

Appendix K. Selenium concentrations ($\mu\text{g/g}$ dry weight) in muscle plugs collected from Colorado pikeminnow captured in the Walter Walker State Wildlife Area and other river miles in the upper Colorado River.

PIT tag number	Date captured	Total length (mm)	Weight (g)	Selenium ($\mu\text{g/g}$)	River ¹ mile
1F2003330B	05/06/96	606	-	3.7 ⁵	147.4
1F204A3A3D ²	06/06/96	720	4,250	11.0 ³	
1F401A7710	06/13/95	560	3,000	6.4 ³	159.5
1F40312B45	06/06/96	638	2,550	6.2 ³	
	05/25/95	525	1,200	8.8 ³	
	06/06/96	531	1,200	13.3 ³	
	04/22/97	545	2,200	11.0	
1F4041312F	05/29/97	526	1,200	NP ⁴	
	05/24/94	508	1,110	7.1 ³	164.0
	07/25/95	572	1,900	5.8 ³	
1F40466576	05/20/94	513	-	5.8 ³	175.3
1F40466774	05/27/94	553	-	6.4 ³	175.8
1F404A1542	05/24/94	511	-	15.6 ³	
	05/04/95	-	-	NP	
	05/17/95	-	-	NP	
	05/15/97	541	1,250	13.0	
1F4055321A	07/08/97	620	1,800	6.8	
1F40774F5B	05/23/94	513	-	4.5 ³	181.9
	06/06/96	585	-	3.8 ¹	0.9 GU
1F407C7530	05/25/95	543	1,200	6.3 ³	
	06/12/95	548	1,350	6.6 ³	
	07/10/95	543	1,400	6.7 ³	
1F4101031C	05/16/97	657	2,000	5.6	
1F41094156 ²	05/16/97	719	4,000	6.0	
	06/19/97	734	4,200	NP	
1F41161A70	05/24/94	509	-	11.0 ³	
	05/18/95	-	-	NP	
1F412B7005	06/17/94	791	-	6.2 ³	130
1F412B787D	06/13/95	604	2,200	7.7 ³	159.5
	08/04/95	615	2,250	7.9 ³	
	05/24/94	682	2,950	6.4 ³	
1F412D0E65 ²	05/24/95	-	-	NP	
	08/04/95	696	3,500	8.3 ³	
	05/14/96	704	3,400	8.0 ³	
	05/23/96	712	3,350	NP	
	05/16/96	627	-	5.1 ⁵	174.4
1F412E767C	05/24/94	-	-	NP	
1F412F3938	05/25/95	-	-	NP	
	06/14/94	673	-	4.8 ³	168.9

Appendix K. Continued.

PIT tag number	Date captured	Total length (mm)	Weight (g)	Selenium ($\mu\text{g/g}$)	River ¹ mile
1F41330C61	08/04/95	576	2,000	8.1 ³	
1F41340666	05/24/94	652	2,048	4.4 ³	
	05/04/95	673	3,545	4.1 ³	
1F41343735	05/27/94	588	-	4.9 ³	174.4
1F41345715	05/24/94	510	-	21.4 ³	
1F4134707C	05/23/94	564	-	3.2 ³	182.6
1F41353A31	05/24/94	523	-	7.4 ³	
	06/17/97	615	1,750	8.3	
1F413A0066	04/15/96	863	-	3.6 ⁵	174.4
1F413B1F46	08/04/95	-	-	NP	
	05/07/97	573	1,500	9.0	
	06/17/97	580	1,750	NP	
1F414DOE45	05/24/94	530	-	16.2 ³	
1F415D6F54	06/06/96	555	1,750	7.0 ³	
1F416A7B3B	05/13/96	511	1,200	14.1 ³	
	04/22/97	511	1,050	13.0	
	06/16/98	512	752	12.0	
1F416B7B3A	05/16/96	861	-	4.2 ⁵	174.4
1F435C4002	05/08/97	625	2,000	6.0	
1F43600B33	05/27/94	742	-	5.3 ³	174.4
	05/22/96	762	-	5.5 ⁵	174.4
1F43620B31	05/24/94	840	-	5.2 ³	
1F43675463 ²	06/06/96	655	2,650	13.3 ³	
	06/07/96	655	2,650	NP	
1F462E7C71	05/22/96	555	1,700	13.5 ³	
	05/16/97	556	1,400	12.0	
	06/16/98	558	1,390	11.2	
1F46440D4A	05/16/97	676	3,300	3.9	
1F46515A70	05/13/96	707	3,450	5.7 ³	
	06/06/96	706	3,450	4.8 ³	
	05/16/97	730	3,800	6.2	
	06/17/97	745	4,100	NP	
1F53235813	05/13/96	516	1,120	6.0 ³	
	04/22/97	528	2,300	9.4	
1F5B065B25	05/21/96	584	-	4.4 ⁵	61.0
1F5B08017D	06/06/96	777	4,350	6.5 ³	
1F5B0F680F	05/10/96	490	-	4.4 ⁵	67.8
1F5B104234	06/04/96	650	-	4.9 ⁵	174.4
1F5B155A17	05/29/97	530	1,300	11.0	
1F5B1D2242	05/21/96	510	-	7.4 ⁵	90.6
1F5B261A46	06/06/96	590	2,150	7.1 ³	
	06/18/97	605	2,000	7.0	

Appendix K. Continued.

PIT tag Number	Date captured	Total length (mm)	Weight (g)	Selenium (µg/g)	River mile
1F5B711401	06/04/96	610	-	5.2 ⁵	174.4
1F5B793855	05/24/96	656	-	3.6 ⁵	174.4
1F5C051F61	06/06/96	624	-	5.6 ⁵	174.4
1F5C087C01	05/23/96	526	-	5.3 ⁵	23.0
1F5D5B4F5A	06/16/96	560	1,850	5.8 ³	
1F646C4E43 ²	06/10/97	660	3,000	4.9	
1F65373C09	05/14/96	737	3,300	5.0 ³	
1F661F7D5F	05/24/96	594	2,000	4.4 ³	
1F6B1F6C6B	06/06/96	694	4,050	5.4 ³	
	06/17/97	699	3,856	6.5	
1F6B290B42	05/10/96	387	-	5.3 ⁵	63.8
1F6C380538	05/10/96	571	-	6.2 ⁵	20.8
1F6D0E283E	05/08/97	625	2,000	8.3	
	06/17/97	628	2,200	NP	
1F73276562	07/25/95	512	1,250	8.8 ³	
	05/07/96	519	-	5.9 ⁵	149.9
1F732C2D15	08/04/95	759	4,100	7.0 ³	
	06/05/96	760	4,150	4.6 ³	
	06/06/96	754	4,050	5.8 ³	
1F732C6D55	05/23/94	501	-	5.0 ³	179.2
1F73301529	08/04/95	511	1,350	6.6 ³	
1F733B5A59	05/07/96	482	-	6.9 ⁵	149.7
1F742E0A35	05/06/96	636	-	5.4 ⁵	147.1
1F74342C0D	05/25/95	529	1,300	11.0 ³	
	05/14/96	531	1,250	13.4 ³	
	05/21/96	535	1,250	14.6 ³	
	06/06/96	525	1,350	13.5 ³	
	04/22/97	536	1,150	13.0	
1F74372115	05/07/96	555	-	5.1 ⁵	143.4
1F743A585B	05/23/94	604	-	4.8 ³	183.3
1F743D614F	06/14/94	677	-	4.1 ³	169.2
1F743E200F	05/09/96	577	-	4.5 ⁵	149.9
1F75117368	05/22/96	585	1,800	6.2 ³	
1F7D101036	06/17/97	545	1,400	7.5	
1F7D551C73	05/08/97	890	8,000	4.2	
2007425542	05/23/96	514	1,350	7.0 ³	
201D596109	06/17/97	610	2,500	4.1	
201D5B0068 ²	06/10/97	697	3,100	4.3	
201D5D471F	04/22/97	593	1,600	7.2	
201D6B5F79	05/08/97	615	2,000	11.0	
201D665904	06/24/97	567	1,300	5.5	
201D672E2E	06/17/97	531	1,400	8.2	

Appendix K. Continued.

PIT tag number	Date Captured	Total length (mm)	Weight (g)	Selenium ($\mu\text{g/g}$)	River mile
20371E0605	05/08/97	740	4,000	5.6	
20371E4B40	04/22/97	494	950	5.8	
2037211573	06/17/97	624	2,100	6.8	
2037272161	04/22/97	530	1,100	10.0	
2037283150	06/24/97	655	2,700	14.0	
2038556370	06/02/97	553	1,300	8.1	
2038576869	04/22/97	590	1,550	6.8	
	05/16/97	591	1,700	NP	
	06/02/97	591	1,700	NP	
2038581D33	06/17/97	601	2,200	7.2	
2241237477	06/17/98	602	780	7.6	
7F701B6823	05/23/96	607	-	4.4 ⁵	174.4
7F732B645F	06/17/97	555	1,600	4.4	
7F7B01562D	07/25/95	529	1,450	8.1 ³	
7F7B015E64	07/10/95	546	1,500	9.0 ³	
7F7B017E34	07/25/95	566	1,850	9.9 ³	
	08/04/95	-	-	NP	
7F7B023E4D	07/25/95	611	1,950	11.0 ³	
7F7B025272	07/10/95	548	1,450	8.9 ³	
7F7B081455	07/25/95	578	1,100	6.1 ³	
7F7B10354B	06/11/97	529	1,200	6.4	
7F7B111846	06/18/97	534	1,200	7.0	
7F7B112129	05/08/97	530	1,200	15.0	
7F7B117411	06/07/93	-	-	NP	
	05/25/95	523	1,300	9.7 ³	
7F7B117D28	05/24/96	675	-	4.8 ⁵	174.4
7F7B121D37	07/16/96	650	-	4.7 ⁵	174.4
7F7B122A0E	05/16/97	550	1,300	7.3	
7F7B124032	05/28/93	-	-	NP	158.7
	05/25/95	594	2,200	6.0 ³	
7F7B124D75	06/12/96	615	-	5.7 ⁵	174.4
7F7B127367	07/18/96	563	-	5.3 ⁵	174.4
7F7B130D1D	06/13/96	566	1,500	5.3 ³	
7F7B135115	06/07/93	580	1,908	NP	
	05/24/94	584	1,706	30.7 ³	
	05/04/95	587	2,050	NP	
	05/11/95	590	2,500	NP	
	05/17/95	589	2,450	NP	
	06/05/95	592	1,725	22.0 ³	
	05/21/96	590	1,950	21.5 ³	
	04/22/97	592	1,600	19.0	
7F7B135346	05/26/93	-	-	NP	

Appendix K. Continued.

PIT tag Number	Date Captured	Total length (mm)	Weight (g)	Selenium (µg/g)	River mile
7F7B135346	07/10/95	546	1,375	11.0 ³	
	04/22/97	568	1,550	10.0	
7F7B135346	06/19/97	566	1,500	NP	
7F7B176531	05/26/93	-	-	NP	
	05/24/94	607	1,897	16.6 ³	
	05/04/95	610	2,545	10.0 ³	
	05/16/97	616	2,100	10.0	
7F7B177F02	05/30/97	487	1,000	NP	
7F7B1A6215	06/04/96	687	-	5.7 ⁵	174.4
	05/30/97	706	4,000	5.0	
7F7B1B503A	06/19/97	605	1,850	NP	
7F7D03081F	04/09/96	594	-	5.3 ⁵	174.4
7F7D031620 ²	05/28/92	686	3,290	NP	
	05/13/96	732	3,925	5.6 ³	
7F7D031F2C	06/13/94	880	-	4.4 ³	158.9
7F7D072F30	07/02/92	-	-	NP	130.2
	05/25/95	535	1,150	12.0 ³	
	08/04/95	544	1,400	16.0 ³	
	05/08/97	545	1,300	11.0	
7F7D073002	06/03/91	-	-	NP	176.6
	06/13/95	768	4,750	5.6 ³	
	06/06/96	773	4,950	5.6 ³	
7F7D073369	04/21/92	-	-	NP	3.0 GU
	06/12/95	777	4,850	4.5 ³	
7F7D073E2E	04/29/92	-	-	NP	58.2
	05/25/95	540	1,500	6.3 ³	
	06/13/95	540	1,500	6.2 ³	
	05/16/96	550	-	5.4 ⁵	174.4
7F7D07570A	05/24/91	-	-	NP	144.2
	05/29/92	-	-	NP	154.5
	05/14/96	582	1,800	7.8 ³	
7F7D086422	05/27/94	802	-	3.8 ³	174.4
7F7D090A57	04/22/97	585	1,650	8.3	
7F7D0F3916	05/21/96	505	-	6.3 ⁵	90.6
7F7D0F0F7F	05/15/97	621	2,300	9.0	
	06/19/97	629	2,600	NP	
	05/18/92	-	-	NP	
7F7D0F3B28	05/24/94	590	1,840	13.7 ³	
	07/10/95	619	2,450	6.5 ³	
	06/12/97	546	1,400	7.0	
7F7D101036	06/12/97	546	1,400	7.0	
7F7D133C6F	05/28/92	-	-	NP	
	05/24/94	518	1,260	29.1 ³	

Appendix K. Continued.

PIT tag number	Date Captured	Total length (mm)	Weight (g)	Selenium ($\mu\text{g/g}$)	River mile
7F7D133C6F	05/04/95	534	1,818	19.0 ³	
	04/22/97	540	2,350	19.0	
	06/24/97	543	1,300	NP	
7F7D13540C	06/13/95	569	1,700	5.2 ³	159.5
7F7D141911	05/18/92 ⁶	472	858	NP	
	06/07/93	482	914	NP	
	06/14/94	498	980	17.8 ³	169.6
	05/04/95	503	1,350	NP	
	07/10/95	504	1,150	15.0 ³	
	05/13/96	514	1,225	17.2 ³	
	05/07/97	520	1,200	18.0	
7F7D141C6A	06/02/97	518	1,150	NP	
	04/22/92	-	-	NP	51.0
7F7D152D61	07/25/95	563	1,925	6.7 ³	
	05/28/92	560	1,588	NP	
7F7D153941	06/07/93	573	1,792	NP	
	04/29/94 ⁶	573	-	NP	
	05/25/95	580	1,775	20.0 ³	
	06/13/95	577	1,775	20.0 ³	
	05/23/96	585	1,850	20.4 ³	
	05/07/97	590	1,800	20.0	
	05/16/97	585	1,800	NP	
7F7D16184E	05/06/96	585	-	5.4 ⁵	151.9
7F7D170B16	04/14/93	-	-	NP	
	05/24/94	588	1,890	20.4 ³	
	05/11/95	-	-	NP	
7F7D170D4F	05/25/95	594	2,025	15.0 ³	
	04/22/93	-	-	NP	150.5
	06/13/94	881	7,936	4.4 ³	130.2
7F7D173405	06/13/95	889	6,500	5.1 ³	
	06/05/92	-	-	NP	168.2
	06/15/94	568	-	9.8 ³	168.9
	06/21/94	-	-	NP	168.9
7F7D174F06	05/14/96	596	2,050	7.2 ³	
	04/15/92	-	-	NP	168.3
	06/07/93	610	2,262	NP	
	05/24/94	615	2,240	12.5 ³	
	05/17/95	616	2,725	NP	
7F7D1A323D	05/14/96	623	2,150	9.5 ³	
	05/30/97	622	2,300	8.8	
7F7D174F06	05/20/94	616	-	5.6 ³	175.6
7F7D1A323D	05/28/92	-	-	NP	

Appendix K. Continued.

PIT tag number	Date Captured	Total length (mm)	Weight (g)	Selenium ($\mu\text{g/g}$)	River mile
7F7D1A323D	05/04/95	736	4,609	8.6 ³	
	05/30/97	755	5,500	7.6	
7F7D1A3460	04/27/93	601	1,932	NP	
	05/26/93	605	2,172	NP	
	05/24/94	609	2,210	29.6 ³	
	05/04/95	631	2,700	NP	
	05/22/96	646	2,800	17.7 ³	
	05/08/97	650	2,100	18.0	
	06/16/94	553	-	7.7 ³	168.9
7F7D1A3D44	04/14/93	-	-	NP	
	05/11/95	-	-	NP	
	06/12/95	631	2,450	15.0 ³	
7F7D1D3317	05/04/92	-	-	NP	176.7
	06/16/92	-	-	NP	175.2
	05/20/94	696	-	6.8 ³	175.5
	05/13/96	731	3,900	5.1 ³	
7F7D1D756E	05/05/92	-	-	NP	175.3
	07/11/95	708	4,000	4.4 ³	
7F7D1D7E68	06/14/94	564	-	6.8 ³	168.9
7F7D1E3127	06/12/95	582	1,950	5.3 ³	
	06/06/96	608	2,250	5.8 ³	
	04/17/92 ⁶	533	1,125	NP	
7F7D22513D	05/04/95	596	2,150	NP	
	06/12/95	597	2,000	15.0 ³	
	05/13/96	606	2,025	11.6 ³	
	05/24/96	607	1,950	13.5 ³	
	05/04/95	729	3,691	5.6 ³	
7F7D22572D	05/17/95	-	-	NP	
7F7D3F7E28	07/10/95	713	3,850	4.8 ³	
7F7D48667E	05/06/96	519	-	5.1 ⁵	151.8
7F7E61017A	05/09/91	-	-	NP	167.8
	06/12/95	659	3,050	4.2 ³	
7F7E61176C	05/23/94	639	-	10.0 ³	175.8
7F7F362E6D	06/11/90	-	-	NP	
	05/28/92	582	1,905	NP	
	04/27/93	581	1,618	NP	
	05/26/93	583	1,830	NP	
	06/17/93	576	-	NP	
	06/01/95	586	1,600	17.0 ³	
	07/10/95	584	1,800	19.0 ³	
	05/21/96	-	1,850	18.1 ³	
7F7F365A7C	05/24/94	661	-	4.2 ³	175.5

Appendix K. Continued.

PIT tag number	Date Captured	Total length (mm)	Weight (g)	Selenium ($\mu\text{g/g}$)	River mile
7F7F365E34	06/07/90	-	-	NP	179.1
	05/13/94	-	-	NP	175.5
7F7F365E34	05/14/96	763	4,550	5.6 ³	
7F7F366E7F	06/11/90	-	-	NP	
	05/24/94	574	1,663	25.9 ³	
	07/10/95	591	2,200	18.0 ³	

¹RM: river mile in Colorado River. All fish collected at WWSWA were at river mile 163.3 to 163.7. GU: Gunnison River. Adobe Creek is at river mile 159.5.

²Previously radiotagged and released in the Gunnison River immediately downstream from the Redlands Diversion Dam, RM 2.9 (Scheer 1997).

³Reported by Osmundson et al. (2000).

⁴NP = no plug collected.

⁵Unpublished data from National Irrigation Water Quality Program, Denver, CO.

⁶Captured in backwater located in side channel on opposite shore from WWSWA (D. Osmundson, unpublished date) given in Lloyd (1996).