

12-4-2009

Ex. 280-US-471

Unknown

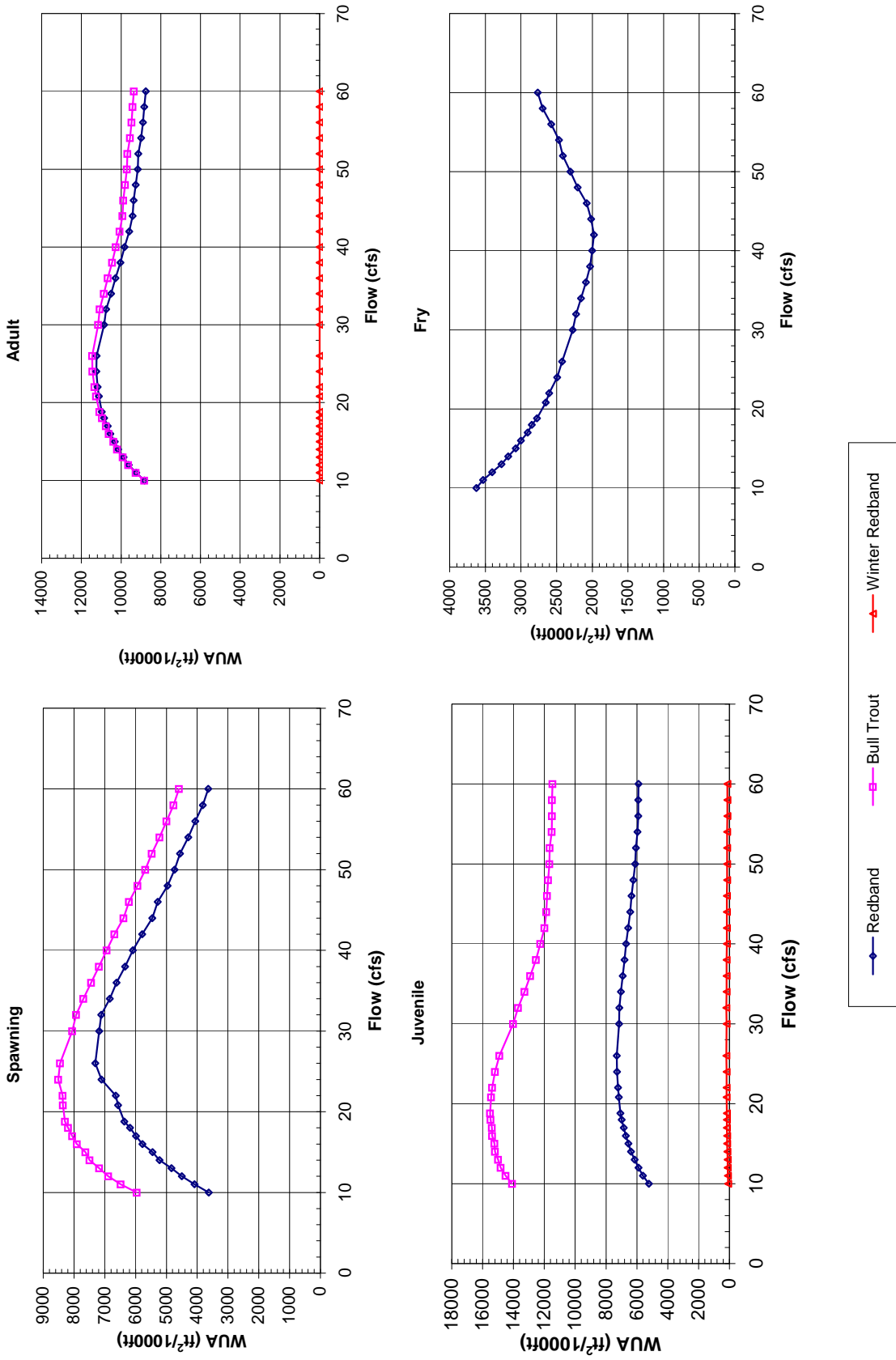
Follow this and additional works at: <https://digitalcommons.law.uidaho.edu/all>

Recommended Citation

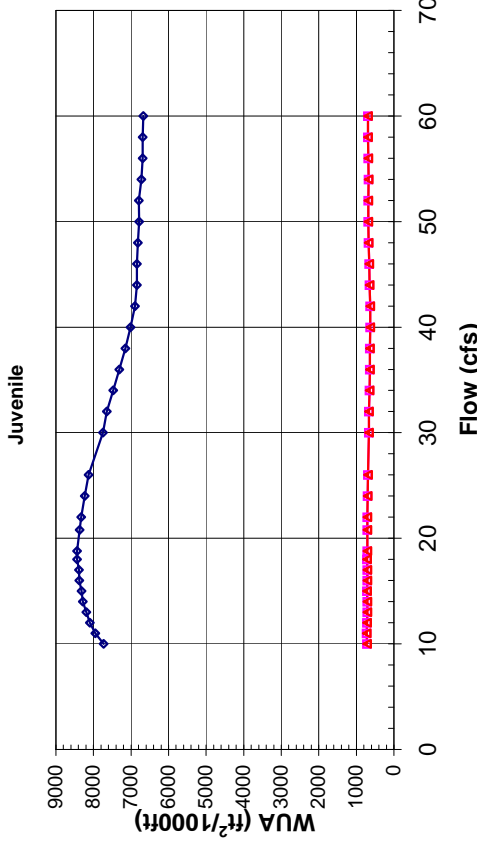
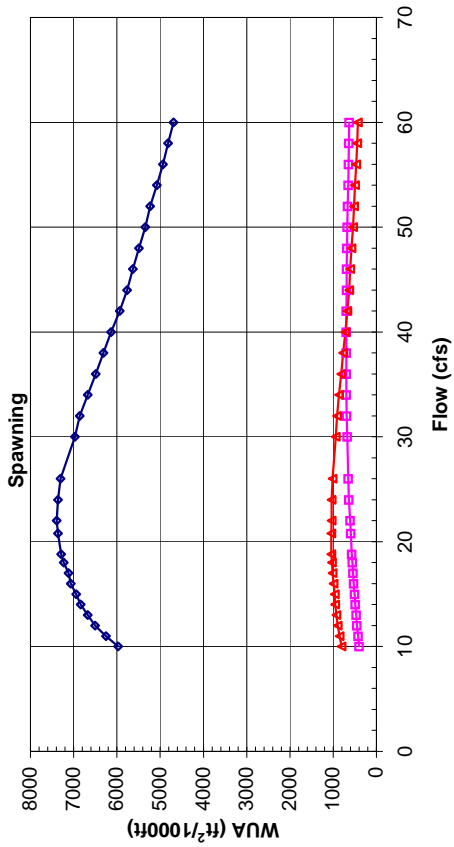
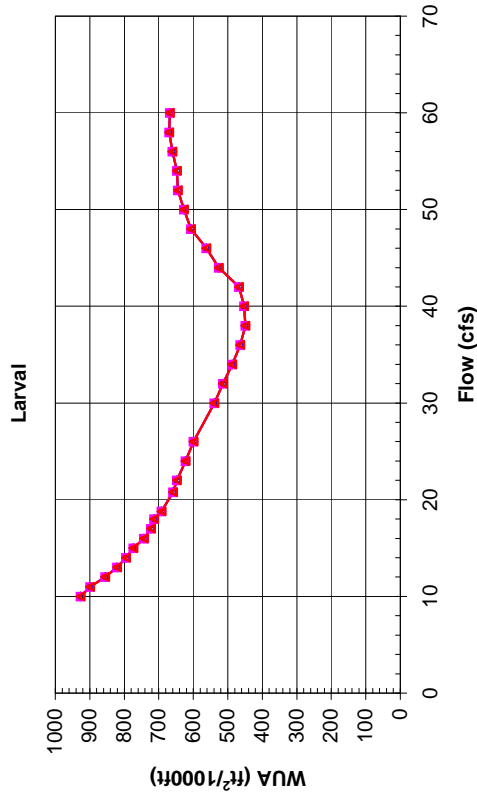
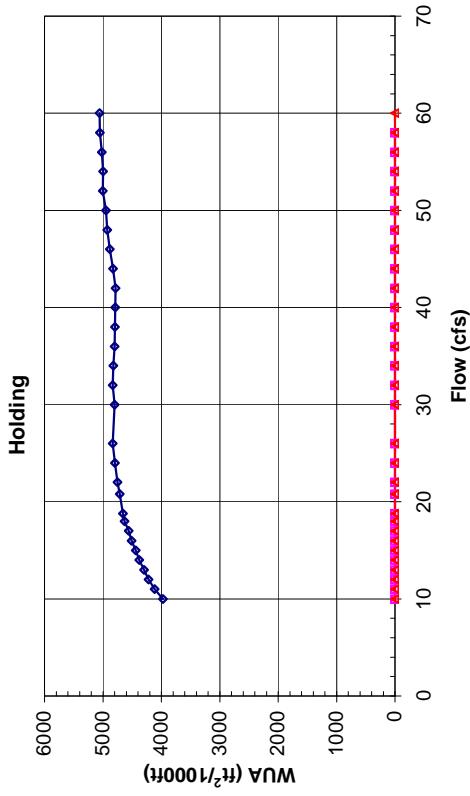
Unknown, "Ex. 280-US-471" (2009). *Hedden-Nicely Collection, All*. 509.
<https://digitalcommons.law.uidaho.edu/all/509>

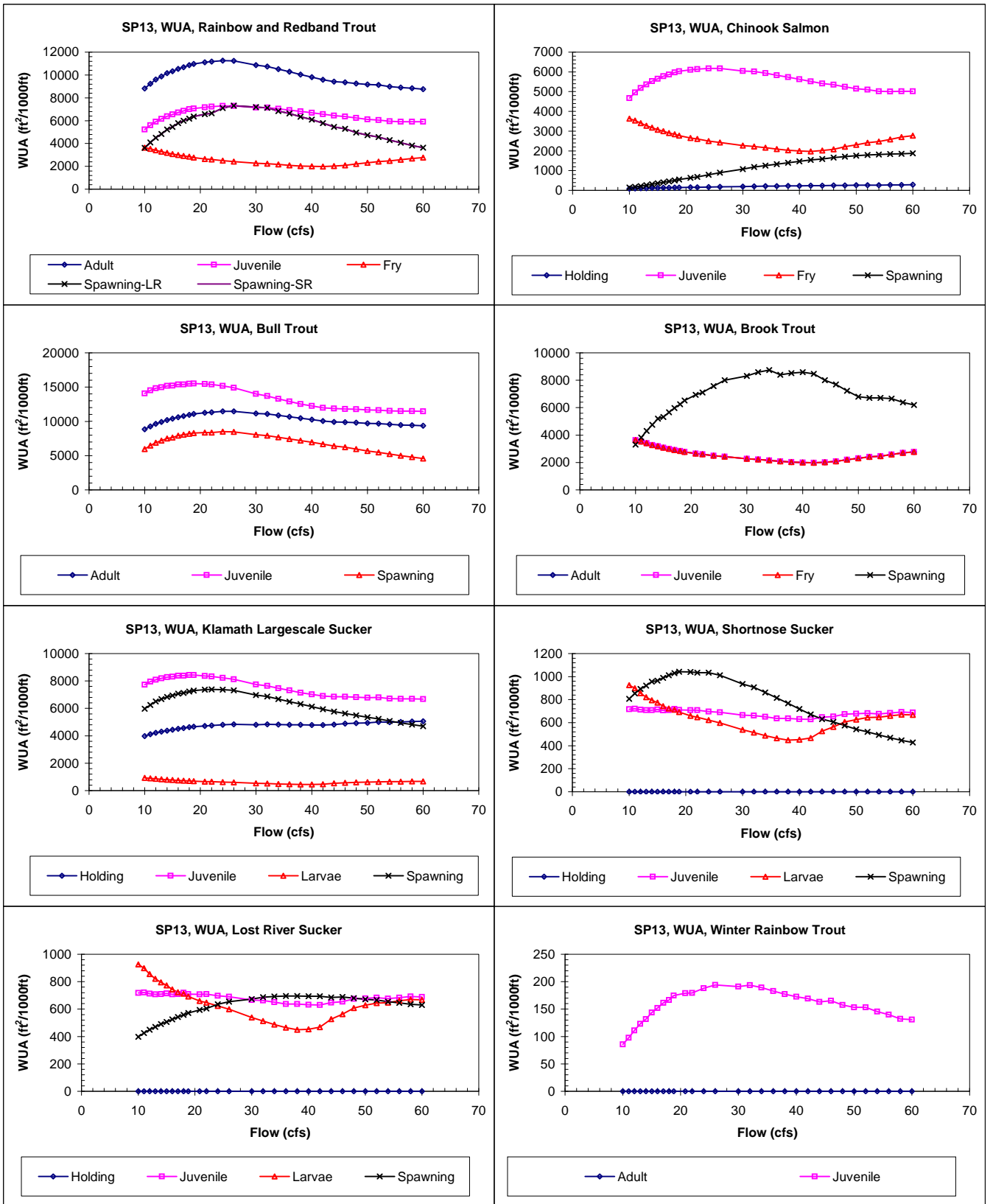
This Expert Report is brought to you for free and open access by the Hedden-Nicely at Digital Commons @ UIdaho Law. It has been accepted for inclusion in Hedden-Nicely Collection, All by an authorized administrator of Digital Commons @ UIdaho Law. For more information, please contact annablaine@uidaho.edu.

Site 653
Priority Species Habitat - Flow Curves



Site 653
Priority Species Habitat - Flow Curves





Claim Reach 653 Sprague River, Site 13, Composite WUA

	WUA (ft ² /1000ft)				
	Q	Spawning - Spawning -			
	(cfs)	Adult	Juvenile	Fry	Large River Small River
10	8818	5219	3627	3621	3621
11	9242	5600	3530	4086	4086
12	9610	5902	3405	4503	4503
13	9875	6148	3275	4837	4837
14	10153	6379	3180	5227	5227
15	10326	6548	3073	5449	5449
16	10542	6721	3001	5776	5776
17	10673	6849	2908	5987	5987
18	10862	6993	2847	6179	6179
18.8	10974	7069	2775	6366	6366
20.8	11120	7175	2653	6572	6572
22	11183	7225	2607	6644	6644
24	11251	7283	2494	7108	7108
26	11231	7298	2423	7308	7308
30	10857	7152	2273	7181	7181
32	10749	7140	2226	7119	7119
34	10503	7035	2160	6836	6836
36	10283	6924	2088	6624	6624
38	10034	6808	2030	6345	6345
40	9820	6695	2001	6088	6088
42	9587	6560	1975	5783	5783
44	9422	6436	2017	5459	5459
46	9364	6355	2079	5281	5281
48	9261	6229	2207	4965	4965
50	9164	6110	2306	4737	4737
52	9131	6054	2413	4561	4561
54	8988	5953	2468	4291	4291
56	8898	5915	2577	4063	4063
58	8832	5909	2695	3818	3818
60	8759	5898	2766	3640	3640

	WUA (ft ² /1000ft)			
	Q	Spawning		
	(cfs)	Holding	Juvenile	Fry
10	89	4672	3627	142
11	97	4963	3530	179
12	103	5182	3405	220
13	110	5361	3275	263
14	116	5530	3180	311
15	122	5650	3073	355
16	128	5778	3001	406
17	133	5869	2908	458
18	139	5979	2847	504
18.8	144	6032	2775	547
20.8	153	6103	2653	630
22	158	6141	2607	677
24	169	6179	2494	794
26	178	6181	2423	894
30	193	6046	2273	1080
32	202	6026	2226	1180
34	209	5933	2160	1258
36	215	5827	2088	1328
38	222	5733	2030	1399
40	228	5632	2001	1472
42	234	5517	1975	1539
44	240	5416	2017	1590
46	246	5347	2079	1662
48	252	5248	2207	1708
50	257	5148	2306	1751
52	262	5103	2413	1794
54	267	5023	2468	1817
56	272	5003	2577	1836
58	278	5014	2695	1852
60	283	5013	2766	1871

	WUA (ft ² /1000ft)			
	Q	Spawning		
	(cfs)	Adult	Juvenile	Fry
10	8837	14096		5962
11	9265	14512		6484
12	9637	14830		6887
13	9914	14991		7180
14	10201	15188		7497
15	10388	15223		7630
16	10616	15382		7905
17	10762	15402		8062
18	10962	15486		8195
18.8	11087	15516		8293
20.8	11261	15450		8359
22	11339	15387		8368
24	11447	15193		8510
26	11462	14914		8455
30	11158	14025		8060
32	11081	13706		7929
34	10867	13277		7693
36	10672	12908		7440
38	10454	12538		7189
40	10268	12254		6938
42	10067	11987		6683
44	9928	11863		6393
46	9886	11821		6214
48	9798	11760		5939
50	9710	11676		5683
52	9683	11651		5475
54	9553	11524		5223
56	9475	11498		4998
58	9420	11500		4771
60	9356	11475		4595

	WUA (ft ² /1000ft)			
	Q	Spawning		
	(cfs)	Adult	Juvenile	Fry
10	3627	3627	3627	3298
11	3530	3530	3530	3826
12	3405	3405	3405	4302
13	3275	3275	3275	4746
14	3180	3180	3180	5206
15	3073	3073	3073	5311
16	3001	3001	3001	5665
17	2908	2908	2908	5969
18	2847	2847	2847	6254
18.8	2775	2775	2775	6530
20.8	2653	2653	2653	6941
22	2607	2607	2607	7112
24	2494	2494	2494	7568
26	2423	2423	2423	7996
30	2273	2273	2273	8307
32	2226	2226	2226	8593
34	2160	2160	2160	8737
36	2088	2088	2088	8396
38	2030	2030	2030	8514
40	2001	2001	2001	8588
42	1975	1975	1975	8470
44	2017	2017	2017	8002
46	2079	2079	2079	7688
48	2207	2207	2207	7232
50	2306	2306	2306	6799
52	2413	2413	2413	6706
54	2468	2468	2468	6712
56	2577	2577	2577	6653
58	2695	2695	2695	6392
60	2766	2766	2766	6189

Claim Reach 653 Sprague River, Site 13, Composite WUA

	Q (cfs)	WUA (ft ² /1000ft)			
		Holding	Juvenile	Larvae	Spawning
Klamath Largescale Sucker	10	3970	7730	927	5972
	11	4114	7951	899	6255
	12	4217	8095	855	6502
	13	4295	8188	821	6674
	14	4380	8284	795	6838
	15	4441	8319	773	6940
	16	4510	8379	743	7066
	17	4561	8390	722	7118
	18	4631	8437	713	7228
	18.8	4659	8436	692	7291
	20.8	4712	8371	659	7364
	22	4749	8329	648	7389
	24	4796	8234	623	7366
	26	4832	8127	599	7307
	30	4799	7749	539	6974
	32	4832	7645	514	6862
	34	4820	7471	487	6675
	36	4801	7309	464	6493
	38	4795	7149	449	6310
	40	4787	7015	453	6132
	42	4786	6896	468	5936
	44	4827	6844	526	5768
	46	4880	6844	562	5635
	48	4928	6822	607	5491
	50	4948	6783	627	5347
	52	5002	6792	645	5231
	54	4996	6721	647	5077
	56	5017	6694	660	4935
	58	5050	6690	670	4816
	60	5057	6673	668	4694

	Q (cfs)	WUA (ft ² /1000ft)			
		Holding	Juvenile	Larvae	Spawning
Shorthose Sucker	10	0	718	927	807
	11	0	721	899	853
	12	0	712	855	894
	13	0	708	821	922
	14	0	709	795	956
	15	0	714	773	964
	16	0	707	743	990
	17	0	709	722	1011
	18	0	719	713	1030
	18.8	0	710	692	1043
	20.8	0	708	659	1041
	22	0	709	648	1033
	24	0	697	623	1034
	26	0	690	599	1012
	30	0	666	539	936
	32	0	662	514	907
	34	0	650	487	863
	36	0	638	464	814
	38	0	636	449	768
	40	0	632	453	719
	42	0	629	468	672
	44	0	647	526	630
	46	0	654	562	606
	48	0	674	607	575
	50	0	678	627	542
	52	0	683	645	521
	54	0	676	647	494
	56	0	683	660	468
	58	0	692	670	446
	60	0	689	668	428

	Q (cfs)	WUA (ft ² /1000ft)			
		Holding	Juvenile	Larvae	Spawning
Lost River Sucker	10	0	718	927	398
	11	0	721	899	425
	12	0	712	855	450
	13	0	708	821	470
	14	0	709	795	490
	15	0	714	773	506
	16	0	707	743	525
	17	0	709	722	542
	18	0	719	713	558
	18.8	0	710	692	572
	20.8	0	708	659	594
	22	0	709	648	605
	24	0	697	623	635
	26	0	690	599	654
	30	0	666	539	674
	32	0	662	514	687
	34	0	650	487	692
	36	0	638	464	695
	38	0	636	449	696
	40	0	632	453	694
	42	0	629	468	693
	44	0	647	526	686
	46	0	654	562	689
	48	0	674	607	679
	50	0	678	627	670
	52	0	683	645	666
	54	0	676	647	655
	56	0	683	660	645
	58	0	692	670	635
	60	0	689	668	630

	Q (cfs)	WUA (ft ² /1000ft)			
		Adult	Juvenile	Fry	Spawning
Winter Rainbow Trout	10	0	86		
	11	0	98		
	12	0	111		
	13	0	123		
	14	0	132		
	15	0	144		
	16	0	152		
	17	0	161		
	18	0	167		
	18.8	0	175		
	20.8	0	179		
	22	0	180		
	24	0	188		
	26	0	194		
	30	0	191		
	32	0	194		
	34	0	189		
	36	0	183		
	38	0	177		
	40	0	172		
	42	0	169		
	44	0	163		
	46	0	165		
	48	0	157		
	50	0	153		
	52	0	153		
	54	0	145		
	56	0	140		
	58	0	132		
	60	0	131		