Jackson Project
Process Flow Tracking

Year	Year Number	Upmigration	Flushing	Outmigration	Outmigration	Maintenance	Forming	Notes
Sept 2011 - August 2012	1	9/2/2011 9/13/2011	9/2/2011 9/13/2011	4/3/2012	5/23/2012 5/22-31/2012			
Sept 2012 - August 2013	2	9/14/2012	9/14/2012 4/9/2013	4/9/2013	5/6/2013 5/1-8/2013			
Sept 2013 - August 2014	3	9/16-17/2013 9/24-25/2013	9/16-17/2013 9/24-25/2013 4/1/2014 4/17-18/2014	4/1/2014 4/17-18/2014	5/21/2014	*, 3/16-17/2014		*Attempt on 12/01/2013
Sept 2014 - August 2015	4	9/12/2014	9/12/2014 4/25/2015 5/11/2015	4/25/2015	5/11/2015	11/4-5/2014		*Sultan River Riverine Habitat Monitoring Report, February 2015
Sept 2015 - August 2016	5	9/12/2015	9/12/2015 4/23/2016	4/23/2016	5/15-16/2016	11/17-18/2015		
Sept 2016 - August 2017	6	*	4/13-14/2017 *	4/13-14/2017	5/6/2017 5/5-7/2017			*Deferred Sept 2016 upmigration and flushing events due to DDVP construction ** Sultan River Riverine Habitat Monitoring Report, December 2016
Sept 2017 - August 2018	7	9/2/2017	9/2/2017 4/5-6/2018	4/5-6/2018	5/19/2018	2/4-5/2018		
Sept 2018 - August 2019	8	9/8/2018	9/8/2018	4/19-20/2019	5/25/2019			
Sept 2019 - August 2020	9	9/8/2019	9/8/2019, 4/16-17/2020	4/16-17/2020	5/19/2020		2/1-2/2020	
Sept 2020 - August 2021	10	9/11/2020	9/11/2020, 5/22/2021	4/9-13/21; 4/23/21	5/22/2021			

as of 5/4/2023

Jackson Project
Process Flow Tracking

Year	Year Number	Upmigration	Flushing	Outmigration	Outmigration	Maintenance	Forming	Notes
Sept 2021 - August 2022	11	9/26/2021	9/26/2021, 4/21-22/2022	4/21-22/2022	5/21/2022	11/15-16/2021		
Sept 2022 - August 2023	12	9/25/2022	9/25/2022, 4/24-25/23 and 5/2/2023	4/24-25/23				
Sept 2023 - August 2024	13							
Sept 2024 - August 2025	14							
Sept 2025 - August 2026	15							
Sept 2026 - August 2027	16							
Sept 2027 - August 2028	17							
Sept 2028 - August 2029	18							
Sept 2029 - August 2030	19							
Sept 2030 - August 2031	20							

as of 5/4/2023

Appendix 3

Process Flow Events Log

Process Flow Log

Date[1]	Time[2]	Magnitude[3] (cfs)	Duration[4] (hrs)	Accretion[5] (cfs)	Notes[6]	Counts as PF Type[7]
9/2/2011	10:00	R1- 1200	95 hours	R1- N/A R2- N/A R3- N/A	Near full generation Reference Figure 1	FL, U
9/13/2011	15:00	R2 – 150 to 375	6 hours	R1- N/A R2- N/A R3- N/A	Modified, in consultation with ARC, due to presence of early spawning Chinook in Reach 2, downramped to September 15 minimum flow schedule one day early Reference Figure 2	FL, U
9/13/2011	10:00	R3 – 150 to 300	6 hours	R1- N/A R2- N/A R3- N/A	Modified due to presence of early spawning Chinook downstream in Reach 2	FL
4/3/2012	10:00	R1 – 1797 (average), range: 1,500 to 2,060	8.5 hours		Reservoir > 1,420' elevation, magnitude of greater than 1,500 cfs was achieved through release combined with increase in generation, rotary screw trap in operation at RM	FL, O

[1] Start Date of Event (MM/DD/YYYY)
[2] Start Time-End Time
[3] Magnitude of the Event for Each Compliance Location (R1-Reach 1, R2-Reach 2, R3-Reach 3)
[4] Duration of Event
[5] Portion of Event Attributed to Accretion Flows
[6] Notes of Day's Event, Sequencing with Other Flow Events/Maintenance
[7] Channel Forming (FO), Channel Maintenance (M), Flushing (FL), Outmigration (O), Upmigration (U)

Process Flow Log

					0.2 before, during, and after process flow to capture outmigrating salmonids Reference Figure 3	
4/3/2012	11:45	R2 – 661 (average), range: 512 to 721	8 hours	R2- estimated at 70 cfs	Reference Figure 4	FL, O
4/3/2012	10:00	R3 – 579 (average), range: 411 to 654	8.75 hours	R3 – estimated at 60 cfs	Reference Figure 5	FL
5/23/2012	08:45 – 18:45	R2 – 480 (average), range: 400 to 561	10.0 hours		Reference Figure 6	O
5/22/2012 to 5/31/2012	Multiple Days	R1 – 1,493 (average), range: 1,040 to 2,080			Reference Figure 7	O
9/14/2012	4:45-11:00	R1 – 1,323 (average), range: 1,200 to 1,430	6.25 hours		Reservoir at 1,421 ft msl. In consultation with ARC, implemented 1,200 cfs release due to current and forecasted dry conditions. Reference Figure 8	FL, U
9/14/2012	04:30-11:15	R2 – 681 (average), range: 544 to 763	6.75 hours		Reference Figure 9	FL, U

Process Flow Log

9/14/2012	2:30-8:45	R3 – 627 (average), range: 505 to 698	6.25 hours		Reference Figure 10	FL
4/9/2013	Multiple Days	R1 – 1,679 (average), range: 1,530 and 2,060	>240 hours (10 days)	R1 – variable over period, estimated between 100 and 400 cfs cumulative	Reference Figure 11	FL, O
4/9/2013	11:45 to 18:00	R2 – 663 (average), range: 626 to 696	6.25 hours	R2 – variable during release, estimated between 175 and 200 cfs	Reference Figure 12	FL, O
4/9/2013	10:15 to 16:15	R3 – 523 (average), range: 505 to 553	6 hours	R3 – variable during release, estimated between 110 and 150 cfs within reach	Reference Figure 13	FL
5/6/2013	23:30 to 05:30	R2 – 612 (average), range: 493 to 628	6 hours		Reference Figure 14	O
5/1/2013 to 5/8/2013	Multiple Days	R1 – 891 (average), range: 838 to 1,310	>176 hours (7.33 days)		Reference Figure 15	O
9/16/2013 to 9/17/2013	12:15 (9/16) to 2:30 (9/17)	R1 – 1,350 (average), range:	14.5 hours		Reservoir < elevation 1,420’	FL, U

Process Flow Log

	(9/17)	1,200 to 1,420			Reference Figure 16	
9/24/2013 to 9/25/2013	22:45 (9/24) to 10:00 (9/25)	R2 – 543 (average), range: 501 to 563	11.25 hours		Reference Figure 17	FL, U
9/24/2013 to 9/25/2013	21:00 (9/24) to 10:30 (9/25)	R3 – 514 (average), range: 400 to 548	13.75 hours		Reference Figure 18	FL
12/01/2013	15:15 to 19:15	R1 – 3,108 (average), range: 2,610 to 3,660	4.00 hours		Reference Figure 19, accretion flows did not manifest as expected or forecasted	M (attempt)
3/16/2014 to 3/17/2014	12:15 (3/16/14) to 15:00 (3/17/14)	R1 – 4,508 (average), range: 4,030 to 4,940 (prior to USGS correction)	26.75 hours, followed by downramping and return to normal operations	R1- cumulative accretion (including spill), measured at Powerhouse: 1,100 to 2,000 cfs	Reference Figure 20, full operational release sequenced with reservoir spill, 5.7” of rainfall in 24-hour period between 3/15/14 (2200 HR) and 3/16/14 (2100 HR)	M*
4/01/2014 to 4/04/2014	0:00 (4/01/14) to 22:45 (4/04/14)	R1 – 1,722 (average), range: 1,540 to 1,770 cfs	94.75 hours		Reference Figure 21	FL, O
4/17/2014 to 4/18/2014	04:00 (4/17/14) to 06:30 (4/18/14)	R3 (& R2) – 486 (average), range: 406 to 567 cfs	26.5 hours		Reference Figure 22	FL, O

Process Flow Log

4/17/2014	06:15 to 15:00	R1 – 1,649 (average), range: 1,220 to 2,130 cfs	8.75 hours		Reference Figure 23	O
5/21/2014	06:15 to 13:00	R2 – 690 (average), range: 543 to 743 cfs	6.75 hours		Reference Figure 24	O
5/21/2014	06:30 to 13:15	R1 – 2,000 (average), range: 1,530 to 2,100 cfs	6.75 hours		Reference Figure 25	O
9/12/2014	06:45 to 14:00	R1 – 1,606 (average), range: 1,500 to 1,760 cfs	7.25 hours		Reference Figure 26	FL, U
9/12/2014	04:30 to 10:30	R2 – 523 (average), range: 469 to 536 cfs	6 hours		Reference Figure 27 – note that figure does not include estimated accretion in Reach 2 of 32 cfs at time of release	FL, U
9/12/2014	02:00 to 08:00	R3 – 509 (average), range: 455 to 522 cfs	6 hours		Reference Figure 27 – note that accretion in Reach 3 at time of release was estimated at 14 cfs	FL, U
11/4/2014 to	19:00 to	R1 – 4,088 (average), range:	24 hours	R1- cumulative accretion	Reference Figure 28	M

Process Flow Log

11/5/2014	19:00	3,810 to 4,540 cfs		measured at Powerhouse: 800 to 1,400 cfs		
4/25/2015	14:45 to 0:00 (4/26/15)	R1 – 1,126 (average), range: 808 to 1,450 cfs	9.5 hours		Reference Figure 29	O
4/25/2015	14:45 to 21:00	R2 – 805 (average), range: 501 to 1,013 cfs	6.25 hours @ greater than 500 cfs		Reference Figure 30	FL, O
4/25/2015	13:15 to 17:00	R3 – 786 (average), range: 631 to 830 cfs	3.75 hours @ greater than 600 cfs		Reference Figure 31	FL
5/11/2015	04:45 to 12:30	R1 – 1,863 (average), range: 1,520 to 2,150 cfs	7.75 hours greater than 1,500 cfs		Reference Figure 32	FL, O
5/11/2015	05:45 to 13:15	R2 – 664 (average), range: 408 to 756 cfs	7.5 hours greater than 400 cfs		Reference Figure 33	O
9/12/2015	12:15 to 18:15	R3 – 464 (average), range: 404 to 483	6 hours greater than 400 cfs	Estimated at 10 cfs	Reference Figure 34	U, FL
9/12/2015	13:45 to 19:45	R2 – 569 (average), range:	6 hours greater than	Estimated at 15 cfs	Reference Figure 35	U, FL

Process Flow Log

		509 to 588 cfs	500 cfs			
9/12/2015	14:15 to 20:15	R1 – 1,038 (average), range: 997 to 1,050 cfs	8 hours greater than 1,000 cfs		Reference Figure 36	U
11/17/2015 to 11/18/2015	18:45 to 20:15	R1 – 5,917 (average), range: 4,230 to 7,320	25.5 hours greater than 4,100 cfs	R1- cumulative accretion (including spill), measured at Powerhouse: 3,330 to 6,420 cfs	Reference Figure 37	M
4/23/2016	13:30 to 20:15	R1 – 1,611 (average), range: 1,510 to 1,840	6.75 hours greater than 1,500 cfs,	R1 – cumulative accretion estimated at 132 cfs	Reference Figure 38	FL, O
4/23/2016	13:30 to 18:15	R2 – 917 (average), range: 700 to 1,047	4.75 hours greater than 700 cfs	Estimated at 76 cfs	Reference Figure 39	FL
4/23/2016	13:30 to 23:30	R2 – 732 (average), range: 402 – 1,047	10 hours greater than 400 cfs	Estimated at 76 cfs	Reference Figure 39	O
4/23/2016	12:00 to 16:30	R3 – 824 (average), range: 638 to 906	4.5 hours greater than 600 cfs	Estimated at 56 cfs	Reference Figure 40	FL
5/15-16/2016	22:30 to 04:30	R1 – 908 (average), range: 832 to 951	6 hours greater than 800 cfs		Reference Figure 41	O

Process Flow Log

5/15-16/2016	22:30 to 04:30	R2 – 541 (average), range: 487 to 579	6 hours greater than 400 cfs	Estimated at 55 cfs	Reference Figure 42	O
4/13-14/2017	21:30 to 09:00	R3 – 462 (average), range: 206 to 621	> 6 hours greater than 400 cfs	Estimated at 78 cfs	Reference Figure 43	FL, O
4/13-14/2017	23:00 to 10:30	R2 – 712 (average), range: 430 to 1010	> 6 hours greater than 500 cfs	Estimated at 144 cfs	Reference Figure 44	FL, O
4/13-14/2017	23:00 to 10:30	R1 – 1,940 (average), range: 1,610 to 2,150	> 6 hours greater than 1,500 cfs	Cumulative accretion estimated at 222	Reference Figure 45	FL, O
5/06/2017	11:00 to 19:45	R3 – 691 (average), range: 217 to 1,010	> 6 hours greater than 200 cfs	Estimated at 118 cfs	Reference Figure 46	O
5/06/2017	12:30 to 19:30	R2 – 851 (average), range: 434 to 1,070	> 6 hours greater than 400 cfs	Estimated at 160 cfs	Reference Figure 47	O
5/05-07/2017	5/05/17 0:00 to 5/07/17 23:45	R1 – 1,137 (average), range: 832 to 2,070	> 6 hours greater than 800 cfs	Cumulative accretion estimated at 278	Reference Figure 48	O
9/02/2017	10:15 to	R3 – 713 (average), range:	> 6 hours greater than	Accretion negligible (Average	Reference Figure 49	FL, U

Process Flow Log

	17:00	304 to 948	300 cfs, > 3 hours greater than 600 cfs.	Spada Total Rain (June-August): 15.16” 2017 Totals: 6.42”		
9/02/2017	11:45 to 21:15	R2 – 786 (average), range 406 to 1,123	> 6 hours greater than 400 cfs, > 3 hours greater than 700 cfs.	Estimated at 50 cfs	Reference Figure 50	FL, U
9/02/2017	9/02/17 11:45 to 9/03/17 15:15	R1 – 1,189 (average), range 802 to 1,620	> 6 hours greater than 1,500 cfs, > 6 hours greater than 800 cfs.	Estimated at 50 cfs	Reference Figure 51	FL, U
2/04-05/2018	2/04/18 17:00 to 2/05/18 17:45	R1 – 4,394 (average), range 4,130 to 4,650	24.75 hours greater than 4,100 cfs	Variable, estimated between 600 and 1,100 cfs	Reference Figure 52	M
4/5/2018 – 4/6/2018	21:00 to 05:30	R3 – 512 (average), range 492 to 526	8.5 hours greater than 400 cfs	Estimated at 148 cfs	Reference Figure 53	FL, O
4/5/2018 – 4/6/2018	21:00 to 05:30	R2 – 699 (average), range	8.5 hours greater than	Estimated at 100 cfs	Reference Figure 54	FL, O

Process Flow Log

		670 to 730	500 cfs			
4/5/2018 – 4/6/2018	21:00 to 05:30	R1 – 2,079 (average), range 2,050 to 2,110	8.5 hours greater than 1,500 cfs	Cumulative accretion estimated at 248 cfs	Reference Figure 55	FL, O
5/19/2018	11:30 to 19:00	R1 – 1,118 (average), range 805 to 1,330	7.5 hours greater than 800 cfs	Cumulative accretion 57 cfs	Reference Figure 56	O
5/19/2018	11:30 to 22:00	R2 – 774 (average), range 403 to 1,099	10.5 hours greater than 400 cfs	Cumulative accretion 57 cfs	Reference Figure 57	O
5/19/2018 – 5/20/2018	10:00 to 0:00	R3 – 642 (average), range 210 to 1,060	14 hours greater than 200 cfs	Estimated at 29 cfs	Reference Figure 58	O
9/8/2018	10:45 to 17:30	R3 – 691 (average), range 314 to 912	3 hours greater than 600 cfs, 6 hours greater than 300 cfs	Estimated at 10 cfs	Reference Figure 59	FL, U
9/8/2018	12:30 to 16:30	R2 – 754 (average), range 412 to 976	3 hours greater than 700 cfs, 6 hours greater than 400 cfs	Estimated at 15 cfs	Reference Figure 60	FL, U

Process Flow Log

9/8/2018 to 9/9/2018	12:30 to 08:15	R1 – 1,150 (average), range 805 to 1,440	6 hours greater than 1,200 cfs, 6 hours greater than 800 cfs	Estimated at 15 cfs	Reference Figure 61	FL, U
4/10/2019 to 4/11/2019	21:30 to 05:00	R3 – 435 (average), range 346 to 480	6 hours greater than 200 cfs	Estimated at 250 cfs	Reference Figure 62	O
4/10/2019 to 4/11/2019	21:30 to 05:00	R2 – 526 (average), range 418 to 577	6 hours greater than 400 cfs	Estimated at 250 cfs	Reference Figure 63	O
4/19/2019 to 4/20/2019	21:30 to 05:00	R1 – 947 (average), range 828 to 989	6 hours greater than 800 cfs	Estimated at 140 cfs	Reference Figure 64	O
5/25/2019	8:45 to 16:00	R3 – 788 (average), range 440 to 945	6 hours greater than 400 cfs	Estimated at 20 cfs	Reference Figure 65	FL, O
5/25/2019	10:15 to 17:30	R2 – 922 (average), range 527 to 1,120	6 hours greater than 500 cfs	Estimated at 20 cfs	Reference Figure 66	FL, O
5/25/2019	11:15 to 19:15	R1 – 1,824 (average), range 1,530 to 2,000	6 hours greater than 1,500 cfs	Estimated at 20 cfs	Reference Figure 67	FL, O

Process Flow Log

9/8/2019	11:45 to 20:15	R1 – 1,353 (average), range 1,210 to 1,460	8.5 hours greater than 1,200 cfs	Estimated at 100 cfs	Reference Figure 68	FL, U
9/8/2019	11:30 to 22:00	R2 – 734 (average), range 505 to 988	10.5 hours greater than 500 cfs	Estimated at 100 cfs	Reference Figure 69	FL, U
9/8/2019	10:00 to 21:45	R3 – 629 (average), range 401 - 908	11.75 hours greater than 400 cfs	Estimated at 100 cfs	Reference Figure 70	FL, U
2/1-2/2020	02:00 on 2-1, to 04:30 on 2-2	R1 – 10,454 (average), range 6,540 – 13,900	26.5 hours greater than 6,500 cfs	Estimated at 500 cfs	Reference Figure 71	FO
4/16-17/2020	23:00 on 4-16, to 05:00 on 4-17	R1 – 1,246 (average), range 1,220 – 1,260	6 hours greater than 1,200 cfs	Estimated at 40 cfs	Reference Figure 72	FL, O
4/16-17/2020	23:00 on 4-16, to 05:00 on 4-17	R2 – 605 (average), range 573 – 616	6 hours greater than 500 cfs	Estimated at 30 cfs	Reference Figure 73	FL, O
4/16-17/2020	21:15 on 4-16, to 05:00 on 4-17	R3 – 504 (average), range 462 – 511	7.75 hours greater than 400 cfs	Estimated at 20 cfs	Reference Figure 74	FL, O
5/19/2020	09:45 to 20:00	R3 – 245 (average), range	10.25 hours greater than	Estimated at 35 cfs	Reference Figure 75	O

Process Flow Log

		204 – 404	200 cfs			
5/19/2020	11:45 to 19:00	R2 – 475 (average), range 407 - 495	7.25 hours greater than 400 cfs	Estimated at 45 cfs	Reference Figure 76	O
5/19/2020	11:45 to 19:00	R1 – 874 (average). Range 804 - 901	7.25 hours greater than 800 cfs	Estimated at 50 cfs	Reference Figure 77	O
9/11/2020	01:45 to 11:45	R3 – 599 (average). Range 408 - 647	10 hours greater than 400 cfs	Estimated at 10 cfs	Reference Figure 78	FL, U
9/11/2020	03:30 to 12:15	R2 – 671 (average). Range 506 - 706	8.75 hours greater than 500 cfs	Estimated at 10 cfs	Reference Figure 79	FL, U
9/11/2020	03:30 to 11:00	R1 – 1,273 (average), Range 1,200 – 1,310	7.5 hours greater than 1,200 cfs (Reservoir elevation < 1,420')	Estimated at 10 cfs	Reference Figure 80	FL, U
4/9-13/2021	21:00 to 05:15 (multiple nights)	R1 – 856 (average), Range 822 – 869	>6 hours >800 cfs	Estimated 40 cfs	Reference Figure 81	O

Process Flow Log

4/23/2021	21:15 to 05:00	R2 – 469 (average), Range 461 – 473	7.75 hours greater than 400 cfs	Estimated at 30 cfs	Reference Figure 82	O
4/23/2021	21:15 to 05:00	R3 – 316 (average), Range 283 – 321	7.75 hours greater than 200 cfs	Estimated at 40 cfs	Reference Figure 83	O
05/22/2021	11:15 to 19:45	R1 – 1,740 (average), Range 1,510 – 1,910	8.25 hours greater than 1,500 cfs	Estimated at 40 cfs	Reference Figure 84	FL, O
05/22/2021	10:15 to 17:45	R2 – 926 (average), Range 522 – 1,130	7.25 hours greater than 500 cfs	Estimated at 20 cfs	Reference Figure 85	FL, O
05/22/2021	08:45 to 16:00	R3 – 787 (average), Range 421 – 945	7.25 hours greater than 400 cfs	Estimated at 20 cfs	Reference Figure 86	FL, O
09/26/2021	12:00 to 21:00	R1 – 1,347 (average), Range 1,220 – 1,450	9.0 hours greater than 1,200 cfs	Estimated at 75 cfs	Reference Figure 87	FL, U
09/26/2021	11:30 to 06:15	R2 – 663 (average), Range 504 – 992	18.75 hours greater than 500 cfs	Estimated at 75 cfs	Reference Figure 88	FL, U
09/26/2021	10:00 to 03:45	R3 – 537 (average), Range	17.75 hours greater than	Estimated at 25 cfs	Reference Figure 89	FL, U

Process Flow Log

		402 – 844	400 cfs			
11/15-16/2021	11:45 to 12:45	R1 – 5,039 (average), Range 4,150 – 6,180	25 hours greater than 4,100 cfs	Variable, estimated between 500 – 1,000 cfs	Reference Figure 90	M
4/21-22/2022	21:30 to 07:00	R3 – 441 (average), Range 401 – 463	9.5 hours greater than 400 cfs	Estimated at 55 cfs	Reference Figure 91	FL, O
4/21-22/2022	23:00 to 07:00	R2 – 632 (average), Range 575 – 653	8 hours greater than 500 cfs	Estimated at 30 cfs	Reference Figure 92	FL, O
4/21-22/2022	23:00 to 07:00	R1 – 1,676 (average), Range 1,610 – 1,700	8 hours greater than 1,500 cfs	Estimated at 30 cfs	Reference Figure 93	FL, O
5/21/2022	10:00 to 19:45	R1 – 1,457 (average), Range 901 – 1,860	Multiple days greater than 800 cfs	Estimated at 120 cfs	Reference Figure 94	O
5/21/2022	11:45 to 19:45	R2 – 861 (average), Range 475 – 1,165	8 hours greater than 400 cfs	Estimated at 60 cfs	Reference Figure 95	O
5/21/2022	10:30 to 19:45	R3 – 587 (average), Range 227 – 881	9.25 hours greater than 200 cfs	Estimated at 60 cfs	Reference Figure 96	O
9/25/2022	10:00 to	R3 – 601	8.25 hours	Estimated at 10 cfs	Reference Figure 97	FL, U

Process Flow Log

	18:15	(average), Range 403 – 793	greater than 400 cfs			
9/25/2022	11:30 to 23:00	R2 – 734 (average), Range 506 – 1,035	11.5 hours greater than 500 cfs	Estimated at 25 cfs	Reference Figure 98	FL, U
9/25/2022	11:45 to 19:30	R1 – 1,293 (average), Range 1,210 – 1,360	7.75 hours greater than 1,200 cfs	Estimated at 25 cfs	Reference Figure 99	FL, U
4/24-25/2023	21:00 to 05:00	R3 – 339 (average), Range 319 – 359	8 hours greater than 200 cfs	Estimated at 175 cfs	Reference Figure 100	O
4/24-25/2023	21:30 to 09:45	R2 – 567 (average), Range 500 to 600	12.25 hours greater than 500 cfs	Estimated at 150 cfs	Reference Figure 101	FL, O
4/24-25/2023	22:15 to 04:30	R1 – 828 (average), Range 811 to 840 cfs	6.25 hours greater than 800 cfs	Estimated at 150 cfs	Reference Figure 102	O
5/2/2023	08:45 to 14:45	R1 – 1,548 (average), Range 1,520 to 1,560 cfs	6 hours greater than 1,500 cfs	Estimated at 35 cfs	Reference Figure 103	FL

For each event, attach graph of flow at each compliance point.

Process Flow Log

*Changed previously designated FO event on March 16-17, 2014, to a M event given occurrence of a more substantive FO event on February 1-2, 2020.

Figure 1. Sultan River below Powerplant hydrograph – 9/1/2011 to 9/20/2011

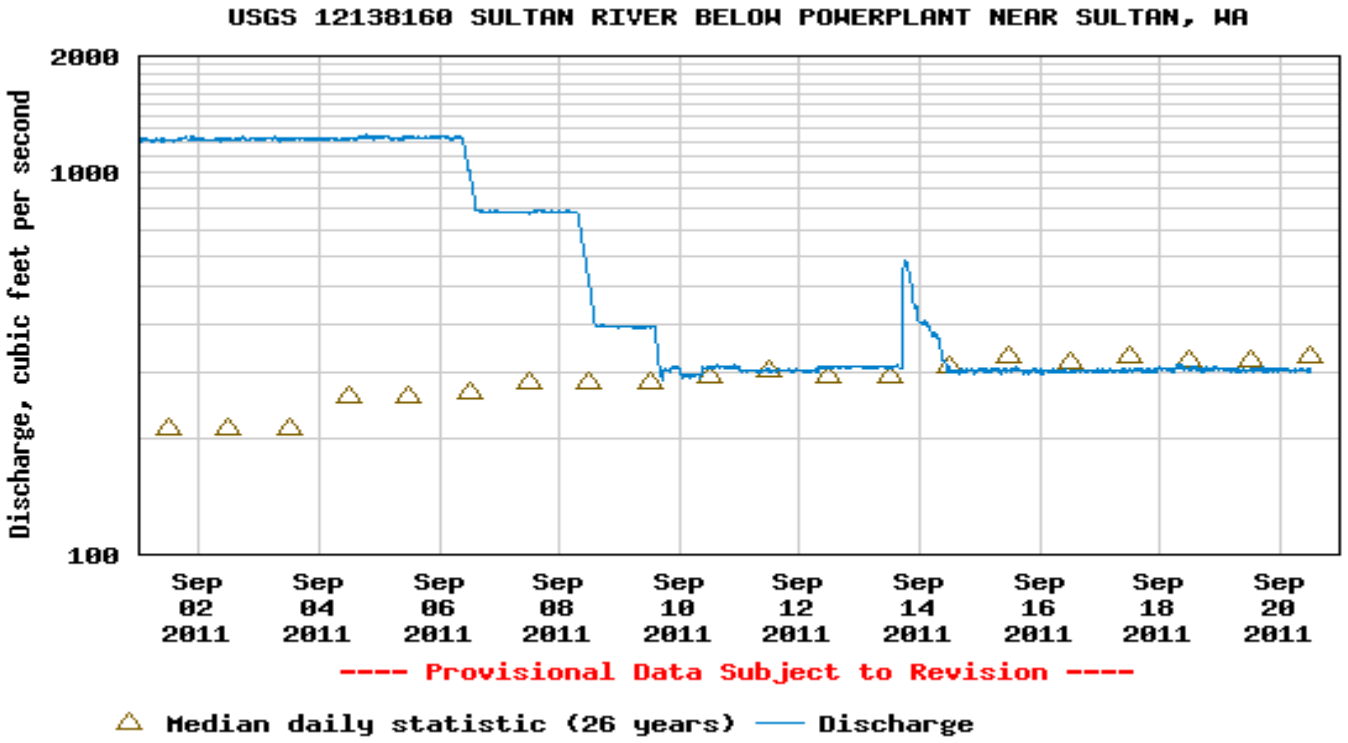


Figure 2. Sultan River below Diversion Dam hydrograph – 9/13/2011 to 9/20/2011

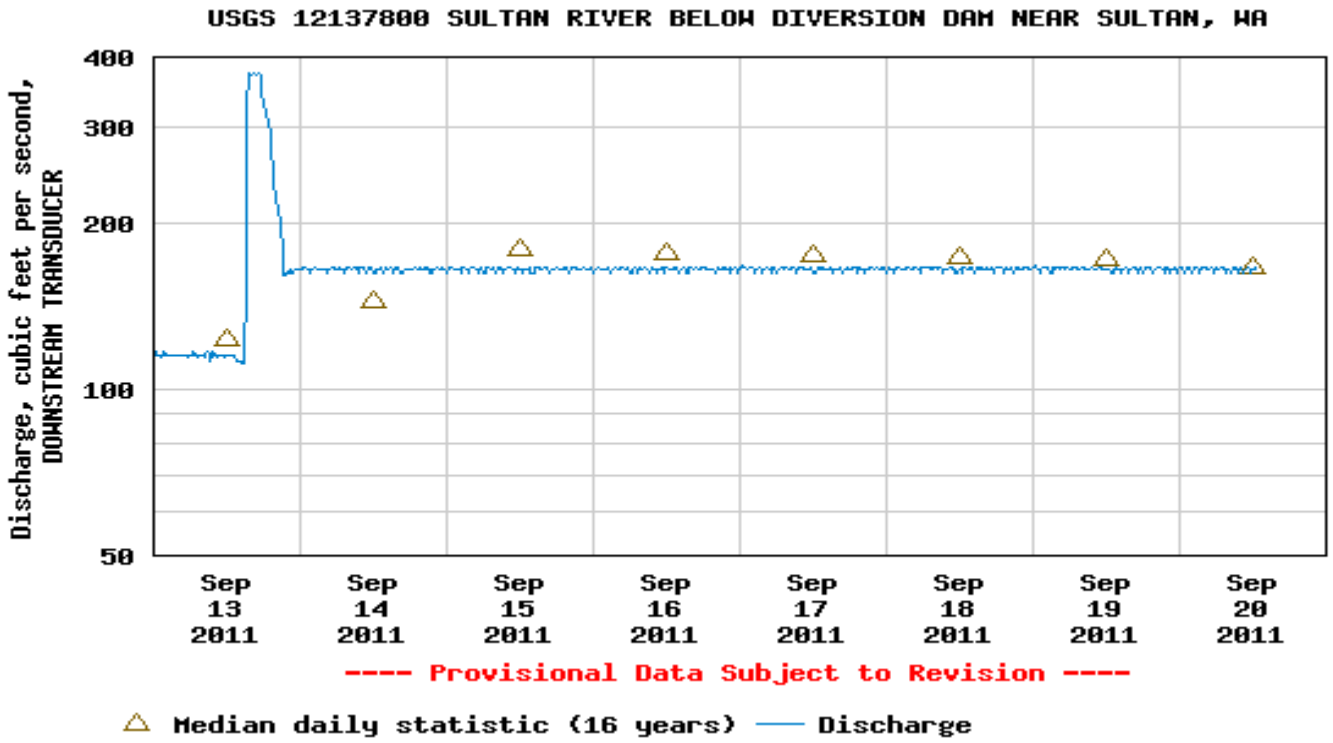


Figure 3. Sultan River below Powerplant hydrograph – 4/2/2012 to 4/9/2012

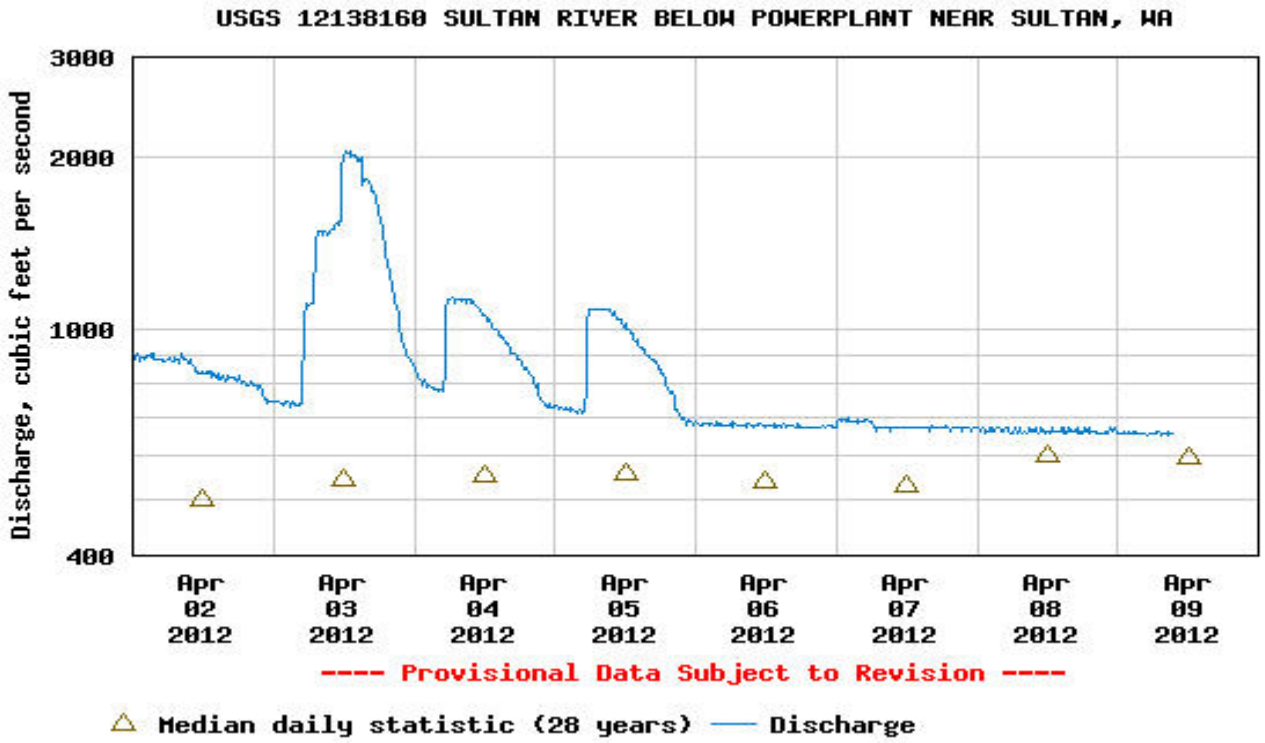


Figure 4. Sultan River, immediately upstream of Powerhouse at RM 4.7, hydrograph – 4/3/2012

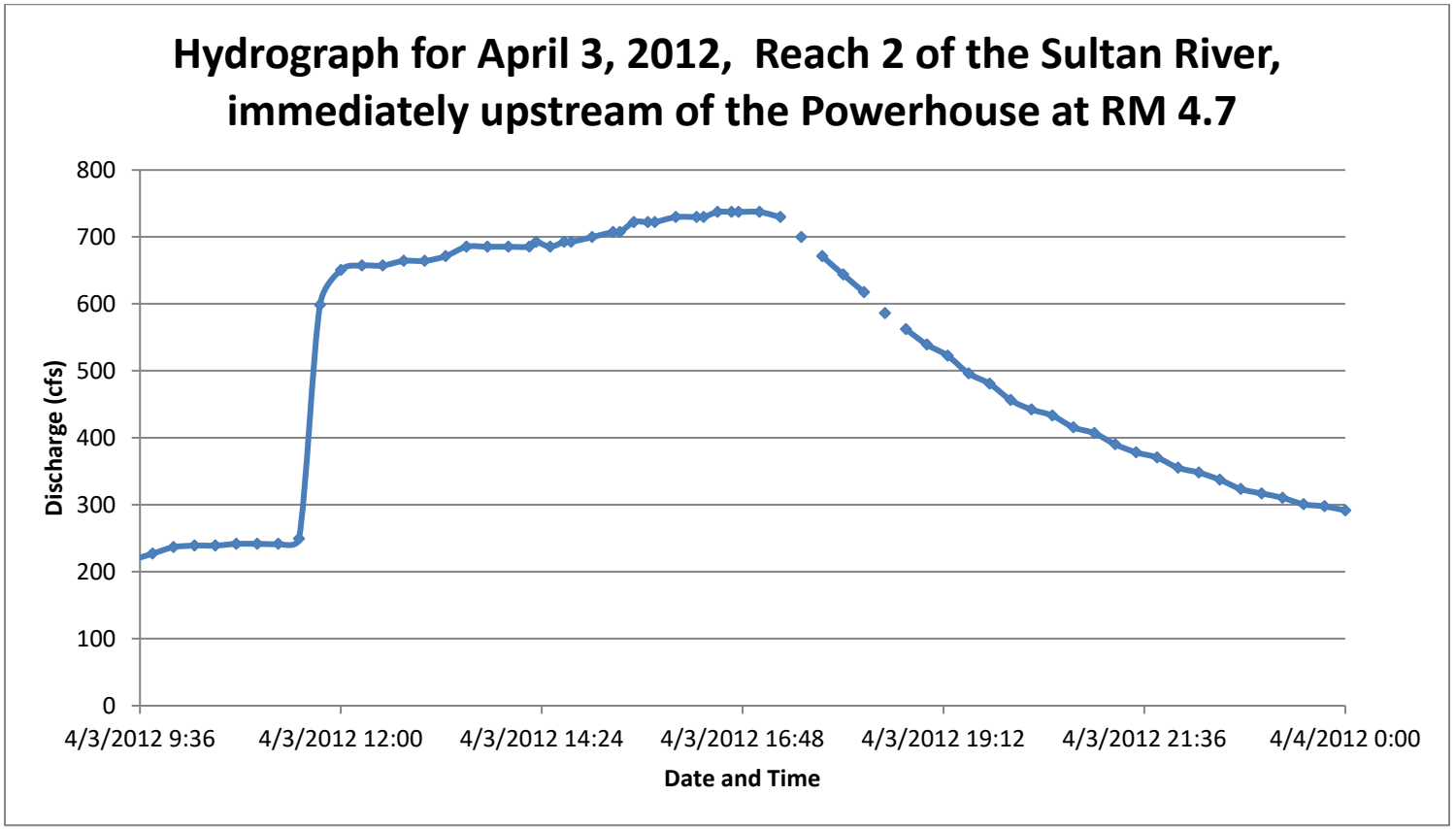


Figure 5. Sultan River, immediately upstream of City's Diversion Dam at RM 9.8, hydrograph – 4/3/2012

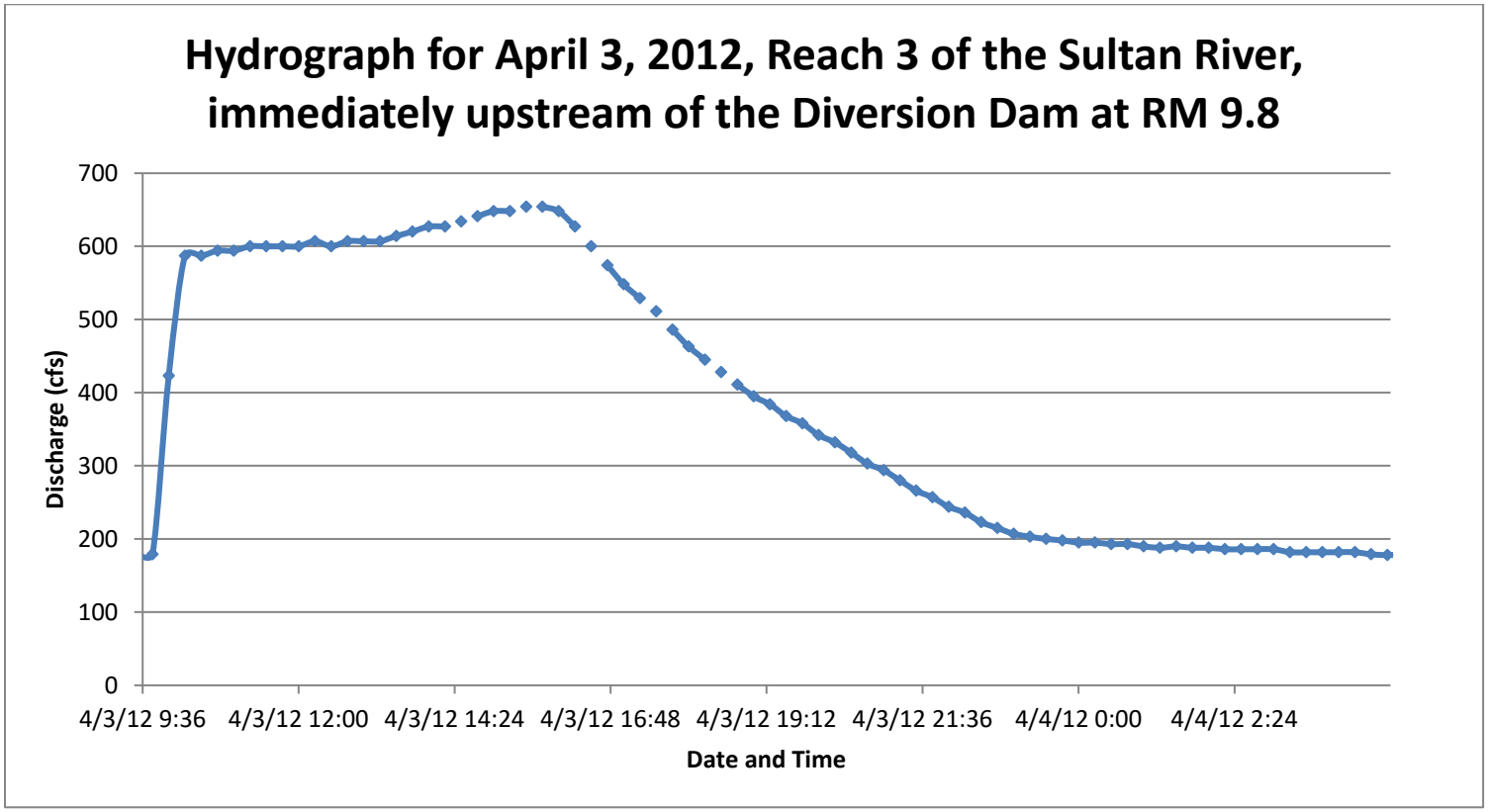


Figure 6. Sultan River below Diversion Dam hydrograph – 5/23/2012

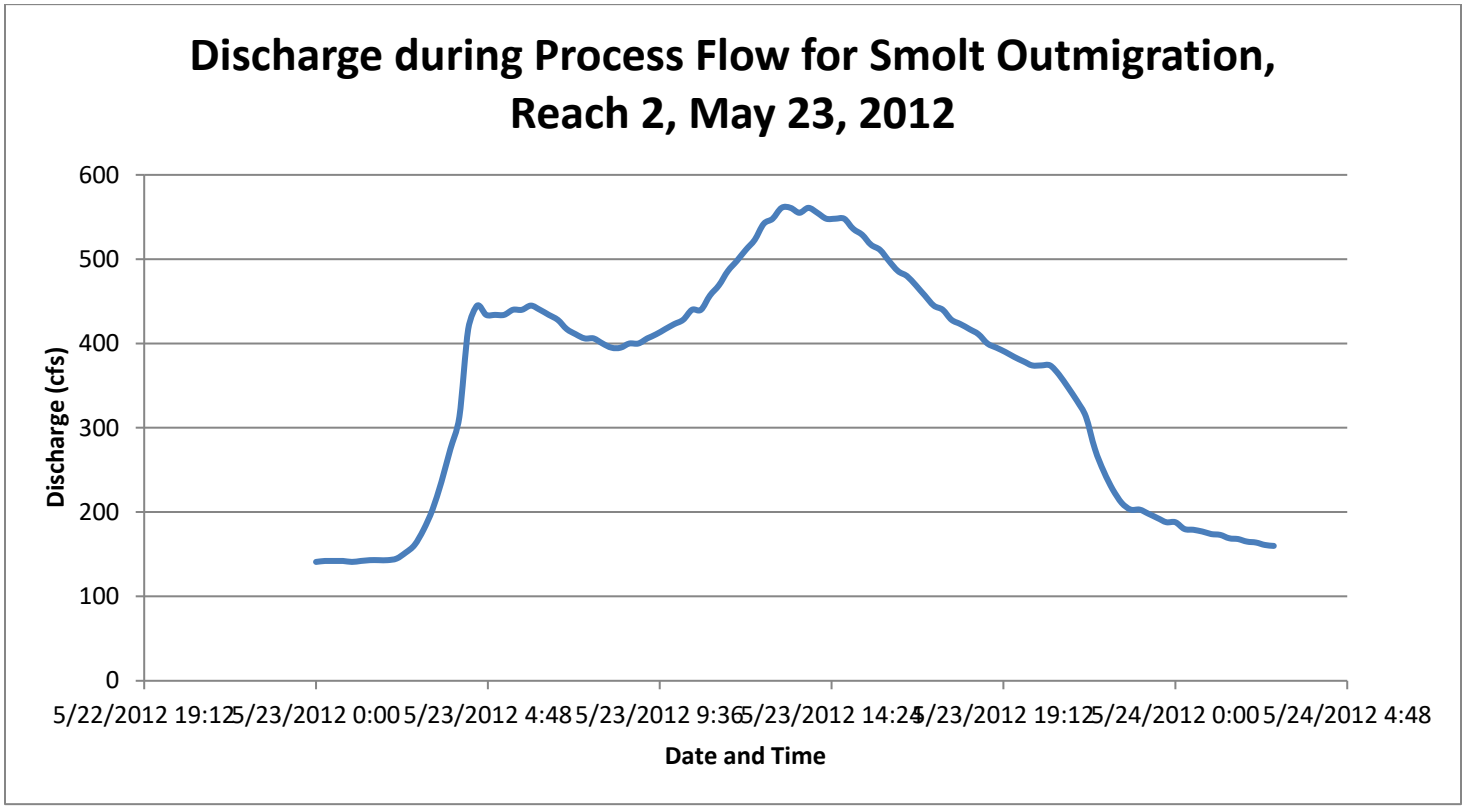


Figure 7. Sultan River below Powerplant hydrograph – 5/22/2012 to 5/31/2012

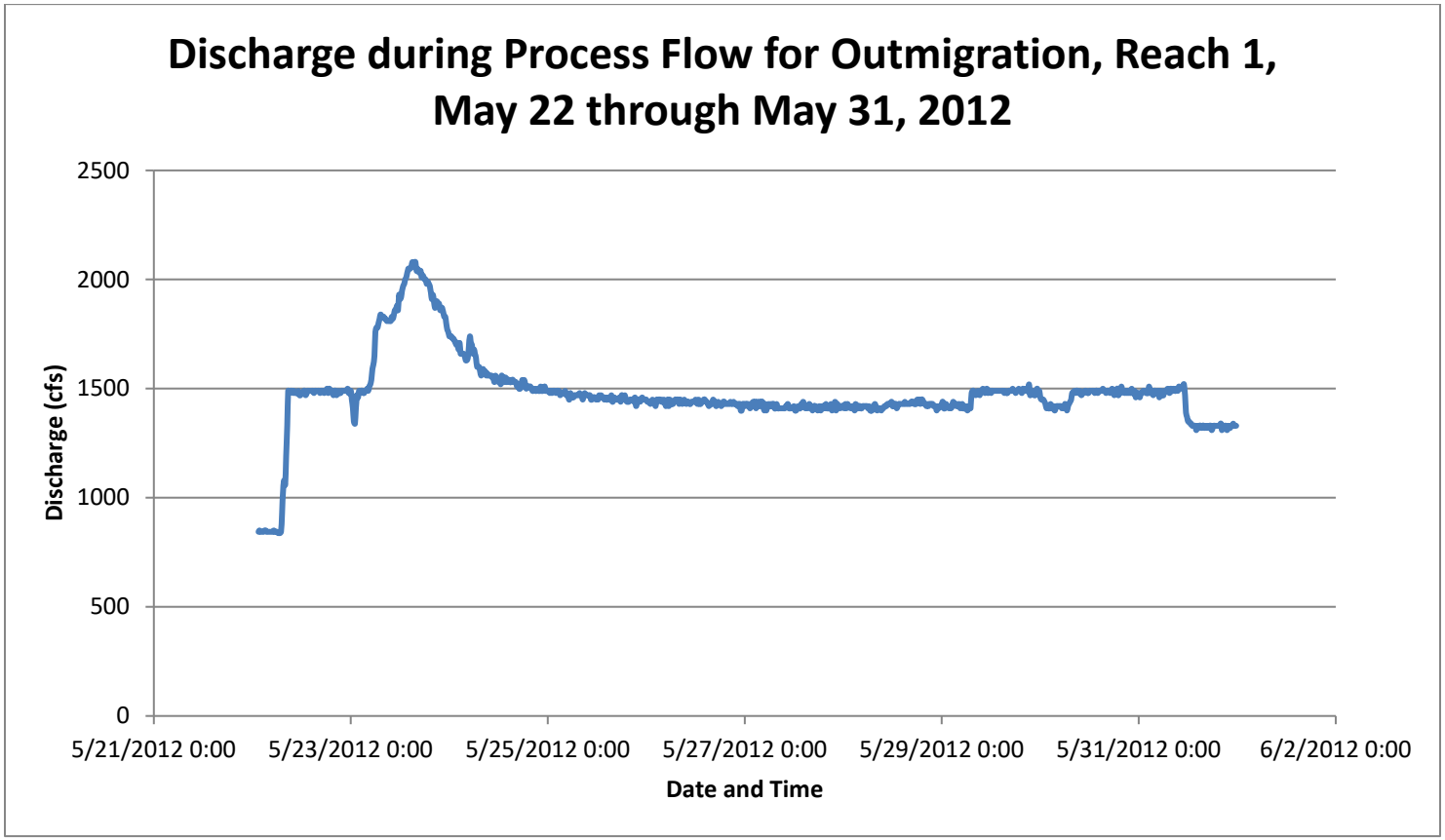


Figure 8. Sultan River below Powerplant hydrograph – 9/13/2012 to 9/15/2012

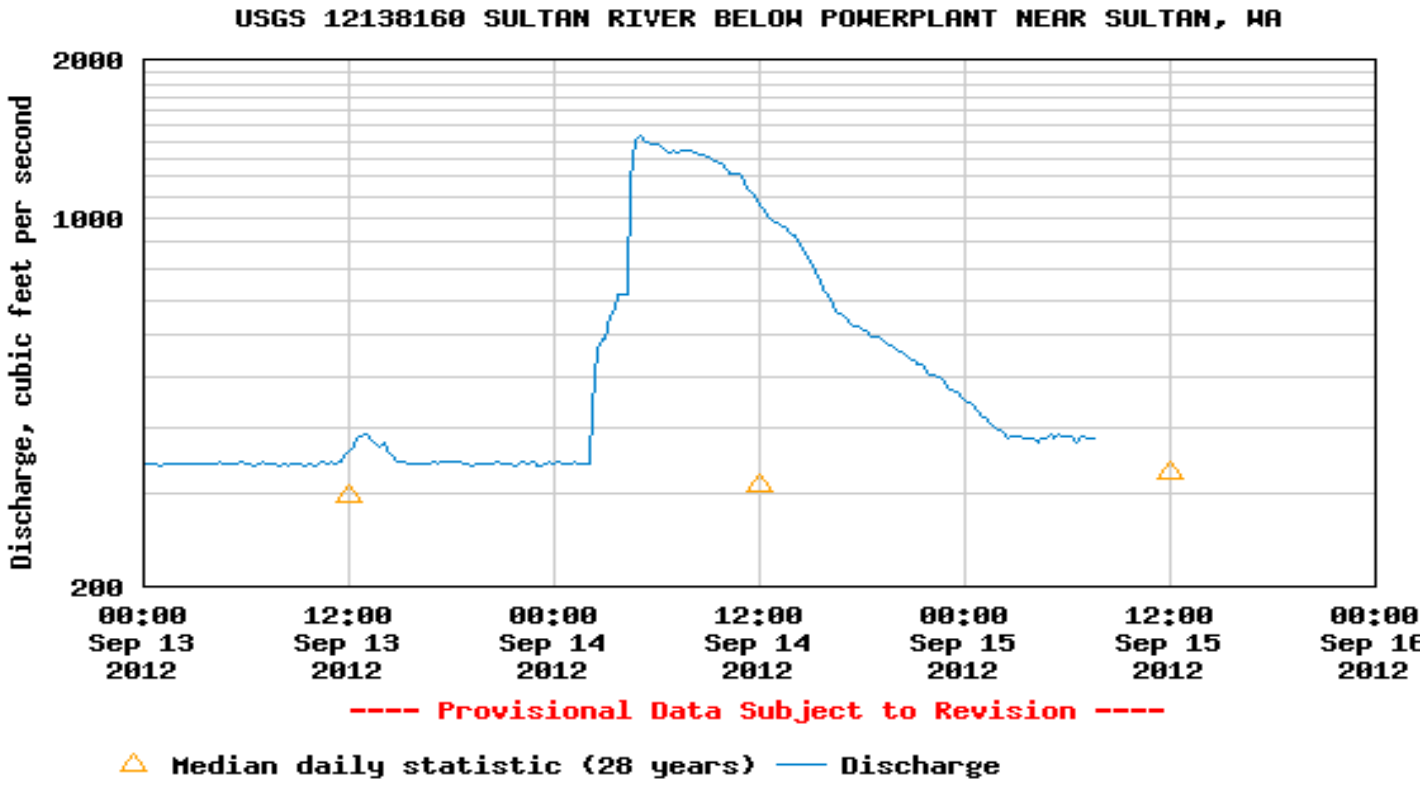


Figure 9. Sultan River, immediately upstream of the Powerhouse at RM 4.7, hydrograph – 9/14/2012

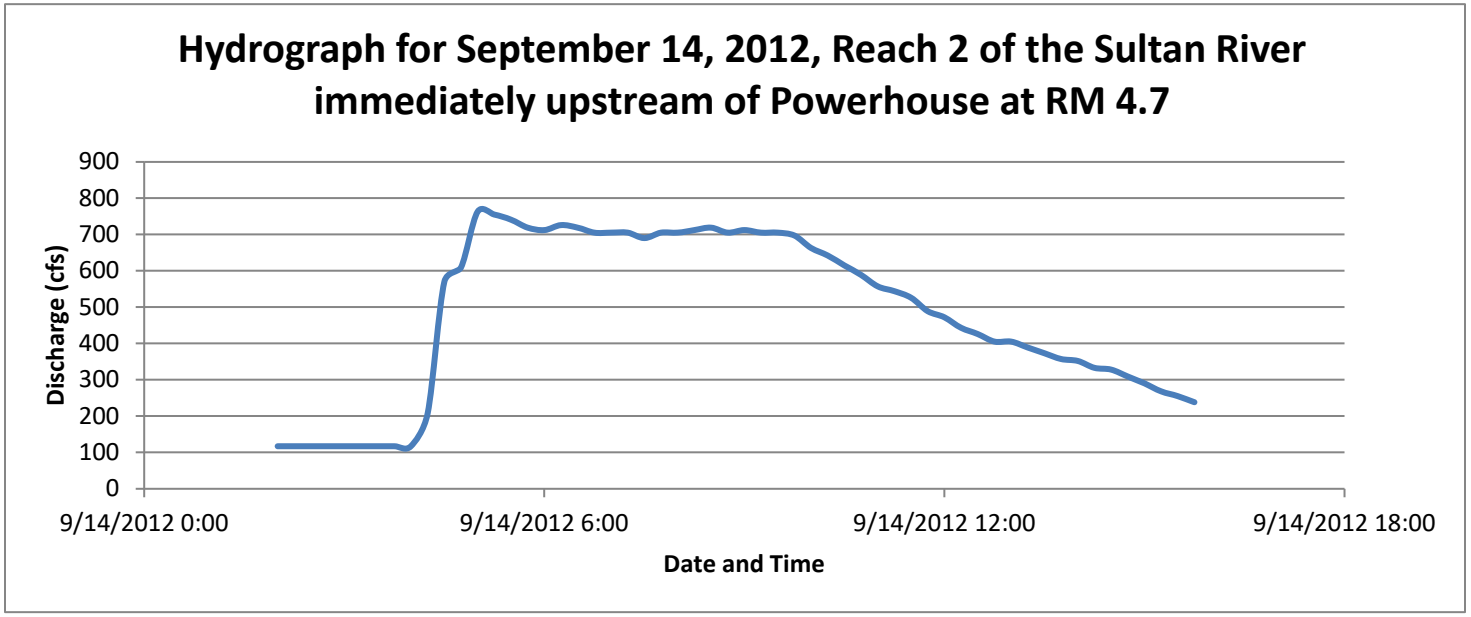


Figure 10. Sultan River, immediately upstream of the City's Diversion Dam at RM 9.8, hydrograph – 9/14/12

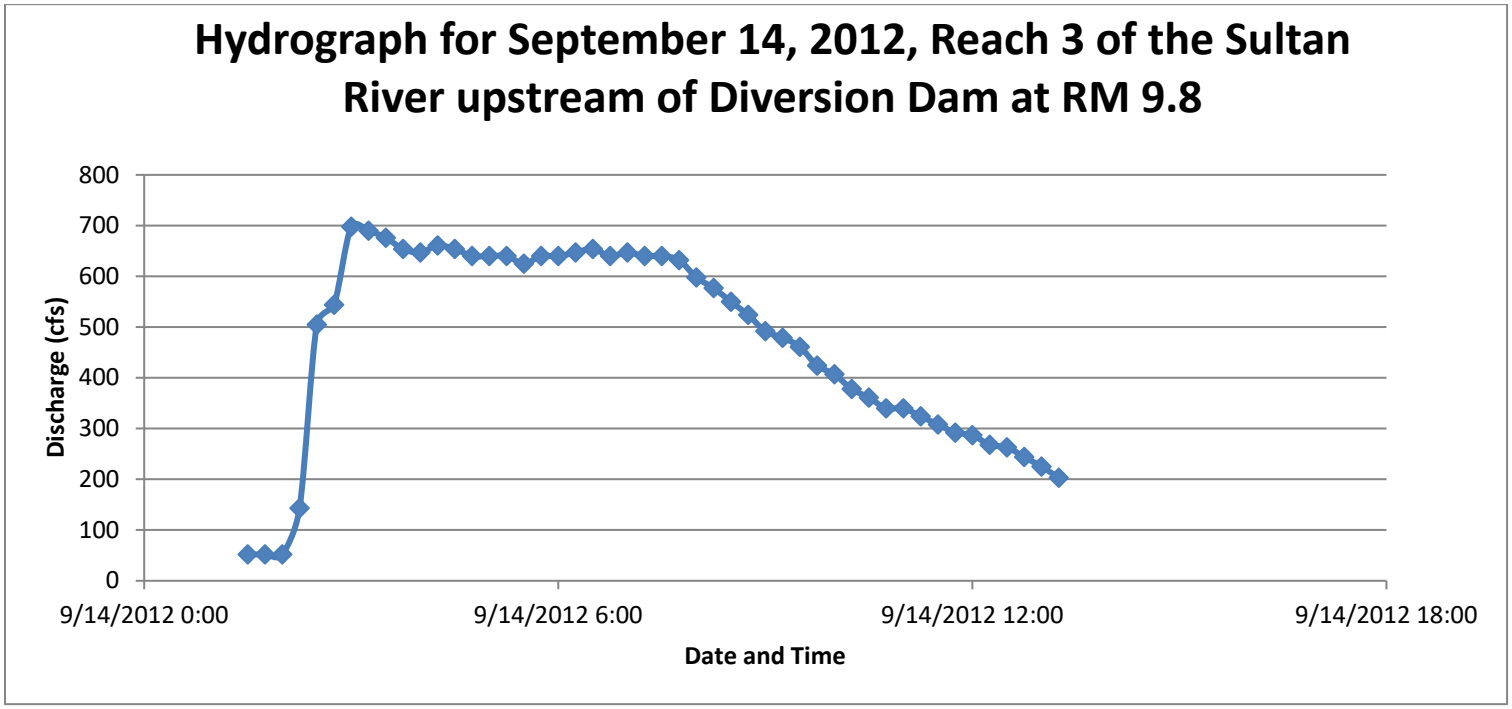


Figure 11. Sultan River below Powerplant hydrograph – 4/1/2013 to 4/10/2013

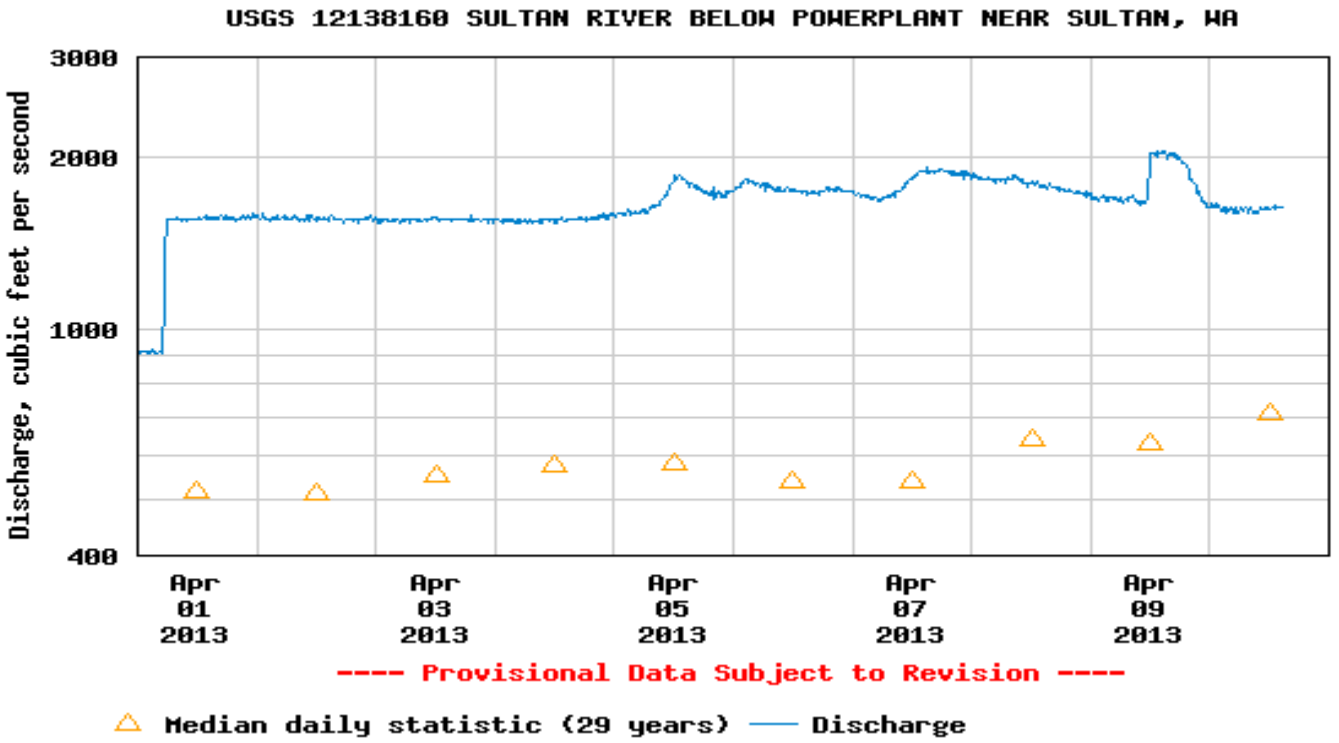


Figure 12. Sultan River, immediately upstream of Powerhouse, at RM 4.7 hydrograph – 4/9/2013

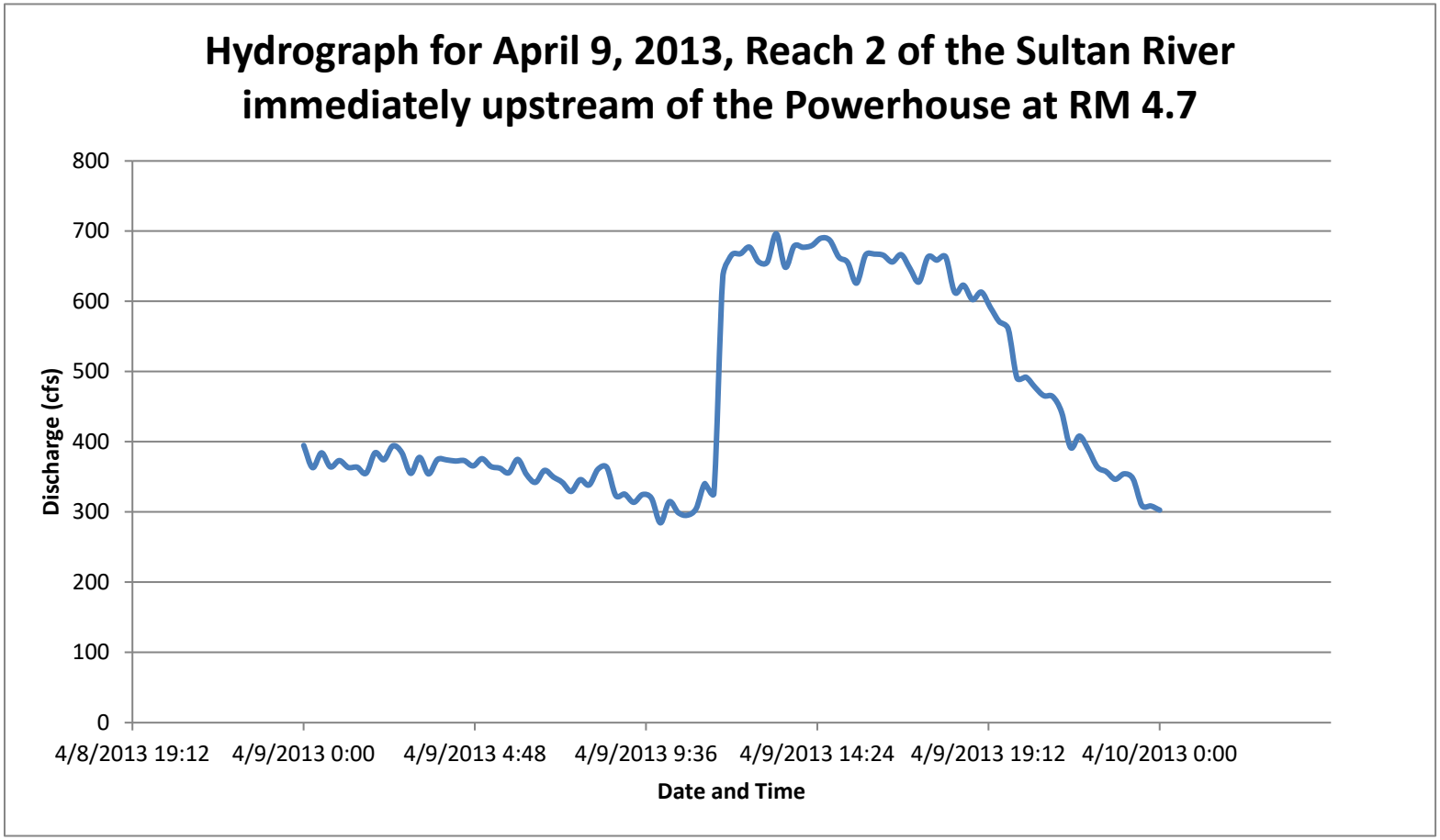


Figure 13. Sultan River, immediately upstream of the City's Diversion Dam at RM 9.8 – 4/9/2013

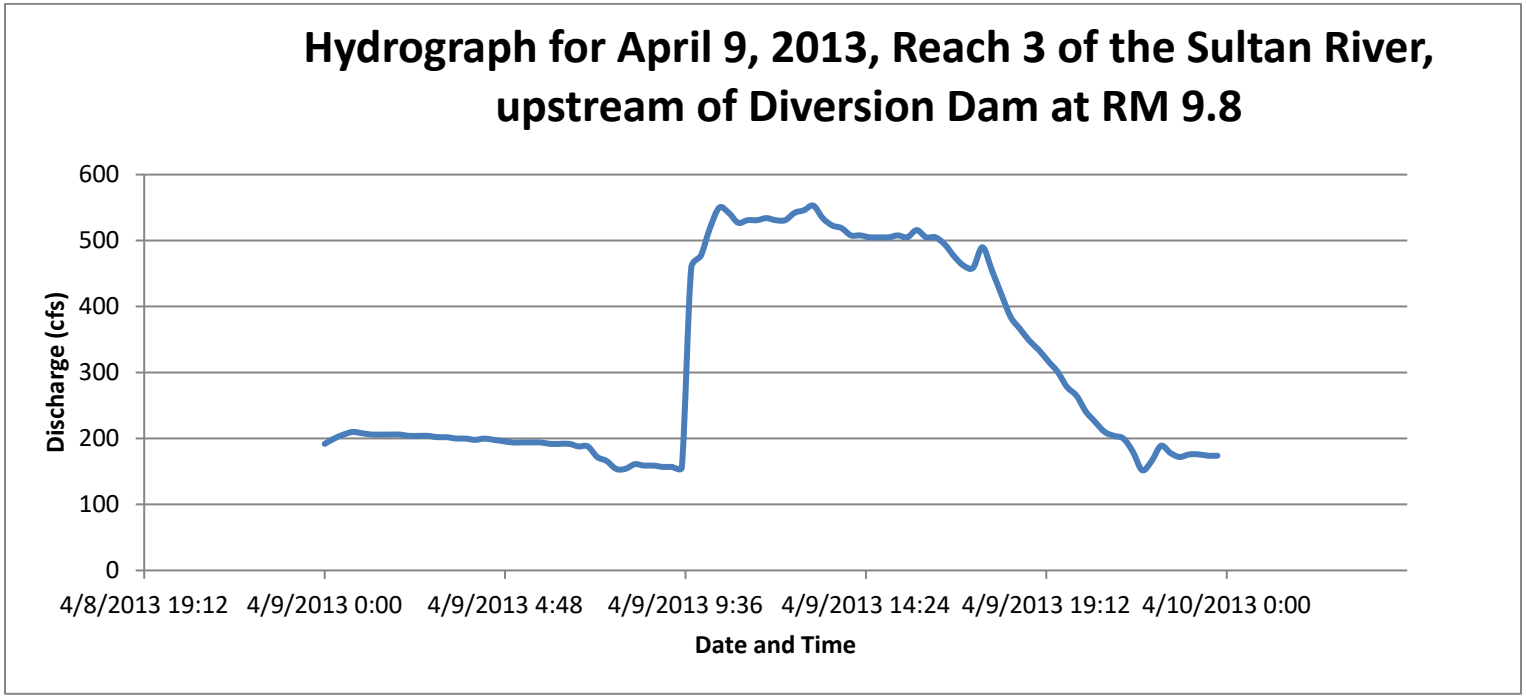


Figure 14. Sultan River immediately upstream of Powerhouse, at RM 4.7 hydrograph – 5/6/2013 to 5/7/2013

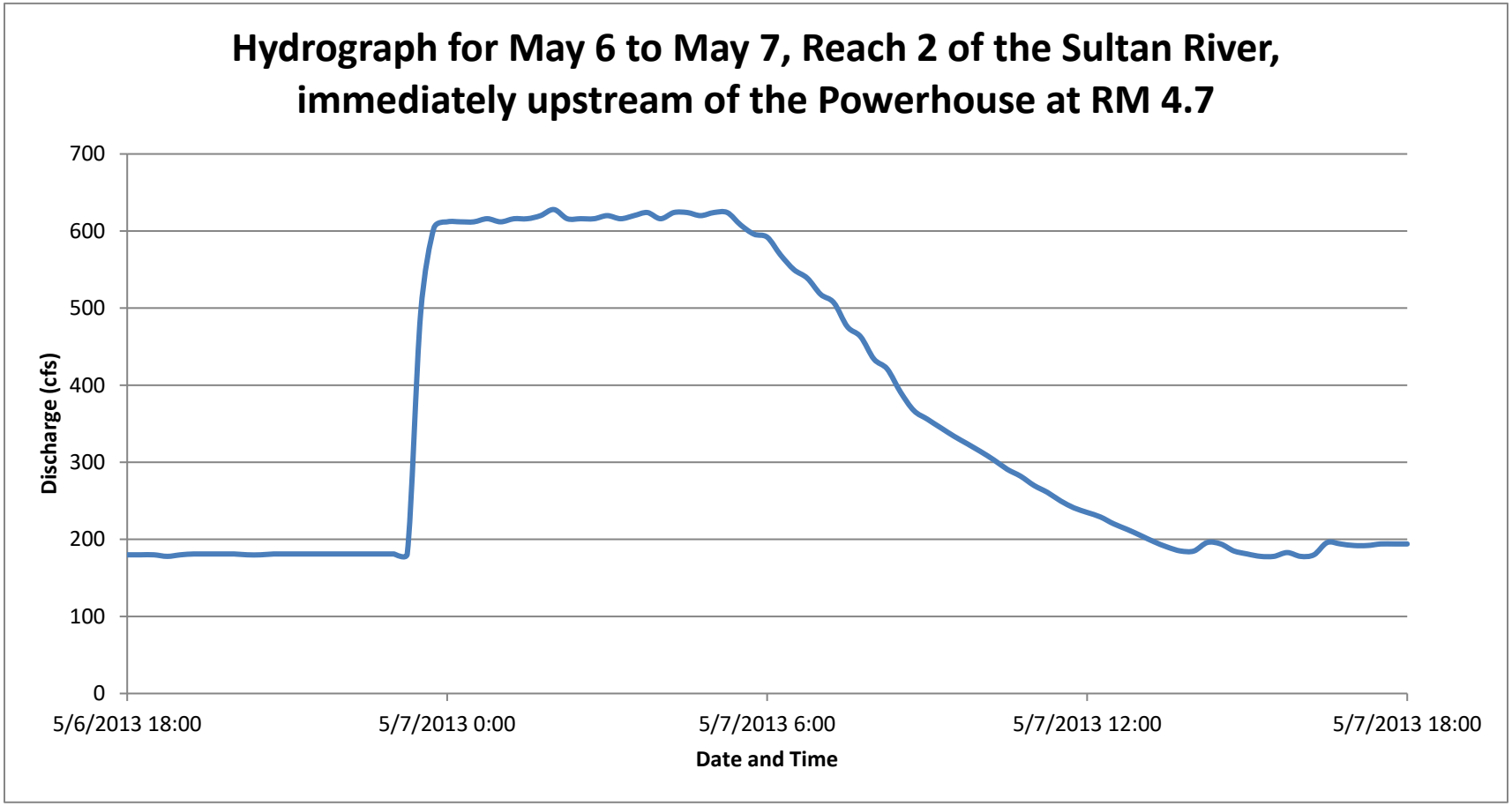


Figure 15. Sultan River below Powerplant hydrograph, 5/1/2013 to 5/8/2013

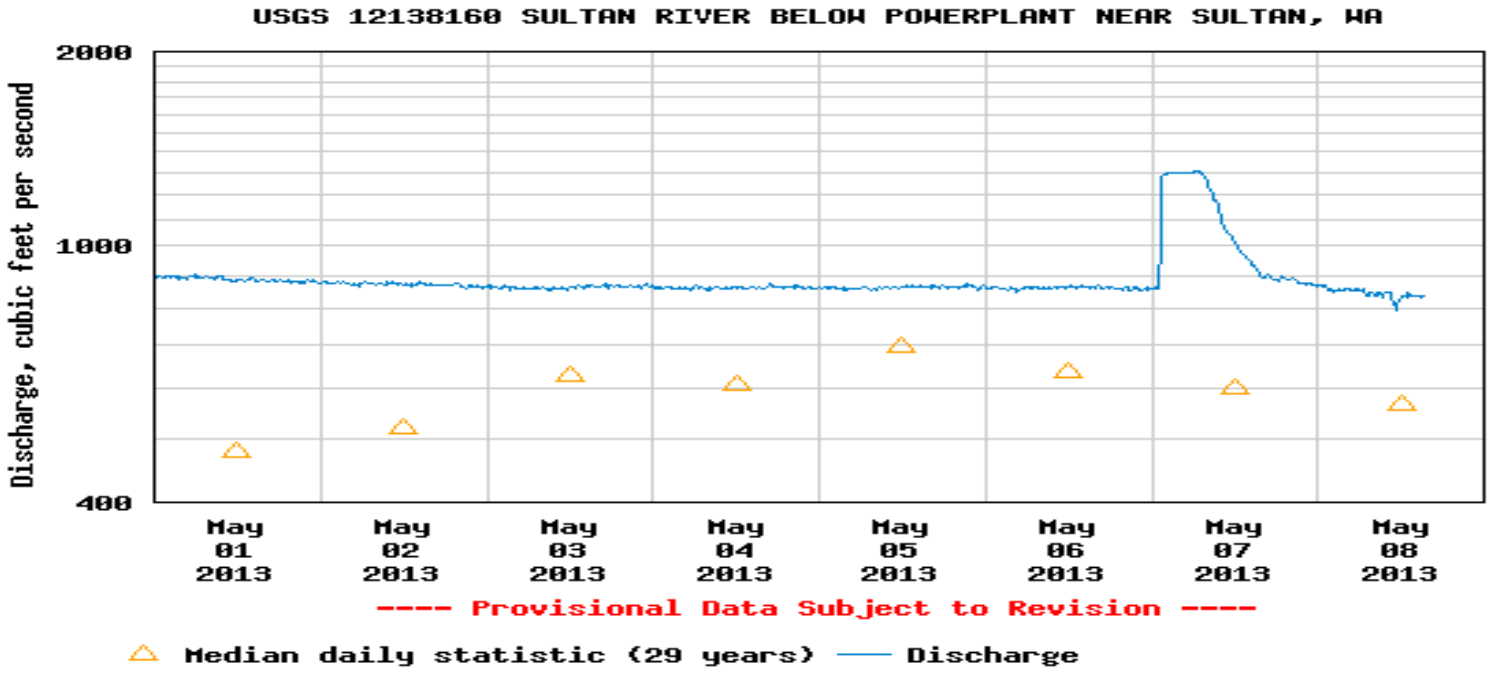


Figure 16. Sultan River below Powerplant hydrograph – 9/10/2013 to 9/24/2013

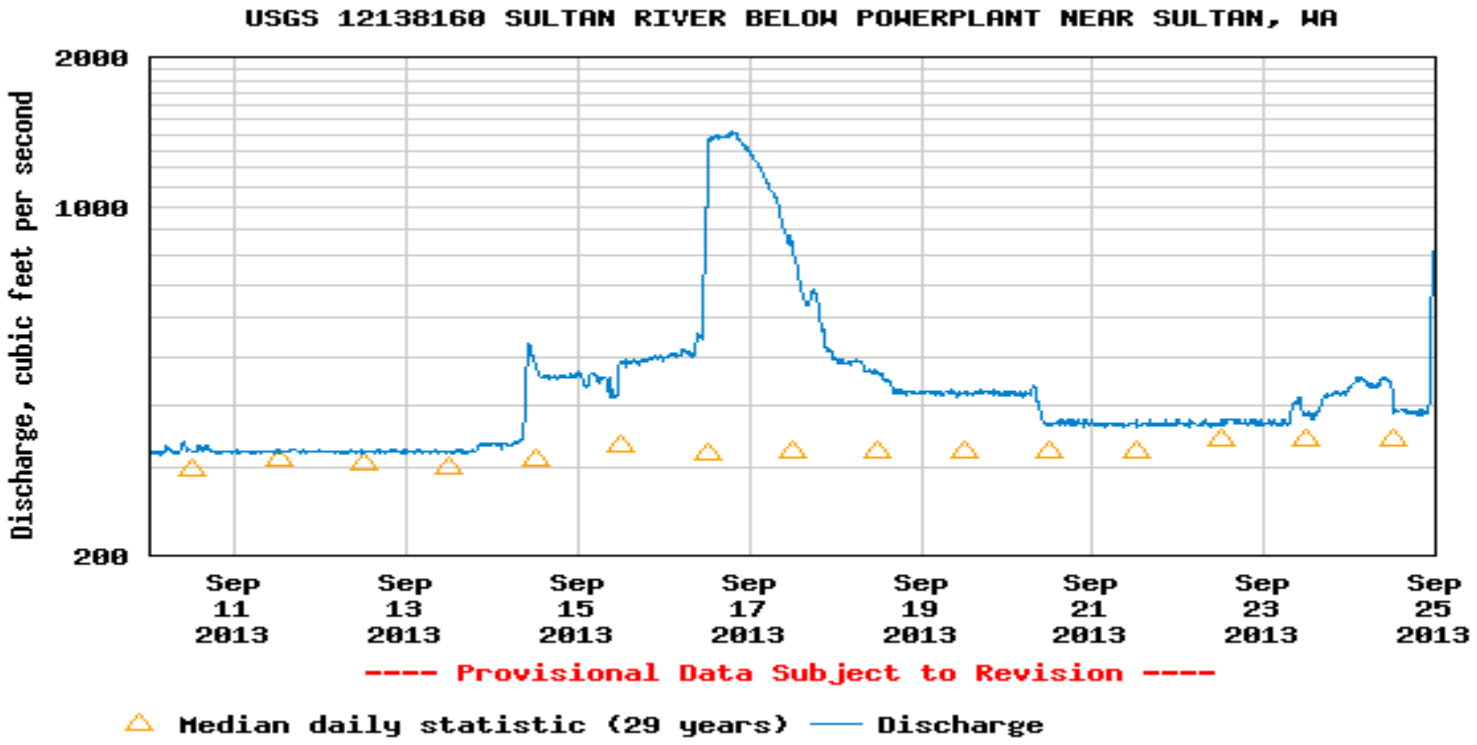


Figure 17. Sultan River immediately upstream of Powerhouse at RM 4.7 hydrograph – 9/24/2013 to 9/25/2013

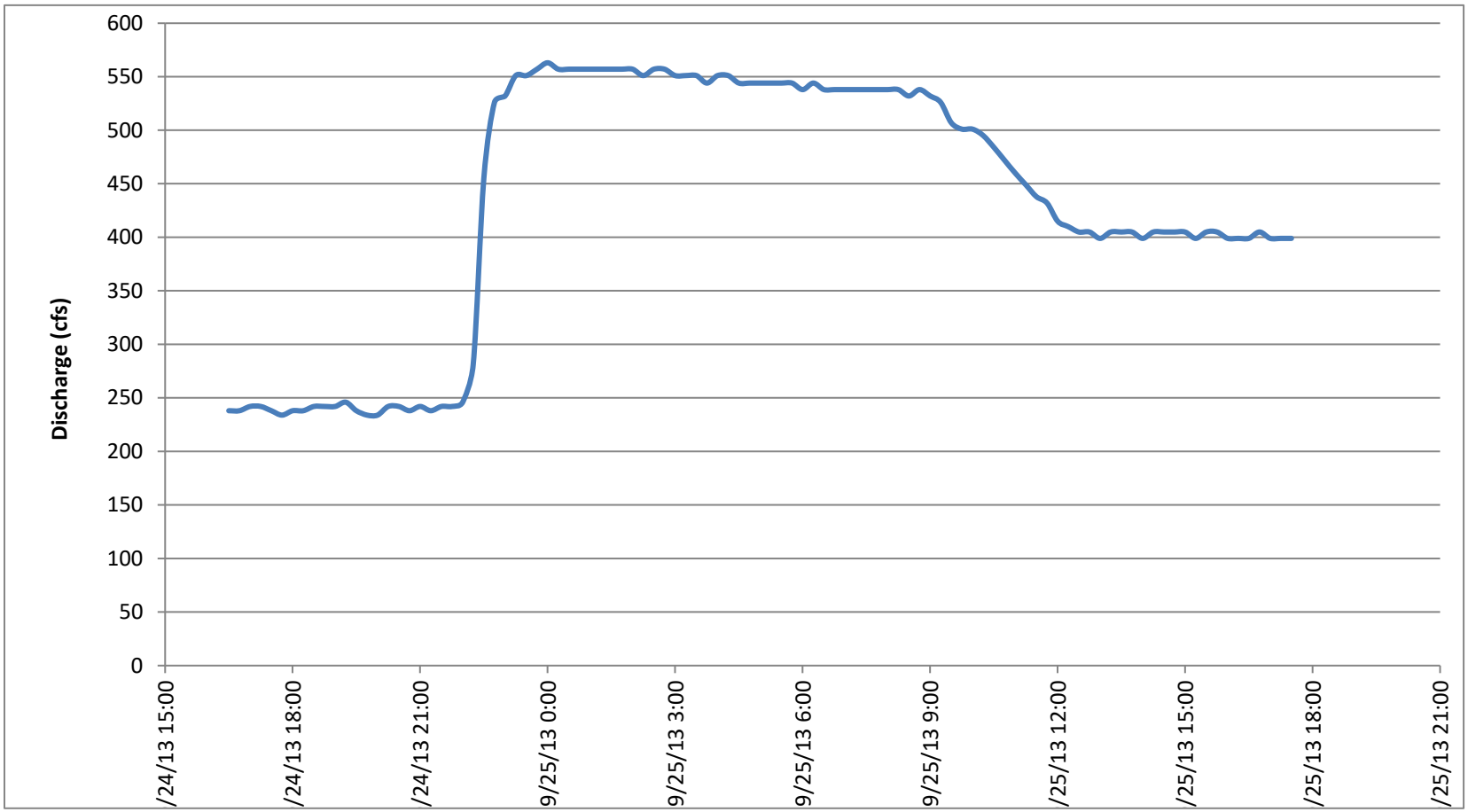


Figure 18. Sultan River, immediately upstream of City's Diversion Dam at RM 9.8, hydrograph – 9/24/2013 to 9/25/13

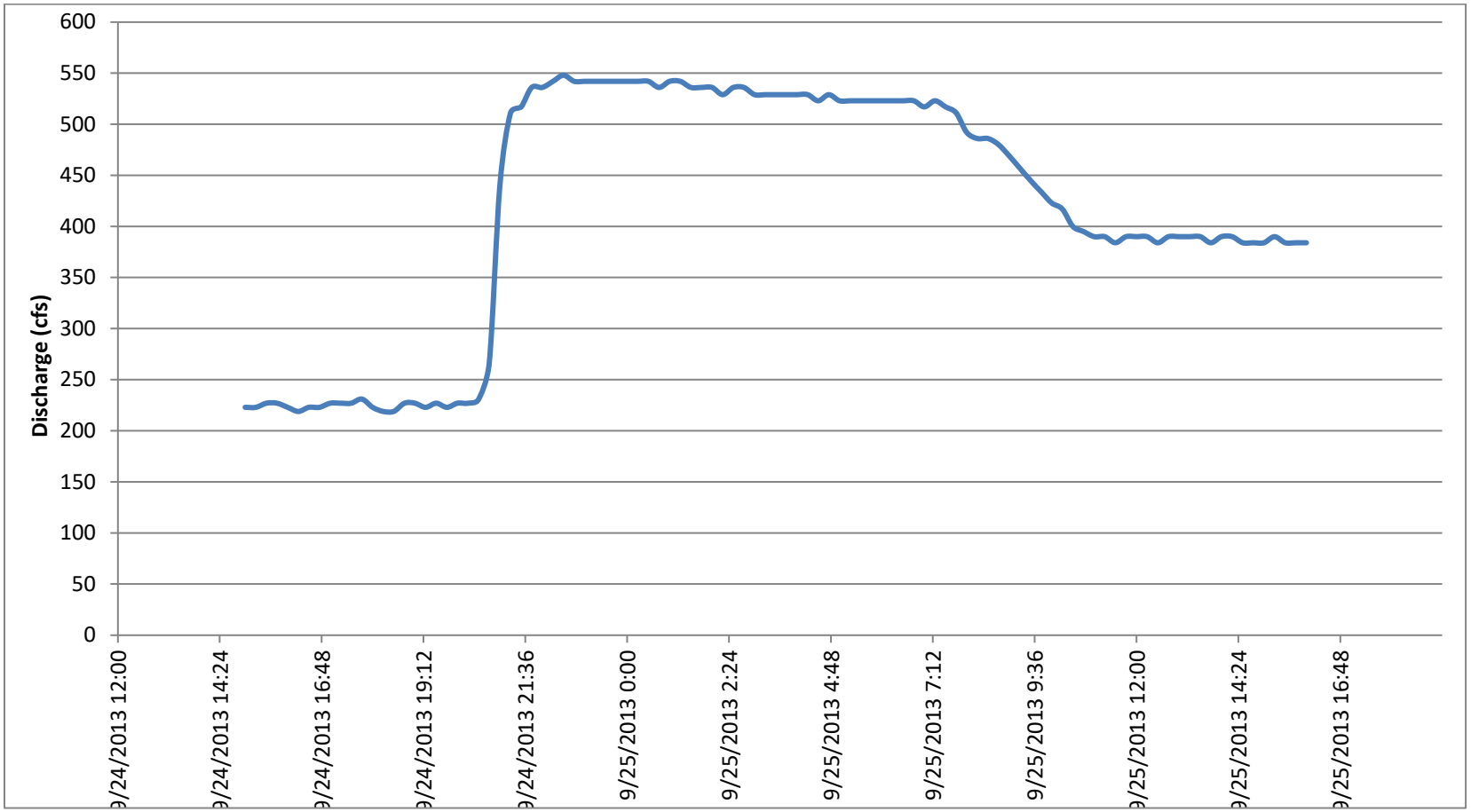


Figure 19. Sultan River below Powerplant hydrograph – 12/01/2013

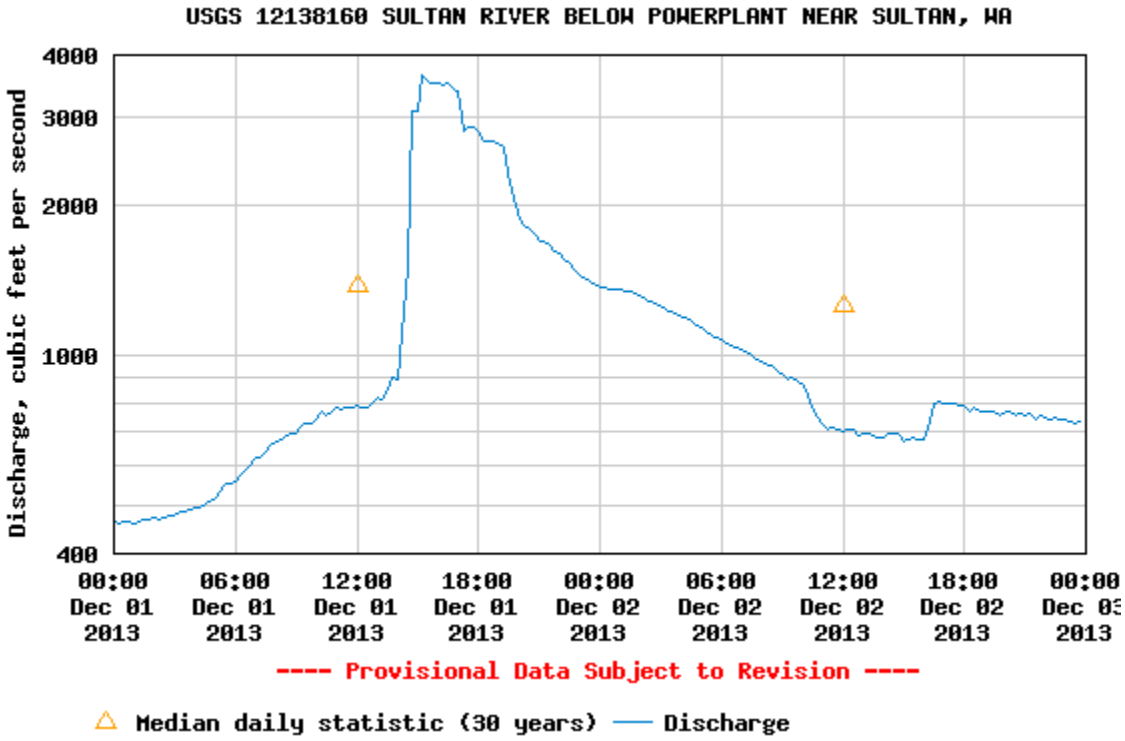


Figure 20. Sultan River below Powerplant hydrograph – 3/16/2014 to 3/17/2014

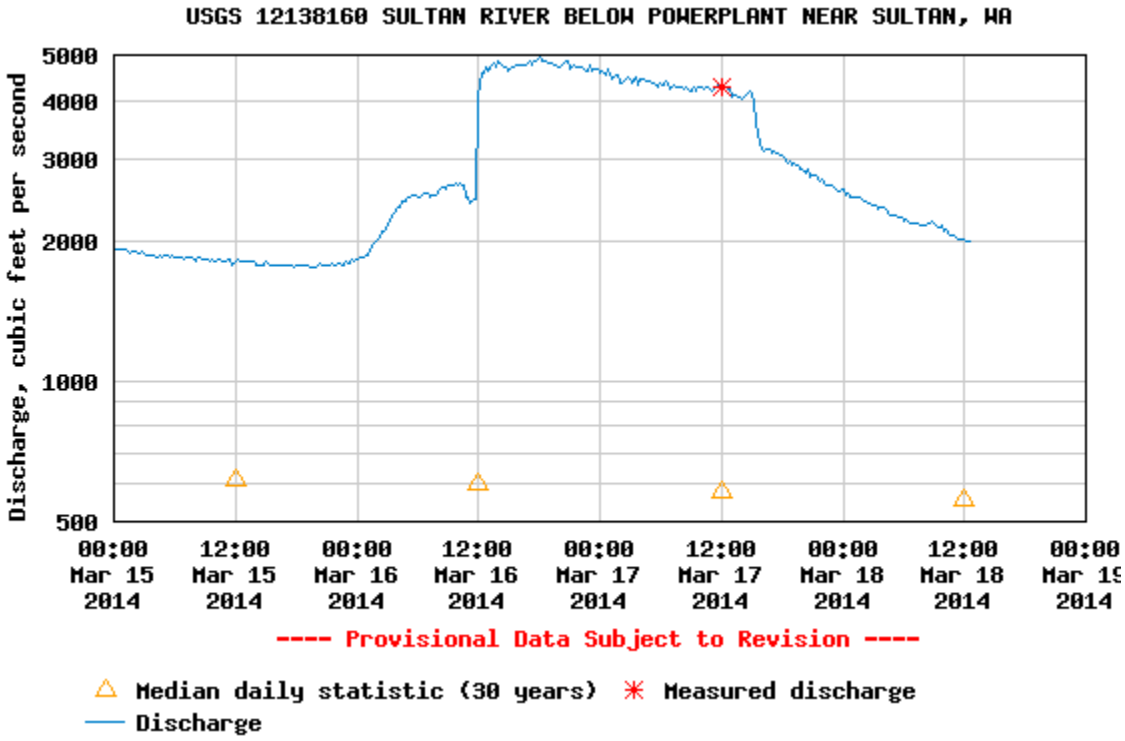


Figure 21. Sultan River below Powerplant hydrograph – 4/01/2014 to 4/04/2014

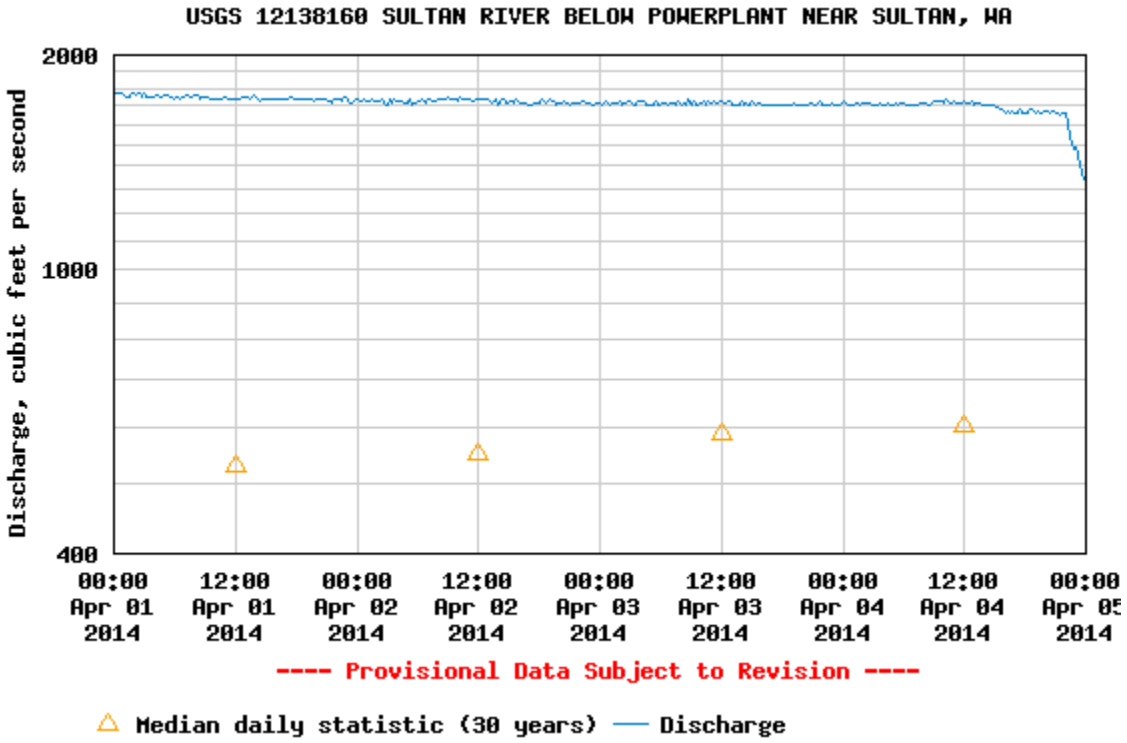


Figure 22. Sultan River below Diversion Dam hydrograph – 4/14/2014 to 4/21/2014

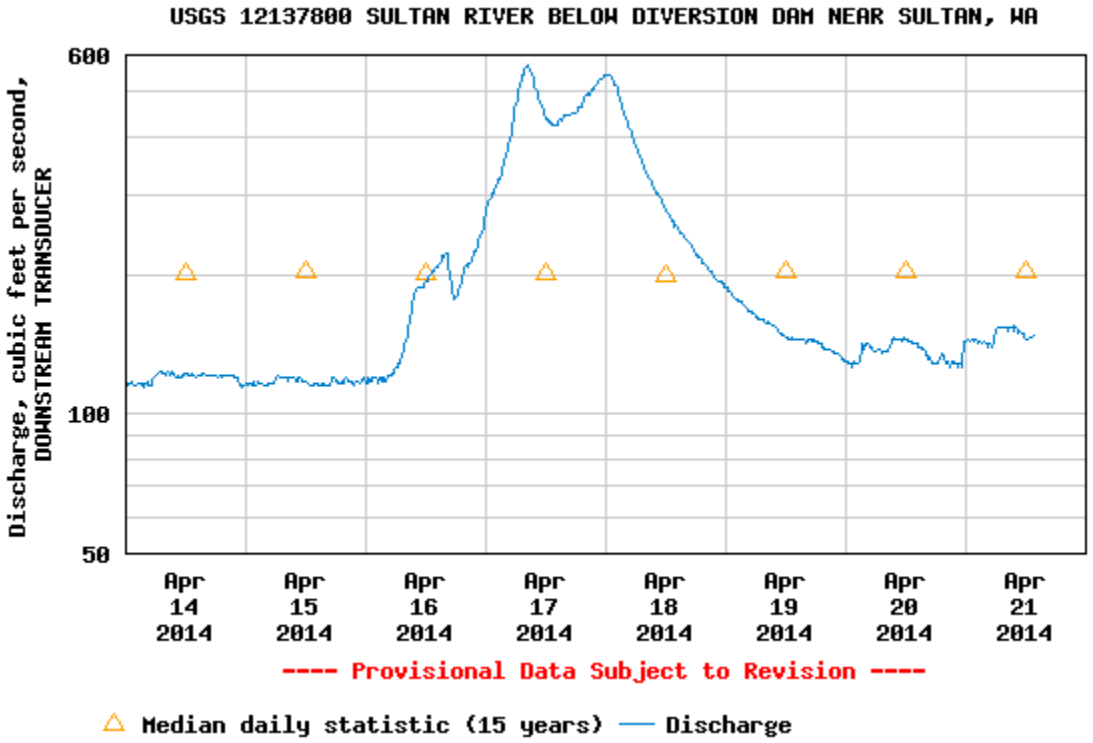


Figure 23. Sultan River below Powerplant hydrograph – 4/17/2014

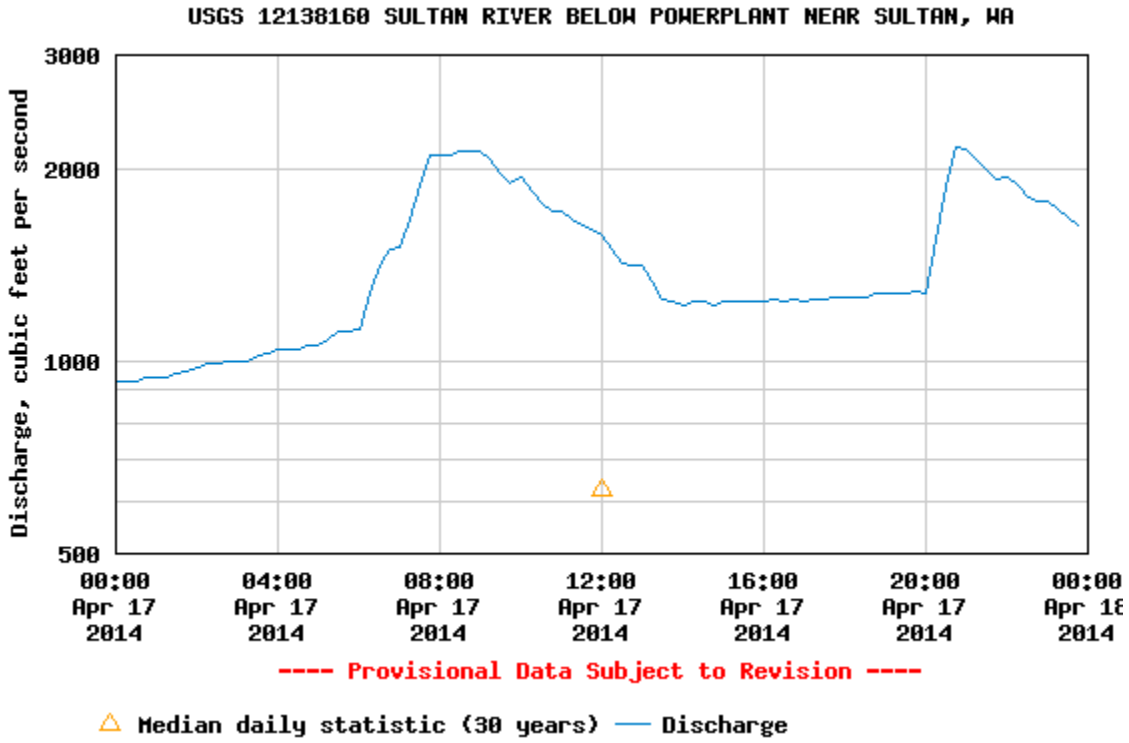


Figure 24. Sultan River immediately upstream of Powerhouse at RM 4.7 – 5/21/2014

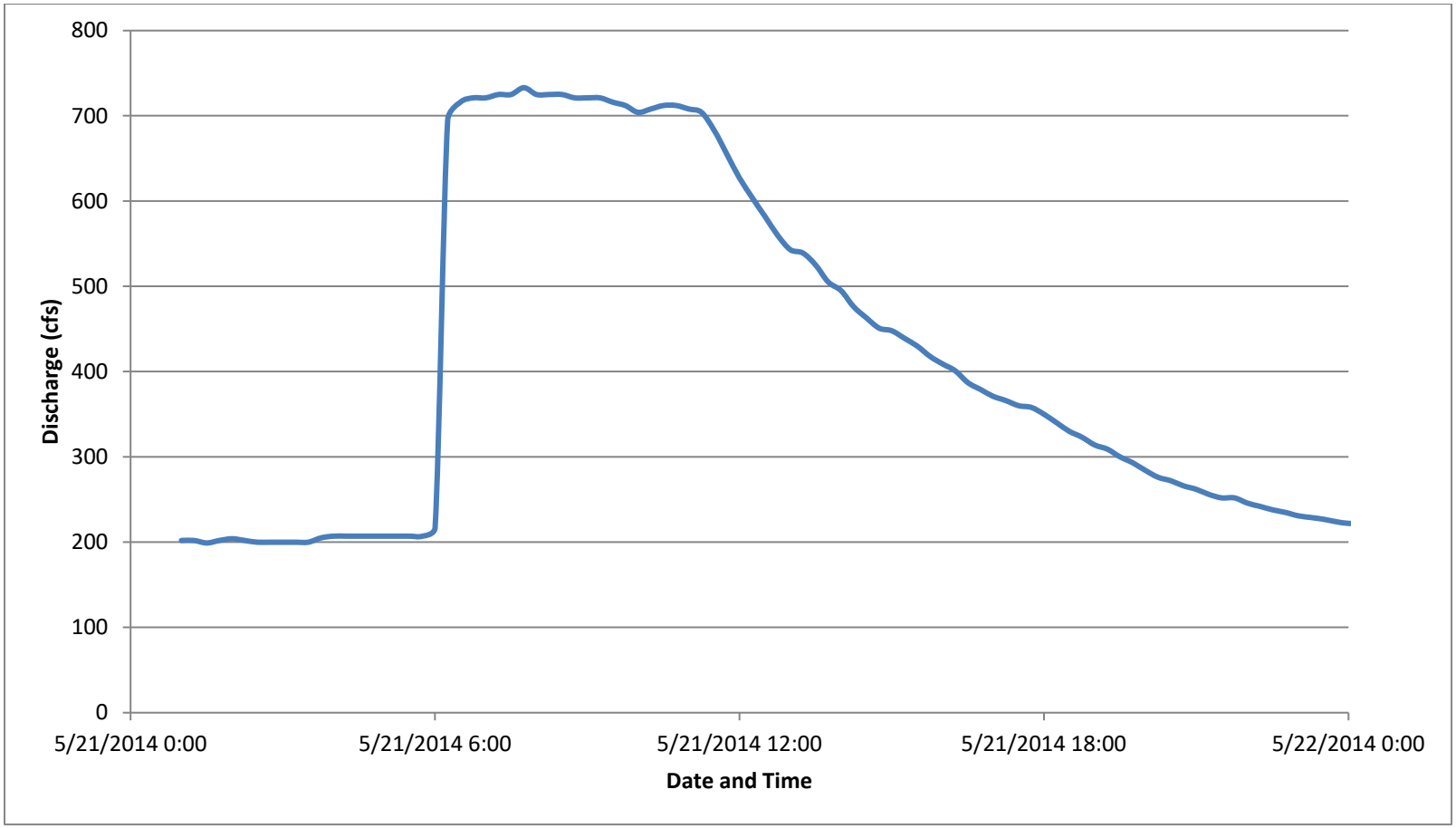


Figure 25. Sultan River below Powerplant hydrograph – 5/21/2014

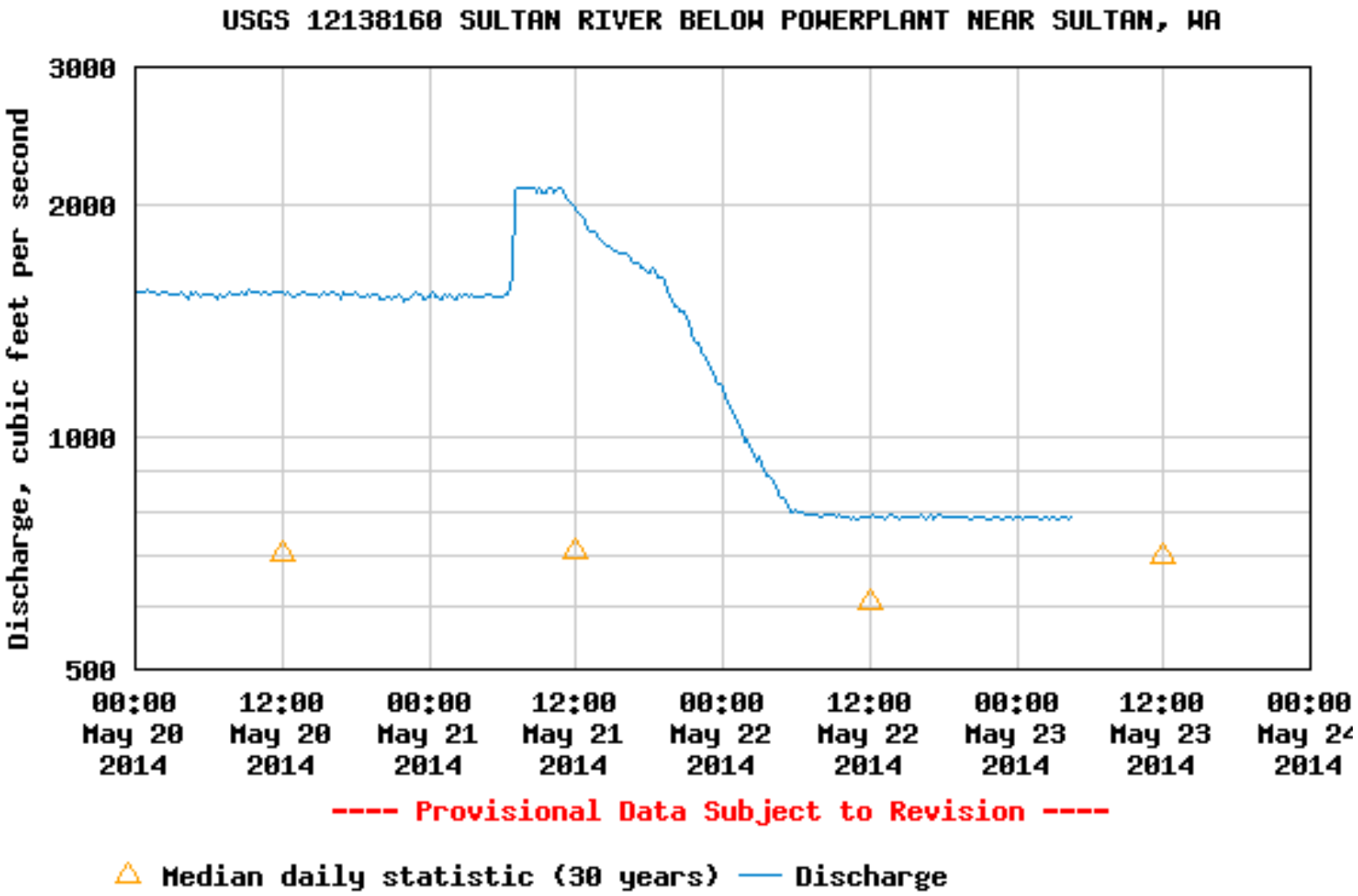


Figure 26. Sultan River below Powerplant hydrograph – 9/12/2014 to 9/13/2014

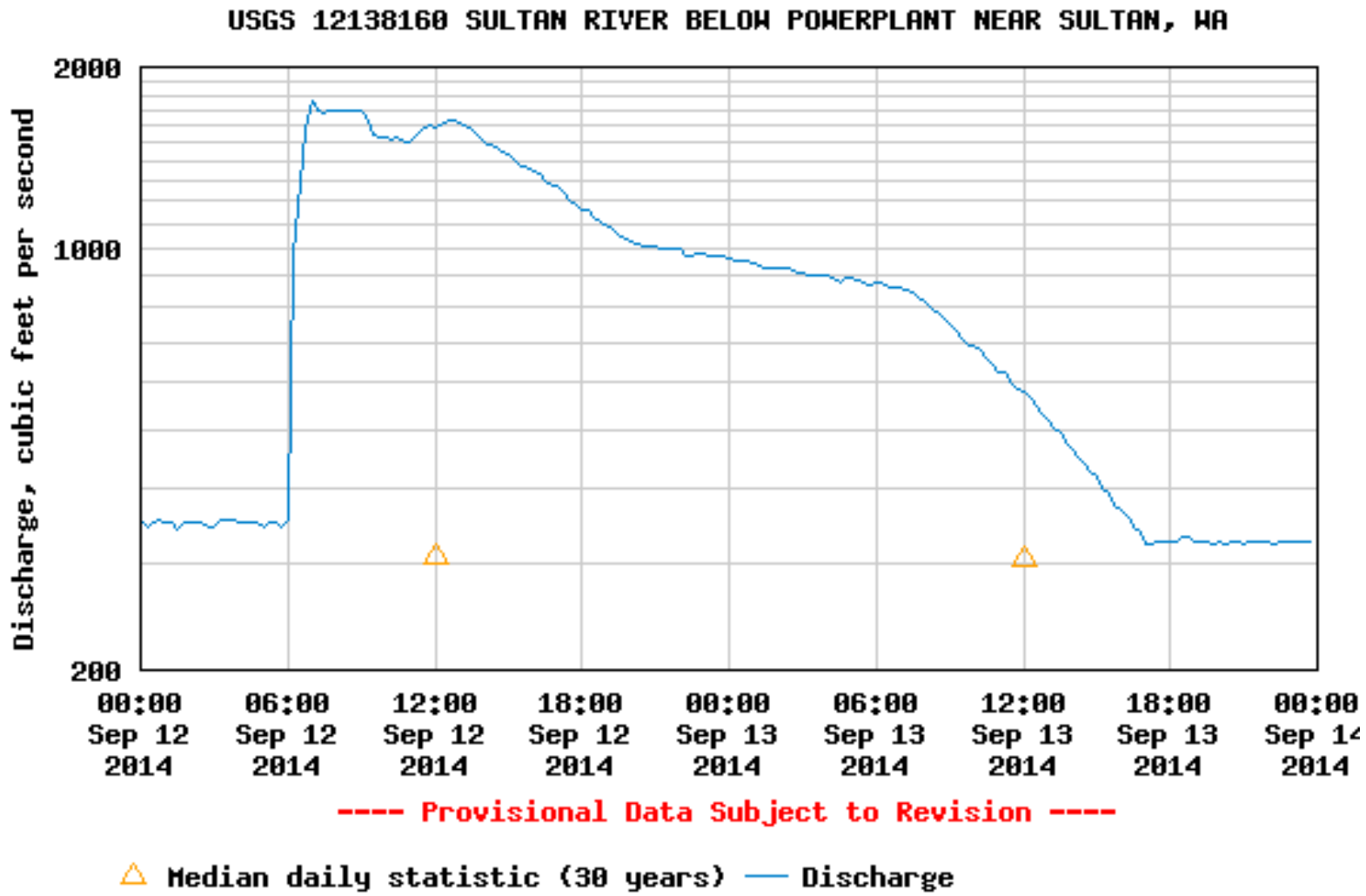


Figure 27. Sultan River below Diversion Dam hydrograph – 9/12/2014

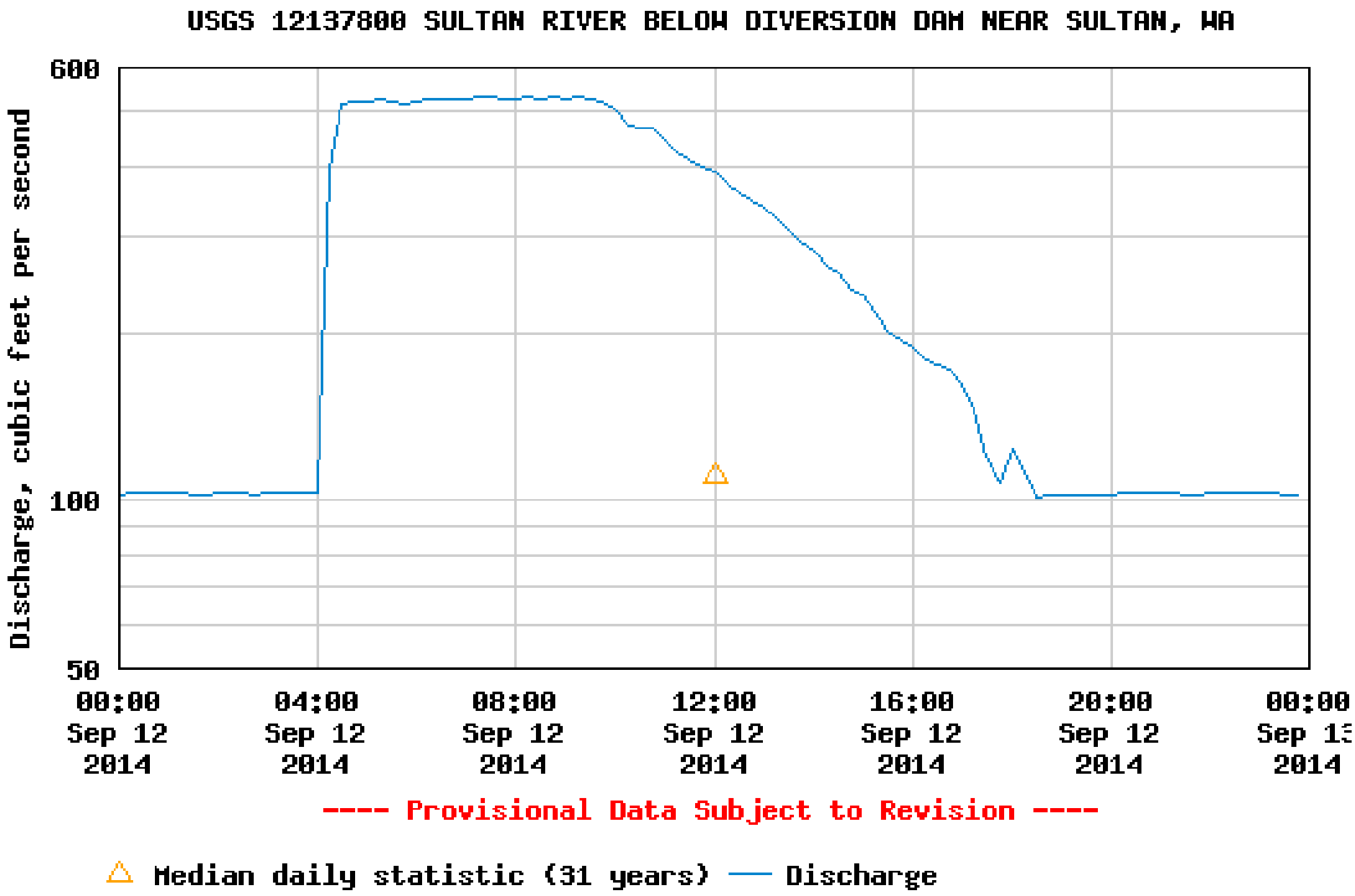


Figure 28. Sultan River below Powerplant hydrograph – 11/04/2014 to 11/05/2014

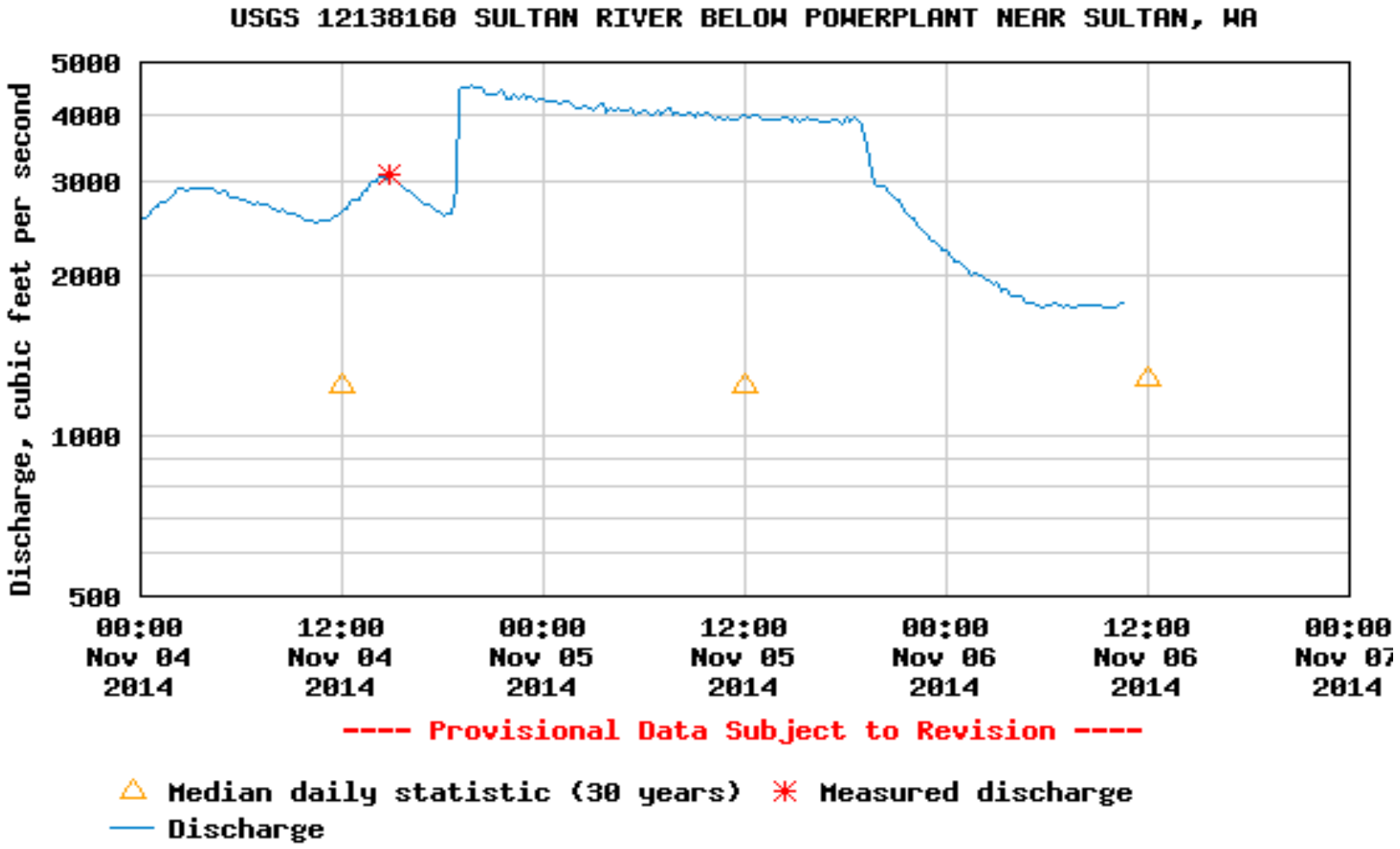


Figure 29. Sultan River below Powerplant hydrograph – 04/25/2015

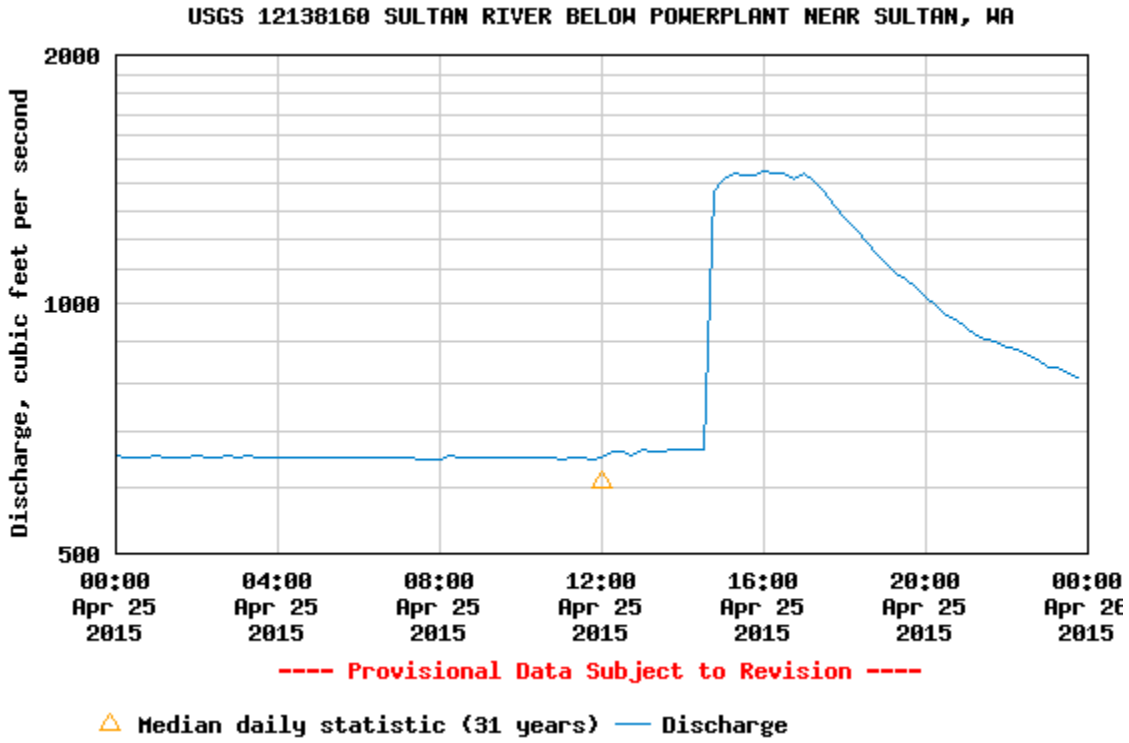


Figure 30. Sultan River immediately upstream of Powerhouse at RM 4.7 – 04/25/2015

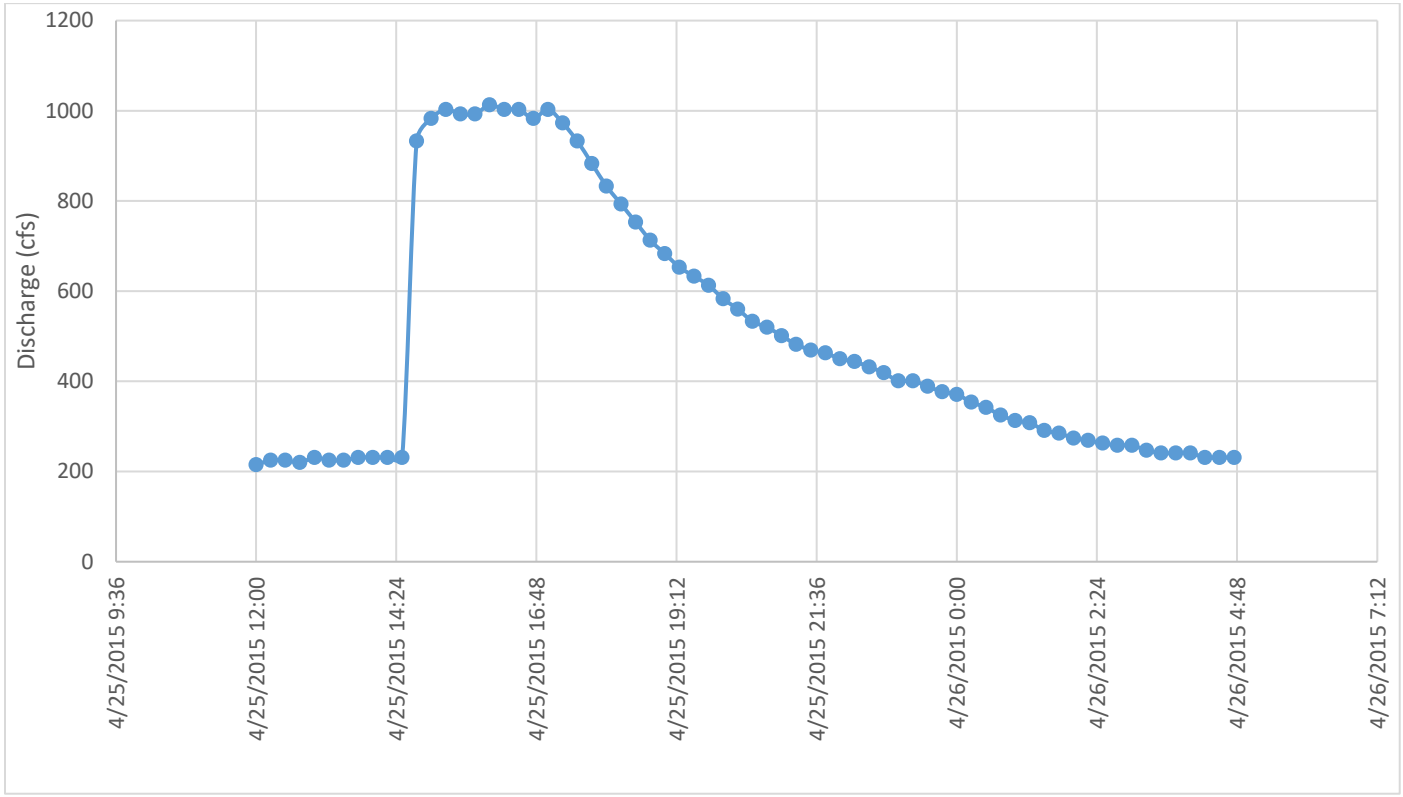


Figure 31. Sultan River immediately upstream of Diversion Dam hydrograph – 04/25/2015

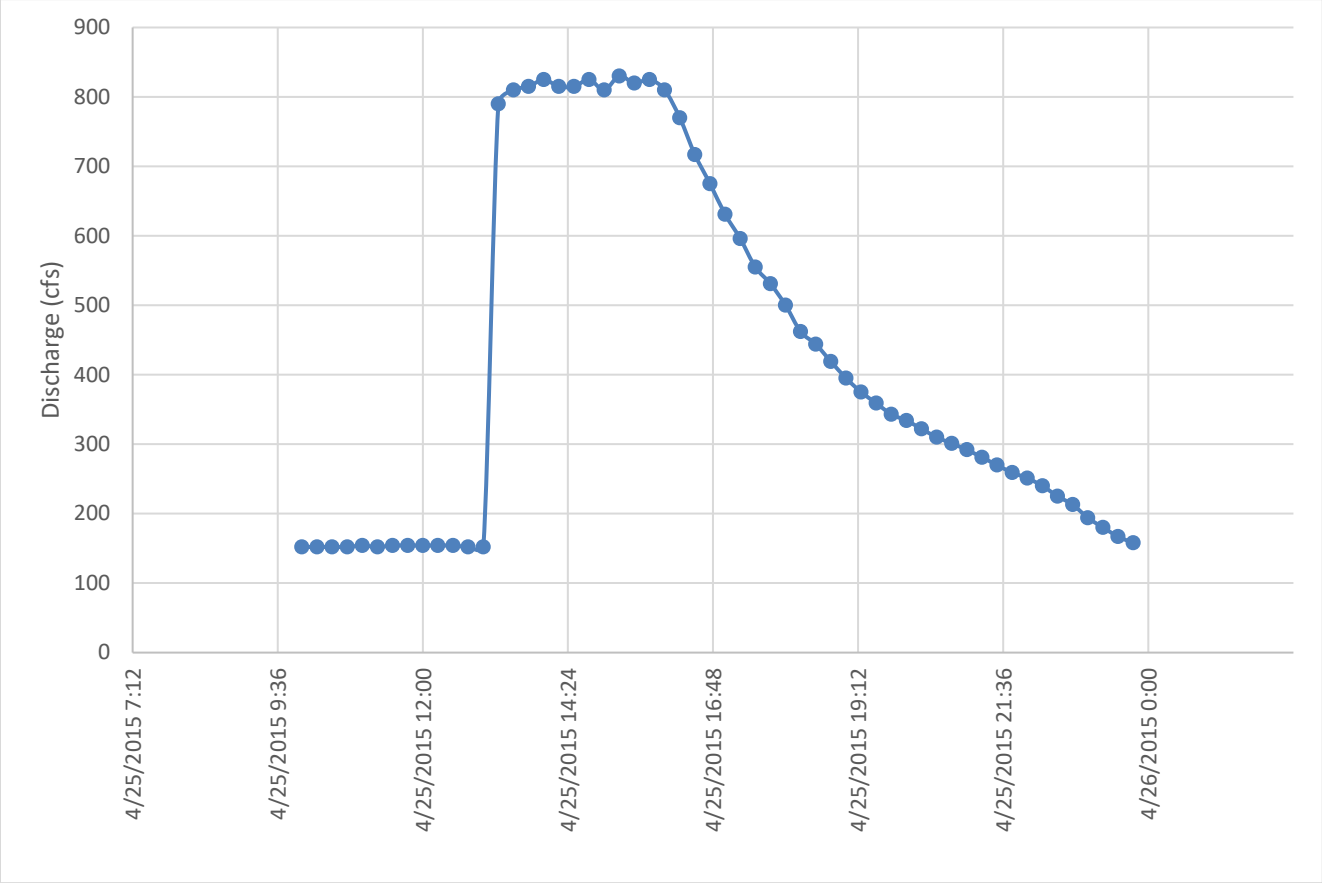


Figure 32. Sultan River below Powerplant – 05/11/2015

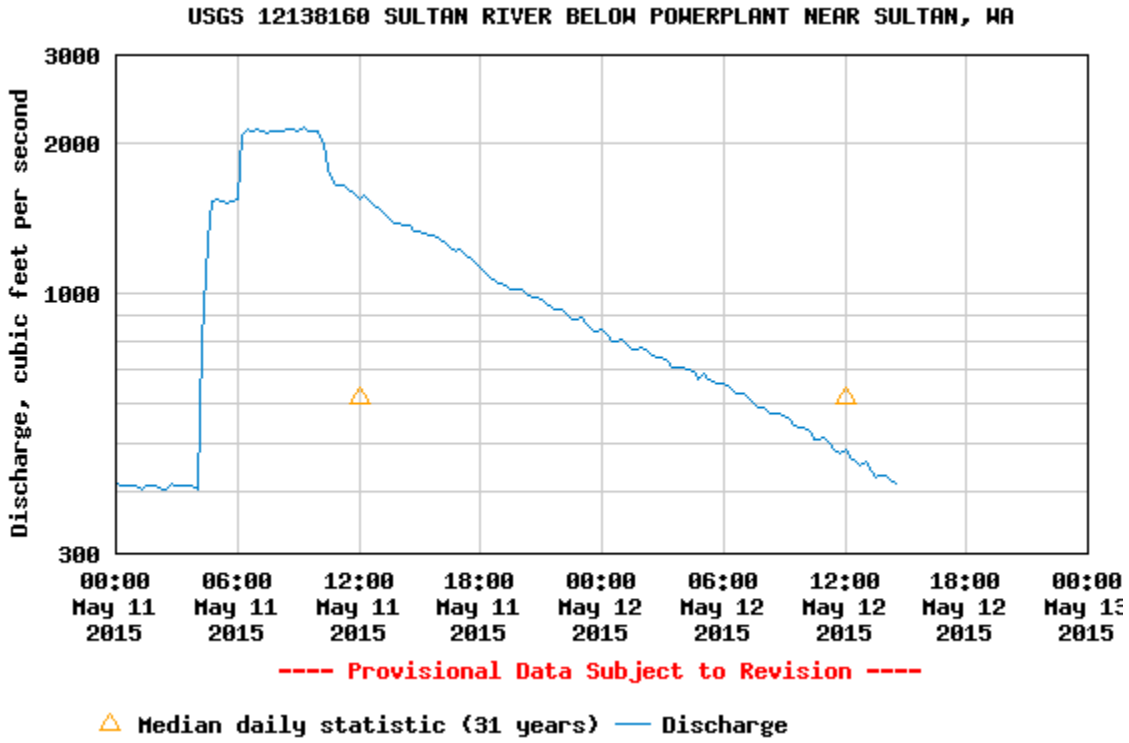


Figure 33. Sultan River immediately upstream of Powerhouse at RM 4.7 – 05/11/2015

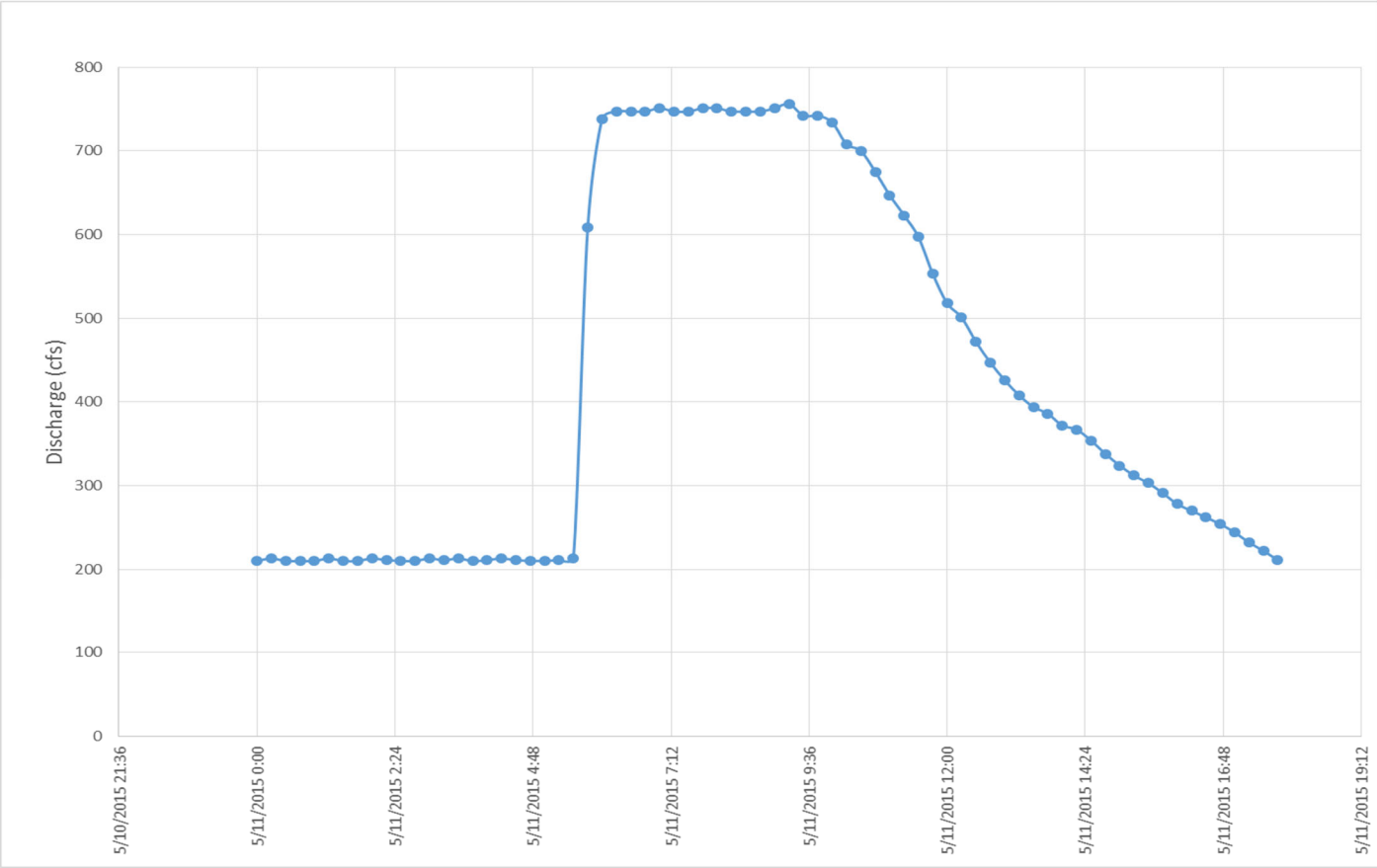


Figure 34. Sultan River immediately upstream of Diversion Dam hydrograph – 09/12/2015

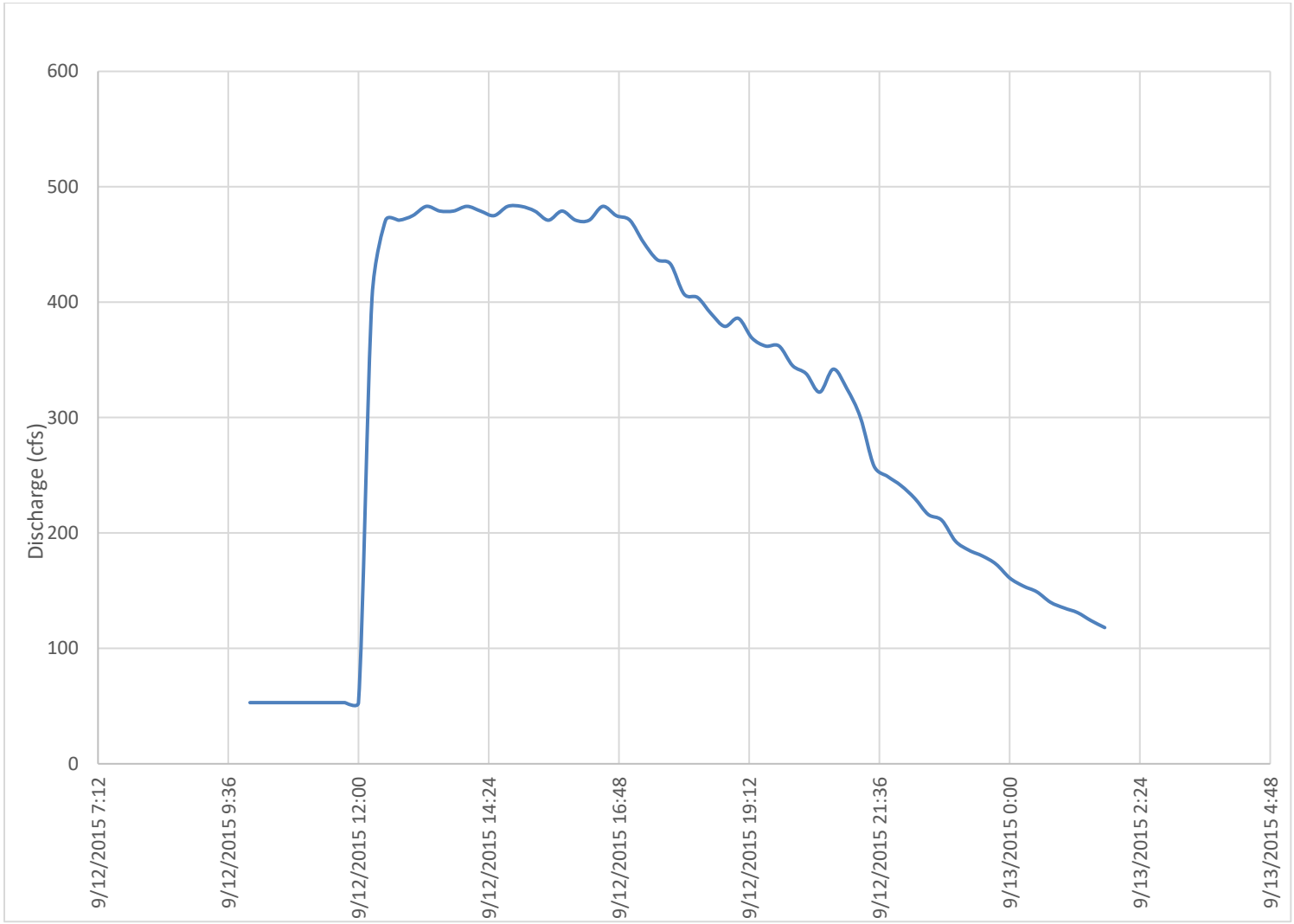


Figure 35. Sultan River immediately upstream of Powerhouse at RM 4.7 – 09/12/2015

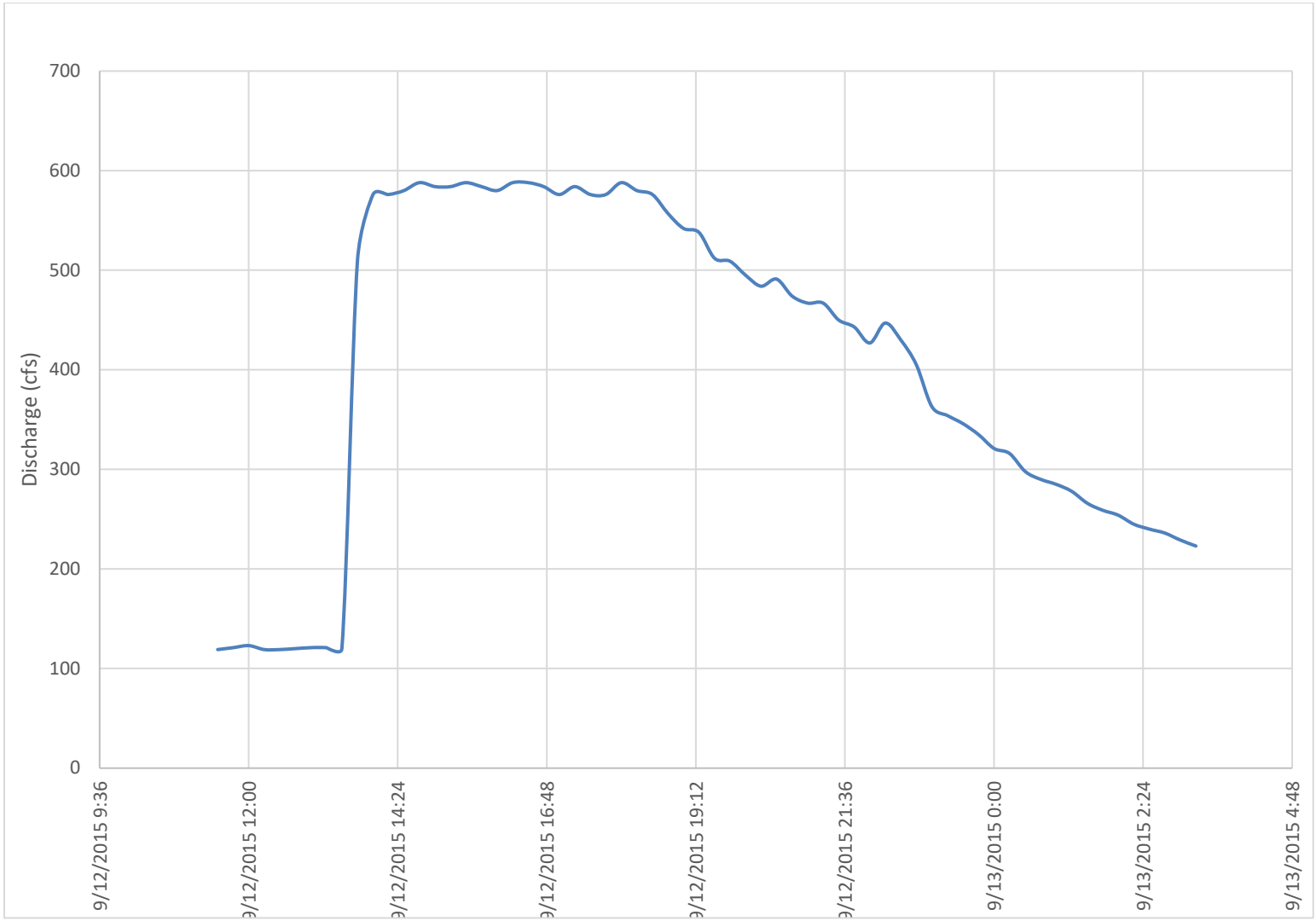


Figure 36. Sultan River below Powerplant – 09/12/2015

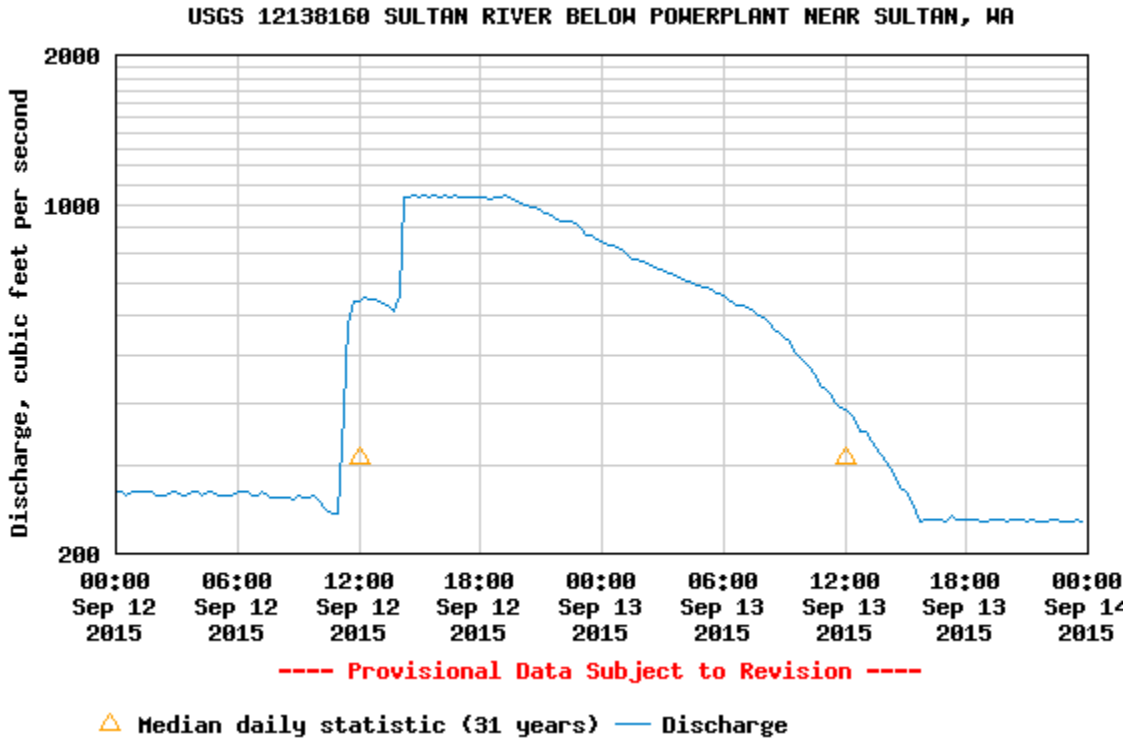


Figure 37. Sultan River below Powerplant – 11/17/2015 to 11/18/2015

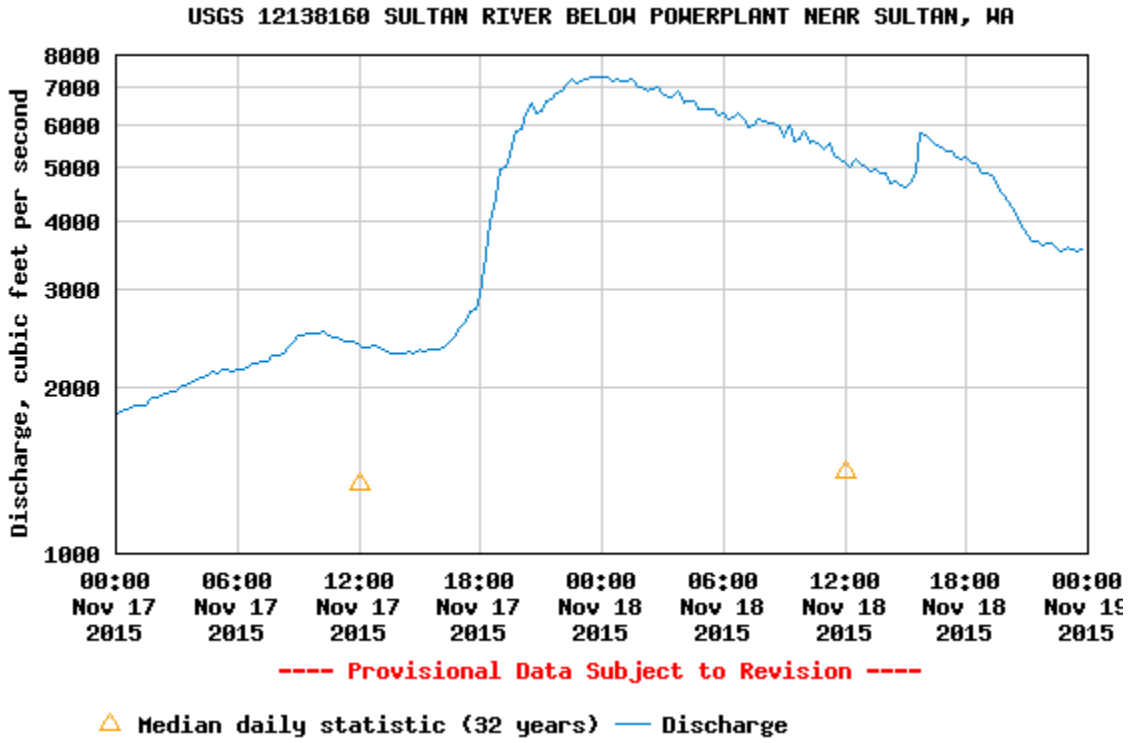


Figure 38. Sultan River below Powerplant – 4/23/2016

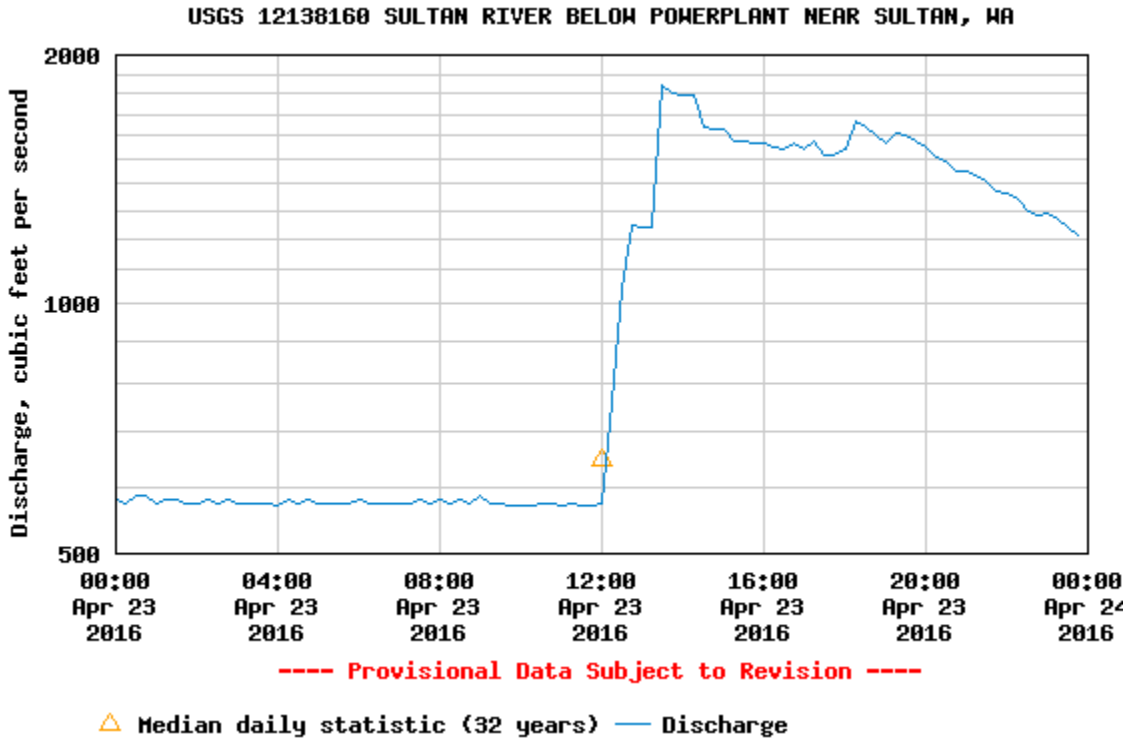


Figure 39. Sultan River immediately upstream of Powerhouse at RM 4.7 – 4/23/2016

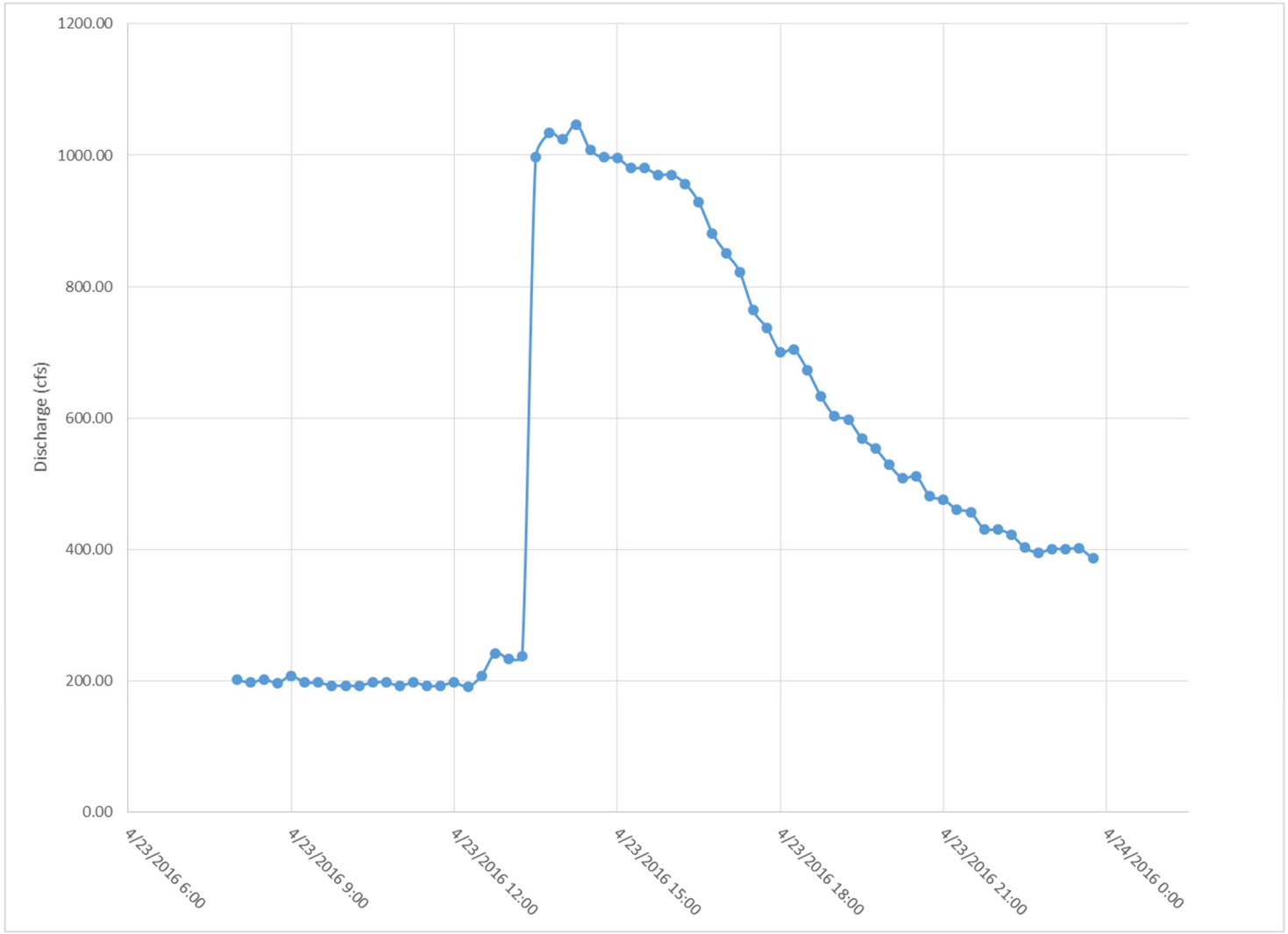


Figure 40. Sultan River immediately upstream of Diversion Dam hydrograph – 4/23/2016

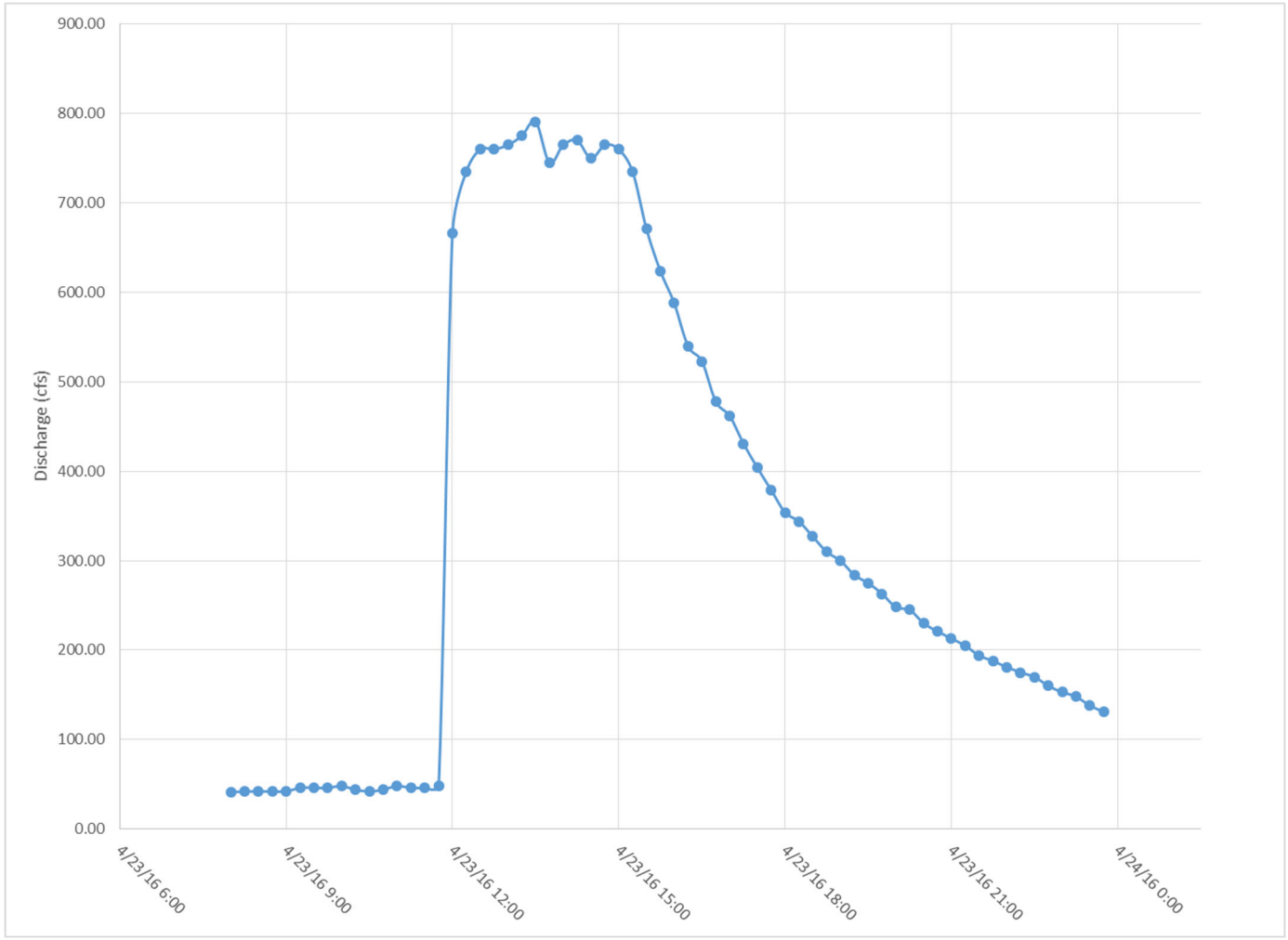


Figure 41. Sultan River below Powerhouse – 5/15-16/2016

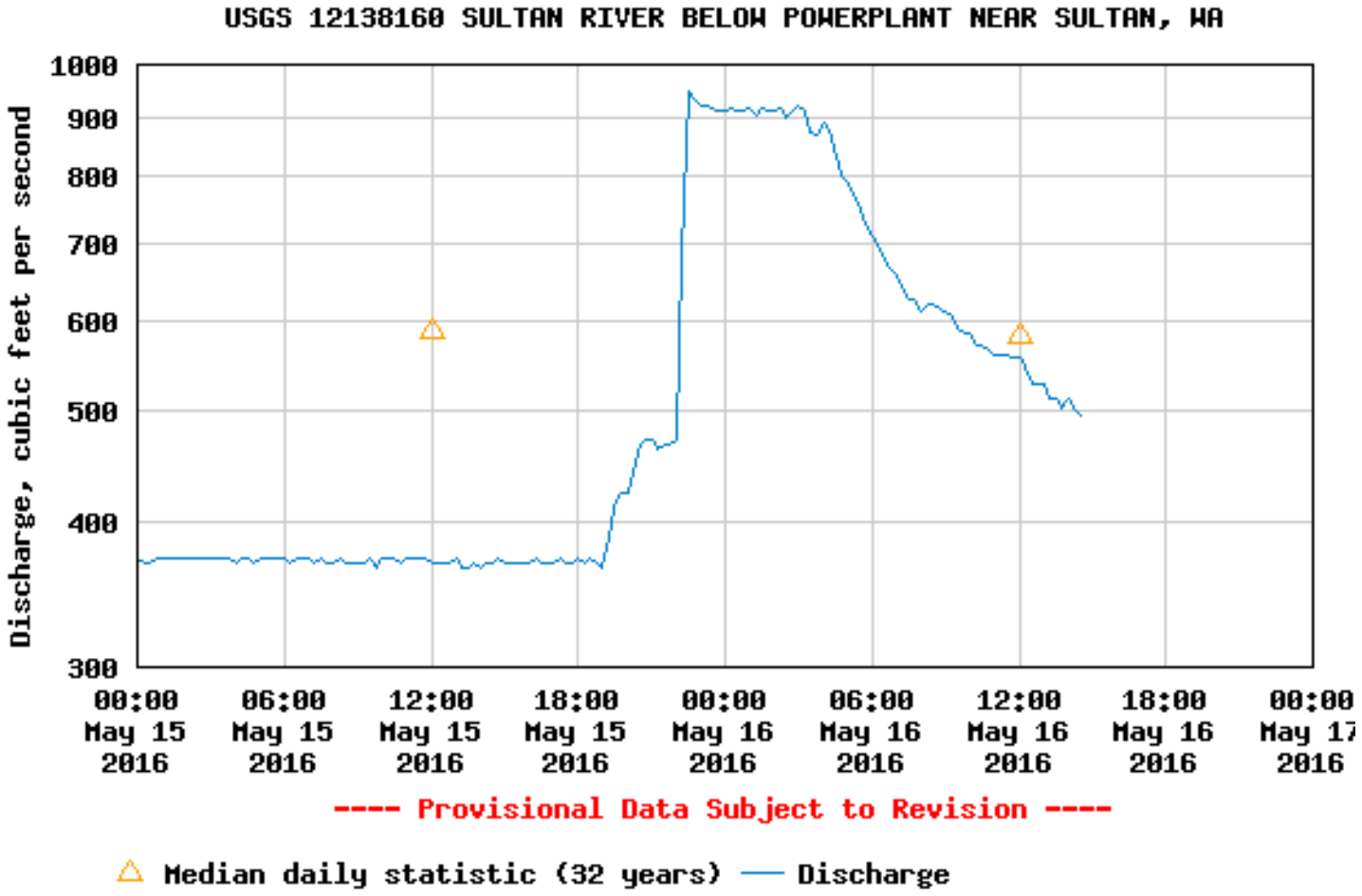


Figure 42. Sultan River immediately upstream of Powerhouse at RM 4.7 – 5/15-16/2016

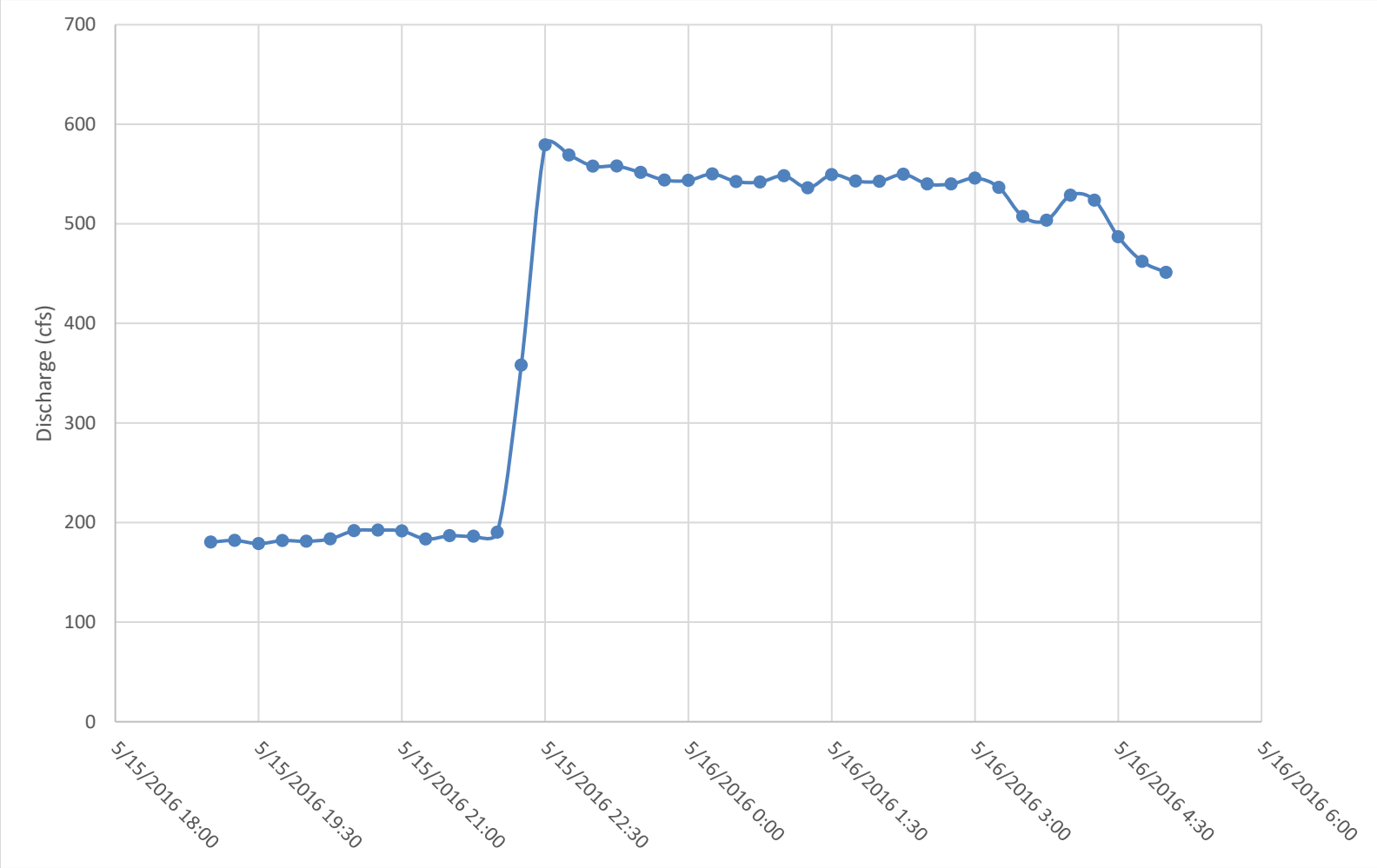
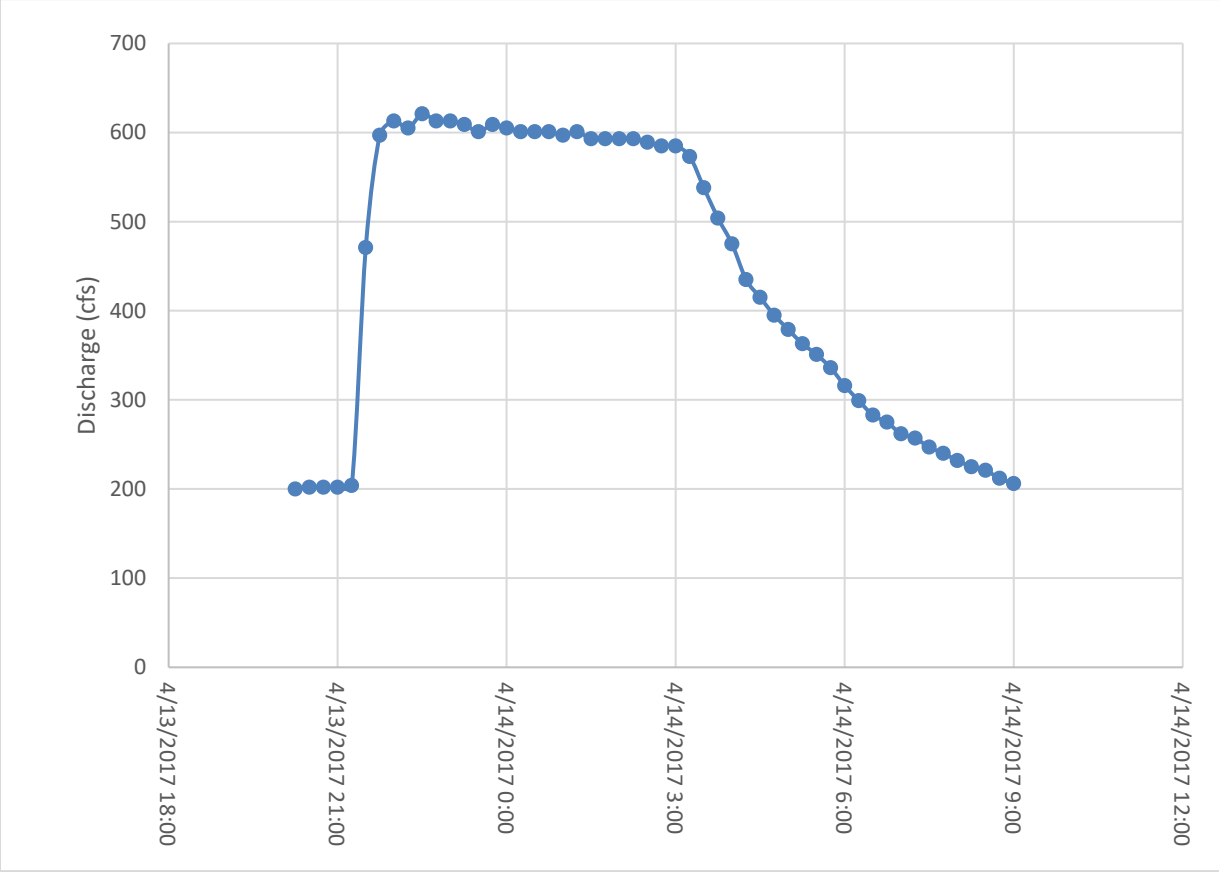


Figure 43. Sultan River immediately upstream of Diversion Dam at RM 9.8 – 4/13-14/2017



Process Flow Log

Figure 44. Sultan River immediately upstream of Powerhouse at RM 4.7 – 4/13-14/2017

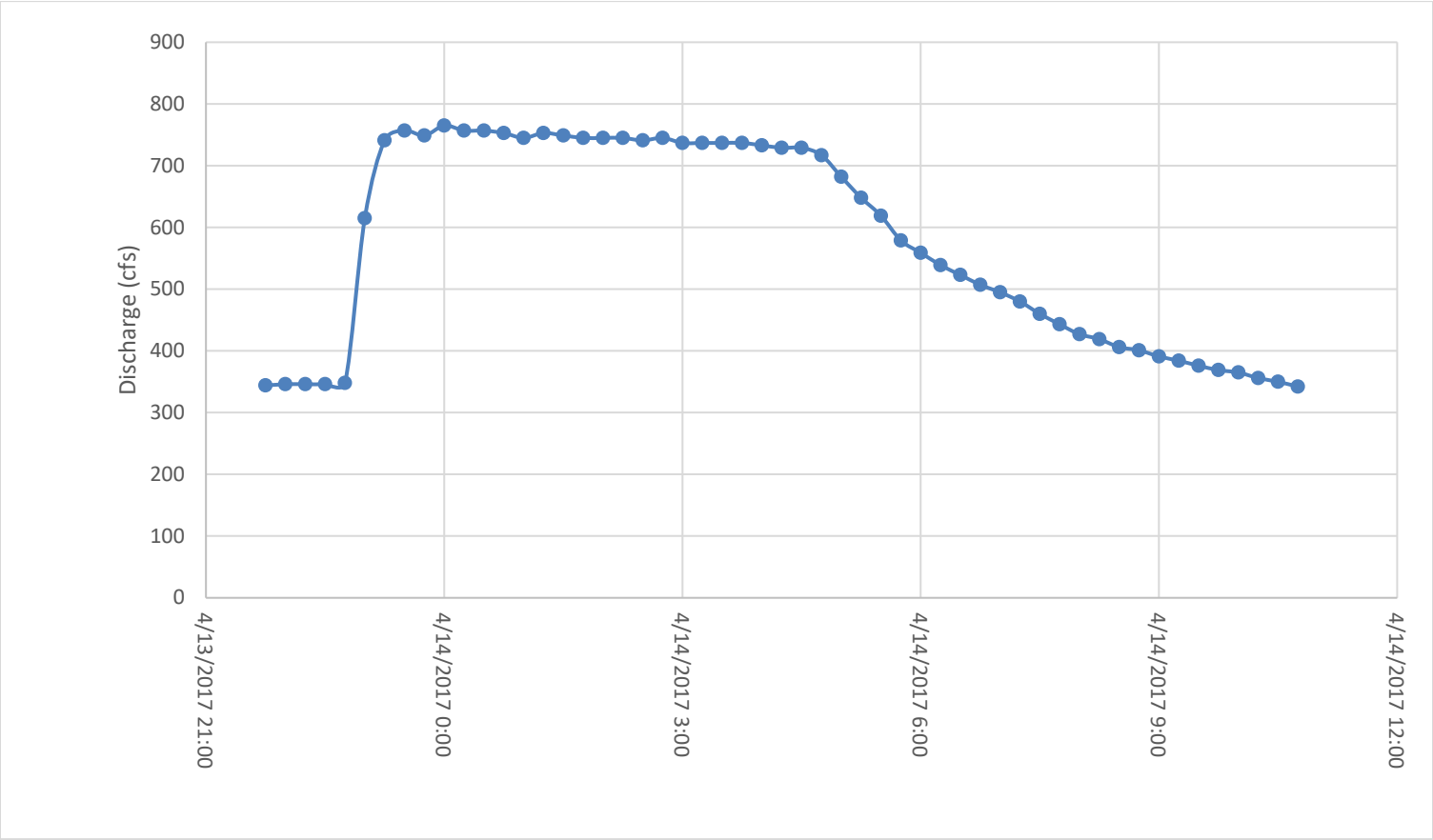


Figure 45. Sultan River immediately downstream of Powerhouse – 4/13-14/2017

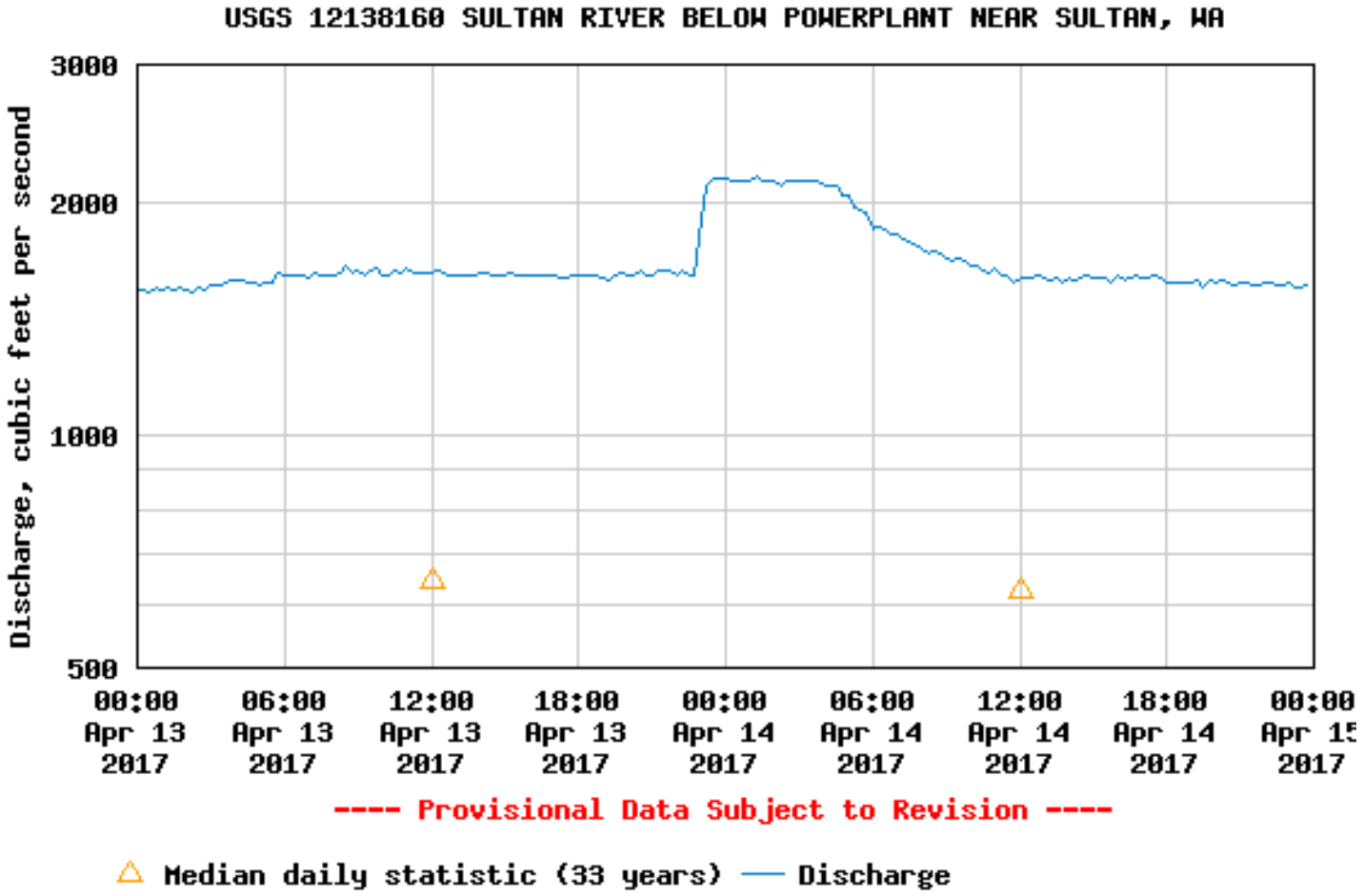


Figure 46. Sultan River immediately upstream of Diversion Dam at RM 9.8 – 5/06/2017

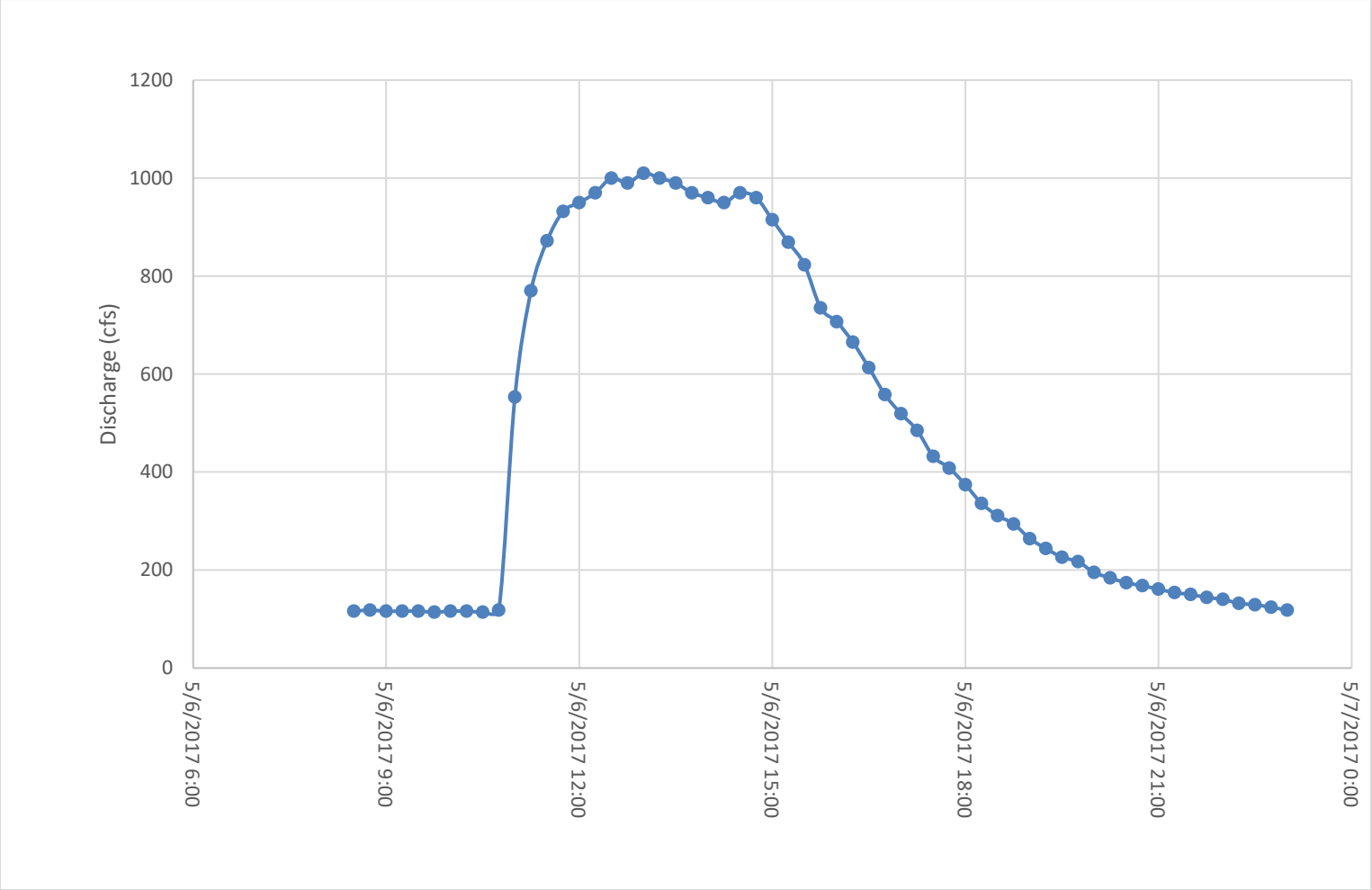


Figure 47. Sultan River immediately upstream of Powerhouse at RM 4.7 – 5/06/2017

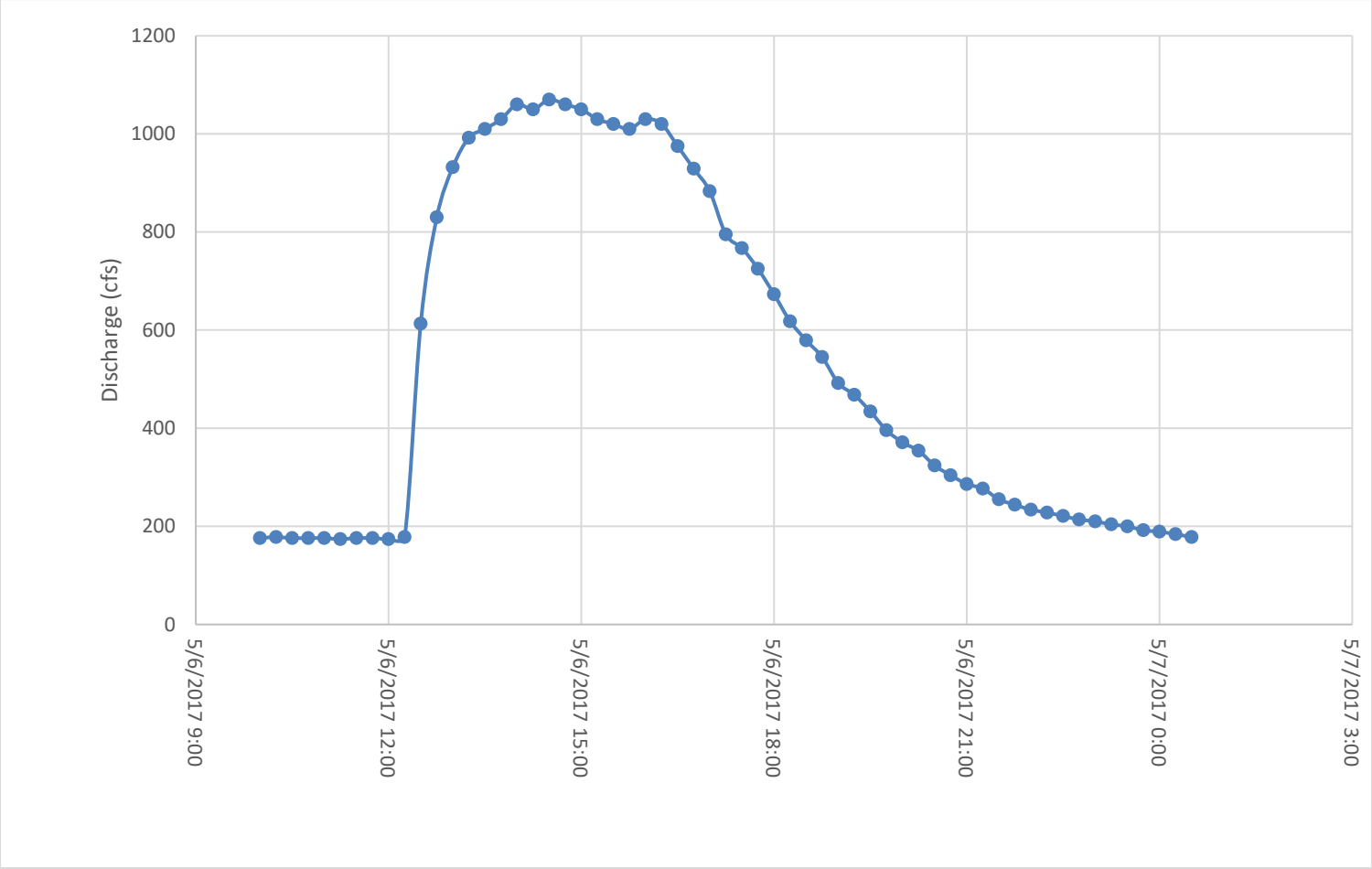


Figure 48. Sultan River immediately downstream of Powerhouse – 5/06/2017

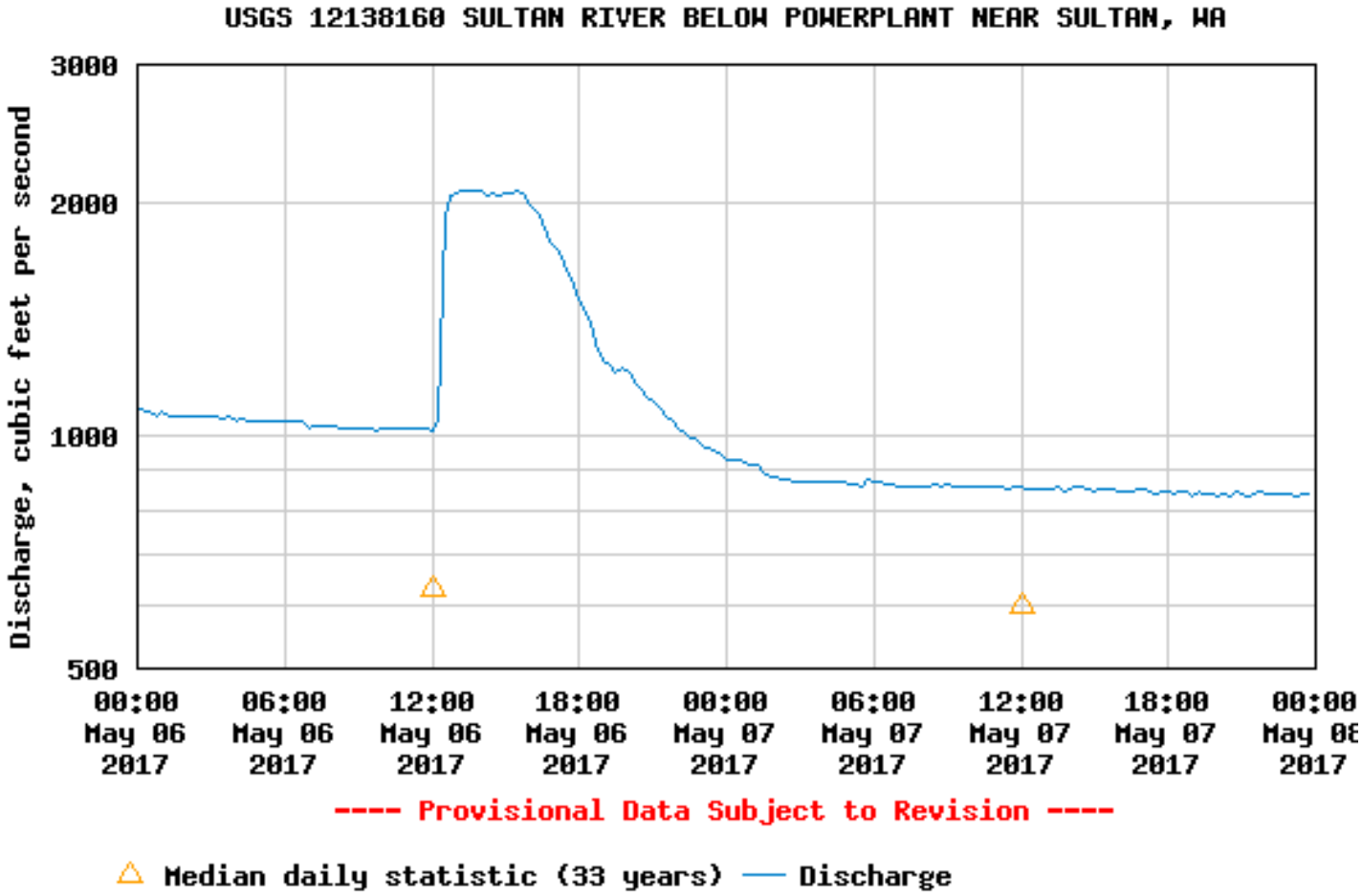


Figure 49. Sultan River immediately upstream of Diversion Dam at RM 9.8 – 9/02/2017

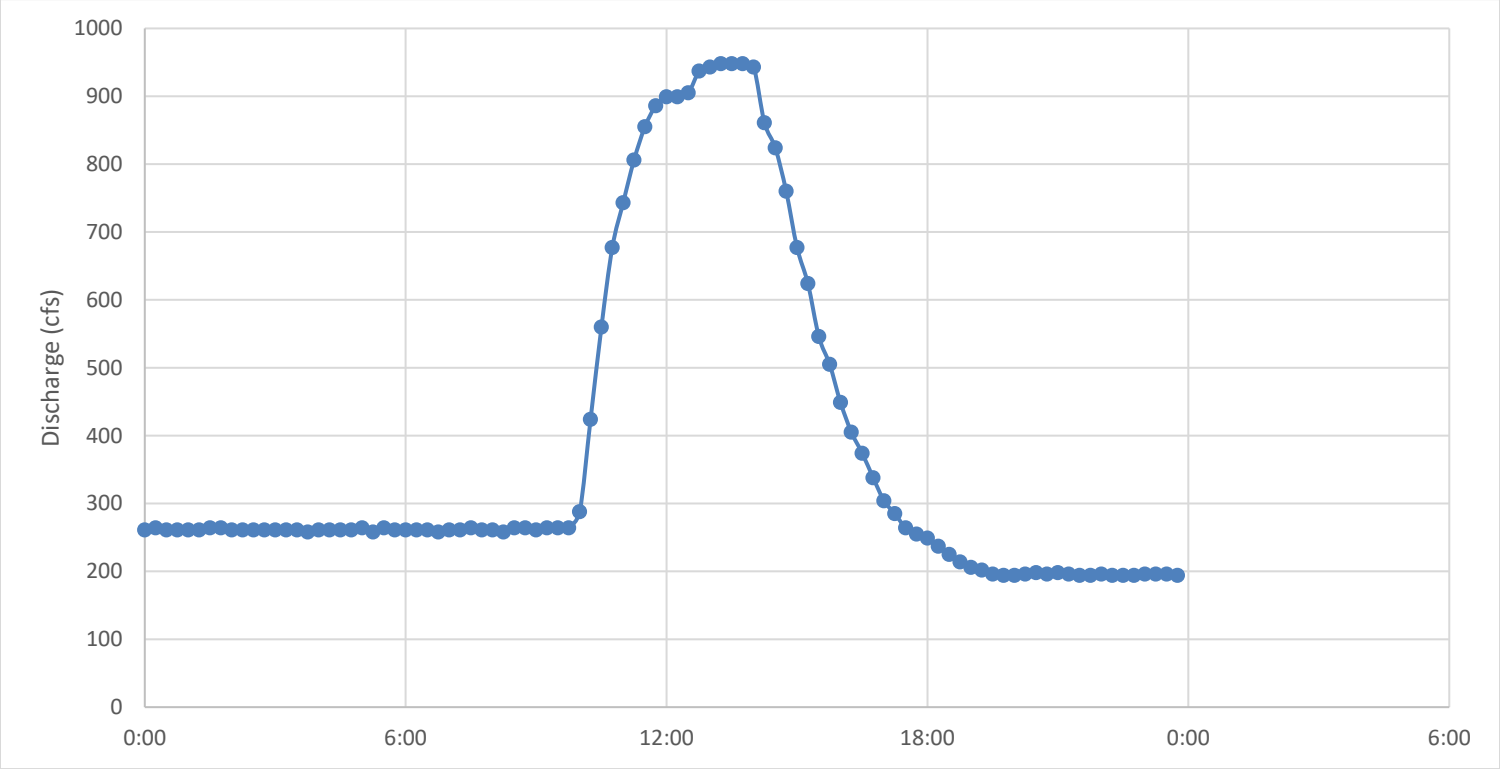


Figure 50. Sultan River immediately upstream of Powerhouse at RM 4.7 – 9/02/2017

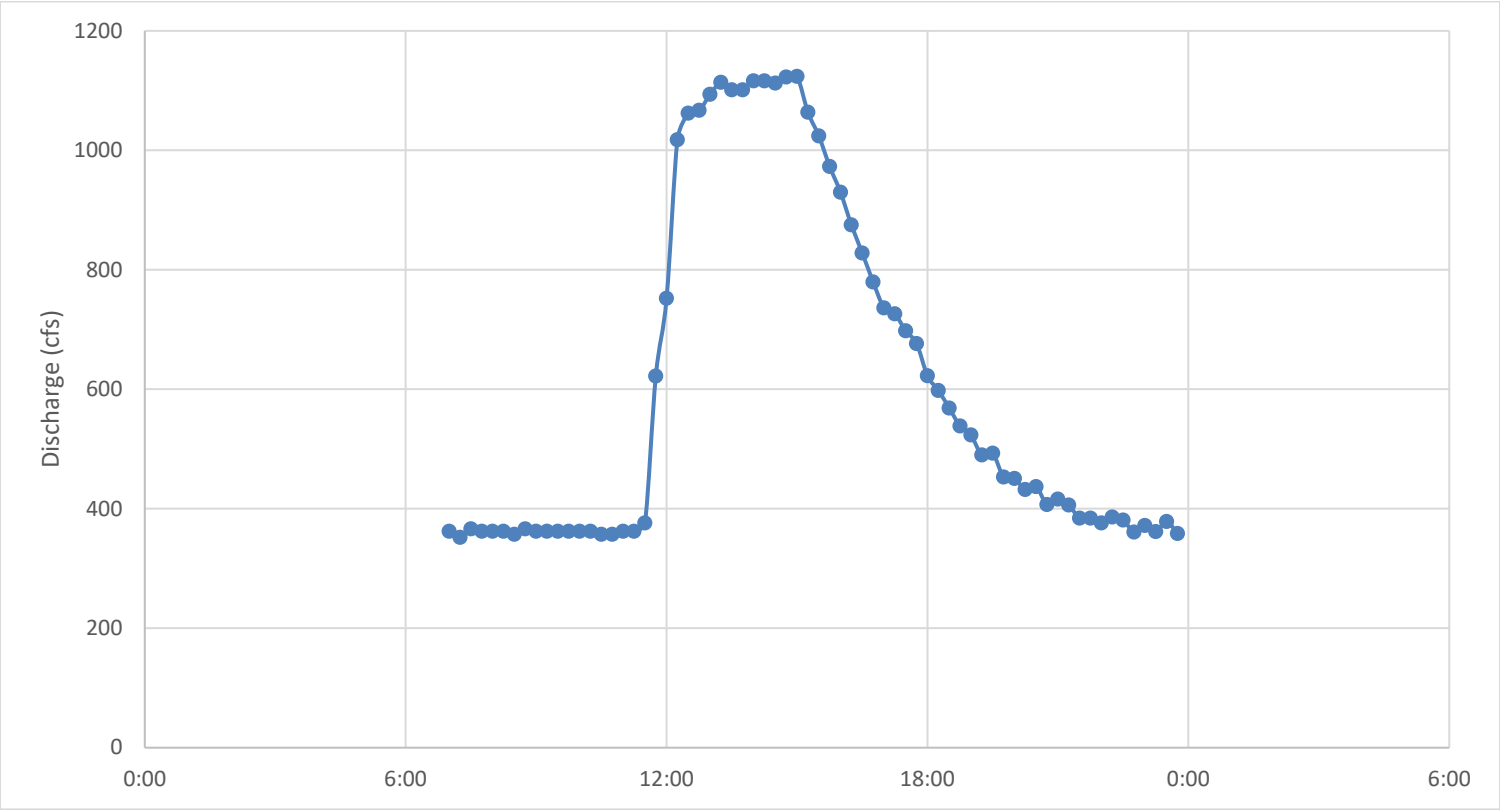
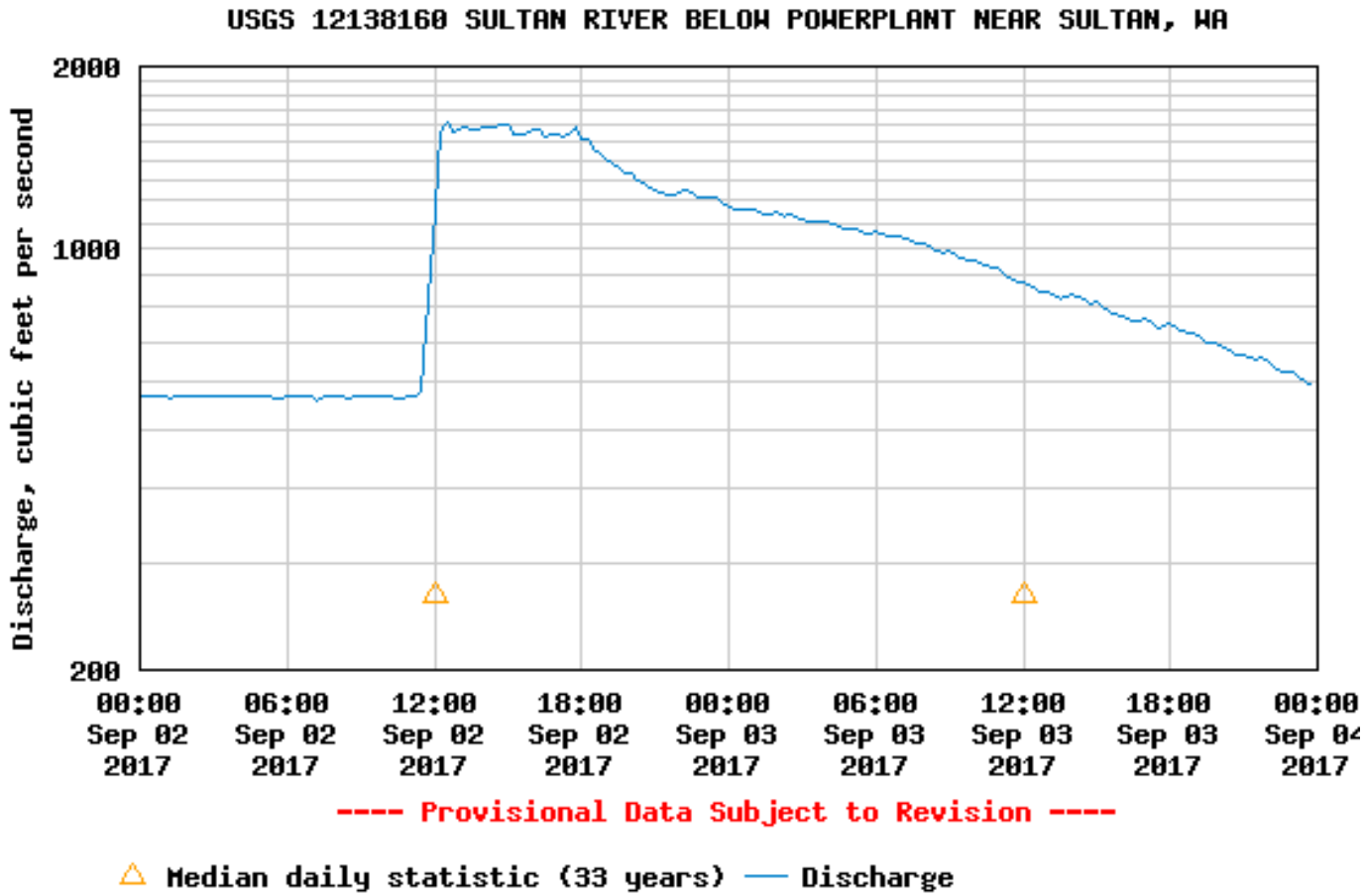


Figure 51. Sultan River immediately downstream of Powerhouse – 9/02/2017



Process Flow Log

Figure 52. Sultan River immediately downstream of Powerhouse – 2/04-05/2018

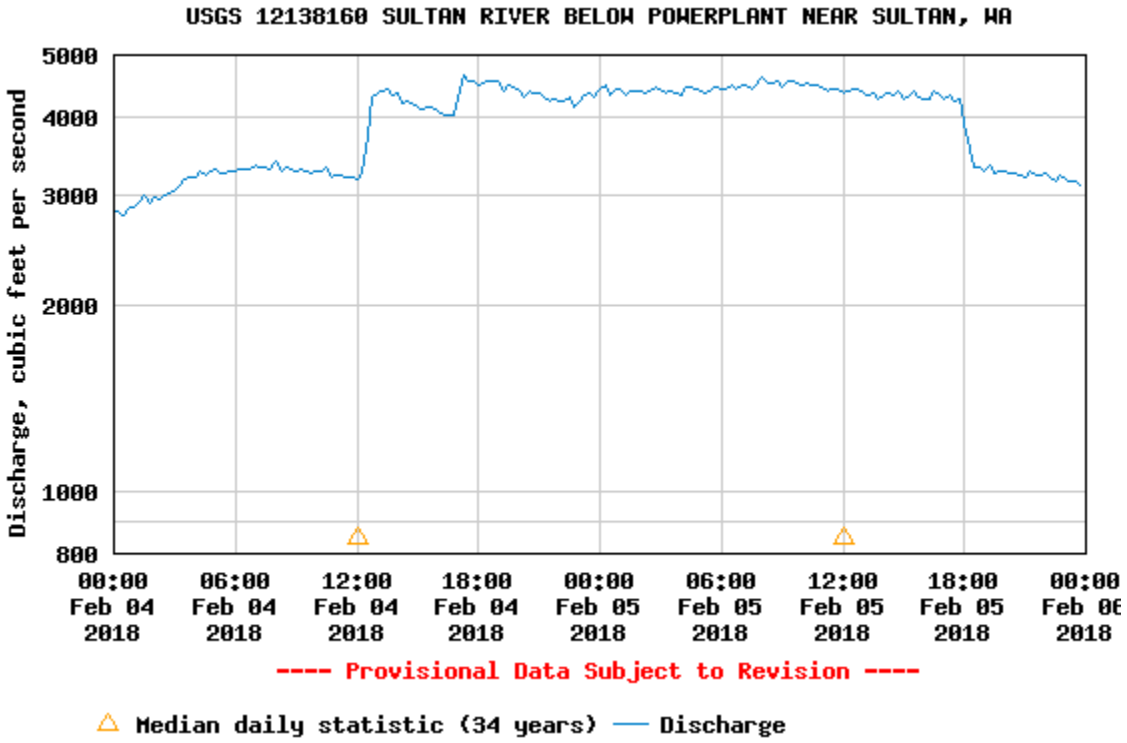
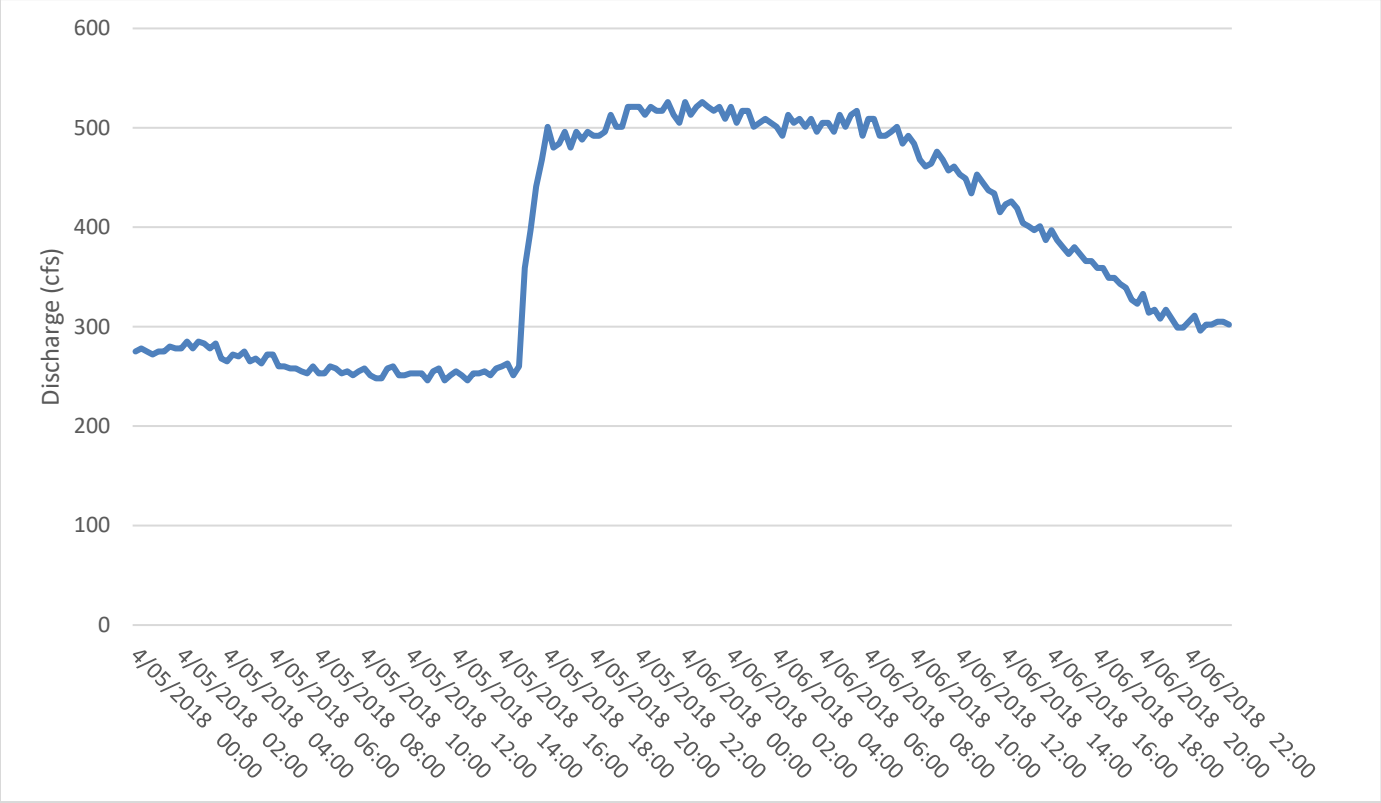


Figure 53. Sultan River immediately upstream of Diversion Dam – 4/05-06-/2018



Process Flow Log

Figure 54. Sultan River immediately upstream of Powerhouse – 4/05-06/2018

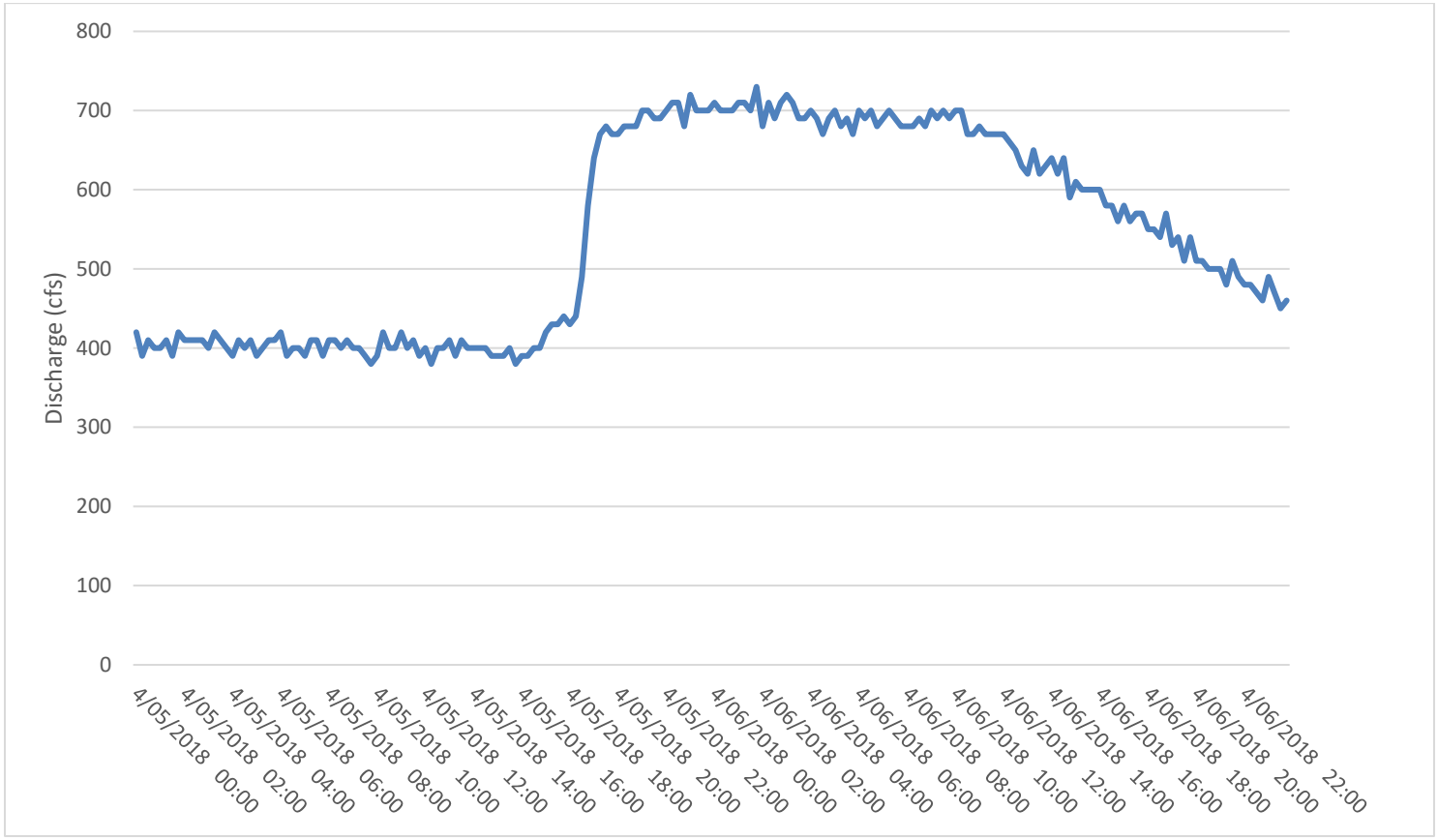


Figure 55. Sultan River immediately downstream of Powerhouse – 4/05-06/2018

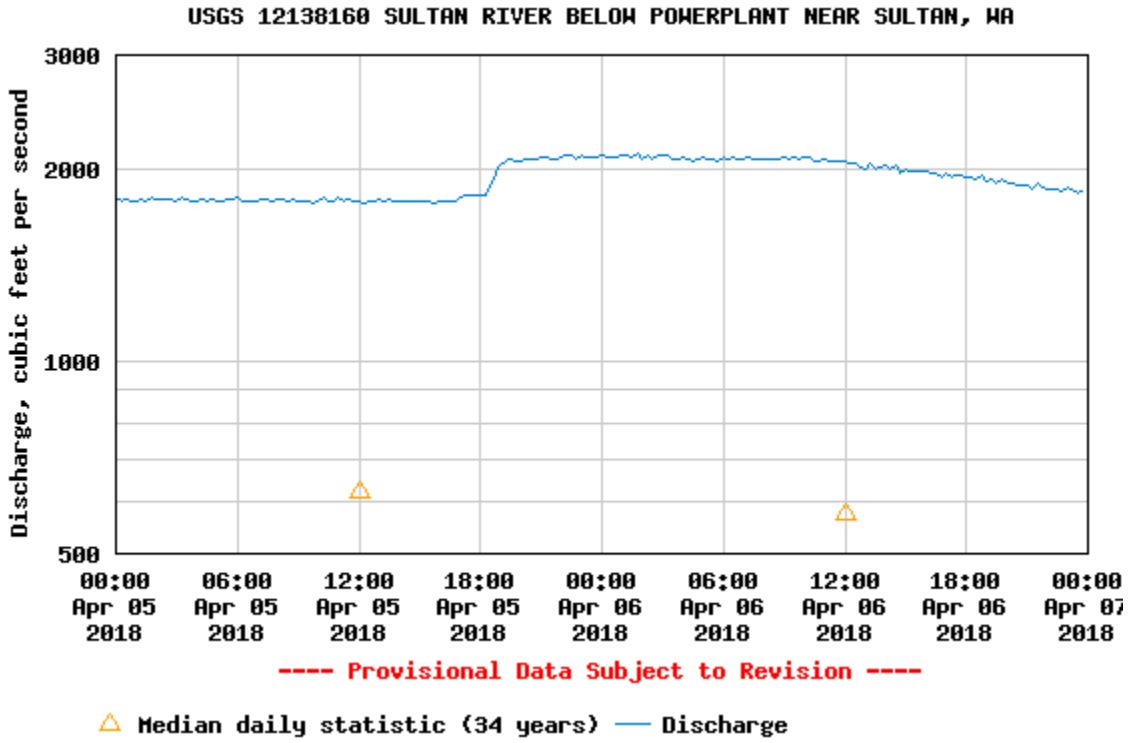


Figure 56 – Sultan River immediately downstream of Powerhouse – 5/19/2018

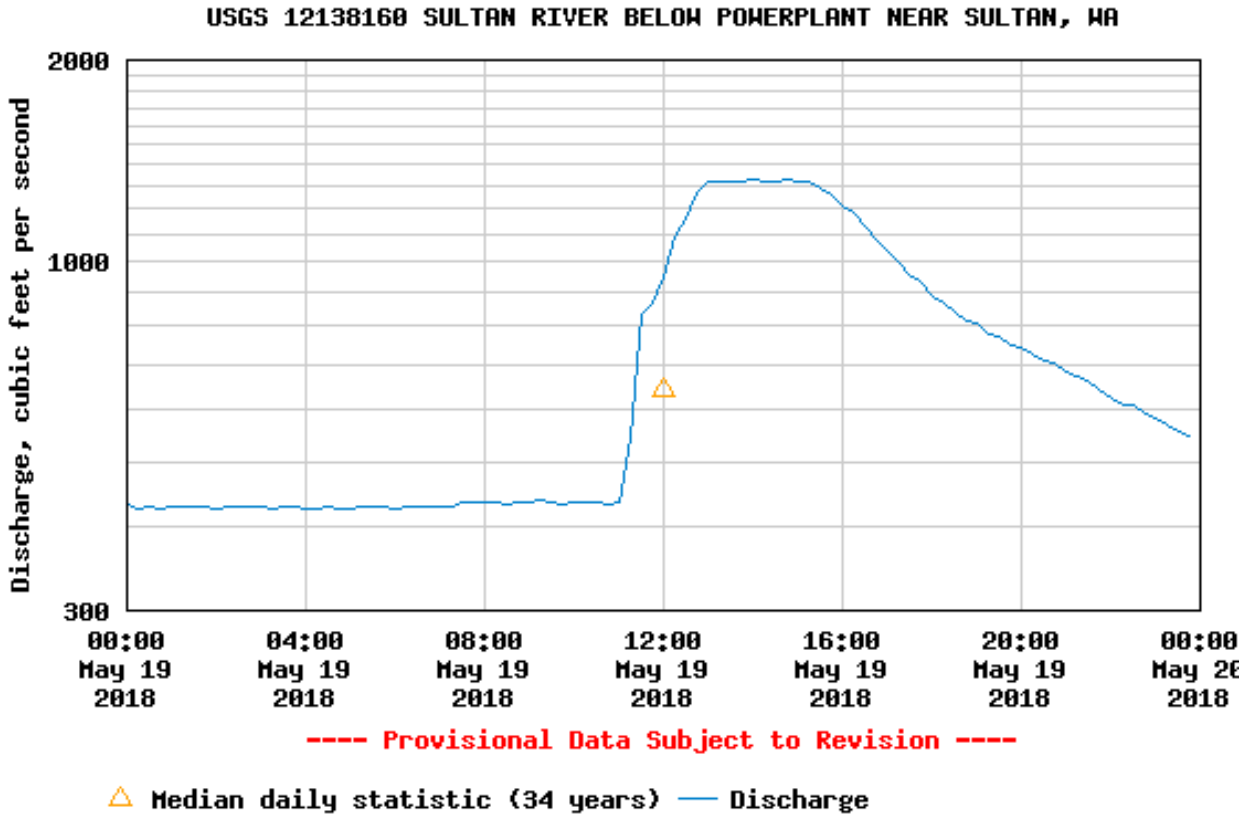


Figure 57 – Sultan River immediately upstream of Powerhouse – 5/19/2018

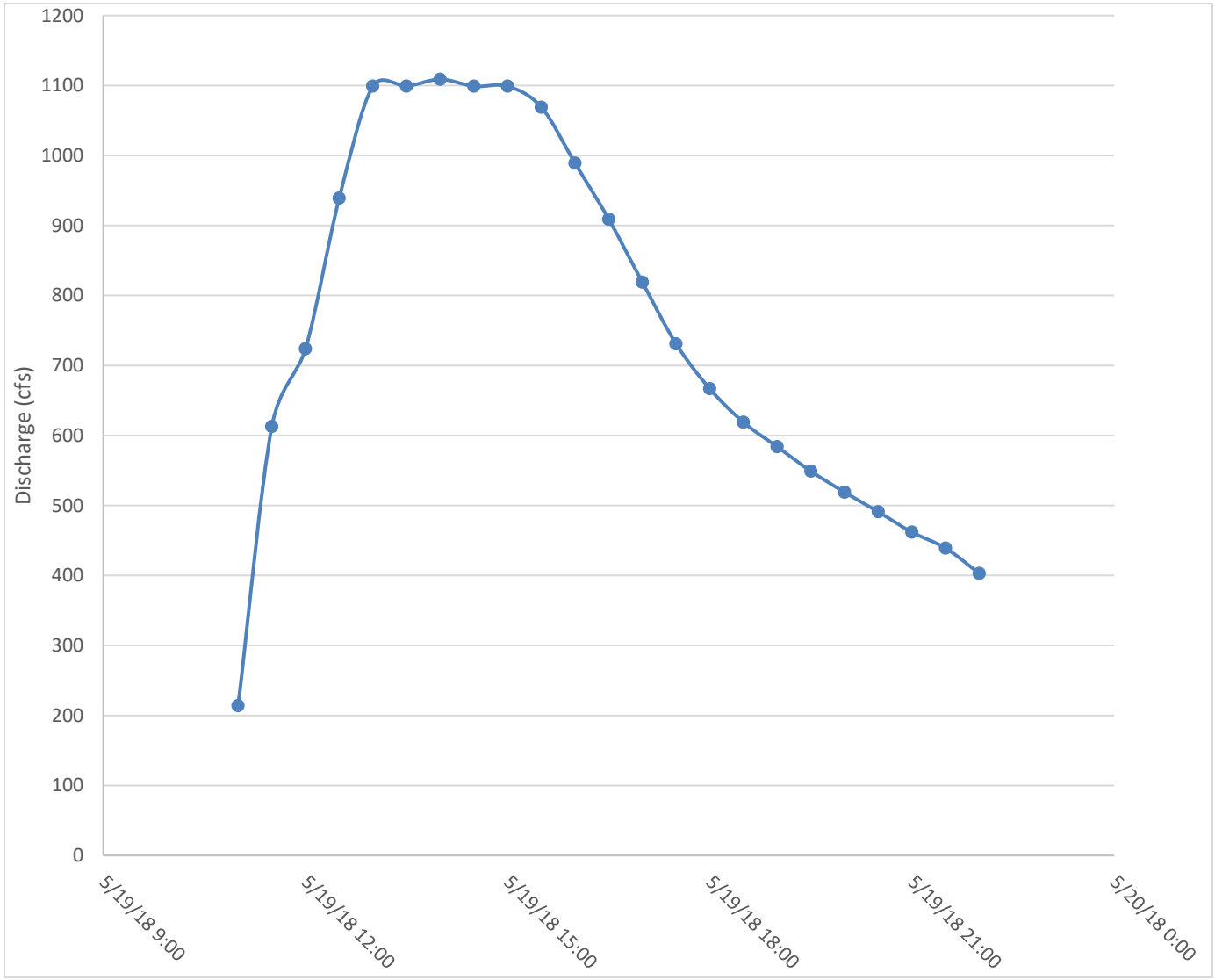


Figure 58 – Sultan River immediately upstream of Diversion Dam – 5/19/2018

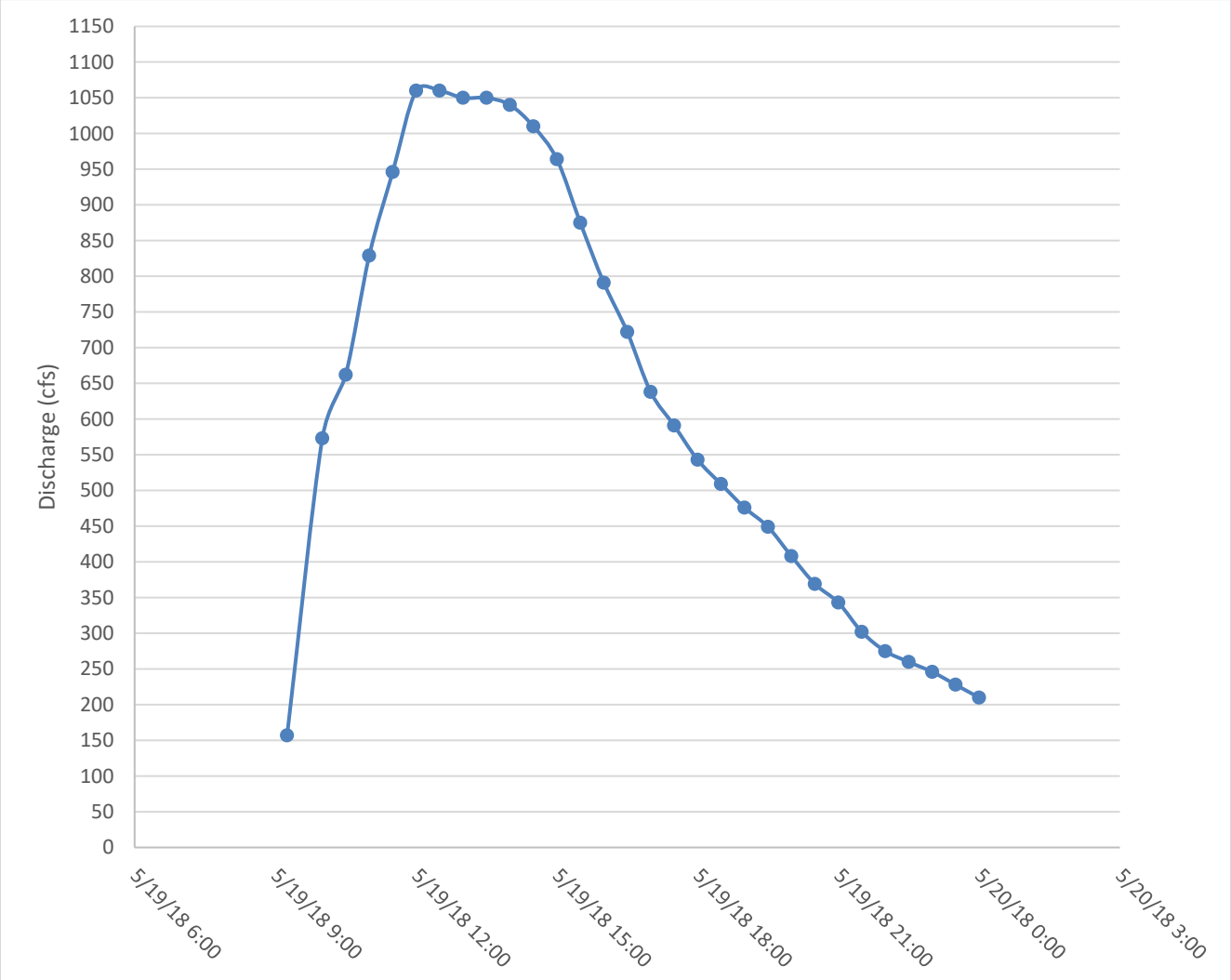


Figure 59 – Sultan River immediately upstream of Diversion Dam – 09/08/2018

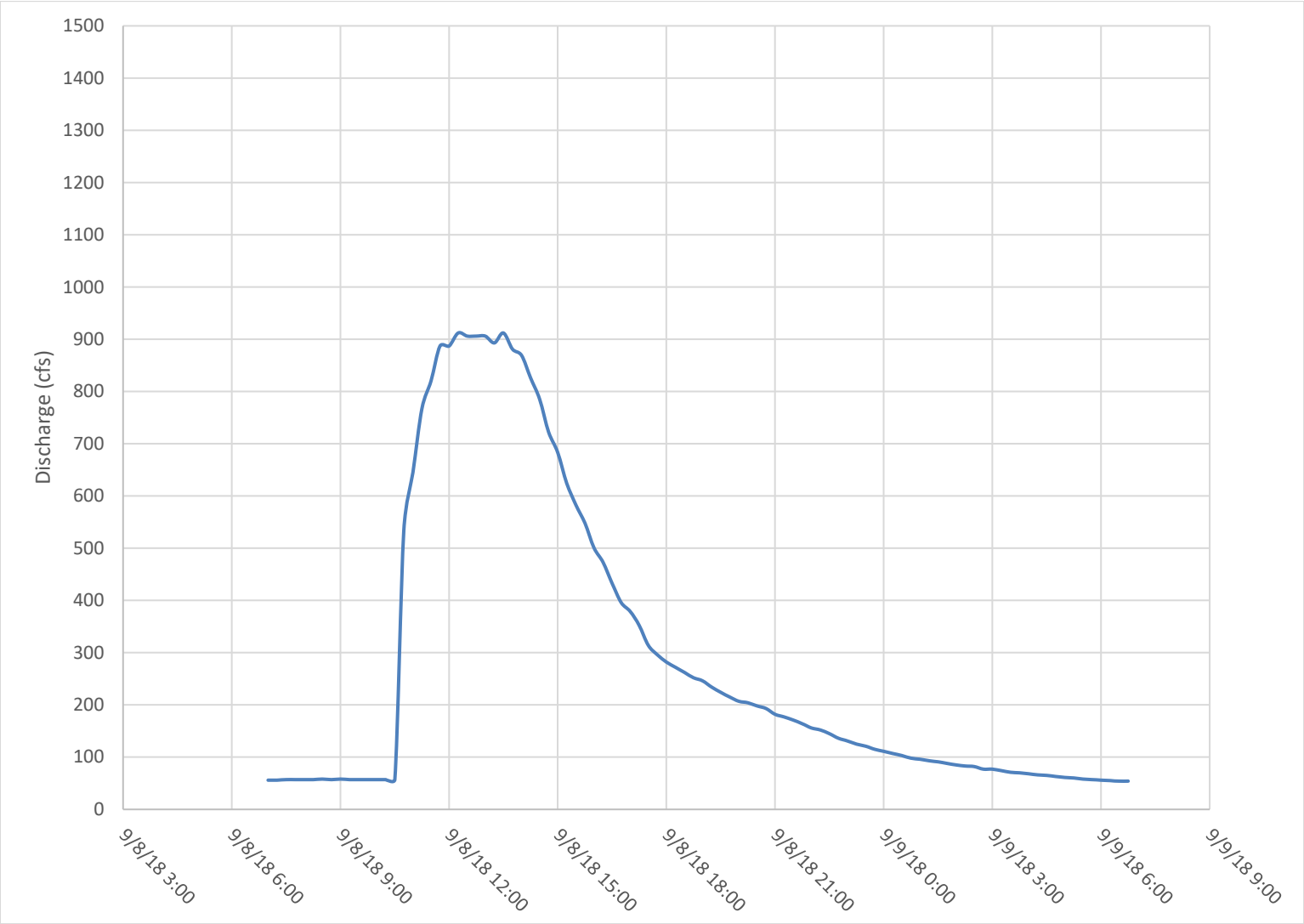


Figure 60 – Sultan River immediately upstream of Powerhouse – 09/08/2018

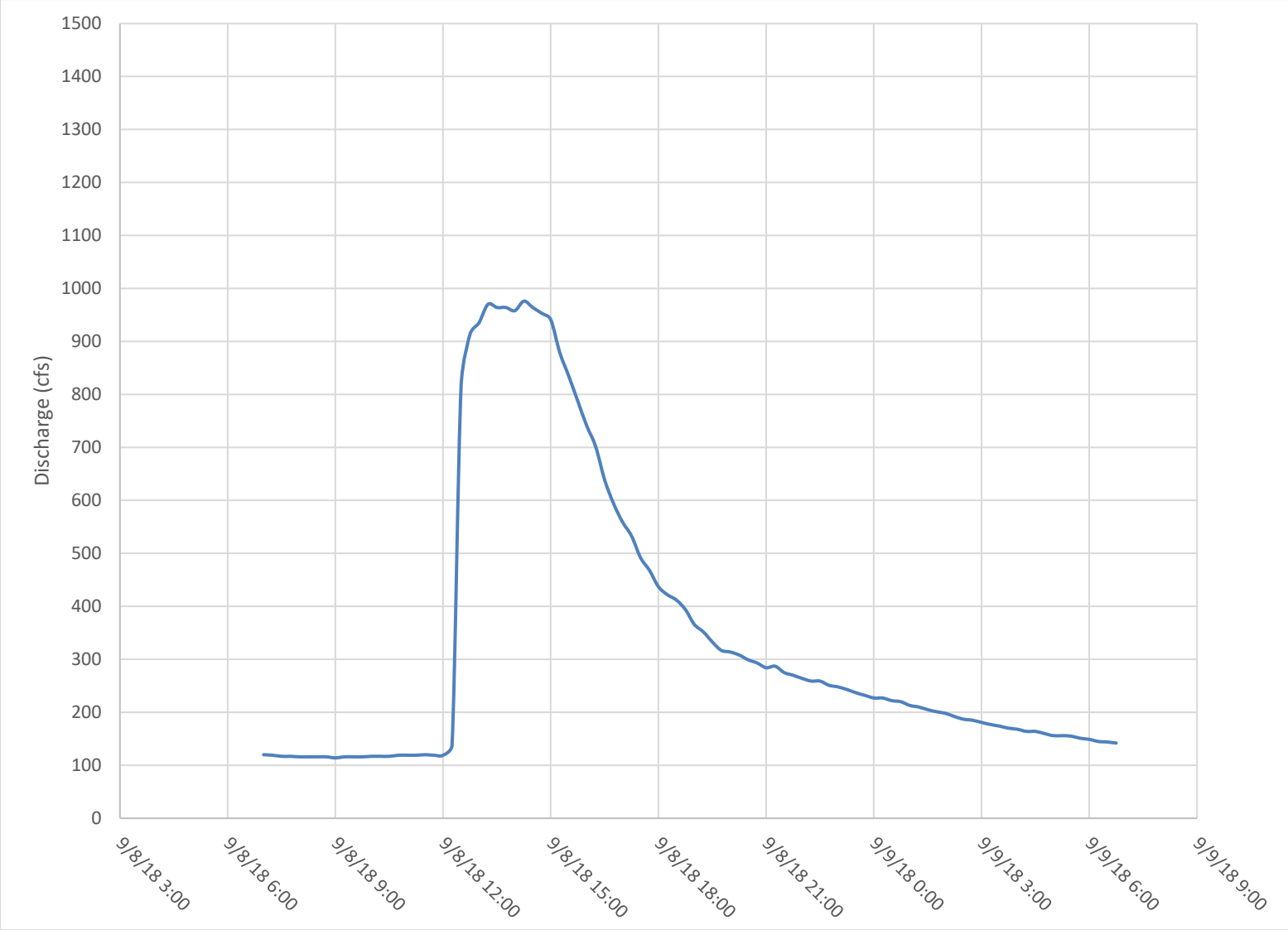


Figure 61 – Sultan River immediately downstream of Powerhouse – 09/08/2018

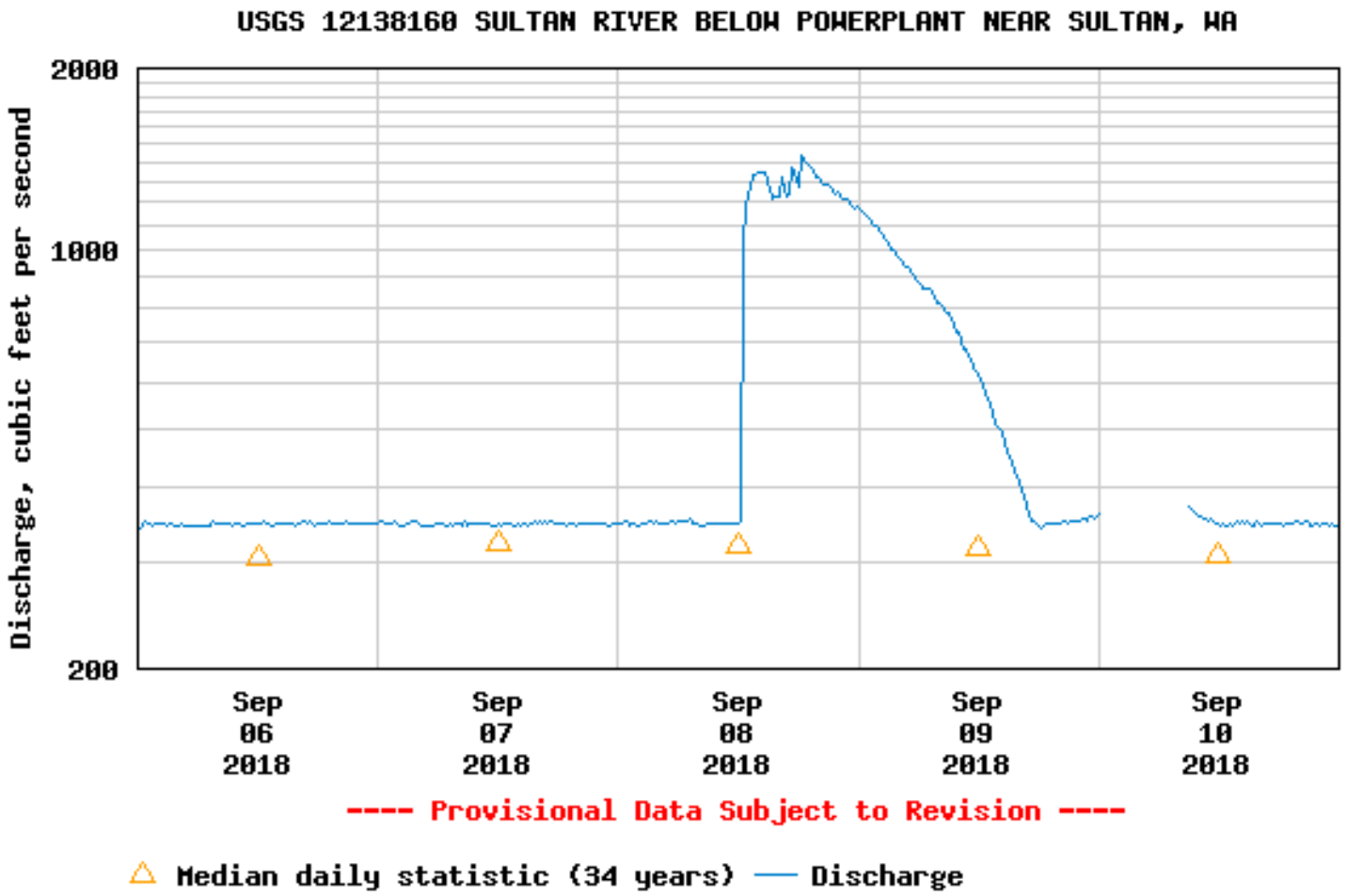


Figure 62 – Sultan River immediately upstream of Diversion Dam – 04/10/2019 to 04/11/2019

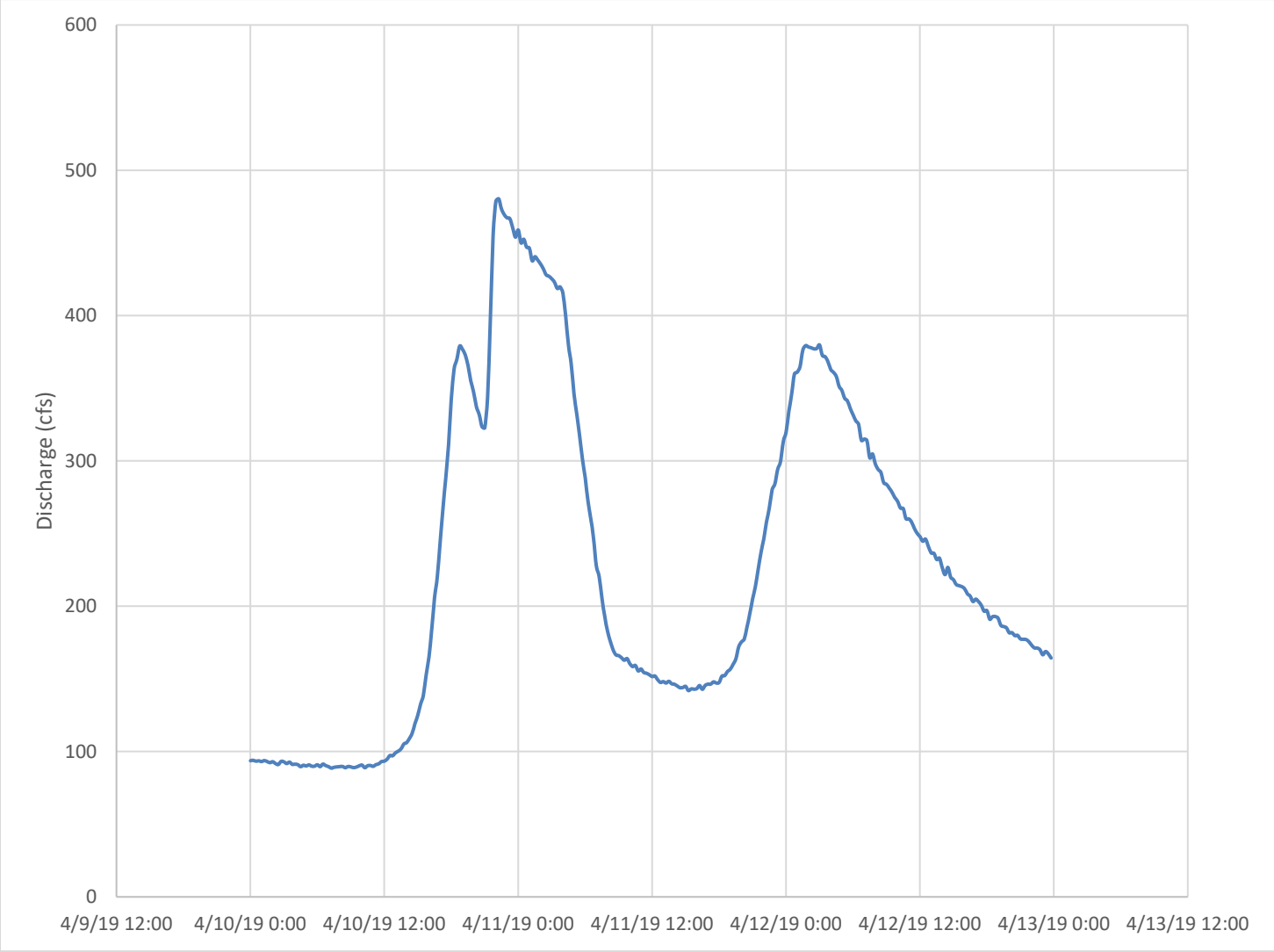


Figure 63 – Sultan River immediately upstream of Powerhouse – 04/10/2019 to 04/11/2019

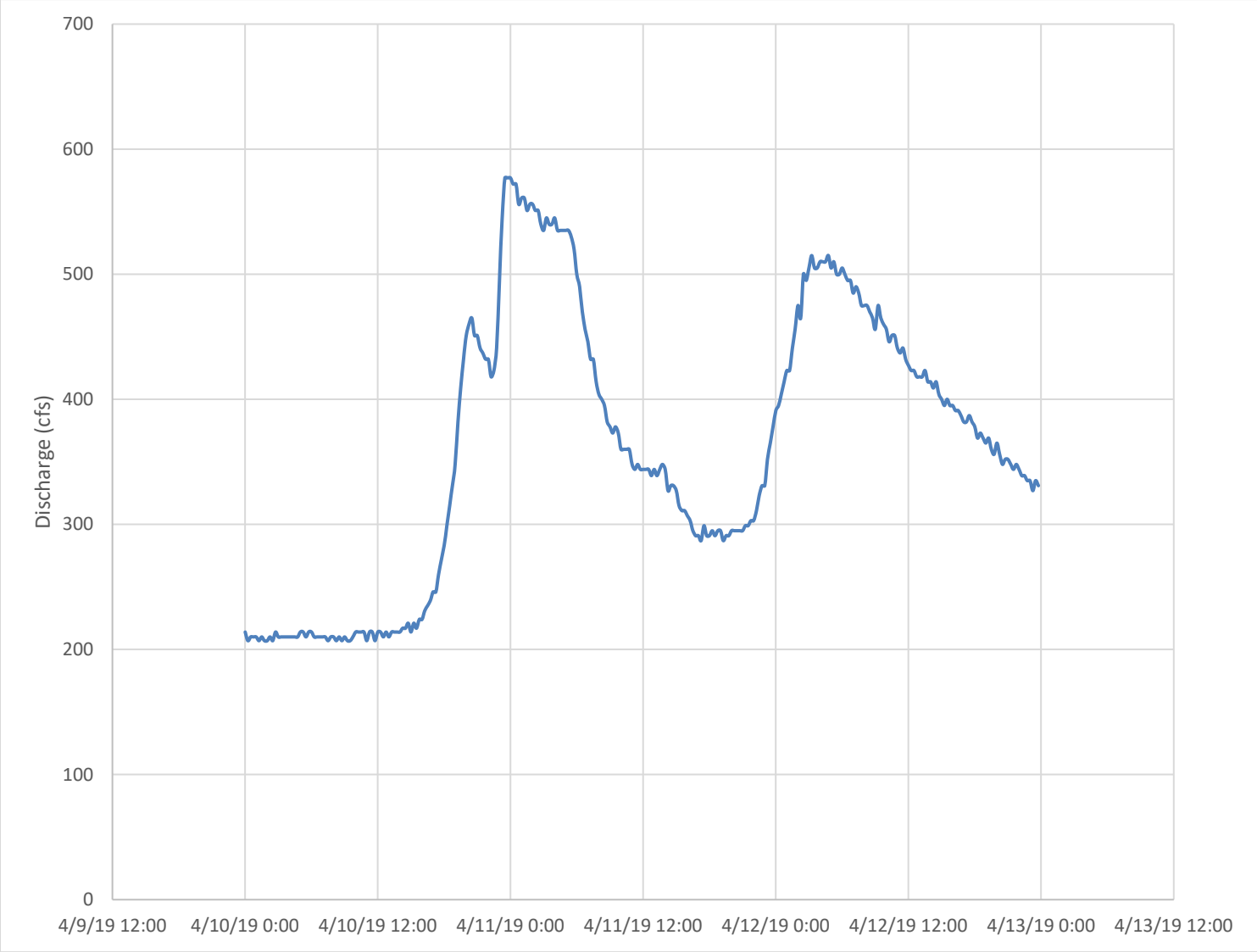


Figure 64 – Sultan River immediately downstream of Powerhouse – 04/19/2019 to 04/20/2019

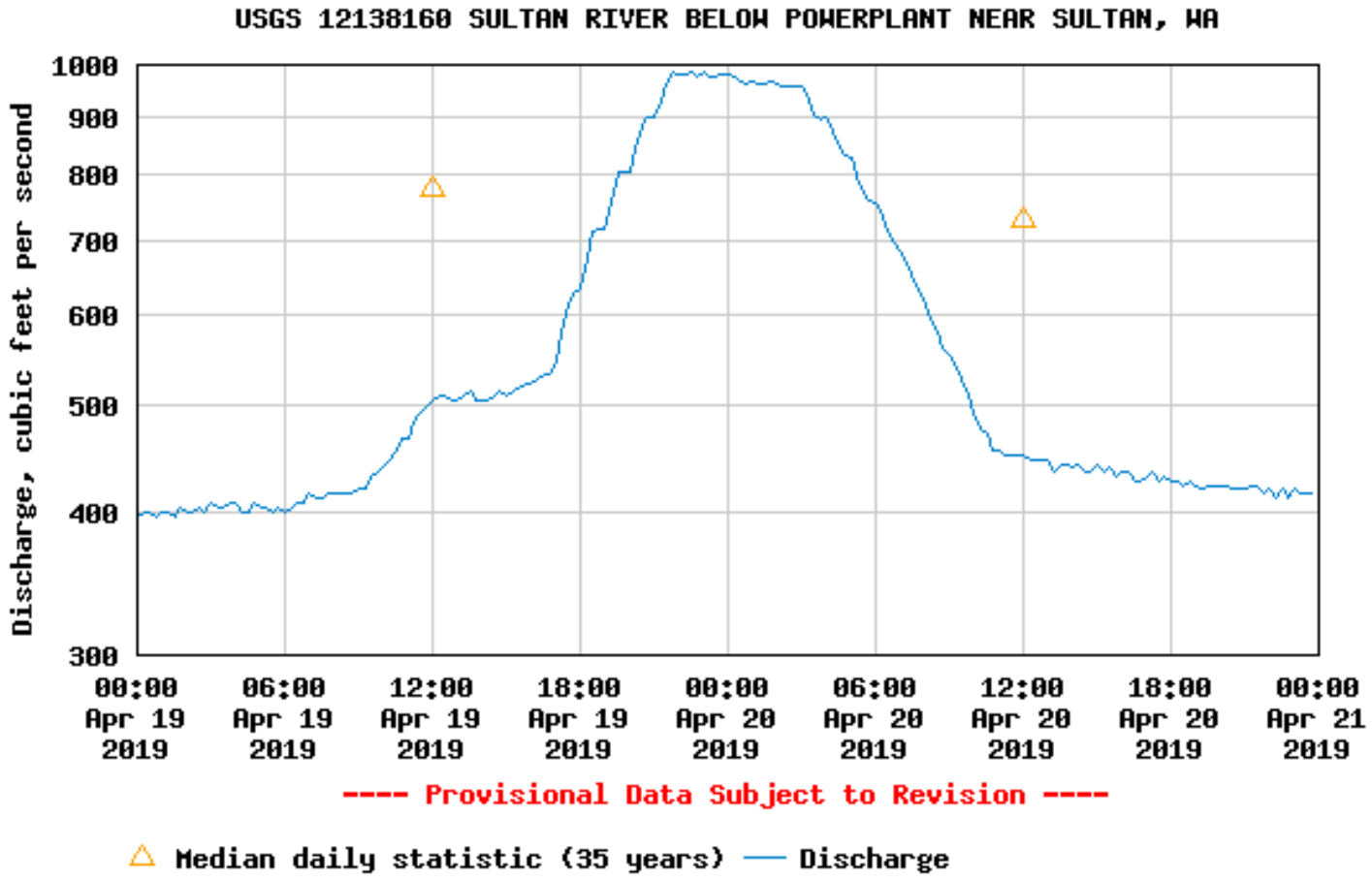


Figure 65 – Sultan River immediately upstream of Diversion Dam – 05/25/2019

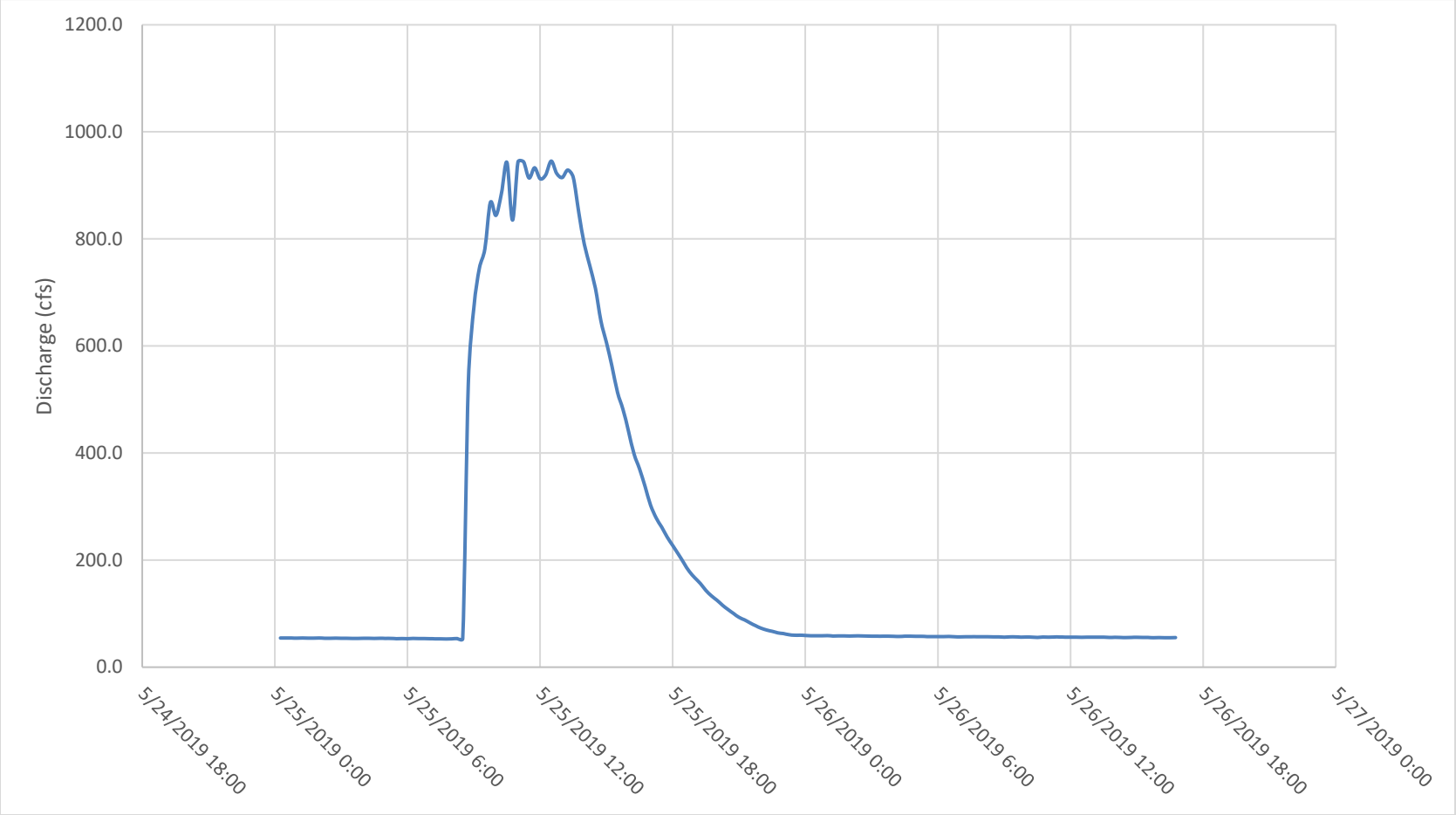


Figure 66 – Sultan River immediately upstream of Powerhouse – 05/25/2019

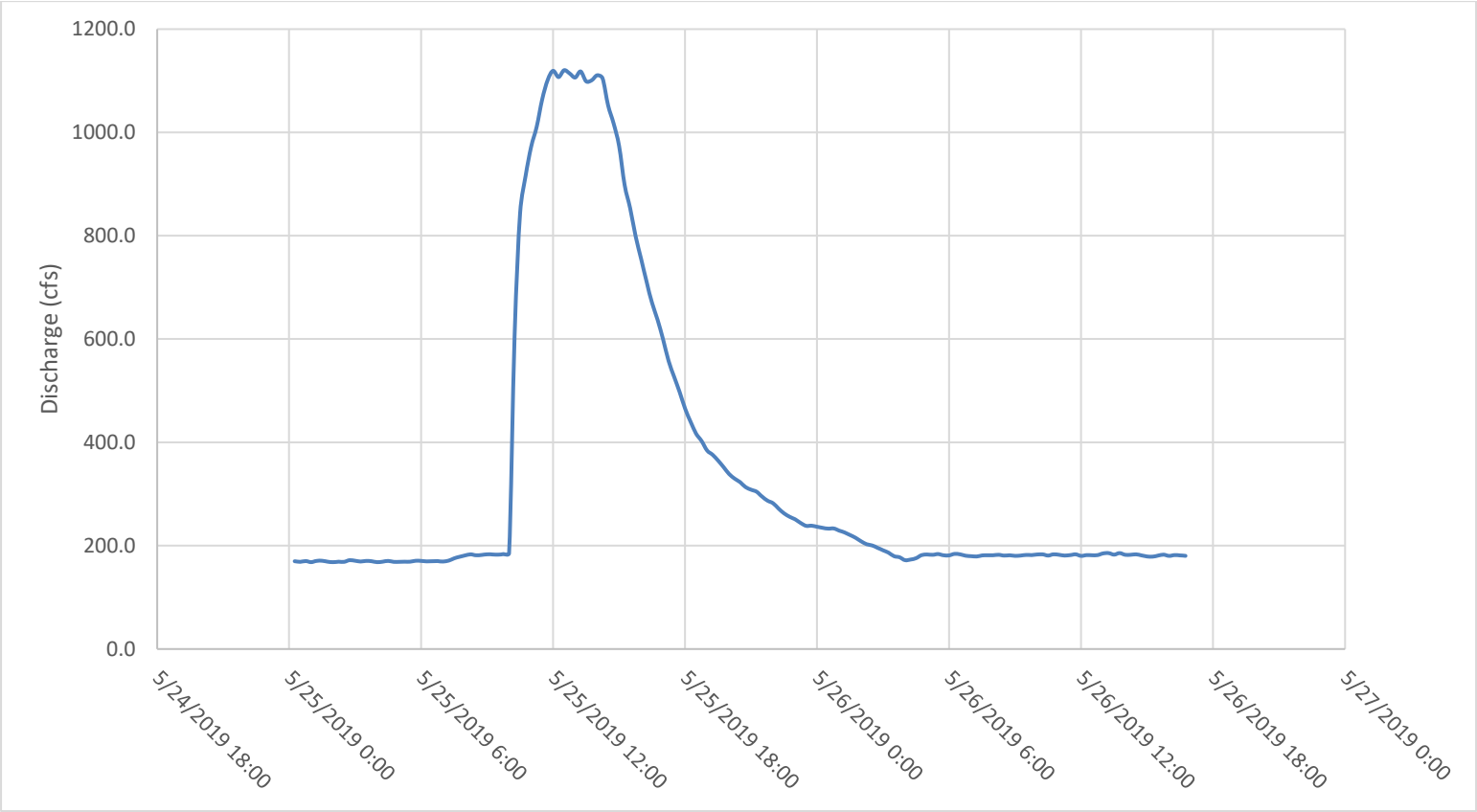


Figure 67 – Sultan River immediately downstream of Powerhouse – 05/25/2019

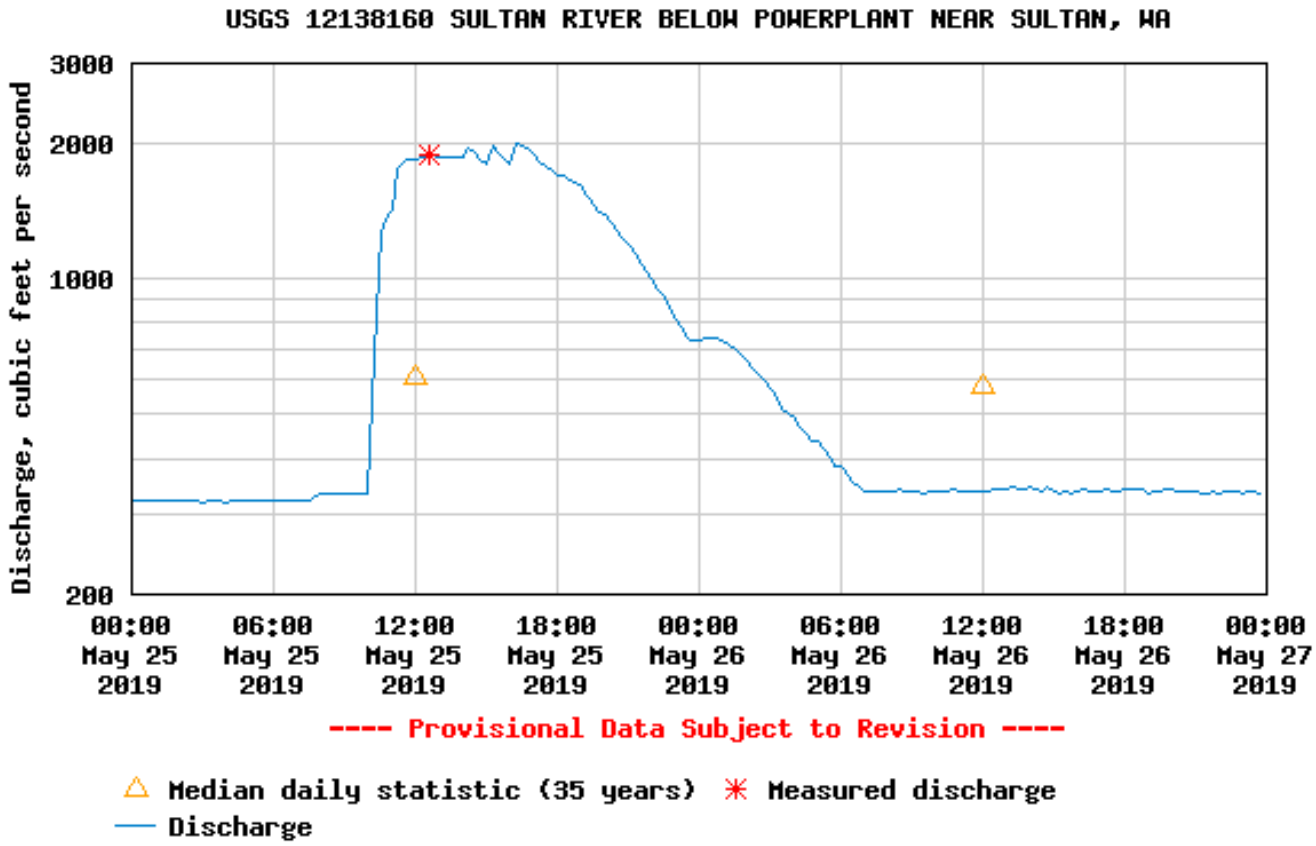


Figure 68 – Sultan River immediately downstream of Powerhouse – 09/8/2019

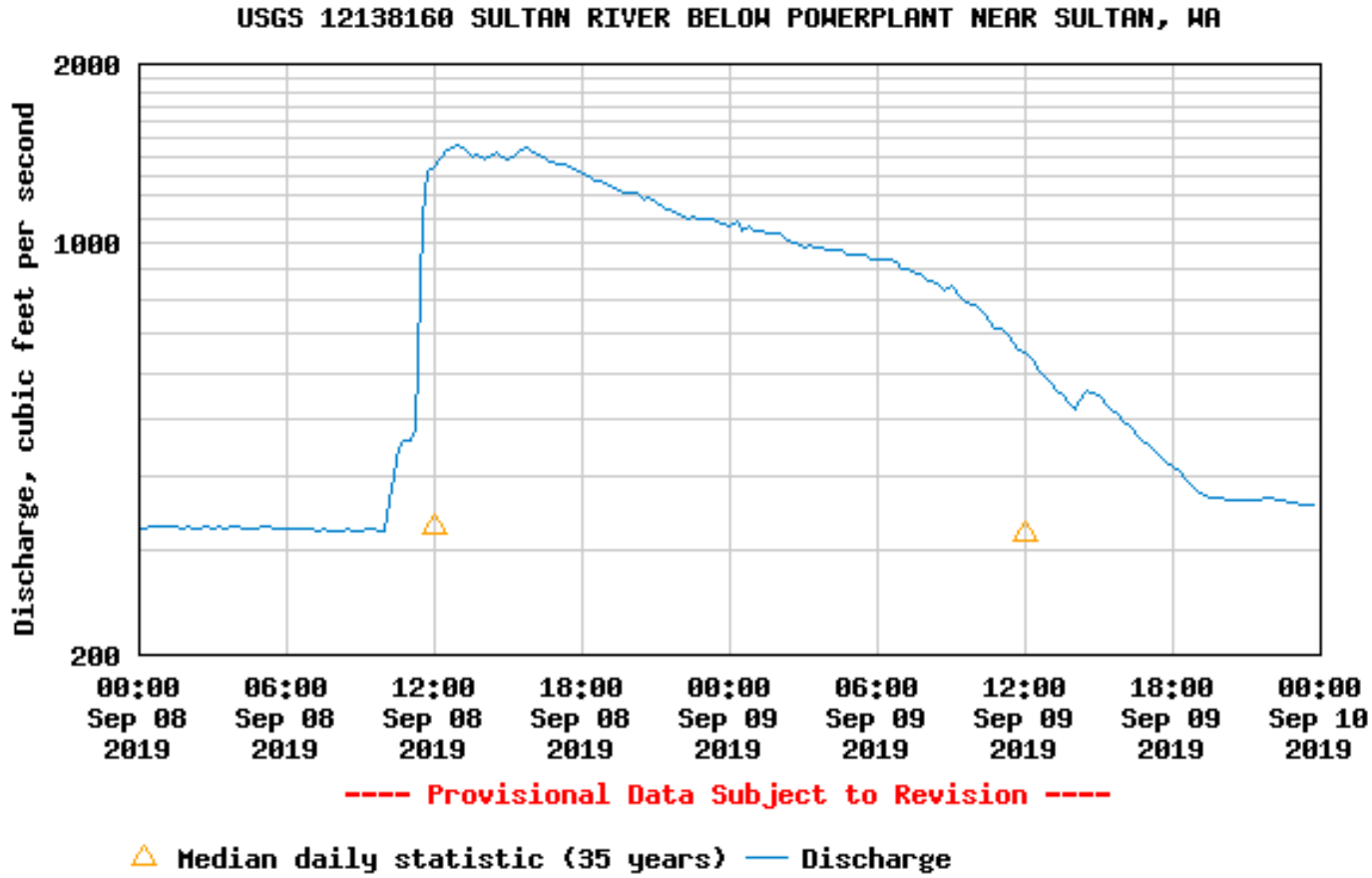


Figure 69 – Sultan River immediately upstream of Powerhouse – 09/8/2019

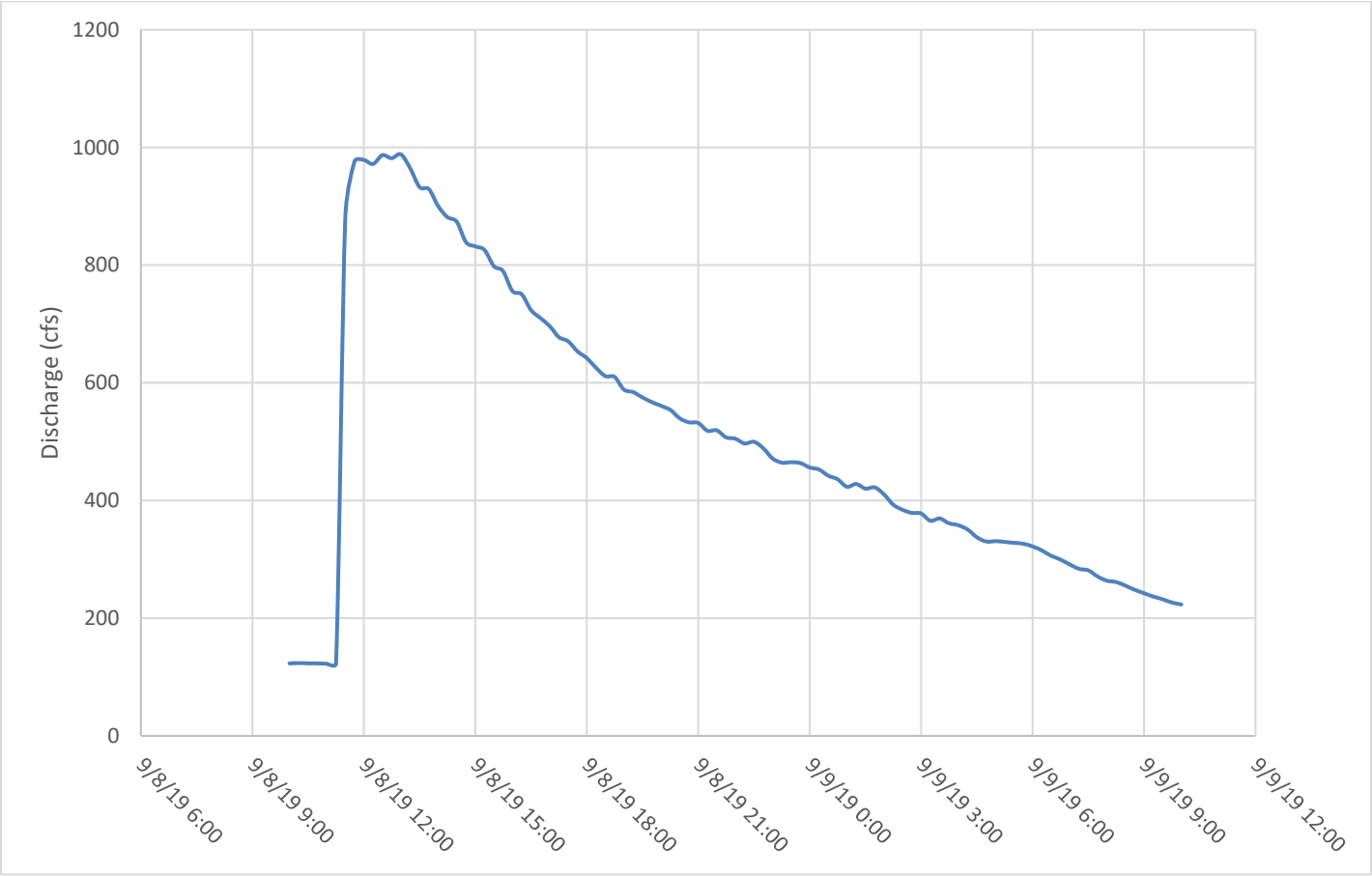


Figure 70 – Sultan River immediately upstream of Diversion Dam – 09/8/2019

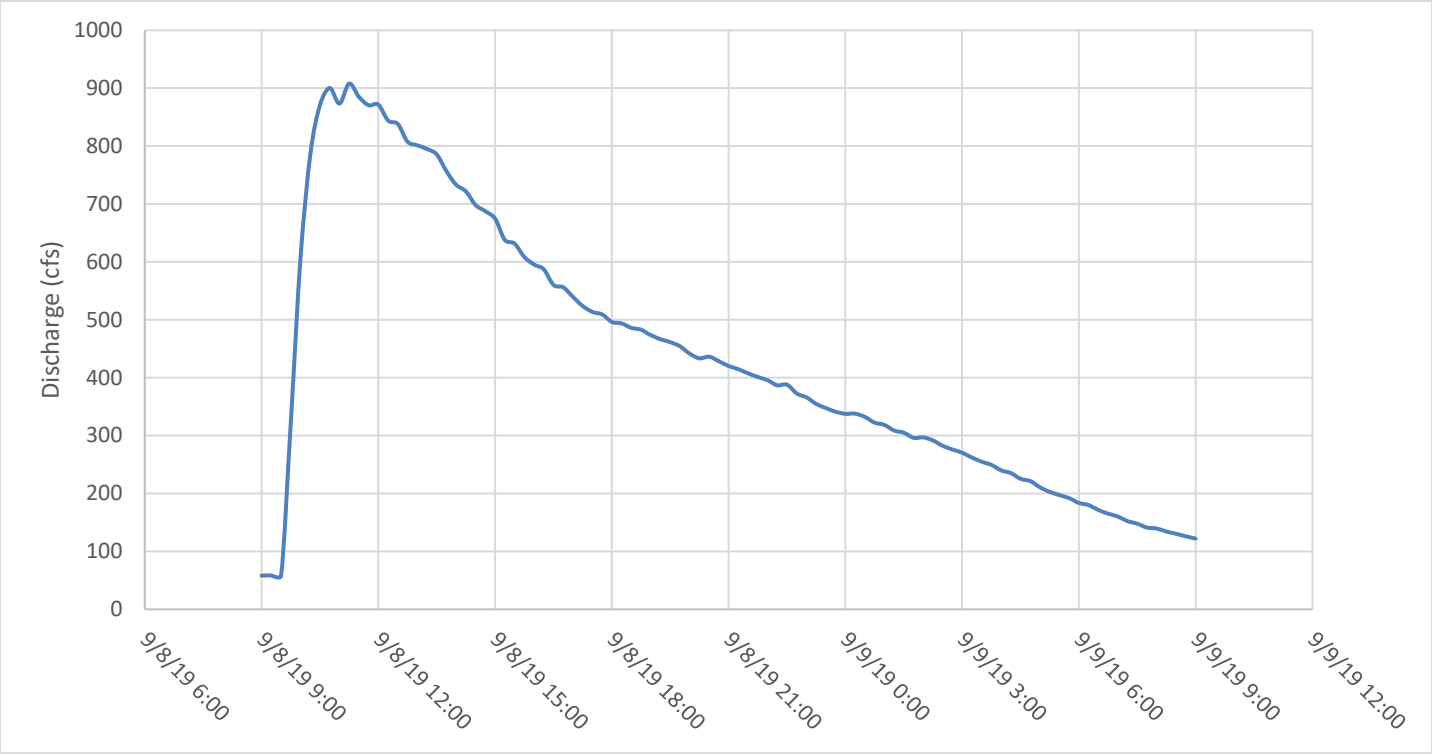


Figure 71 – Sultan River immediately downstream of Powerhouse – 02/01-02/2020

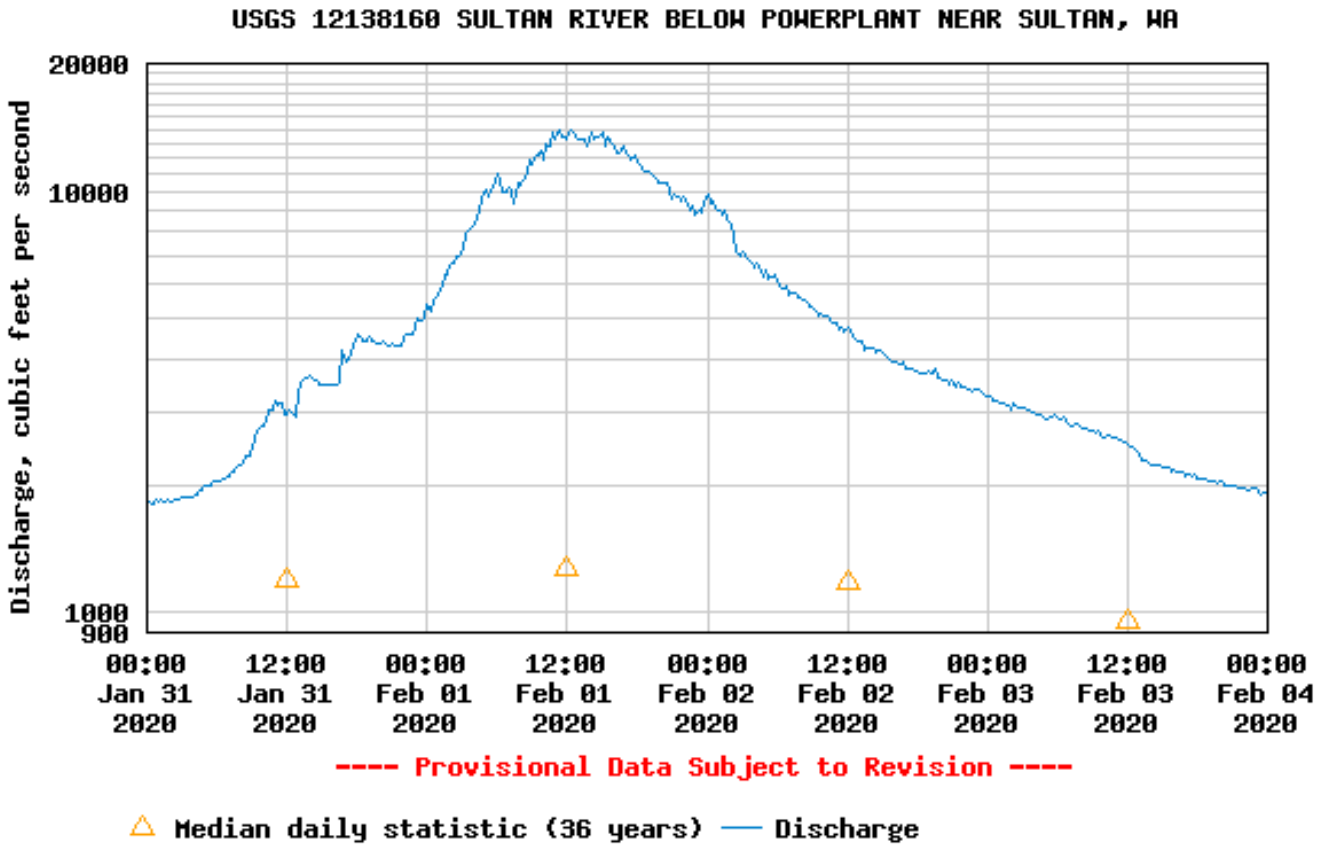


Figure 72 – Sultan River immediately downstream of Powerhouse – 04/16-17/2020

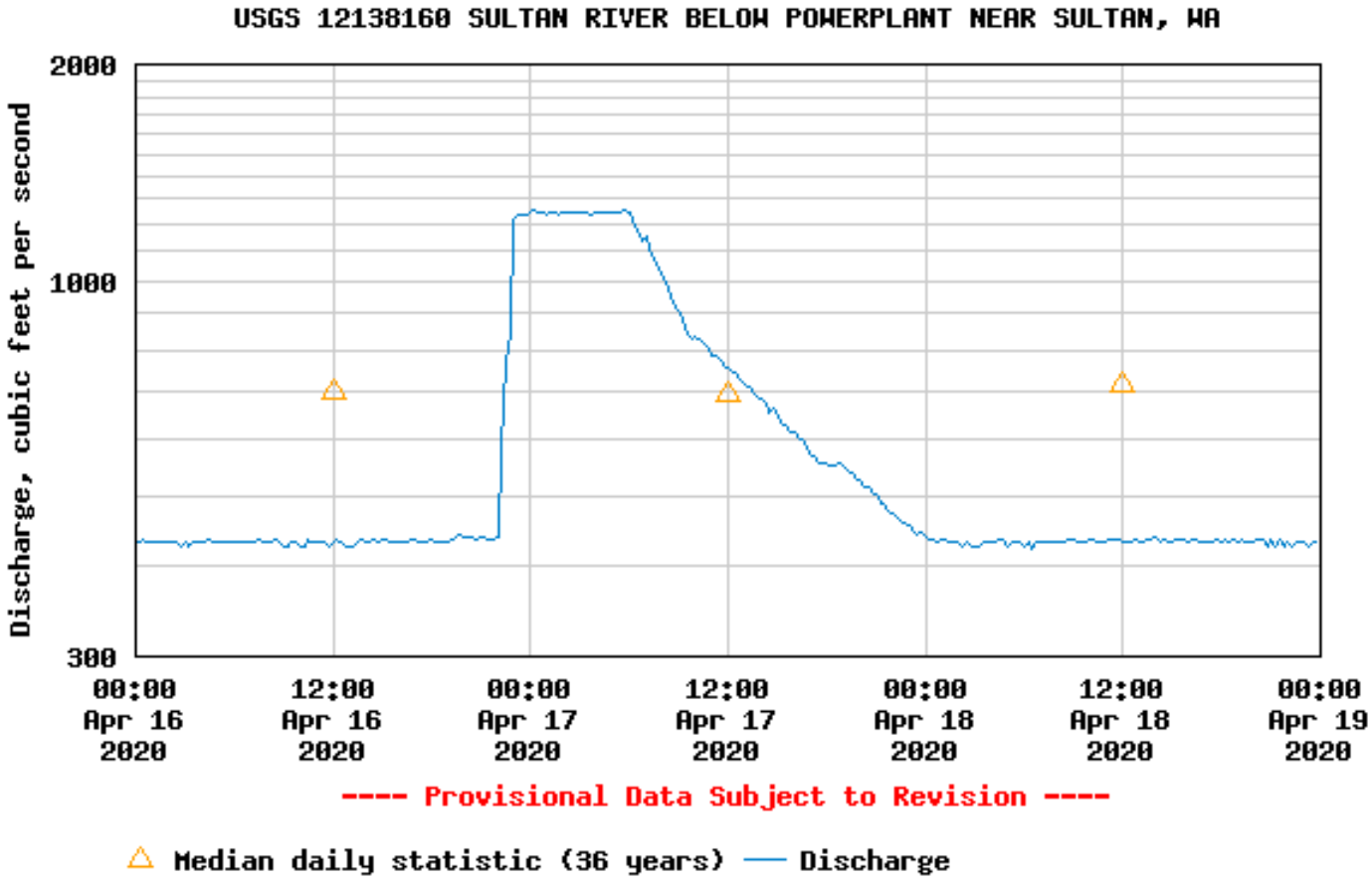


Figure 73 – Sultan River immediately upstream of Powerhouse – 04/16-17/2020

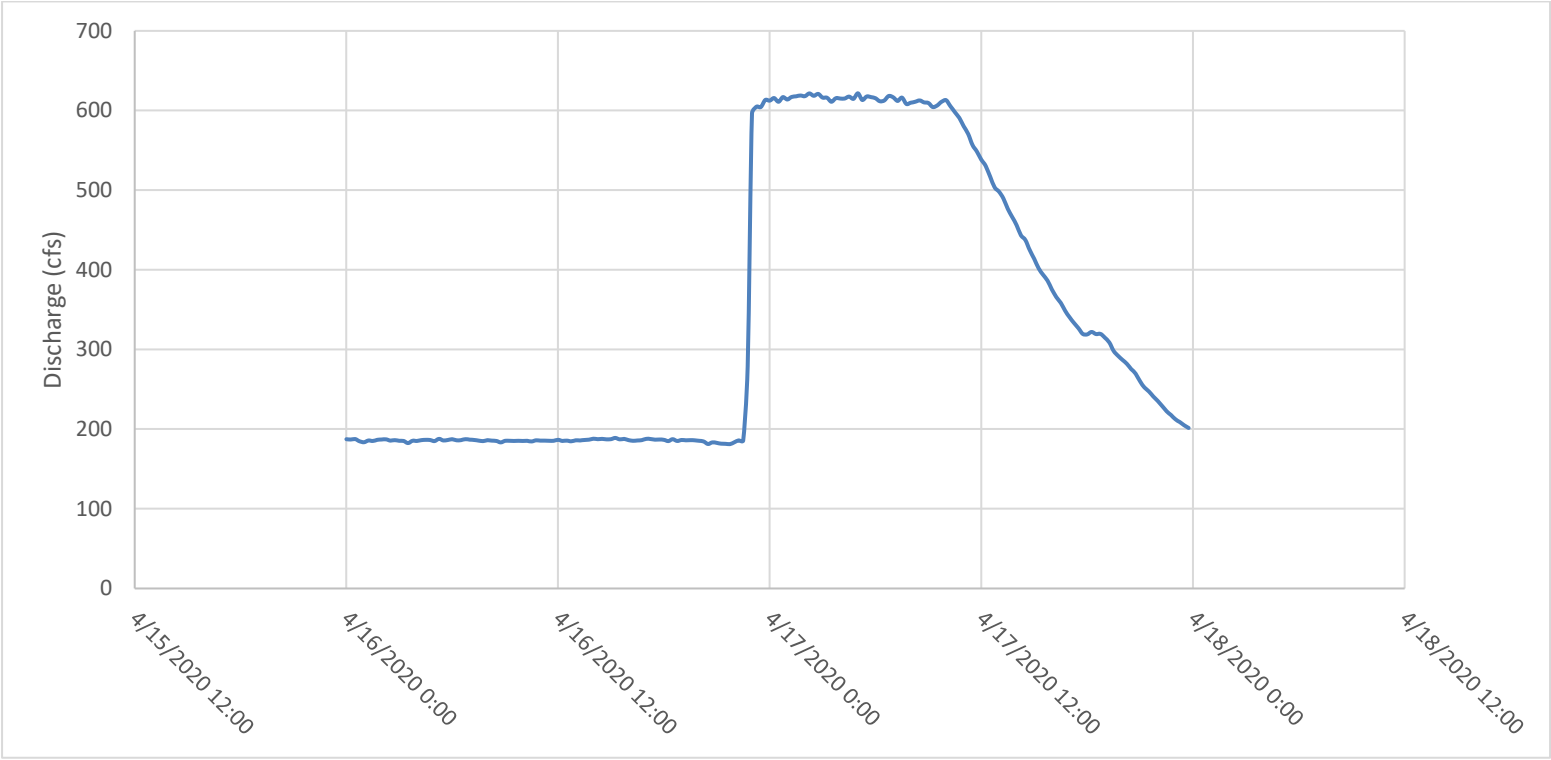


Figure 74 – Sultan River immediately upstream of Diversion Dam – 04/16-17/2020

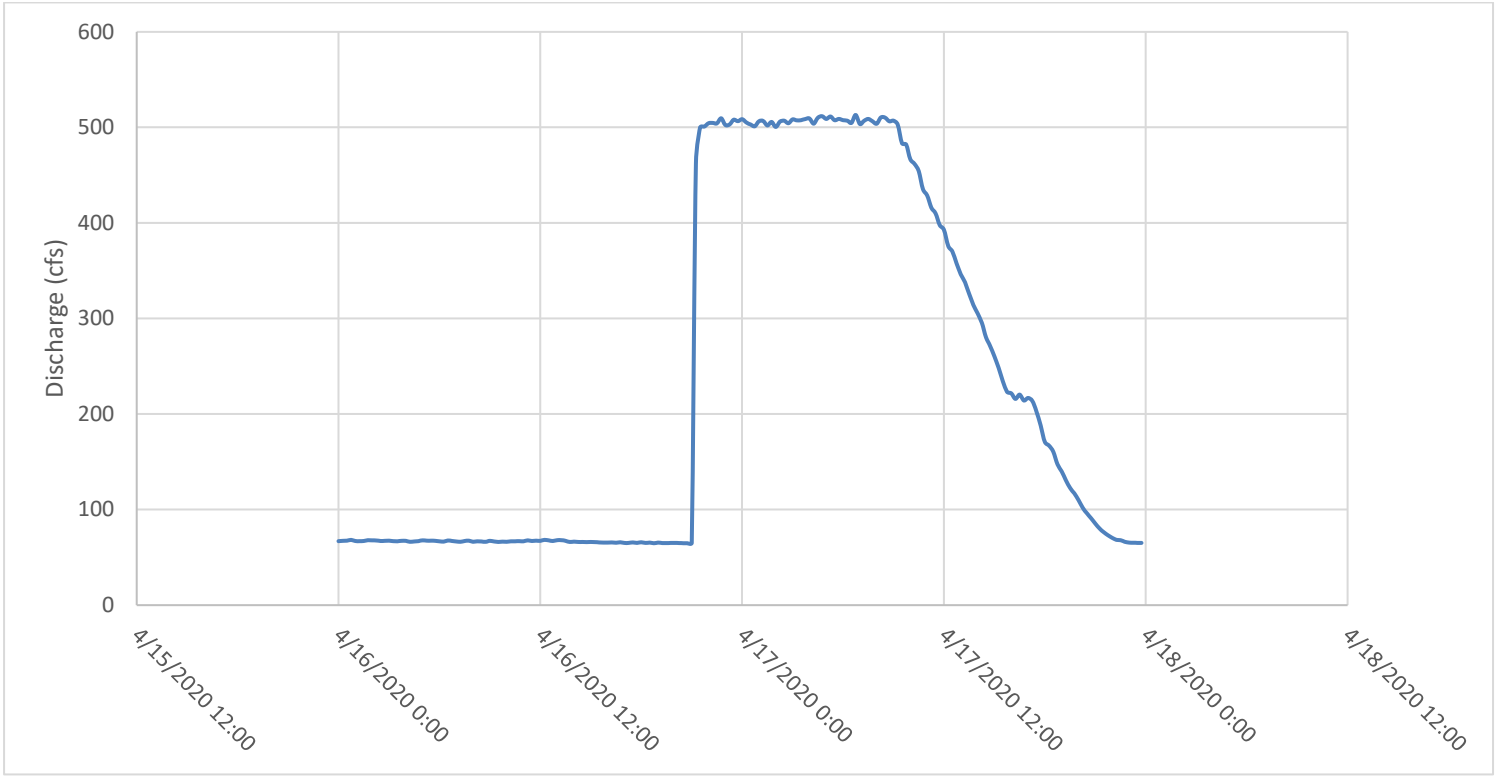


Figure 75 – Sultan River immediately upstream of Diversion Dam – 05/19/2020

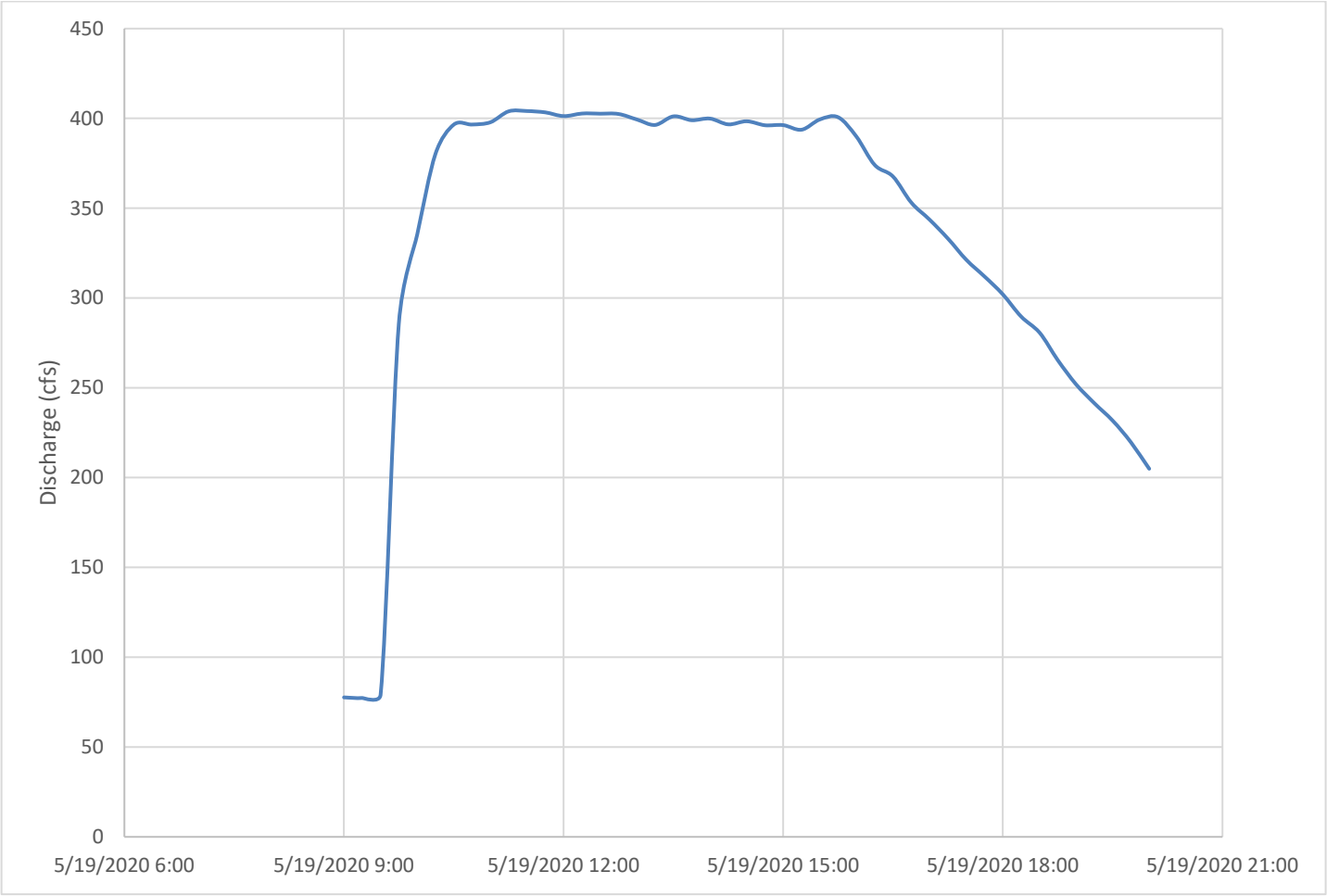


Figure 76 – Sultan River immediately upstream of Powerhouse – 05/19/2020

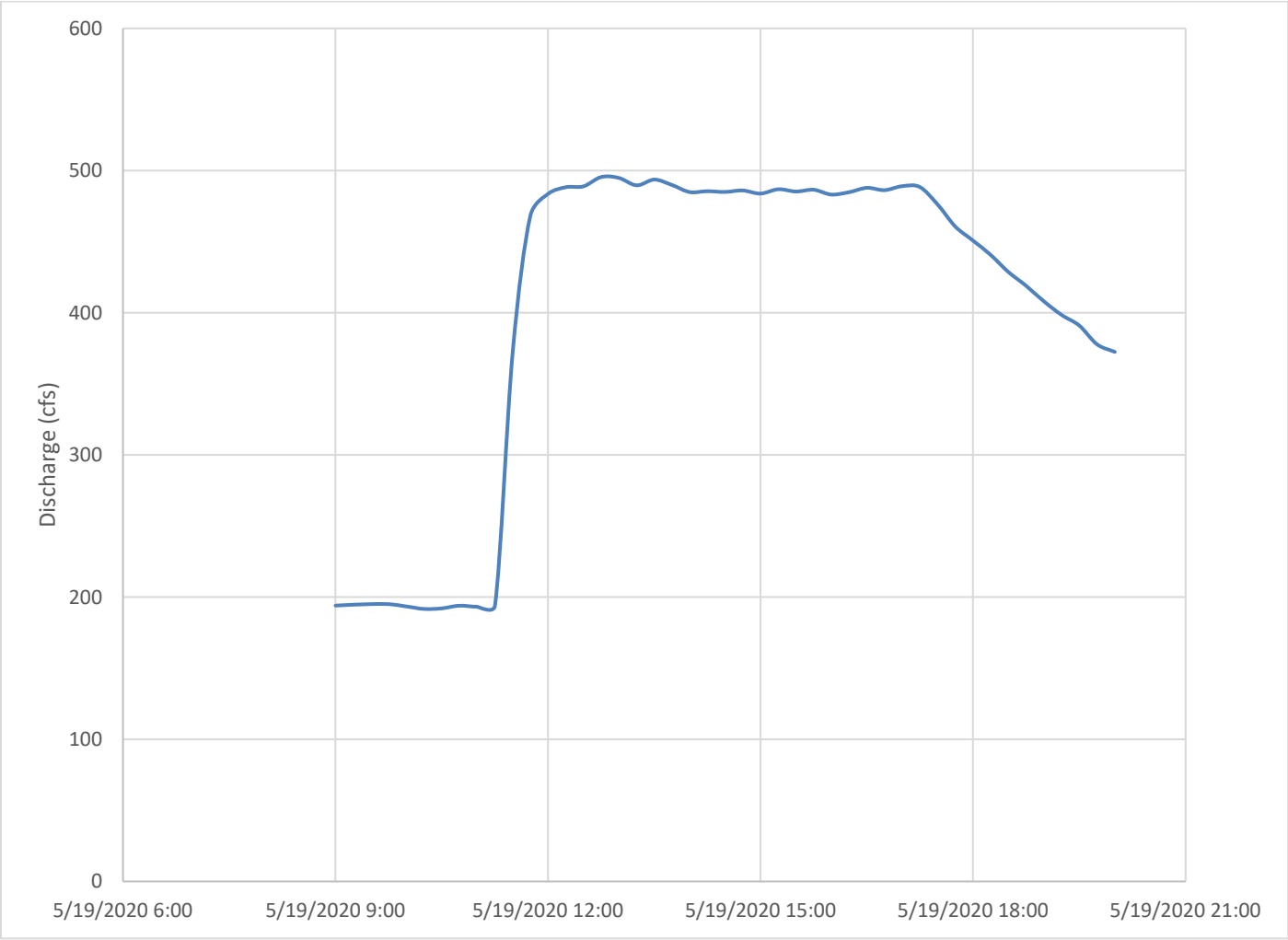


Figure 77 – Sultan River immediately downstream of Powerhouse – 05/19/2020

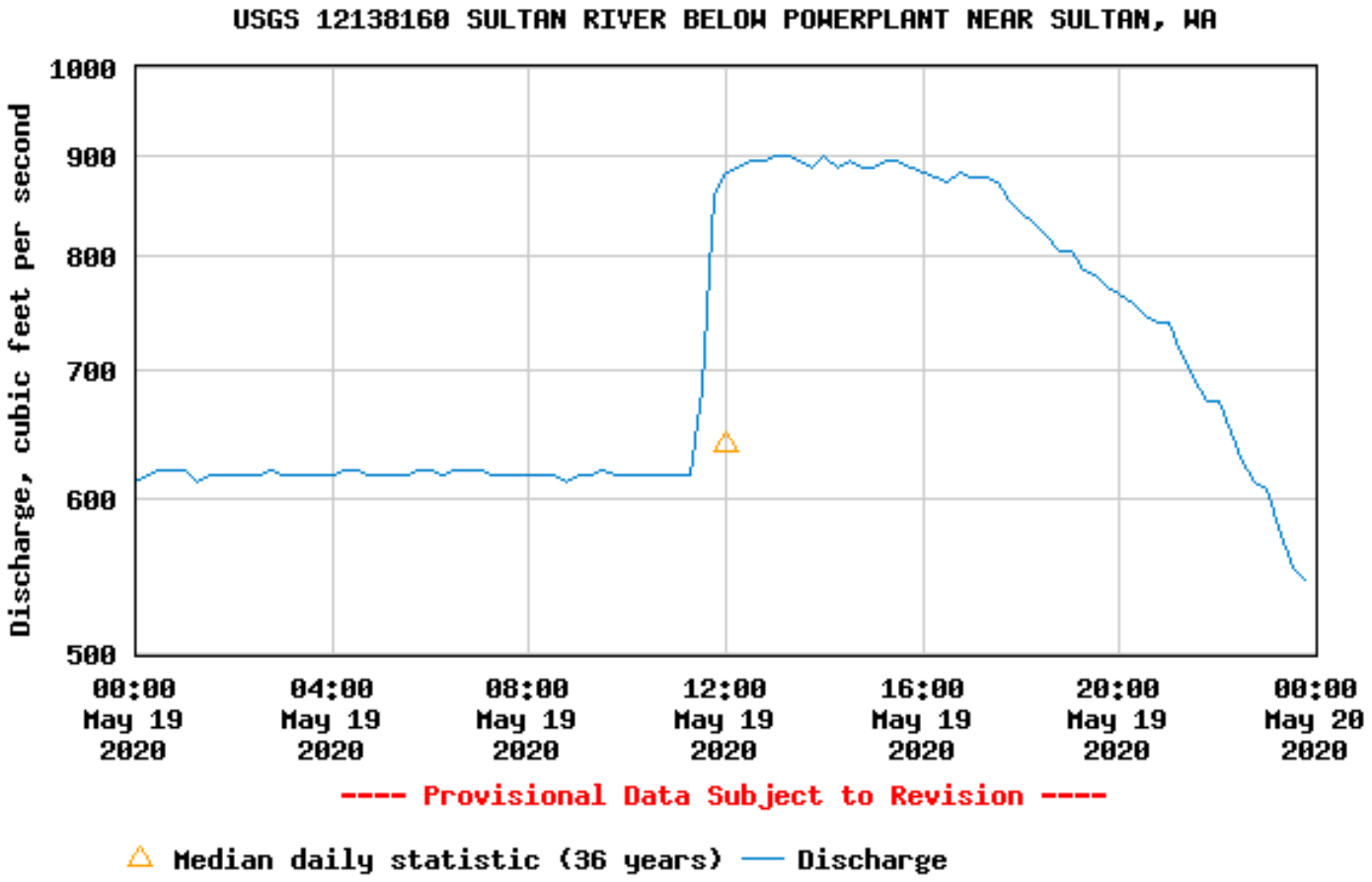


Figure 78 – Sultan River immediately upstream of Diversion Dam – 09/11/2020

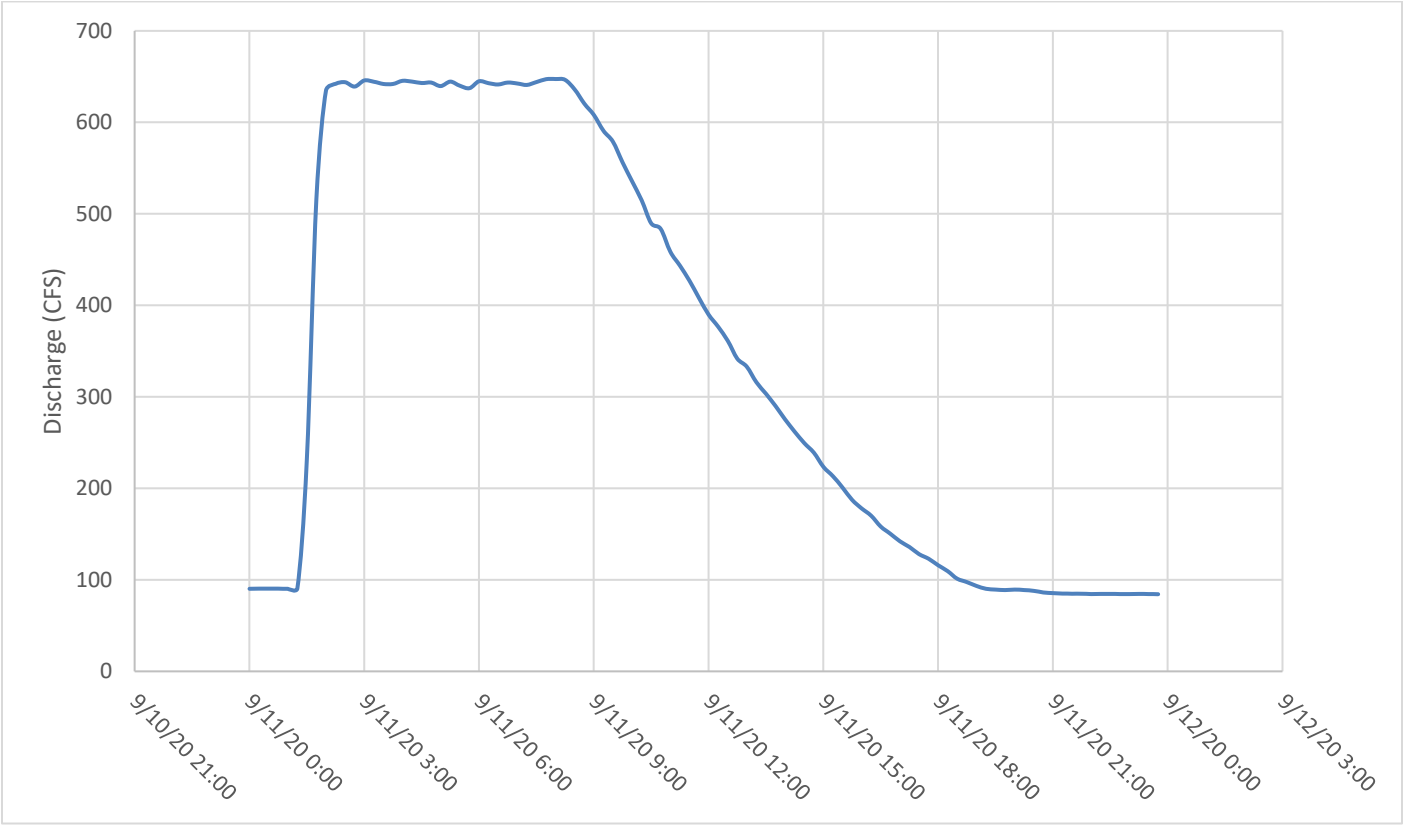


Figure 79 – Sultan River immediately upstream of Powerhouse – 09/11/2020

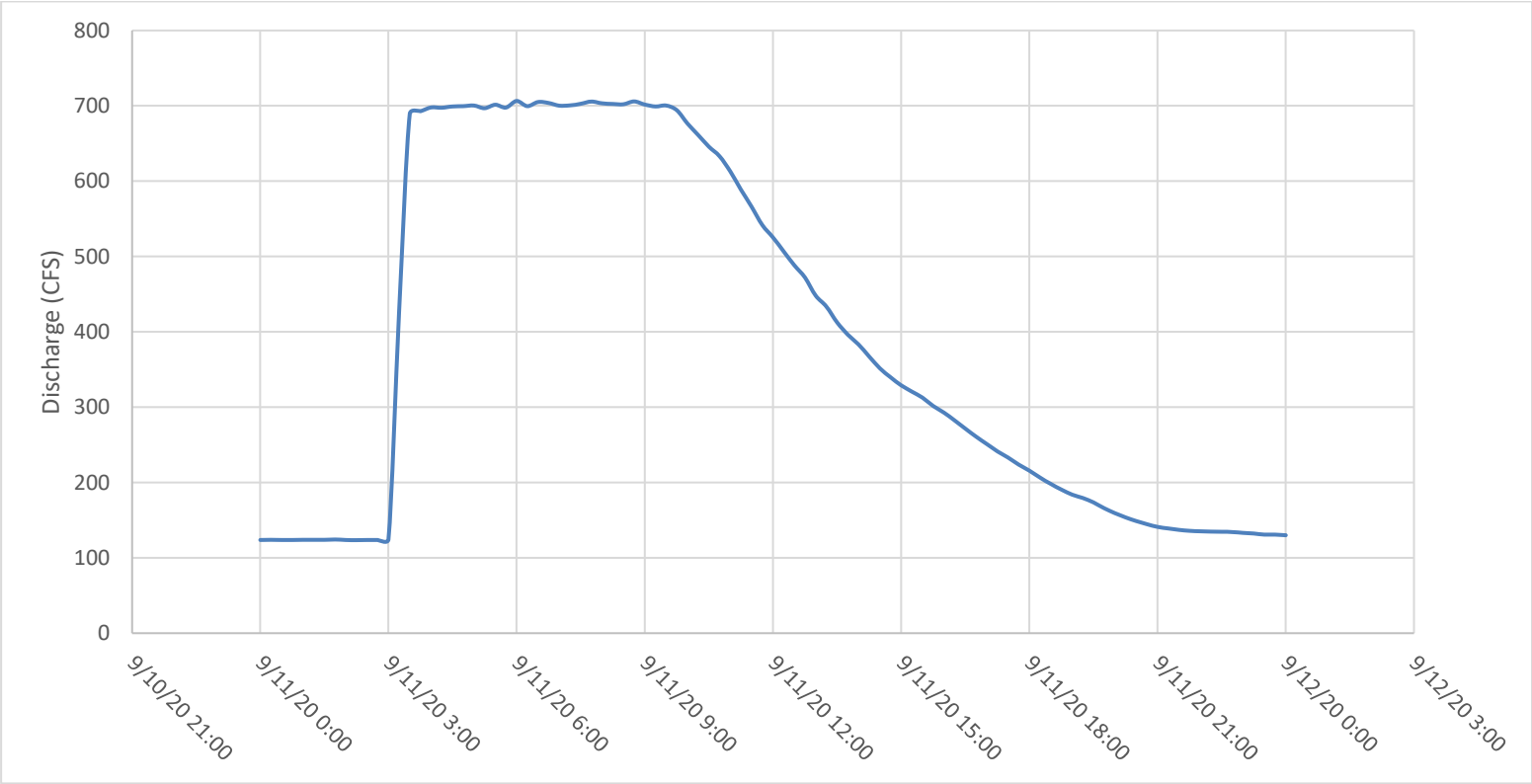


Figure 80 – Sultan River immediately downstream of Powerhouse – 09/11/2020

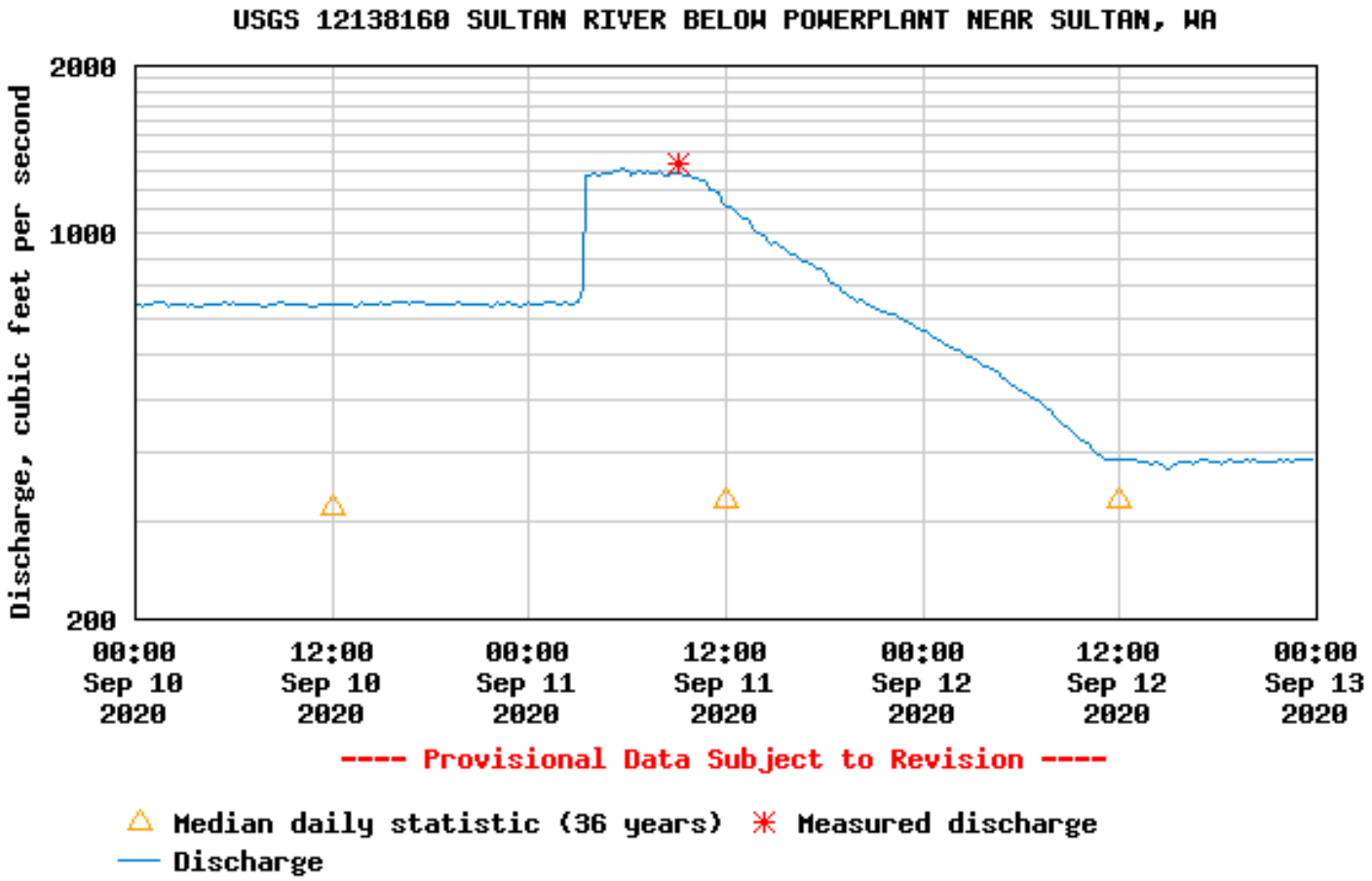


Figure 81 – Sultan River immediately downstream of Powerhouse – 04/9-13/2021

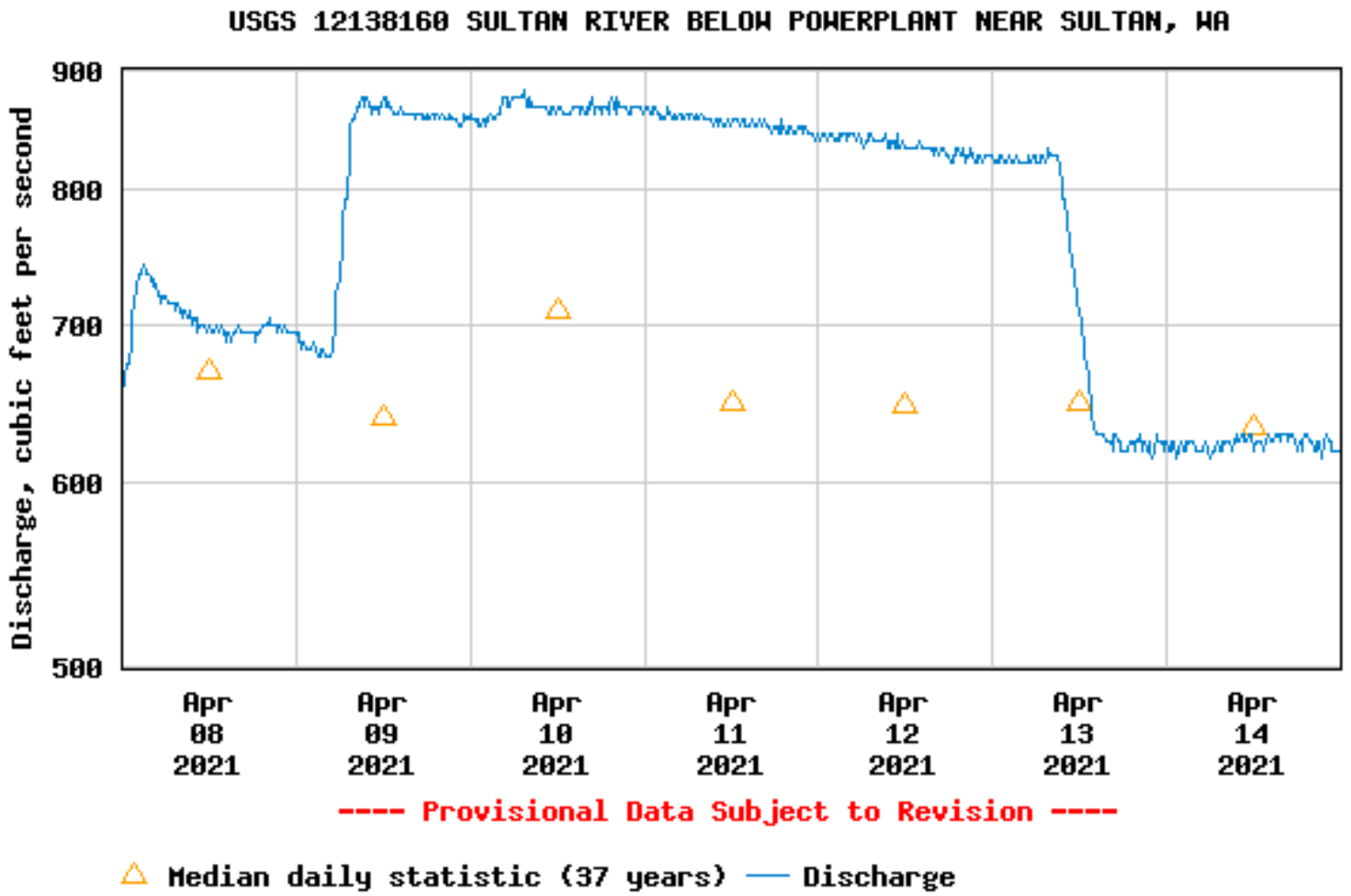


Figure 82 – Sultan River immediately upstream of Powerhouse – 04/23/2021

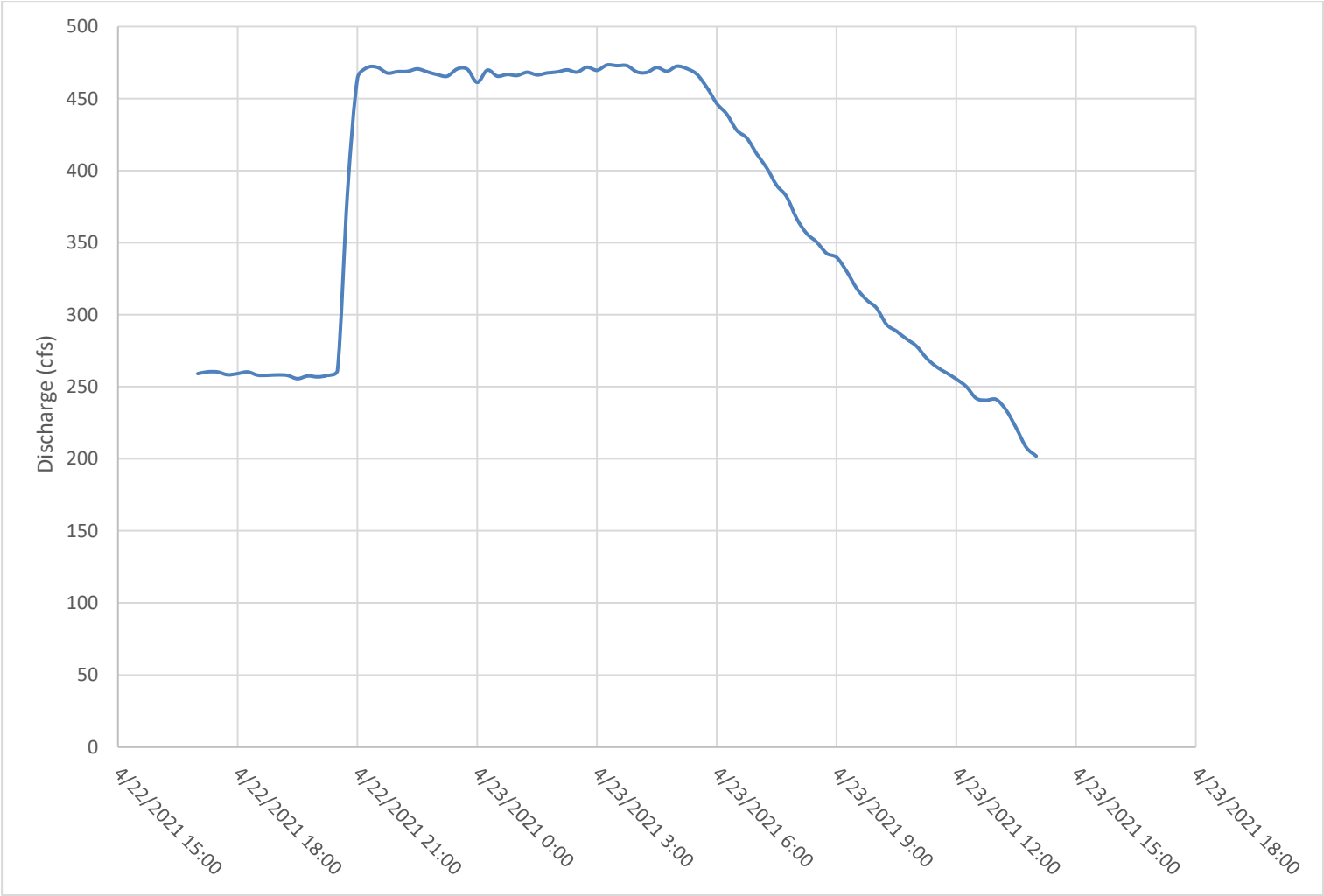


Figure 83 – Sultan River immediately upstream of Diversion Dam – 04/23/2021

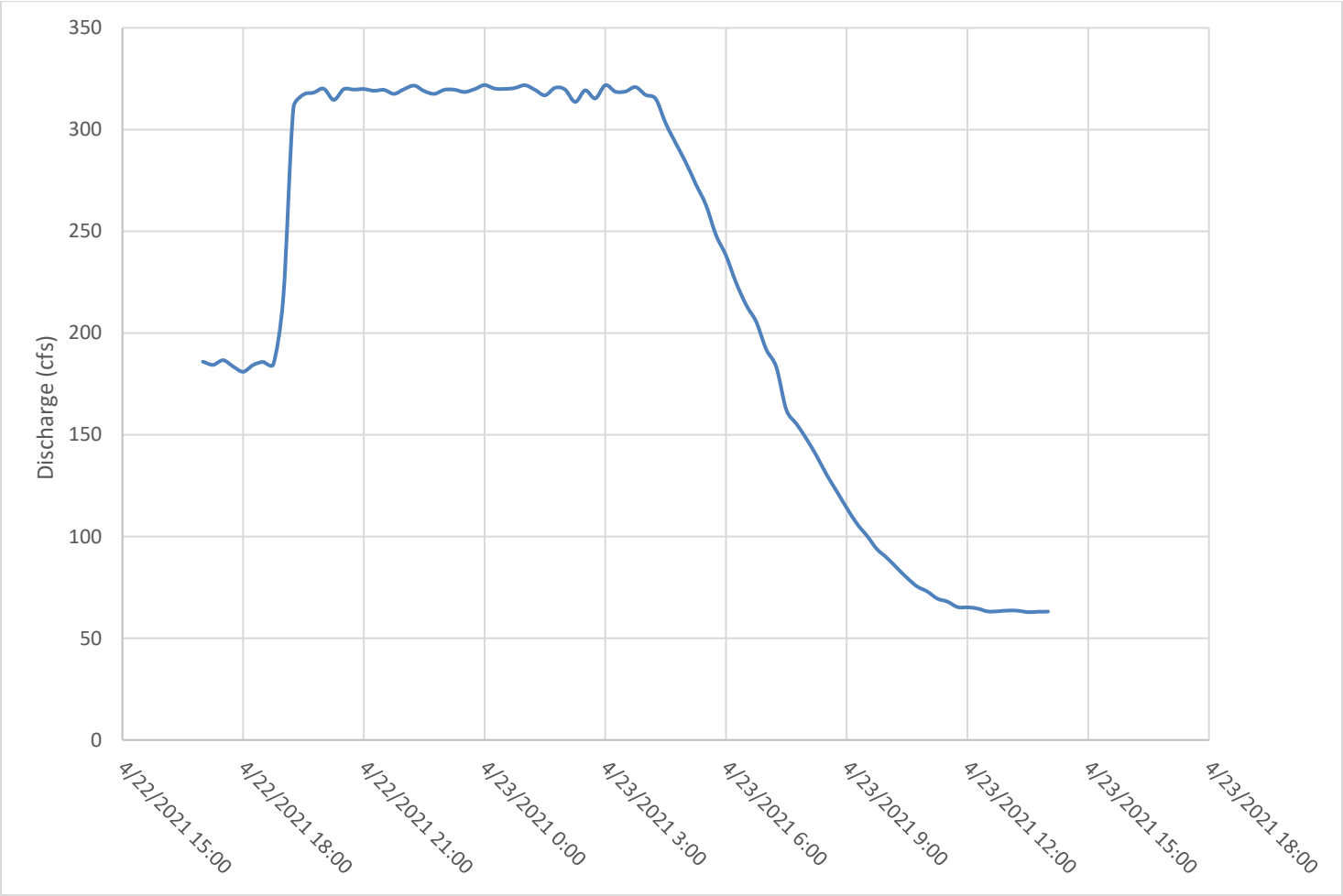


Figure 84 – Sultan River immediately downstream of Powerhouse – 05/22/2021

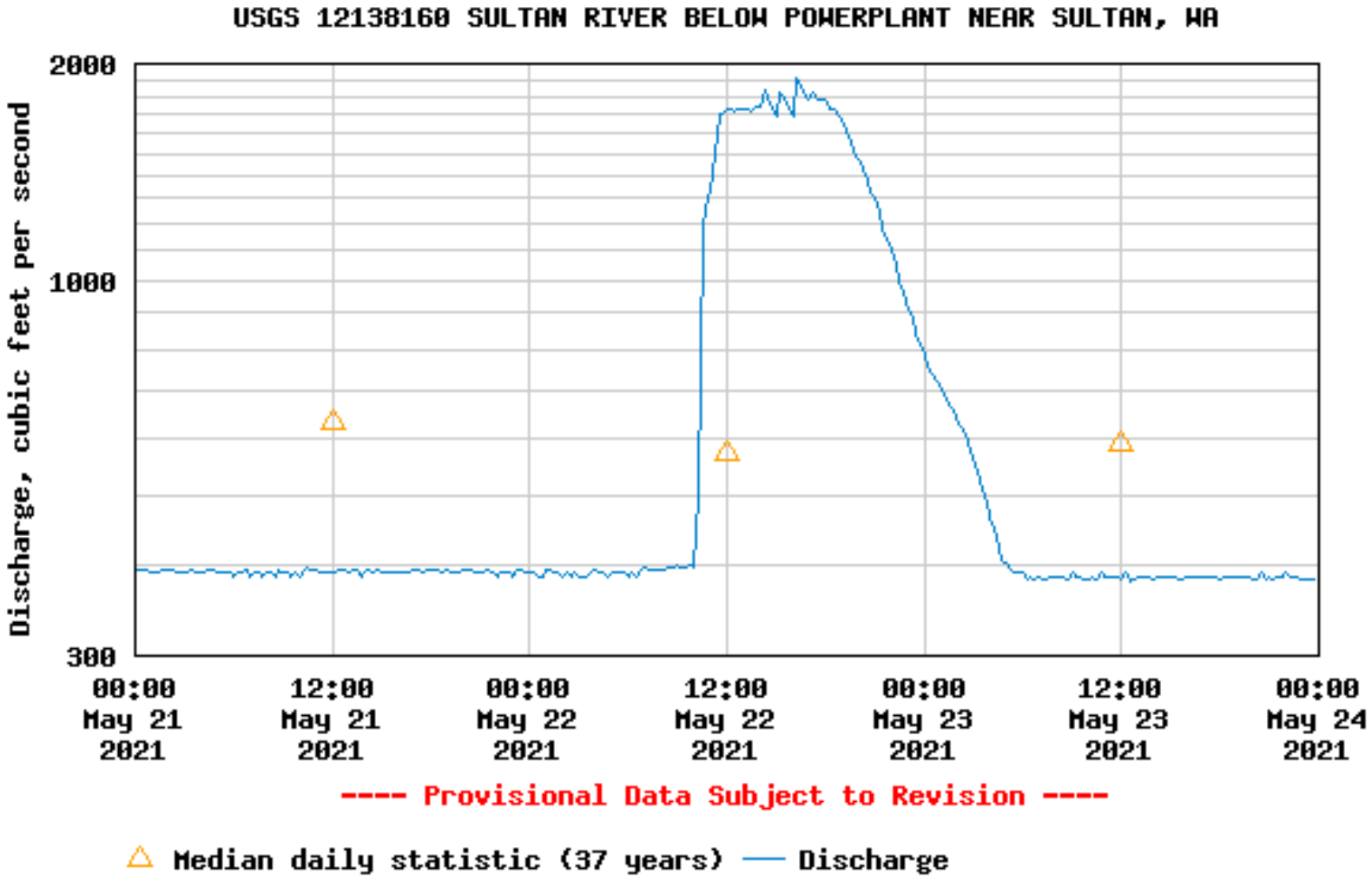


Figure 85 – Sultan River immediately upstream of Powerhouse – 05/22/2021

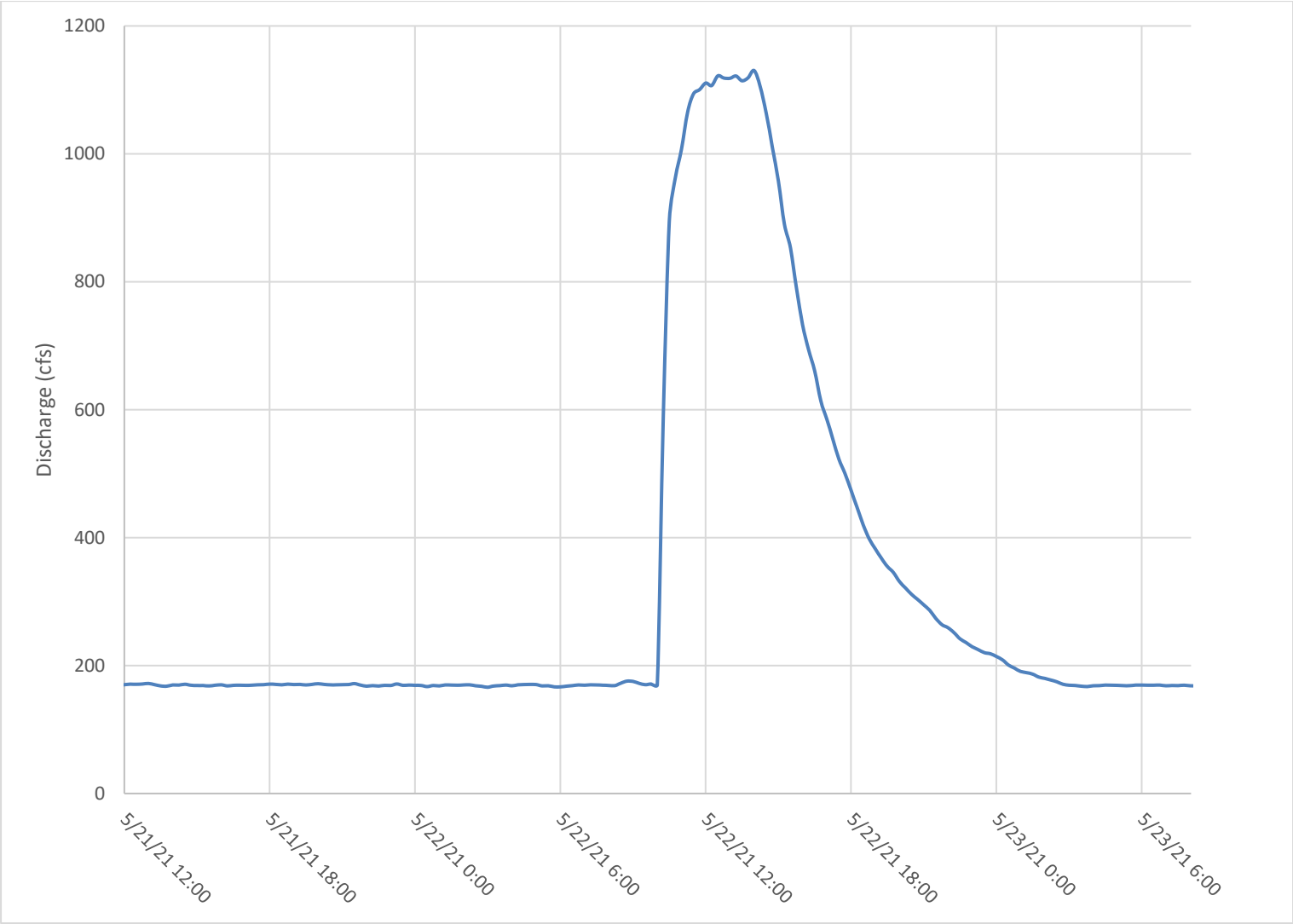


Figure 86 – Sultan River immediately upstream of Diversion Dam – 05/22/2021

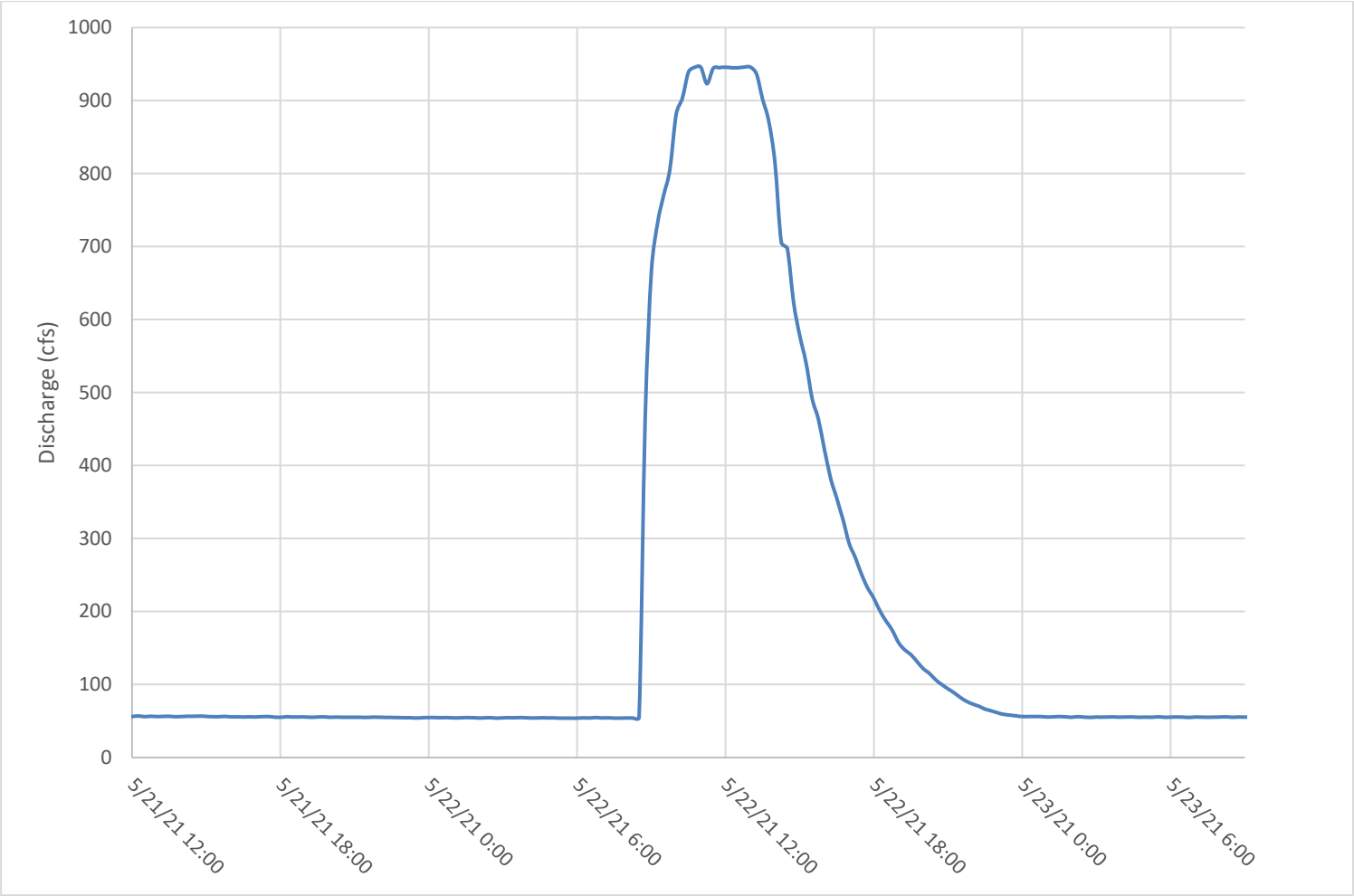


Figure 87 – Sultan River immediately downstream of Powerhouse – 09/26/2021

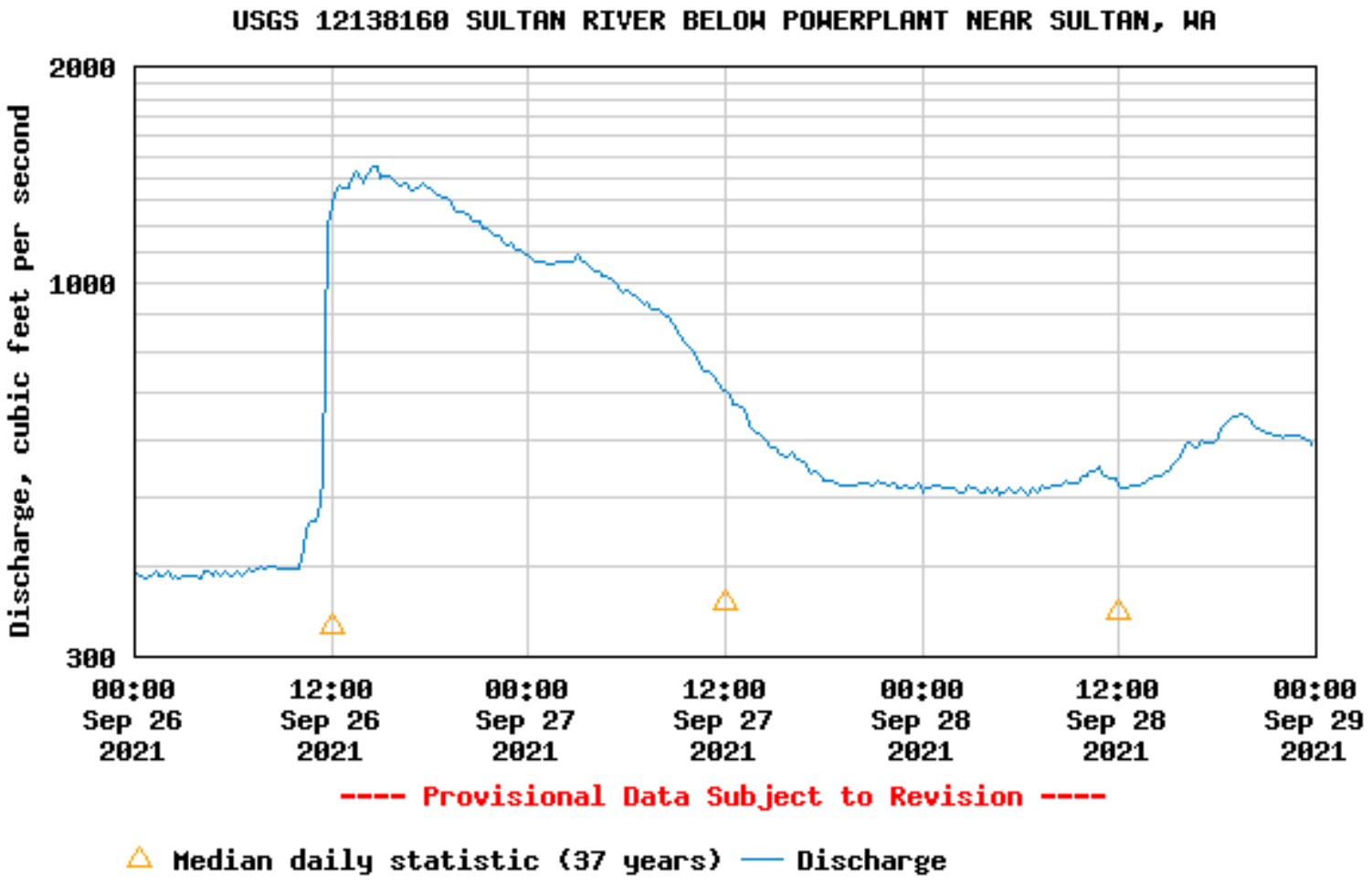


Figure 88 – Sultan River immediately upstream of Powerhouse – 09/26/2021

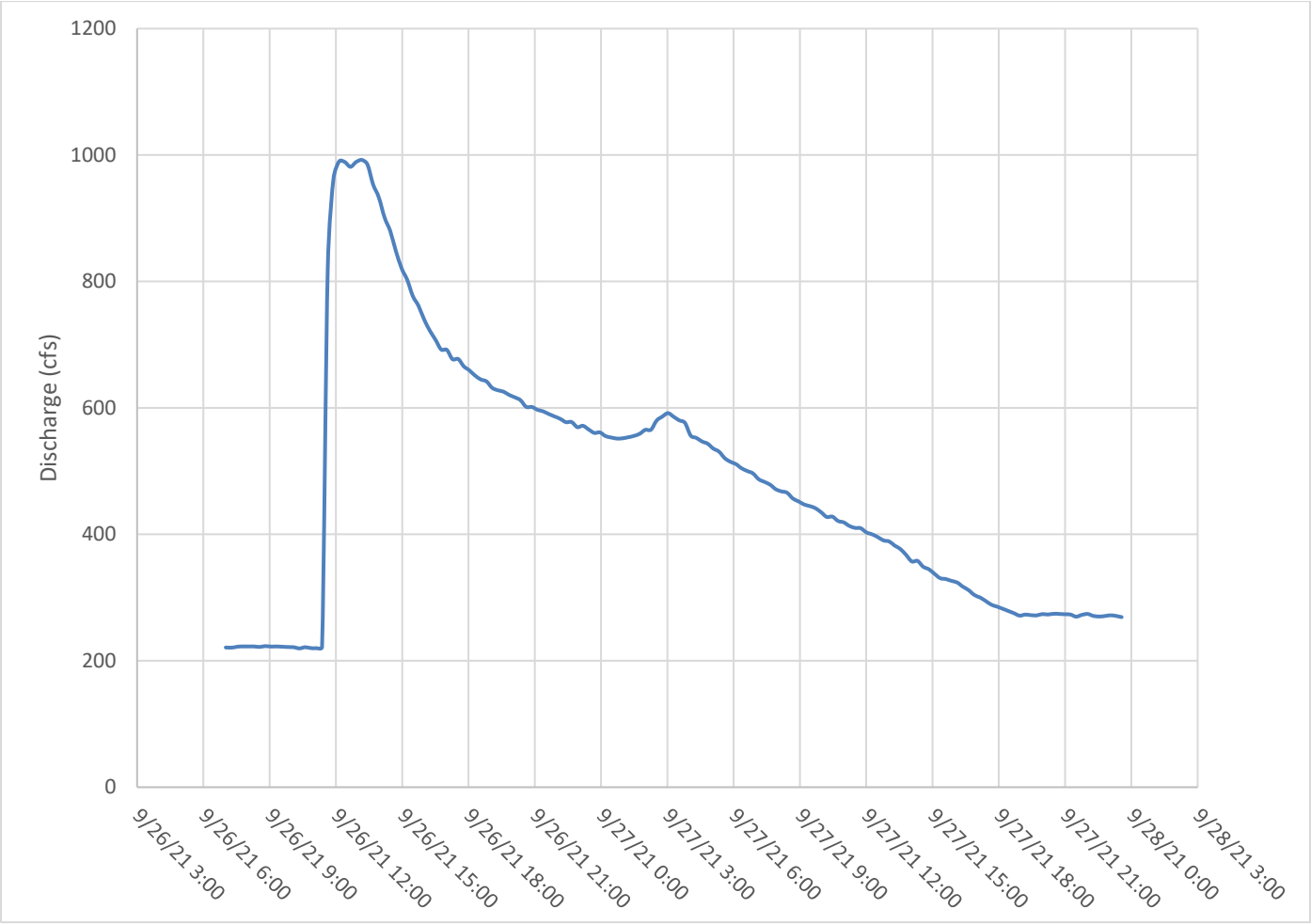


Figure 89 – Sultan River immediately upstream of Diversion Dam – 09/26/2021

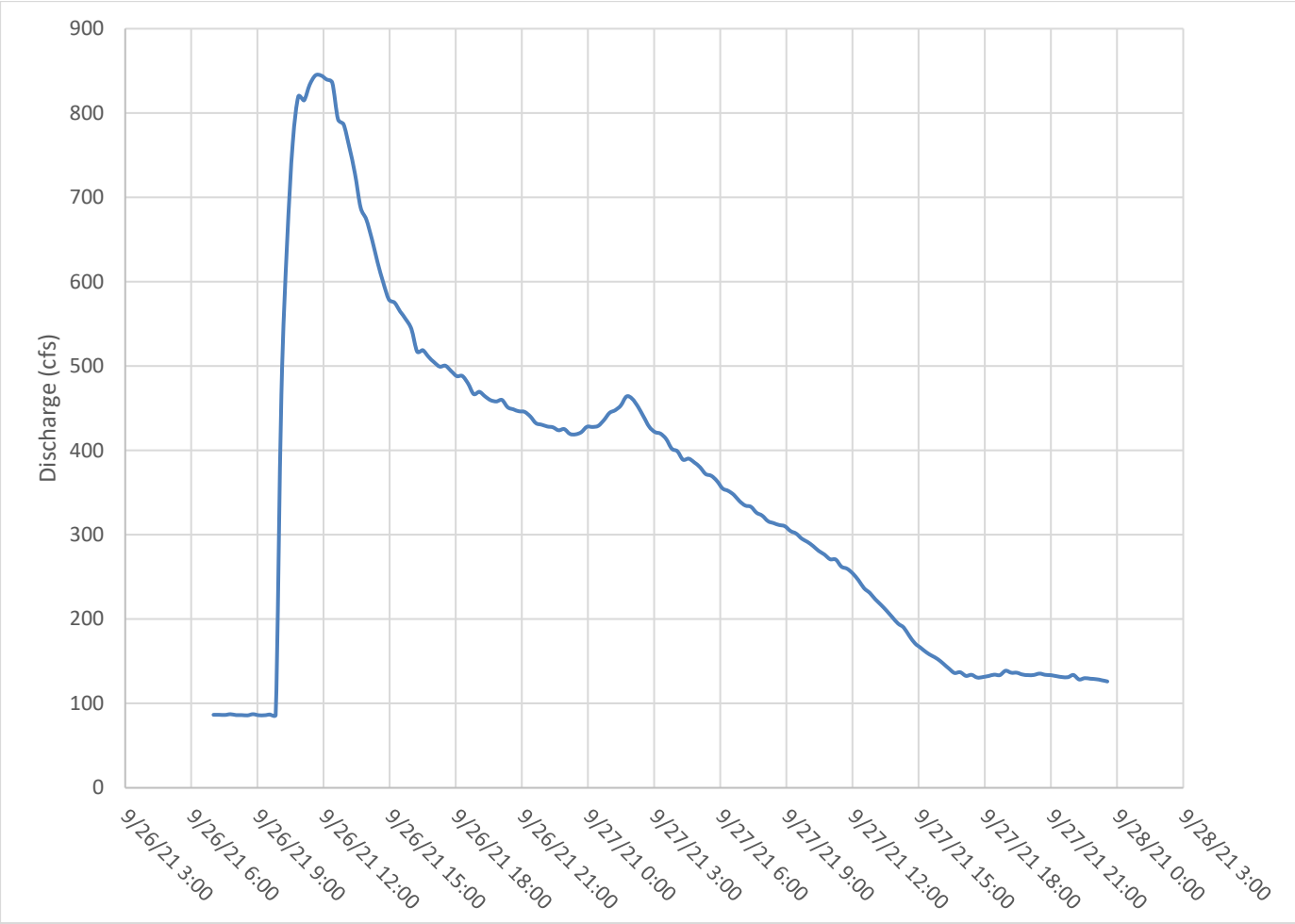


Figure 90 – Sultan River immediately downstream of Powerhouse – 11/15-16/2021

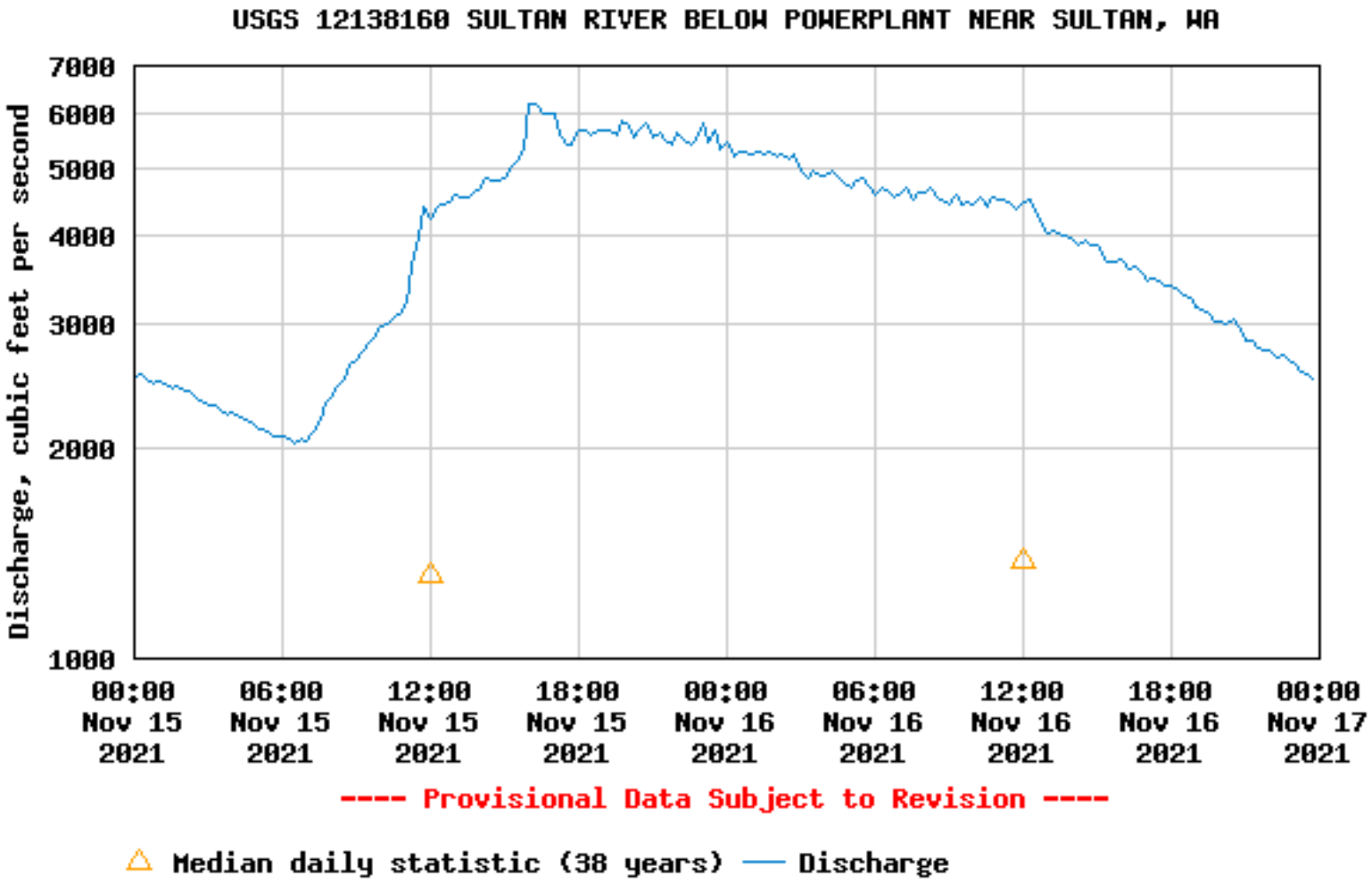


Figure 91 – Sultan River immediately upstream of Diversion Dam – 04/21-22/2022

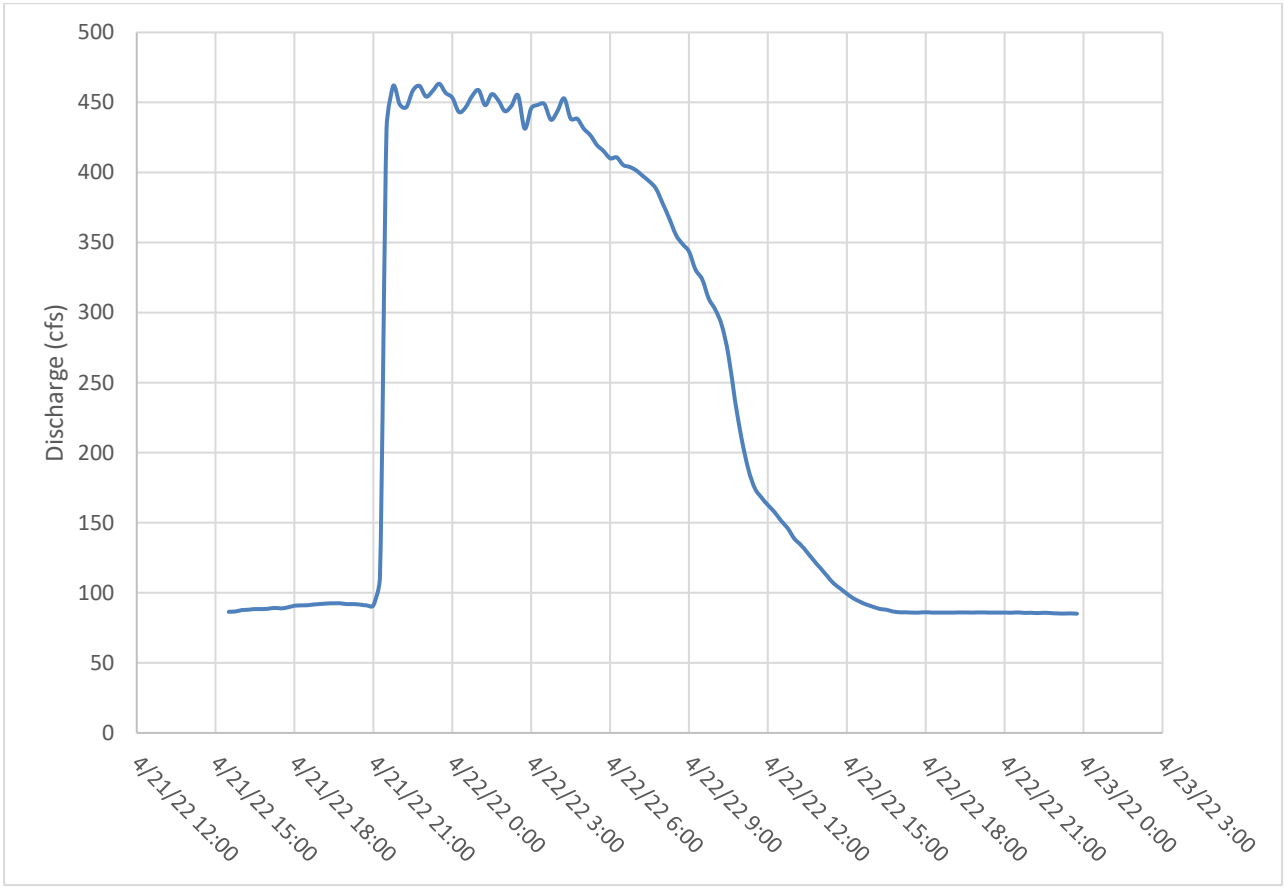


Figure 92 – Sultan River immediately upstream of Powerhouse – 04/21-22/2022

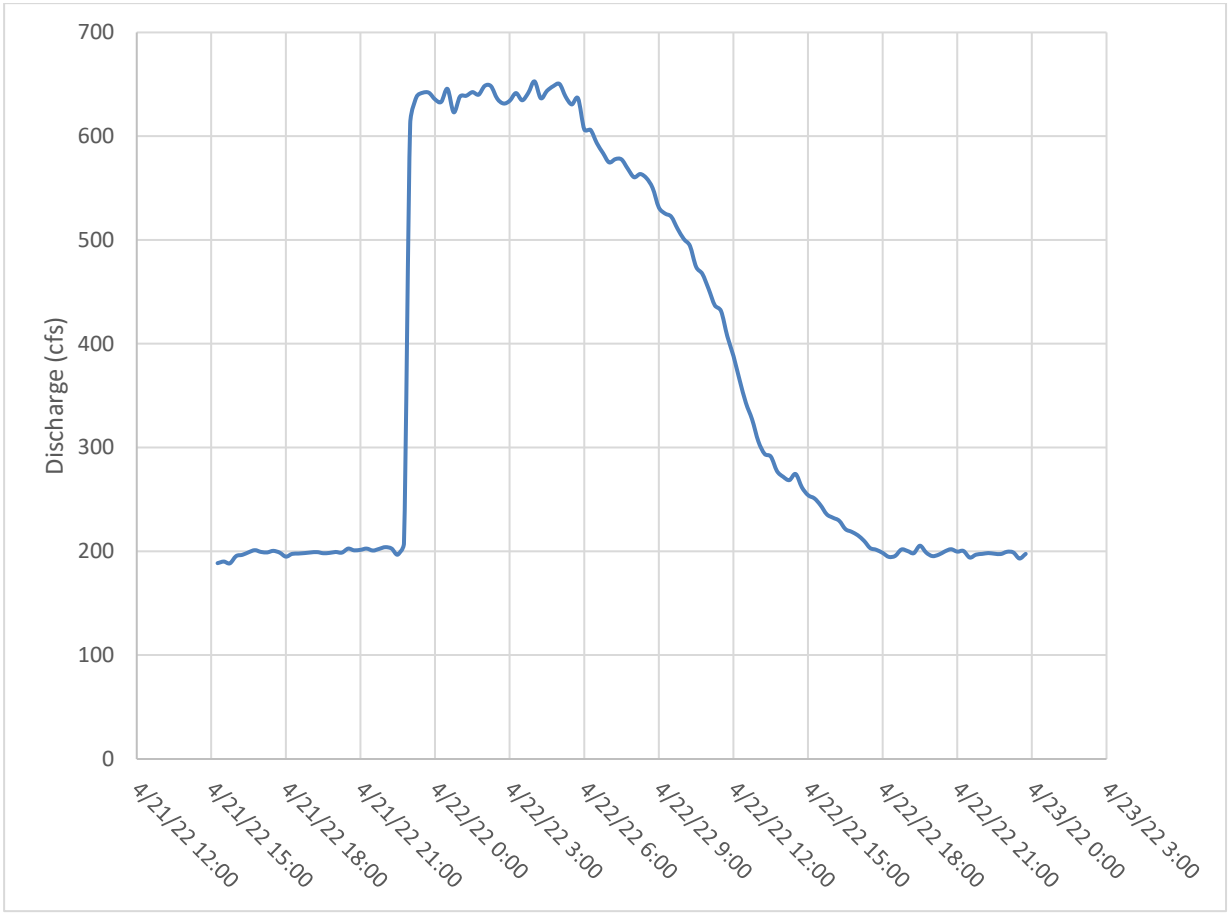


Figure 93 – Sultan River immediately downstream of Powerhouse – 04/21-22/2022

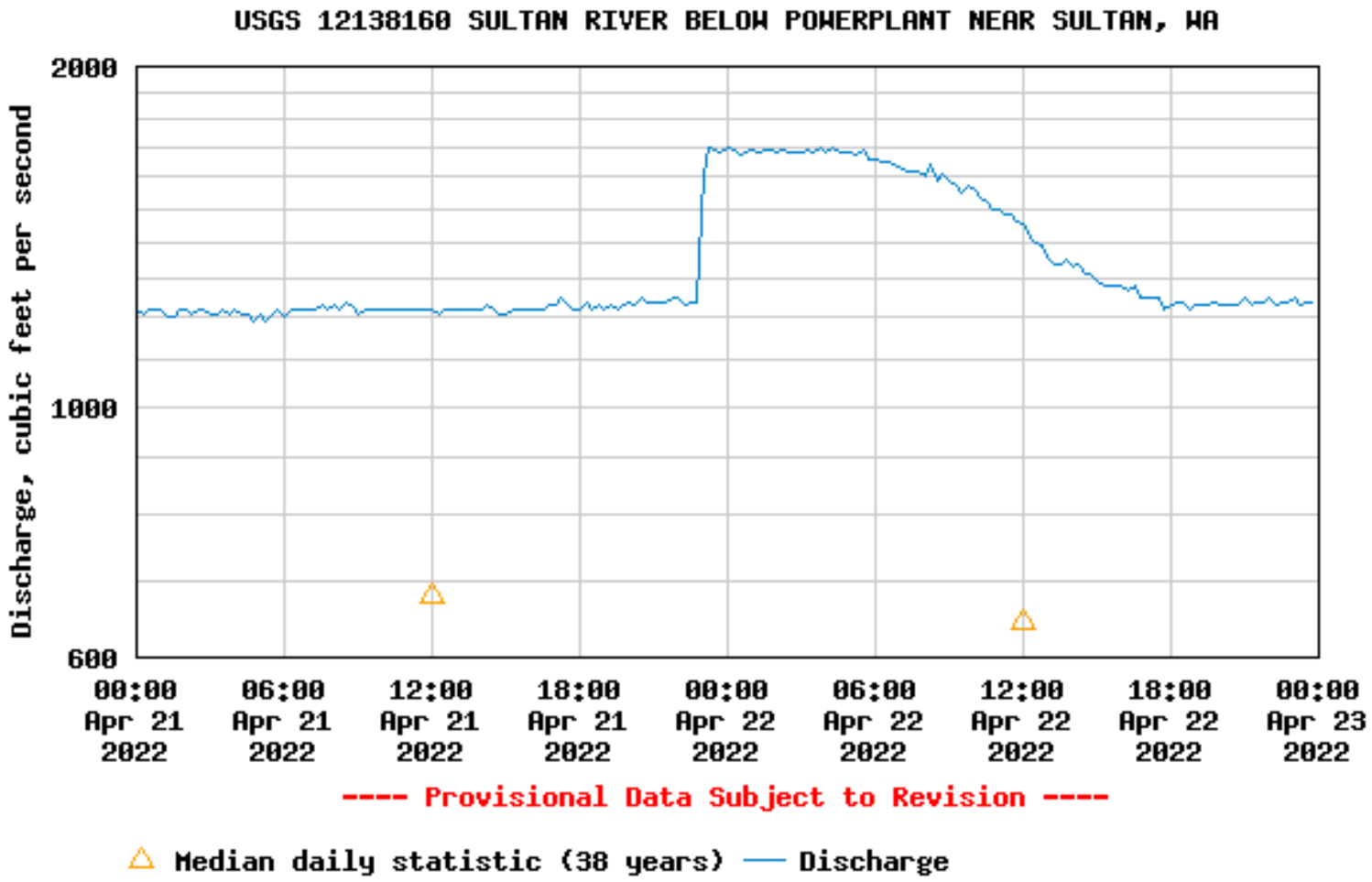


Figure 94 – Sultan River immediately downstream of Powerhouse – 05/21/2022

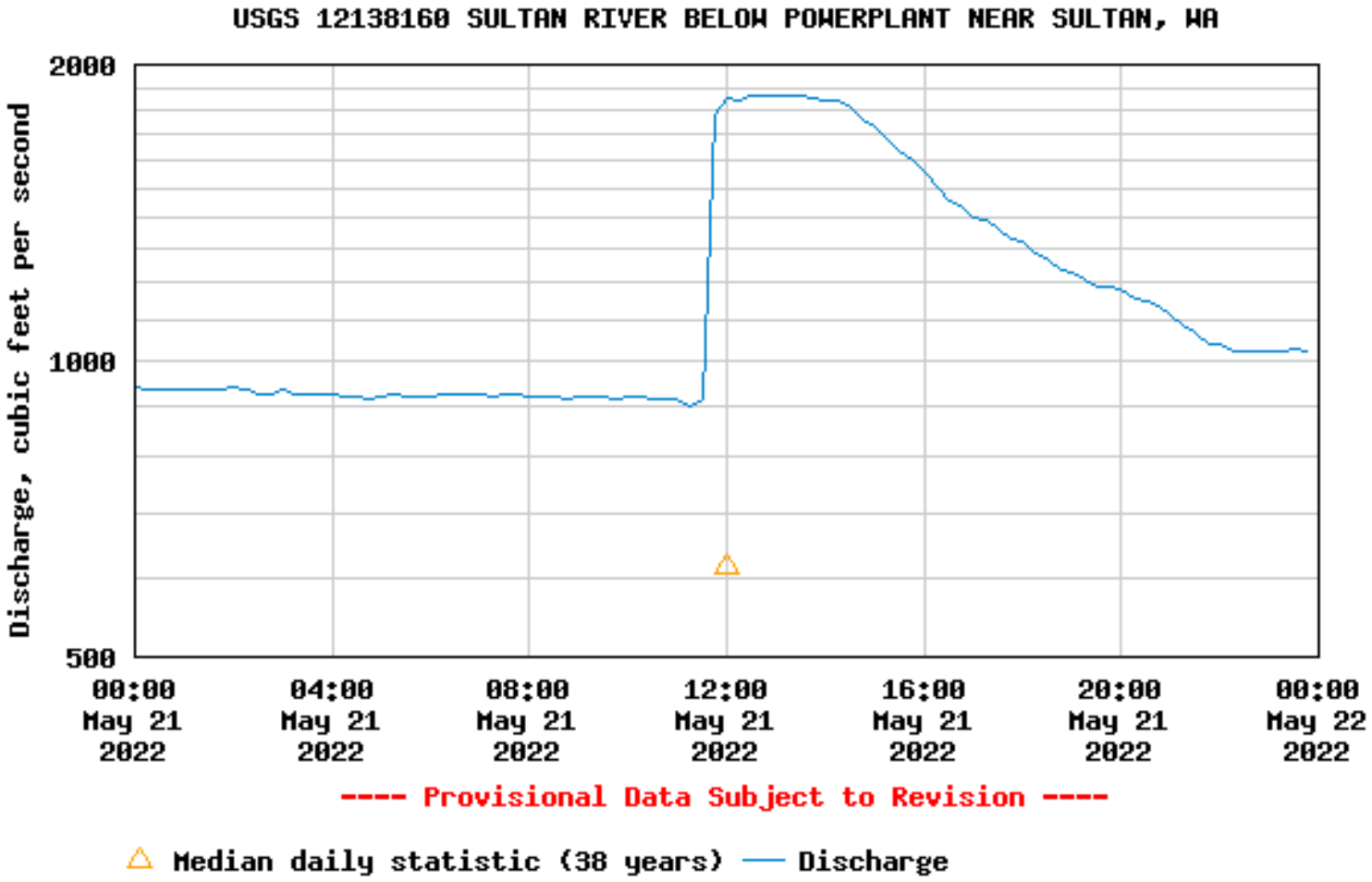


Figure 95 – Sultan River immediately upstream of Powerhouse – 05/21/2022

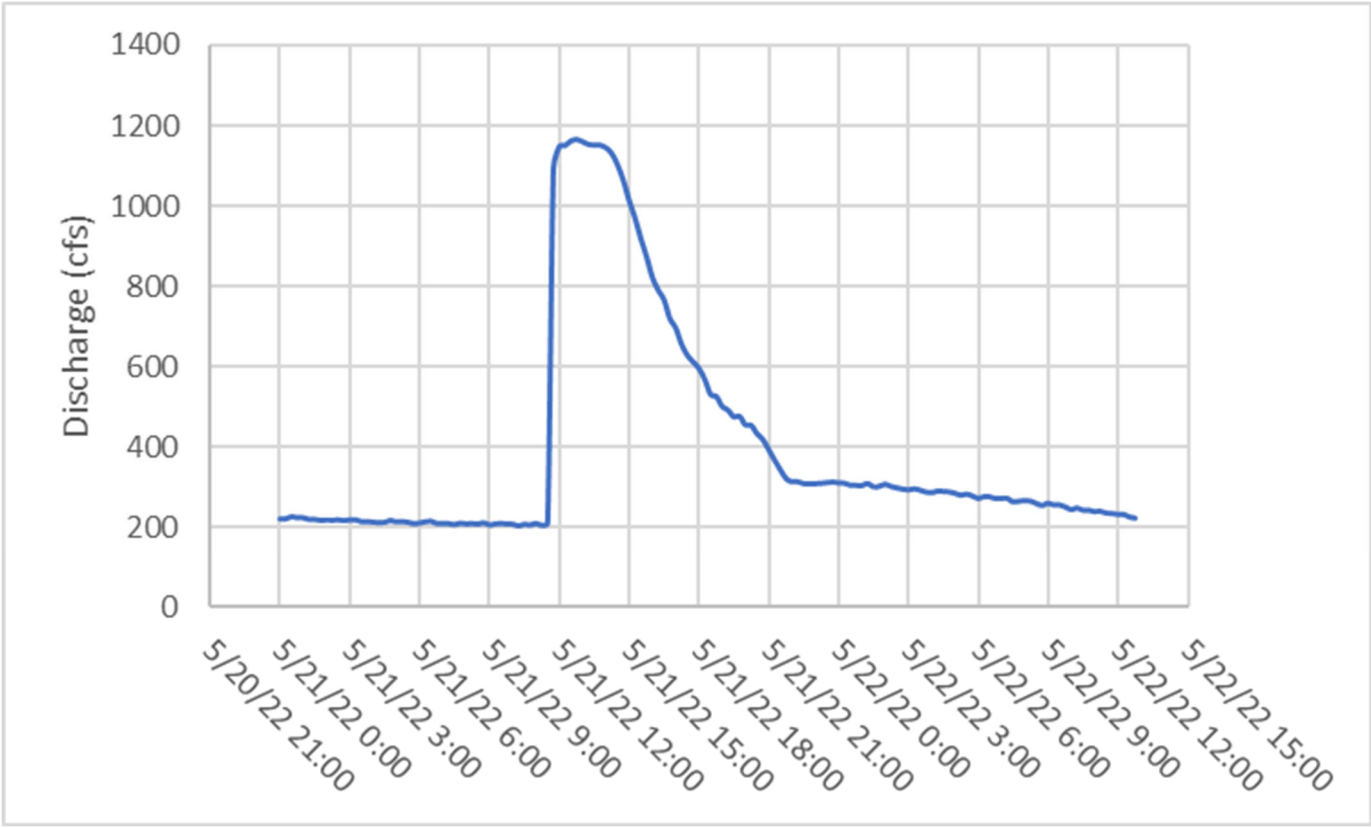


Figure 96 – Sultan River immediately upstream of Diversion Dam – 05/21/2022

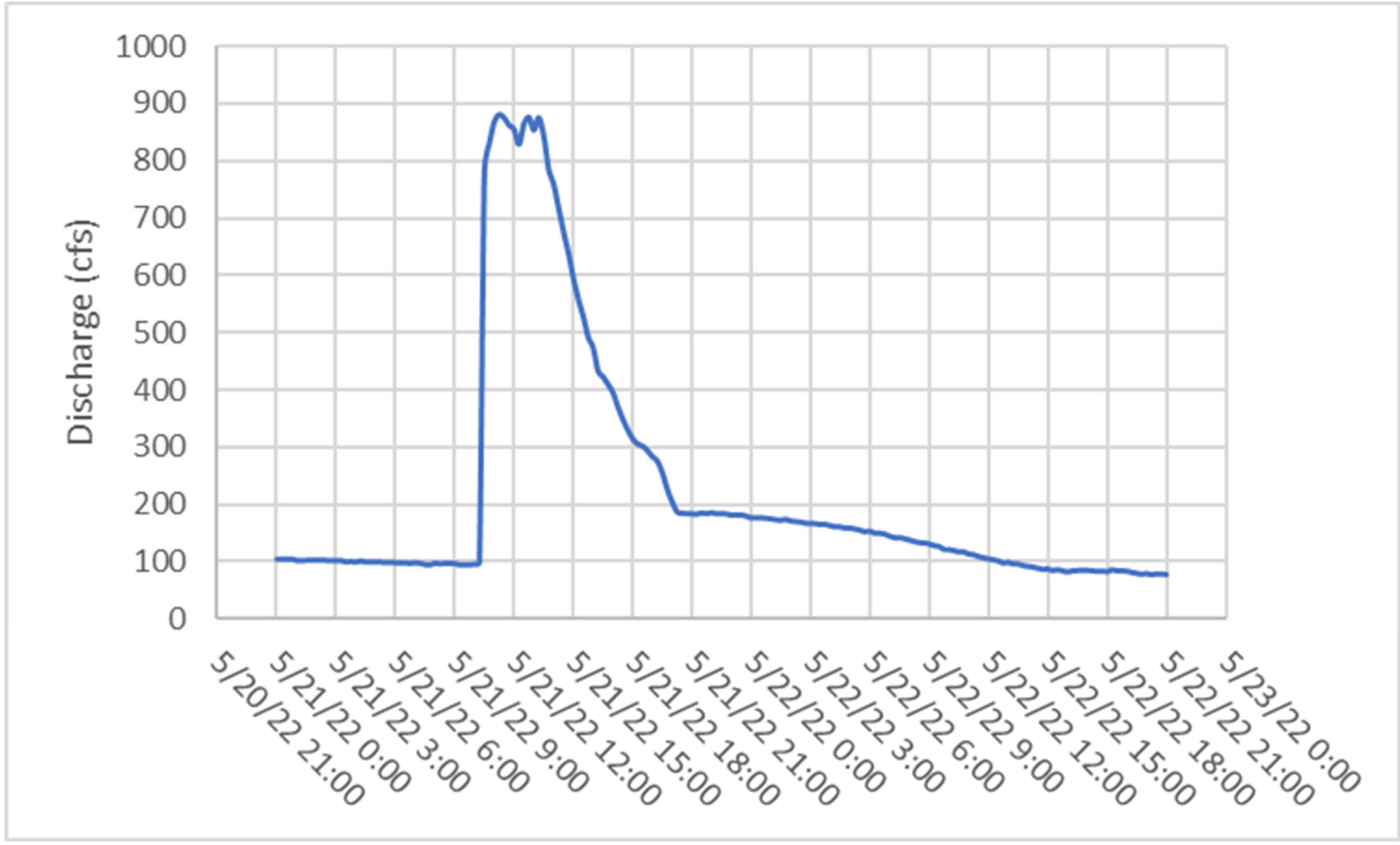


Figure 97 – Sultan River immediately upstream of Diversion Dam – 09/25/2022

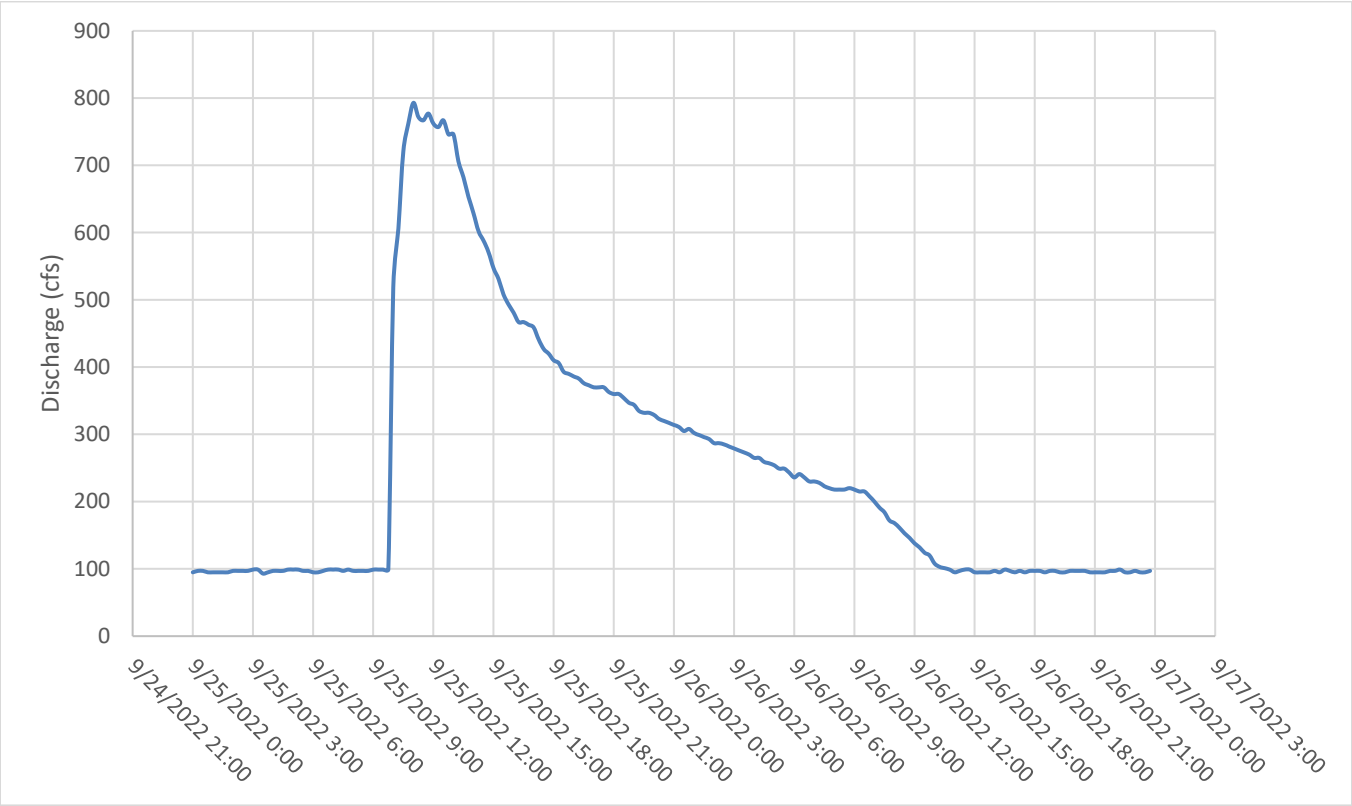


Figure 98 – Sultan River immediately upstream of Powerhouse – 09/25/2022

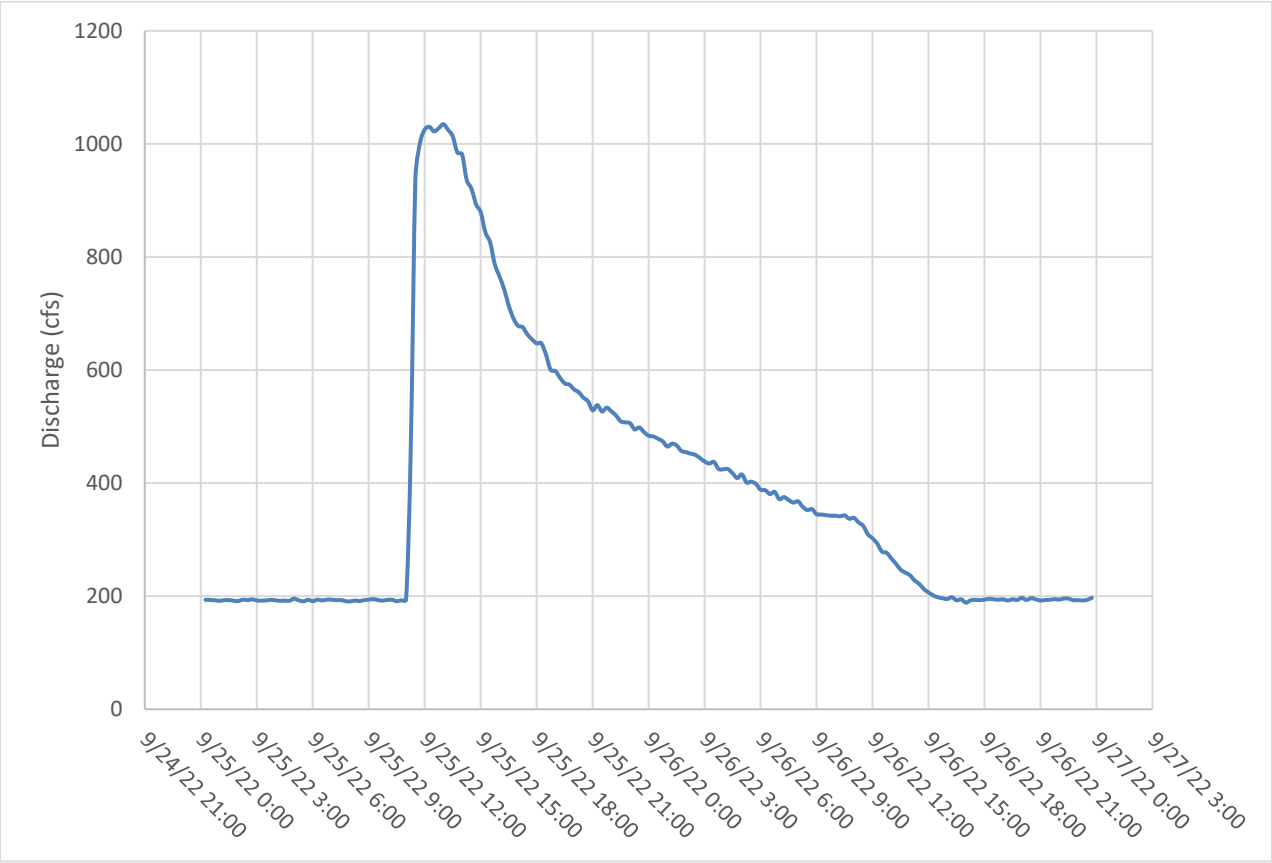


Figure 99 – Sultan River immediately downstream of Powerhouse – 09/25/2022

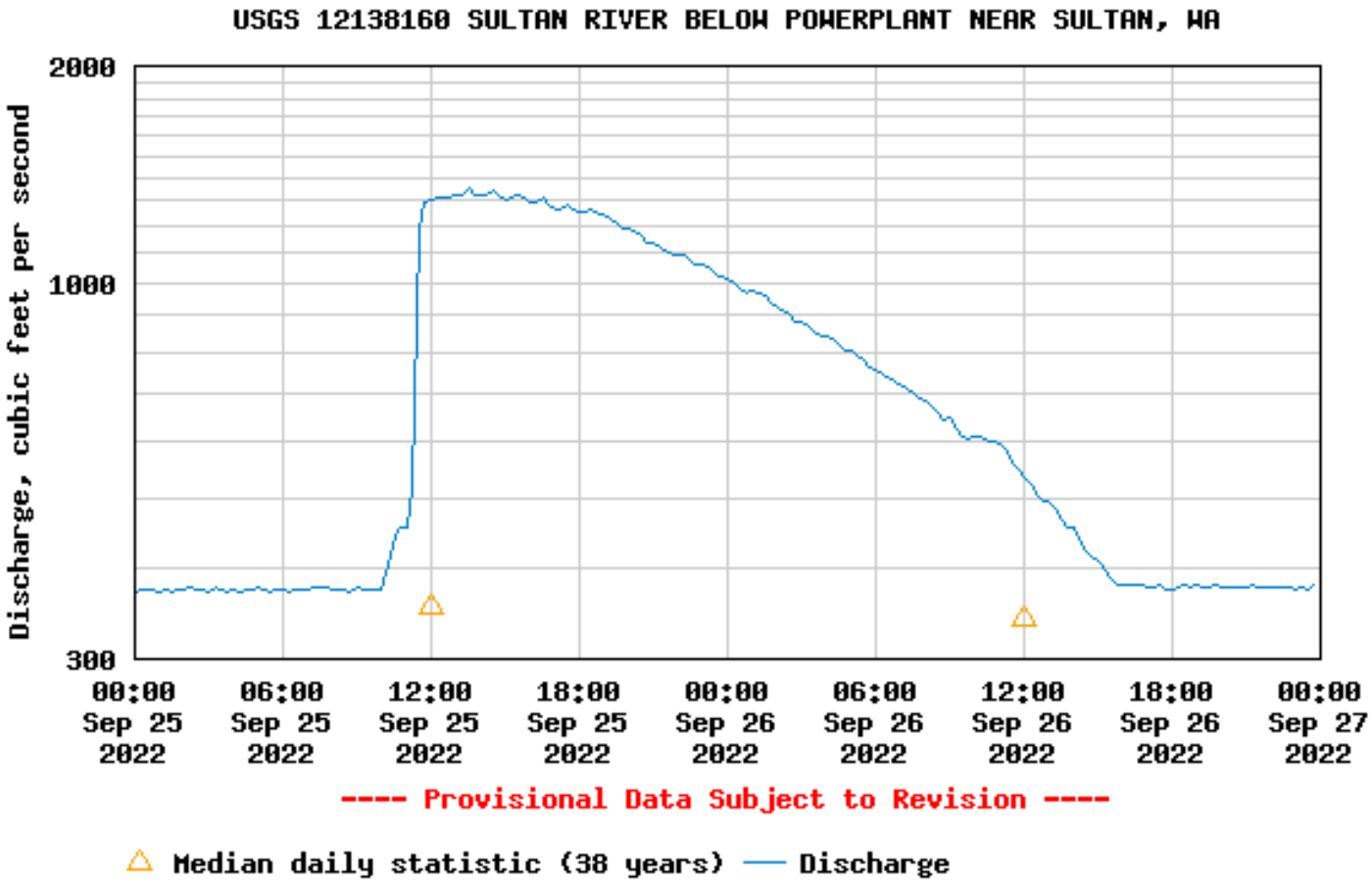
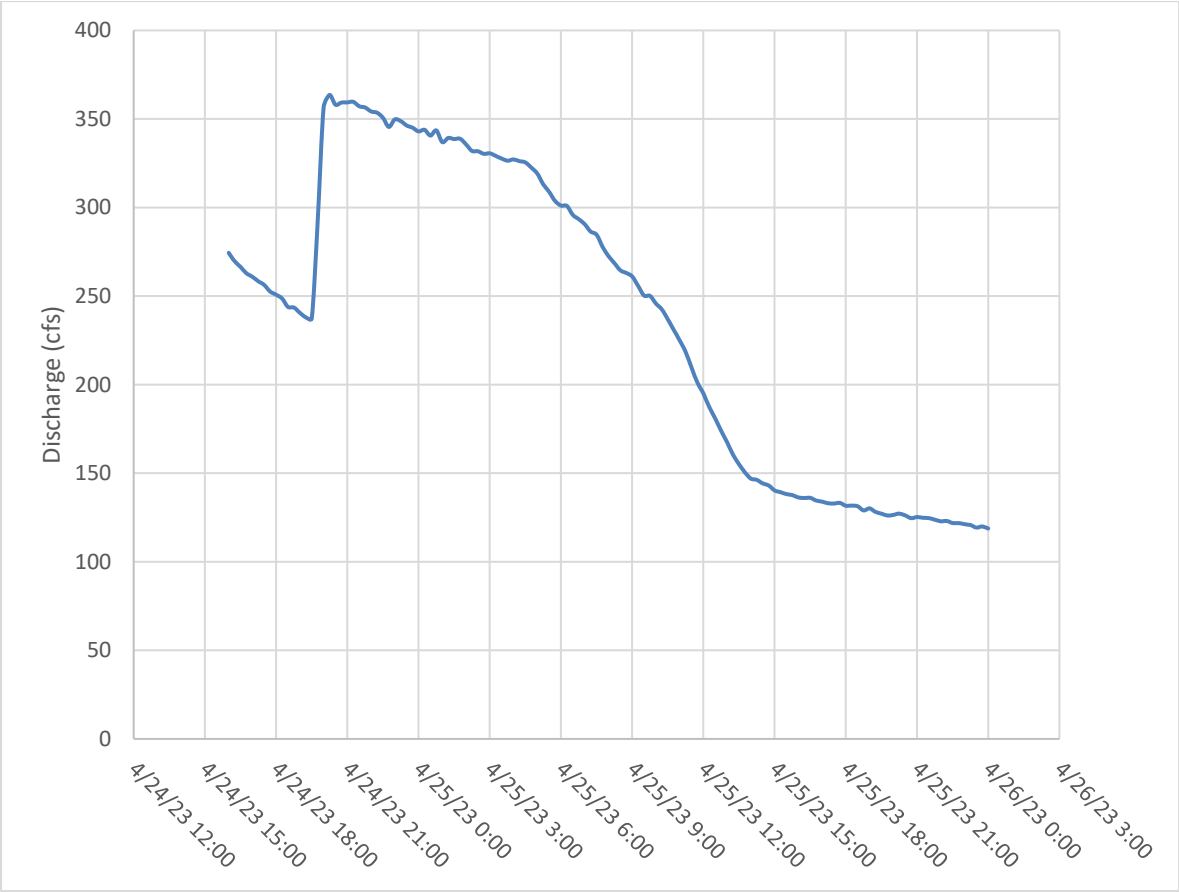


Figure 100 – Sultan River immediately upstream of Diversion Dam – 04/24-25/2023



Process Flow Log

Figure 101 – Sultan River immediately upstream of Powerhouse – 04/24-25/2023

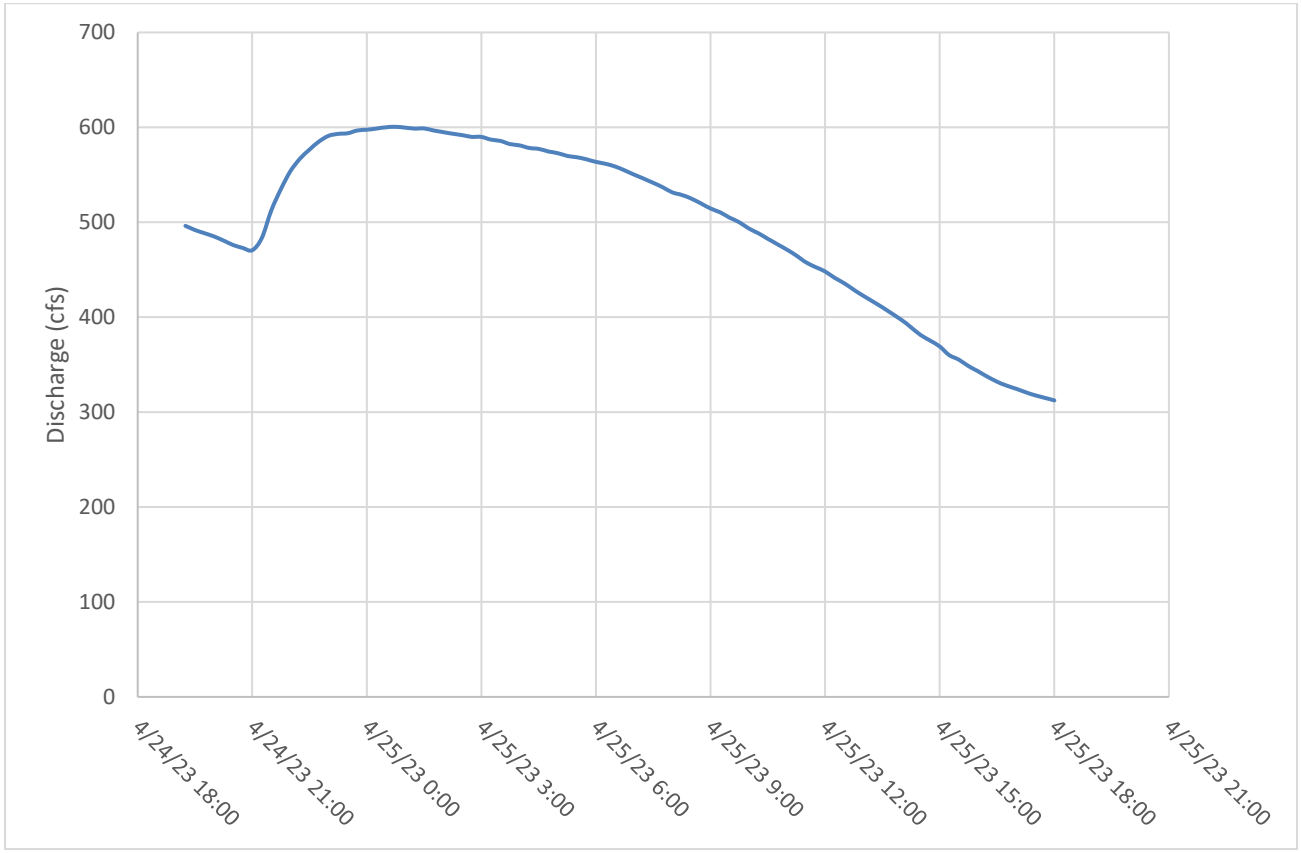


Figure 102 – Sultan River immediately downstream of Powerhouse – 04/24-25/2023

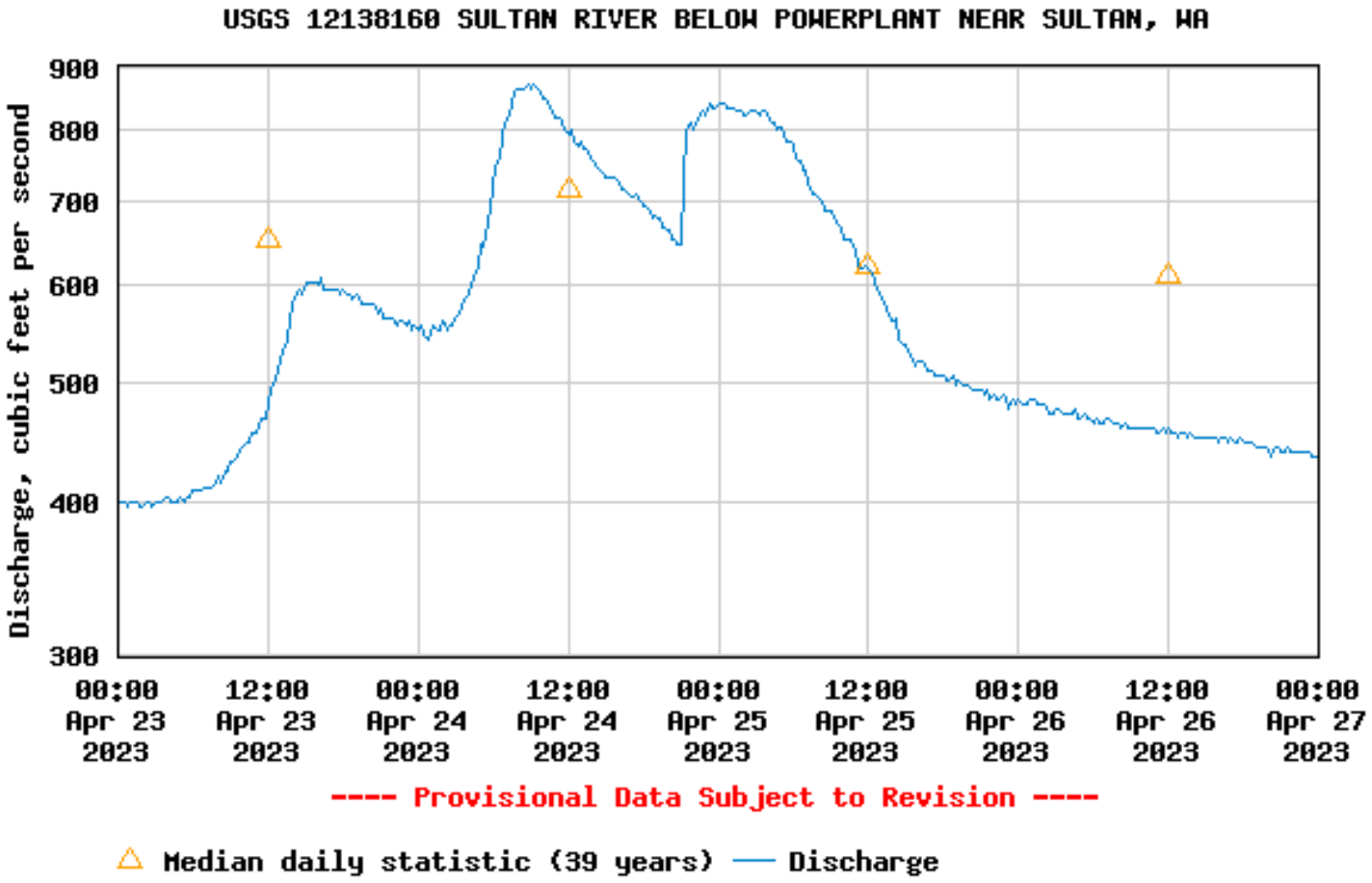


Figure 103 – Sultan River immediately downstream of Powerhouse – 05/02/2023