

SUMMARY: Samples were collected immediately after the spill upstream as a control (point of reference) location (W-016) and downstream of the boom containment area (W-003). Since the release of the data, two more booms were installed upstream of W-003 and upstream of W-002, since it appears that some of the contaminants may be making their way through the containment zone, as indicated in the W-003. In addition, samples were collected within the boom containment area and as anticipated with a diesel spill, the values of Total Petroleum Hydrocarbons-Diesel remain above the water quality habitat goals of 640 micrograms per liter in one location. California Department of Fish and Wildlife anticipates that the diesel will naturally attenuate over a timeframe of months; therefore, other clean up alternatives are currently being explored. With the movement of the creek, the booms in place to absorb any remaining fuel products, and the natural degradation of fuel, VA third party experts expect the values to continue on a downward trend. Sampling results have been provided to the City as the VA receives them and results will continue to be released publicly online as they become available.



Matadero Creek Sampling Sites @ VA Hospital Diesel Spill Site



Table 1 (Updated August 3, 2021): Summary of Water Quality Samples within the boom containment area for total petroleum hydrocarbons, total petroleum hydrocarbons-diesel (with silica gel cleanup), and BTEX (benzene, toluene, ethylbenzene and xylenes).

Sample ID	Sample Location	Sample Date	Total Petroleum Hydrocarbons- Diesel	Total Petroleum Hydrocarbons-Diesel (with Silica Gel Cleanup)*	BTEX (benzene, toluene, ethylbenzene and xylenes)
			(all results reported in micrograms per liter [µg/L])		
VA-Creek Outfall	under pipe outfall (near W-014)	05/07/21	65	---	ND
VA-A Creek	upstream of release, past W-016	05/07/21	ND	---	ND
VA-A-1		05/08/21	ND	---	ND
VA-A-2		05/09/21	ND	---	ND
VA-B Creek	downstream of bridge, past W-001	05/07/21	310	---	Xylenes - 2.0
VA-B-1		05/08/21	320	---	ND
VA-B-2		05/09/21	130	---	ND
W-001	downstream of bridge	05/10/21	210	---	ND
		06/01/21	ND	---	ND
		06/04/21	ND	---	ND
		06/10/21	51	---	ND
		06/13/21	ND	---	ND
		06/16/21	100	---	ND
		06/19/21	58	---	ND
		06/22/21	ND	---	ND
		06/25/21	38	---	---
		07/07/21	ND	---	ND
		07/14/21	ND	---	ND
		07/21/21	ND	---	ND
W-002	along bridge, downstream side	07/28/21	ND	---	---
		05/10/21	110	---	ND
		06/02/21	ND	---	ND
		06/05/21	45	---	ND
		06/08/21	52	---	ND
		06/11/21	ND	---	ND

		06/14/21	ND	---	ND
		06/17/21	83	---	ND
		06/23/21	45	---	ND
		06/28/21	47	---	---
		07/09/21	ND	---	ND
		07/16/21	ND	---	ND
		07/23/21	ND	---	---
W-003	approximately 10 feet downstream of last boom	05/10/21	140	---	ND
		05/18/21	47	---	ND
		05/19/21	83	---	ND
		05/21/21	1,100	---	ND
		05/22/21	55	---	ND
		05/23/21	39	---	ND
		05/24/21	1,500	---	ND
		05/25/21	48	---	ND
		05/26/21	ND	---	ND
		05/28/21	160	---	ND
		05/29/21	43	---	ND
		06/03/21	ND	---	ND
		06/06/21	ND	---	ND
		06/09/21	120	---	ND
		06/12/21	ND	---	ND
		06/15/21	49	---	ND
		06/18/21	81	---	ND
		06/30/21	ND	---	---
		07/12/21	ND	---	ND
		07/19/21	ND	---	ND
07/27/21	ND	---	ND		
W-004	between 3rd and 4th boom going upstream	05/10/21	2,600	---	ND
		05/19/21	2,700	---	ND
		05/23/21	920	---	ND
		05/26/21	2,400	---	ND
		05/29/21	480	---	ND
		06/02/21	55	---	ND
		06/05/21	99	---	ND
		06/09/21	63	---	ND

		06/13/21	67	---	ND
		06/16/21	4,800	6,000	ND
		06/19/21	12,000	10,000	ND
		06/25/21	2,000	1,600	ND
		07/07/21	200	---	ND
		07/14/21	120	---	ND
		07/19/21	310	---	ND
		07/28/21	51	---	---
W-005	between 5th and 6th boom going upstream	05/10/21	2,900	---	ND
		05/24/21	860	---	ND
		06/04/21	570	---	ND
		06/08/21	140	---	ND
		06/10/21	92	---	ND
		06/12/21	39	---	ND
		06/13/21	66	---	ND
		06/15/21	59	---	ND
		06/18/21	150	---	ND
		06/22/21	200	---	ND
		06/25/21	230	---	---
		06/30/21	68	---	---
		07/12/21	230	---	ND
		07/16/21	54	---	ND
		07/27/21	ND	---	ND
07/28/21	ND	---	ND		
W-006	between 6th and 7th boom going upstream	05/10/21	5,200	---	ND
		05/21/21	3,200	---	ND
		05/26/21	7,700	---	ND
		06/03/21	5,700	4,800	ND
		06/09/21	16,000	3,500	ND
		06/11/21	410	---	ND
		06/14/21	1,500	1,400	ND
		06/16/21	660	---	ND
		06/17/21	1,000	---	ND
		06/19/21	340	---	ND
		06/23/21	3,200	---	ND
		06/28/21	4,000	3,600	---

		07/07/21	2,600	2,600	ND
		07/09/21	1,300	PENDING	ND
		07/14/21	250	---	ND
		07/19/21	1,400	PENDING	ND
		07/23/21	79	---	---
W-007	between 7th and 8th boom going upstream	05/10/21	190,000	---	ND
		05/18/21	6,500	---	ND
		05/28/21	2,700	---	ND
		06/01/21	1,800	---	ND
		06/06/21	6,500	7,900	ND
		06/10/21	15,000	13,000	ND
		06/11/21	57	---	ND
		06/13/21	74	---	ND
		06/15/21	5,700	5,400	ND
		06/17/21	8,400	8,500	ND
		06/19/21	47*	---	ND
		06/22/21	8,000	7,600	ND
		06/23/21	11,000	---	ND
		06/25/21	8,800	7,700	---
		06/30/21	6,600	7,500	---
		07/07/21	2,800	2,900	ND
		07/09/21	800	---	ND
		07/14/21	1,500	1,800	ND
		07/21/21	2,200	PENDING	ND
		07/23/21	680	PENDING	ND
W-008	in shallow divided part of creek	05/10/21	2,400	---	ND
		05/22/21	1,500	---	ND
		05/25/21	ND	---	ND
		06/04/21	63	---	ND
		06/08/21	180	---	ND
		06/09/21	53	---	ND
		06/12/21	55	---	ND
		06/14/21	82	---	ND
		06/16/21	ND	---	ND
		06/18/21	470	---	ND
		06/28/21	74	---	---

		07/07/21	ND	---	ND
		07/12/21	160	---	ND
		07/16/21	120	---	ND
		07/19/21	140	---	ND
		07/27/21	530	---	ND
W-009	downstream of foot bridge	05/10/21	120	---	ND
		05/18/21	ND	---	ND
		05/23/21	1,100	---	ND
		05/28/21	150	---	ND
		06/01/21	ND	---	ND
		06/05/21	180	---	ND
		06/06/21	500	---	ND
		06/10/21	160	---	ND
		06/13/21	41	---	ND
		06/17/21	ND	---	ND
		06/22/21	ND	---	ND
		06/25/21	95	---	---
		06/30/21	ND	---	---
		07/09/21	ND	---	ND
		07/16/21	60	---	ND
		7/28/21	ND	---	---
		W-010	just upstream of foot bridge	05/10/21	84
05/21/21	45			---	ND
05/24/21	190			---	ND
06/03/21	ND			---	ND
06/11/21	ND			---	ND
06/17/21	130			---	ND
06/23/21	ND			---	ND
06/28/21	ND			---	---
7/9/21	ND			---	ND
07/21/21	ND			---	ND
07/23/21	ND			---	---
W-011	between foot bridge and outfall pipe	05/10/21	100	---	ND
		05/19/21	63	---	ND
		05/22/21	46	---	ND
		05/23/21	39	---	ND

		05/25/21	1,500	---	ND
		05/29/21	670	---	ND
		06/02/21	96	---	ND
		06/05/21	ND	---	ND
		06/08/21	89	---	ND
		06/12/21	71	---	ND
		06/15/21	890	---	ND
		06/30/21	84	---	ND
		7/12/21	82	---	ND
		07/21/21	68	---	ND
		07/27/21	ND	---	ND
W-012	between foot bridge and outfall pipe	05/11/21	3,400	---	ND
		05/18/21	560	---	ND
		05/26/21	ND	---	ND
		06/01/21	ND	---	ND
		06/09/21	270	---	ND
		06/14/21	410	---	ND
		06/18/21	210	---	ND
		06/28/21	520	---	---
		07/12/21	95	---	ND
		07/16/21	880	PENDING	ND
		7/28/21	ND	---	---
W-013	between foot bridge and outfall pipe	05/11/21	2,400	---	ND
		05/21/21	970	---	ND
		05/24/21	150	---	ND
		06/03/21	71	57	ND
		06/11/21	84	---	ND
		06/15/21	72	---	ND
		06/19/21	130	---	ND
		06/23/21	ND	---	ND
		07/19/21	2,100	PENDING	ND
		7/23/21	ND	---	---
W-014	by outfall pipe	05/11/21	ND	---	ND
		05/19/21	ND	---	ND
		05/28/21	ND	---	ND
		05/29/21	ND	---	ND

		06/02/21	ND	---	ND
		06/06/21	ND	---	ND
		06/10/21	42	---	ND
		06/12/21	ND	---	ND
		06/16/21	45	---	ND
		06/22/21	120	---	ND
		07/07/21	51	---	ND
		07/09/21	ND	---	ND
		07/14/21	ND	---	ND
		07/21/21	85	---	ND
		07/27/21	ND	---	ND
		07/28/21	ND	---	---
W-015	upstream of outfall pipe	05/11/21	36,000	---	ND
		05/22/21	150	---	ND
		05/25/21	38	---	ND
		06/04/21	ND	---	ND
		06/08/21	ND	---	ND
		06/14/21	49	---	ND
		06/18/21	ND	---	ND
		06/28/21	190	---	---
		07/14/21	110	---	ND
		07/19/21	130	---	ND
		07/27/21	40	---	ND
W-016	between two upstream booms	05/11/21	ND	---	ND
		05/18/21	ND	---	ND
		05/19/21	ND	---	ND
		05/21/21	39	---	ND
		05/22/21	ND	---	ND
		05/23/21	ND	---	ND
		05/24/21	ND	---	ND
		05/25/21	ND	---	ND
		05/26/21	ND	---	ND
		05/28/21	ND	---	ND
		05/29/21	ND	---	ND
		06/01/21	ND	---	ND

	06/02/21	ND	---	ND
	06/03/21	ND	---	ND
	06/04/21	ND	---	ND
	06/05/21	93	---	ND
	06/06/21	ND	---	ND
	06/08/21	ND	---	ND
	06/09/21	ND	---	ND
	06/10/21	ND	---	ND
	06/11/21	ND	---	ND
	06/12/21	ND	---	ND
	06/13/21	70	---	ND
	06/14/21	ND	---	ND
	06/15/21	ND	---	ND
	06/16/21	ND	---	ND
	06/17/21	ND	---	ND
	06/18/21	ND	---	ND
	06/19/21	ND	---	ND
	06/22/21	ND	---	ND
	06/23/21	ND	---	ND
	06/25/21	ND	---	---
	06/30/21	ND	---	---
	07/12/21	ND	---	ND
	07/16/21	46	---	ND
	0723/21	ND	---	---
San Francisco RWQCB Water Habitat Goals (Freshwater - Table GW-2 Aquatic Habitat Screening Levels), 2019, Revision 2		640	640	46 - 290

NL= No Limit; ND = Non Detect; *sample analytical results are still DRAFT from laboratory pending QA/QC

**Fish and Wildlife suggested in our earlier meeting that these high values may be coming from the degradation of natural organic matters in the creek and suggested doing the silica gel cleanup. However results from sample with the silica gel cleanup showed that the TPH concentration remains high after treatment, suggesting that there are high concentrations of diesel TPH in the creek water.

Table 2 (Updated August 3, 2021): Summary of Water Quality Samples collected for Polycyclic Aromatic Hydrocarbons (PAHs)

Sample ID	Sample Location	Sample Date	Polycyclic Aromatic Hydrocarbons (PAHs)
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			Anthracene	Benzo(a)pyrene	Benzo(g,h,i) perylene	Benzo(k) fluoranthene	Dibenzo(a,h) anthracene	Flouranthene	Fluorene	Indeno (1,2,3-cd) pyrene	1-Methyl-naphthalene	2-Methyl-naphthalene	Naphthalene	Phenanthrene	Pyrene	Other PAHs
			(all results reported in micrograms per liter [µg/L])													
VA-Creek Outfall	under pipe outfall (near W-014)	05/07/21	ND	ND	ND	ND	ND	ND	ND	ND	0.083	0.16	0.13	ND	ND	ND
VA-A Creek	upstream of release, past W-016	05/07/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VA-A-1		05/08/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VA-A-2		05/09/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VA-B Creek	downstream of bridge, past W-001	05/07/21	ND	ND	ND	ND	ND	ND	0.058	ND	0.59	1.1	0.66	ND	ND	ND
VA-B-1		05/08/21	ND	ND	ND	ND	ND	ND	ND	ND	0.10	0.19	ND	ND	ND	ND
VA-B-2		05/09/21	ND	ND	ND	ND	ND	ND	ND	ND	0.064	ND	ND	ND	ND	ND
W-001	downstream of bridge	05/10/21	ND	ND	ND	ND	ND	ND	0.018	ND	0.15	0.26	0.12	ND	ND	ND
		06/01/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		06/04/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		06/10/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		06/13/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		06/16/21	ND	3.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		06/19/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		06/22/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		07/07/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		07/14/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
W-002	along bridge, downstream side	05/10/21	ND	ND	ND	ND	ND	ND	ND	ND	0.083	0.14	ND	ND	ND	ND
		06/02/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		06/05/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		06/08/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		06/11/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		06/14/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		06/17/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		06/23/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		07/09/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		07/16/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
W-003	approximately 10 feet downstream of last boom	05/10/21	ND	ND	ND	ND	ND	ND	ND	ND	0.12	0.21	ND	ND	ND	ND

	05/26/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	05/28/21	ND	ND	ND	ND	ND	ND	ND	ND	0.099	0.33	0.26	ND	ND	ND
	05/29/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/01/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/02/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/03/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/04/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/05/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/06/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/08/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/09/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/10/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/11/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/12/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/13/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/14/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/15/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/16/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/17/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/18/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/19/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/22/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	06/23/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	07/12/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	07/16/21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
San Francisco RWQCB Water Habitat Goals (Freshwater - Table GW-2 Aquatic Habitat Screening Levels), 2019, Revision 2		0.73	0.014	0.10	NL	0.025	8.0	3.9	0.049	NL	2.1	0.24	6.3	2.0	Various

NL= No Limit; ND = Non Detect; *sample analytical results are still DRAFT from laboratory pending QA/QC