

12-4-2009

Ex. 277-US-457

Unknown

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

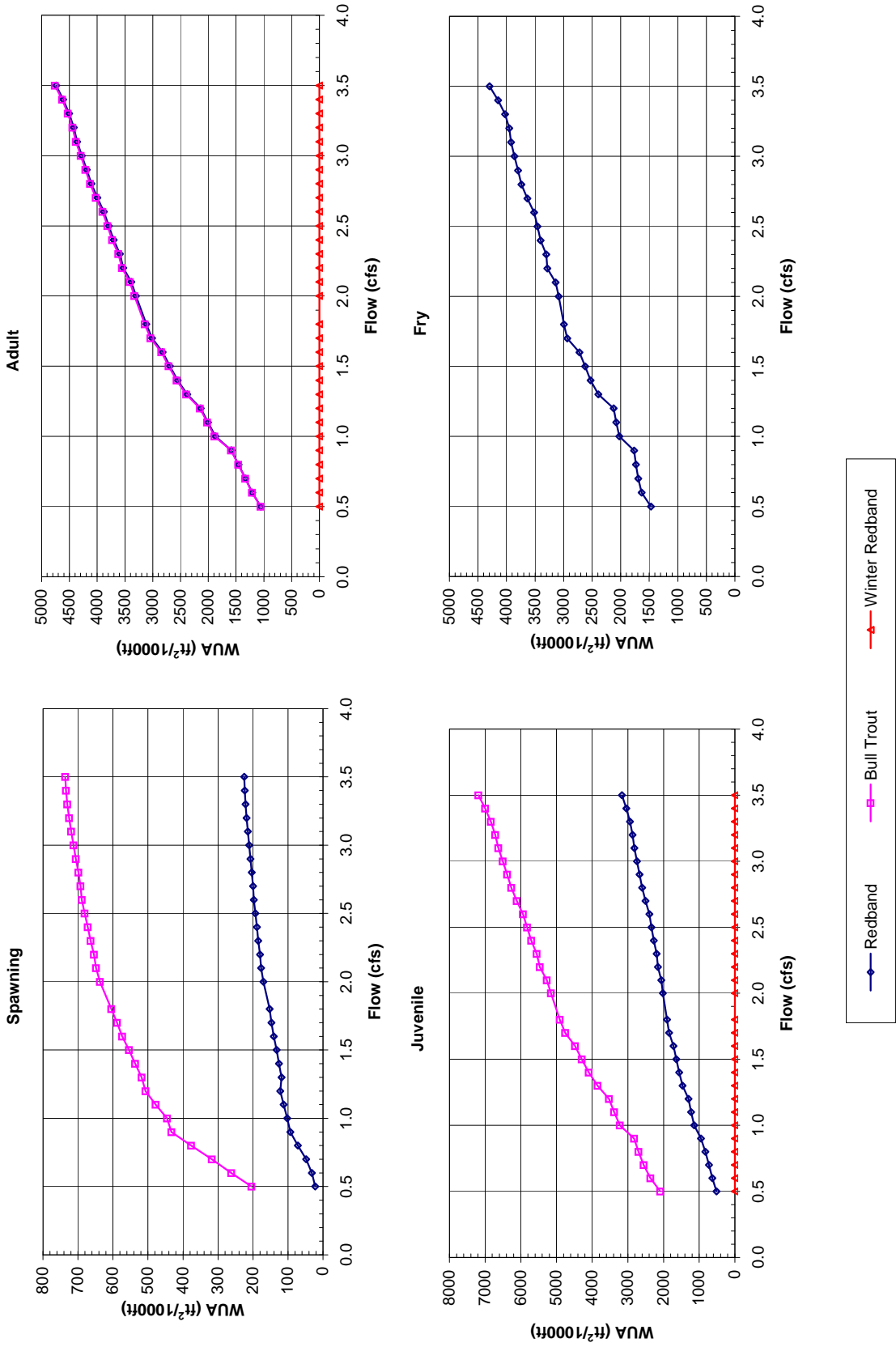
---

### Recommended Citation

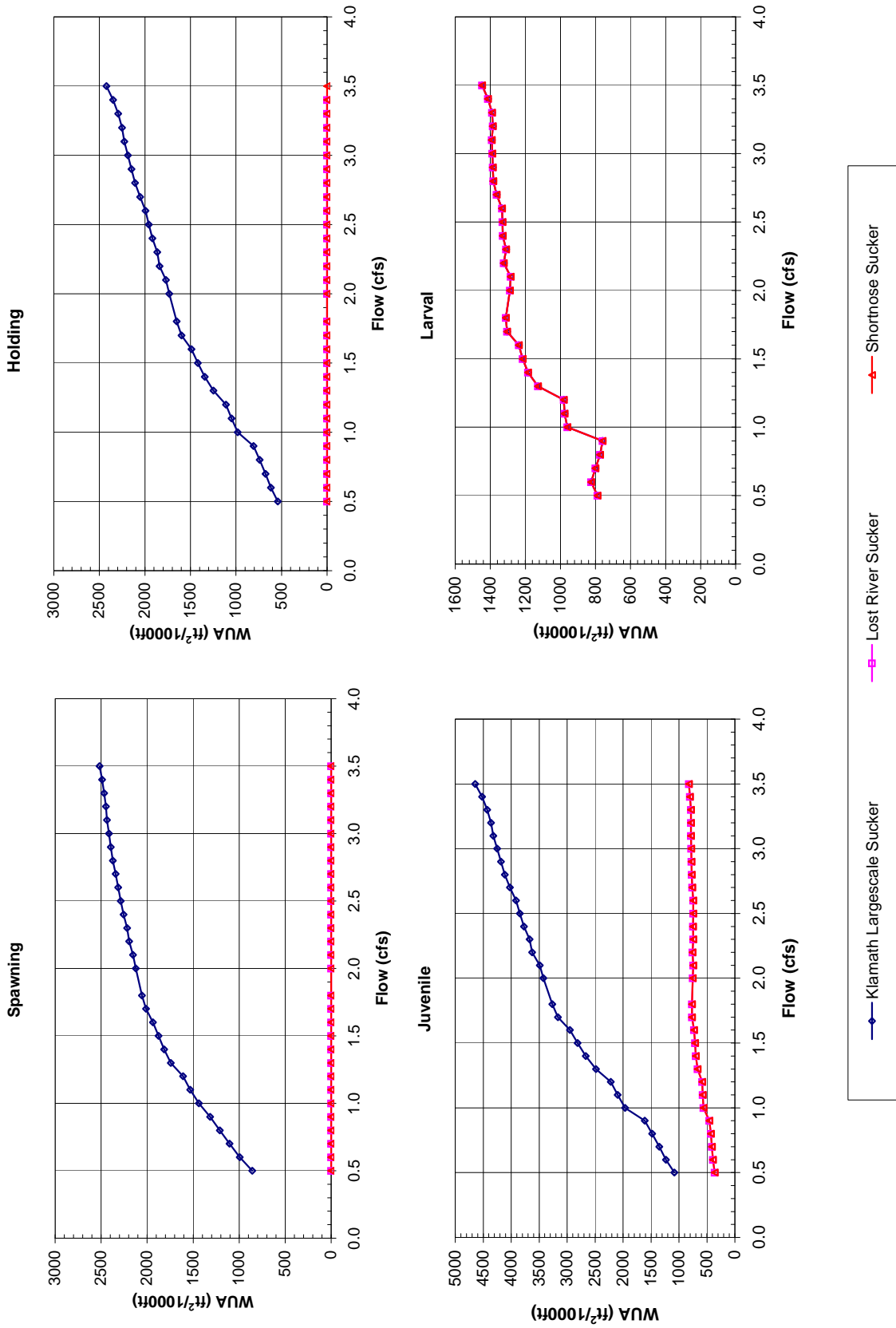
Unknown, "Ex. 277-US-457" (2009). *Hedden-Nicely Collection, All*. 379.  
<https://digitalcommons.law.uidaho.edu/all/379>

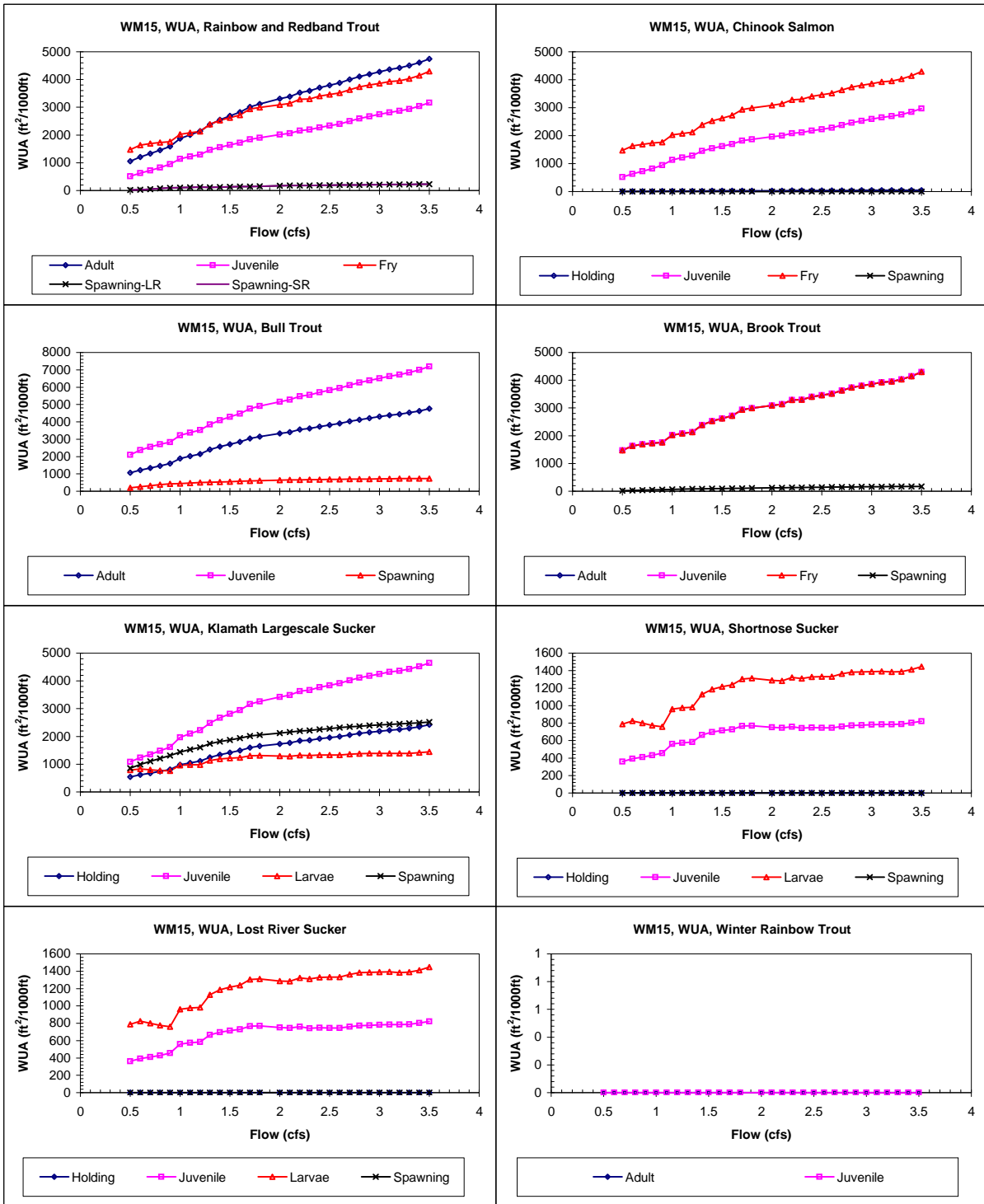
This Expert Report is brought to you for free and open access by the Hedden-Nicely at Digital Commons @ UIdaho Law. It has been accepted for inclusion in Hedden-Nicely Collection, All by an authorized administrator of Digital Commons @ UIdaho Law. For more information, please contact [annablaine@uidaho.edu](mailto:annablaine@uidaho.edu).

# Site WM 15 Priority Species Habitat - Flow Curves



**Site WM 15**  
**Priority Species Habitat - Flow Curves**





Claim Reach 638 Williamson River, Site 15, Composite WUA

	WUA (ft <sup>2</sup> /1000ft)				
	Q	Adult	Juvenile	Spawning - Spawning -	
	(cfs)			Large River	Small River
0.5	1052	516	1469	22	22
0.6	1207	630	1634	32	32
0.7	1329	726	1691	48	48
0.8	1454	830	1732	72	72
0.9	1587	949	1763	93	93
1	1871	1141	2025	102	102
1.1	2006	1224	2080	112	112
1.2	2135	1297	2125	122	122
1.3	2379	1463	2389	118	118
1.4	2549	1560	2528	125	125
1.5	2692	1641	2624	133	133
1.6	2820	1723	2723	141	141
1.7	3013	1846	2936	147	147
1.8	3114	1903	2995	153	153
2	3303	2015	3086	170	170
2.1	3386	2061	3140	177	177
2.2	3529	2153	3287	180	180
2.3	3594	2196	3303	185	185
2.4	3703	2272	3403	189	189
2.5	3792	2334	3459	193	193
2.6	3879	2398	3516	198	198
2.7	3999	2502	3634	200	200
2.8	4102	2595	3738	203	203
2.9	4188	2669	3798	207	207
3	4275	2743	3859	211	211
3.1	4362	2817	3921	215	215
3.2	4423	2868	3953	219	219
3.3	4507	2941	4026	222	222
3.4	4611	3039	4146	224	224
3.5	4740	3166	4296	225	225

	WUA (ft <sup>2</sup> /1000ft)				
	Q	Holding	Juvenile	Fry	Spawning
	(cfs)				
0.5	8	515	1469	0	
0.6	10	628	1634	0	
0.7	12	723	1691	0	
0.8	13	824	1732	0	
0.9	15	943	1763	0	
1	18	1136	2025	0	
1.1	19	1217	2080	0	
1.2	21	1286	2125	0	
1.3	23	1452	2389	0	
1.4	25	1545	2528	0	
1.5	26	1622	2624	0	
1.6	27	1699	2723	0	
1.7	29	1821	2936	0	
1.8	30	1869	2995	0	
2	32	1960	3086	0	
2.1	33	1996	3140	0	
2.2	34	2081	3287	0	
2.3	35	2110	3303	0	
2.4	36	2178	3403	0	
2.5	37	2231	3459	0	
2.6	38	2286	3516	0	
2.7	40	2380	3634	0	
2.8	42	2466	3738	0	
2.9	43	2529	3798	0	
3	44	2592	3859	0	
3.1	45	2655	3921	0	
3.2	46	2695	3953	0	
3.3	48	2758	4026	0	
3.4	49	2852	4146	0	
3.5	51	2974	4296	0	

	WUA (ft <sup>2</sup> /1000ft)			
	Q	Adult	Juvenile	Spawning
	(cfs)			
0.5	1057	2092	204	
0.6	1212	2369	262	
0.7	1334	2553	318	
0.8	1459	2704	377	
0.9	1592	2822	433	
1	1887	3222	446	
1.1	2022	3383	478	
1.2	2150	3530	507	
1.3	2398	3851	518	
1.4	2570	4093	537	
1.5	2714	4290	554	
1.6	2845	4476	573	
1.7	3041	4757	589	
1.8	3143	4907	604	
2	3330	5153	637	
2.1	3412	5271	649	
2.2	3556	5469	654	
2.3	3620	5555	664	
2.4	3729	5708	672	
2.5	3817	5824	681	
2.6	3904	5940	689	
2.7	4024	6111	693	
2.8	4127	6265	699	
2.9	4212	6385	706	
3	4298	6504	713	
3.1	4384	6625	719	
3.2	4444	6718	725	
3.3	4528	6840	731	
3.4	4631	7002	734	
3.5	4760	7187	736	

	WUA (ft <sup>2</sup> /1000ft)				
	Q	Adult	Juvenile	Fry	Spawning
	(cfs)				
0.5	1469	1469	1469	18	
0.6	1634	1634	1634	25	
0.7	1691	1691	1691	36	
0.8	1732	1732	1732	50	
0.9	1763	1763	1763	61	
1	2025	2025	2025	67	
1.1	2080	2080	2080	75	
1.2	2125	2125	2125	83	
1.3	2389	2389	2389	86	
1.4	2528	2528	2528	91	
1.5	2624	2624	2624	97	
1.6	2723	2723	2723	102	
1.7	2936	2936	2936	104	
1.8	2995	2995	2995	109	
2	3086	3086	3086	120	
2.1	3140	3140	3140	126	
2.2	3287	3287	3287	129	
2.3	3303	3303	3303	135	
2.4	3403	3403	3403	139	
2.5	3459	3459	3459	143	
2.6	3516	3516	3516	148	
2.7	3634	3634	3634	151	
2.8	3738	3738	3738	154	
2.9	3798	3798	3798	157	
3	3859	3859	3859	161	
3.1	3921	3921	3921	164	
3.2	3953	3953	3953	168	
3.3	4026	4026	4026	170	
3.4	4146	4146	4146	172	
3.5	4296	4296	4296	172	

Claim Reach 638 Williamson River, Site 15, Composite WUA

	WUA (ft <sup>2</sup> /1000ft)				
	Q (cfs)	Holding	Juvenile	Larvae	Spawning
Klamath Largescale Sucker	0.5	541	1081	789	858
	0.6	617	1234	825	993
	0.7	677	1353	800	1104
	0.8	739	1478	774	1209
	0.9	807	1614	759	1316
	1	983	1965	960	1439
	1.1	1049	2097	976	1531
	1.2	1111	2221	981	1609
	1.3	1248	2483	1128	1742
	1.4	1342	2667	1185	1815
	1.5	1418	2814	1216	1875
	1.6	1490	2951	1237	1936
	1.7	1597	3163	1305	2011
	1.8	1651	3264	1312	2057
	2	1733	3423	1288	2124
	2.1	1770	3490	1284	2153
	2.2	1841	3628	1323	2195
	2.3	1864	3670	1311	2218
	2.4	1917	3770	1329	2255
	2.5	1956	3843	1331	2286
	2.6	1995	3915	1333	2315
	2.7	2053	4022	1364	2344
	2.8	2107	4115	1383	2372
	2.9	2147	4183	1386	2394
	3	2187	4252	1389	2415
	3.1	2227	4321	1392	2436
	3.2	2253	4360	1385	2448
	3.3	2293	4429	1390	2468
	3.4	2349	4521	1413	2488
	3.5	2421	4646	1447	2517

	WUA (ft <sup>2</sup> /1000ft)				
	Q (cfs)	Holding	Juvenile	Larvae	Spawning
Shorthead Sucker	0.5	0	361	789	0
	0.6	0	394	825	0
	0.7	0	411	800	0
	0.8	0	430	774	0
	0.9	0	455	759	0
	1	0	560	960	0
	1.1	0	574	976	0
	1.2	0	584	981	0
	1.3	0	665	1128	0
	1.4	0	698	1185	0
	1.5	0	714	1216	0
	1.6	0	729	1237	0
	1.7	0	768	1305	0
	1.8	0	769	1312	0
	2	0	752	1288	0
	2.1	0	745	1284	0
	2.2	0	759	1323	0
	2.3	0	743	1311	0
	2.4	0	750	1329	0
	2.5	0	746	1331	0
	2.6	0	746	1333	0
	2.7	0	760	1364	0
	2.8	0	773	1383	0
	2.9	0	777	1386	0
	3	0	781	1389	0
	3.1	0	785	1392	0
	3.2	0	784	1385	0
	3.3	0	788	1390	0
	3.4	0	802	1413	0
	3.5	0	821	1447	0

	WUA (ft <sup>2</sup> /1000ft)				
	Q (cfs)	Holding	Juvenile	Larvae	Spawning
Lost River Sucker	1	0	361	789	0
	0.6	0	394	825	0
	0.7	0	411	800	0
	0.8	0	430	774	0
	0.9	0	455	759	0
	1	0	560	960	0
	1.1	0	574	976	0
	1.2	0	584	981	0
	1.3	0	665	1128	0
	1.4	0	698	1185	0
	1.5	0	714	1216	0
	1.6	0	729	1237	0
	1.7	0	768	1305	0
	1.8	0	769	1312	0
	2	0	752	1288	0
	2.1	0	745	1284	0
	2.2	0	759	1323	0
	2.3	0	743	1311	0
	2.4	0	750	1329	0
	2.5	0	746	1331	0
	2.6	0	746	1333	0
	2.7	0	760	1364	0
	2.8	0	773	1383	0
	2.9	0	777	1386	0
	3	0	781	1389	0
	3.1	0	785	1392	0
	3.2	0	784	1385	0
	3.3	0	788	1390	0
	3.4	0	802	1413	0
	3.5	0	821	1447	0

	WUA (ft <sup>2</sup> /1000ft)				
	Q (cfs)	Adult	Juvenile	Fry	Spawning
Winter Rainbow Trout	0.5	0	0		
	0.6	0	0		
	0.7	0	0		
	0.8	0	0		
	0.9	0	0		
	1	0	0		
	1.1	0	0		
	1.2	0	0		
	1.3	0	0		
	1.4	0	0		
	1.5	0	0		
	1.6	0	0		
	1.7	0	0		
	1.8	0	0		
	2	0	0		
	2.1	0	0		
	2.2	0	0		
	2.3	0	0		
	2.4	0	0		
	2.5	0	0		
	2.6	0	0		
	2.7	0	0		
	2.8	0	0		
	2.9	0	0		
	3	0	0		
	3.1	0	0		
	3.2	0	0		
	3.3	0	0		
	3.4	0	0		
	3.5	0	0		