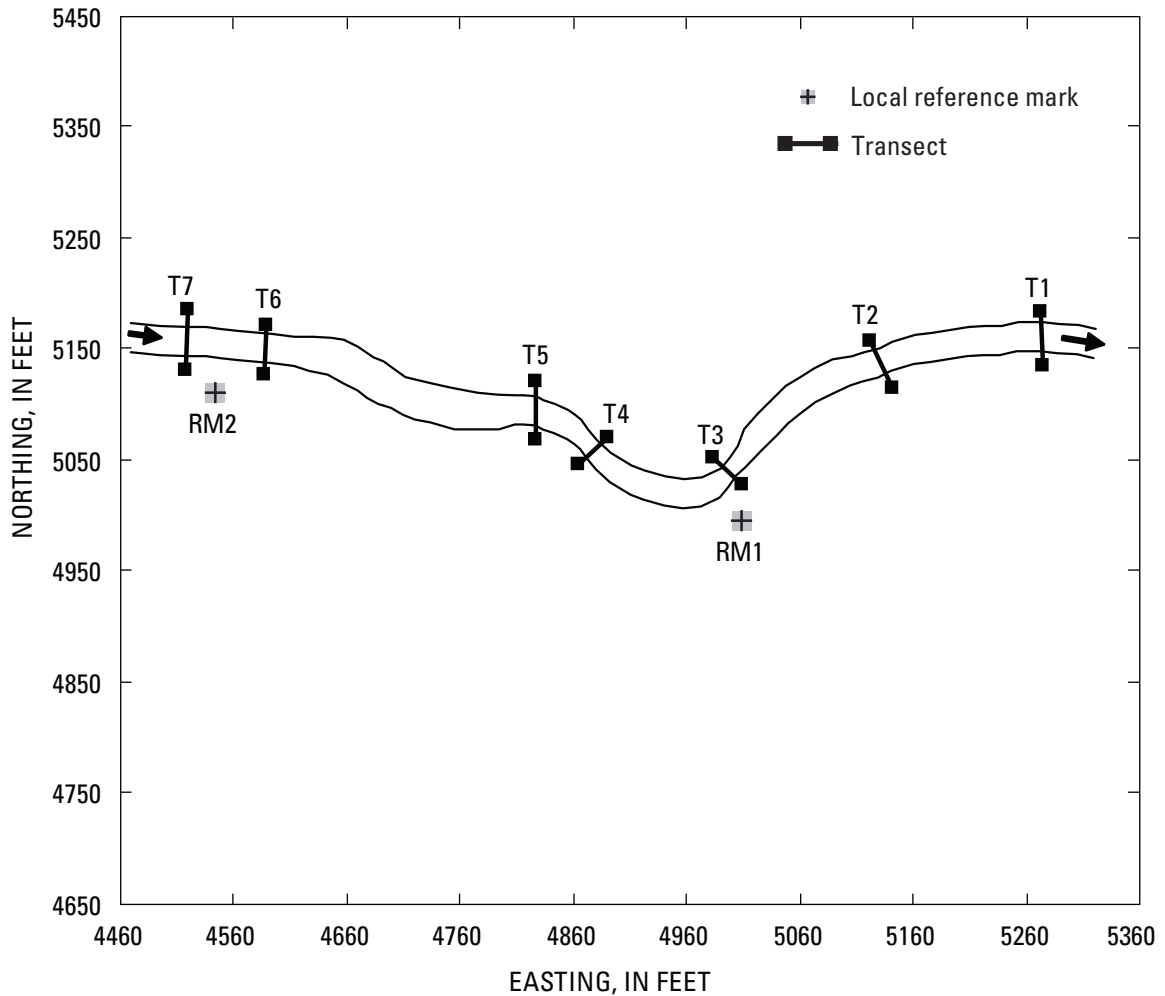


Appendix G. Plan view, weighted usable areas, and passage criteria assessments for bull trout, Chinook salmon, steelhead trout, and invertebrates for lower Challis Creek (CH1), upper Salmon River Basin, Idaho, 2005.



Transect Endpoint Coordinates (NAD 83)			Transect Endpoint Coordinates (NAD 83)		
Point	Latitude	Longitude	Point	Latitude	Longitude
RH1	44° 34' 10.97" N	114° 11' 19.61" W	LH4	44° 34' 9.76" N	114° 11' 25.49" W
LH1	44° 34' 10.6" N	114° 11' 19.61" W	RH5	44° 34' 10.32" N	114° 11' 25.99" W
RH2	44° 34' 10.72" N	114° 11' 21.78" W	LH5	44° 34' 9.91" N	114° 11' 26.01" W
LH2	44° 34' 10.41" N	114° 11' 21.51" W	RH6	44° 34' 10.63" N	114° 11' 29.31" W
RH3	44° 34' 9.85" N	114° 11' 23.82" W	LH6	44° 34' 10.28" N	114° 11' 29.39" W
LH3	44° 34' 9.68" N	114° 11' 23.43" W	RH7	44° 34' 10.71" N	114° 11' 30.3" W
RH4	44° 34' 9.97" N	114° 11' 25.13" W	LH7	44° 34' 10.3" N	114° 11' 30.38" W

For reference only; stream schematic not to scale.

Figure G1. Plan view of lower Challis Creek (CH1), upper Salmon River Basin, Idaho, 2005.

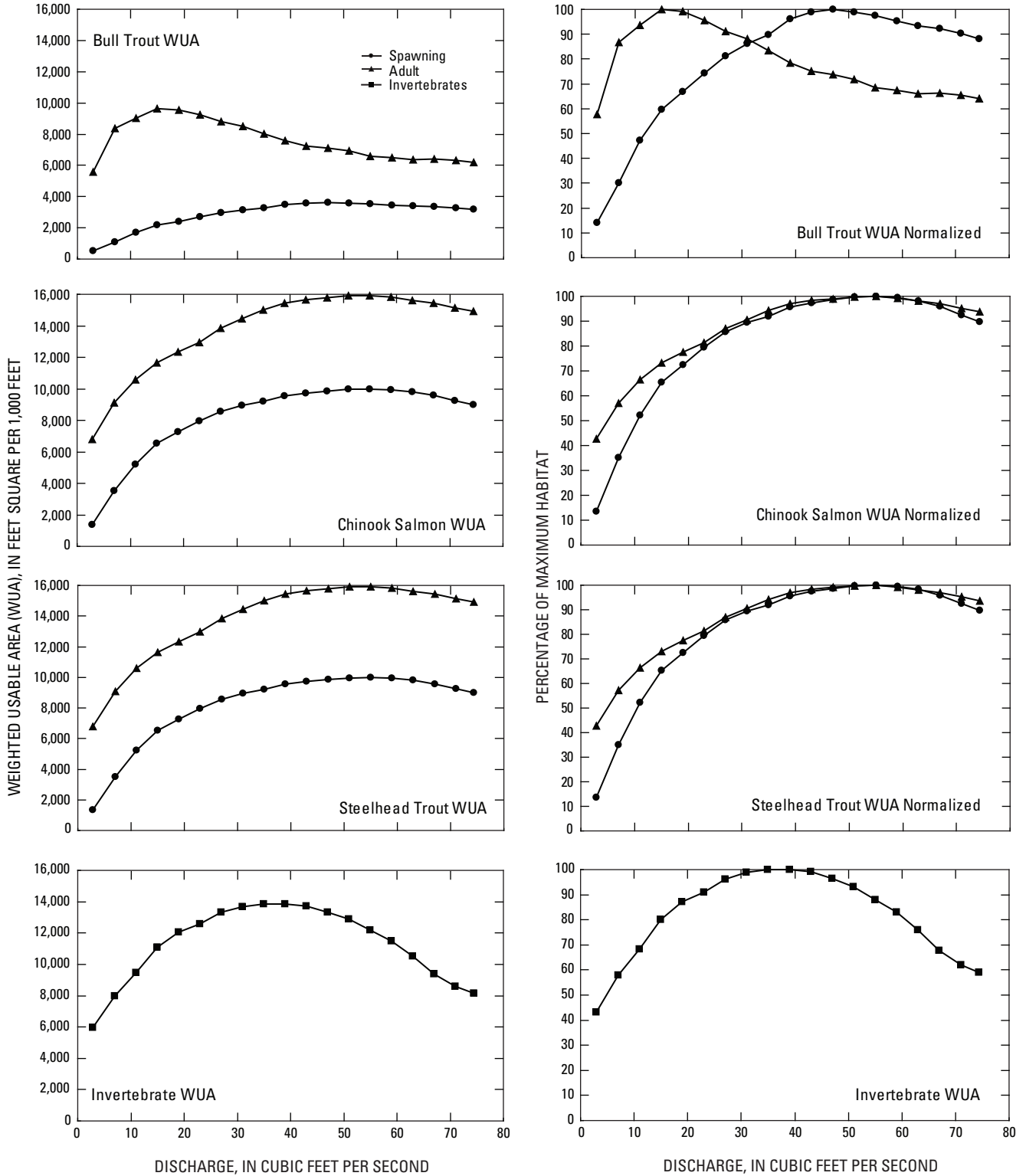


Figure G2. Weighted usable area and percentage of maximum habitat for bull trout, Chinook salmon, steelhead trout, and invertebrates, lower Challis Creek (CH1), upper Salmon River Basin, Idaho, 2005.

Table G1. Weighted usable area for bull trout, Chinook salmon, steelhead trout life stages, and Ephemeroptera, Plecoptera, and Trichoptera (EPT) invertebrates, site CH1, lower Challis Creek, upper Salmon River Basin, Idaho, 2005.

[Site location shown in [figure 8](#). **Abbreviations:** WUA, weighted usable area; ft³/s, cubic foot per second; ft², square foot; ft²/1,000 ft, square foot per 1,000 feet]

Discharge (ft ³ /s)	Total area (ft ²)	Summary of WUA (ft ² /1,000 ft)		Percentage of maximum habitat		Discharge (ft ³ /s)	Total area (ft ²)	Summary of WUA (ft ² /1,000 ft)		Percentage of maximum habitat	
		Adult	Spawning	Adult	Spawning			Adult	Spawning	Adult	Spawning
Bull trout						Steelhead trout					
2.9	17,831	5,573	508	57.8	14.0	2.9	17,831	6,798	1,359	42.7	13.6
7	20,368	8,356	1,094	86.6	30.2	7	20,368	9,101	3,512	57.2	35.1
11	21,829	9,037	1,710	93.7	47.2	11	21,829	10,589	5,225	66.5	52.3
15	23,491	9,648	2,166	100.0	59.8	15	23,491	11,653	6,535	73.2	65.4
19	24,529	9,566	2,419	99.2	66.8	19	24,529	12,340	7,254	77.5	72.6
23	25,366	9,223	2,690	95.6	74.2	23	25,366	12,966	7,945	81.4	79.5
27	26,832	8,801	2,946	91.2	81.3	27	26,832	13,851	8,577	87.0	85.8
31	27,280	8,496	3,126	88.1	86.3	31	27,280	14,432	8,938	90.6	89.4
35	27,964	8,035	3,252	83.3	89.8	35	27,964	15,014	9,193	94.3	92.0
39	28,436	7,575	3,485	78.5	96.2	39	28,436	15,447	9,554	97.0	95.6
43	28,795	7,243	3,582	75.1	98.8	43	28,795	15,659	9,736	98.3	97.4
47	29,126	7,125	3,624	73.9	100.0	47	29,126	15,774	9,869	99.1	98.7
51	29,580	6,926	3,587	71.8	99.0	51	29,580	15,898	9,963	99.8	99.7
55	29,771	6,602	3,531	68.4	97.4	55	29,771	15,925	9,996	100.0	100.0
59	29,947	6,515	3,450	67.5	95.2	59	29,947	15,806	9,934	99.3	99.4
63	30,119	6,376	3,382	66.1	93.3	63	30,119	15,615	9,817	98.1	98.2
67	30,292	6,397	3,345	66.3	92.3	67	30,292	15,431	9,578	96.9	95.8
71	30,461	6,310	3,269	65.4	90.2	71	30,461	15,154	9,247	95.2	92.5
74.400	30,596	6,186	3,195	64.1	88.2	74.400	30,596	14,928	8,976	93.7	89.8
Chinook salmon						EPT Invertebrates					
2.9	17,831	6,798	1,359	42.7	13.6	2.880	17,831	5,982			43
7	20,368	9,101	3,512	57.2	35.1	7	20,368	7,996			58
11	21,829	10,589	5,225	66.5	52.3	11	21,829	9,447			68
15	23,491	11,653	6,535	73.2	65.4	15	23,491	11,074			80
19	24,529	12,340	7,254	77.5	72.6	19	24,529	12,040			87
23	25,366	12,966	7,945	81.4	79.5	23	25,366	12,576			91
27	26,832	13,851	8,577	87.0	85.8	27	26,832	13,315			96
31	27,280	14,432	8,938	90.6	89.4	31	27,280	13,699			99
35	27,964	15,014	9,193	94.3	92.0	35	27,964	13,835			100
39	28,436	15,447	9,554	97.0	95.6	39	28,436	13,836			100
43	28,795	15,659	9,736	98.3	97.4	43	28,795	13,715			99
47	29,126	15,774	9,869	99.1	98.7	47	29,126	13,328			96
51	29,580	15,898	9,963	99.8	99.7	51	29,580	12,877			93
55	29,771	15,925	9,996	100.0	100.0	55	29,771	12,183			88
59	29,947	15,806	9,934	99.3	99.4	59	29,947	11,505			83
63	30,119	15,615	9,817	98.1	98.2	63	30,119	10,523			76
67	30,292	15,431	9,578	96.9	95.8	67	30,292	9,389			68
71	30,461	15,154	9,247	95.2	92.5	71	30,461	8,574			62
74.400	30,596	14,928	8,976	93.7	89.8	74.400	30,596	8,155			59

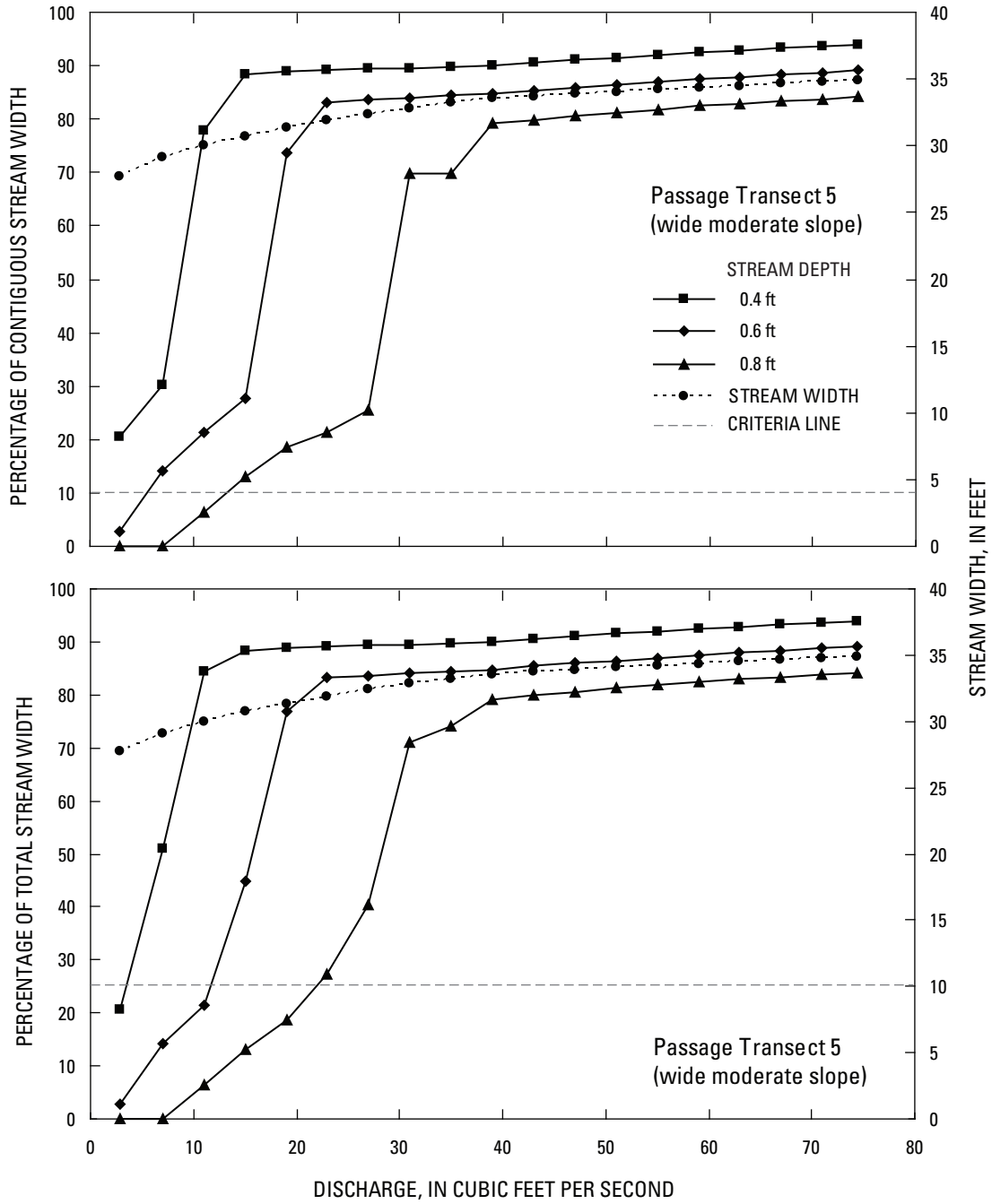


Figure G3. Percentages of contiguous and total stream width for passage transect 5, lower Challis Creek (CH1), upper Salmon River Basin, Idaho, 2005.

Table G2. Passage criteria assessment for transect 5 (wide moderate slope), site CH1, lower Challis Creek, upper Salmon River Basin, Idaho, 2005.

[Site location shown in [figure 8](#). Abbreviations: ft, foot; ft³/s, cubic foot per second]

Discharge (ft ³ /s)	Stream width (ft)	Passage criteria assessment				Discharge (ft ³ /s)	Stream width (ft)	Passage criteria assessment			
		Total	Percentage	Contiguous	Percentage contiguous			Total	Percentage	Contiguous	Percentage contiguous
Stream widths greater than 0.4-ft depth						Stream widths greater than 0.8-ft depth					
2.9	27.7	5.7	20.6	5.7	20.6	2.9	27.7	0.0	0.0	0.0	0.0
7	29.1	14.8	50.9	8.8	30.3	7	29.1	0.0	0.0	0.0	0.0
11	30.0	25.3	84.3	23.4	77.9	11	30.0	1.9	6.4	1.9	6.4
15	30.7	27.2	88.4	27.2	88.4	15	30.7	4.0	13.0	4.0	13.0
19	31.3	27.8	88.9	27.8	88.9	19	31.3	5.8	18.6	5.8	18.6
23	31.9	28.4	89.2	28.4	89.2	23	31.9	8.7	27.3	6.8	21.3
27	32.4	28.9	89.4	28.9	89.4	27	32.4	13.1	40.5	8.2	25.5
31	32.8	29.4	89.5	29.4	89.5	31	32.8	23.3	71.1	22.9	69.7
35	33.2	29.8	89.6	29.8	89.6	35	33.2	24.6	74.1	23.2	69.8
39	33.5	30.2	89.9	30.2	89.9	39	33.5	26.5	79.1	26.5	79.1
43	33.7	30.5	90.5	30.5	90.5	43	33.7	26.9	79.9	26.9	79.9
47	33.9	30.9	91.0	30.9	91.0	47	33.9	27.3	80.6	27.3	80.6
51	34.1	31.2	91.5	31.2	91.5	51	34.1	27.7	81.2	27.7	81.2
55	34.2	31.5	92.0	31.5	92.0	55	34.2	28.0	81.9	28.0	81.9
59	34.4	31.8	92.4	31.8	92.4	59	34.4	28.3	82.4	28.3	82.4
63	34.5	32.0	92.9	32.0	92.9	63	34.5	28.6	82.9	28.6	82.9
67	34.6	32.3	93.3	32.3	93.3	67	34.6	28.9	83.4	28.9	83.4
71	34.8	32.6	93.7	32.6	93.7	71	34.8	29.1	83.8	29.1	83.8
74.4	34.9	32.8	94.0	32.8	94.0	74.4	34.9	29.4	84.1	29.4	84.1
Stream widths greater than 0.6-ft depth											
2.9	27.7	0.8	2.9	0.8	2.9						
7	29.1	4.1	14.2	4.1	14.2						
11	30.0	6.4	21.3	6.4	21.3						
15	30.7	13.8	44.9	8.5	27.6						
19	31.3	24.1	76.8	23.1	73.6						
23	31.9	26.5	83.2	26.5	83.2						
27	32.4	27.1	83.7	27.1	83.7						
31	32.8	27.6	84.0	27.6	84.0						
35	33.2	28.0	84.4	28.0	84.4						
39	33.5	28.5	84.8	28.5	84.8						
43	33.7	28.8	85.4	28.8	85.4						
47	33.9	29.1	86.0	29.1	86.0						
51	34.1	29.5	86.5	29.5	86.5						
55	34.2	29.8	87.0	29.8	87.0						
59	34.4	30.0	87.4	30.0	87.4						
63	34.5	30.3	87.9	30.3	87.9						
67	34.6	30.6	88.3	30.6	88.3						
71	34.8	30.9	88.7	30.9	88.7						
74.4	34.9	31.1	89.1	31.1	89.1						

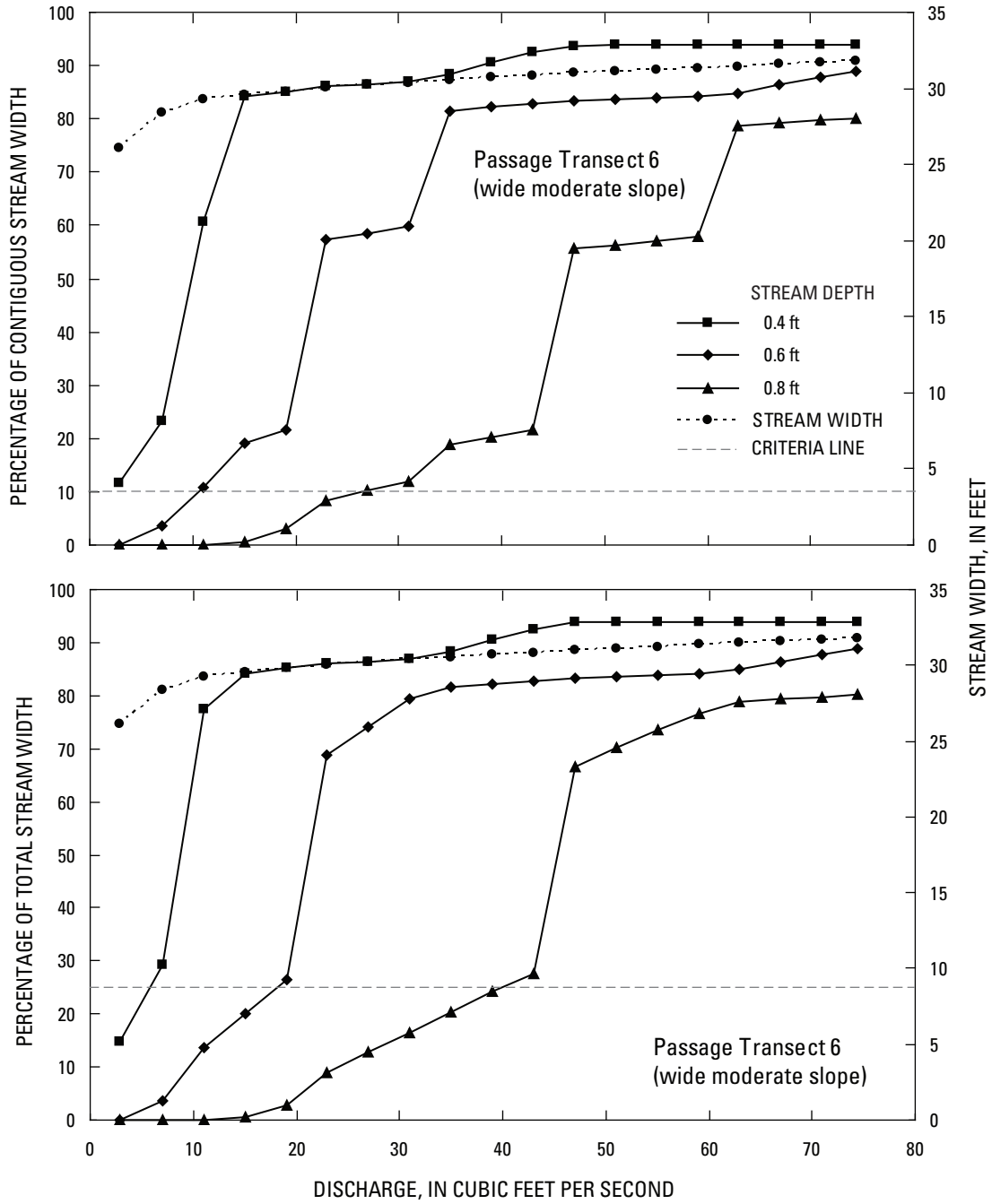


Figure G4. Percentages of contiguous and total stream width for passage transect 6, lower Challis Creek (CH1), upper Salmon River Basin, Idaho, 2005.

Table G3. Passage criteria assessment for transect 6 (wide moderate slope), site CH1, lower Challis Creek, upper Salmon River Basin, Idaho, 2005.

[Site location shown in [figure 8](#). Abbreviations: ft, foot; ft³/s, cubic foot per second]

Discharge (ft ³ /s)	Stream width (ft)	Passage criteria assessment				Discharge (ft ³ /s)	Stream width (ft)	Passage criteria assessment			
		Total	Percentage	Contiguous	Percentage contiguous			Total	Percentage	Contiguous	Percentage contiguous
Stream widths greater than 0.4-ft depth						Stream widths greater than 0.8-ft depth					
2.9	26.1	3.9	14.8	3.1	11.7	2.9	26.1	0.0	0.0	0.0	0.0
7	28.4	8.3	29.2	6.6	23.3	7	28.4	0.0	0.0	0.0	0.0
11	29.3	22.6	77.4	17.7	60.7	11	29.3	0.0	0.0	0.0	0.0
15	29.5	24.8	84.1	24.8	84.1	15	29.5	0.2	0.6	0.2	0.6
19	29.8	25.4	85.2	25.4	85.2	19	29.8	0.9	2.9	0.9	2.9
23	30.0	25.8	86.0	25.8	86.0	23	30.0	2.6	8.8	2.5	8.3
27	30.2	26.1	86.5	26.1	86.5	27	30.2	3.9	12.8	3.1	10.1
31	30.4	26.4	86.9	26.4	86.9	31	30.4	5.0	16.4	3.6	11.9
35	30.6	27.0	88.4	27.0	88.4	35	30.6	6.2	20.3	5.7	18.8
39	30.7	27.8	90.6	27.8	90.6	39	30.7	7.4	24.1	6.2	20.3
43	30.8	28.5	92.5	28.5	92.5	43	30.8	8.5	27.6	6.7	21.7
47	31.0	29.0	93.8	29.0	93.8	47	31.0	20.6	66.5	17.2	55.6
51	31.1	29.2	93.8	29.2	93.8	51	31.1	21.8	70.2	17.5	56.4
55	31.2	29.3	93.8	29.3	93.8	55	31.2	23.0	73.6	17.8	57.1
59	31.3	29.4	93.8	29.4	93.8	59	31.3	24.0	76.7	18.1	57.8
63	31.5	29.5	93.9	29.5	93.9	63	31.5	24.8	78.8	24.8	78.8
67	31.6	29.6	93.9	29.6	93.9	67	31.6	25.0	79.3	25.0	79.3
71	31.7	29.7	93.9	29.7	93.9	71	31.7	25.3	79.7	25.3	79.7
74.4	31.8	29.8	93.9	29.8	93.9	74.4	31.8	25.4	80.1	25.4	80.1
Stream widths greater than 0.6-ft depth											
2.9	26.1	0.0	0.0	0.0	0.0						
7	28.4	1.0	3.6	1.0	3.6						
11	29.3	4.0	13.7	3.1	10.7						
15	29.5	5.9	20.0	5.6	19.0						
19	29.8	7.9	26.4	6.4	21.6						
23	30.0	20.6	68.8	17.2	57.4						
27	30.2	22.4	74.2	17.7	58.6						
31	30.4	24.1	79.3	18.1	59.7						
35	30.6	24.9	81.6	24.9	81.6						
39	30.7	25.3	82.2	25.3	82.2						
43	30.8	25.6	82.9	25.6	82.9						
47	31.0	25.8	83.3	25.8	83.3						
51	31.1	26.0	83.6	26.0	83.6						
55	31.2	26.2	83.9	26.2	83.9						
59	31.3	26.4	84.2	26.4	84.2						
63	31.5	26.7	84.9	26.7	84.9						
67	31.6	27.3	86.4	27.3	86.4						
71	31.7	27.8	87.8	27.8	87.8						
74.4	31.8	28.3	89.0	28.3	89.0						

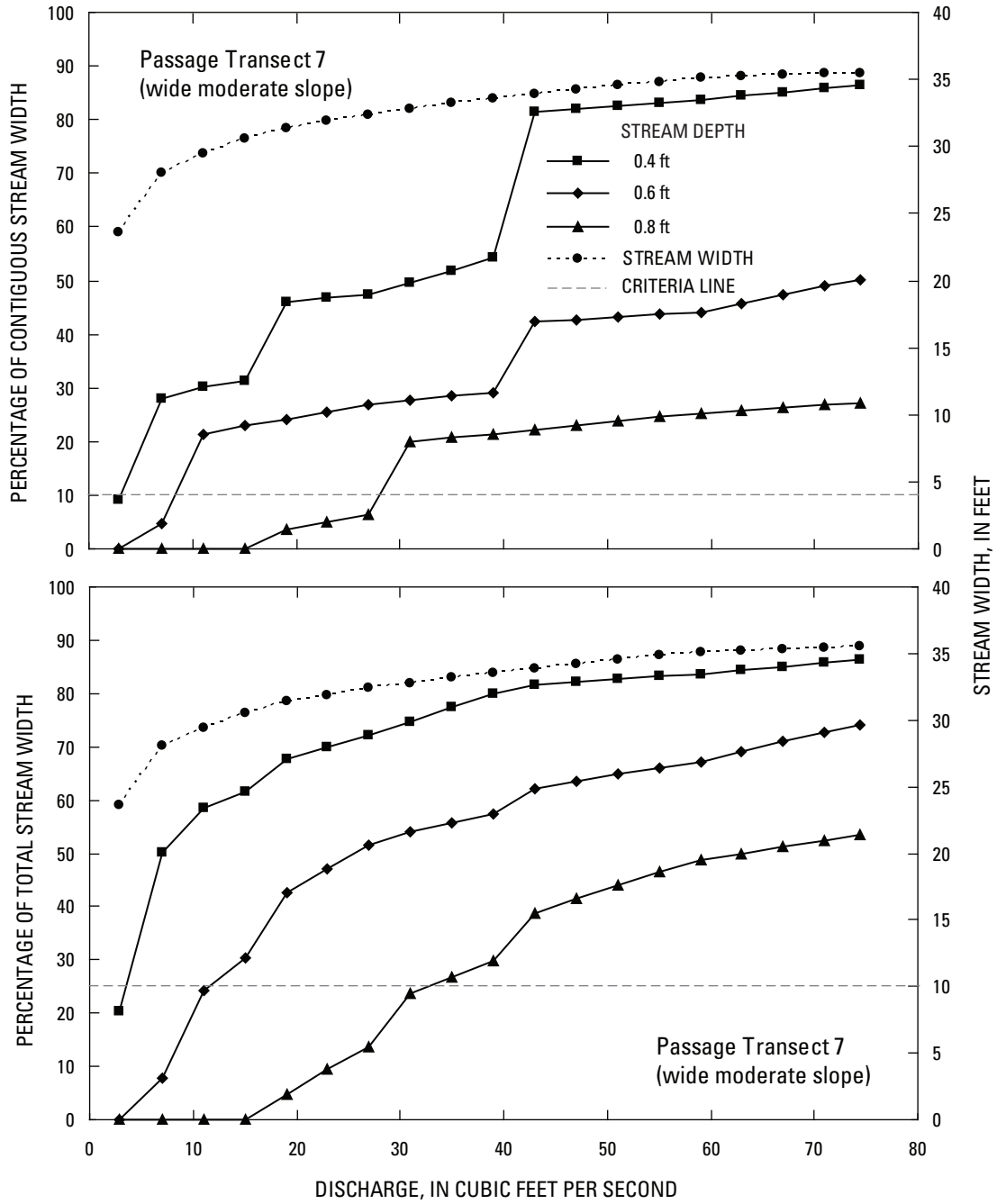


Figure G5. Percentages of contiguous and total stream width for passage transect 7, lower Challis Creek (CH1), upper Salmon River Basin, Idaho, 2005.

Table G4. Passage criteria assessment for transect 7 (wide moderate slope), site CH1, lower Challis Creek, upper Salmon River Basin, Idaho, 2005.

[Site location shown in [figure 8](#). Abbreviations: ft, foot; ft³/s, cubic foot per second]

Discharge (ft ³ /s)	Stream width (ft)	Passage criteria assessment				Discharge (ft ³ /s)	Stream width (ft)	Passage criteria assessment			
		Total	Percentage	Contiguous	Percentage contiguous			Total	Percentage	Contiguous	Percentage contiguous
Stream widths greater than 0.4-ft depth						Stream widths greater than 0.8-ft depth					
2.9	23.6	4.8	20.3	2.1	9.1	2.9	23.6	0.0	0.0	0.0	0.0
7	28.1	14.1	50.2	7.8	27.9	7	28.1	0.0	0.0	0.0	0.0
11	29.5	17.2	58.5	8.9	30.3	11	29.5	0.0	0.0	0.0	0.0
15	30.5	18.8	61.6	9.6	31.4	15	30.5	0.0	0.0	0.0	0.0
19	31.4	21.2	67.7	14.4	45.9	19	31.4	1.5	4.8	1.1	3.7
23	31.9	22.3	70.0	14.9	46.7	23	31.9	3.0	9.4	1.6	5.0
27	32.4	23.3	72.0	15.3	47.4	27	32.4	4.4	13.6	2.0	6.3
31	32.8	24.5	74.7	16.3	49.6	31	32.8	7.8	23.7	6.5	19.9
35	33.2	25.7	77.3	17.2	51.9	35	33.2	8.9	26.8	6.9	20.7
39	33.6	26.8	79.9	18.2	54.2	39	33.6	10.0	29.8	7.2	21.4
43	33.9	27.7	81.6	27.7	81.6	43	33.9	13.1	38.7	7.5	22.2
47	34.2	28.1	82.1	28.1	82.1	47	34.2	14.2	41.4	7.9	23.0
51	34.5	28.5	82.6	28.5	82.6	51	34.5	15.2	44.0	8.2	23.8
55	34.8	29.0	83.2	29.0	83.2	55	34.8	16.2	46.5	8.6	24.6
59	35.1	29.3	83.6	29.3	83.6	59	35.1	17.1	48.6	8.8	25.2
63	35.2	29.7	84.4	29.7	84.4	63	35.2	17.6	50.0	9.1	25.8
67	35.3	30.1	85.1	30.1	85.1	67	35.3	18.1	51.3	9.3	26.3
71	35.4	30.4	85.8	30.4	85.8	71	35.4	18.6	52.5	9.5	26.8
74.4	35.5	30.6	86.3	30.6	86.3	74.4	35.5	19.0	53.4	9.7	27.2
Stream widths greater than 0.6-ft depth											
2.9	23.6	0.0	0.0	0.0	0.0						
7	28.1	2.2	7.7	1.4	4.8						
11	29.5	7.1	24.1	6.3	21.4						
15	30.5	9.3	30.5	7.0	22.9						
19	31.4	13.3	42.5	7.6	24.2						
23	31.9	15.0	47.2	8.2	25.6						
27	32.4	16.6	51.4	8.7	26.9						
31	32.8	17.7	54.0	9.1	27.8						
35	33.2	18.5	55.8	9.5	28.5						
39	33.6	19.3	57.5	9.8	29.2						
43	33.9	21.1	62.2	14.3	42.3						
47	34.2	21.8	63.6	14.6	42.8						
51	34.5	22.4	64.9	14.9	43.2						
55	34.8	23.0	66.1	15.2	43.7						
59	35.1	23.6	67.2	15.5	44.1						
63	35.2	24.4	69.2	16.1	45.8						
67	35.3	25.1	71.0	16.7	47.4						
71	35.4	25.8	72.8	17.3	48.9						
74.4	35.5	26.3	74.1	17.8	50.1						