

SAM CEC -TAC Meeting Minutes

Date: 10/8/24 **Location:** Virtual (Teams)

Project Number: 22-07975-000

Attendees:

Dana Deleon	James Packman	John Hermann
Ed Kolodziej	Bob Hutton	Jennifer Arthur
Brandi Lubliner	Carla Milesi	Chelsea Morris
Dylan Ahearn	David Batts	Carol Falkenhayn Maloy
Stacy Luell	Ani Jayakaran	Meredith Seely
Win Cowger	Brad Archibold	

Meeting Objective:

- Introduction
- Background and Progress to Date
- Questions for TAC
- Next Steps and Schedule

Discussion:

Project Phases -

- Phase 1 - QAPP, SOPs, White Paper, Site selection, Equipment deployment, partial sample collection
 - Goal is to start sample collection in March 2025.
- Phase 2 - Complete sample collection, reporting

Microplastics method -

- VIMS Pyrolysis technique doesn't do particle count or size distribution.
- Moore method - FTIR can give longer list of plastic by size and distribution but can only do TWP > 500 um.

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- Considering cost of both Moore and VIMS, Tacoma and Herrera decided to go with VIMS pyrolysis GCMS.
- Feedback:
 - [Win] - Good plan. Recognize cost for microplastics is high. Question for project - is there some way we should be constraining sample process to target key questions?
 - [Dylan] - important to get TWP numbers for size classes. Plays into fate and transport. Proposing to extract sample, send to Meredith, one screen at 250 um, run below and above 250 for 5 plastics, including TWP.
 - [Ed] - No thoughts on size fraction to split at. For phase 2 and future projects, consider subset of samples. Do exploratory screening. Pick specific sites and dig more into them. Small data set or exploratory screening for future phases. Trying to understand relationship between TWP occurrence, size distribution, and the CECs derived from that.
 - [Dylan] - Saving sample and archiving for a time when we have future budget will be helpful.
 - [Meredith] - The cost is very prohibitive... I am happy to continue discussions with Win and Ed to see how we may save samples for later FTIR at Moore, budget permitting.
 - Regarding size classes, I'm happy to continue discussions on the sizes as well. 250 + or - makes sense for Py. It may be worthwhile to screen below 53 um as well if we're very interested in the small size class. I can try to work on cost to make that possible if that's of particular interest (especially to Ed RE TWP contaminant fate)
 - I would to do 250+ on a filter as possible, and pick larger particles when necessary. We'd capture the weights before analysis.
 - I can sub-sample larger particles, so we could save them for FTIR.
 - [John H] - Will pyrolysis take into account the encrusted minerals or would we just assume that encrustation is uniform across the materials?
 - [Meredith] - No, pyrolysis will not quantify mineral encrustation. We calculate mass of tire rubber specifically, so it's not exactly the same as weighing a true tire and road wear particle (TRWP).
 - [Win] - Meredith Evans Seeley, where I was going with the picking for the larger particles > 250um is if you did do a visual pick you could measure the shapes, colors, sizes with imagery on just those particles then lump them all together and put them into your device for one run. Could be an add on that gives them some size data that they wanted without too big of an extra lift and cost.
 - [Meredith] - agree, that's a good plan! We would already definitely record weight/morphology of any pickable-size particles, but can also image them for color/morphology/etc. to archive those data.
 - **Decision – we will archive an MP split for Moore, but only analyse MP by PyGCMS with Meredith at VIMS. UWT will extract the MP sample sand send to VIMS. VIMS will screen >250 and <250 and analyze both samples. For the >250 split VIMS will visually ID the largest**

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particles before running the entire sample through PyGCMS. Meredith will also explore if she could screen at 53 microns while also keeping costs down.

CEC DB and lit review-

- What Permits do we need to deploy equipment and access site?
 - [John H] - Snohomish Co. commercial site. Knaack box in parking space on private site. Separate easement was needed. Needed again.
 - If the Commercial site for SNOCO is just grab samples then there should not be an access issue.
 - [Bob H] - Clark Co. No permitting issues anticipated but will double check.
 - [Carol] - Pierce Co. County owned properties.
- We need 2 industrial basins. Does the TAC have any ideas within each county?
 - [Carol] - Follow up with me.
 - [John] - Little Bear watershed, southern Snohomish, near hwy 9. Aspect will follow up.
 - [Bob] - Clark Co - none come to mind for industrial. Unfamiliar with criteria.
 - Majority of LU needs to be Industrial. Goal is at least 75% LU coverage of watershed.
 - [David] - In King Co, we weren't able to identify an industrial site during 2007-2012 permit. Will ask around.
 - [Brandi] - I reached out to the two Phase I ports for the industrial sites; I haven't heard back yet.
- How to get traffic volume for basins?
 - [Brad] - State ROW ADT
 - [John] - SnoCo has ADT.
 - [Bob] - Clark Co has modeled traffic data. Working with county transportation planner.
 - [Ed]- It might be possible to ask Google and Microsoft have research divisions, and some people have been able to access such traffic data.
 - Herrera lead will look into options for AADT datasets

[Meredith] - Along the lines of traffic flow data, I would be interested in data on vehicle type. That can better constrain our mass calculations as different vehicles have different rubber contents.

Database -

- Plan is to create database similar to database from 10+ years ago.
- [Ed] shared link to Canadian 6PPDq data collection - [Experience \(arcgis.com\)](#)
- [David] - The 2007-2012 permit cycle data indicates high variability among sites w/ in both HDR and COM land uses. Suggests not dropping those from Clark Co. as over represented, E.g, dCu
 - [Dylan] - If we can't find Ind sites, should we not drop Clark Co sites? Questions was not definitively answered by the group.

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[Ed] - Should check out the "tire wear toxins" website. They have about the same amount of data for mainland BC, but it's not yet on the website

Site visits –

Need to be scheduled for:

- Snohomish
- Seattle
- Pierce
- Tacoma Clark

We have done recon at King Co sites. Successful recon.

Schedule and next steps -

- Next TAC mtg - Feb 2025
- Start sampling in March 2025
- Get more info on LU, site access, site recon, get all info we need to inform the QAPP.

Action Items:

Action	Due Date	Assigned To
Herrera to send Ed bullet points for lit review topics.		
Herrera to send counties a GIS figure showing site locations so they can tell us what permits we need.		
Herrera to Follow up with Carol (Pierce Co), John (SnoCo), Bob (Clark Co) to find Industrial sites.		
Herrera - Look into Google and Microsoft research divisions for traffic data		
John H will double check on permits needed. We will pass info on to Aspect about easement needed for above ground Knaack.		