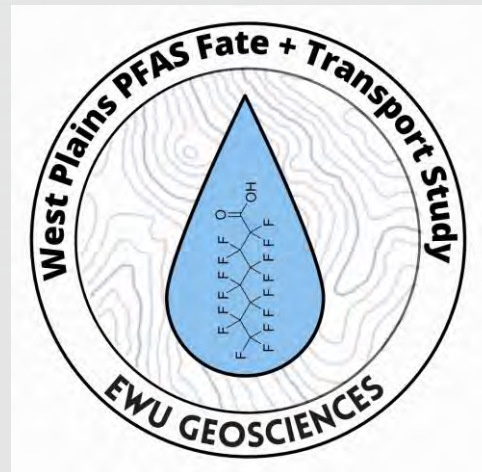


West Plains PFAS Fate and Transport Study

Update for Spokane River – EXPO H2O Symposium

May 2024

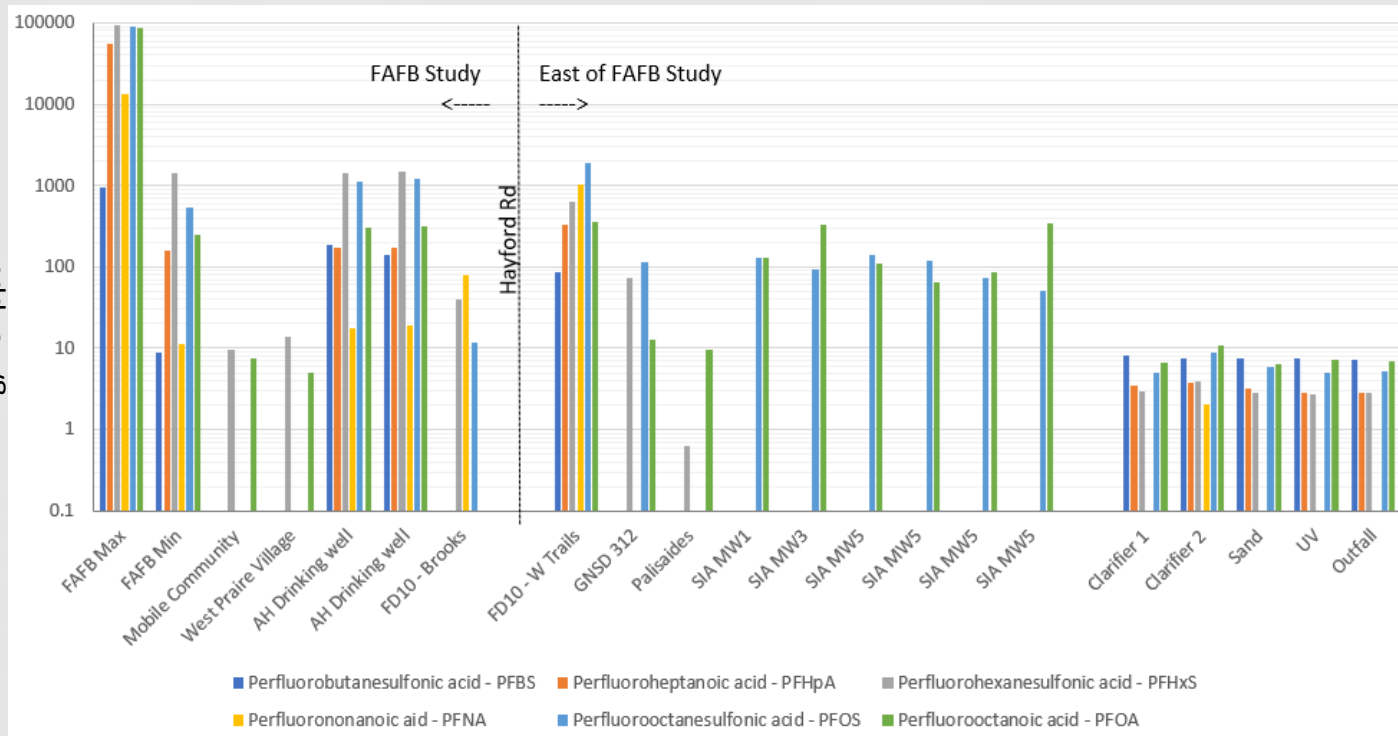
WA Dept. of Ecology Agreement Number: TCPRA-2123-CiMedL-00076



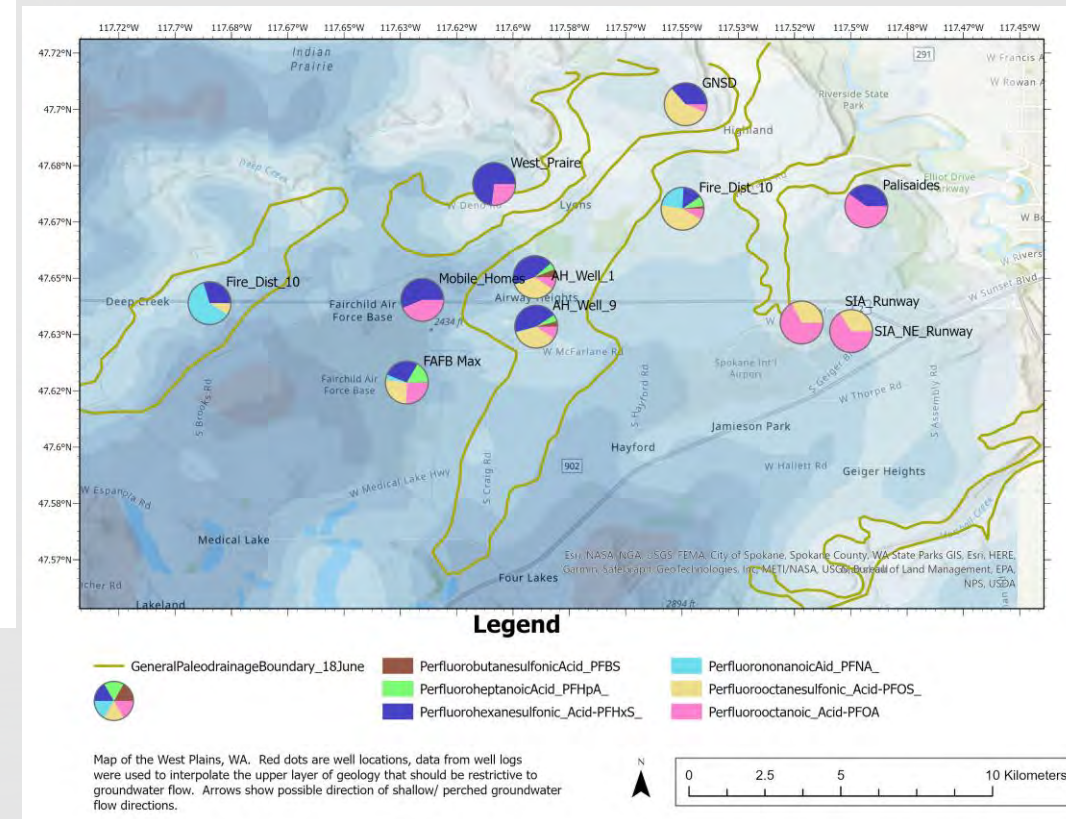
PFAS – Found all over the West Plains (even out side of the FAFB study area)



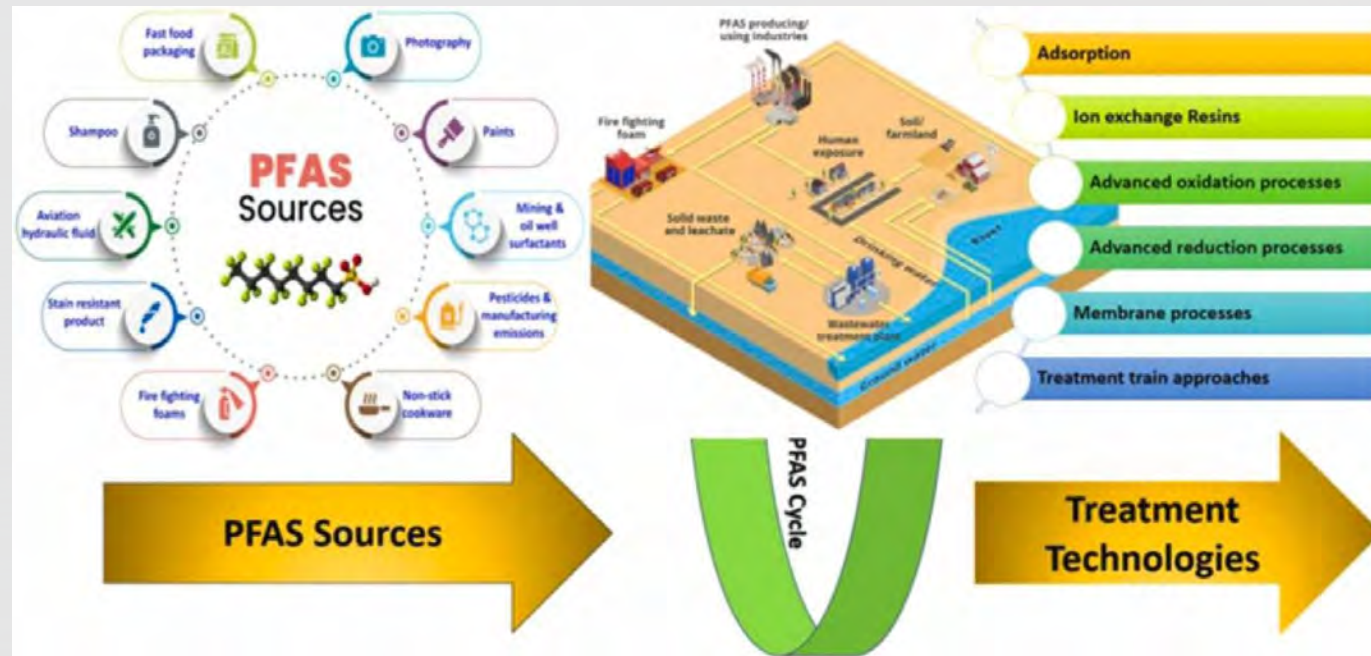
SEATTLETIMES.COM
PFAS is in the groundwater west of Spokane. What's known about the contamination is only growing.



Perfluorooctainesulfonic (PFOS) and Perfluorooctanoic acids (PFOA)
 State Action Levels (2022) are ~ 10 to 15 ppt
 EPA standards are 4 ppt

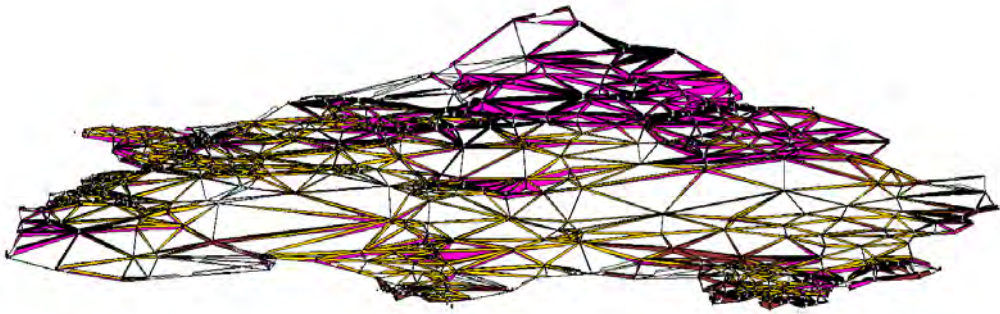


PFAS – There are fixes – but need to know where the contamination is...

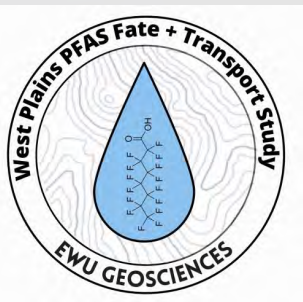
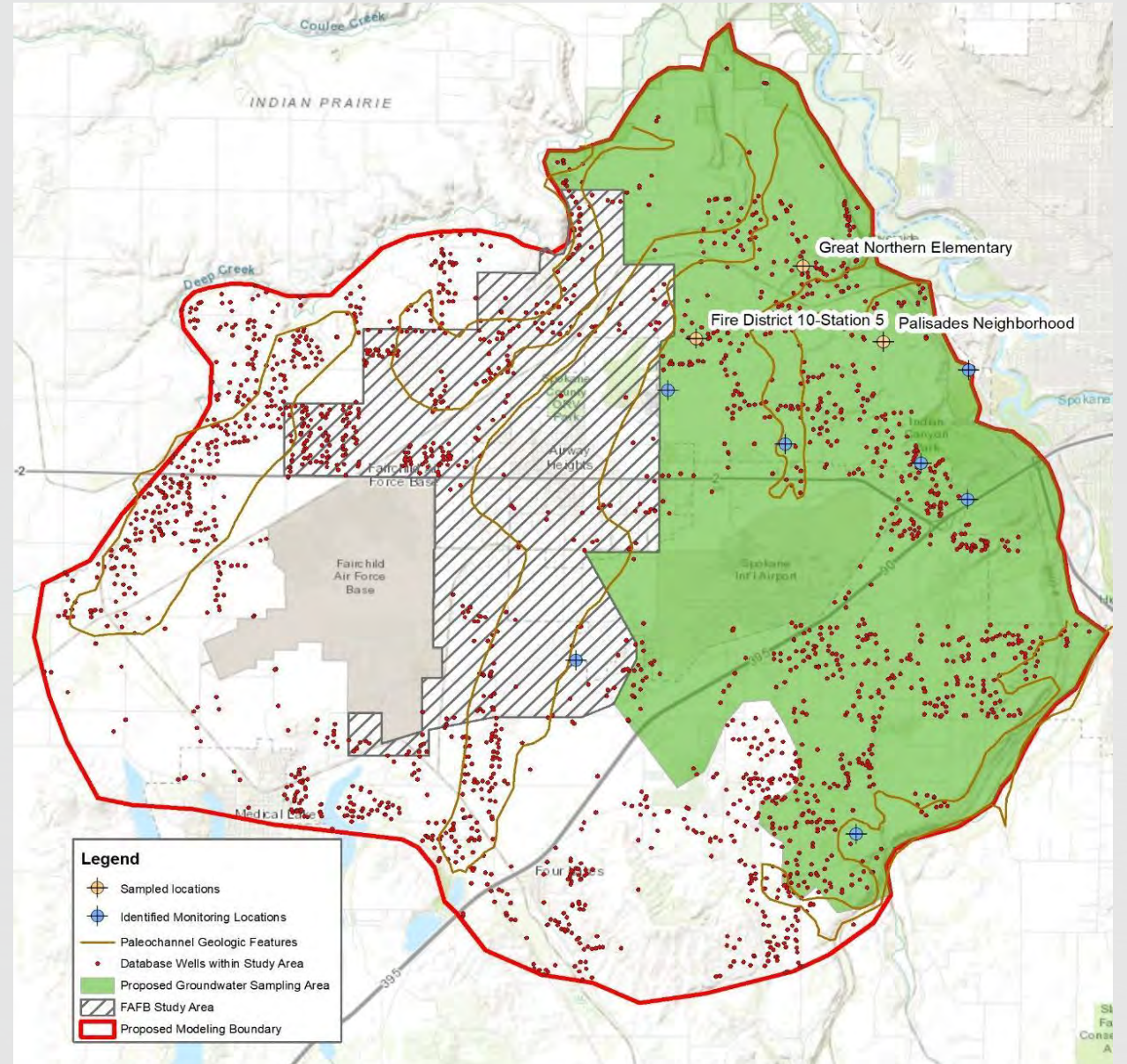


<https://doi.org/10.1016/j.cherd.2022.04.009>

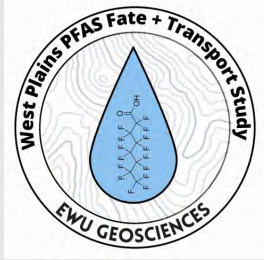
Where are we doing the study?



GMS model cross sections across West Plains

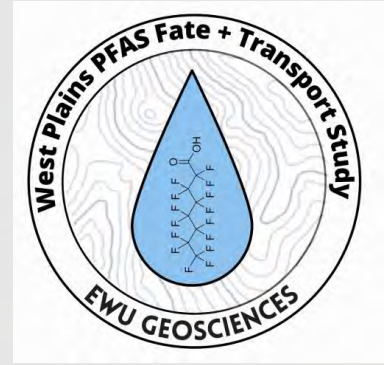


What are we doing?

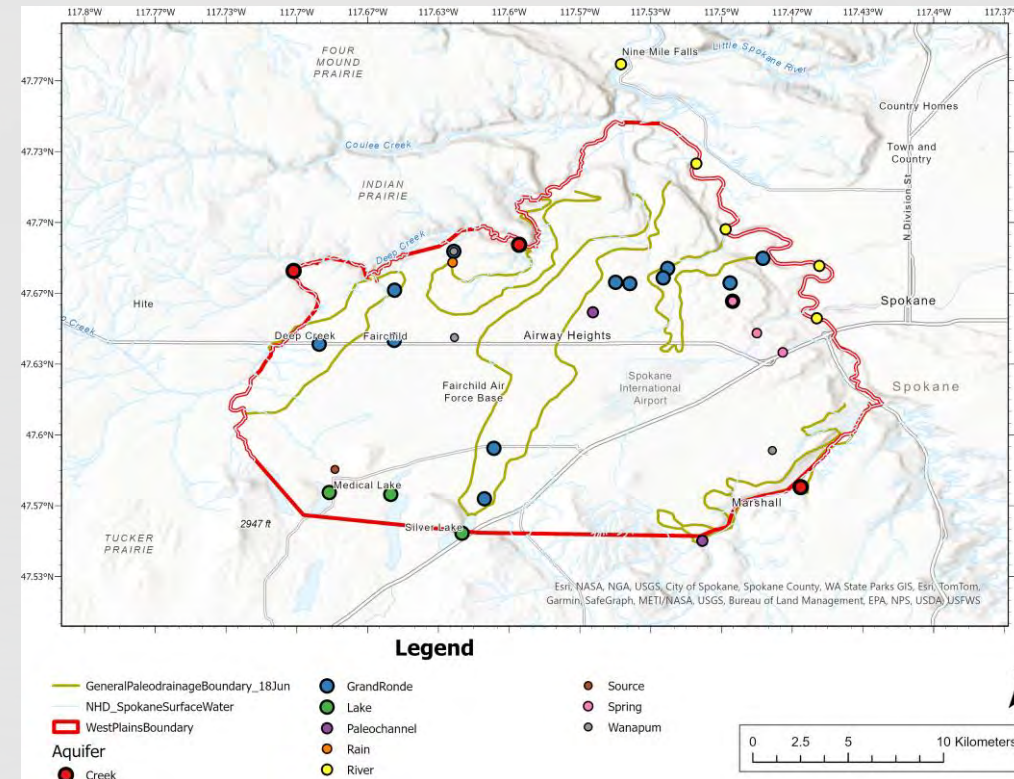


- \$450,000 Ecology grant over 2-years. Needed to be to a regional government
 - \$50,000 to City of Medical Lake for administration
- Build a 3D model of the West Plains
 - Identify the orientation of rock types that control groundwater flow
- Sample ~30 locations four times over a year. PFAS, Temp, DO, pH
- Use results to calibrate the groundwater model for each season to track PFAS transport.
- Attempt to use statistics to identify source of PFAS

When are we doing the study?



- Fall Winter 2023
 - QAPP
 - Start Groundwater Modeling – MODFLOW (GMS)
- Spring through Winter 2024 – sample 30 locations
 - Water Wells
 - Surface Water
 - Rain at Rambo Road NOAA
 - Wastewater Reclamation Facility in Medical Lake...
- Evaluate and complete model – Winter 2024
- Write report by Spring 2025, all will be available on-line (TBD)
- Attend community events the whole time,
 - see you at Founders Day! 😊



What Have We Done

- The QAPP has been Approved
- Modeling is ongoing, working with GIS experts to fine tune rasters
- First round of monitoring is complete, waiting on results
- Out reach has been immense:
 - Media, West Plains Water Coalition events, School presentations, EWU classes, Medical Lake Government, Medical Lake GeoWalk

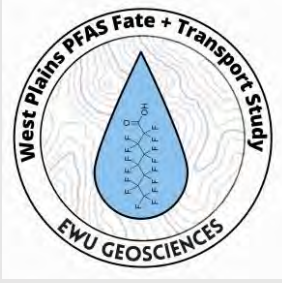


Next Steps

Some last thoughts:

- Preparing for full water level survey
 - Data loggers starting to be deployed (July – August is the big push)
- EPA sampling will have second round in July
 - About 160 wells from EPA/Ecology to add to model and for first round of environmental statistics
- On track for modeling with GIS experts and GMS staff
- Report should be completed by June 2025





Thank you!!

