



United States Department of the Interior

U.S. Geological Survey

USGS Washington Water Science Center

934 Broadway, Suite 300
Tacoma, Washington 98402
(253) 552-1600. FAX (253) 552-1581
<http://wa.water.usgs.gov/>

February 10, 2023

To: Chelsea Morris, SAM coordinator
Washington State Department of Ecology, Olympia, WA

From: Richard W. Sheibley
Research Hydrologist, Washington Water Science Center, Tacoma, WA

Subject: First quarter update for WY 2023 SAM small streams work

This memo summarizes and documents the continued work by USGS for the SAM small streams project. From October through December 2022.

During this time period, focus was on data management tasks for the summer 2022 sampling and to begin site selection for summer 2023.

All summer 2022 WHM data was submitted to Ecology and those data were QC'd by Ecology with help from USGS. This data is ready for final upload to the Ecology WHM database. Lab data from MEL started to come back and ongoing QC review is taking place. It is not expected that final electronic data delivery from MEL will be complete until Spring of 2023.

Site selection for summer 2023 is ongoing. About ¼ of the sites have been picked and will continue into early 2023.

Work on past due annual reports is a high priority for the beginning of 2023.

Please feel free to contact me at any time with questions about this quarterly summary or any other project related issues.



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April 10, 2023

To: Chelsea Morris, SAM coordinator
Washington State Department of Ecology, Olympia, WA

From: Richard W. Sheibley
Research Hydrologist, Washington Water Science Center, Tacoma, WA

Subject: Second quarter update for WY 2023 SAM small streams work

This memo summarizes and documents the continued work by USGS for the SAM small streams project. From January through March 2023.

During this time period, work continued on data management tasks for the summer 2022 sampling and site selection for summer 2023.

All summer 2022 WHM data finalized and uploaded into the Ecology WHM database. Lab data from MEL has been sent and ongoing QC review is taking place. It is not expected that final electronic data delivery from MEL will be complete until Summer of 2023.

Site selection for summer 2023 is ongoing. About half of the sites have been picked and is ongoing. Like other years, we are having to drop a lot of the initial sites so it is taking a while to finalize the list.

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June 30, 2023

To: Chelsea Morris, SAM coordinator
Washington State Department of Ecology, Olympia, WA

From: Richard W. Sheibley
Research Hydrologist, Washington Water Science Center, Tacoma, WA

Subject: Third quarter update for WY 2023 SAM small streams work

This memo summarizes and documents the continued work by USGS for the SAM small streams project. From March through June 2023.

During this time period, work continued on data management tasks for past sampling years. We continue to work through time series records for final USGS approval. In addition, we have QC'd the 2021 and 2022 lab data. We have completed the next round of data downloads of the water level sensors as well.

Data upload for 2021 and 2022 lab results has begun. We finalized and uploaded all the SAM PSS data from 2021 into EIM and are awaiting communication for the SAM EIM administrator to make sure its clear to publish to EIM. We began the SAM 2022 data compilation for upload to EIM but came across a few missing lab reports and I am waiting to get those files before we can proceed. Another complication with SAM 2022 lab data was we had to use 3 different labs. MEL had problems with their nutrient analyzers so some parameters were contracted out to King County and OnSite labs. I am working to harmonize 3 different lab reports into the EIM results template, but I think we should be done within a few weeks, after we get the missing results reports.

Site selection for summer 2023 is complete. I am including an initial site list for this summer with this memo. We are still waiting on permission at about 6 sites, but the rest are ready to go. We had to drop about 18 of the initial 33 sites because of permission or conditions that would not allow sampling this year (access, dry channels, etc.). We will begin the summer WHM sampling this coming week, and our goal is to finish by September 30th, 2023.

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siteID	stratum	panel	SITE_ID	Lat_DD83	Long_DD83	Stream Name	County	Wskm2	Imp_PCT
SAM-1010	New [0,10]	Panel 04	PSS05520-008253	47.41244661	-122.7054197	Huge Creek	Kitsap County	11.53885613	3.539402915
SAM-1013	New [0,10]	Panel 04	PSS05520-003425	46.9686372	-122.4560216	Lacamas Creek	Pierce County	7.885928609	1.986872146
SAM-1015	New [0,10]	Panel 04	PSS05520-011642	48.25220099	-122.358367		Snohomish County	4.417343041	6.92117623
SAM-1017	New [0,10]	Panel 04	PSS05520-018588	48.88224708	-122.6082289		Whatcom County	0.941694856	3.836852207
SAM-1332	New [10,20]	Panel 04	PSS05520-011788	47.73107031	-122.0567731	Colin Creek	King County	5.397825875	14.77868307
SAM-1339	New [10,20]	Panel 04	PSS05520-002148	47.10700228	-122.2396438	Horsehaven	Pierce County	25.28447872	13.44902904
SAM-1340	New [10,20]	Panel 04	PSS05520-005102	48.78018632	-122.4897539	Baker Creek	Whatcom County	23.75383789	13.73822247
SAM-1654	New [20,40]	Panel 04	PSS05520-013552	47.60300614	-122.1623476	Kelsey Creek	King County	18.29742624	38.57189221
SAM-1655	New [20,40]	Panel 04	PSS05520-008133	47.18328996	-122.3944219	Swan Creek	Pierce County	4.387624582	24.45635654
SAM-1656	New [20,40]	Panel 04	PSS05520-016806	47.32389371	-122.158141	Soosette Creek	King County	12.47109056	28.34432975
SAM-1657	New [20,40]	Panel 04	PSS05520-008936	47.78728974	-122.1931459	North Creek	Snohomish County	66.44366908	36.40981741
SAM-1659	New [20,40]	Panel 04	PSS05520-009157	47.13412494	-122.4107563	NF Clover Creek	Pierce County	14.22712197	26.17366255
SAM-1660	New [20,40]	Panel 04	PSS05520-014148	47.30341838	-122.2688066	Mill Creek	King County	9.388112888	25.24107143
SAM-1973	New [40,100]	Panel 04	PSS05520-009356	47.95154076	-122.2720816	Powder Mill Gulch	Snohomish County	4.964236548	42.38946989
SAM-1974	New [40,100]	Panel 04	PSS05520-007858	47.77295786	-122.3142548	McAleeer Creek	King County	16.05504369	47.43571789
SAM-1975	New [40,100]	Panel 04	PSS05520-018368	47.37792087	-122.2165556	Mill Creek	King County	5.547062339	41.02480143
SAM-1977	New [40,100]	Panel 04	PSS05520-003250	47.7006192	-122.304919	SF Thornton Creek	King County	6.047876726	49.37689218
SAM-1978	New [40,100]	Panel 04	PSS05520-000844	47.81295152	-122.2552302	Swamp Creek	Snohomish County	32.63975168	40.05014473
SAM-1074	New [0,10]	OverSamp	PSS05520-010429	47.40715718	-122.6124389	Purdy Creek	Kitsap County	5.817533534	3.367305908
SAM-1077	New [0,10]	OverSamp	PSS05520-013153	46.97319852	-122.5047929	Murray Creek	Pierce County	4.306081595	1.316031812
SAM-1078	New [0,10]	OverSamp	PSS05520-000110	48.579302	-122.3896945	Colony Creek	Skagit County	10.7866307	0.684329602
SAM-1080	New [0,10]	OverSamp	PSS05520-000539	48.19078002	-122.0105834	Unnamed tributary	Snohomish County	2.798607274	
SAM-1082	New [0,10]	OverSamp	PSS05520-000217	47.4119925	-123.0418664	Rendsland creek	Mason County	5.319100541	1.498057104
SAM-1396	New [10,20]	OverSamp	PSS05520-008568	47.7135517	-122.0054419	Adair Creek	King County	2.62216826	18.54977763
SAM-1403	New [10,20]	OverSamp	PSS05520-004677	47.21767812	-122.381567	Squally Creek	Pierce County	2.00100099	14.96162528
SAM-1404	New [10,20]	OverSamp	PSS05520-001182	48.7515688	-122.4350971	Unnamed tributary	Whatcom County	3.118065575	11.66639936
SAM-1405	New [10,20]	OverSamp	PSS05520-007659	48.10472234	-122.1628738	Quilceda Creek	Snohomish County	46.08521779	16.96203149
SAM-1408	New [10,20]	OverSamp	PSS05520-013300	47.53556798	-121.8322873	Kimball Creek	King County	23.16837542	10.47260354
SAM-1413	New [10,20]	OverSamp	PSS05520-011879	48.11591032	-123.1794166	Unnamed tributary	Clallam County	5.23943724	10.6747506
SAM-1723	New [20,40]	OverSamp	PSS05520-015381	47.12754806	-122.3959735	Clover Creek	Pierce County	28.86488175	25.48613148
SAM-1725	New [20,40]	OverSamp	PSS05520-017682	48.05265652	-122.1641894	Allen Creek	Snohomish County	18.03487422	24.89754344
SAM-1729	New [20,40]	OverSamp	PSS05520-002764	47.84230633	-122.1621246	Little Bear Creek	Snohomish County	4.645093972	25.45589942
SAM-2018	New [40,100]	OverSamp	PSS05520-000114	47.83092857	-122.3067509	Scriber creek	Snohomish County	2.005244756	49.80672646



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October 18, 2023

To: Chelsea Morris, SAM coordinator

Washington State Department of Ecology, Olympia, WA

From: Richard W. Sheibley

Research Hydrologist, Washington Water Science Center, Tacoma, WA

Subject: Fourth quarter update for WY 2023 SAM small streams work

This memo summarizes and documents the continued work by USGS for the SAM small streams project from July through September 2023.

During this time period, all sites for summer 2023 were visited and WHM summer sampling took place. Of the initial 33 sites only 11 of them were sampled. The other 22 had to be dropped due to landowner permission, dry site conditions, or the site was a non-target location. We were able to sample 15 backup sites to replace the dropped locations for a total of 26 sites successfully sampled this summer.

We fell short of the target of 33 total sites this summer. The main reasons for this were personnel shortages, delays in hearing back from landowners, and a large number of dry sites. Over 85 sites were evaluated this summer and at the end of the sampling period we simply ran out of time to complete the remaining 7 sites.

Site reconnaissance for the summer 2024 sample locations has already begun, and 5-10 of them have been instrumented and are collecting water temperature and water level data. We plan to complete site recon by December.

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