

APPENDIX C – FISH SPECIES, SURFACE WATER NUTRIENTS, CHLOROPHYLL-A, MACROINVERTEBRATES AND PHILIPSBURG WASTEWATER TREATMENT PLANT DATA

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Table C-1. Fish Species Present in the Flint TPA

Waterbody	Species	Abundance	Origin
Boulder Creek	Bull Trout	Rare	Native
	Mountain Whitefish	Rare	Native
	Westslope Cutthroat Trout	Rare	Native
	Brook Trout	Rare	Introduced
	Brown Trout	Common	Introduced
Colter Gulch	Westslope Cutthroat Trout	Unknown	Unknown
	Brook Trout	Unknown	Introduced
Copper Creek	Bull Trout	Rare	Native
	Westslope Cutthroat Trout	Rare	Native
	Brook Trout	Abundant	Introduced
Cottonwood Creek	Westslope Cutthroat Trout	Rare	Native
Cow Creek	Westslope Cutthroat Trout	Rare	Native
Discovery Creek	Westslope Cutthroat Trout	Rare	Native
Douglas Creek	Westslope Cutthroat Trout	Unknown	Unknown
	Westslope Cutthroat Trout	Rare	Native
	Westslope Cutthroat Trout	Rare	Native
	Brook Trout	Rare	Introduced
	Brown Trout	Common	Introduced
	Brown Trout	Unknown	Introduced
Flint Creek	Bull Trout	Rare	Native
	Largescale Sucker	Common	Native
	Longnose Sucker	Common	Native
	Mountain Whitefish	Abundant	Native
	Westslope Cutthroat Trout	Rare	Native
	Brook Trout	Abundant	Introduced
	Rainbow Trout	Abundant	Introduced
Fred Burr Creek	Bull Trout	Rare	Native
	Westslope Cutthroat Trout	Rare	Native
	Brown Trout	Unknown	Introduced
	Rainbow Trout	Unknown	Introduced
Goose Gulch	Westslope Cutthroat Trout	Rare	Native
Granite Creek	Bull Trout	Rare	Native
	Westslope Cutthroat Trout	Rare	Native
Little Gold Creek	Westslope Cutthroat Trout	Rare	Native
Lower Willow Creek	Westslope Cutthroat Trout	Rare	Native
	Brook Trout	Rare	Introduced
Marshall Creek	Bull Trout	Rare	Native
	Westslope Cutthroat Trout	Rare	Native
McLean Creek	Westslope Cutthroat Trout	Rare	Native
Middle Fork Douglas Creek	Westslope Cutthroat Trout	Rare	Native
	Brook Trout	Unknown	Introduced
Mohave Creek	Westslope Cutthroat Trout	Rare	Native
North Fork Douglas Creek	Westslope Cutthroat Trout	Rare	Native
North Fork Flint Creek	Longnose Sucker	Rare	Native
	Brook Trout	Common	Introduced
	Kokanee	Rare	Introduced
	Rainbow Trout	Rare	Introduced

Table C-1. Fish Species Present in the Flint TPA

Waterbody	Species	Abundance	Origin
North Fork Lower Willow Creek	Westslope Cutthroat Trout	Rare	Native
	Brook Trout	Rare	Introduced
Princeton Gulch	Westslope Cutthroat Trout	Rare	Native
Royal Gold Creek	Westslope Cutthroat Trout	Rare	Native
Senia Creek	Westslope Cutthroat Trout	Rare	Native
Smart Creek	Westslope Cutthroat Trout	Unknown	Native
South Boulder Creek	Bull Trout	Rare	Native
	Westslope Cutthroat Trout	Rare	Native
	Brook Trout	Unknown	Introduced
South Fork Douglas Creek	Westslope Cutthroat Trout	Rare	Native
South Fork Lower Willow Creek	Longnose Sucker	Unknown	Native
	Westslope Cutthroat Trout	Rare	Native
Spring Creek	Westslope Cutthroat Trout	Rare	Native
Stuart Mill Creek	Brook Trout	Abundant	Introduced
	Brown Trout	Unknown	Introduced
	Kokanee	Abundant	Introduced
	Rainbow Trout	Unknown	Introduced
Swamp Gulch Creek	Westslope Cutthroat Trout	Rare	Native
Trout Creek	Westslope Cutthroat Trout	Rare	Native
	Brook Trout	Unknown	Introduced
	Brown Trout	Unknown	Introduced
West Fork Lower Willow Creek	Westslope Cutthroat Trout	Rare	Native
Wyman Gulch	Bull Trout	Rare	Native
	Westslope Cutthroat Trout	Rare	Native

Table C-2. Recent Surface Water Nutrients and Flow Data for the Flint TPA

Waterbody Name	Site ID	Collection Date	Latitude	Longitude	Flow (cfs)	Total N per Sulfate Method (mg/L)	NO ₂ + ₃ Combined (mg/L)	Total P (mg/L)
Barnes Creek	BARNESC01	9/4/2008	46.61124	-113.16065	1.6	0.23	-0.01	0.045
Barnes Creek	BARNESC01	9/5/2007	46.61124	-113.16065	2.37	0.4	0.018	0.102
Barnes Creek	BARNESC01	8/26/2009	46.61124	-113.16065	6.53	0.4	0.12	0.119
Barnes Creek	BARNESC02	8/25/2009	46.59060	-113.15941	2.5	0.62	0.22	0.154
Barnes Creek	BARNESC02	9/4/2007	46.59060	-113.15941	1.25	0.71	0.224	0.17
Barnes Creek	BARNESC02	8/19/2008	46.59060	-113.15941	0.17	0.88	0.2	0.176
Barnes Creek	BARNESC03	8/25/2009	46.56760	-113.14510	2.5	0.57	0.3	0.11
Barnes Creek	BARNESC03	8/19/2008	46.56760	-113.14510	1.02	1.81	0.22	0.45
Barnes Creek	BARNESC04	8/19/2008	46.54210	-113.13510	0.52	0.38	0.09	0.043
Barnes Creek	C02BARNC01	7/15/2004	46.59065	-113.15937	2.74	-	0.24	0.198
Barnes Creek	C02BARNC02	7/16/2004	46.61089	-113.16017	1.31	-	0.08	0.077
Douglas Creek	C02DOUGC01	7/11/2007	46.53820	-113.20180	-	0.17	0.142	0.066
Douglas Creek	DOUGLASC-H01	8/31/2007	46.54995	-113.21549	1.65	0.29	0.117	0.033
Douglas Creek	DOUGLASC-H01	8/25/2009	46.54995	-113.21549	4.76	0.16	0.09	0.036
Douglas Creek	DOUGLASC-H01	8/14/2008	46.54995	-113.21549	4.73	0.22	0.11	0.05
Douglas Creek	DOUGLASC-H02	8/31/2007	46.52990	-113.19452	2.73	0.26	0.173	0.034
Douglas Creek	DOUGLASC-H02	8/14/2008	46.52990	-113.19452	4.84	0.28	0.1	0.045
Douglas Creek	DOUGLASC-H02	8/25/2009	46.52990	-113.19452	5.2	0.21	0.12	0.055
Douglas Creek	DOUGLASC-H02.5	8/25/2009	46.50130	-113.17120	9.9	0.11	0.11	0.029
Douglas Creek	DOUGLASC-H03	8/14/2008	46.50103	-113.17114	12.41	0.13	0.07	0.026
Douglas Creek	DOUGLASC-H03	8/30/2007	46.50103	-113.17114	9.34	0.16	0.089	0.026
Douglas Creek	DOUGLASC-H03	8/25/2009	46.50103	-113.17114	11	0.11	0.15	0.028
Douglas Creek	DOUGLASC-H04	8/14/2008	46.48830	-113.14390	7.33	0.12	0.04	0.023
Douglas Creek	DOUGLASC-H04	8/25/2009	46.48830	-113.14390	6	-0.05	0.06	0.023
Flint Creek	CFRPO-11.5	8/19/2002	46.62920	-113.15000	25	-	0.01	0.116
Flint Creek	Flint_10.25	7/20/2005	46.34981	-113.31946	-	-	-	0.026
Flint Creek	Flint_10.25	7/15/2008	46.34981	-113.31946	-	-	-	0.027
Flint Creek	Flint_10.25	9/16/2008	46.34981	-113.31946	-	-	-	0.028
Flint Creek	Flint_10.25	9/15/2009	46.34981	-113.31946	-	-	-	0.032
Flint Creek	Flint_10.25	8/18/2009	46.34981	-113.31946	-	-	-	0.033
Flint Creek	Flint_10.25	9/14/2005	46.34981	-113.31946	-	-	-	0.038
Flint Creek	Flint_10.25	8/12/2008	46.34981	-113.31946	-	-	-	0.038

Table C-2. Recent Surface Water Nutrients and Flow Data for the Flint TPA

Waterbody Name	Site ID	Collection Date	Latitude	Longitude	Flow (cfs)	Total N per Sulfate Method (mg/L)	NO ₂ + ₃ Combined (mg/L)	Total P (mg/L)
Flint Creek	Flint_10.25	7/14/2009	46.34981	-113.31946	-	-	-	0.052
Flint Creek	Flint_10.25	7/19/2006	46.34981	-113.31946	-	-	-	0.068
Flint Creek	Flint_10.25	8/17/2005	46.34981	-113.31946	-	-	-	0.069
Flint Creek	Flint_10.25	9/13/2006	46.34981	-113.31946	-	-	-	0.0756
Flint Creek	Flint_10.25	8/15/2007	46.34981	-113.31946	-	-	-	0.09
Flint Creek	Flint_10.25	8/16/2006	46.34981	-113.31946	-	-	-	0.108
Flint Creek	Flint_10.25	7/18/2007	46.34981	-113.31946	-	-	-	0.126
Flint Creek	Flint_10.25	9/19/2007	46.34981	-113.31946	-	-	-	0.145
Flint Creek	Flint_10.75	9/16/2008	46.34869	-113.32018	-	-	-	0.023
Flint Creek	Flint_10.75	7/15/2008	46.34869	-113.32018	-	-	-	0.024
Flint Creek	Flint_10.75	9/15/2009	46.34869	-113.32018	-	-	-	0.03
Flint Creek	Flint_10.75	8/18/2009	46.34869	-113.32018	-	-	-	0.032
Flint Creek	Flint_10.75	8/12/2008	46.34869	-113.32018	-	-	-	0.037
Flint Creek	Flint_10.75	7/20/2005	46.34869	-113.32018	-	-	-	0.038
Flint Creek	Flint_10.75	9/14/2005	46.34869	-113.32018	-	-	-	0.053
Flint Creek	Flint_10.75	7/14/2009	46.34869	-113.32018	-	-	-	0.055
Flint Creek	Flint_10.75	8/17/2005	46.34869	-113.32018	-	-	-	0.061
Flint Creek	Flint_10.75	8/16/2006	46.34869	-113.32018	-	-	-	0.079
Flint Creek	Flint_10.75	7/19/2006	46.34869	-113.32018	-	-	-	0.085
Flint Creek	Flint_10.75	9/13/2006	46.34869	-113.32018	-	-	-	0.098
Flint Creek	Flint_10.75	9/19/2007	46.34869	-113.32018	-	-	-	0.105
Flint Creek	Flint_10.75	7/18/2007	46.34869	-113.32018	-	-	-	0.12
Flint Creek	Flint_10.75	8/15/2007	46.34869	-113.32018	-	-	-	0.13
Flint Creek	Flint_15	9/16/2008	46.22140	-113.28810	-	-	-	0.012
Flint Creek	Flint_15	9/15/2009	46.22140	-113.28810	-	-	-	0.014
Flint Creek	Flint_15	7/14/2009	46.22140	-113.28810	-	-	-	0.017
Flint Creek	Flint_15	8/18/2009	46.22140	-113.28810	-	-	-	0.018
Flint Creek	Flint_15	7/15/2008	46.22140	-113.28810	-	-	-	0.021
Flint Creek	Flint_15	8/12/2008	46.22140	-113.28810	-	-	-	0.028
Flint Creek	Flint_15	8/17/2005	46.22140	-113.28810	-	-	-	0.032
Flint Creek	Flint_15	9/14/2005	46.22140	-113.28810	-	-	-	0.039
Flint Creek	Flint_15	7/20/2005	46.22140	-113.28810	-	-	-	0.046

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Waterbody Name	Site ID	Collection Date	Latitude	Longitude	Flow (cfs)	Total N per Sulfate Method (mg/L)	NO ₂ + ₃ Combined (mg/L)	Total P (mg/L)
Flint Creek	Flint_15	7/19/2006	46.22140	-113.28810	-	-	-	0.061
Flint Creek	Flint_15	9/13/2006	46.22140	-113.28810	-	-	-	0.0699
Flint Creek	Flint_15	8/15/2007	46.22140	-113.28810	-	-	-	0.073
Flint Creek	Flint_15	8/16/2006	46.22140	-113.28810	-	-	-	0.084
Flint Creek	Flint_15	9/19/2007	46.22140	-113.28810	-	-	-	0.121
Flint Creek	Flint_15	7/18/2007	46.22140	-113.28810	-	-	-	0.161
Flint Creek	FLINTC01	8/25/2009	46.65334	-113.14740	159.05	0.22	0.03	0.048
Flint Creek	FLINTC01	9/5/2008	46.65334	-113.14740	175.9	0.27	0.03	0.057
Flint Creek	FLINTC01	9/3/2007	46.65334	-113.14740	36.98	0.3	0.005	0.094
Flint Creek	FLINTC04	8/26/2009	46.61159	-113.16109	66.77	0.2	0.05	0.036
Flint Creek	FLINTC04	9/4/2008	46.61159	-113.16109	126.8	0.25	0.03	0.041
Flint Creek	FLINTC04	7/10/2008	46.61159	-113.16109	197.3	0.23	-0.01	0.043
Flint Creek	FLINTC04	9/5/2007	46.61159	-113.16109	21.28	0.3	0.03	0.058
Flint Creek	FLINTC05	8/25/2009	46.55023	-113.21521	106.64	0.14	0.01	0.024
Flint Creek	FLINTC05	8/31/2007	46.55023	-113.21521	19.71	0.22	0.082	0.027
Flint Creek	FLINTC05	8/14/2008	46.55023	-113.21521	52.55	0.23	0.09	0.033
Flint Creek	FLINTC07	8/25/2009	46.48835	-113.23619	179	0.09	0.02	0.02
Flint Creek	FLINTC07	9/3/2008	46.48835	-113.23619	149.3	0.2	0.03	0.034
Flint Creek	FLINTC07	9/4/2007	46.48835	-113.23619	73.66	0.2	0.007	0.035
Flint Creek	FLINTC08	8/19/2009	46.47060	-113.24037	174.84	0.19	-0.01	0.024
Flint Creek	FLINTC08	8/28/2007	46.47060	-113.24037	-	0.19	-0.005	0.028
Flint Creek	FLINTC08	9/4/2008	46.47060	-113.24037	-	0.23	0.05	0.037
Flint Creek	FLINTC09	8/25/2009	46.39398	-113.30857	146.25	0.15	-0.01	0.023
Flint Creek	FLINTC09	8/26/2007	46.39398	-113.30857	66.17	0.21	0.02	0.027
Flint Creek	FLINTC09	8/13/2008	46.39398	-113.30857	88.16	0.27	0.01	0.035
Flint Creek	FLINTC10	8/25/2009	46.36751	-113.31714	136.74	0.13	-0.01	0.02
Flint Creek	FLINTC10	8/13/2008	46.36751	-113.31714	81.89	0.22	0.01	0.026
Flint Creek	FLINTC10	9/4/2007	46.36751	-113.31714	60	-	0.026	-
Flint Creek	FLINTC11	8/25/2009	46.33860	-113.32110	134.94	0.11	-0.05	0.02
Flint Creek	FLINTC11	8/13/2008	46.33860	-113.32110	81.44	0.22	0.02	0.027
Flint Creek	FLINTC11	8/24/2007	46.33860	-113.32110	59.78	-	0.04	-
Flint Creek	FLINTC12	8/21/2007	46.31686	-113.33273	65.87	0.21	0.071	0.027

Table C-2. Recent Surface Water Nutrients and Flow Data for the Flint TPA

Waterbody Name	Site ID	Collection Date	Latitude	Longitude	Flow (cfs)	Total N per Sulfate Method (mg/L)	NO ₂₊₃ Combined (mg/L)	Total P (mg/L)
Flint Creek	FLINTC13	8/24/2009	46.27680	-113.33700	44.57	0.22	0.04	0.013
Flint Creek	FLINTC13	8/13/2008	46.27680	-113.33700	11.81	0.39	0.12	0.019
Flint Creek	FLINTC14	8/24/2009	46.24550	-113.33242	52.33	0.25	0.08	0.01
Flint Creek	FLINTC14	8/13/2008	46.24550	-113.33242	24.07	0.33	0.15	0.015
Flint Creek	FLINTC14	8/21/2007	46.24550	-113.33242	12.65	0.31	0.133	0.016
Flint Creek	FLINTC15	8/24/2009	46.22021	-113.28443	60.9	0.31	0.09	0.012
Flint Creek	FLINTC15	8/18/2008	46.22021	-113.28443	34.82	0.35	-0.01	0.013
Flint Creek	FLINTC15	8/20/2007	46.22021	-113.28443	32.17	-	0.31	0.022
Princeton Gulch	C02PRNCG01	8/30/2012	46.43290	-113.13203	0.52	-0.05	-	0.011
Princeton Gulch	PRINCETONG01	8/27/2007	46.41806	-113.16892	0.19	0.11	0.04	0.011
Princeton Gulch	PRINCETONG01	8/24/2009	46.41806	-113.16892	0.6	-0.05	0.03	0.021
Princeton Gulch	PRINCETONG01	8/20/2008	46.41806	-113.16892	0.26	0.11	0.03	0.03
Princeton Gulch	PRINCETONG02	8/27/2007	46.43376	-113.13091	0.99	0.035	0.012	0.013
Princeton Gulch	PRINCETONG02	8/24/2009	46.43376	-113.13091	1.5	-0.05	-0.01	0.015
Princeton Gulch	PRINCETONG02	8/20/2008	46.43376	-113.13091	0.12	0.04	0.05	0.022
Princeton Gulch	PRINCETONG02	7/8/2008	46.43376	-113.13091	0.28	0.04	0.03	0.044
Princeton Gulch	PRINCETONG03	8/24/2009	46.44990	-113.11830	0.1	-0.05	-0.01	0.009
Princeton Gulch	PRINCETONG03	7/8/2008	46.44990	-113.11830	0.28	-0.01	-0.01	0.01
Princeton Gulch	PRINCETONG03	8/20/2008	46.44990	-113.11830	0.04	-0.01	-0.01	0.058
Smart Creek	C02SMRTC01	8/18/2005	46.49563	-113.24726	-	-	-0.01	0.045
Smart Creek	C02SMRTC02	8/17/2005	46.45355	-113.29070	0.34	-	-0.01	0.032
Smart Creek	C02SMRTC03	7/11/2007	46.48760	-113.26000	-	0.09	0.049	0.05
Smart Creek	SMARTC01	8/21/2008	46.51548	-113.23550	1.1	0.15	-0.01	0.046
Smart Creek	SMARTC01	9/4/2007	46.51548	-113.23550	1.06	2.28	2	0.087
Smart Creek	SMARTC01	8/26/2009	46.51548	-113.23550	8.4	1.17	0.97	0.089
Smart Creek	SMARTC02	8/20/2009	46.49645	-113.24658	0.68	0.14	0.02	0.033
Smart Creek	SMARTC02	8/22/2008	46.49645	-113.24658	0.93	0.11	-0.01	0.042
Smart Creek	SMARTC02	8/29/2007	46.49645	-113.24658	0.4	0.77	0.021	0.132
Smart Creek	SMARTC03	8/29/2007	46.45434	-113.28931	0.33	0.08	-0.005	0.011
Smart Creek	SMARTC03	8/21/2008	46.45434	-113.28931	0.88	0.1	-0.01	0.015
Smart Creek	SMARTC03	8/20/2009	46.45434	-113.28931	0.41	0.15	0.02	0.016

Table C-3. Recent Algal Measure Data for the Flint TPA

Waterbody Name	Site ID	Collection Date	Latitude	Longitude	Algal Measure	Result Value	Result Unit
Barnes Creek	BARNESC01	9/5/2007	46.61124	-113.16065	Chlorophyll- <i>a</i> , corrected for pheophytin	556	mg/m ²
Barnes Creek	BARNESC02	9/4/2007	46.59060	-113.15941	Chlorophyll- <i>a</i> , corrected for pheophytin	721	mg/m ²
Barnes Creek	BARNESC02	8/19/2008	46.59060	-113.15941	Chlorophyll- <i>a</i> , corrected for pheophytin	4	mg/m ²
Barnes Creek	BARNESC03	8/19/2008	46.56760	-113.14510	Chlorophyll- <i>a</i> , corrected for pheophytin	3	mg/m ²
Barnes Creek	BARNESC04	8/19/2008	46.54210	-113.13510	Chlorophyll- <i>a</i> , corrected for pheophytin	3	mg/m ²
Douglas Creek	C02DOUGC01	7/11/2007	46.53820	-113.20180	Chlorophyll- <i>a</i> , corrected for pheophytin	34.7	mg/m ²
Douglas Creek	DOUGLASC-H01	8/31/2007	46.54995	-113.21549	Chlorophyll- <i>a</i> , corrected for pheophytin	281	mg/m ²
Douglas Creek	DOUGLASC-H01	8/14/2008	46.54995	-113.21549	Chlorophyll- <i>a</i> , corrected for pheophytin	19	mg/m ²
Douglas Creek	DOUGLASC-H02	8/31/2007	46.52990	-113.19452	Chlorophyll- <i>a</i> , corrected for pheophytin	354	mg/m ²
Douglas Creek	DOUGLASC-H02	8/15/2008	46.52990	-113.19452	Chlorophyll- <i>a</i> , corrected for pheophytin	17	mg/m ²
Douglas Creek	DOUGLASC-H03	8/30/2007	46.50103	-113.17114	Chlorophyll- <i>a</i> , corrected for pheophytin	29	mg/m ²
Douglas Creek	DOUGLASC-H03	8/15/2008	46.50103	-113.17114	Chlorophyll- <i>a</i> , corrected for pheophytin	5	mg/m ²
Douglas Creek	DOUGLASC-H04	8/14/2008	46.48830	-113.14390	Chlorophyll- <i>a</i> , corrected for pheophytin	8	mg/m ²
Flint Creek	FLINTC01	9/3/2007	46.65334	-113.14740	Chlorophyll- <i>a</i> , corrected for pheophytin	56	mg/m ²
Flint Creek	FLINTC01	9/11/2008	46.65334	-113.14740	Chlorophyll- <i>a</i> , corrected for pheophytin	97	mg/m ²
Flint Creek	FLINTC01	8/25/2009	46.65334	-113.14740	Chlorophyll- <i>a</i> , corrected for pheophytin	297	mg/m ²
Flint Creek	FLINTC04	9/5/2007	46.61159	-113.16109	Chlorophyll- <i>a</i> , corrected for pheophytin	135	mg/m ²
Flint Creek	FLINTC04	9/4/2008	46.61159	-113.16109	Chlorophyll- <i>a</i> , corrected for pheophytin	91	mg/m ²
Flint Creek	FLINTC04	8/26/2009	46.61159	-113.16109	Chlorophyll- <i>a</i> , corrected for pheophytin	-0.28	mg/m ³
Flint Creek	FLINTC05	8/31/2007	46.55023	-113.21521	Chlorophyll- <i>a</i> , corrected for pheophytin	158	mg/m ²
Flint Creek	FLINTC05	8/14/2008	46.55023	-113.21521	Chlorophyll- <i>a</i> , corrected for pheophytin	38	mg/m ²
Flint Creek	FLINTC07	9/4/2007	46.48835	-113.23619	Chlorophyll- <i>a</i> , corrected for pheophytin	106	mg/m ²
Flint Creek	FLINTC07	9/3/2008	46.48835	-113.23619	Chlorophyll- <i>a</i> , corrected for pheophytin	66	mg/m ²
Flint Creek	FLINTC09	8/26/2007	46.39398	-113.30857	Chlorophyll- <i>a</i> , corrected for pheophytin	157	mg/m ²
Flint Creek	FLINTC09	8/20/2008	46.39398	-113.30857	Chlorophyll- <i>a</i> , corrected for pheophytin	12	mg/m ²
Flint Creek	FLINTC10	9/4/2008	46.36751	-113.31714	Chlorophyll- <i>a</i> , corrected for pheophytin	99	mg/m ²
Flint Creek	FLINTC11	8/24/2007	46.33860	-113.32110	Chlorophyll- <i>a</i> , corrected for pheophytin	110	mg/m ²
Flint Creek	FLINTC11	8/27/2008	46.33860	-113.32110	Chlorophyll- <i>a</i> , corrected for pheophytin	54	mg/m ²
Flint Creek	FLINTC12	8/21/2007	46.31686	-113.33273	Chlorophyll- <i>a</i> , corrected for pheophytin	535	mg/m ²
Flint Creek	FLINTC13	8/26/2008	46.27680	-113.33700	Chlorophyll- <i>a</i> , corrected for pheophytin	71	mg/m ²
Flint Creek	FLINTC14	8/21/2007	46.24550	-113.33242	Chlorophyll- <i>a</i> , corrected for pheophytin	483	mg/m ²
Flint Creek	FLINTC14	8/26/2008	46.24550	-113.33242	Chlorophyll- <i>a</i> , corrected for pheophytin	42	mg/m ²

Table C-3. Recent Algal Measure Data for the Flint TPA

Waterbody Name	Site ID	Collection Date	Latitude	Longitude	Algal Measure	Result Value	Result Unit
Flint Creek	FLINTC15	8/20/2007	46.22021	-113.28443	Chlorophyll- <i>a</i> , corrected for pheophytin	34	mg/m ²
Flint Creek	FLINTC15	8/18/2008	46.22021	-113.28443	Chlorophyll- <i>a</i> , corrected for pheophytin	8	mg/m ²
Princeton Gulch	PRINCETONG01	8/27/2007	46.41806	-113.16892	Chlorophyll- <i>a</i> , corrected for pheophytin	626	mg/m ²
Princeton Gulch	PRINCETONG01	8/20/2008	46.41806	-113.16892	Chlorophyll- <i>a</i> , corrected for pheophytin	4	mg/m ²
Princeton Gulch	PRINCETONG01	8/24/2009	46.41806	-113.16892	Chlorophyll- <i>a</i> , corrected for pheophytin	382	mg/m ²
Princeton Gulch	PRINCETONG02	8/27/2007	46.43376	-113.13091	Chlorophyll- <i>a</i> , corrected for pheophytin	40	mg/m ²
Princeton Gulch	PRINCETONG02	8/20/2008	46.43376	-113.13091	Chlorophyll- <i>a</i> , corrected for pheophytin	4	mg/m ²
Princeton Gulch	PRINCETONG03	8/20/2008	46.44990	-113.11830	Chlorophyll- <i>a</i> , corrected for pheophytin	3	mg/m ²
Smart Creek	C02SMRTC03	7/11/2007	46.48760	-113.26000	Chlorophyll- <i>a</i> , corrected for pheophytin	4.1	mg/m ²
Smart Creek	SMARTC02	8/29/2007	46.49645	-113.24658	Chlorophyll- <i>a</i> , corrected for pheophytin	153	mg/m ²
Smart Creek	SMARTC03	8/29/2007	46.45434	-113.28931	Chlorophyll- <i>a</i> , corrected for pheophytin	60	mg/m ²
Smart Creek	SMARTC03	8/21/2008	46.45434	-113.28931	Chlorophyll- <i>a</i> , corrected for pheophytin	21	mg/m ²

Table C-4. Recent Macroinvertebrate Data for the Flint TPA

Waterbody Name	Site ID	Collection Date	Latitude	Longitude	HBI Score
Barnes Creek	C02BARNC01	7/15/2004	46.59065	-113.15937	5.04
Barnes Creek	C02BARNC02	7/16/2004	46.61089	-113.16017	6.37
Smart Creek	C02SMRTC01	8/18/2005	46.49563	-113.24726	5.20
Smart Creek	C02SMRTC02	8/17/2005	46.45355	-113.29070	3.63
Smart Creek	C02SMRTC03	8/29/2011	46.48805	-113.25986	3.57

Table C-5. Nutrients and Flow Data from Philipsburg Wastewater Treatment Plant Discharge Monitoring Reports

Date	Effluent Rate (gal/day)	Nitrate+ Nitrite (as N) (mg/L)	Total Ammonia (as N) (mg/L)	Total Kjeldahl Nitrogen (as N) (mg/L)	Total Nitrogen (mg/L)	Total Phosphorus (mg/L)
Jan-00	87,000	No Data	No Data	No Data	No Data	No Data
Feb-00	120,000	No Data	No Data	No Data	No Data	No Data
Mar-00	109,000	No Data	No Data	No Data	No Data	No Data
Apr-00	77,000	No Data	No Data	No Data	No Data	No Data
May-00	77,000	No Data	No Data	No Data	No Data	No Data
Jun-00	144,000	No Data	No Data	No Data	No Data	No Data
Jul-00	68,000	No Data	No Data	No Data	No Data	No Data
Aug-00	59,000	No Data	No Data	No Data	No Data	No Data
Sep-00	59,000	No Data	No Data	No Data	No Data	No Data
Oct-00	68,000	No Data	No Data	No Data	No Data	No Data
Nov-00	68,000	No Data	No Data	No Data	No Data	No Data
Dec-00	68,000	No Data	No Data	No Data	No Data	No Data
Jan-01	120,000	No Data	No Data	No Data	No Data	No Data
Feb-01	169,000	No Data	No Data	No Data	No Data	No Data
Mar-01	169,000	No Data	No Data	No Data	No Data	No Data
Apr-01	98,000	No Data	No Data	No Data	No Data	No Data
May-01	59,000	No Data	No Data	No Data	No Data	No Data
Jun-01	98,000	No Data	No Data	No Data	No Data	No Data
Jul-01	68,000	No Data	No Data	No Data	No Data	No Data
Aug-01	34,000	No Data	No Data	No Data	No Data	No Data
Sep-01	68,000	No Data	No Data	No Data	No Data	No Data
Oct-01	59,000	No Data	No Data	No Data	No Data	No Data
Nov-01	68,000	No Data	No Data	No Data	No Data	No Data
Dec-01	87,000	No Data	No Data	No Data	No Data	No Data
Jan-02	98,000	No Data	No Data	No Data	No Data	No Data
Feb-02	87,000	No Data	No Data	No Data	No Data	No Data
Mar-02	77,000	No Data	No Data	No Data	No Data	No Data
Apr-02	68,000	No Data	No Data	No Data	No Data	No Data
May-02	59,000	No Data	No Data	No Data	No Data	No Data
Jun-02	144,000	No Data	No Data	No Data	No Data	No Data
Jul-02	59,000	No Data	No Data	No Data	No Data	No Data
Aug-02	42,000	No Data	No Data	No Data	No Data	No Data
Sep-02	50,000	No Data	No Data	No Data	No Data	No Data
Oct-02	50,000	No Data	No Data	No Data	No Data	No Data
Nov-02	59,000	No Data	No Data	No Data	No Data	No Data
Dec-02	77,000	No Data	No Data	No Data	No Data	No Data
Jan-03	77,000	No Data	No Data	No Data	No Data	No Data
Feb-03	77,000	No Data	No Data	No Data	No Data	No Data
Mar-03	109,000	No Data	No Data	No Data	No Data	No Data
Apr-03	87,000	No Data	No Data	No Data	No Data	No Data
May-03	98,000	No Data	No Data	No Data	No Data	No Data
Jun-03	77,000	No Data	No Data	No Data	No Data	No Data
Jul-03	50,000	No Data	No Data	No Data	No Data	No Data
Aug-03	34,000	No Data	No Data	No Data	No Data	No Data
Sep-03	59,000	No Data	No Data	No Data	No Data	No Data

Table C-5. Nutrients and Flow Data from Philipsburg Wastewater Treatment Plant Discharge Monitoring Reports

Date	Effluent Rate (gal/day)	Nitrate+ Nitrite (as N) (mg/L)	Total Ammonia (as N) (mg/L)	Total Kjeldahl Nitrogen (as N) (mg/L)	Total Nitrogen (mg/L)	Total Phosphorus (mg/L)
Oct-03	77,000	No Data	No Data	No Data	No Data	No Data
Nov-03	109,000	No Data	No Data	No Data	No Data	No Data
Dec-03	59,000	No Data	No Data	No Data	No Data	No Data
Jan-04	68,000	No Data	No Data	No Data	No Data	No Data
Feb-04	98,000	No Data	No Data	No Data	No Data	No Data
Mar-04	156,000	No Data	No Data	No Data	No Data	No Data
Apr-04	59,000	No Data	No Data	No Data	No Data	No Data
May-04	156,000	No Data	No Data	No Data	No Data	No Data
Jun-04	87,000	No Data	No Data	No Data	No Data	No Data
Jul-04	42,000	No Data	No Data	No Data	No Data	No Data
Aug-04	50,000	No Data	No Data	No Data	No Data	No Data
Sep-04	87,000	No Data	No Data	No Data	No Data	No Data
Oct-04	59,000	No Data	No Data	No Data	No Data	No Data
Nov-04	N/A	No Data	No Data	No Data	No Data	No Data
Dec-04	N/A	No Data	No Data	No Data	No Data	No Data
Jan-05	N/A	No Data	No Data	No Data	No Data	No Data
Feb-05	N/A	No Data	No Data	No Data	No Data	No Data
Mar-05	N/A	No Data	No Data	No Data	No Data	No Data
Apr-05	N/A	No Data	No Data	No Data	No Data	No Data
May-05	N/A	No Data	No Data	No Data	No Data	No Data
Jun-05	N/A	No Data	No Data	No Data	No Data	No Data
Jul-05	N/A	No Data	No Data	No Data	No Data	No Data
Aug-05	N/A	No Data	No Data	No Data	No Data	No Data
Sep-05	N/A	No Data	No Data	No Data	No Data	No Data
Oct-05	N/A	No Data	No Data	No Data	No Data	No Data
Nov-05	N/A	No Data	No Data	No Data	No Data	No Data
Dec-05	N/A	No Data	No Data	No Data	No Data	No Data
Jan-06	N/A	No Data	No Data	No Data	No Data	No Data
Feb-06	N/A	No Data	No Data	No Data	No Data	No Data
Mar-06	N/A	No Data	No Data	No Data	No Data	No Data
Apr-06	N/A	No Data	No Data	No Data	No Data	No Data
May-06	N/A	No Data	No Data	No Data	No Data	No Data
Jun-06	N/A	No Data	No Data	No Data	No Data	No Data
Jul-06	N/A	No Data	No Data	No Data	No Data	No Data
Aug-06	N/A	No Data	No Data	No Data	No Data	No Data
Sep-06	N/A	No Data	No Data	No Data	No Data	No Data
Oct-06	N/A	No Data	No Data	No Data	No Data	No Data
Nov-06	144,000	No Data	No Data	No Data	No Data	No Data
Dec-06	132,000	No Data	No Data	No Data	No Data	No Data
Jan-07	109,000	No Data	No Data	No Data	No Data	No Data
Feb-07	68,000	No Data	No Data	No Data	No Data	No Data
Mar-07	87,000	No Data	No Data	No Data	No Data	No Data
Apr-07	87,000	No Data	No Data	No Data	No Data	No Data
May-07	156,000	No Data	No Data	No Data	No Data	No Data
Jun-07	182,000	No Data	No Data	No Data	No Data	No Data

Table C-5. Nutrients and Flow Data from Philipsburg Wastewater Treatment Plant Discharge Monitoring Reports

Date	Effluent Rate (gal/day)	Nitrate+ Nitrite (as N) (mg/L)	Total Ammonia (as N) (mg/L)	Total Kjeldahl Nitrogen (as N) (mg/L)	Total Nitrogen (mg/L)	Total Phosphorus (mg/L)
Jul-07	34,000	No Data	No Data	No Data	No Data	No Data
Aug-07	50,000	0.16	5.16	5.74	5.90	2.20
Sep-07	87,000	0.062	5.23	6.96	6.97	3.02
Oct-07	98,000	0.084	10.4	11.9	11.98	2.74
Nov-07	120,000	0.154	10.8	8.16	8.31	0.74
Dec-07	109,000	0.174	8.93	11.6	11.77	2.19
Jan-08	77,000	0.06	0.08	15	15.06	2.91
Feb-08	68,000	<0.01	9.71	19.5	19.50	3.50
Mar-08	87,000	0.02	17.5	23.8	23.82	2.93
Apr-08	98,000	0.575	10.2	15	15.58	19.10
May-08	87,000	0.186	5.74	12.6	12.79	2.84
Jun-08	196,000	0.095	2.75	9.82	9.92	9.73
Jul-08	87,000	<0.01	0.5	2.03	2.03	3.77
Aug-08	59,000	0.148	2.32	2.11	2.26	9.61
Sep-08	132,000	0.173	6.99	7.53	7.70	10.60
Oct-08	98,000	0.55	2.18	4.1	4.65	1.94
Nov-08	120,000	0.746	4.8	7.42	8.17	1.24
Dec-08	120,000	0.077	6.52	6.48	6.56	1.67
Jan-09	87,000	0.017	10.2	14.5	14.52	3.28
Feb-09	87,000	0.048	9.3	10.3	10.35	4.68
Mar-09	68,000	0.054	6.88	14.9	14.95	2.26
Apr-09	50,000	0.332	6.41	13.3	13.63	2.29
May-09	50,000	0.397	0.63	5.63	6.03	1.87
Jun-09	120,000	0.013	6.07	8.84	8.85	2.62
Jul-09	68,000	0.012	9.42	14.7	14.71	3.32
Aug-09	27,000	0.091	1.09	6.18	6.27	2.28
Sep-09	59,000	0.304	1.67	5.77	6.07	2.82
Oct-09	120,000	0.179	5.31	7.81	7.99	3.06
Nov-09	34,000	0.79	2.9	6.79	7.58	1.87
Dec-09	34,000	0.297	3.78	6.25	6.55	3.03
Jan-10	27,000	0.653	2.21	7.62	8.27	3.00
Feb-10	42,000	0.003	10.4	17.6	17.60	4.34
Mar-10	27,000	0.004	11.3	23.6	23.60	3.81
Apr-10	14,000	0.219	5.9	12.2	12.42	2.20
May-10	15,000	0.27	1.17	4.52	4.79	1.99
Jun-10	120,000	0.198	5.68	9.88	10.10	3.58
Jul-10	50,000	0.149	9.09	12.5	12.65	3.51
Aug-10	59,000	0.46	1.57	7.25	7.71	1.50
Sep-10	68,000	0.332	1.09	2.97	3.30	1.73
Oct-10	90,000	0.204	0.9	2.51	2.71	2.38
Nov-10	70,000	0.131	0.48	2.28	2.41	1.90
Dec-10	70,000	0.003	2	10.1	10.1	2.50
Jan-11	70,000	0.003	7.01	10.2	10.2	2.22
Feb-11	70,000	0.003	5.08	5.99	5.99	2.11
Mar-11	50,000	0.017	12.3	14.3	14.32	2.58

Table C-5. Nutrients and Flow Data from Philipsburg Wastewater Treatment Plant Discharge Monitoring Reports

Date	Effluent Rate (gal/day)	Nitrate+ Nitrite (as N) (mg/L)	Total Ammonia (as N) (mg/L)	Total Kjeldahl Nitrogen (as N) (mg/L)	Total Nitrogen (mg/L)	Total Phosphorus (mg/L)
Apr-11	40,000	0.086	8.57	9.4	9.49	2.24
May-11	120,000	0.241	1.22	4.25	4.49	1.89
Jun-11	310,000	0.016	5.96	9.01	9.03	2.05
Jul-11	280,000	0.324	4.83	6.06	6.38	2.25
Aug-11	10,000	0.135	0.927	1.73	1.87	1.06
Sep-11	130,000	0.04	0.413	1.81	1.85	1.93
Oct-11	100,000	0.04	2.39	4.59	4.63	2.17
Nov-11	80,000	0.022	5.78	7.36	7.39	2.59
Dec-11	90,000	0.12	6.85	9.51	9.63	2.71
Jan-12	90,000	0.008	11.3	13.5	13.51	3.22
Feb-12	90,000	0.097	11	19.3	19.4	2.83
Mar-12	90,000	0.012	8.06	12.9	20.97	2.02
Apr-12	40,000	<0.01	4.08	5.29	5.29	3.73
May-12	50,000	0.089	0.469	2.45	3.81	1.45
Jun-12	470,000	0.68	0.826	3.11	3.94	2.13
Jul-12	210,000	<0.01	2.88	10	12.88	0.82
Aug-12	120,000	0.007	4.38	8.95	13.34	2.58
Sep-12	270,000	0.277	1.37	3.09	7.14	2.40

N/A – Measured effluent rate unreliable during this month