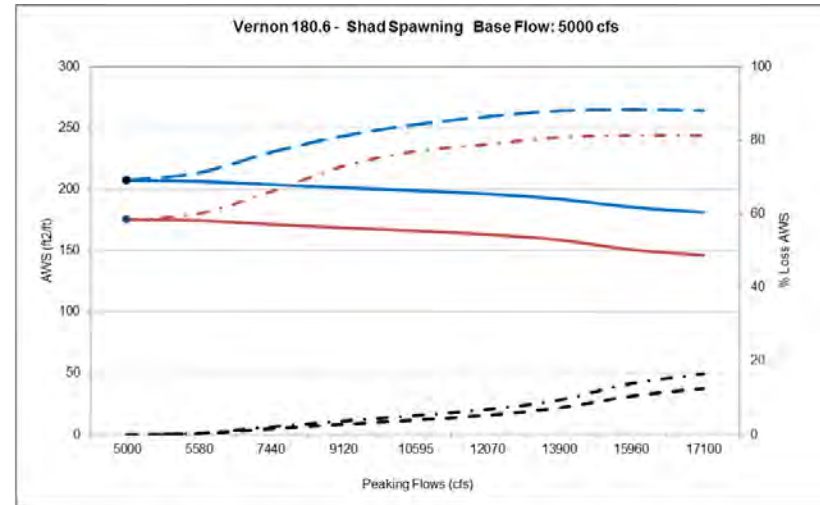
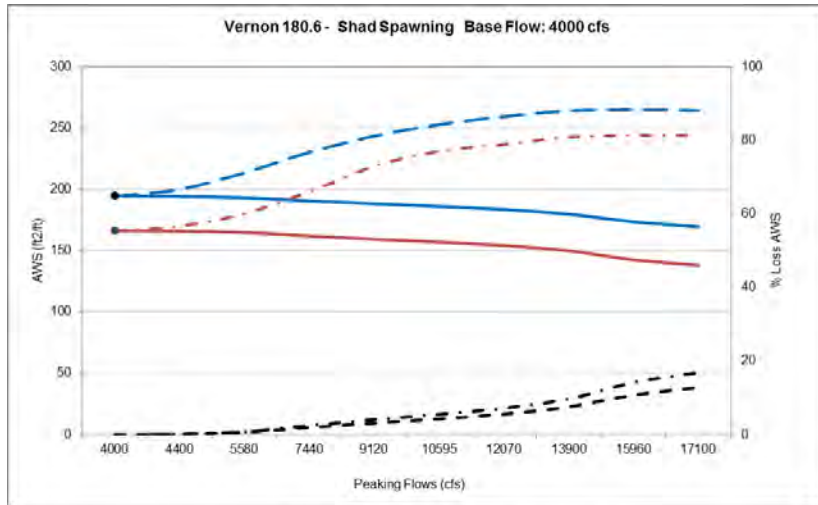
Base Flows	% at Base Flow	% Loss Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	11	34	48	66	82	90	91	94	96	96
1800	0	8	33	47	65	81	89	91	94	95	96
2000	0	4	31	45	64	81	89	90	94	95	96
2250	0		28	43	63	80	88	90	93	95	96
2500	0		25	40	61	79	87	90	93	95	95
2750	0		20	37	59	78	86	89	92	94	95
3000	0		18	34	58	77	86	88	92	94	94
3500	0		11	29	54	73	82	84	88	90	91
4000	0		4	23	50	69	78	80	85	86	87
5000	0			9	40	61	70	73	79	81	82
6000	0				28	52	63	67	74	76	77

Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - American Shad spawning persistent and persistent quality habitat.



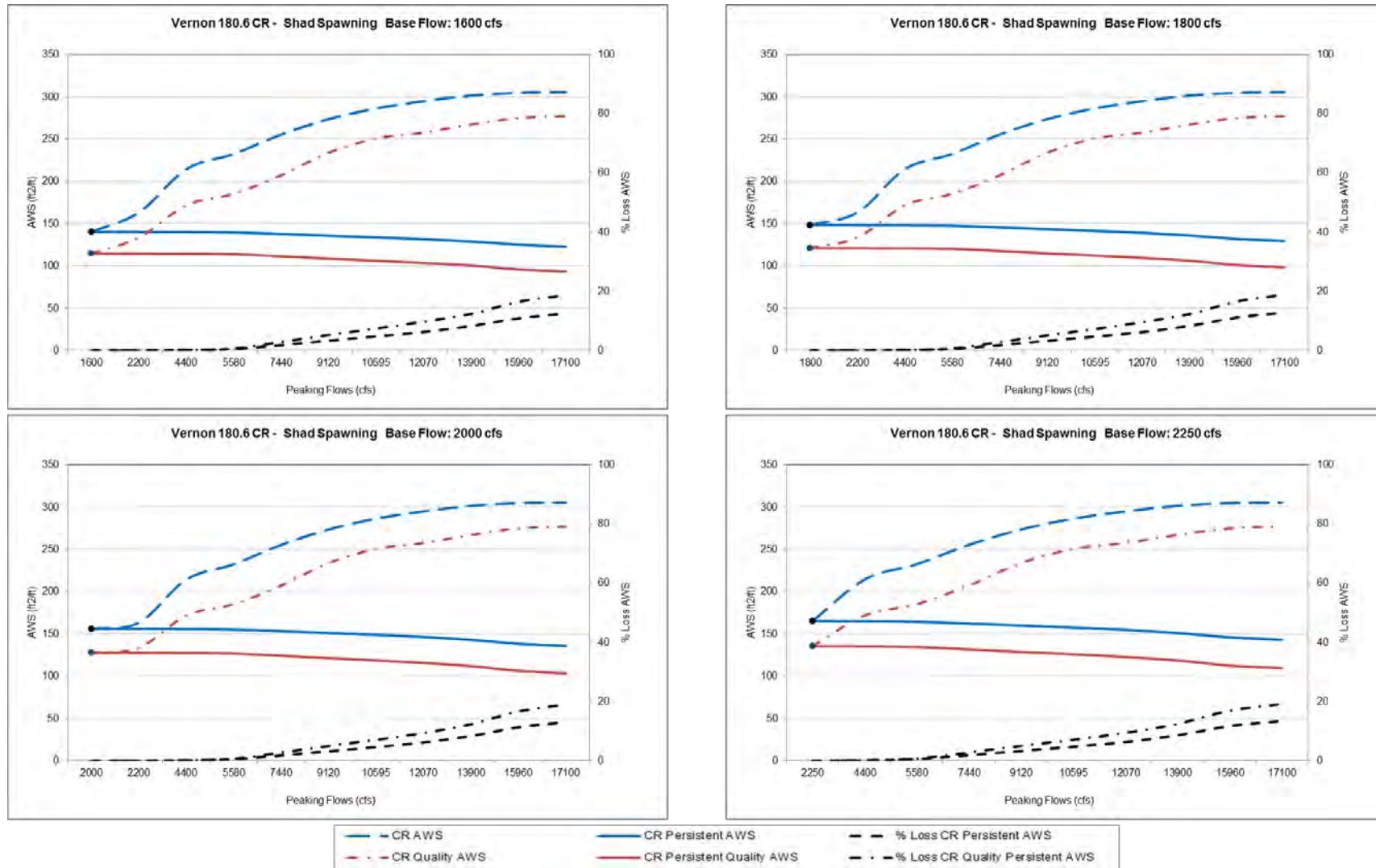


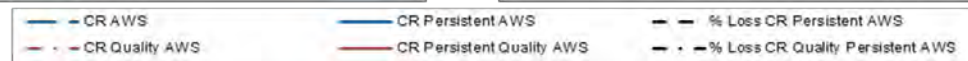
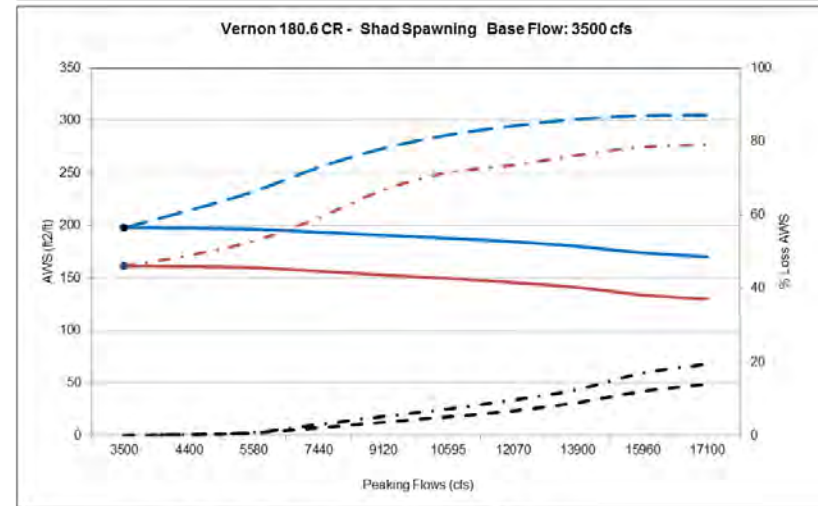
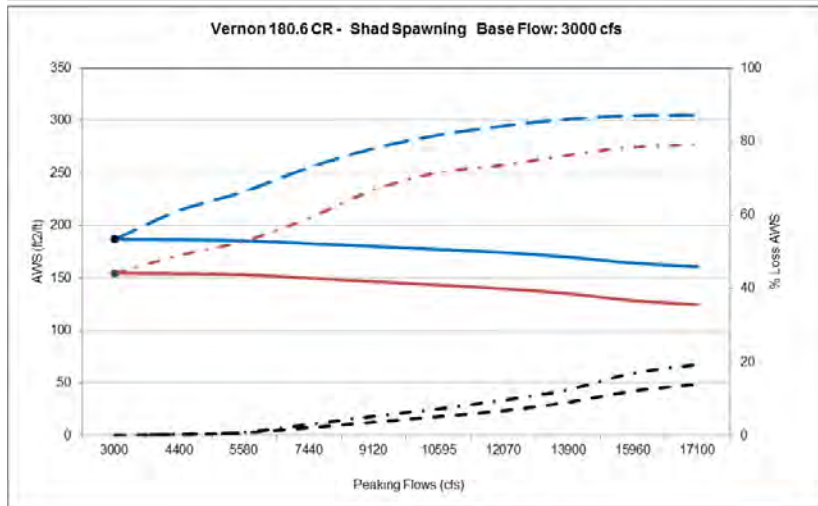
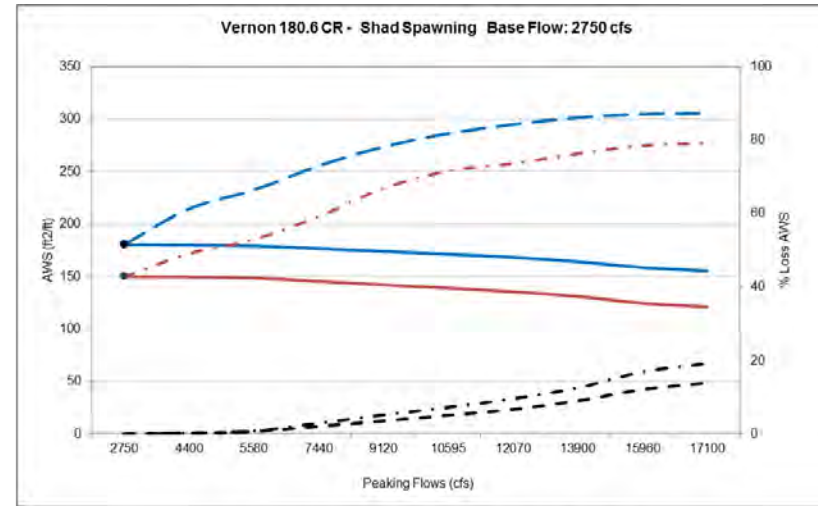
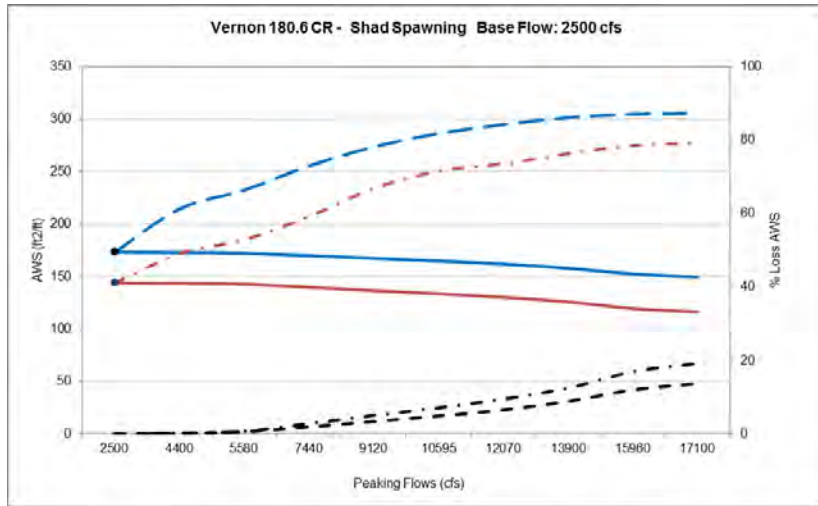


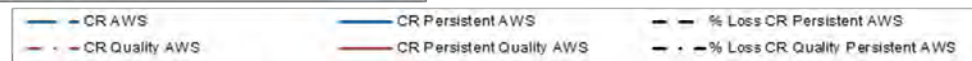
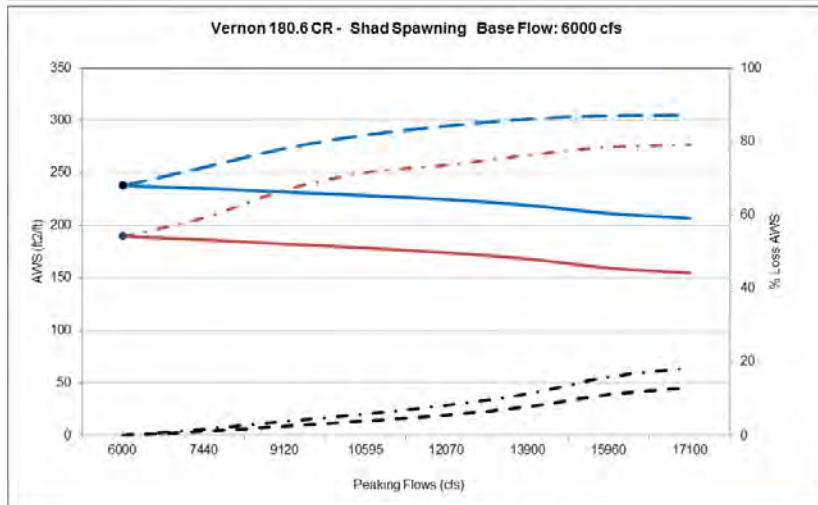
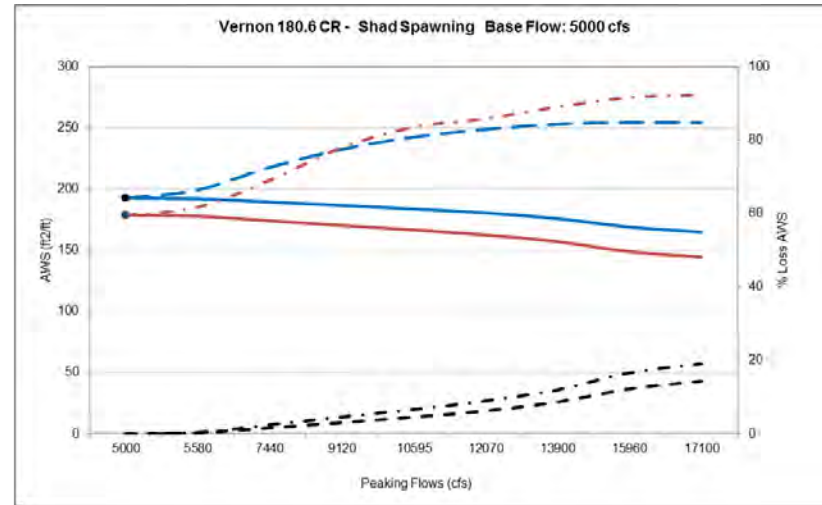
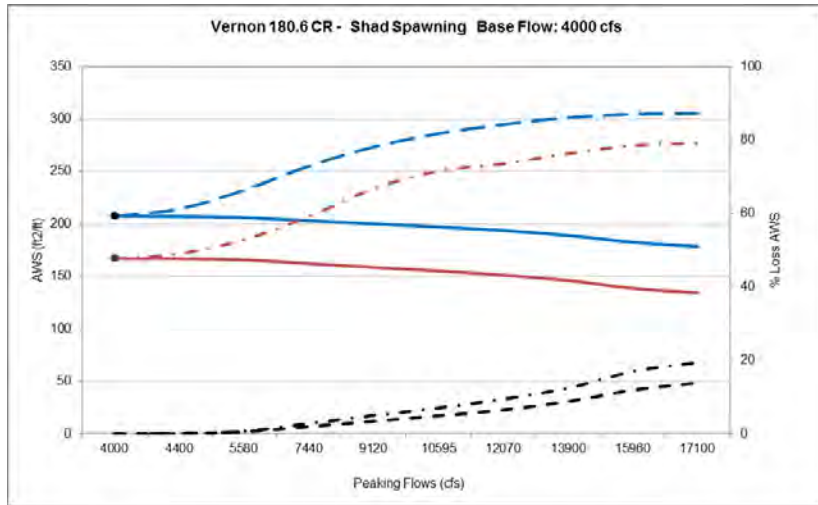




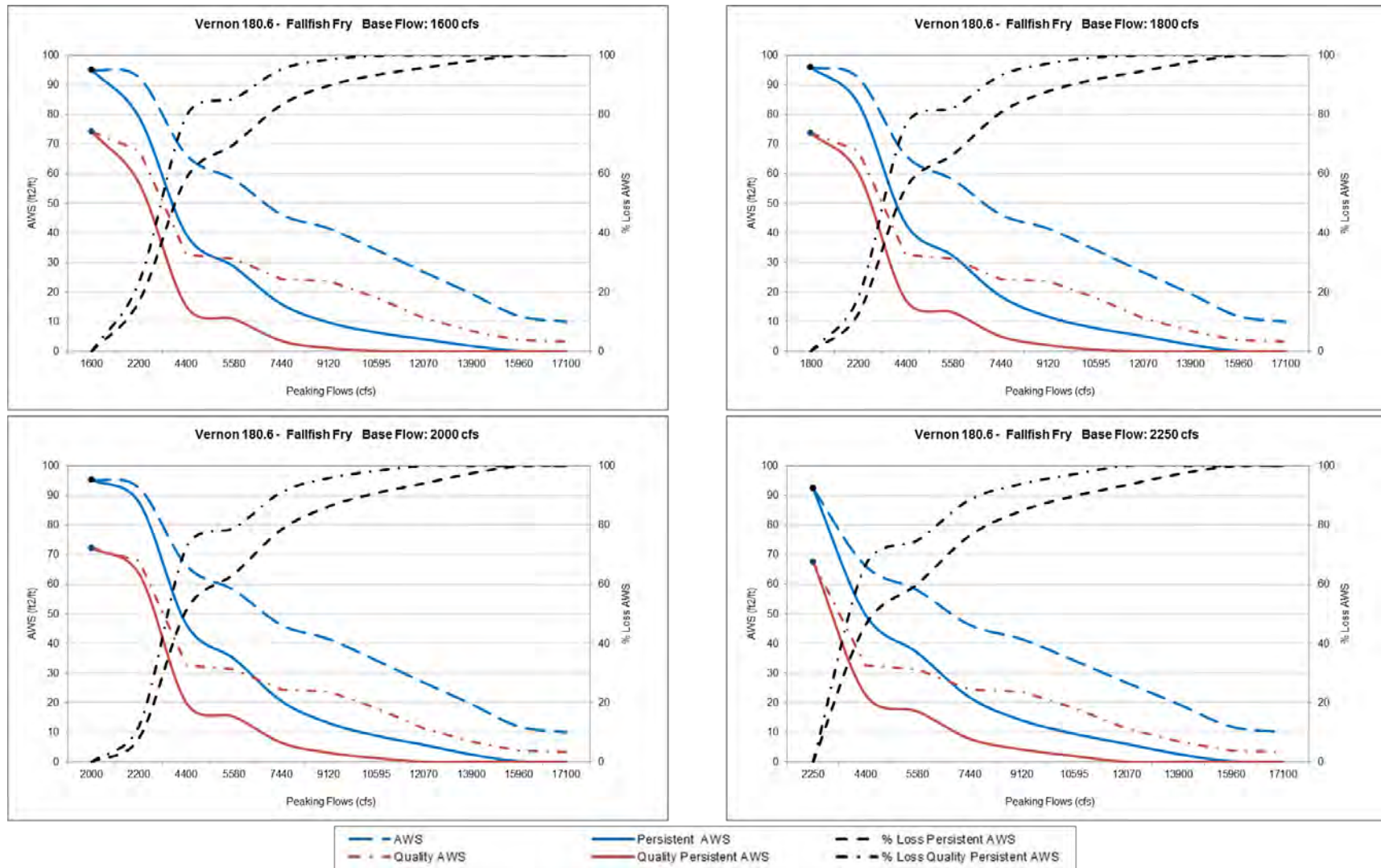
Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - CR American Shad spawning persistent and persistent quality habitat.



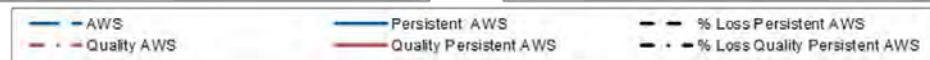
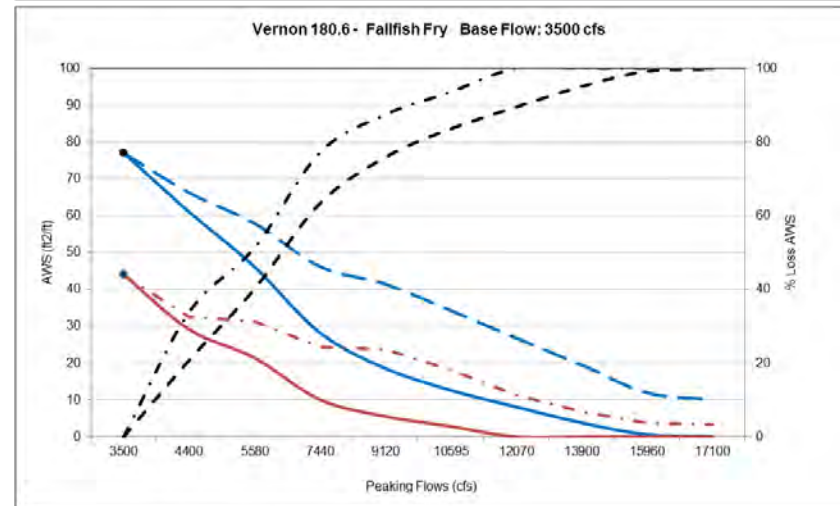
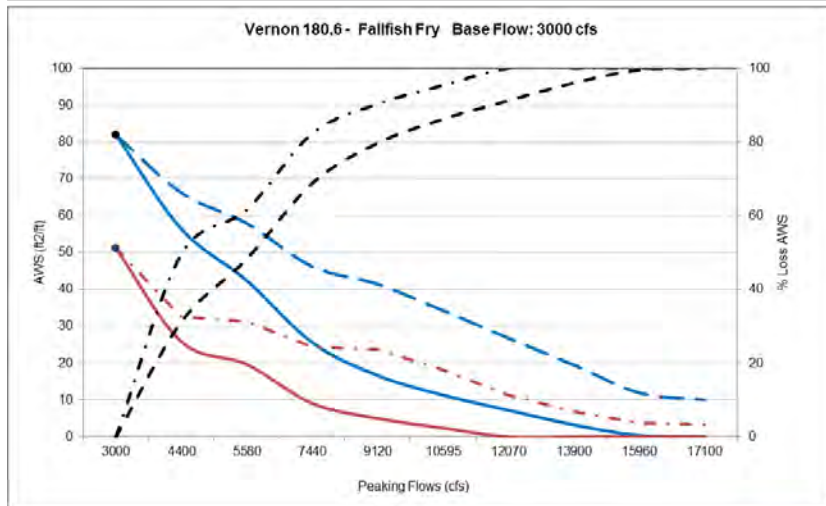
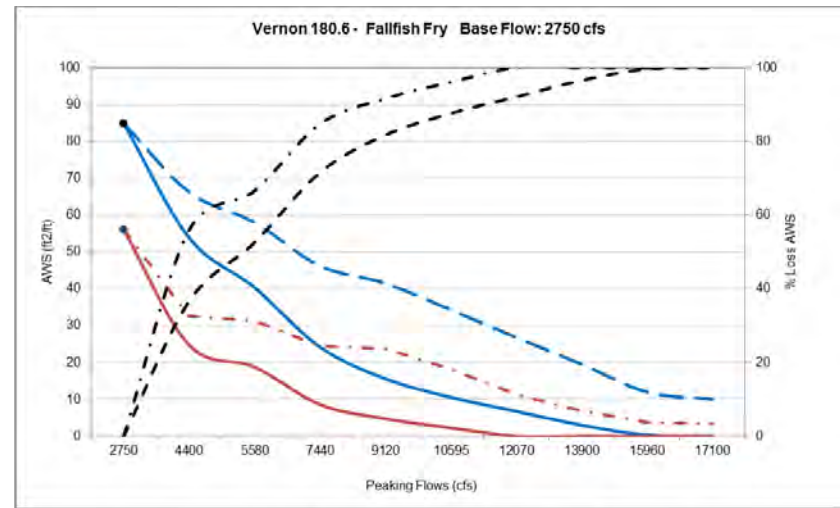
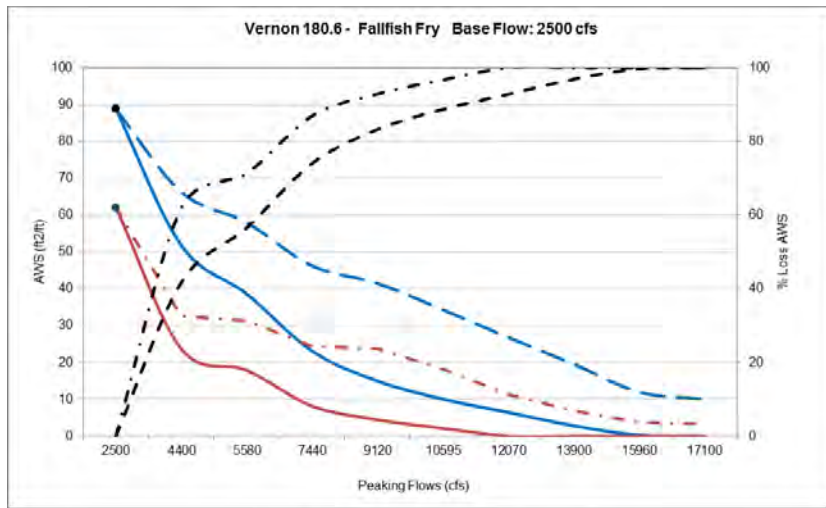


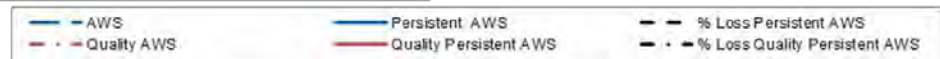
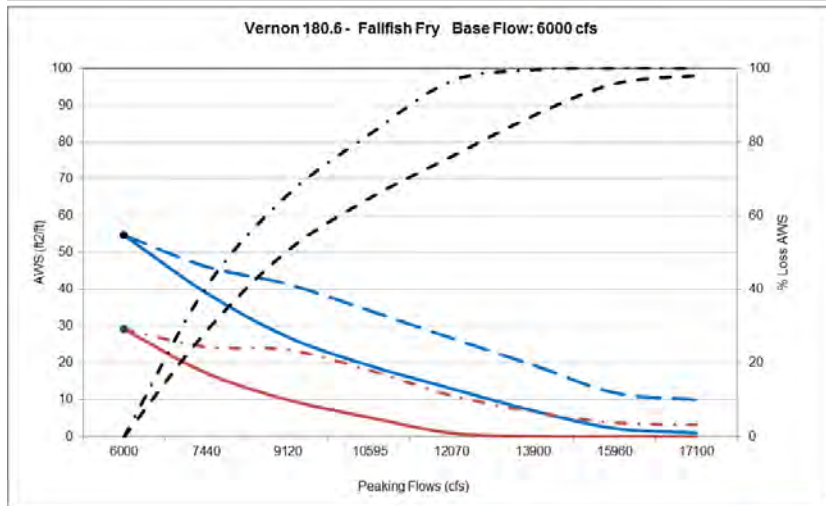
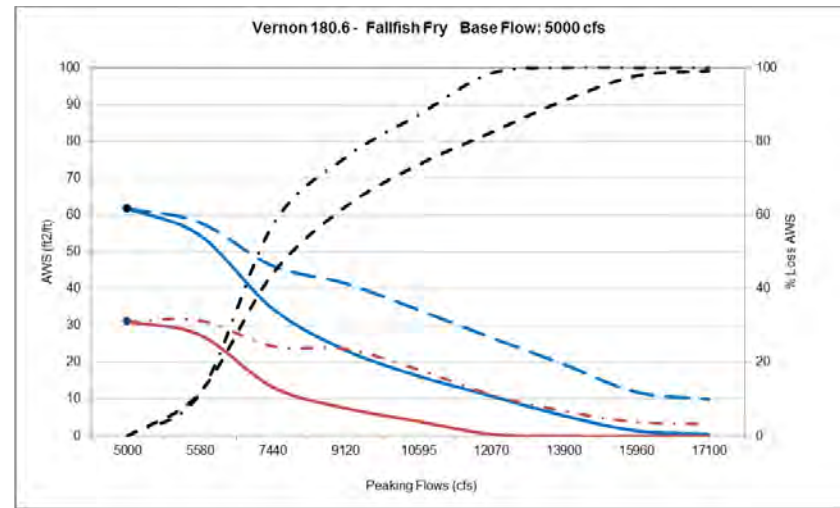
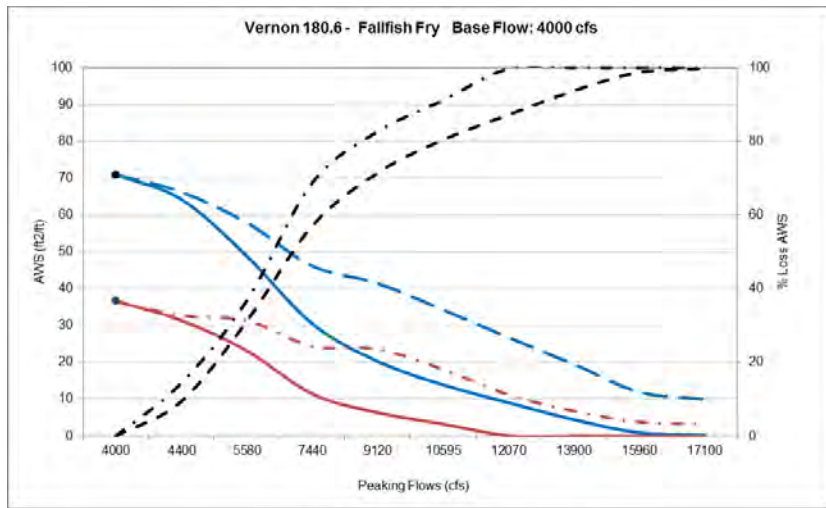


Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - Fallfish fry persistent and persistent quality habitat.

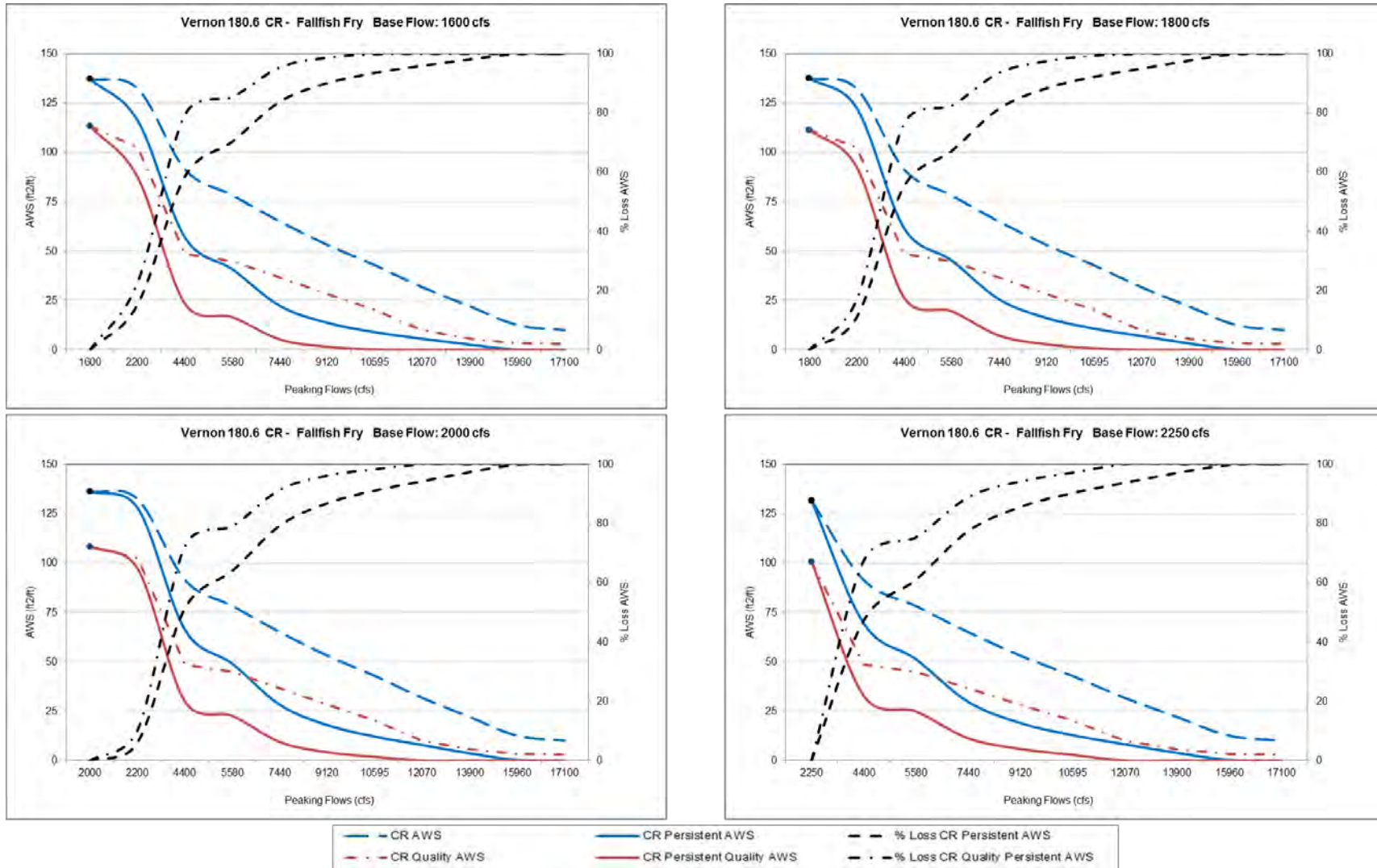


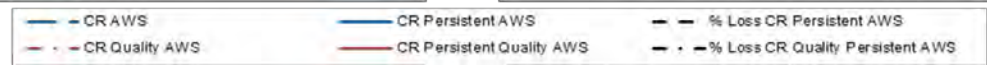
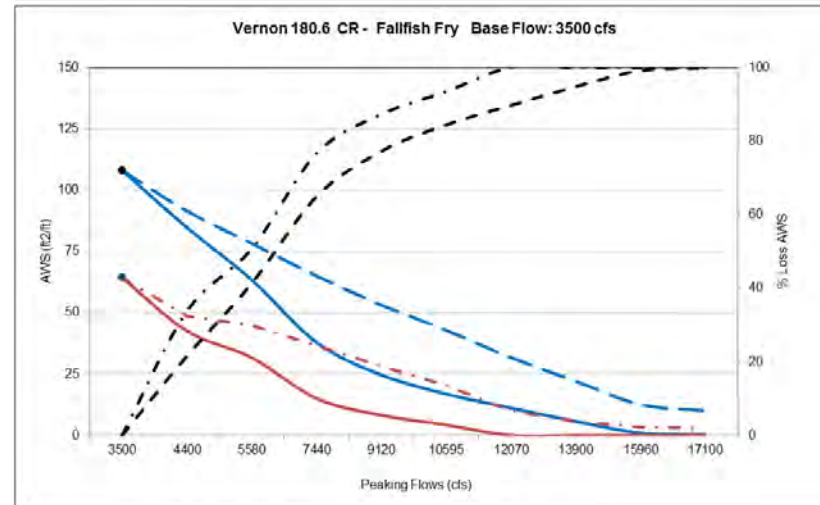
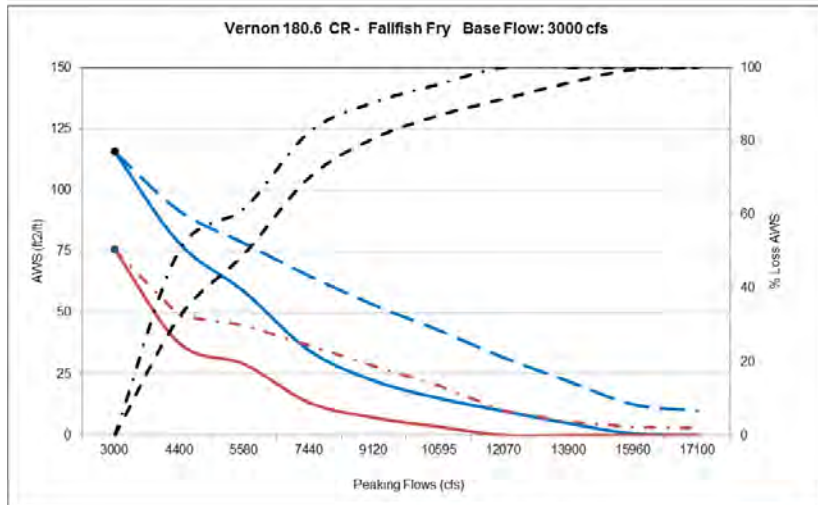
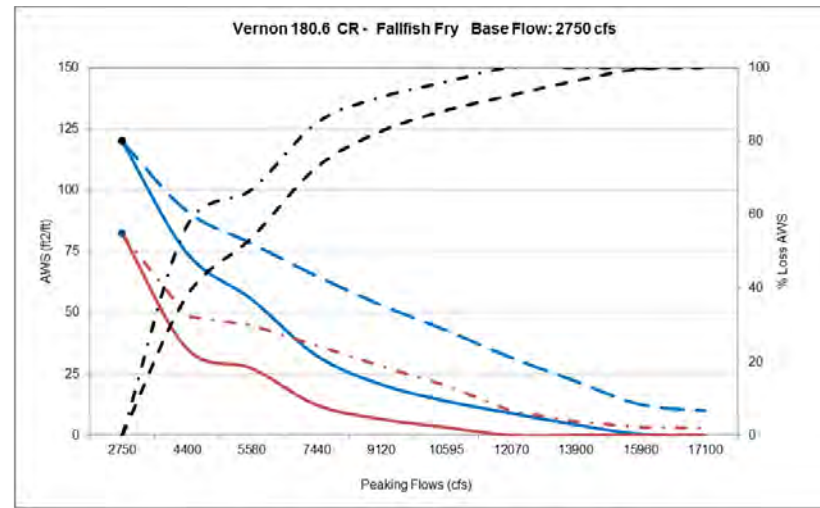
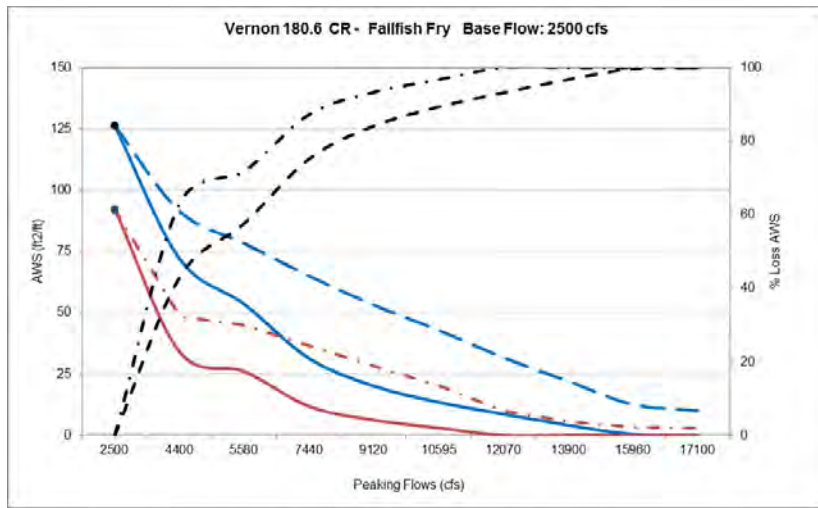




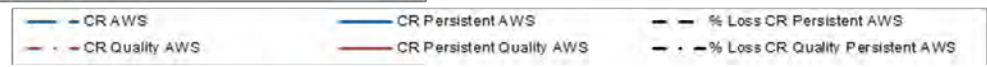
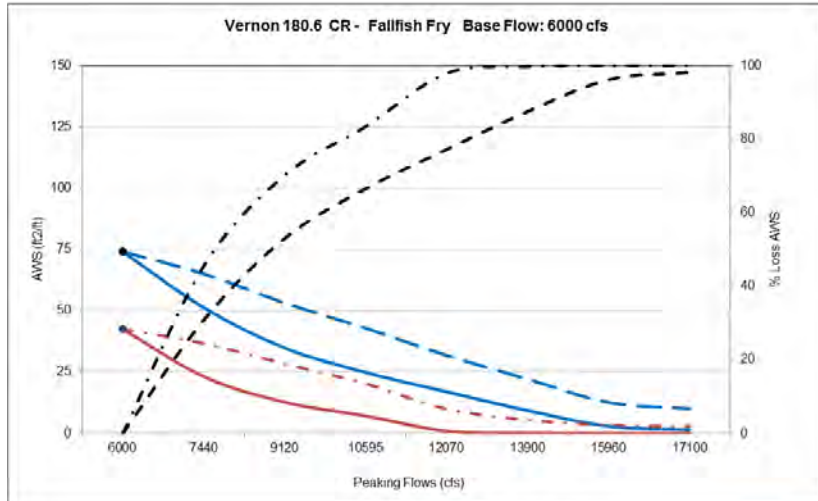
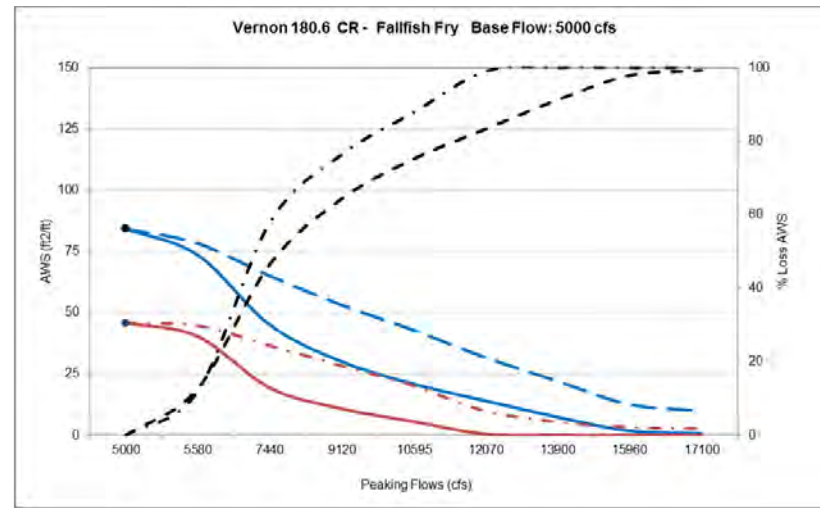
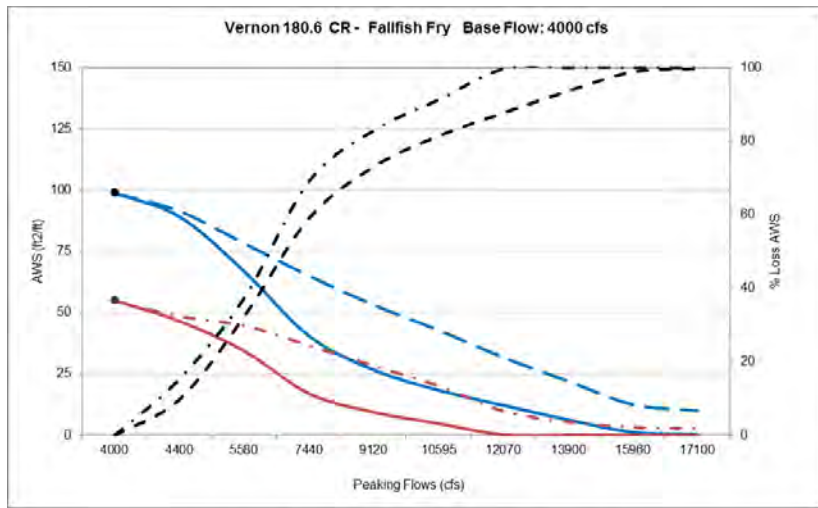


Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - CR Fallfish fry persistent and persistent quality habitat.

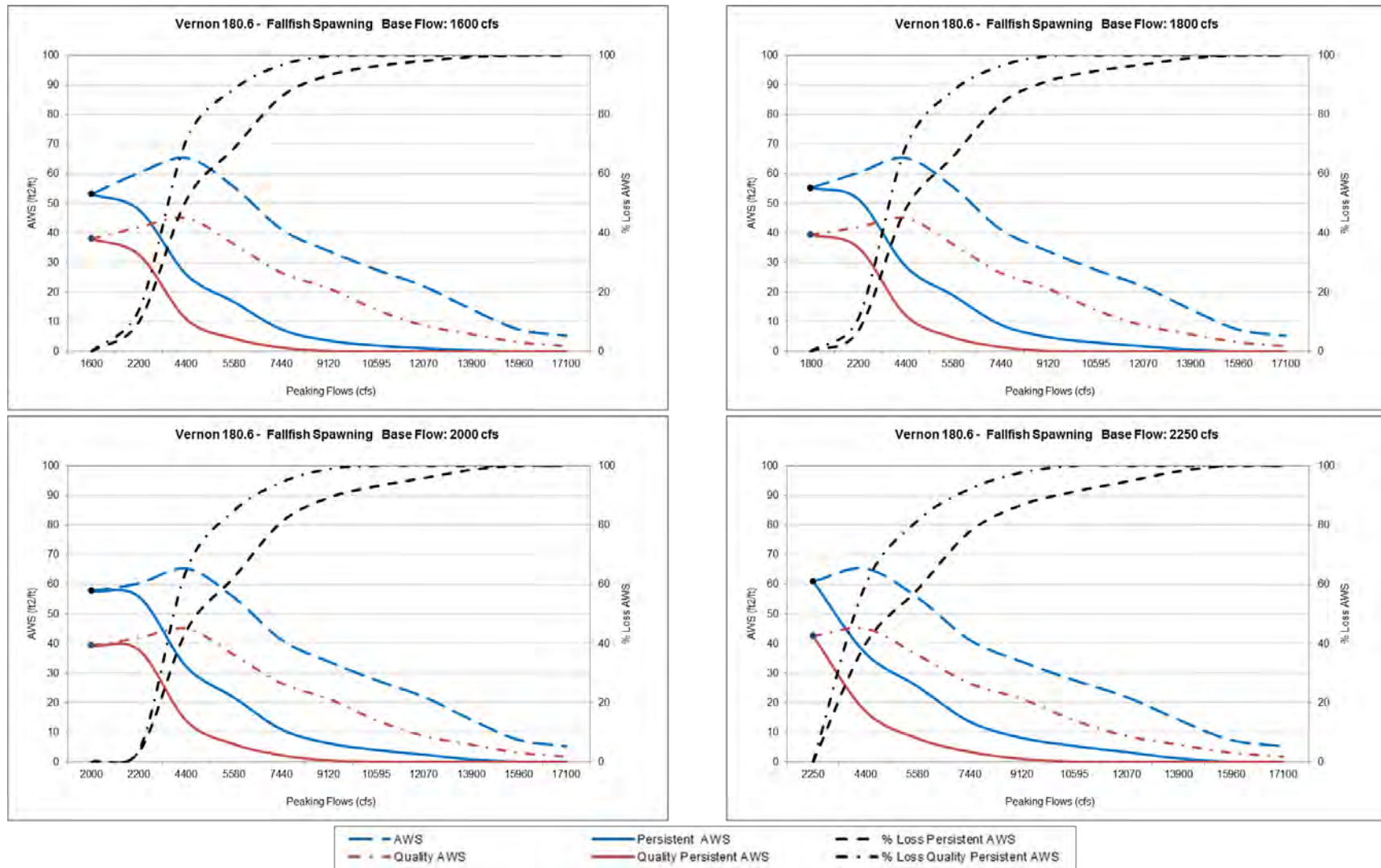


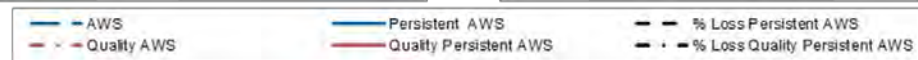
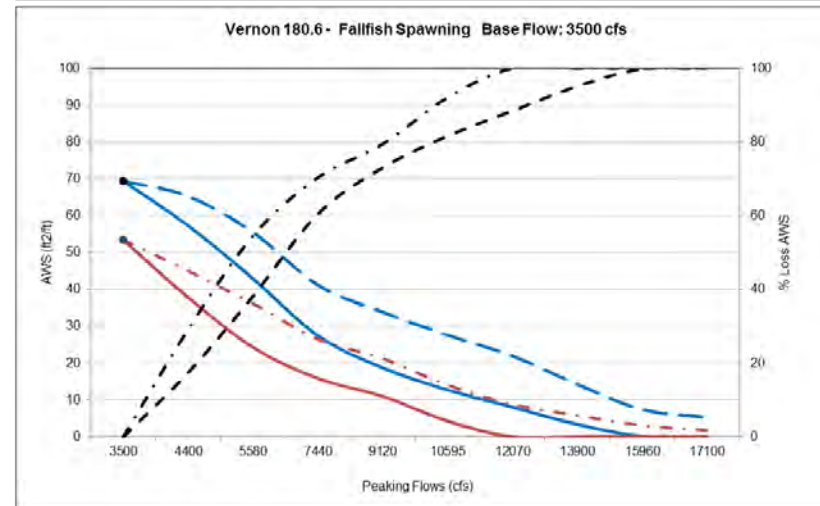
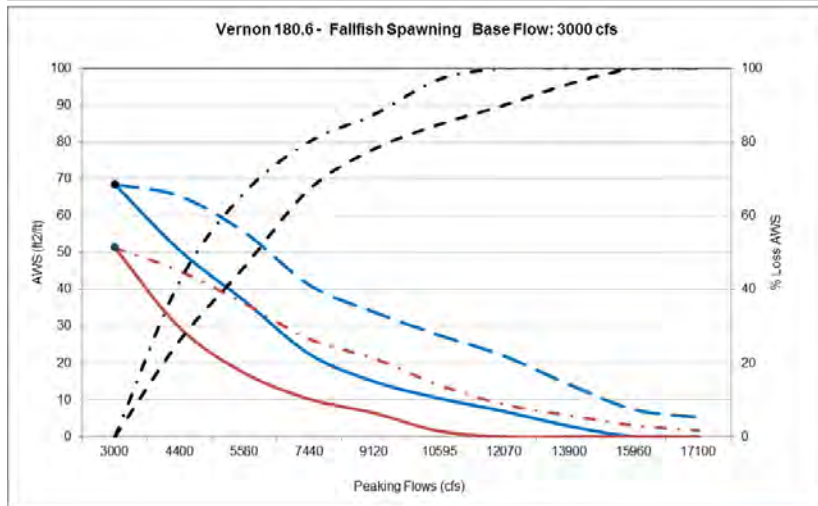
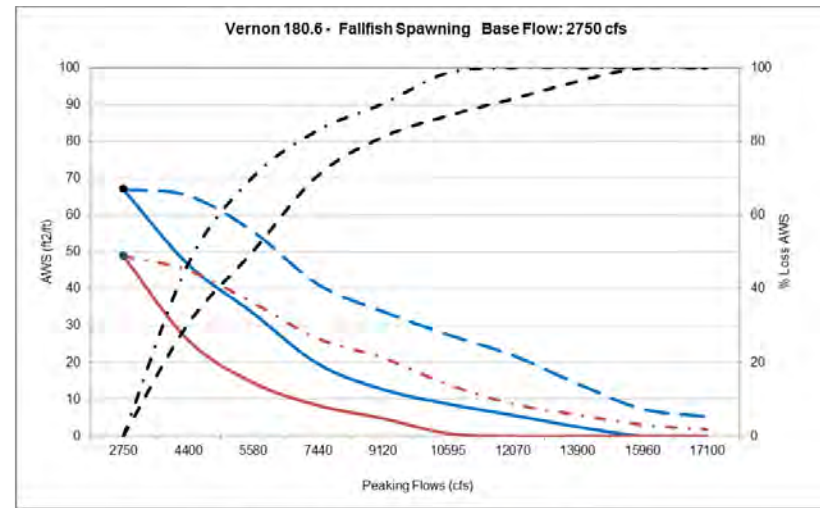
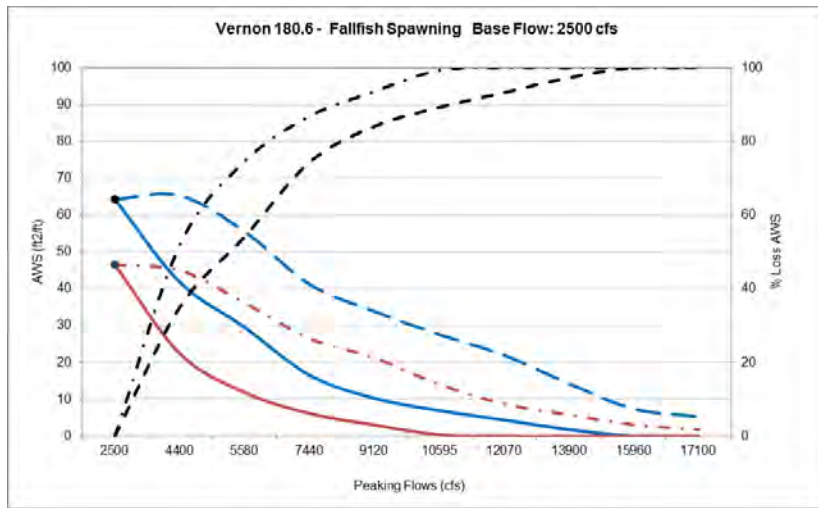


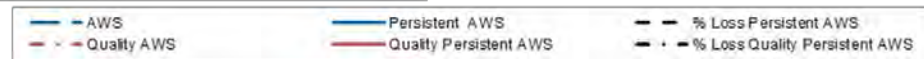
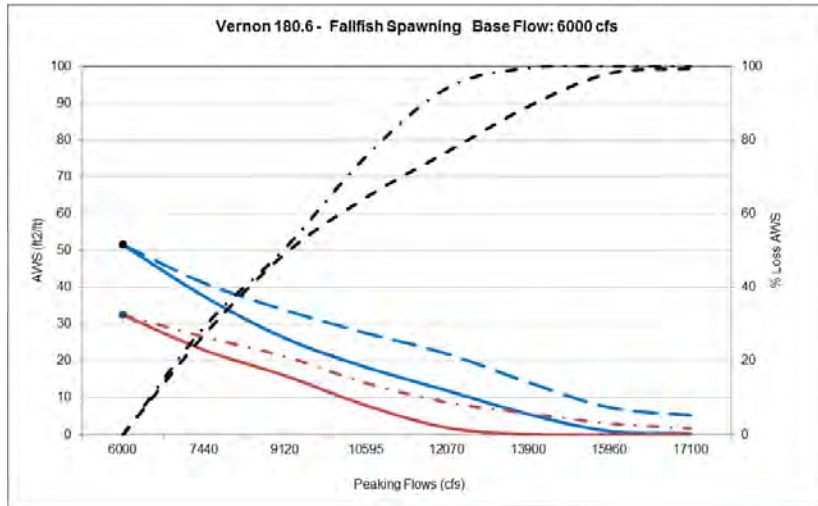
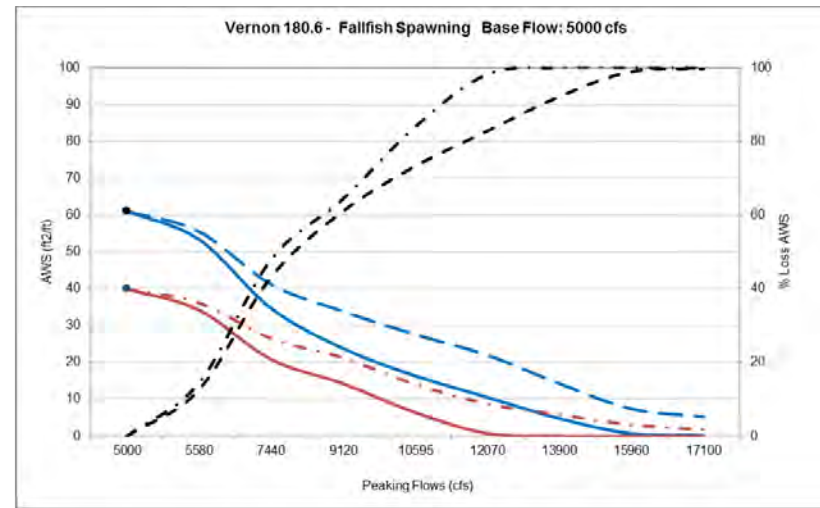
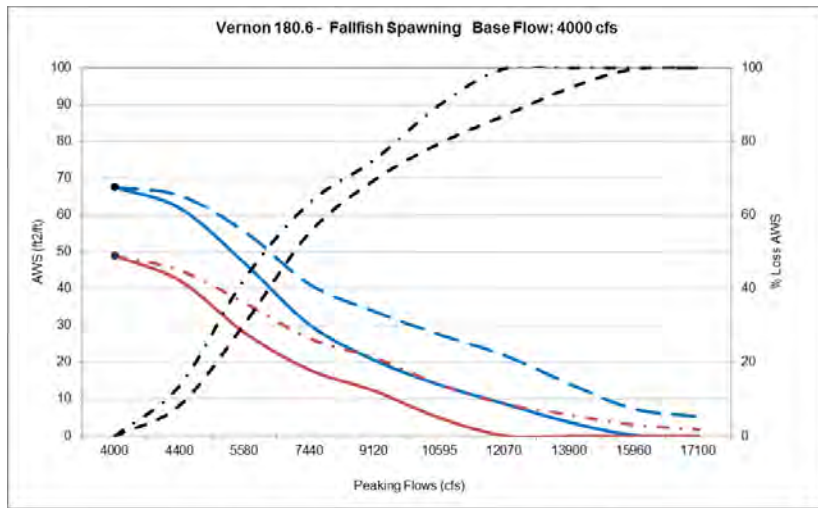




Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - Fallfish spawning persistent and persistent quality habitat.

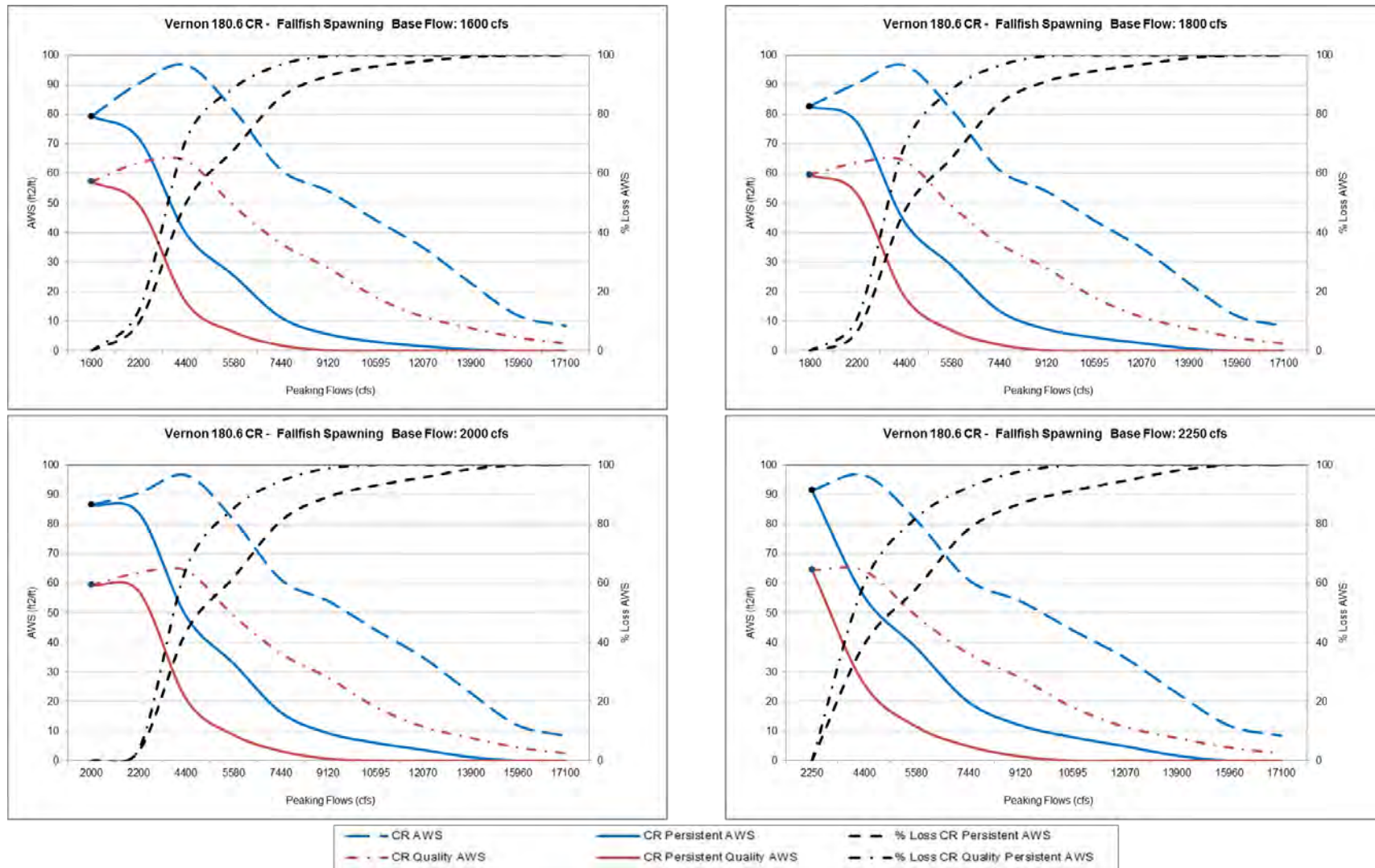


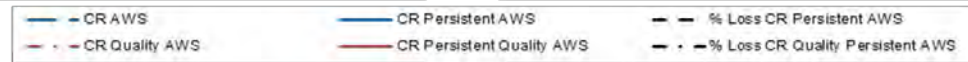
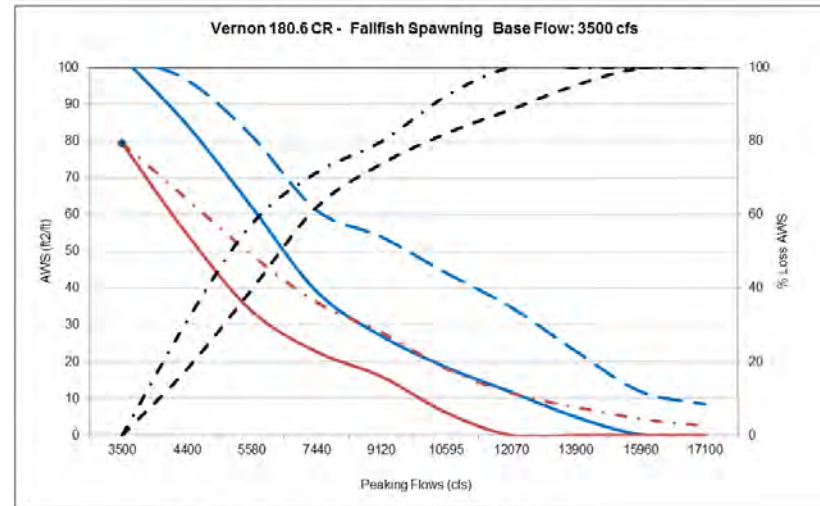
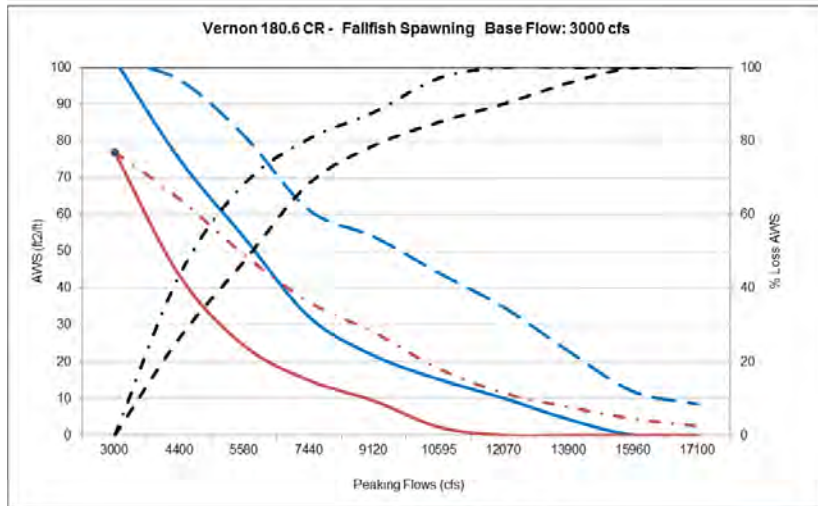
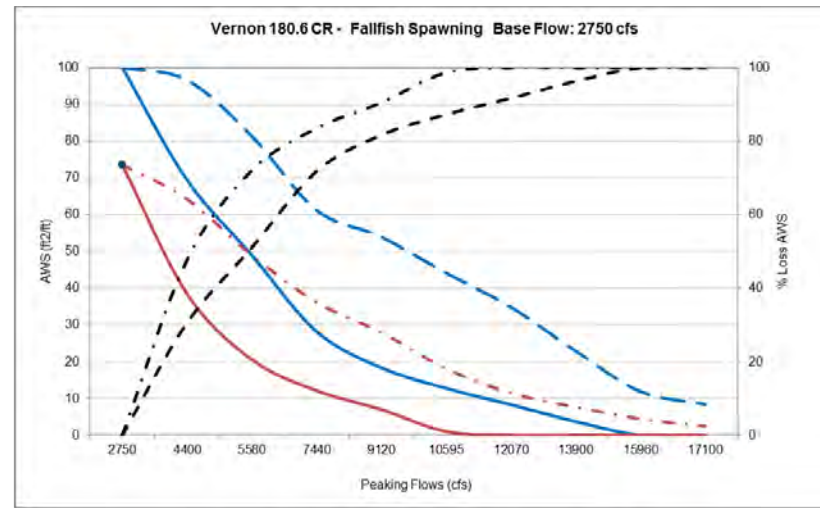
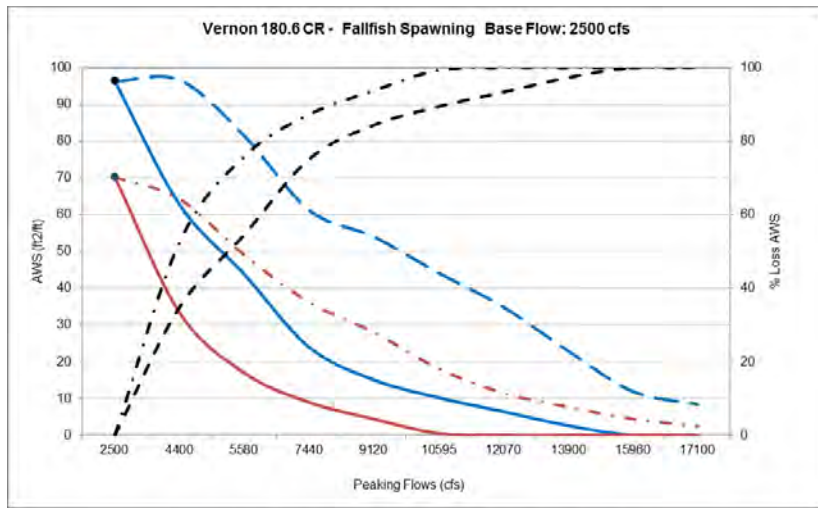


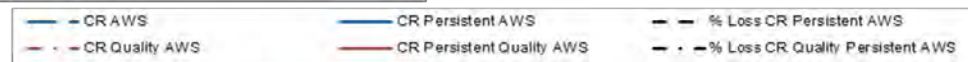
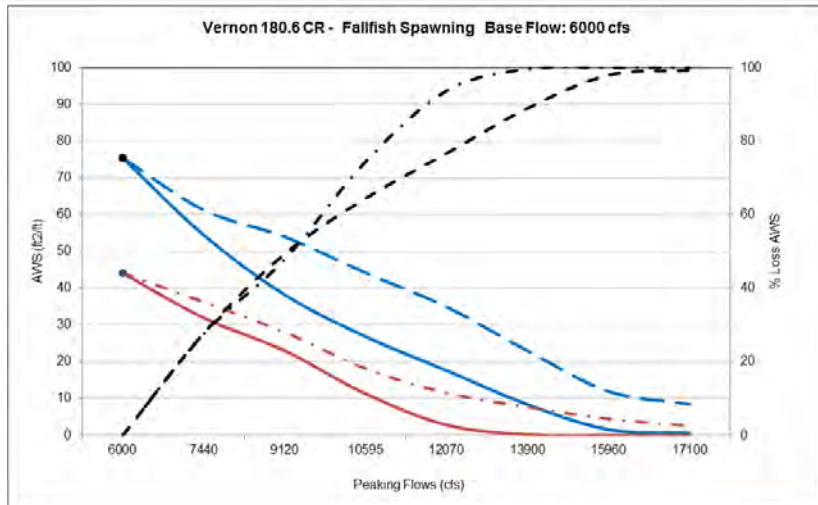
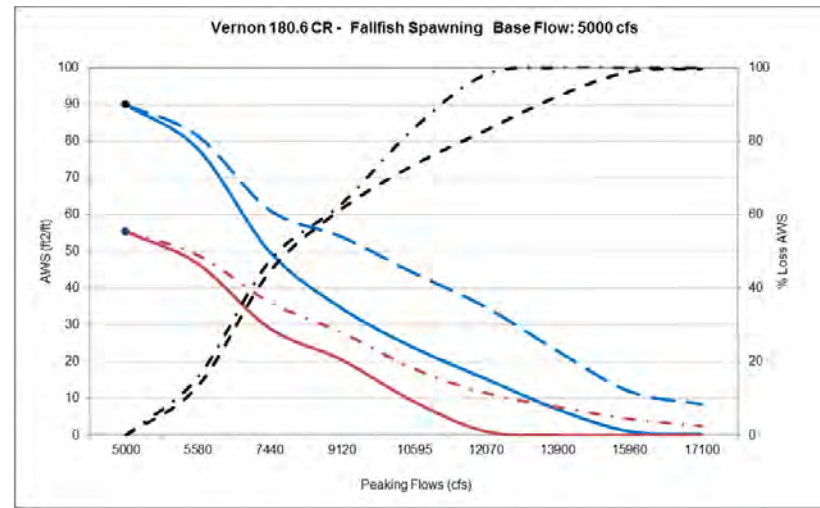
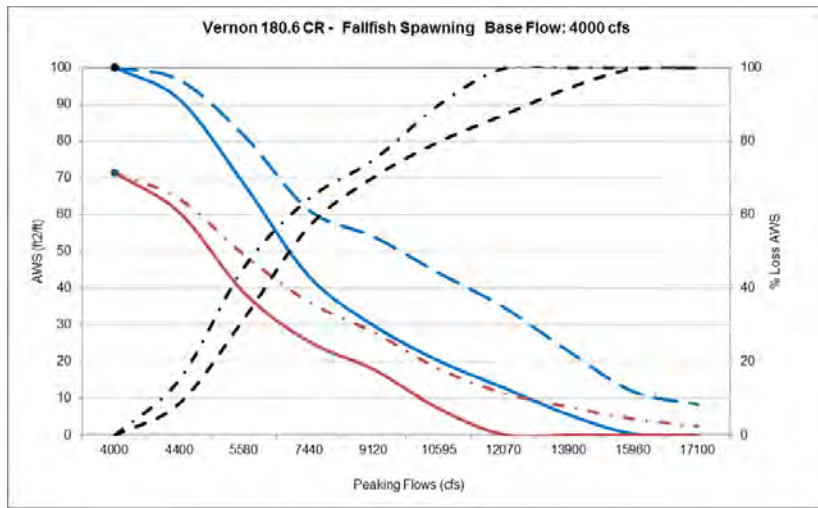




Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - CR Fallfish spawning persistent and persistent quality habitat.

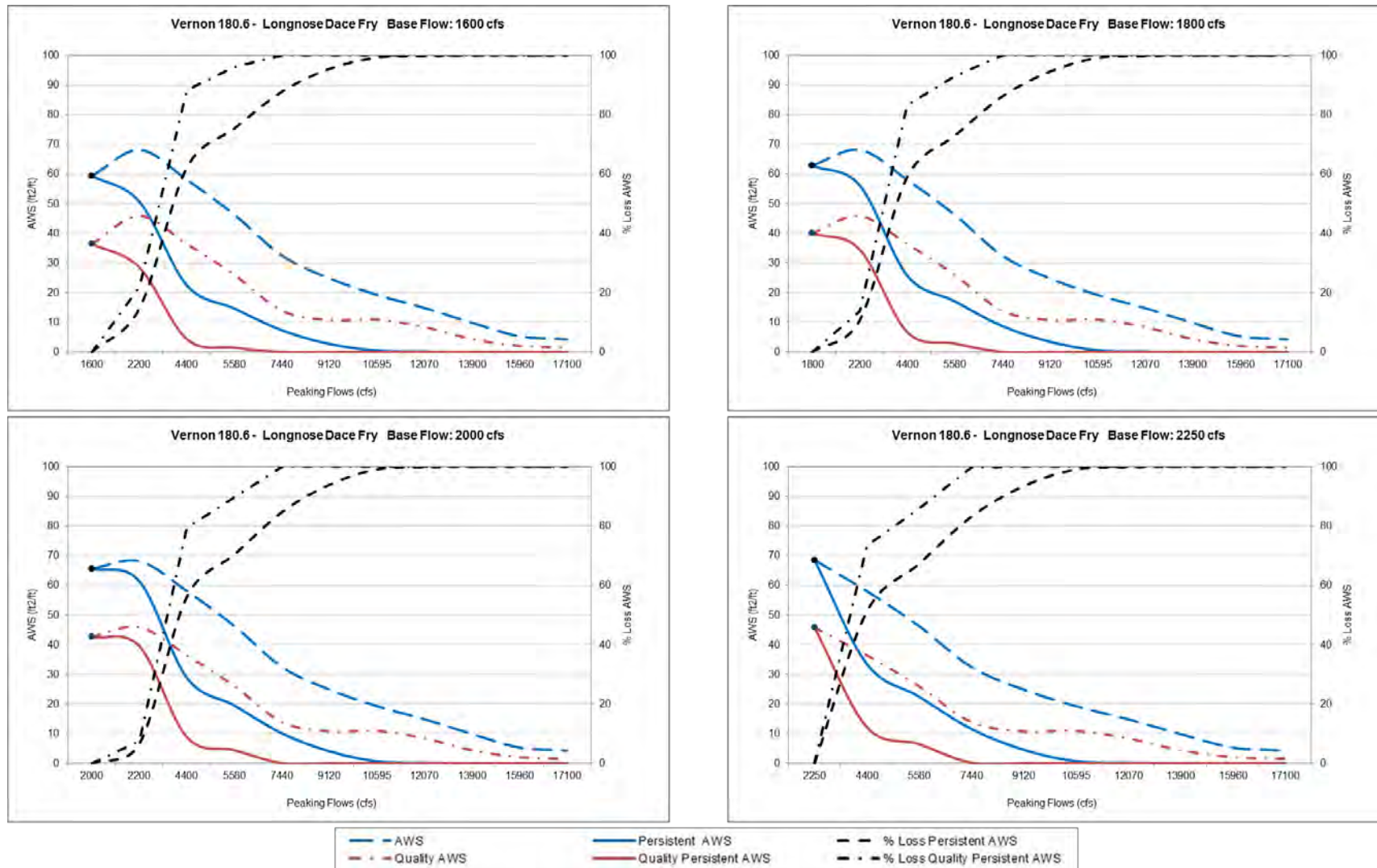




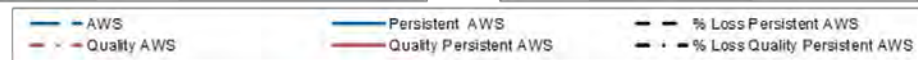
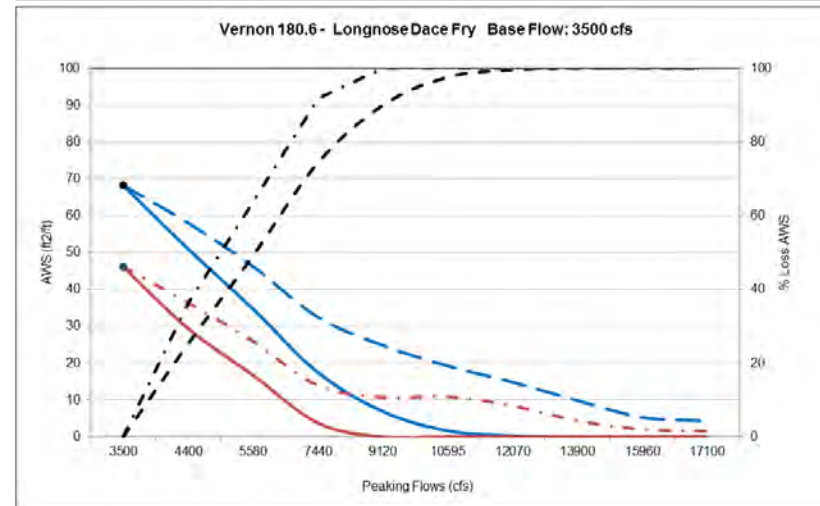
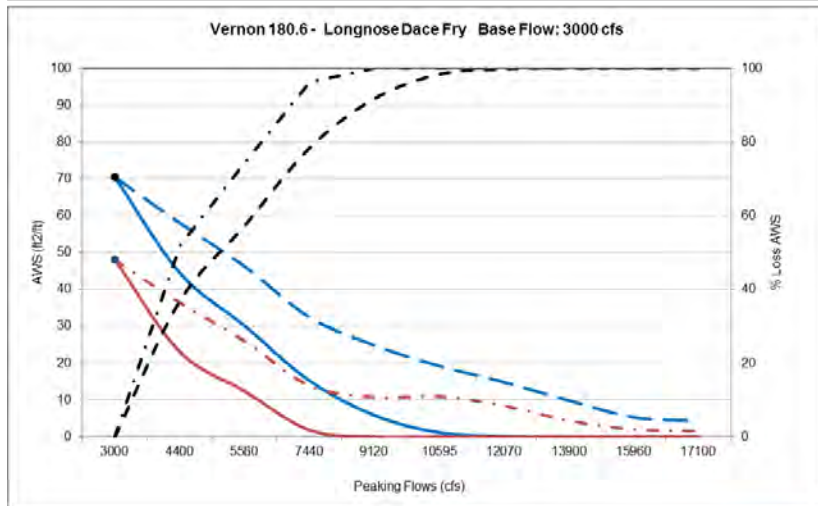
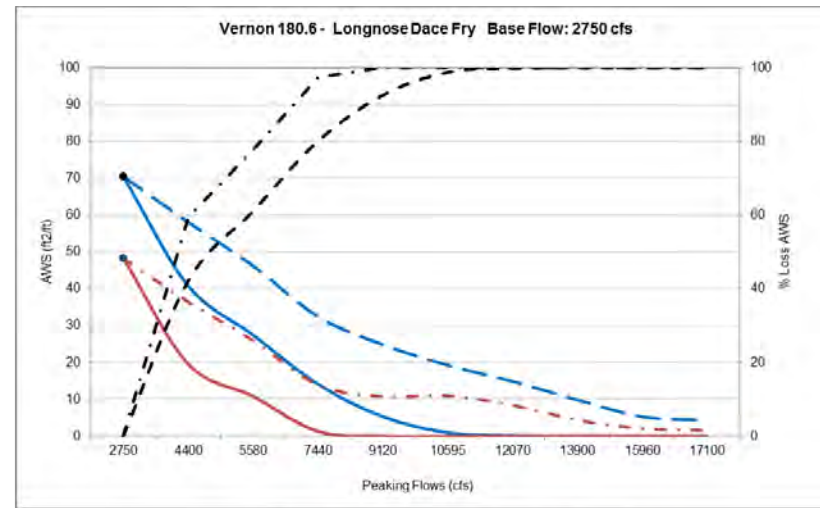
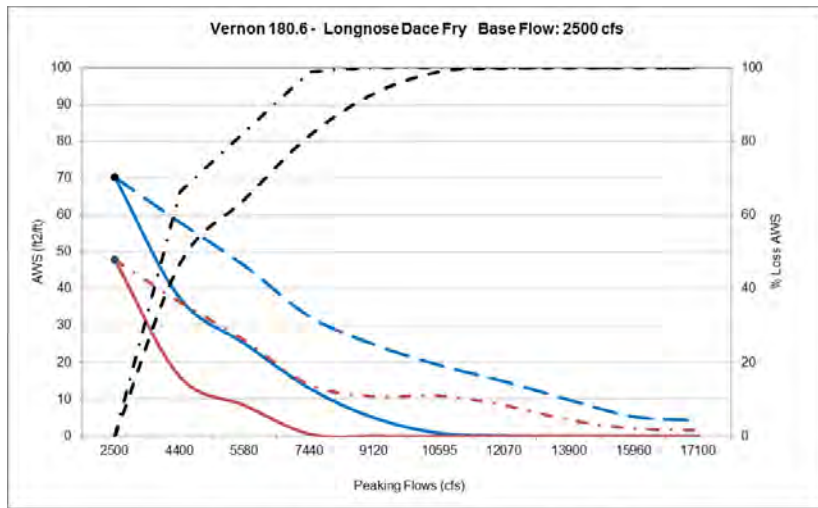


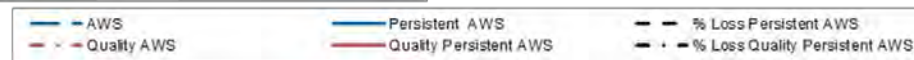
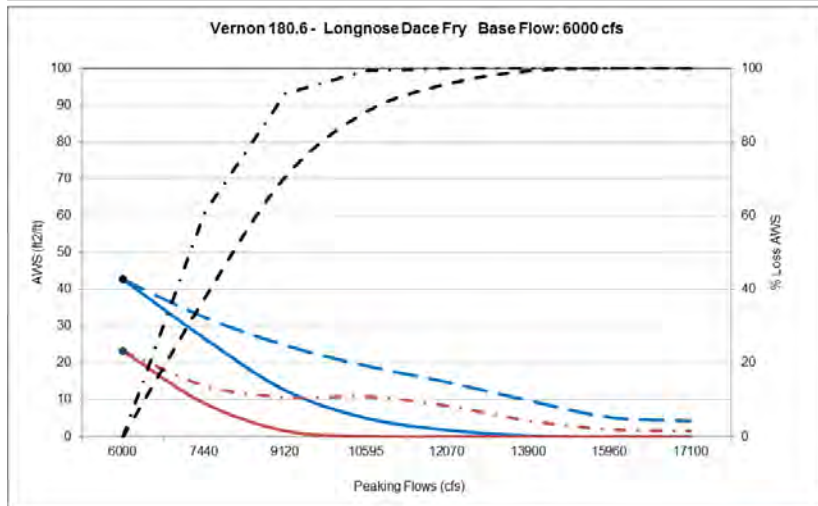
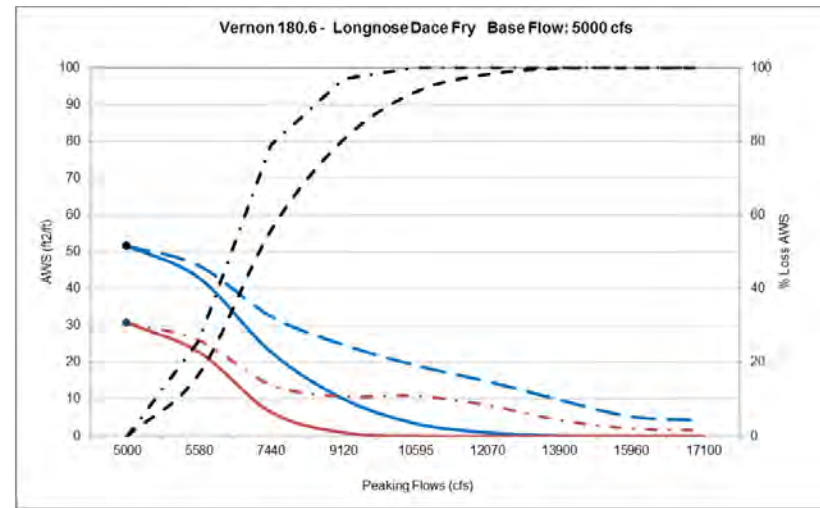
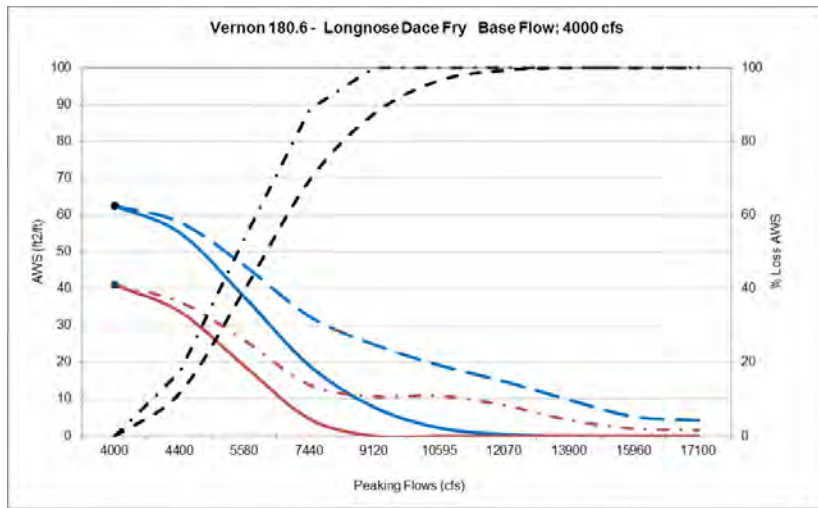


Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - Longnose Dace fry persistent and persistent quality habitat.

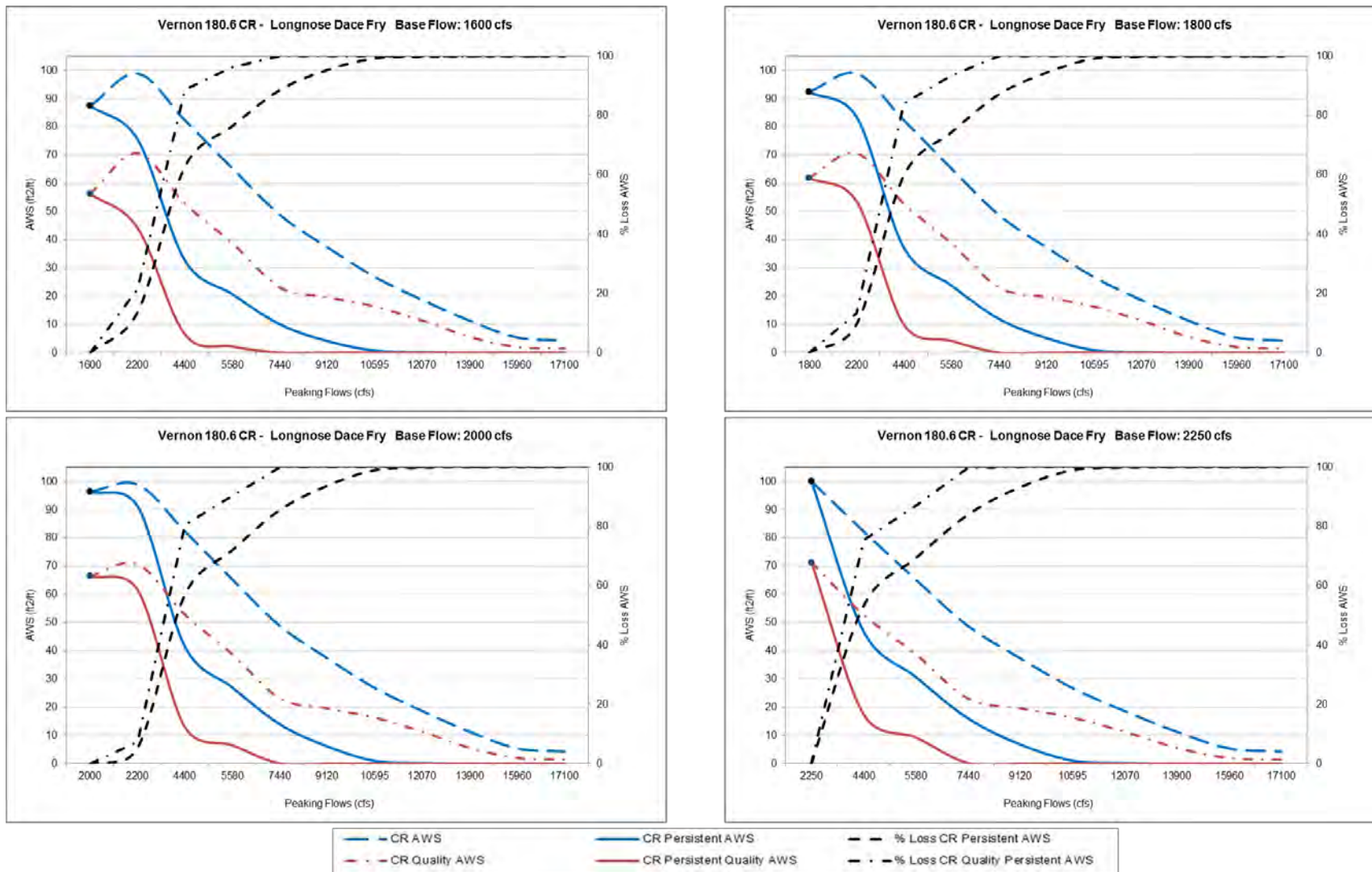


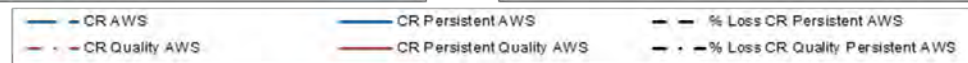
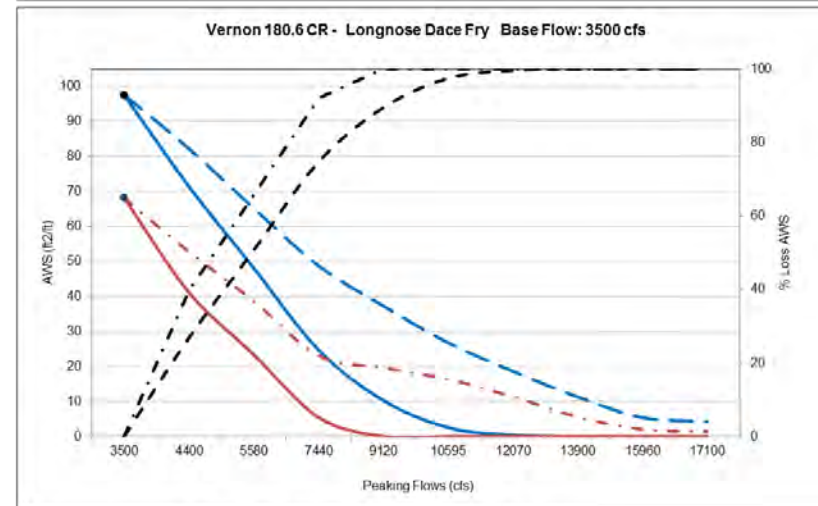
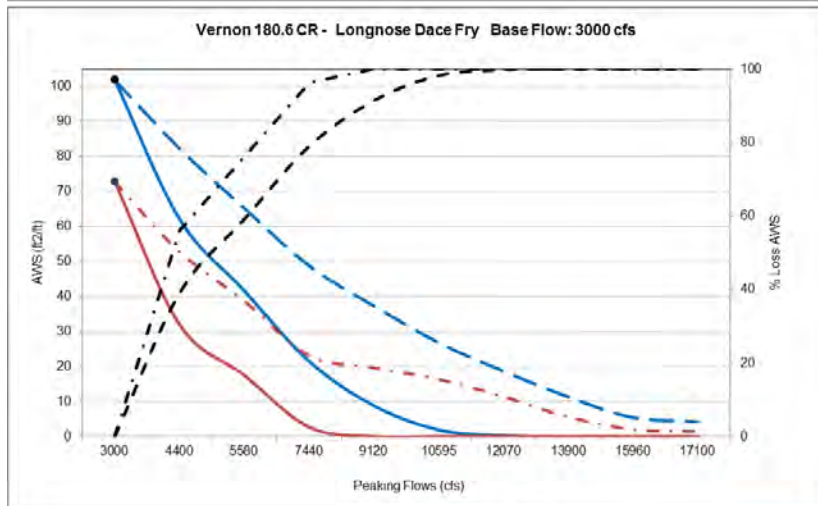
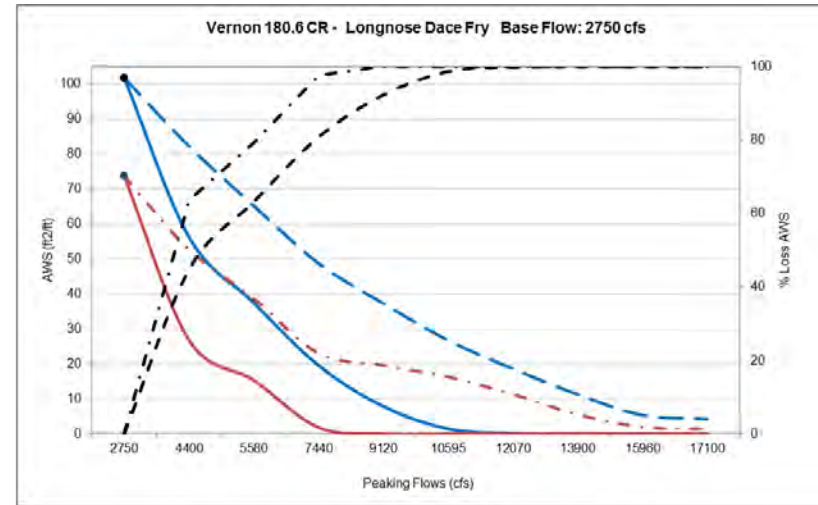
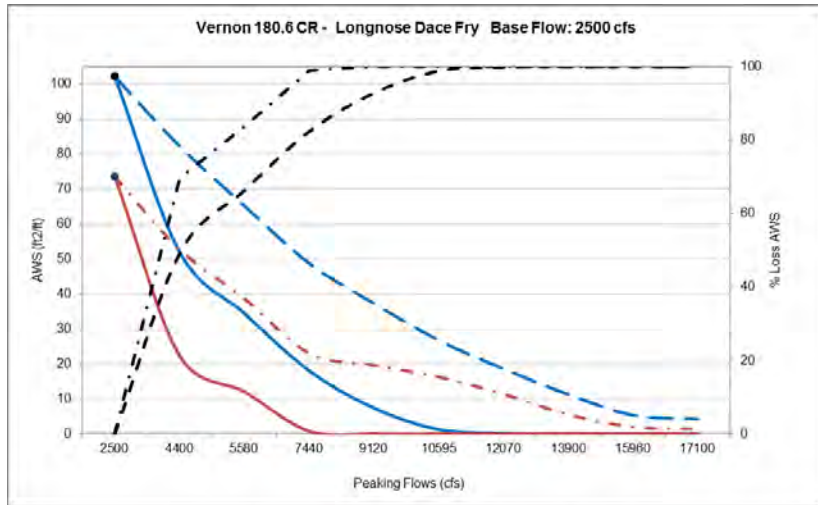




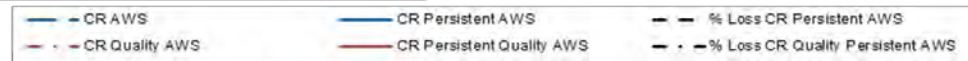
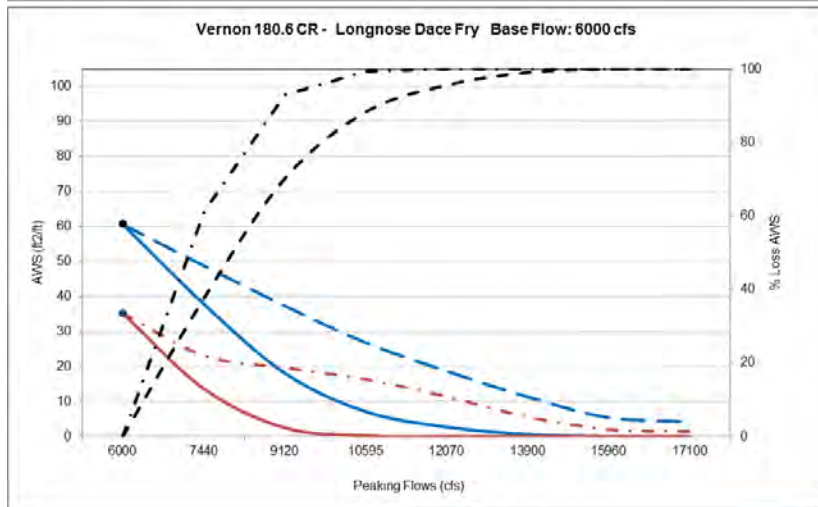
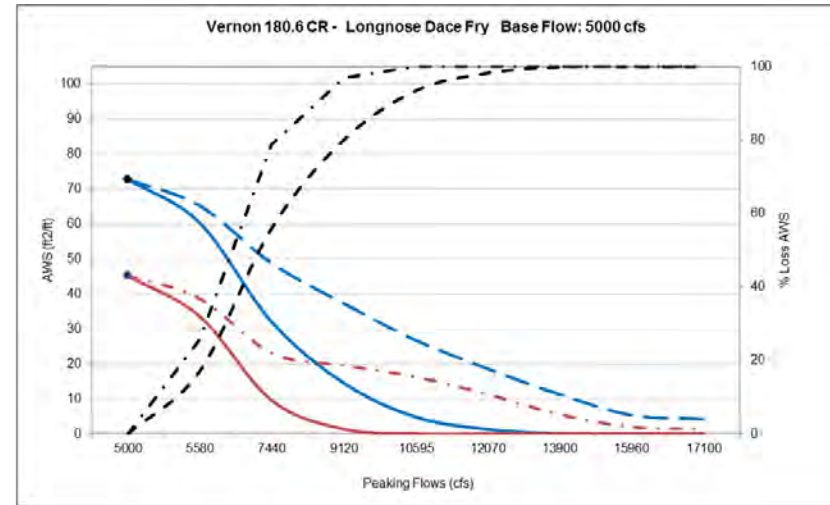
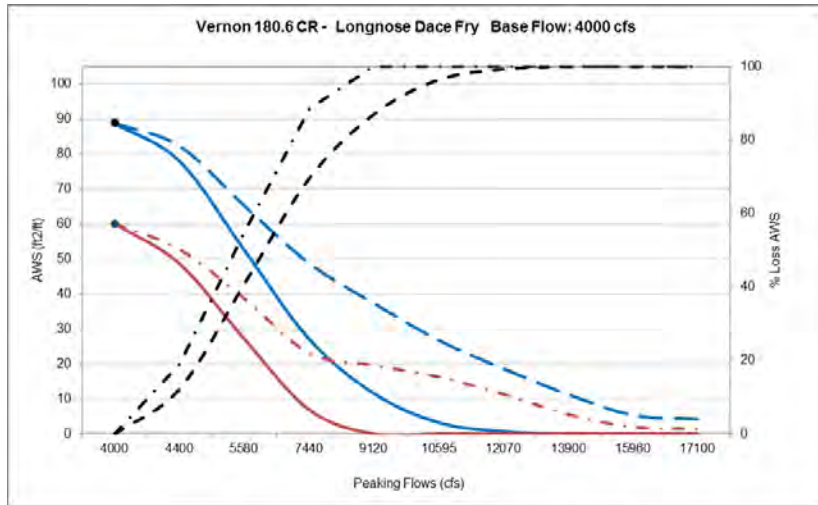


Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - CR Longnose Dace fry persistent and persistent quality habitat.

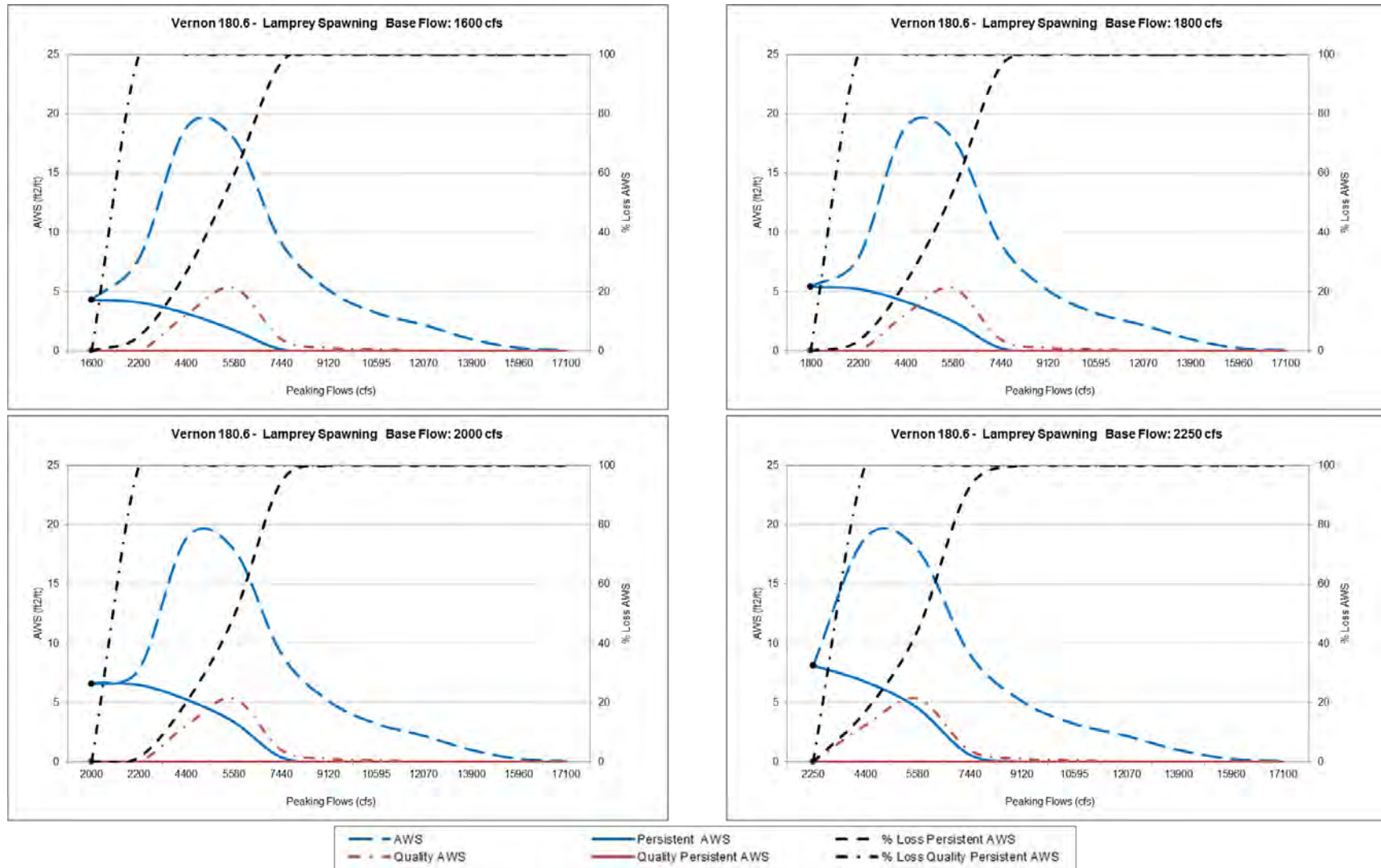


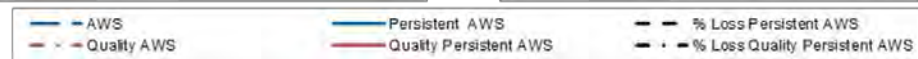
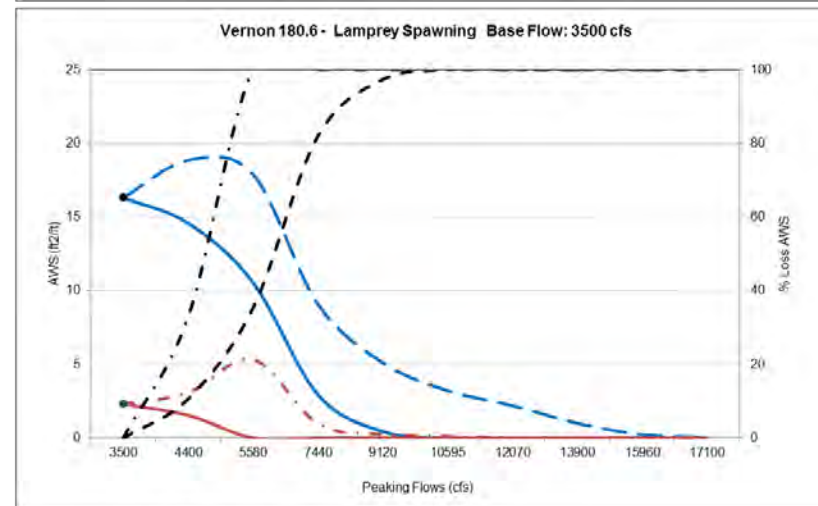
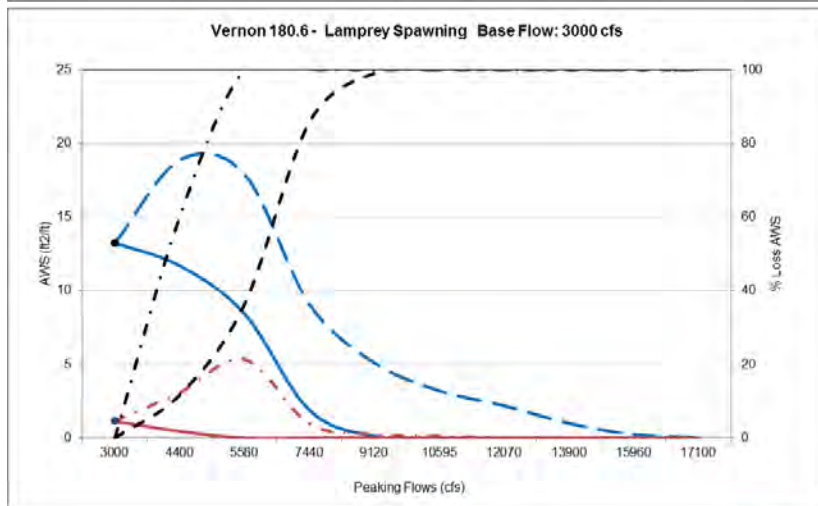
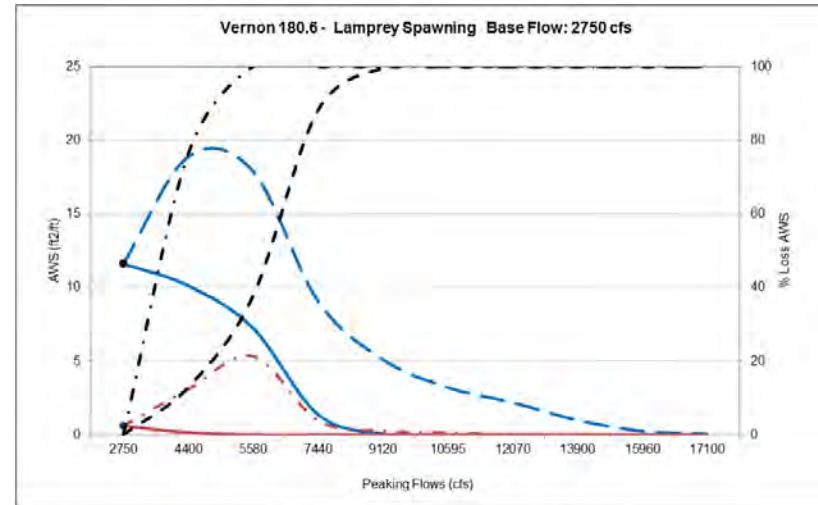
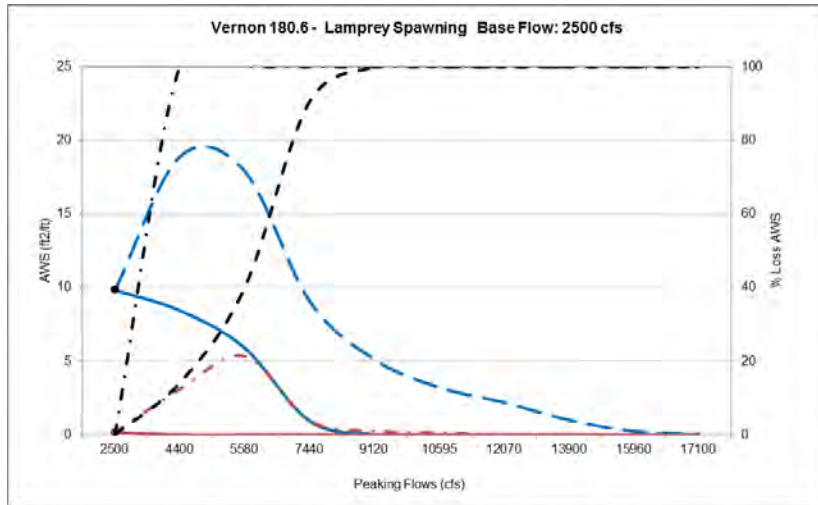


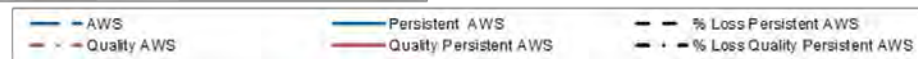
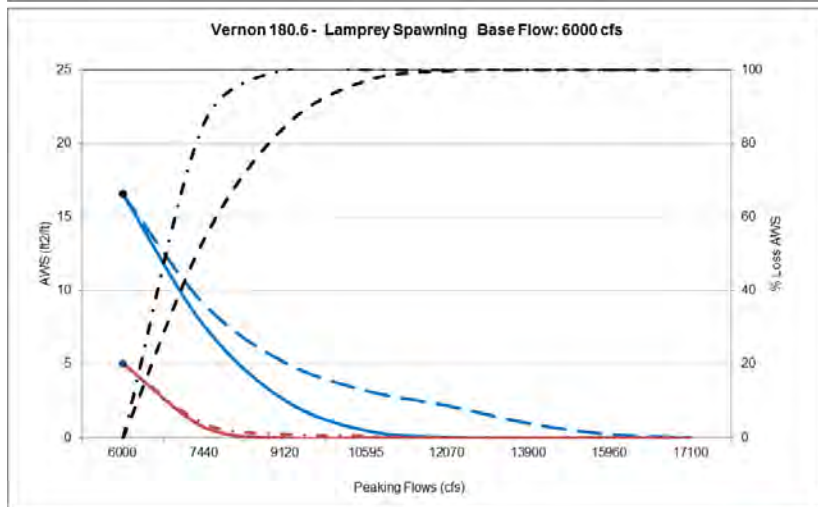
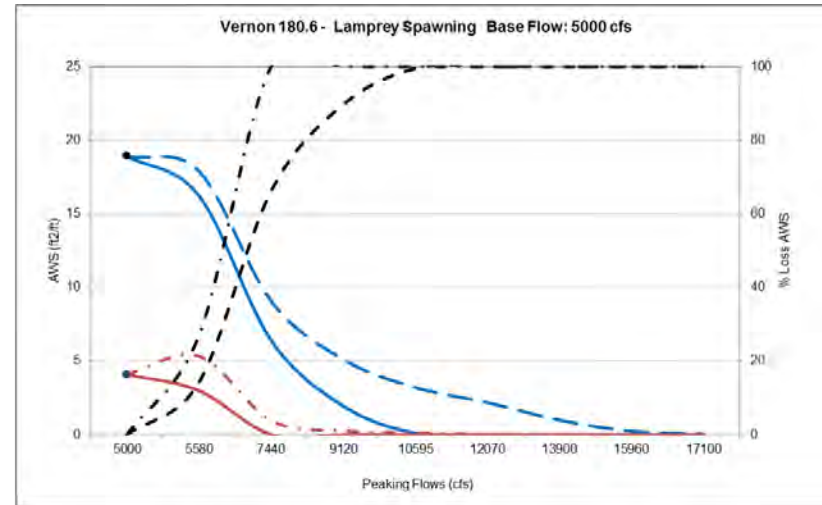
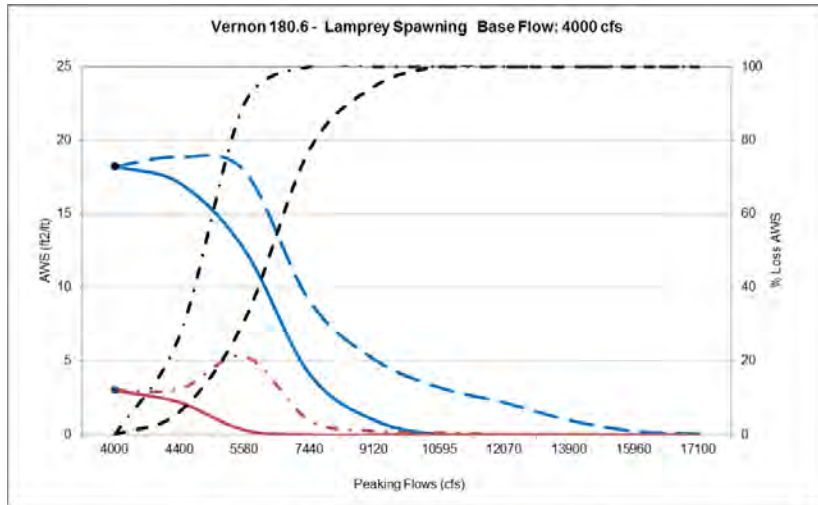




Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - Sea Lamprey spawning persistent and persistent quality habitat.

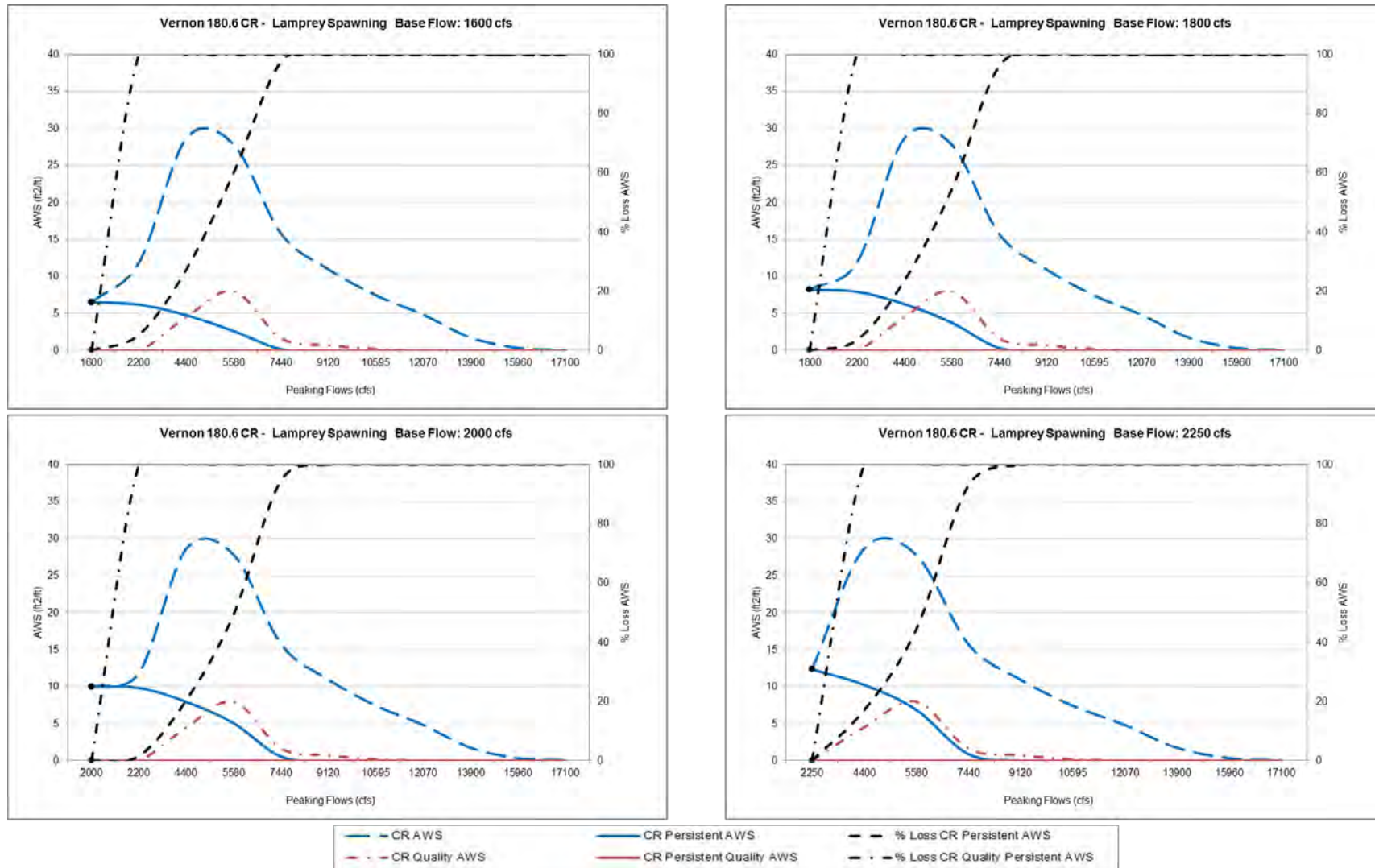


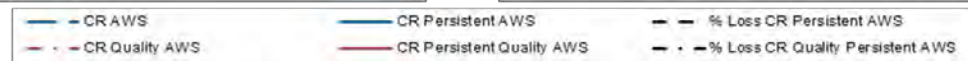
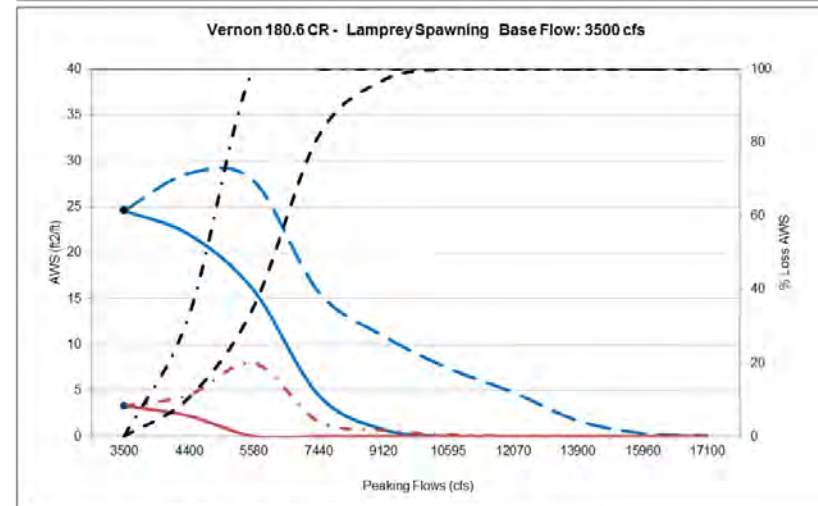
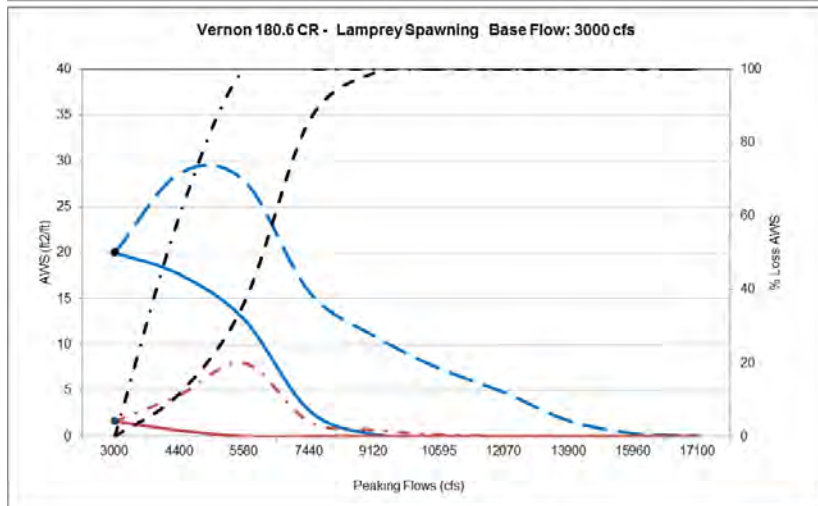
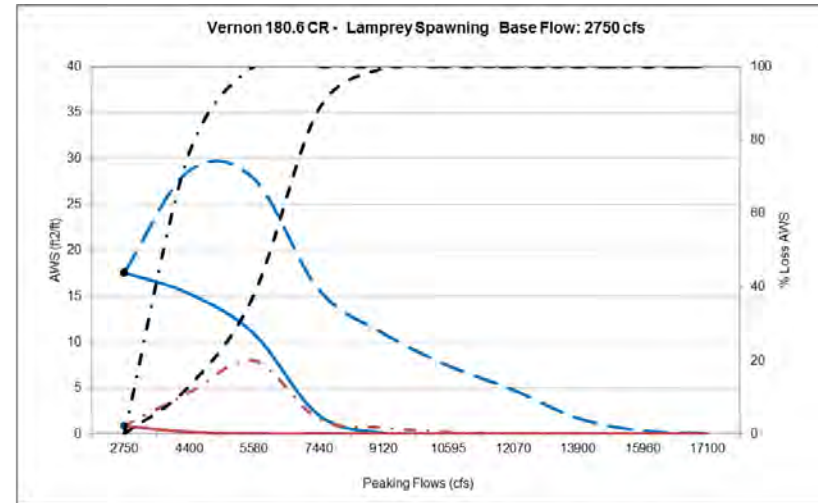
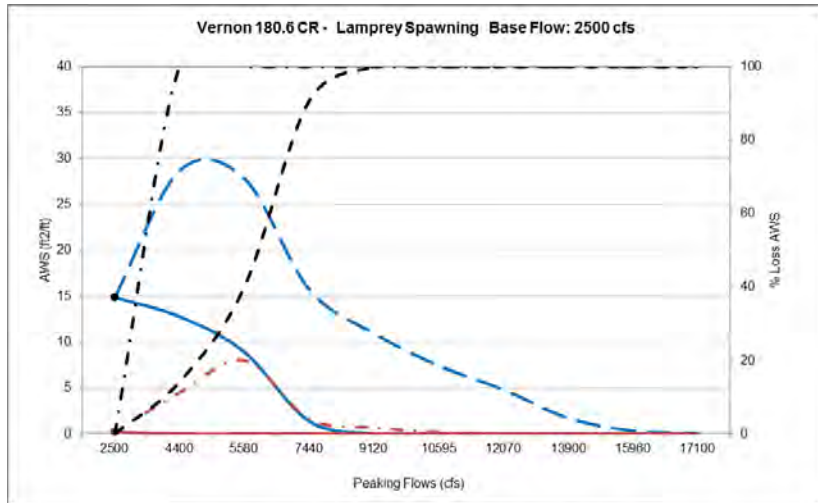


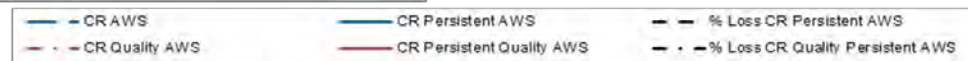
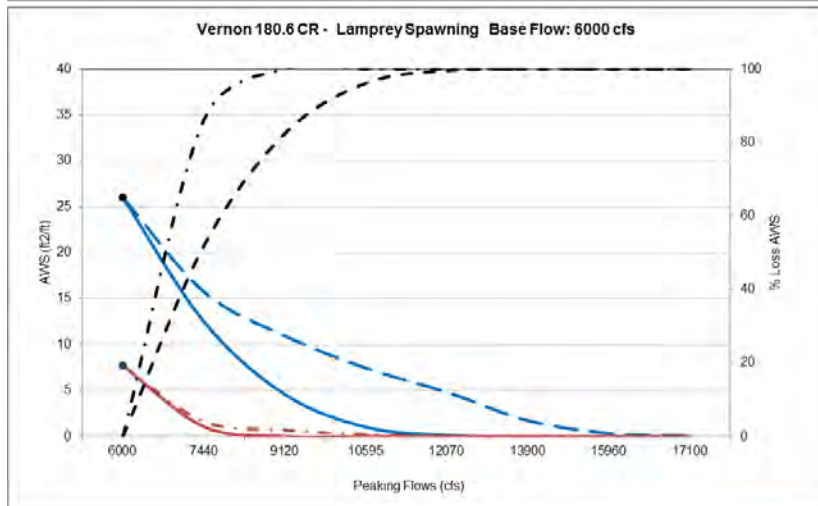
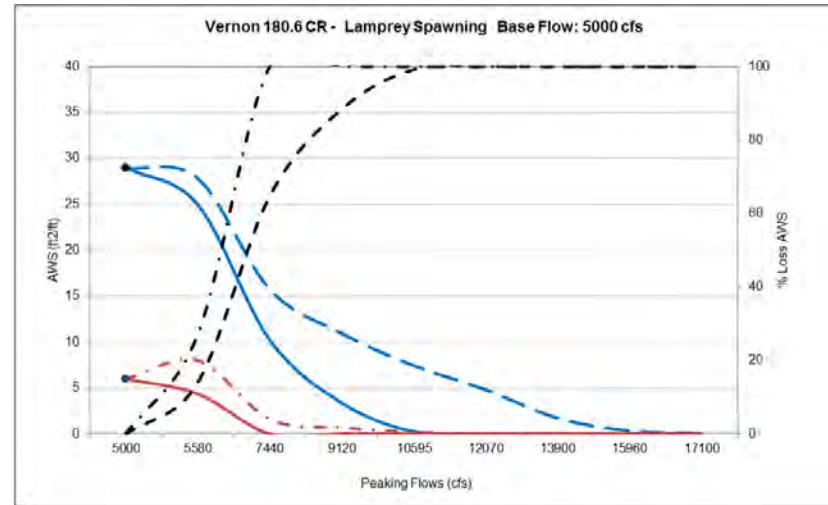
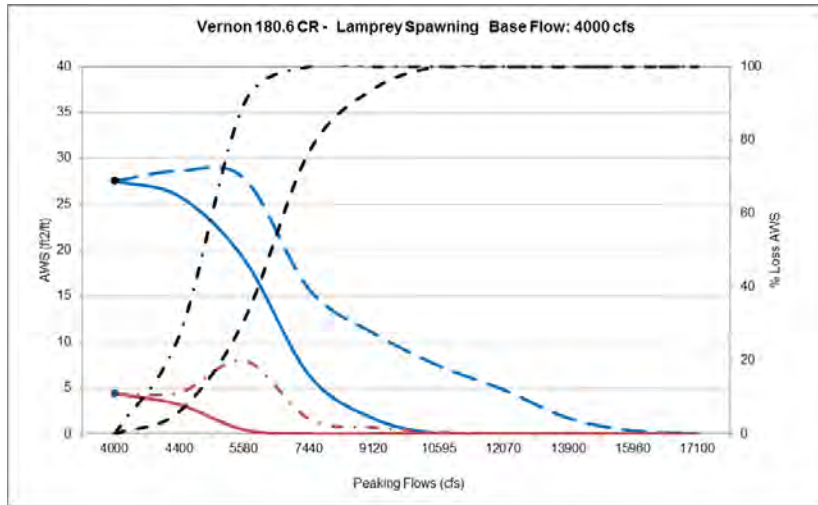




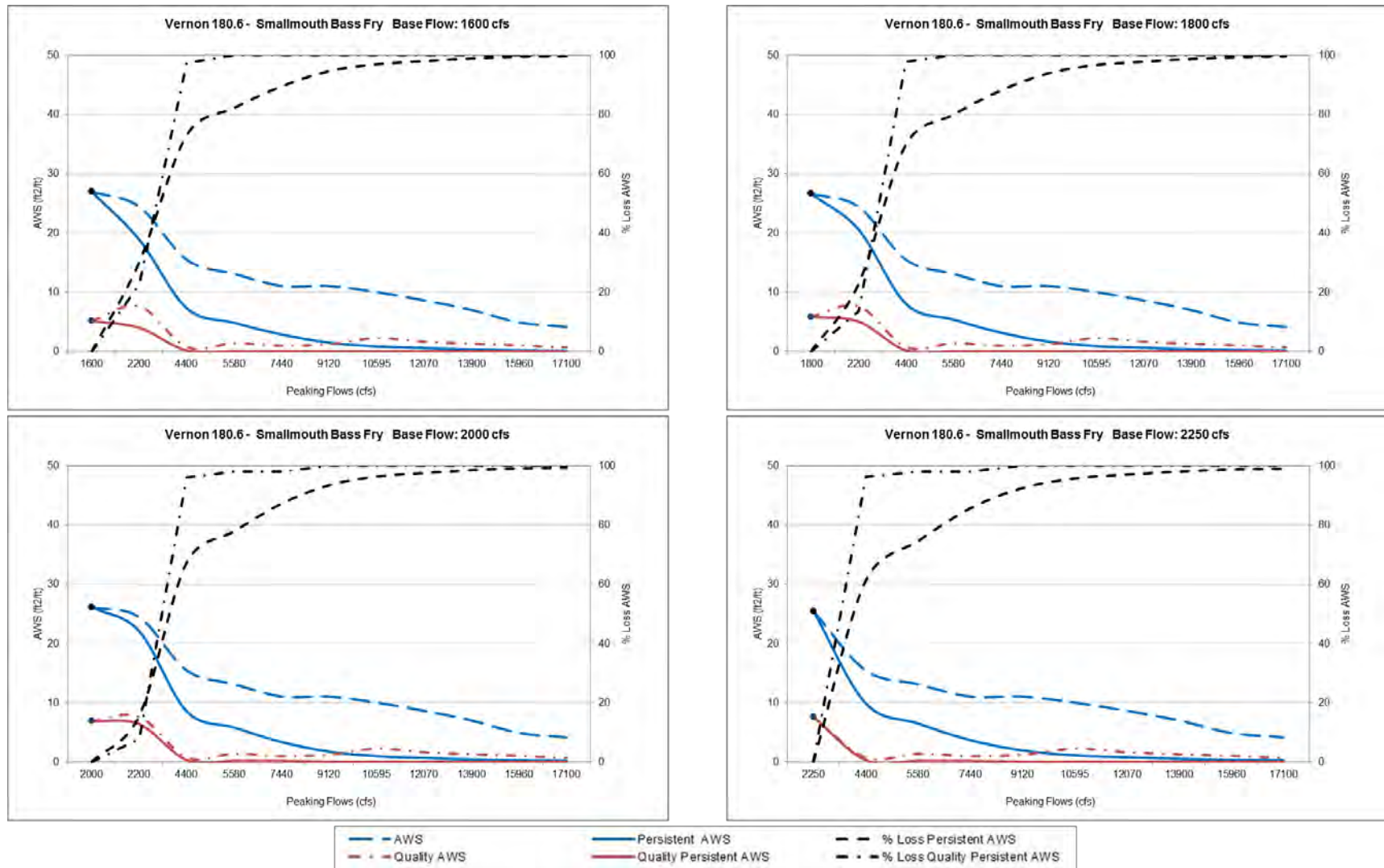
Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - CR Sea Lamprey spawning persistent and persistent quality habitat.



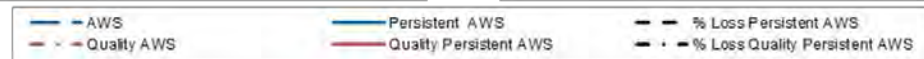
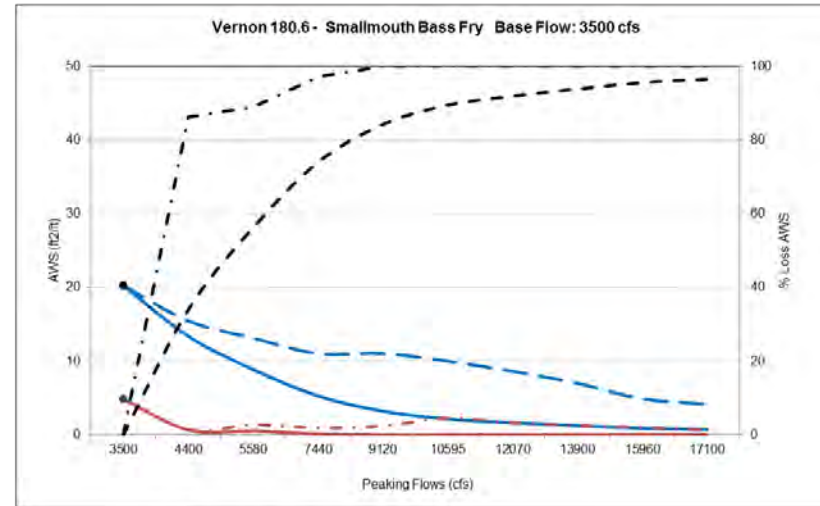
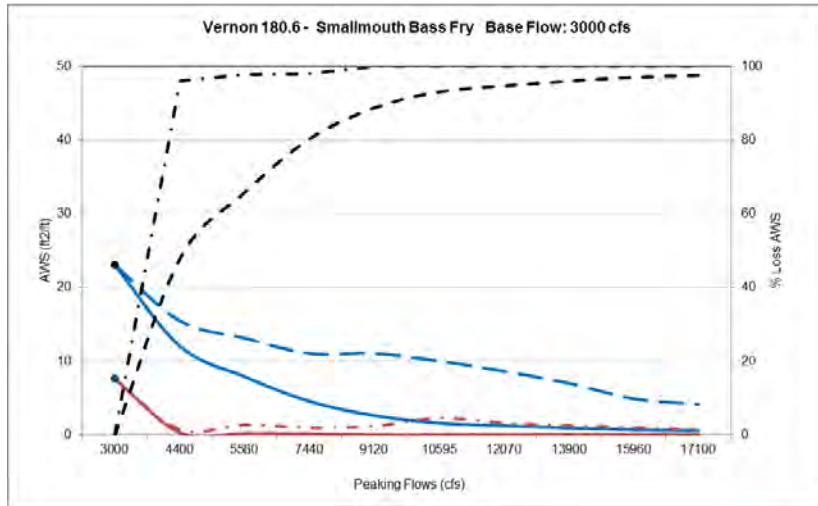
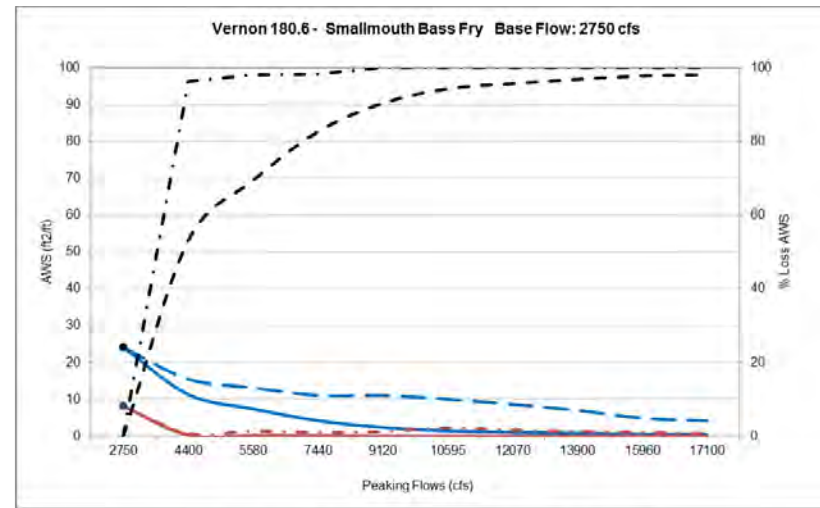
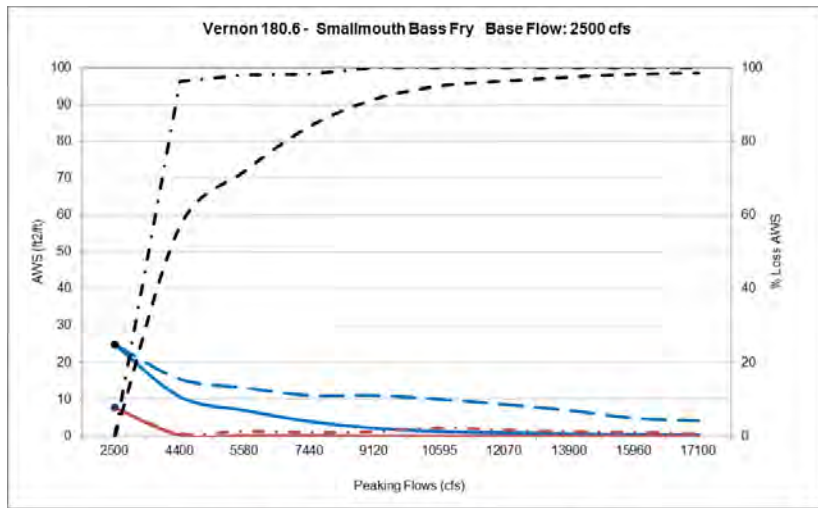


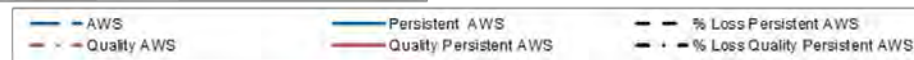
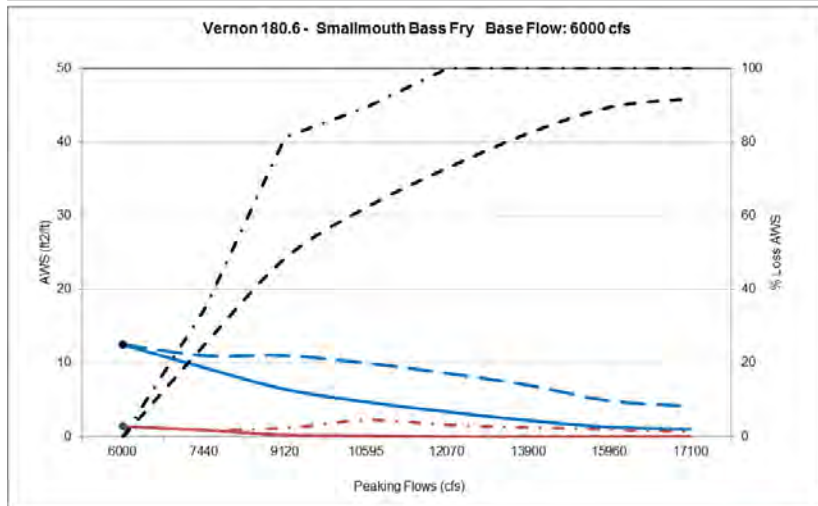
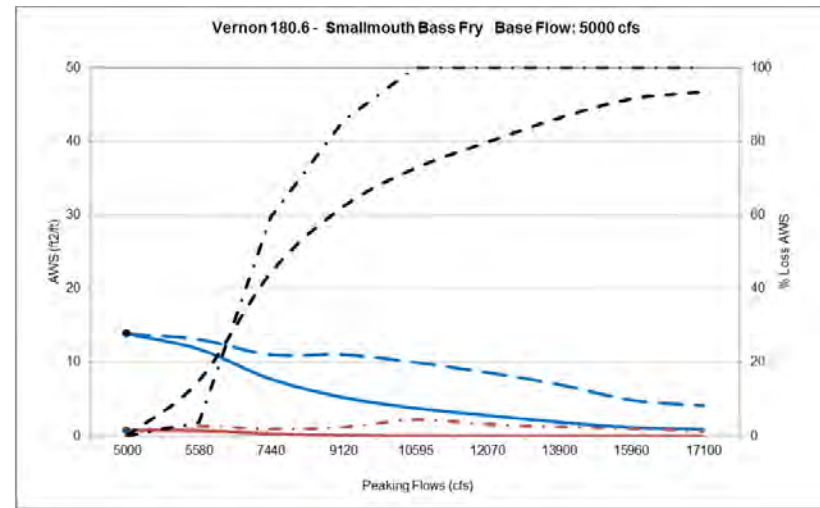
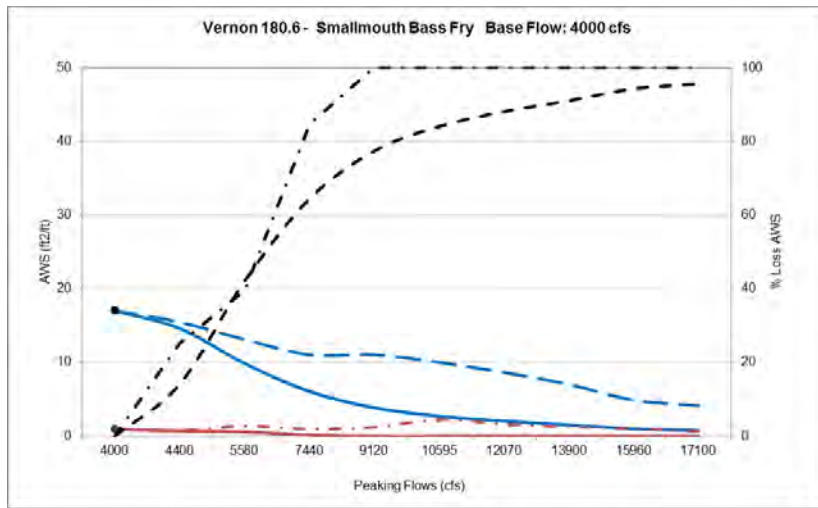


Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - Smallmouth Bass fry persistent and persistent quality habitat.



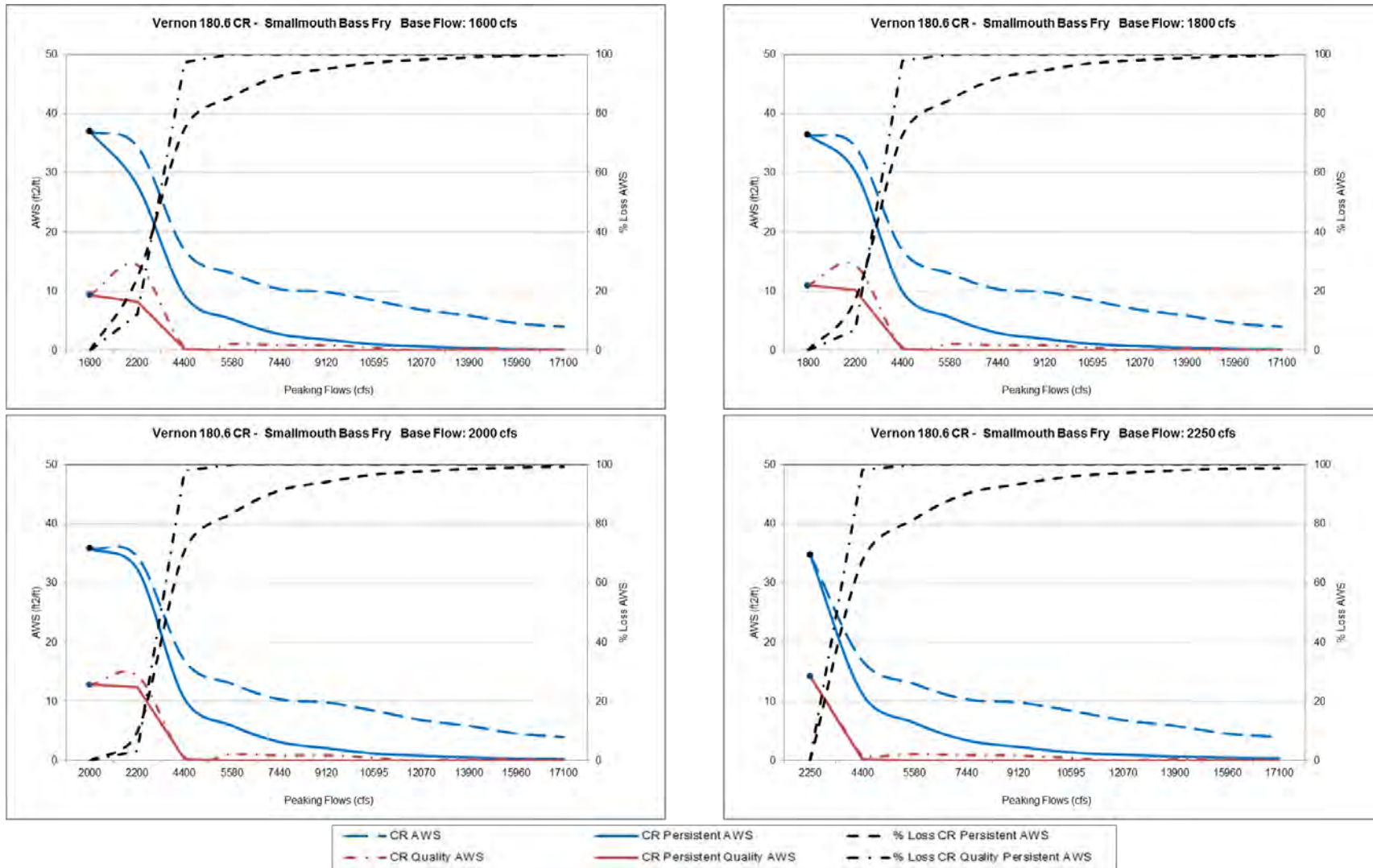


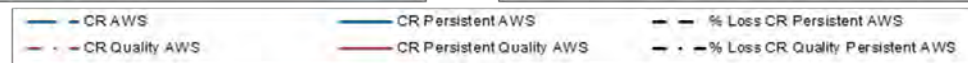
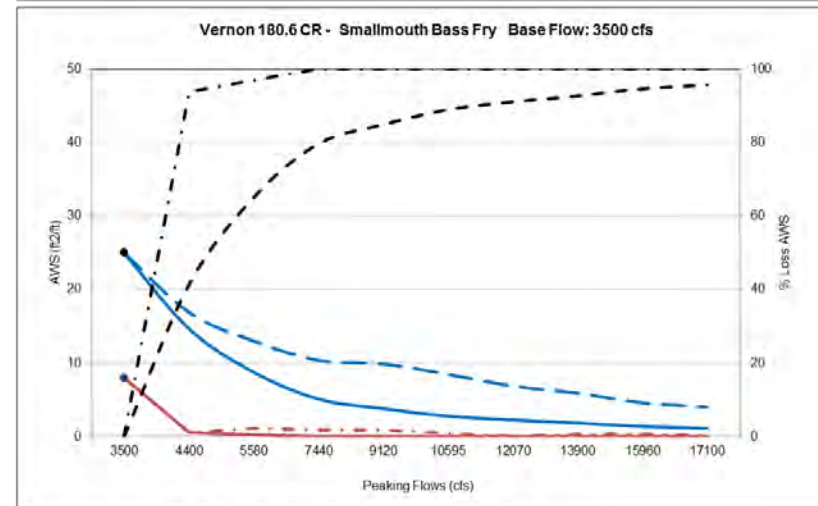
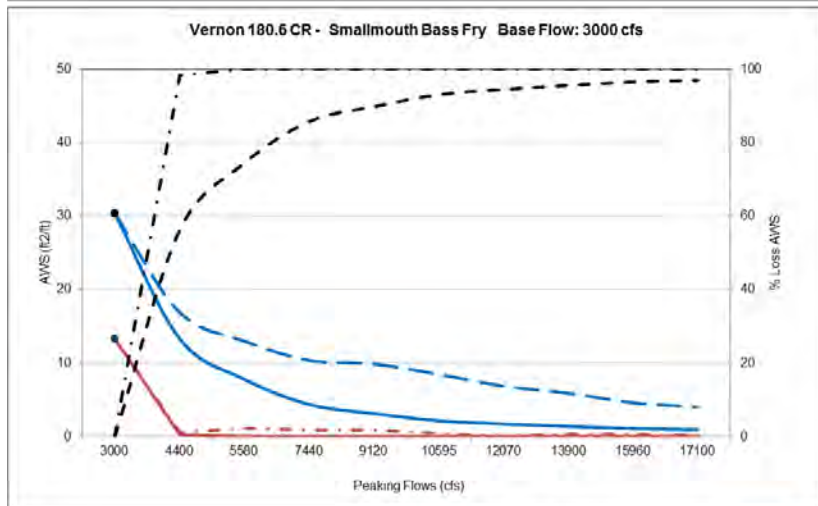
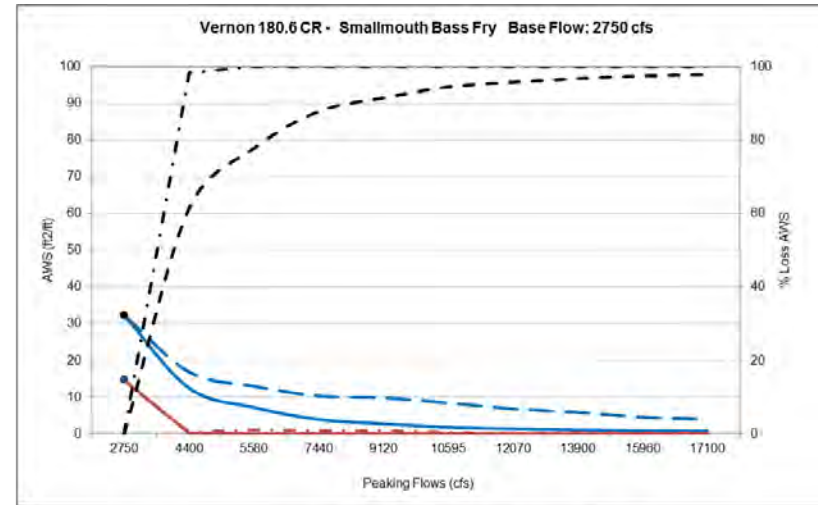
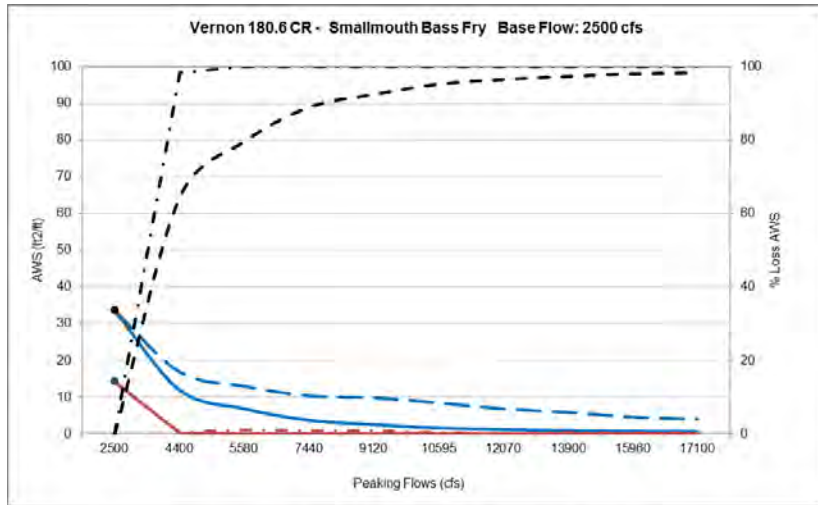


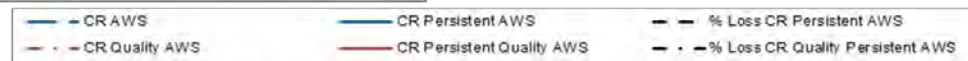
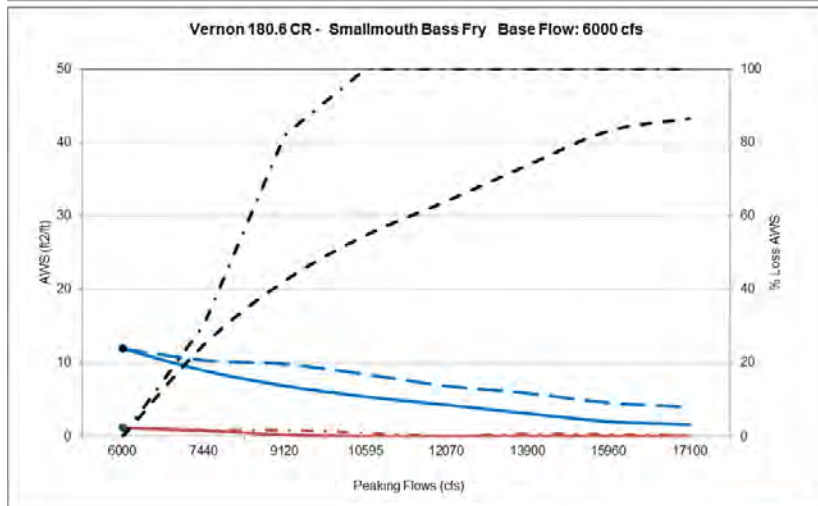
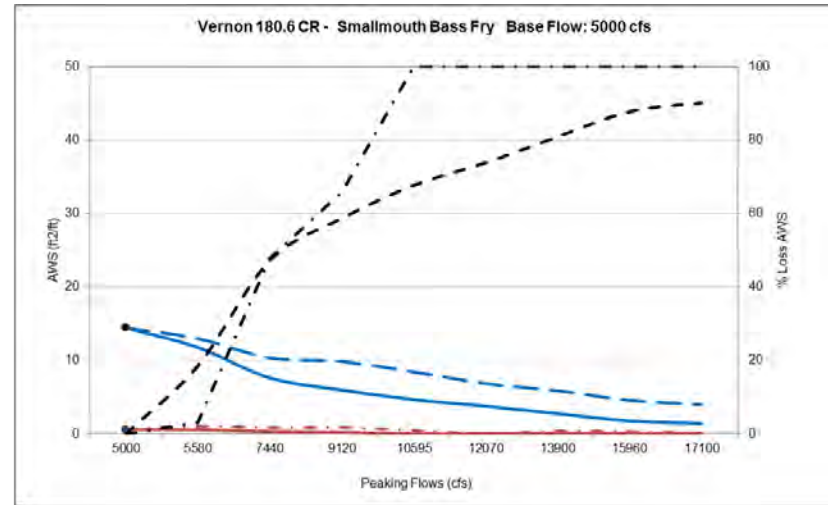
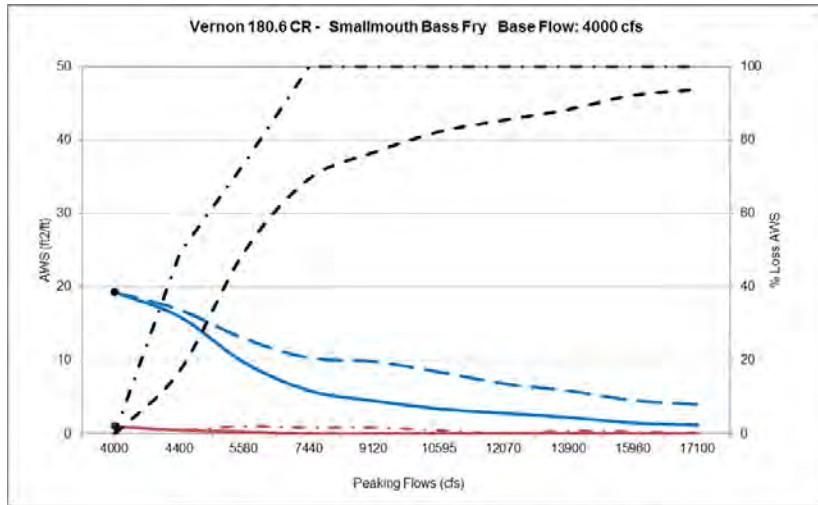




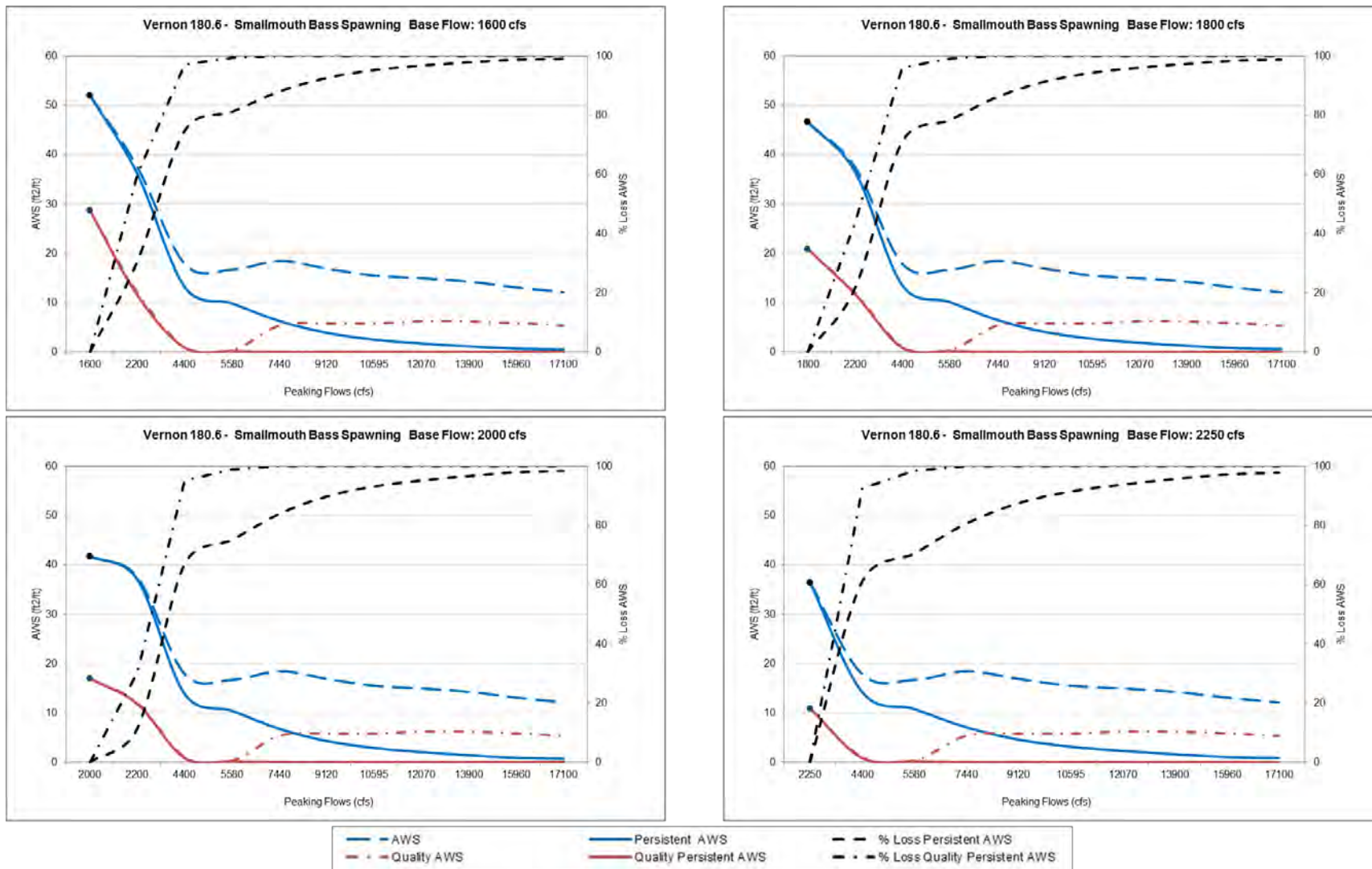
Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - CR Smallmouth Bass fry persistent and persistent quality habitat.



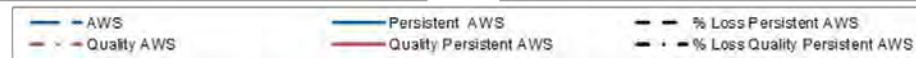
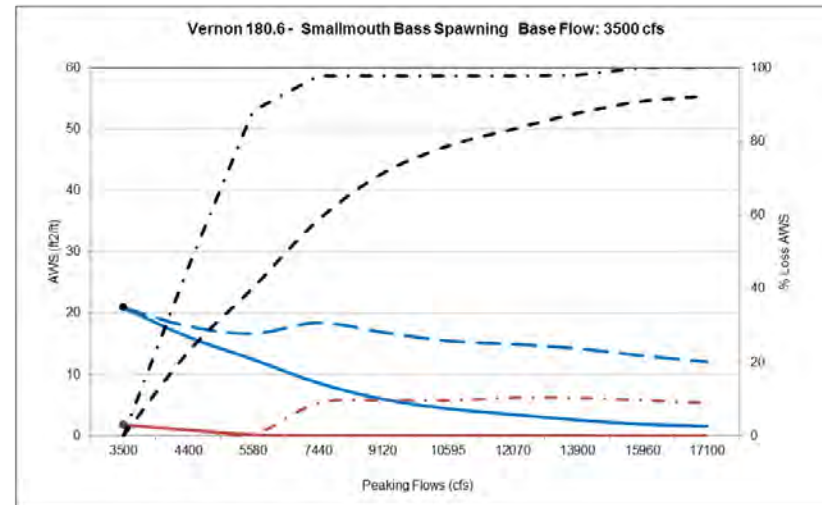
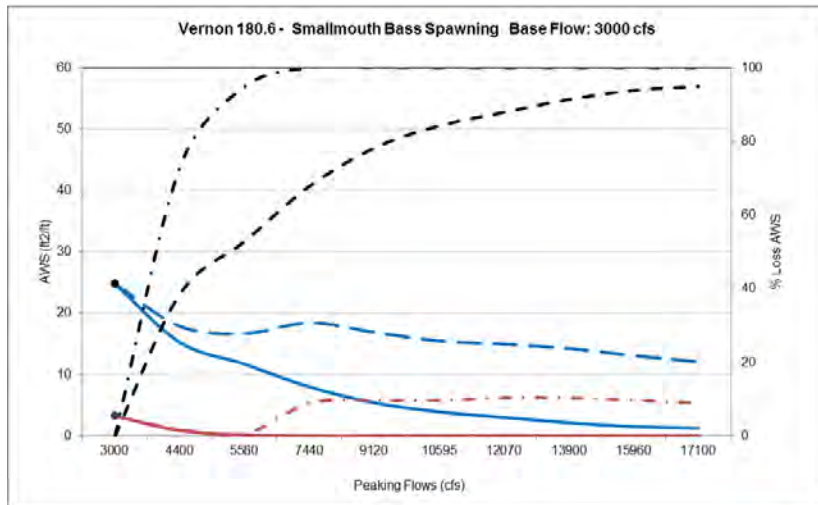
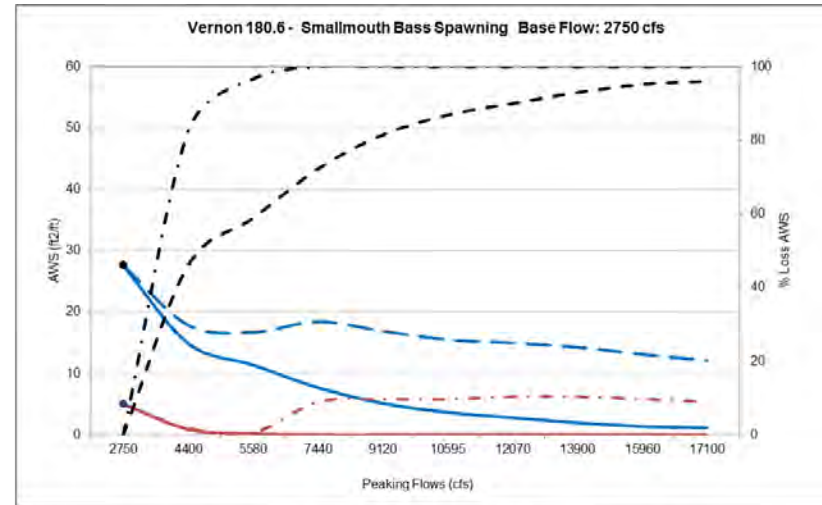
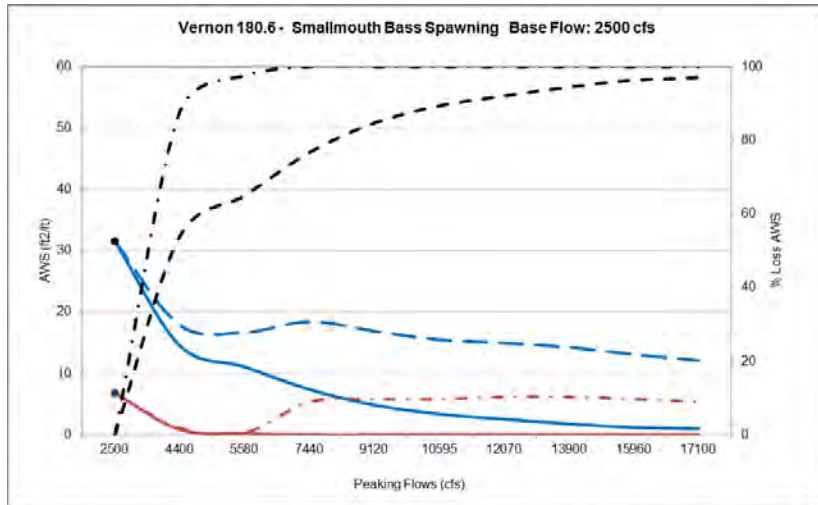


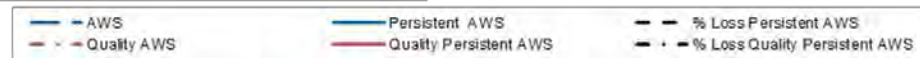
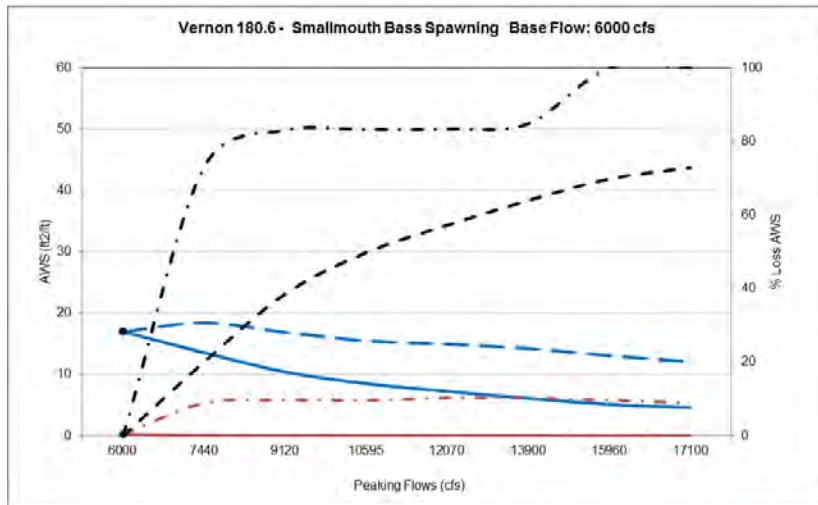
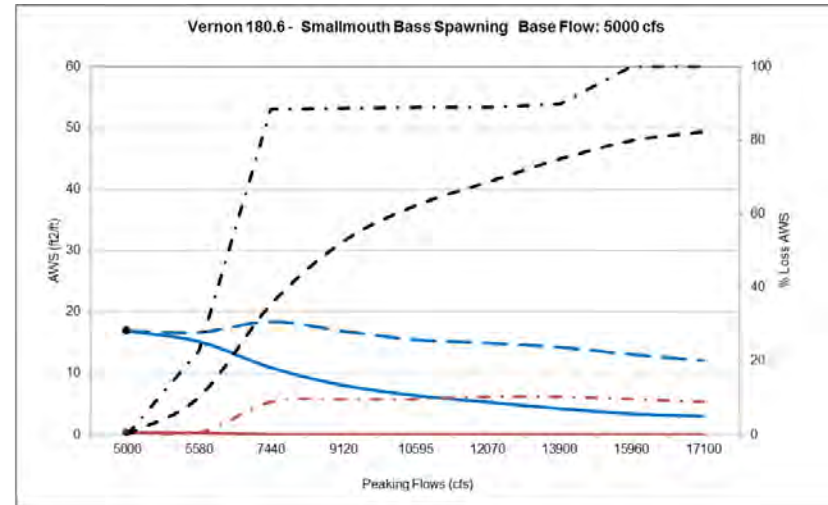
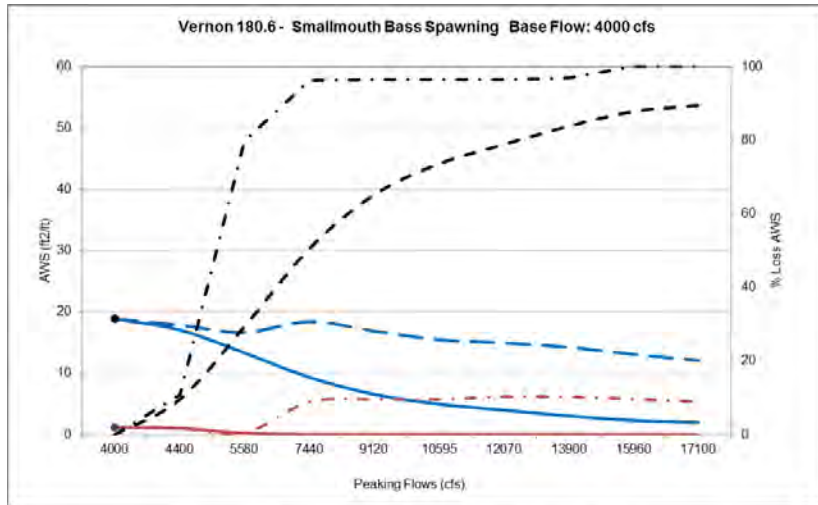


Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - Smallmouth Bass spawning persistent and persistent quality habitat.



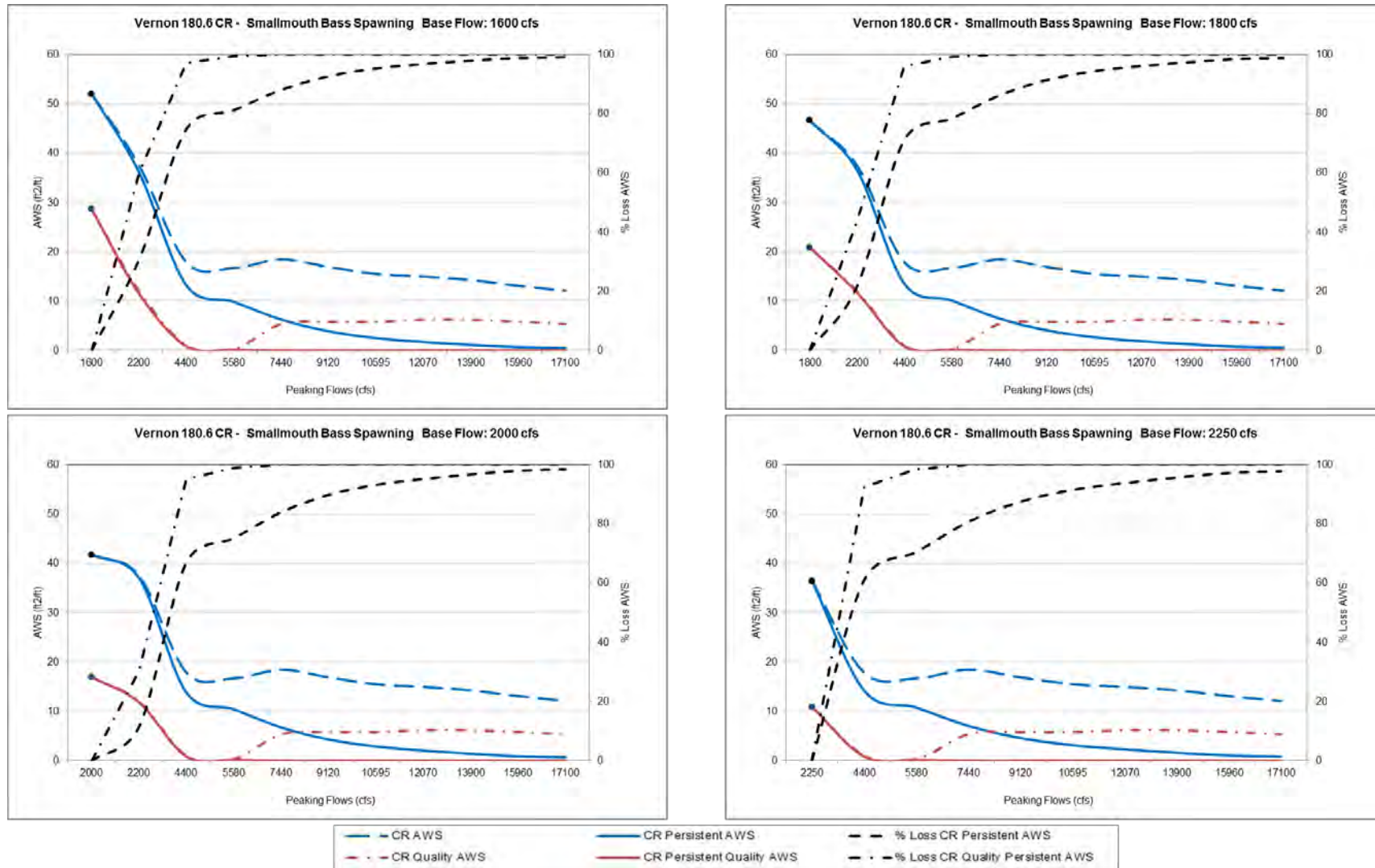


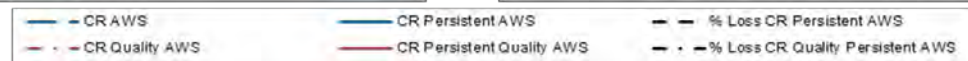
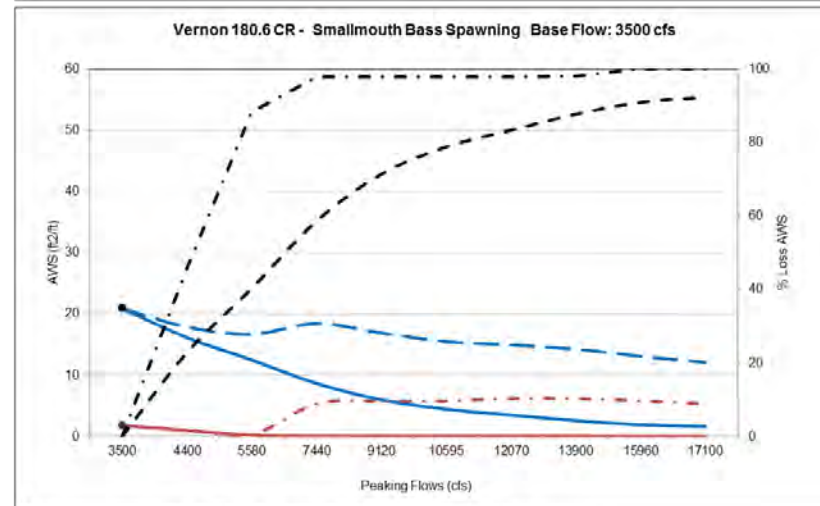
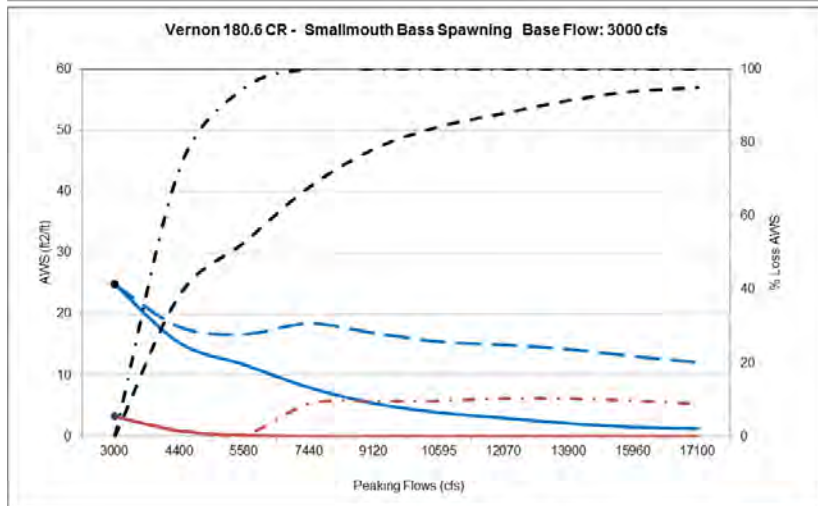
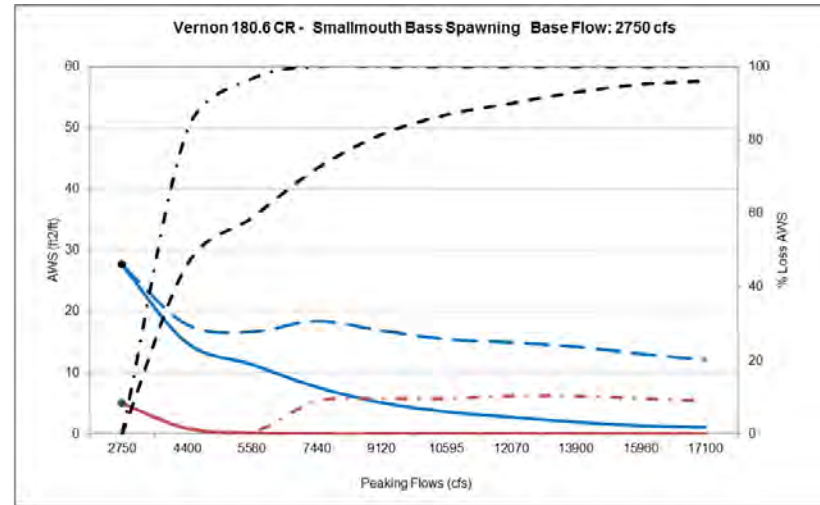
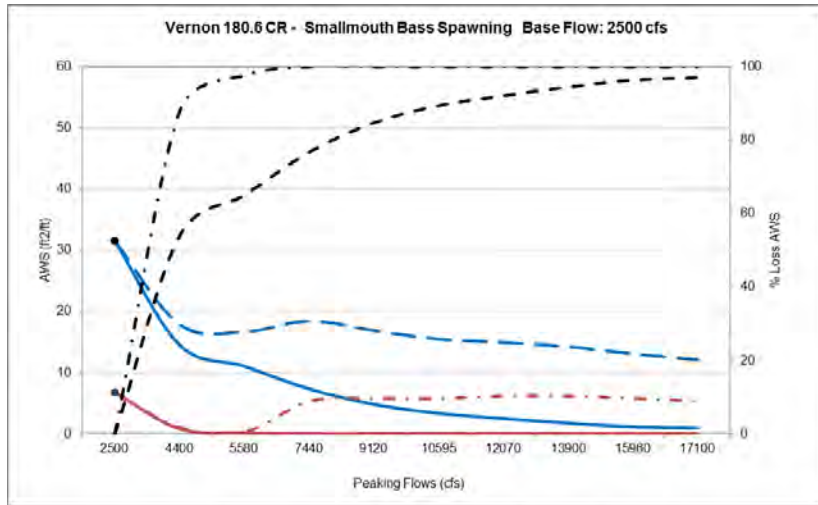


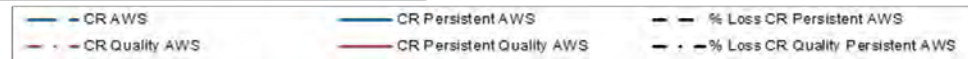
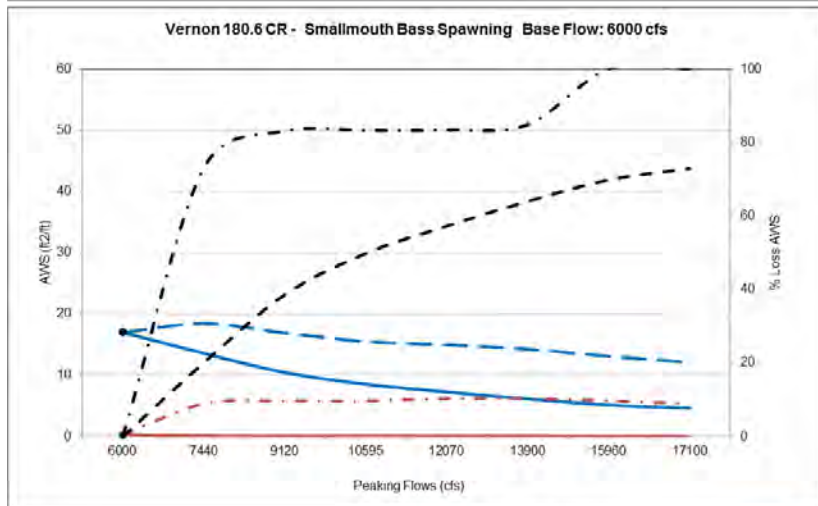
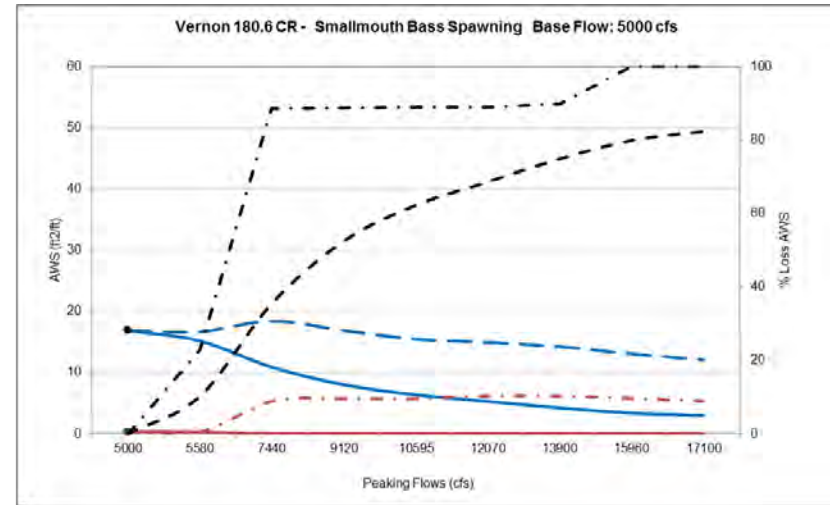
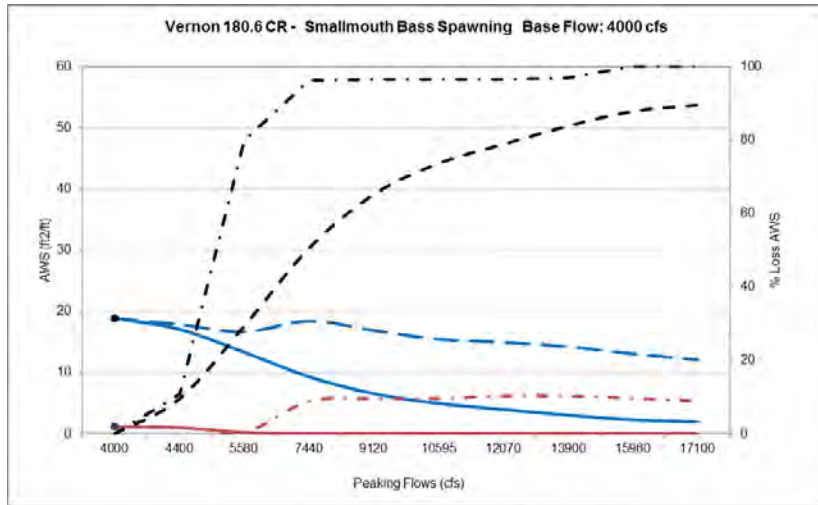




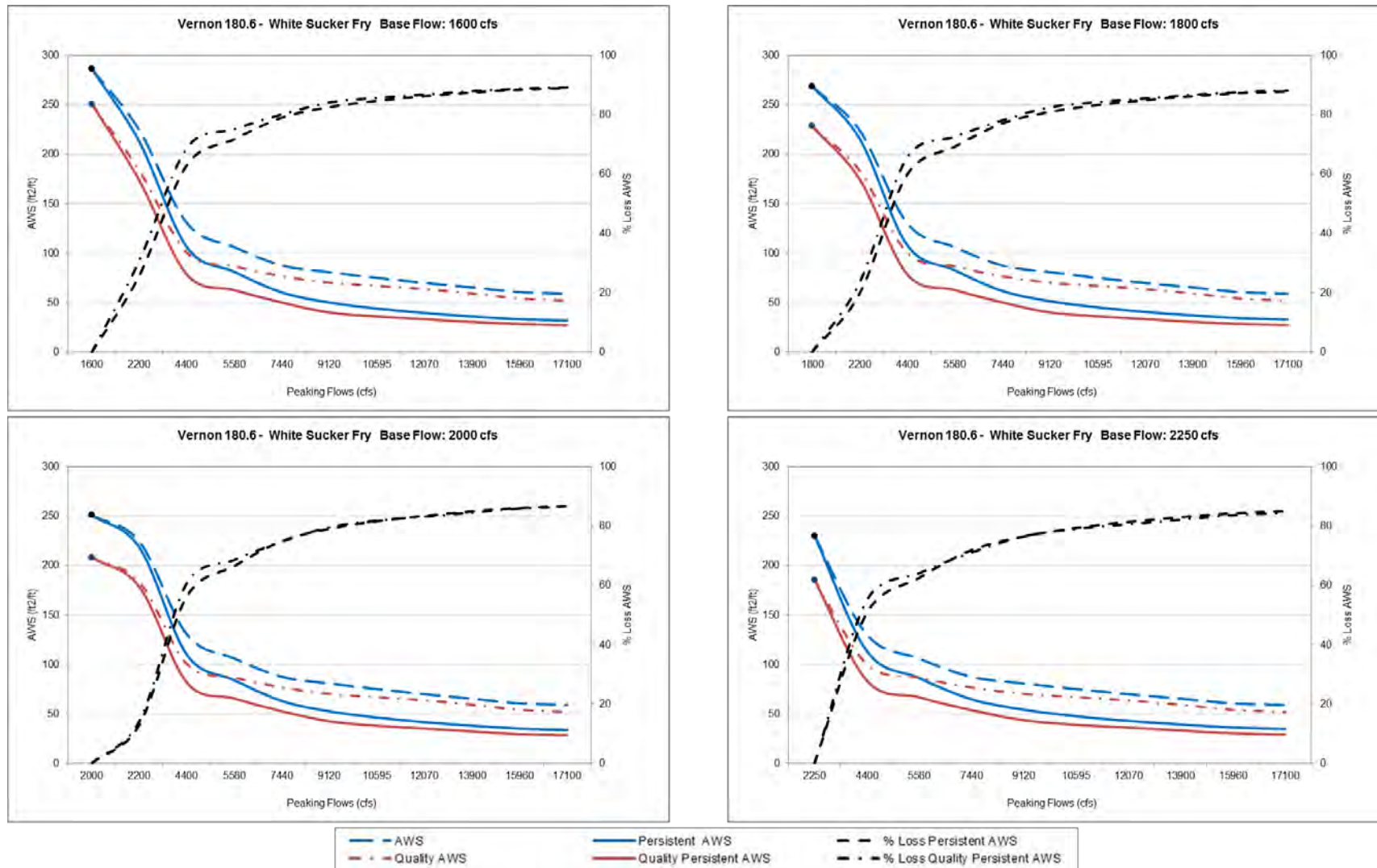
Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - CR Smallmouth Bass spawning persistent and persistent quality habitat.



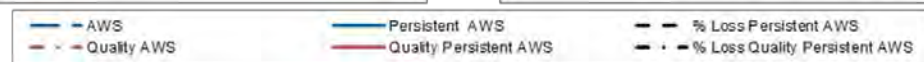
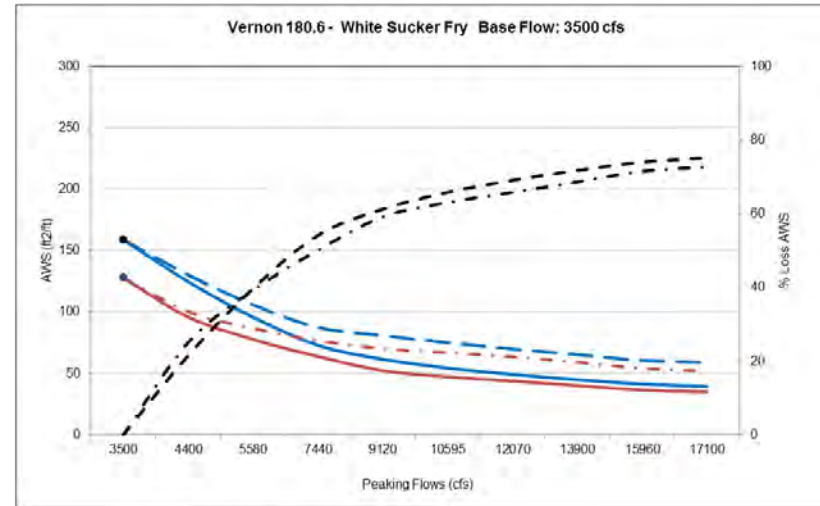
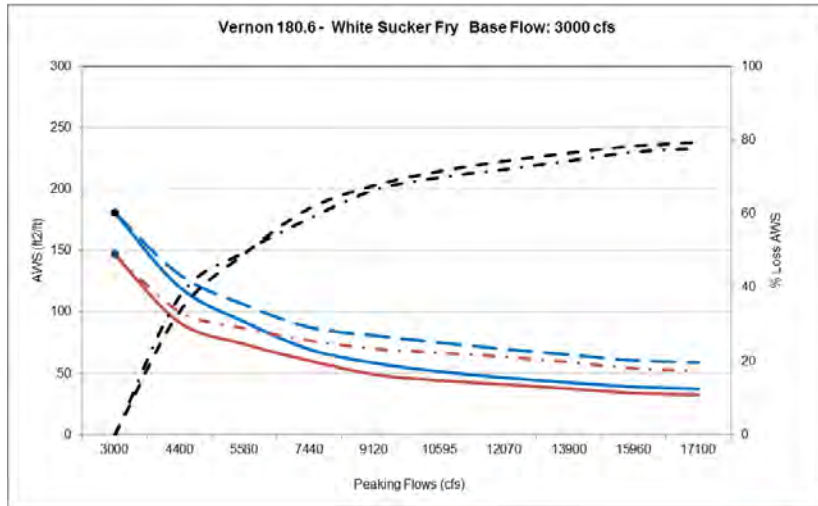
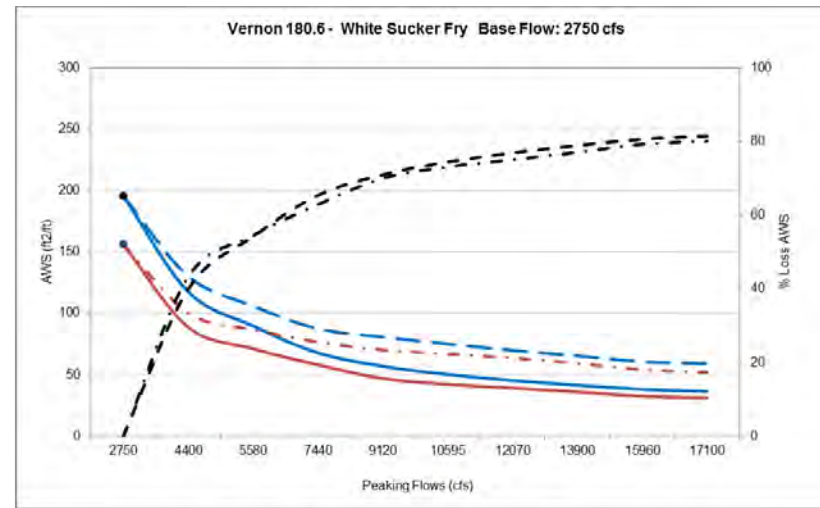
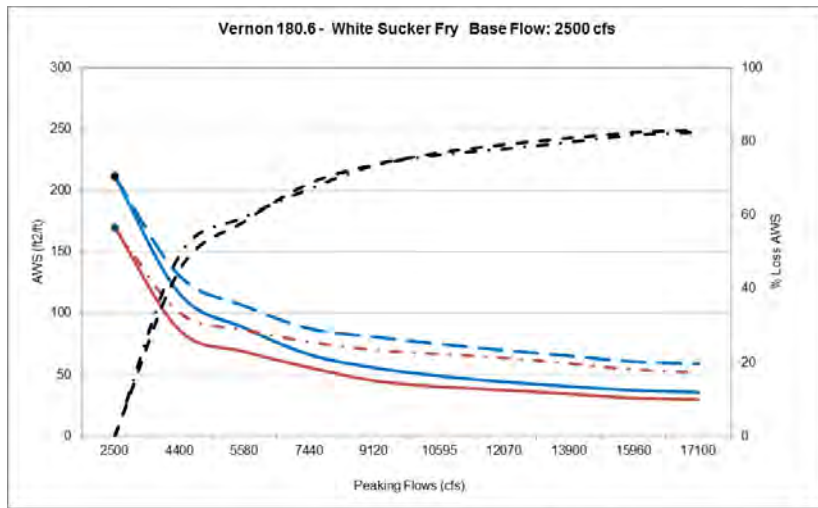


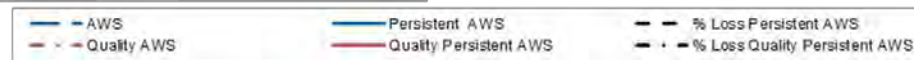
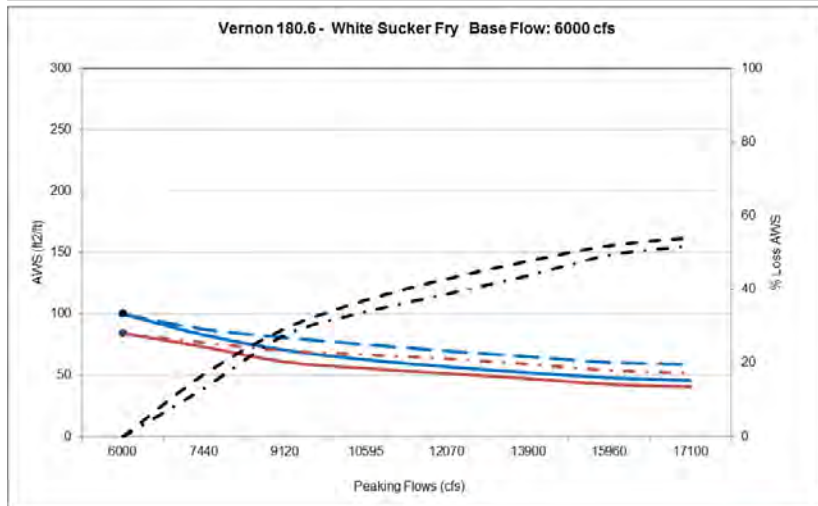
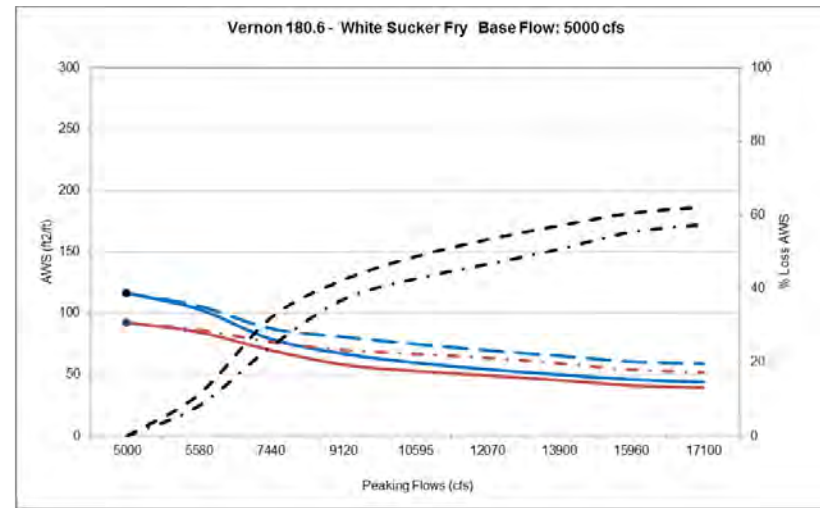
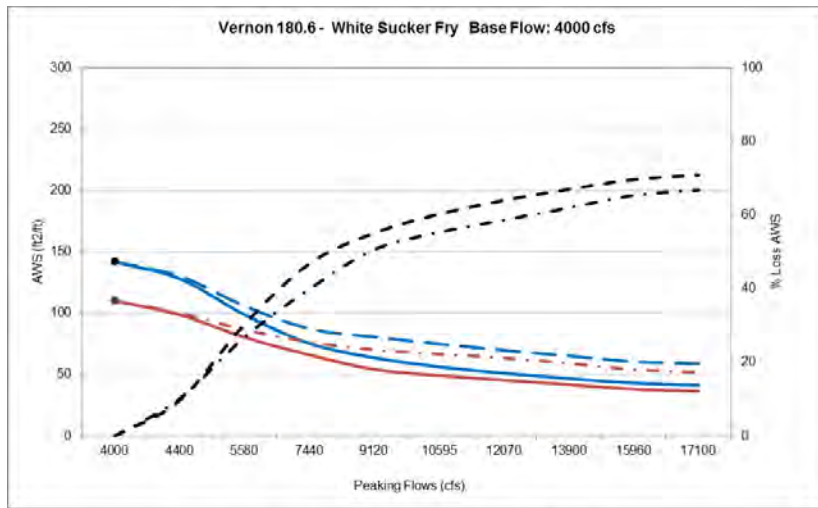


Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - White Sucker fry persistent and persistent quality habitat.



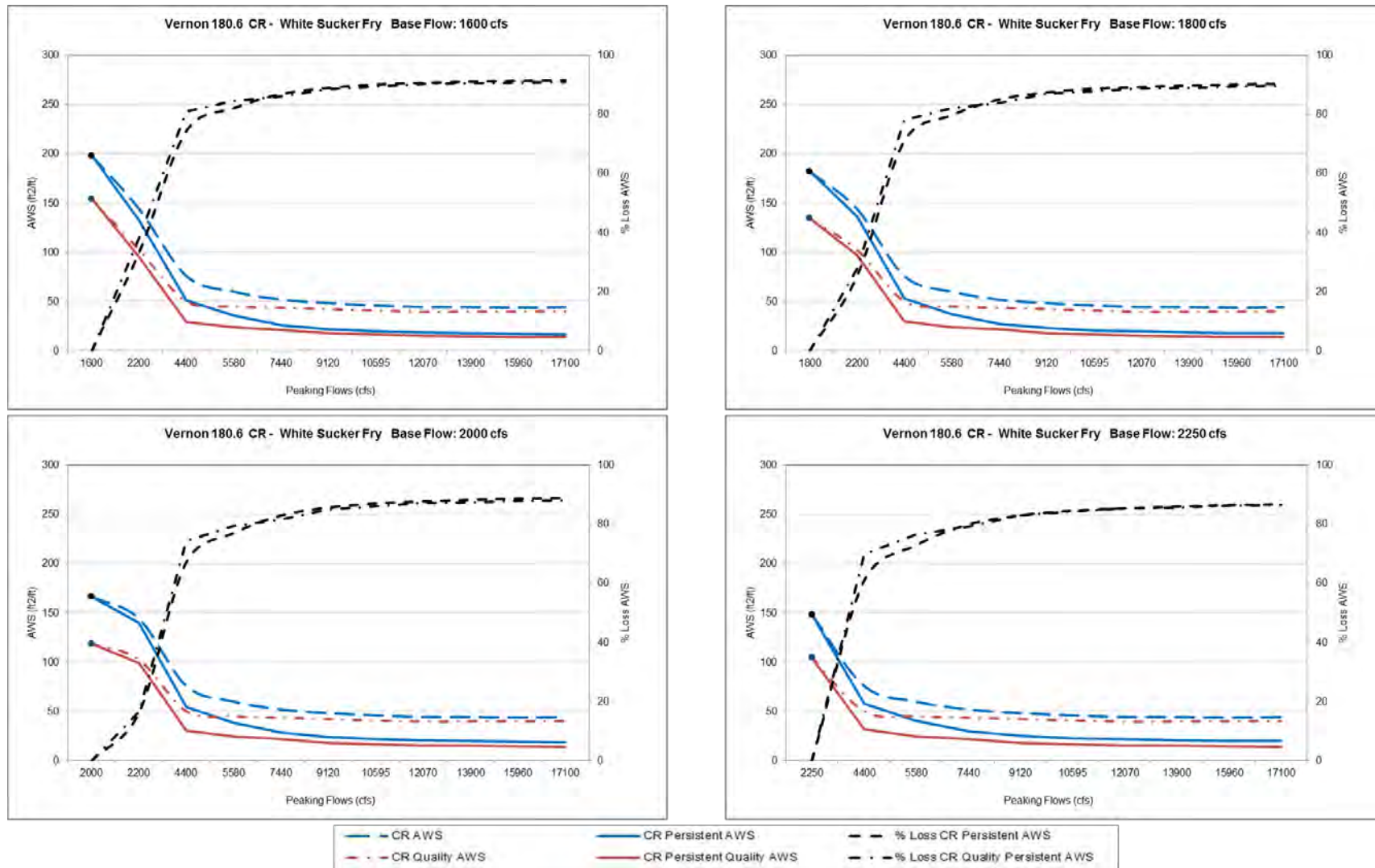


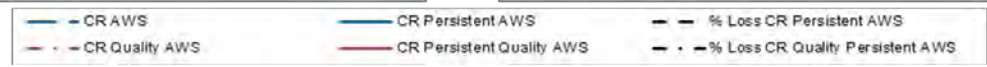
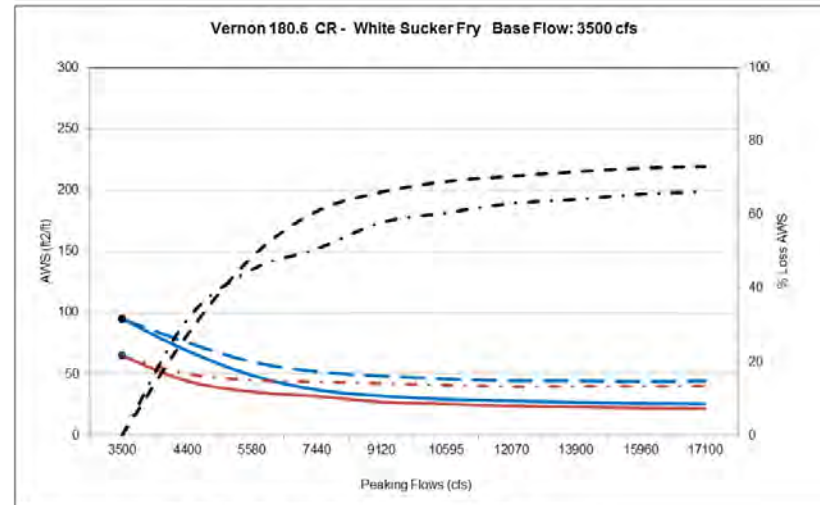
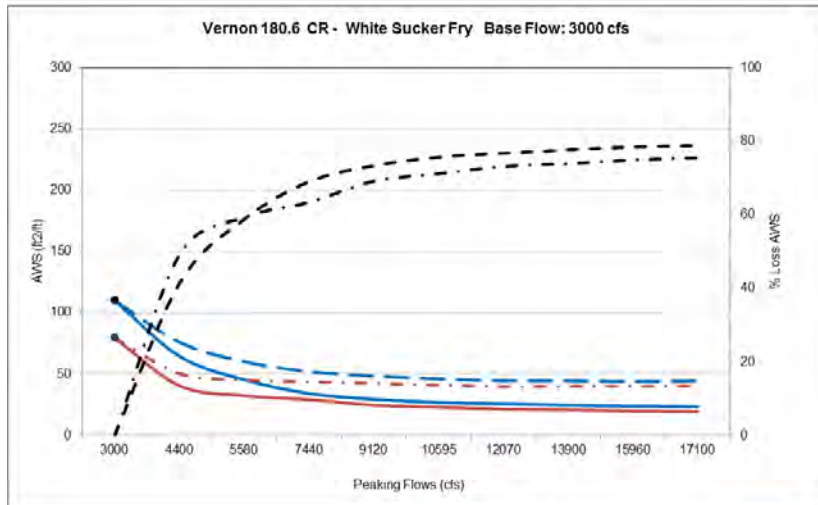
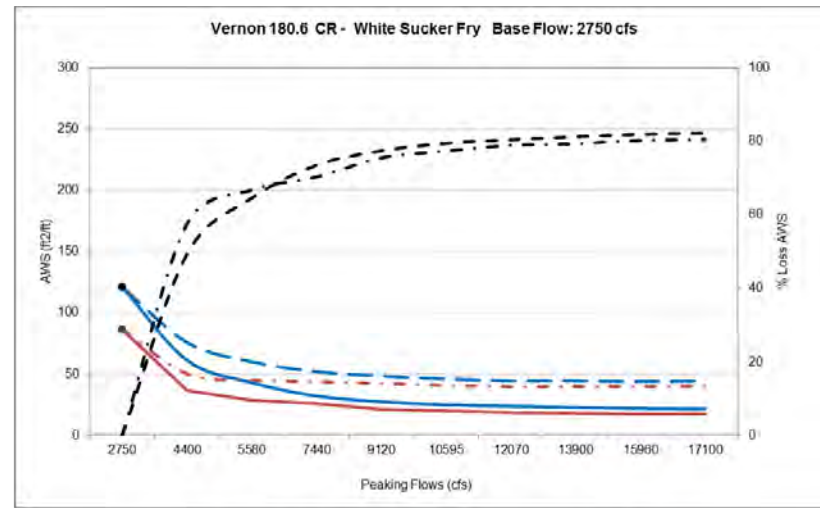
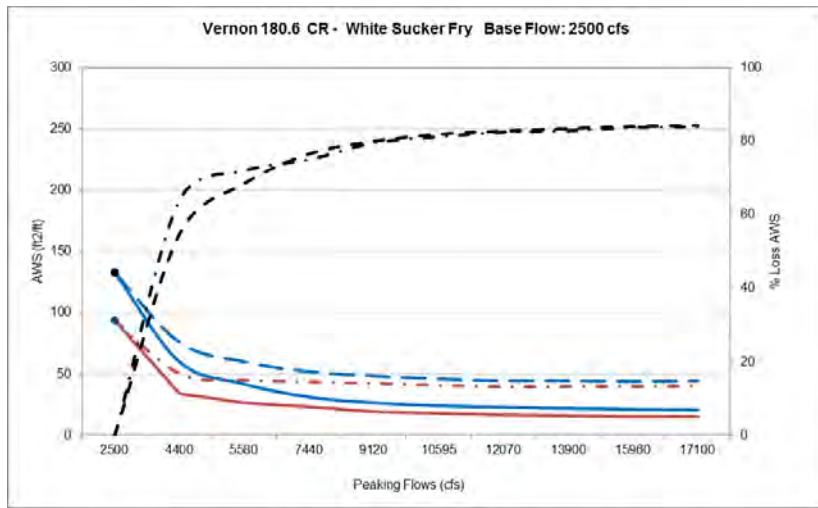


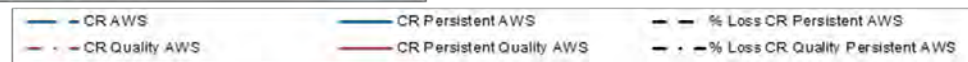
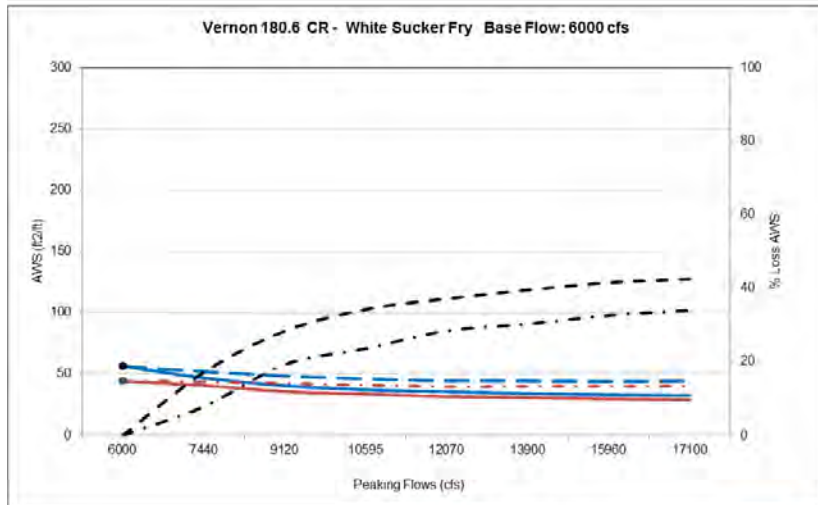
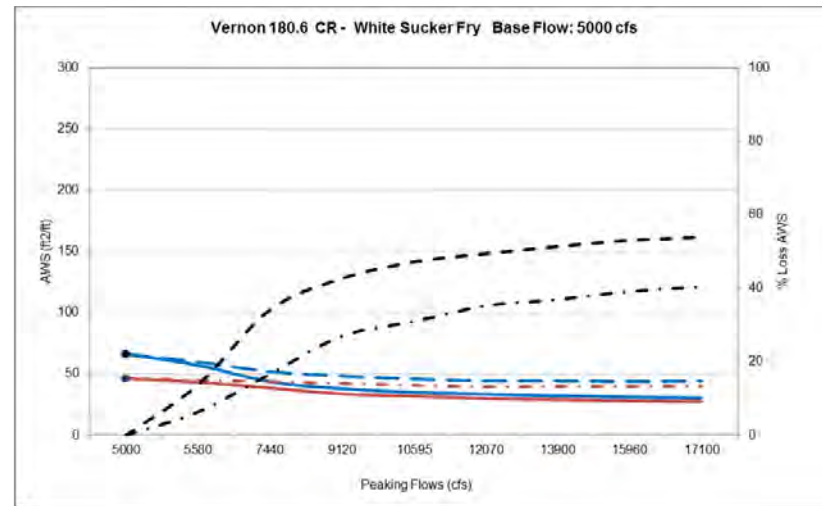
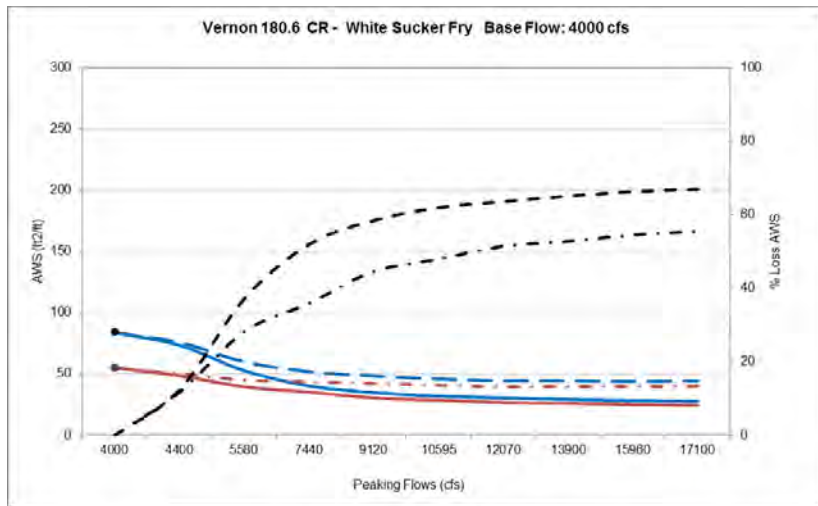




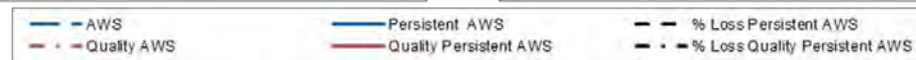
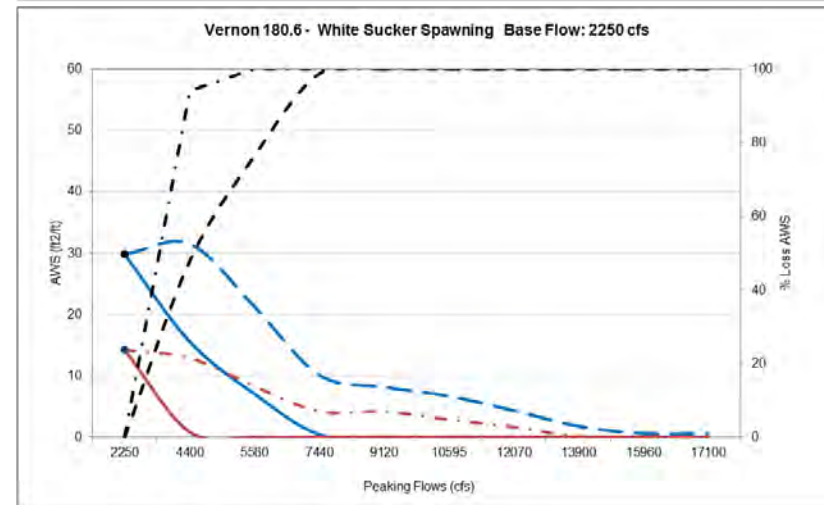
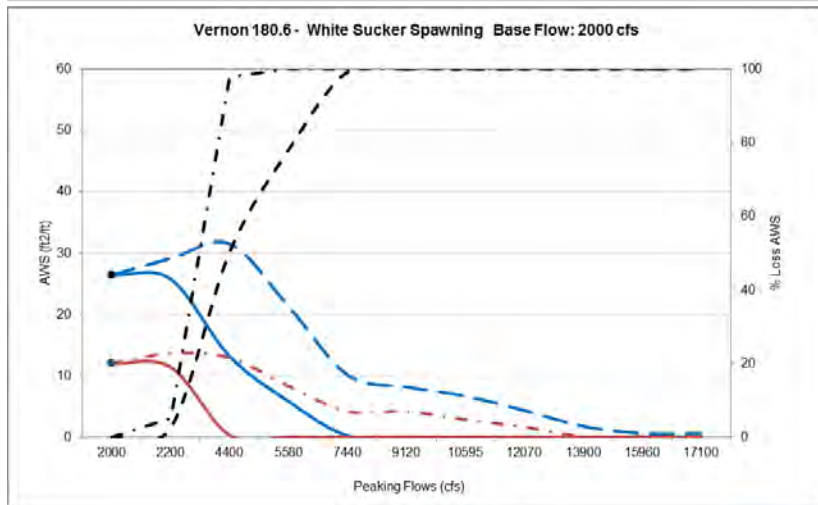
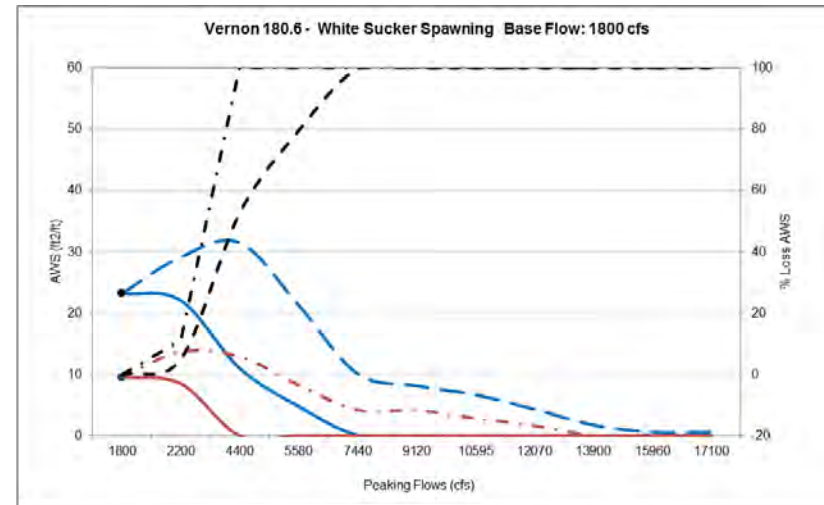
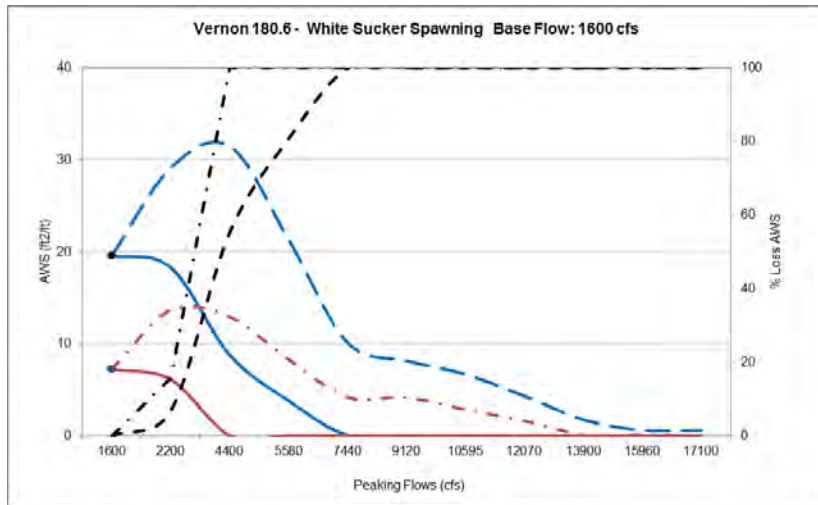
Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - CR White Sucker fry persistent and persistent quality habitat.



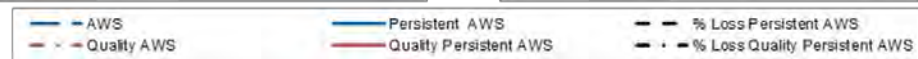
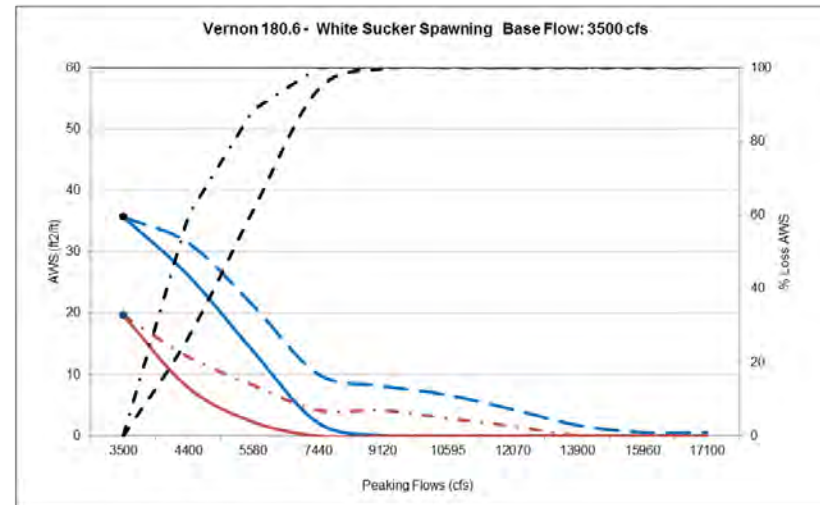
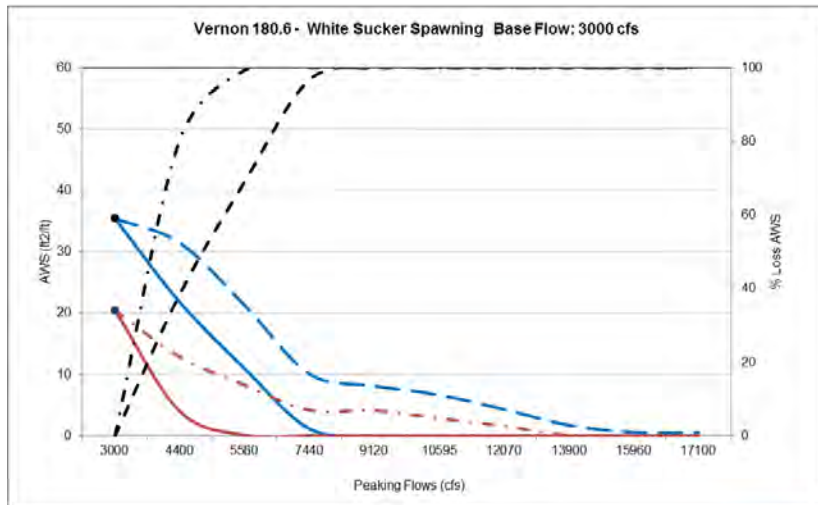
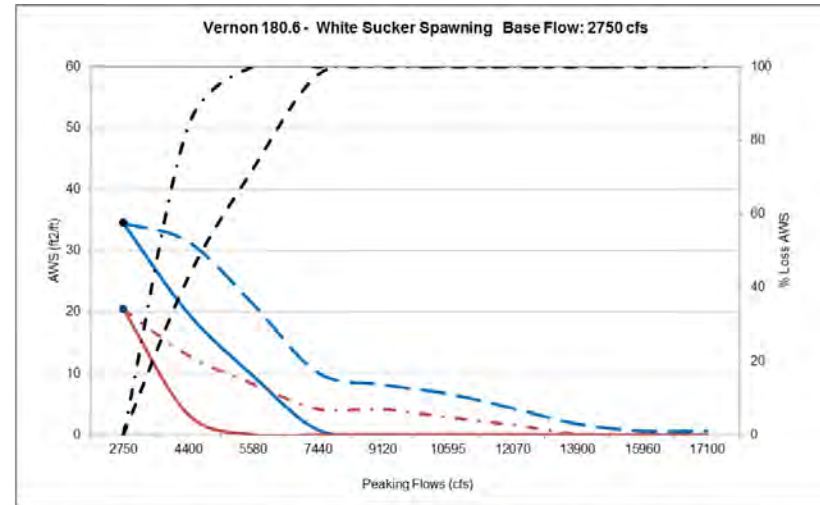
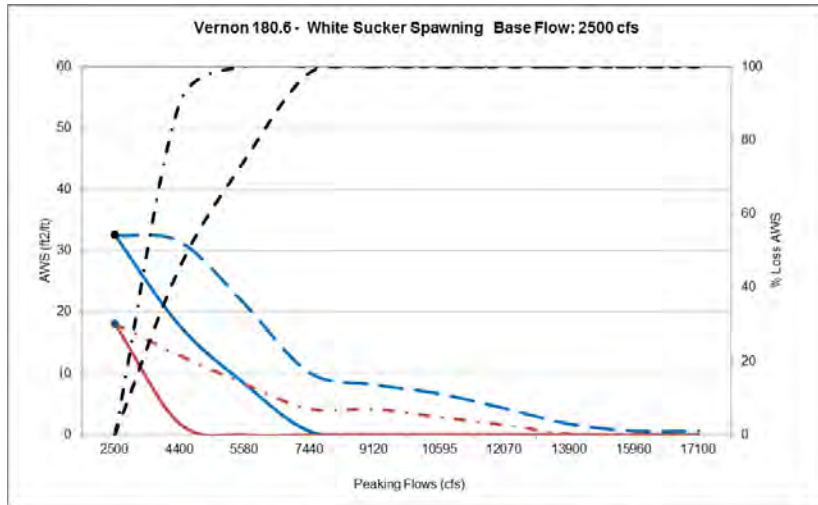


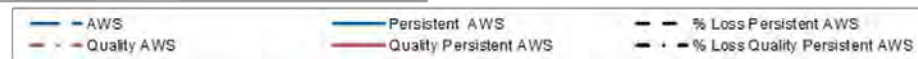
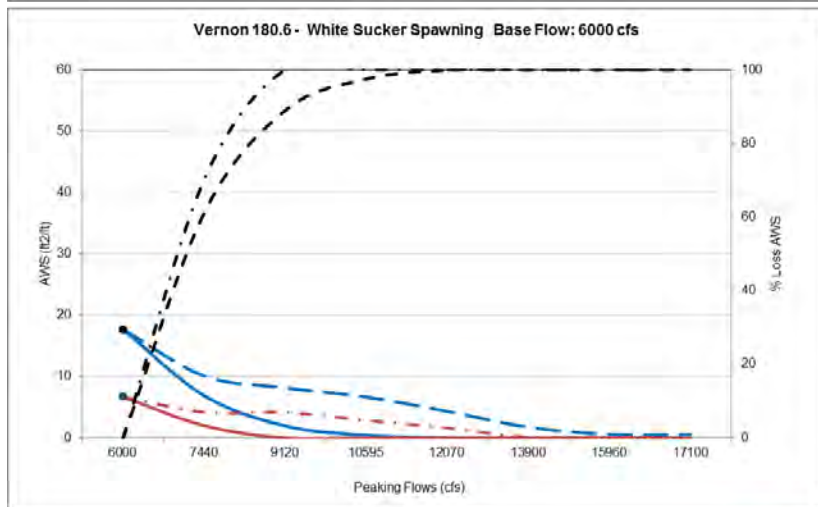
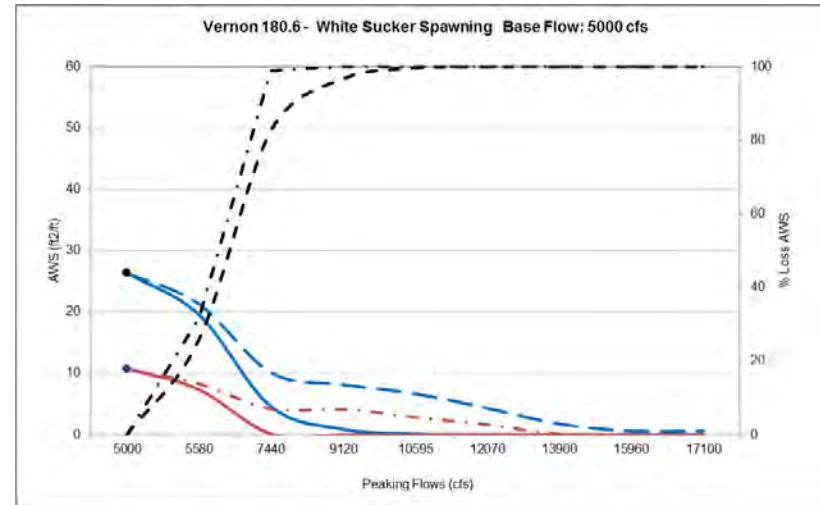
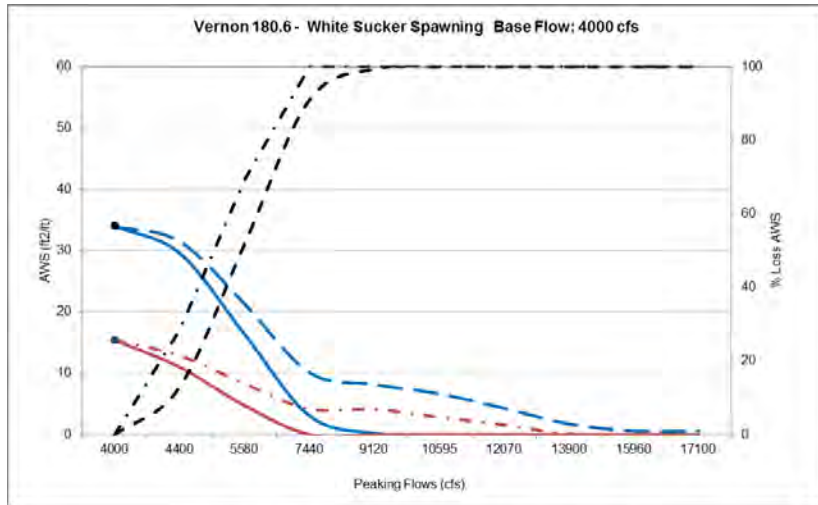


Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - White Sucker spawning persistent and persistent quality habitat.



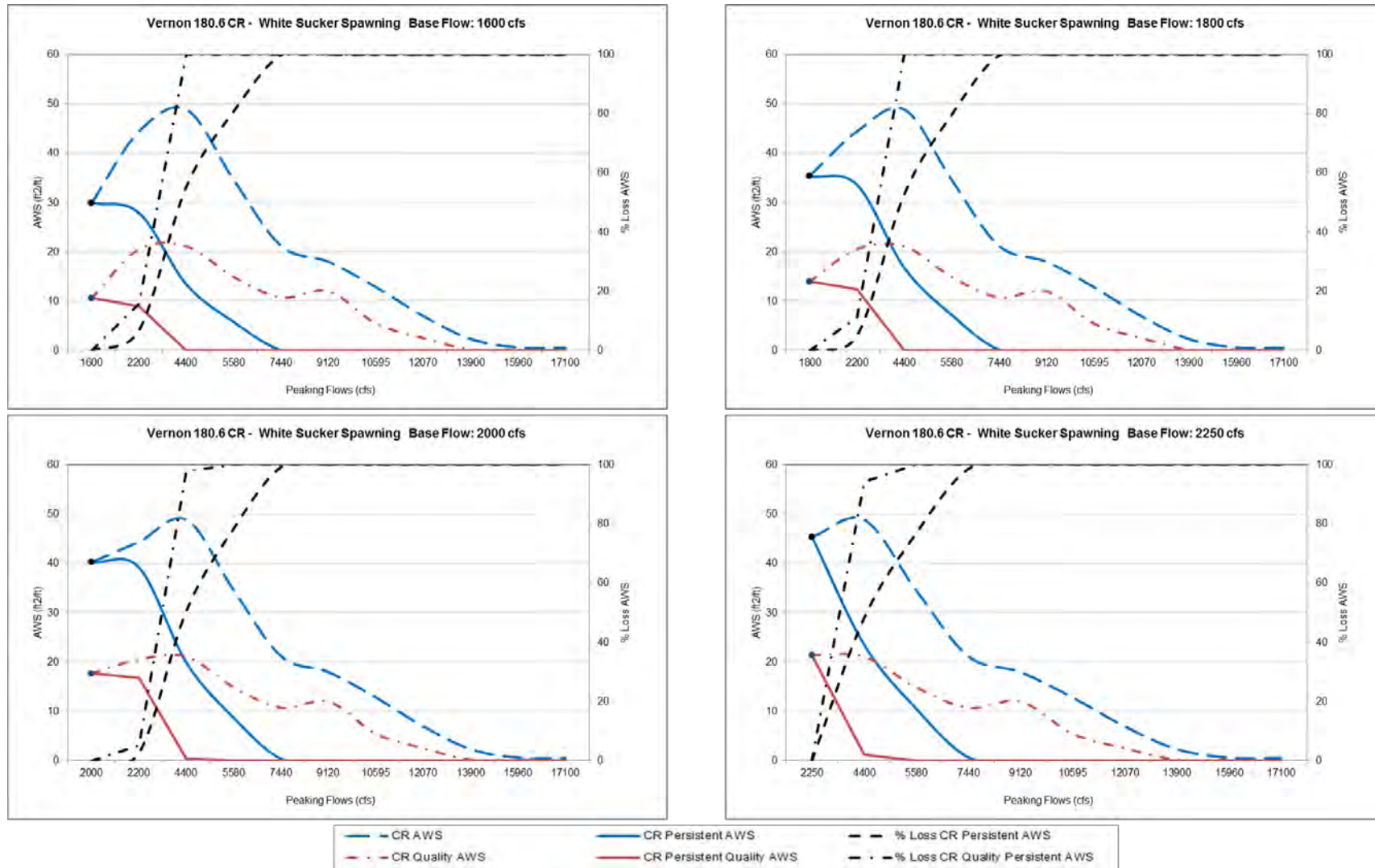


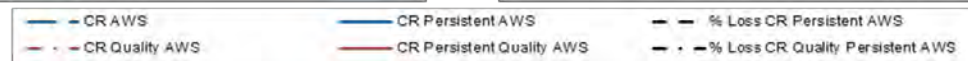
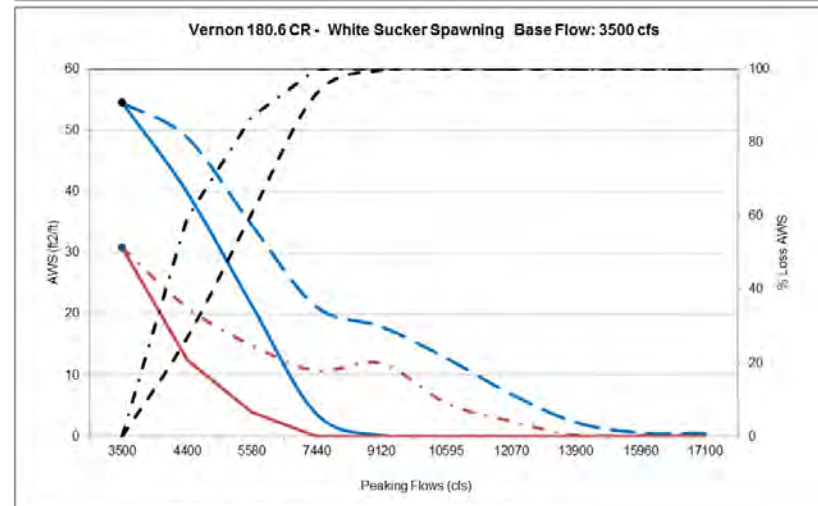
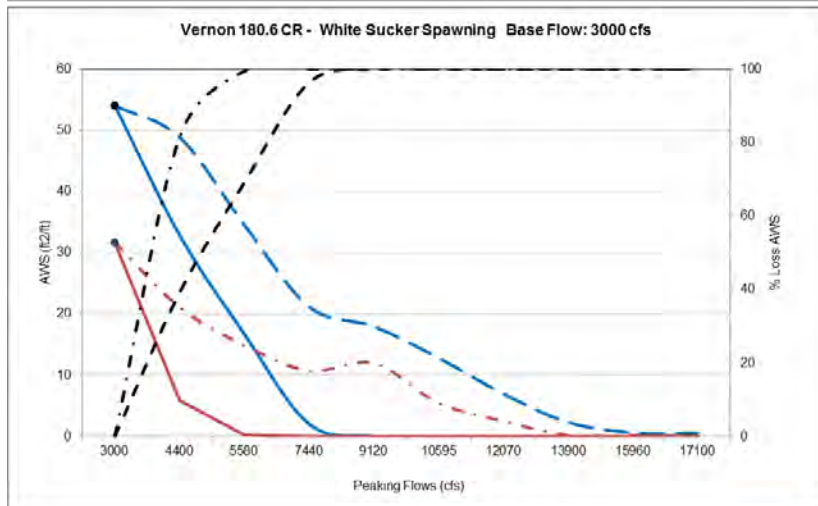
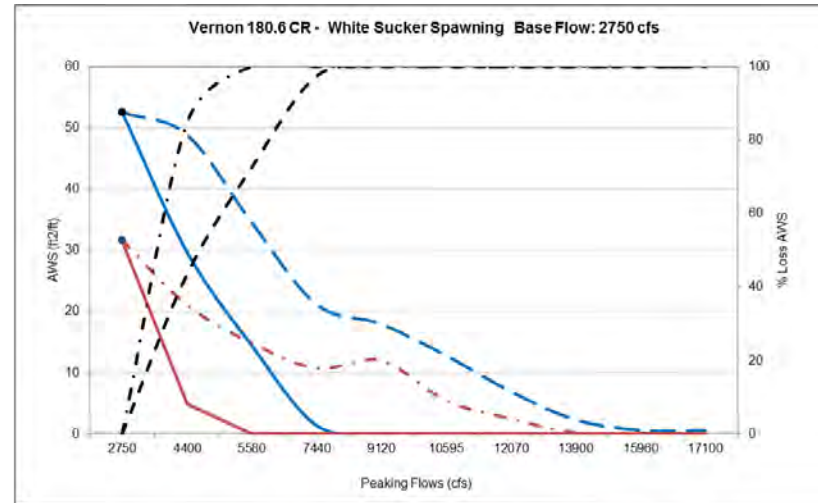
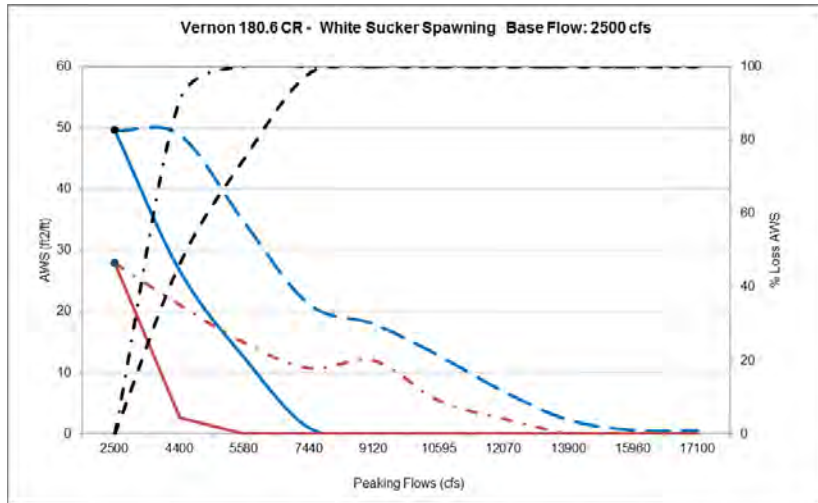


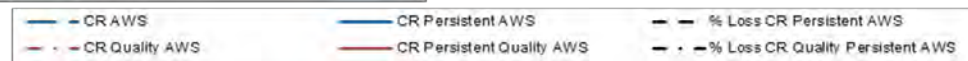
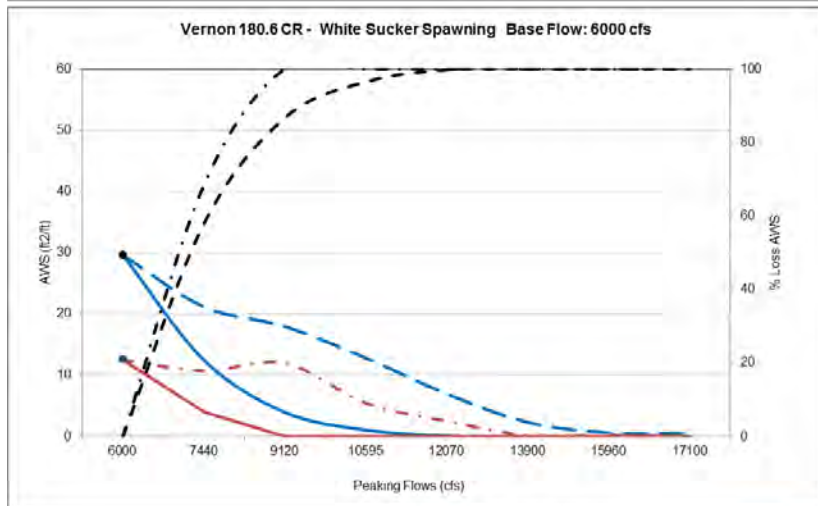
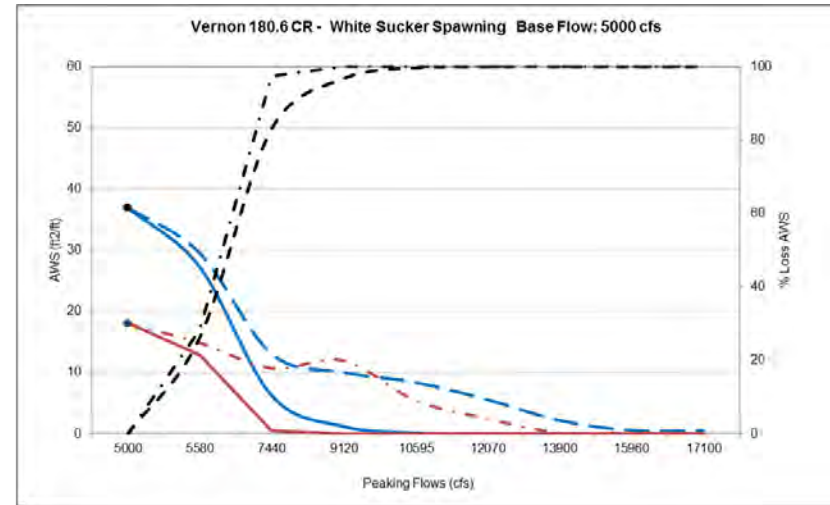
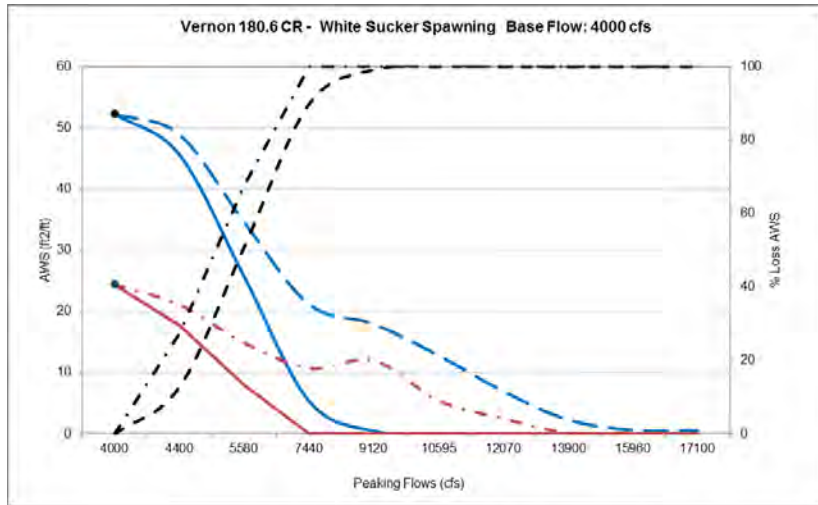




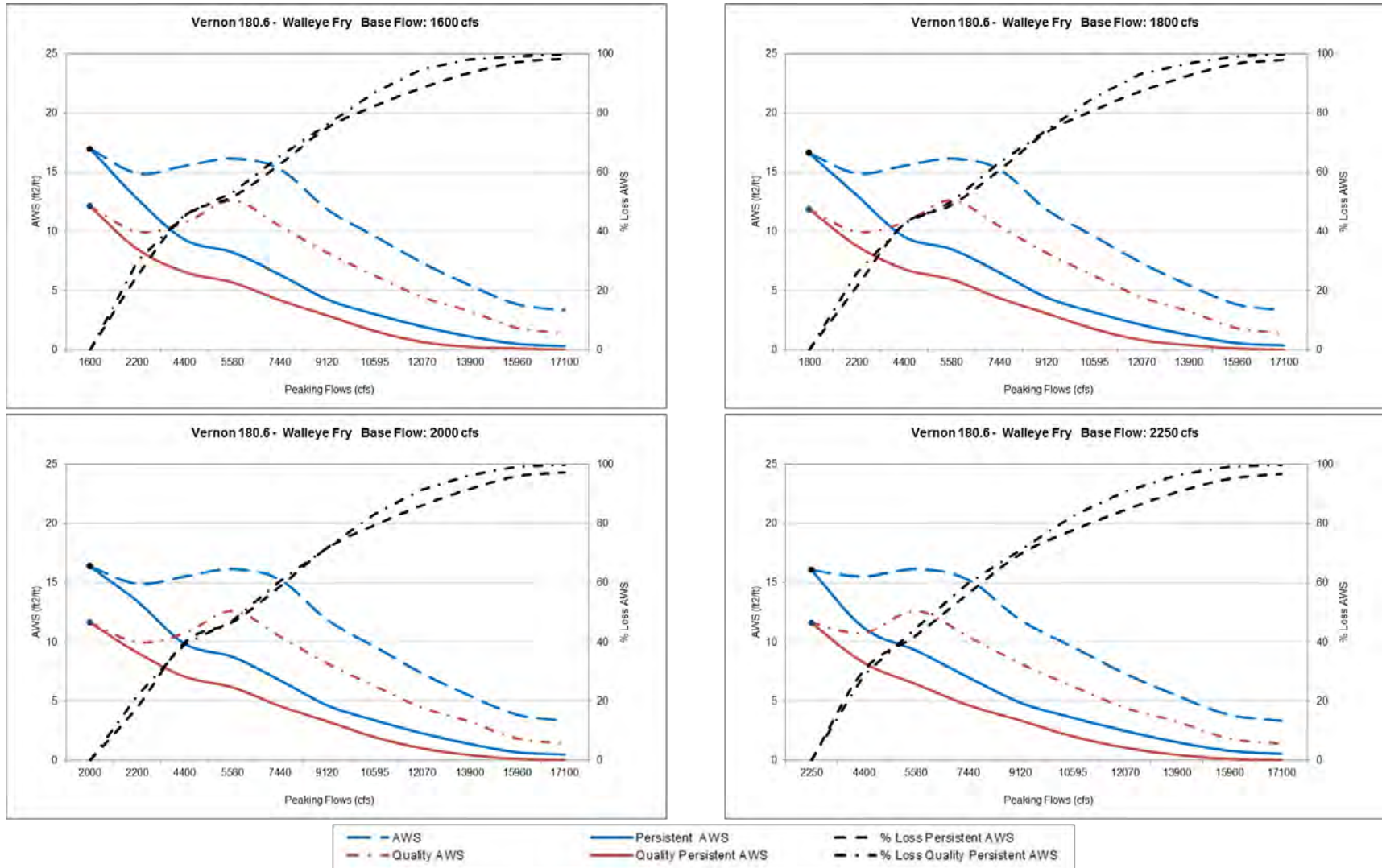
Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - CR White Sucker spawning persistent and persistent quality habitat.



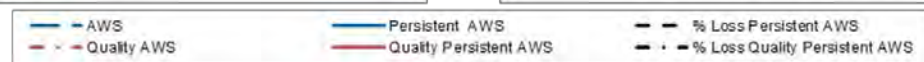
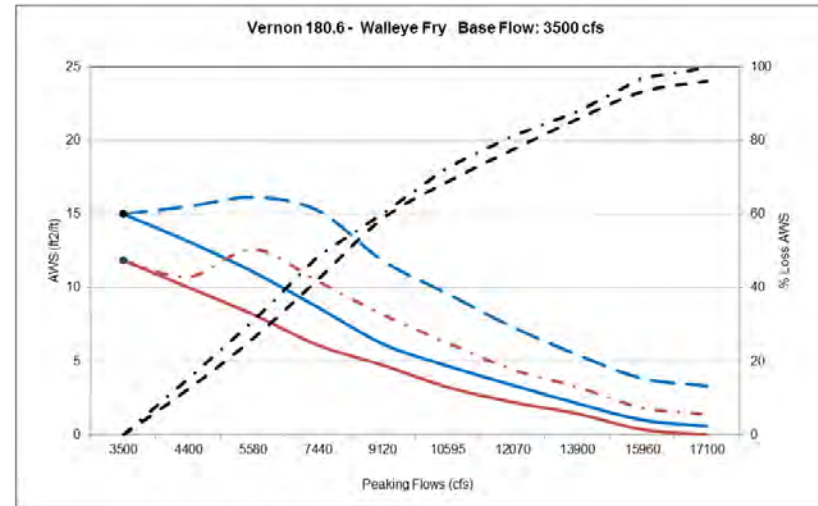
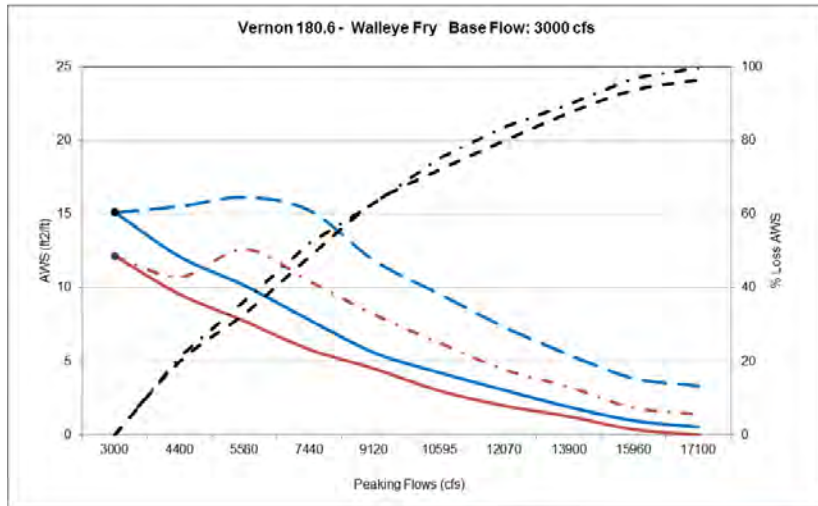
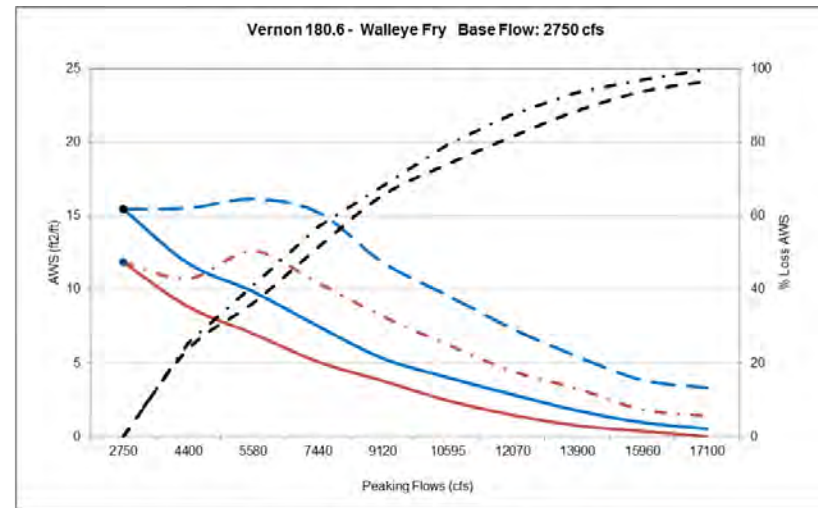
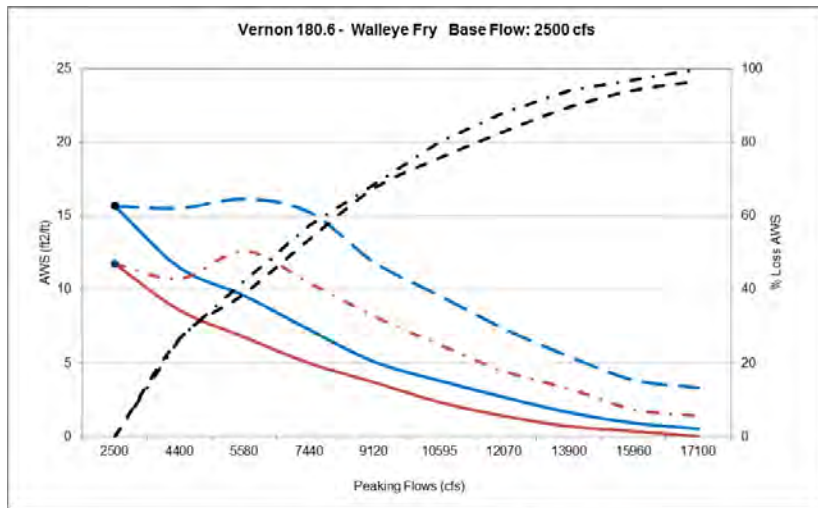


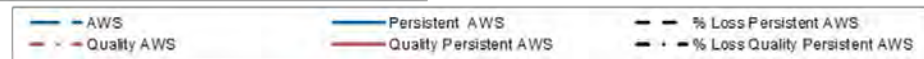
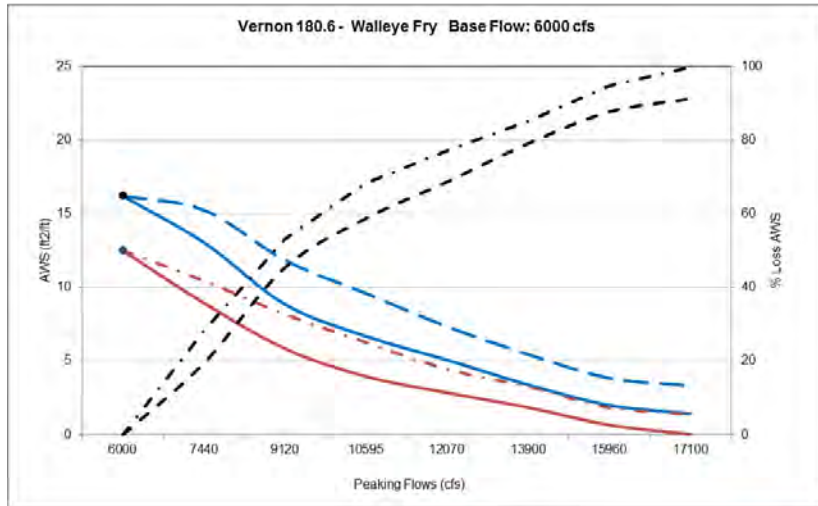
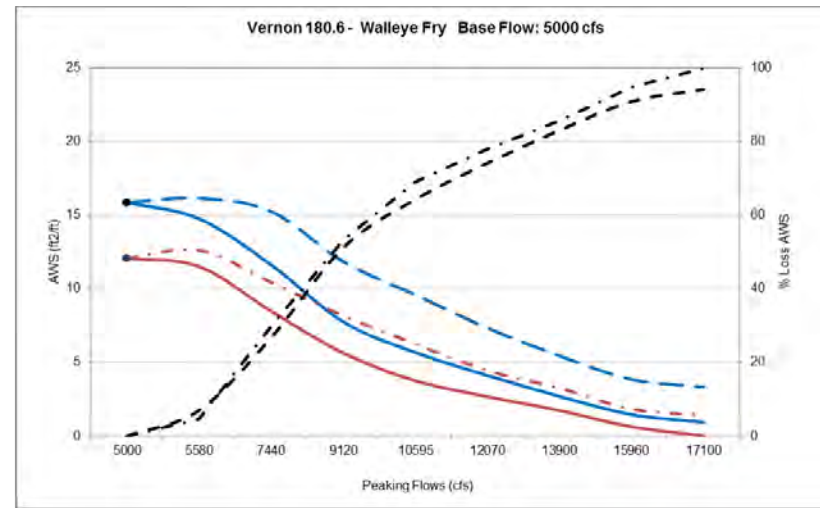
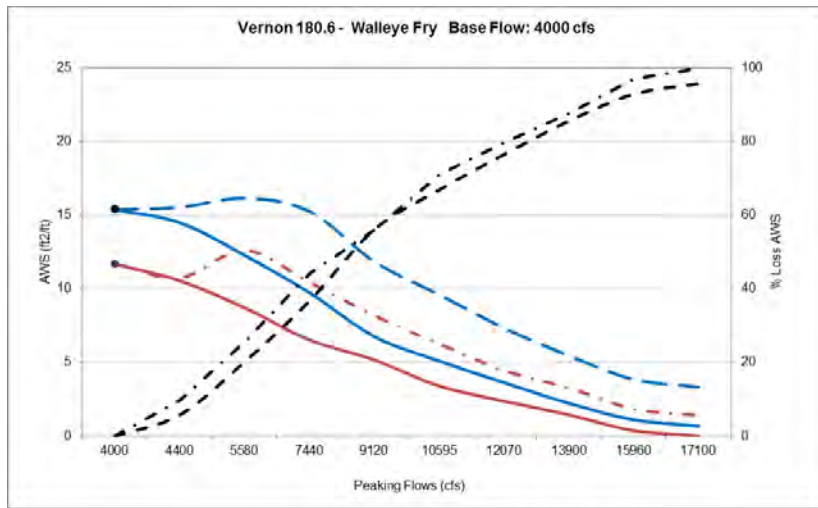


Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - Walleye fry persistent and persistent quality habitat.



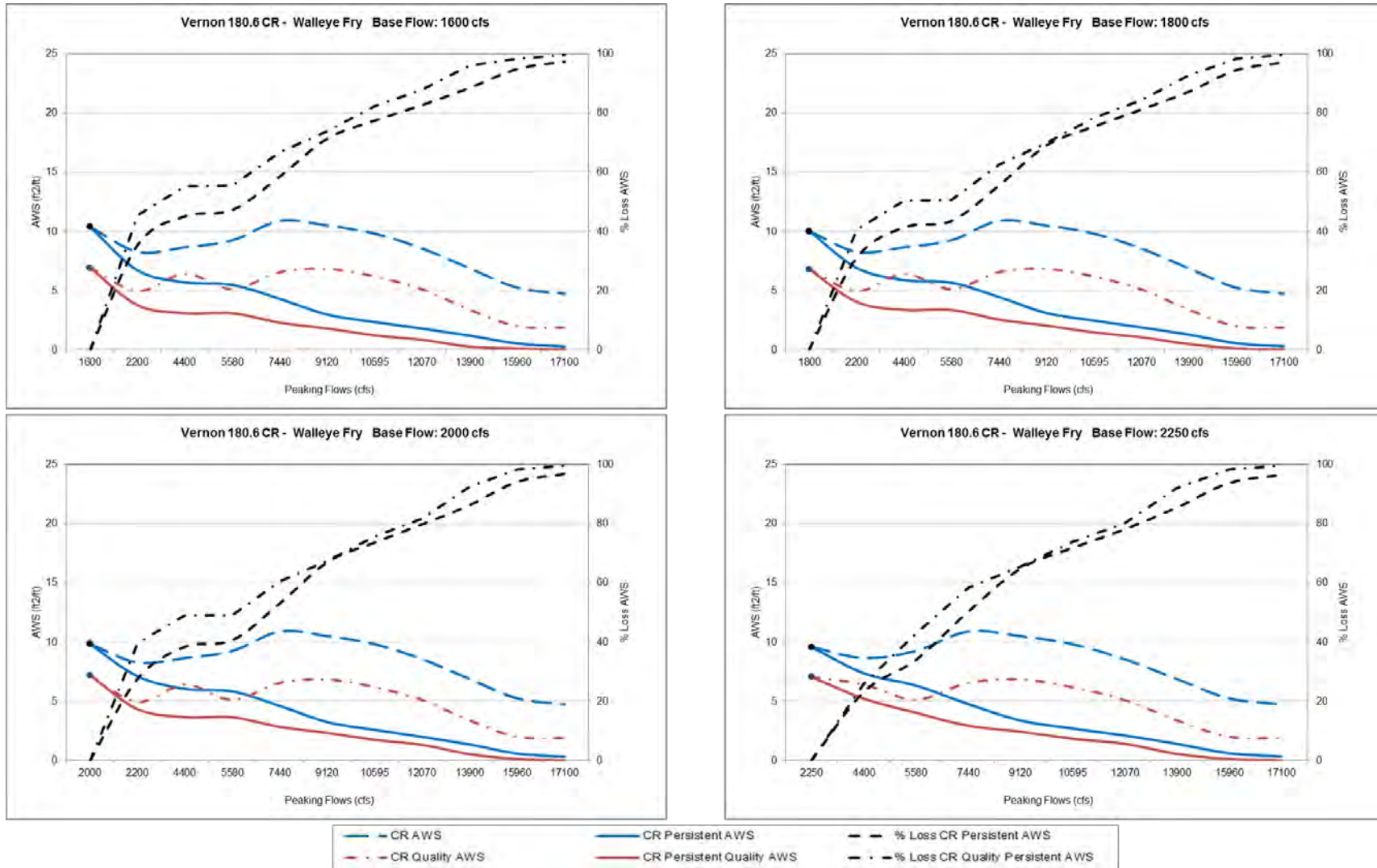


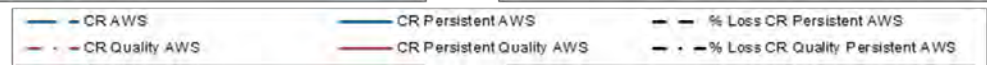
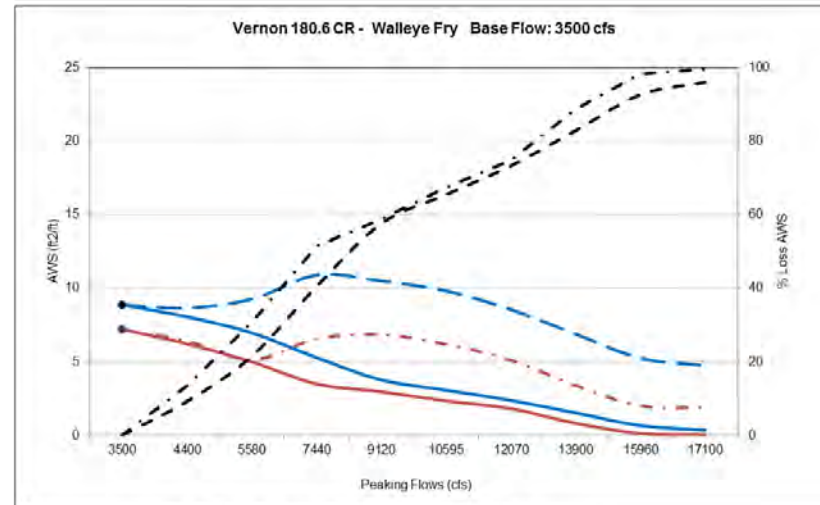
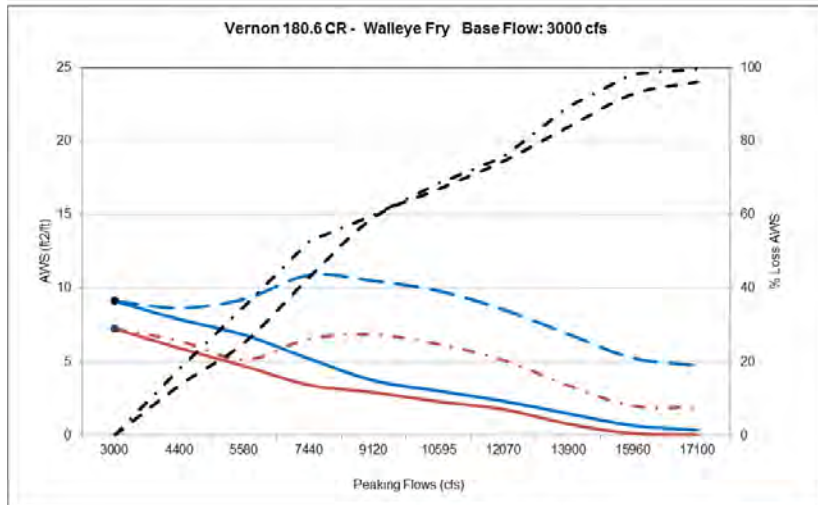
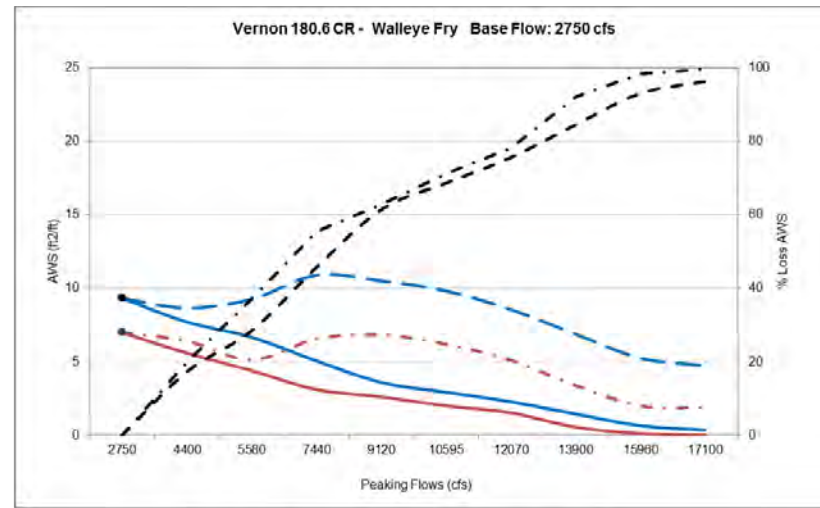
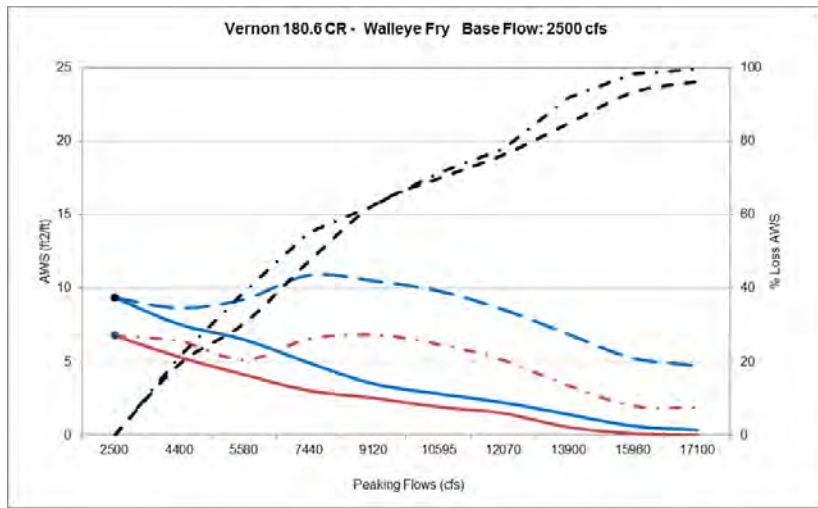


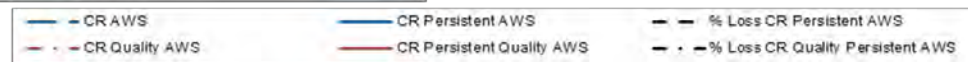
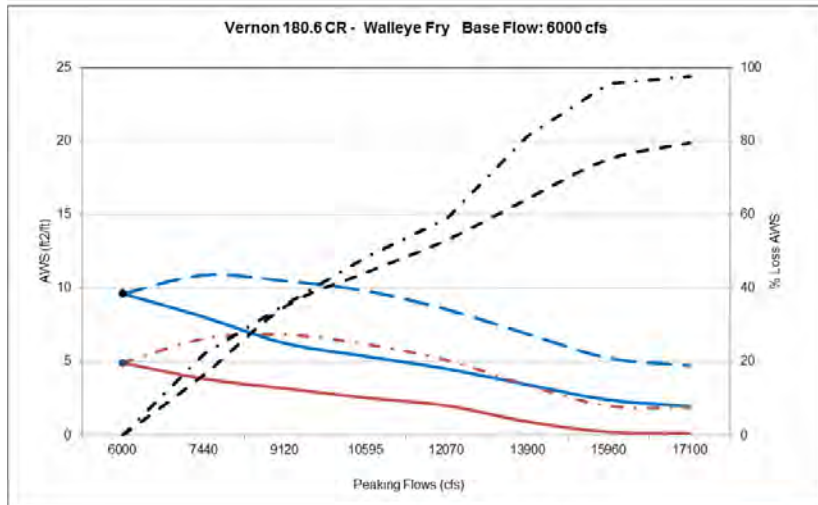
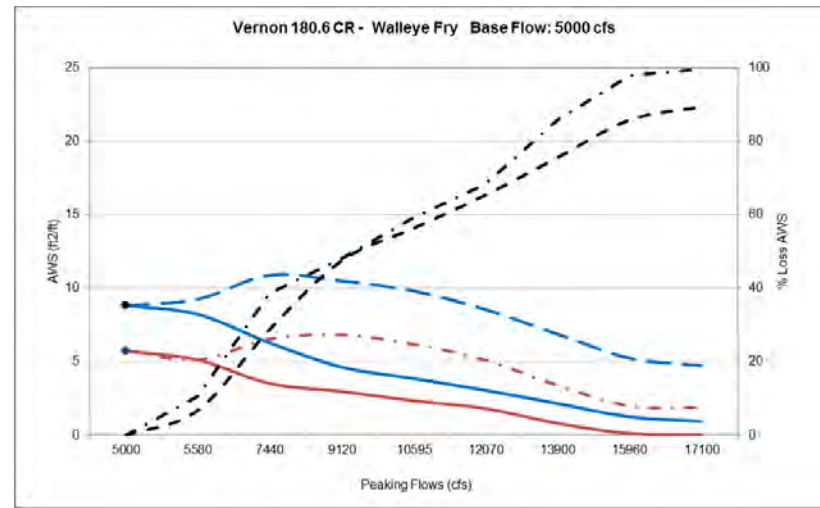
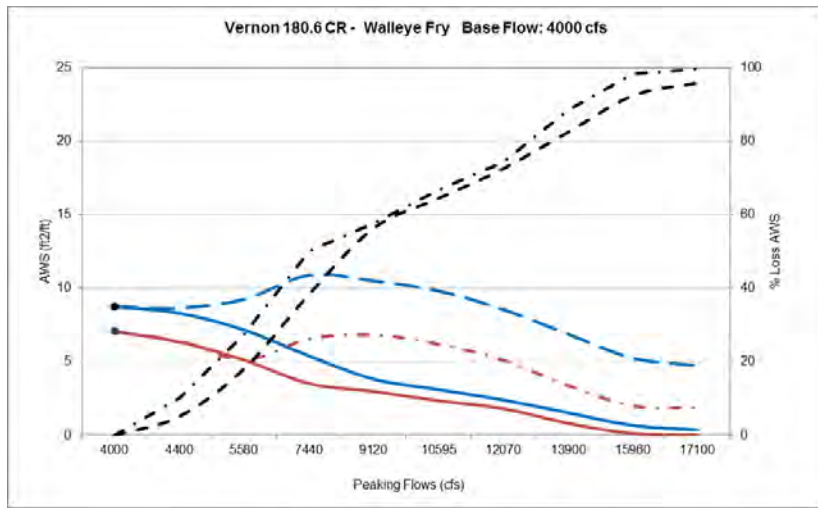




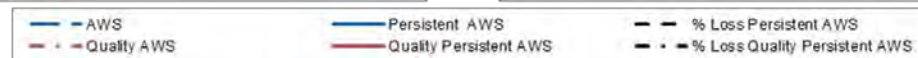
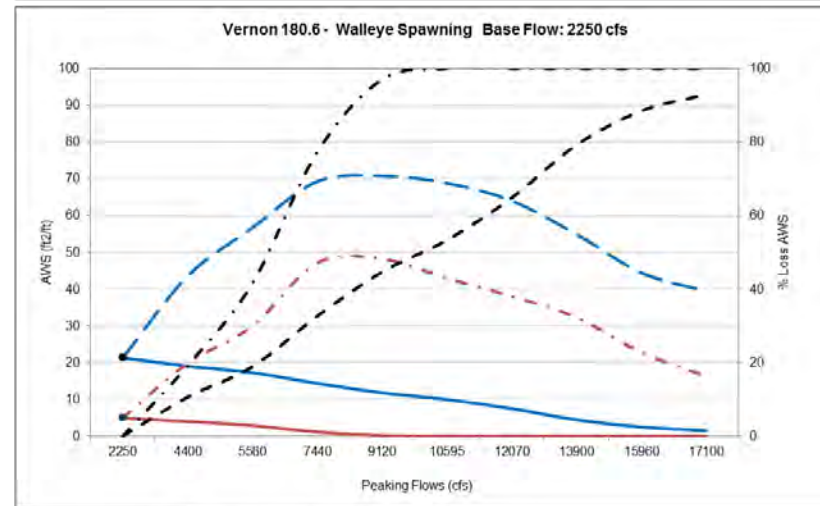
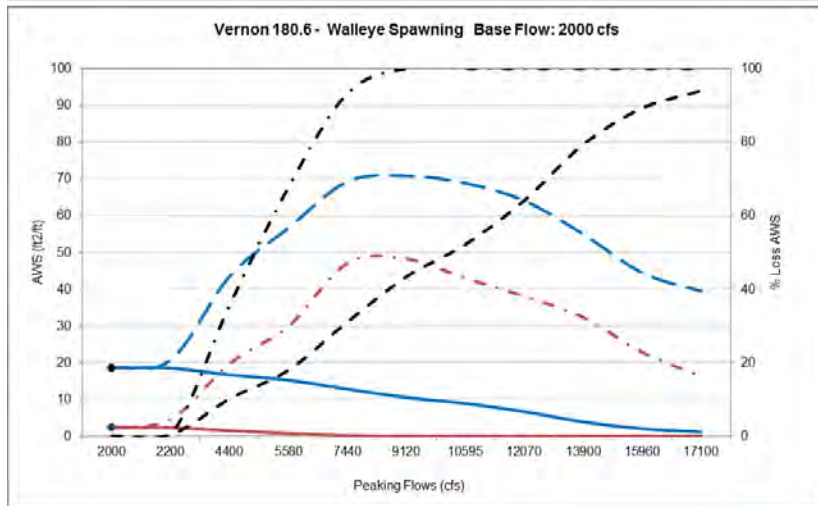
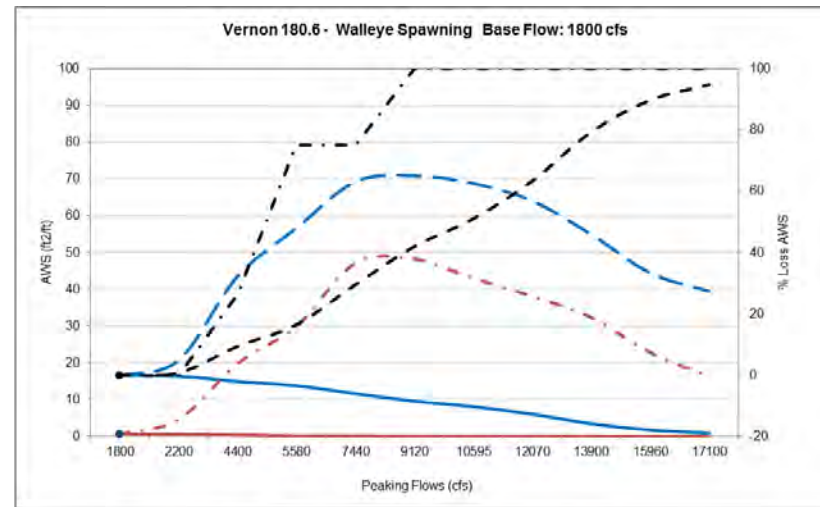
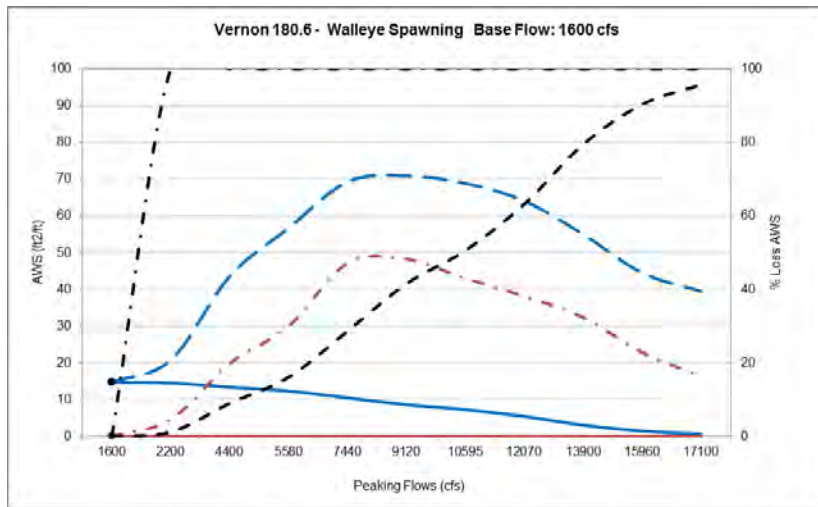
Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - CR Walleye fry persistent and persistent quality habitat.



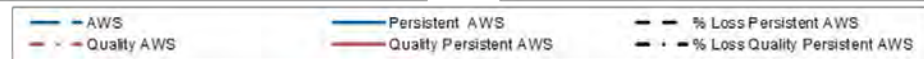
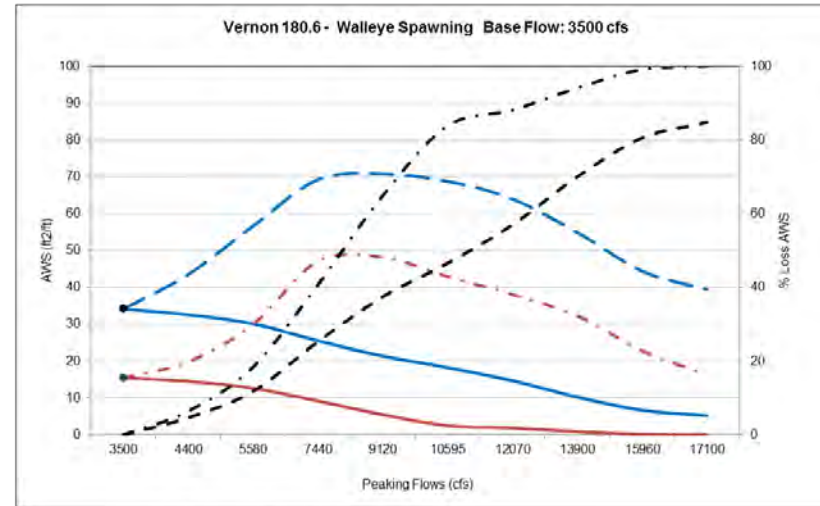
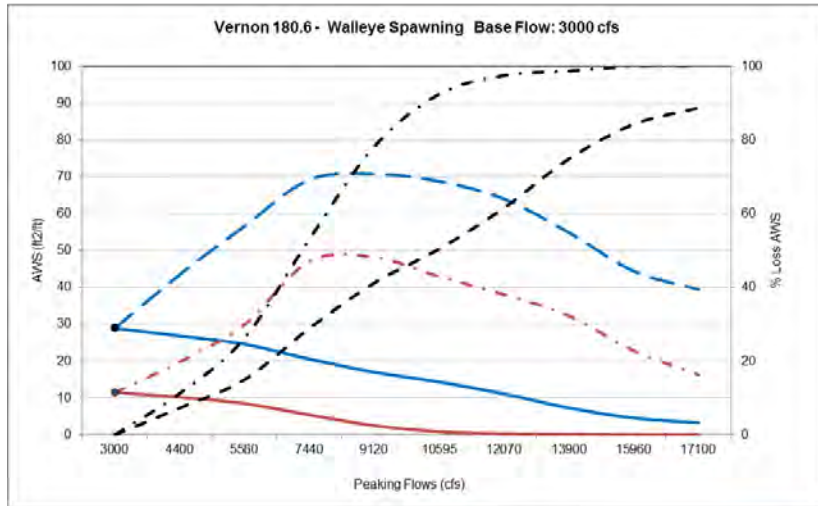
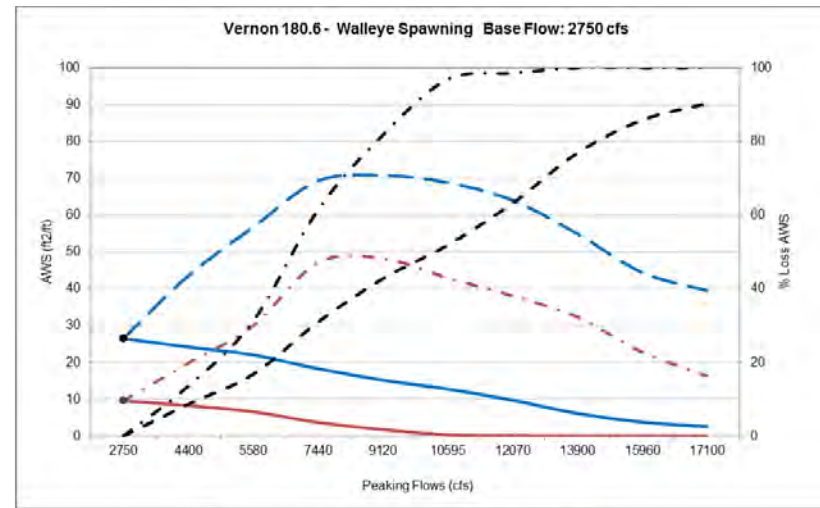
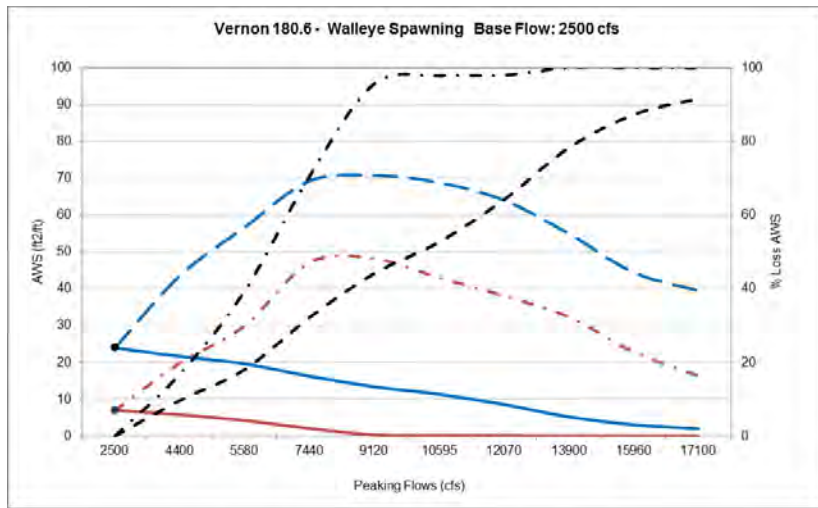




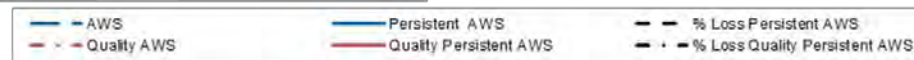
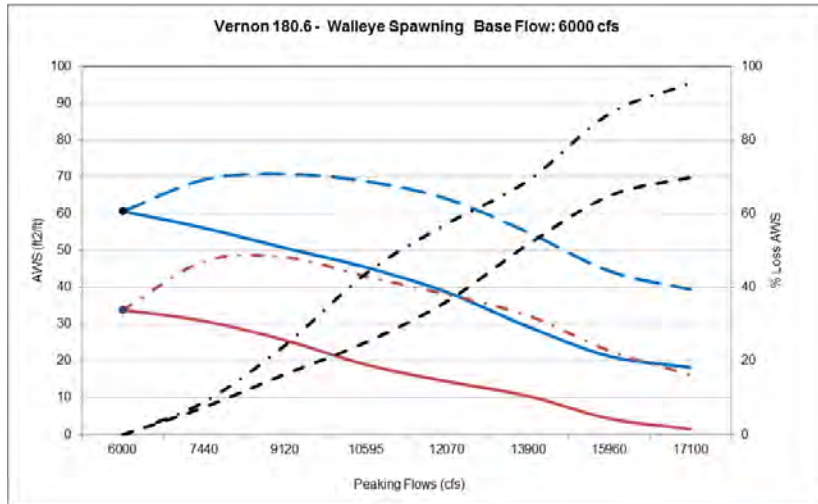
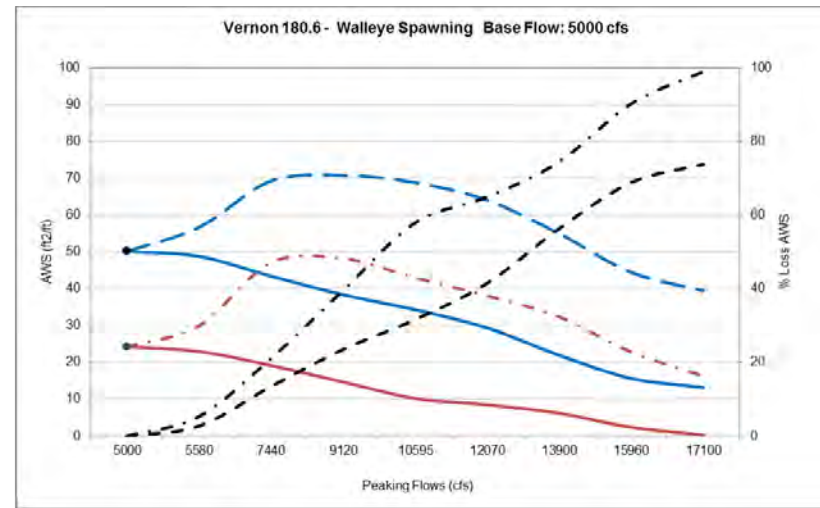
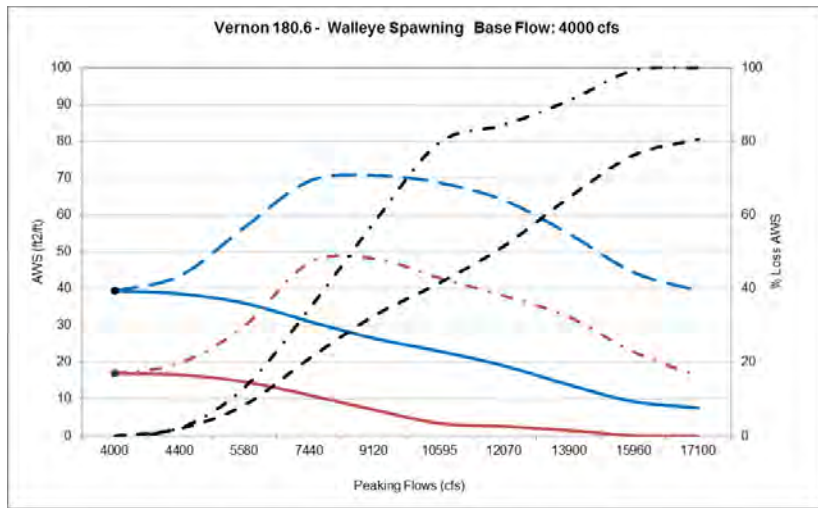
Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - Walleye spawning persistent and persistent quality habitat.



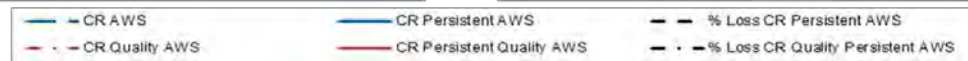
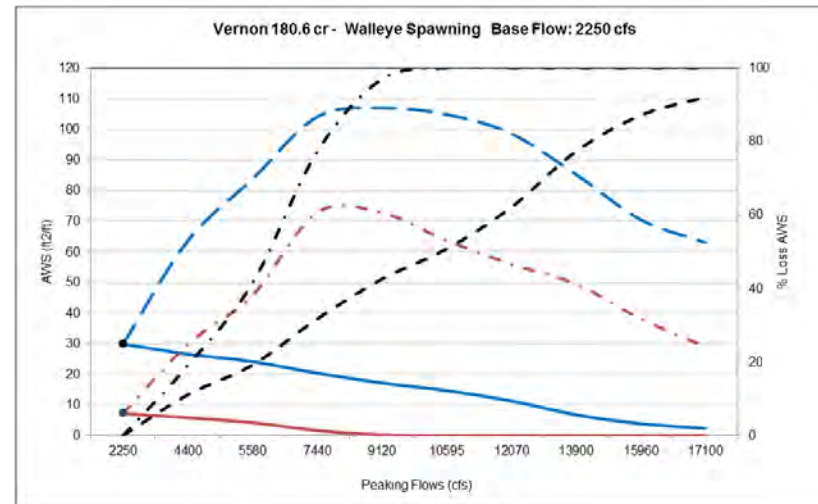
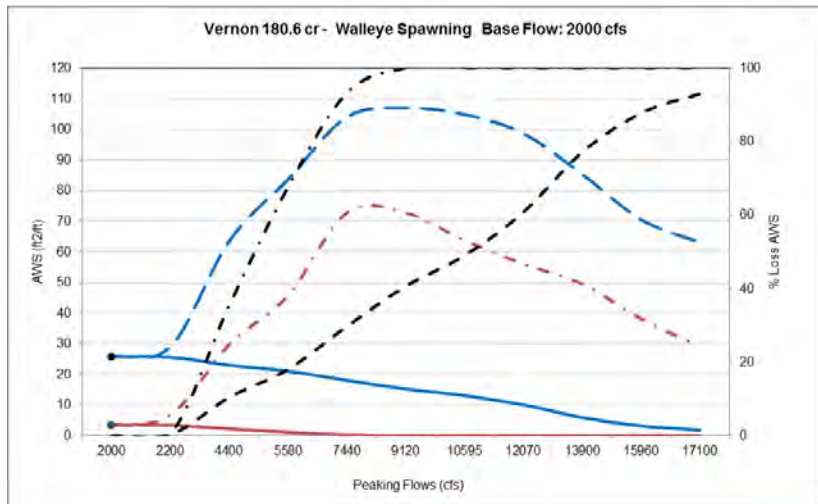
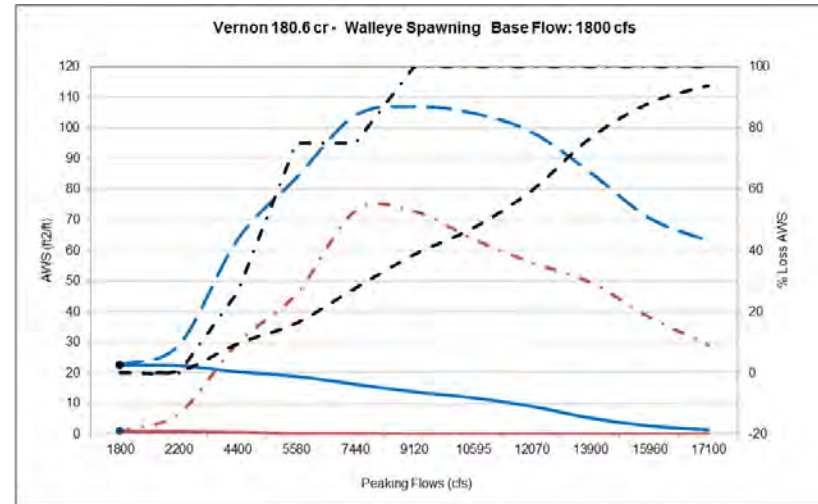
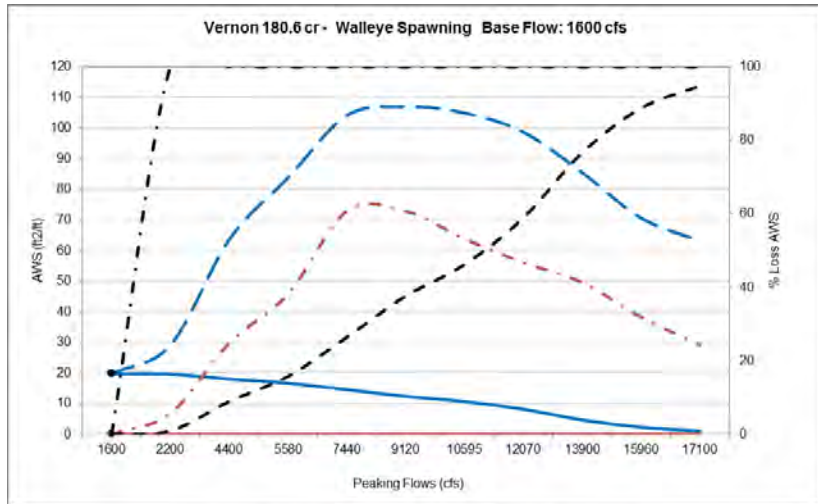


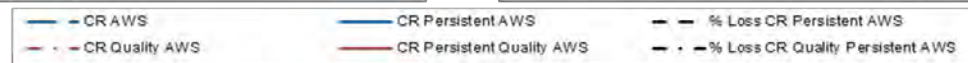
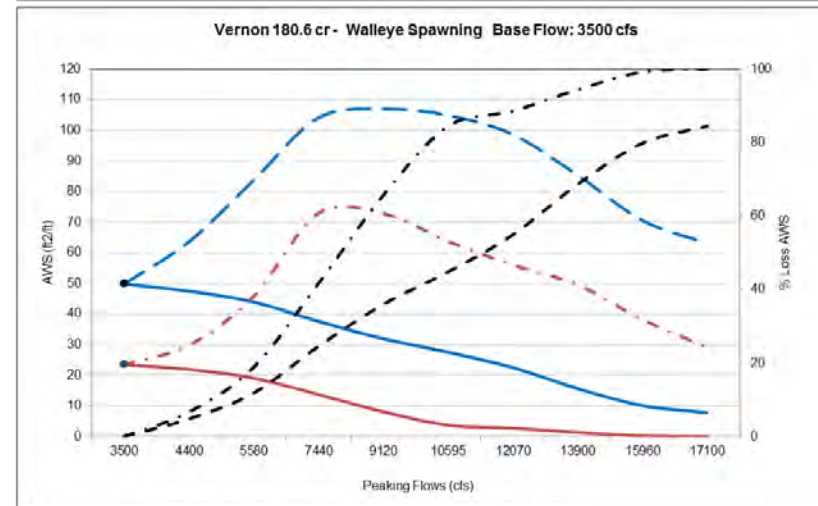
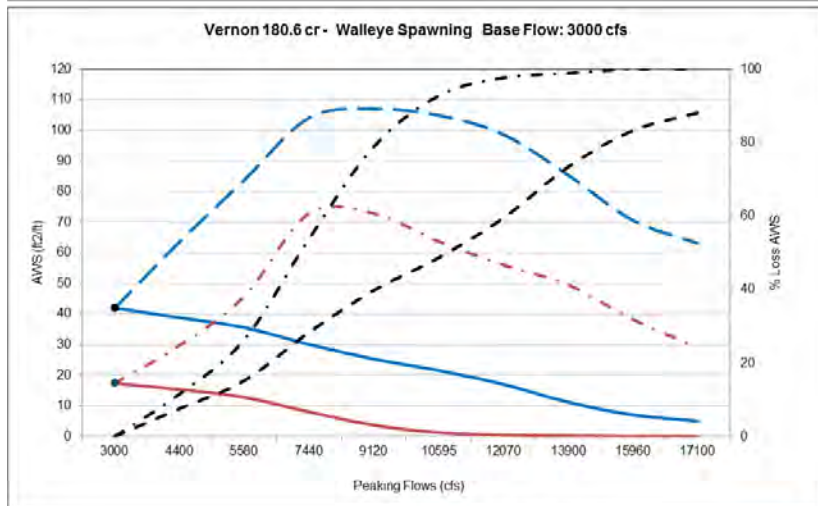
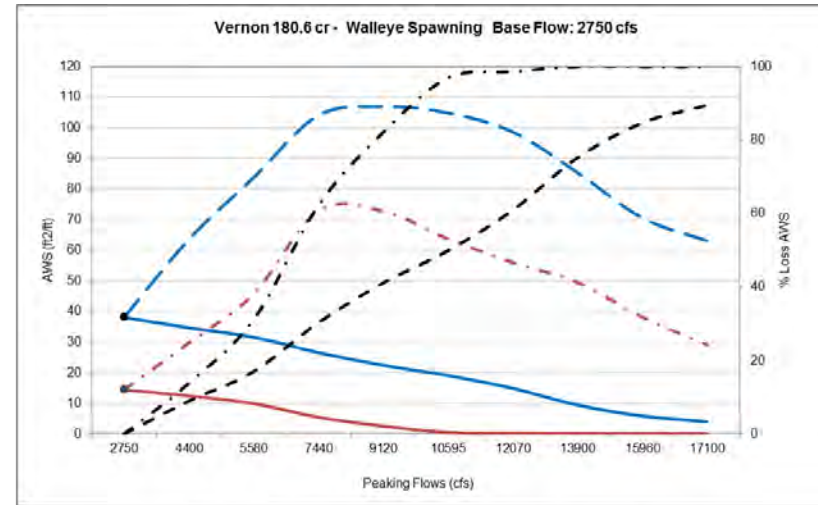
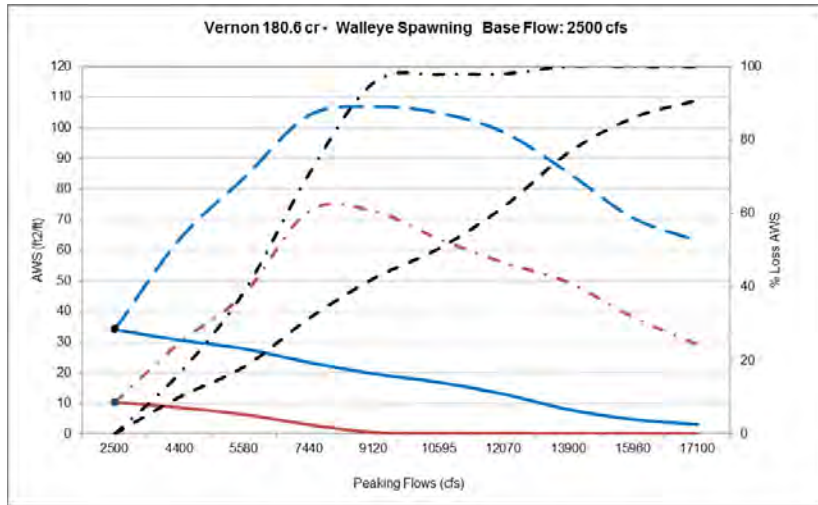




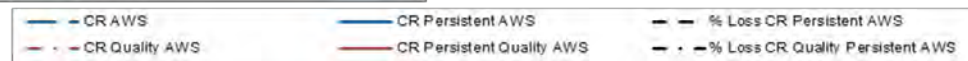
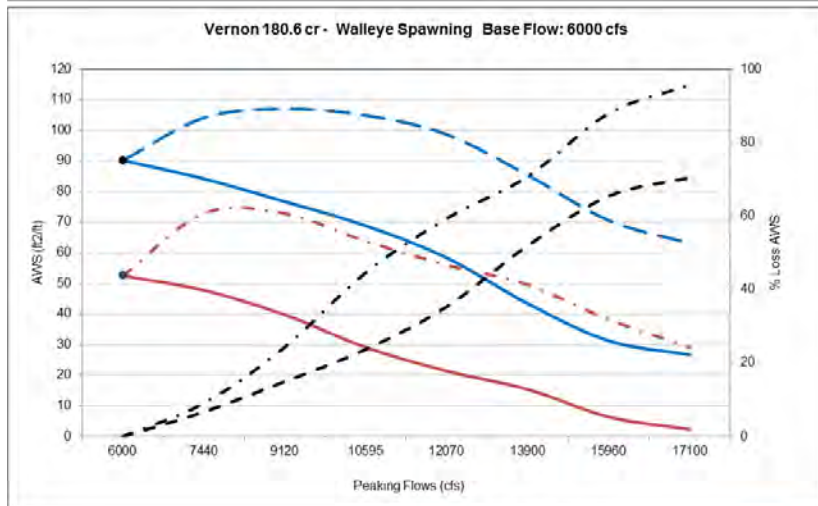
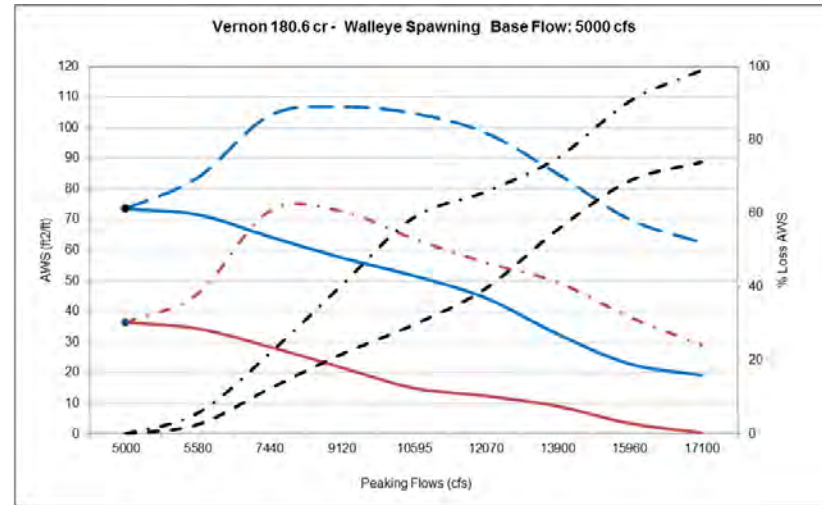
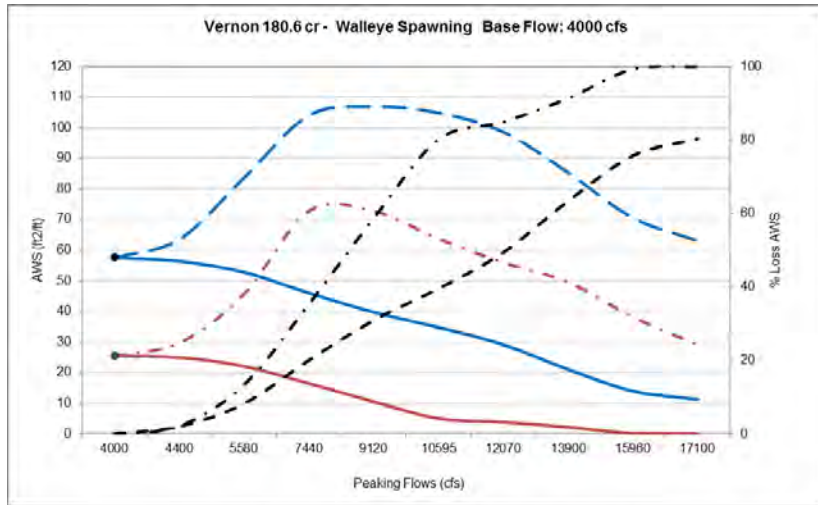


Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - CR Walleye spawning persistent and persistent quality habitat.

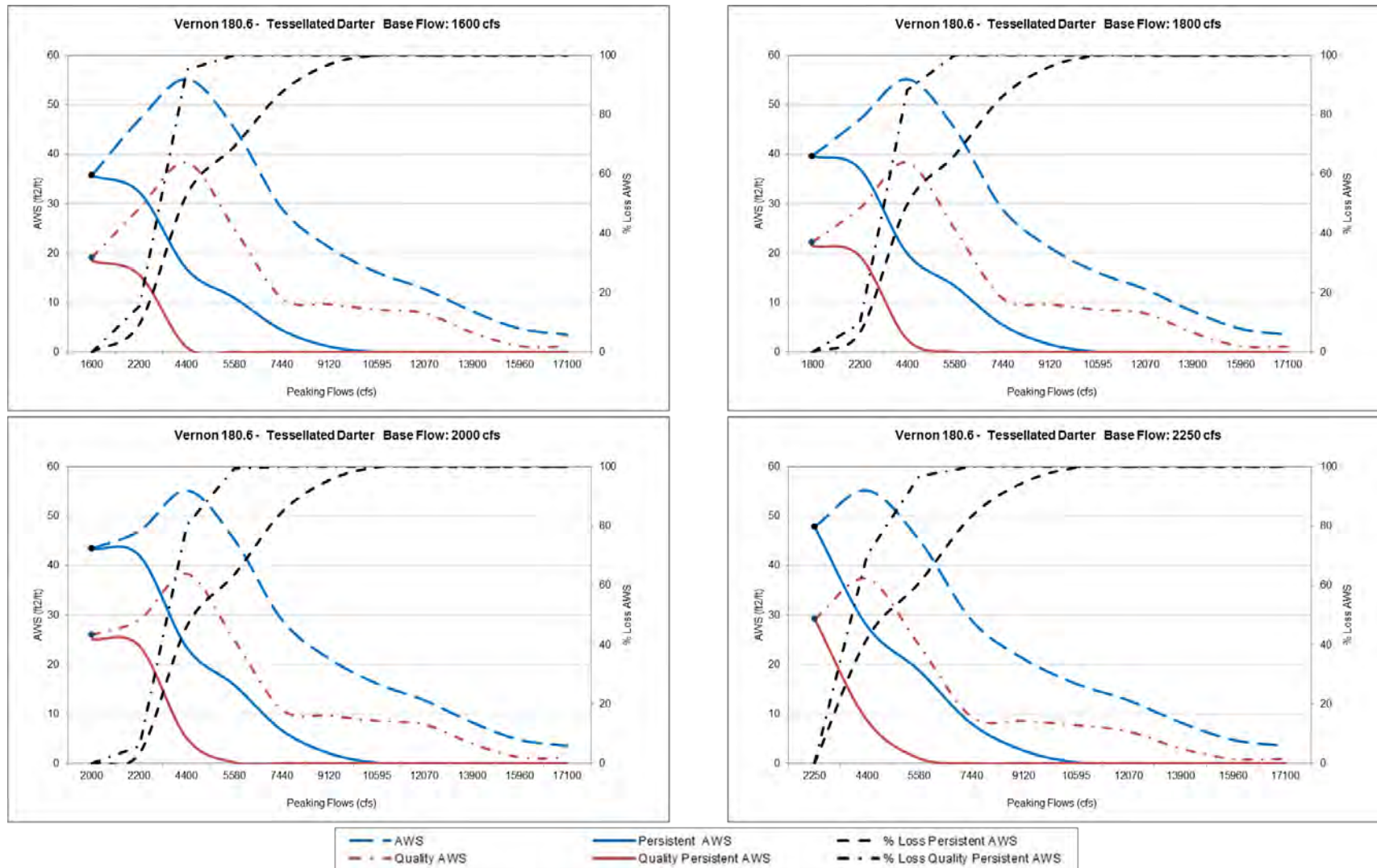




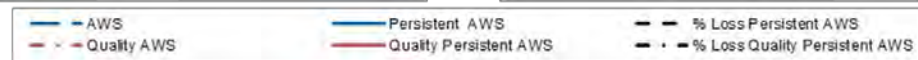
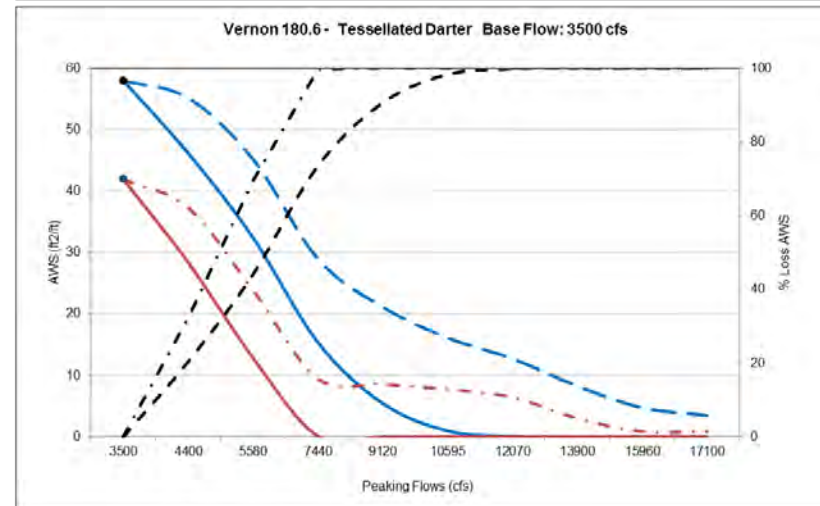
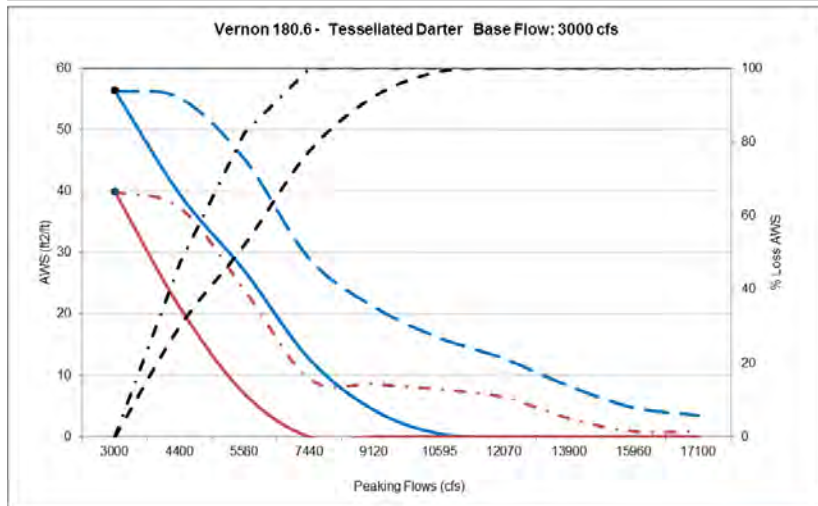
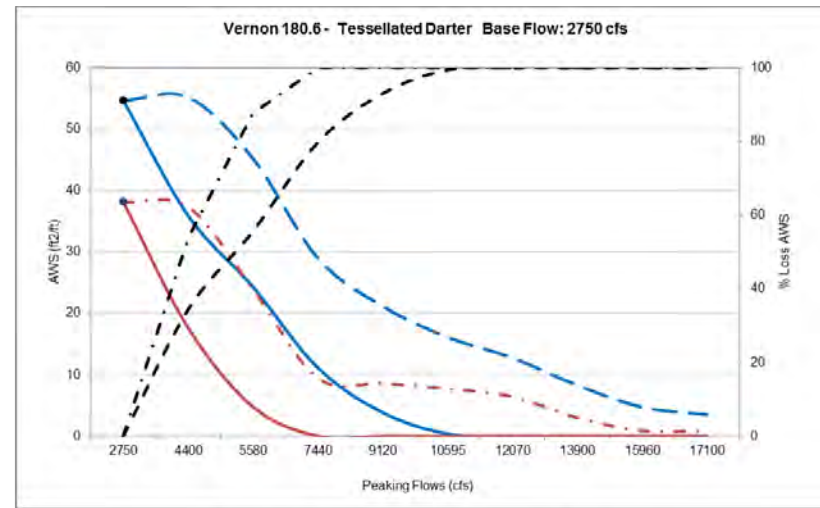
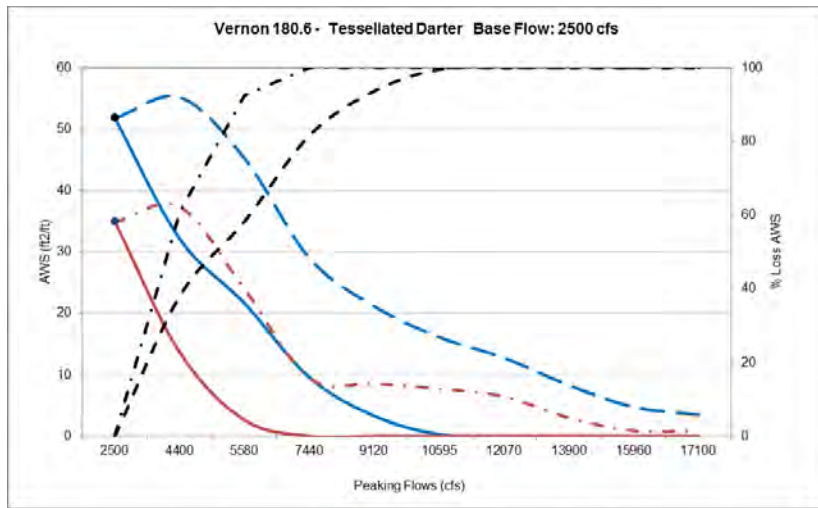


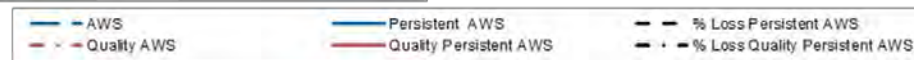
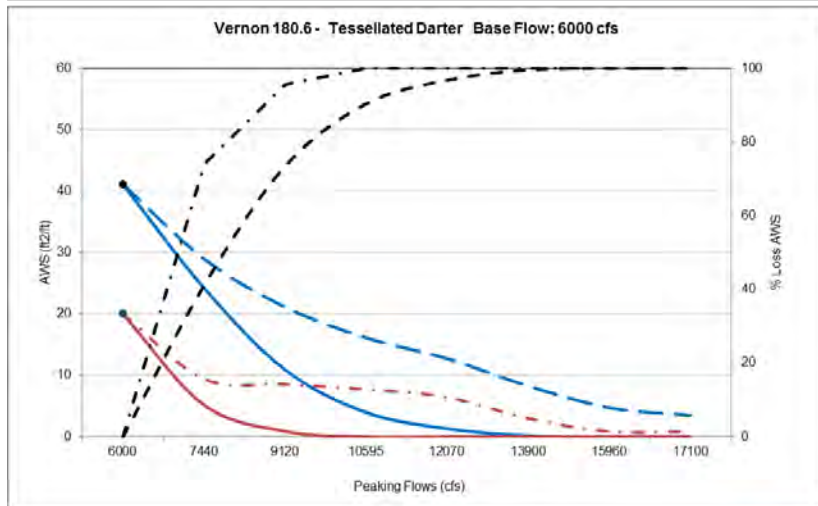
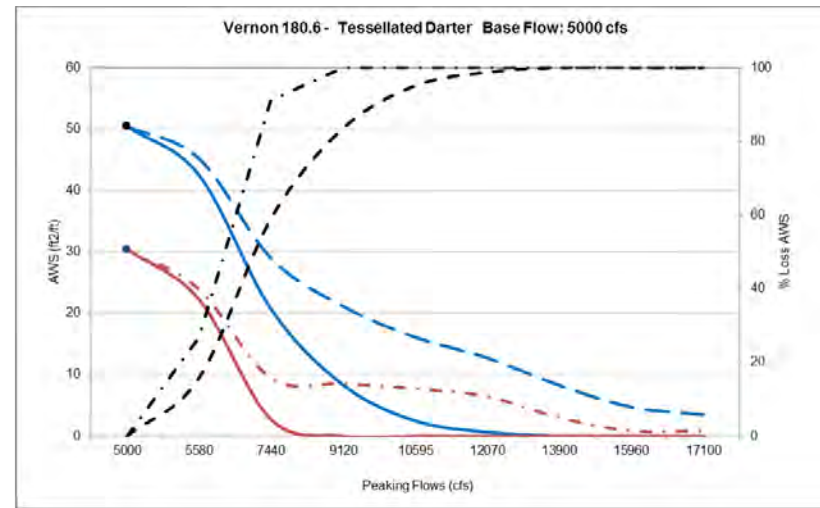
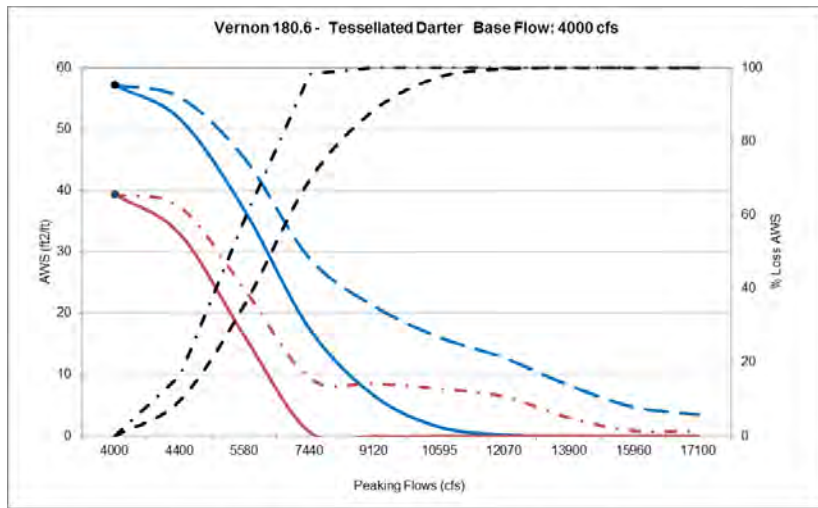


Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - Tessellated Darter persistent and persistent quality habitat.

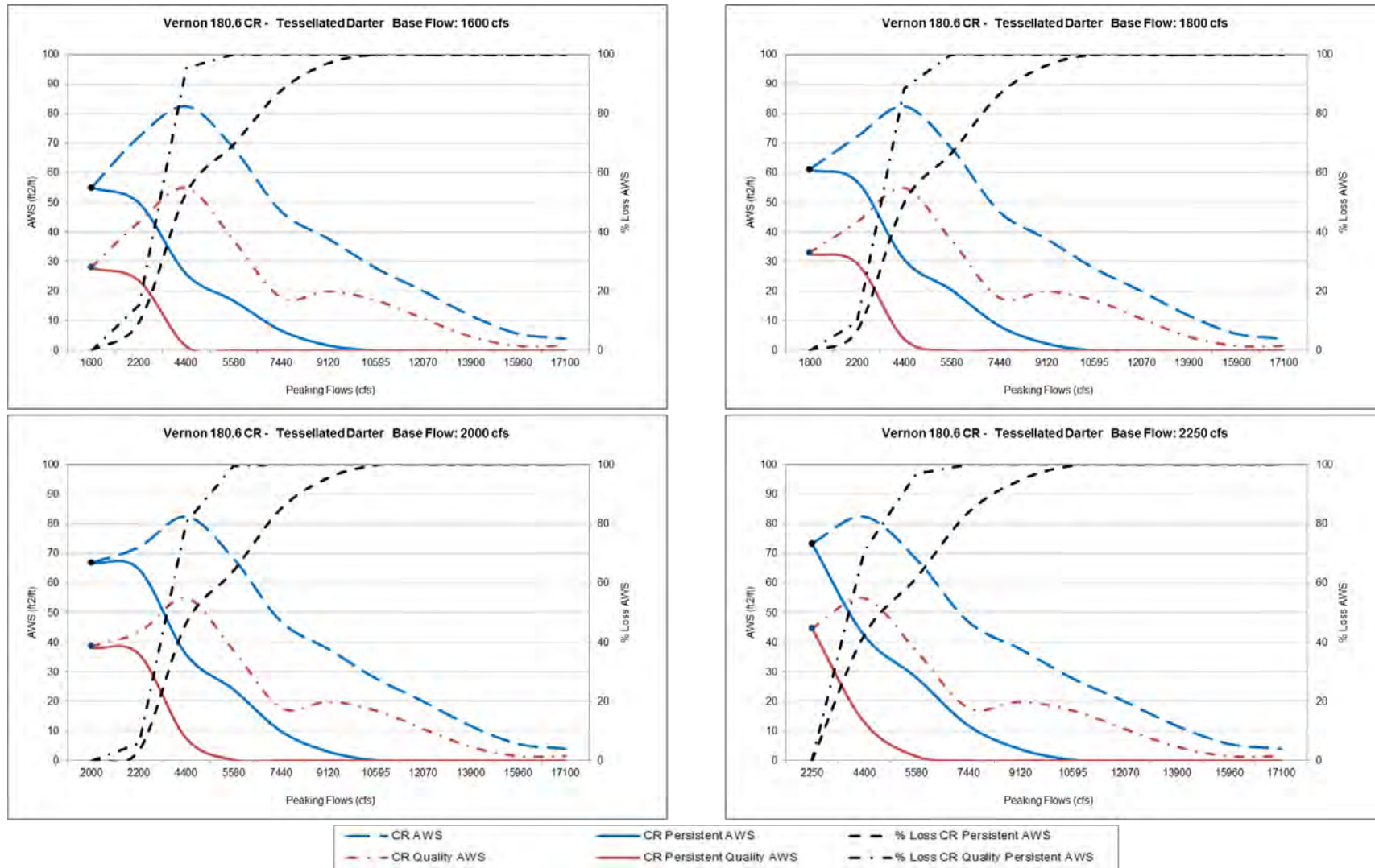


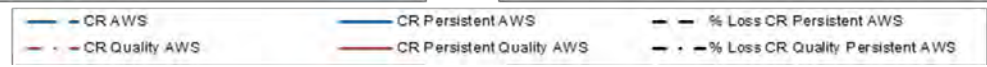
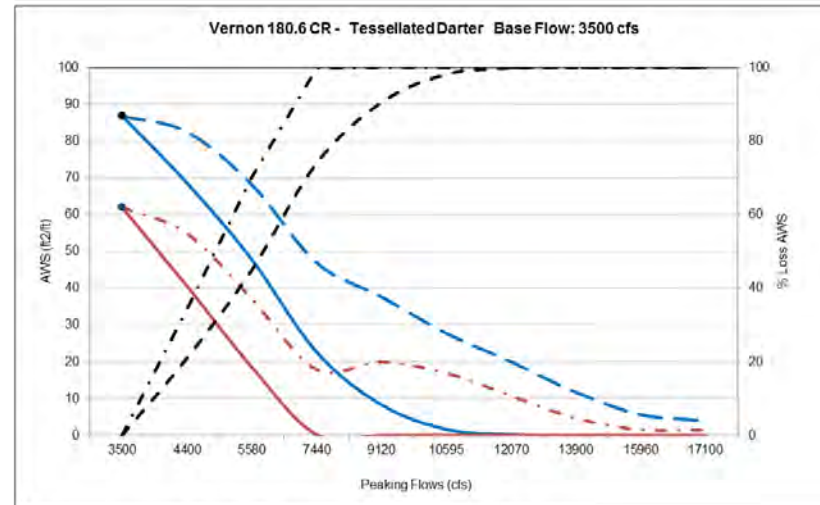
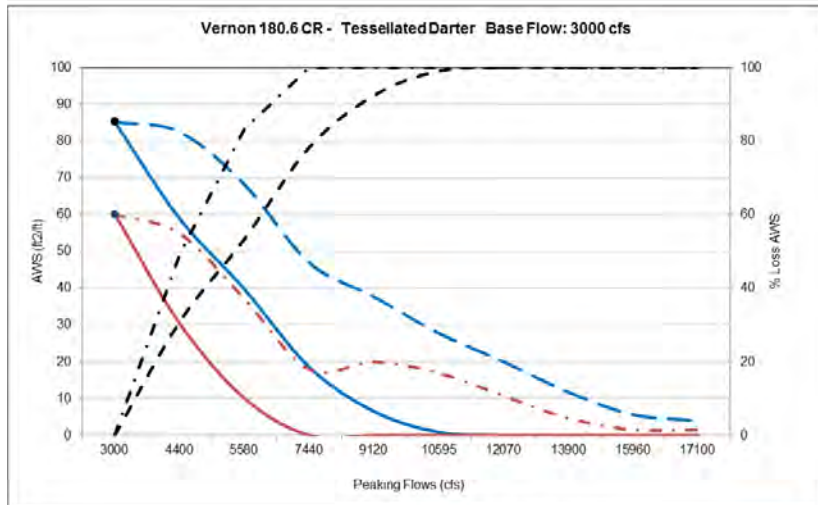
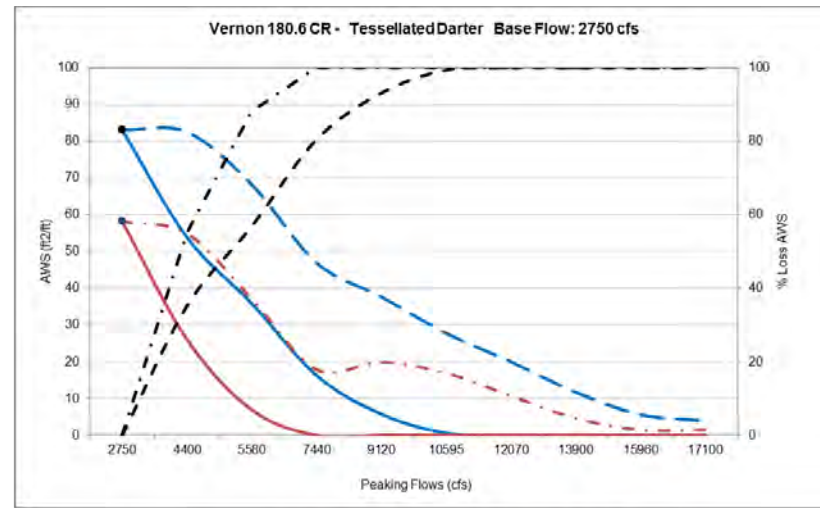
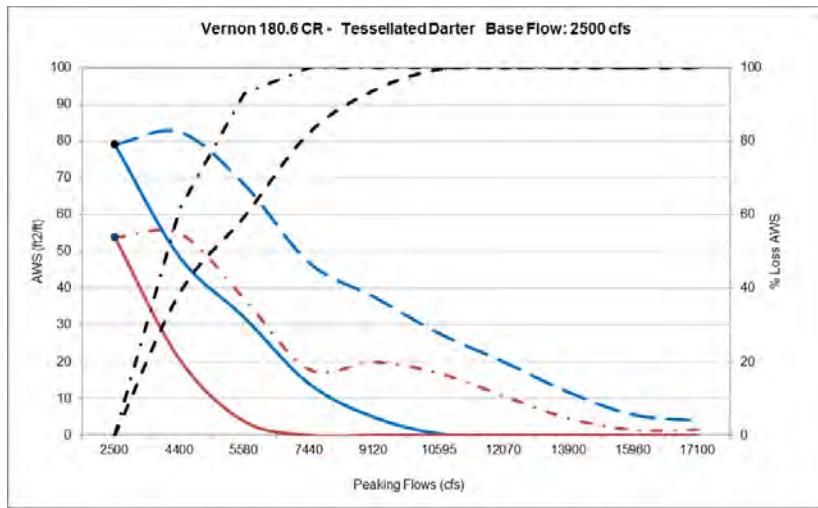




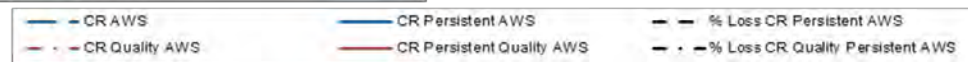
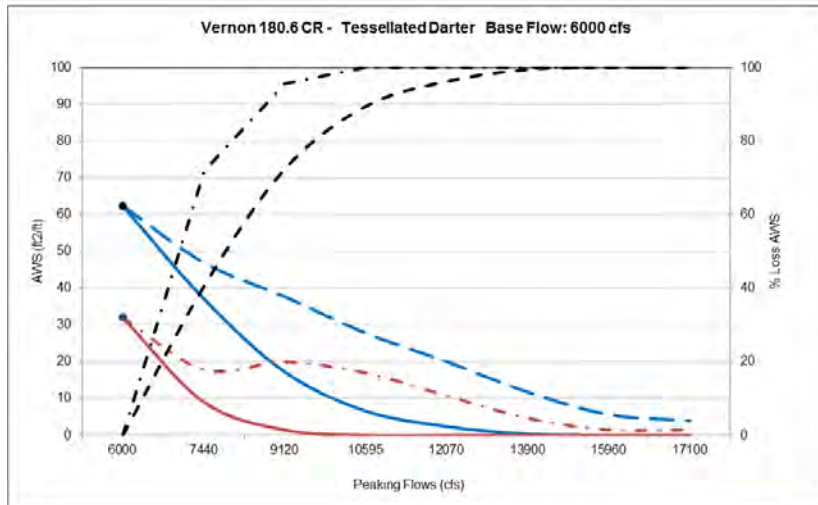
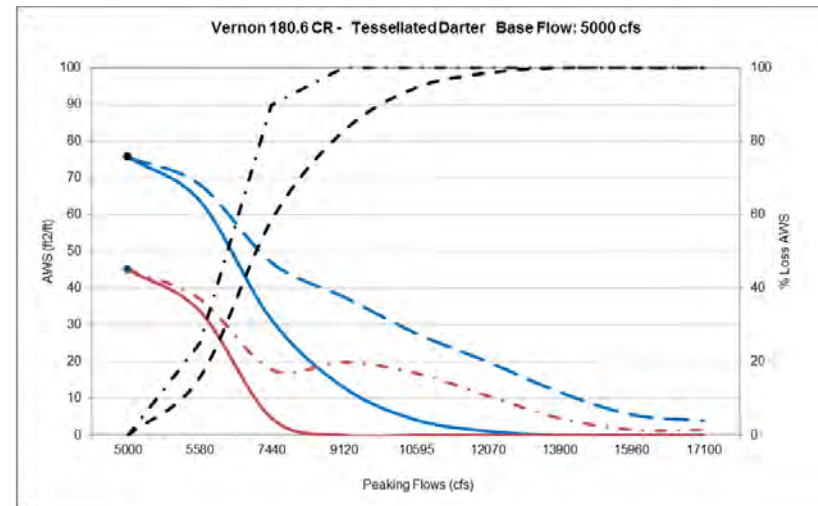
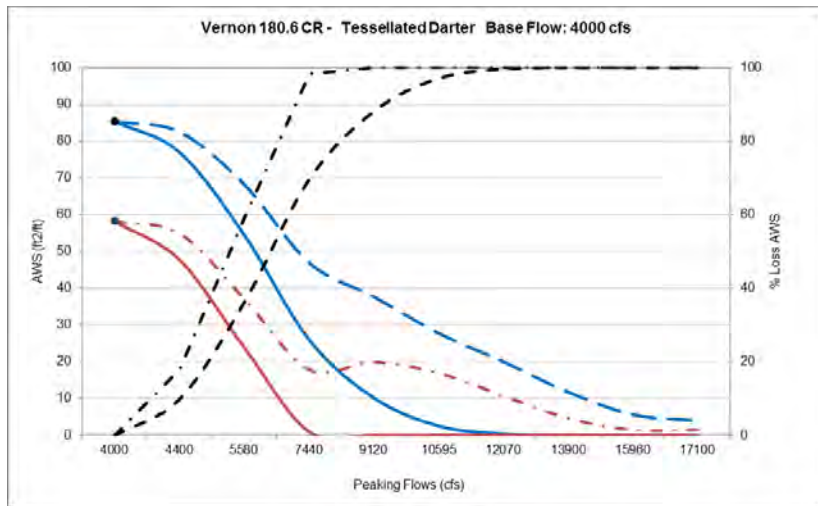


Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - CR Tessellated Darter persistent and persistent quality habitat.



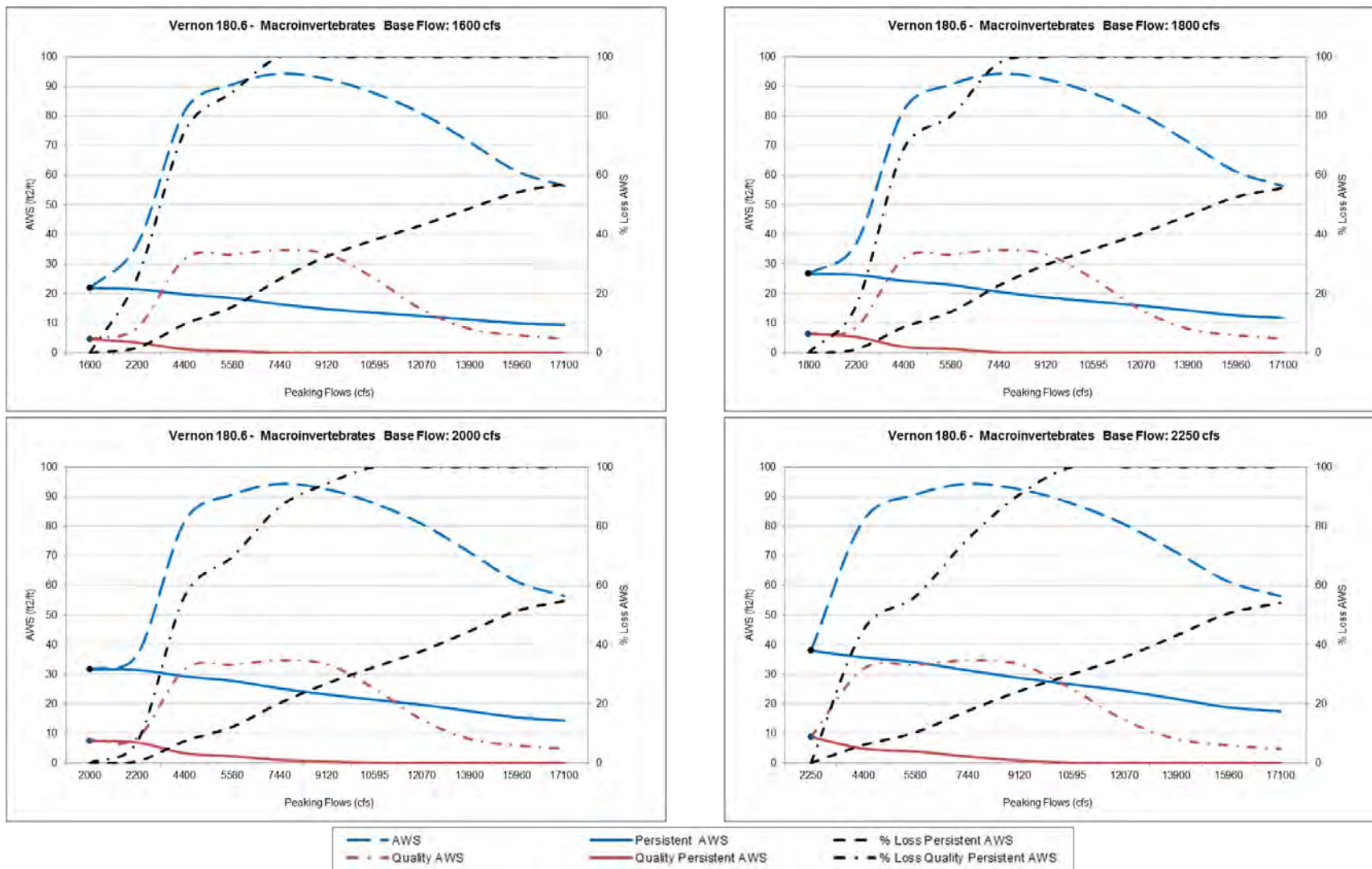


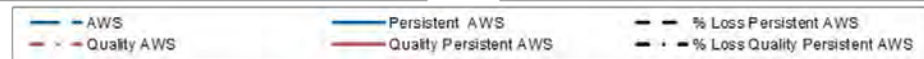
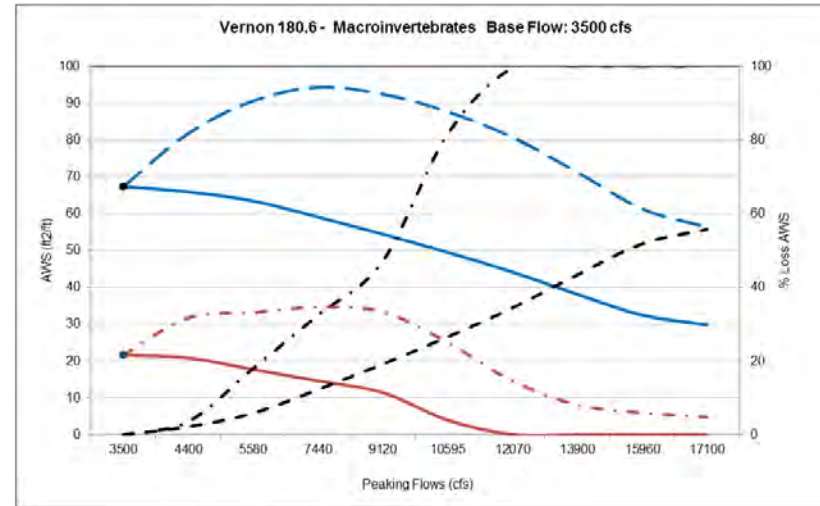
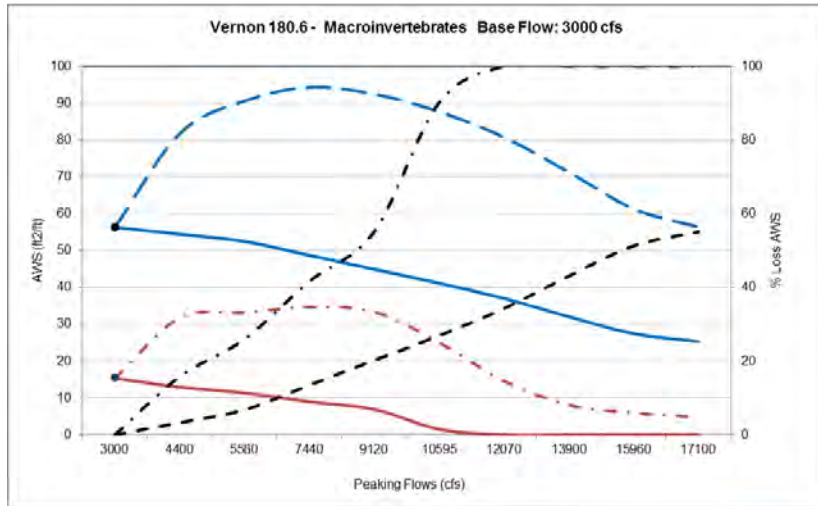
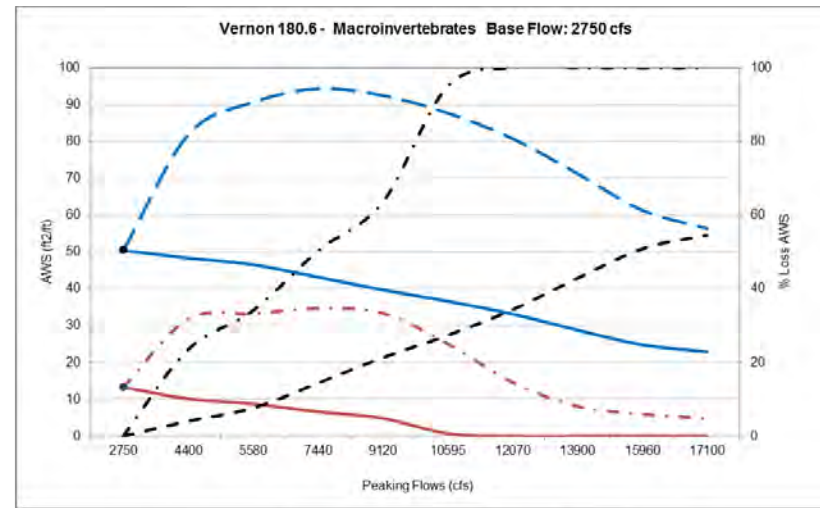
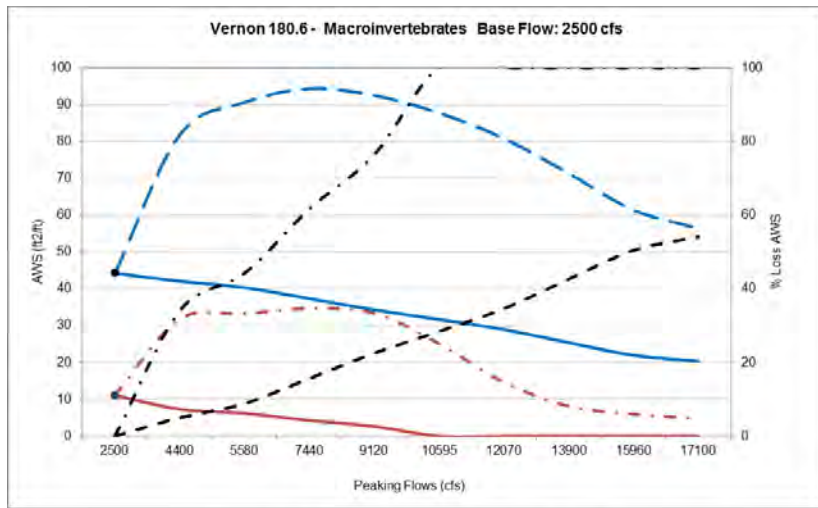


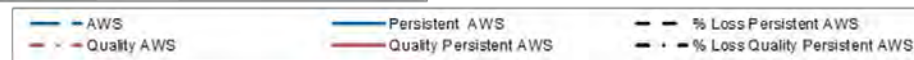
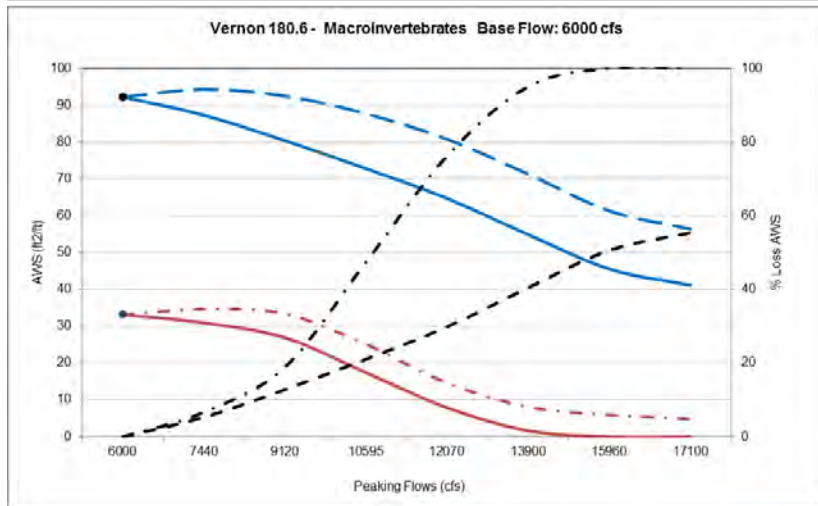
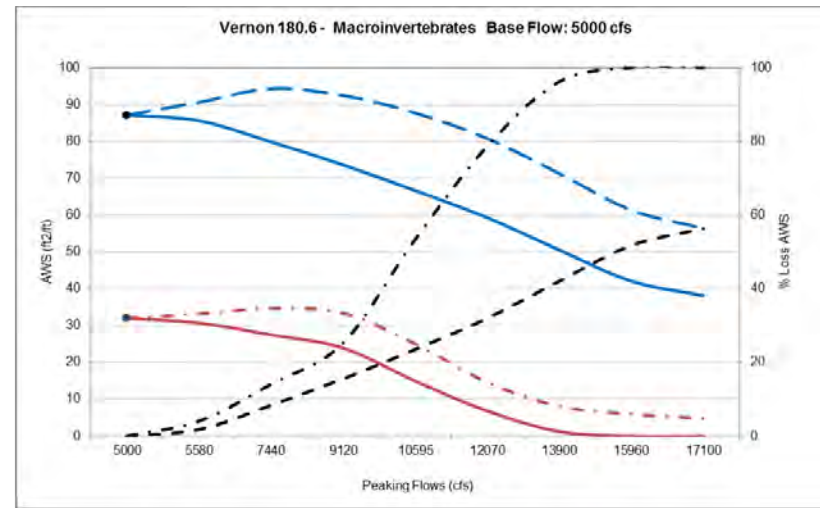
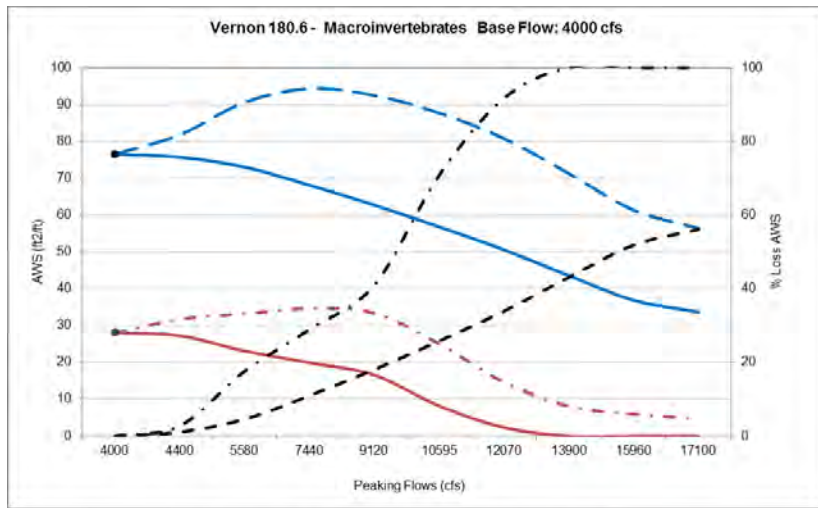




Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - Macroinvertebrates persistent and persistent quality habitat.

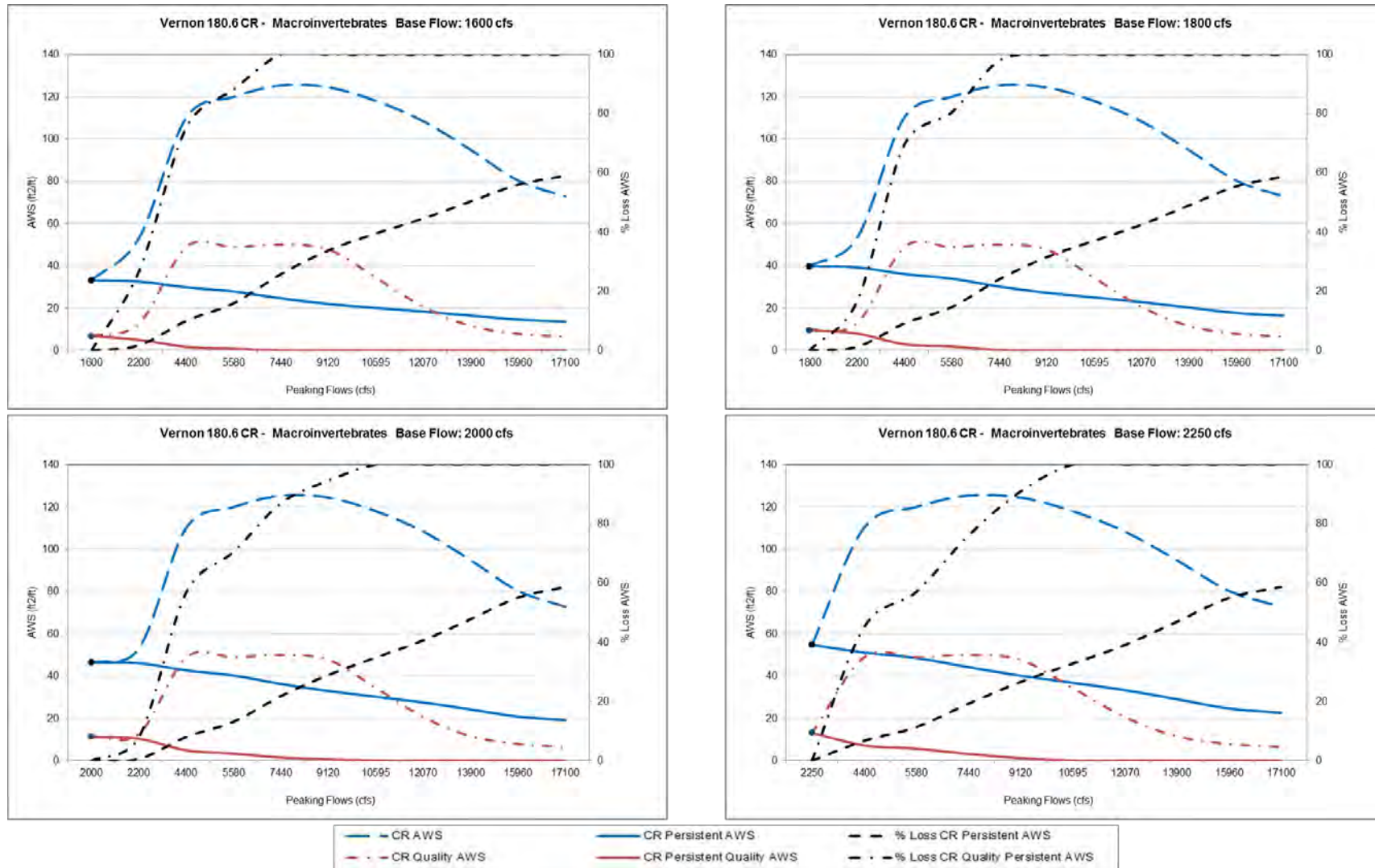


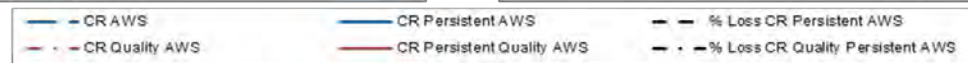
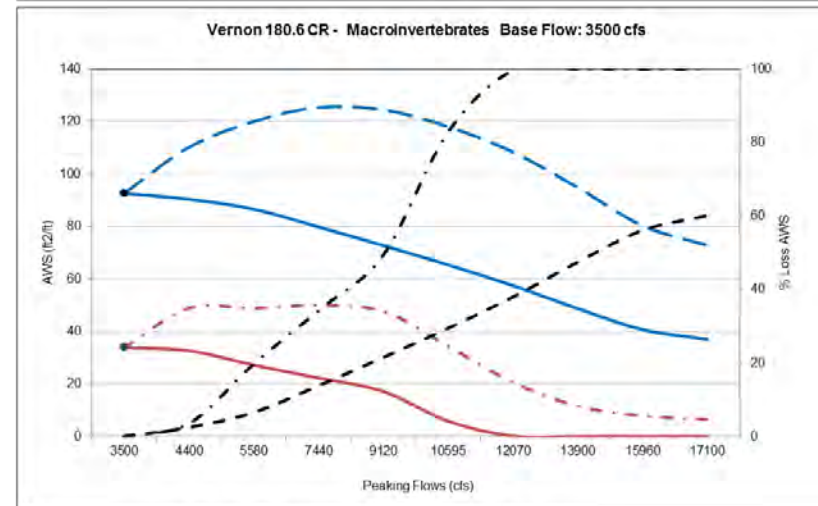
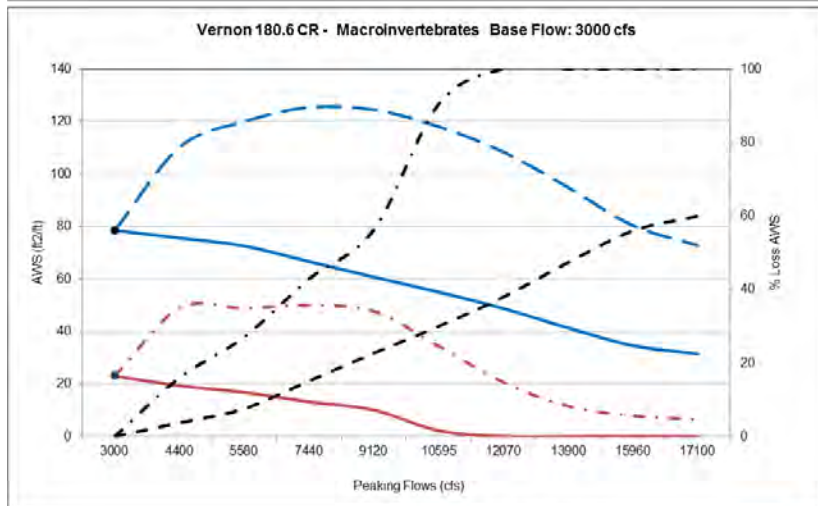
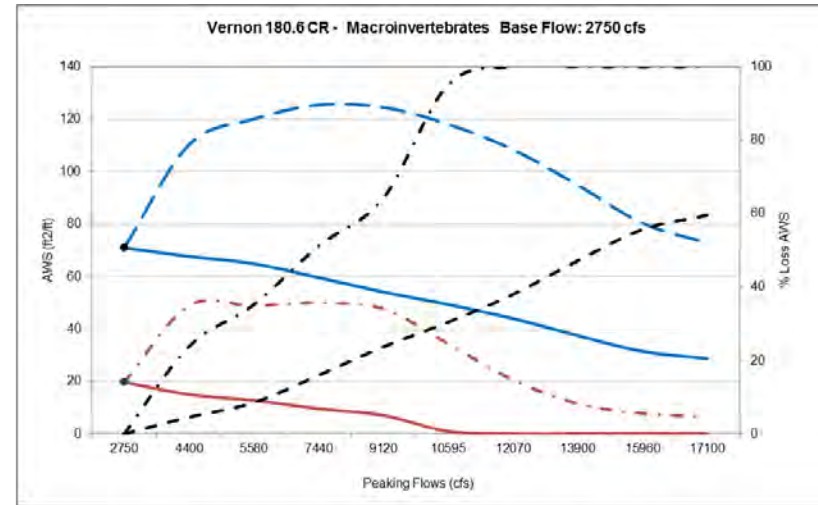
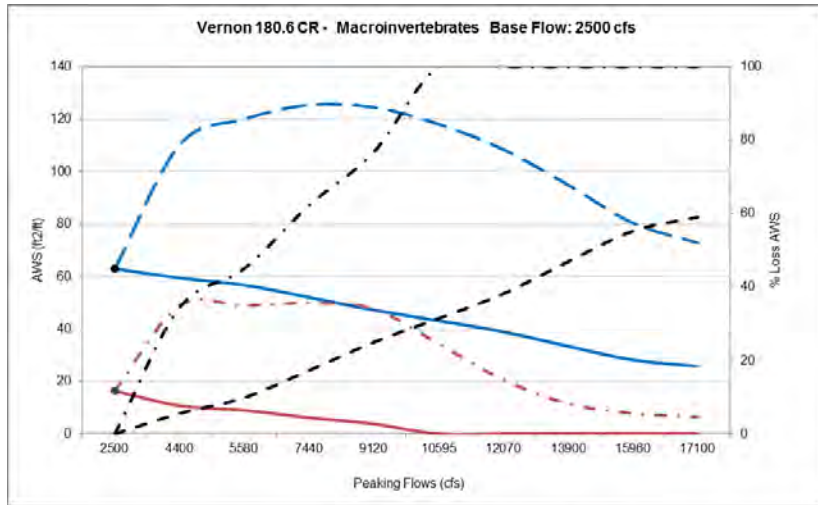




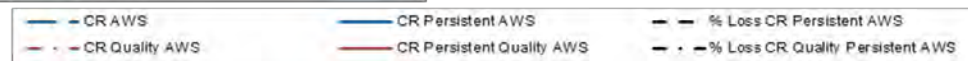
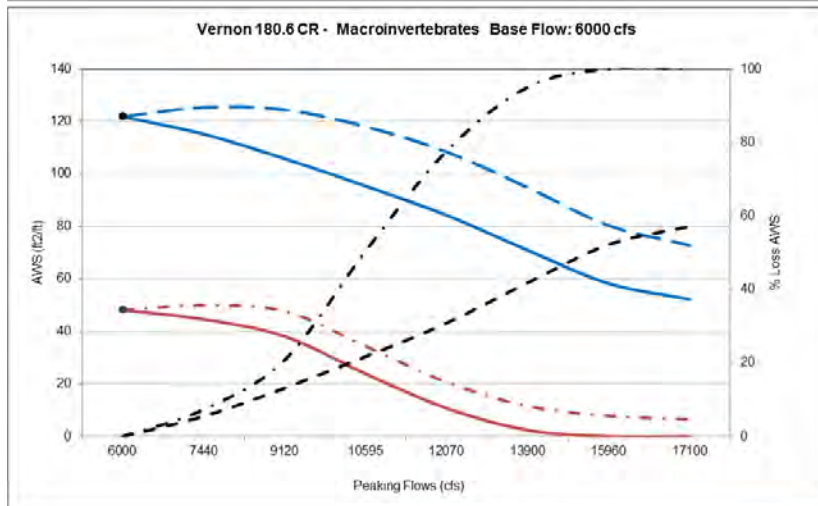
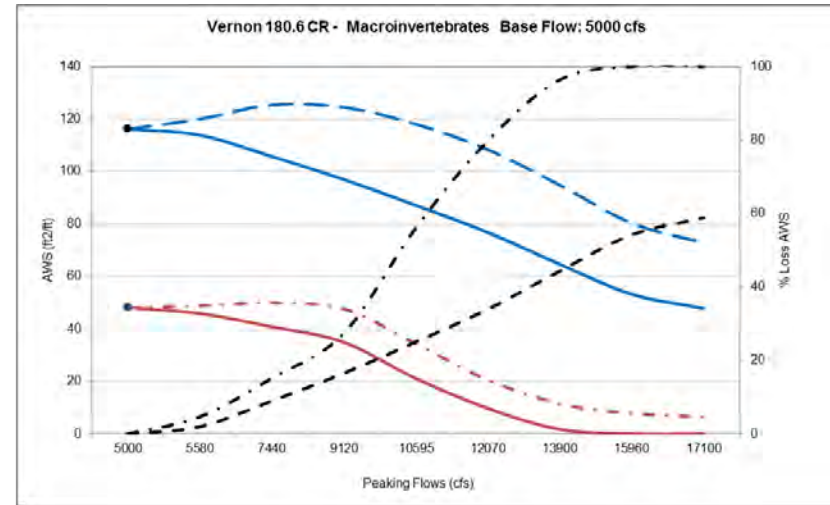
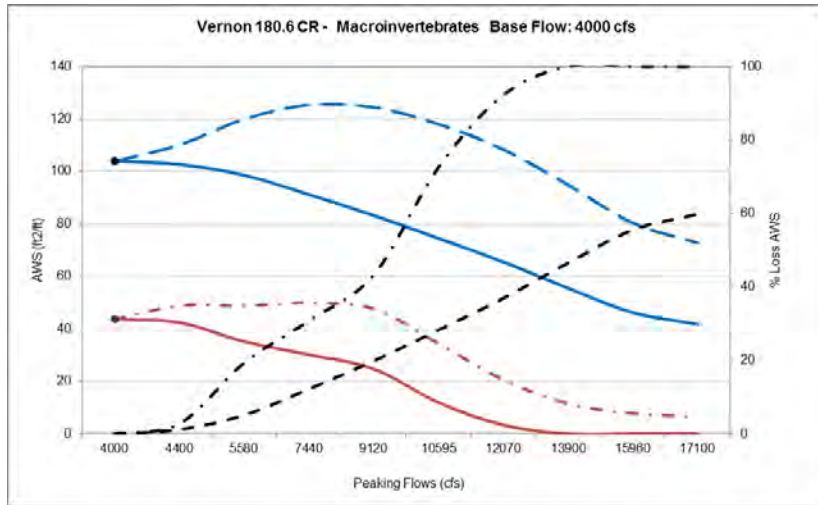


Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) - CR Macroinvertebrates persistent and persistent quality habitat.

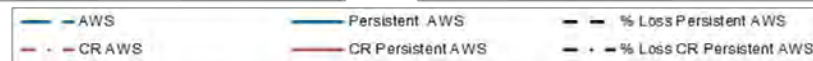
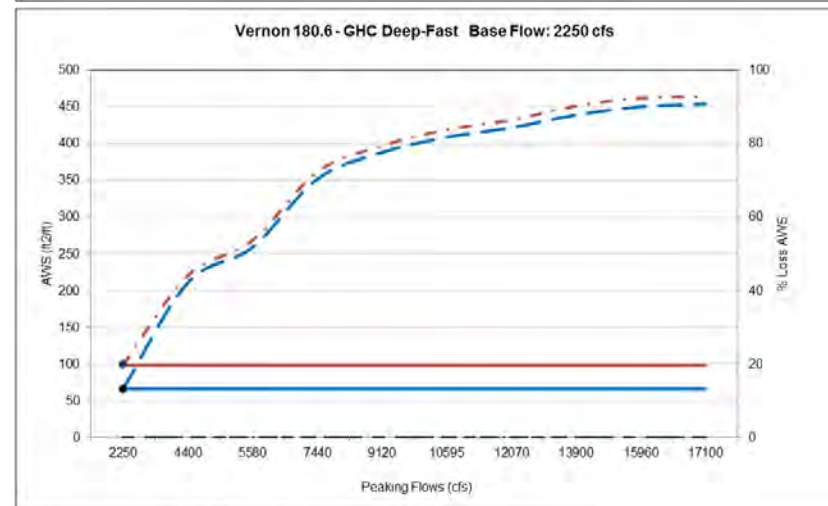
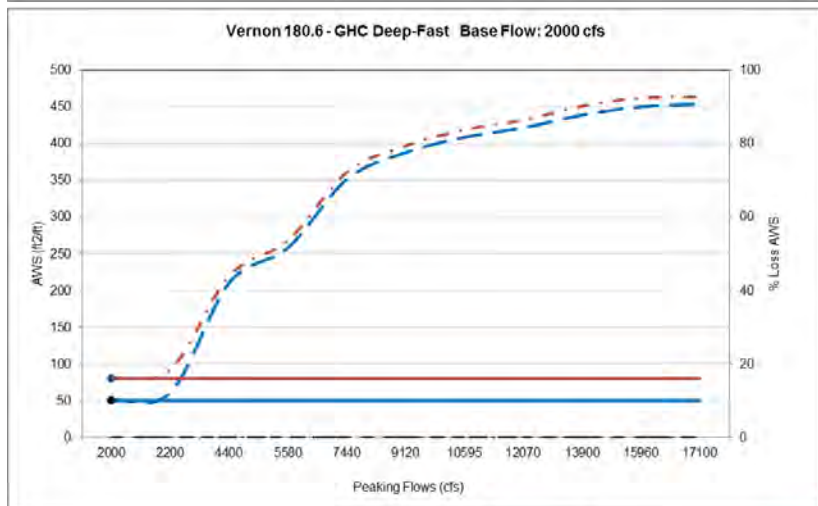
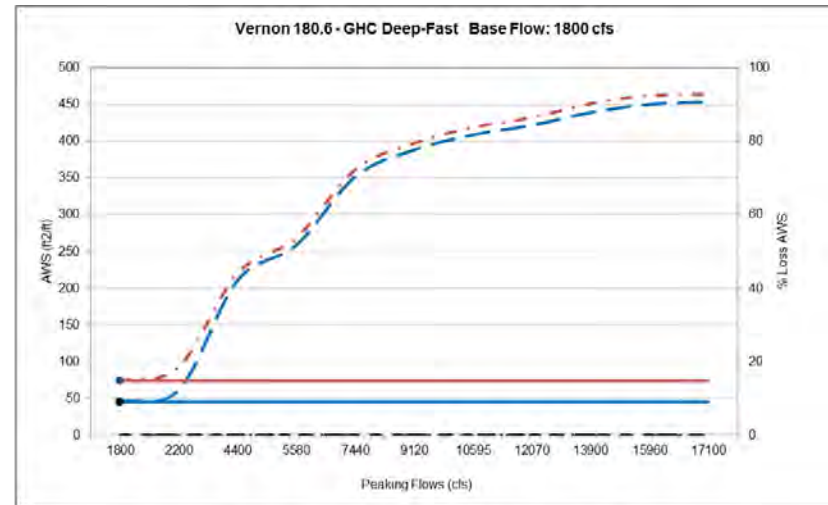
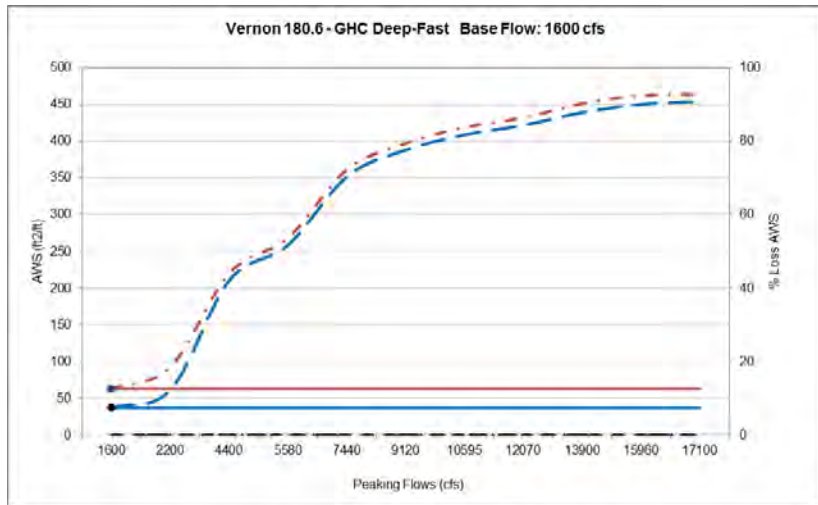


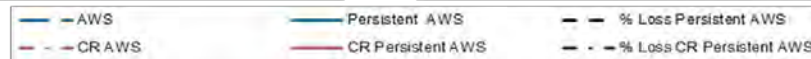
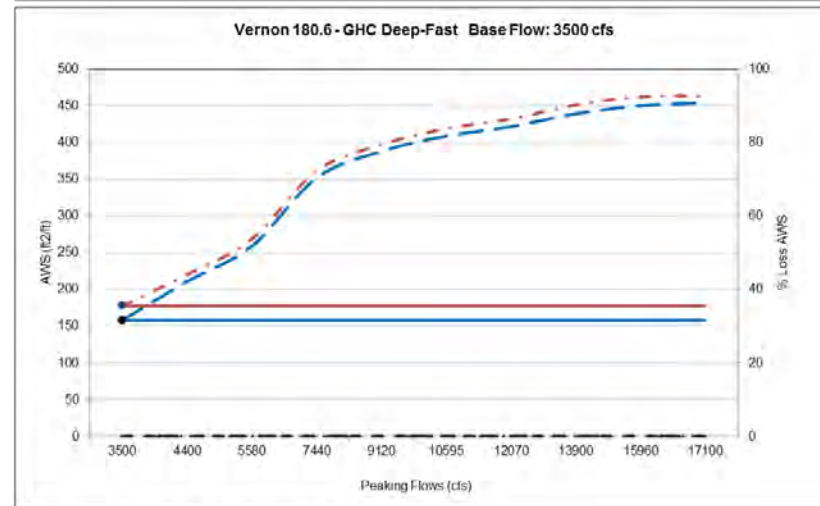
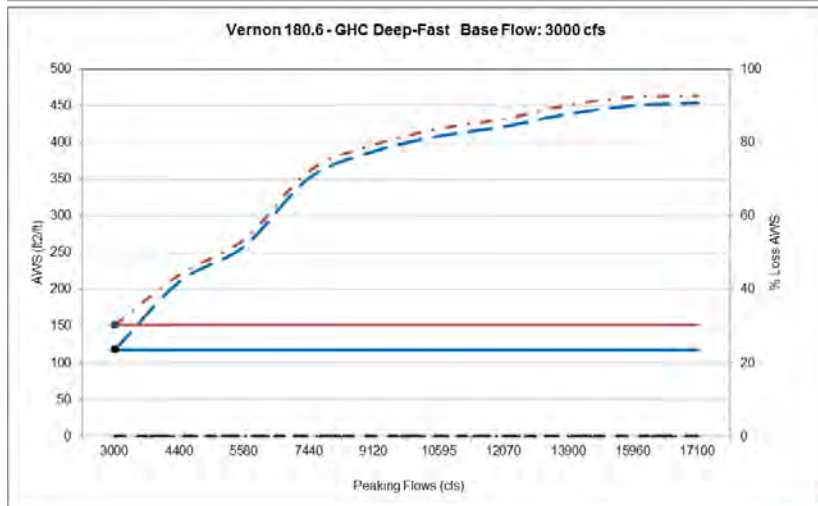
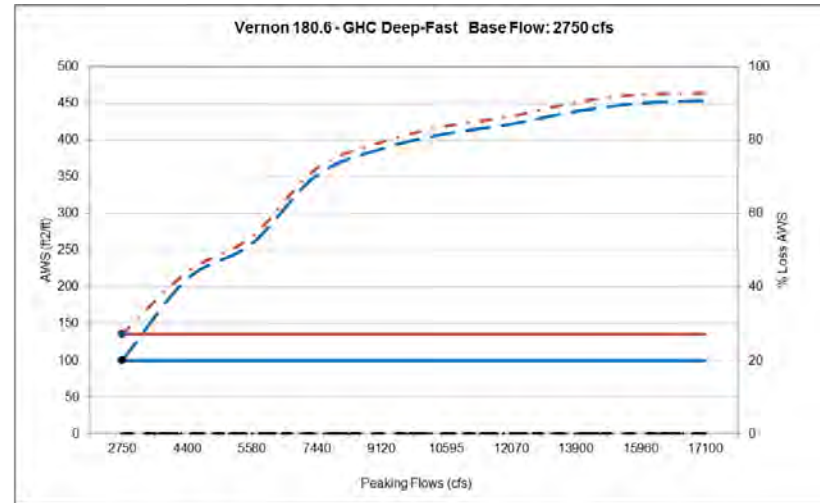
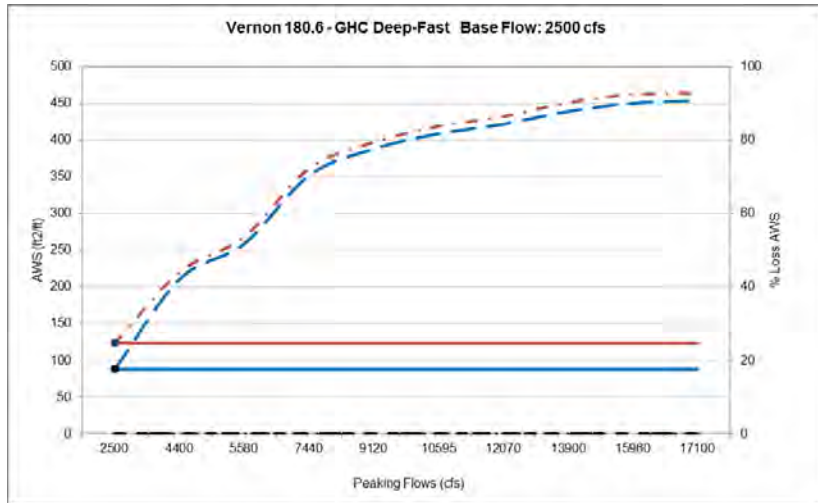


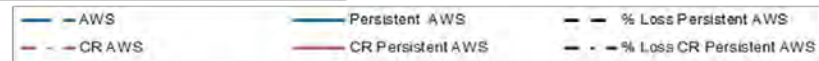
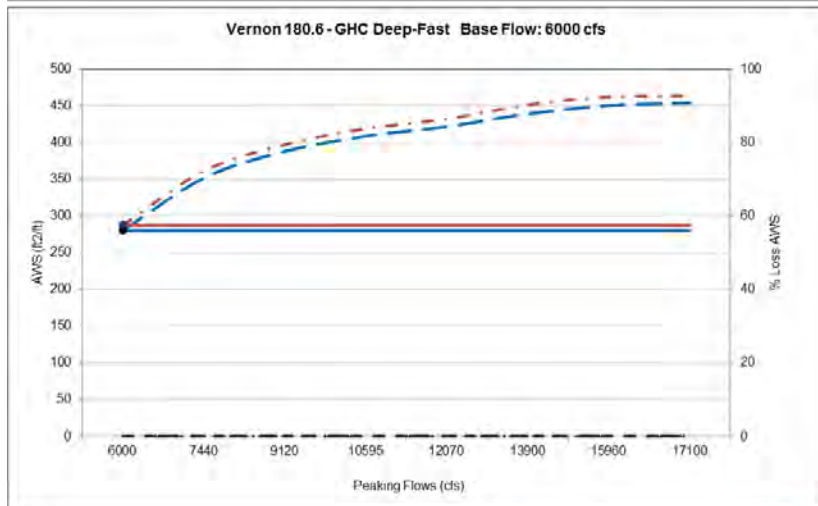
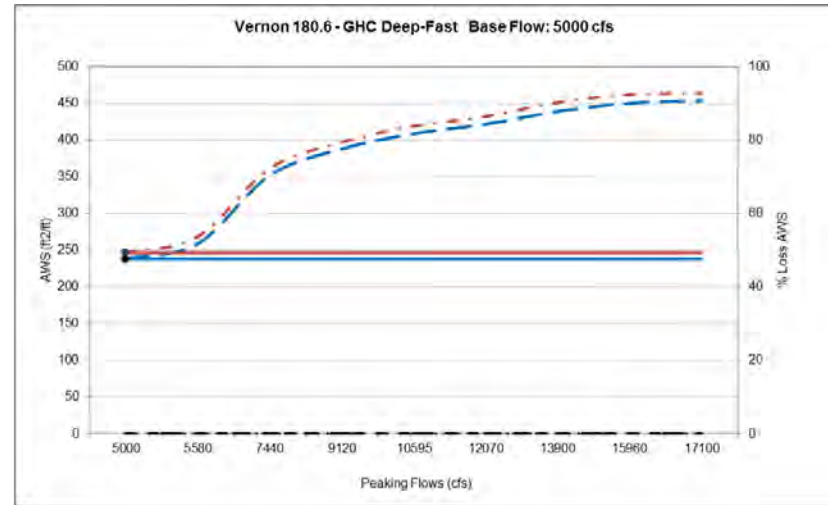
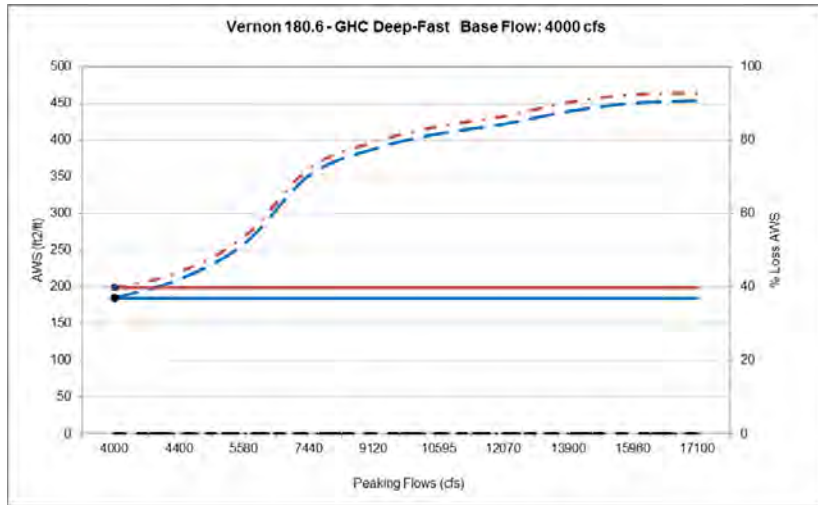




Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) and Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) CR - GHC Deep-Fast persistent habitat.

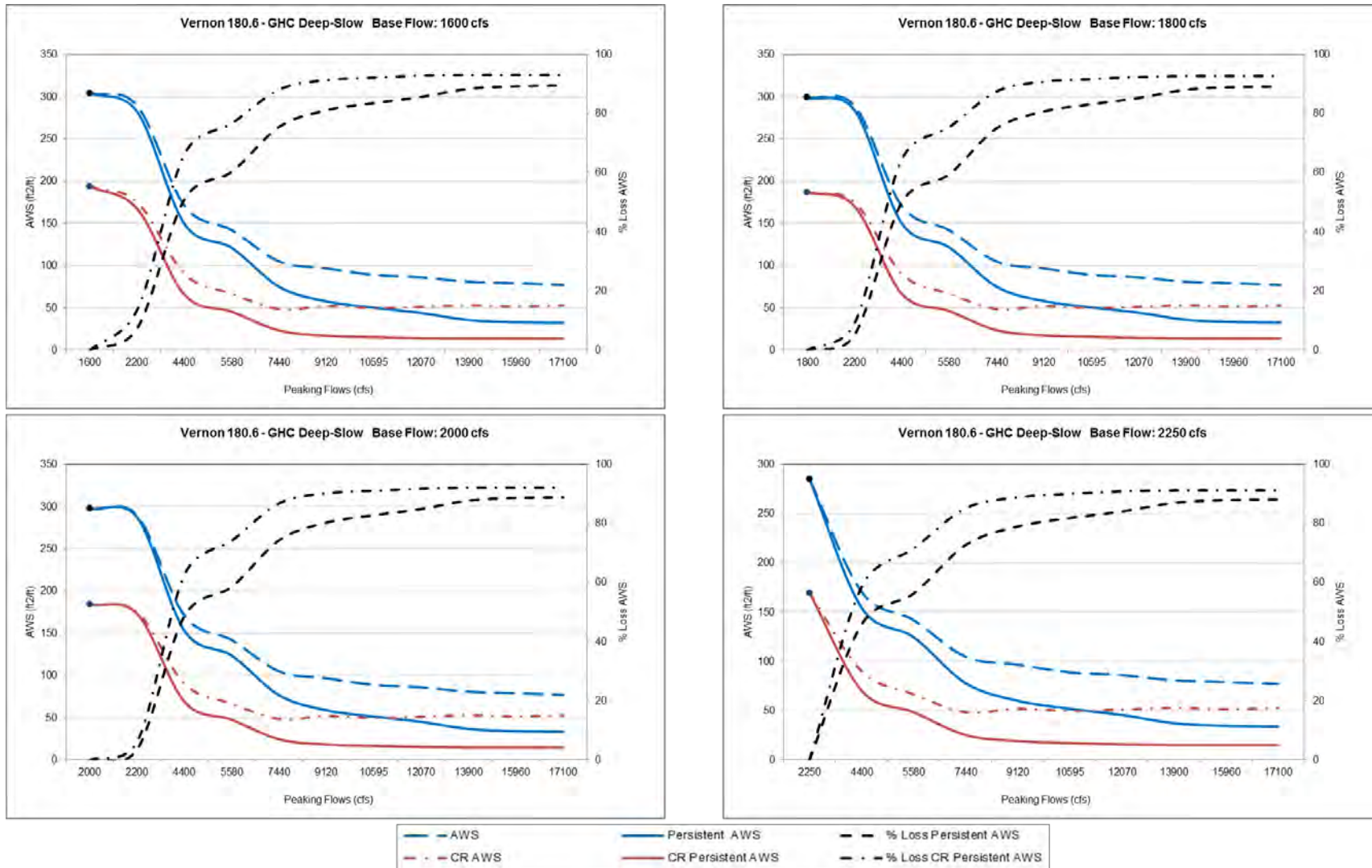




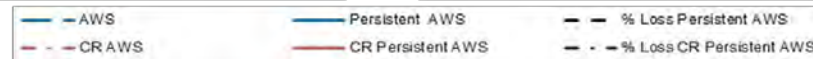
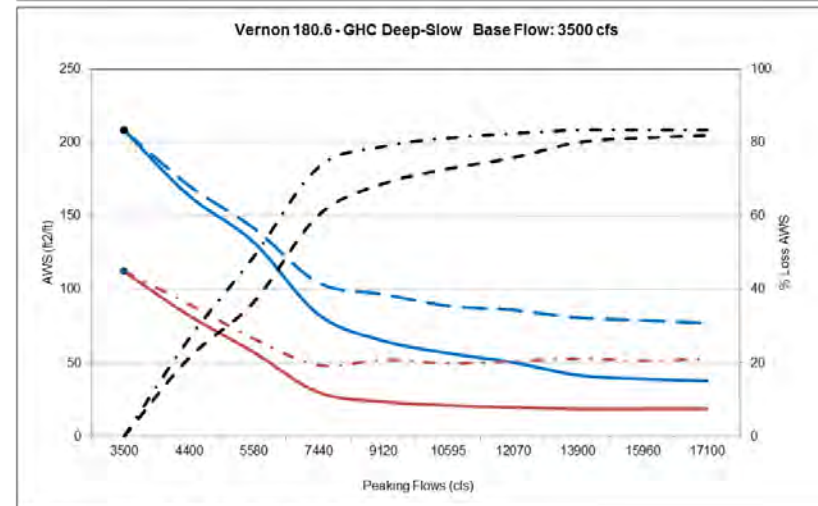
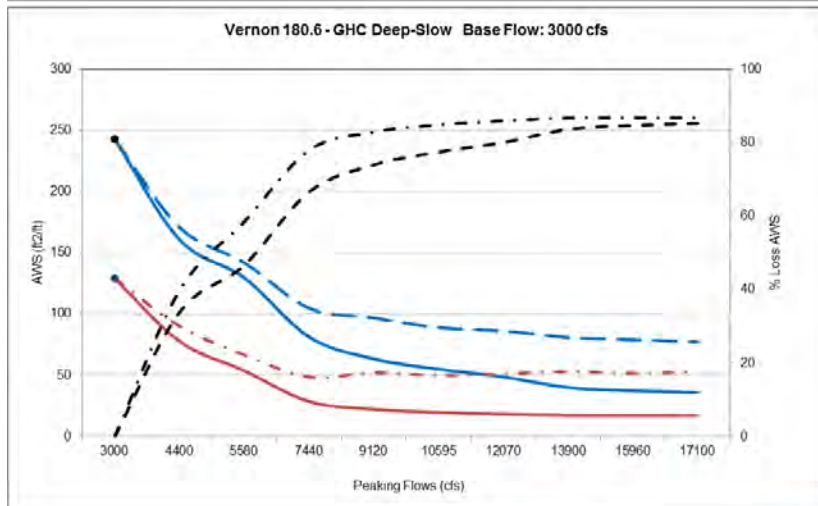
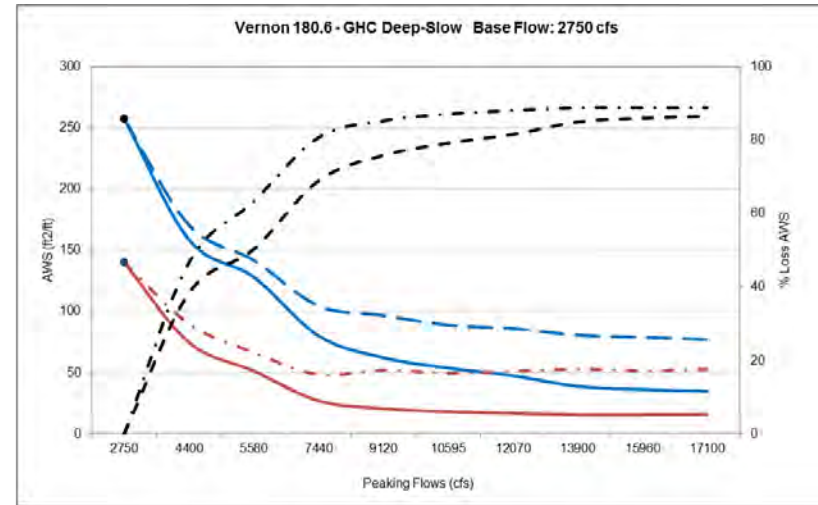
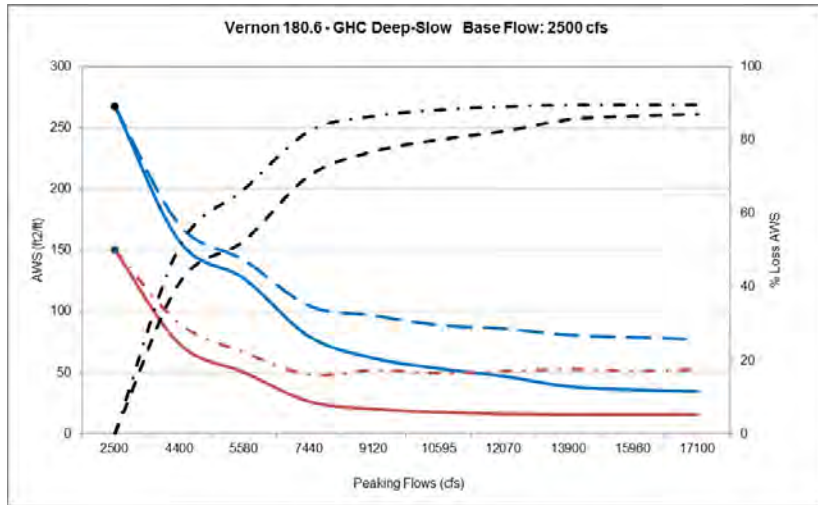


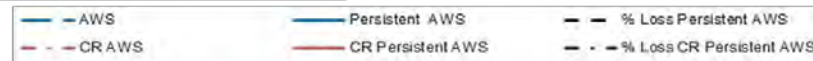
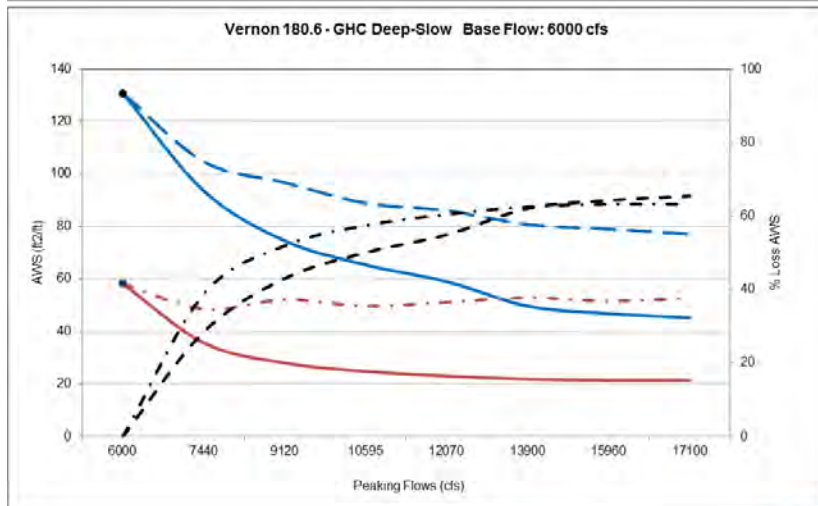
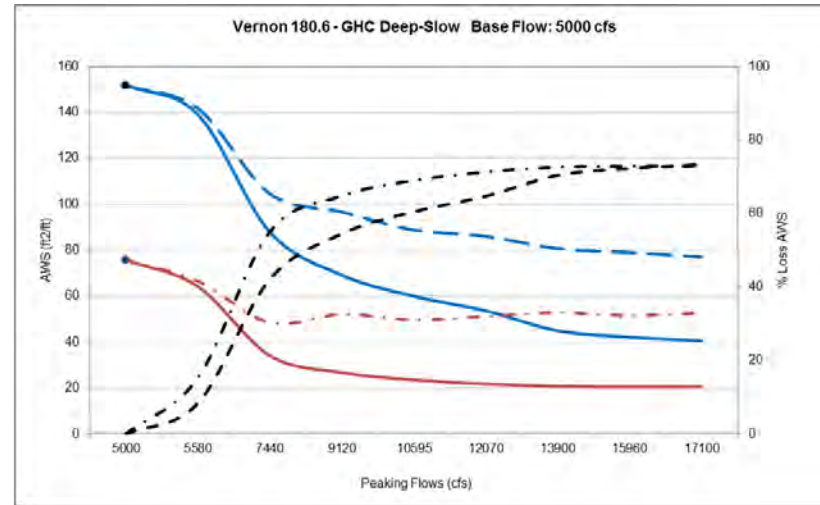
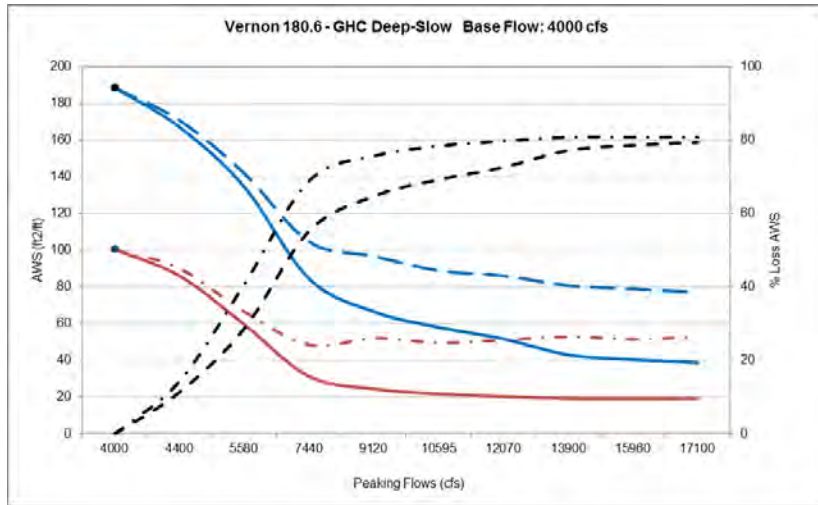


Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) and Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) CR -  
 GHC Deep-Slow persistent habitat.

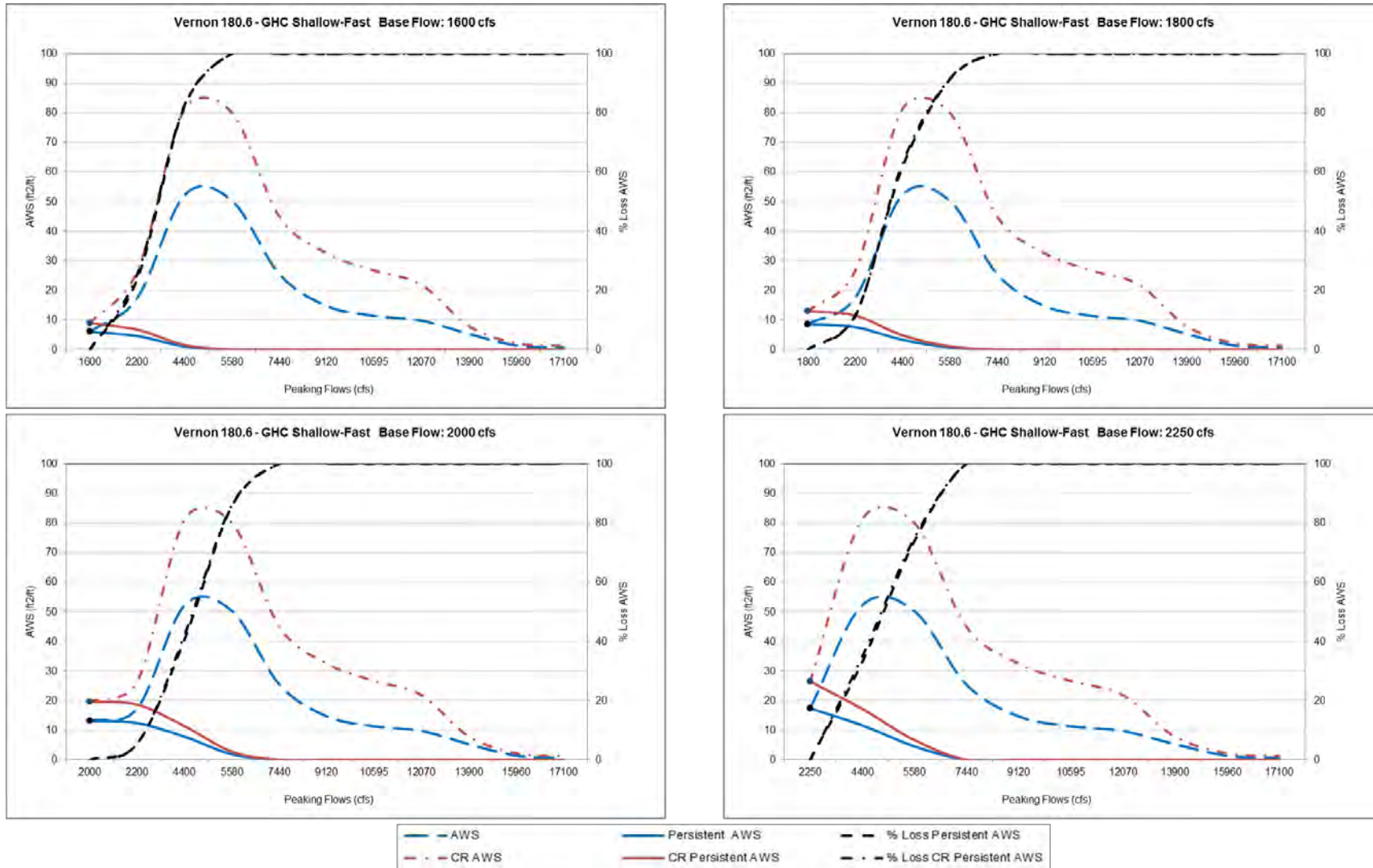


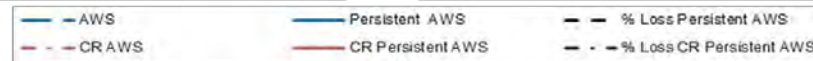
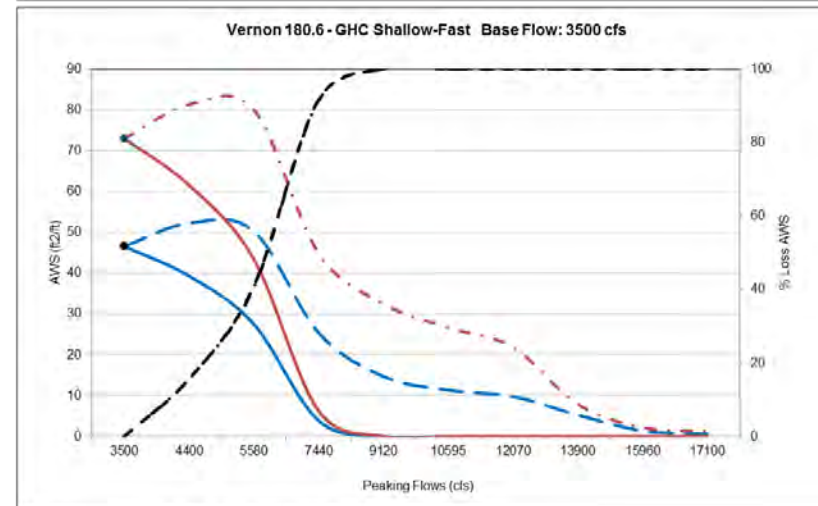
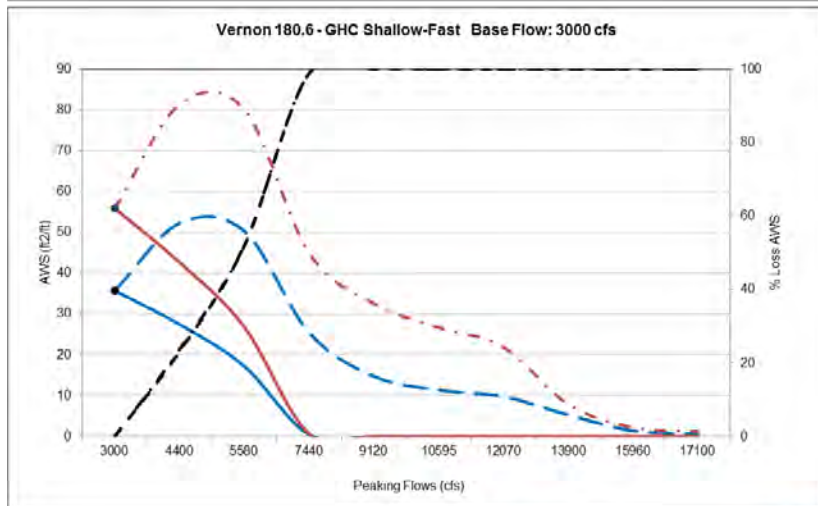
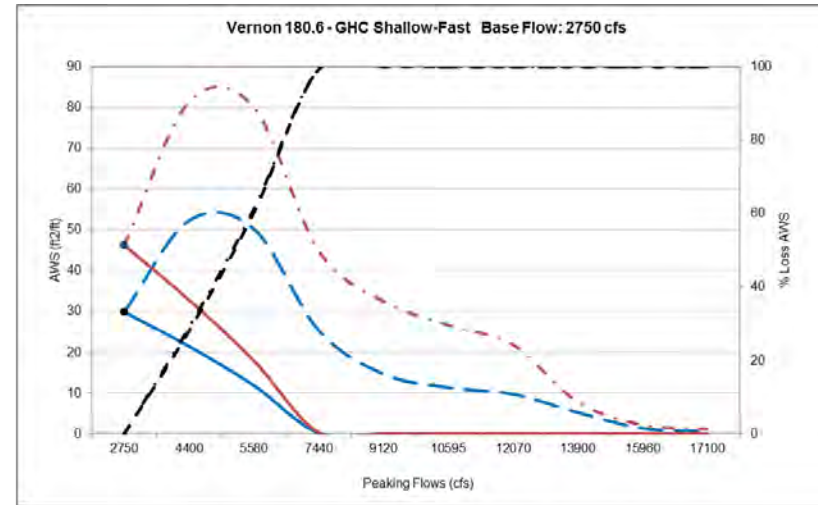
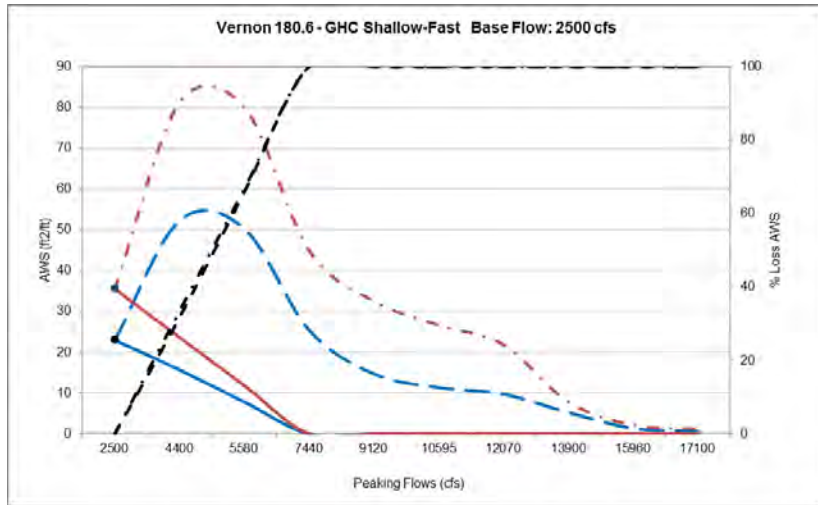




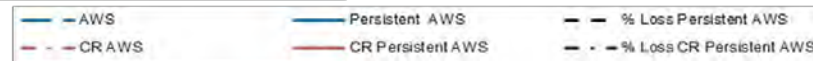
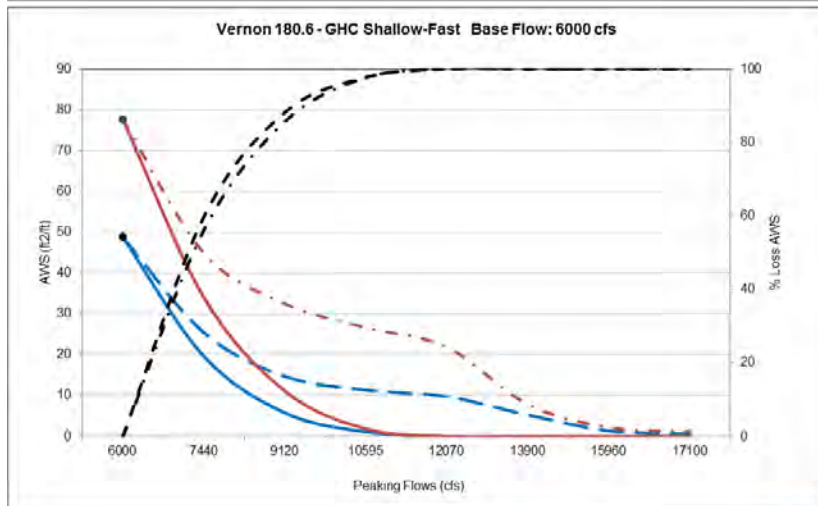
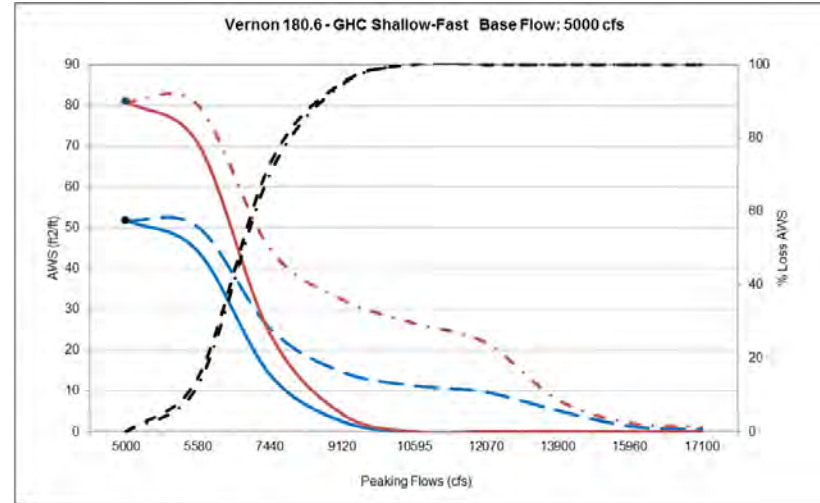
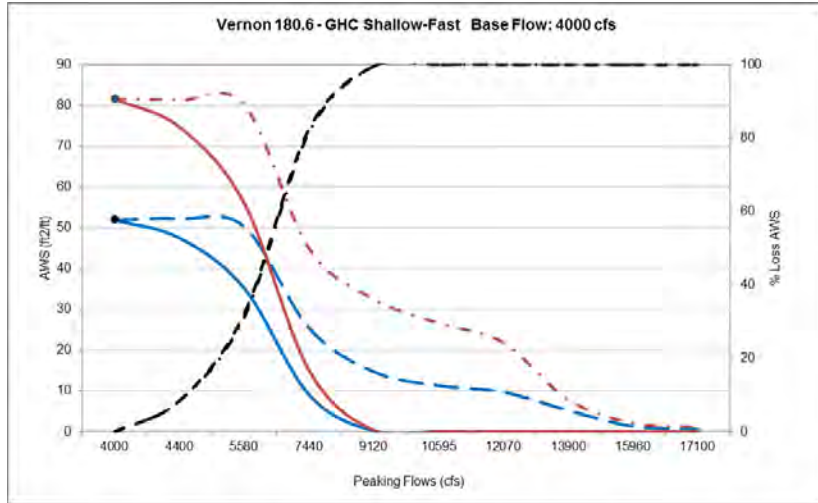


Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) and Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) CR -  
 GHC Shallow-Fast persistent habitat.



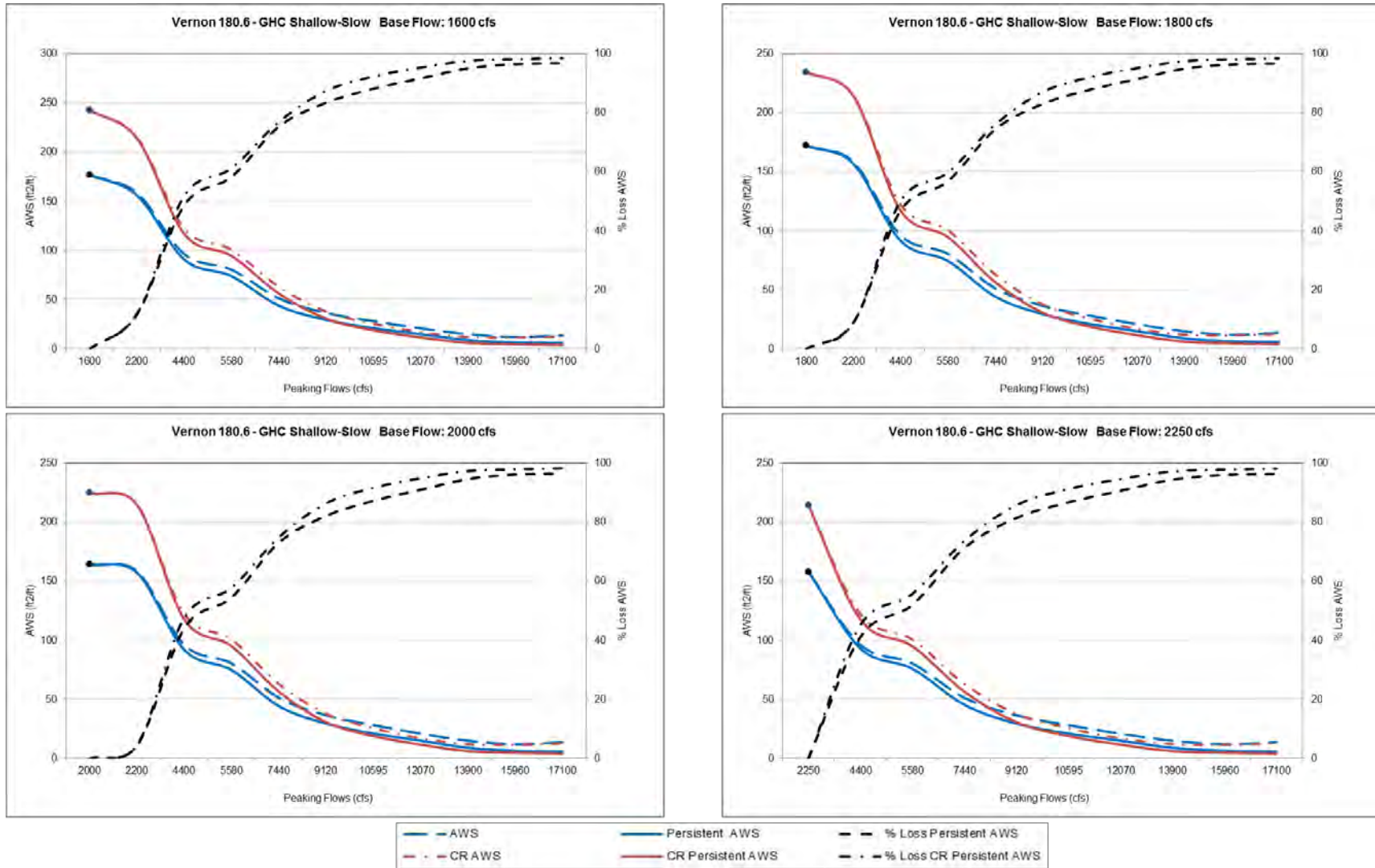


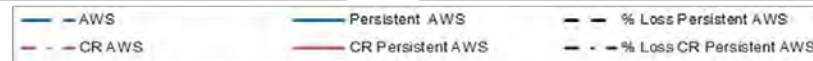
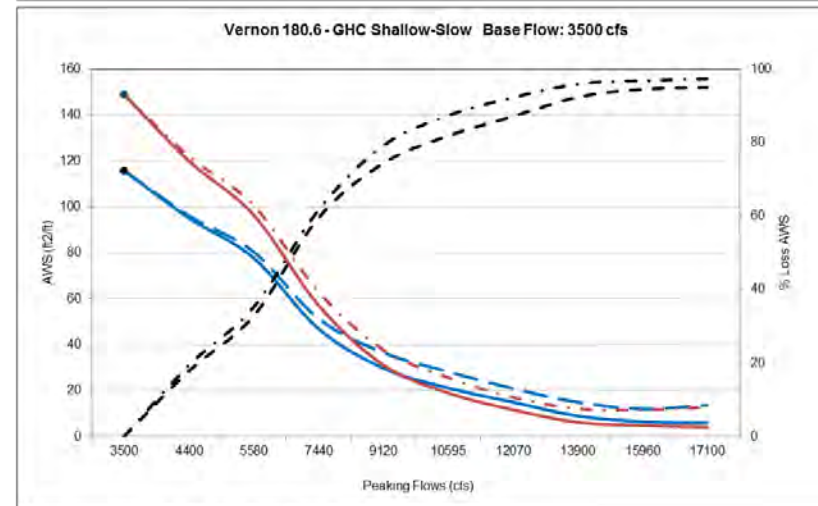
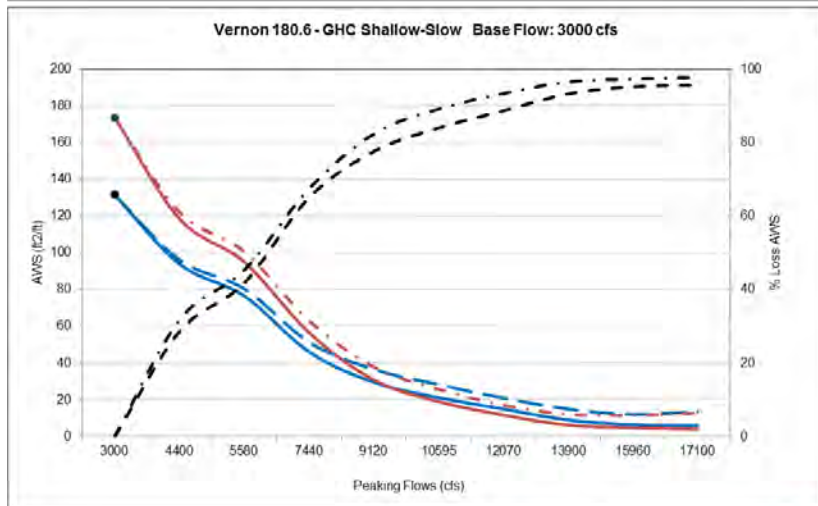
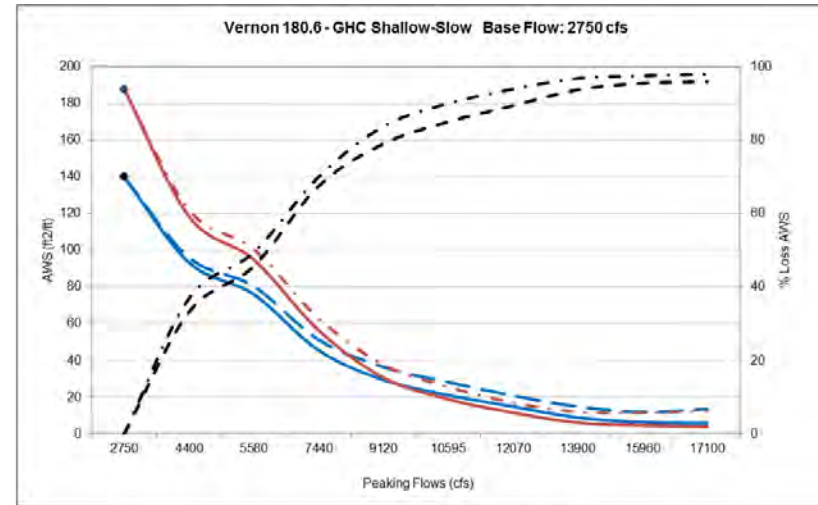
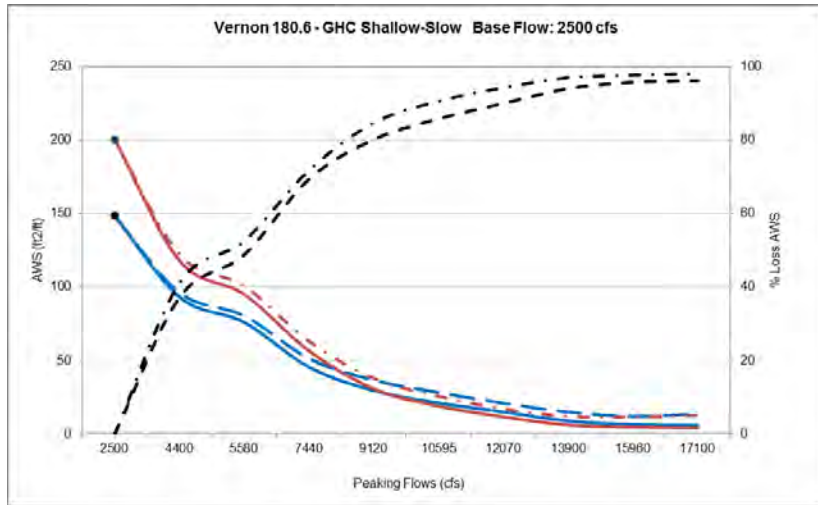


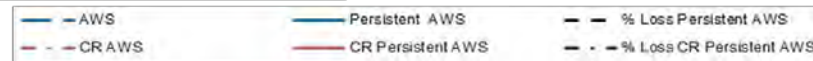
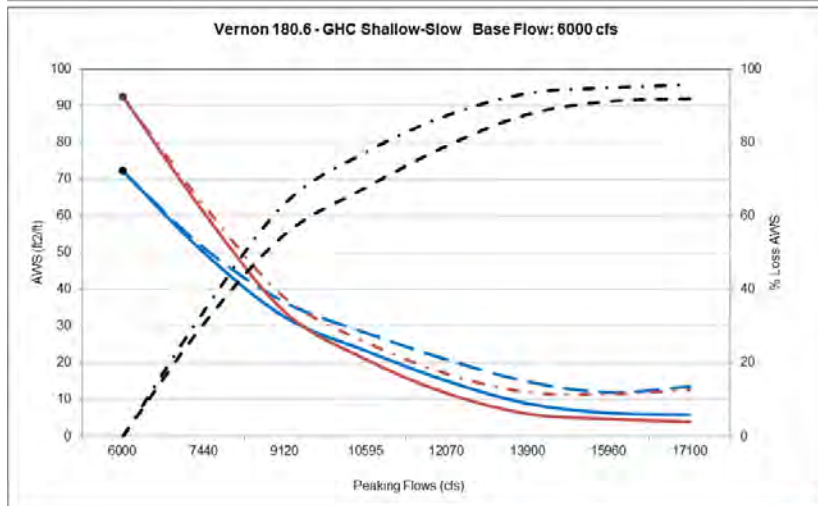
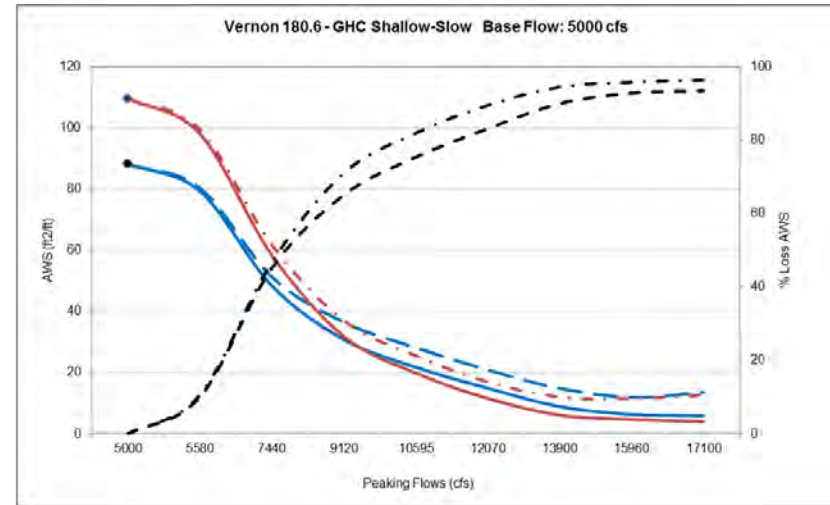
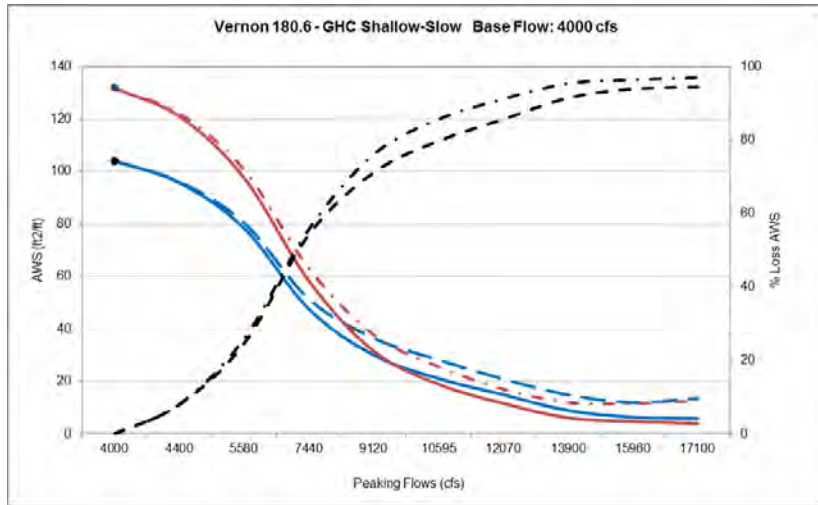




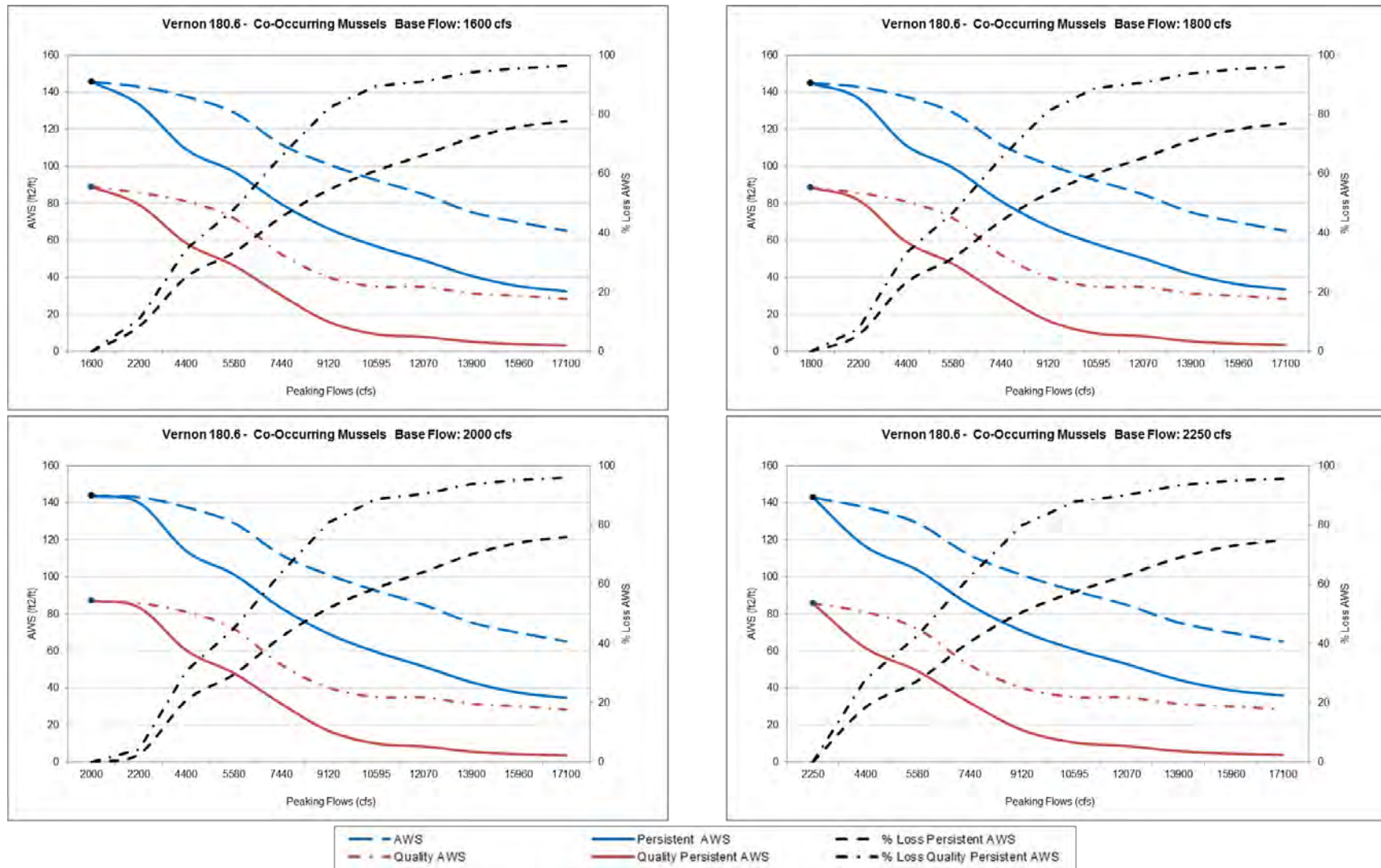
Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) and Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) CR - GHC Shallow-Slow persistent habitat.



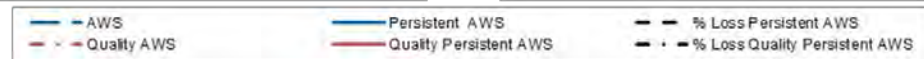
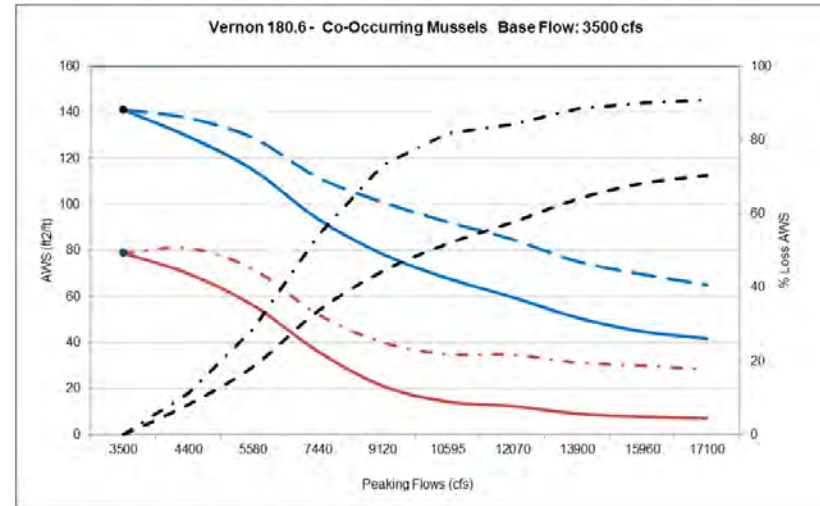
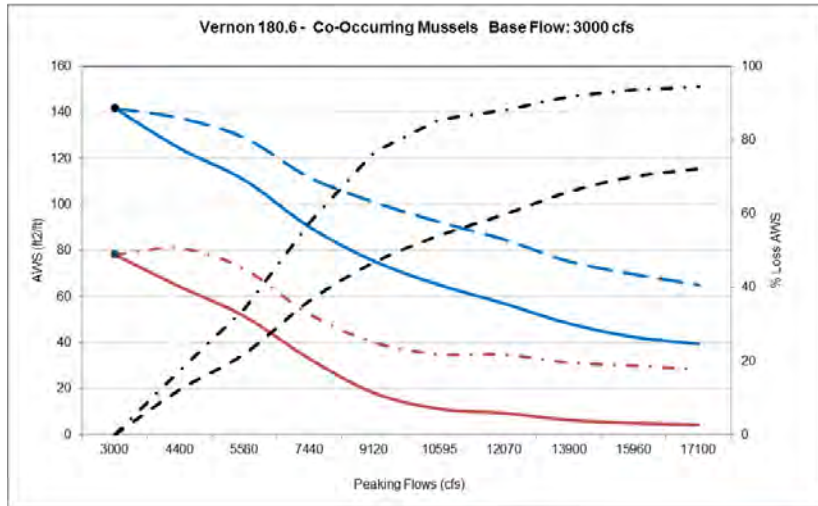
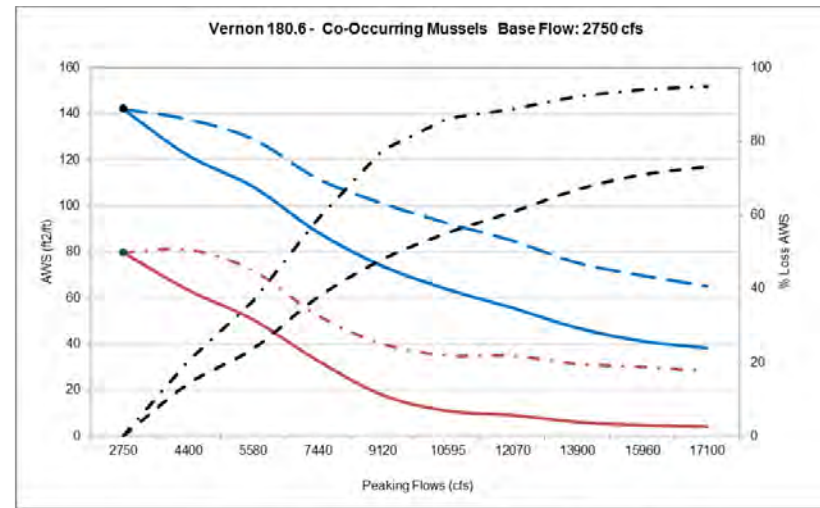
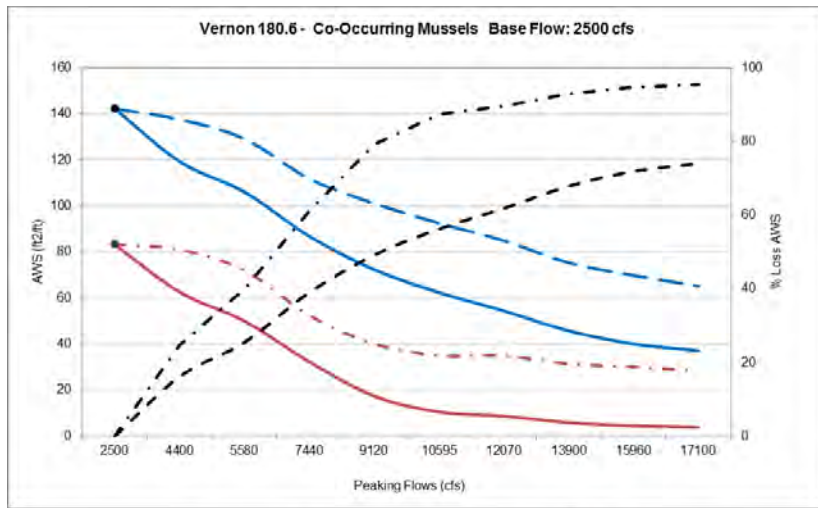




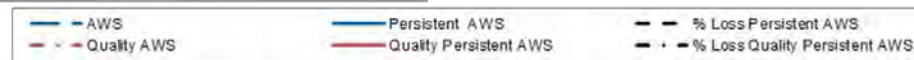
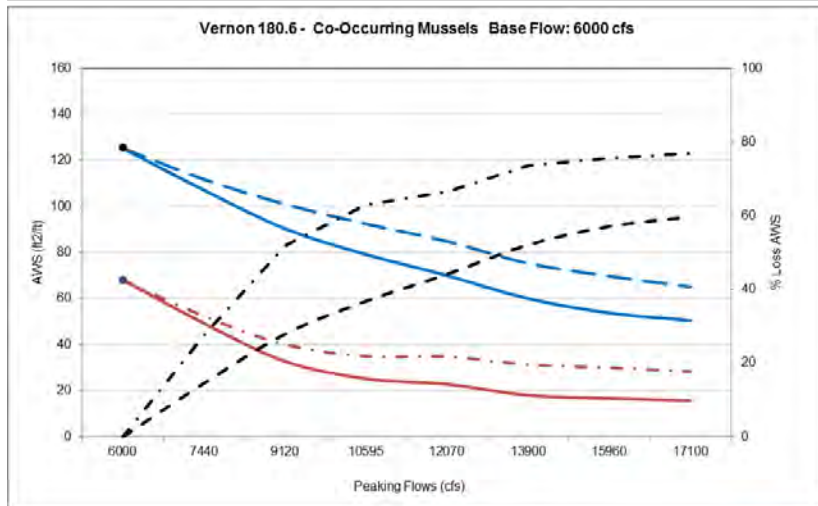
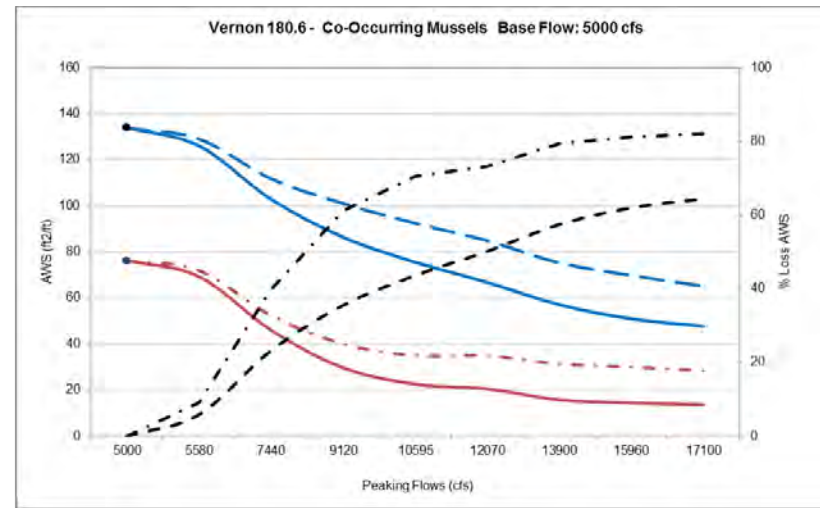
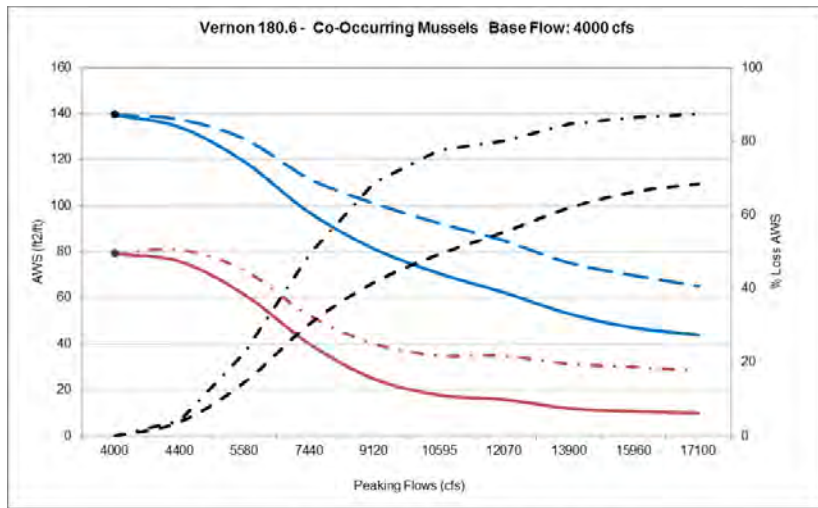
Vernon: Turners Falls dam WSE=180.6 ft (NAVD88) Co-occurring mussels persistent and persistent quality habitat.











Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - American Shad spawning persistent and persistent quality habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	143.88	143.88	143.88	143.88	143.87	143.56	142.92	142.17	140.94	139.03	137.46
1800	152.76	152.76	152.75	152.75	152.74	152.42	151.71	150.82	149.35	146.90	144.98
2000	161.41	161.41	161.40	161.39	161.38	161.04	160.30	159.30	157.61	154.64	152.36
2250	171.84		171.35	171.32	171.28	170.90	170.11	169.01	167.07	163.53	160.80
2500	181.71		178.93	178.89	178.81	178.40	177.58	176.43	174.40	170.52	167.57
2750	190.82		185.98	185.93	185.83	185.37	184.50	183.28	181.16	176.97	173.85
3000	198.75		192.37	192.30	192.13	191.61	190.66	189.35	187.07	182.75	179.53
3500	211.79		203.49	203.32	202.98	202.32	201.27	199.86	197.41	192.84	189.50
4000	221.91		212.56	212.34	211.93	211.20	210.07	208.57	205.95	201.12	197.65
5000	236.17			225.63	225.10	224.23	222.95	221.22	218.19	212.74	208.97
6000	245.49				244.54	242.99	241.07	238.63	234.57	227.75	223.39

Base Flows	Base Flow AWS	Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	77.57	77.57	77.56	77.56	77.56	77.25	76.53	75.08	73.68	70.73	68.90
1800	88.88	88.88	88.88	88.87	88.87	88.54	87.76	86.16	84.52	81.01	78.82
2000	98.81	98.81	98.80	98.79	98.78	98.44	97.62	95.92	93.93	89.86	87.40
2250	115.20		115.17	115.15	115.09	114.72	113.84	112.03	109.52	104.53	101.49
2500	127.82		127.75	127.69	127.57	127.09	126.10	124.12	121.04	115.08	111.50
2750	138.91		138.77	138.64	138.38	137.69	136.49	134.30	130.96	124.42	120.51
3000	147.10		146.89	146.65	146.20	145.11	143.76	141.38	137.78	130.90	126.91
3500	160.88		160.62	160.22	159.26	157.94	156.41	153.90	150.12	142.90	138.80
4000	174.31		174.16	173.70	172.63	171.22	169.60	166.97	162.89	155.31	151.10
5000	192.33			192.06	190.87	189.33	187.56	184.70	180.06	171.36	166.58
6000	203.36				202.31	200.69	198.60	195.63	190.79	181.27	176.37

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	0	0	0	0	0	1	1	2	3	4
1800	0	0	0	0	0	0	1	1	2	4	5
2000	0	0	0	0	0	0	1	1	2	4	6
2250	0		0	0	0	1	1	2	3	5	6
2500	0		2	2	2	2	2	3	4	6	8
2750	0		3	3	3	3	3	4	5	7	9
3000	0		3	3	3	4	4	5	6	8	10
3500	0		4	4	4	4	5	6	7	9	11
4000	0		4	4	4	5	5	6	7	9	11
5000	0			4	5	5	6	6	8	10	12
6000	0				0	1	2	3	4	7	9

Base Flows	% at Base Flow	% Loss Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	0	0	0	0	0	1	3	5	9	11
1800	0	0	0	0	0	0	1	3	5	9	11
2000	0	0	0	0	0	0	1	3	5	9	12
2250	0		0	0	0	0	1	3	5	9	12
2500	0		0	0	0	1	1	3	5	10	13
2750	0		0	0	0	1	2	3	6	10	13
3000	0		0	0	1	1	2	4	6	11	14
3500	0		0	0	1	2	3	4	7	11	14
4000	0		0	0	1	2	3	4	7	11	13
5000	0			0	1	2	2	4	6	11	13
6000	0				1	1	2	4	6	11	13

Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - CR American Shad spawning persistent and persistent quality habitat.

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	166.11	166.11	166.11	166.10	166.09	165.54	164.37	162.84	160.45	157.30	155.26
1800	177.07	177.07	177.05	177.04	177.01	176.43	175.07	173.25	170.53	166.73	164.33
2000	187.57	187.57	187.53	187.50	187.44	186.82	185.40	183.41	180.35	175.95	173.17
2250	199.83		199.46	199.43	199.35	198.70	197.21	195.05	191.65	186.64	183.36
2500	211.20		209.22	209.16	209.02	208.30	206.74	204.51	200.99	195.64	192.05
2750	221.46		217.99	217.90	217.72	216.95	215.34	213.04	209.41	203.79	199.97
3000	230.18		225.61	225.50	225.27	224.44	222.76	220.39	216.62	210.86	206.92
3500	244.07		238.21	238.06	237.76	236.87	235.14	232.69	228.76	222.71	218.64
4000	254.77		248.36	248.20	247.85	246.91	245.13	242.62	238.54	232.21	228.02
5000	270.83			263.78	263.36	262.32	260.44	257.75	253.28	246.29	241.83
6000	282.79				282.04	280.47	278.07	274.80	269.41	261.08	256.12

Base Flows	Base Flow AWS	CR Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	91.01	91.01	91.00	91.00	90.99	90.44	88.93	86.09	83.25	78.45	76.62
1800	104.06	104.06	104.04	104.03	104.00	103.42	101.73	98.60	95.42	89.91	87.64
2000	116.15	116.15	116.11	116.08	116.02	115.40	113.63	110.34	106.59	100.32	97.78
2250	136.34		136.29	136.25	136.17	135.52	133.69	130.22	126.09	119.01	115.66
2500	151.95		151.87	151.80	151.64	150.87	148.92	145.30	140.87	132.51	128.39
2750	166.07		165.92	165.78	165.50	164.58	162.45	158.62	153.92	144.93	140.32
3000	176.09		175.88	175.66	175.22	174.15	171.86	167.87	162.92	153.45	148.73
3500	191.86		191.63	191.29	190.62	189.34	186.90	182.76	177.61	167.71	162.88
4000	205.55		205.43	205.02	204.28	202.93	200.43	196.19	190.63	180.31	175.40
5000	227.97			227.73	226.89	225.44	222.81	218.39	212.18	200.31	194.67
6000	243.59				242.88	241.36	238.67	234.14	227.68	214.38	208.59

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	0	0	0	0	0	1	2	3	5	7
1800	0	0	0	0	0	0	1	2	4	6	7
2000	0	0	0	0	0	0	1	2	4	6	8
2250	0		0	0	0	1	1	2	4	7	8
2500	0		1	1	1	1	2	3	5	7	9
2750	0		2	2	2	2	3	4	5	8	10
3000	0		2	2	2	2	3	4	6	8	10
3500	0		2	2	3	3	4	5	6	9	10
4000	0		3	3	3	3	4	5	6	9	10
5000	0			3	3	3	4	5	6	9	11
6000	0				0	1	2	3	5	8	9

Base Flows	% at Base Flow	% Loss CR Persistent Quality AWS										
		Peaking Flows										
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100	
1600	0	0	0	0	0	0	1	2	5	9	14	16
1800	0	0	0	0	0	0	1	2	5	8	14	16
2000	0	0	0	0	0	0	1	2	5	8	14	16
2250	0		0	0	0	0	1	2	4	8	13	15
2500	0		0	0	0	0	1	2	4	7	13	16
2750	0		0	0	0	0	1	2	4	7	13	16
3000	0		0	0	0	0	1	2	5	7	13	16
3500	0		0	0	0	1	1	3	5	7	13	15
4000	0		0	0	0	1	1	2	5	7	12	15
5000	0			0	0	0	1	2	4	7	12	15
6000	0				0	1	2	4	7	12	14	

Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - Fallfish fry persistent and persistent quality habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	88.12	83.31	52.30	41.29	27.48	18.13	11.84	7.00	3.42	1.52	0.90
1800	87.87	84.42	53.25	42.22	28.34	18.78	12.32	7.31	3.60	1.64	0.97
2000	87.31	85.45	54.21	43.17	29.20	19.43	12.83	7.68	3.84	1.77	1.07
2250	86.13		55.37	44.30	30.18	20.22	13.48	8.16	4.15	1.95	1.18
2500	84.06		56.38	45.28	30.98	20.93	14.05	8.55	4.38	2.08	1.28
2750	81.17		57.35	46.21	31.74	21.59	14.56	8.90	4.61	2.18	1.36
3000	77.97		58.31	47.09	32.50	22.24	15.08	9.27	4.83	2.34	1.49
3500	71.77		60.16	48.81	34.03	23.55	16.15	10.18	5.45	2.76	1.78
4000	66.57		61.85	50.38	35.41	24.75	17.23	11.10	6.14	3.25	2.15
5000	59.72			54.29	39.02	28.12	20.31	13.80	8.45	4.62	3.08
6000	54.46				42.64	30.96	22.67	15.65	9.46	5.15	3.45

Base Flows	Base Flow AWS	Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	67.37	61.55	27.13	17.61	6.55	2.60	0.96	0.00	0.00	0.00	0.00
1800	66.40	62.35	27.89	18.37	7.13	3.01	1.27	0.00	0.00	0.00	0.00
2000	65.65	63.23	28.76	19.24	7.83	3.39	1.45	0.00	0.00	0.00	0.00
2250	63.46		29.42	19.88	8.39	3.79	1.64	0.00	0.00	0.00	0.00
2500	59.77		30.14	20.58	8.88	4.26	2.00	0.16	0.00	0.00	0.00
2750	55.67		31.25	21.55	9.55	4.88	2.56	0.41	0.00	0.00	0.00
3000	51.24		32.04	22.31	9.99	5.28	2.92	0.69	0.00	0.00	0.00
3500	44.77		33.13	23.33	10.84	5.99	3.35	1.04	0.00	0.00	0.00
4000	38.74		35.06	25.22	12.29	7.08	4.18	1.52	0.00	0.00	0.00
5000	33.42			29.10	15.78	10.25	6.94	3.59	1.65	0.00	0.00
6000	31.06				19.78	13.09	9.48	5.74	2.24	0.00	0.00

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	5	41	53	69	79	87	92	96	98	99
1800	0	4	39	52	68	79	86	92	96	98	99
2000	0	2	38	51	67	78	85	91	96	98	99
2250	0		36	49	65	77	84	91	95	98	99
2500	0		33	46	63	75	83	90	95	98	98
2750	0		29	43	61	73	82	89	94	97	98
3000	0		25	40	58	71	81	88	94	97	98
3500	0		16	32	53	67	77	86	92	96	98
4000	0		7	24	47	63	74	83	91	95	97
5000	0			9	35	53	66	77	86	92	95
6000	0				22	43	58	71	83	91	94

Base Flows	% at Base Flow	% Loss Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	9	60	74	90	96	99	100	100	100	100
1800	0	6	58	72	89	95	98	100	100	100	100
2000	0	4	56	71	88	95	98	100	100	100	100
2250	0		54	69	87	94	97	100	100	100	100
2500	0		50	66	85	93	97	100	100	100	100
2750	0		44	61	83	91	95	99	100	100	100
3000	0		37	56	80	90	94	99	100	100	100
3500	0		26	48	76	87	93	98	100	100	100
4000	0		9	35	68	82	89	96	100	100	100
5000	0			13	53	69	79	89	95	100	100
6000	0				36	58	69	82	93	100	100

Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - CR Fallfish fry persistent and persistent quality habitat.

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	139.16	131.78	83.91	66.82	44.06	28.88	19.15	11.59	5.82	2.81	1.76
1800	138.21	132.93	84.95	67.86	44.97	29.61	19.66	11.90	6.00	2.92	1.86
2000	136.99	134.15	86.15	69.04	46.06	30.50	20.32	12.38	6.33	3.14	2.00
2250	134.50		87.29	70.15	47.04	31.34	20.99	12.89	6.64	3.33	2.13
2500	130.71		88.31	71.12	47.88	32.11	21.61	13.31	6.90	3.49	2.25
2750	125.61		89.27	72.03	48.68	32.80	22.17	13.69	7.16	3.60	2.32
3000	120.03		90.18	72.90	49.46	33.48	22.74	14.13	7.40	3.78	2.45
3500	109.15		91.70	74.32	50.80	34.70	23.80	14.97	7.93	4.09	2.65
4000	100.14		93.09	75.65	52.06	35.85	24.81	15.81	8.51	4.42	2.85
5000	87.35			79.09	55.37	38.98	27.66	18.27	10.47	5.61	3.71
6000	77.68				59.28	41.80	29.86	20.02	11.59	6.16	4.09

Base Flows	Base Flow AWS	CR Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	110.47	101.40	48.85	33.62	14.28	5.64	2.12	0.00	0.00	0.00	0.00
1800	108.57	102.44	49.82	34.59	14.98	6.25	2.57	0.00	0.00	0.00	0.00
2000	107.61	103.91	51.29	36.04	16.18	6.97	2.95	0.00	0.00	0.00	0.00
2250	104.21		52.22	36.96	16.93	7.56	3.23	0.00	0.00	0.00	0.00
2500	98.49		53.44	38.13	17.77	8.36	3.82	0.30	0.00	0.00	0.00
2750	91.37		54.90	39.37	18.58	9.08	4.46	0.51	0.00	0.00	0.00
3000	84.39		55.83	40.27	19.22	9.65	4.97	0.93	0.00	0.00	0.00
3500	74.23		56.92	41.28	19.97	10.36	5.59	1.45	0.00	0.00	0.00
4000	63.56		58.15	42.45	21.11	11.27	6.47	2.12	0.00	0.00	0.00
5000	53.31			46.07	24.68	14.45	9.11	4.11	1.27	0.00	0.00
6000	45.77				28.11	16.54	10.86	5.64	2.21	0.00	0.00

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	5	40	52	68	79	86	92	96	98	99
1800	0	4	39	51	67	79	86	91	96	98	99
2000	0	2	37	50	66	78	85	91	95	98	99
2250	0		35	48	65	77	84	90	95	98	98
2500	0		32	46	63	75	83	90	95	97	98
2750	0		29	43	61	74	82	89	94	97	98
3000	0		25	39	59	72	81	88	94	97	98
3500	0		16	32	53	68	78	86	93	96	98
4000	0		7	24	48	64	75	84	91	96	97
5000	0			9	37	55	68	79	88	94	96
6000	0				24	46	62	74	85	92	95

Base Flows	% at Base Flow	% Loss CR Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	8	56	70	87	95	98	100	100	100	100
1800	0	6	54	68	86	94	98	100	100	100	100
2000	0	3	52	67	85	94	97	100	100	100	100
2250	0		50	65	84	93	97	100	100	100	100
2500	0		46	61	82	92	96	100	100	100	100
2750	0		40	57	80	90	95	99	100	100	100
3000	0		34	52	77	89	94	99	100	100	100
3500	0		23	44	73	86	92	98	100	100	100
4000	0		9	33	67	82	90	97	100	100	100
5000	0			14	54	73	83	92	98	100	100
6000	0				39	64	76	88	95	100	100



Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - Fallfish spawning persistent and persistent quality habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	64.58	63.45	53.60	44.18	28.58	17.71	10.60	5.32	2.19	0.77	0.39
1800	65.04	64.23	54.16	44.62	28.93	17.98	10.82	5.51	2.31	0.83	0.44
2000	65.38	64.95	54.70	45.08	29.29	18.27	11.07	5.70	2.44	0.91	0.49
2250	65.68		55.37	45.63	29.72	18.61	11.38	5.94	2.60	1.01	0.56
2500	65.83		56.03	46.17	30.14	18.96	11.69	6.20	2.77	1.12	0.65
2750	65.81		56.69	46.74	30.59	19.35	12.04	6.46	2.96	1.27	0.75
3000	65.52		57.32	47.28	31.01	19.73	12.38	6.73	3.18	1.43	0.85
3500	64.39		58.51	48.32	31.91	20.53	13.10	7.35	3.70	1.74	1.05
4000	62.50		59.54	49.27	32.75	21.30	13.80	7.98	4.15	2.01	1.25
5000	56.17			50.86	34.18	22.59	14.99	9.05	4.95	2.54	1.65
6000	48.81				36.06	24.36	16.55	10.36	5.95	3.26	2.23

Base Flows	Base Flow AWS	Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	50.19	49.12	38.71	26.70	8.73	3.45	0.82	0.15	0.00	0.00	0.00
1800	50.44	49.54	38.95	26.85	8.81	3.52	0.87	0.15	0.00	0.00	0.00
2000	50.85	50.26	39.56	27.37	9.14	3.82	1.17	0.32	0.00	0.00	0.00
2250	50.97		40.17	27.88	9.43	3.97	1.31	0.33	0.00	0.00	0.00
2500	51.17		40.63	28.22	9.71	4.21	1.54	0.46	0.00	0.00	0.00
2750	51.26		41.16	28.66	10.09	4.54	1.86	0.67	0.00	0.00	0.00
3000	50.42		41.57	28.86	10.22	4.64	1.96	0.71	0.00	0.00	0.00
3500	48.71		42.65	29.56	10.82	5.20	2.46	0.93	0.00	0.00	0.00
4000	46.89		43.71	30.43	11.62	5.95	3.17	1.53	0.00	0.00	0.00
5000	38.02			31.68	12.79	7.04	4.20	2.51	0.55	0.00	0.00
6000	27.27				13.87	8.07	5.18	3.45	1.31	0.00	0.00

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	2	17	32	56	73	84	92	97	99	99
1800	0	1	17	31	56	72	83	92	96	99	99
2000	0	1	16	31	55	72	83	91	96	99	99
2250	0		16	31	55	72	83	91	96	98	99
2500	0		15	30	54	71	82	91	96	98	99
2750	0		14	29	54	71	82	90	96	98	99
3000	0		13	28	53	70	81	90	95	98	99
3500	0		9	25	50	68	80	89	94	97	98
4000	0		5	21	48	66	78	87	93	97	98
5000	0			9	39	60	73	84	91	95	97
6000	0				26	50	66	79	88	93	95

Base Flows	% at Base Flow	% Loss Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	2	23	47	83	93	98	100	100	100	100
1800	0	2	23	47	83	93	98	100	100	100	100
2000	0	1	22	46	82	92	98	99	100	100	100
2250	0		21	45	81	92	97	99	100	100	100
2500	0		21	45	81	92	97	99	100	100	100
2750	0		20	44	80	91	96	99	100	100	100
3000	0		18	43	80	91	96	99	100	100	100
3500	0		12	39	78	89	95	98	100	100	100
4000	0		7	35	75	87	93	97	100	100	100
5000	0			17	66	81	89	93	99	100	100
6000	0				49	70	81	87	95	100	100

Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - CR Fallfish spawning persistent and persistent quality habitat.

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	100.45	98.71	83.43	69.08	45.79	29.68	18.81	10.53	5.14	2.20	1.23
1800	101.30	100.06	84.47	69.98	46.54	30.30	19.37	11.00	5.44	2.37	1.35
2000	102.02	101.36	85.54	70.91	47.33	30.97	20.00	11.49	5.79	2.60	1.51
2250	102.67		86.80	72.00	48.22	31.74	20.71	12.05	6.18	2.82	1.68
2500	103.12		88.04	73.06	49.09	32.52	21.44	12.63	6.57	3.06	1.87
2750	103.25		89.25	74.11	49.97	33.32	22.18	13.20	6.95	3.34	2.05
3000	102.90		90.35	75.06	50.77	34.05	22.87	13.73	7.33	3.60	2.24
3500	101.30		92.31	76.82	52.30	35.43	24.12	14.74	8.10	4.05	2.52
4000	98.47		93.91	78.31	53.63	36.63	25.21	15.70	8.79	4.45	2.82
5000	88.64			80.63	55.73	38.55	26.94	17.28	9.97	5.23	3.41
6000	77.60				58.64	41.27	29.29	19.20	11.42	6.28	4.23

Base Flows	Base Flow AWS	CR Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	76.31	74.68	59.21	42.02	15.35	6.67	1.93	0.62	0.00	0.00	0.00
1800	76.83	75.46	59.74	42.41	15.63	6.92	2.14	0.64	0.00	0.00	0.00
2000	77.90	76.98	61.08	43.63	16.56	7.81	3.01	1.00	0.00	0.00	0.00
2250	78.22		62.20	44.59	17.19	8.39	3.57	1.02	0.00	0.00	0.00
2500	78.72		63.15	45.35	17.85	8.99	4.15	1.21	0.00	0.00	0.00
2750	79.40		64.38	46.44	18.84	9.92	5.06	1.73	0.00	0.00	0.00
3000	78.30		65.23	46.98	19.29	10.32	5.44	1.88	0.00	0.00	0.00
3500	76.28		67.46	48.66	20.80	11.73	6.74	2.41	0.00	0.00	0.00
4000	73.99		69.27	50.20	22.22	13.05	7.97	3.24	0.00	0.00	0.00
5000	61.07			52.21	24.08	14.77	9.52	4.69	0.82	0.00	0.00
6000	45.99				25.86	16.45	11.05	6.12	1.92	0.00	0.00

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	2	17	31	54	70	81	90	95	98	99
1800	0	1	17	31	54	70	81	89	95	98	99
2000	0	1	16	30	54	70	80	89	94	97	99
2250	0		15	30	53	69	80	88	94	97	98
2500	0		15	29	52	68	79	88	94	97	98
2750	0		14	28	52	68	79	87	93	97	98
3000	0		12	27	51	67	78	87	93	97	98
3500	0		9	24	48	65	76	85	92	96	98
4000	0		5	20	46	63	74	84	91	95	97
5000	0			9	37	57	70	81	89	94	96
6000	0				24	47	62	75	85	92	95

Base Flows	% at Base Flow	% Loss CR Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	2	22	45	80	91	97	99	100	100	100
1800	0	2	22	45	80	91	97	99	100	100	100
2000	0	1	22	44	79	90	96	99	100	100	100
2250	0		20	43	78	89	95	99	100	100	100
2500	0		20	42	77	89	95	98	100	100	100
2750	0		19	42	76	88	94	98	100	100	100
3000	0		17	40	75	87	93	98	100	100	100
3500	0		12	36	73	85	91	97	100	100	100
4000	0		6	32	70	82	89	96	100	100	100
5000	0			15	61	76	84	92	99	100	100
6000	0				44	64	76	87	96	100	100

Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - Longnose Dace fry persistent and persistent quality habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	41.31	38.70	23.18	15.02	8.21	4.48	2.33	1.07	0.18	0.00	0.00
1800	41.43	39.52	23.74	15.47	8.58	4.71	2.49	1.17	0.21	0.00	0.00
2000	41.35	40.32	24.33	15.98	9.00	5.00	2.71	1.31	0.24	0.00	0.00
2250	41.00		25.05	16.62	9.52	5.37	3.00	1.44	0.28	0.00	0.00
2500	40.43		25.75	17.23	10.00	5.70	3.25	1.57	0.33	0.00	0.00
2750	39.66		26.42	17.84	10.49	6.04	3.50	1.69	0.38	0.00	0.00
3000	38.73		27.10	18.47	10.96	6.42	3.76	1.82	0.44	0.00	0.00
3500	36.46		28.58	19.84	12.05	7.30	4.34	2.17	0.60	0.01	0.00
4000	33.38		29.86	21.02	13.09	8.05	4.85	2.55	0.81	0.05	0.00
5000	27.66			23.75	15.43	9.91	6.35	3.66	1.43	0.21	0.01
6000	23.90				17.71	11.76	7.83	4.77	2.04	0.37	0.04

Base Flows	Base Flow AWS	Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	12.88	11.90	6.54	3.78	1.05	0.00	0.00	0.00	0.00	0.00	0.00
1800	13.56	12.87	7.20	4.35	1.42	0.00	0.00	0.00	0.00	0.00	0.00
2000	14.17	13.73	7.93	4.87	1.88	0.07	0.00	0.00	0.00	0.00	0.00
2250	14.77		8.56	5.34	2.27	0.21	0.00	0.00	0.00	0.00	0.00
2500	15.03		8.80	5.56	2.44	0.25	0.00	0.00	0.00	0.00	0.00
2750	14.92		9.82	6.31	3.05	0.57	0.00	0.00	0.00	0.00	0.00
3000	14.49		10.31	6.77	3.31	0.76	0.00	0.00	0.00	0.00	0.00
3500	15.02		11.88	8.24	4.43	1.59	0.00	0.00	0.00	0.00	0.00
4000	13.74		12.85	9.14	5.12	2.00	0.00	0.00	0.00	0.00	0.00
5000	12.50			11.24	6.95	3.42	0.96	0.00	0.00	0.00	0.00
6000	11.95				8.66	4.59	1.85	0.31	0.00	0.00	0.00

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	6	44	64	80	89	94	97	100	100	100
1800	0	5	43	63	79	89	94	97	100	100	100
2000	0	2	41	61	78	88	93	97	99	100	100
2250	0		39	59	77	87	93	96	99	100	100
2500	0		36	57	75	86	92	96	99	100	100
2750	0		33	55	74	85	91	96	99	100	100
3000	0		30	52	72	83	90	95	99	100	100
3500	0		22	46	67	80	88	94	98	100	100
4000	0		11	37	61	76	85	92	98	100	100
5000	0			14	44	64	77	87	95	99	100
6000	0				26	51	67	80	91	98	100

Base Flows	% at Base Flow	% Loss Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	8	49	71	92	100	100	100	100	100	100
1800	0	5	47	68	90	100	100	100	100	100	100
2000	0	3	44	66	87	100	100	100	100	100	100
2250	0		42	64	85	99	100	100	100	100	100
2500	0		41	63	84	98	100	100	100	100	100
2750	0		34	58	80	96	100	100	100	100	100
3000	0		29	53	77	95	100	100	100	100	100
3500	0		21	45	71	89	100	100	100	100	100
4000	0		6	33	63	85	100	100	100	100	100
5000	0			10	44	73	92	100	100	100	100
6000	0				28	62	85	97	100	100	100

Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - CR Longnose Dace fry persistent and persistent quality habitat.

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	64.23	60.44	38.15	26.25	15.36	8.95	4.83	2.28	0.31	0.00	0.00
1800	64.78	61.97	39.28	27.19	16.12	9.35	5.08	2.41	0.35	0.00	0.00
2000	65.07	63.57	40.51	28.26	17.01	9.92	5.48	2.66	0.40	0.00	0.00
2250	64.95		41.88	29.46	17.96	10.49	5.87	2.84	0.46	0.00	0.00
2500	64.55		43.23	30.65	18.87	11.01	6.22	3.02	0.52	0.00	0.00
2750	63.82		44.53	31.83	19.73	11.53	6.55	3.18	0.58	0.00	0.00
3000	62.81		45.80	33.01	20.55	12.10	6.90	3.34	0.66	0.00	0.00
3500	59.80		48.28	35.18	22.03	13.10	7.52	3.70	0.83	0.02	0.00
4000	55.25		50.15	36.89	23.35	14.02	8.09	4.08	1.02	0.07	0.00
5000	46.42			40.40	26.19	16.23	9.77	5.28	1.71	0.30	0.02
6000	39.52				28.76	18.17	11.25	6.38	2.40	0.52	0.05

Base Flows	Base Flow AWS	CR Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	24.04	22.52	13.78	9.01	3.50	0.00	0.00	0.00	0.00	0.00	0.00
1800	25.56	24.50	15.17	10.22	4.37	0.00	0.00	0.00	0.00	0.00	0.00
2000	27.12	26.44	16.86	11.57	5.56	0.30	0.00	0.00	0.00	0.00	0.00
2250	28.82		18.58	13.01	6.79	0.91	0.00	0.00	0.00	0.00	0.00
2500	29.84		19.58	13.93	7.50	1.07	0.00	0.00	0.00	0.00	0.00
2750	30.50		22.01	15.85	9.06	2.04	0.00	0.00	0.00	0.00	0.00
3000	30.02		23.11	16.87	9.73	2.49	0.00	0.00	0.00	0.00	0.00
3500	31.53		26.43	19.90	11.95	4.05	0.00	0.00	0.00	0.00	0.00
4000	29.74		28.09	21.40	13.07	4.81	0.00	0.00	0.00	0.00	0.00
5000	27.36			24.88	15.96	7.01	1.41	0.00	0.00	0.00	0.00
6000	25.79				18.68	8.91	2.86	0.56	0.00	0.00	0.00

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	6	41	59	76	86	92	96	100	100	100
1800	0	4	39	58	75	86	92	96	99	100	100
2000	0	2	38	57	74	85	92	96	99	100	100
2250	0		36	55	72	84	91	96	99	100	100
2500	0		33	53	71	83	90	95	99	100	100
2750	0		30	50	69	82	90	95	99	100	100
3000	0		27	47	67	81	89	95	99	100	100
3500	0		19	41	63	78	87	94	99	100	100
4000	0		9	33	58	75	85	93	98	100	100
5000	0			13	44	65	79	89	96	99	100
6000	0				27	54	72	84	94	99	100

Base Flows	% at Base Flow	% Loss CR Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	6	43	63	85	100	100	100	100	100	100
1800	0	4	41	60	83	100	100	100	100	100	100
2000	0	2	38	57	79	99	100	100	100	100	100
2250	0		36	55	76	97	100	100	100	100	100
2500	0		34	53	75	96	100	100	100	100	100
2750	0		28	48	70	93	100	100	100	100	100
3000	0		23	44	68	92	100	100	100	100	100
3500	0		16	37	62	87	100	100	100	100	100
4000	0		6	28	56	84	100	100	100	100	100
5000	0			9	42	74	95	100	100	100	100
6000	0				28	65	89	98	100	100	100

Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - Sea Lamprey spawning persistent and persistent quality habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0.41	0.37	0.18	0.06	0.01	0.00	0.00	0.00	0.00	0.00	0.00
1800	0.52	0.49	0.25	0.09	0.04	0.00	0.00	0.00	0.00	0.00	0.00
2000	0.63	0.61	0.33	0.14	0.06	0.00	0.00	0.00	0.00	0.00	0.00
2250	0.74		0.43	0.19	0.10	0.00	0.00	0.00	0.00	0.00	0.00
2500	0.81		0.52	0.25	0.13	0.01	0.00	0.00	0.00	0.00	0.00
2750	0.88		0.62	0.32	0.18	0.03	0.00	0.00	0.00	0.00	0.00
3000	0.94		0.71	0.38	0.22	0.05	0.01	0.00	0.00	0.00	0.00
3500	1.04		0.87	0.51	0.32	0.11	0.02	0.00	0.00	0.00	0.00
4000	1.09		1.02	0.63	0.42	0.18	0.05	0.00	0.00	0.00	0.00
5000	1.08			0.86	0.61	0.33	0.13	0.00	0.00	0.00	0.00
6000	0.94				0.76	0.45	0.21	0.04	0.00	0.00	0.00

Base Flows	Base Flow AWS	Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2250	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2500	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2750	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3000	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3500	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4000	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5000	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6000	0.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	11	57	86	96	100	100	100	100	100	100
1800	0	7	52	82	93	100	100	100	100	100	100
2000	0	4	48	78	90	100	100	100	100	100	100
2250	0		42	74	87	100	100	100	100	100	100
2500	0		36	69	83	98	100	100	100	100	100
2750	0		29	64	80	97	100	100	100	100	100
3000	0		25	60	76	94	99	100	100	100	100
3500	0		16	51	70	89	98	100	100	100	100
4000	0		6	42	62	83	96	100	100	100	100
5000	0			20	43	69	88	100	100	100	100
6000	0				19	52	77	96	100	100	100

Base Flows	% at Base Flow	% Loss Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	0	0	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0	0	0
2250	0		0	0	0	0	0	0	0	0	0
2500	0		0	0	0	0	0	0	0	0	0
2750	0		0	0	0	0	0	0	0	0	0
3000	0		0	0	0	0	0	0	0	0	0
3500	0		0	0	0	0	0	0	0	0	0
4000	0		0	0	0	0	0	0	0	0	0
5000	0			0	0	0	0	0	0	0	0
6000	0				0	0	0	0	0	0	0



Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - CR Sea Lamprey spawning persistent and persistent quality habitat.

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0.66	0.59	0.29	0.10	0.03	0.00	0.00	0.00	0.00	0.00	0.00
1800	0.85	0.80	0.42	0.18	0.07	0.00	0.00	0.00	0.00	0.00	0.00
2000	1.03	1.00	0.56	0.27	0.12	0.00	0.00	0.00	0.00	0.00	0.00
2250	1.23		0.74	0.38	0.19	0.01	0.00	0.00	0.00	0.00	0.00
2500	1.39		0.94	0.52	0.29	0.05	0.00	0.00	0.00	0.00	0.00
2750	1.55		1.15	0.68	0.41	0.11	0.02	0.00	0.00	0.00	0.00
3000	1.72		1.36	0.84	0.54	0.19	0.03	0.00	0.00	0.00	0.00
3500	2.02		1.74	1.17	0.81	0.38	0.09	0.00	0.00	0.00	0.00
4000	2.20		2.09	1.49	1.08	0.59	0.16	0.00	0.00	0.00	0.00
5000	2.37			2.04	1.55	0.94	0.33	0.01	0.00	0.00	0.00
6000	2.20				1.82	1.15	0.47	0.06	0.00	0.00	0.00

Base Flows	Base Flow AWS	CR Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2250	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2500	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2750	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3000	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3500	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4000	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5000	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6000	0.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	11	57	84	96	100	100	100	100	100	100
1800	0	7	51	79	92	100	100	100	100	100	100
2000	0	3	46	74	89	100	100	100	100	100	100
2250	0		40	69	84	99	100	100	100	100	100
2500	0		32	63	79	96	100	100	100	100	100
2750	0		25	56	73	93	99	100	100	100	100
3000	0		21	51	69	89	98	100	100	100	100
3500	0		14	42	60	81	96	100	100	100	100
4000	0		5	32	51	73	93	100	100	100	100
5000	0			14	35	60	86	100	100	100	100
6000	0				17	48	79	97	100	100	100

Base Flows	% at Base Flow	% Loss CR Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	0	0	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0	0	0
2250	0		0	0	0	0	0	0	0	0	0
2500	0		0	0	0	0	0	0	0	0	0
2750	0		0	0	0	0	0	0	0	0	0
3000	0		0	0	0	0	0	0	0	0	0
3500	0		0	0	0	0	0	0	0	0	0
4000	0		0	0	0	0	0	0	0	0	0
5000	0			0	0	0	0	0	0	0	0
6000	0				0	0	0	0	0	0	0

Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - Smallmouth Bass fry persistent and persistent quality habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	46.33	38.42	18.11	13.55	9.08	6.35	4.64	3.46	2.43	1.56	1.17
1800	44.50	38.77	18.41	13.81	9.27	6.47	4.71	3.52	2.46	1.58	1.19
2000	42.12	39.11	18.69	14.06	9.46	6.58	4.79	3.58	2.50	1.60	1.21
2250	38.73		19.03	14.37	9.71	6.73	4.89	3.67	2.55	1.64	1.24
2500	35.29		19.34	14.66	9.94	6.88	4.98	3.74	2.60	1.68	1.28
2750	32.20		19.65	14.93	10.14	7.01	5.08	3.82	2.66	1.73	1.31
3000	29.70		19.94	15.19	10.33	7.15	5.18	3.89	2.71	1.77	1.35
3500	25.82		20.57	15.77	10.80	7.50	5.47	4.13	2.90	1.93	1.49
4000	23.24		21.12	16.27	11.22	7.82	5.73	4.32	3.05	2.04	1.58
5000	19.99			17.77	12.54	8.90	6.68	5.01	3.52	2.33	1.81
6000	17.96				13.75	9.82	7.47	5.68	4.04	2.68	2.10

Base Flows	Base Flow AWS	Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	2.43	2.42	1.28	1.28	1.28	0.31	0.00	0.00	0.00	0.00	0.00
1800	2.47	2.45	1.31	1.31	1.31	0.31	0.00	0.00	0.00	0.00	0.00
2000	2.50	2.49	1.35	1.35	1.33	0.31	0.00	0.00	0.00	0.00	0.00
2250	2.76		1.62	1.62	1.58	0.55	0.23	0.23	0.00	0.00	0.00
2500	2.71		1.67	1.67	1.61	0.56	0.24	0.24	0.00	0.00	0.00
2750	2.60		1.72	1.72	1.63	0.57	0.25	0.25	0.00	0.00	0.00
3000	2.38		1.75	1.75	1.65	0.57	0.25	0.25	0.00	0.00	0.00
3500	2.18		1.92	1.92	1.79	0.72	0.26	0.25	0.00	0.00	0.00
4000	2.20		1.95	1.95	1.81	0.73	0.28	0.25	0.00	0.00	0.00
5000	2.33			2.33	2.18	1.08	0.59	0.25	0.00	0.00	0.00
6000	2.99				2.59	1.42	0.90	0.49	0.24	0.00	0.00

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	17	61	71	80	86	90	93	95	97	97
1800	0	13	59	69	79	85	89	92	94	96	97
2000	0	7	56	67	78	84	89	91	94	96	97
2250	0		51	63	75	83	87	91	93	96	97
2500	0		45	58	72	81	86	89	93	95	96
2750	0		39	54	69	78	84	88	92	95	96
3000	0		33	49	65	76	83	87	91	94	95
3500	0		20	39	58	71	79	84	89	93	94
4000	0		9	30	52	66	75	81	87	91	93
5000	0			11	37	55	67	75	82	88	91
6000	0				23	45	58	68	78	85	88

Base Flows	% at Base Flow	% Loss Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	1	47	47	47	87	100	100	100	100	100
1800	0	1	47	47	47	87	100	100	100	100	100
2000	0	1	46	46	47	87	100	100	100	100	100
2250	0		41	41	43	80	92	92	100	100	100
2500	0		38	38	40	79	91	91	100	100	100
2750	0		34	34	37	78	90	90	100	100	100
3000	0		26	26	31	76	89	90	100	100	100
3500	0		12	12	18	67	88	89	100	100	100
4000	0		11	11	18	67	87	89	100	100	100
5000	0			0	6	53	75	89	100	100	100
6000	0				13	52	70	84	92	100	100

Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - CR Smallmouth Bass fry persistent and persistent quality habitat.

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	63.59	51.19	22.29	15.71	9.26	6.16	4.54	3.39	2.35	1.60	1.26
1800	60.59	51.65	22.68	16.02	9.47	6.28	4.60	3.43	2.38	1.63	1.28
2000	56.78	52.10	23.06	16.34	9.70	6.41	4.65	3.48	2.42	1.66	1.30
2250	51.44		23.49	16.70	9.97	6.55	4.73	3.54	2.47	1.69	1.33
2500	46.13		23.90	17.03	10.23	6.69	4.81	3.60	2.52	1.73	1.36
2750	41.52		24.30	17.34	10.47	6.83	4.90	3.66	2.57	1.77	1.39
3000	37.99		24.67	17.64	10.69	6.97	4.99	3.73	2.62	1.80	1.42
3500	32.63		25.42	18.23	11.13	7.24	5.19	3.86	2.72	1.88	1.49
4000	29.12		26.11	18.80	11.55	7.52	5.39	4.00	2.82	1.95	1.56
5000	23.58			20.16	12.57	8.22	5.98	4.46	3.16	2.18	1.73
6000	19.71				13.66	8.90	6.50	4.86	3.41	2.32	1.84

Base Flows	Base Flow AWS	CR Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2250	0.24		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2500	0.24		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2750	0.24		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3000	0.24		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3500	0.13		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4000	0.13		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5000	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6000	0.34				0.08	0.00	0.00	0.00	0.00	0.00	0.00

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	19	65	75	85	90	93	95	96	97	98
1800	0	15	63	74	84	90	92	94	96	97	98
2000	0	8	59	71	83	89	92	94	96	97	98
2250	0		54	68	81	87	91	93	95	97	97
2500	0		48	63	78	85	90	92	95	96	97
2750	0		41	58	75	84	88	91	94	96	97
3000	0		35	54	72	82	87	90	93	95	96
3500	0		22	44	66	78	84	88	92	94	95
4000	0		10	35	60	74	81	86	90	93	95
5000	0			15	47	65	75	81	87	91	93
6000	0				31	55	67	75	83	88	91

Base Flows	% at Base Flow	% Loss CR Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	0	100	100	100	100	100	100	100	100	100
1800	0	0	100	100	100	100	100	100	100	100	100
2000	0	0	100	100	100	100	100	100	100	100	100
2250	0		100	100	100	100	100	100	100	100	100
2500	0		100	100	100	100	100	100	100	100	100
2750	0		100	100	100	100	100	100	100	100	100
3000	0		100	100	100	100	100	100	100	100	100
3500	0		100	100	100	100	100	100	100	100	100
4000	0		100	100	100	100	100	100	100	100	100
5000	0				0	0	0	0	0	0	0
6000	0					76	100	100	100	100	100

Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - Smallmouth Bass spawning persistent and persistent quality habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	110.14	88.16	40.56	31.48	22.10	17.08	14.09	12.01	10.16	7.06	5.16
1800	104.28	88.75	40.89	31.72	22.29	17.23	14.23	12.14	10.27	7.14	5.22
2000	97.47	89.28	41.21	31.95	22.48	17.38	14.37	12.27	10.38	7.21	5.29
2250	87.83		41.63	32.25	22.72	17.57	14.56	12.44	10.52	7.33	5.37
2500	79.10		42.02	32.56	22.95	17.76	14.73	12.59	10.66	7.45	5.45
2750	71.47		42.40	32.87	23.19	17.96	14.90	12.74	10.81	7.55	5.54
3000	65.19		42.75	33.16	23.42	18.15	15.05	12.89	10.95	7.66	5.63
3500	55.79		43.41	33.68	23.84	18.50	15.35	13.19	11.24	7.90	5.86
4000	48.97		44.05	34.24	24.29	18.86	15.69	13.52	11.56	8.18	6.12
5000	39.93			35.46	25.30	19.73	16.55	14.30	12.24	8.79	6.57
6000	33.65				26.16	20.49	17.17	14.86	12.75	9.25	6.99

Base Flows	Base Flow AWS	Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	83.41	55.75	16.15	11.15	7.35	6.16	5.74	5.33	5.10	3.20	0.00
1800	75.02	56.02	16.27	11.21	7.40	6.21	5.79	5.38	5.15	3.20	0.00
2000	67.23	56.63	16.77	11.51	7.57	6.37	5.95	5.54	5.16	3.20	0.00
2250	54.21		16.94	11.62	7.65	6.45	6.02	5.61	5.22	3.20	0.00
2500	44.14		17.17	11.67	7.68	6.48	6.05	5.63	5.23	3.20	0.00
2750	36.37		17.41	11.87	7.73	6.54	6.09	5.66	5.25	3.20	0.00
3000	31.53		17.63	12.06	7.77	6.57	6.13	5.69	5.28	3.20	0.00
3500	24.66		17.89	12.12	7.79	6.58	6.14	5.70	5.29	3.20	0.00
4000	21.33		18.63	12.82	8.24	6.75	6.31	5.87	5.46	3.36	0.14
5000	16.88			13.39	8.44	6.89	6.44	6.00	5.59	3.48	0.16
6000	12.43				8.64	7.08	6.48	6.04	5.62	3.50	0.18

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	20	63	71	80	84	87	89	91	94	95
1800	0	15	61	70	79	83	86	88	90	93	95
2000	0	8	58	67	77	82	85	87	89	93	95
2250	0		53	63	74	80	83	86	88	92	94
2500	0		47	59	71	78	81	84	87	91	93
2750	0		41	54	68	75	79	82	85	89	92
3000	0		34	49	64	72	77	80	83	88	91
3500	0		22	40	57	67	72	76	80	86	90
4000	0		10	30	50	61	68	72	76	83	88
5000	0			11	37	51	59	64	69	78	84
6000	0				22	39	49	56	62	72	79

Base Flows	% at Base Flow	% Loss Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	33	81	87	91	93	93	94	94	96	100
1800	0	25	78	85	90	92	92	93	93	96	100
2000	0	16	75	83	89	91	91	92	92	95	100
2250	0		69	79	86	88	89	90	90	94	100
2500	0		61	74	83	85	86	87	88	93	100
2750	0		52	67	79	82	83	84	86	91	100
3000	0		44	62	75	79	81	82	83	90	100
3500	0		27	51	68	73	75	77	79	87	100
4000	0		13	40	61	68	70	72	74	84	99
5000	0			21	50	59	62	64	67	79	99
6000	0				31	43	48	51	55	72	99

Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - CR Smallmouth Bass spawning persistent and persistent quality habitat.

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	154.14	121.06	55.21	42.72	29.90	23.26	19.56	16.95	14.63	10.33	7.59
1800	145.35	121.88	55.65	43.03	30.14	23.47	19.77	17.13	14.79	10.43	7.67
2000	135.02	122.62	56.08	43.33	30.37	23.67	19.96	17.30	14.93	10.53	7.75
2250	120.37		56.62	43.71	30.65	23.91	20.19	17.50	15.10	10.68	7.87
2500	107.40		57.12	44.07	30.91	24.16	20.40	17.69	15.27	10.82	7.98
2750	96.39		57.59	44.44	31.19	24.40	20.60	17.87	15.44	10.96	8.10
3000	87.61		58.05	44.80	31.46	24.64	20.79	18.05	15.62	11.10	8.22
3500	75.14		58.93	45.46	31.99	25.08	21.15	18.40	15.95	11.38	8.47
4000	66.26		59.77	46.15	32.53	25.47	21.50	18.75	16.26	11.65	8.72
5000	53.74			47.44	33.47	26.20	22.21	19.35	16.79	12.15	9.18
6000	44.86				34.58	27.14	22.91	19.94	17.34	12.67	9.67

Base Flows	Base Flow AWS	CR Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	121.68	79.44	24.24	16.66	11.05	9.14	8.53	7.84	7.52	4.52	0.00
1800	108.96	79.96	24.47	16.81	11.19	9.27	8.66	7.98	7.65	4.52	0.00
2000	97.39	81.00	25.28	17.23	11.42	9.50	8.89	8.20	7.67	4.52	0.00
2250	77.65		25.65	17.51	11.66	9.75	9.13	8.44	7.88	4.52	0.00
2500	62.74		25.99	17.59	11.71	9.79	9.17	8.46	7.89	4.52	0.00
2750	51.72		26.38	17.94	11.85	9.93	9.30	8.57	8.00	4.52	0.00
3000	45.36		26.77	18.28	11.97	10.05	9.41	8.68	8.10	4.52	0.00
3500	36.79		27.15	18.36	12.01	10.07	9.43	8.70	8.11	4.52	0.00
4000	32.22		28.18	19.34	12.63	10.29	9.65	8.92	8.33	4.73	0.11
5000	25.39			20.17	12.94	10.52	9.87	9.14	8.55	4.95	0.13
6000	18.87				13.28	10.84	9.98	9.25	8.66	5.05	0.23

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	21	64	72	81	85	87	89	91	93	95
1800	0	16	62	70	79	84	86	88	90	93	95
2000	0	9	58	68	78	82	85	87	89	92	94
2250	0		53	64	75	80	83	85	87	91	93
2500	0		47	59	71	78	81	84	86	90	93
2750	0		40	54	68	75	79	81	84	89	92
3000	0		34	49	64	72	76	79	82	87	91
3500	0		22	40	57	67	72	76	79	85	89
4000	0		10	30	51	62	68	72	75	82	87
5000	0			12	38	51	59	64	69	77	83
6000	0				23	40	49	56	61	72	78

Base Flows	% at Base Flow	% Loss CR Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	35	80	86	91	92	93	94	94	96	100
1800	0	27	78	85	90	91	92	93	93	96	100
2000	0	17	74	82	88	90	91	92	92	95	100
2250	0		67	77	85	87	88	89	90	94	100
2500	0		59	72	81	84	85	87	87	93	100
2750	0		49	65	77	81	82	83	85	91	100
3000	0		41	60	74	78	79	81	82	90	100
3500	0		26	50	67	73	74	76	78	88	100
4000	0		13	40	61	68	70	72	74	85	100
5000	0			21	49	59	61	64	66	81	99
6000	0				30	43	47	51	54	73	99



Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - White Sucker fry persistent and persistent quality habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	428.67	358.29	182.28	137.67	96.58	78.27	68.54	61.89	56.43	51.78	49.52
1800	405.98	358.85	182.74	138.08	96.93	78.56	68.79	62.11	56.65	51.98	49.70
2000	383.10	359.51	183.29	138.58	97.36	78.91	69.09	62.39	56.90	52.21	49.92
2250	354.47		184.01	139.24	97.94	79.41	69.52	62.78	57.26	52.53	50.23
2500	326.66		184.56	139.77	98.40	79.77	69.85	63.04	57.50	52.74	50.37
2750	300.80		185.15	140.33	98.86	80.15	70.19	63.34	57.75	52.93	50.53
3000	277.97		185.72	140.89	99.33	80.55	70.55	63.65	58.00	53.11	50.71
3500	240.22		187.24	142.35	100.59	81.71	71.61	64.61	58.78	53.82	51.38
4000	210.26		188.52	143.58	101.65	82.68	72.47	65.31	59.36	54.31	51.86
5000	167.85			147.48	105.30	85.89	75.30	67.78	61.37	55.96	53.27
6000	139.24				107.87	88.19	77.41	69.70	63.02	56.94	54.07

Base Flows	Base Flow AWS	Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	413.77	321.61	145.92	103.72	77.92	65.77	59.73	55.51	50.92	46.11	43.64
1800	381.54	322.17	146.32	103.98	78.04	65.88	59.82	55.59	51.00	46.17	43.69
2000	350.09	322.69	146.61	104.19	78.16	65.99	59.90	55.67	51.06	46.22	43.74
2250	317.07		147.42	104.92	78.62	66.43	60.32	56.09	51.45	46.60	44.11
2500	288.55		148.15	105.56	78.94	66.71	60.60	56.34	51.70	46.84	44.30
2750	263.76		148.99	106.36	79.50	67.16	61.04	56.77	51.97	47.07	44.51
3000	238.29		149.92	107.22	80.11	67.76	61.64	57.33	52.45	47.35	44.79
3500	202.58		151.83	109.04	81.35	69.00	62.85	58.50	53.39	48.24	45.63
4000	175.78		153.51	110.66	82.81	70.04	63.86	59.41	54.25	49.00	46.26
5000	130.69			114.51	86.19	72.55	66.12	61.08	55.67	50.37	47.58
6000	109.87				89.49	75.28	68.26	63.12	57.66	51.33	48.19

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	16	57	68	77	82	84	86	87	88	88
1800	0	12	55	66	76	81	83	85	86	87	88
2000	0	6	52	64	75	79	82	84	85	86	87
2250	0		48	61	72	78	80	82	84	85	86
2500	0		43	57	70	76	79	81	82	84	85
2750	0		38	53	67	73	77	79	81	82	83
3000	0		33	49	64	71	75	77	79	81	82
3500	0		22	41	58	66	70	73	76	78	79
4000	0		10	32	52	61	66	69	72	74	75
5000	0			12	37	49	55	60	63	67	68
6000	0				23	37	44	50	55	59	61

Base Flows	% at Base Flow	% Loss Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	22	65	75	81	84	86	87	88	89	89
1800	0	16	62	73	80	83	84	85	87	88	89
2000	0	8	58	70	78	81	83	84	85	87	88
2250	0		54	67	75	79	81	82	84	85	86
2500	0		49	63	73	77	79	80	82	84	85
2750	0		44	60	70	75	77	78	80	82	83
3000	0		37	55	66	72	74	76	78	80	81
3500	0		25	46	60	66	69	71	74	76	77
4000	0		13	37	53	60	64	66	69	72	74
5000	0			12	34	44	49	53	57	61	64
6000	0				19	31	38	43	48	53	56

Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - CR White Sucker fry persistent and persistent quality habitat.

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	384.28	303.12	135.18	97.89	64.30	50.51	44.64	41.47	39.11	37.19	36.39
1800	357.33	303.99	135.78	98.36	64.64	50.75	44.84	41.64	39.27	37.35	36.54
2000	331.23	305.11	136.61	99.07	65.17	51.11	45.12	41.90	39.52	37.59	36.77
2250	299.84		137.38	99.70	65.63	51.47	45.40	42.12	39.72	37.77	36.95
2500	270.34		137.84	100.13	65.96	51.70	45.58	42.24	39.83	37.86	37.04
2750	243.85		138.30	100.56	66.27	51.92	45.75	42.37	39.92	37.95	37.13
3000	221.70		138.80	101.04	66.65	52.19	45.97	42.55	40.03	38.06	37.24
3500	186.84		139.82	101.98	67.32	52.72	46.39	42.85	40.24	38.26	37.43
4000	160.72		140.83	102.92	68.03	53.29	46.83	43.16	40.44	38.42	37.58
5000	124.76			106.24	71.04	55.86	49.04	45.04	41.90	39.50	38.53
6000	100.40				72.59	57.06	49.97	45.74	42.35	39.77	38.77

Base Flows	Base Flow AWS	CR Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	360.52	255.18	100.78	65.63	46.79	41.42	38.65	36.72	34.79	33.24	32.46
1800	321.80	256.27	101.33	65.94	46.88	41.49	38.70	36.78	34.85	33.30	32.52
2000	285.97	257.40	102.00	66.37	46.96	41.57	38.76	36.84	34.91	33.35	32.57
2250	251.69		103.33	67.41	47.29	41.88	39.07	37.14	35.21	33.65	32.86
2500	226.98		104.57	68.39	47.67	42.24	39.43	37.50	35.57	34.01	33.22
2750	204.49		105.85	69.56	48.38	42.93	40.12	38.19	36.05	34.49	33.71
3000	184.43		107.03	70.50	48.85	43.39	40.57	38.55	36.39	34.83	34.04
3500	152.65		108.81	72.08	49.56	44.09	41.27	39.20	37.03	35.47	34.68
4000	130.70		110.48	73.64	50.86	44.79	41.93	39.85	37.68	36.06	35.05
5000	91.08			77.45	54.06	46.88	43.86	41.35	38.92	37.26	36.23
6000	73.08				56.22	48.11	44.24	41.70	39.22	37.48	36.42

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	21	65	75	83	87	88	89	90	90	91
1800	0	15	62	72	82	86	87	88	89	90	90
2000	0	8	59	70	80	85	86	87	88	89	89
2250	0		54	67	78	83	85	86	87	87	88
2500	0		49	63	76	81	83	84	85	86	86
2750	0		43	59	73	79	81	83	84	84	85
3000	0		37	54	70	76	79	81	82	83	83
3500	0		25	45	64	72	75	77	78	80	80
4000	0		12	36	58	67	71	73	75	76	77
5000	0			15	43	55	61	64	66	68	69
6000	0				28	43	50	54	58	60	61

Base Flows	% at Base Flow	% Loss CR Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	29	72	82	87	89	89	90	90	91	91
1800	0	20	69	80	85	87	88	89	89	90	90
2000	0	10	64	77	84	85	86	87	88	88	89
2250	0		59	73	81	83	84	85	86	87	87
2500	0		54	70	79	81	83	83	84	85	85
2750	0		48	66	76	79	80	81	82	83	84
3000	0		42	62	74	76	78	79	80	81	82
3500	0		29	53	68	71	73	74	76	77	77
4000	0		15	44	61	66	68	70	71	72	73
5000	0			15	41	49	52	55	57	59	60
6000	0				23	34	39	43	46	49	50

Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - White Sucker spawning persistent and persistent quality habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	2.38	2.27	1.36	1.08	0.49	0.14	0.00	0.00	0.00	0.00	0.00
1800	2.57	2.49	1.53	1.21	0.57	0.17	0.00	0.00	0.00	0.00	0.00
2000	2.75	2.70	1.71	1.35	0.67	0.20	0.01	0.00	0.00	0.00	0.00
2250	2.93		1.92	1.52	0.79	0.25	0.01	0.00	0.00	0.00	0.00
2500	3.09		2.13	1.69	0.90	0.29	0.02	0.00	0.00	0.00	0.00
2750	3.22		2.34	1.87	1.02	0.35	0.03	0.00	0.00	0.00	0.00
3000	3.31		2.54	2.03	1.14	0.40	0.05	0.00	0.00	0.00	0.00
3500	3.40		2.92	2.36	1.37	0.51	0.09	0.00	0.00	0.00	0.00
4000	3.48		3.28	2.70	1.60	0.65	0.15	0.01	0.00	0.00	0.00
5000	3.67			3.36	2.12	1.01	0.34	0.06	0.00	0.00	0.00
6000	3.70				2.65	1.40	0.60	0.16	0.00	0.00	0.00

Base Flows	Base Flow AWS	Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2250	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2500	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2750	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3000	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3500	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4000	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5000	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6000	0.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	5	43	55	80	94	100	100	100	100	100
1800	0	3	40	53	78	93	100	100	100	100	100
2000	0	2	38	51	76	93	100	100	100	100	100
2250	0		35	48	73	92	100	100	100	100	100
2500	0		31	45	71	90	99	100	100	100	100
2750	0		27	42	68	89	99	100	100	100	100
3000	0		23	38	66	88	99	100	100	100	100
3500	0		14	30	60	85	97	100	100	100	100
4000	0		6	22	54	81	96	100	100	100	100
5000	0			9	42	73	91	98	100	100	100
6000	0				28	62	84	96	100	100	100

Base Flows	% at Base Flow	% Loss Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	0	0	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0	0	0
2250	0		0	0	0	0	0	0	0	0	0
2500	0		0	0	0	0	0	0	0	0	0
2750	0		0	0	0	0	0	0	0	0	0
3000	0		0	0	0	0	0	0	0	0	0
3500	0		0	0	0	0	0	0	0	0	0
4000	0		0	0	0	0	0	0	0	0	0
5000	0			0	0	0	0	0	0	0	0
6000	0				0	0	0	0	0	0	0

Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - CR White Sucker spawning persistent and persistent quality habitat.

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	4.78	4.60	3.14	2.64	1.45	0.38	0.00	0.00	0.00	0.00	0.00
1800	5.22	5.09	3.54	2.98	1.67	0.45	0.00	0.00	0.00	0.00	0.00
2000	5.65	5.57	3.96	3.34	1.92	0.53	0.01	0.00	0.00	0.00	0.00
2250	6.10		4.45	3.76	2.20	0.61	0.02	0.00	0.00	0.00	0.00
2500	6.48		4.92	4.17	2.45	0.69	0.03	0.00	0.00	0.00	0.00
2750	6.84		5.39	4.57	2.70	0.78	0.05	0.00	0.00	0.00	0.00
3000	7.10		5.83	4.94	2.94	0.87	0.07	0.00	0.00	0.00	0.00
3500	7.45		6.64	5.63	3.39	1.03	0.12	0.00	0.00	0.00	0.00
4000	7.71		7.38	6.30	3.78	1.21	0.20	0.01	0.00	0.00	0.00
5000	8.01			7.41	4.50	1.66	0.44	0.09	0.00	0.00	0.00
6000	7.72				5.18	2.16	0.79	0.23	0.00	0.00	0.00

Base Flows	Base Flow AWS	CR Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2250	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2500	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2750	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3000	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3500	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4000	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5000	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6000	0.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	4	34	45	70	92	100	100	100	100	100
1800	0	3	32	43	68	91	100	100	100	100	100
2000	0	1	30	41	66	91	100	100	100	100	100
2250	0		27	38	64	90	100	100	100	100	100
2500	0		24	36	62	89	100	100	100	100	100
2750	0		21	33	60	89	99	100	100	100	100
3000	0		18	30	59	88	99	100	100	100	100
3500	0		11	24	55	86	98	100	100	100	100
4000	0		4	18	51	84	97	100	100	100	100
5000	0			8	44	79	94	99	100	100	100
6000	0				33	72	90	97	100	100	100

Base Flows	% at Base Flow	% Loss CR Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	0	0	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0	0	0
2250	0		0	0	0	0	0	0	0	0	0
2500	0		0	0	0	0	0	0	0	0	0
2750	0		0	0	0	0	0	0	0	0	0
3000	0		0	0	0	0	0	0	0	0	0
3500	0		0	0	0	0	0	0	0	0	0
4000	0		0	0	0	0	0	0	0	0	0
5000	0			0	0	0	0	0	0	0	0
6000	0				0	0	0	0	0	0	0

Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - Walleye fry persistent and persistent quality habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	32.69	27.77	20.13	17.48	12.40	8.84	6.65	4.95	3.31	2.01	1.52
1800	30.80	28.03	20.36	17.69	12.59	8.98	6.75	5.02	3.37	2.06	1.56
2000	29.51	28.28	20.59	17.90	12.79	9.12	6.85	5.08	3.43	2.11	1.59
2250	28.30		20.87	18.17	13.01	9.27	6.96	5.17	3.51	2.16	1.61
2500	27.31		21.16	18.44	13.22	9.41	7.06	5.25	3.57	2.21	1.64
2750	26.44		21.45	18.71	13.43	9.54	7.14	5.32	3.63	2.24	1.66
3000	25.85		21.76	19.01	13.64	9.66	7.22	5.38	3.67	2.27	1.68
3500	24.89		22.36	19.58	14.01	9.81	7.34	5.49	3.78	2.32	1.73
4000	24.07		22.95	20.10	14.32	9.98	7.48	5.61	3.85	2.37	1.77
5000	22.72			21.20	15.08	10.53	7.89	5.90	4.02	2.50	1.91
6000	20.75				15.78	11.04	8.26	6.15	4.17	2.64	2.02

Base Flows	Base Flow AWS	Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	21.92	19.54	14.64	12.28	7.54	4.90	3.64	2.77	1.70	0.41	0.40
1800	21.23	19.77	14.85	12.48	7.74	5.09	3.83	2.80	1.73	0.42	0.41
2000	20.87	20.27	15.35	12.97	8.22	5.42	4.16	2.88	1.76	0.44	0.42
2250	20.54		15.67	13.13	8.36	5.55	4.28	2.96	1.83	0.48	0.45
2500	19.84		15.81	13.27	8.48	5.63	4.33	3.00	1.85	0.50	0.45
2750	19.42		15.93	13.39	8.57	5.71	4.37	3.03	1.87	0.51	0.46
3000	19.19		16.23	13.69	8.85	5.96	4.41	3.05	1.88	0.51	0.46
3500	18.71		16.83	14.28	9.13	6.04	4.46	3.10	1.89	0.52	0.46
4000	18.75		17.87	15.29	9.60	6.45	4.87	3.50	2.26	0.70	0.63
5000	17.75			16.02	9.91	6.70	4.97	3.57	2.33	0.77	0.70
6000	15.65				10.44	6.96	5.18	3.61	2.36	0.80	0.72

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	15	38	47	62	73	80	85	90	94	95
1800	0	9	34	43	59	71	78	84	89	93	95
2000	0	4	30	39	57	69	77	83	88	93	95
2250	0		26	36	54	67	75	82	88	92	94
2500	0		23	32	52	66	74	81	87	92	94
2750	0		19	29	49	64	73	80	86	92	94
3000	0		16	26	47	63	72	79	86	91	94
3500	0		10	21	44	61	71	78	85	91	93
4000	0		5	16	41	59	69	77	84	90	93
5000	0			7	34	54	65	74	82	89	92
6000	0				24	47	60	70	80	87	90

Base Flows	% at Base Flow	% Loss Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	11	33	44	66	78	83	87	92	98	98
1800	0	7	30	41	64	76	82	87	92	98	98
2000	0	3	26	38	61	74	80	86	92	98	98
2250	0		24	36	59	73	79	86	91	98	98
2500	0		20	33	57	72	78	85	91	97	98
2750	0		18	31	56	71	77	84	90	97	98
3000	0		15	29	54	69	77	84	90	97	98
3500	0		10	24	51	68	76	83	90	97	98
4000	0		5	18	49	66	74	81	88	96	97
5000	0			10	44	62	72	80	87	96	96
6000	0				33	56	67	77	85	95	95



Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - CR Walleye fry persistent and persistent quality habitat.

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	35.90	29.52	21.63	19.20	14.36	10.95	8.79	7.04	5.22	3.71	3.02
1800	33.30	29.85	21.93	19.48	14.63	11.17	8.97	7.18	5.35	3.80	3.09
2000	31.63	30.17	22.22	19.77	14.90	11.38	9.15	7.33	5.48	3.88	3.14
2250	30.24		22.60	20.13	15.21	11.62	9.35	7.50	5.63	3.98	3.20
2500	29.16		22.98	20.50	15.51	11.85	9.54	7.66	5.75	4.08	3.25
2750	28.27		23.35	20.86	15.80	12.07	9.71	7.80	5.87	4.14	3.29
3000	27.69		23.73	21.22	16.08	12.28	9.87	7.91	5.95	4.20	3.34
3500	26.84		24.42	21.87	16.57	12.57	10.10	8.12	6.13	4.32	3.44
4000	26.08		25.04	22.44	16.97	12.83	10.33	8.32	6.26	4.42	3.53
5000	25.05			23.68	17.98	13.66	11.00	8.81	6.59	4.69	3.79
6000	23.54				18.93	14.40	11.58	9.24	6.92	5.00	4.07

Base Flows	Base Flow AWS	CR Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	12.94	10.39	7.93	6.75	5.34	4.18	3.28	2.72	1.74	1.10	1.05
1800	12.36	10.70	8.25	7.06	5.64	4.46	3.56	2.78	1.80	1.14	1.08
2000	11.97	11.23	8.77	7.58	6.14	4.76	3.85	3.05	1.87	1.18	1.11
2250	11.57		9.15	7.95	6.49	5.08	4.15	3.34	2.14	1.32	1.22
2500	11.37		9.43	8.23	6.74	5.21	4.26	3.42	2.19	1.37	1.24
2750	11.43		9.61	8.40	6.88	5.33	4.35	3.49	2.24	1.40	1.26
3000	11.39		9.89	8.68	7.15	5.57	4.43	3.54	2.27	1.42	1.27
3500	11.15		10.46	9.23	7.63	5.84	4.65	3.74	2.30	1.45	1.28
4000	11.28		10.94	9.68	8.00	6.13	4.93	4.01	2.56	1.70	1.52
5000	11.14			10.13	8.39	6.46	5.04	4.11	2.66	1.80	1.61
6000	9.68				8.77	6.82	5.34	4.15	2.70	1.84	1.63

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	18	40	47	60	69	76	80	85	90	92
1800	0	10	34	42	56	66	73	78	84	89	91
2000	0	5	30	38	53	64	71	77	83	88	90
2250	0		25	33	50	62	69	75	81	87	89
2500	0		21	30	47	59	67	74	80	86	89
2750	0		17	26	44	57	66	72	79	85	88
3000	0		14	23	42	56	64	71	79	85	88
3500	0		9	19	38	53	62	70	77	84	87
4000	0		4	14	35	51	60	68	76	83	86
5000	0			5	28	45	56	65	74	81	85
6000	0				20	39	51	61	71	79	83

Base Flows	% at Base Flow	% Loss CR Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	20	39	48	59	68	75	79	87	91	92
1800	0	13	33	43	54	64	71	77	85	91	91
2000	0	6	27	37	49	60	68	75	84	90	91
2250	0		21	31	44	56	64	71	82	89	89
2500	0		17	28	41	54	63	70	81	88	89
2750	0		16	27	40	53	62	69	80	88	89
3000	0		13	24	37	51	61	69	80	88	89
3500	0		6	17	32	48	58	66	79	87	89
4000	0		3	14	29	46	56	64	77	85	87
5000	0			9	25	42	55	63	76	84	86
6000	0				9	30	45	57	72	81	83

Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - Walleye spawning persistent and persistent quality habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	13.47	13.38	12.97	12.70	12.10	11.47	10.70	9.91	8.69	7.63	6.32
1800	13.75	13.69	13.27	13.00	12.39	11.75	10.97	10.17	8.92	7.82	6.48
2000	14.08	14.04	13.62	13.35	12.69	12.03	11.24	10.42	9.14	8.01	6.64
2250	14.60		14.18	13.89	13.18	12.46	11.63	10.77	9.42	8.25	6.84
2500	15.22		14.83	14.54	13.76	12.97	12.09	11.18	9.74	8.49	7.03
2750	16.00		15.66	15.36	14.51	13.65	12.70	11.74	10.20	8.81	7.27
3000	16.97		16.68	16.38	15.46	14.52	13.52	12.50	10.83	9.23	7.57
3500	19.30		19.11	18.79	17.75	16.67	15.55	14.34	12.36	10.32	8.42
4000	21.99		21.90	21.54	20.40	19.15	17.93	16.50	14.18	11.64	9.50
5000	28.25			27.98	26.33	24.65	23.09	21.07	18.02	14.60	11.81
6000	35.34				33.44	31.08	29.12	26.33	21.82	17.51	14.00

Base Flows	Base Flow AWS	Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2250	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2500	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2750	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3000	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3500	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4000	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5000	0.43			0.43	0.32	0.22	0.10	0.00	0.00	0.00	0.00
6000	5.76				5.02	4.05	3.16	2.24	0.56	0.00	0.00

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	1	4	6	10	15	21	26	36	43	53
1800	0	0	3	5	10	15	20	26	35	43	53
2000	0	0	3	5	10	15	20	26	35	43	53
2250	0		3	5	10	15	20	26	35	43	53
2500	0		3	4	10	15	21	27	36	44	54
2750	0		2	4	9	15	21	27	36	45	55
3000	0		2	4	9	14	20	26	36	46	55
3500	0		1	3	8	14	19	26	36	47	56
4000	0		0	2	7	13	18	25	36	47	57
5000	0			1	7	13	18	25	36	48	58
6000	0				5	12	18	25	38	50	60

Base Flows	% at Base Flow	% Loss Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	0	0	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0	0	0
2250	0		0	0	0	0	0	0	0	0	0
2500	0		0	0	0	0	0	0	0	0	0
2750	0		0	0	0	0	0	0	0	0	0
3000	0		0	0	0	0	0	0	0	0	0
3500	0		0	0	0	0	0	0	0	0	0
4000	0		0	0	0	0	0	0	0	0	0
5000	0			0	25	49	76	100	100	100	100
6000	0				13	30	45	61	90	100	100

Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - CR Walleye spawning persistent and persistent quality habitat.

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	19.40	19.31	18.89	18.63	17.91	17.09	16.03	14.79	12.99	11.20	9.33
1800	19.83	19.77	19.35	19.08	18.34	17.51	16.43	15.17	13.33	11.49	9.57
2000	20.33	20.30	19.87	19.59	18.80	17.94	16.84	15.55	13.67	11.77	9.80
2250	21.16		20.72	20.43	19.54	18.59	17.44	16.08	14.09	12.11	10.09
2500	22.15		21.74	21.44	20.44	19.39	18.15	16.71	14.58	12.48	10.40
2750	23.40		23.03	22.72	21.62	20.46	19.12	17.60	15.31	12.96	10.76
3000	24.98		24.66	24.34	23.14	21.86	20.43	18.82	16.32	13.62	11.22
3500	28.73		28.52	28.17	26.79	25.29	23.69	21.73	18.74	15.28	12.54
4000	33.01		32.91	32.51	30.96	29.21	27.47	25.13	21.58	17.29	14.22
5000	42.86			42.52	40.22	37.81	35.53	32.21	27.47	21.72	17.84
6000	54.33				51.57	48.14	45.18	40.55	33.28	26.20	21.39

Base Flows	Base Flow AWS	CR Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2250	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2500	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2750	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3000	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3500	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4000	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5000	0.62			0.62	0.47	0.32	0.15	0.00	0.00	0.00	0.00
6000	9.10				8.02	6.60	5.27	3.75	0.81	0.00	0.00

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	0	3	4	8	12	17	24	33	42	52
1800	0	0	2	4	8	12	17	23	33	42	52
2000	0	0	2	4	8	12	17	24	33	42	52
2250	0		2	3	8	12	18	24	33	43	52
2500	0		2	3	8	12	18	25	34	44	53
2750	0		2	3	8	13	18	25	35	45	54
3000	0		1	3	7	12	18	25	35	45	55
3500	0		1	2	7	12	18	24	35	47	56
4000	0		0	2	6	12	17	24	35	48	57
5000	0			1	6	12	17	25	36	49	58
6000	0				5	11	17	25	39	52	61

Base Flows	% at Base Flow	% Loss CR Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	0	0	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0	0	0
2250	0	0	0	0	0	0	0	0	0	0	0
2500	0		0	0	0	0	0	0	0	0	0
2750	0		0	0	0	0	0	0	0	0	0
3000	0		0	0	0	0	0	0	0	0	0
3500	0		0	0	0	0	0	0	0	0	0
4000	0		0	0	0	0	0	0	0	0	0
5000	0			0	25	49	76	100	100	100	100
6000	0				12	28	42	59	91	100	100

Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - Tessellated Darter persistent and persistent quality habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	16.81	16.52	11.25	7.19	3.59	1.72	0.88	0.37	0.04	0.00	0.00
1800	18.18	17.93	11.97	7.70	3.89	1.90	1.01	0.43	0.05	0.00	0.00
2000	19.36	19.18	12.62	8.21	4.19	2.11	1.15	0.50	0.06	0.00	0.00
2250	20.45		13.35	8.82	4.57	2.39	1.32	0.59	0.08	0.00	0.00
2500	21.10		14.03	9.37	4.94	2.67	1.48	0.68	0.10	0.00	0.00
2750	21.41		14.69	9.92	5.33	2.96	1.66	0.78	0.12	0.00	0.00
3000	21.38		15.33	10.43	5.72	3.24	1.84	0.88	0.15	0.00	0.00
3500	20.75		16.52	11.46	6.55	3.79	2.26	1.12	0.22	0.00	0.00
4000	19.59		17.60	12.43	7.33	4.36	2.68	1.36	0.30	0.01	0.00
5000	16.90			14.51	9.02	5.72	3.63	1.99	0.61	0.05	0.00
6000	14.95				10.87	7.19	4.71	2.73	1.06	0.16	0.01

Base Flows	Base Flow AWS	Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0.14	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	1.60	1.60	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2250	2.91		0.75	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2500	4.16		1.07	0.76	0.03	0.00	0.00	0.00	0.00	0.00	0.00
2750	5.07		1.89	1.36	0.03	0.00	0.00	0.00	0.00	0.00	0.00
3000	5.45		2.31	1.71	0.21	0.00	0.00	0.00	0.00	0.00	0.00
3500	5.72		3.45	2.75	0.92	0.00	0.00	0.00	0.00	0.00	0.00
4000	5.25		4.19	3.42	1.30	0.04	0.00	0.00	0.00	0.00	0.00
5000	5.67			5.12	2.63	0.47	0.00	0.00	0.00	0.00	0.00
6000	5.81				4.26	1.82	0.00	0.00	0.00	0.00	0.00

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	2	33	57	79	90	95	98	100	100	100
1800	0	1	34	58	79	90	94	98	100	100	100
2000	0	1	35	58	78	89	94	97	100	100	100
2250	0		35	57	78	88	94	97	100	100	100
2500	0		34	56	77	87	93	97	100	100	100
2750	0		31	54	75	86	92	96	99	100	100
3000	0		28	51	73	85	91	96	99	100	100
3500	0		20	45	68	82	89	95	99	100	100
4000	0		10	37	63	78	86	93	98	100	100
5000	0			14	47	66	79	88	96	100	100
6000	0				27	52	69	82	93	99	100

Base Flows	% at Base Flow	% Loss Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	0	100	100	100	100	100	100	100	100	100
1800	0	0	100	100	100	100	100	100	100	100	100
2000	0	0	91	100	100	100	100	100	100	100	100
2250	0		74	81	100	100	100	100	100	100	100
2500	0		74	82	99	100	100	100	100	100	100
2750	0		63	73	99	100	100	100	100	100	100
3000	0		58	69	96	100	100	100	100	100	100
3500	0		40	52	84	100	100	100	100	100	100
4000	0		20	35	75	99	100	100	100	100	100
5000	0			10	54	92	100	100	100	100	100
6000	0				27	69	100	100	100	100	100

Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - CR Tessellated Darter persistent and persistent quality habitat.

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	27.46	27.01	19.01	13.03	7.28	4.03	2.40	1.14	0.11	0.00	0.00
1800	29.85	29.46	20.42	14.12	7.99	4.50	2.74	1.30	0.13	0.00	0.00
2000	31.98	31.69	21.72	15.20	8.70	5.03	3.10	1.48	0.17	0.00	0.00
2250	34.02		23.23	16.50	9.59	5.71	3.51	1.68	0.20	0.00	0.00
2500	35.38		24.68	17.72	10.46	6.39	3.89	1.87	0.24	0.00	0.00
2750	36.24		26.11	18.92	11.35	7.04	4.28	2.09	0.27	0.00	0.00
3000	36.58		27.48	20.06	12.24	7.65	4.63	2.28	0.32	0.00	0.00
3500	36.35		30.02	22.27	14.08	8.76	5.36	2.66	0.41	0.00	0.00
4000	35.27		32.27	24.30	15.64	9.77	6.01	3.02	0.53	0.01	0.00
5000	31.86			28.08	18.36	11.75	7.35	3.84	0.92	0.07	0.00
6000	28.54				21.04	13.75	8.73	4.78	1.45	0.24	0.02

Base Flows	Base Flow AWS	CR Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0.21	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	2.45	2.45	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2250	4.99		1.62	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2500	7.56		2.82	2.06	0.15	0.00	0.00	0.00	0.00	0.00	0.00
2750	9.33		4.32	3.11	0.15	0.00	0.00	0.00	0.00	0.00	0.00
3000	10.48		5.53	4.17	0.90	0.00	0.00	0.00	0.00	0.00	0.00
3500	12.56		9.06	7.47	3.50	0.00	0.00	0.00	0.00	0.00	0.00
4000	12.82		11.12	9.36	4.67	0.15	0.00	0.00	0.00	0.00	0.00
5000	14.66			13.59	7.94	1.27	0.00	0.00	0.00	0.00	0.00
6000	14.98				10.97	3.62	0.00	0.00	0.00	0.00	0.00

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	2	31	53	73	85	91	96	100	100	100
1800	0	1	32	53	73	85	91	96	100	100	100
2000	0	1	32	52	73	84	90	95	99	100	100
2250	0		32	52	72	83	90	95	99	100	100
2500	0		30	50	70	82	89	95	99	100	100
2750	0		28	48	69	81	88	94	99	100	100
3000	0		25	45	67	79	87	94	99	100	100
3500	0		17	39	61	76	85	93	99	100	100
4000	0		9	31	56	72	83	91	99	100	100
5000	0			12	42	63	77	88	97	100	100
6000	0				26	52	69	83	95	99	100

Base Flows	% at Base Flow	% Loss CR Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	0	100	100	100	100	100	100	100	100	100
1800	0	0	100	100	100	100	100	100	100	100	100
2000	0	0	91	100	100	100	100	100	100	100	100
2250	0		68	75	100	100	100	100	100	100	100
2500	0		63	73	98	100	100	100	100	100	100
2750	0		54	67	98	100	100	100	100	100	100
3000	0		47	60	91	100	100	100	100	100	100
3500	0		28	41	72	100	100	100	100	100	100
4000	0		13	27	64	99	100	100	100	100	100
5000	0			7	46	91	100	100	100	100	100
6000	0				27	76	100	100	100	100	100



Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - Macroinvertebrates persistent and persistent quality habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	4.50	4.50	4.50	4.50	4.50	4.48	4.44	4.36	4.14	3.89	3.77
1800	7.37	7.37	7.37	7.37	7.36	7.31	7.20	6.97	6.58	6.16	5.88
2000	10.59	10.59	10.59	10.58	10.53	10.42	10.17	9.80	9.24	8.42	7.94
2250	14.93		14.91	14.88	14.74	14.46	14.05	13.51	12.57	11.22	10.55
2500	19.45		19.40	19.32	19.01	18.55	18.00	17.24	15.66	13.94	13.03
2750	24.11		23.99	23.81	23.31	22.71	21.96	20.70	18.67	16.52	15.39
3000	28.77		28.55	28.24	27.59	26.81	25.67	23.91	21.51	18.93	17.61
3500	37.69		37.37	36.89	35.77	34.21	32.24	29.76	26.57	23.24	21.47
4000	45.95		45.74	44.90	42.92	40.60	38.05	34.98	31.10	26.99	24.95
5000	57.86			57.12	53.97	50.53	46.95	42.93	38.03	33.01	30.55
6000	64.34				61.27	57.09	52.85	48.34	42.85	37.32	34.60

Base Flows	Base Flow AWS	Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2250	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2500	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2750	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3000	0.10		0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3500	2.52		2.51	2.48	1.56	0.58	0.00	0.00	0.00	0.00	0.00
4000	6.02		6.00	5.33	3.26	1.65	0.44	0.00	0.00	0.00	0.00
5000	15.29				13.80	9.31	5.73	1.43	0.00	0.00	0.00
6000	17.76					12.55	7.84	2.81	0.14	0.00	0.00

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	0	0	0	0	1	1	3	8	14	16
1800	0	0	0	0	0	1	2	5	11	16	20
2000	0	0	0	0	1	2	4	7	13	21	25
2250	0		0	0	1	3	6	9	16	25	29
2500	0		0	1	2	5	7	11	19	28	33
2750	0		1	1	3	6	9	14	23	31	36
3000	0		1	2	4	7	11	17	25	34	39
3500	0		1	2	5	9	14	21	30	38	43
4000	0		0	2	7	12	17	24	32	41	46
5000	0			-8	-2	4	11	19	28	38	42
6000	0				5	11	18	25	33	42	46

Base Flows	% at Base Flow	% Loss Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2250	0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2500	0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2750	0		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3000	0		0	0	100	100	100	100	100	100	100
3500	0		0	2	38	77	100	100	100	100	100
4000	0		0	11	46	73	93	100	100	100	100
5000	0			10	39	63	91	100	100	100	100
6000	0				29	56	84	99	100	100	100

Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - CR Macroinvertebrates persistent and persistent quality habitat.

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	7.13	7.13	7.13	7.13	7.12	7.09	7.04	6.91	6.57	6.17	5.98
1800	11.52	11.52	11.52	11.52	11.49	11.42	11.25	10.89	10.28	9.60	9.11
2000	16.32	16.32	16.32	16.31	16.24	16.07	15.68	15.09	14.18	12.80	11.99
2250	22.67		22.64	22.61	22.40	21.95	21.30	20.43	18.85	16.57	15.48
2500	29.13		29.06	28.93	28.45	27.72	26.84	25.57	22.90	20.05	18.60
2750	35.71		35.53	35.25	34.46	33.51	32.27	30.12	26.72	23.25	21.50
3000	42.19		41.86	41.38	40.35	39.09	37.18	34.20	30.23	26.18	24.17
3500	54.49		53.99	53.22	51.44	48.86	45.57	41.48	36.41	31.36	28.77
4000	65.70		65.36	64.01	60.80	57.00	52.84	47.94	41.93	35.87	32.95
5000	81.03			79.85	74.89	69.52	64.01	57.82	50.50	43.37	39.92
6000	89.05				84.38	78.09	71.71	64.91	56.83	48.95	45.09

Base Flows	Base Flow AWS	CR Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2250	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2500	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2750	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3000	0.15		0.15	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3500	4.26		4.25	4.20	2.80	0.95	0.00	0.00	0.00	0.00	0.00
4000	9.41		9.38	8.33	5.17	2.40	0.64	0.00	0.00	0.00	0.00
5000	22.04			19.70	13.07	7.60	2.09	0.00	0.00	0.00	0.00
6000	24.40				16.84	10.23	4.11	0.20	0.00	0.00	0.00

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	0	0	0	0	1	1	3	8	13	16
1800	0	0	0	0	0	1	2	5	11	17	21
2000	0	0	0	0	0	2	4	8	13	22	27
2250	0		0	0	1	3	6	10	17	27	32
2500	0		0	1	2	5	8	12	21	31	36
2750	0		1	1	3	6	10	16	25	35	40
3000	0		1	2	4	7	12	19	28	38	43
3500	0		1	2	6	10	16	24	33	42	47
4000	0		1	3	7	13	20	27	36	45	50
5000	0			-3	4	10	18	26	35	44	49
6000	0				5	12	19	27	36	45	49

Base Flows	% at Base Flow	% Loss CR Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	0	0	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0	0	0
2250	0		0	0	0	0	0	0	0	0	0
2500	0		0	0	0	0	0	0	0	0	0
2750	0		0	0	0	0	0	0	0	0	0
3000	0		0	0	100	100	100	100	100	100	100
3500	0		0	1	34	78	100	100	100	100	100
4000	0		0	11	45	74	93	100	100	100	100
5000	0			11	41	66	91	100	100	100	100
6000	0				31	58	83	99	100	100	100

Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) and Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) CR  
 GHC Deep-Fast persistent habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12
1800	5.84	5.84	5.84	5.84	5.84	5.84	5.84	5.84	5.84	5.84	5.84
2000	12.81	12.81	12.81	12.81	12.81	12.81	12.81	12.81	12.81	12.81	12.81
2250	23.23	23.23	23.23	23.23	23.23	23.23	23.23	23.23	23.23	23.23	23.23
2500	35.59	35.59	35.59	35.59	35.59	35.59	35.59	35.59	35.59	35.59	35.59
2750	58.54	58.54	58.54	58.54	58.54	58.54	58.54	58.54	58.54	58.54	58.54
3000	82.39	82.39	82.39	82.39	82.39	82.39	82.39	82.39	82.39	82.39	82.39
3500	126.22	126.22	126.22	126.22	126.22	126.22	126.22	126.22	126.22	126.22	126.22
4000	164.09	164.09	164.09	164.09	164.09	164.09	164.09	164.09	164.09	164.09	164.09
5000	230.02	230.02	230.02	230.02	230.02	230.02	230.02	230.02	230.02	230.02	230.02
6000	279.55	279.55	279.55	279.55	279.55	279.55	279.55	279.55	279.55	279.55	279.55

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
1800	9.40	9.40	9.40	9.40	9.40	9.40	9.40	9.40	9.40	9.40	9.40
2000	22.17	22.17	22.17	22.17	22.17	22.17	22.17	22.17	22.17	22.17	22.17
2250	39.39	39.39	39.39	39.39	39.39	39.39	39.39	39.39	39.39	39.39	39.39
2500	57.77	57.77	57.77	57.77	57.77	57.77	57.77	57.77	57.77	57.77	57.77
2750	90.56	90.56	90.56	90.56	90.56	90.56	90.56	90.56	90.56	90.56	90.56
3000	121.90	121.90	121.90	121.90	121.90	121.90	121.90	121.90	121.90	121.90	121.90
3500	174.07	174.07	174.07	174.07	174.07	174.07	174.07	174.07	174.07	174.07	174.07
4000	212.43	212.43	212.43	212.43	212.43	212.43	212.43	212.43	212.43	212.43	212.43
5000	269.29	269.29	269.29	269.29	269.29	269.29	269.29	269.29	269.29	269.29	269.29
6000	311.33	311.33	311.33	311.33	311.33	311.33	311.33	311.33	311.33	311.33	311.33

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	0	0	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0	0	0
2250	0	0	0	0	0	0	0	0	0	0	0
2500	0	0	0	0	0	0	0	0	0	0	0
2750	0	0	0	0	0	0	0	0	0	0	0
3000	0	0	0	0	0	0	0	0	0	0	0
3500	0	0	0	0	0	0	0	0	0	0	0
4000	0	0	0	0	0	0	0	0	0	0	0
5000	0	0	0	0	0	0	0	0	0	0	0
6000	0	0	0	0	0	0	0	0	0	0	0

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	0	0	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0	0	0
2250	0	0	0	0	0	0	0	0	0	0	0
2500	0	0	0	0	0	0	0	0	0	0	0
2750	0	0	0	0	0	0	0	0	0	0	0
3000	0	0	0	0	0	0	0	0	0	0	0
3500	0	0	0	0	0	0	0	0	0	0	0
4000	0	0	0	0	0	0	0	0	0	0	0
5000	0	0	0	0	0	0	0	0	0	0	0
6000	0	0	0	0	0	0	0	0	0	0	0

Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) and Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) CR  
 GHC Deep-Slow persistent habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	456.96	437.74	278.70	214.22	147.22	105.11	85.62	73.48	62.27	56.83	54.87
1800	454.86	439.37	279.74	215.27	148.00	105.62	86.13	73.94	62.73	57.28	55.32
2000	450.53	442.01	281.83	216.68	149.30	106.92	87.14	74.34	63.14	57.69	55.73
2250	441.95		283.01	217.77	149.97	107.59	87.54	74.75	63.54	57.95	55.87
2500	432.23		284.12	218.48	150.41	107.83	87.78	74.99	63.78	58.19	56.11
2750	410.69		284.85	219.15	151.08	108.17	88.12	75.33	64.12	58.53	56.45
3000	387.42		285.09	219.39	151.18	108.27	88.22	75.42	64.22	58.62	56.55
3500	349.57		289.55	223.39	154.45	111.07	90.70	77.90	66.70	61.10	59.02
4000	315.91		291.50	225.11	155.90	112.21	91.34	78.55	67.34	61.75	59.67
5000	257.63			230.15	159.17	115.09	93.96	81.17	69.87	63.85	61.77
6000	214.52				164.94	120.23	98.09	85.08	73.32	67.27	65.19

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	805.02	771.82	359.56	286.44	220.38	175.55	158.31	149.98	142.41	138.98	138.24
1800	801.14	774.15	361.25	288.13	221.68	176.46	159.22	150.65	143.08	139.65	138.91
2000	790.43	776.21	362.62	288.73	222.10	176.89	159.22	150.65	143.08	139.65	138.91
2250	776.77		364.87	290.68	223.46	178.24	160.19	151.62	144.05	140.41	139.49
2500	758.63		366.03	291.85	224.23	178.72	160.66	152.09	144.52	140.88	139.97
2750	693.91		367.70	293.23	225.61	179.43	161.37	152.80	145.23	141.59	140.68
3000	609.03		368.12	293.64	226.03	179.84	161.78	153.22	145.65	142.01	141.09
3500	498.14		376.24	301.15	232.47	185.60	167.41	158.84	151.27	147.63	146.71
4000	421.17		382.99	306.96	237.87	190.55	172.11	163.55	155.98	152.33	151.42
5000	345.56			313.41	241.46	193.58	174.75	166.19	158.48	154.84	153.93
6000	306.66				254.52	205.47	185.00	176.02	167.64	163.94	163.02

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	4	39	53	68	77	81	84	86	88	88
1800	0	3	38	53	67	77	81	84	86	87	88
2000	0	2	37	52	67	76	81	83	86	87	88
2250	0		36	51	66	76	80	83	86	87	87
2500	0		34	49	65	75	80	83	85	87	87
2750	0		31	47	63	74	79	82	84	86	86
3000	0		26	43	61	72	77	81	83	85	85
3500	0		17	36	56	68	74	78	81	83	83
4000	0		8	29	51	64	71	75	79	80	81
5000	0			11	38	55	64	68	73	75	76
6000	0				23	44	54	60	66	69	70

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	4	55	64	73	78	80	81	82	83	83
1800	0	3	55	64	72	78	80	81	82	83	83
2000	0	2	54	63	72	78	80	81	82	82	82
2250	0		53	63	71	77	79	80	81	82	82
2500	0		52	62	70	76	79	80	81	81	82
2750	0		47	58	67	74	77	78	79	80	80
3000	0		40	52	63	70	73	75	76	77	77
3500	0		24	40	53	63	66	68	70	71	71
4000	0		9	27	44	55	59	61	63	64	64
5000	0			9	30	44	49	52	54	55	55
6000	0				17	33	40	43	45	47	47

Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) and Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) CR  
 GHC Shallow-Fast persistent habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	1.96	1.90	0.77	0.31	0.18	0.11	0.05	0.00	0.00	0.00	0.00
1800	2.09	2.04	0.80	0.34	0.21	0.12	0.06	0.00	0.00	0.00	0.00
2000	2.19	2.14	0.84	0.38	0.24	0.13	0.06	0.00	0.00	0.00	0.00
2250	2.20		0.88	0.42	0.27	0.15	0.07	0.00	0.00	0.00	0.00
2500	2.10		0.92	0.46	0.30	0.16	0.08	0.01	0.00	0.00	0.00
2750	2.00		0.96	0.50	0.33	0.18	0.09	0.01	0.01	0.00	0.00
3000	2.24		1.01	0.53	0.36	0.20	0.10	0.02	0.01	0.00	0.00
3500	3.33		1.37	0.63	0.42	0.25	0.15	0.05	0.01	0.00	0.00
4000	2.83		2.04	0.97	0.48	0.31	0.19	0.08	0.02	0.00	0.00
5000	2.54			2.28	0.75	0.46	0.32	0.16	0.07	0.00	0.00
6000	3.93				1.31	0.80	0.50	0.32	0.17	0.00	0.00

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	3.16	3.06	0.99	0.26	0.16	0.11	0.04	0.00	0.00	0.00	0.00
1800	3.36	3.26	1.01	0.29	0.18	0.12	0.04	0.00	0.00	0.00	0.00
2000	3.49	3.40	1.04	0.31	0.20	0.12	0.05	0.00	0.00	0.00	0.00
2250	3.44		1.06	0.34	0.23	0.13	0.05	0.00	0.00	0.00	0.00
2500	3.20		1.09	0.36	0.25	0.13	0.05	0.00	0.00	0.00	0.00
2750	2.97		1.12	0.39	0.27	0.14	0.05	0.01	0.01	0.00	0.00
3000	3.24		1.15	0.42	0.29	0.15	0.06	0.01	0.01	0.00	0.00
3500	4.62		1.60	0.48	0.32	0.17	0.08	0.03	0.01	0.00	0.00
4000	4.10		2.70	0.93	0.35	0.20	0.10	0.05	0.01	0.00	0.00
5000	4.01			3.42	0.73	0.28	0.18	0.08	0.02	0.00	0.00
6000	6.47				1.86	0.53	0.19	0.09	0.02	0.00	0.00

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	3	61	84	91	94	97	100	100	100	100
1800	0	3	62	84	90	94	97	100	100	100	100
2000	0	2	62	83	89	94	97	100	100	100	100
2250	0		60	81	88	93	97	100	100	100	100
2500	0		56	78	86	92	96	100	100	100	100
2750	0		52	75	84	91	96	100	100	100	100
3000	0		55	76	84	91	95	99	100	100	100
3500	0		59	81	87	92	96	98	100	100	100
4000	0		28	66	83	89	93	97	99	100	100
5000	0			10	71	82	87	94	97	100	100
6000	0				67	80	87	92	96	100	100

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	3	69	92	95	96	99	100	100	100	100
1800	0	3	70	91	95	96	99	100	100	100	100
2000	0	3	70	91	94	96	99	100	100	100	100
2250	0		69	90	93	96	99	100	100	100	100
2500	0		66	89	92	96	98	100	100	100	100
2750	0		62	87	91	95	98	100	100	100	100
3000	0		64	87	91	95	98	100	100	100	100
3500	0		65	90	93	96	98	99	100	100	100
4000	0		34	77	92	95	98	99	100	100	100
5000	0			15	82	93	95	98	100	100	100
6000	0				71	92	97	99	100	100	100



Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) and Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) CR  
 GHC Shallow-Slow persistent habitat.

Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	58.61	53.76	36.06	29.45	21.13	15.39	10.64	7.96	4.60	4.21	2.95
1800	56.98	53.76	36.06	29.45	21.13	15.39	10.64	7.96	4.60	4.21	2.95
2000	55.69	54.09	36.39	29.79	21.47	15.73	10.98	7.96	4.60	4.21	2.95
2250	53.85		36.39	29.79	21.47	15.73	10.98	7.96	4.60	4.21	2.95
2500	51.21		36.39	29.79	21.47	15.73	10.98	7.96	4.60	4.21	2.95
2750	49.81		36.39	29.79	21.47	15.73	10.98	7.96	4.60	4.21	2.95
3000	48.88		36.39	29.79	21.47	15.73	10.98	7.96	4.60	4.21	2.95
3500	42.86		36.39	29.79	21.47	15.73	10.98	7.96	4.60	4.21	2.95
4000	39.25		36.39	29.79	21.47	15.73	10.98	7.96	4.60	4.21	2.95
5000	34.01			30.88	22.56	16.82	12.07	9.06	4.79	4.21	2.95
6000	28.91				22.96	17.19	12.29	9.27	4.85	4.21	2.95

Base Flows	Base Flow AWS	CR Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	97.82	90.25	61.14	49.13	33.03	22.61	13.76	10.06	5.20	4.70	3.37
1800	95.49	90.25	61.14	49.13	33.03	22.61	13.76	10.06	5.20	4.70	3.37
2000	94.11	90.93	61.82	49.81	33.71	23.29	14.44	10.06	5.20	4.70	3.37
2250	90.55		61.82	49.81	33.71	23.29	14.44	10.06	5.20	4.70	3.37
2500	86.81		61.82	49.81	33.71	23.29	14.44	10.06	5.20	4.70	3.37
2750	83.79		61.82	49.81	33.71	23.29	14.44	10.06	5.20	4.70	3.37
3000	82.16		61.82	49.81	33.71	23.29	14.44	10.06	5.20	4.70	3.37
3500	73.22		61.82	49.81	33.71	23.29	14.44	10.06	5.20	4.70	3.37
4000	66.79		61.82	49.81	33.71	23.29	14.44	10.06	5.20	4.70	3.37
5000	56.88			51.39	35.29	24.87	16.02	11.64	5.48	4.70	3.37
6000	48.12				35.79	25.32	16.30	11.92	5.76	4.70	3.37

Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	8	38	50	64	74	82	86	92	93	95
1800	0	6	37	48	63	73	81	86	92	93	95
2000	0	3	35	47	61	72	80	86	92	92	95
2250	0		32	45	60	71	80	85	91	92	95
2500	0		29	42	58	69	79	84	91	92	94
2750	0		27	40	57	68	78	84	91	92	94
3000	0		26	39	56	68	78	84	91	91	94
3500	0		15	31	50	63	74	81	89	90	93
4000	0		7	24	45	60	72	80	88	89	92
5000	0			9	34	51	65	73	86	88	91
6000	0				21	41	57	68	83	85	90

Base Flows	% at Base Flow	% Loss CR Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	8	37	50	66	77	86	90	95	95	97
1800	0	5	36	49	65	76	86	89	95	95	96
2000	0	3	34	47	64	75	85	89	94	95	96
2250	0		32	45	63	74	84	89	94	95	96
2500	0		29	43	61	73	83	88	94	95	96
2750	0		26	41	60	72	83	88	94	94	96
3000	0		25	39	59	72	82	88	94	94	96
3500	0		16	32	54	68	80	86	93	94	95
4000	0		7	25	50	65	78	85	92	93	95
5000	0			10	38	56	72	80	90	92	94
6000	0				26	47	66	75	88	90	93

Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) Co-occurring mussels persistent and persistent quality habitat.

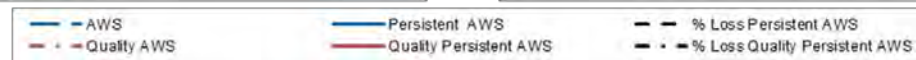
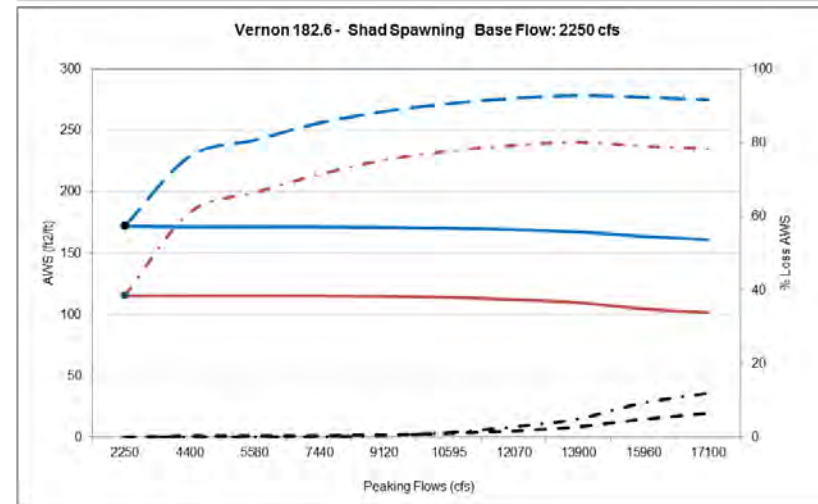
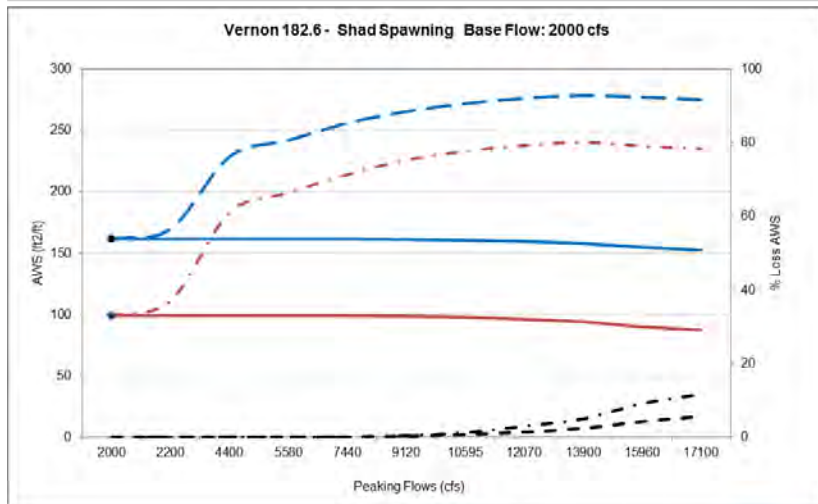
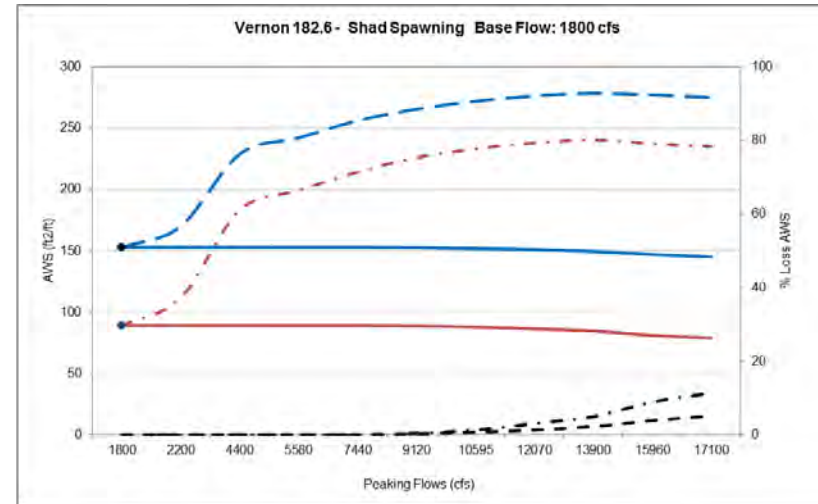
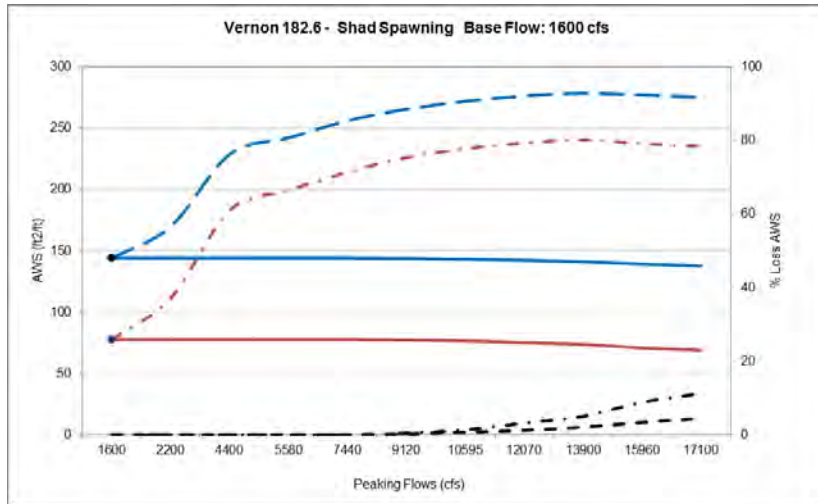
Base Flows	Base Flow AWS	Persistent AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	200.73	192.27	173.64	159.49	134.08	114.17	99.18	86.65	74.16	63.41	58.80
1800	199.76	194.21	175.18	160.94	135.32	115.36	100.34	87.75	75.16	64.31	59.65
2000	198.35	195.74	176.56	162.14	136.33	116.30	101.25	88.62	75.99	65.07	60.39
2250	197.14		178.27	163.59	137.58	117.50	102.34	89.63	76.92	65.94	61.23
2500	195.90		179.51	164.70	138.57	118.45	103.24	90.46	77.70	66.65	61.93
2750	195.43		180.96	165.92	139.62	119.40	104.12	91.25	78.45	67.32	62.57
3000	194.73		182.12	166.95	140.50	120.23	104.91	91.99	79.15	67.97	63.20
3500	193.43		184.43	168.96	142.32	121.90	106.46	93.48	80.52	69.27	64.47
4000	190.95		186.41	170.85	144.03	123.45	107.92	94.86	81.73	70.41	65.59
5000	182.40			174.19	147.12	126.37	110.75	97.43	84.03	72.61	67.70
6000	172.07				150.92	130.03	113.99	100.34	86.71	75.04	70.04

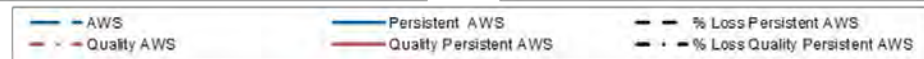
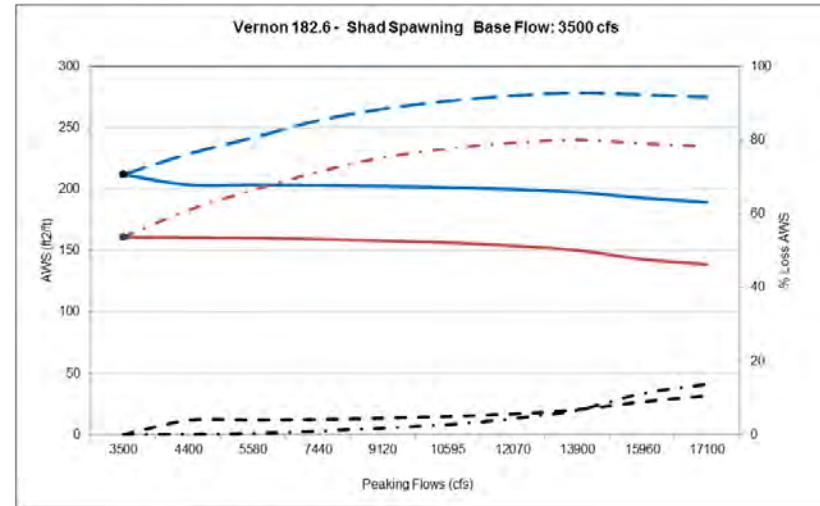
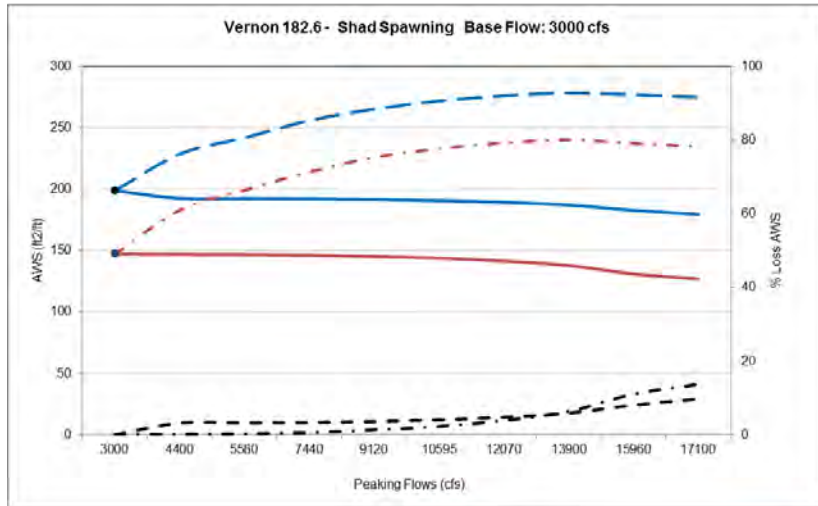
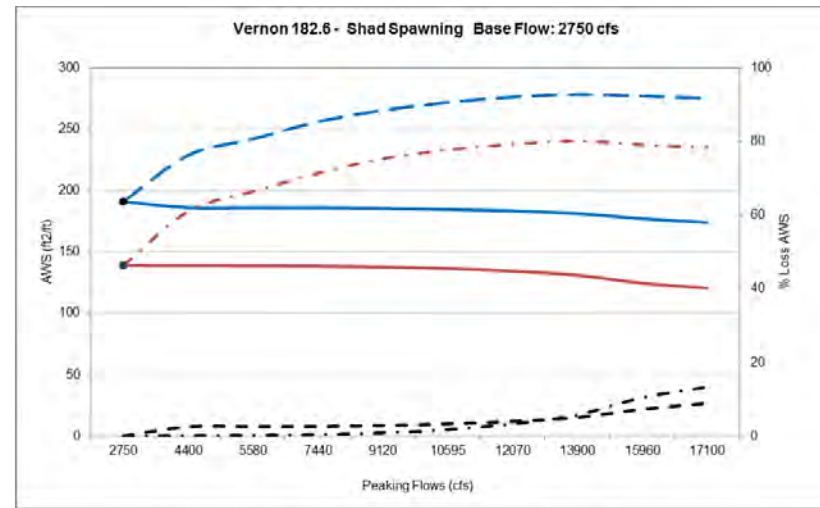
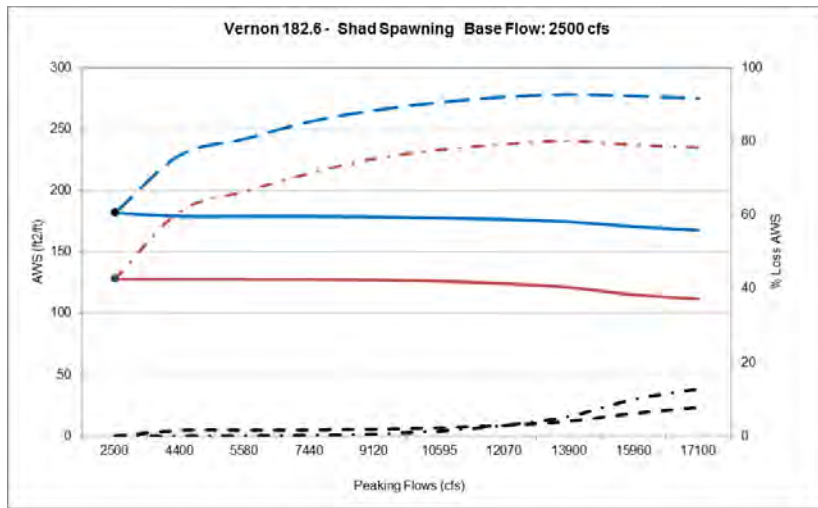
Base Flows	Base Flow AWS	Persistent Quality AWS (ft <sup>2</sup> /ft)									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	138.79	137.41	123.53	103.28	77.10	59.43	45.15	33.98	24.33	20.19	18.93
1800	140.01	139.12	124.93	104.34	78.01	60.32	46.04	34.83	25.09	20.94	19.66
2000	140.56	140.48	126.19	105.42	78.56	60.86	46.56	35.33	25.57	21.29	20.01
2250	142.25		127.92	106.93	79.07	61.36	47.05	35.80	26.04	21.74	20.46
2500	143.58		129.45	108.40	79.87	62.14	47.79	36.51	26.76	22.30	20.98
2750	144.88		130.43	109.17	80.52	62.43	48.06	36.77	27.01	22.54	21.22
3000	144.62		130.84	109.48	80.72	62.60	48.22	36.92	27.15	22.68	21.35
3500	144.32		132.80	111.07	82.11	63.60	49.17	37.82	28.04	23.55	22.23
4000	140.52		134.43	112.75	83.61	64.70	49.97	38.47	28.67	24.18	22.85
5000	126.00			115.79	86.50	67.43	52.51	40.73	30.80	26.28	24.73
6000	110.49				90.25	71.02	55.48	43.21	33.10	28.51	26.93

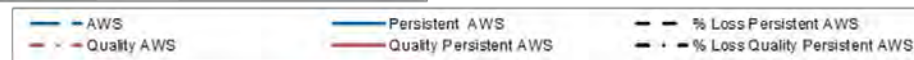
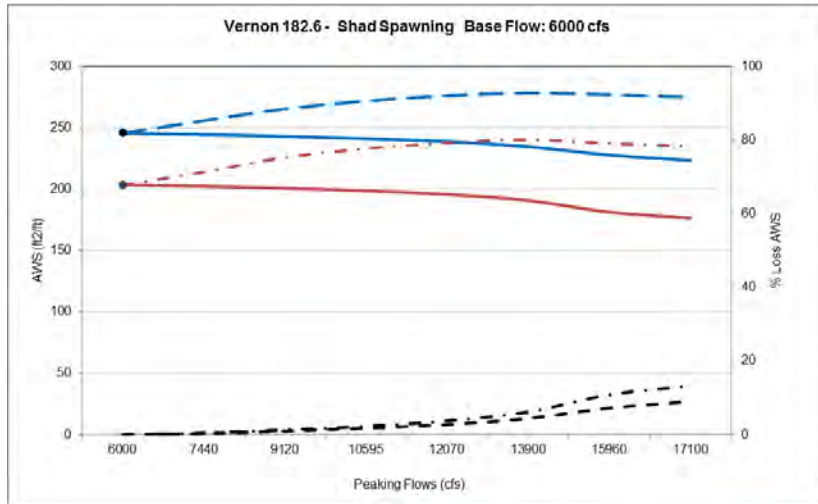
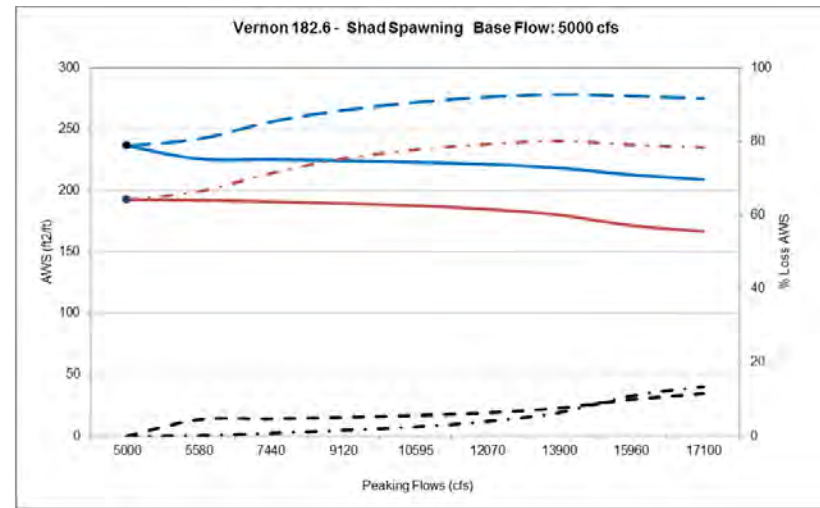
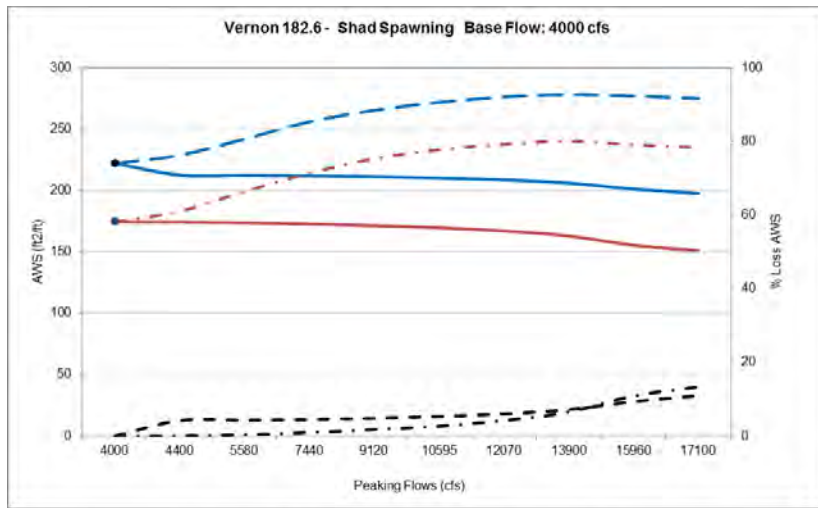
Base Flows	% at Base Flow	% Loss Persistent AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	4	13	21	33	43	51	57	63	68	71
1800	0	3	12	19	32	42	50	56	62	68	70
2000	0	1	11	18	31	41	49	55	62	67	70
2250	0		10	17	30	40	48	55	61	67	69
2500	0		8	16	29	40	47	54	60	66	68
2750	0		7	15	29	39	47	53	60	66	68
3000	0		6	14	28	38	46	53	59	65	68
3500	0		5	13	26	37	45	52	58	64	67
4000	0		2	11	25	35	43	50	57	63	66
5000	0			5	19	31	39	47	54	60	63
6000	0				12	24	34	42	50	56	59

Base Flows	% at Base Flow	% Loss Persistent Quality AWS									
		Peaking Flows									
		2200	4400	5580	7440	9120	10595	12070	13900	15960	17100
1600	0	1	11	26	44	57	67	76	82	85	86
1800	0	1	11	25	44	57	67	75	82	85	86
2000	0	0	10	25	44	57	67	75	82	85	86
2250	0		10	25	44	57	67	75	82	85	86
2500	0		10	25	44	57	67	75	81	84	85
2750	0		10	25	44	57	67	75	81	84	85
3000	0		10	24	44	57	67	74	81	84	85
3500	0		8	23	43	56	66	74	81	84	85
4000	0		4	20	40	54	64	73	80	83	84
5000	0			8	31	46	58	68	76	79	80
6000	0				18	36	50	61	70	74	76

Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - American Shad spawning persistent and persistent quality habitat.

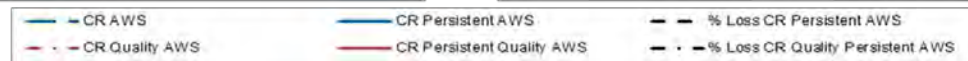
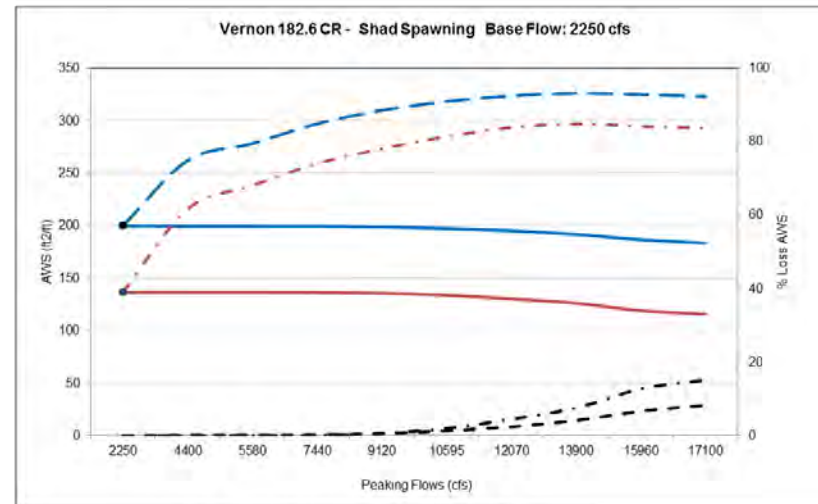
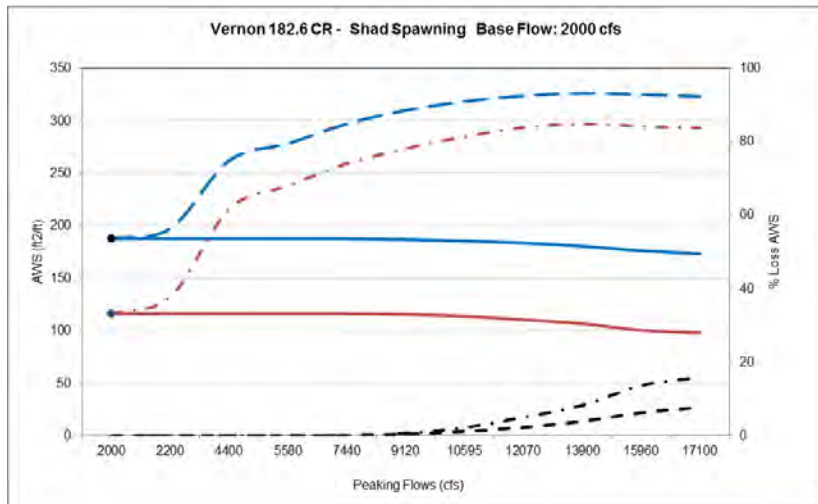
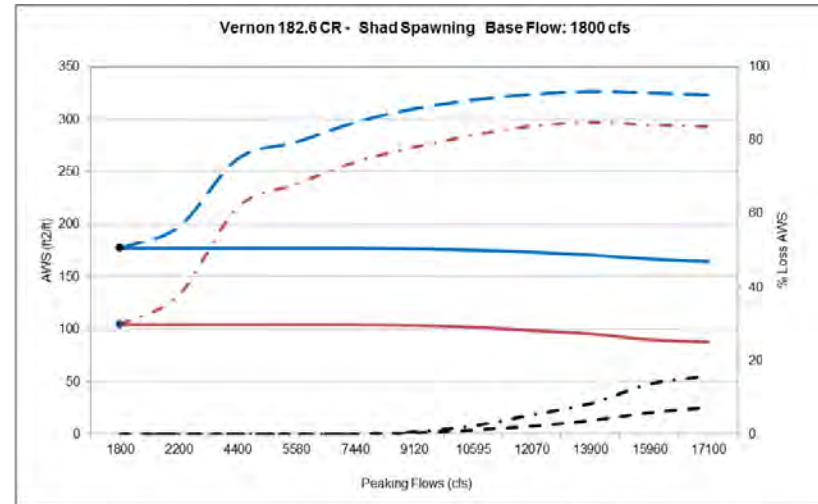
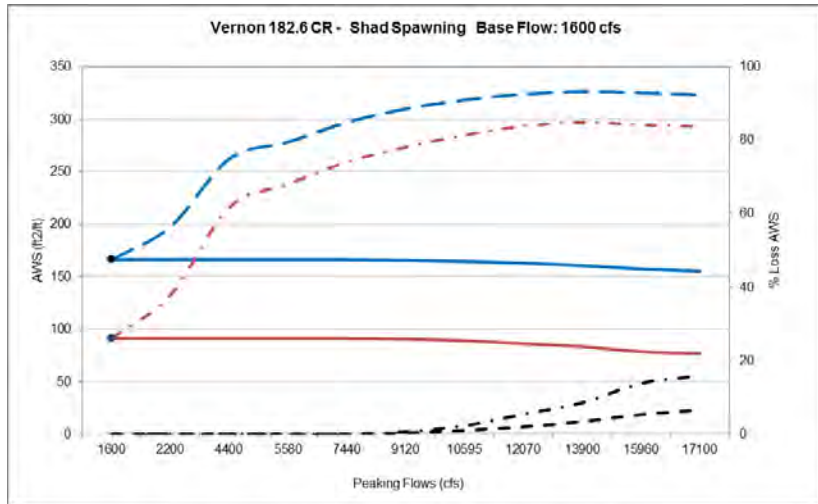


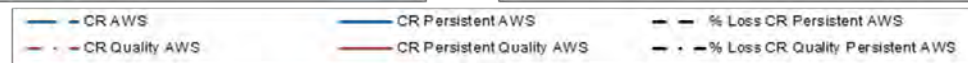
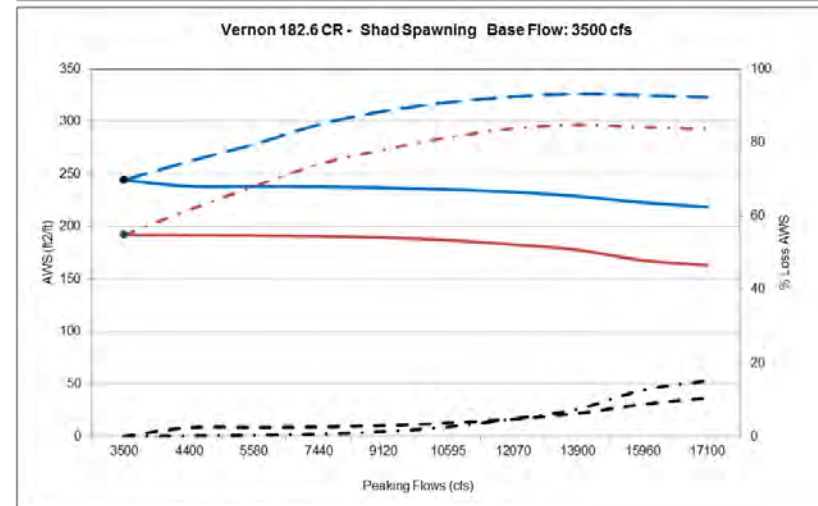
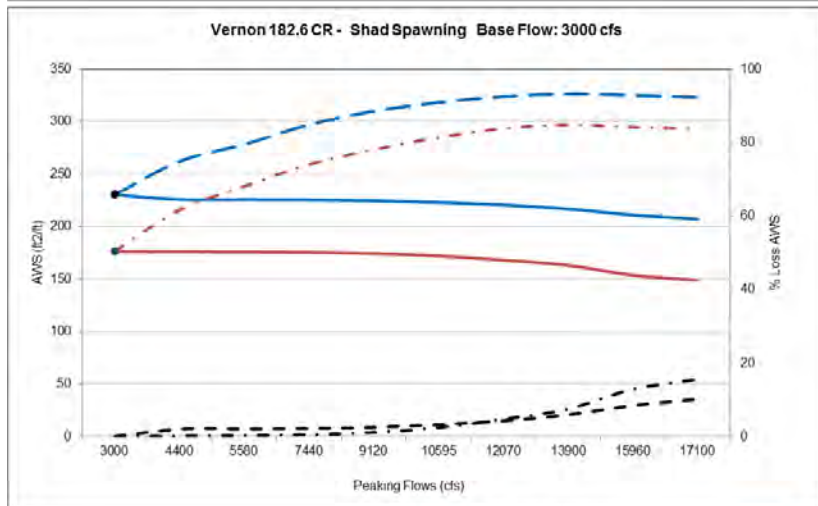
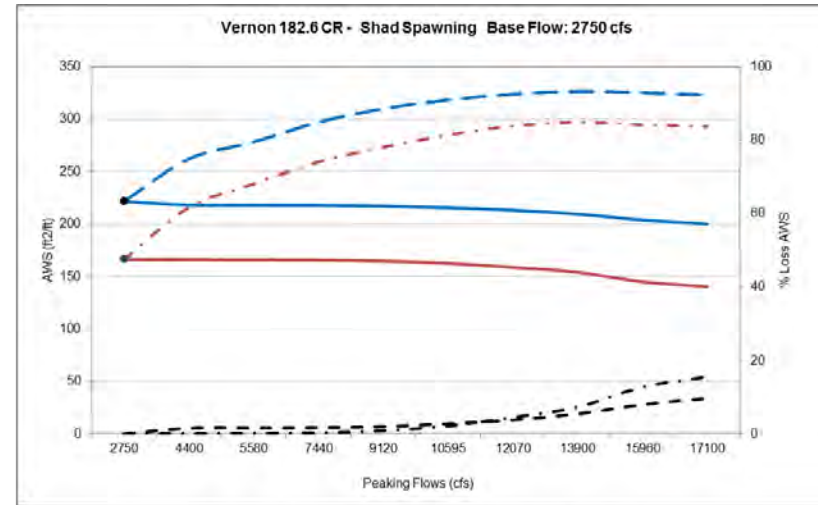
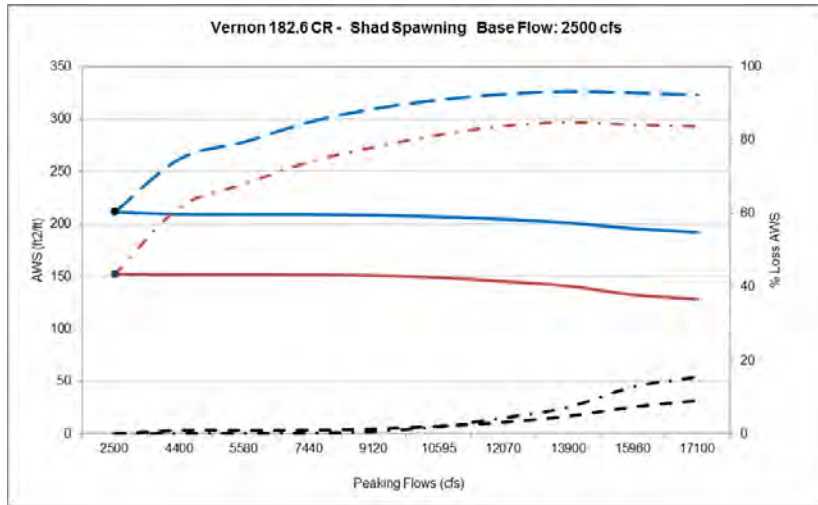


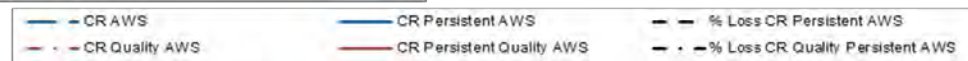
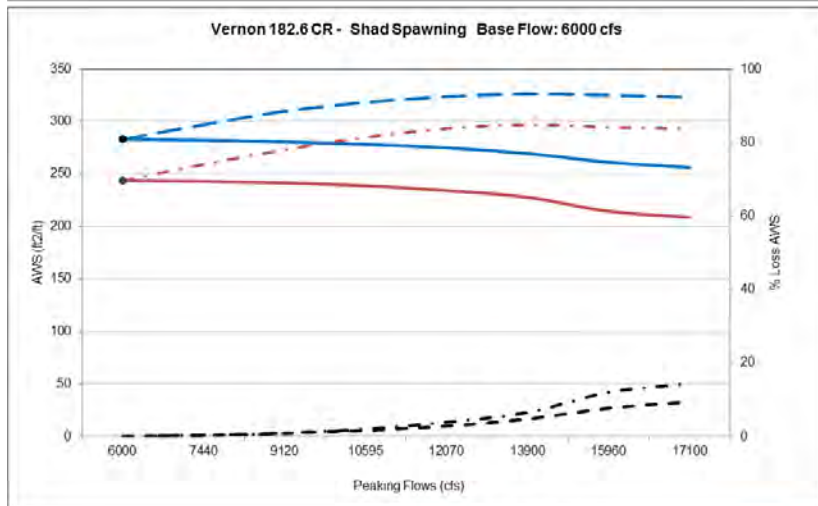
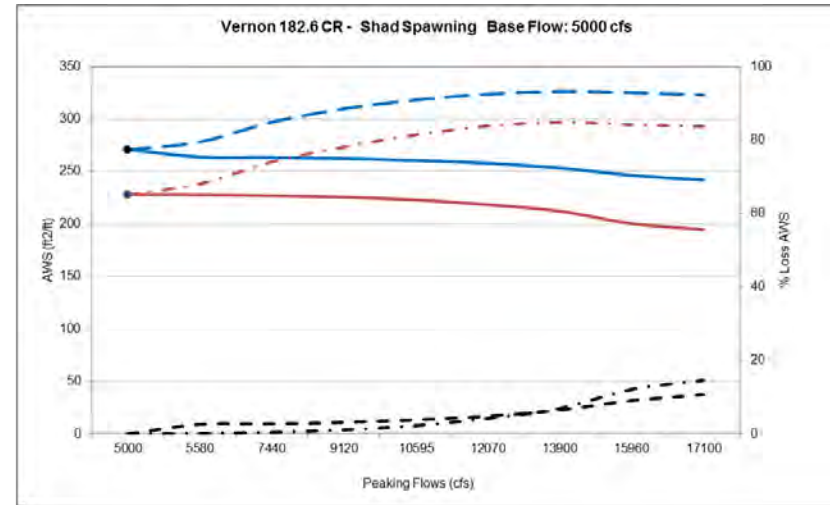
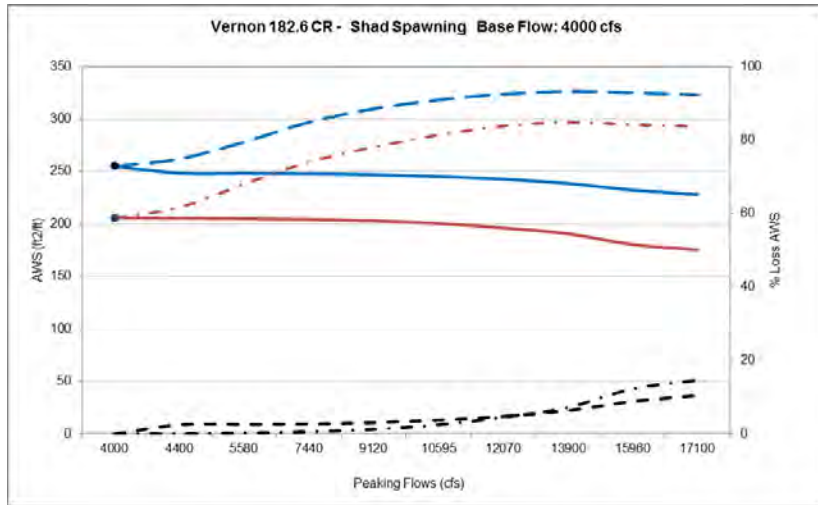




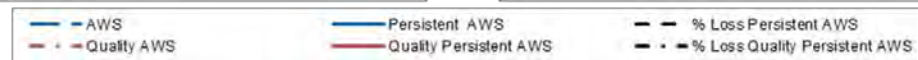
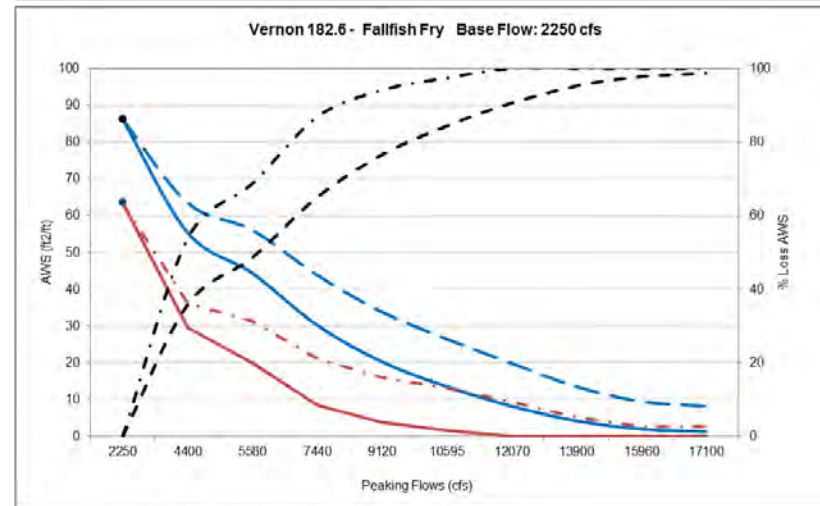
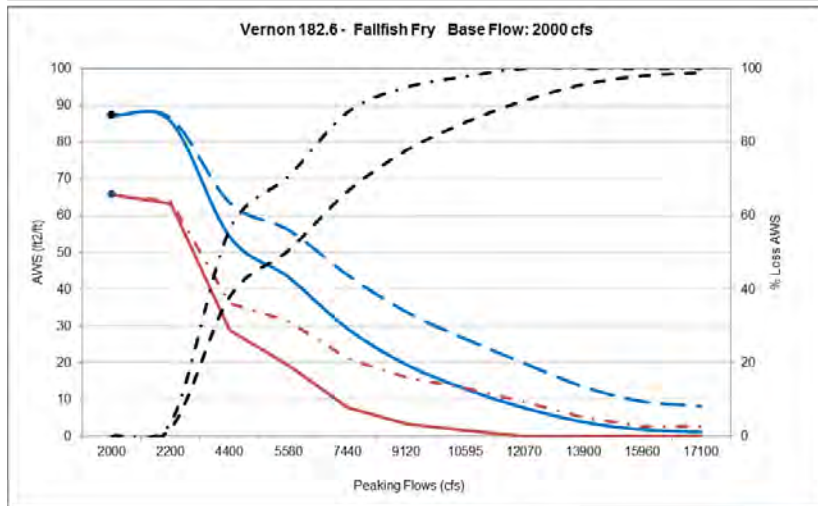
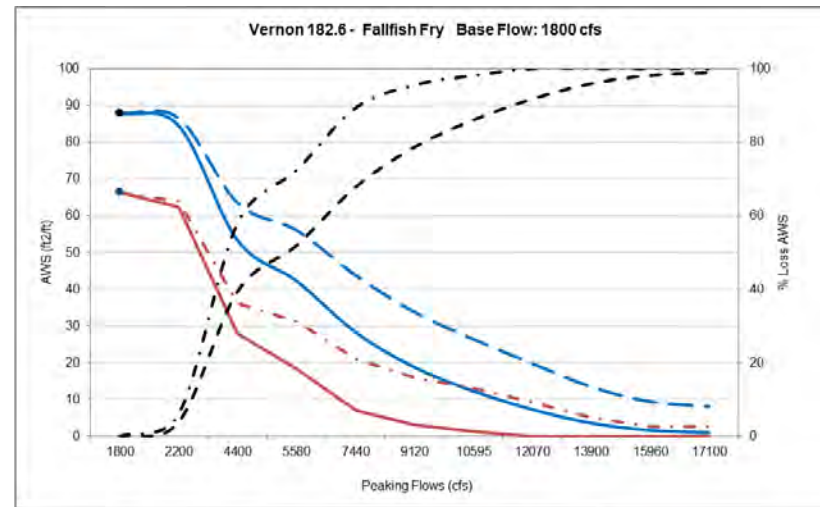
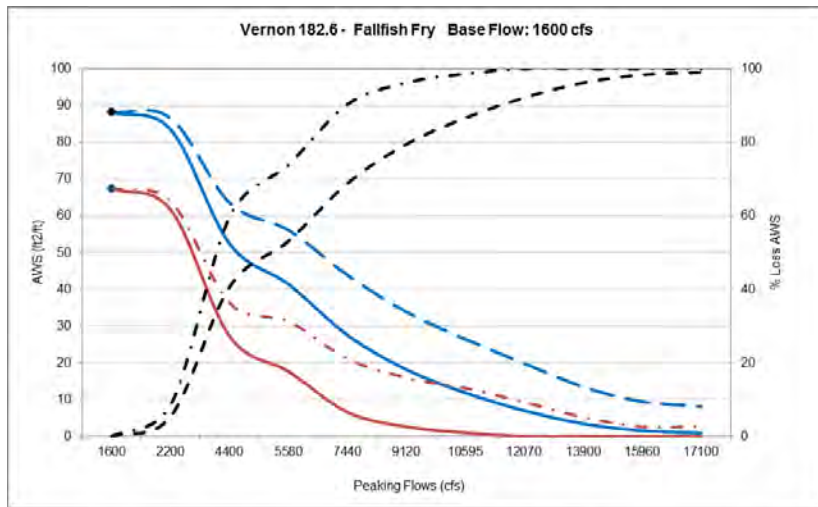
Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - CR American Shad spawning persistent and persistent quality habitat.



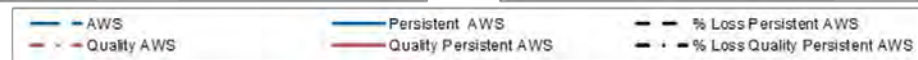
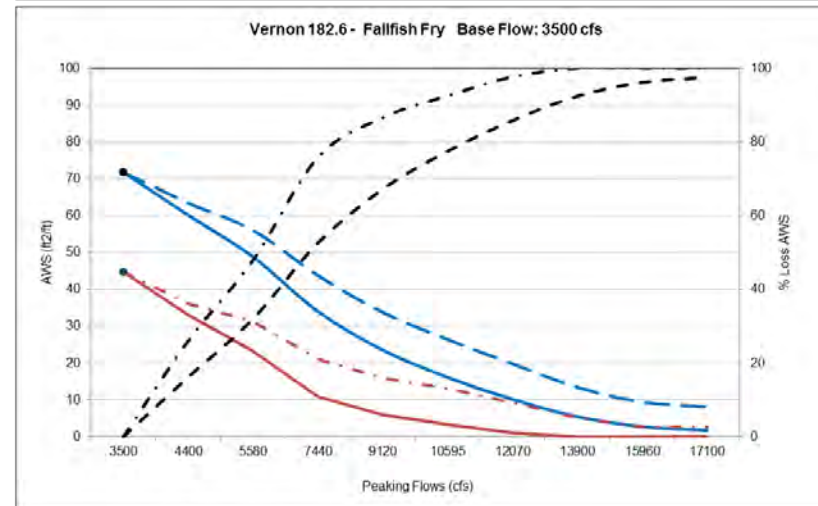
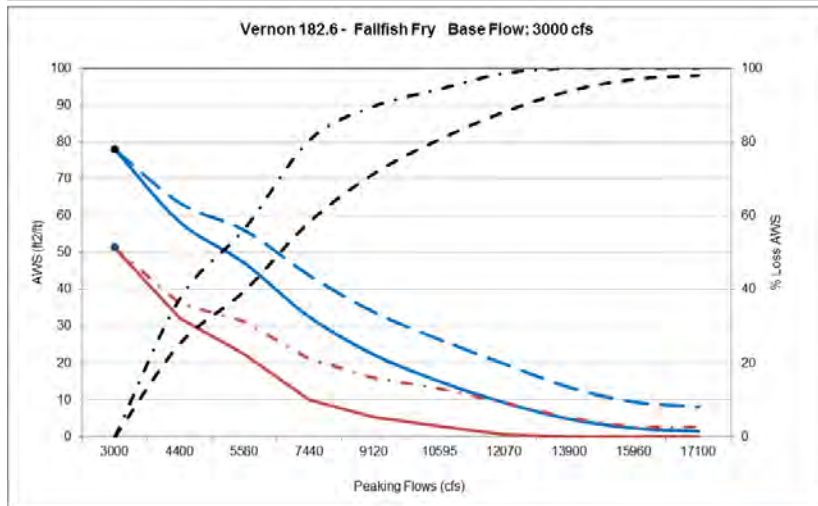
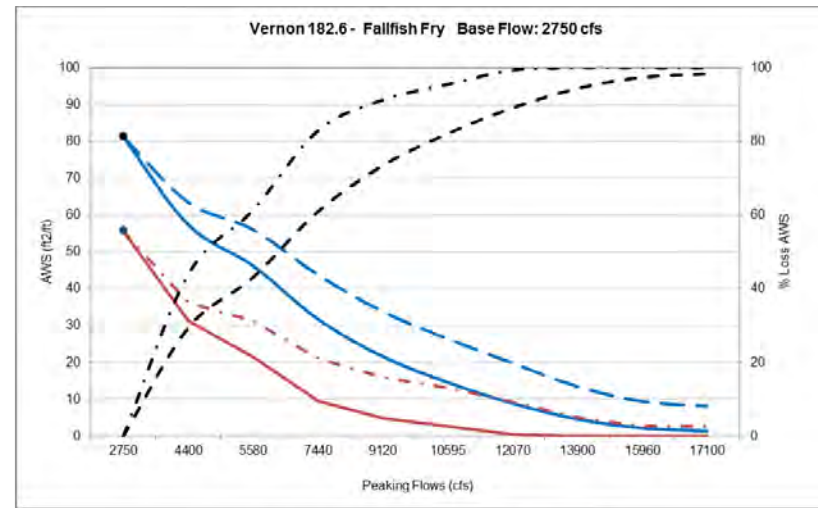
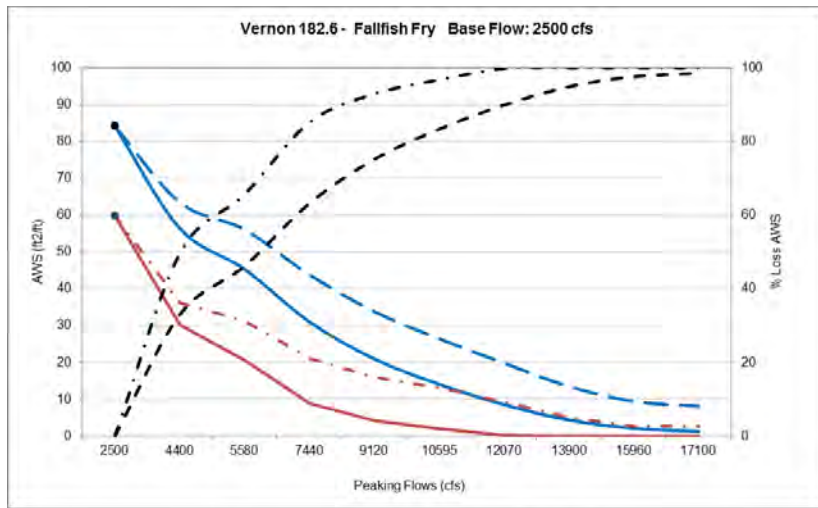




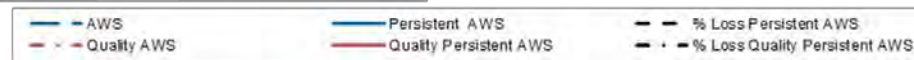
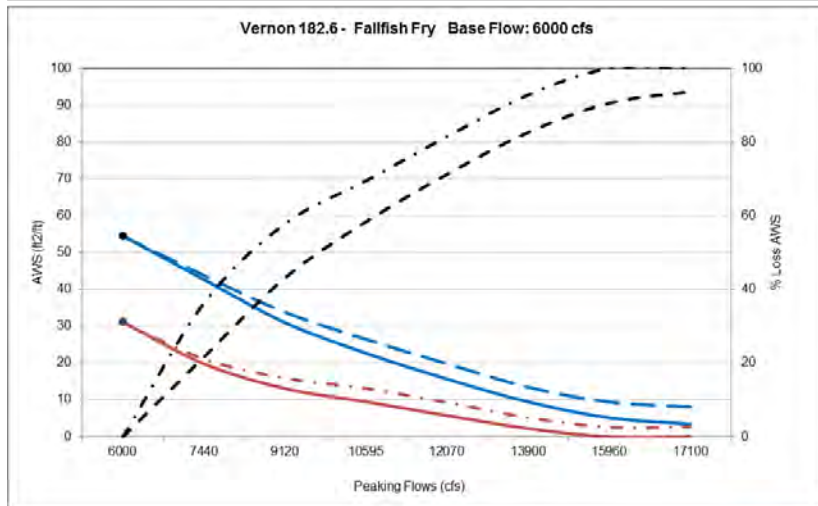
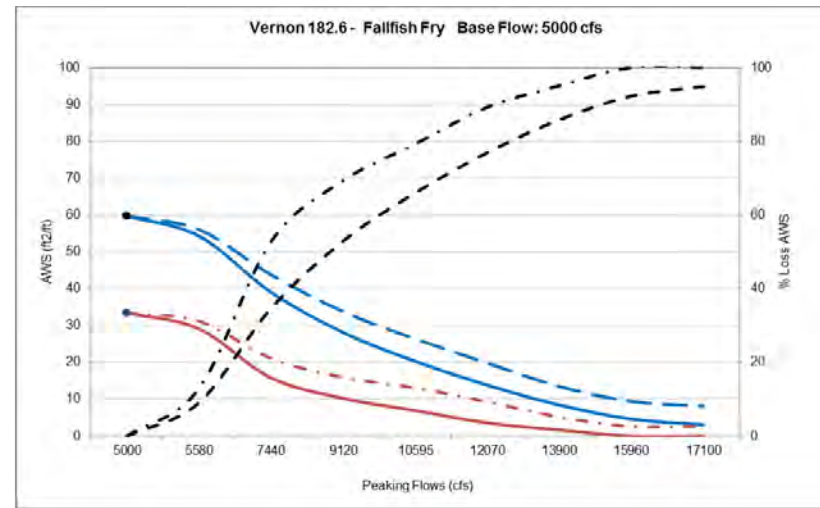
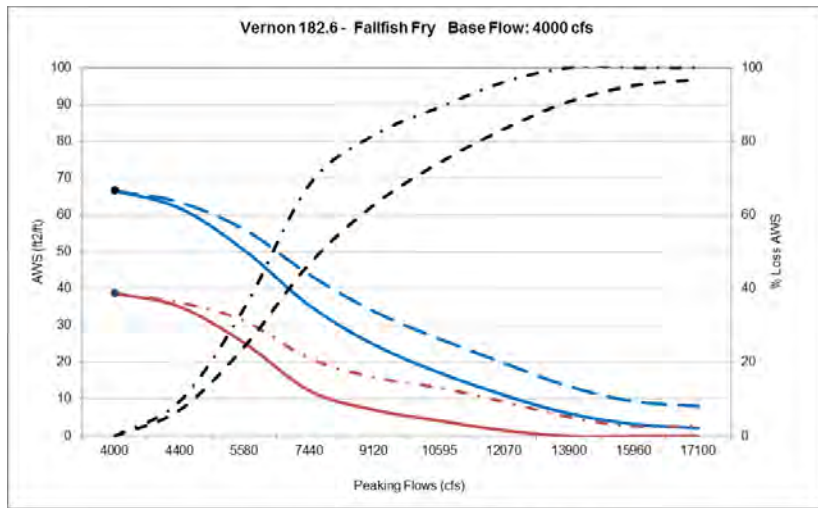
Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - Fallfish fry persistent and persistent quality habitat.



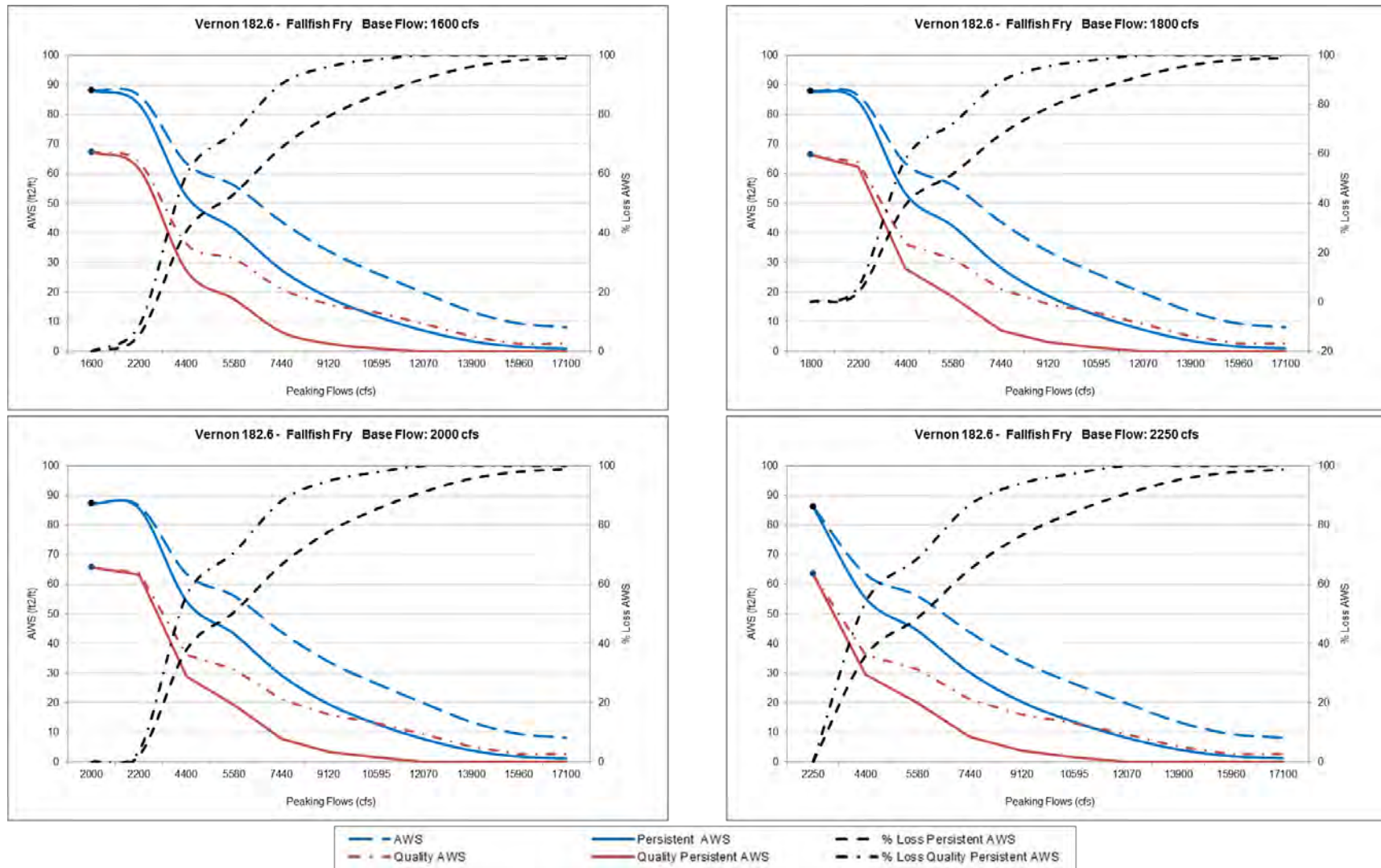


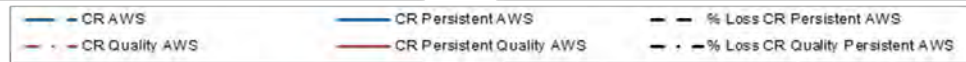
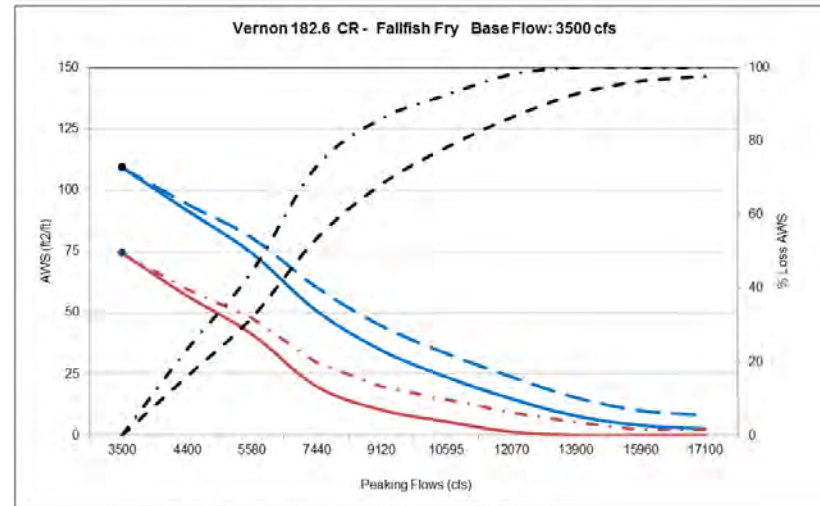
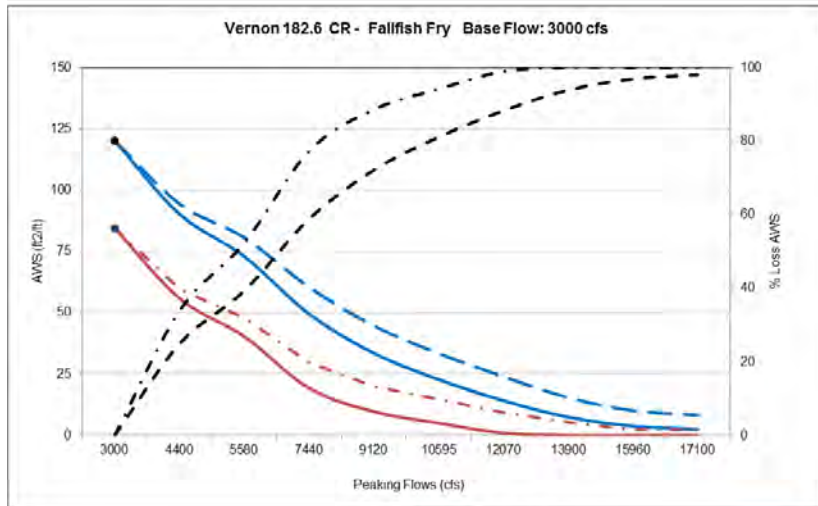
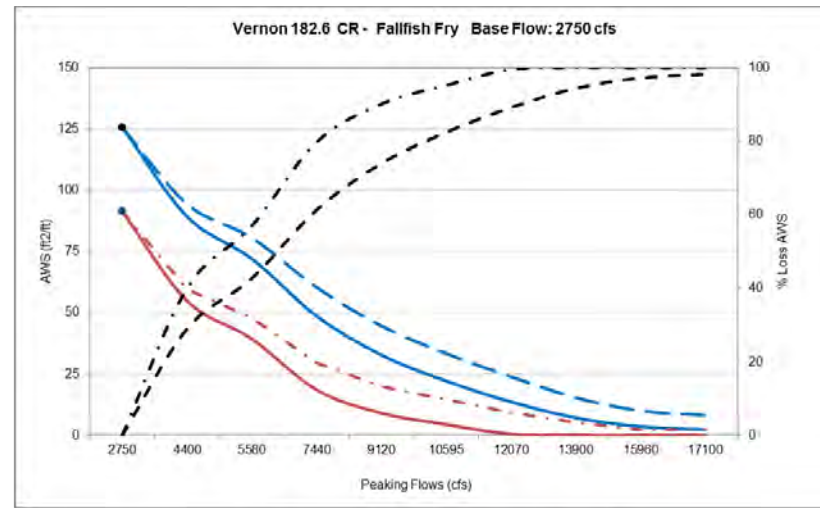
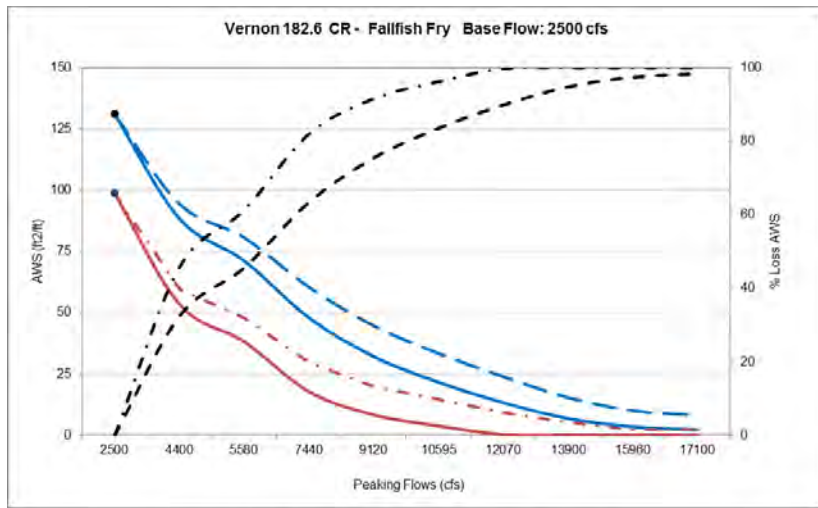


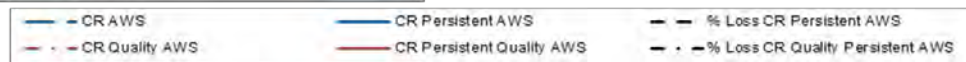
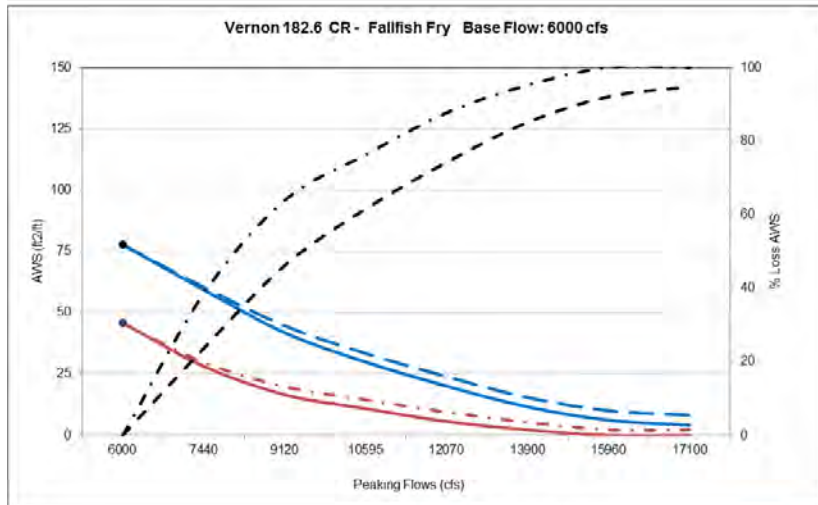
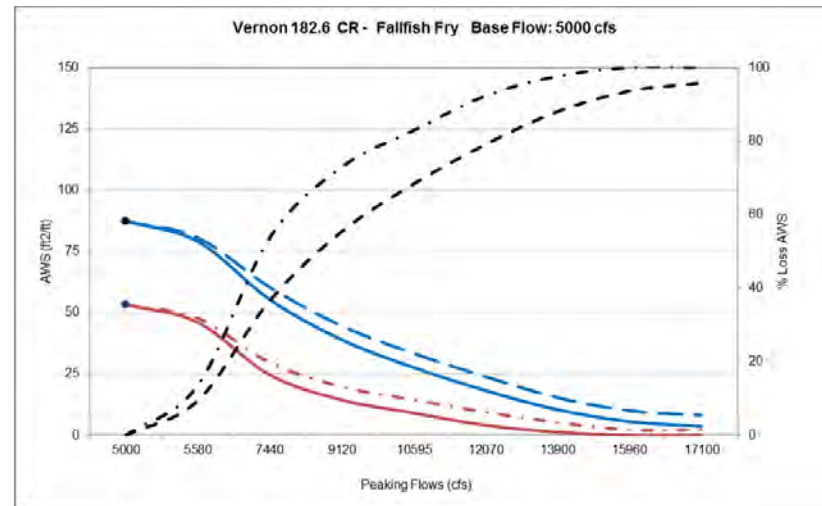
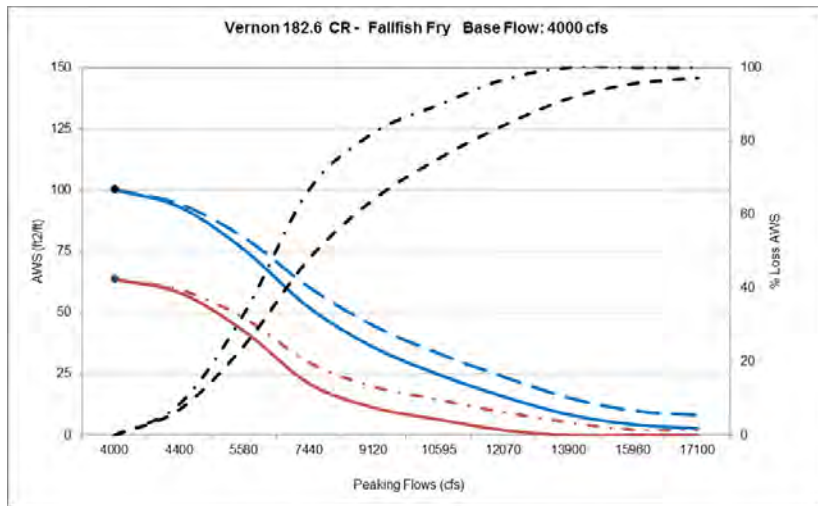




Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - CR Fallfish fry persistent and persistent quality habitat.

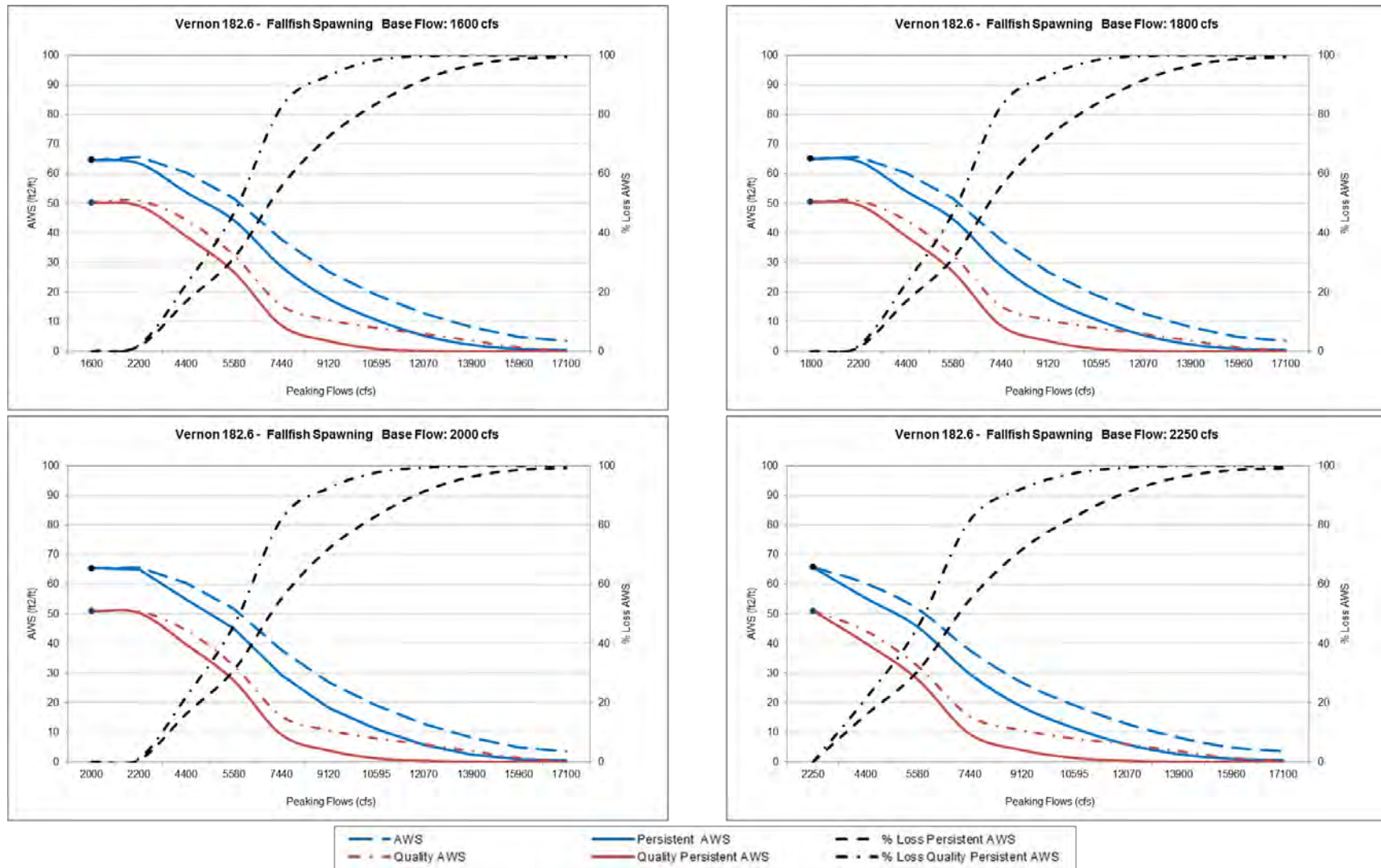




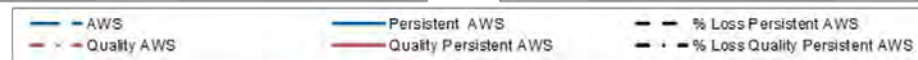
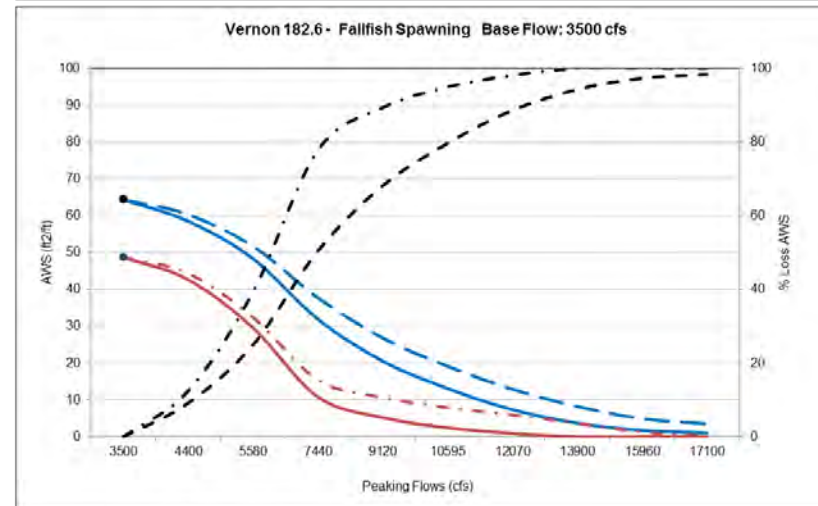
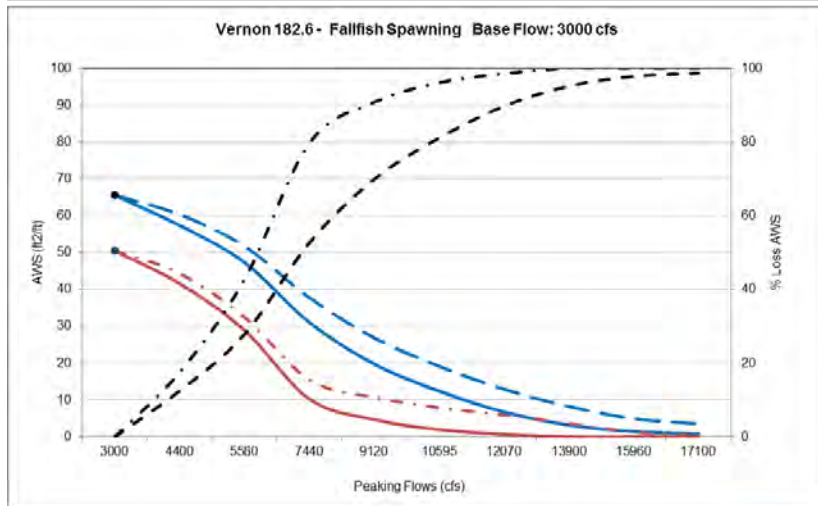
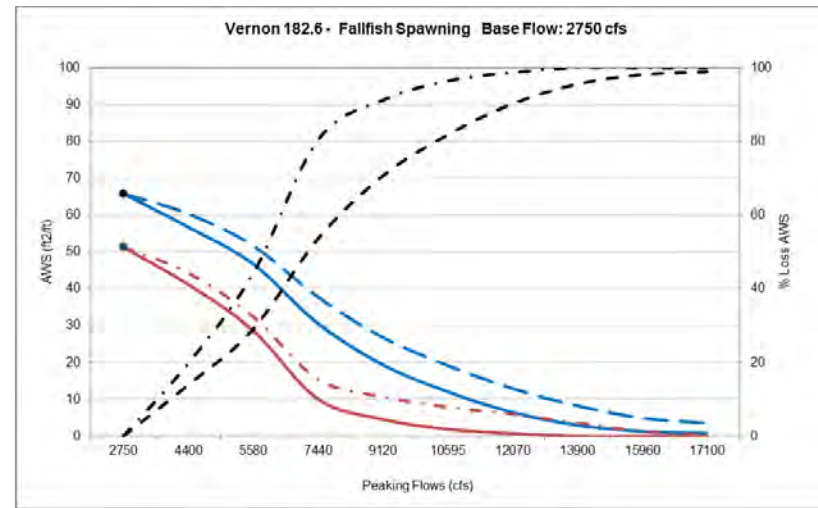
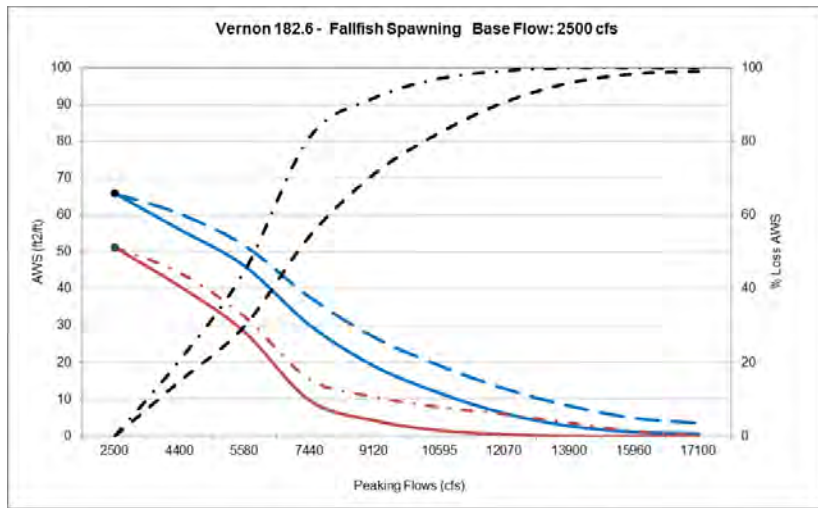


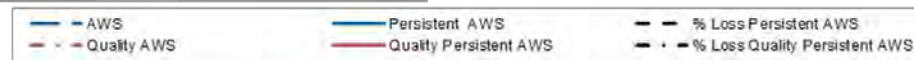
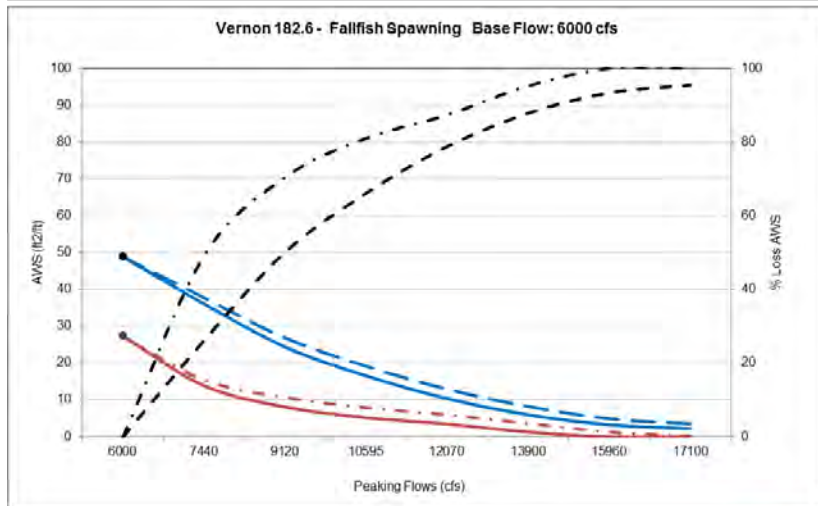
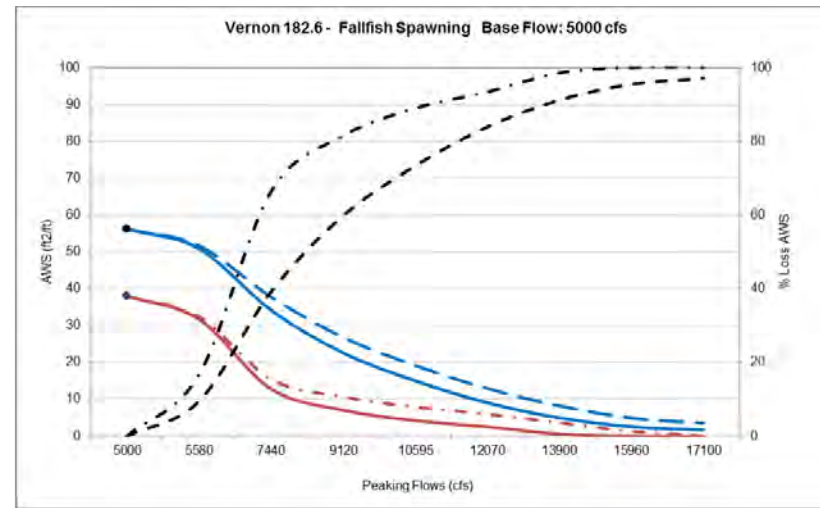
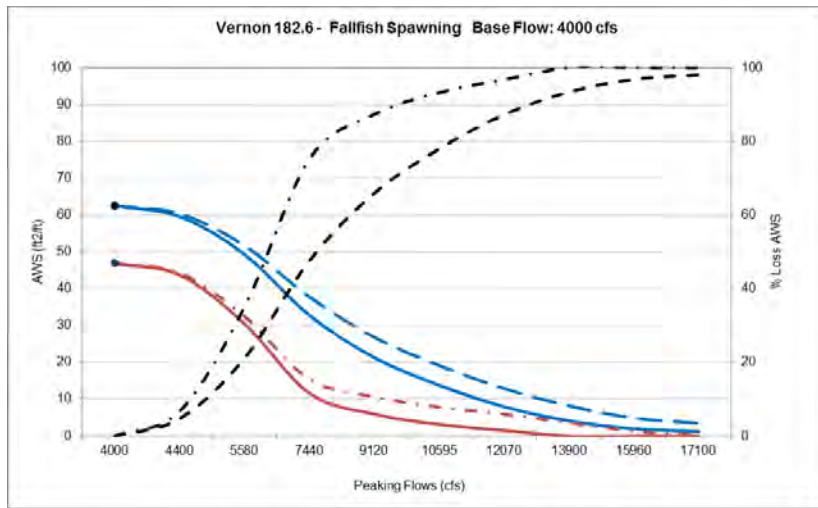


Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - Fallfish spawning persistent and persistent quality habitat.

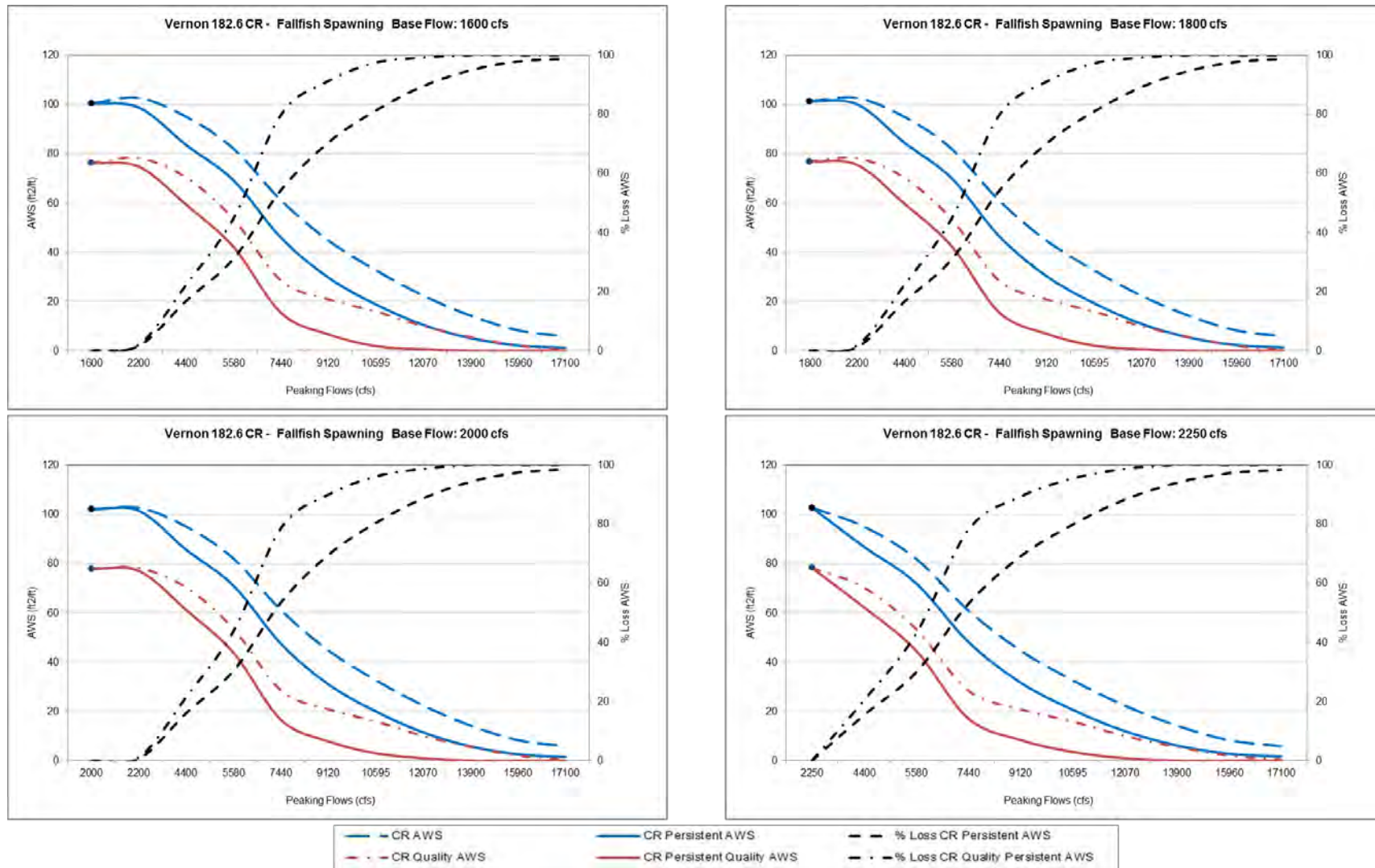


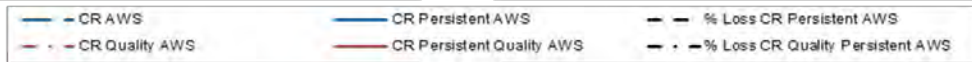
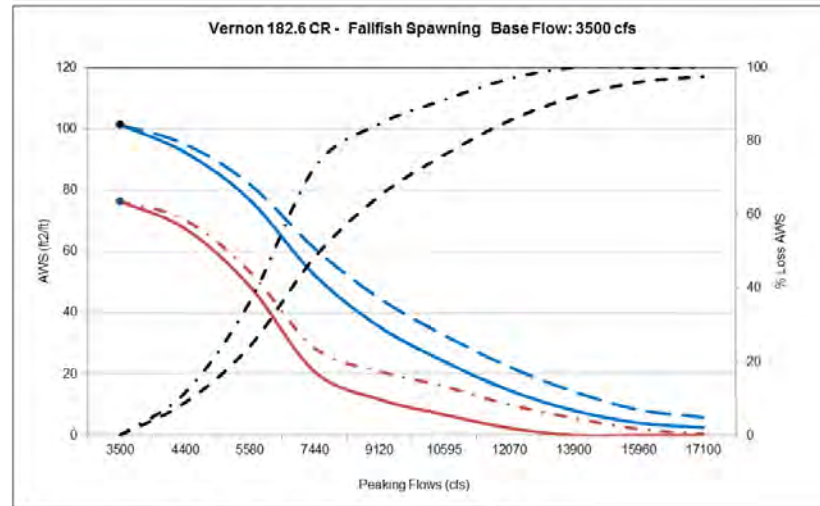
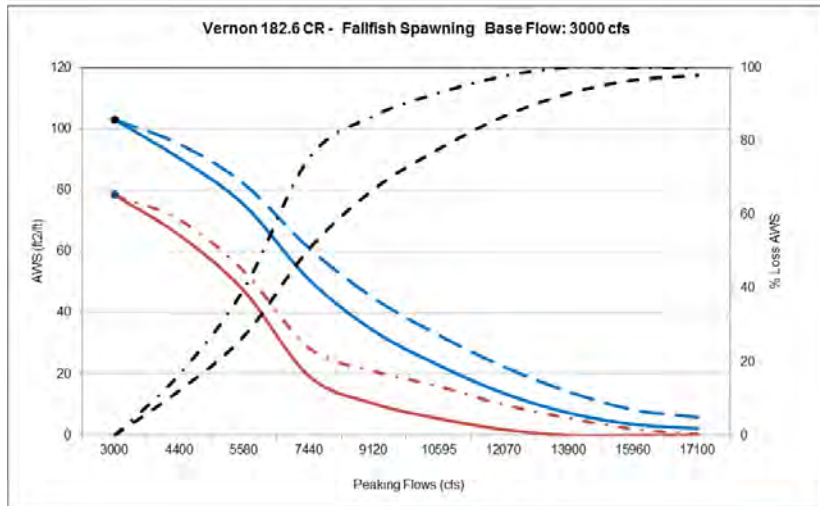
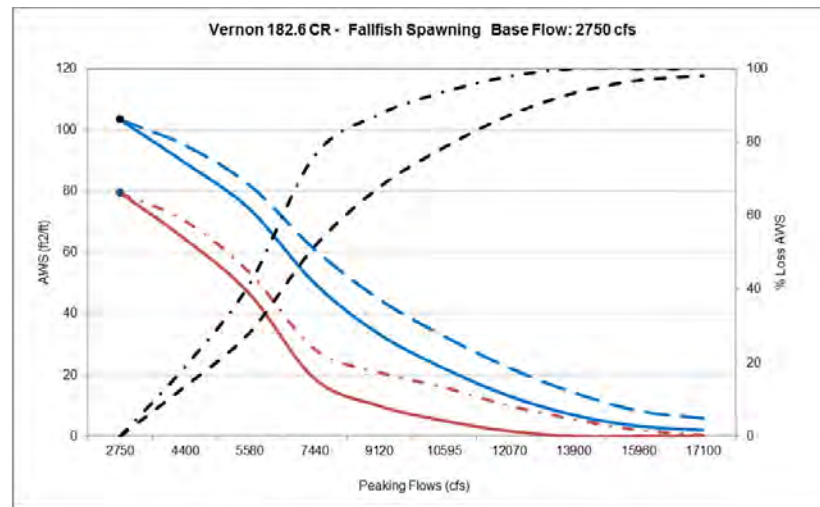
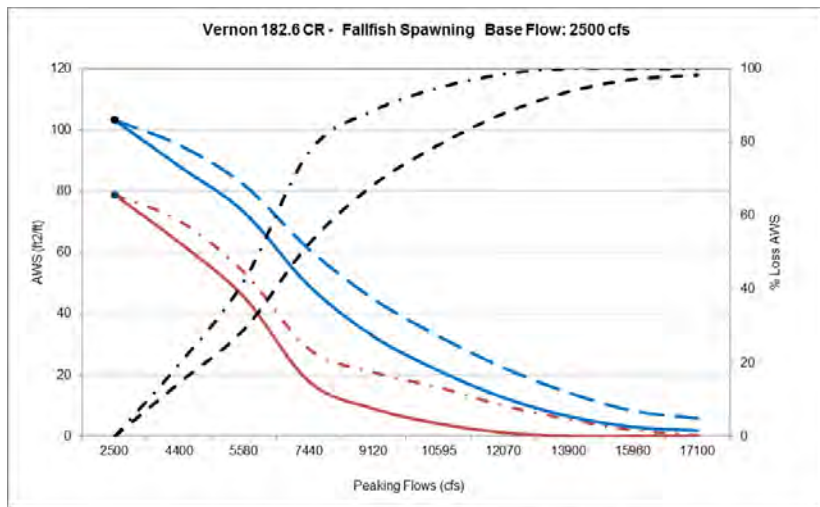




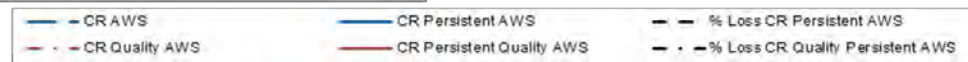
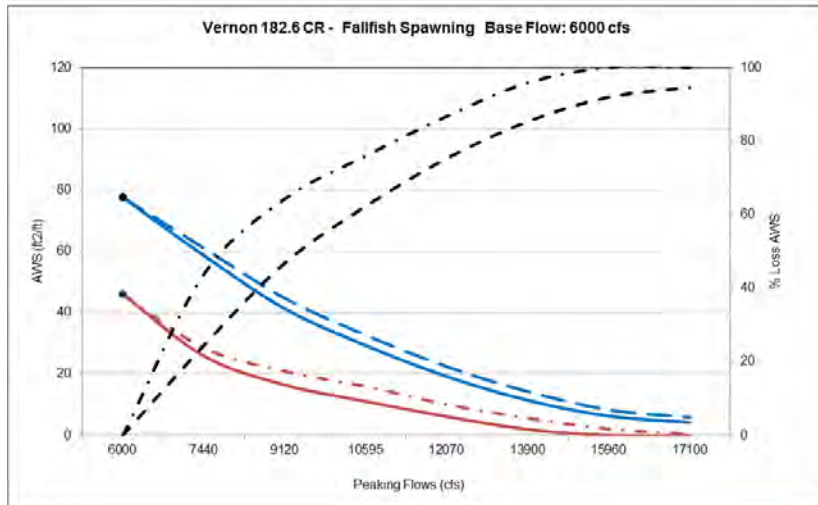
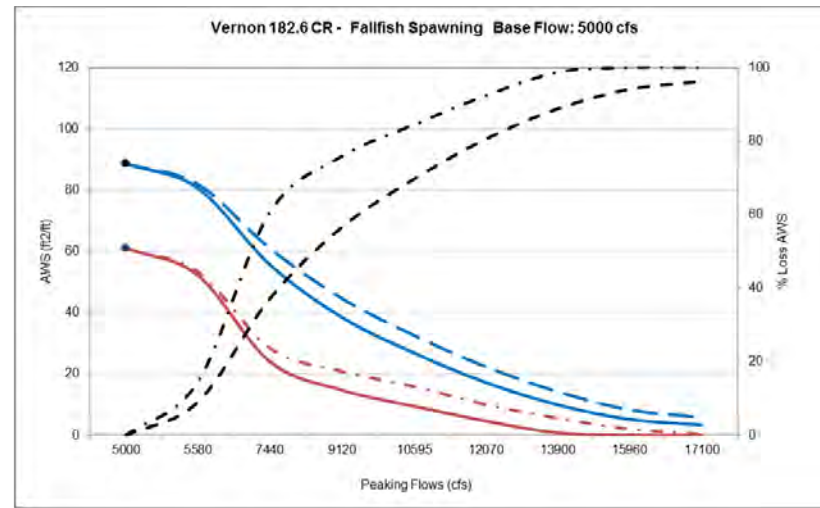
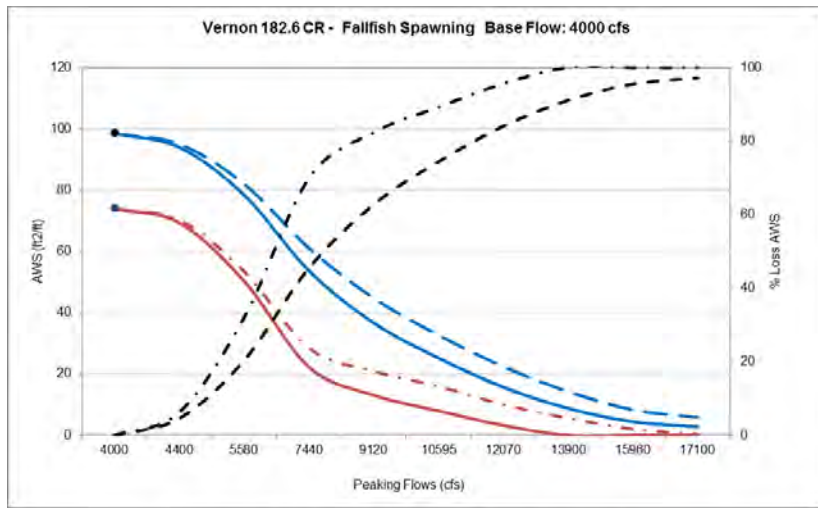


Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - CR Fallfish spawning persistent and persistent quality habitat.



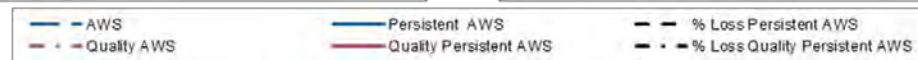
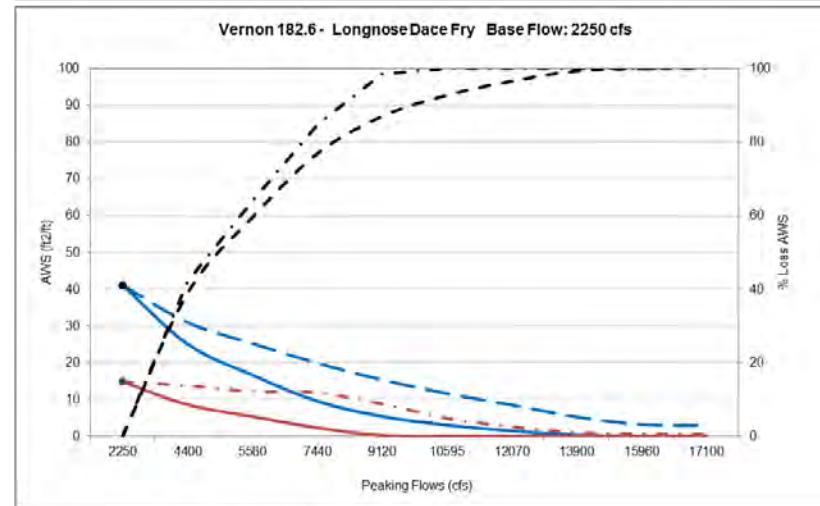
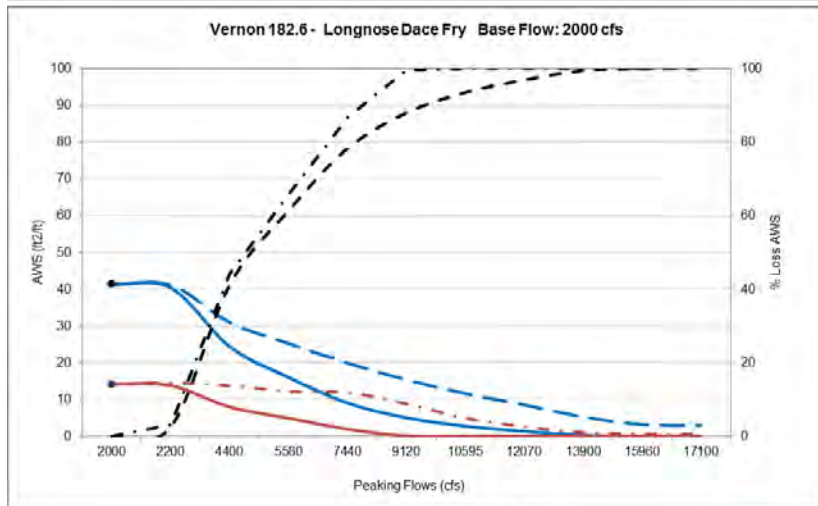
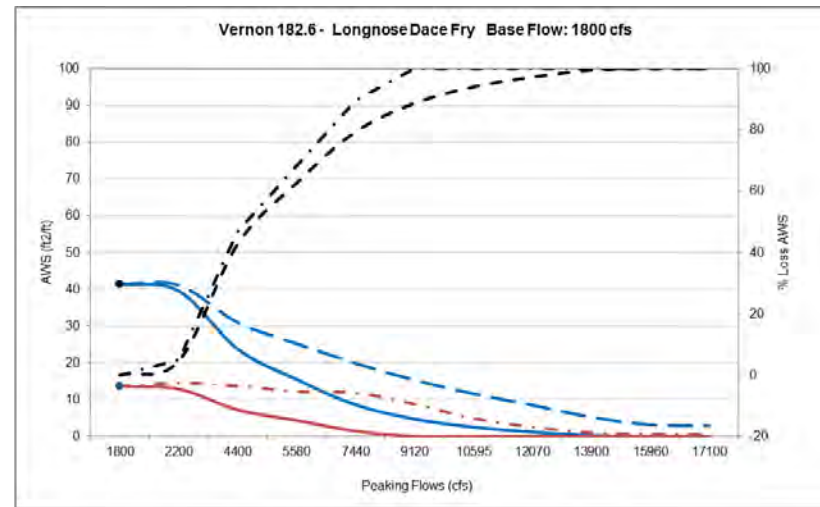
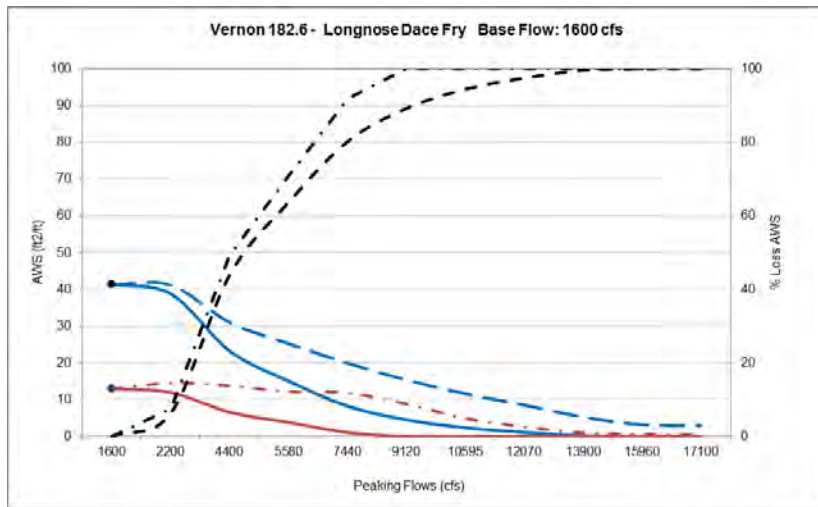


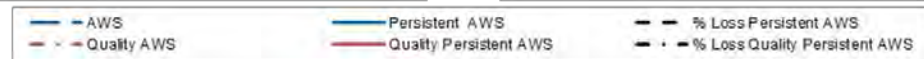
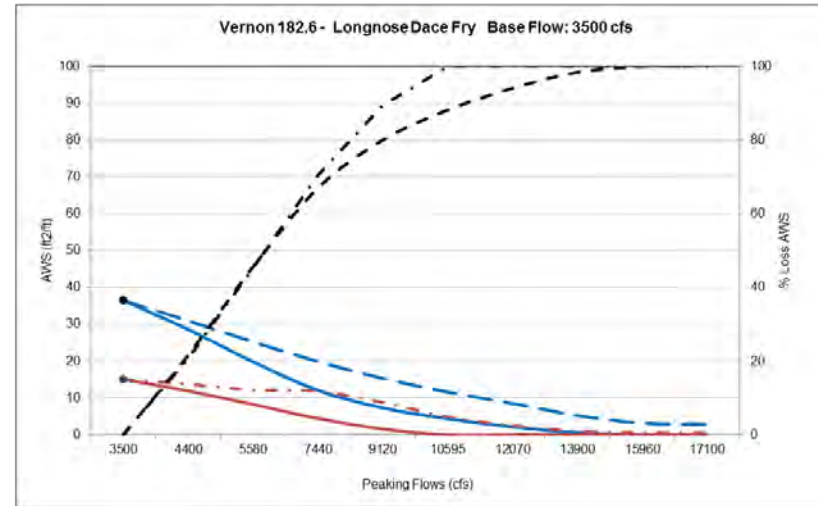
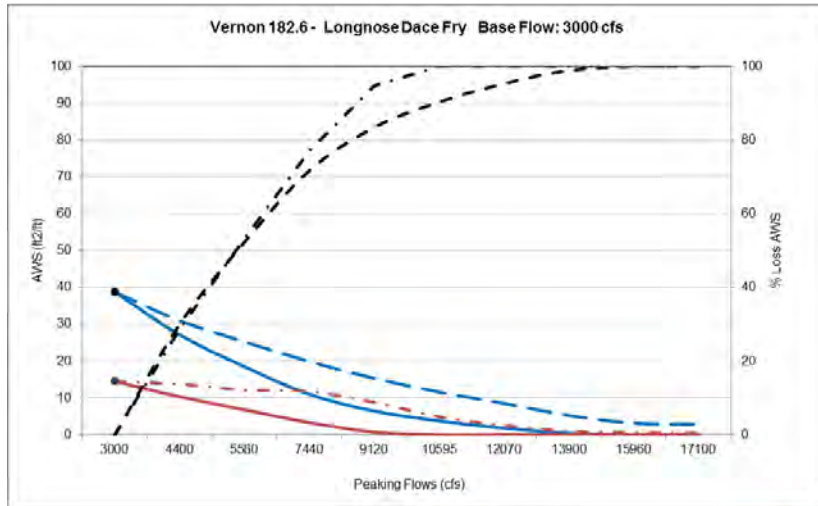
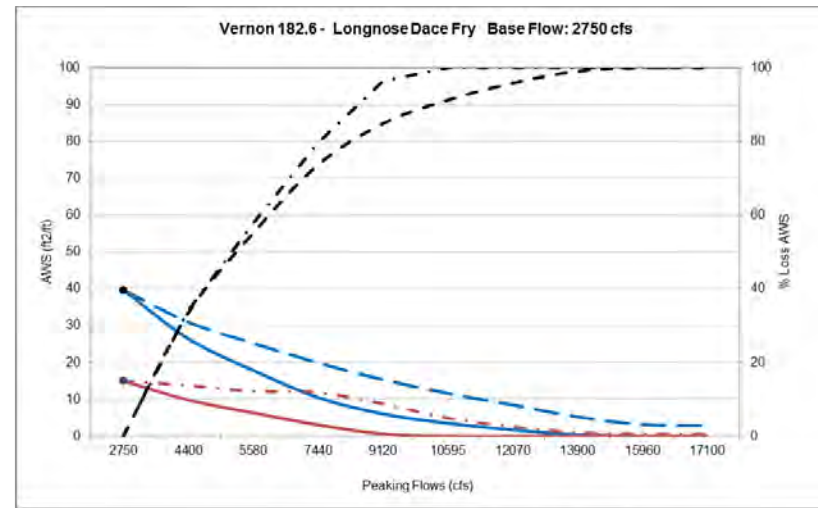
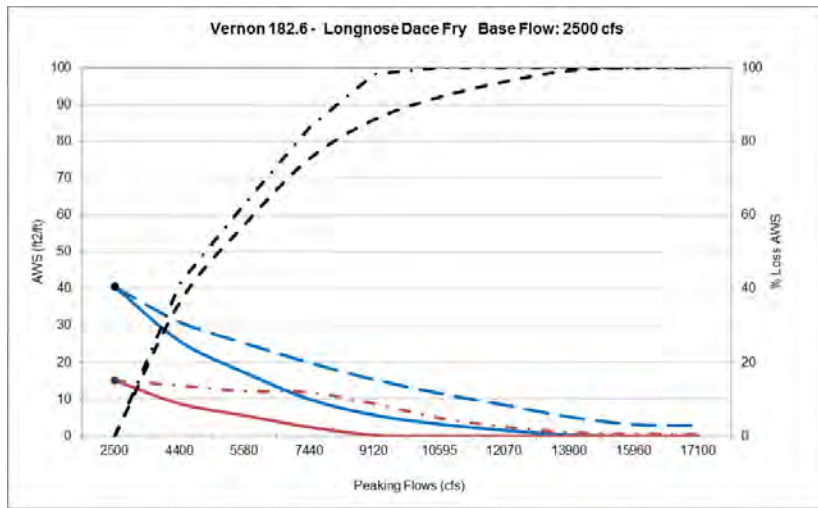


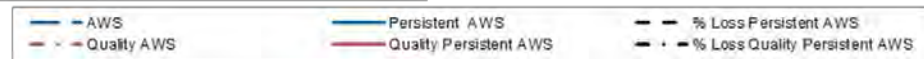
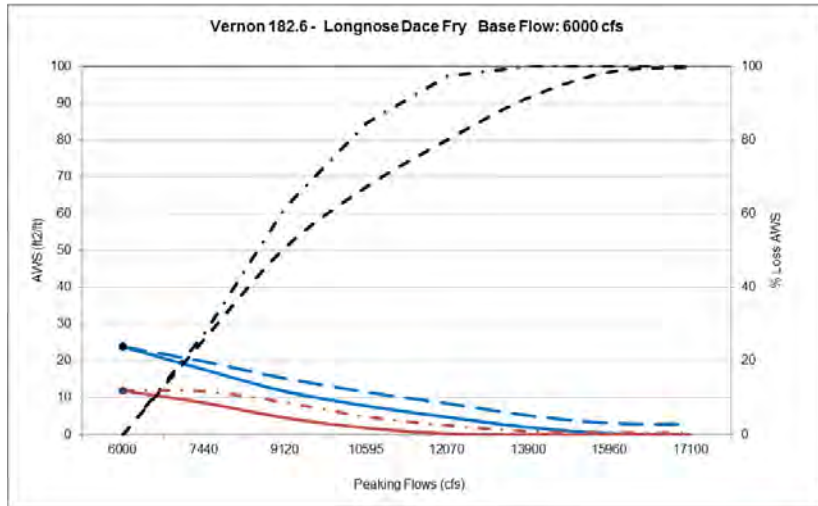
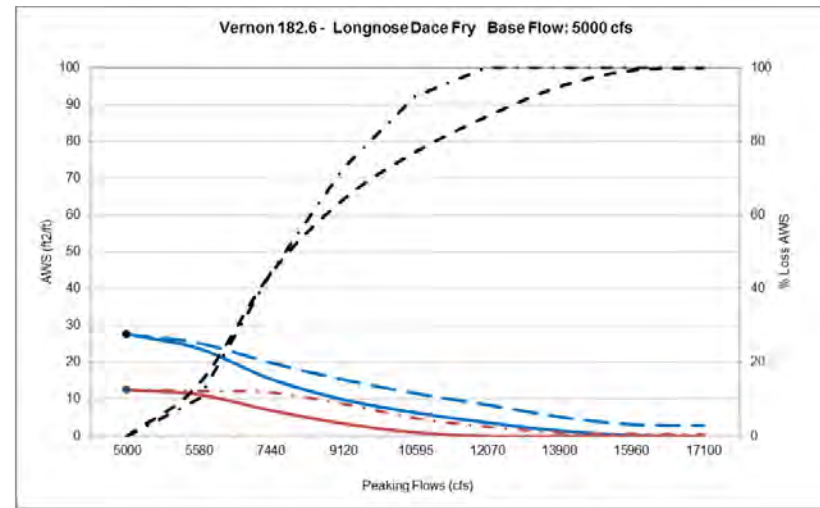
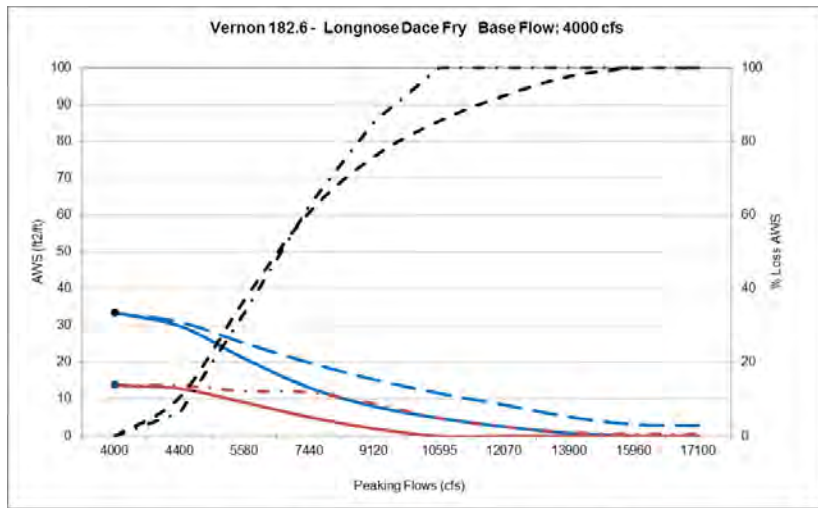




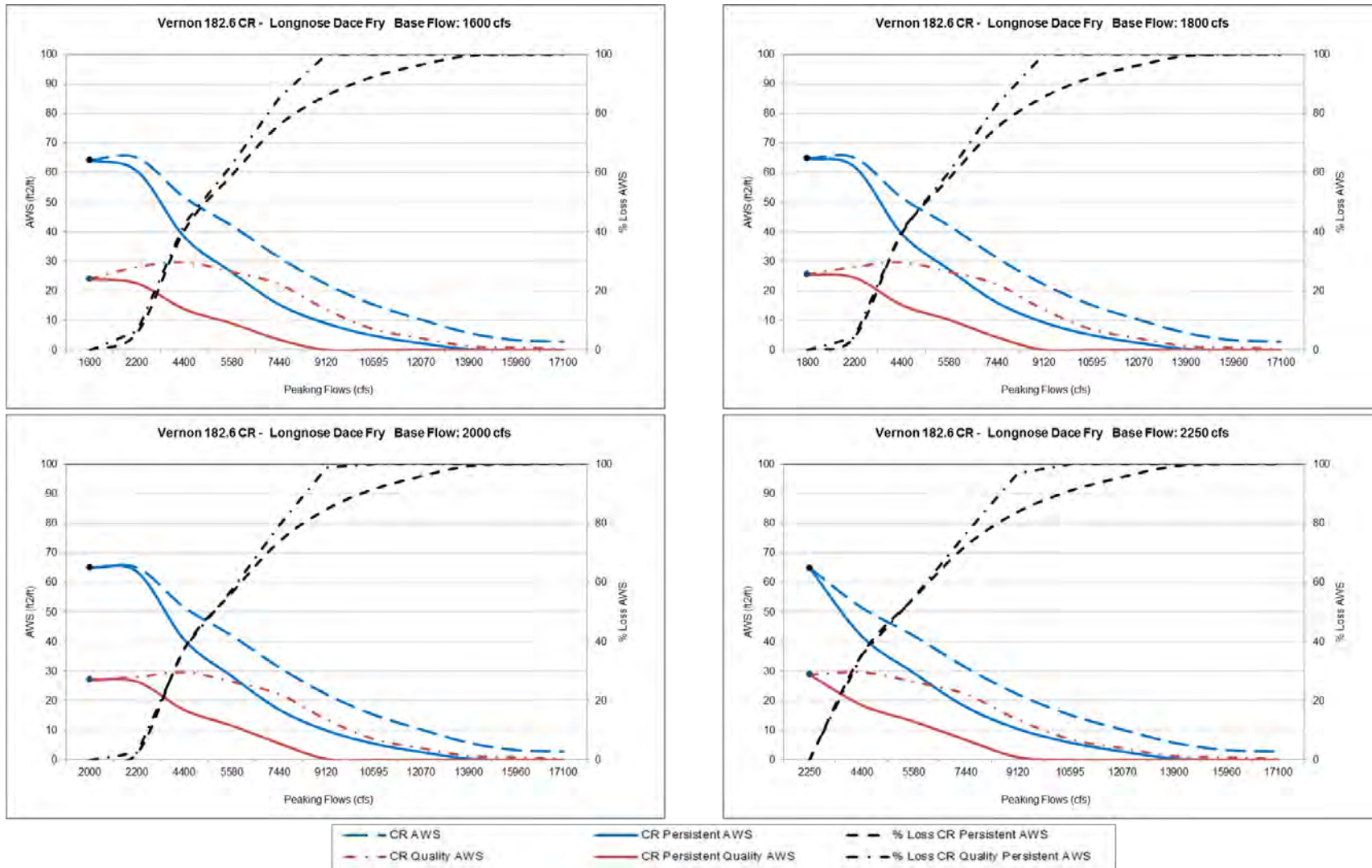
Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - Longnose Dace fry persistent and persistent quality habitat.



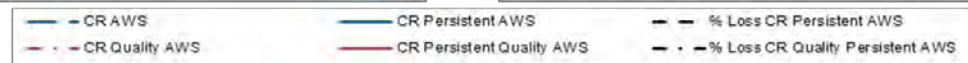
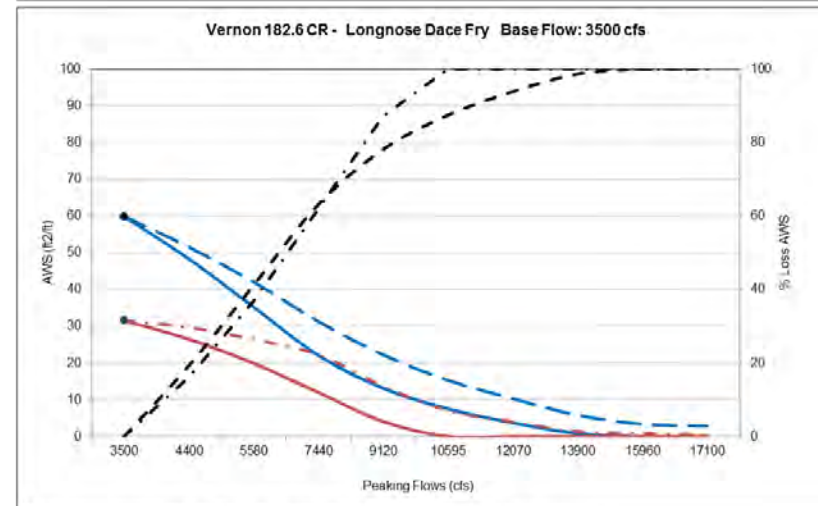
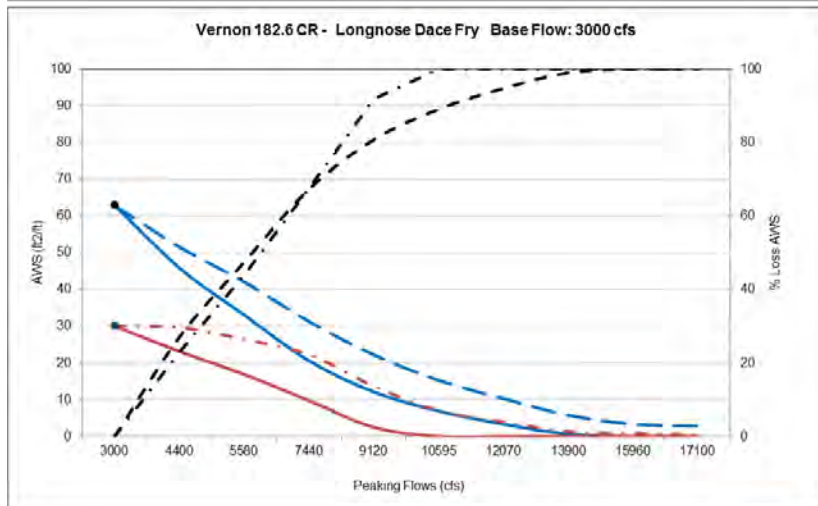
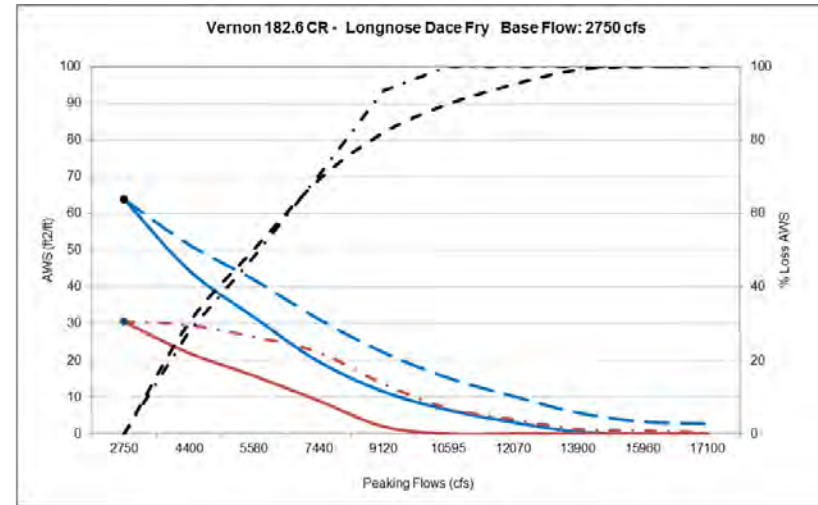
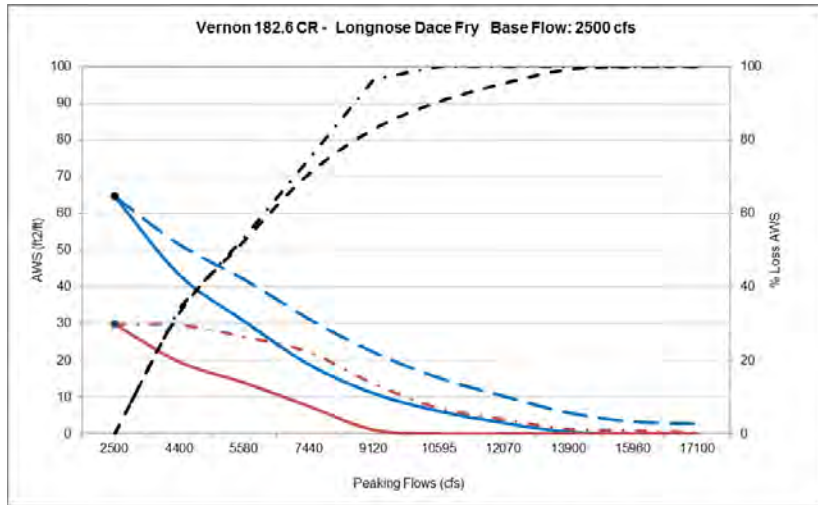




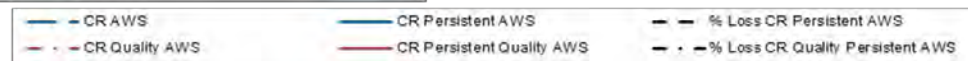
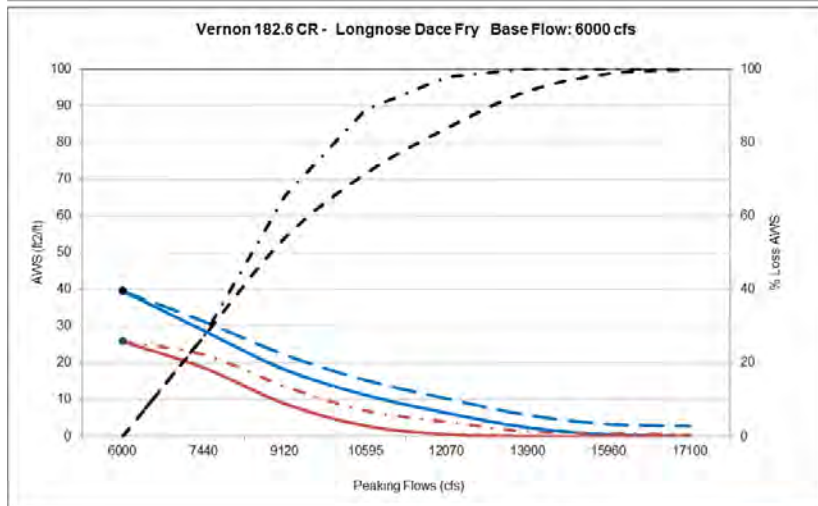
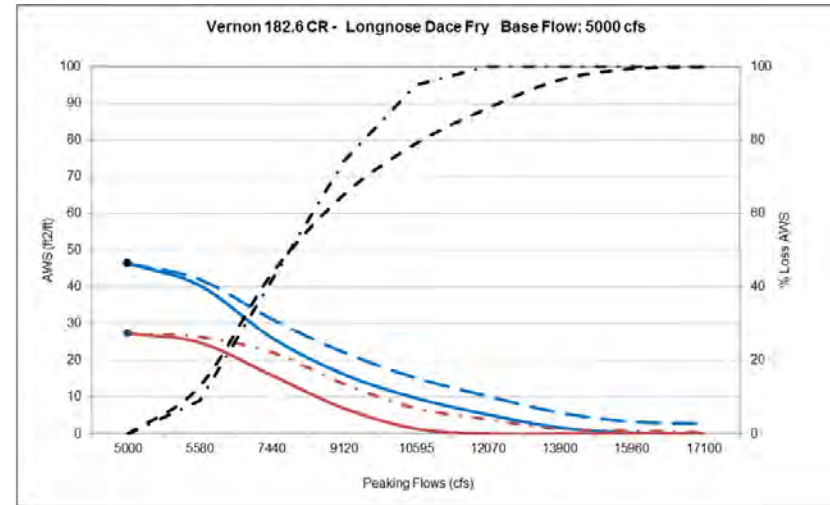
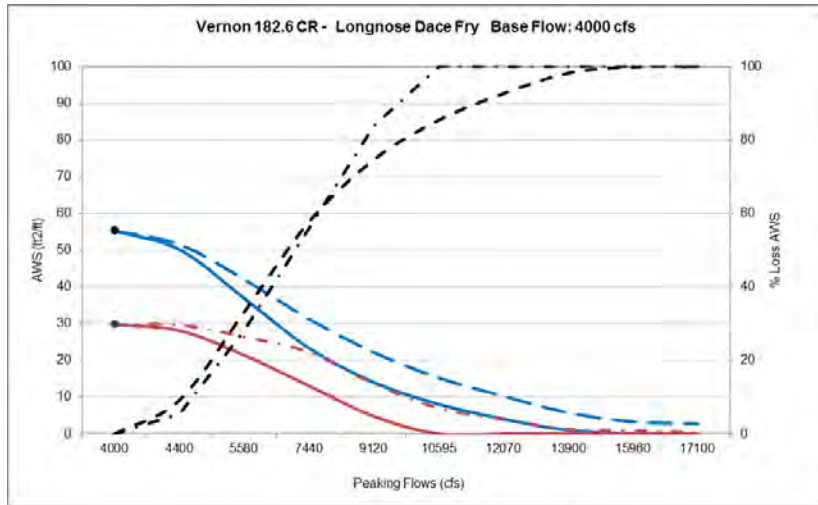
Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - CR Longnose Dace fry persistent and persistent quality habitat.



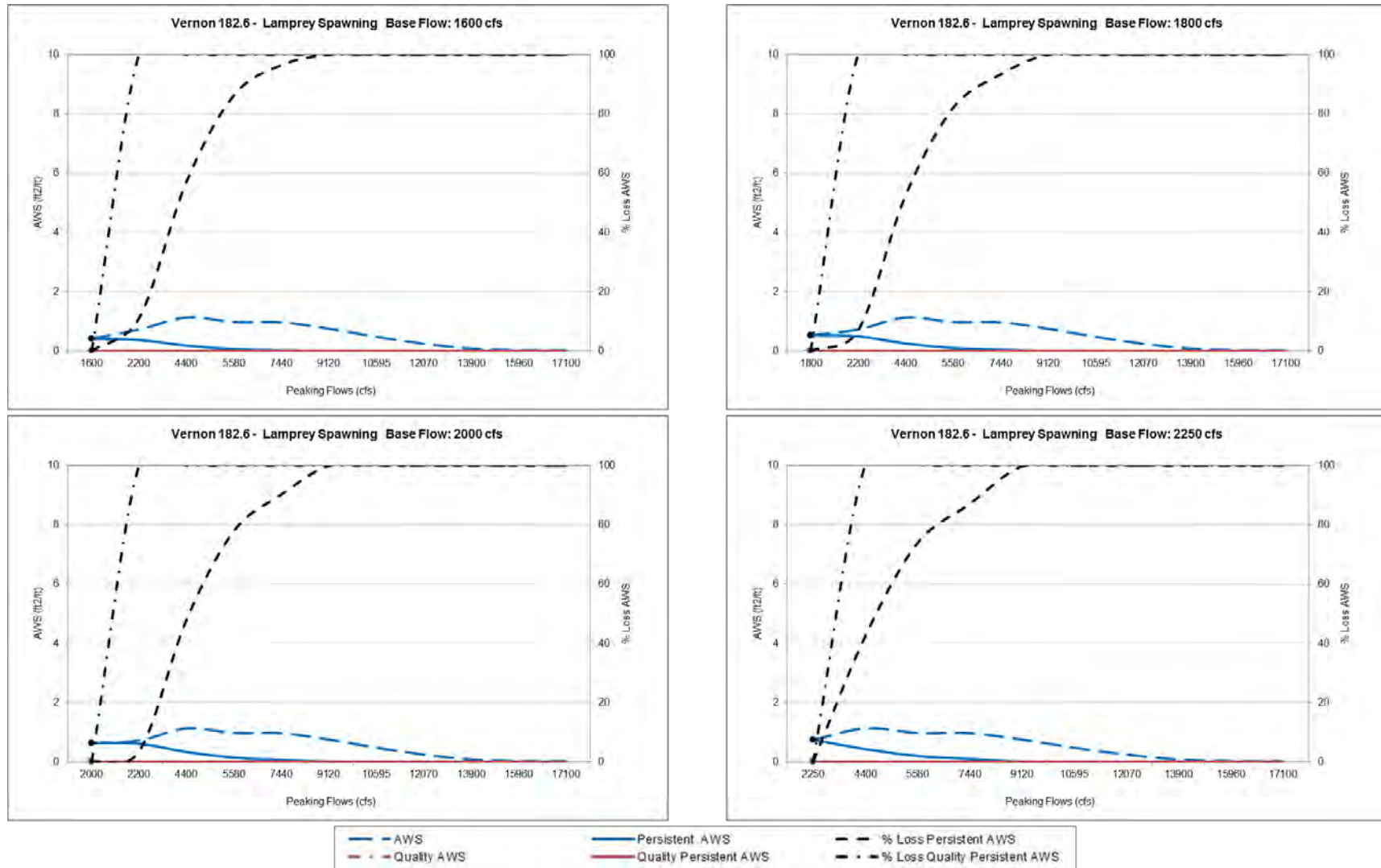


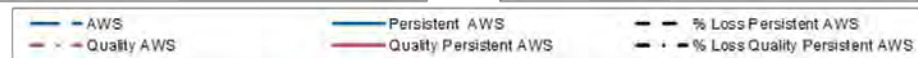
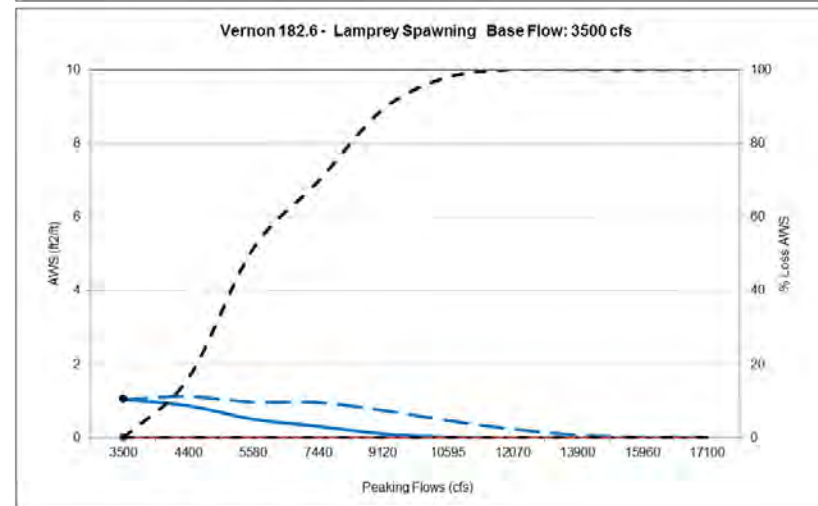
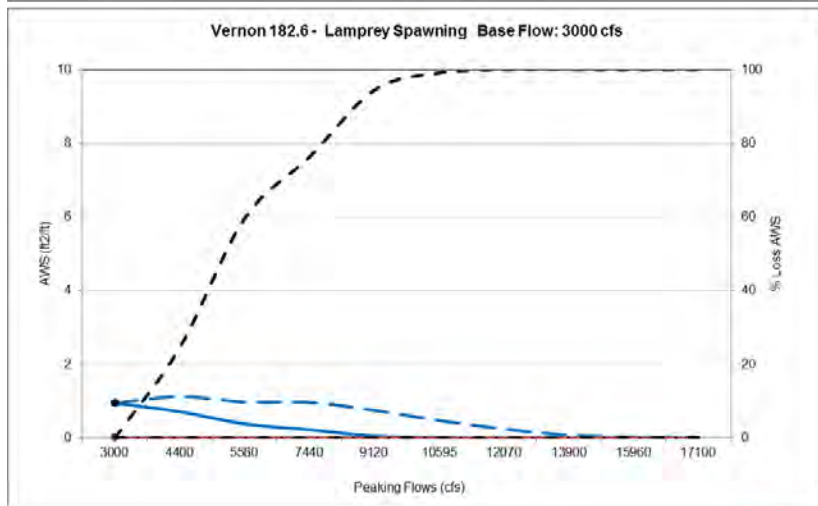
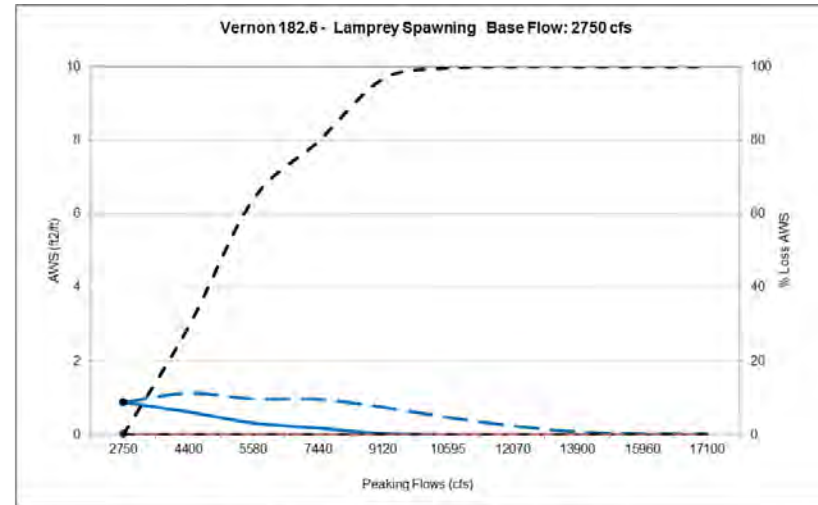
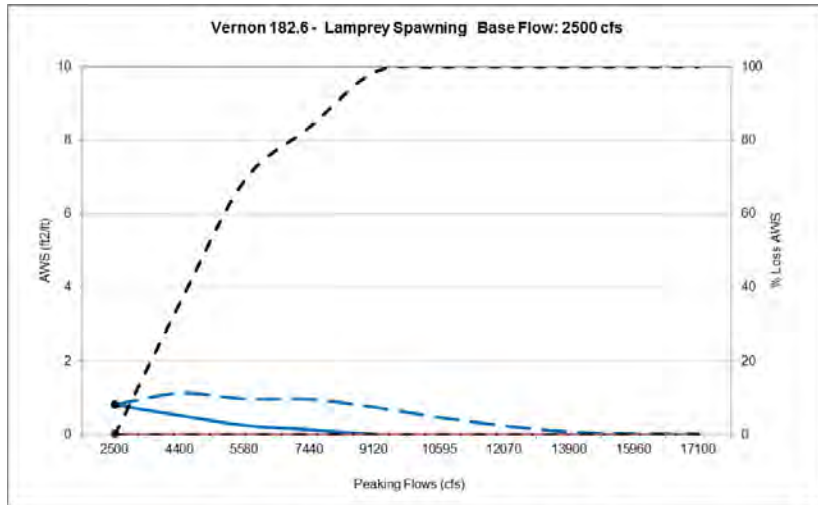


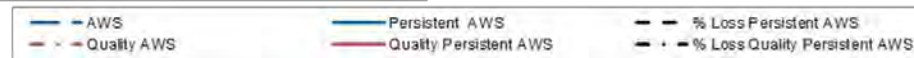
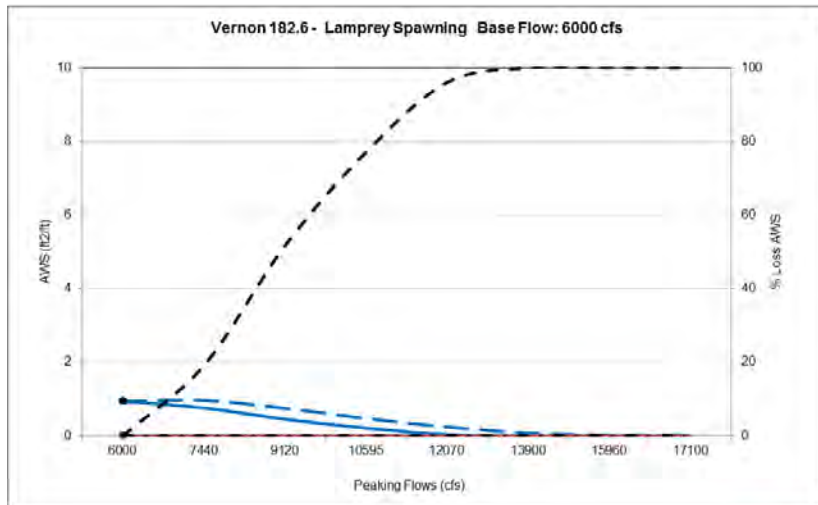
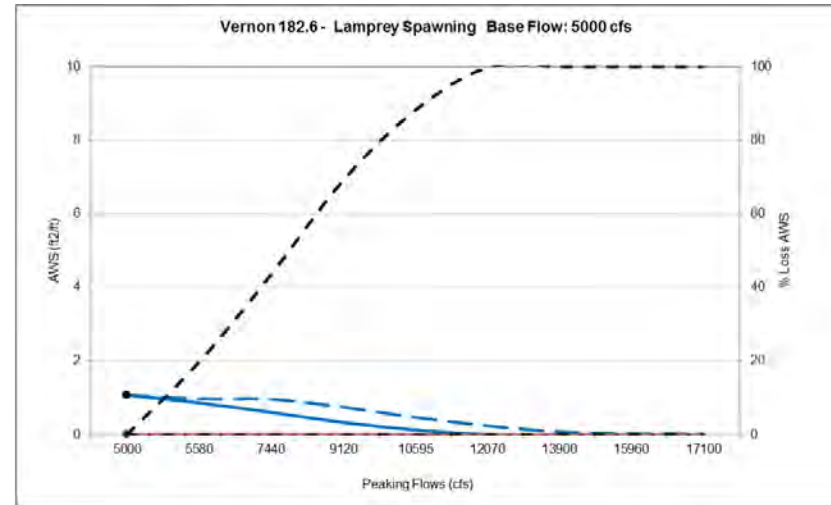
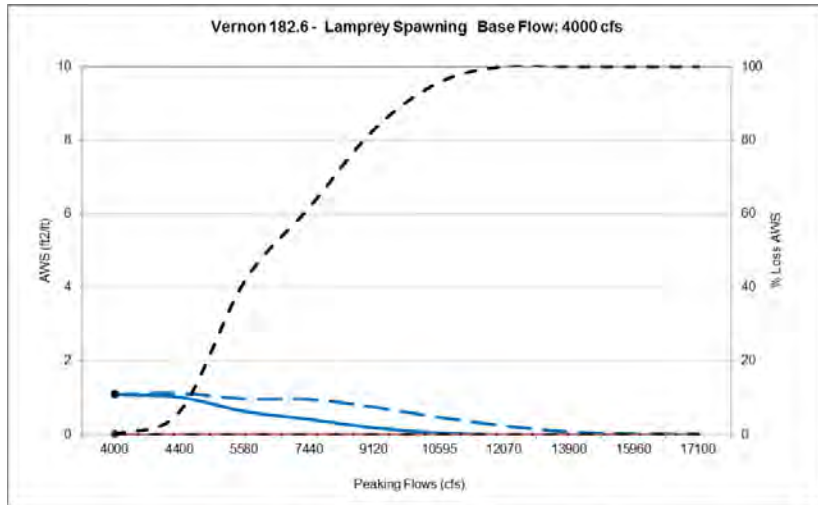




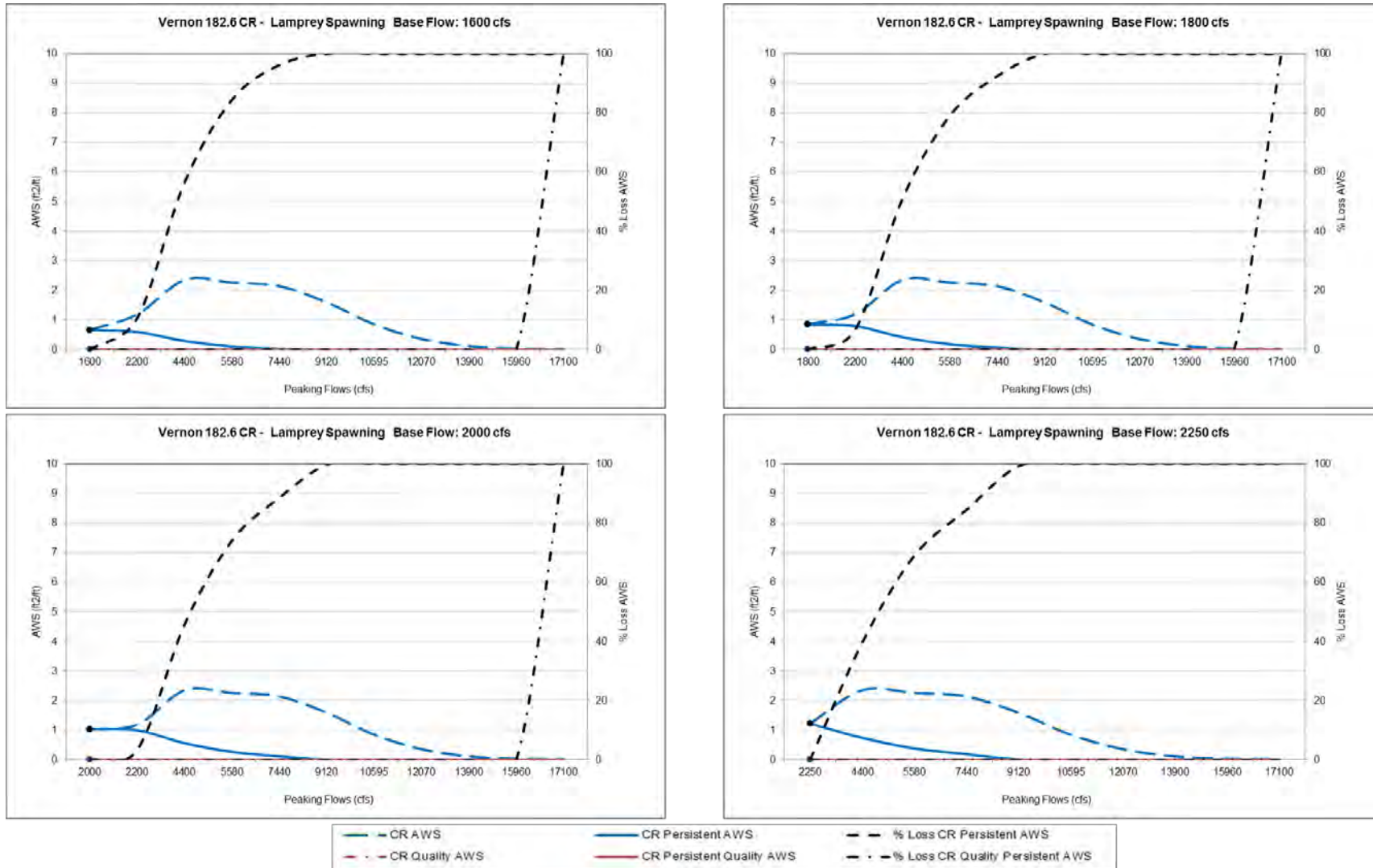
Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - Sea Lamprey spawning persistent and persistent quality habitat.



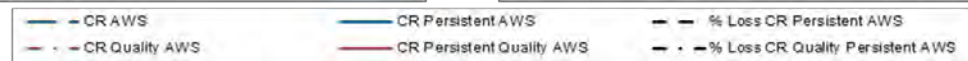
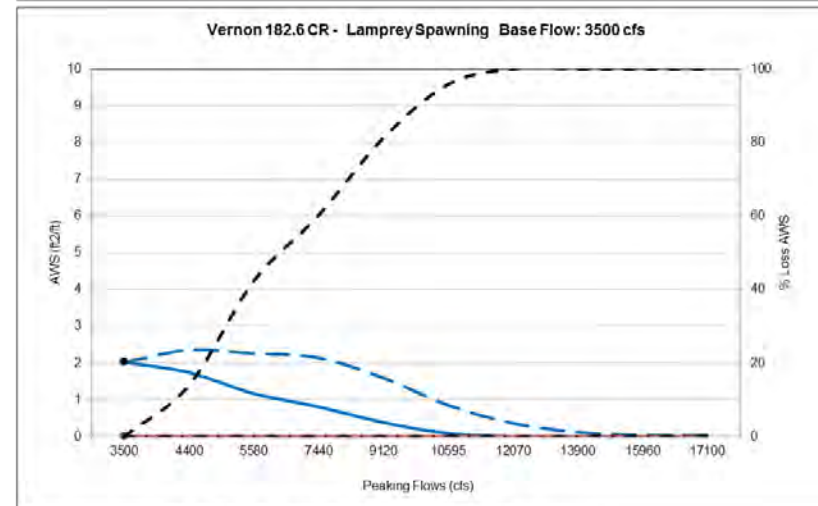
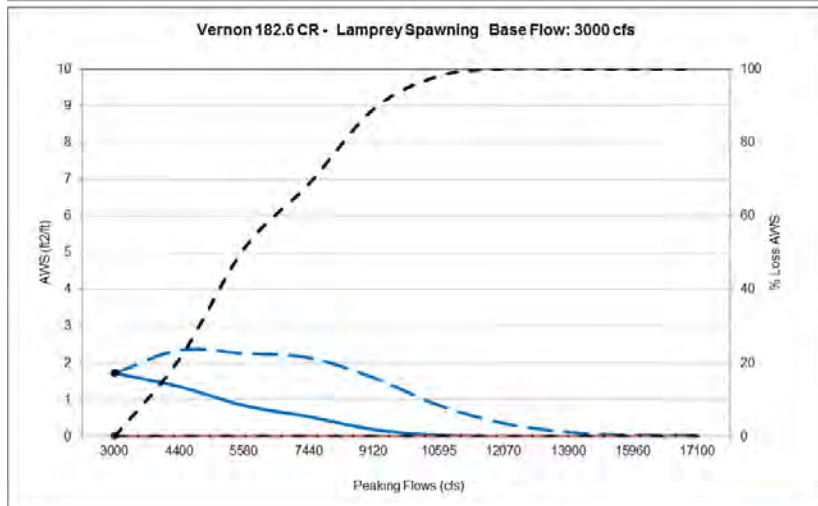
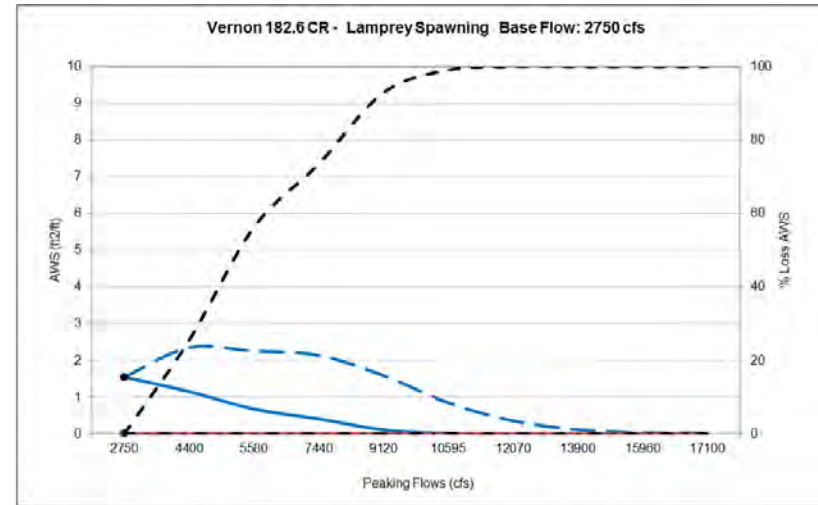
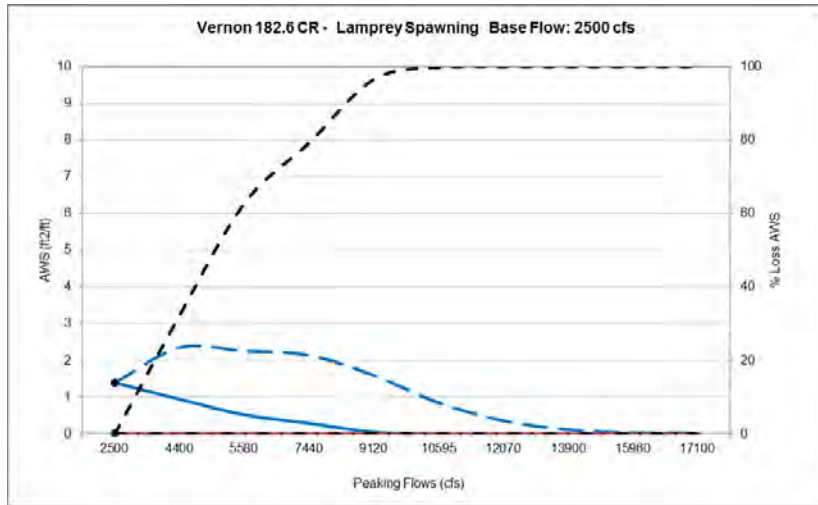


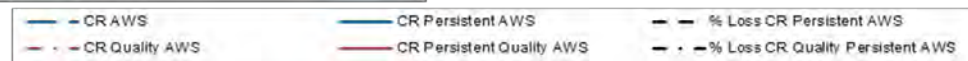
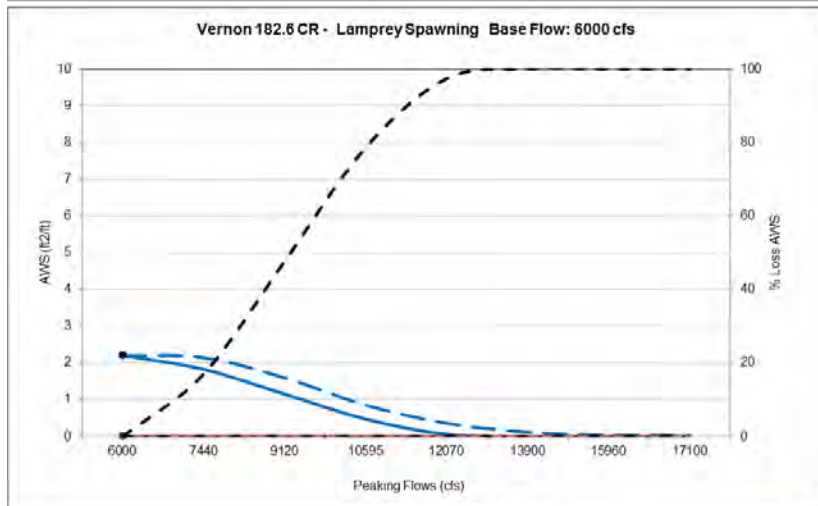
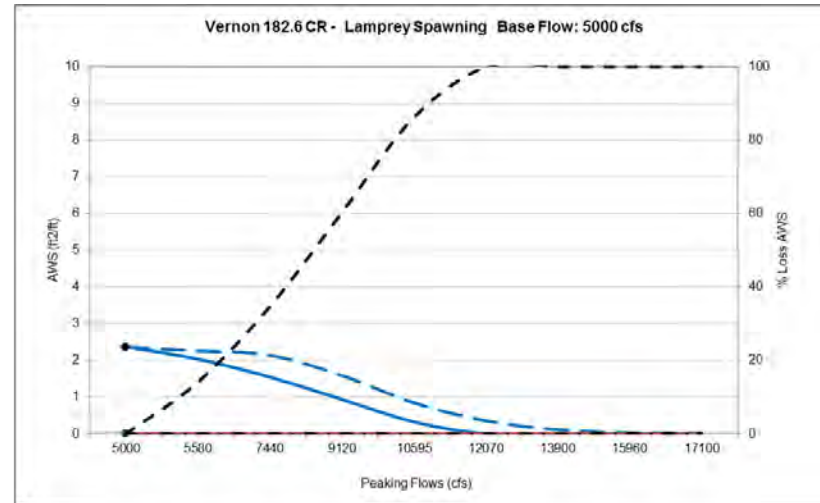
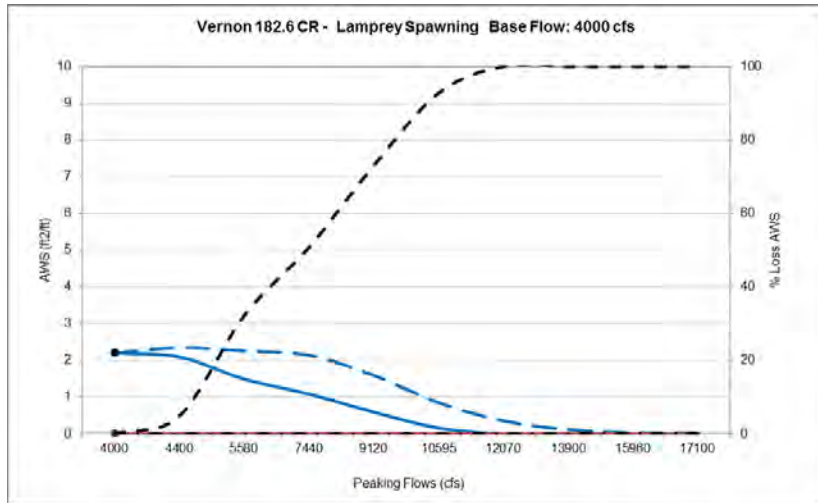


Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - CR Sea Lamprey spawning persistent and persistent quality habitat.

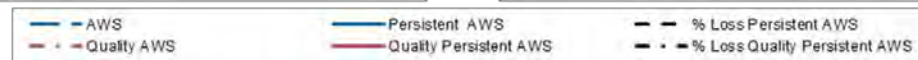
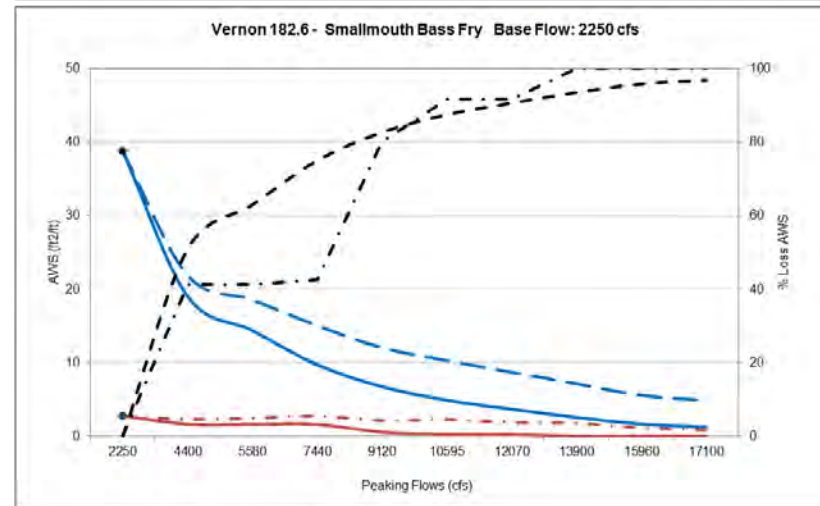
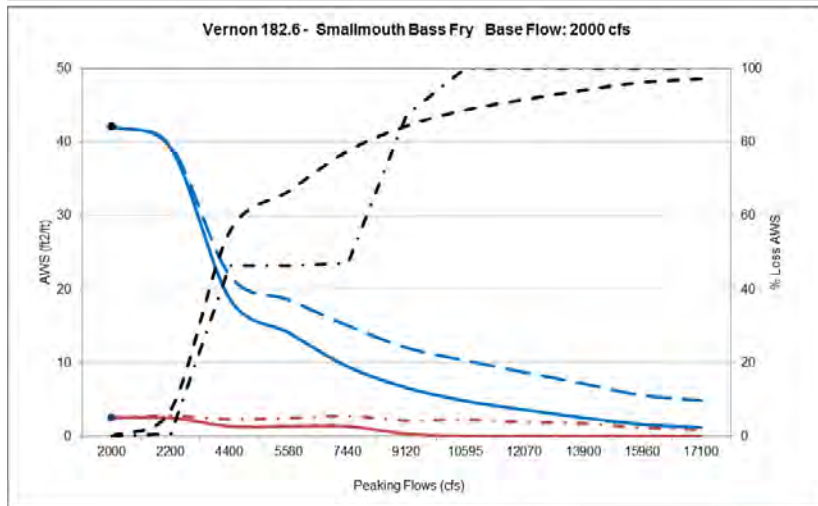
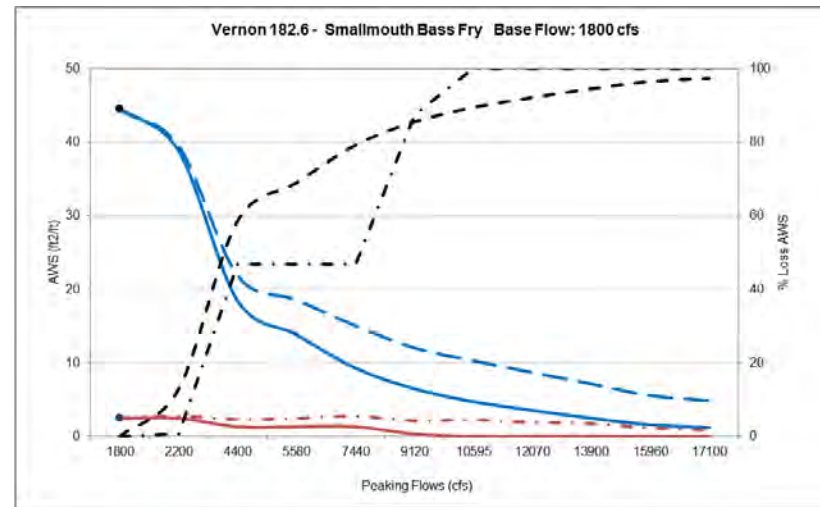
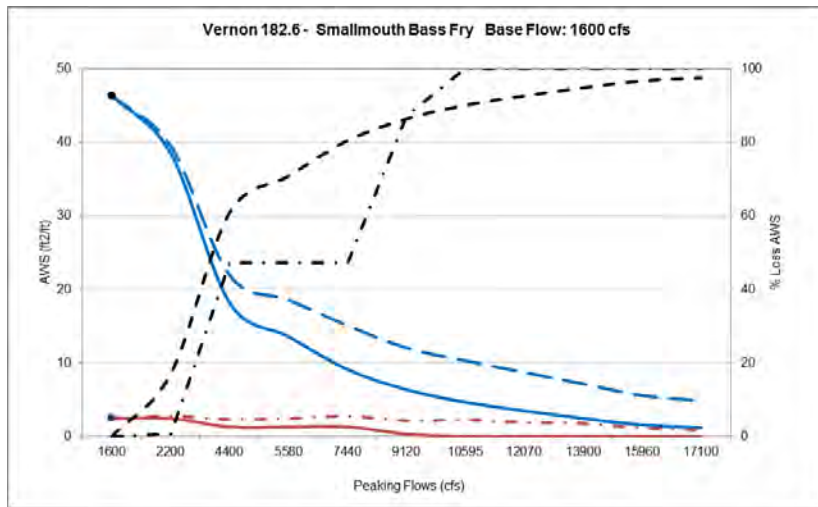


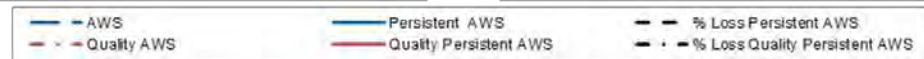
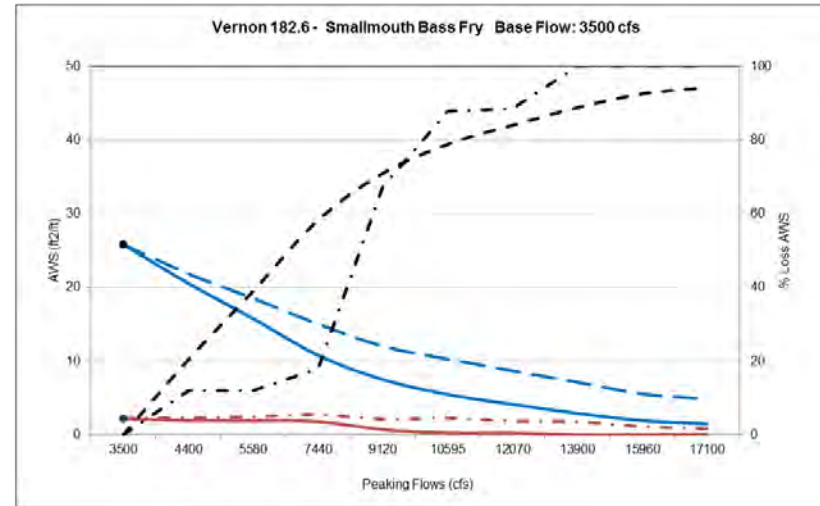
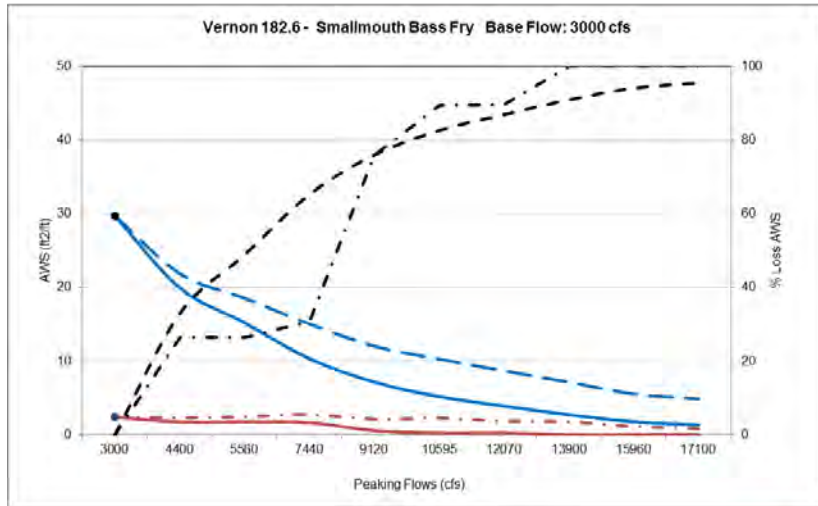
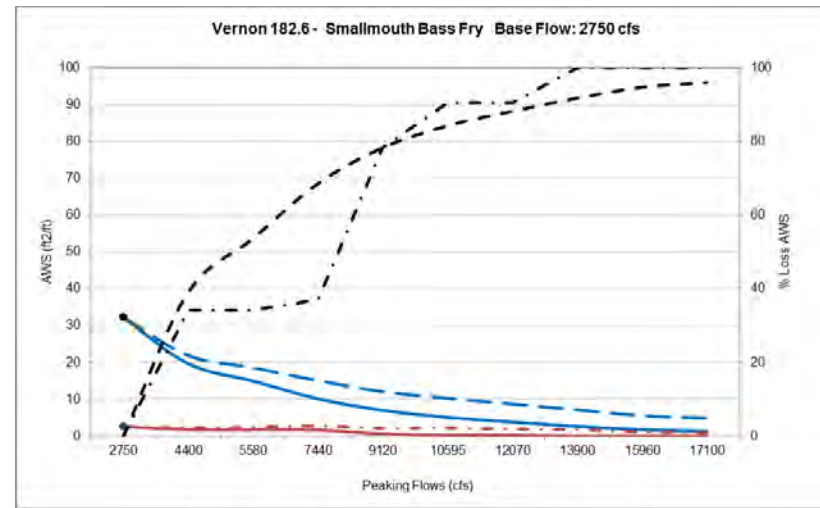
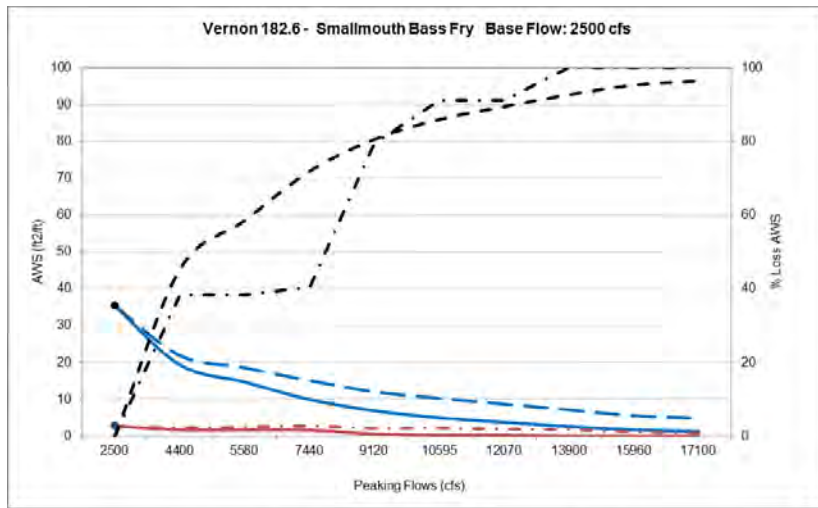


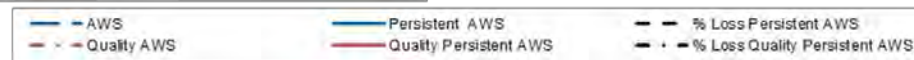
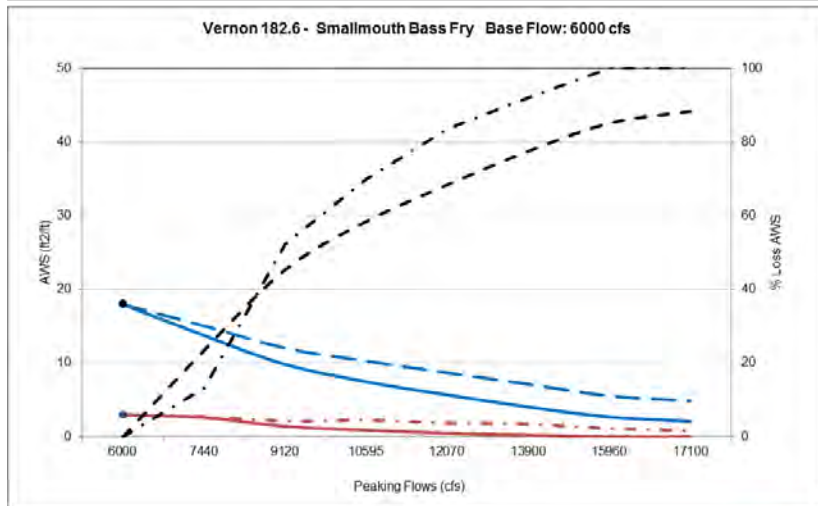
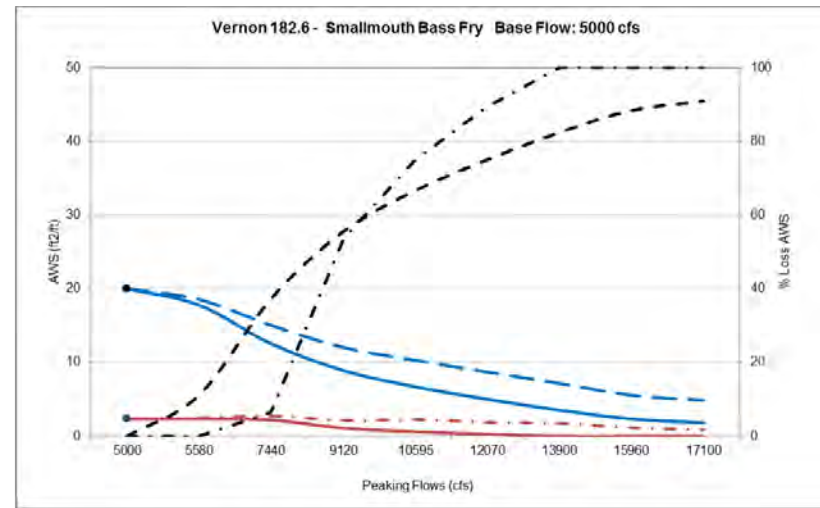
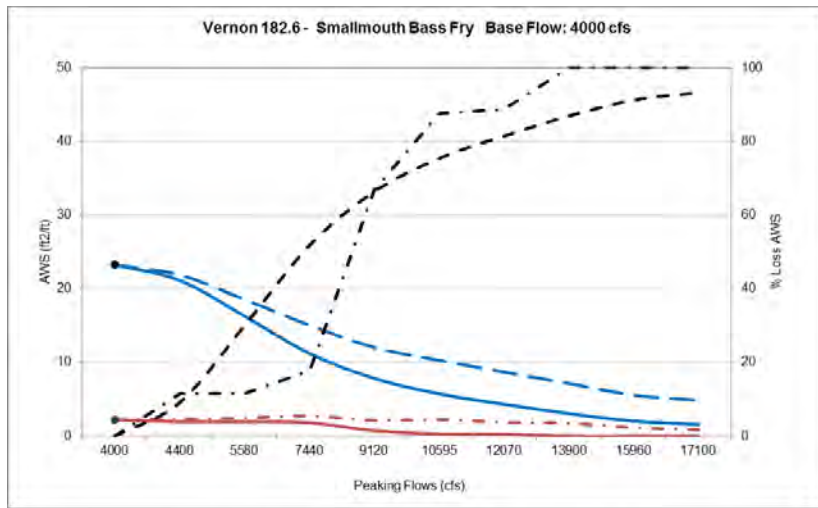




Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - Smallmouth Bass fry persistent and persistent quality habitat.

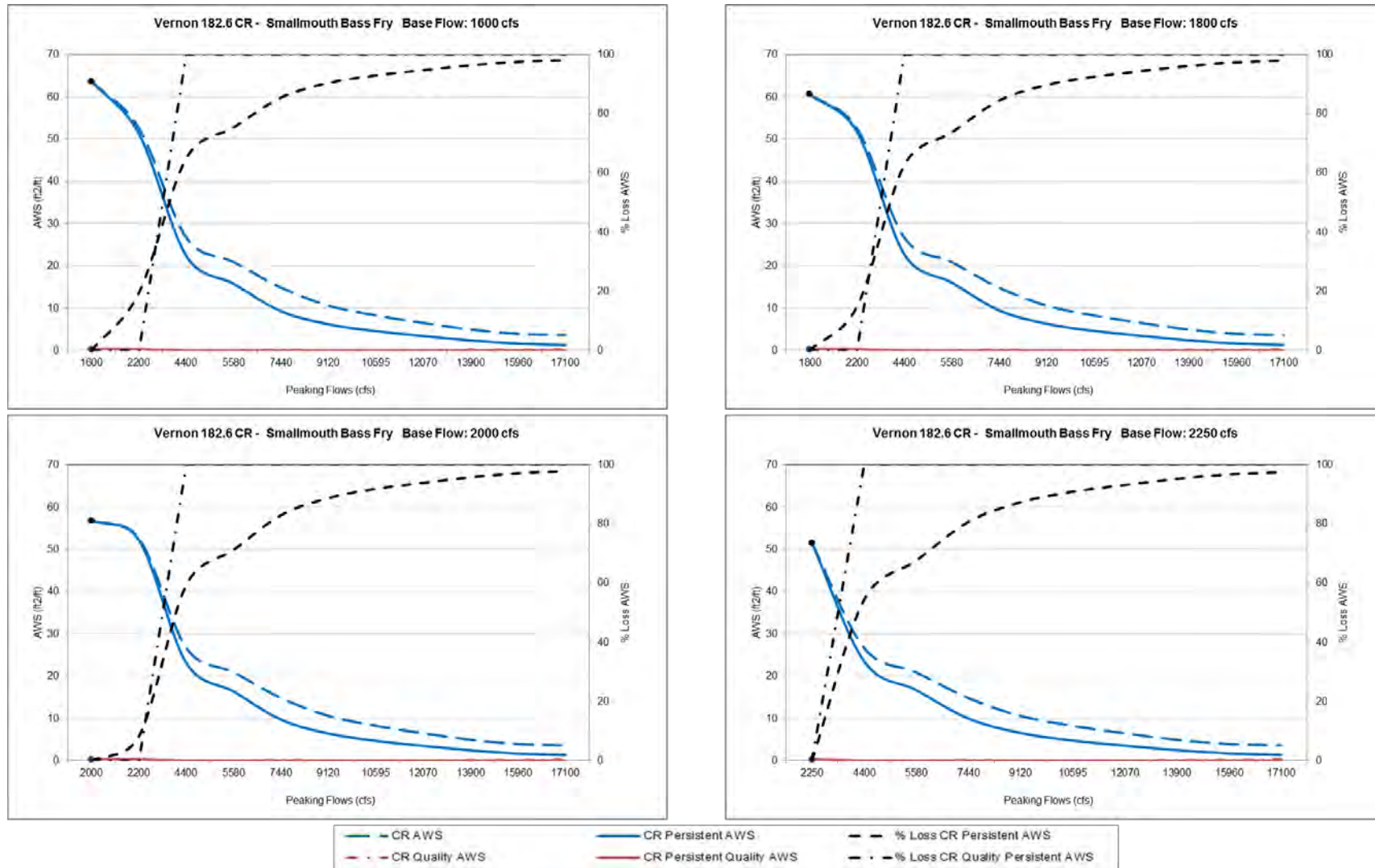


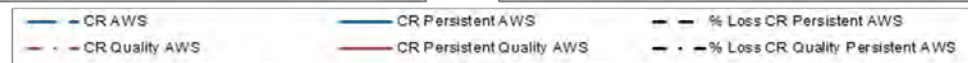
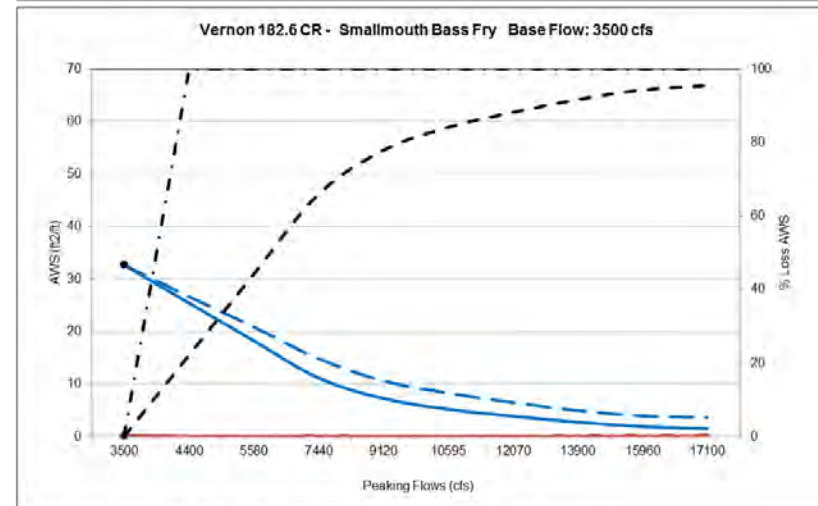
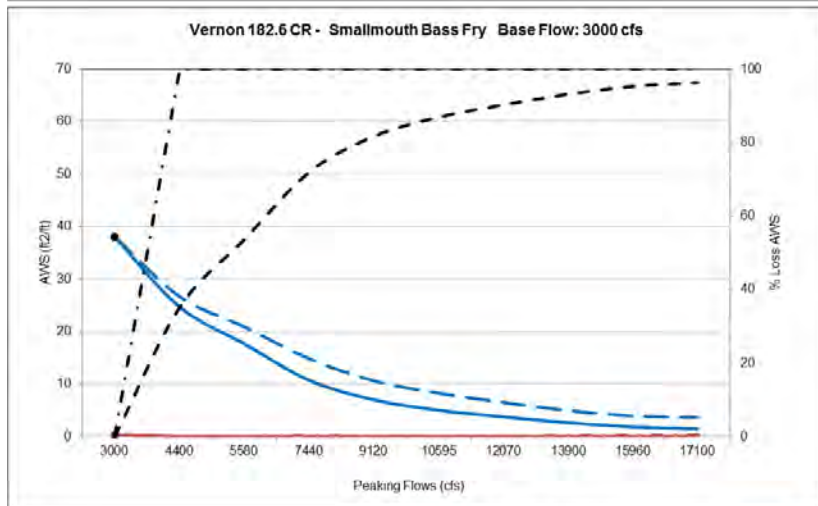
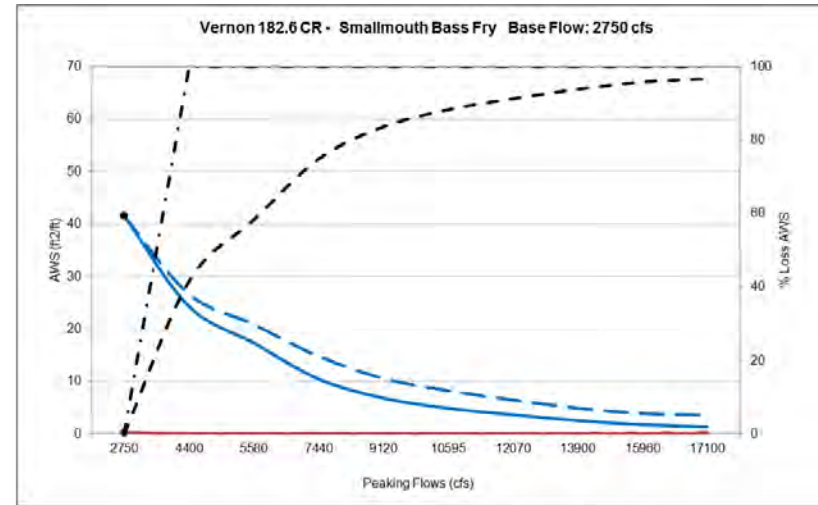
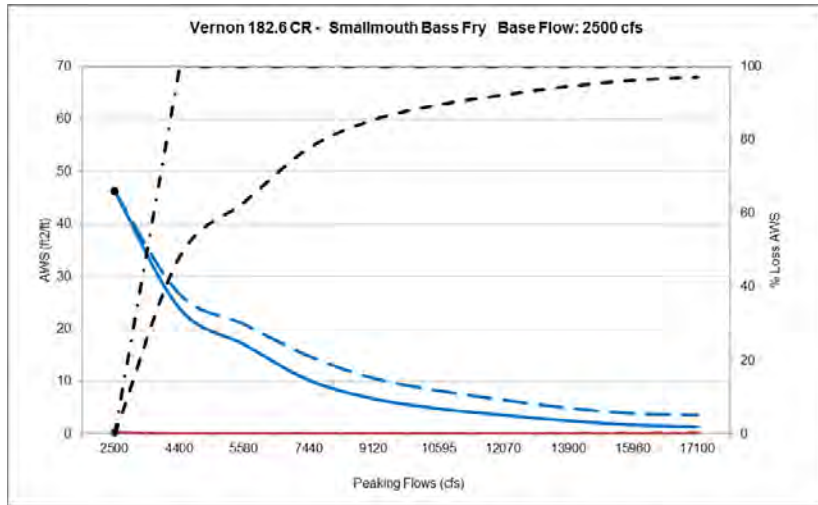


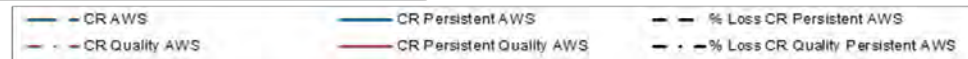
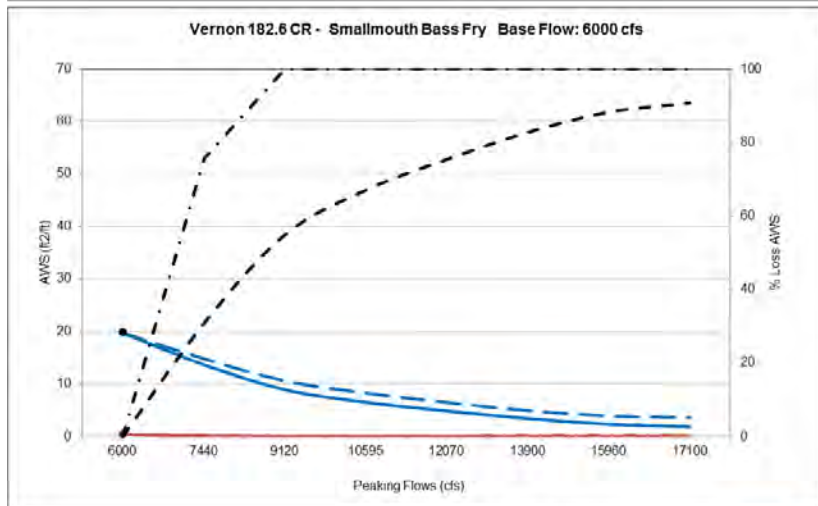
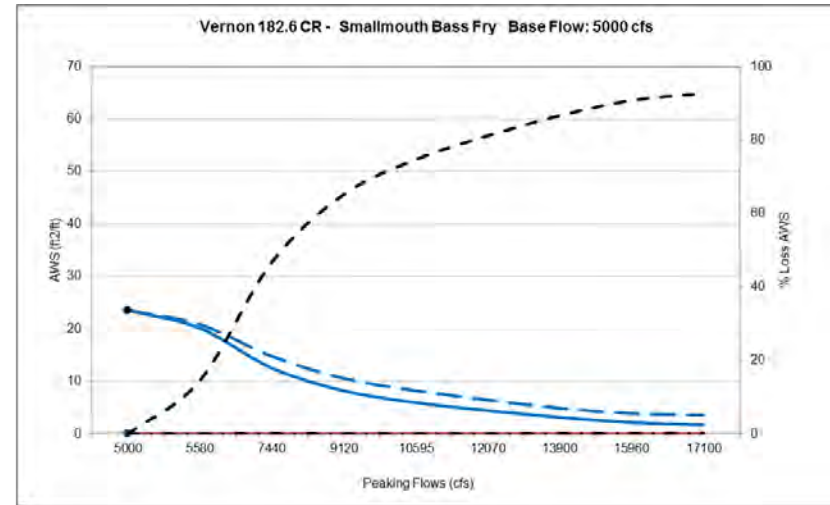
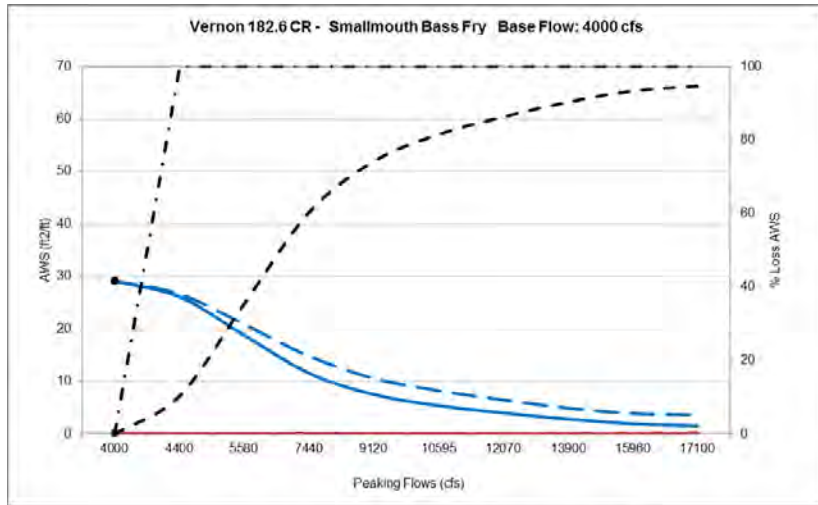




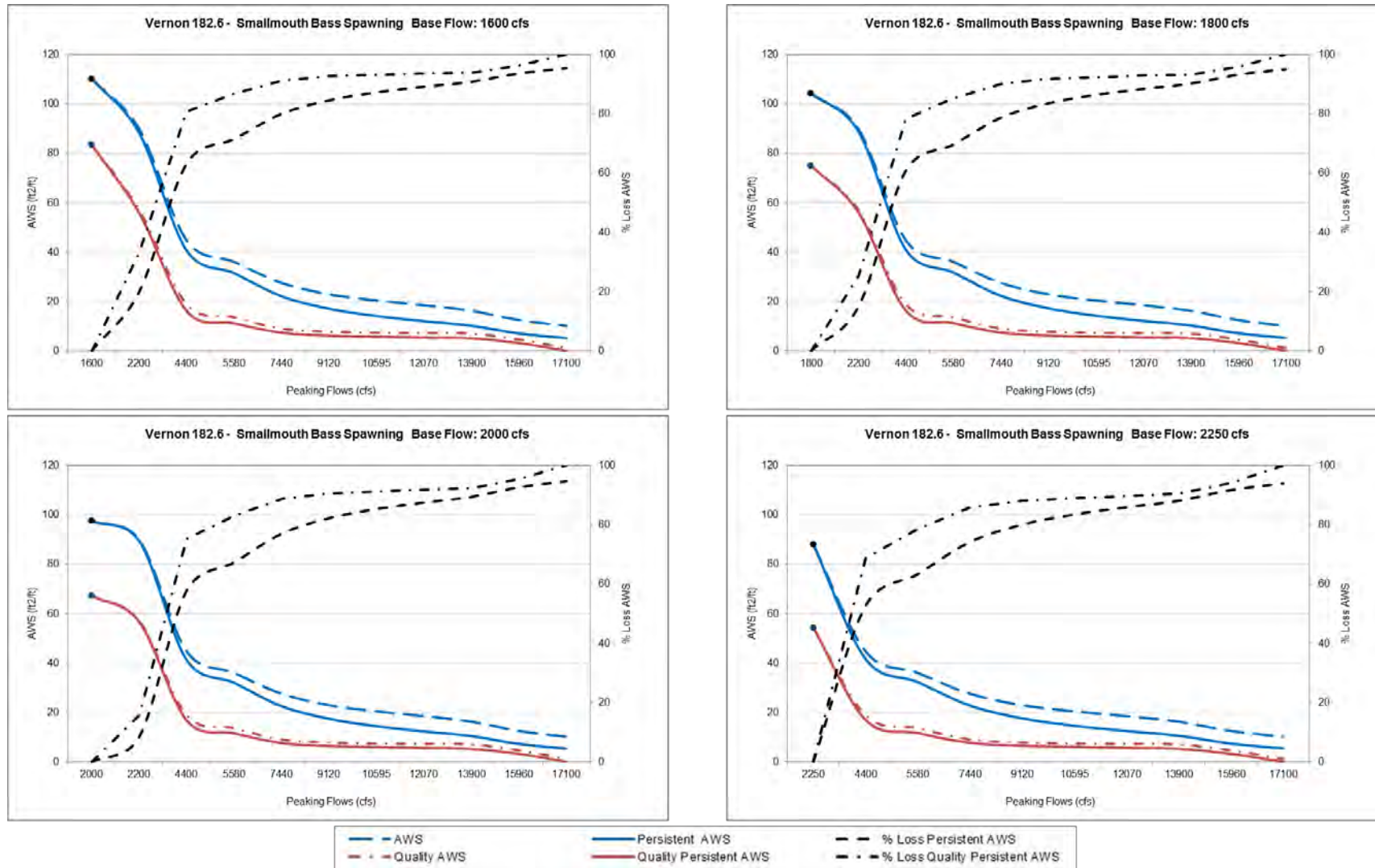
Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - CR Smallmouth Bass fry persistent and persistent quality habitat.



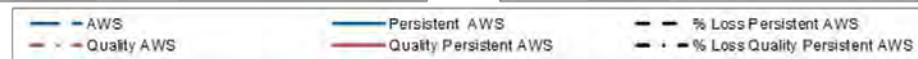
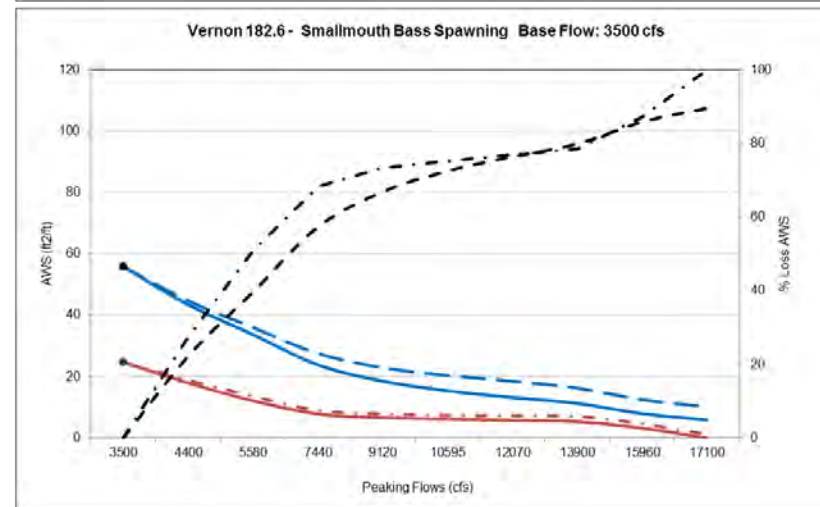
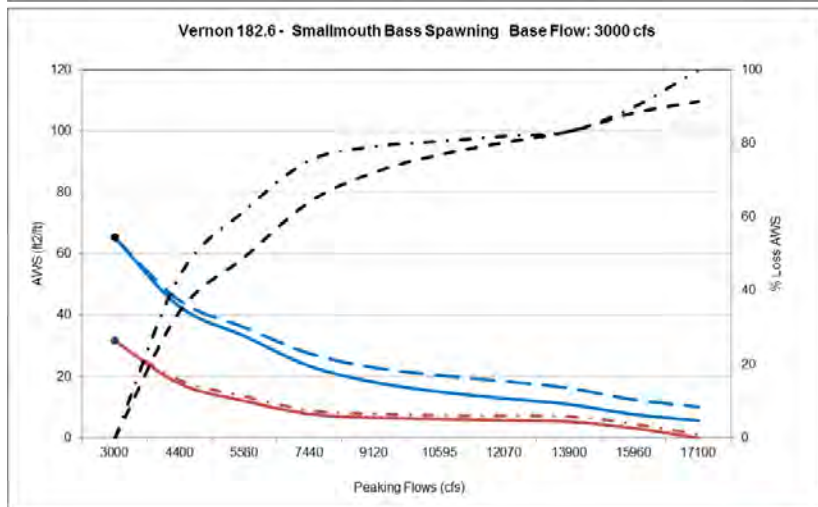
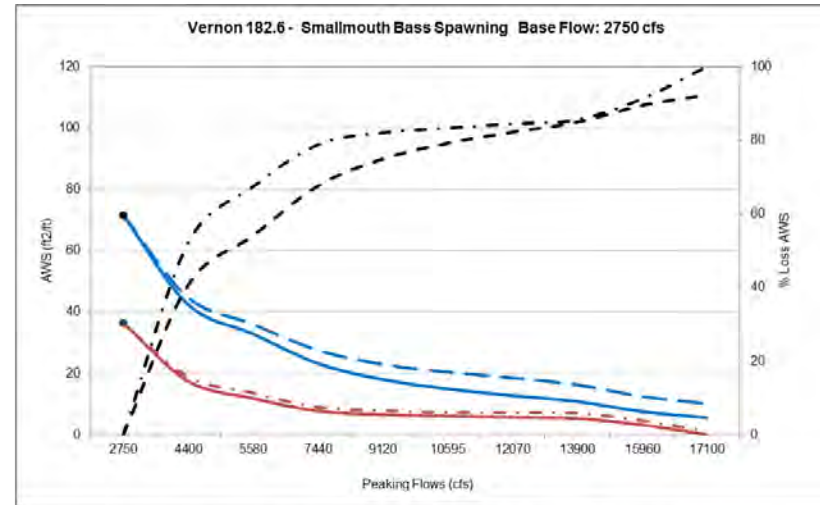
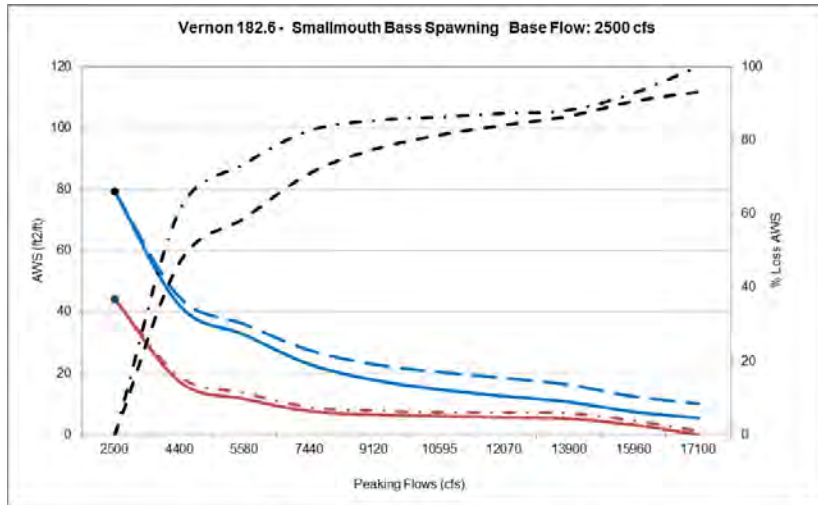




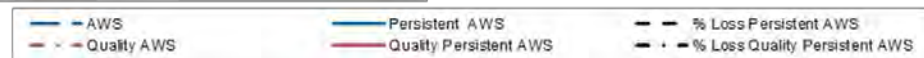
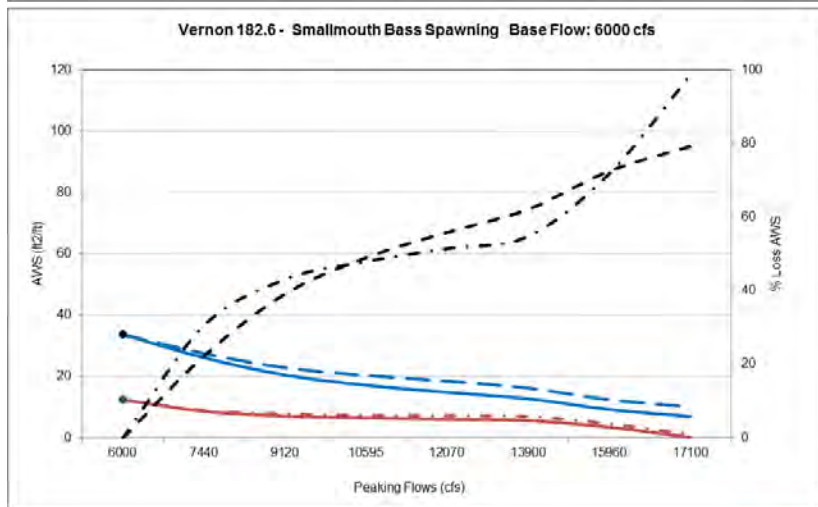
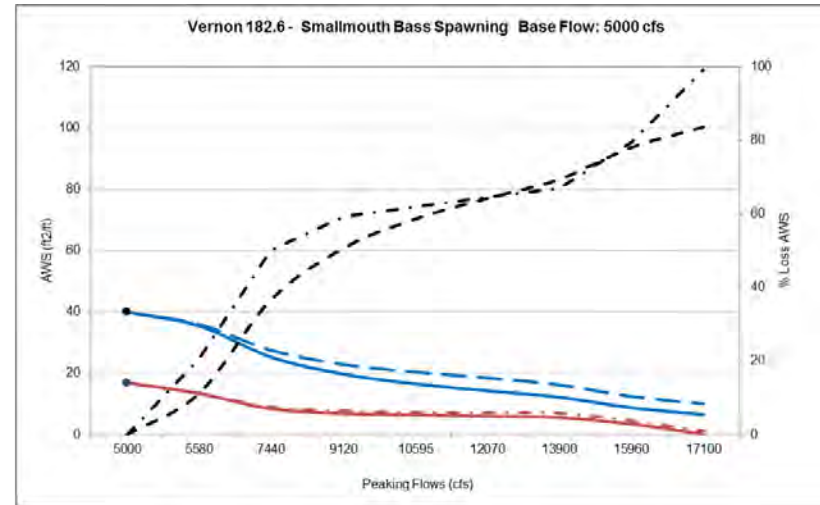
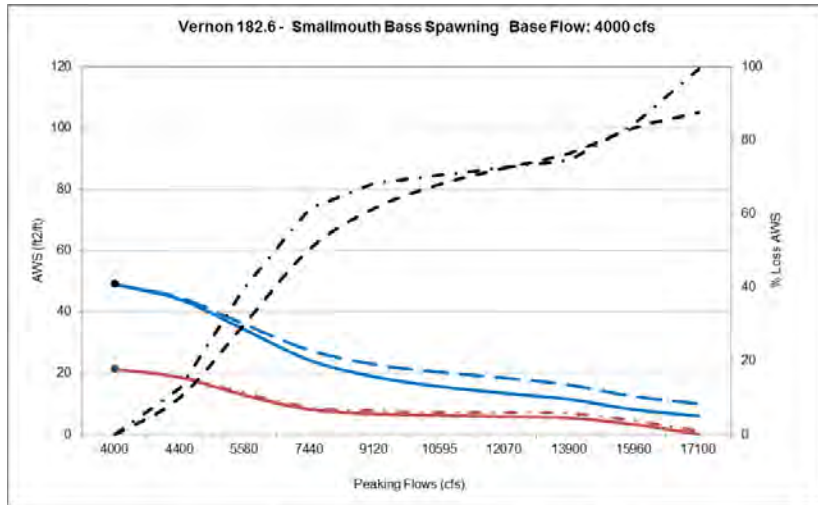
Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - Smallmouth Bass spawning persistent and persistent quality habitat.



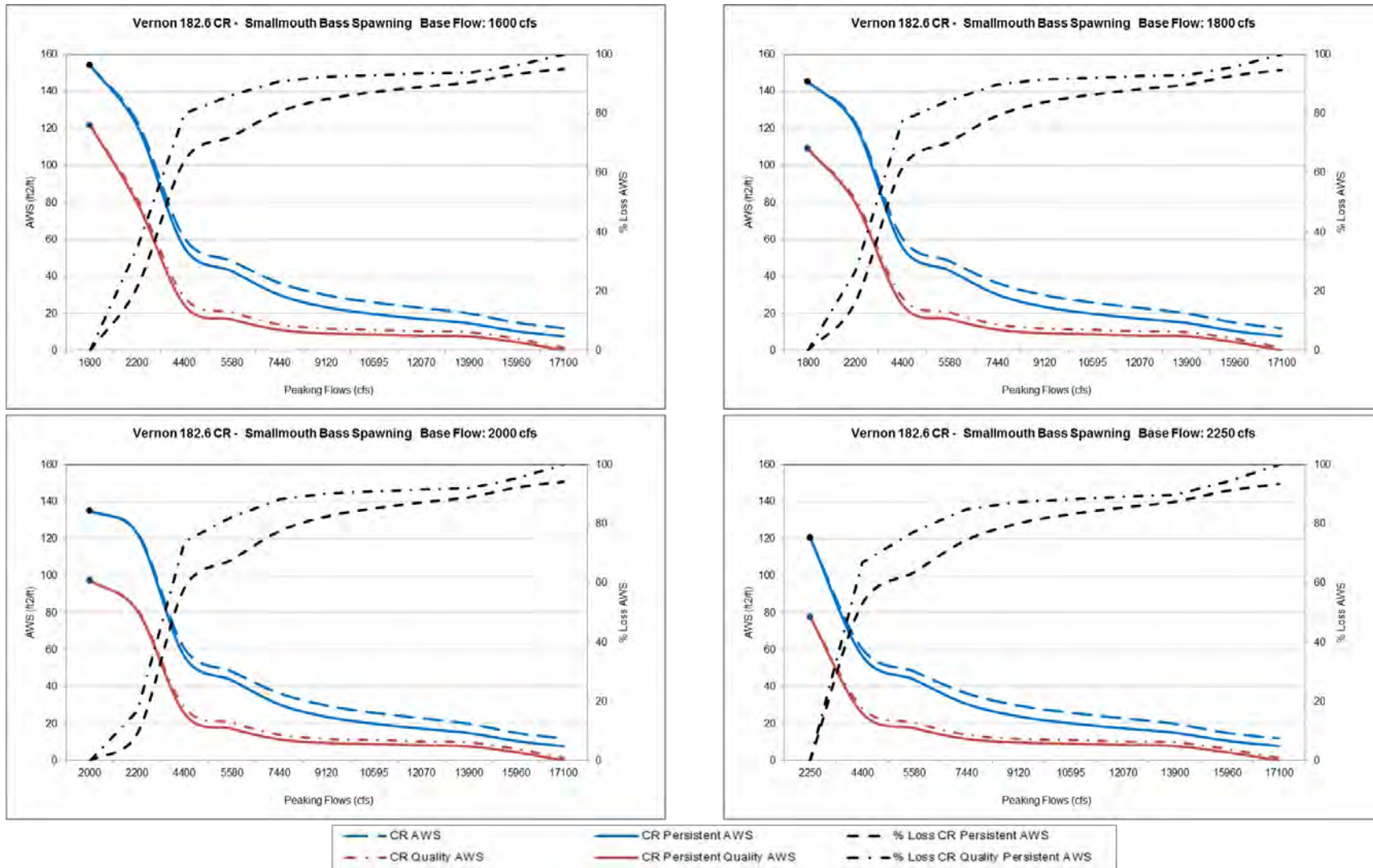


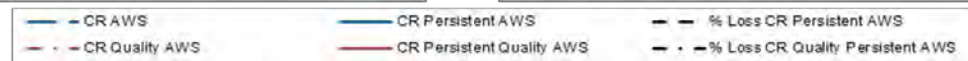
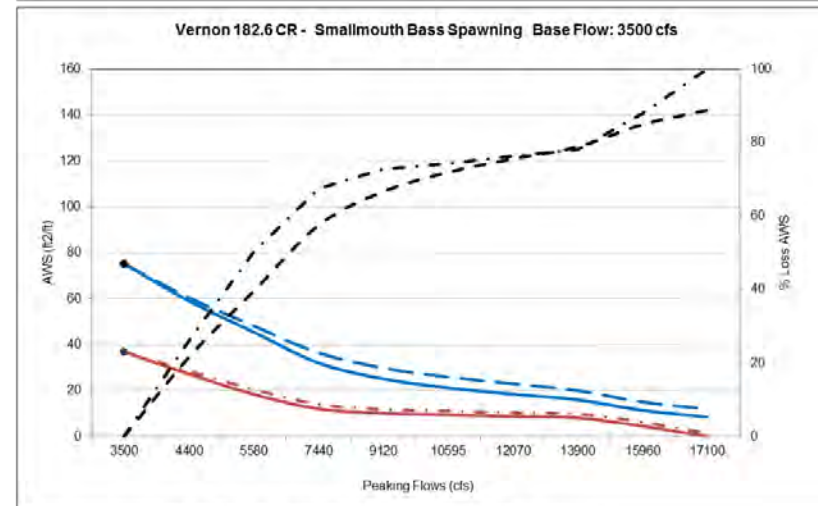
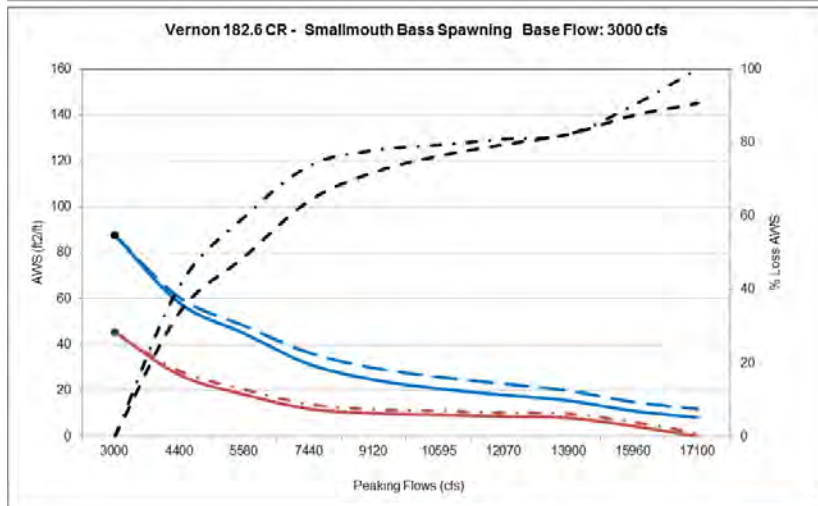
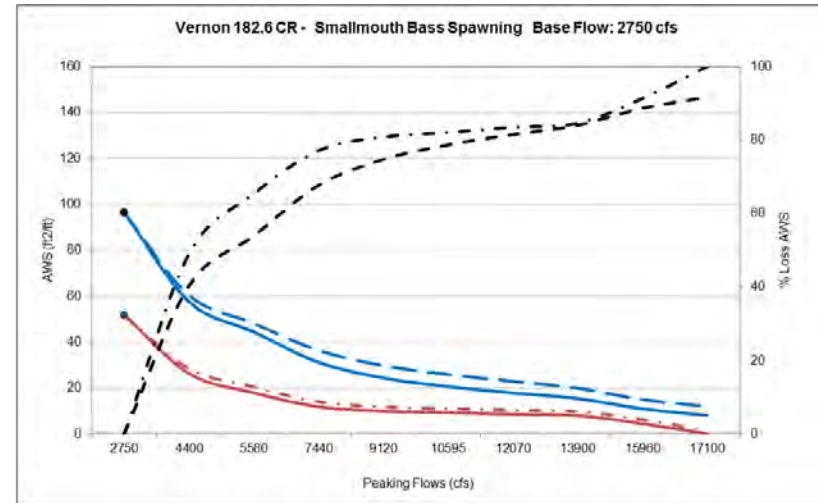
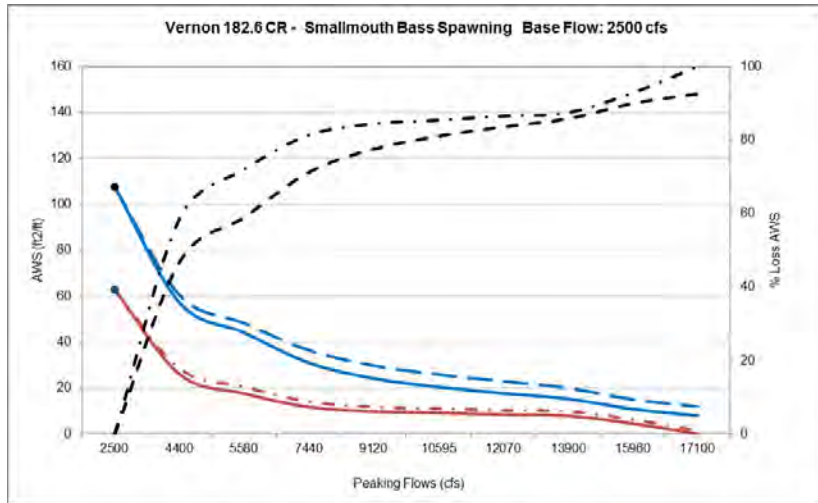


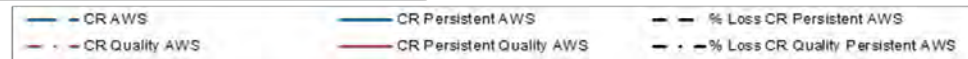
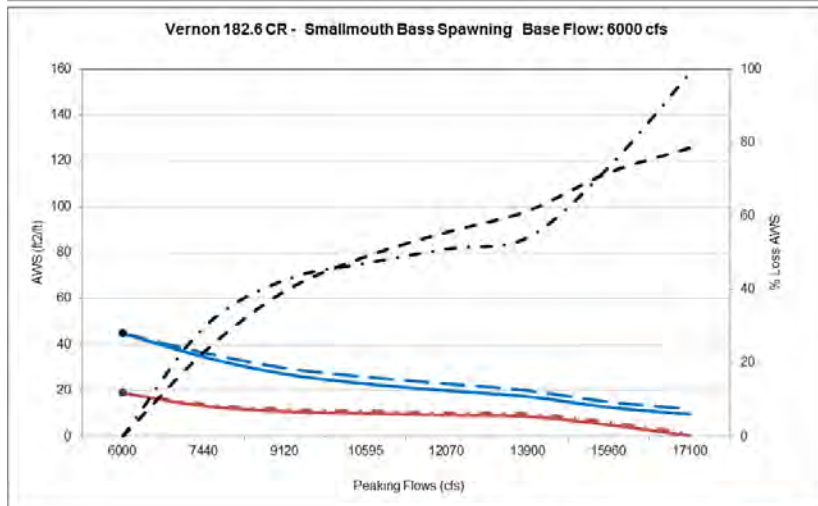
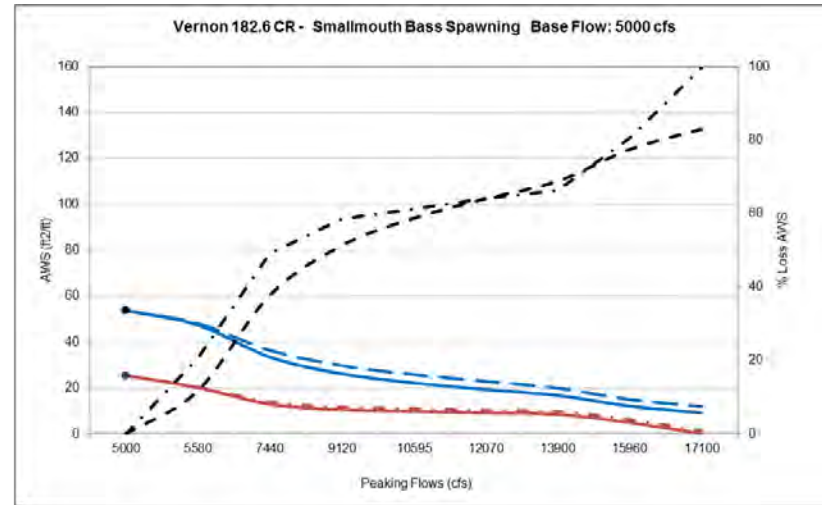
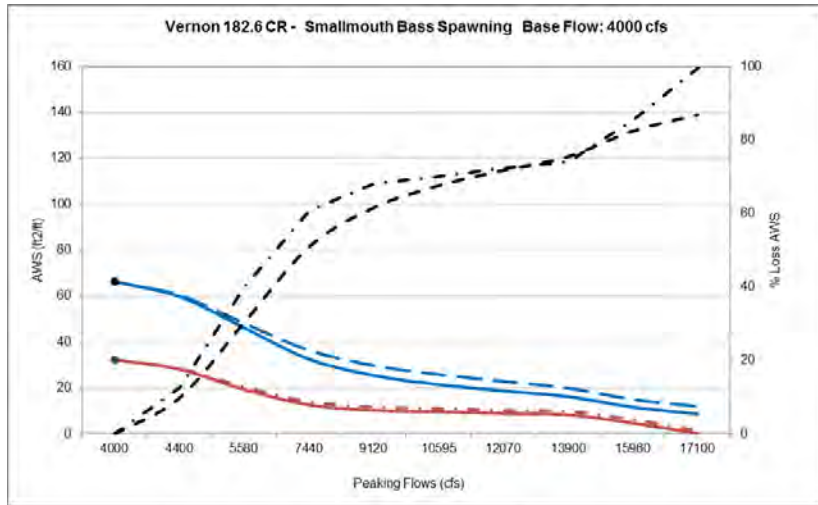




Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - CR Smallmouth Bass spawning persistent and persistent quality habitat.

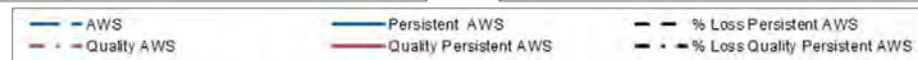
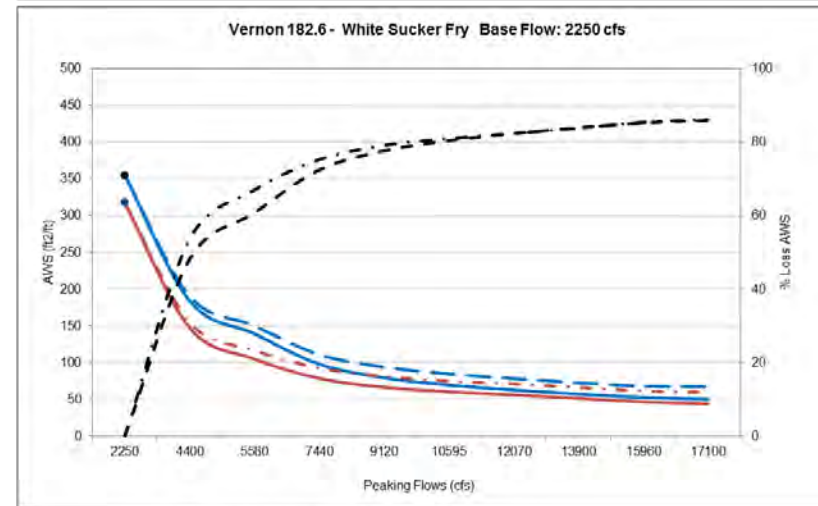
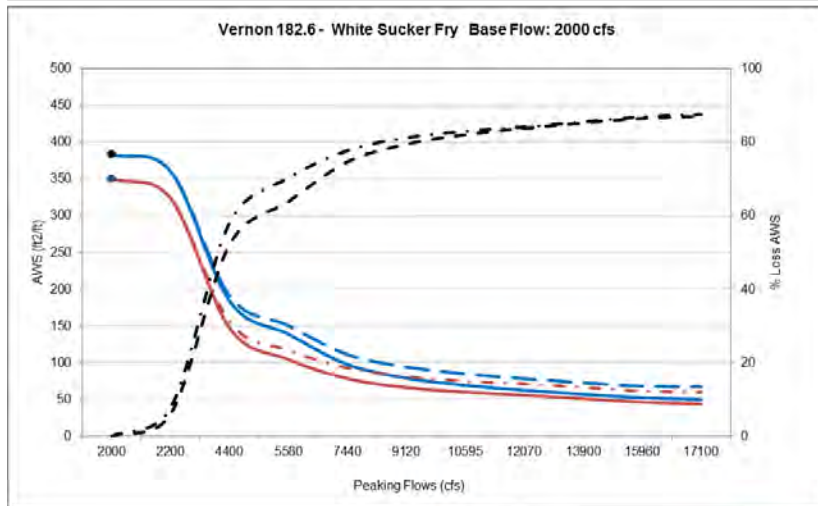
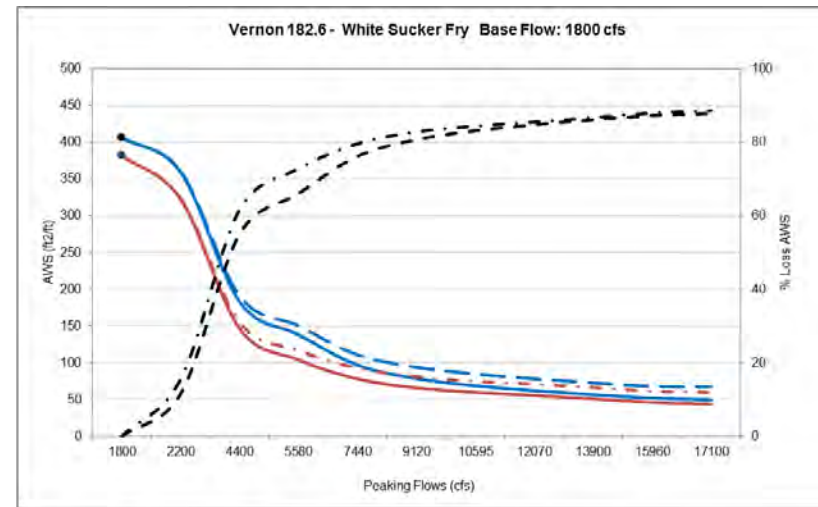
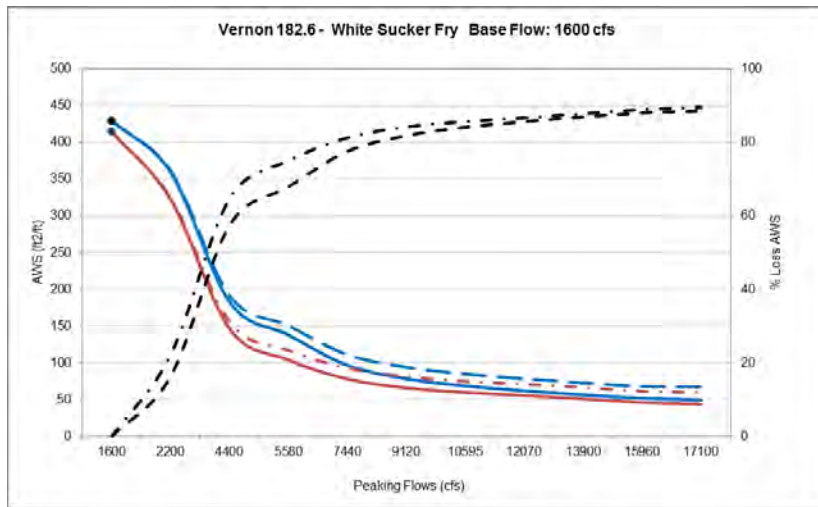




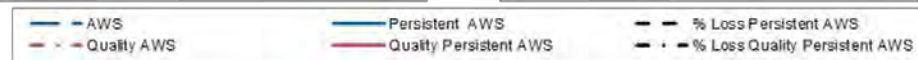
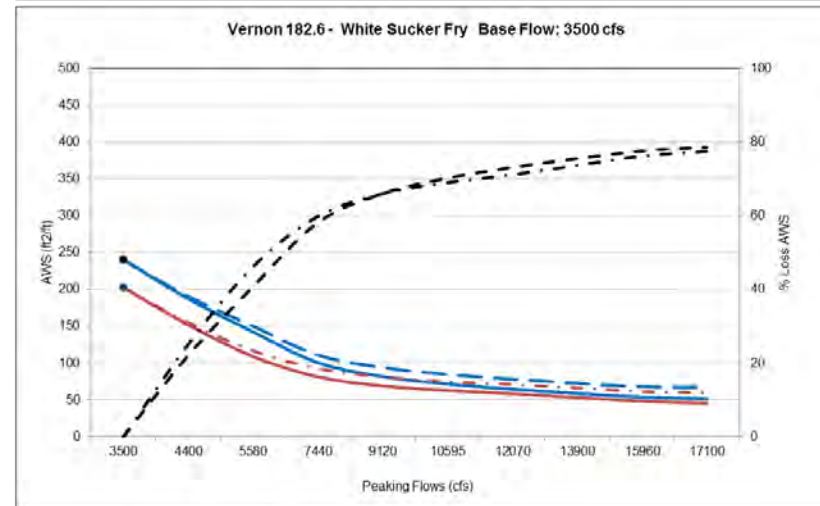
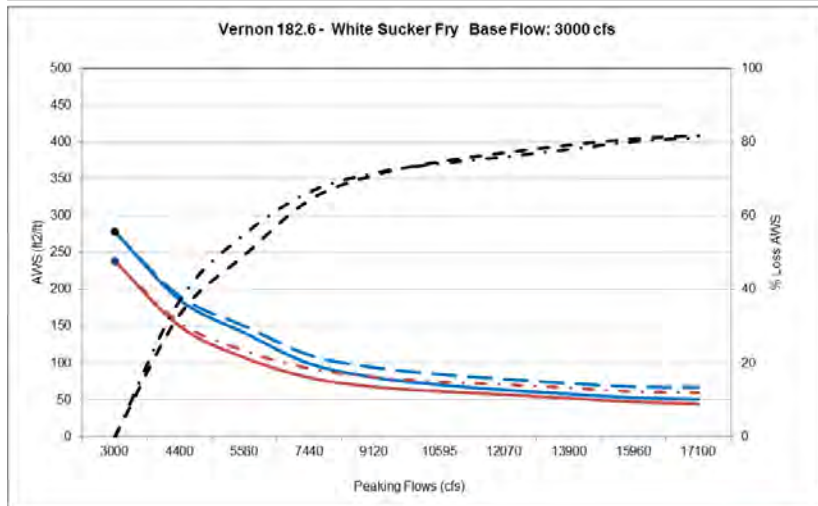
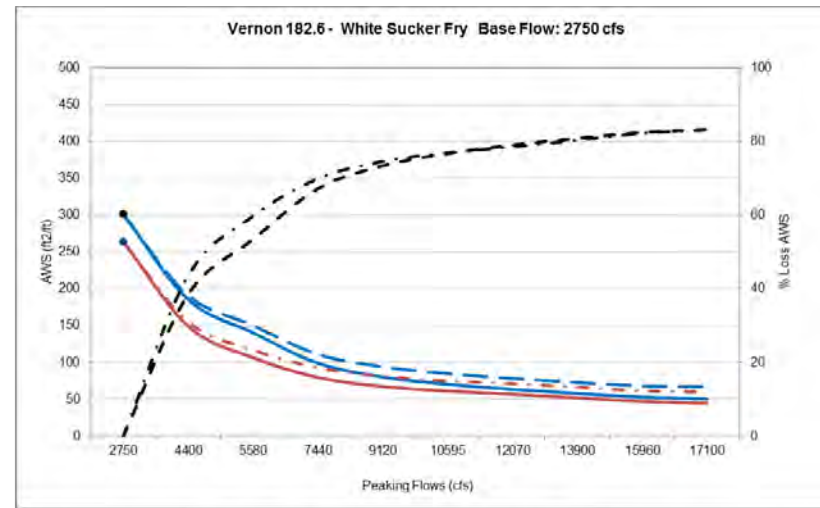
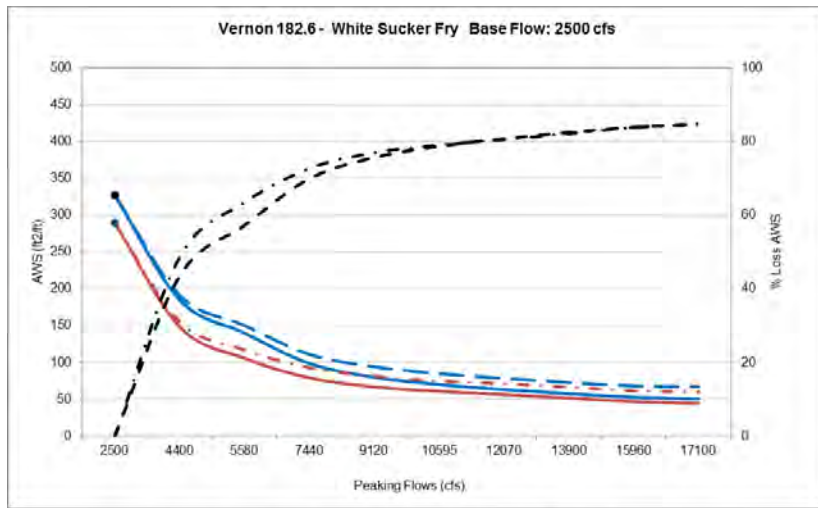


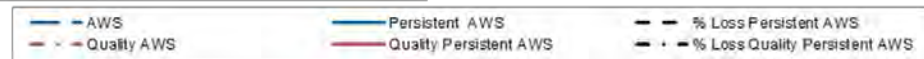
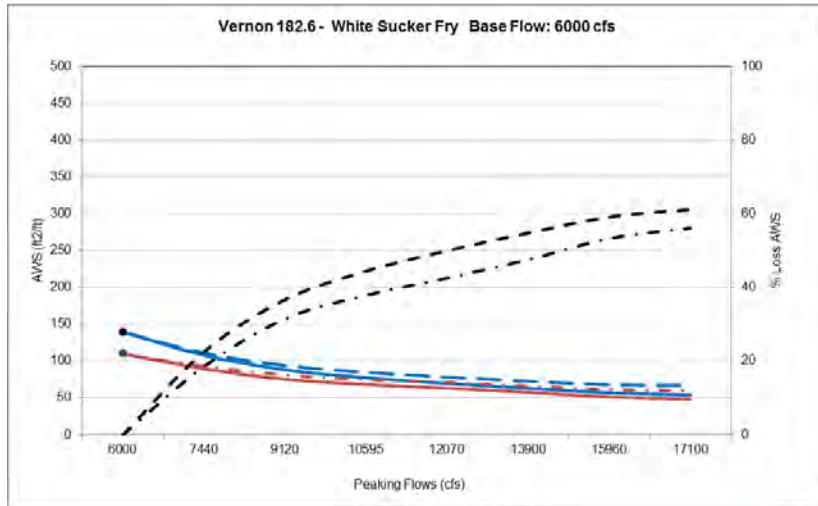
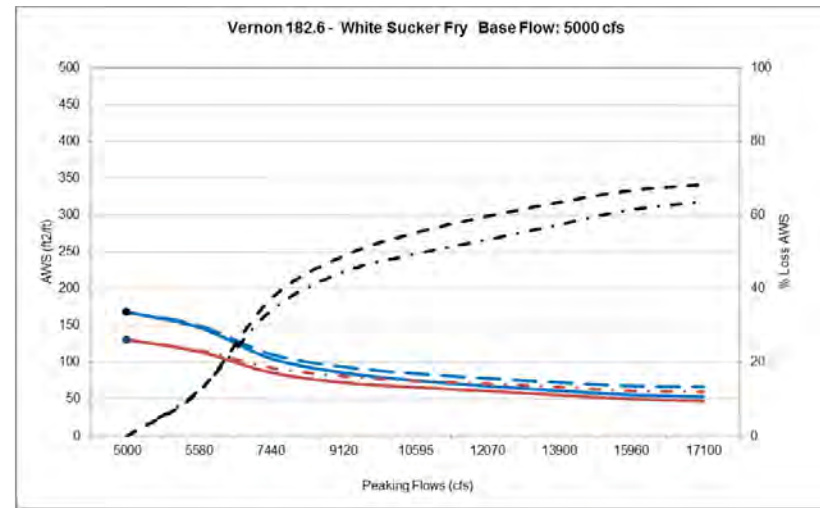
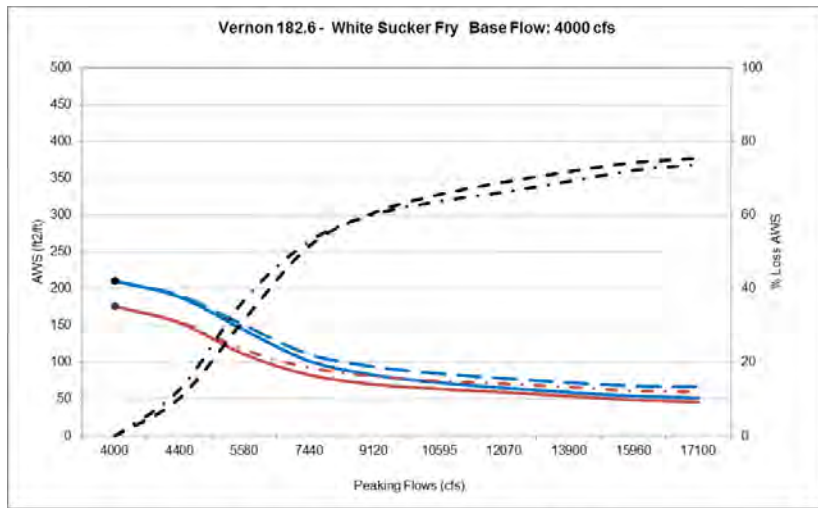


Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - White Sucker fry persistent and persistent quality habitat.

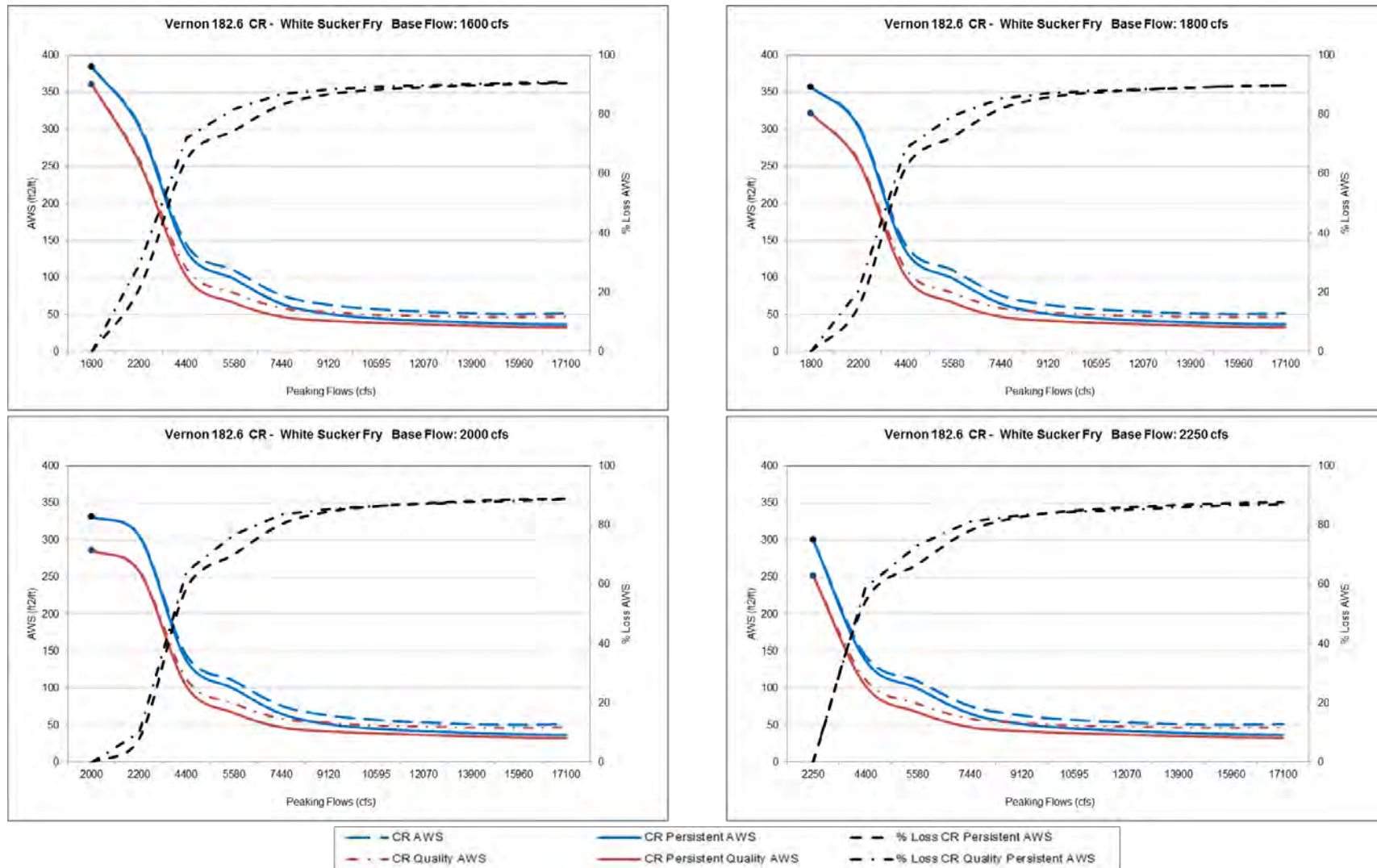


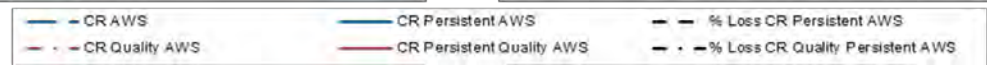
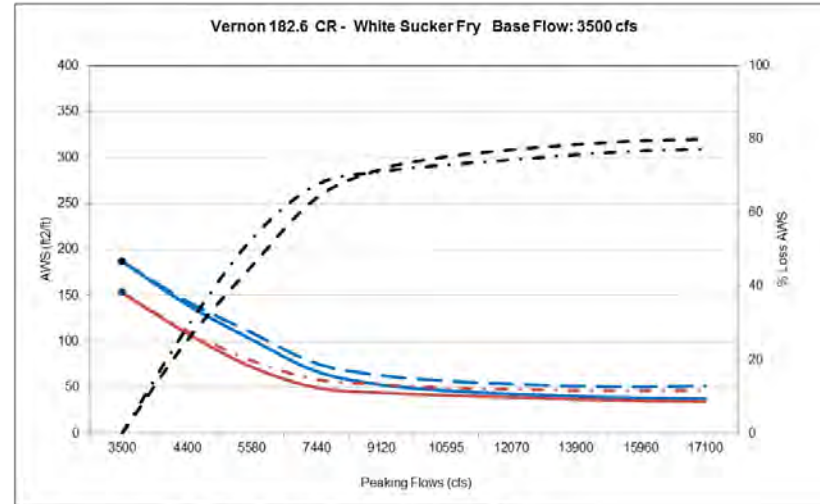
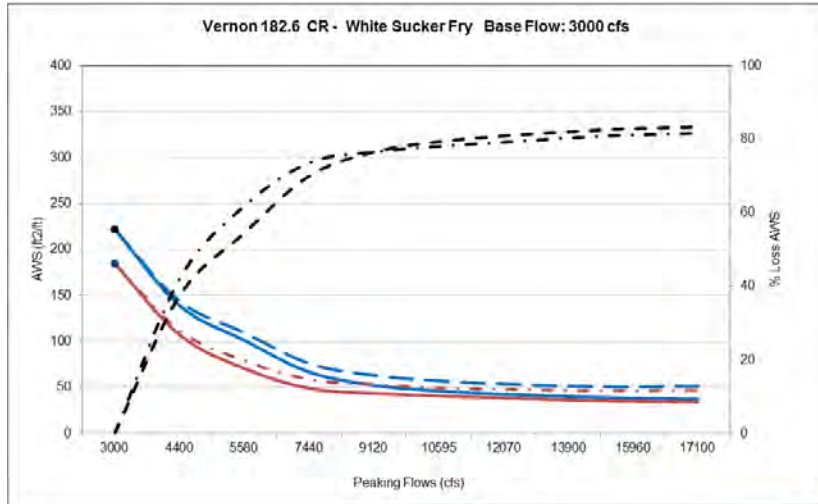
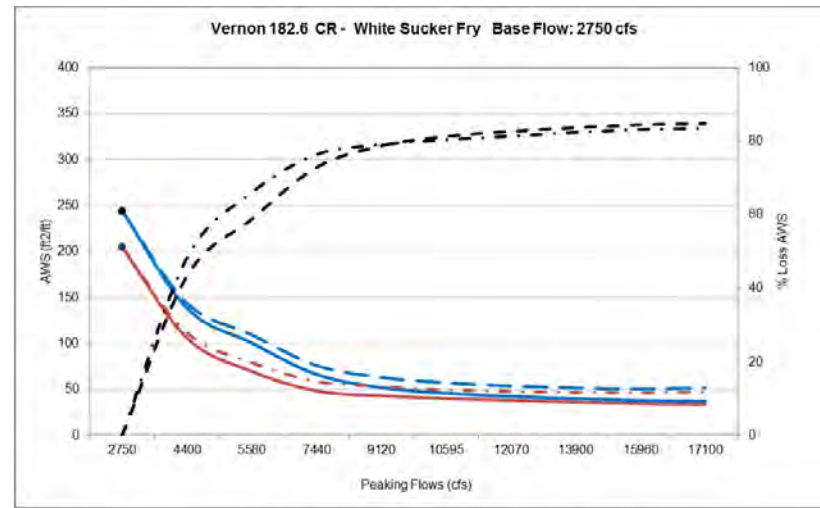
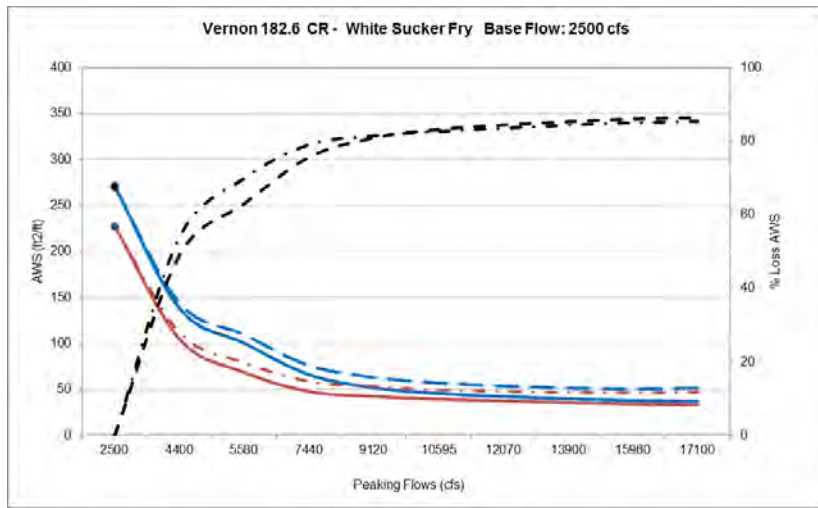


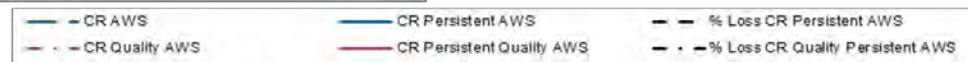
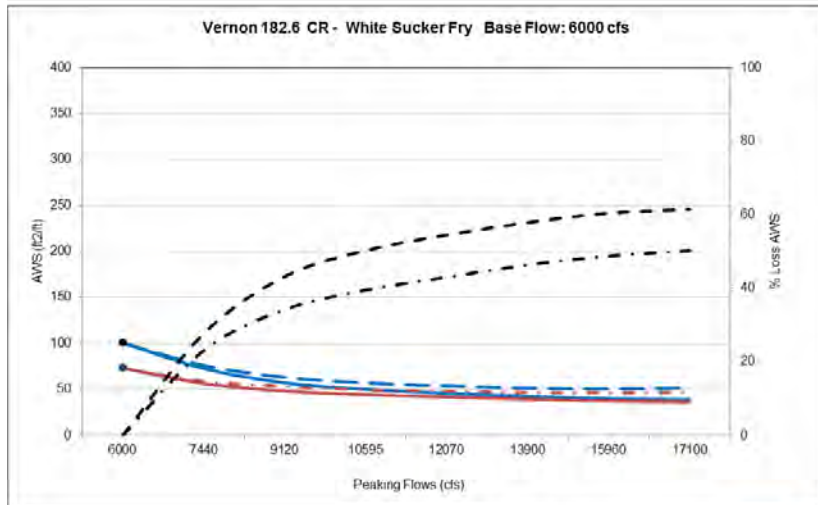
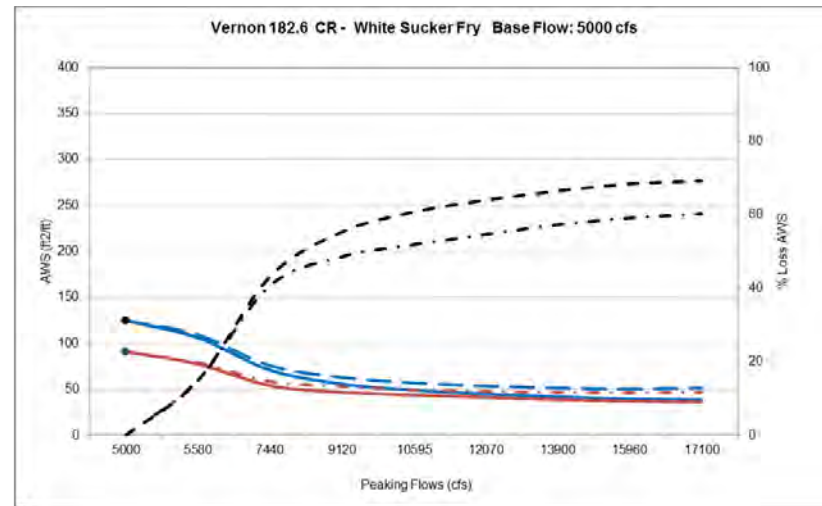
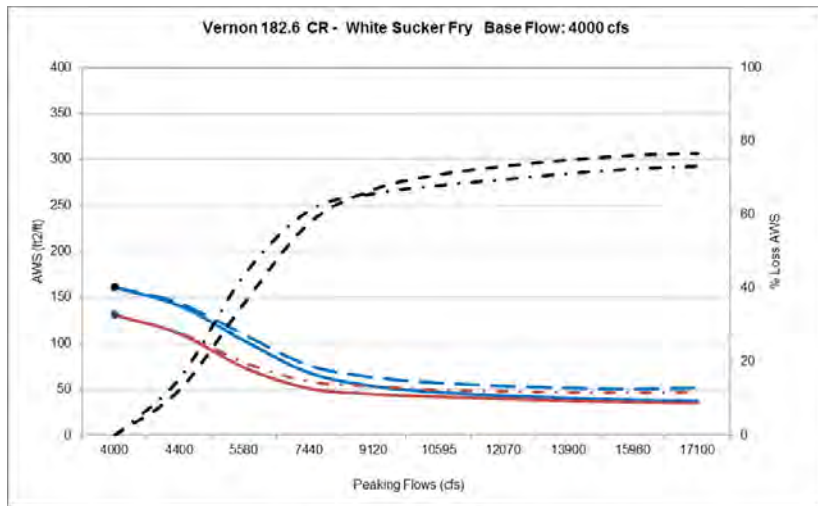




Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - CR White Sucker fry persistent and persistent quality habitat.

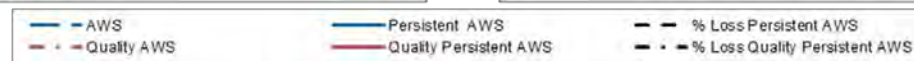
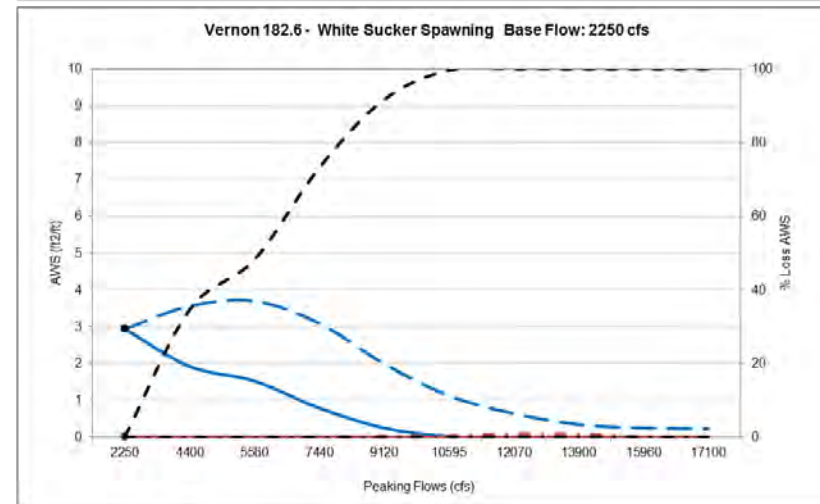
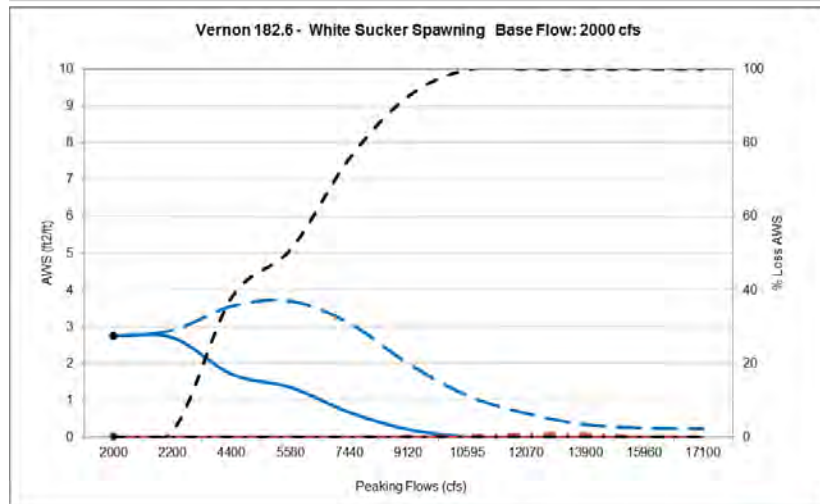
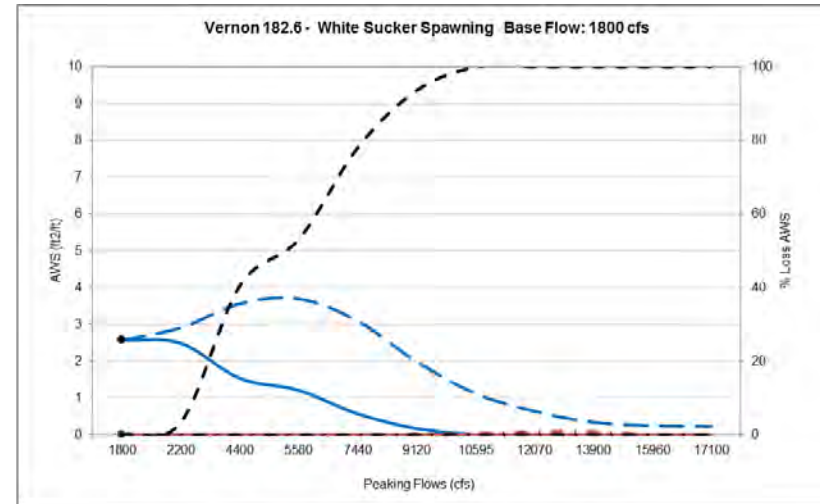
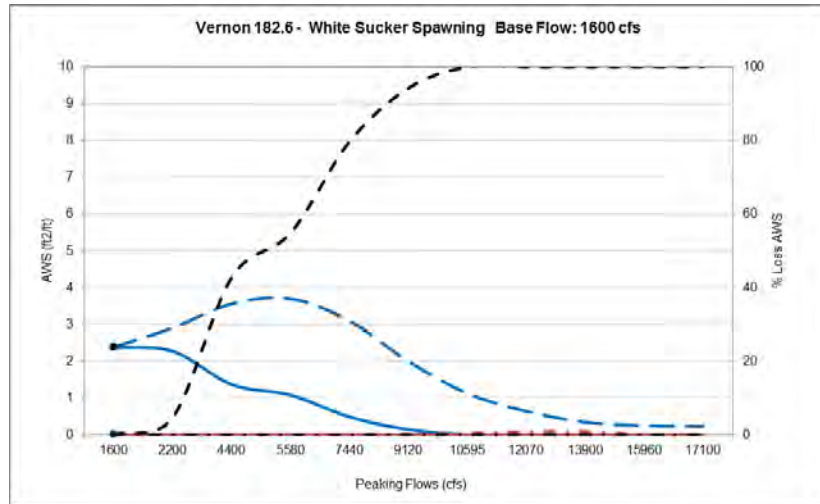


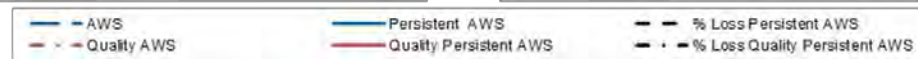
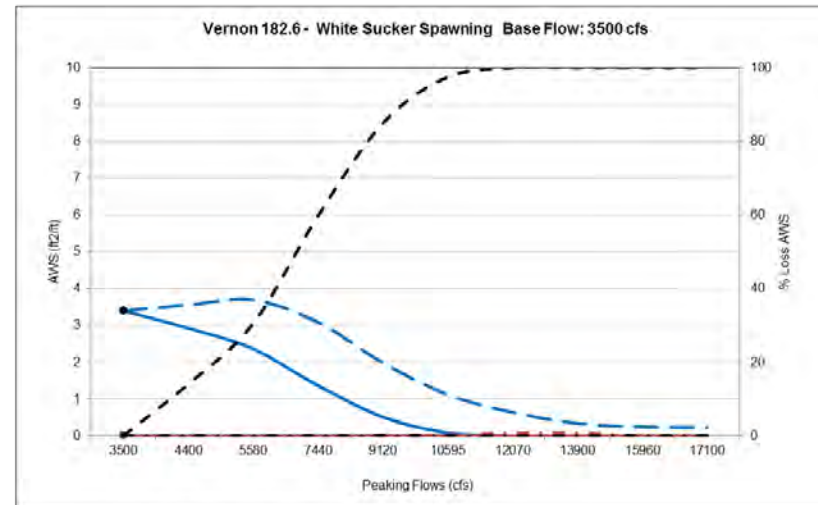
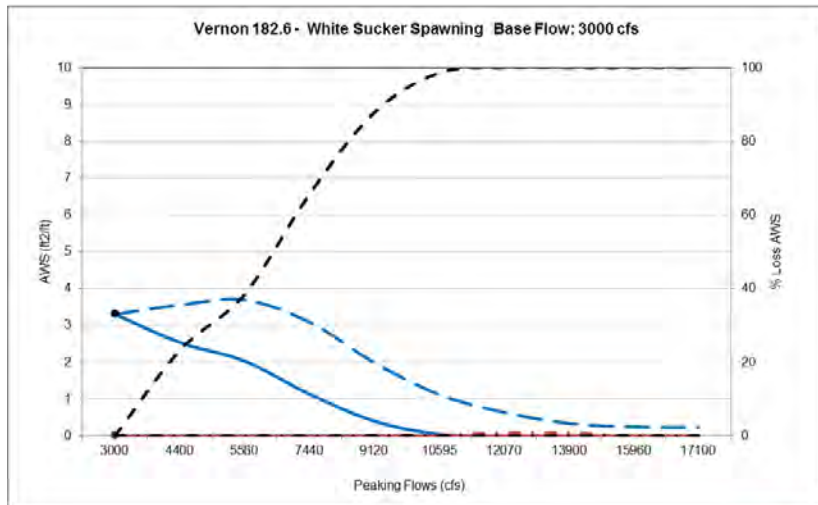
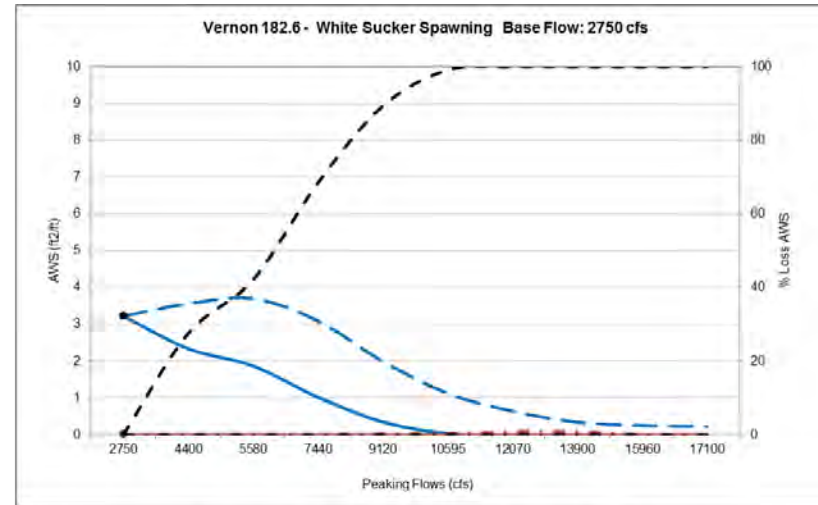
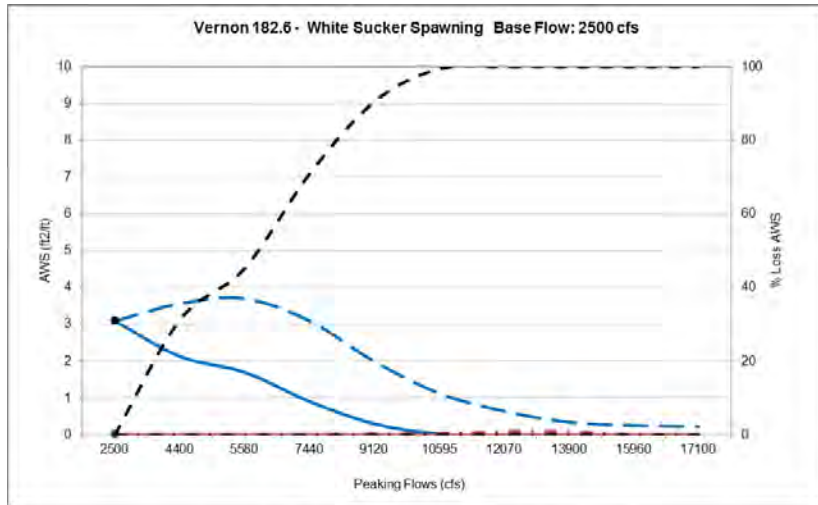


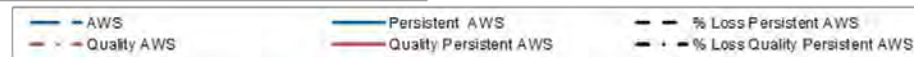
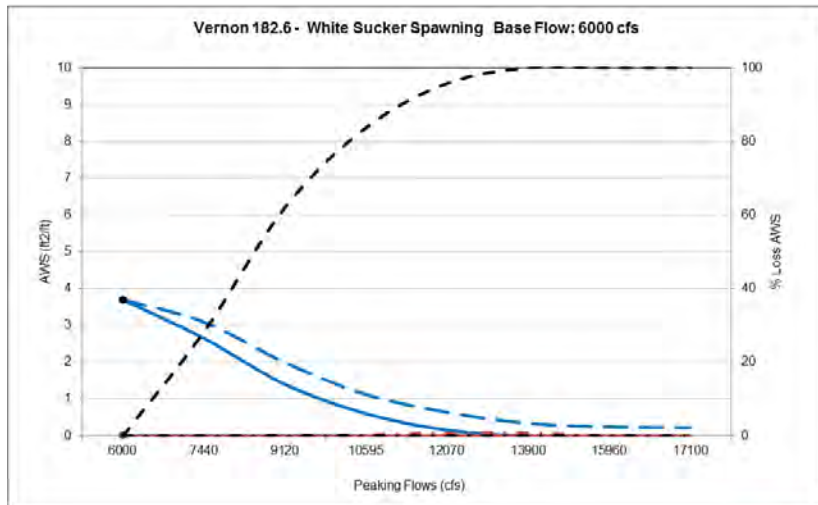
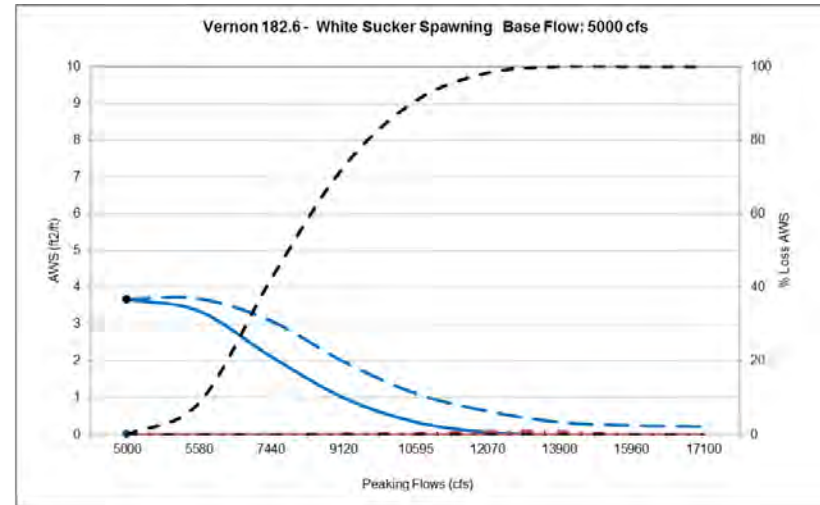
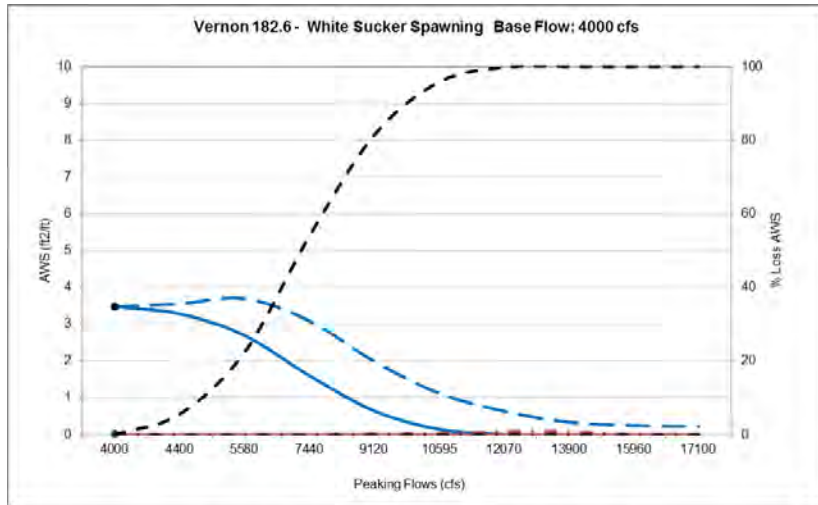




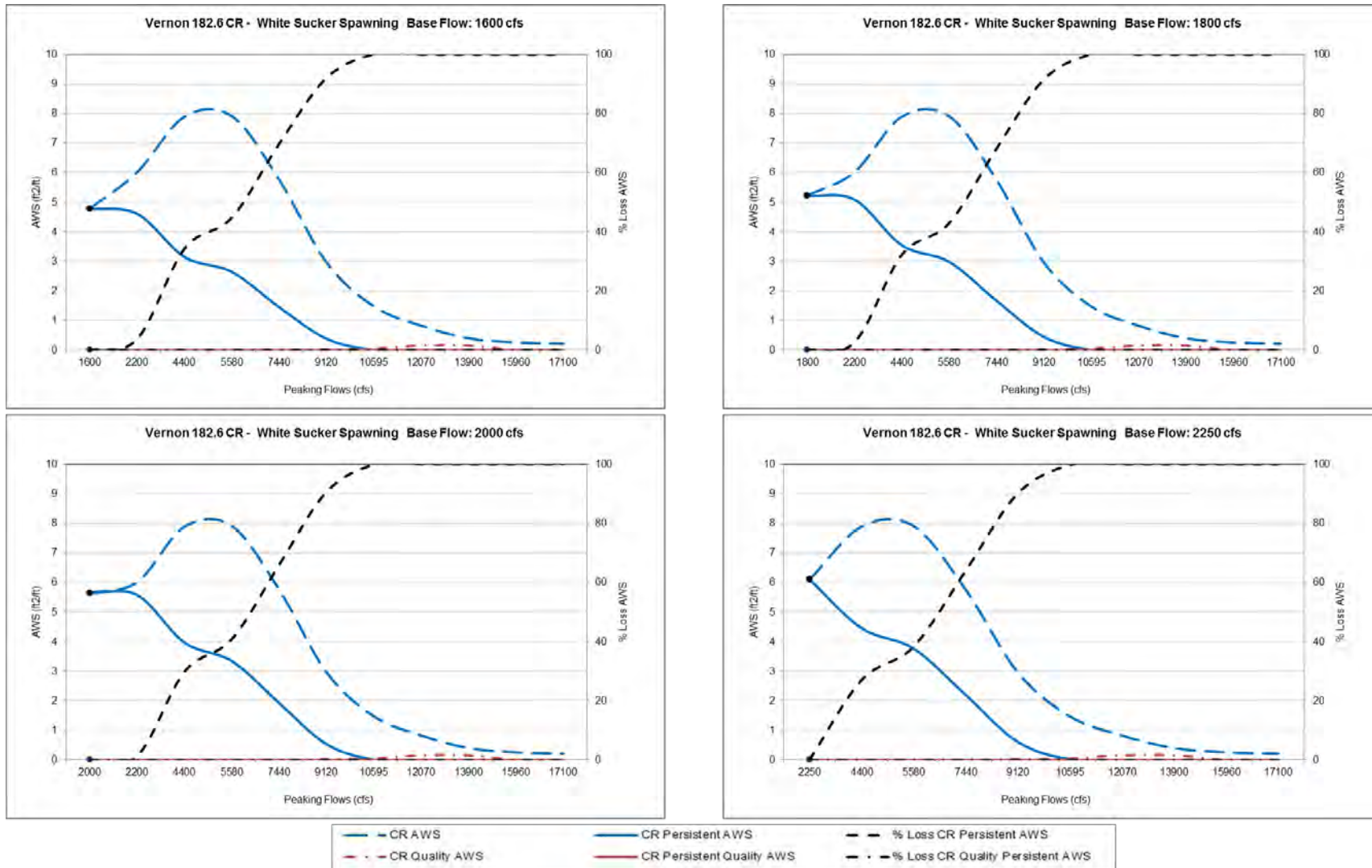
Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - White Sucker spawning persistent and persistent quality habitat.



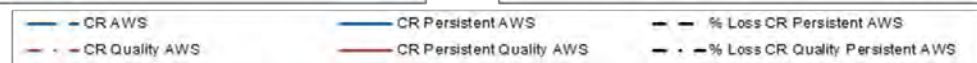
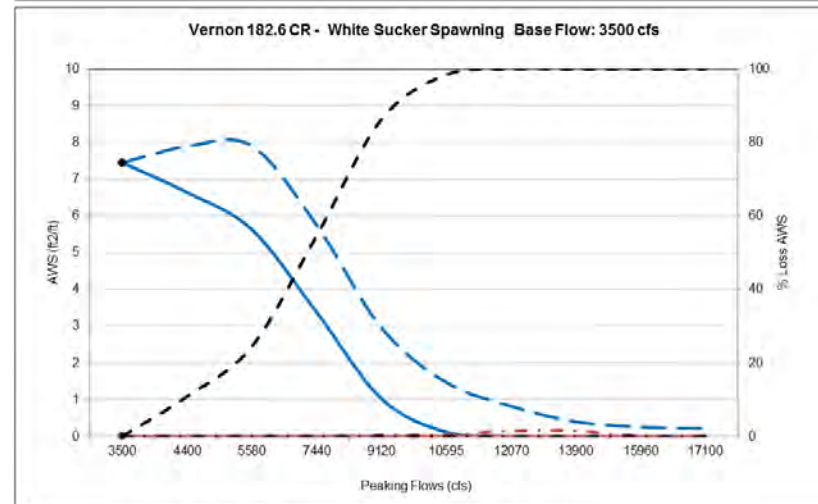
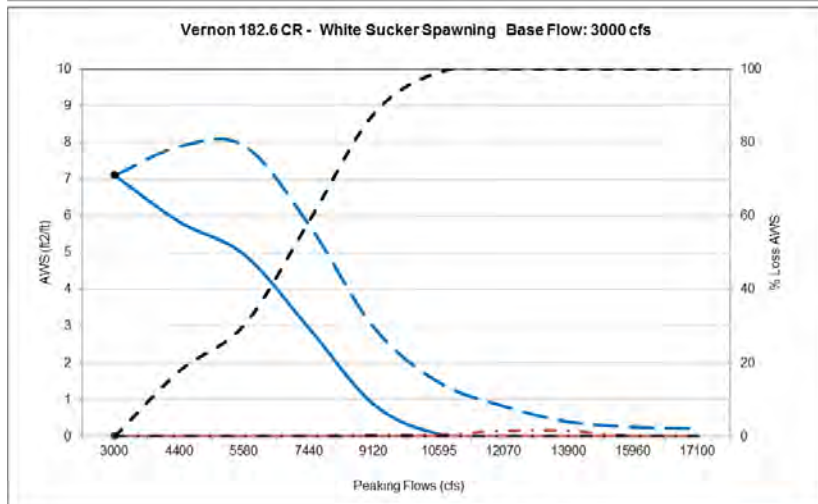
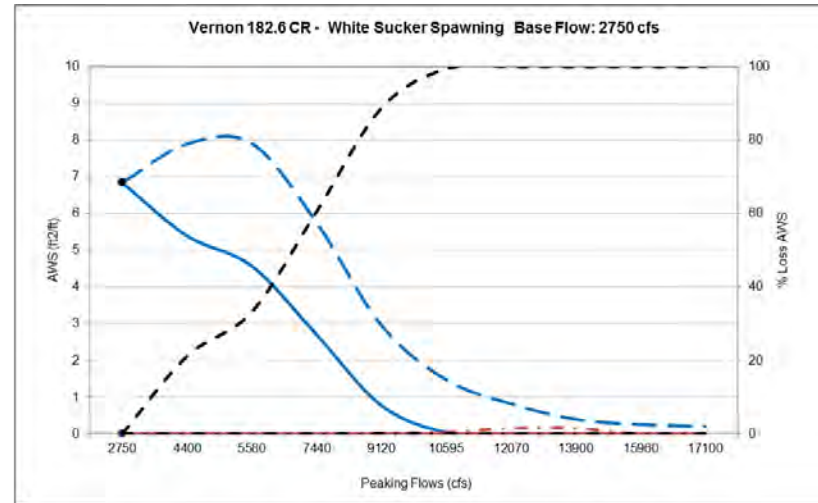
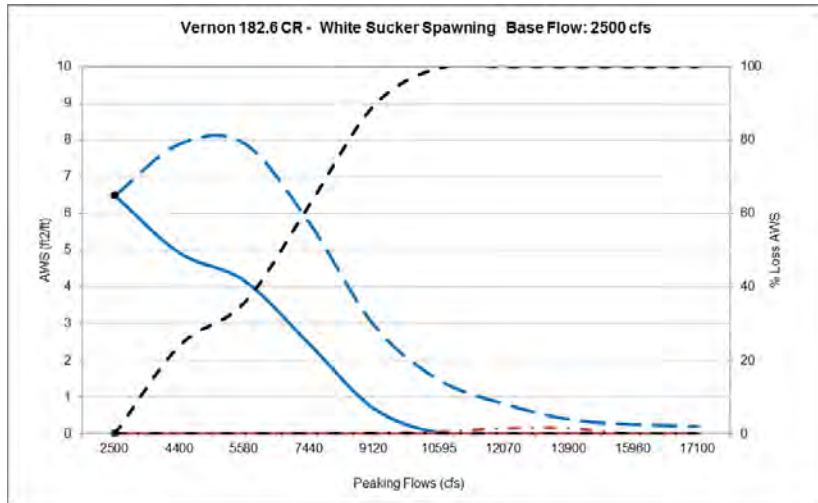




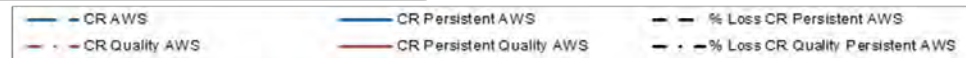
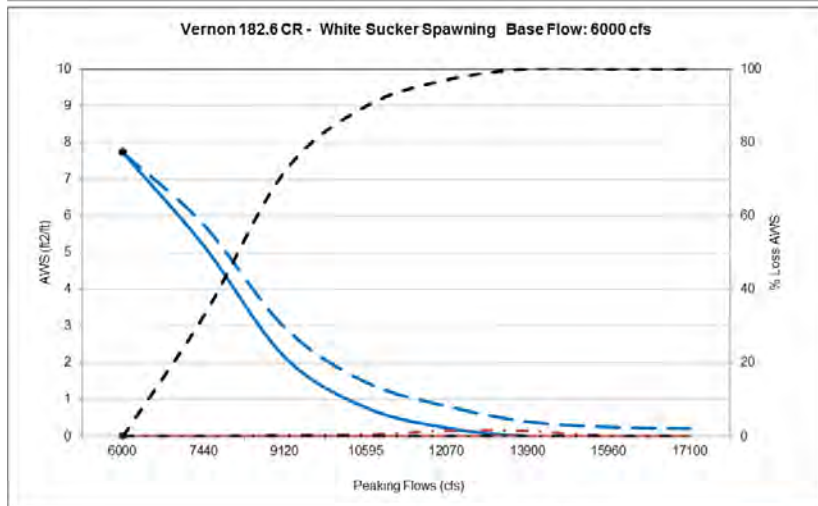
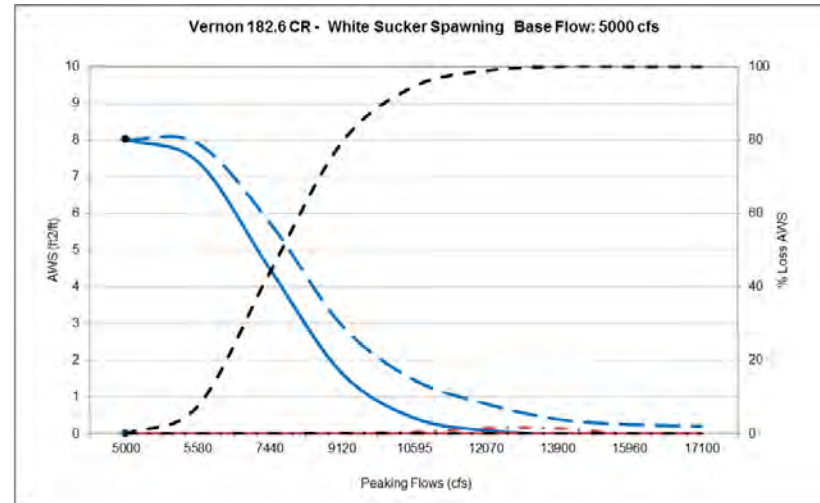
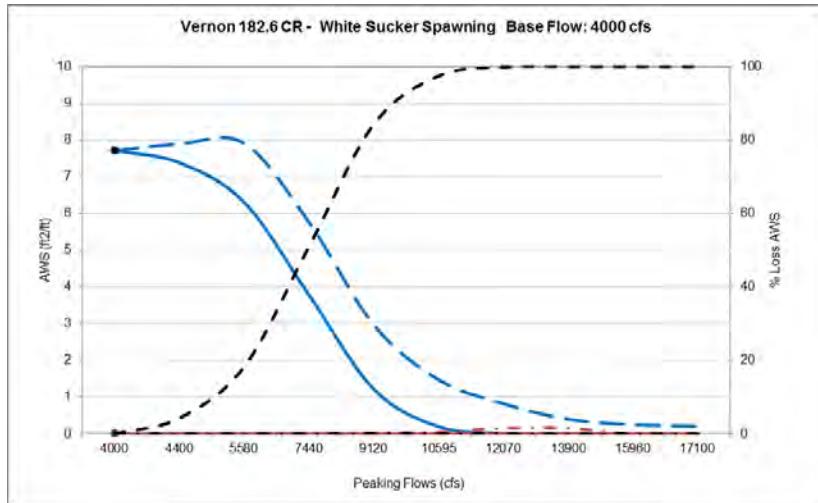
Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - CR White Sucker spawning persistent and persistent quality habitat.



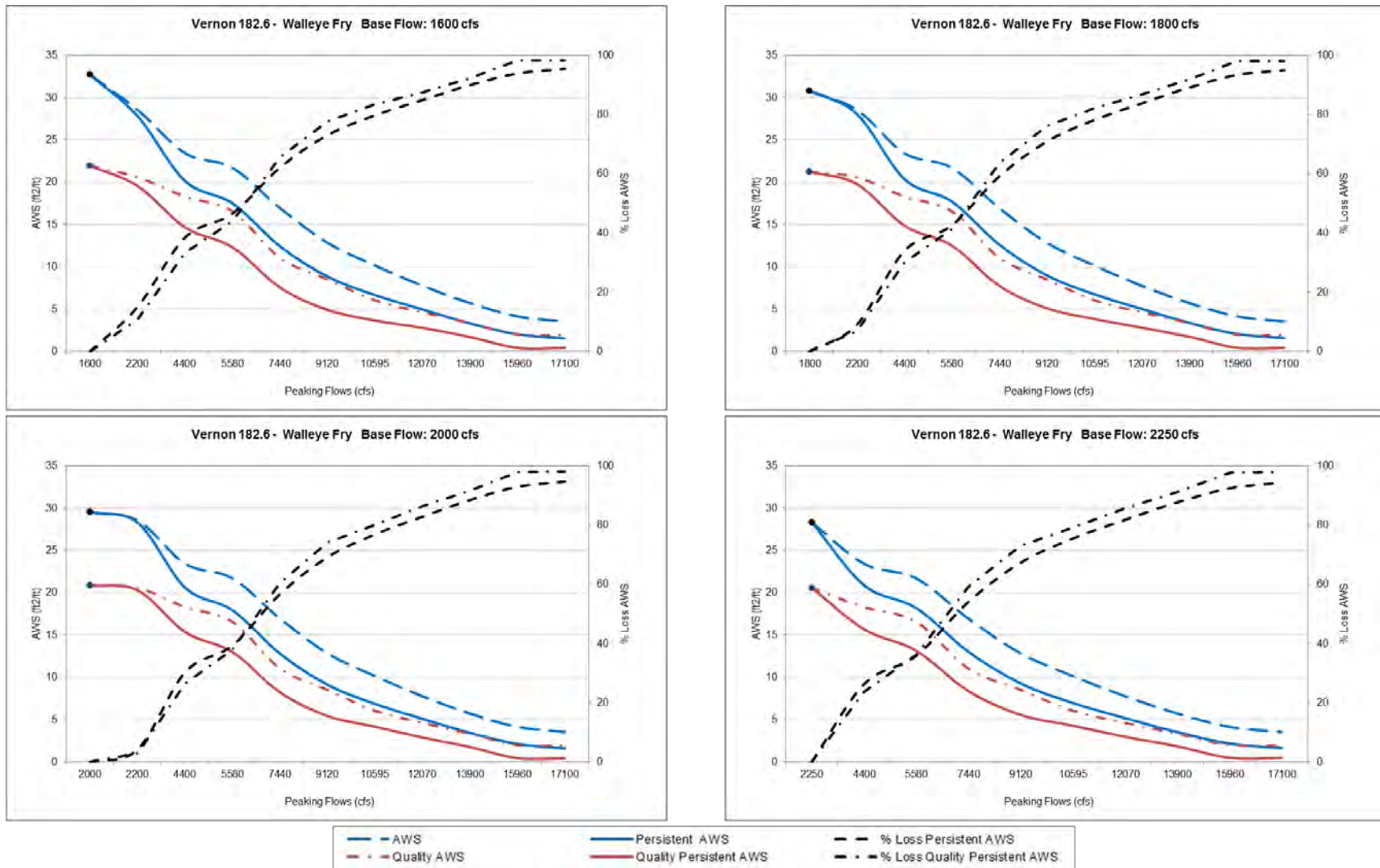


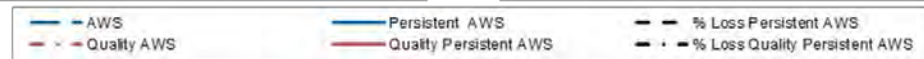
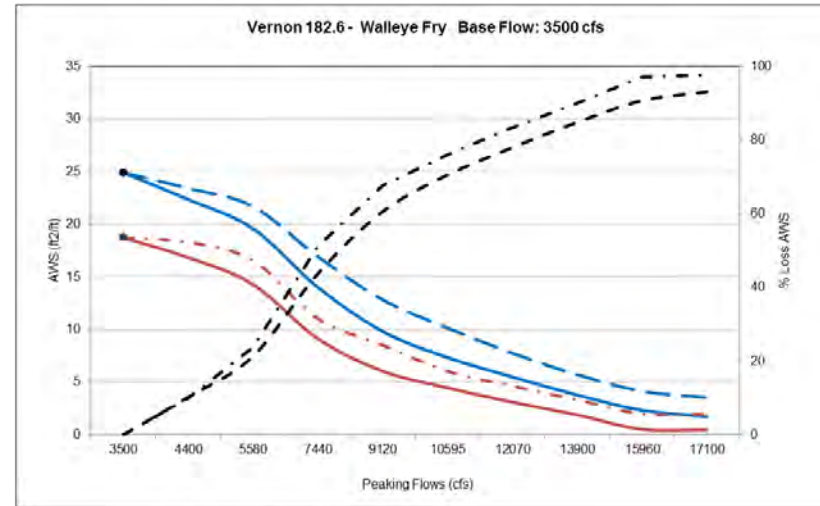
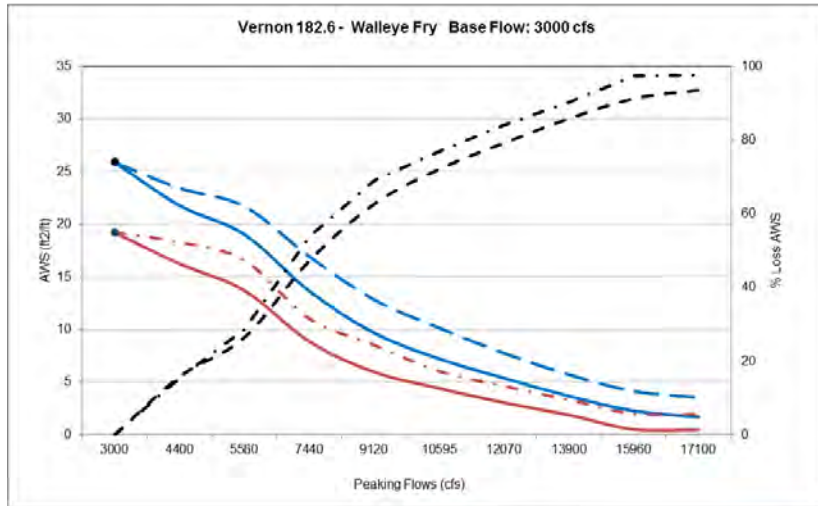
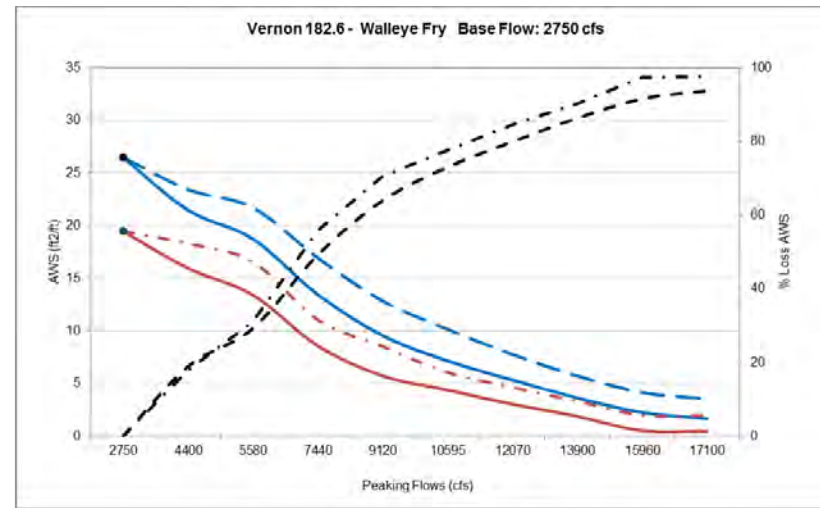
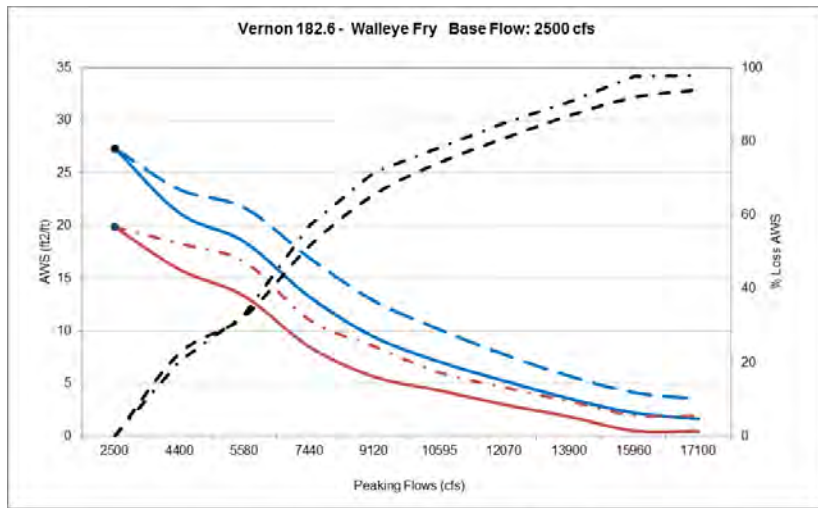


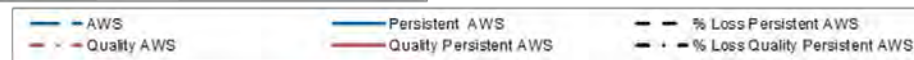
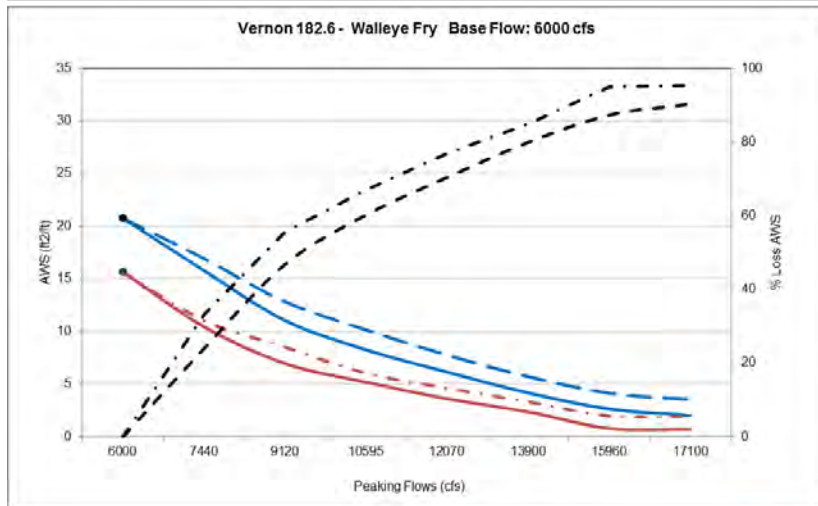
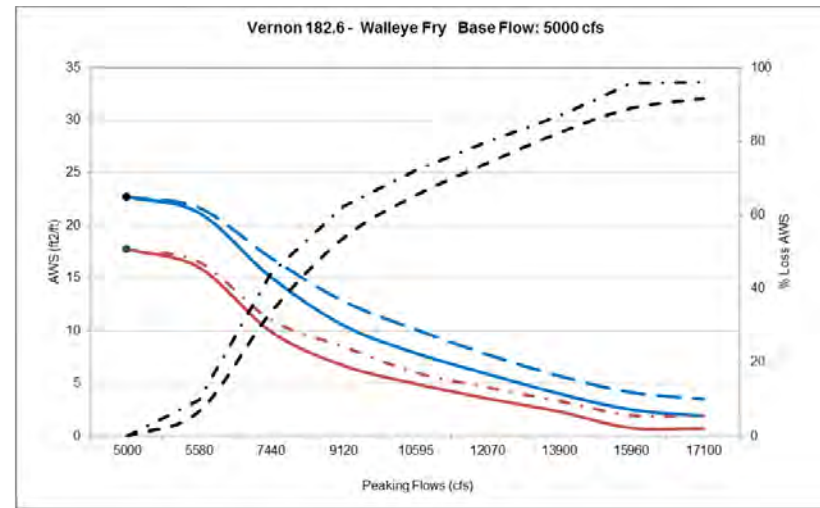
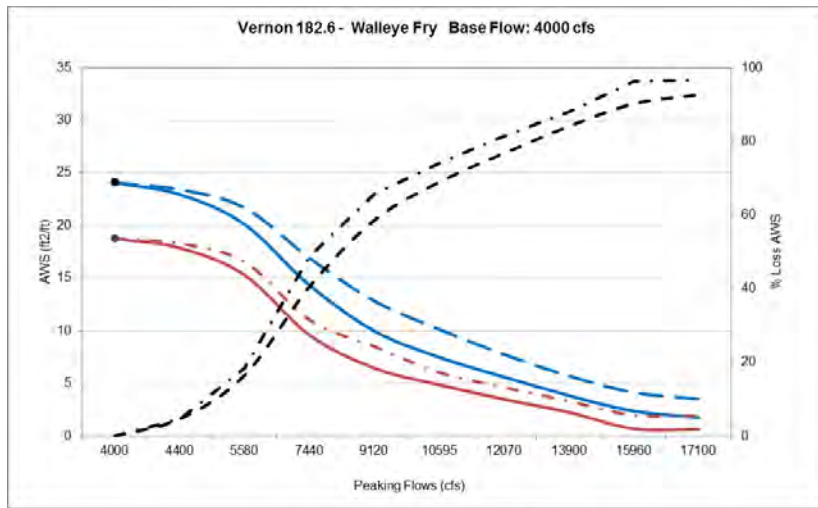




Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - Walleye fry persistent and persistent quality habitat.

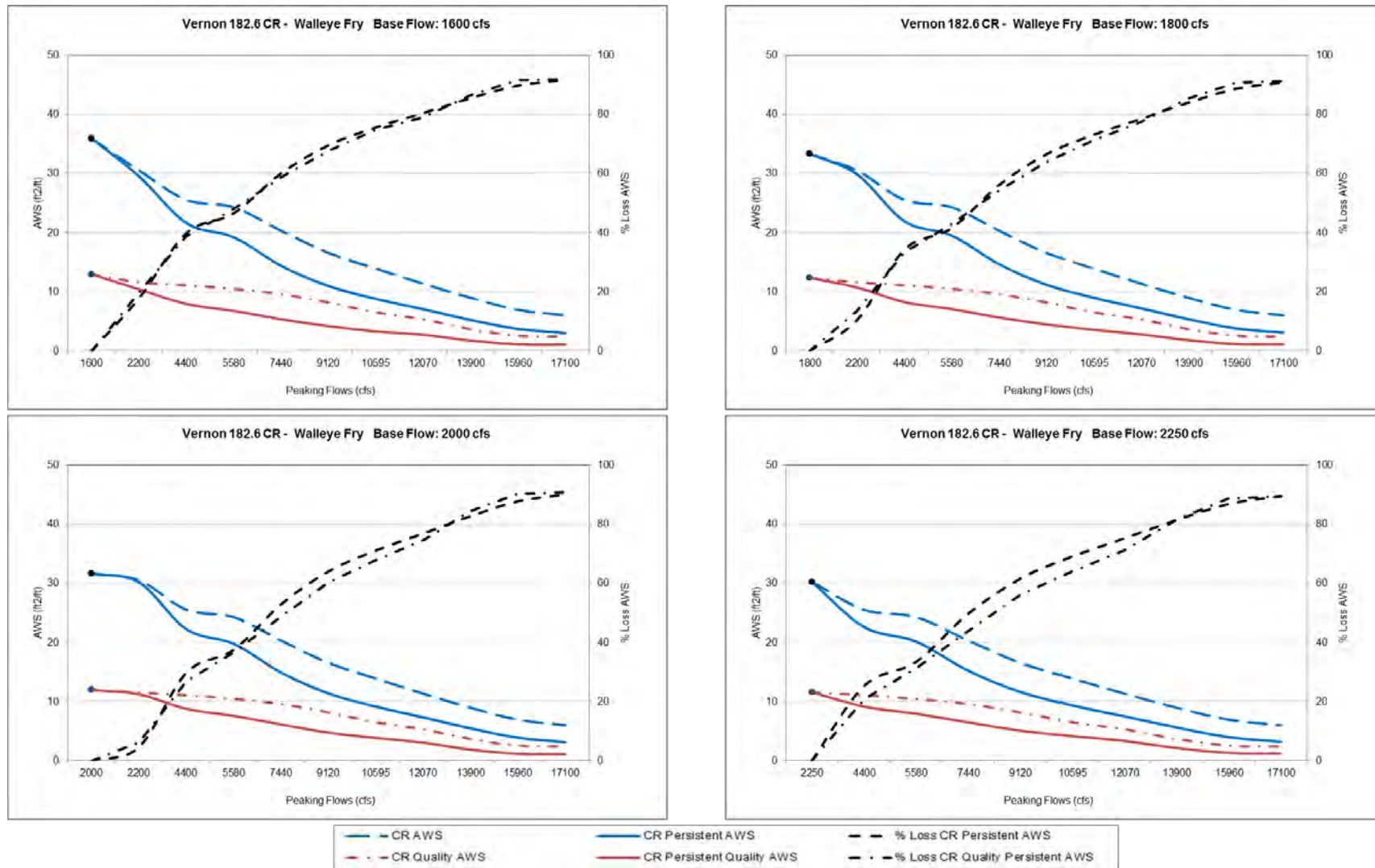




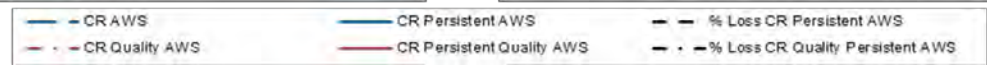
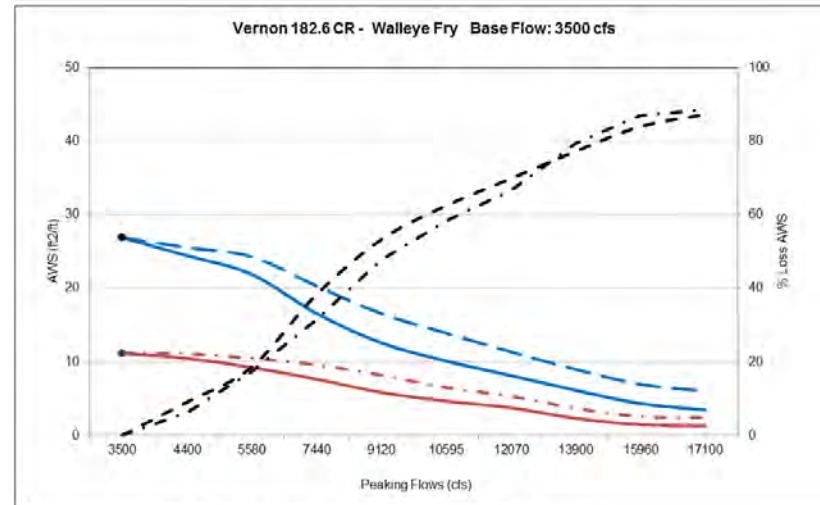
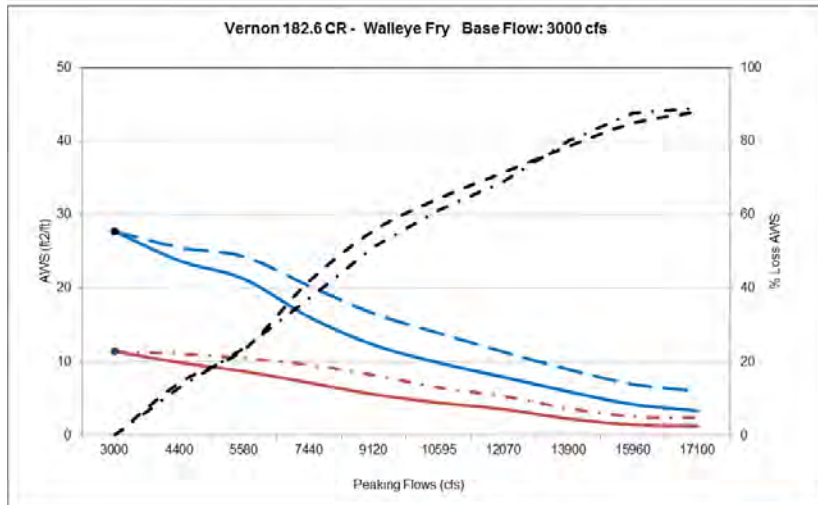
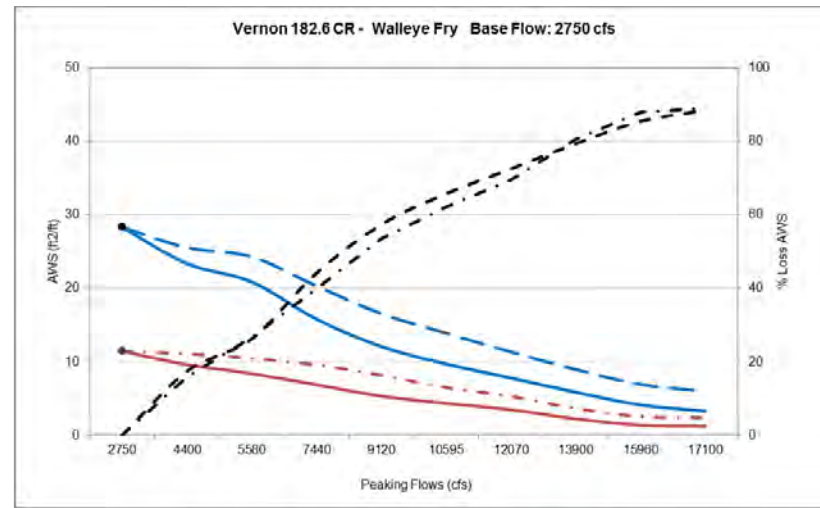
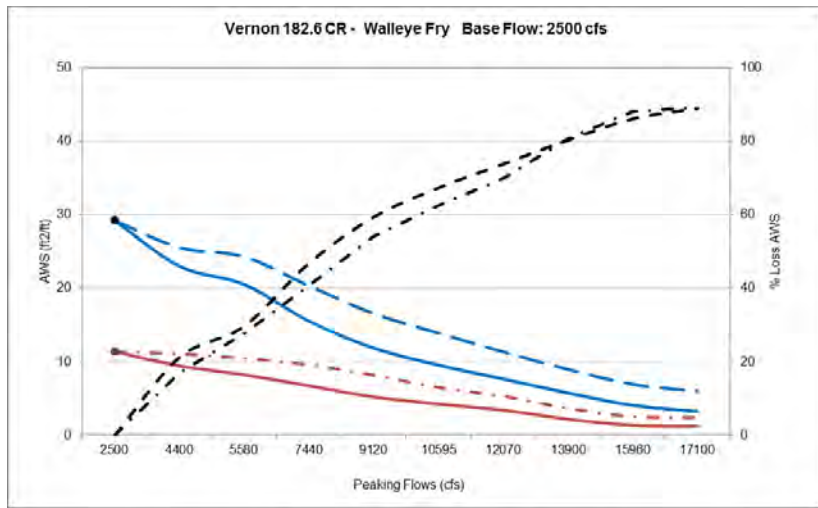


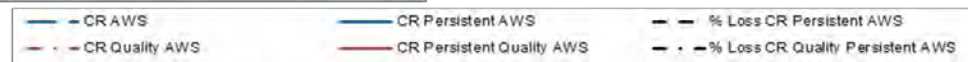
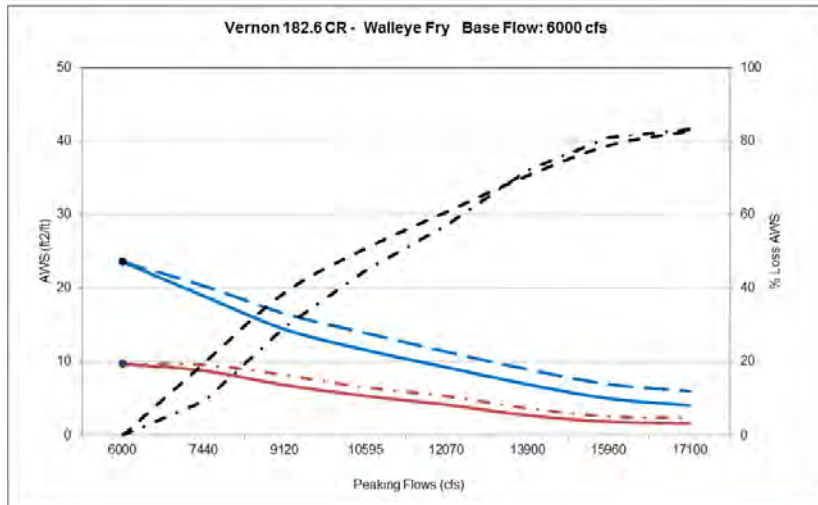
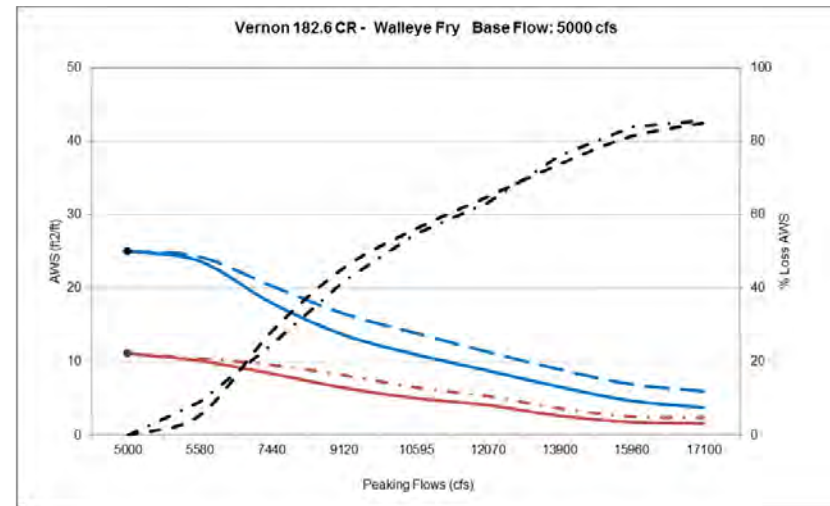
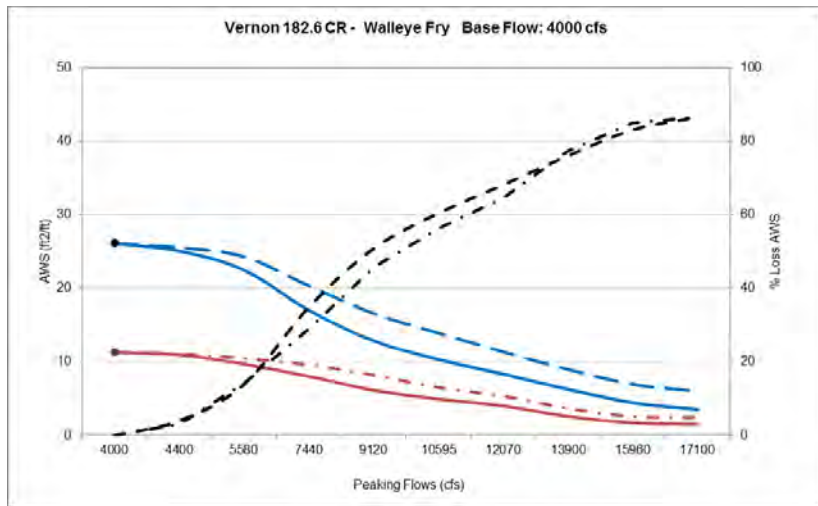


Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - CR Walleye fry persistent and persistent quality habitat.

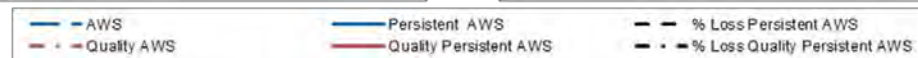
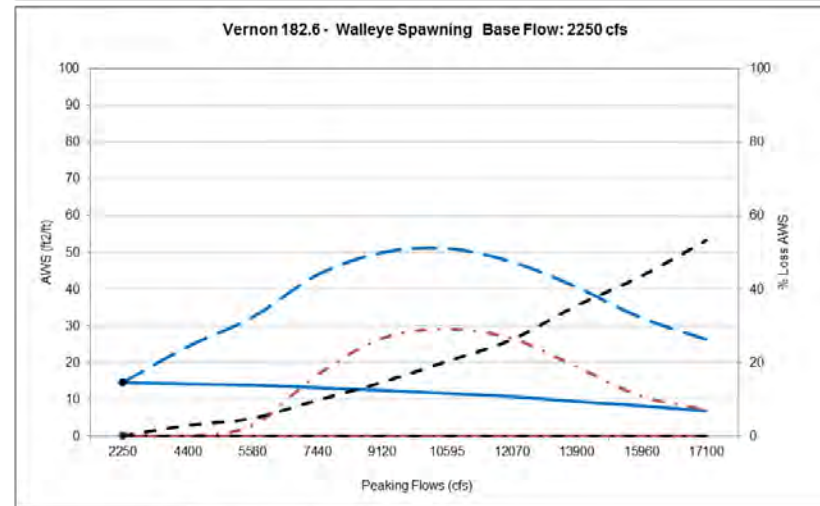
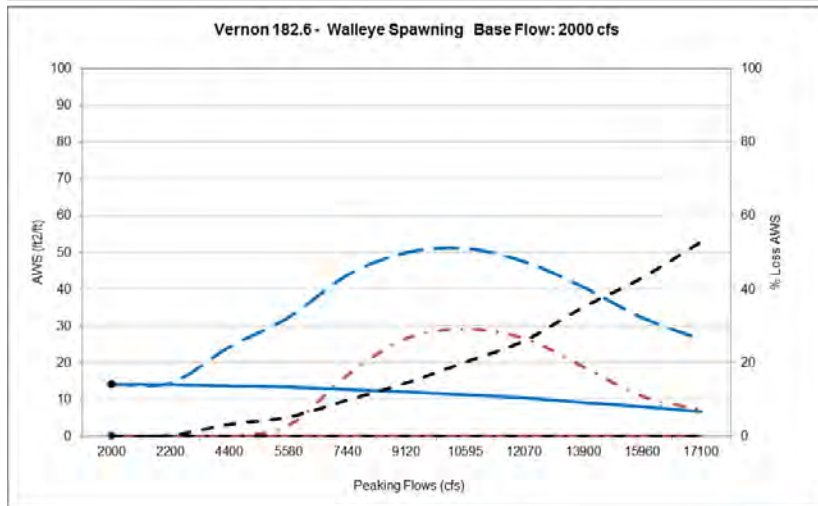
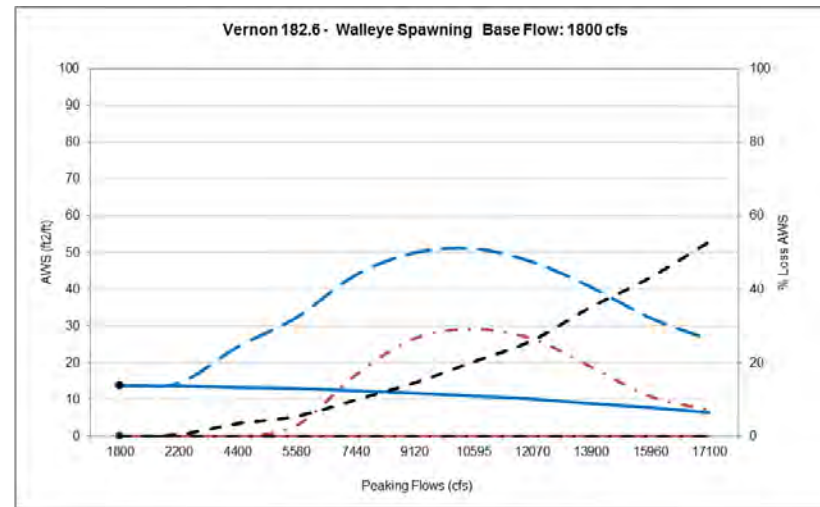
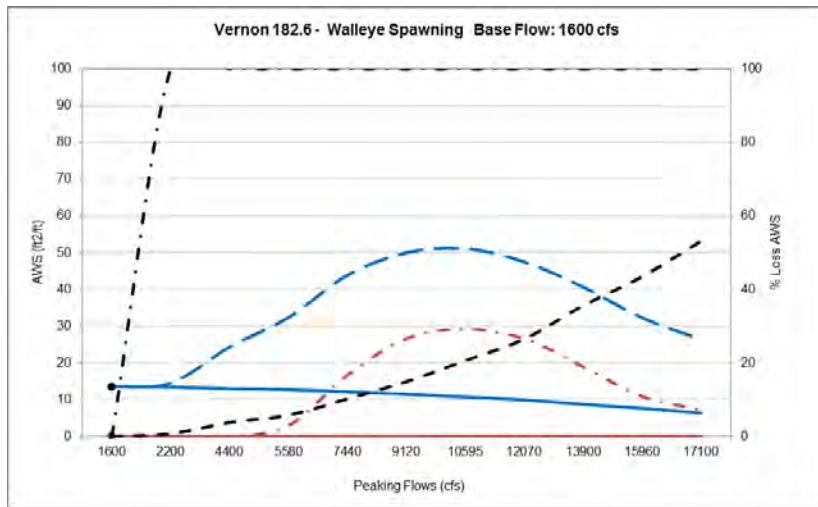


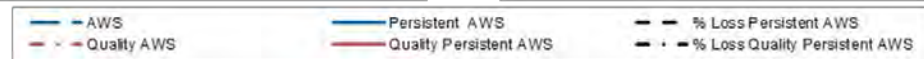
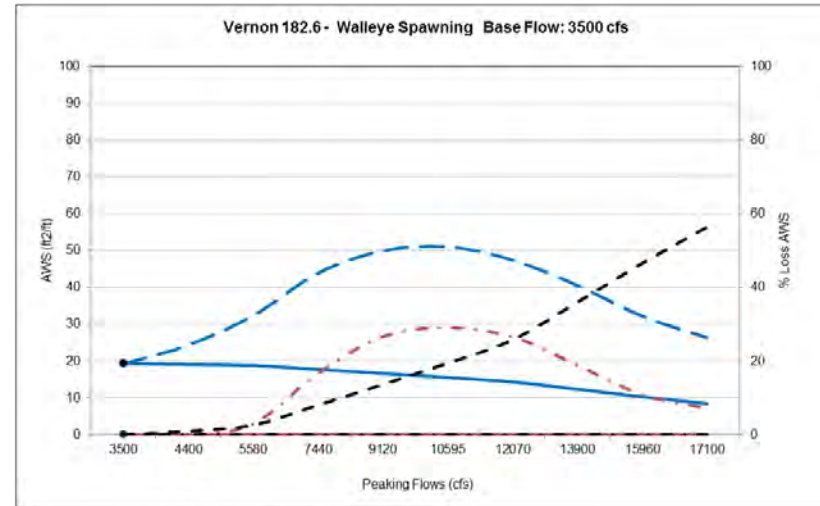
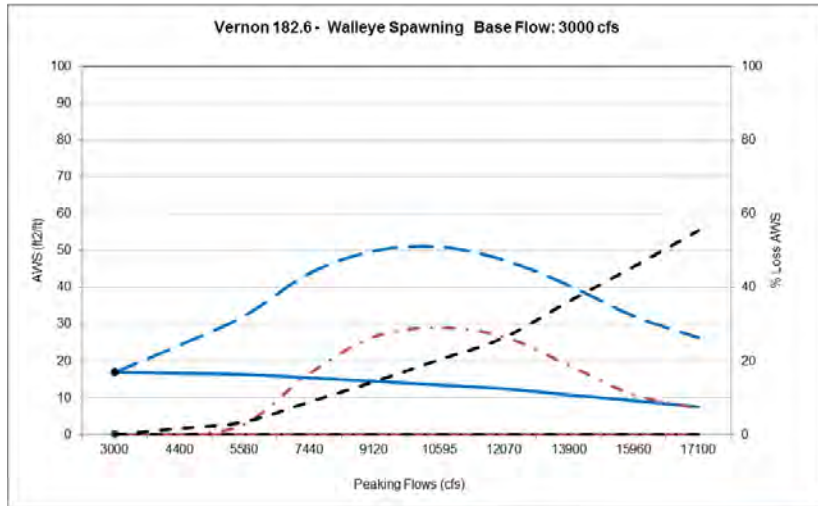
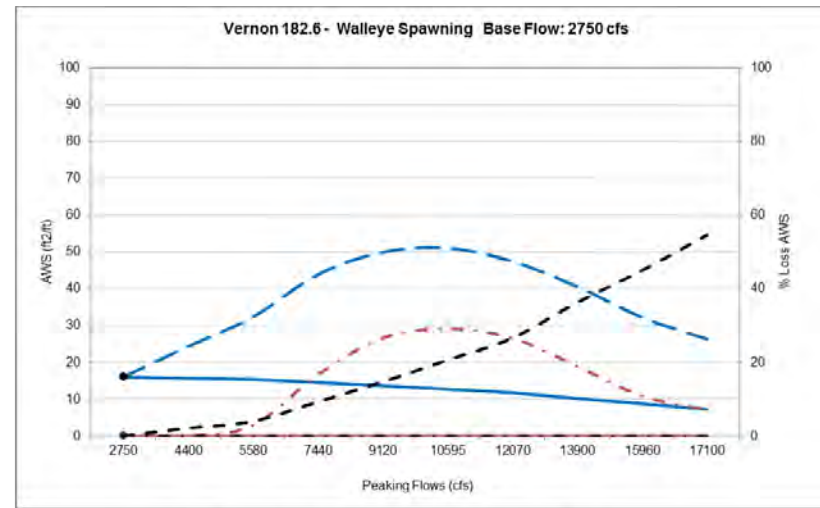
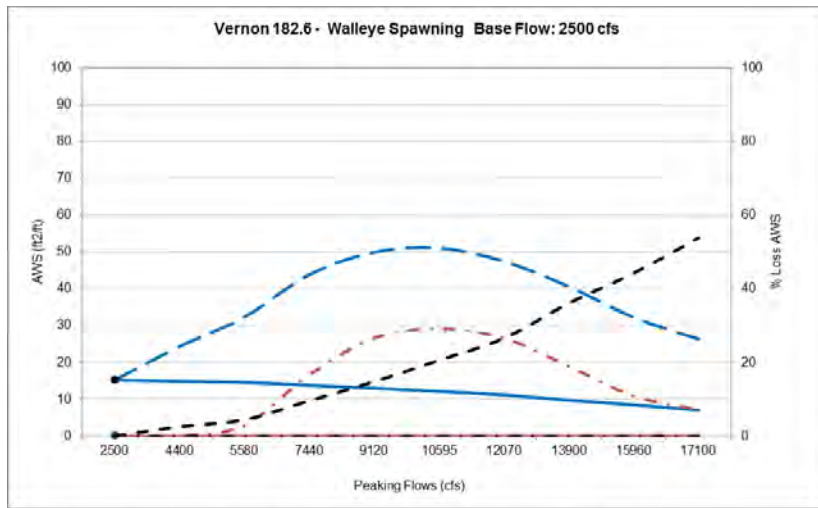




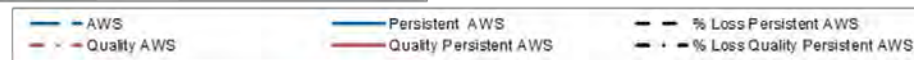
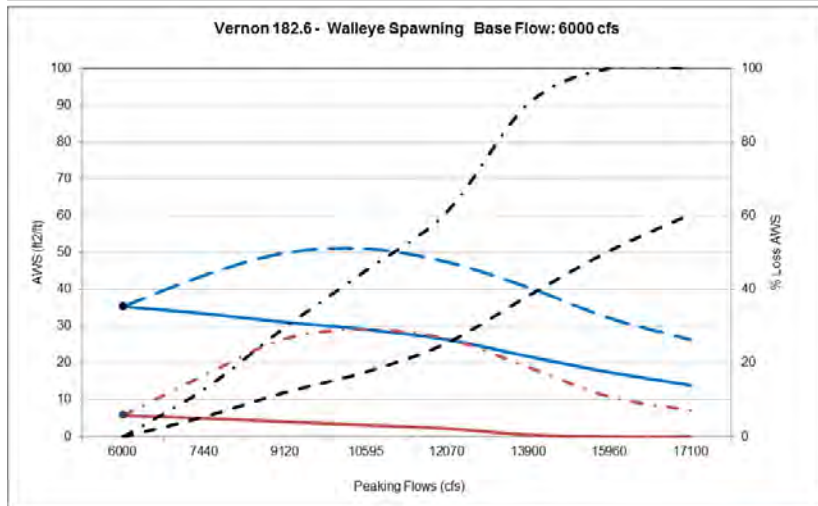
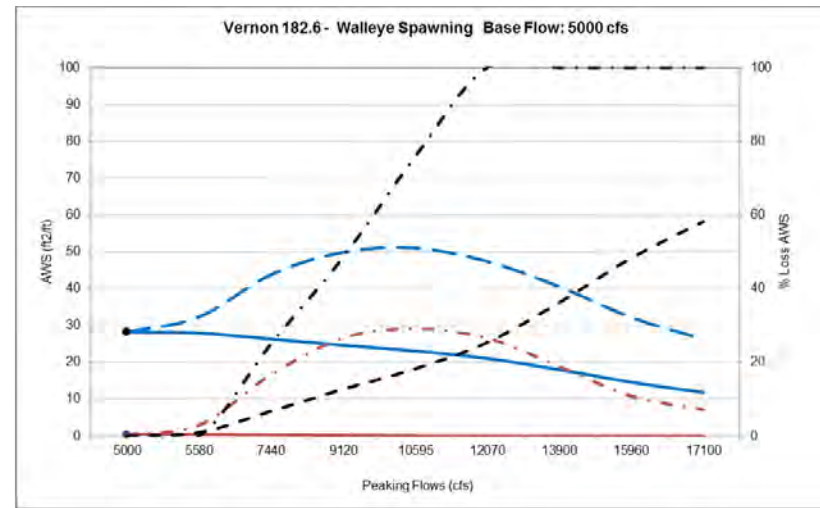
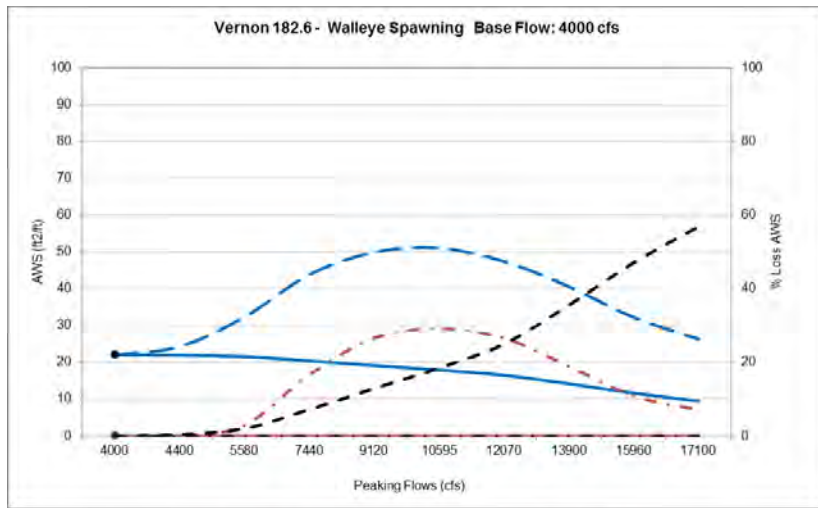


Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - Walleye spawning persistent and persistent quality habitat.



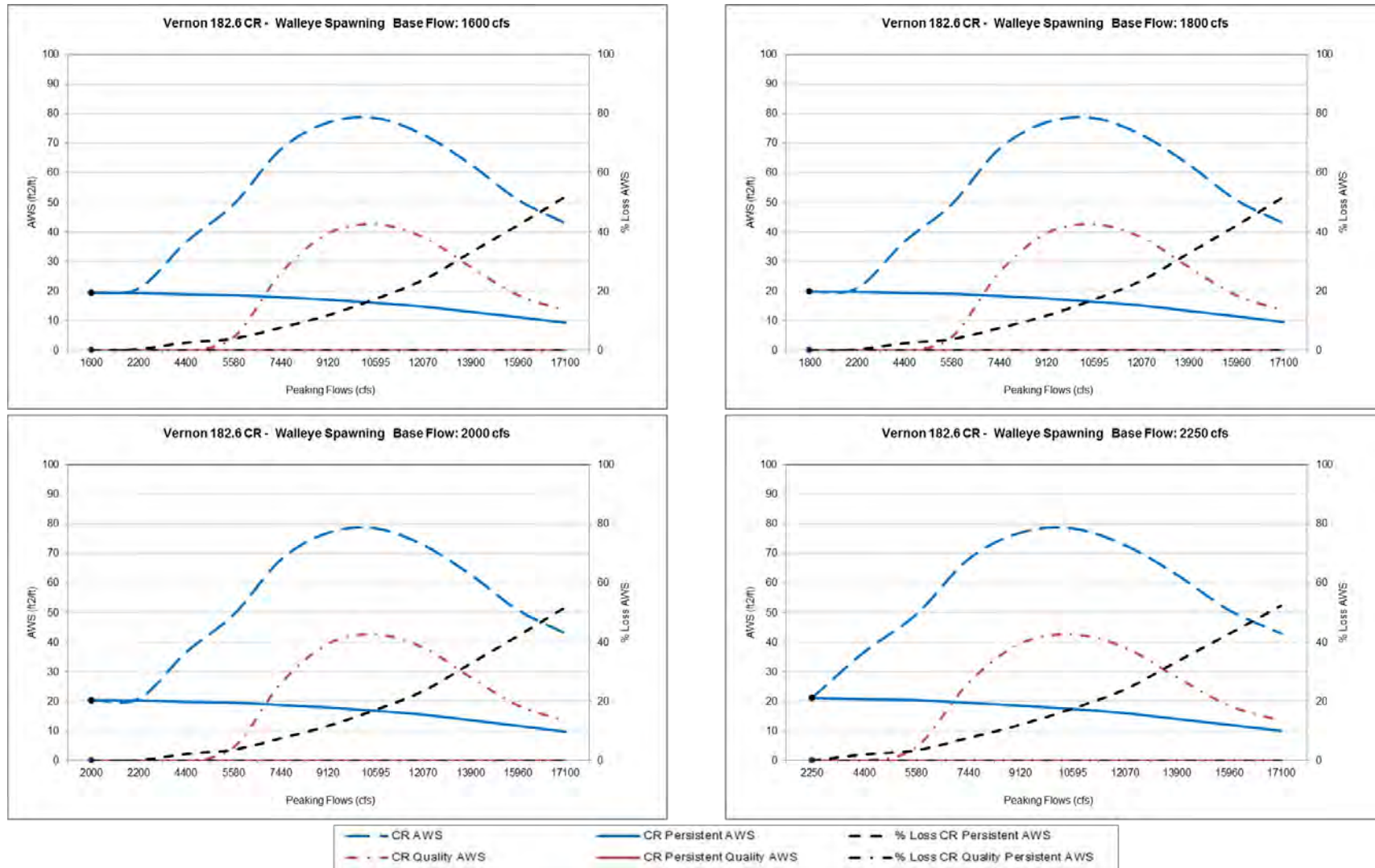


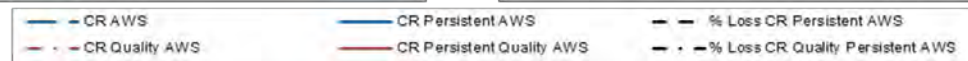
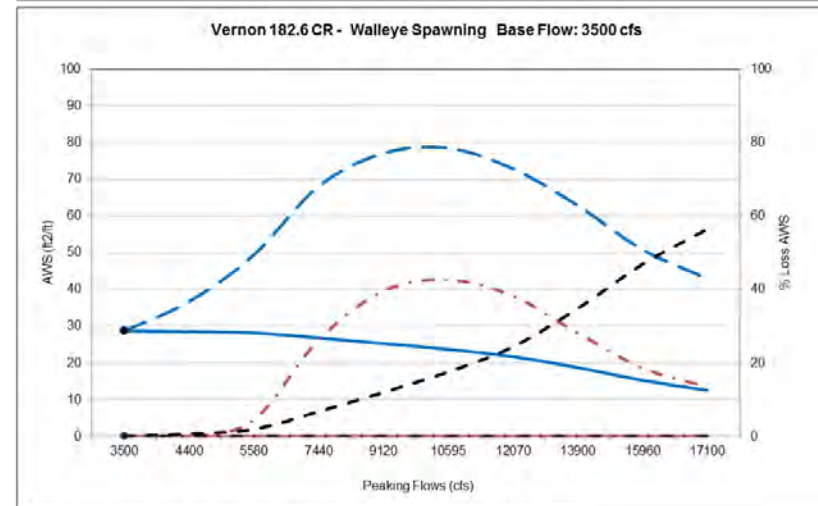
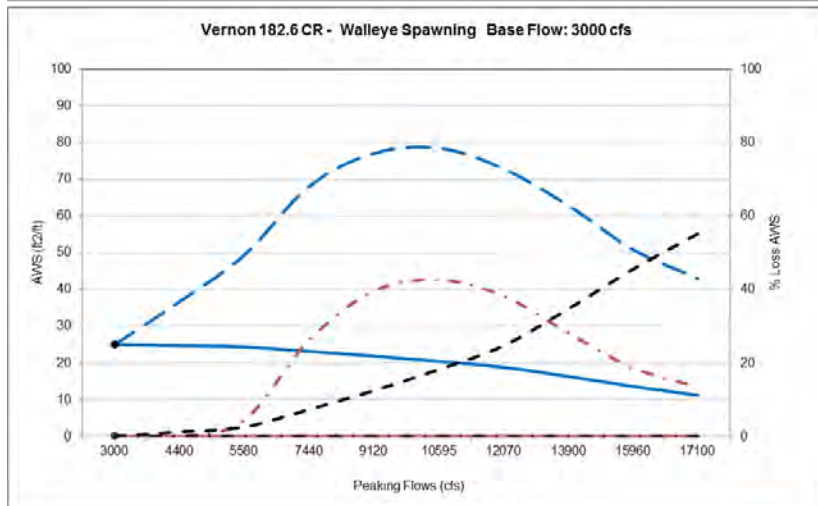
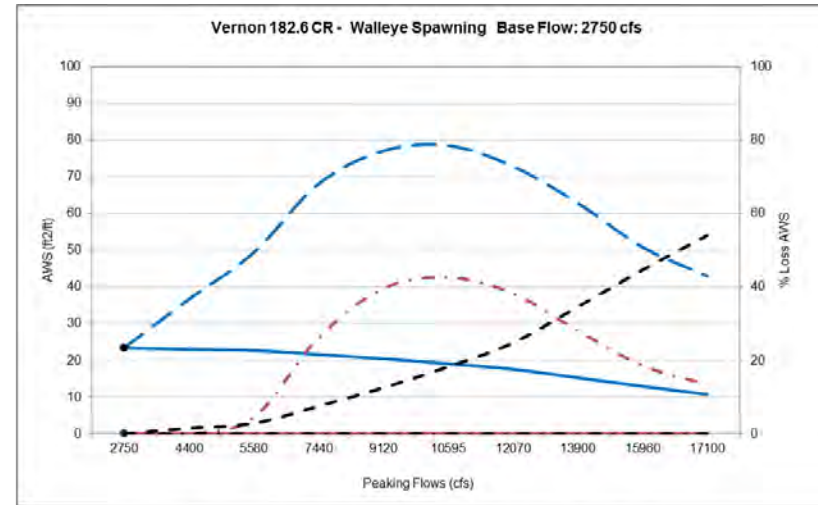
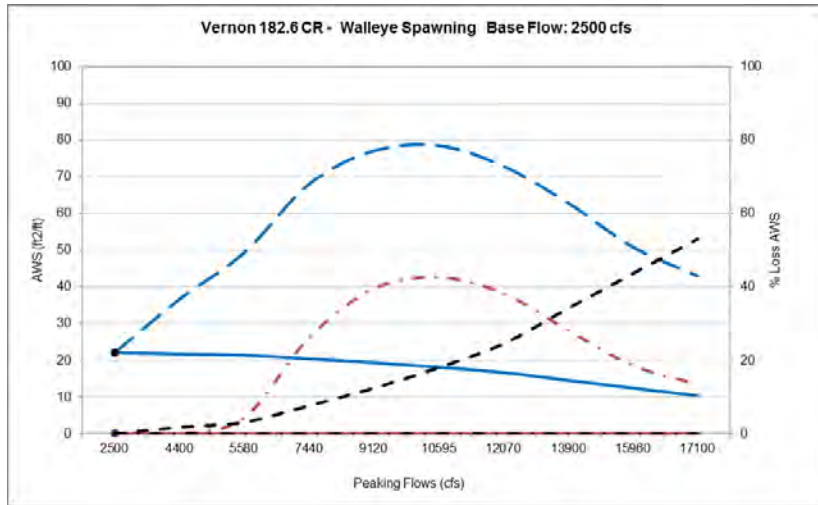


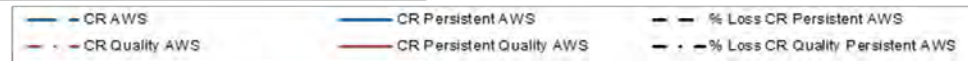
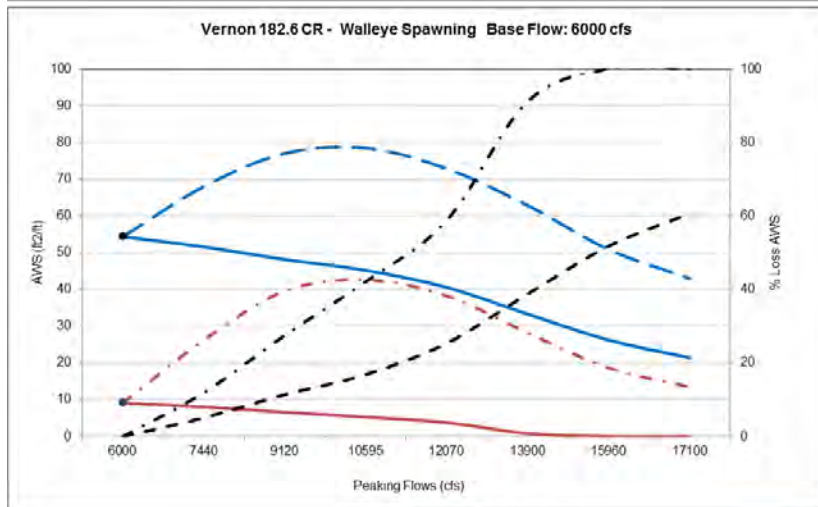
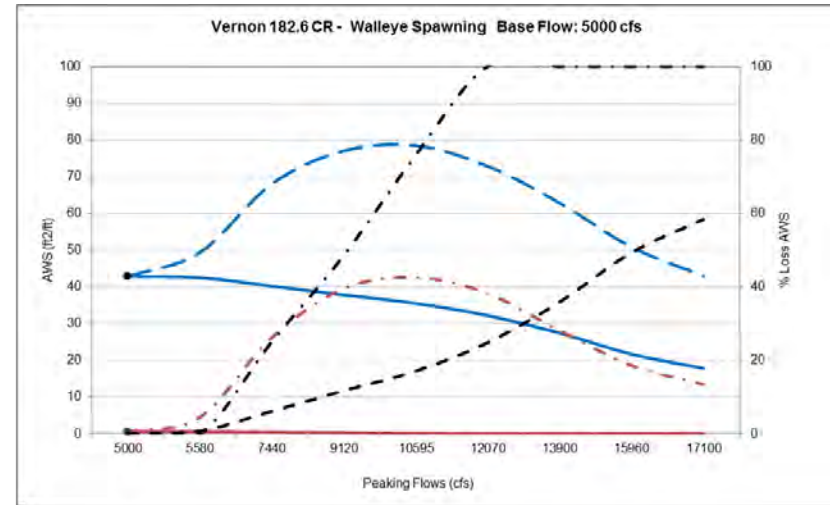
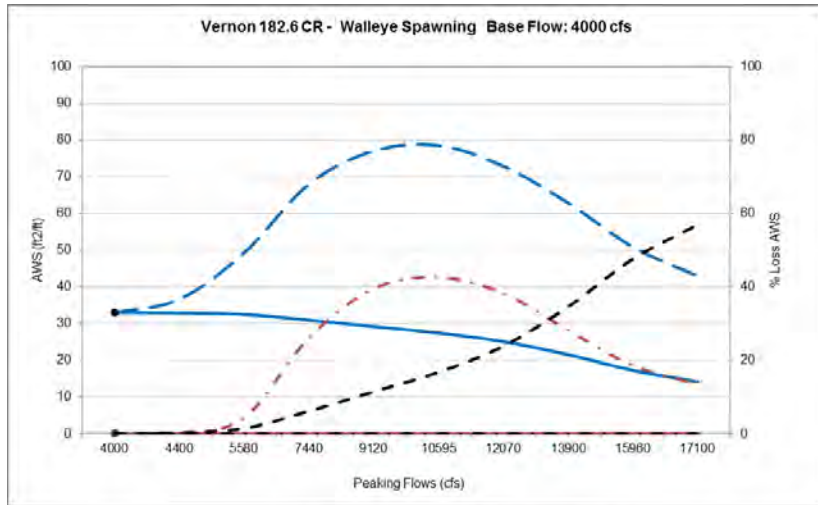




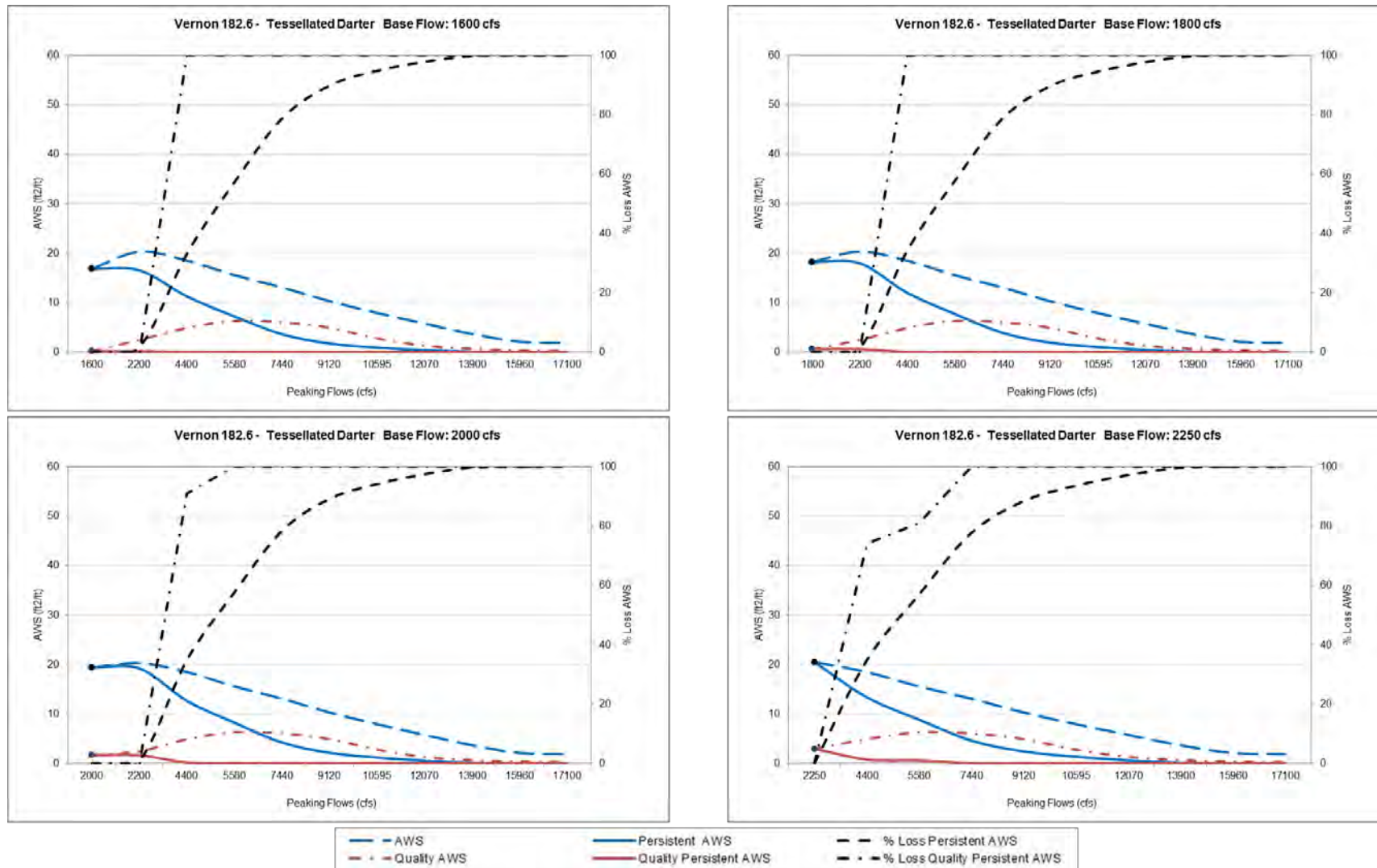
Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - CR Walleye spawning persistent and persistent quality habitat.



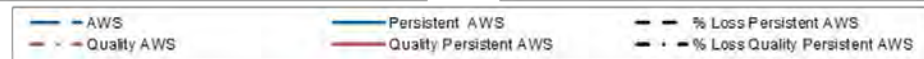
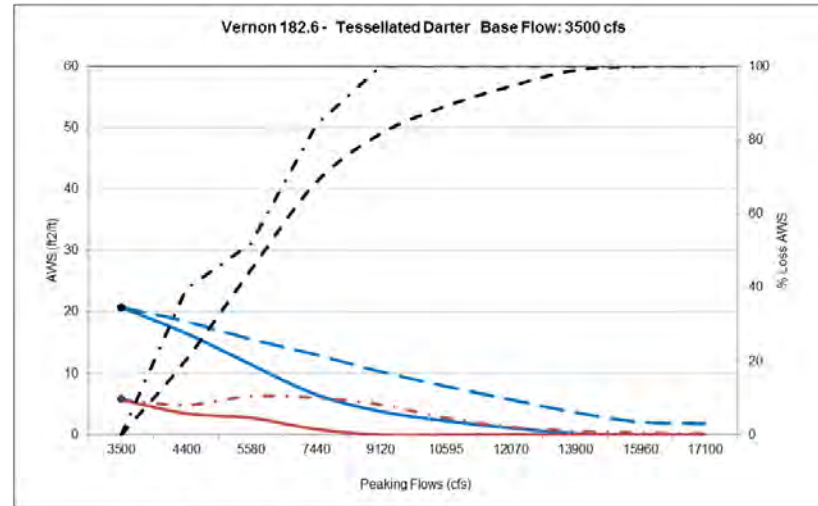
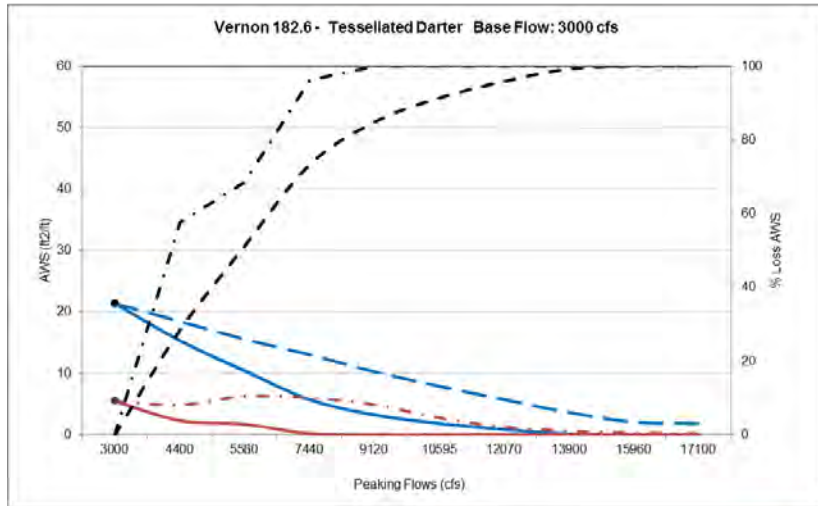
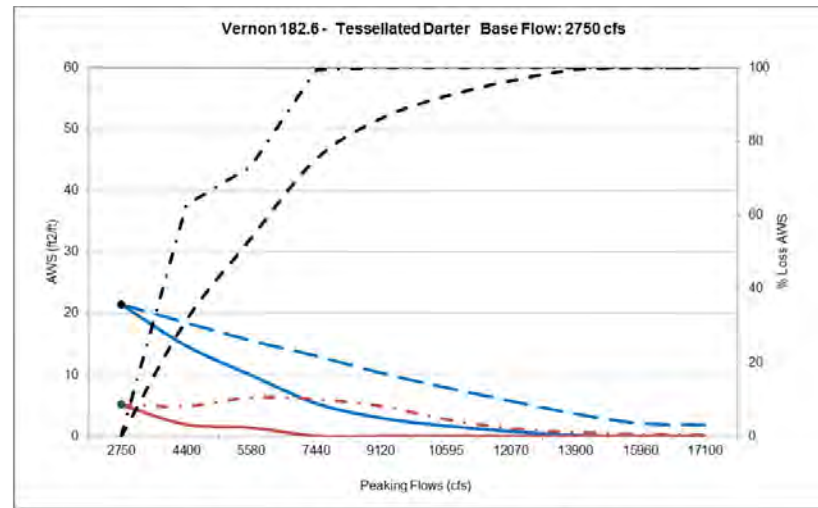
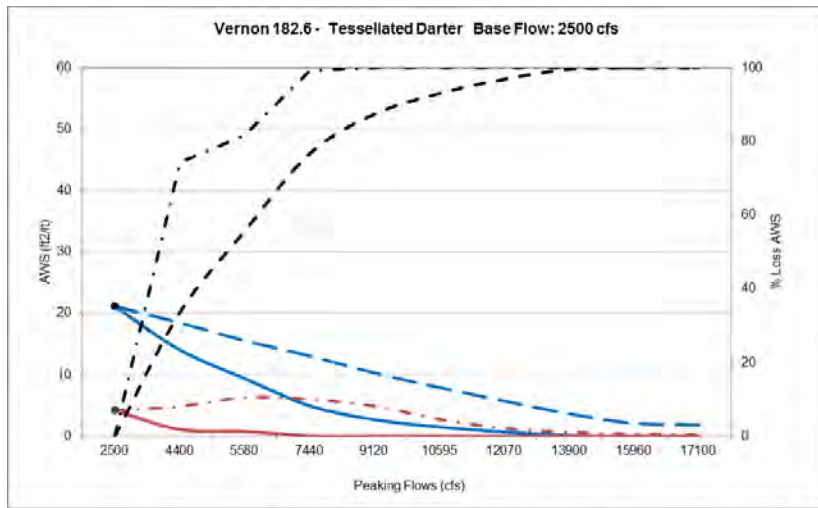




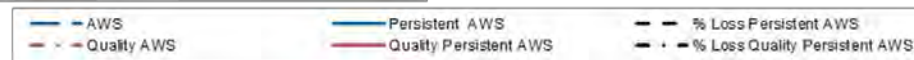
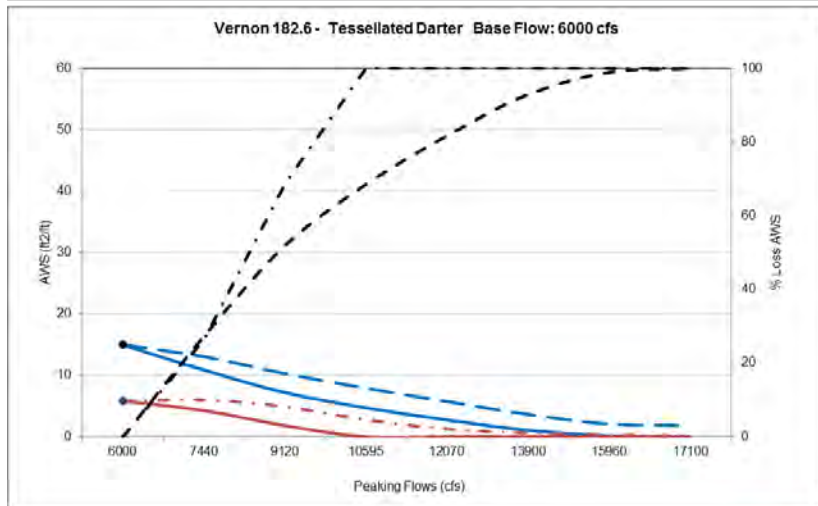
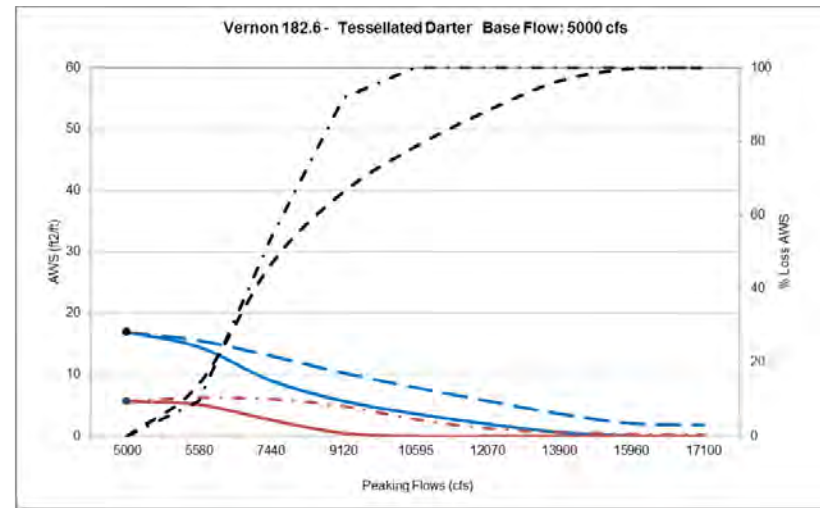
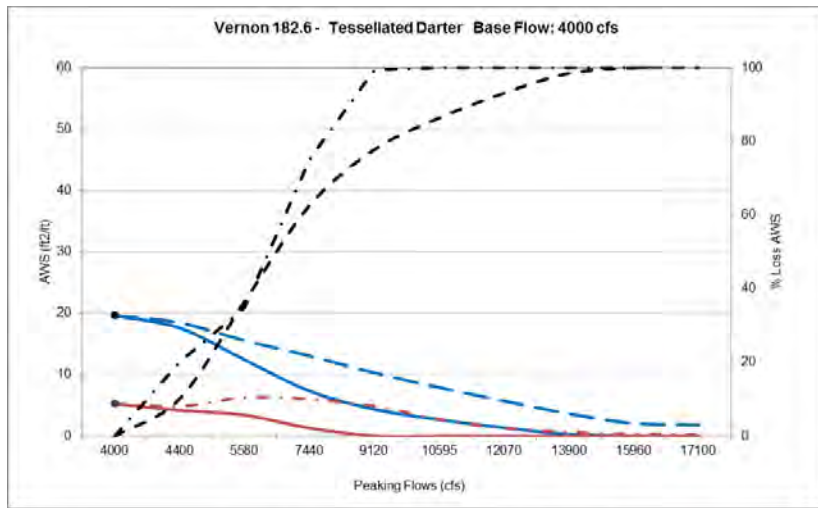
Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - Tessellated Darter persistent and persistent quality habitat.



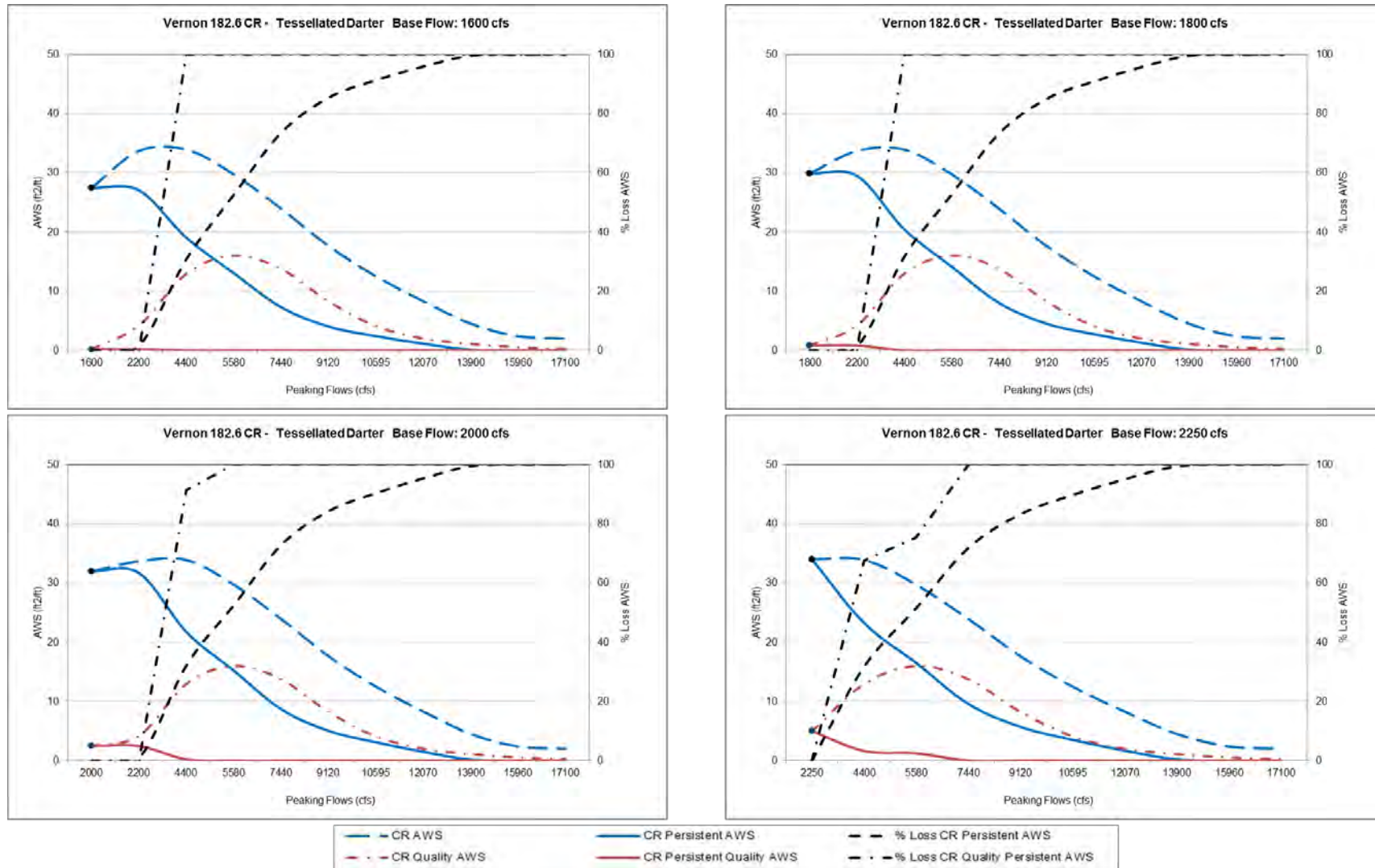


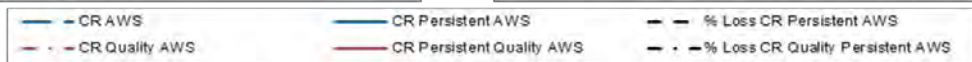
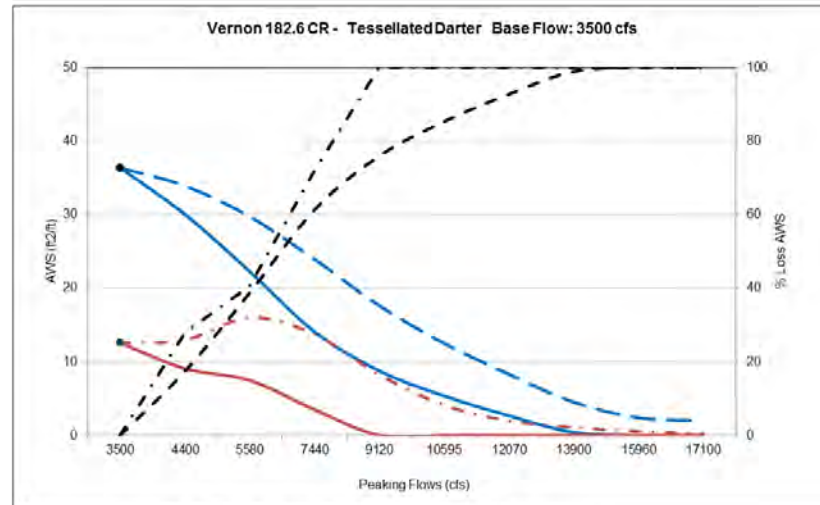
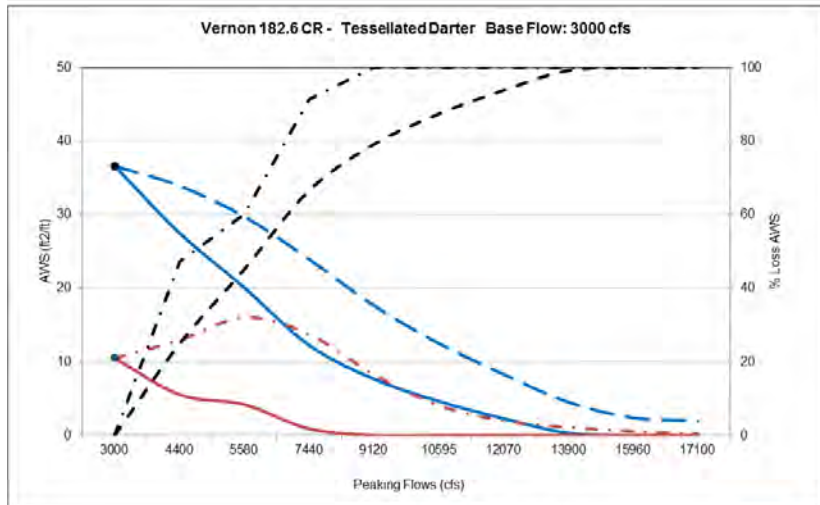
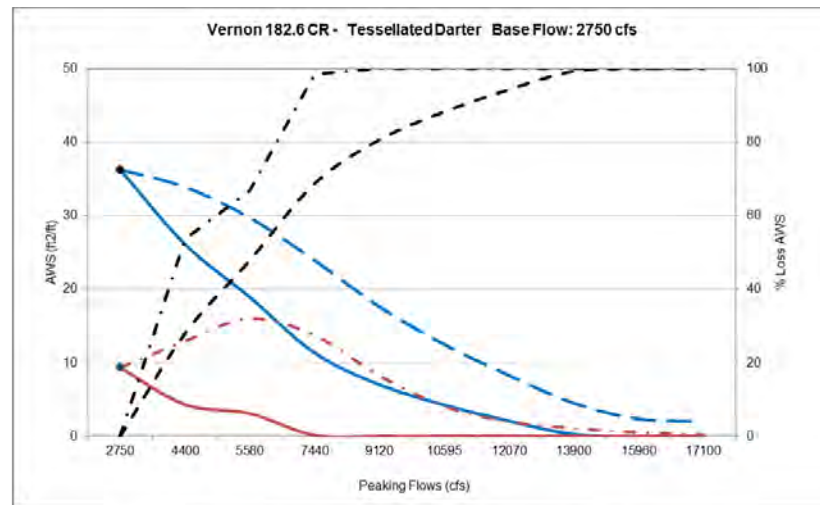
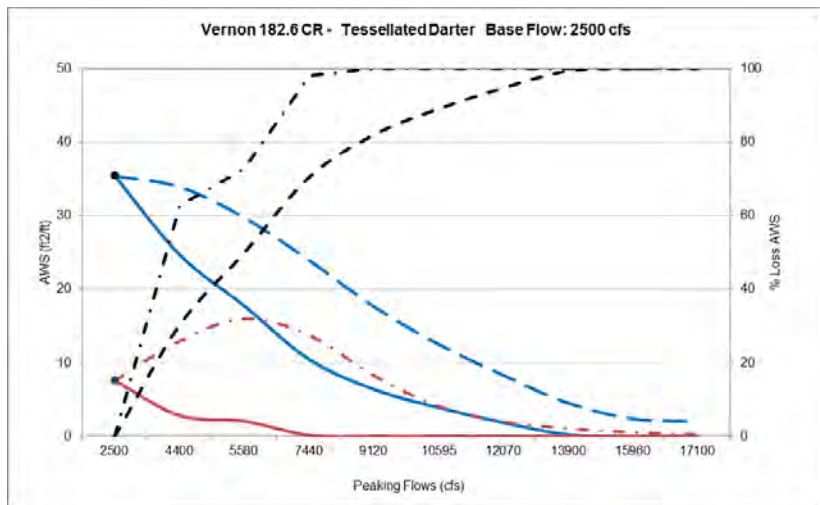


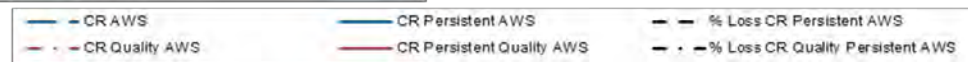
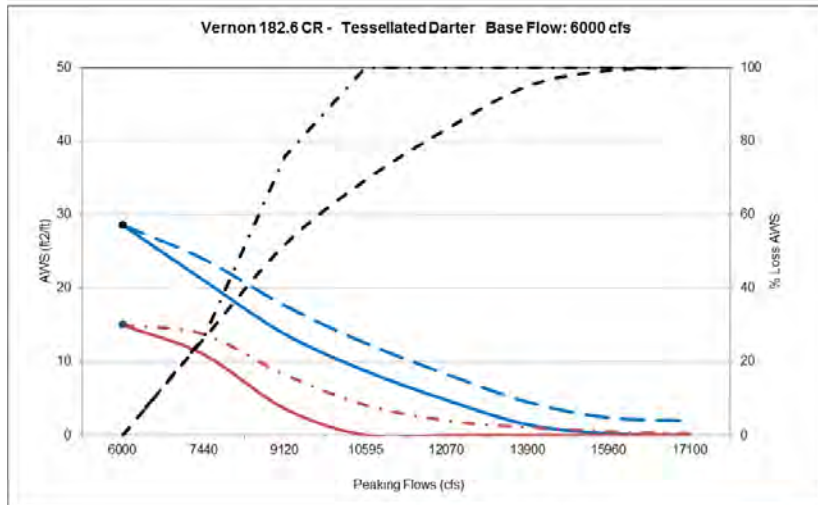
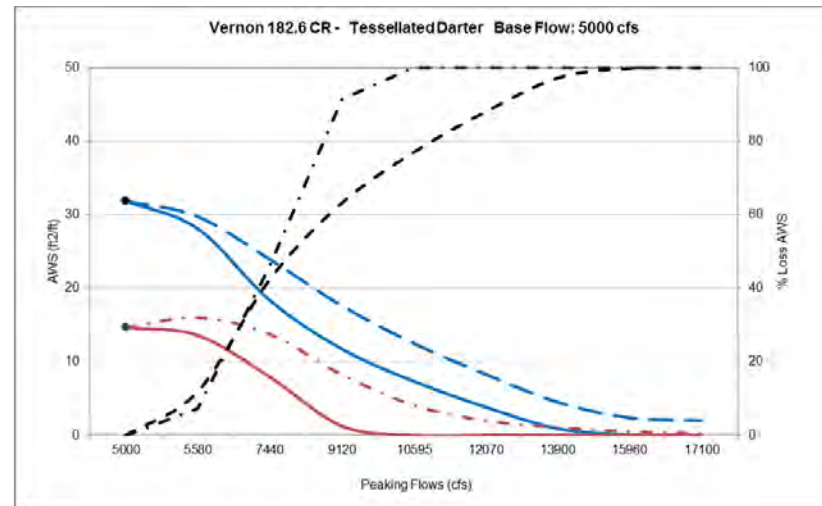
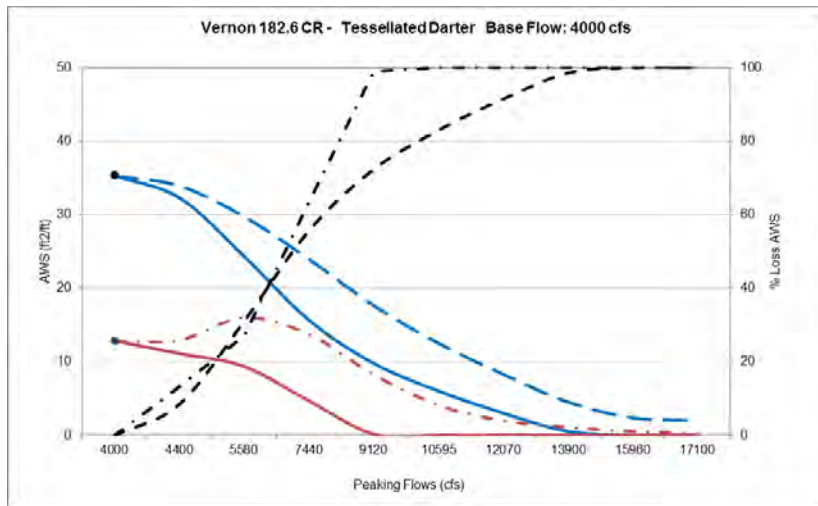




Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - CR Tessellated Darter persistent and persistent quality habitat.

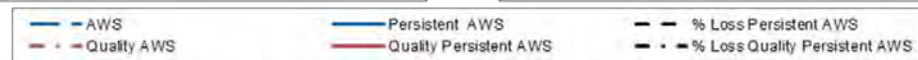
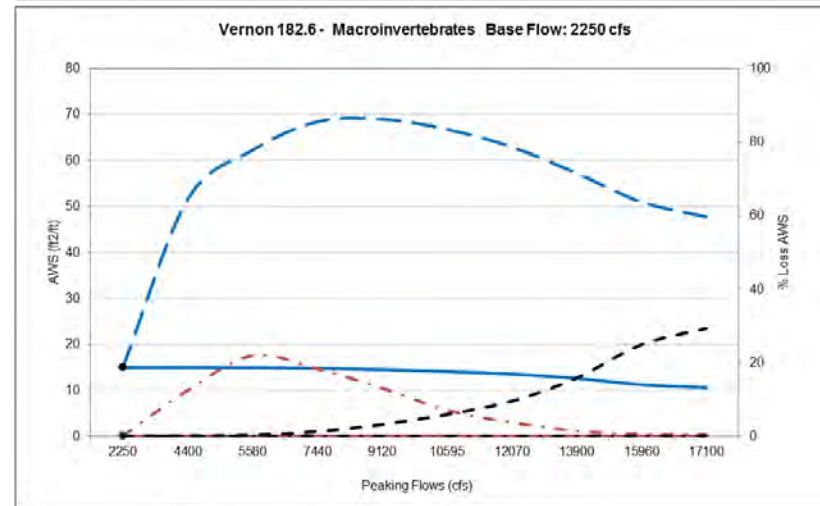
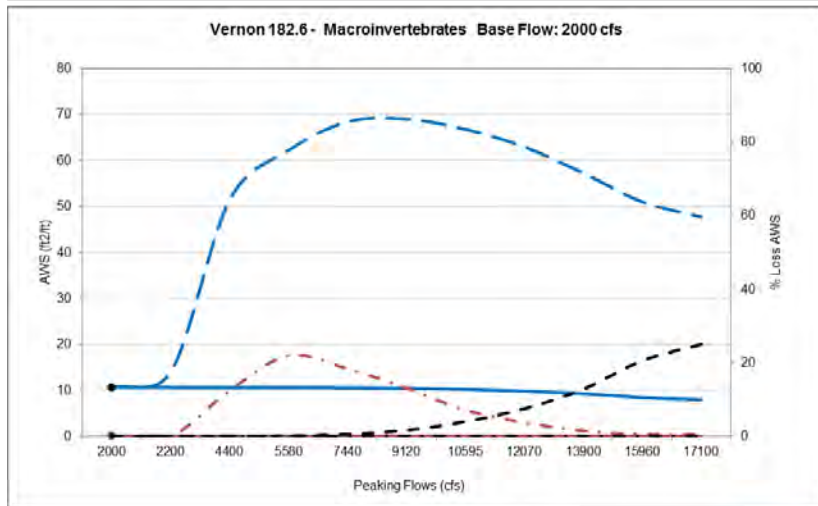
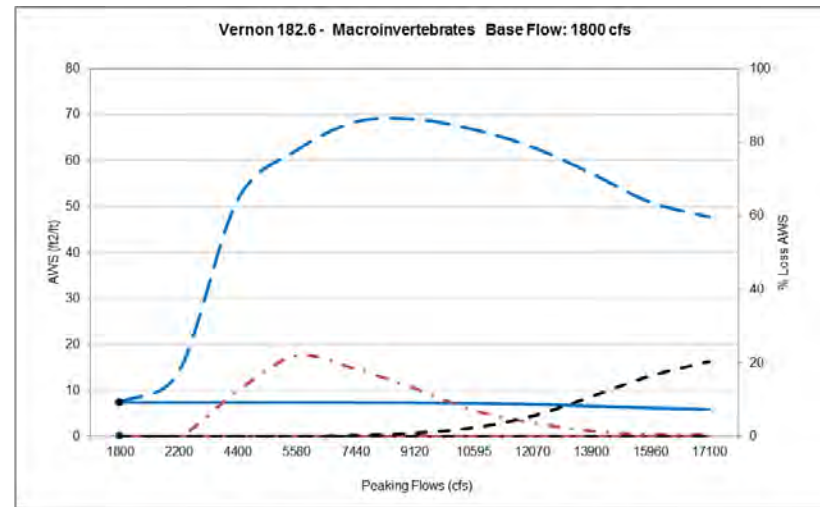
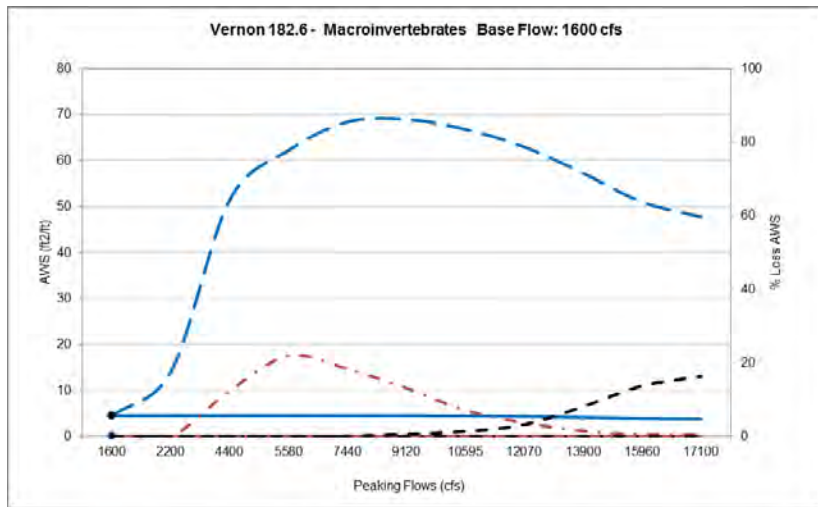




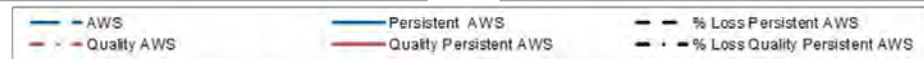
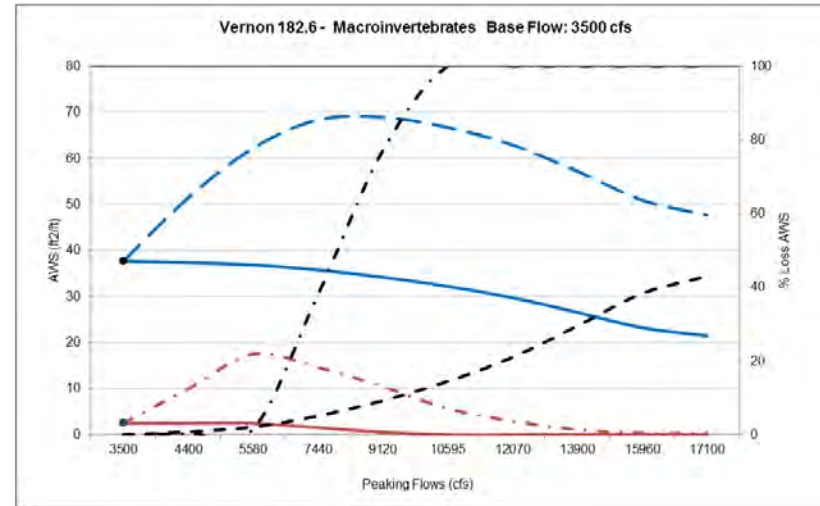
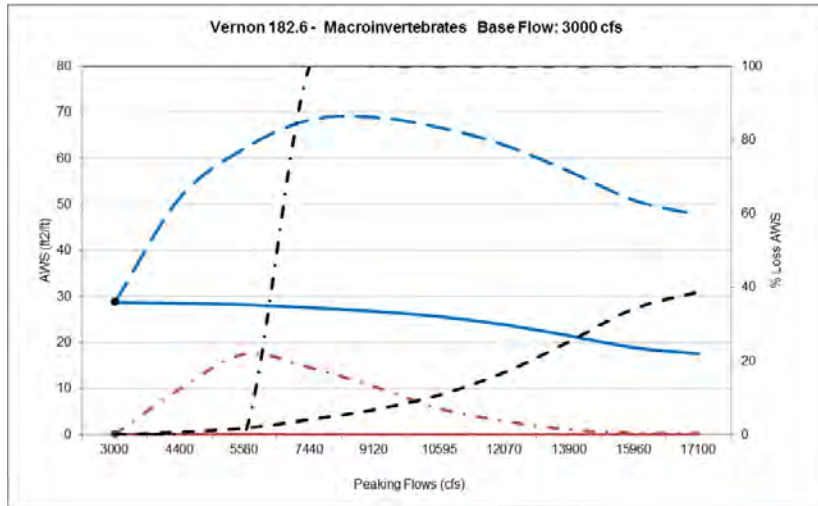
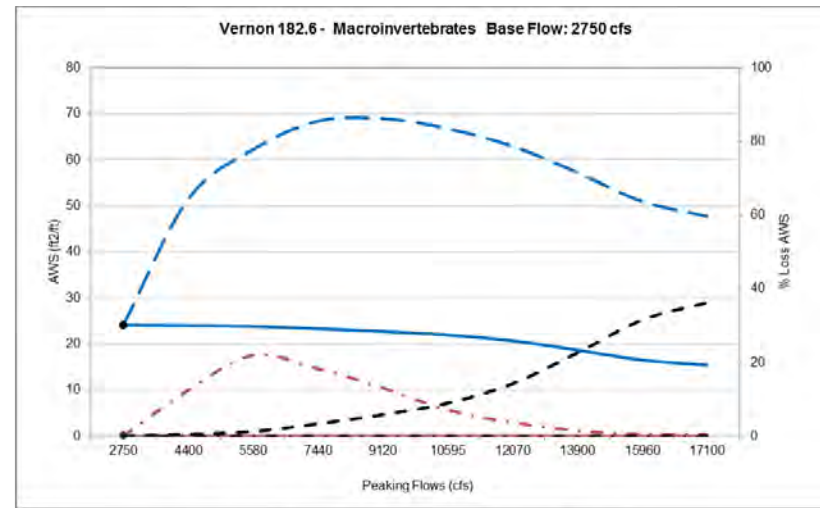
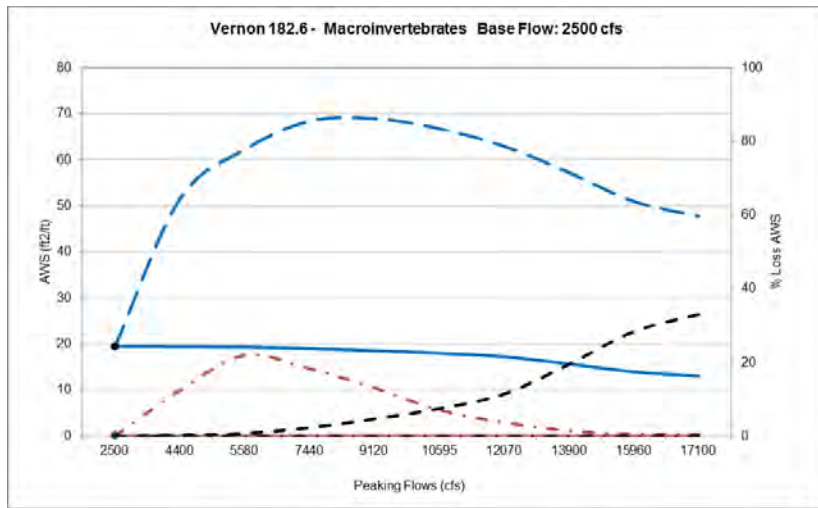


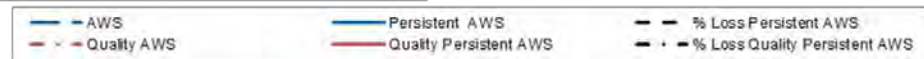
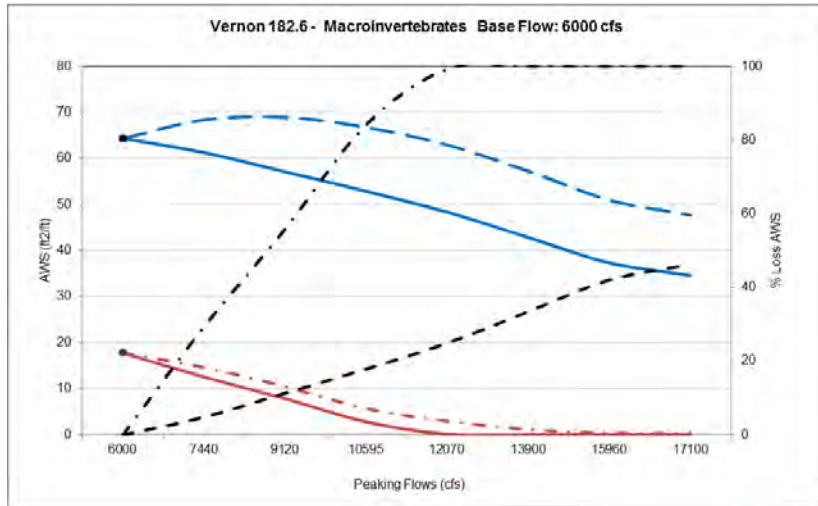
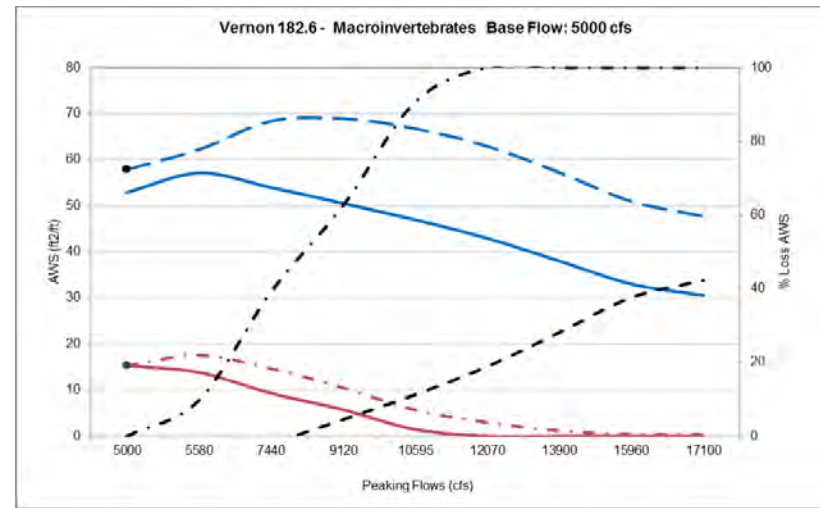
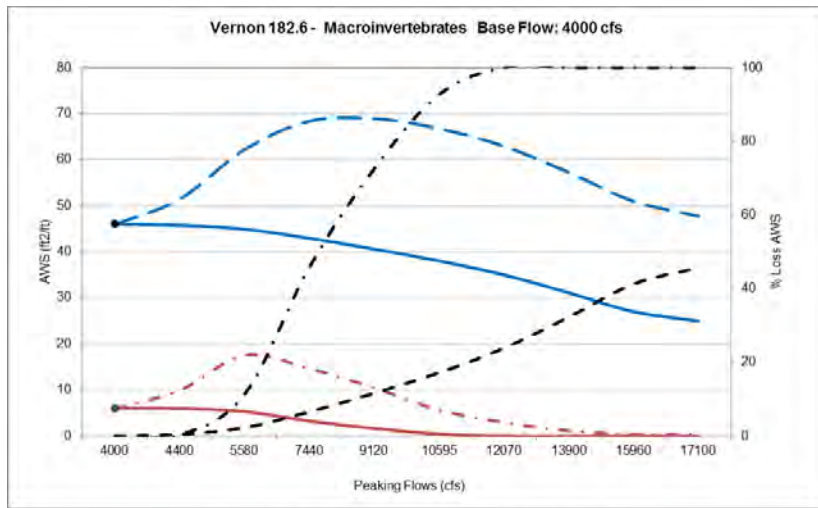


Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - Macroinvertebrates persistent and persistent quality habitat.

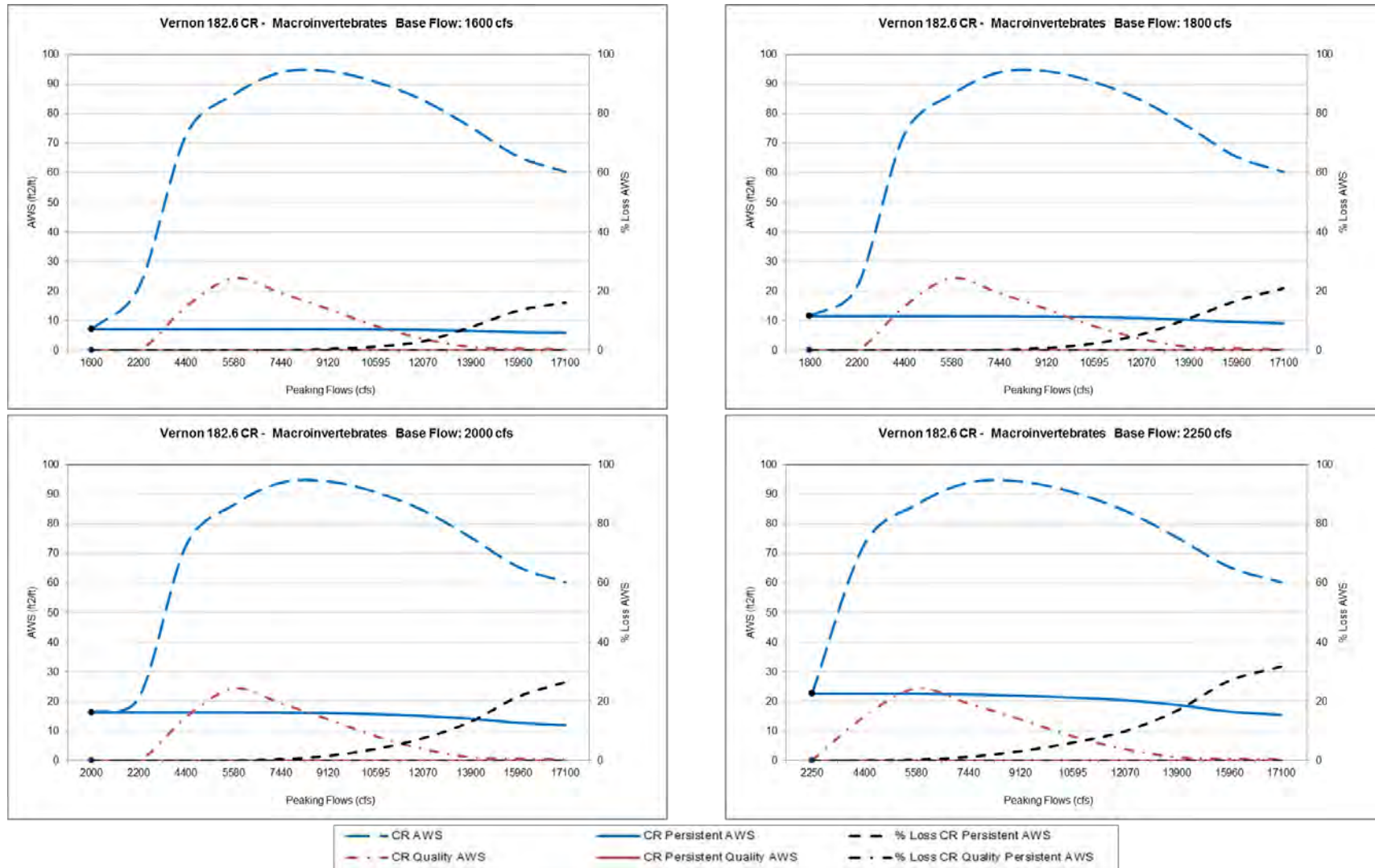


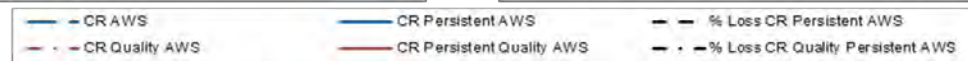
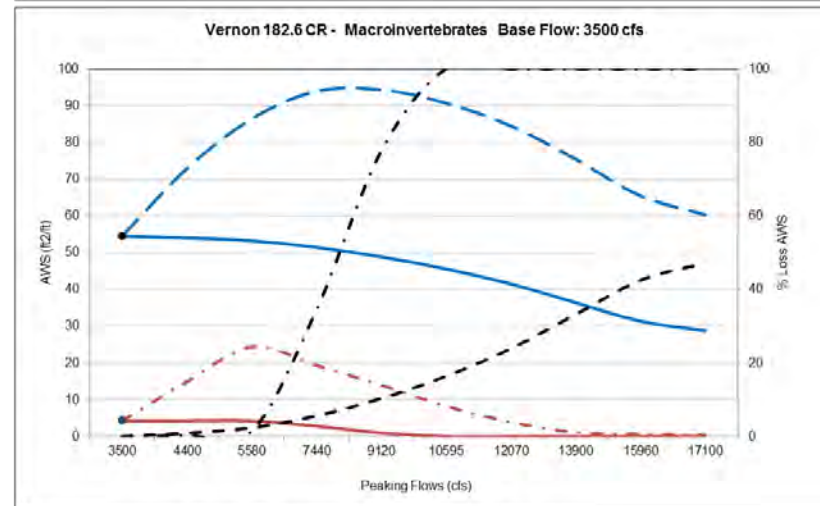
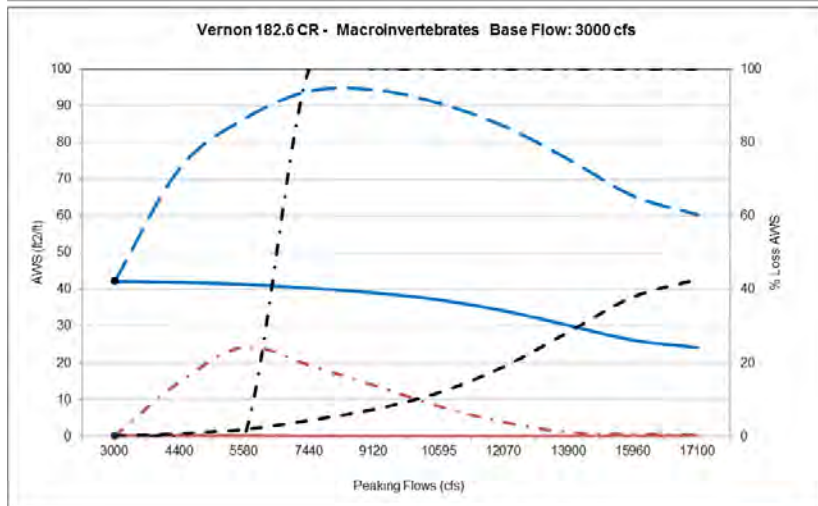
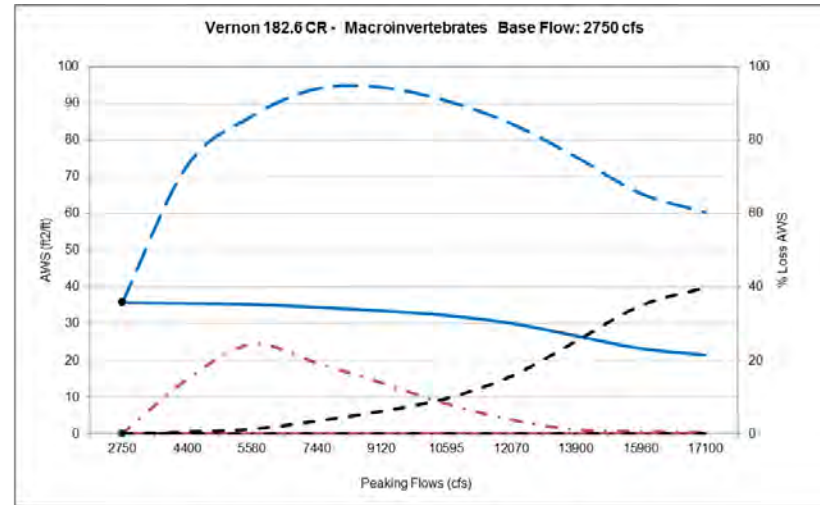
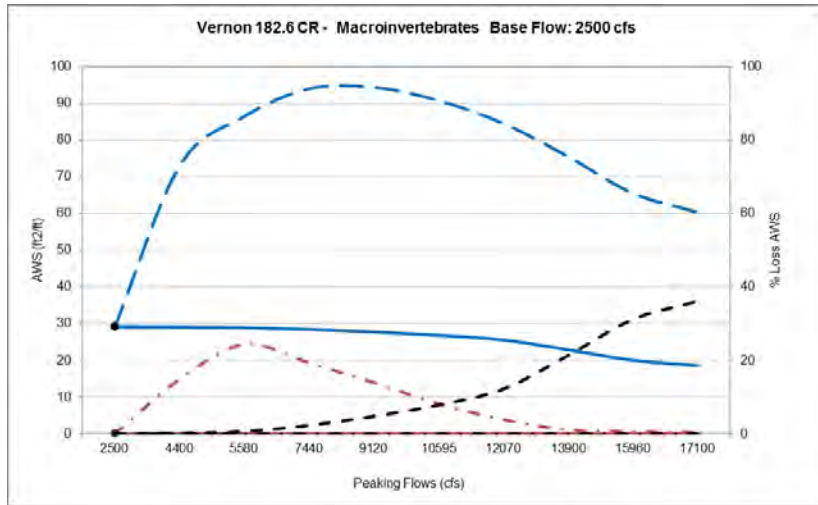




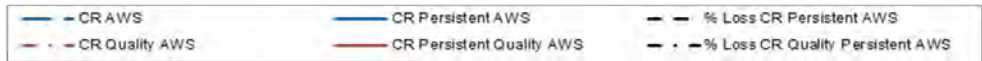
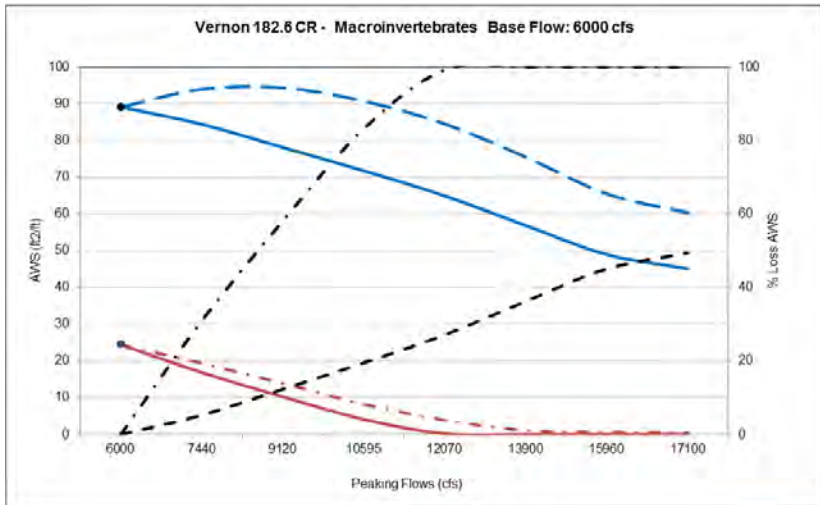
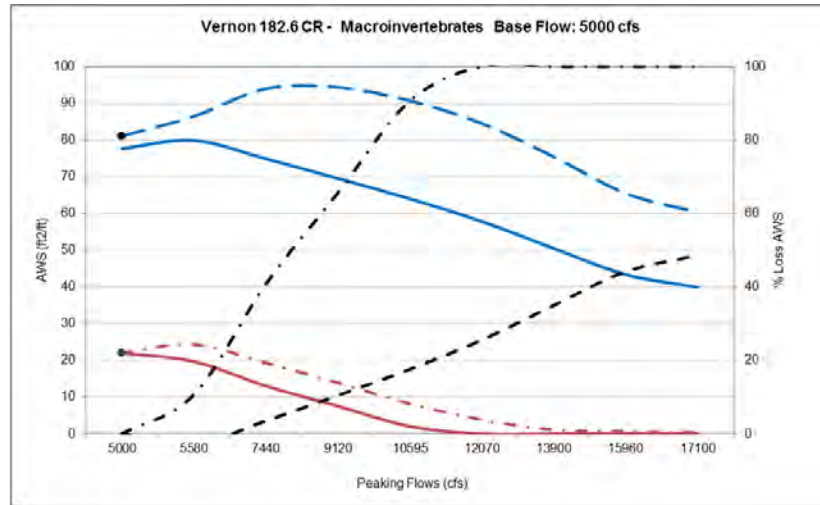
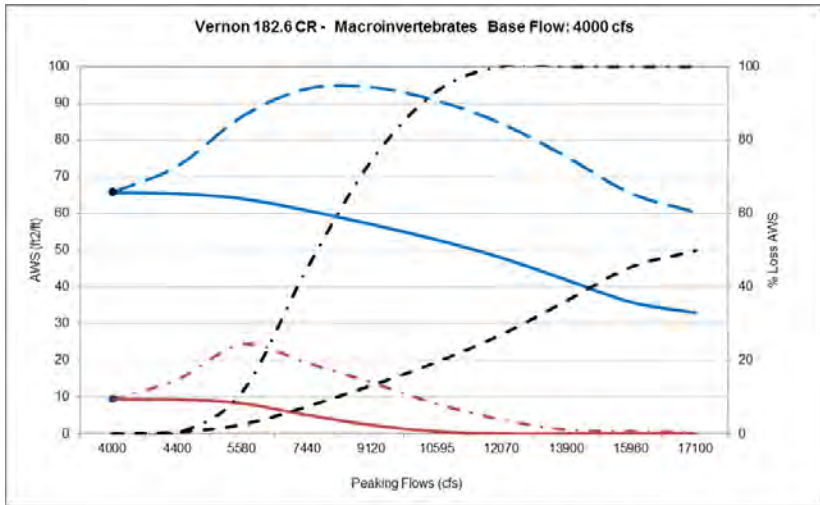


Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) - CR Macroinvertebrates persistent and persistent quality habitat.



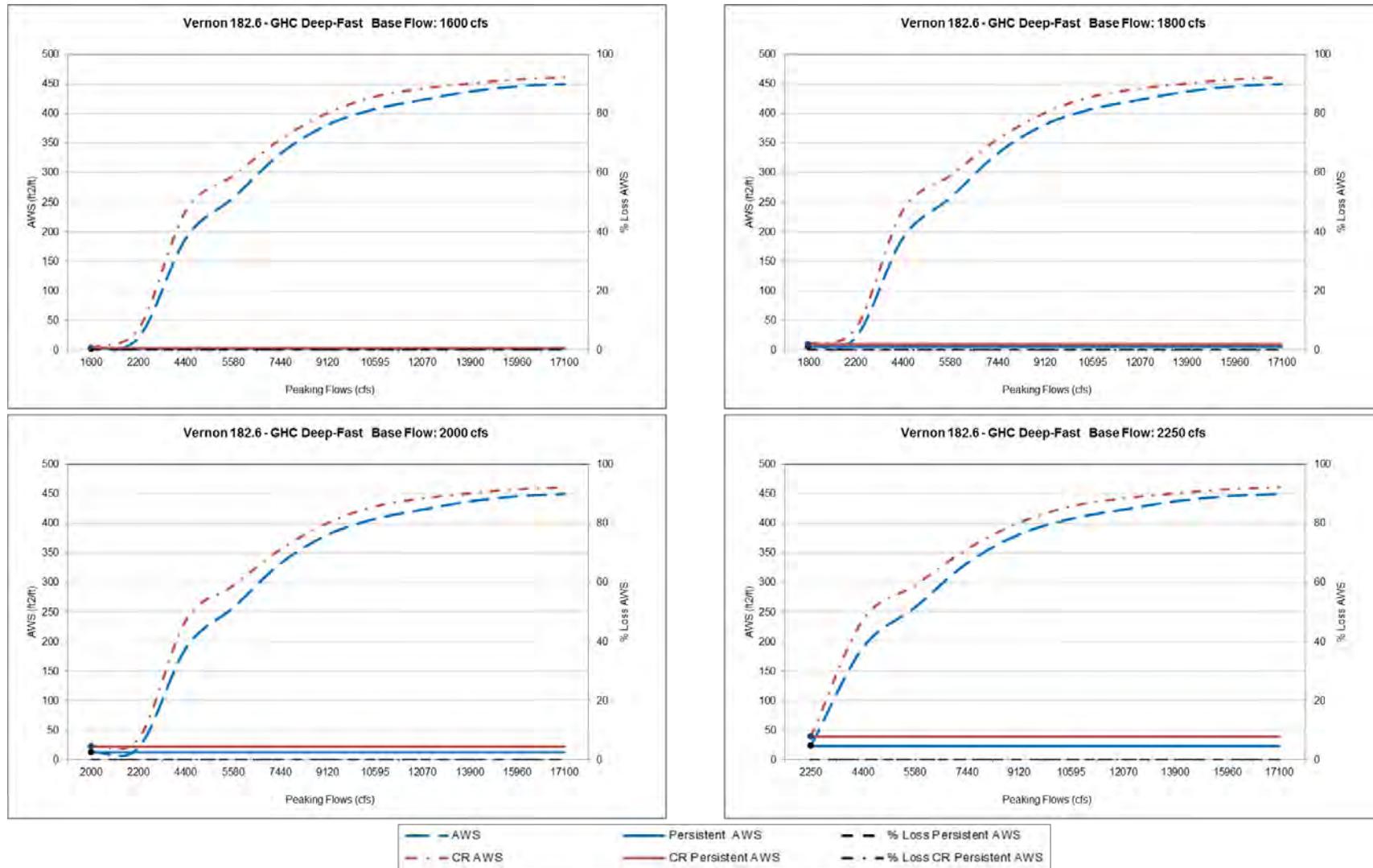


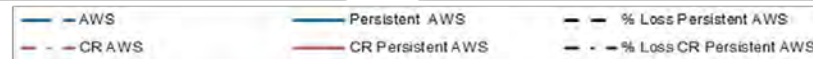
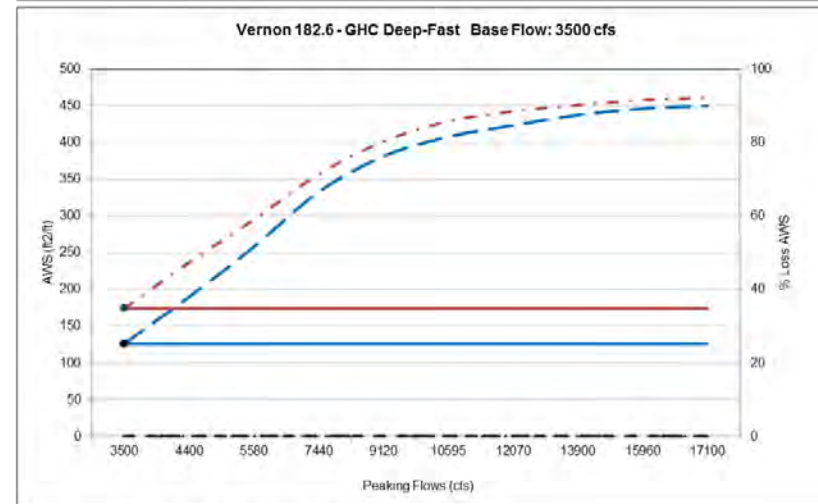
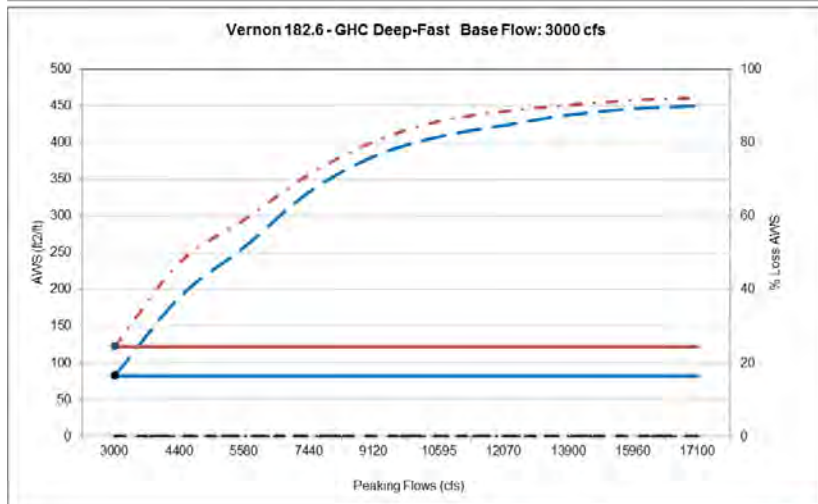
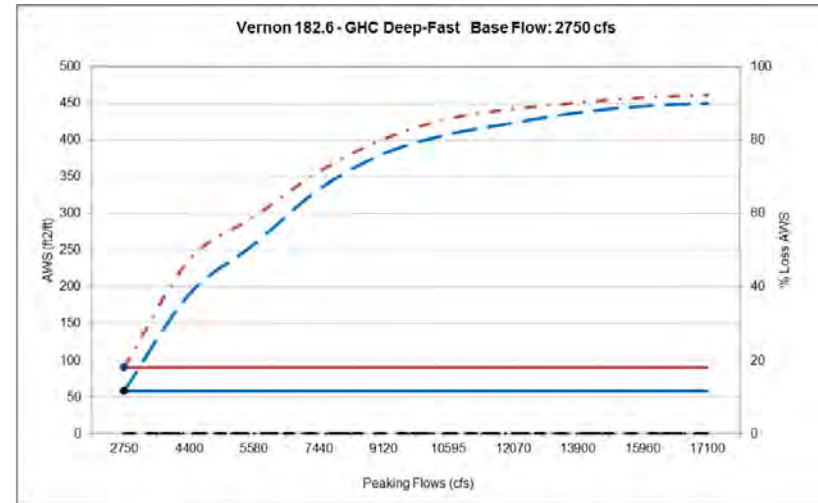
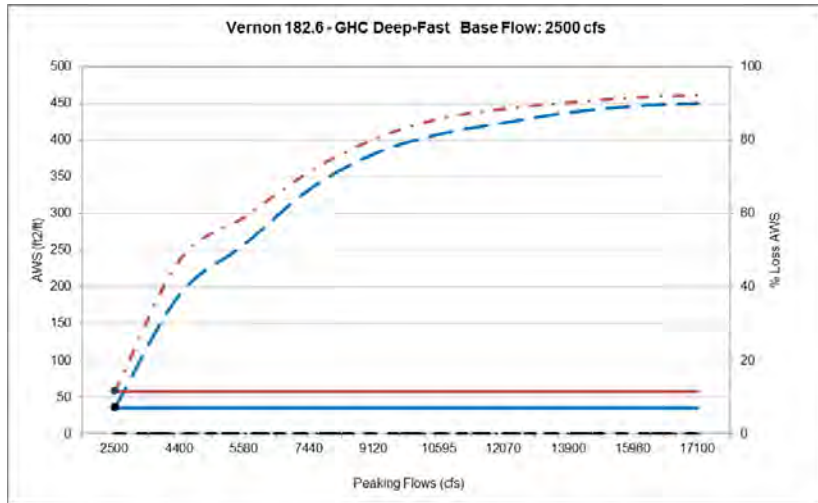


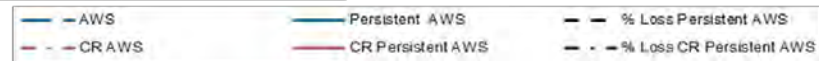
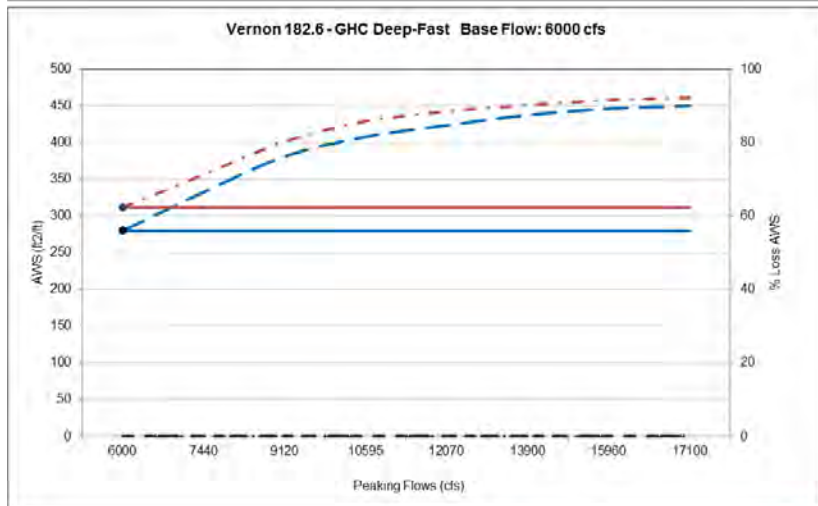
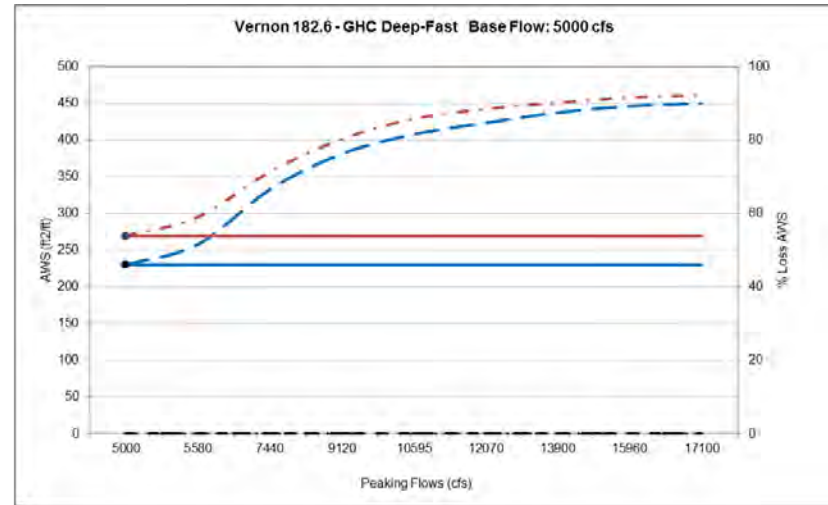
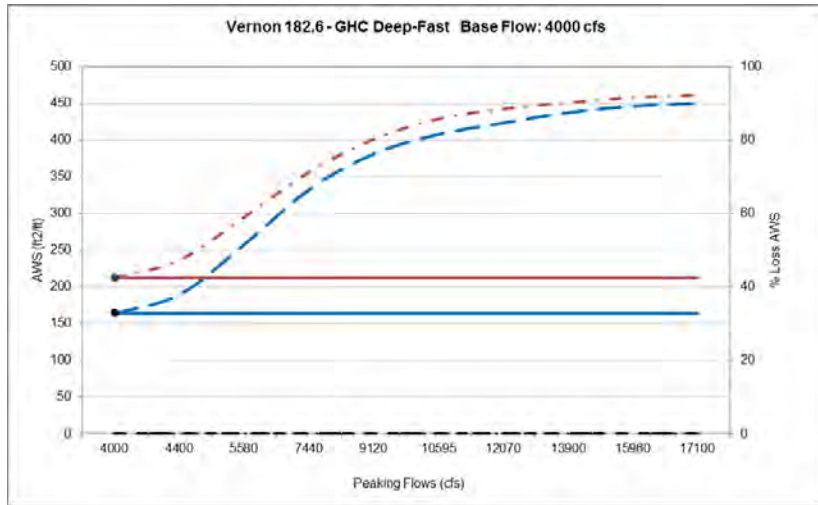




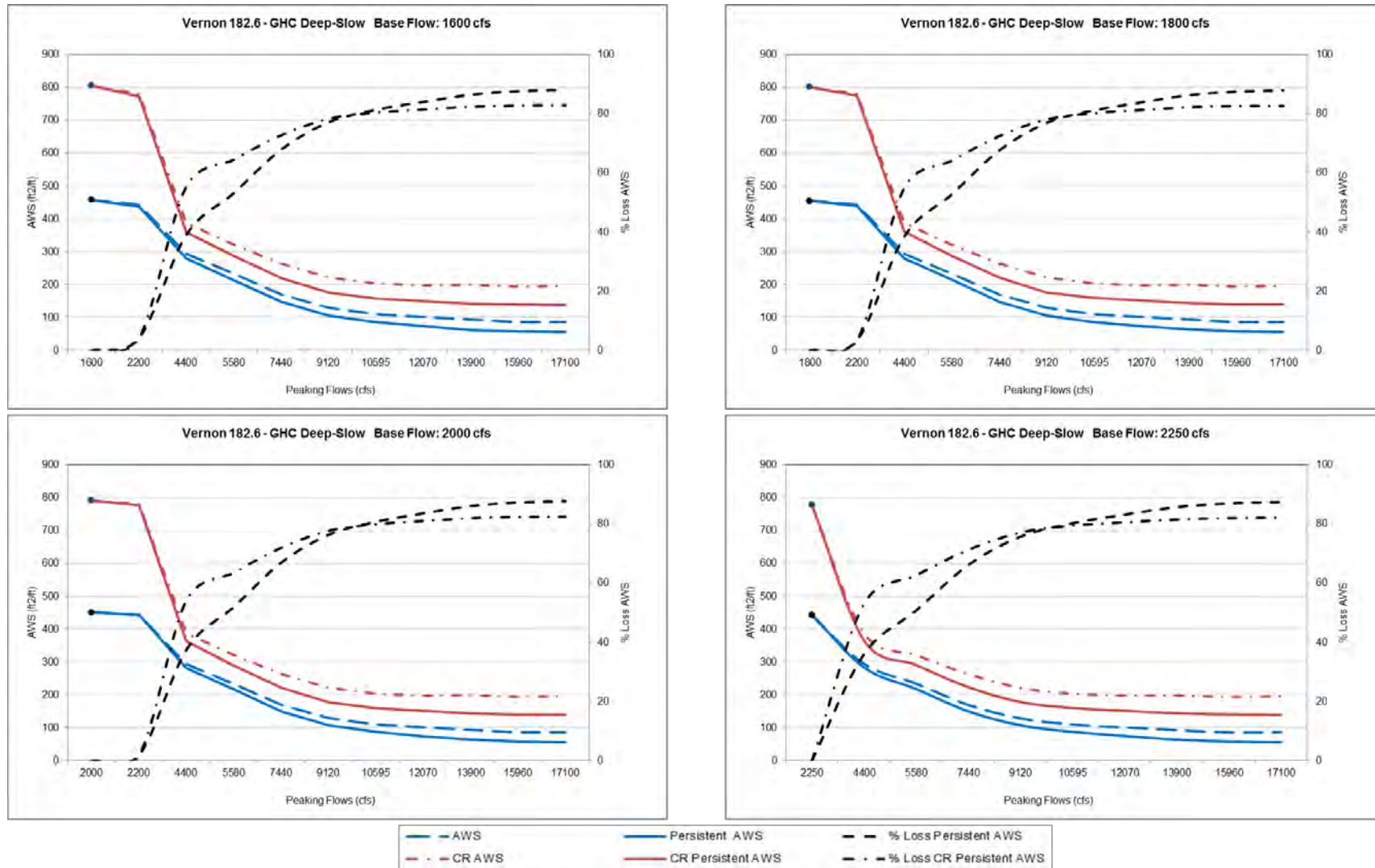
Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) and Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) CR -  
 GHC Deep-Fast persistent habitat.



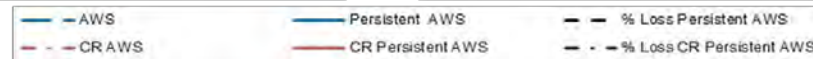
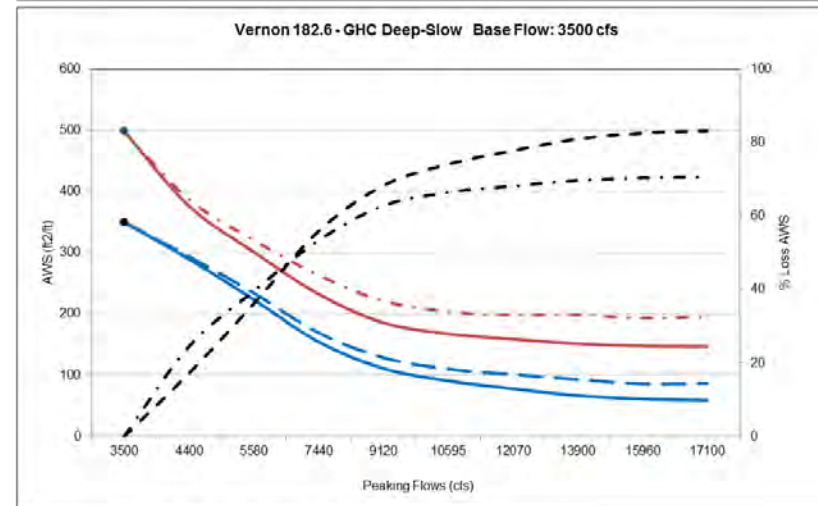
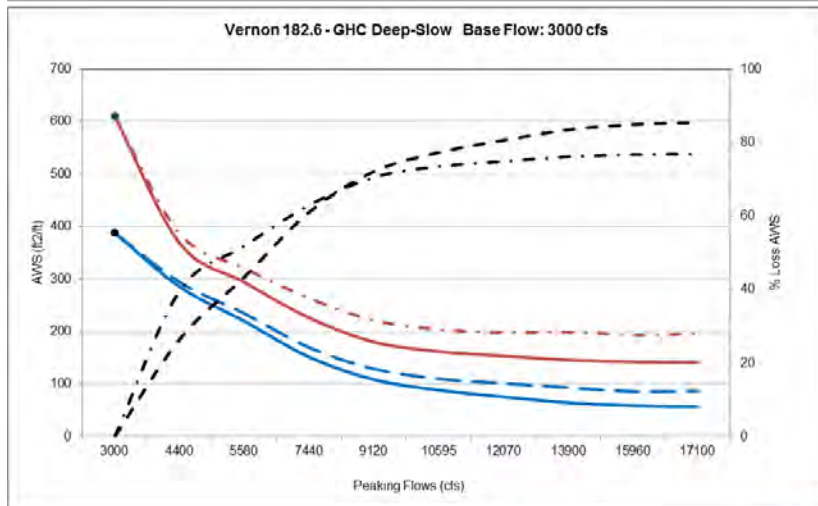
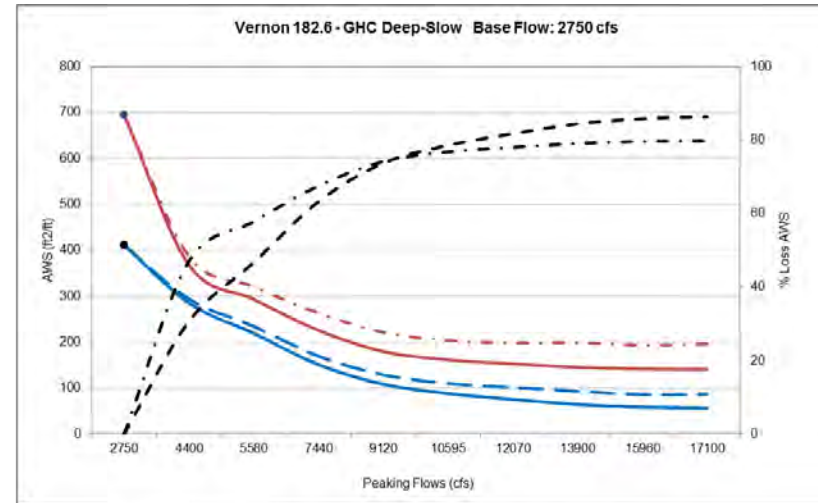
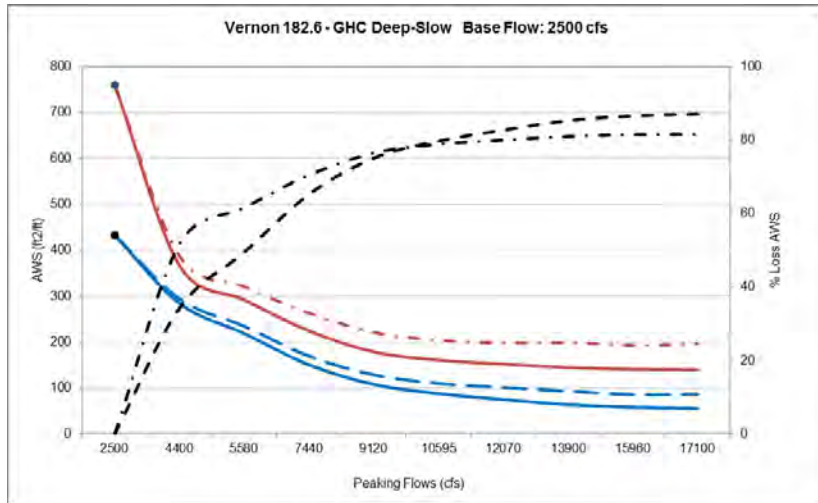




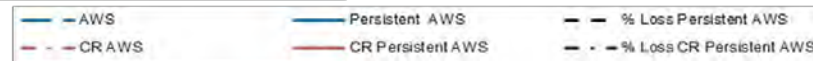
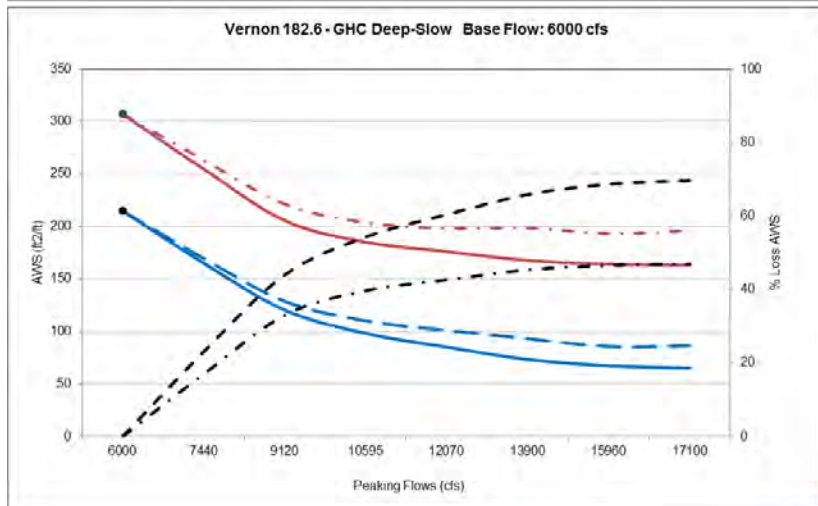
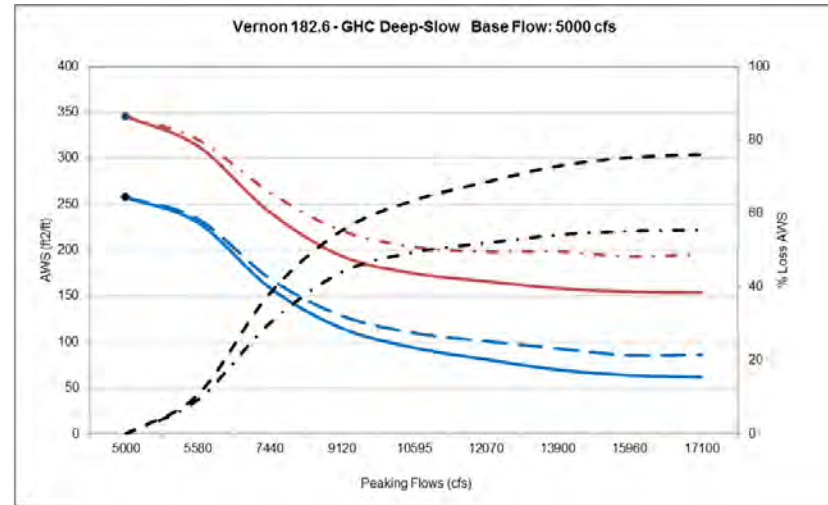
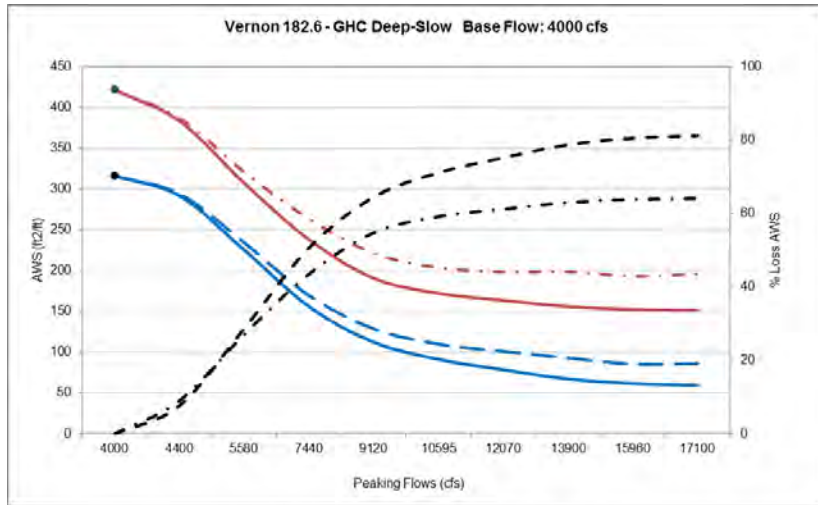
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 GHC Deep-Slow persistent habitat.



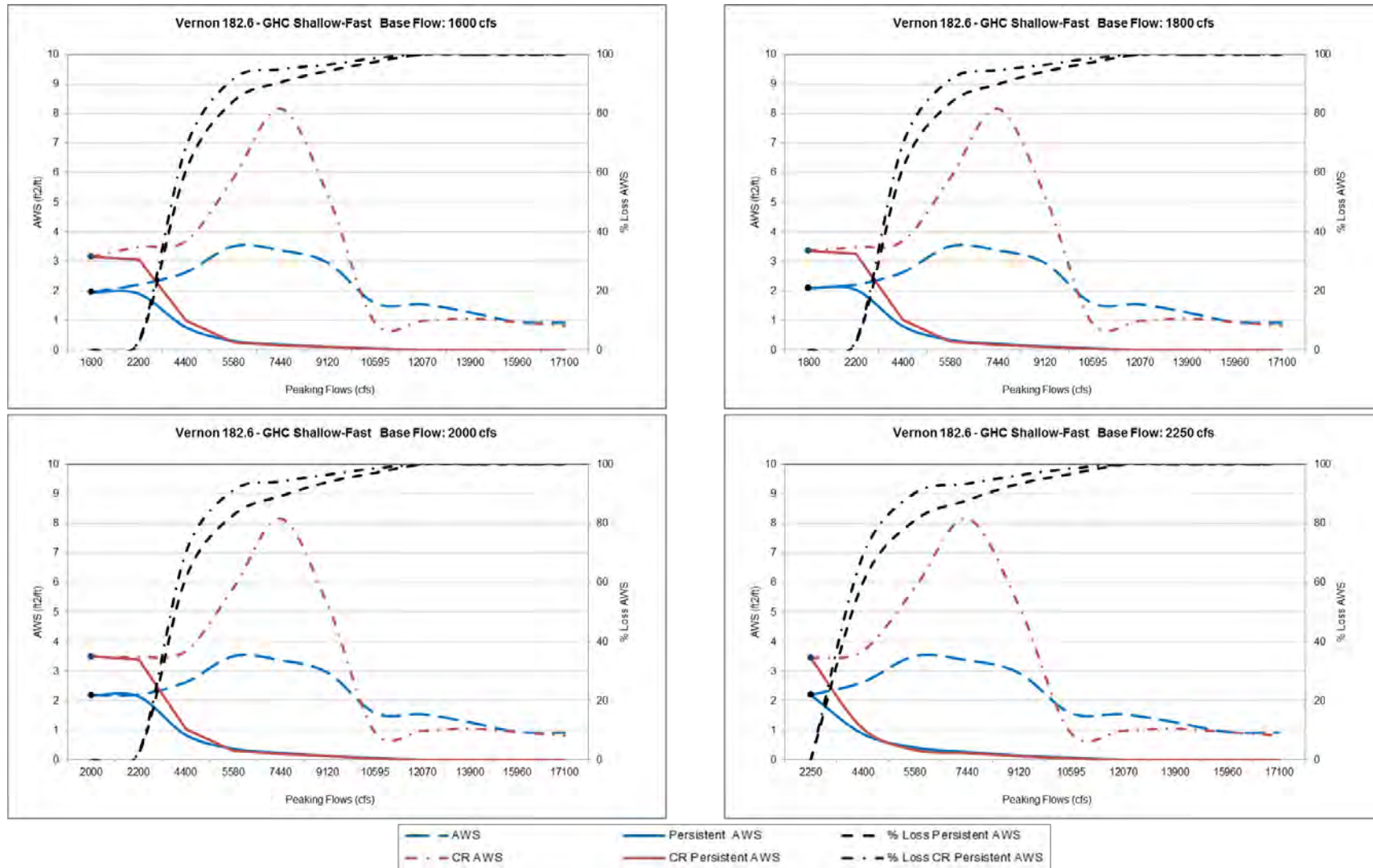


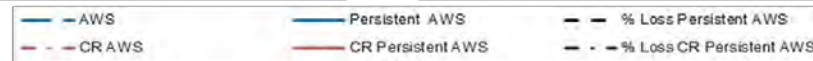
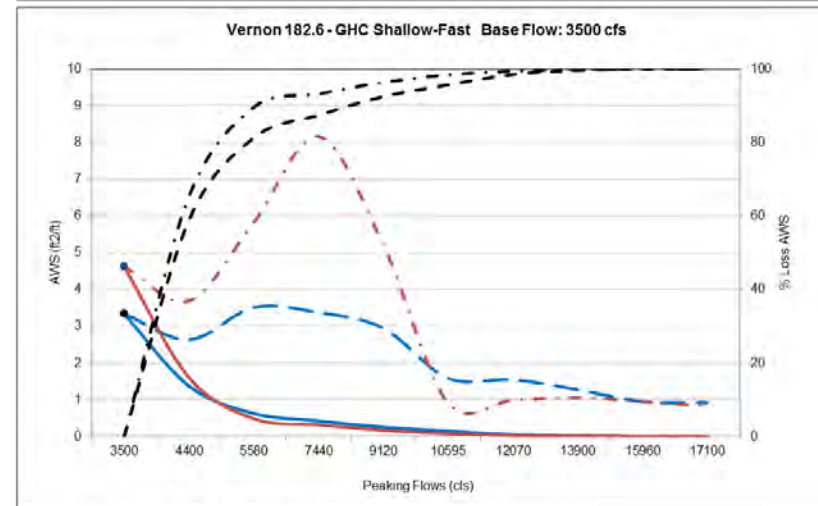
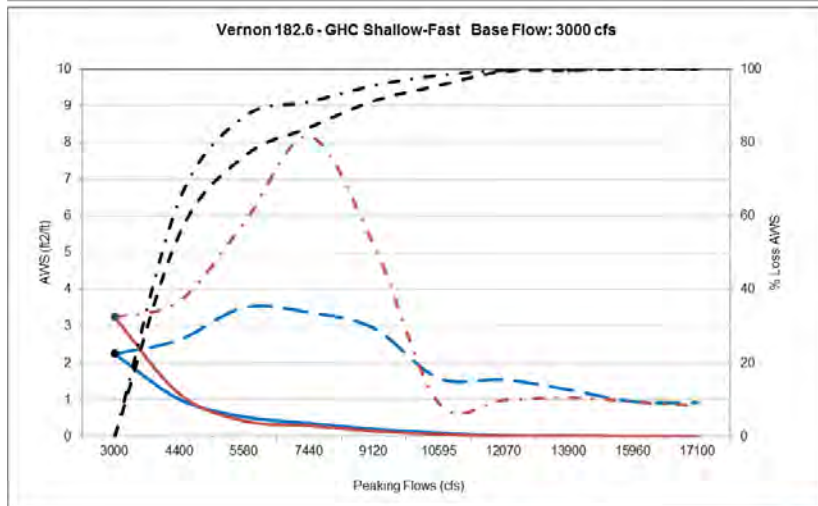
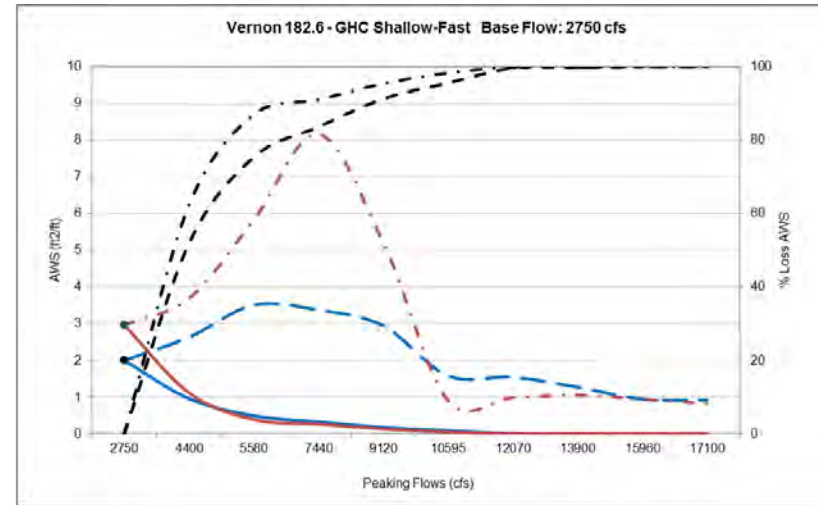
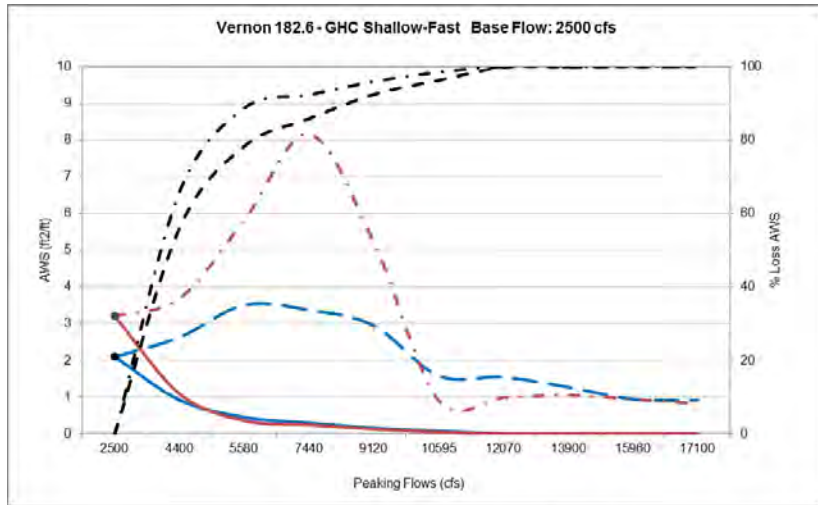


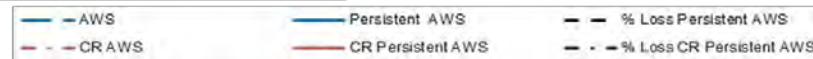
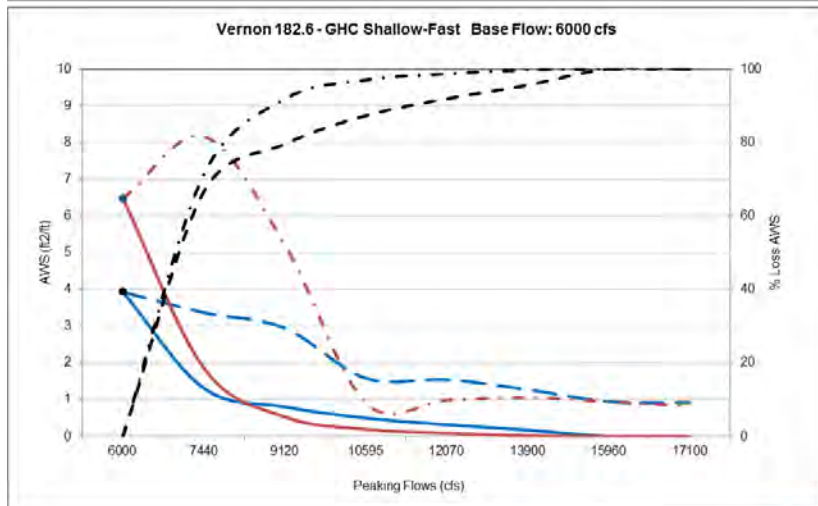
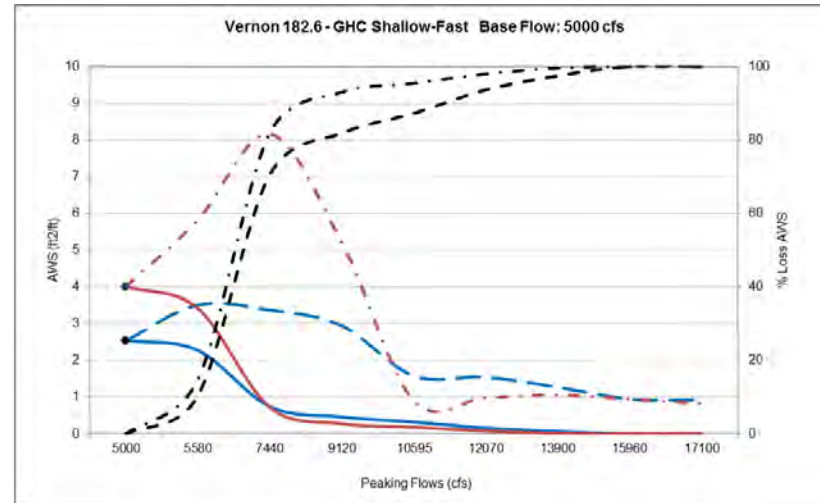
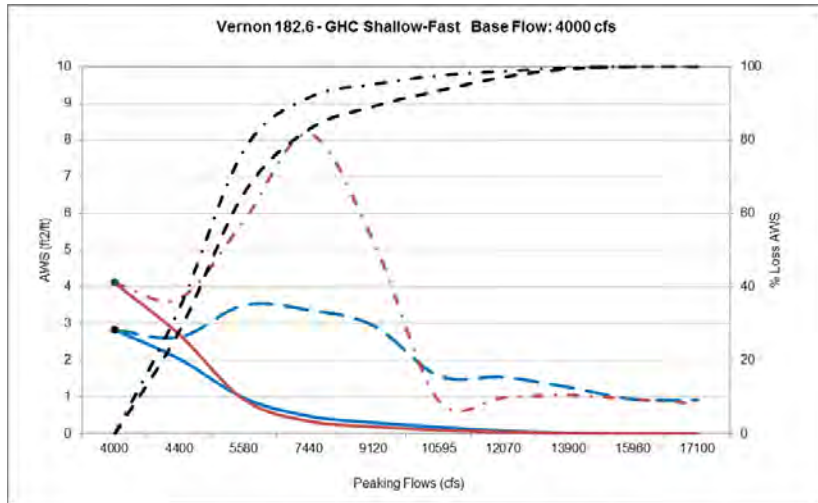




Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) and Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) CR - GHC Shallow-Fast persistent habitat.

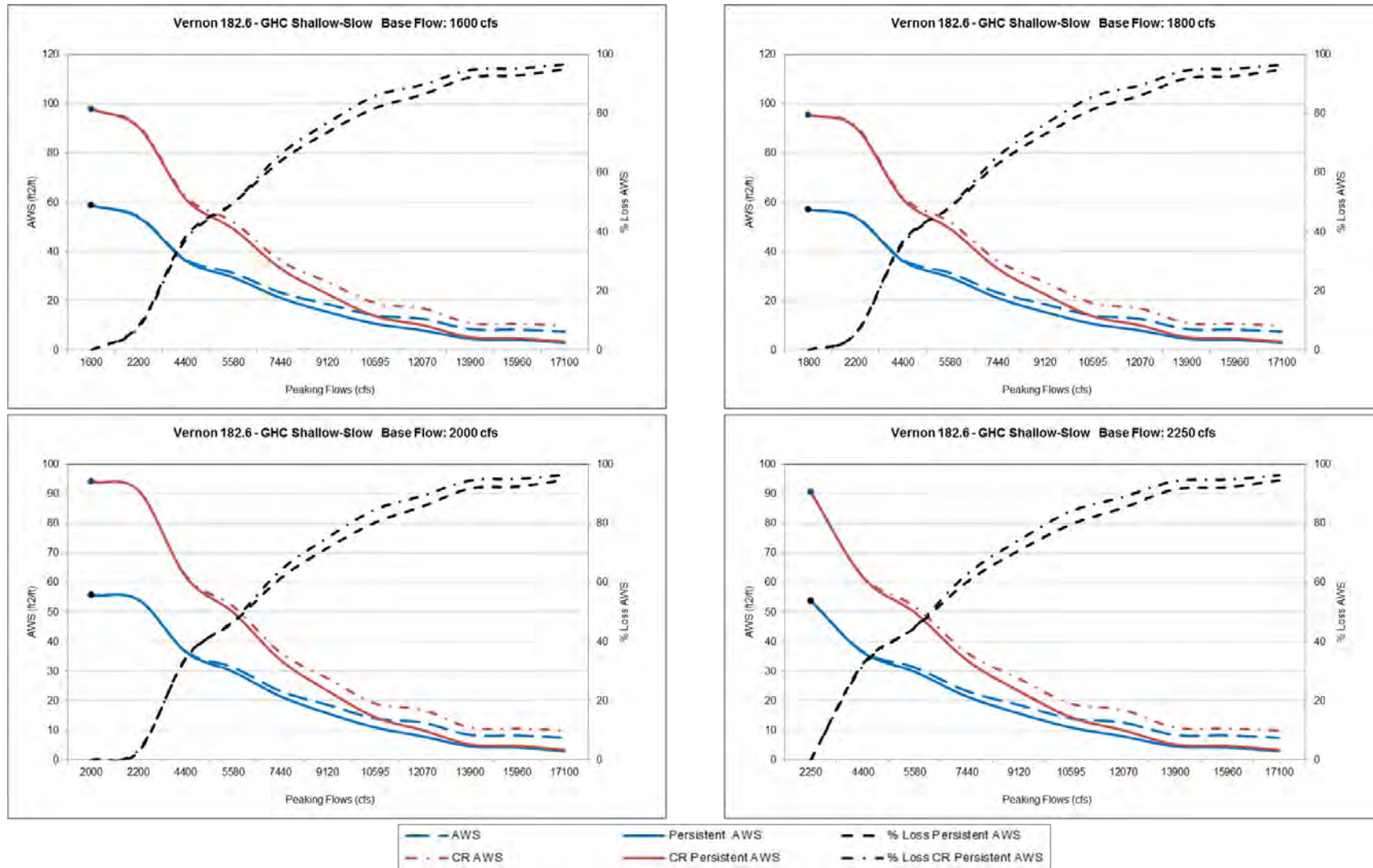




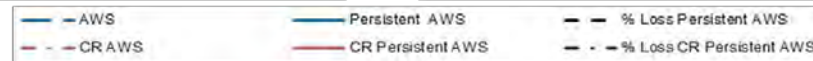
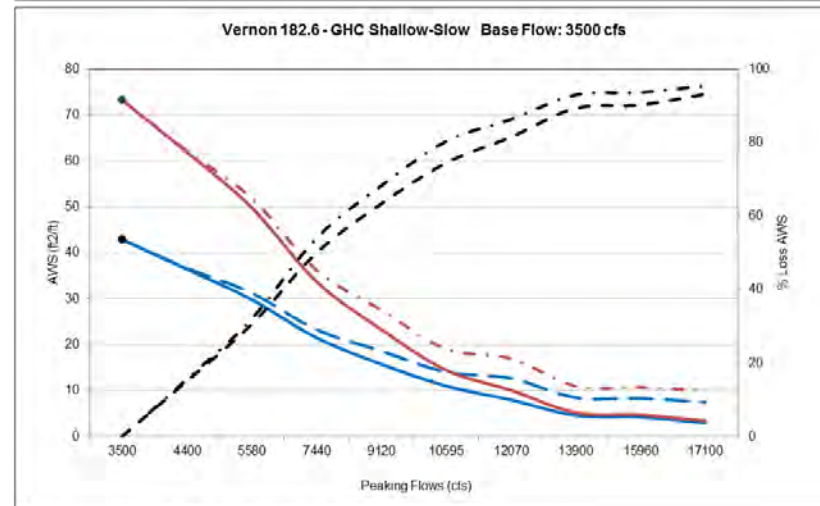
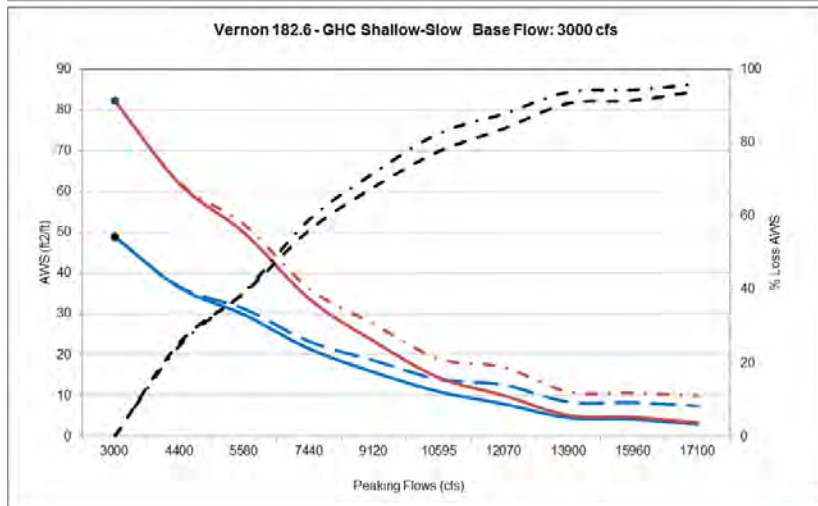
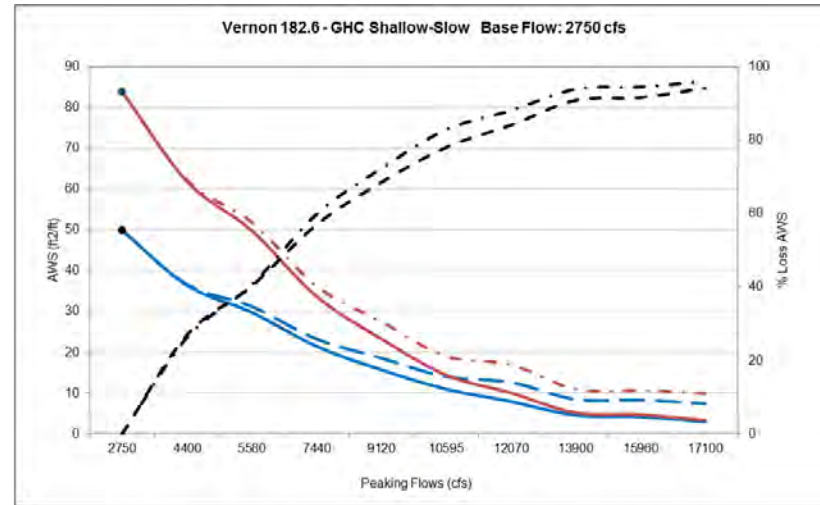
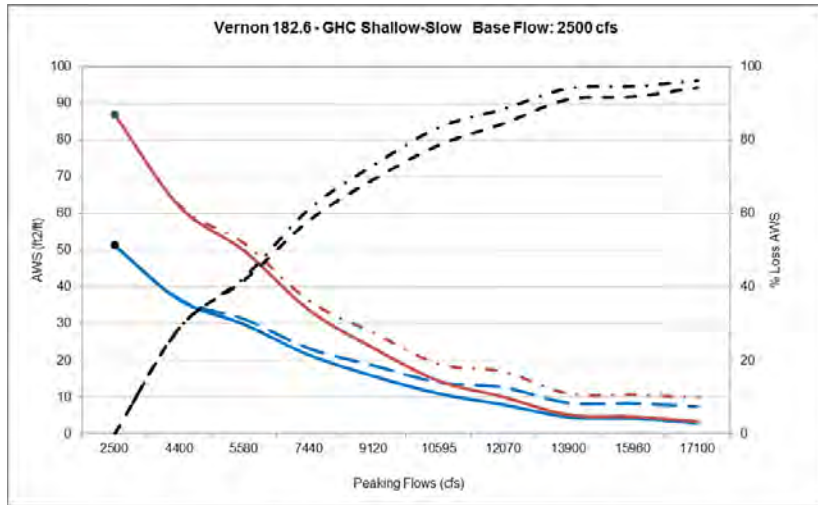


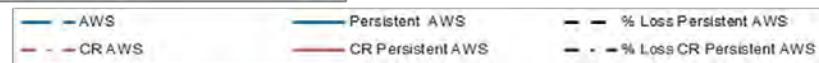
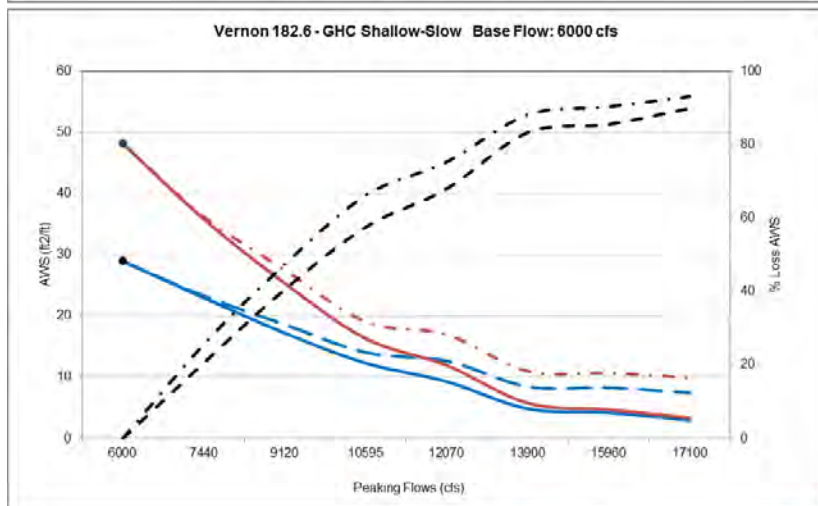
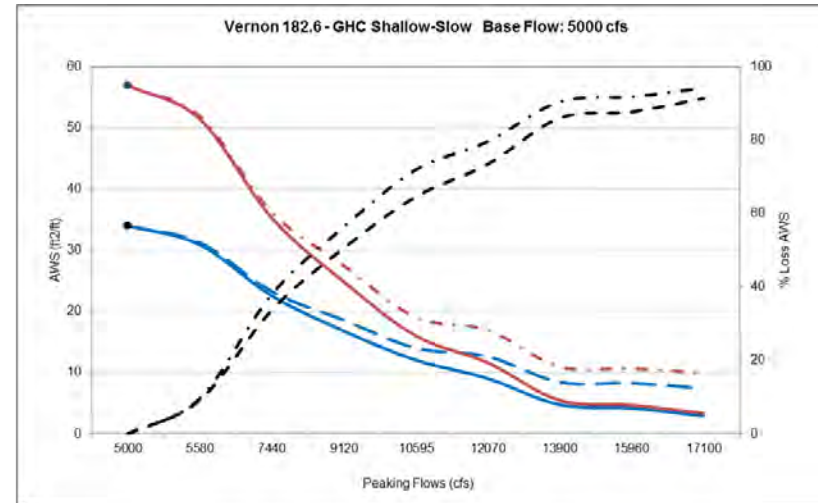
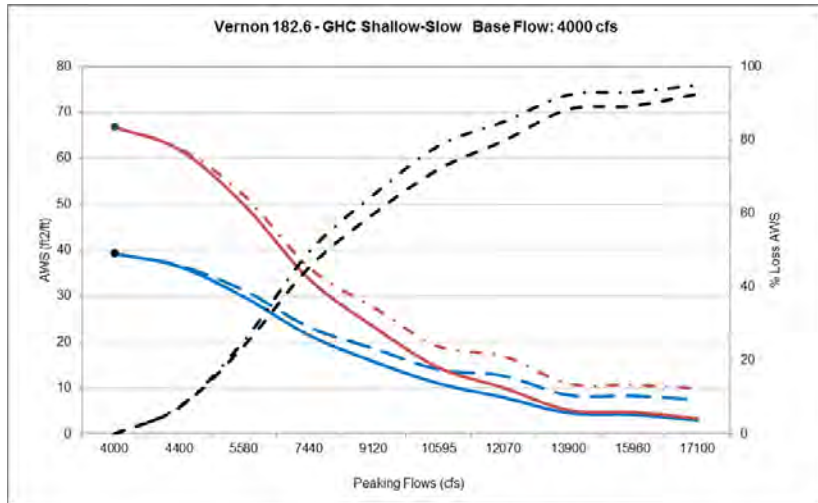


Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) and Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) CR -  
 GHC Shallow-Slow persistent habitat.









Vernon: Turners Falls dam WSE=182.6 ft (NAVD88) Co-occurring mussels persistent and persistent quality habitat.

