

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	4/9-13/2021, 4/23/2021	5/22/2021			
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, 4/24-25/2023, 5/2/2023, 5/13/2023	4/24-25/2023	5/13/2023			

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Year	Year Number	Upmigration	Flushing	Outmigration	Outmigration	Maintenance	Forming	Notes
FERC Approves Updated Plan Process Flow Plan, November 2023 10-Year Cycle = July 2023-June 2033								
July 2023 - June 2024	1	9/24-25/2023	9/24-25/2023, 4/28-29/2024	4/3-4/2024	4/28-29/2024			
July 2024 - June 2025	2	9/7-8/2023	8/17-8/18/2024, 3/23-25/2025, 4/1-9/2025	3/21-22/2025, 3/23-25/25	4/1-9/2025, 4/17-18/2025			
July 2025 - June 2026	3	9/13/2025	8/15-16/2025, 9/13/2025, 3/16-17/2026, 3/19/2026	3/16-17/2026	4/29-30/2026	3/17-18/2026	12/11/2025*	*Attempt at CF made without the use of valves to limit major flooding in Sultan.
July 2026 - June 2027	4	9/13-14/2026*	9/13-14/2026*					*Whitewater event combined
July 2027 - June 2028	5							
July 2028 - June 2029	6							
July 2029 - June 2030	7							
July 2030 - June 2031	8							
July 2031 - June 2032	9							
July 2032 - June 2033	10							

Appendix 3

Process Flow Events Log

7/1/2023 – 6/30/2033

per the updated approved Nov 2023 Process Flow Plan

Process Flow Log

Date ¹	Time ²	Magnitude ³ (cfs)	Duration ⁴ (hrs)	Accretion ⁵ (cfs)	Notes ⁶	Counts as PF Type ⁷
9/24/2023	10:30 to 20:30	R3 – 670 (average), Range 409 to 856 cfs	10 hours greater than 400 cfs	Estimated at 10 cfs	Reference Figure 1	F, U
9/24-25/2023	12:00 to 01:00	R2 – 752 (average), Range 506 to 970 cfs	13 hours greater than 500 cfs	Estimated at 25 cfs	Reference Figure 2	F, U
9/24-25/2023	13:45 to 02:15	R1 – 1,289 (average), Range 1,220 to 1,340 cfs	12.75 hours greater than 1,200 cfs	Estimated at 25 cfs	Reference Figure 3 Reservoir elevation < 1,420'	F, U
4/3-4/2024	23:30-05:30	R3 – 267 (average), Range 241 to 271 cfs	6 hours greater than 200 cfs	Estimated at 30 cfs	Reference Figure 4	O
4/3-4/2024	21:30-05:30	R2 – 444 (average), Range 414 to 500 cfs	8 hours greater than 400 cfs	Estimated at 35 cfs	Reference Figure 5	O
4/3-4/2024	21:30-05:30	R1 – 911 (average), Range 858 to 958 cfs	8 hours greater than 800 cfs	Estimated at 35 cfs	Reference Figure 6	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, Released or Natural

⁷ Channel Forming (CF), Channel Maintenance (CM), Flushing (F), Outmigration (O), Upmigration (U)

Process Flow Log

Date ¹	Time ²	Magnitude ³ (cfs)	Duration ⁴ (hrs)	Accretion ⁵ (cfs)	Notes ⁶	Counts as PF Type ⁷
4/11/2024	05:30-11:30	R1 – 1,658 (average), Range 1,520 to 1,690 cfs	6 hours greater than 1,500 cfs	Estimated at 30 cfs	Reference Figure 7	F
4/28-29/2024	21:15-04:30	R1 – 861 (average), Range 823 to 926 cfs	7.25 hours greater than 800 cfs	Estimated at 80 cfs	Reference Figure 8	O
4/28-29/2024	10:45-05:45	R3 – 526 (average) 410 to 642 cfs	7 hours greater than 400 cfs	Estimated at 85 cfs	Reference Figure 9	F
4/28-29/2024	21:15-04:30	R3 – 467 (average) 446 to 498 cfs	7.25 hours greater than 200 cfs	Estimated at 85 cfs	Reference Figure 9	O
4/28-29/2024	12:15-09:15	R2 – 727 (average) 501 to 904 cfs	21 hours greater than 500 cfs	Estimated at 80 cfs	Reference Figure 10	F
4/28-29/2024	21:15-04:30	R2 – 682 (average) 649 to 750 cfs	7.25 hours greater than 400	Estimated at 80 cfs	Reference Figure 10	O
8/17/2024	10:30-16:30	R3 – 671 (average) 621 to 721 cfs	6 hours greater than 600 cfs	Estimated at 10 cfs	Reference Figure 11	F
8/17/2024	12:15-18:15	R2 – 798 (average) 716 to 853 cfs	6 hours greater than 700 cfs	Estimated at 15 cfs	Reference Figure 12	F
8/17-18/2024	12:00-01:30	R1 – 1,669 cfs (average) 1,520 to	13.5 hours greater than	Estimated at 25 cfs	Reference Figure 13	F

Process Flow Log

Date ¹	Time ²	Magnitude ³ (cfs)	Duration ⁴ (hrs)	Accretion ⁵ (cfs)	Notes ⁶	Counts as PF Type ⁷
		1,810 cfs	1,500 cfs			
9/7–8/2024	09:30-15:00	R3 – 509 (average) 317-728	18 hours greater than 300 cfs	Estimated 8	Reference Figure 14	U
9/7–8/2024	12:30-15:00	R2 – 631 (average) 413 to 762 cfs	26.5 hours greater than 400 cfs	Estimated 13	Reference Figure 15	U
9/7/2024	12:00-18:00	R1 – 844 (average) 805 to 858 cfs	6 hours greater than 800 cfs	Estimated 13	Reference Figure 16	U
3/21-22/2025	18:00-00:00	R3 – 479 (average), Range 456 to 492 cfs	30 hours greater than 200 cfs	Estimated 65	Reference Figure 17	O
3/21-22/2025	20:00-06:00	R2 – 723 (average), Range 678 to 744 cfs	10 hours greater than 400 cfs	Estimated 70	Reference Figure 18	O
3/23-25/2025	12:00-19:00	R1 – 1,837 (average) Range 1,500 – 2,236 cfs	55 hours greater than 1,500 cfs	Estimated 70	Reference Figure 19	F, O
4/1-4/2025	00:00-06:00	R2 – 731 (average), Range 666 – 781 cfs	78 hours greater than 600 cfs	Estimated 31	Reference Figure 20	F, O
4/1-9/2025	00:00-00:00	R3 – 462 (average) Range 402-512 cfs	216 hours greater than	Estimated 22	Reference Figure 21	F,O

Process Flow Log

Date ¹	Time ²	Magnitude ³ (cfs)	Duration ⁴ (hrs)	Accretion ⁵ (cfs)	Notes ⁶	Counts as PF Type ⁷
			400 cfs			
4/17-18/2025	20:00-4:00	R1 – 829 (average), Range 818 to 844 cfs	8 hours with flows greater than 800 cfs	Estimated 70	Reference Figure 22	O
8/15-16/2025	22:00-6:20	R3 – 499 (average), Range 401 to 636	8 hours with flows greater than 400 cfs	Estimated 598	Reference Figure 23. Natural event.	F
8/15-16/2025	23:20-8:00	R2 – 632 (average), Range 511 to 803	8 hours with flows greater than 500 cfs	Estimated 632	Reference Figure 24. Natural event.	F
9/13/2025	10:30-19:15	R3 – 449 (average), Range 301 to 594	7.75 hours with flows greater than 300 cfs	Estimated 10	Reference Figure 25	U
9/13/2025	12:30-20:00	R2 – 739 (average), Range 402 to 1070	7.5 hours with flows greater than 400 cfs	Estimated 10	Reference Figure 26	U
9/13/2025	13:00-23:30	R1 – 1,313 (average), Range 1200 to 1500	10.5 hours with flows greater than 1200 cfs	Estimated 10	Reference Figure 27	F, U
12/11/2025	0:15-22:30	R1 – 8,744 (average), Range 6,500-10,700	22.25 hours with flows greater than 6,500 cfs	Estimated 1,000	Reference Figure 28 *Attempt at CF made without the use of the 42" or 48" valves to limit major flooding experienced in downtown Sultan.	*CF

Process Flow Log

Date ¹	Time ²	Magnitude ³ (cfs)	Duration ⁴ (hrs)	Accretion ⁵ (cfs)	Notes ⁶	Counts as PF Type ⁷
3/16-3/17/2026	20:30-02:30	R3 – 247 (average), Range 236-264	6 hours with flows greater than 200 cfs	Estimated 235	Reference Figure 29	O
3/16-3/17/2026	20:30-02:30	R2 – 537 (average), Range 525-569	6 hours with flows greater than 500 cfs	Estimated 415	Reference Figure 30	O, F
3/16-3/17/2026	20:30-02:30	R1 – 1,152 (average), Range 1,140 - 1,190	6 hours with flows greater than 800 cfs	Estimated 1,800	Reference Figure 31	O
3/17/2026	8:00-14:00	R1 – 1,845 (average), Range 1,520 - 1,990	6 hours with flows greater than 1,500 cfs	Estimated 1,800	Reference Figure 31	F
3/17-3/18/2026	21:00-22:15	R1 – 4,721 (average), Range 4,150 - 5,550	25.25 hours with flows greater than 4,100 cfs	Estimated peak 2,200	Reference Figure 32 CM event was made with the use of the 42” and 48” valves and max generation.	CM
3/19/2026	08:00-14:00	R3 – 908 (average), Range 729 – 1,010	6 hours with flows greater than 400 cfs	Estimated 850	Reference Figure 33	F
4/1-4/2/2026	21:00-05:30	R1 – 1,581 (average), Range 1,550 - 1,600	8.5 hours with flows greater than 800 cfs	Estimated 215	Reference Figure 34	O
4/29-4/30/2026	21:15-04:45	R3 – 270 (average), Range 260 - 274	7.5 hours with flows greater	Estimated 30	Reference Figure 35	O

Process Flow Log

Date ¹	Time ²	Magnitude ³ (cfs)	Duration ⁴ (hrs)	Accretion ⁵ (cfs)	Notes ⁶	Counts as PF Type ⁷
			than 200 cfs			
4/29-4/30/2026	22:30-04:45	R2 – 420 (average), Range 402 - 431	6.25 hours with flows greater than 400 cfs	Estimated 24	Reference Figure 36	O
9/13/2026	11:00-19:00	R3 – 608 (average), Range 401 to 866	8.00 hours with flows greater than 400 cfs	Estimated 11	Reference Figure 37	F, U
9/13-9/14/2026	12:30-0:00	R2 – 833 (average), Range 517 to 1343	11.5 hours with flows greater than 500 cfs	Estimated 10	Reference Figure 38	F, U
9/13/2026	12:45:-19:45	R1 – 1,223 (average), Range 1,070 to 1,340	7 hours. 6 hours with flows greater than 1,200 cfs, 1-hour mid- release dipped below 1,200 cfs	Estimated 10	*The 6-hour duration was met, however it was not consecutive. The mean flow across the 7 hours was 1,223 cfs. Reference Figure 39	F, U

Process Flow Log

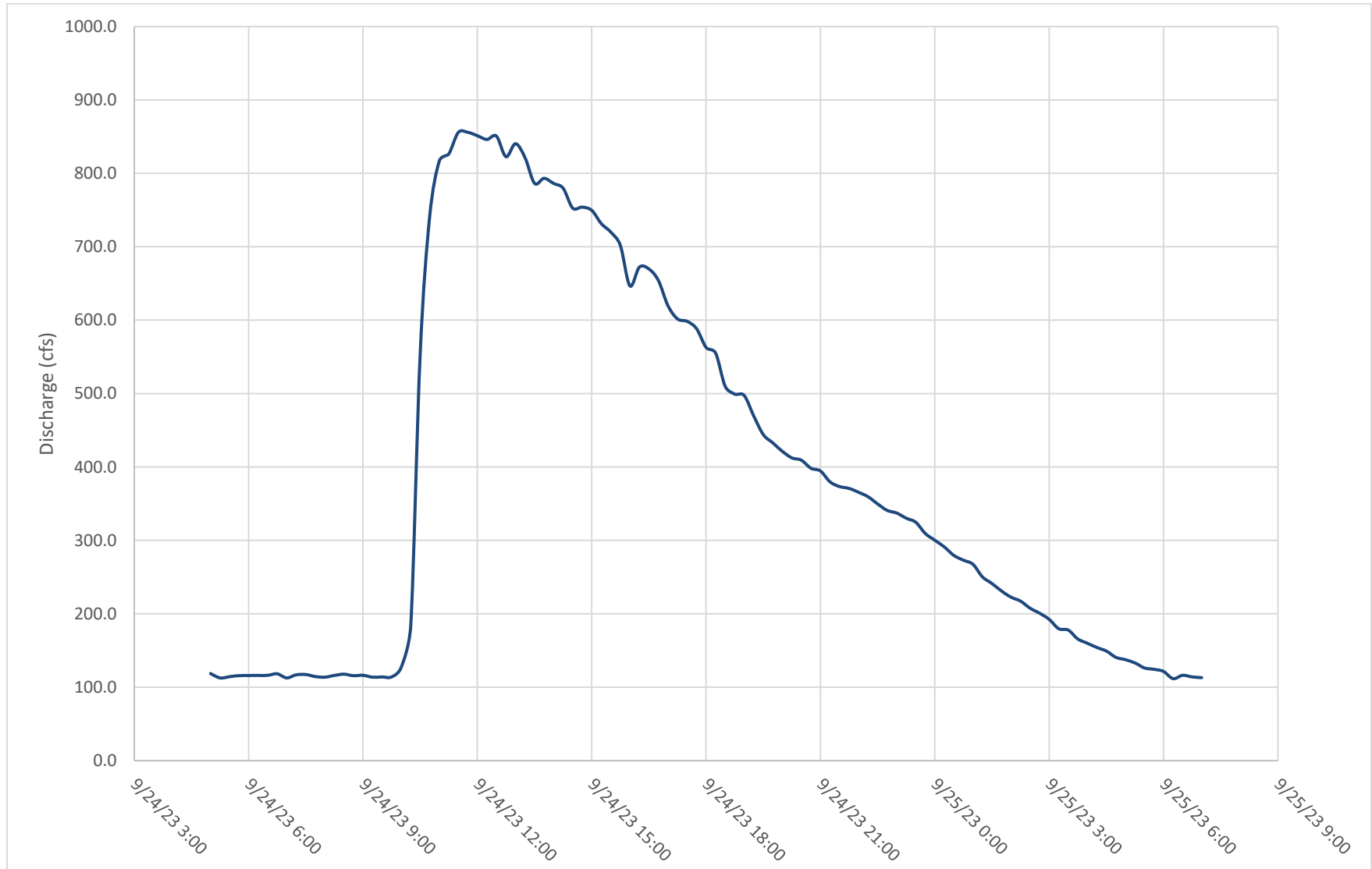


Figure 1. Sultan River immediately upstream of Diversion Dam – 09/24/2023.

Process Flow Log

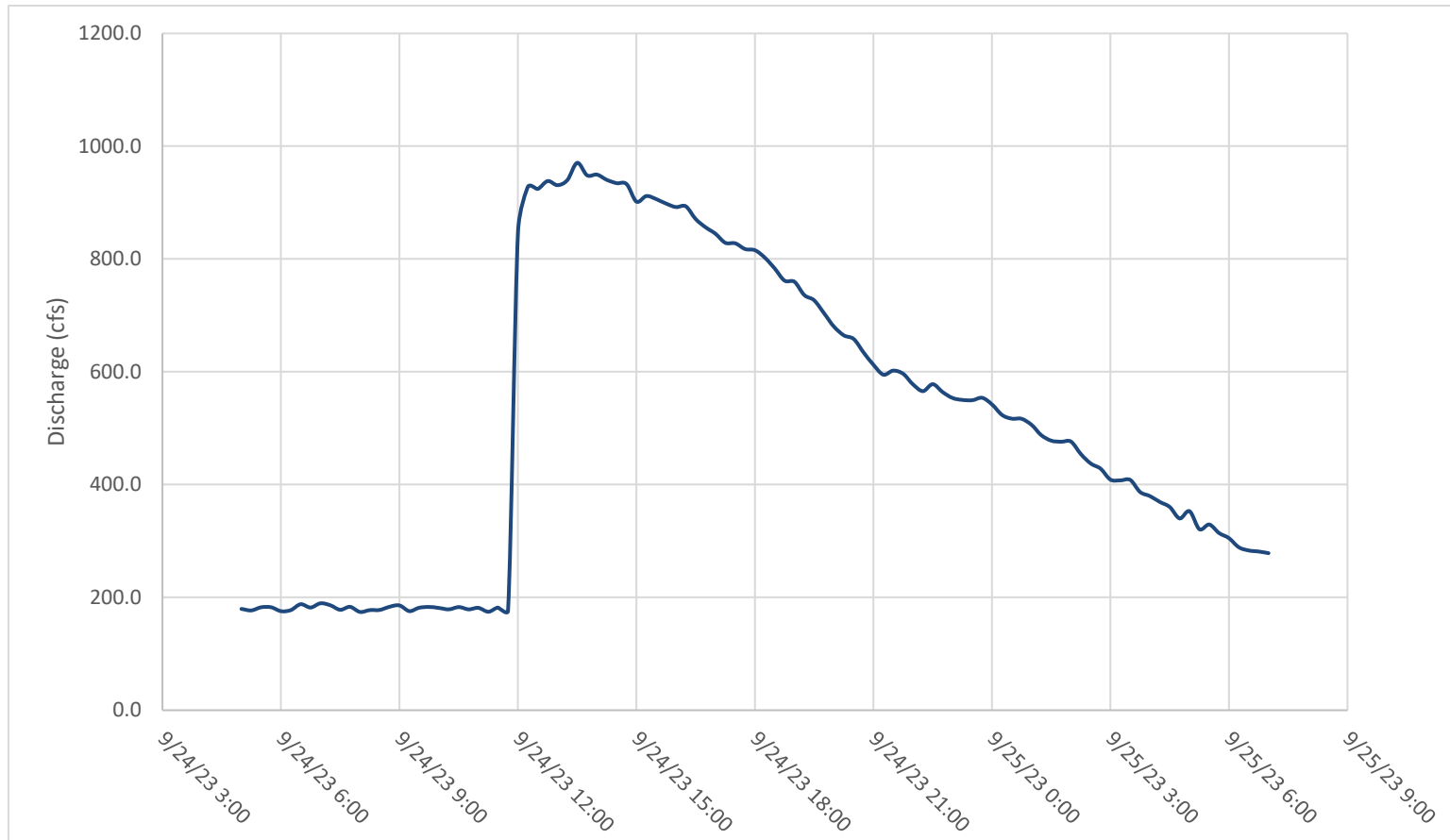


Figure 2. Sultan River immediately upstream of Powerhouse – 09/24-25/2023.

Process Flow Log

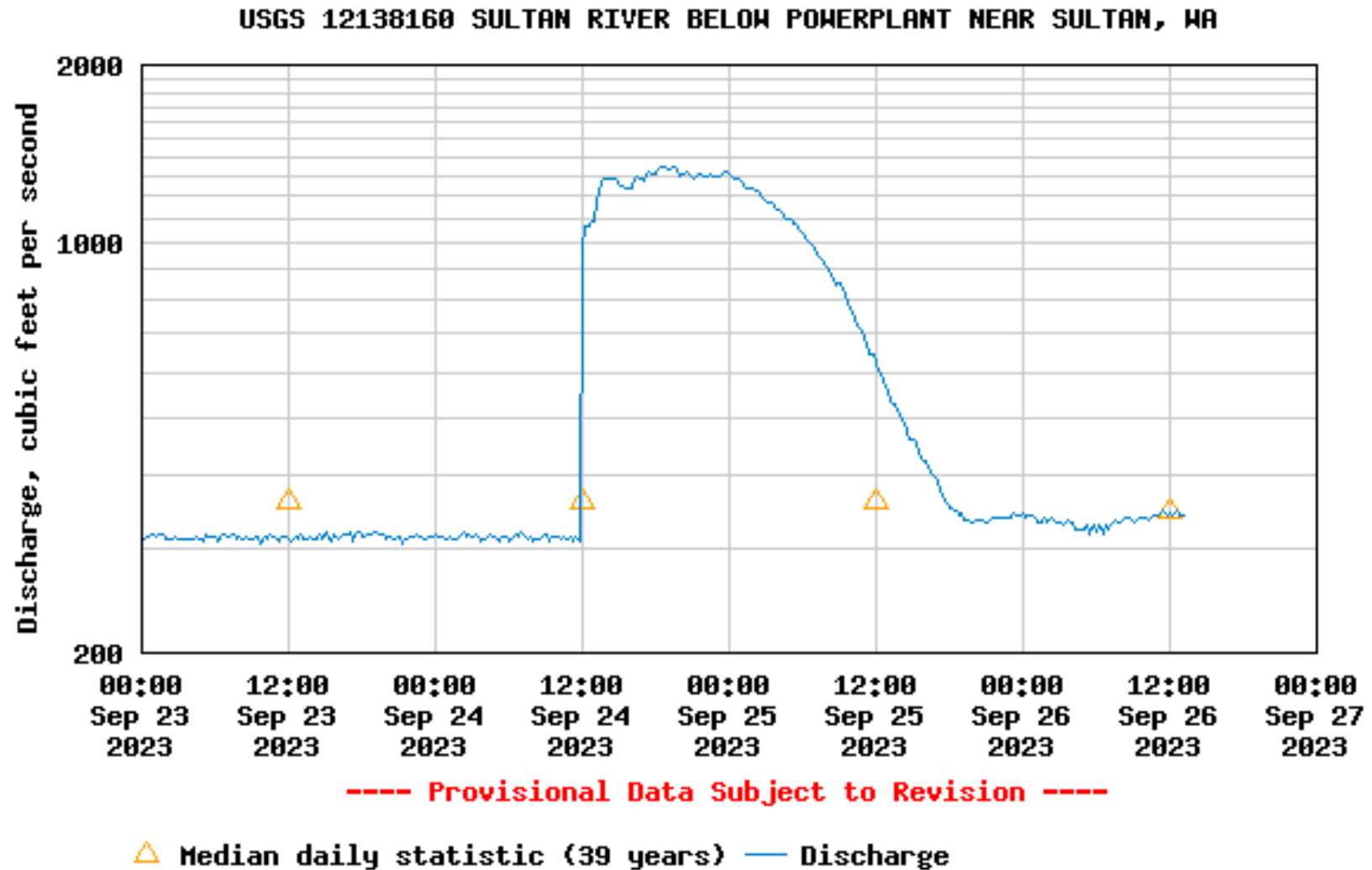


Figure 3. Sultan River immediately downstream of Powerhouse – 09/24-25/2023.

Process Flow Log

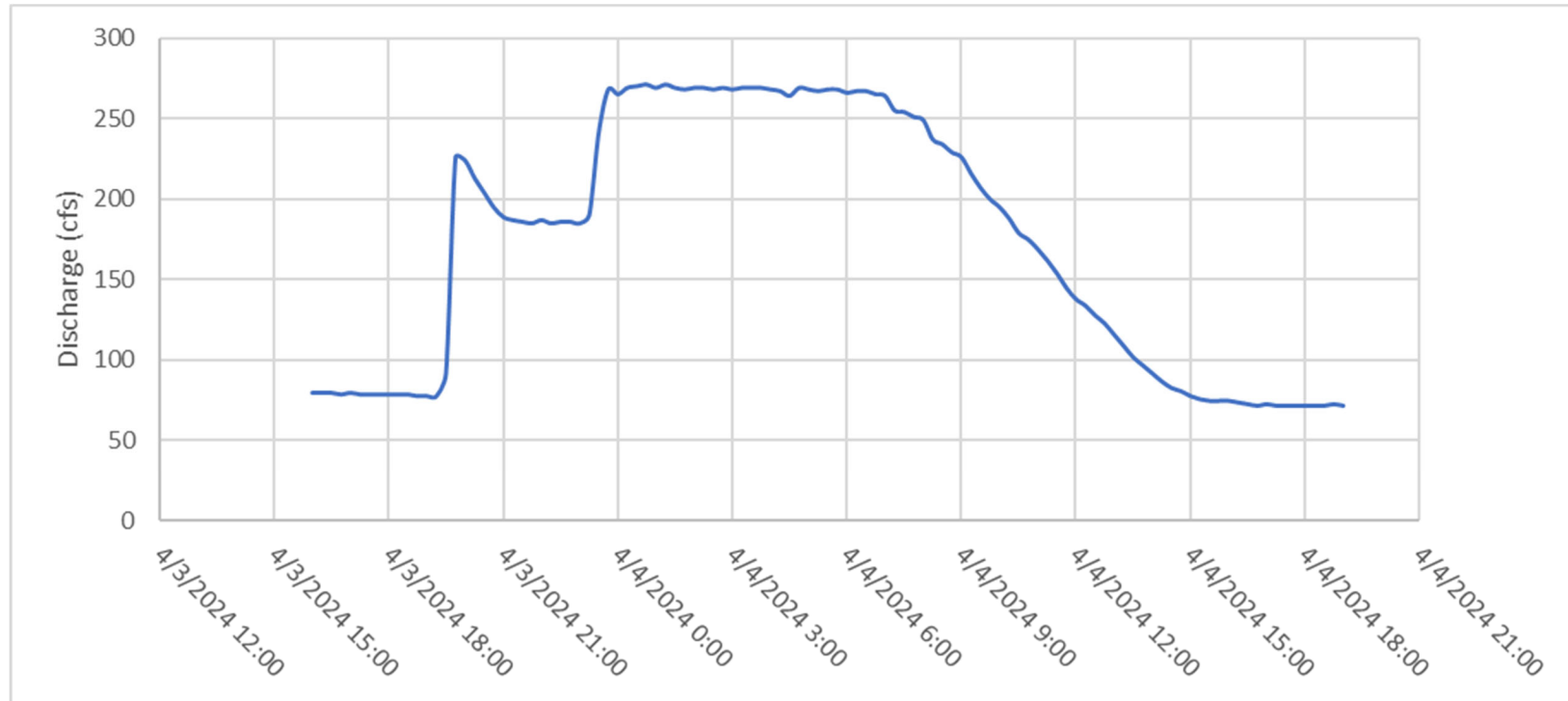


Figure 4. Sultan River immediately upstream of Diversion Dam – 04/03-04/2024.

Process Flow Log

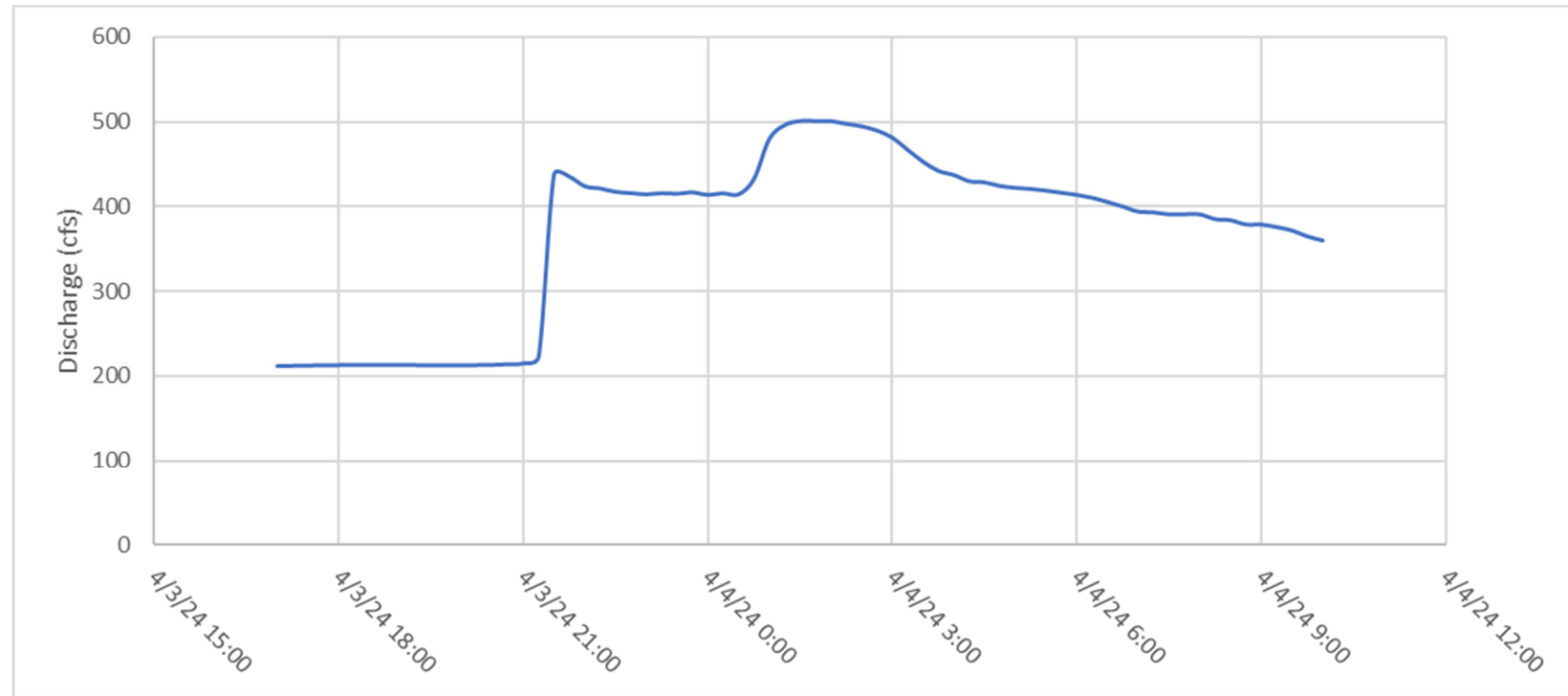


Figure 5. Sultan River immediately upstream of Powerhouse – 04/03-04/2024.

Process Flow Log

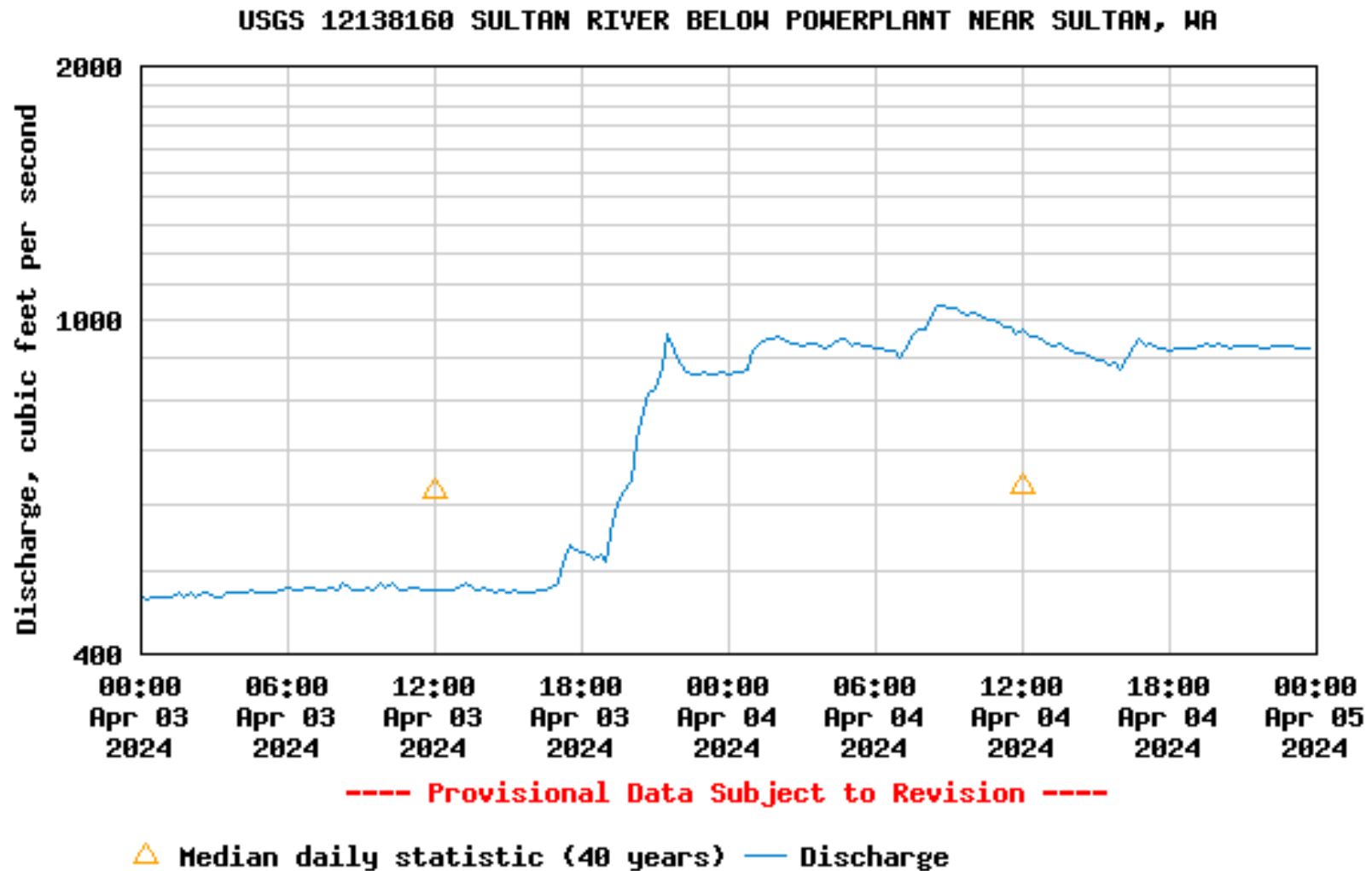


Figure 6. Sultan River immediately downstream of Powerhouse – 04/03-04/2024.

Process Flow Log

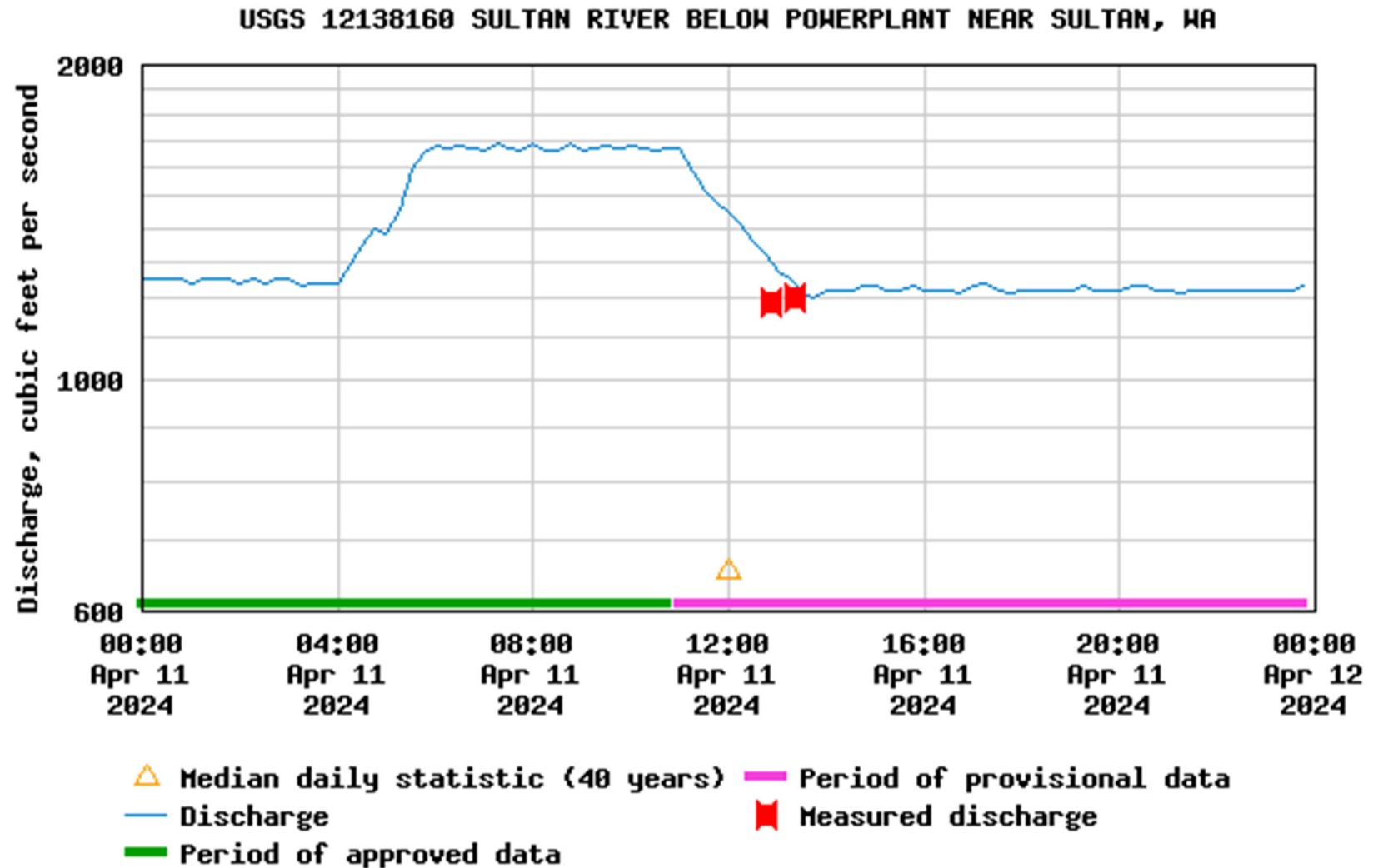


Figure 7. Sultan River immediately downstream of Powerhouse – 04/11/2024

Process Flow Log

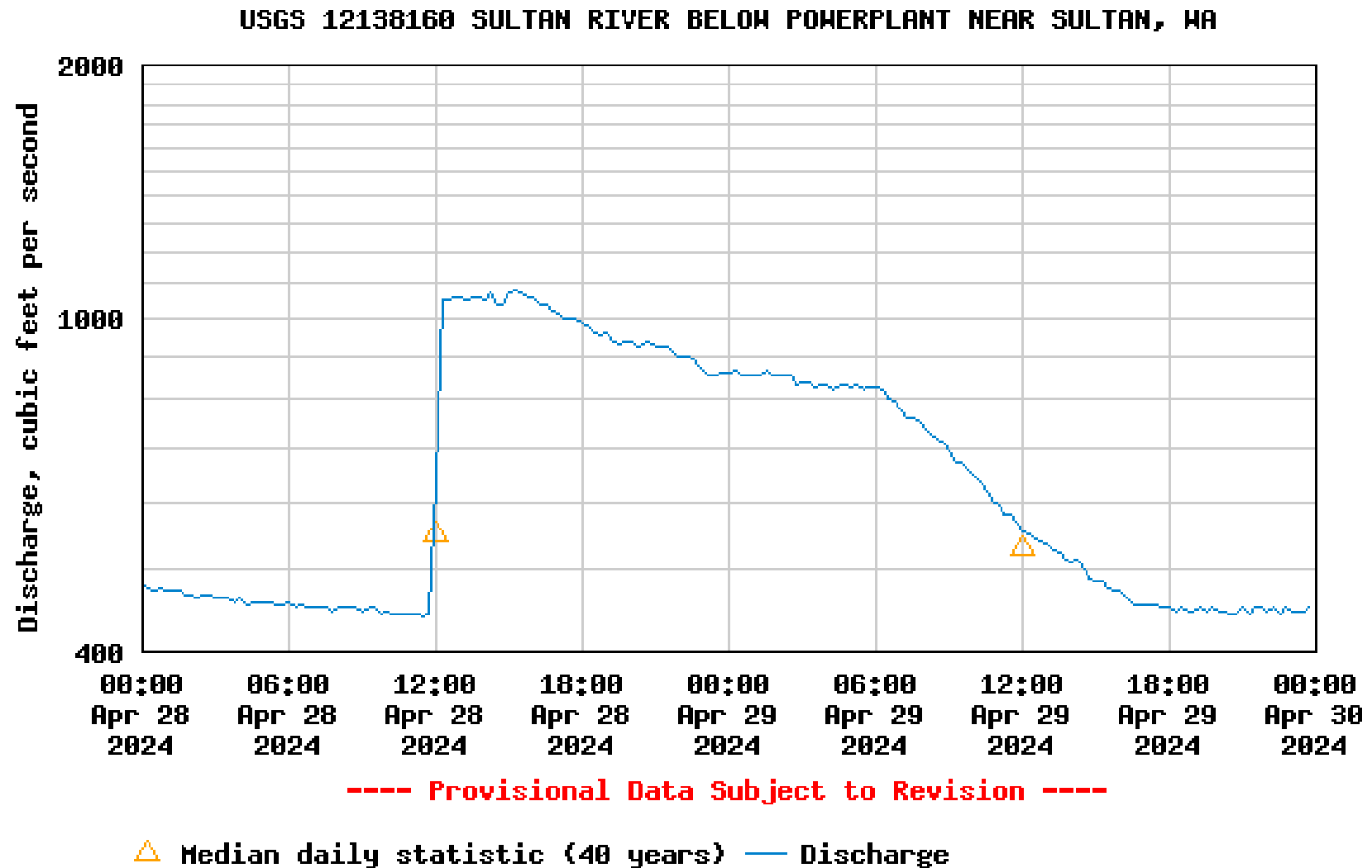


Figure 8. Sultan River immediately downstream of Powerhouse – 04/28-04/29/2024.

Process Flow Log

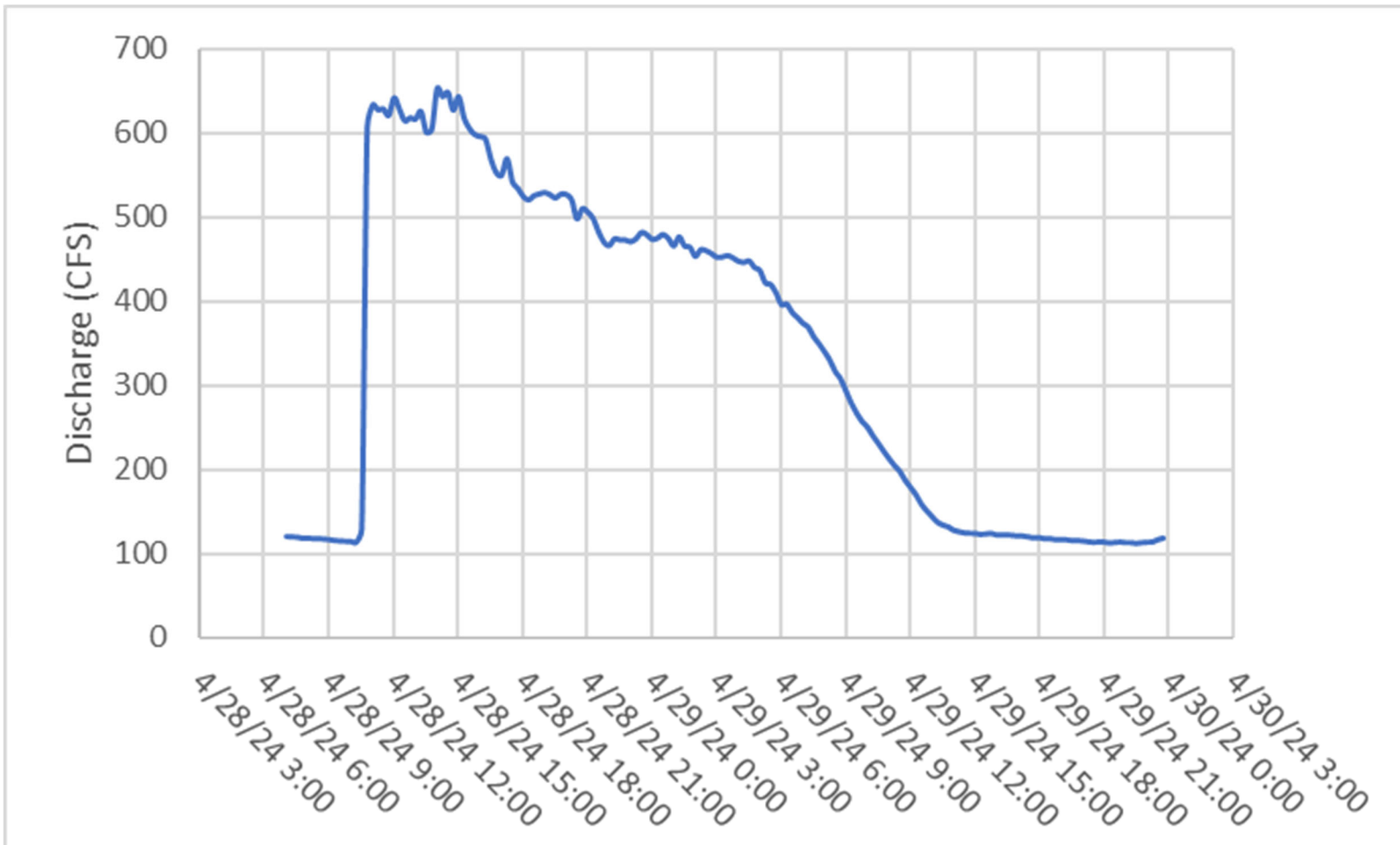


Figure 9. Sultan River immediately upstream of Diversion Dam – 04/28-04/29/2024.

Process Flow Log

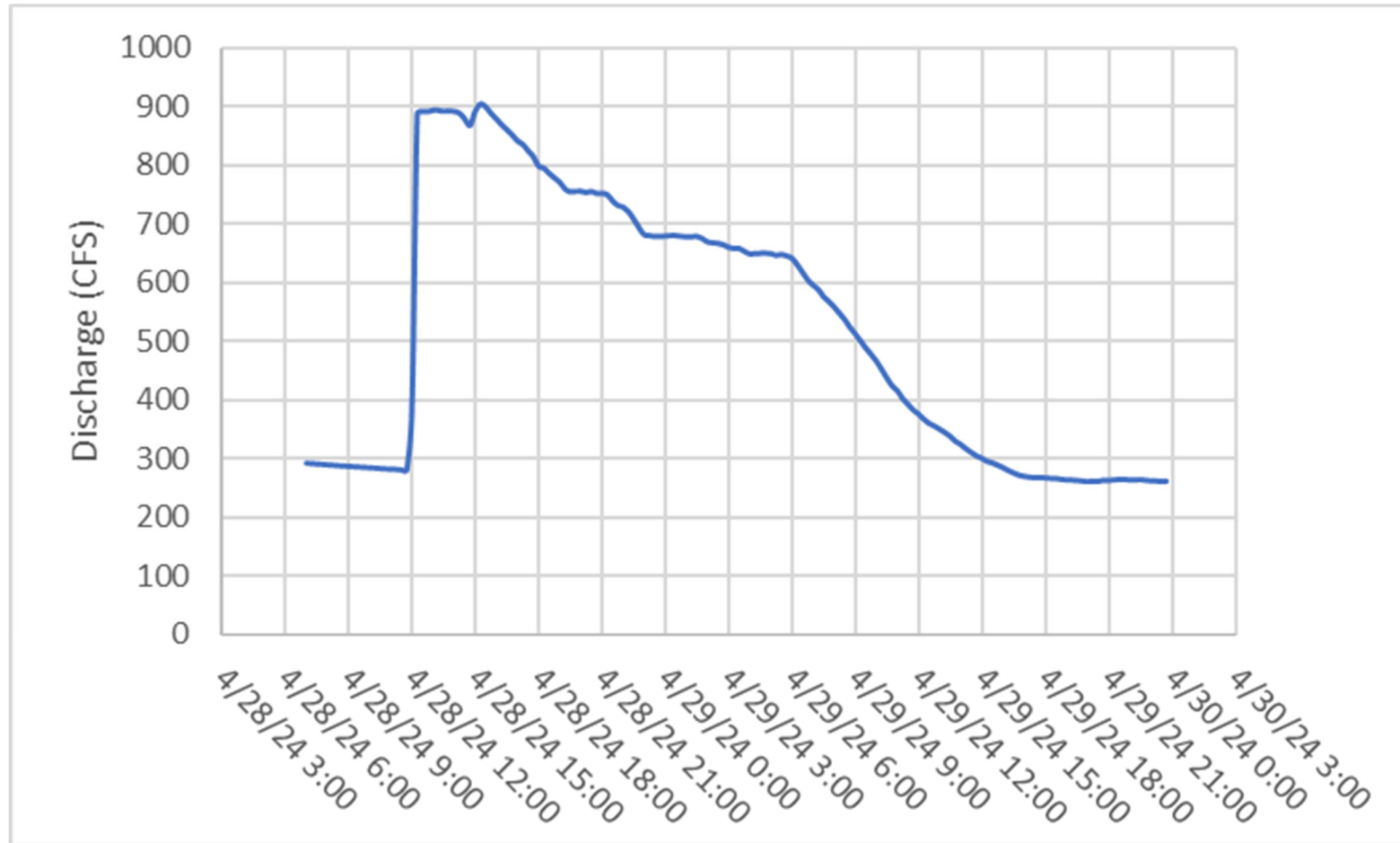


Figure 10. Sultan River immediately upstream of Powerhouse – 04/28-04/29/2024.

Process Flow Log

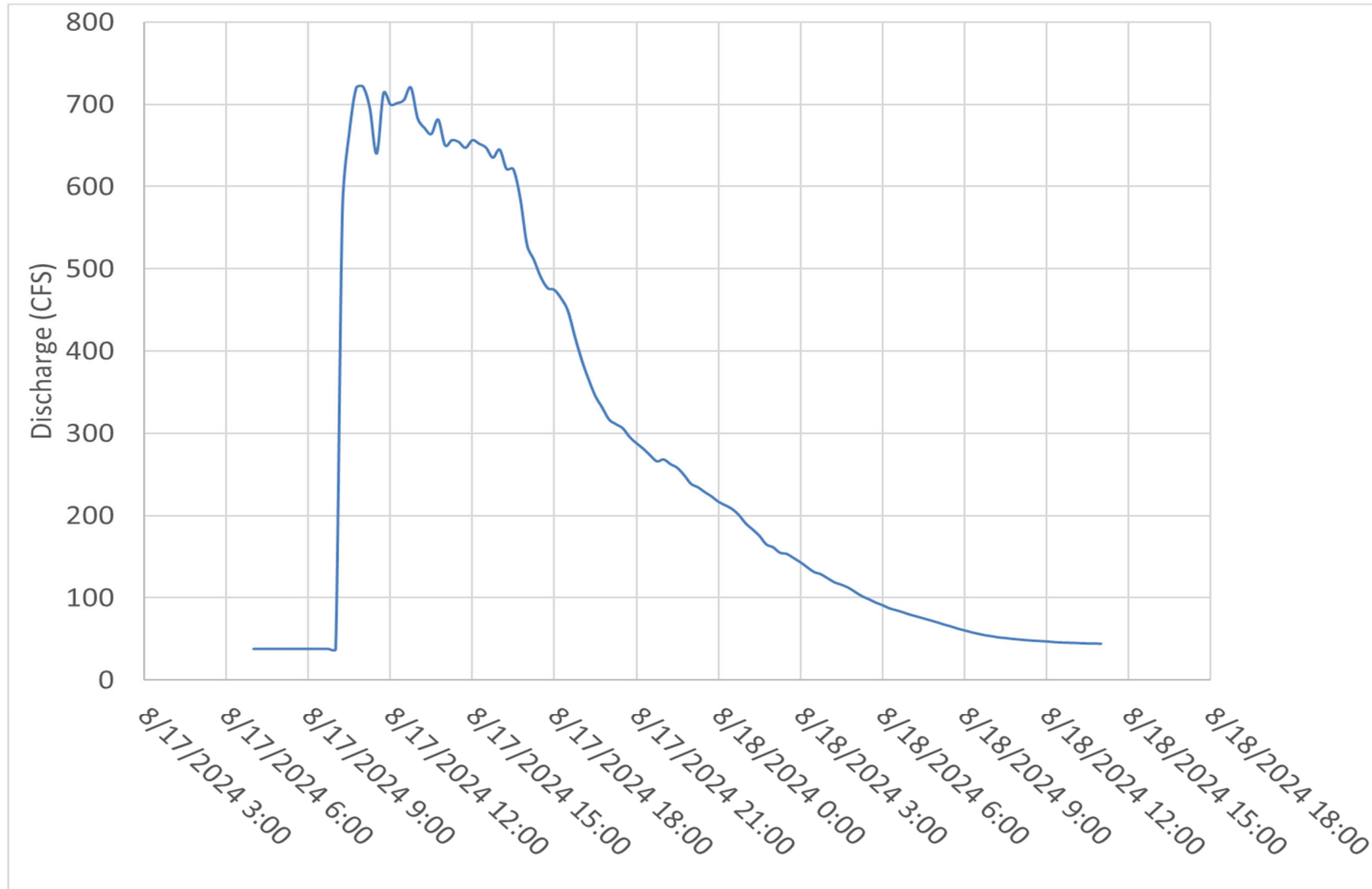


Figure 11. Sultan River immediately upstream of Diversion Dam – 8/17-18/2024.

Process Flow Log

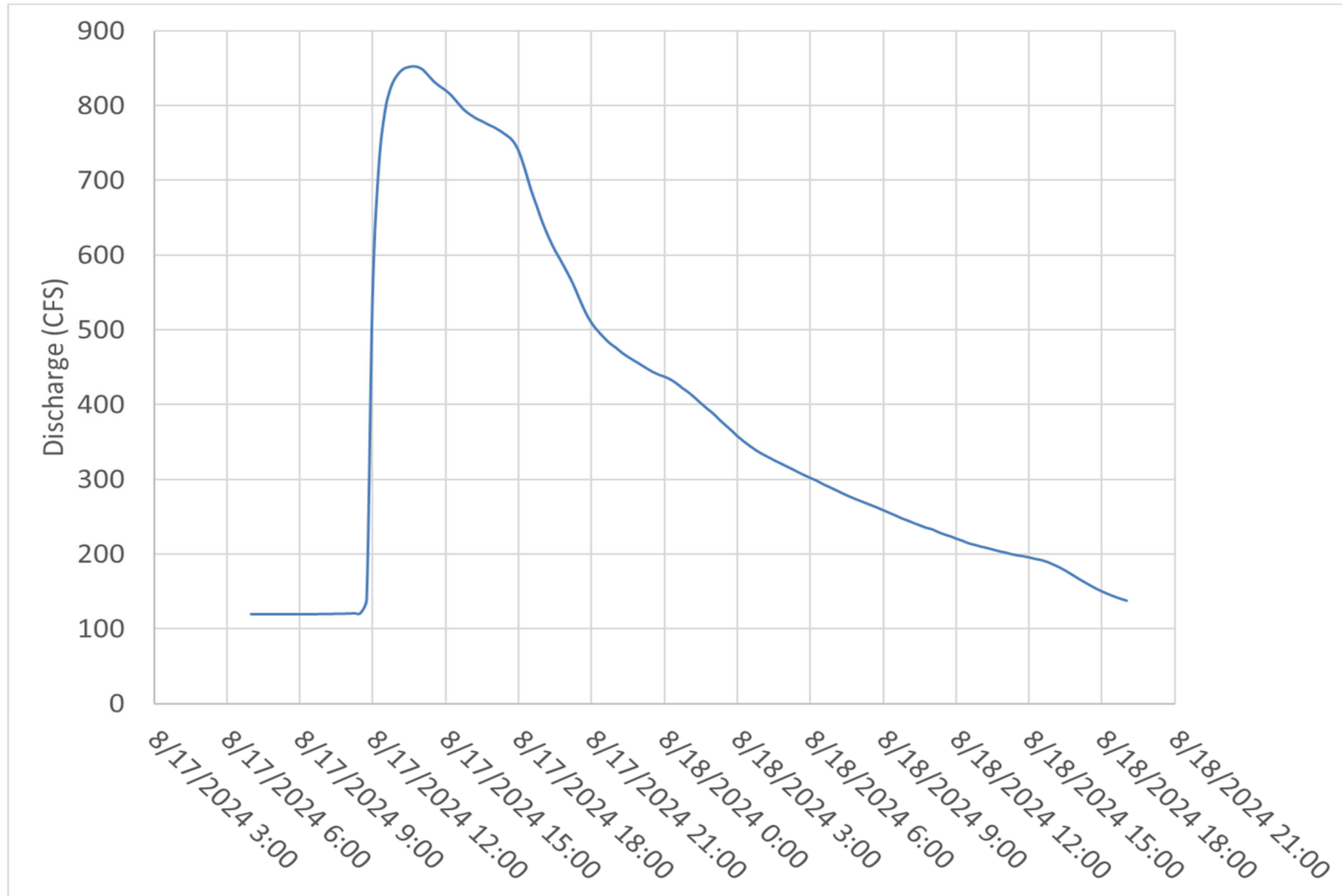


Figure 12. Sultan River immediately upstream of Powerhouse – 08/17-18/2024.

Process Flow Log

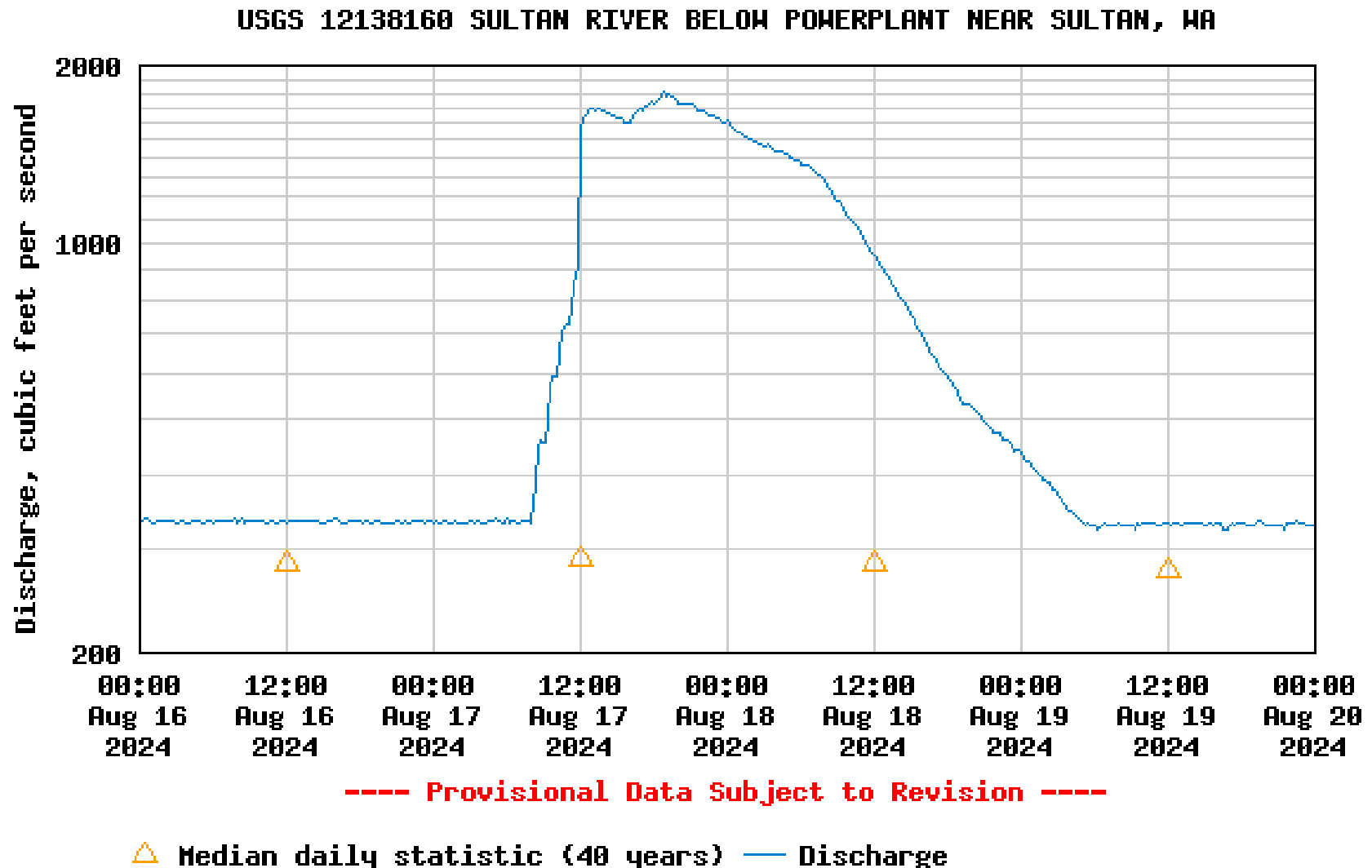


Figure 13. Sultan River immediately downstream of Powerhouse – 08/17-18/2024.

Process Flow Log

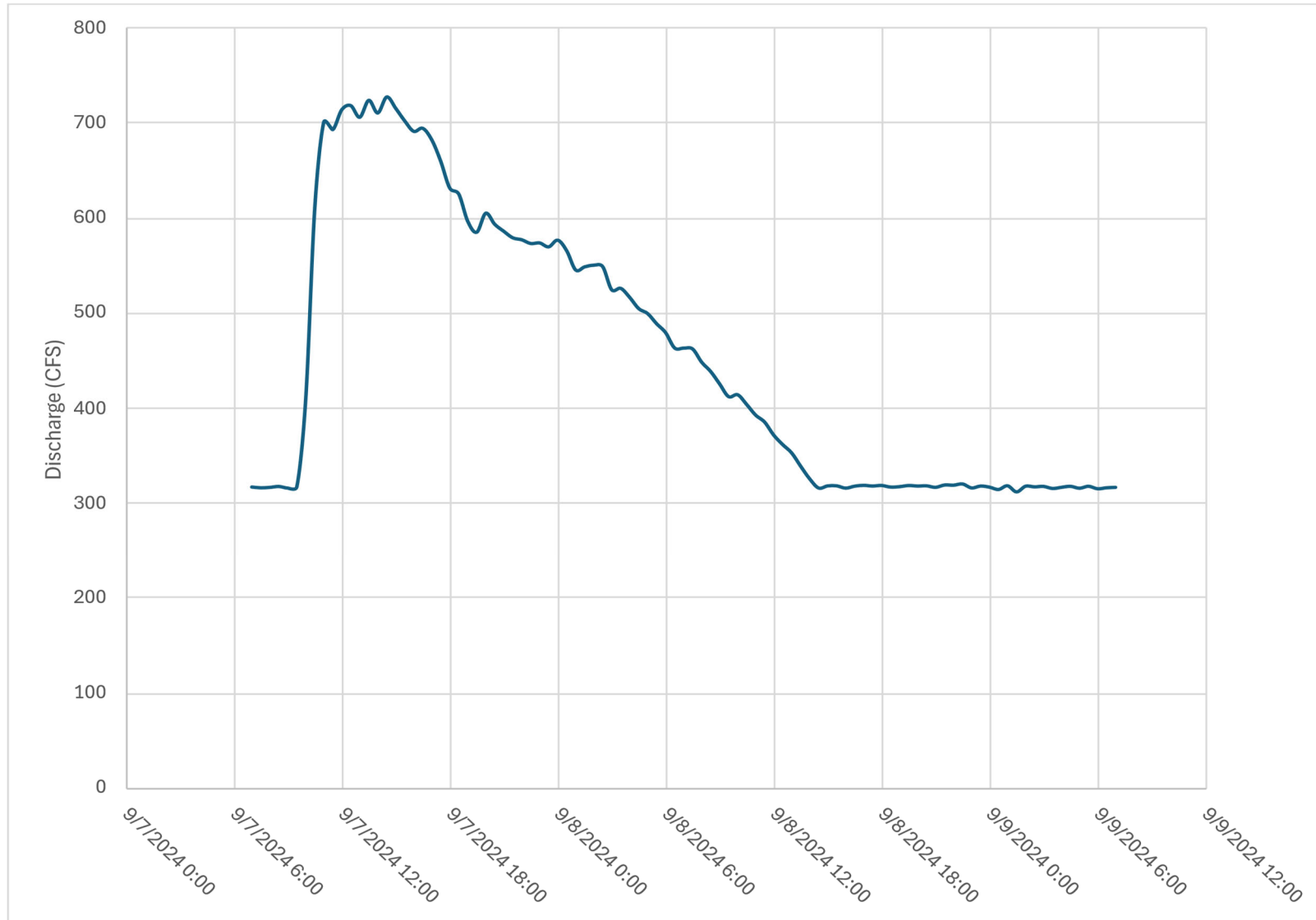


Figure 14. Sultan River immediately upstream of Diversion Dam – 9/07-8/2024.

Process Flow Log

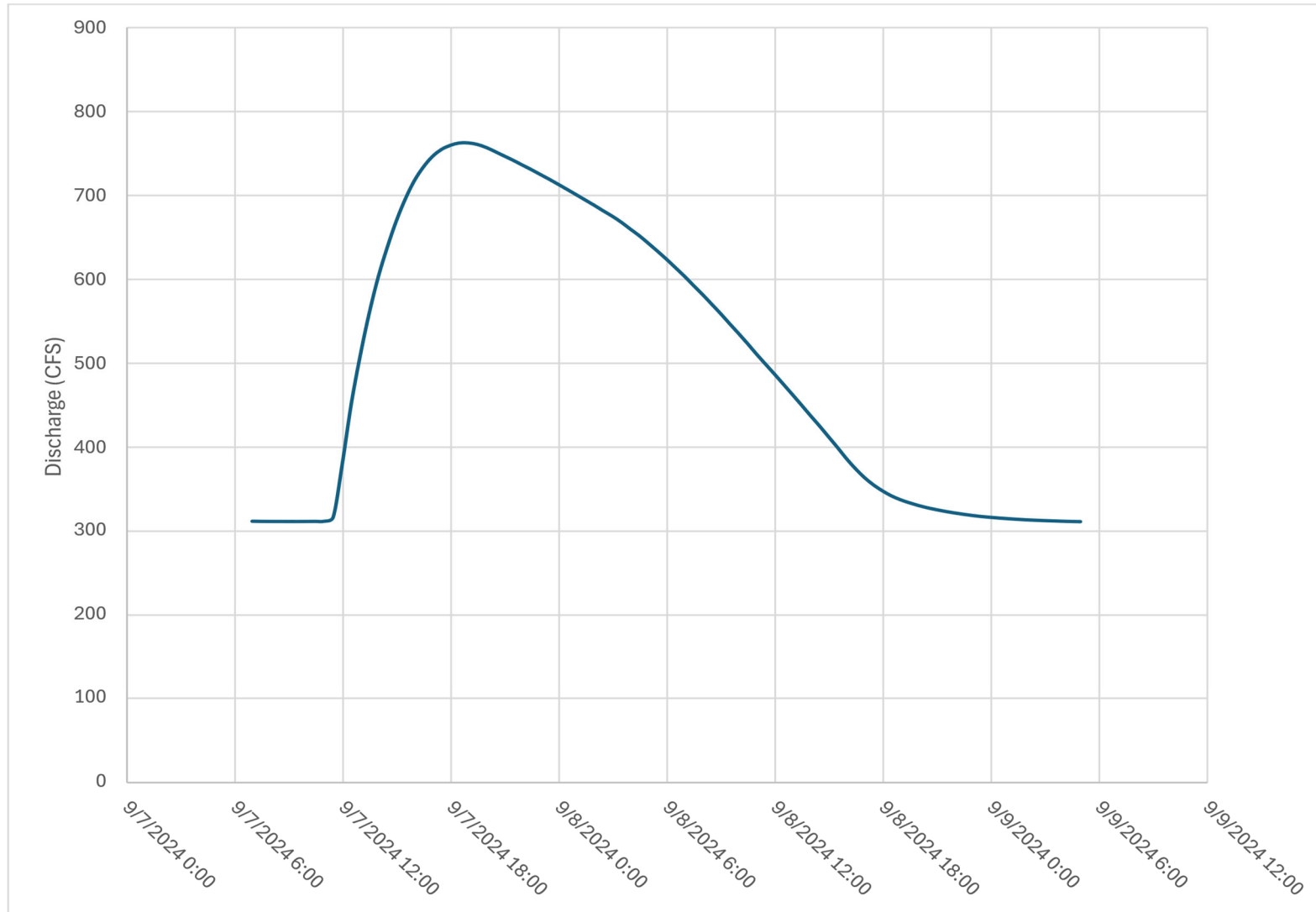


Figure 15. Sultan River immediately upstream of Powerhouse – 09/07-09/2024.

Process Flow Log

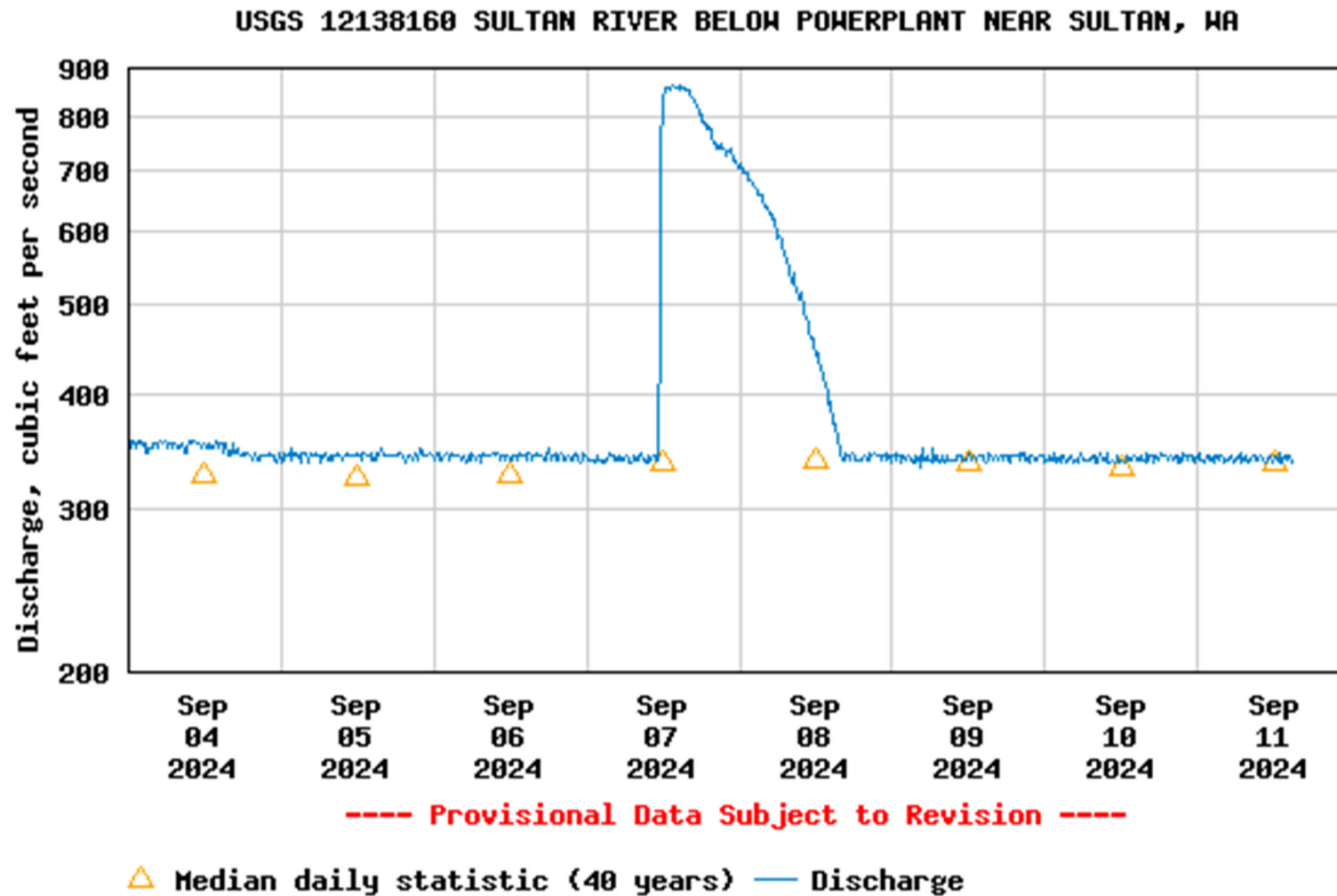


Figure 16. Sultan River immediately downstream of Powerhouse – 09/7/2024.

Process Flow Log

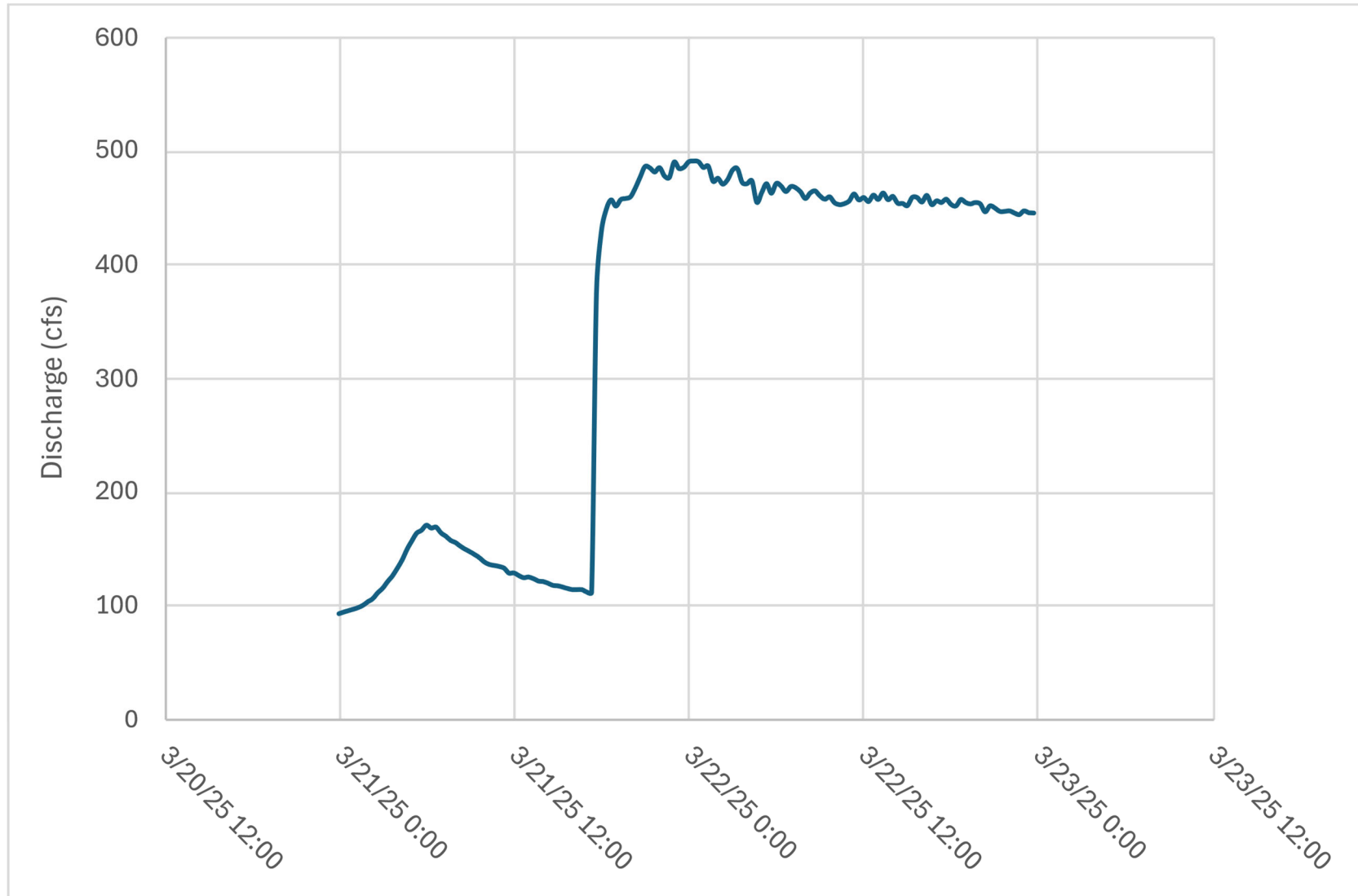


Figure 17. Sultan River immediately Upstream of Diversion Dam Flow – 03/21-22/2025.

Process Flow Log

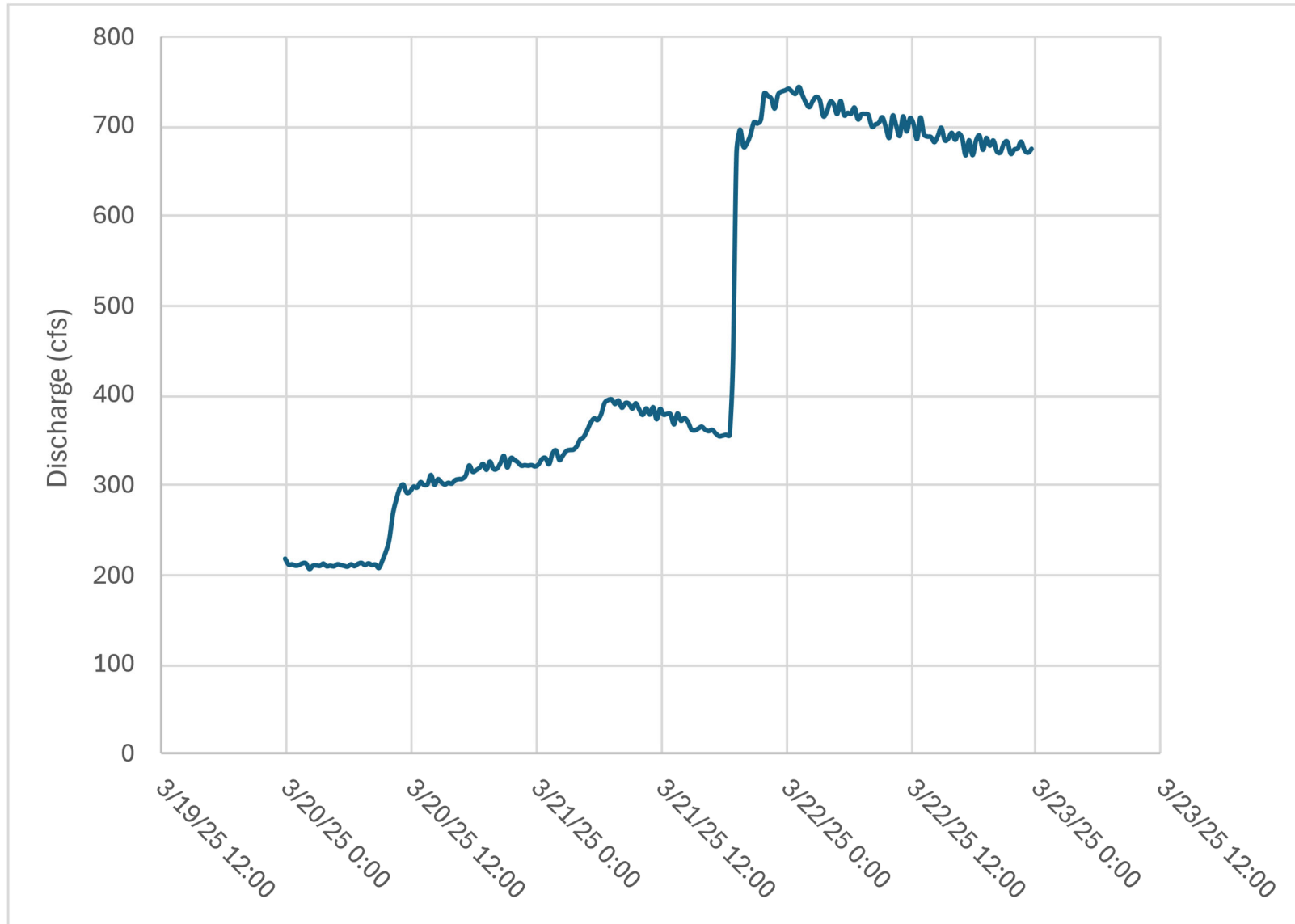


Figure 18. Sultan River immediately Upstream of Powerhouse Flow – 03/21-22/2025.

Process Flow Log

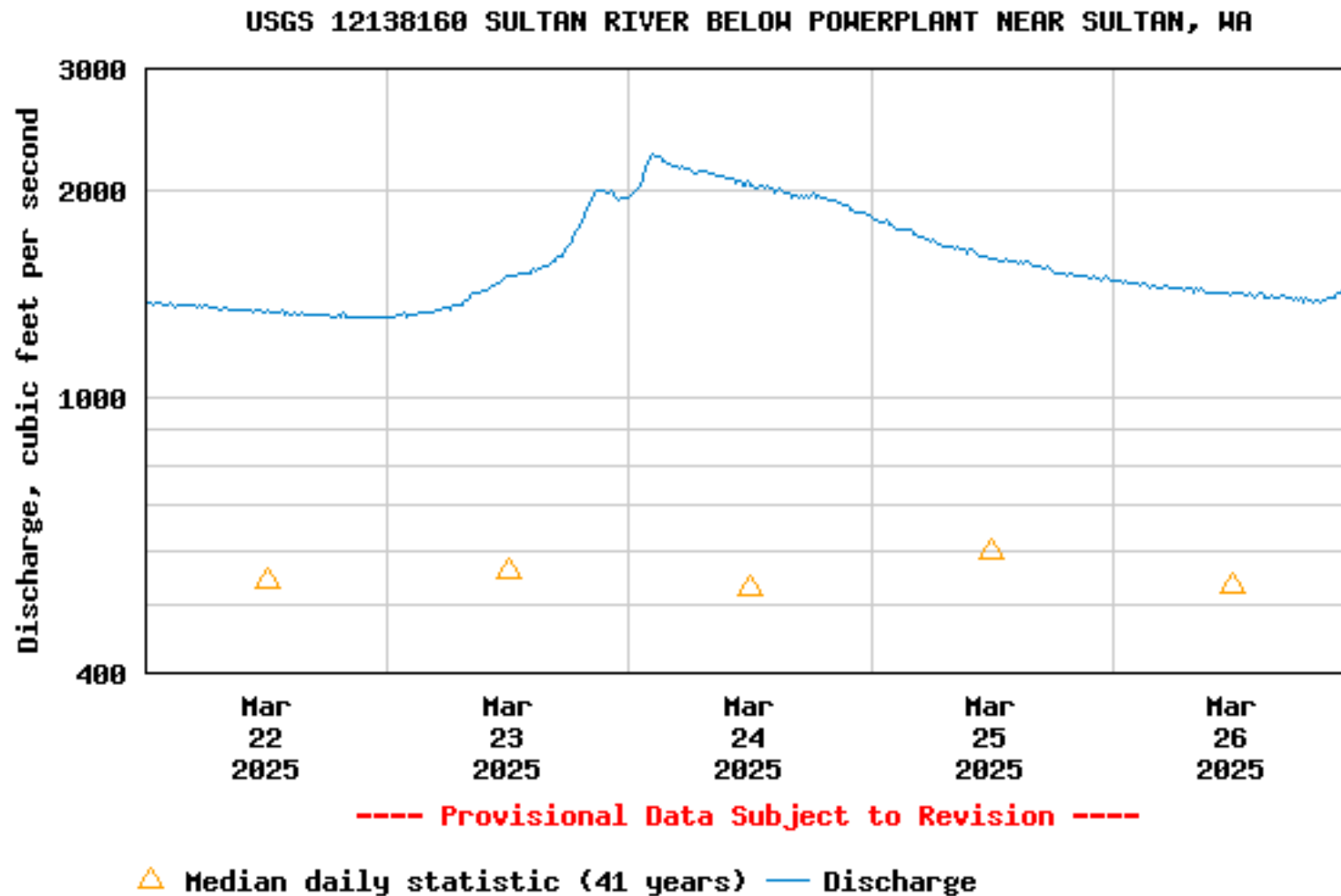


Figure 19. Sultan River immediately Downstream of Powerhouse Flow – 03/23-25/2025.

Process Flow Log

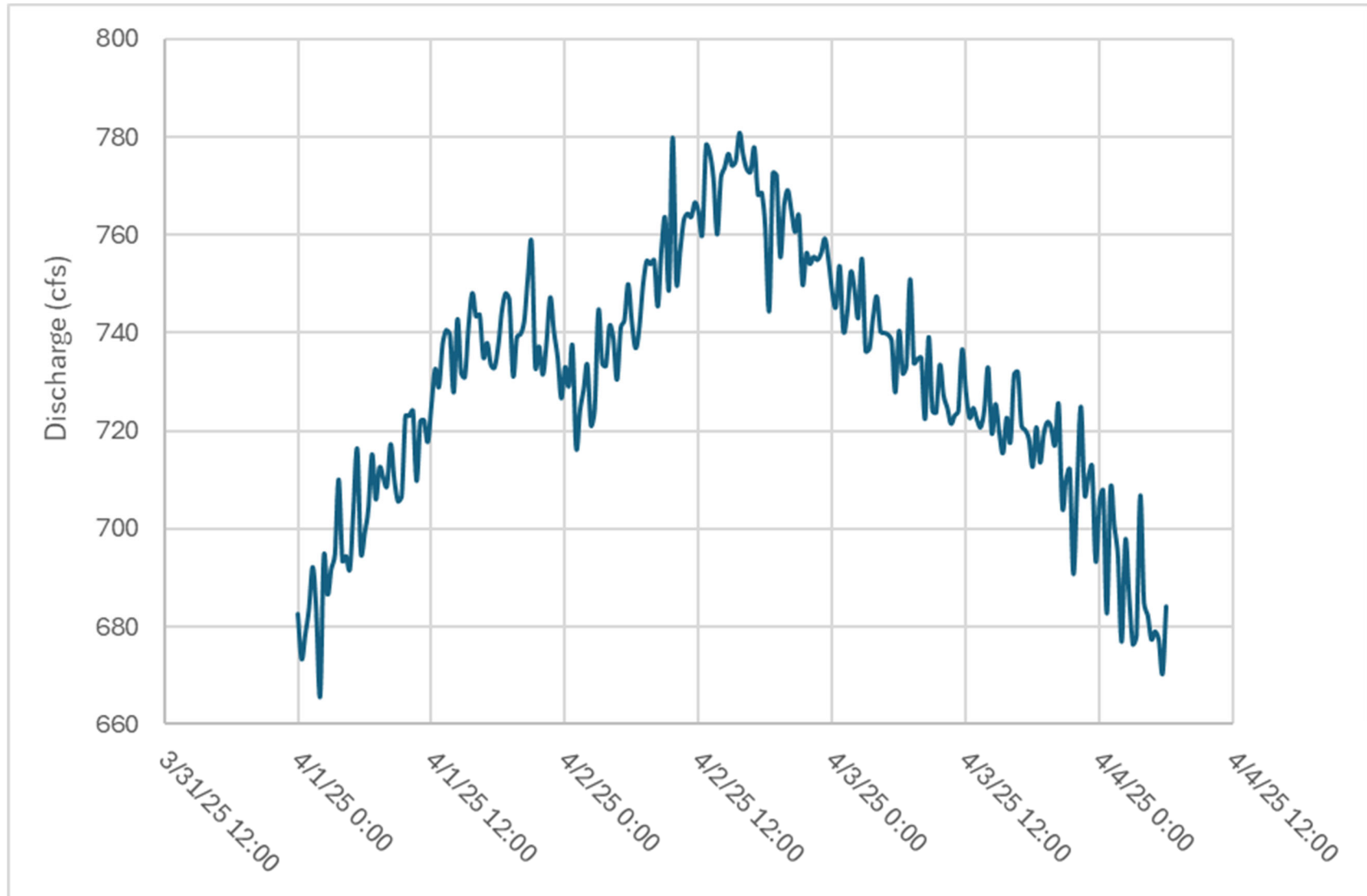


Figure 20. Sultan River immediately Upstream of Powerhouse Flow – 04/1/25 – 04/4/2025.

Process Flow Log

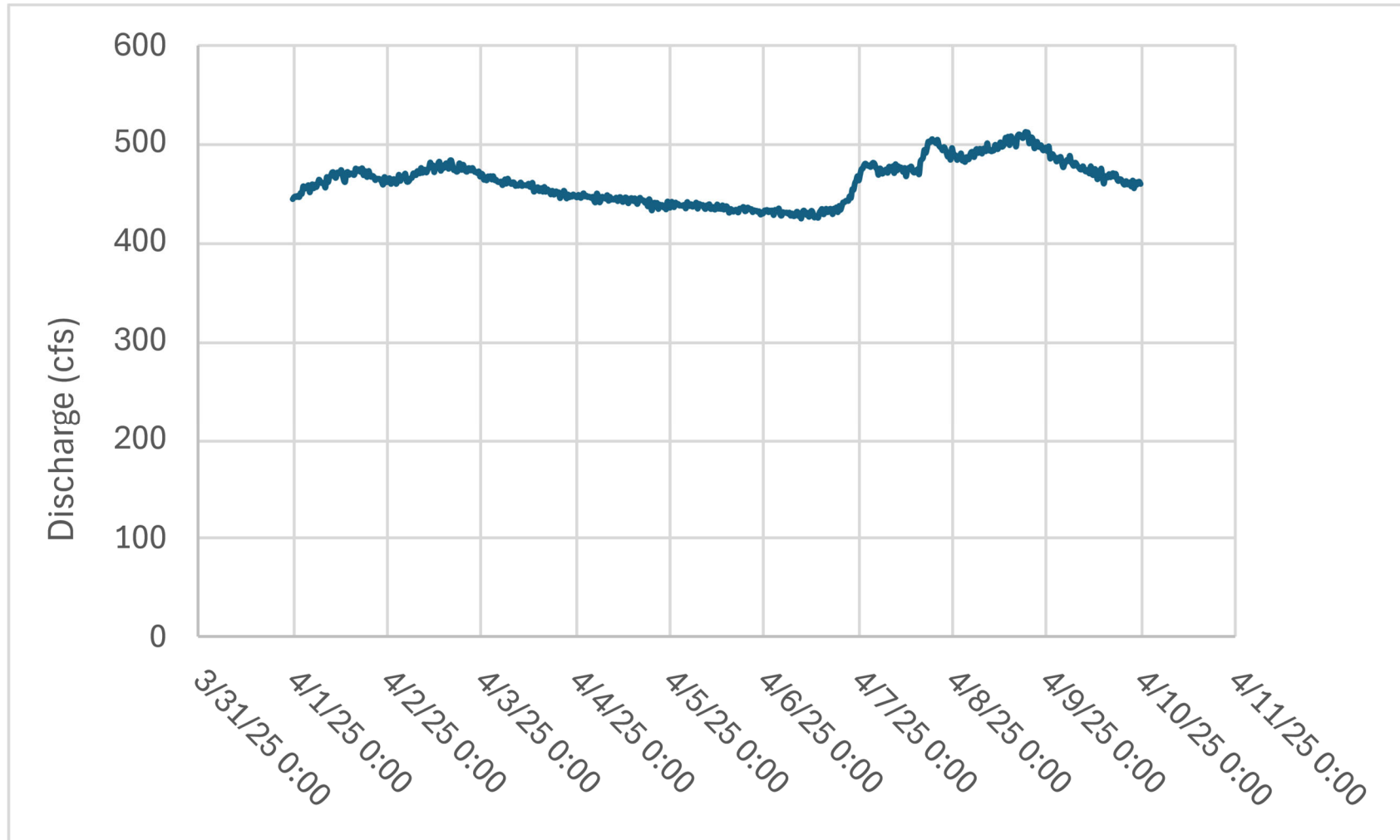


Figure 21. Sultan River immediately Upstream of Diversion Dam Flow – 04/1/25 – 04/9/2025.

Process Flow Log

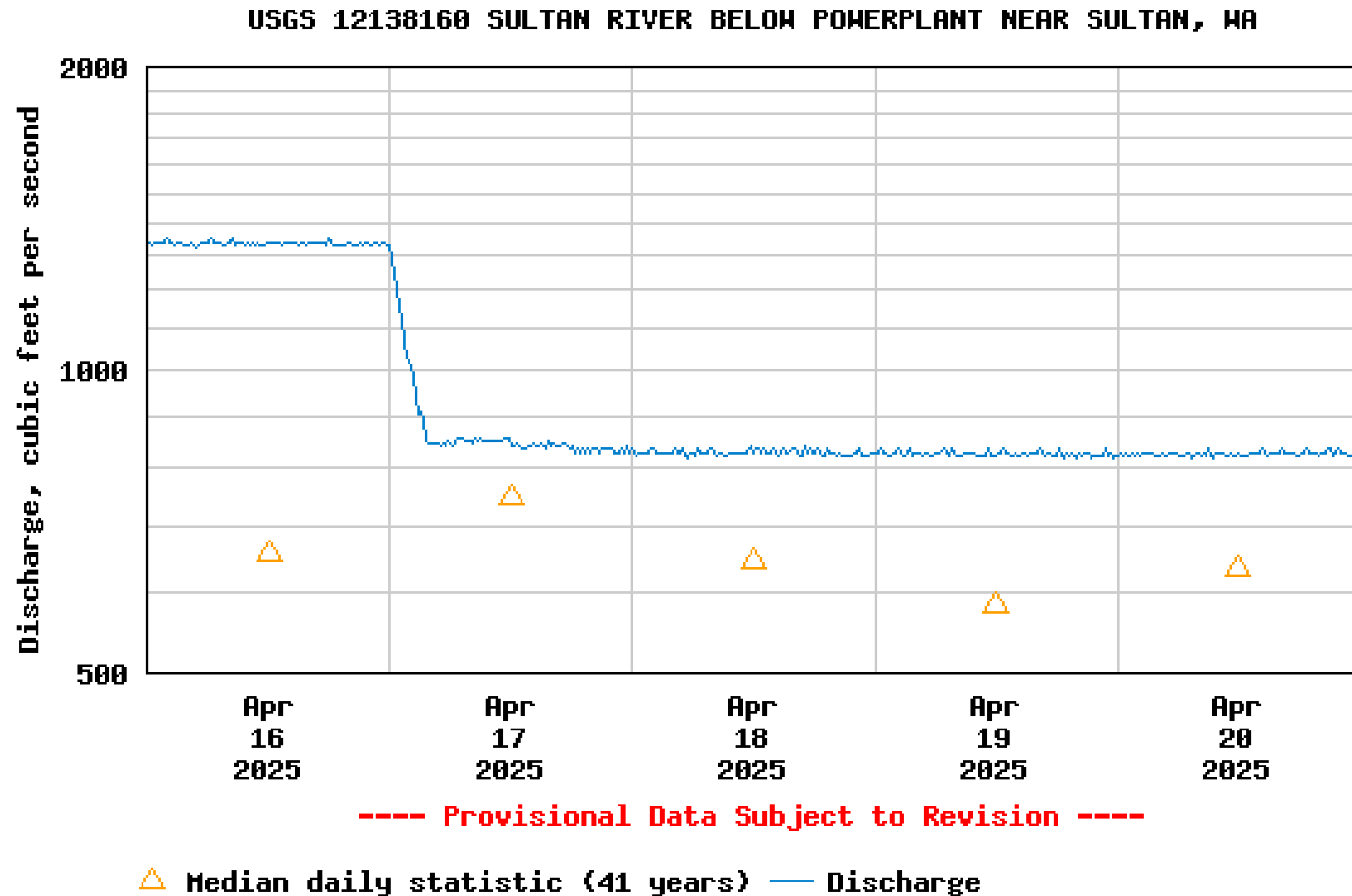


Figure 22. Sultan River immediately Downstream of Powerhouse Flow – 04/17-18/2025.

Process Flow Log

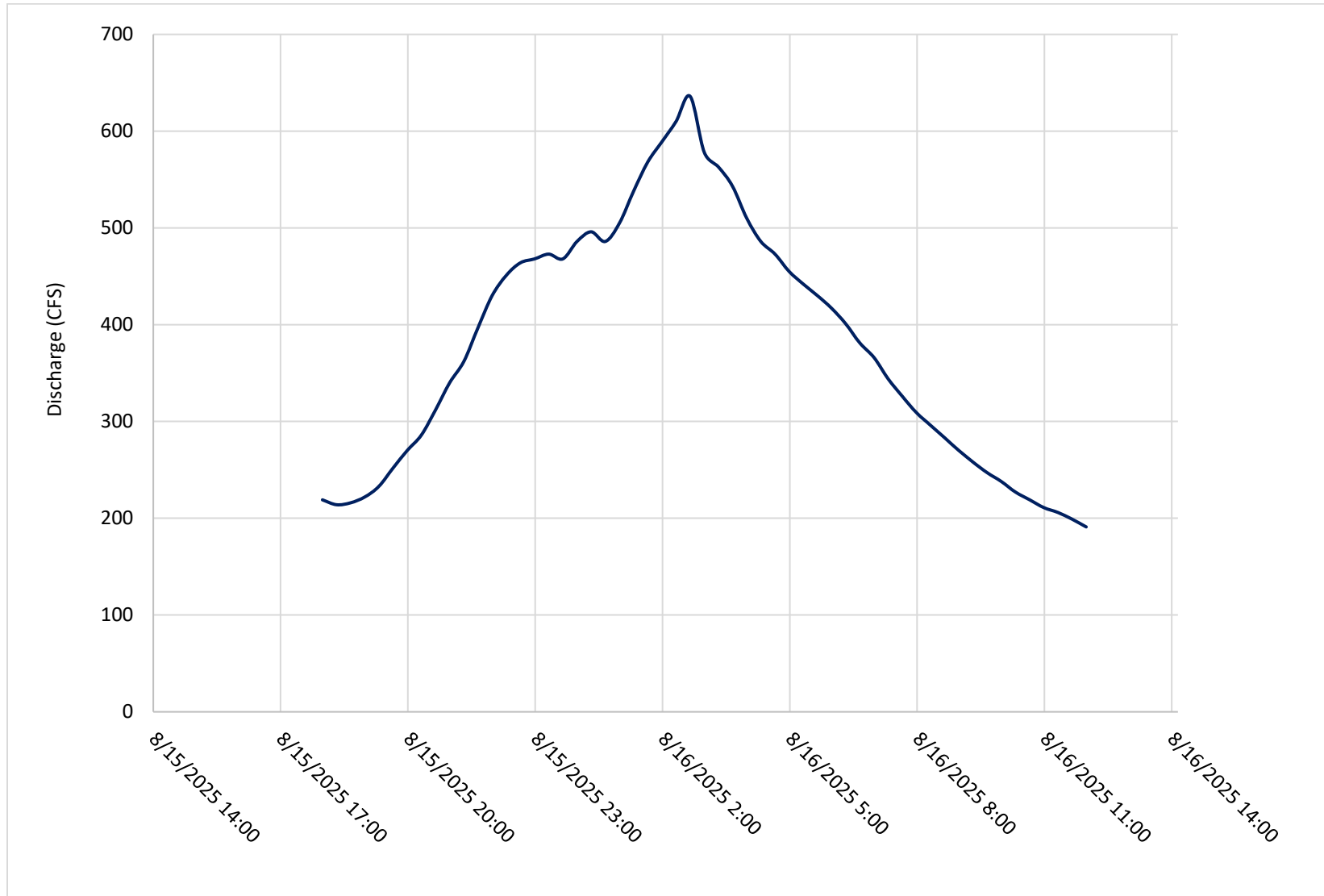


Figure 23. Sultan River immediately Upstream of Diversion Dam Flow – 08/15-16/2025.

Process Flow Log

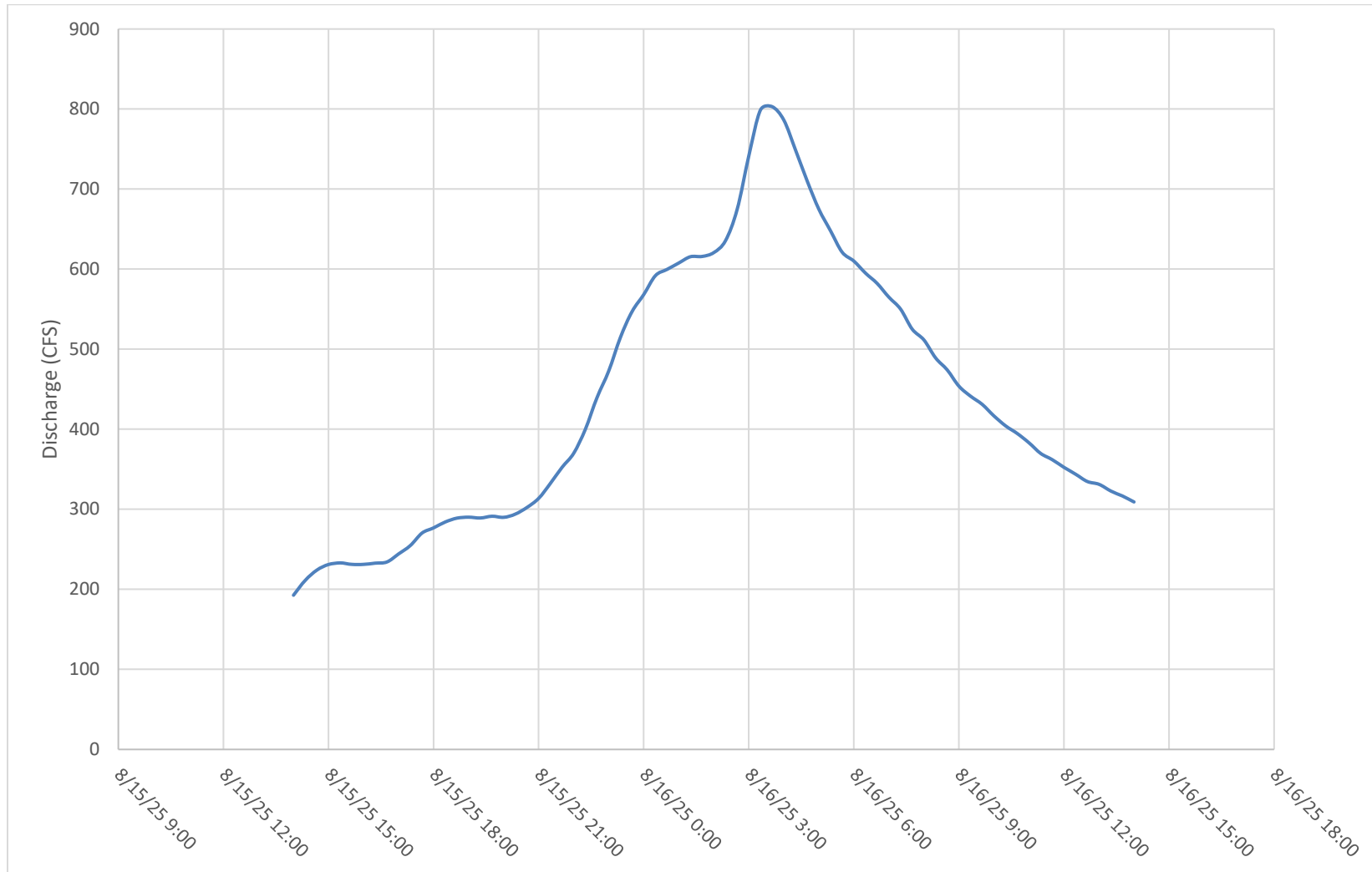


Figure 24. Sultan River immediately Upstream of Powerhouse Flow – 08/15-16/2025.

Process Flow Log

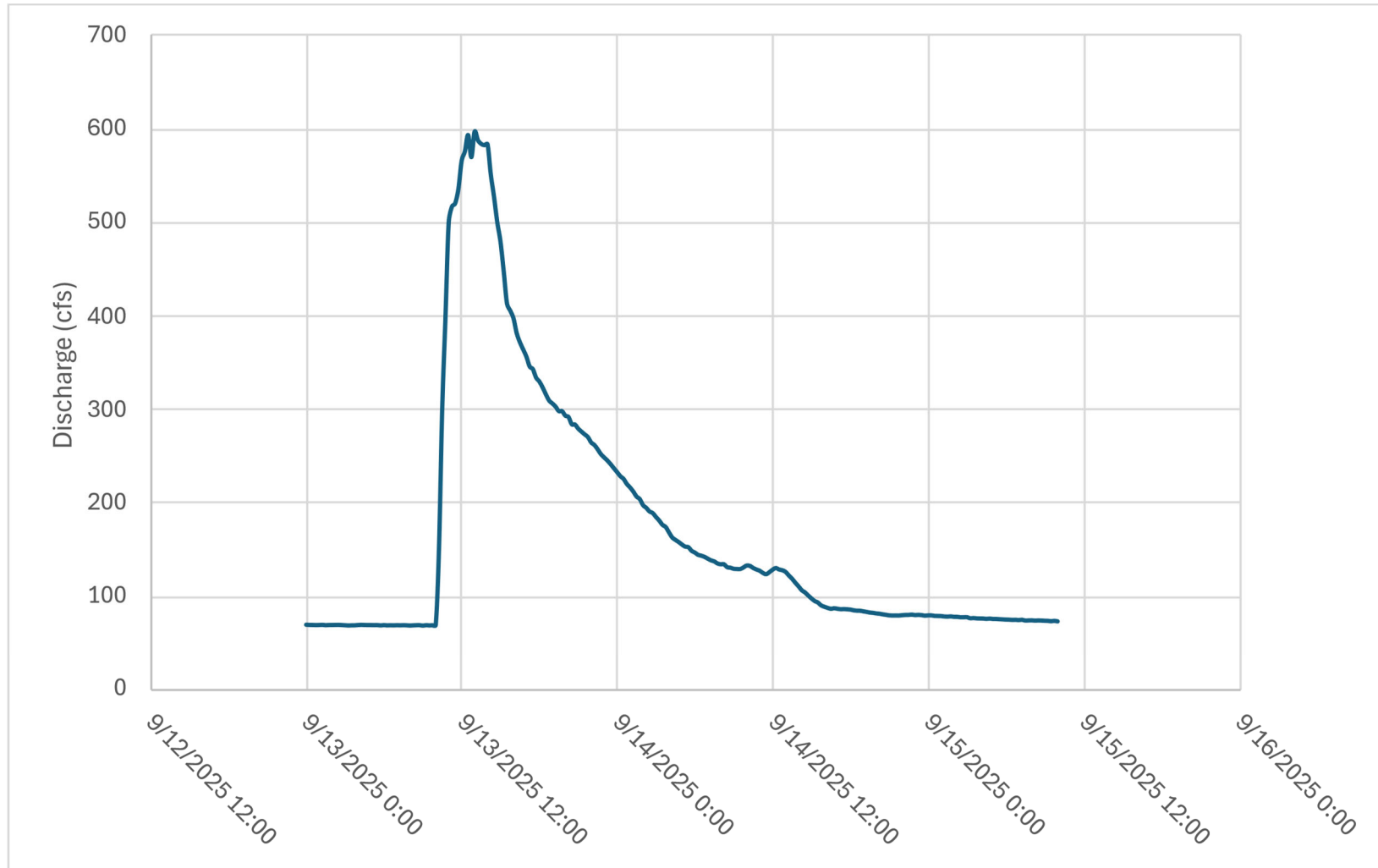


Figure 25. Sultan River immediately Upstream of Diversion Dam Flow – 09/13/25.

Process Flow Log

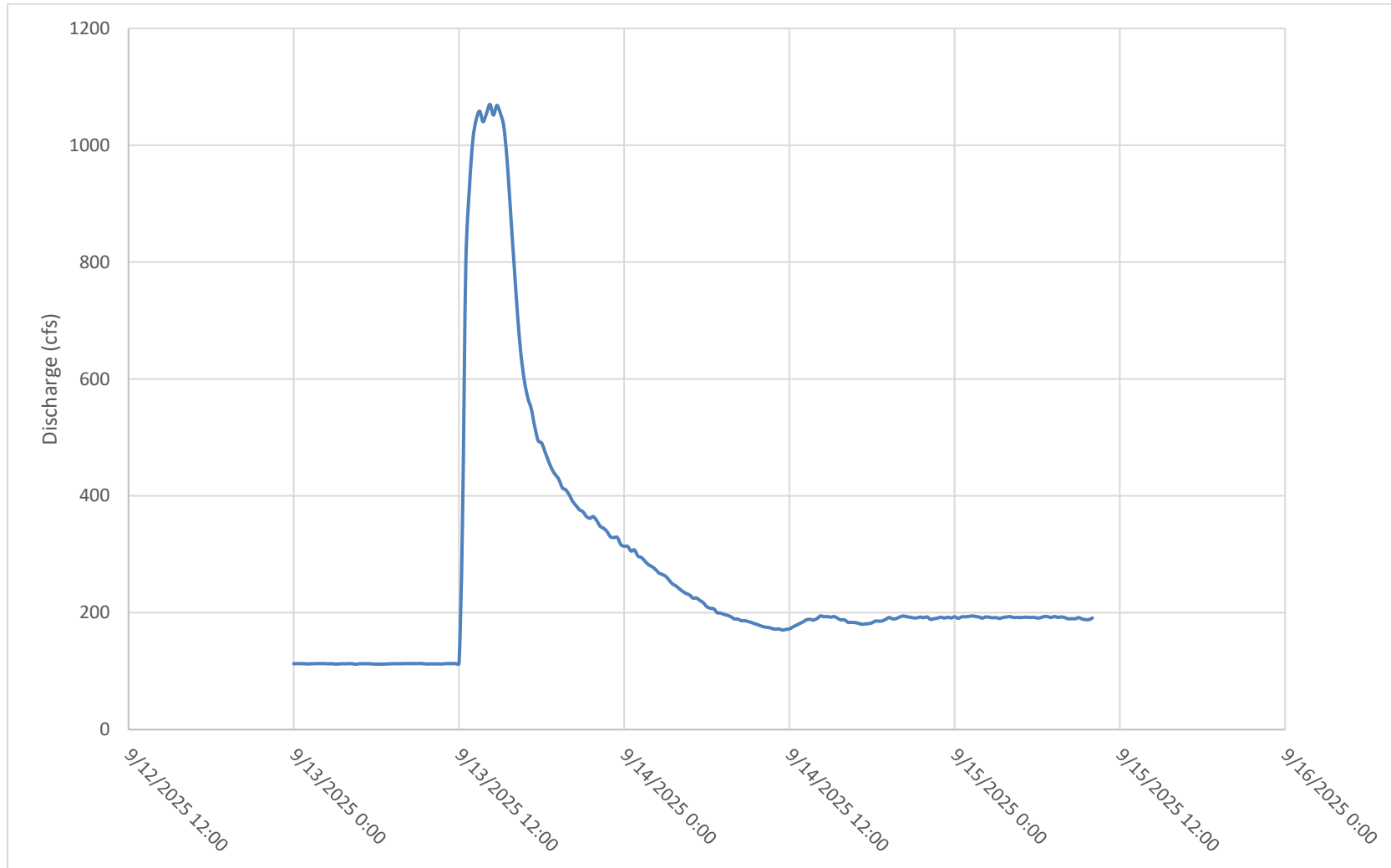


Figure 26. Sultan River immediately Upstream of Powerhouse Flow – 09/13/2025.

Process Flow Log

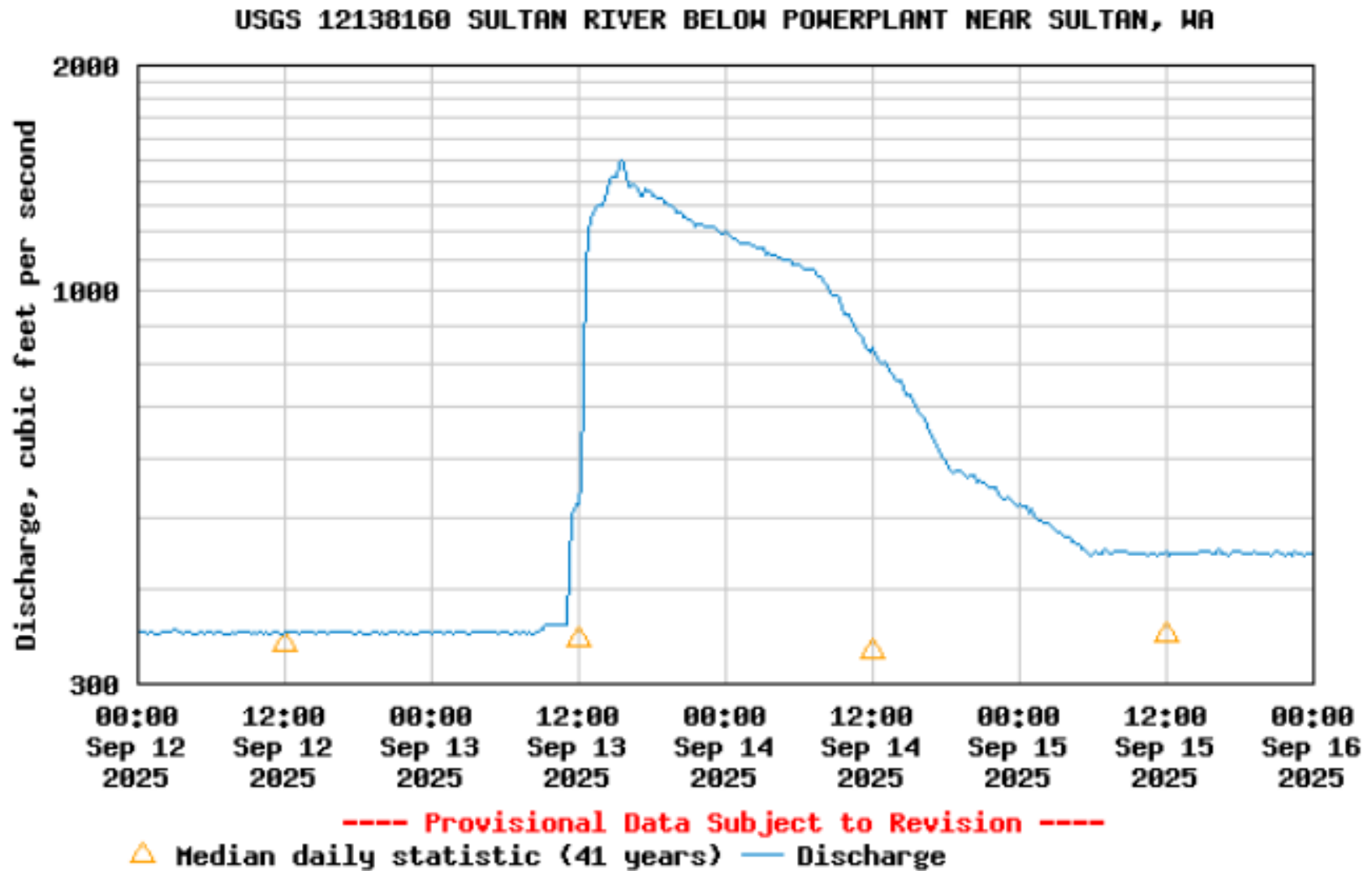


Figure 27. Sultan River immediately Downstream of Powerhouse Flow – 09/13/2025.

Process Flow Log

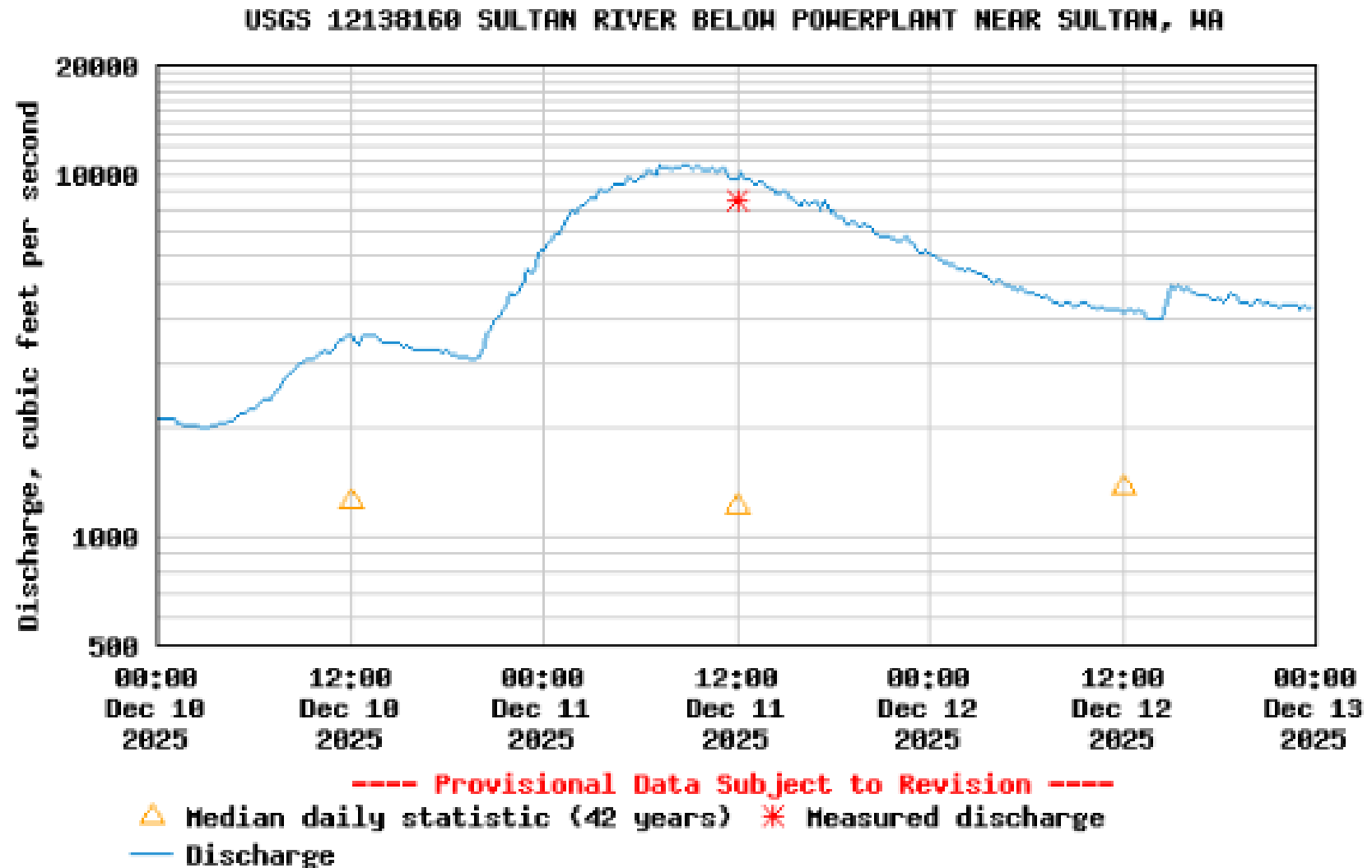


Figure 28. Sultan River immediately Downstream of Powerhouse Flow – 12/11/2025.

Process Flow Log

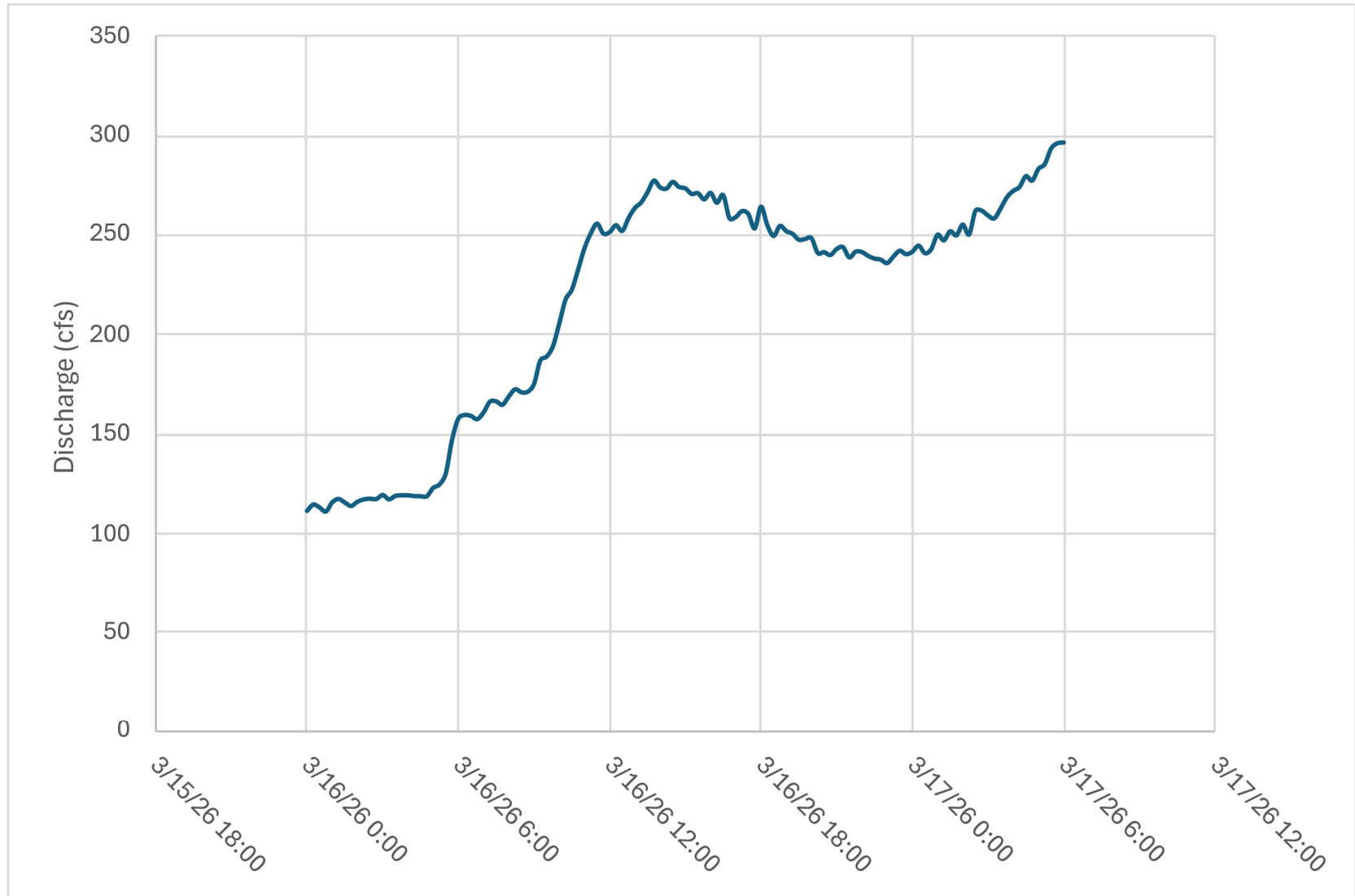


Figure 29. Sultan River immediately Upstream of Diversion Dam Flow – 03/16–17/26.

Process Flow Log

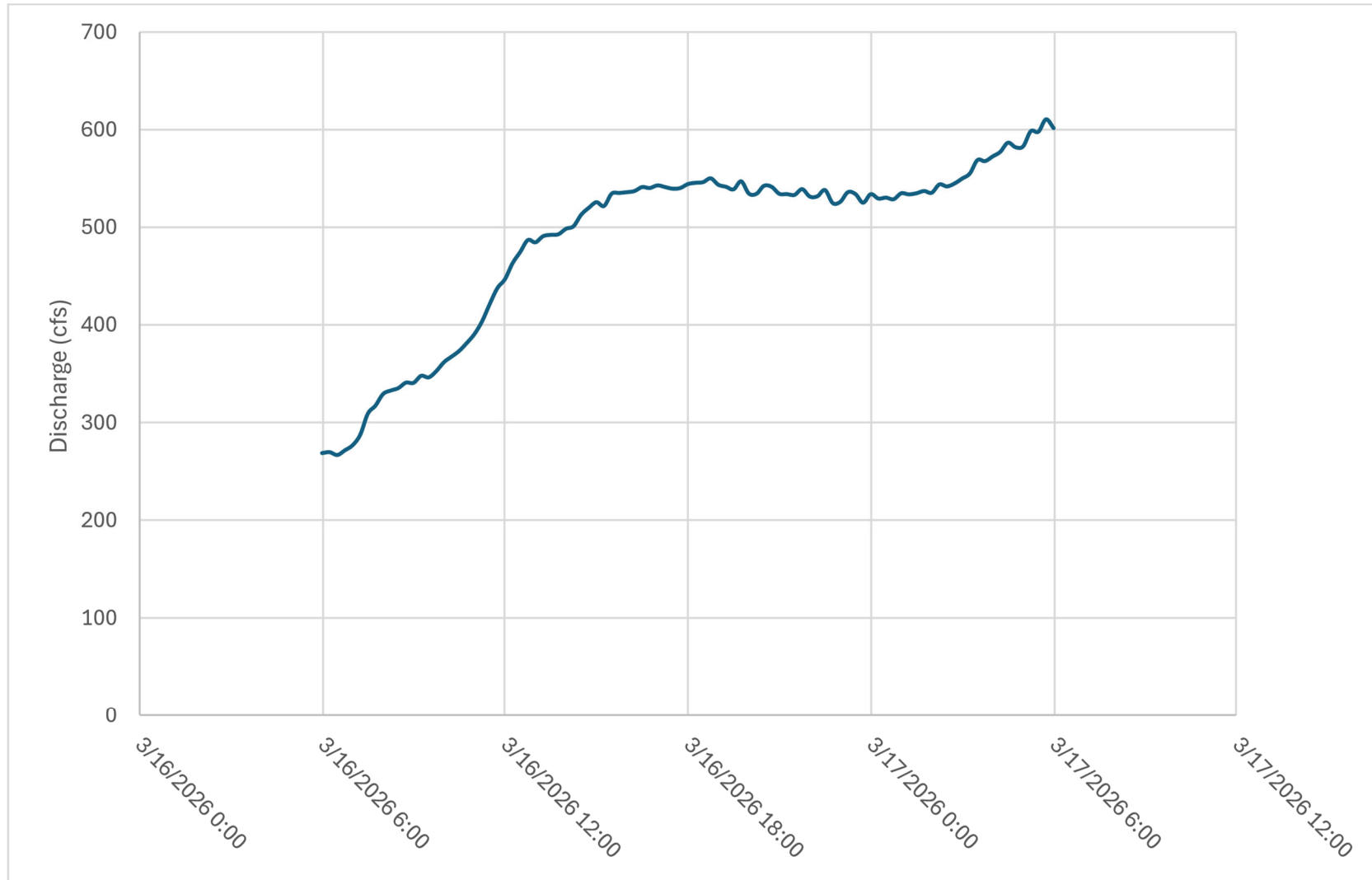


Figure 30. Sultan River immediately Upstream of Powerhouse Flow – 03/16–17/2026.

Process Flow Log

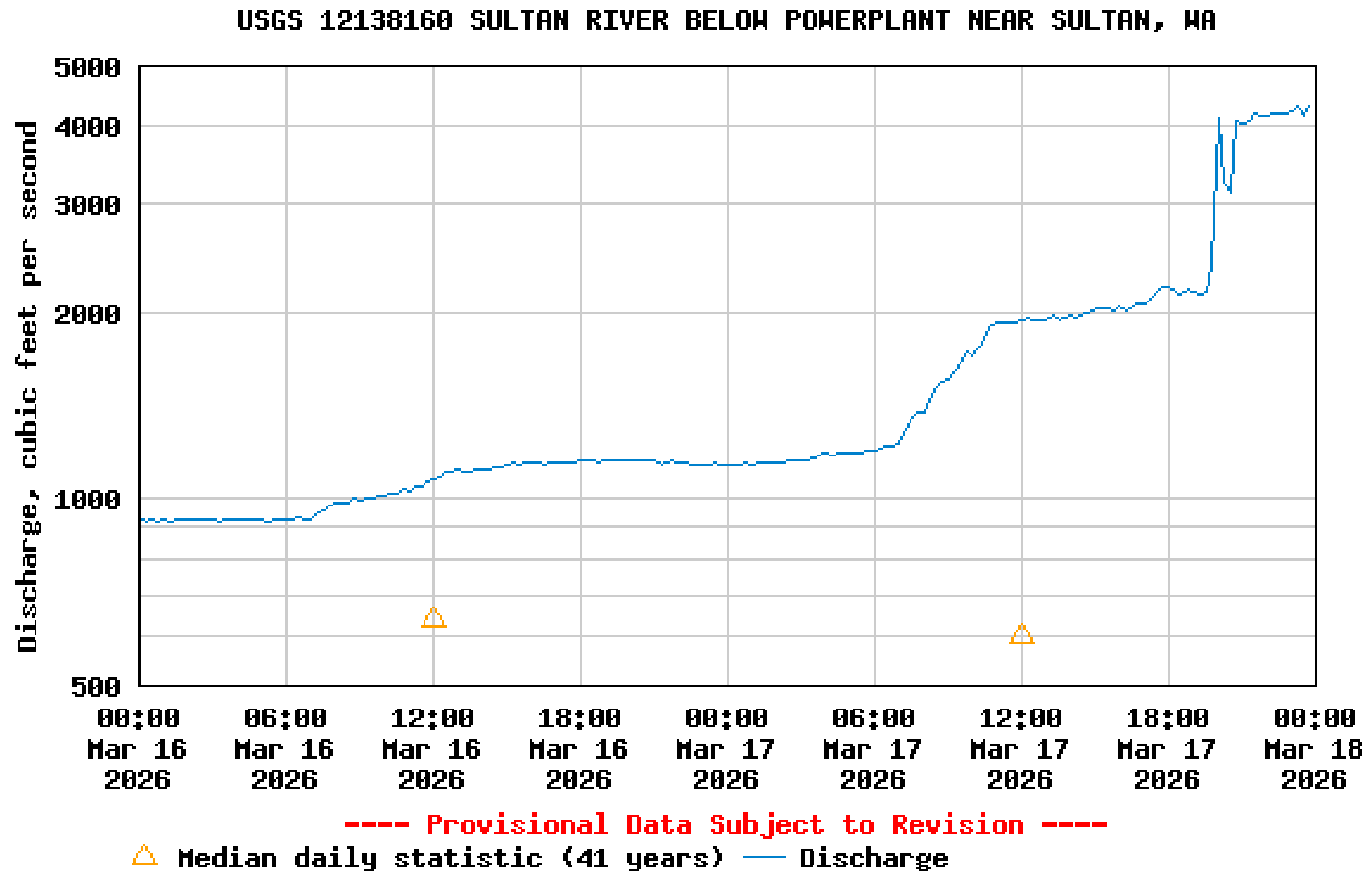


Figure 31. Sultan River immediately Downstream of Powerhouse Flow – 03/16-17/2026.

Process Flow Log

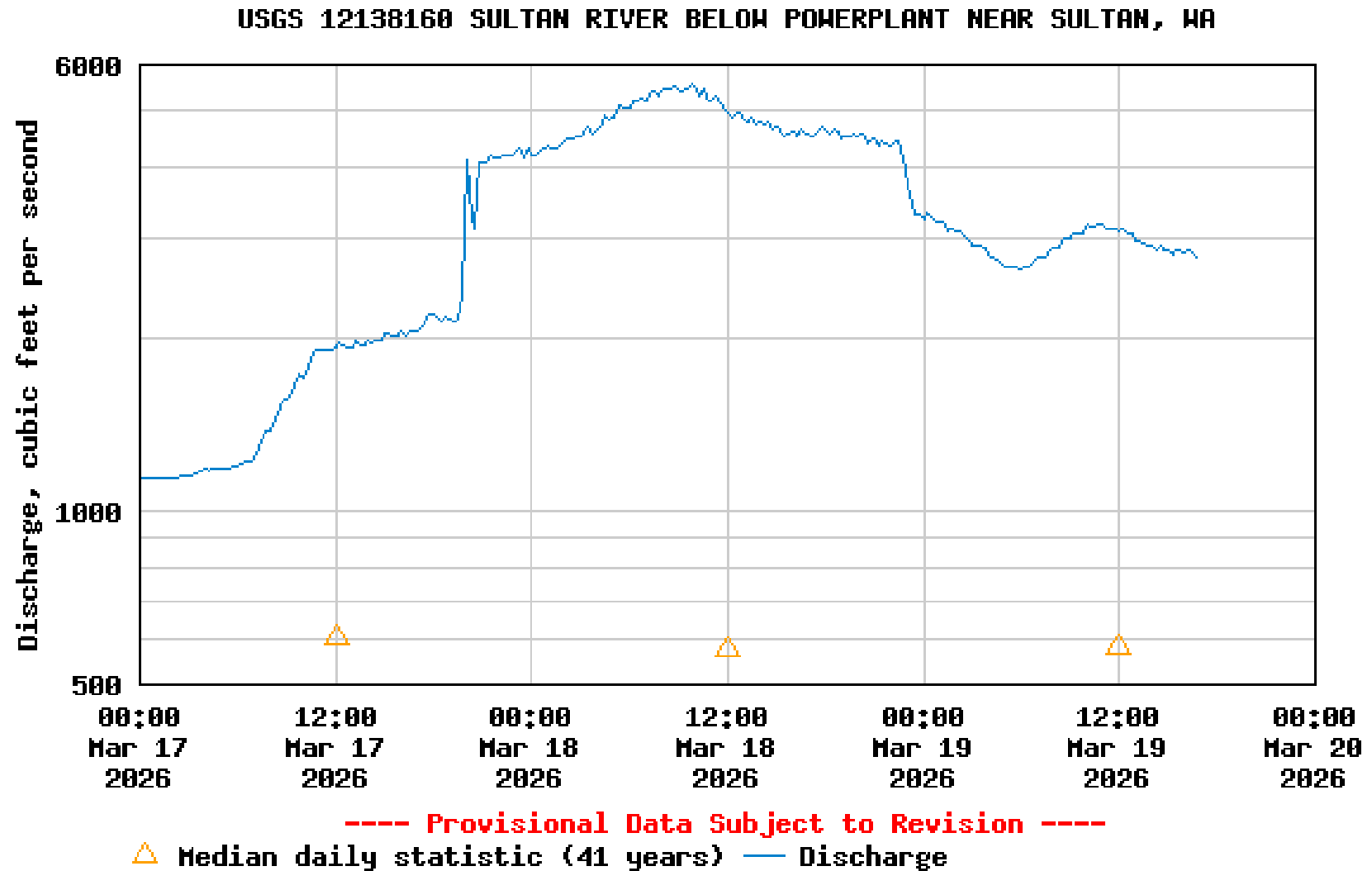


Figure 32. Sultan River immediately Downstream of Powerhouse Flow – 03/17-18/2026.

Process Flow Log

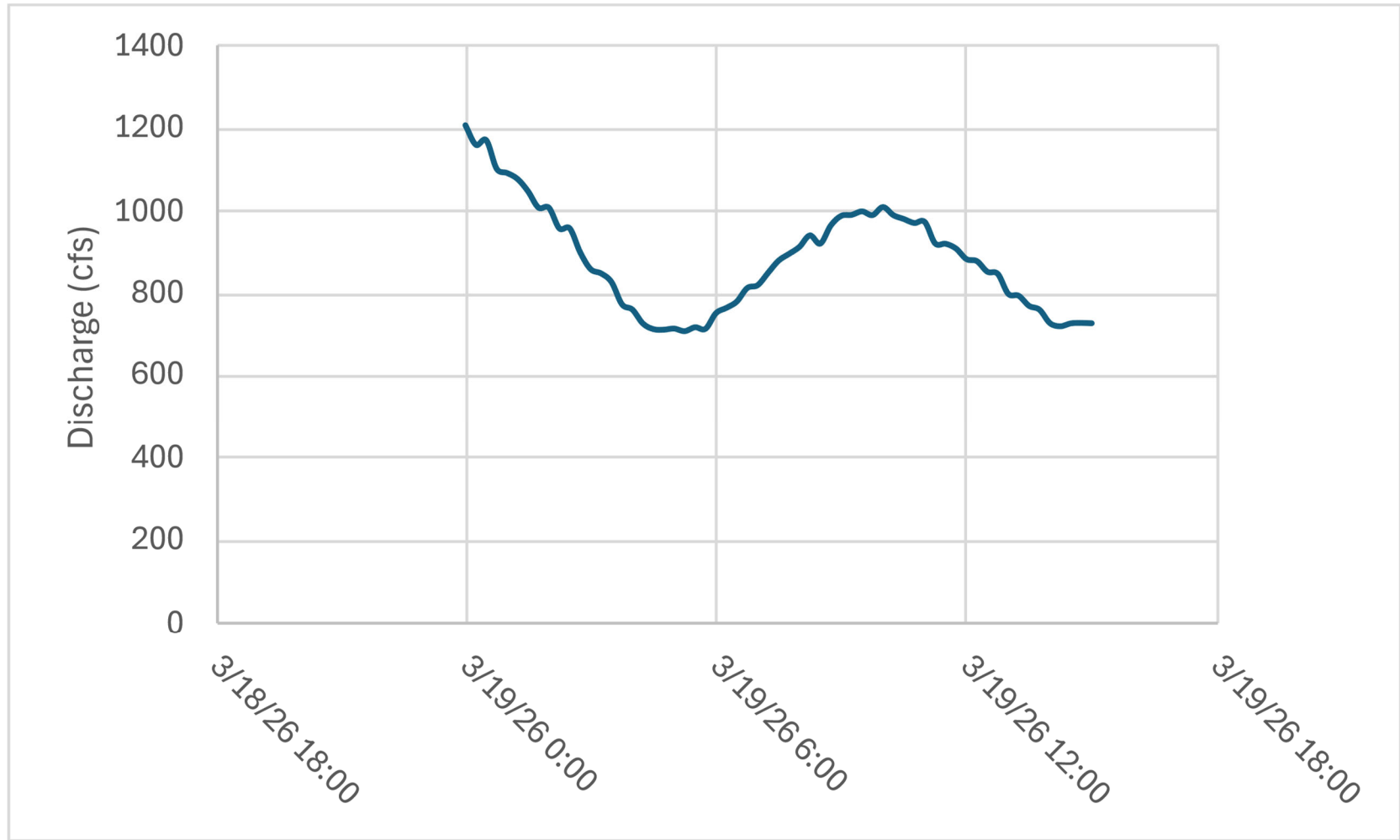


Figure 33. Sultan River immediately Upstream of Diversion Dam Flow – 03/19/26.

Process Flow Log

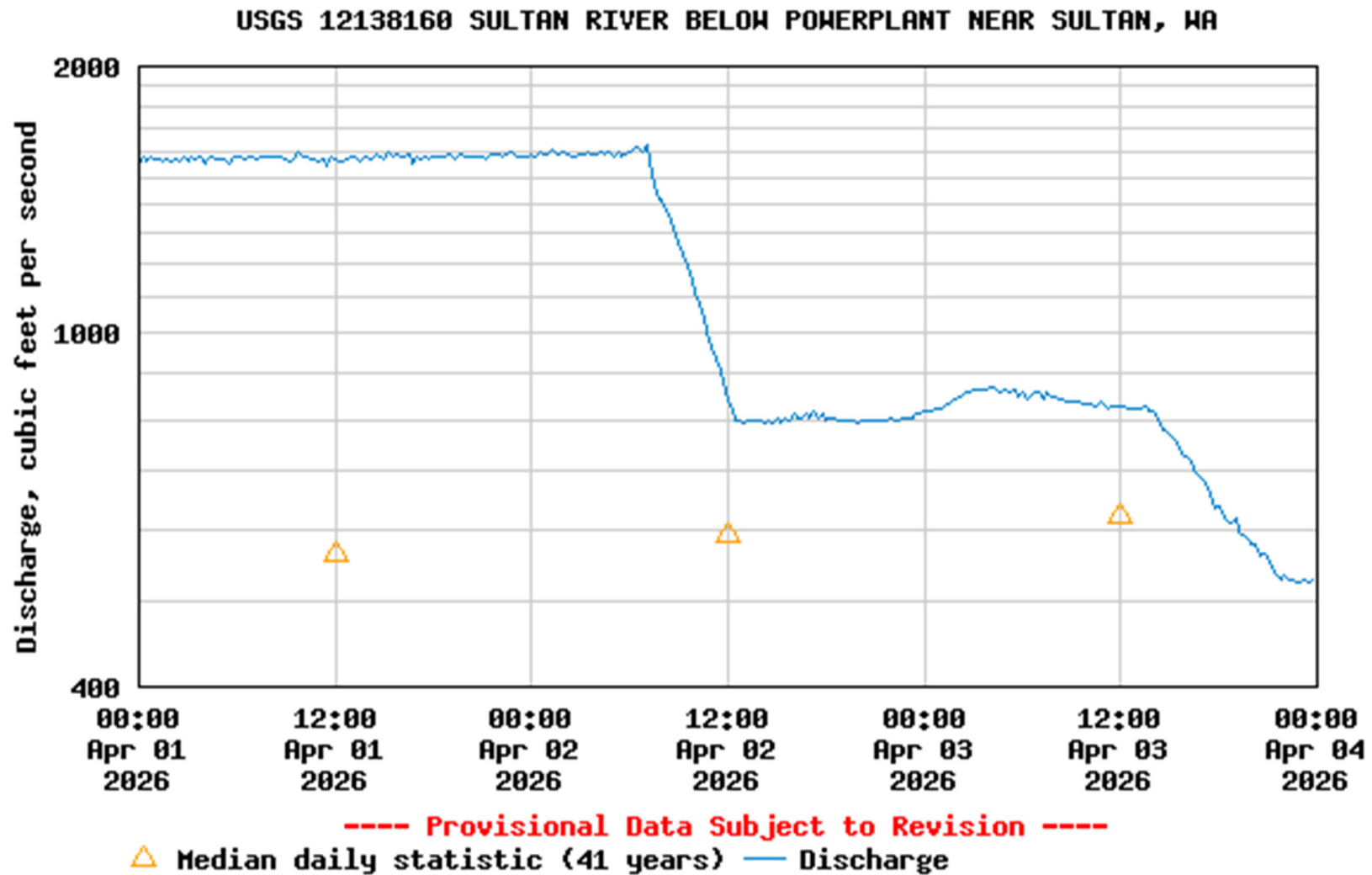


Figure 34. Sultan River immediately Downstream of Powerhouse Flow – 04/1-2/2026.

Process Flow Log

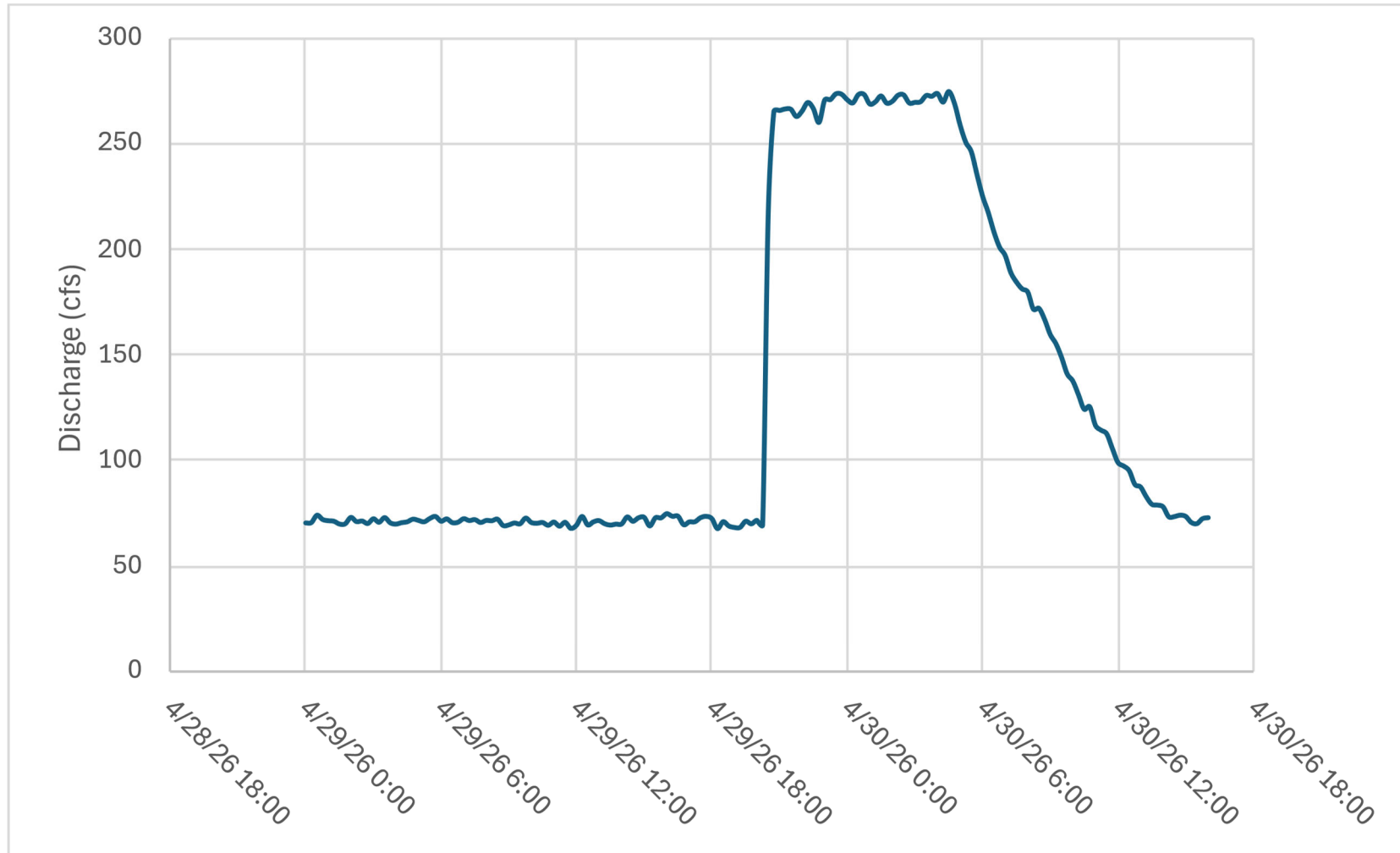


Figure 35. Sultan River immediately Upstream of Diversion Dam Flow – 04/29-30/2026.

Process Flow Log

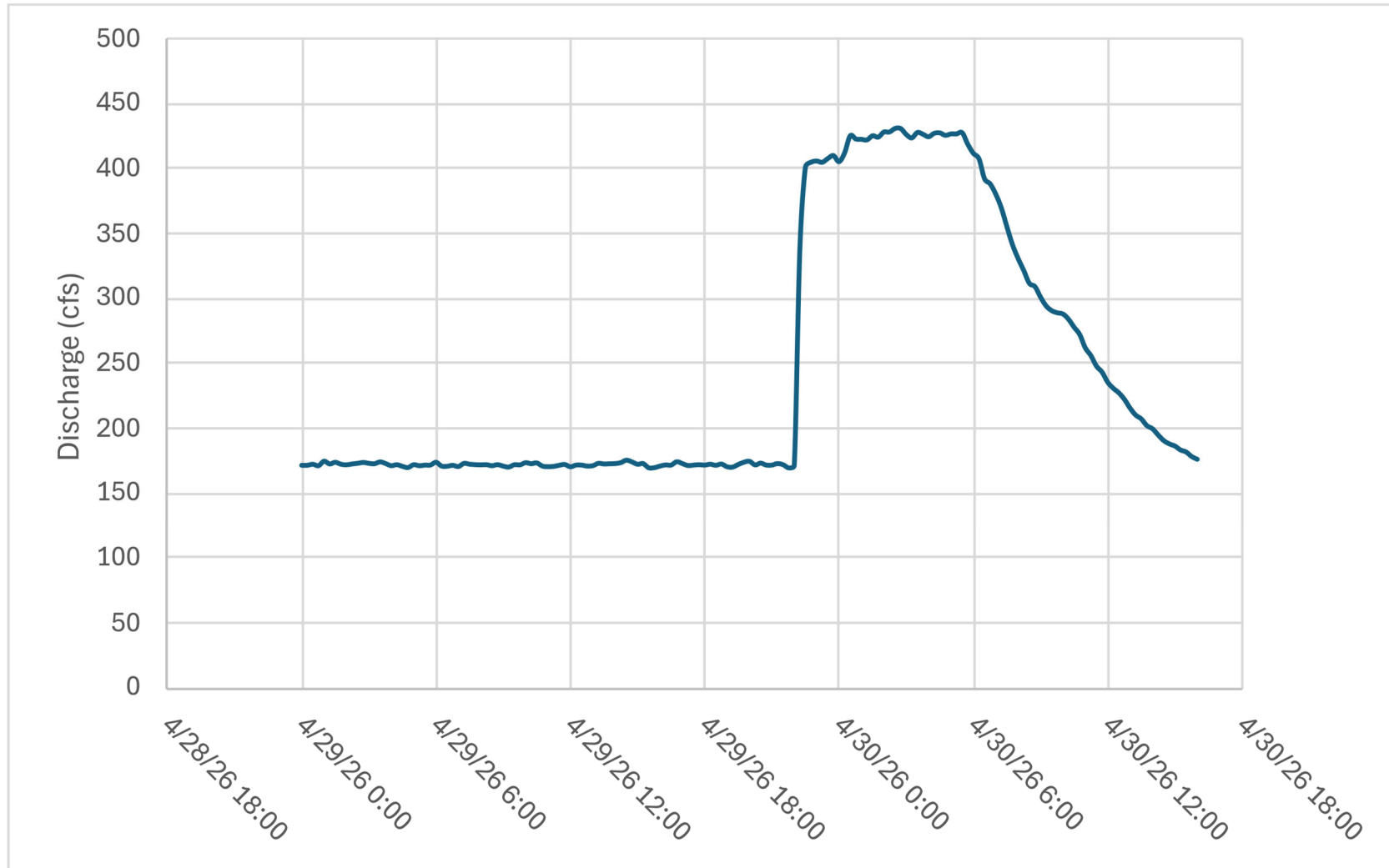


Figure 36. Sultan River immediately Upstream of Powerhouse Flow – 04/29-30/2026.

Process Flow Log

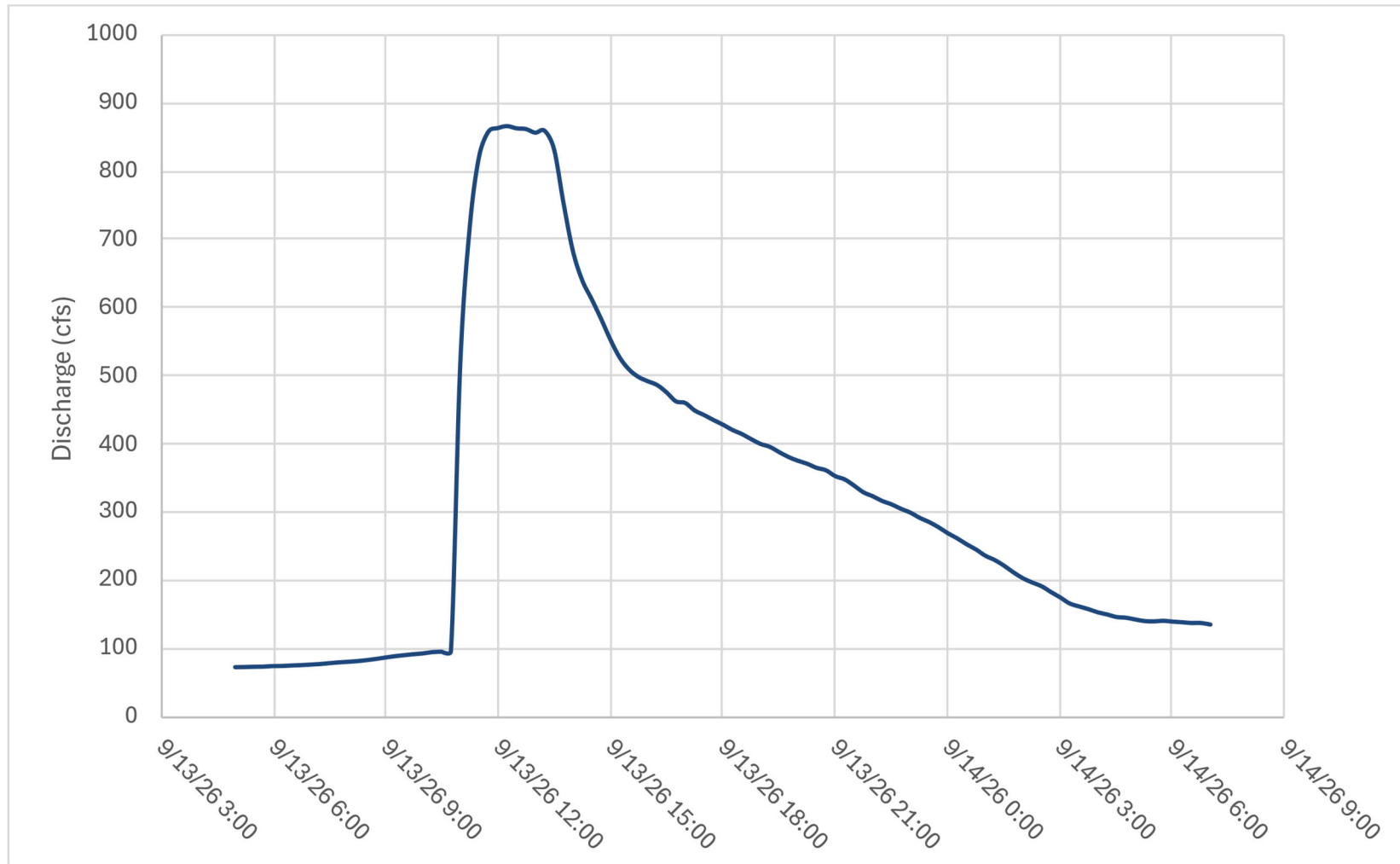


Figure 37. Sultan River immediately Upstream of Diversion Dam Flow – 09/13/2026.

Process Flow Log

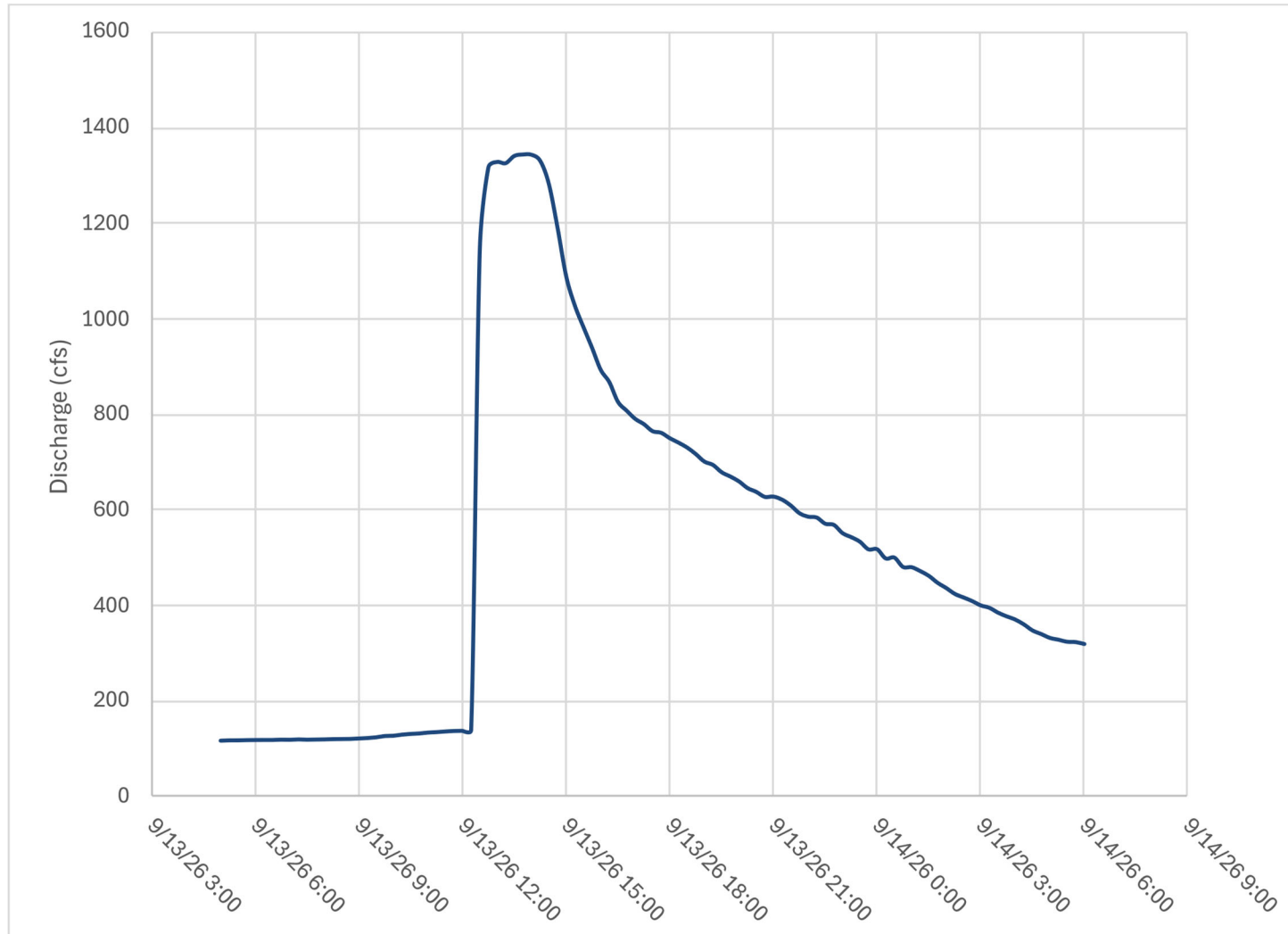


Figure 38. Sultan River immediately Upstream of Powerhouse Flow – 09/13-14/2026.

Process Flow Log

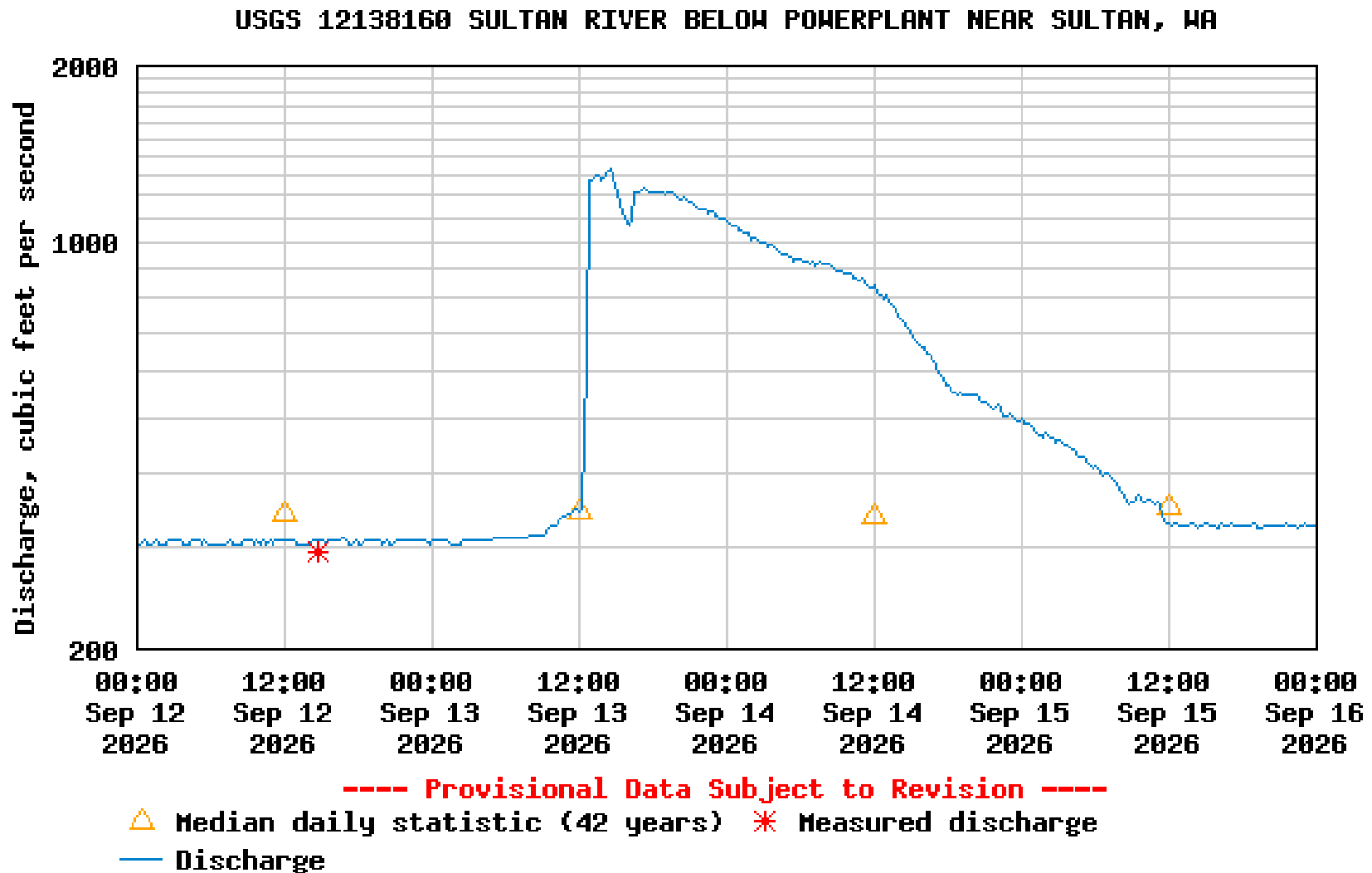


Figure 39. Sultan River immediately Downstream of Powerhouse Flow – 09/13/2026.