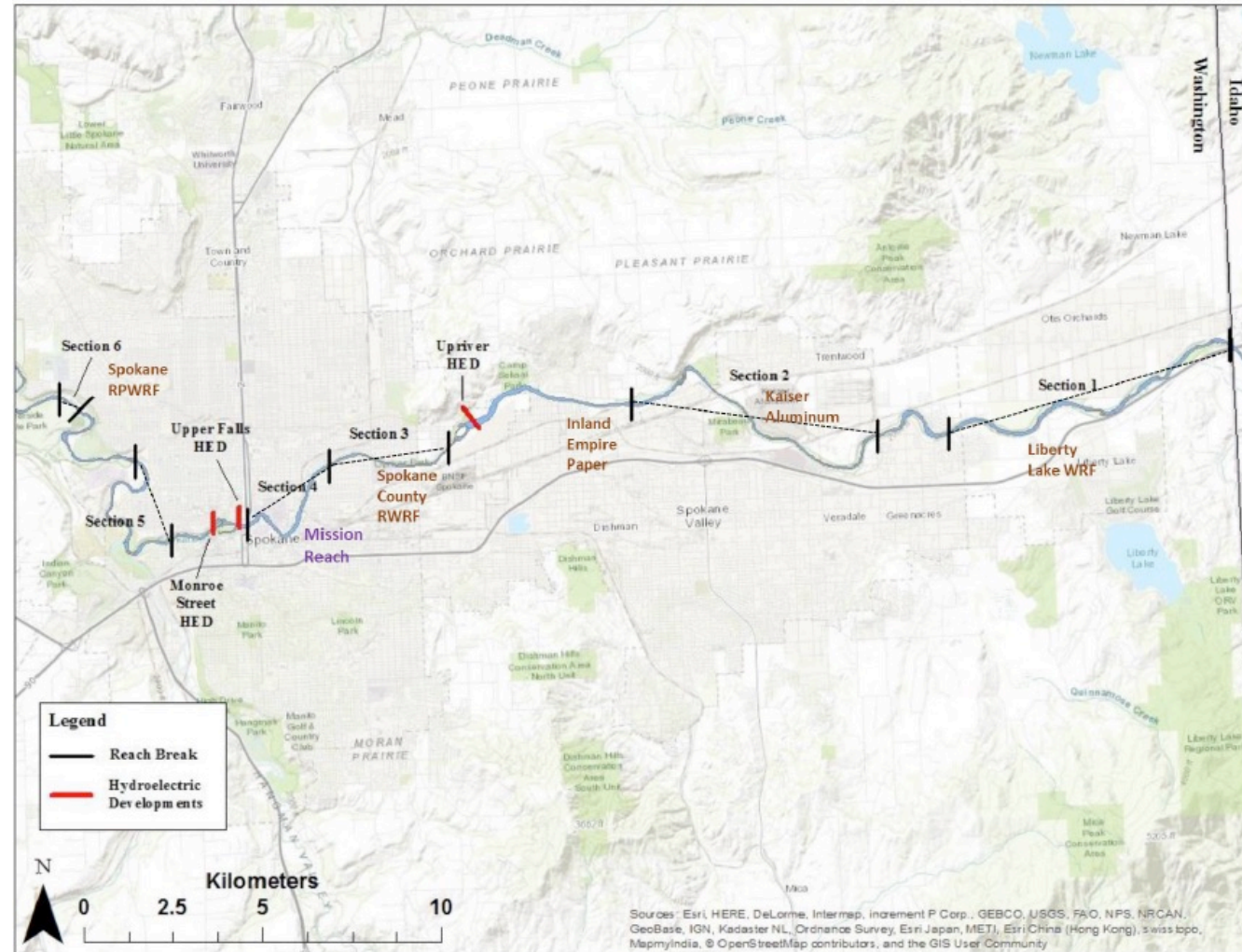


**Fish Tissue Trend Assessment
Mission Reach Sediment/Biofilm Monitoring
Next Level Historical Review**

**Spokane River Toxics Task Force
Technical Track Work Group
June 15, 2022 Meeting**

Fish Tissue Trend Assessment

- Intension is to replicate 2020 sampling
 - QAPP is being developed
 - Limited numbers of suitable fish in Section 6
- Options for 2022
 - Accept smaller sample size
 - Move sampling region further downstream
 - Drop section from assessment



Historical Review

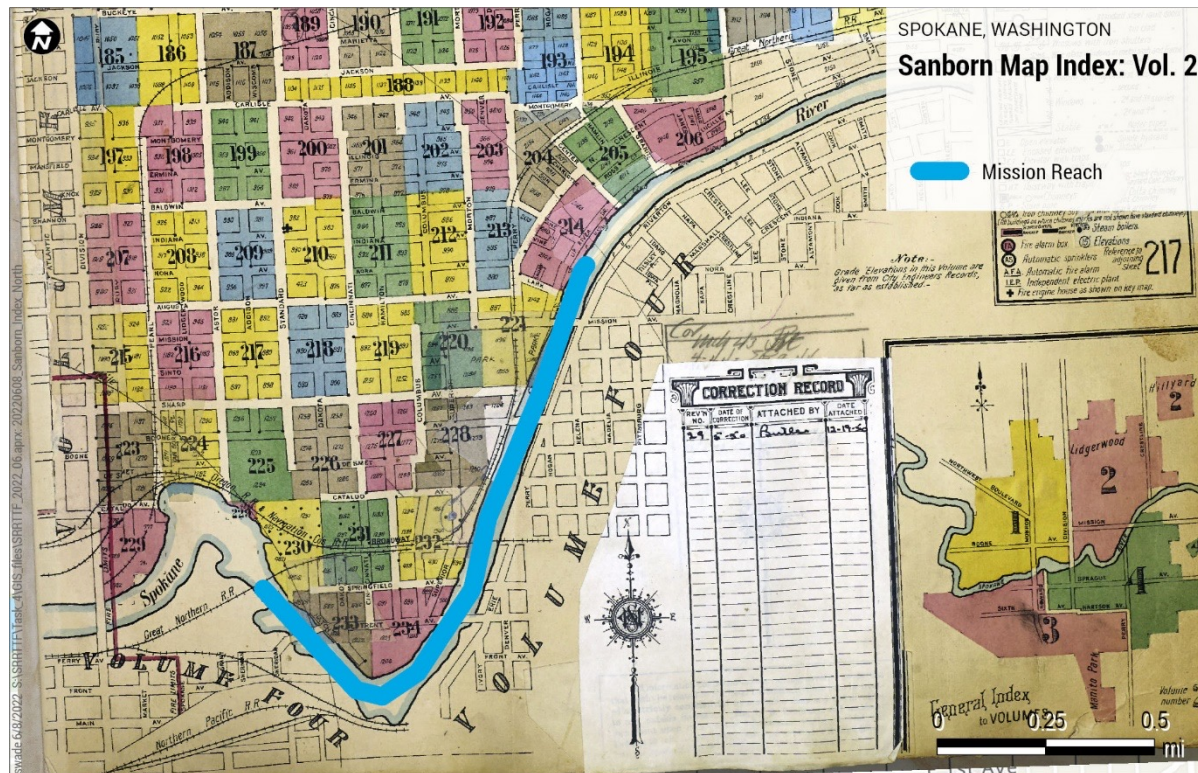
- Background/Purpose
 - Majority of PCBs in the river have been traced to legacy contamination
 - Review of historical land uses is a means to identify potential PCB sources
- Desired scope
 - Review Sanborn fire insurance maps from 1950 to 1980 and identify facilities that were potential sources of PCB releases
 - Review relevant historical documents and associated monitoring data
 - Prioritize sites regarding their potential of being an ongoing PCB source

Iterations on Number of Maps To Purchase/Review

- Initial request
 - 0.25 mile buffer either side of Mission Reach
 - 75 maps
- Interim revision with better temporal coverage
 - 0.25 mile Mission Reach buffer
 - 80 maps
- Task Force requests considering greater spatial coverage
 - Entire area
 - 1120 maps
- Outcome
 - Map purchase and review costs ranged from \$25,000 to >\$300,000
- Current task
 - Make specific recommendation on number of maps to purchase and review

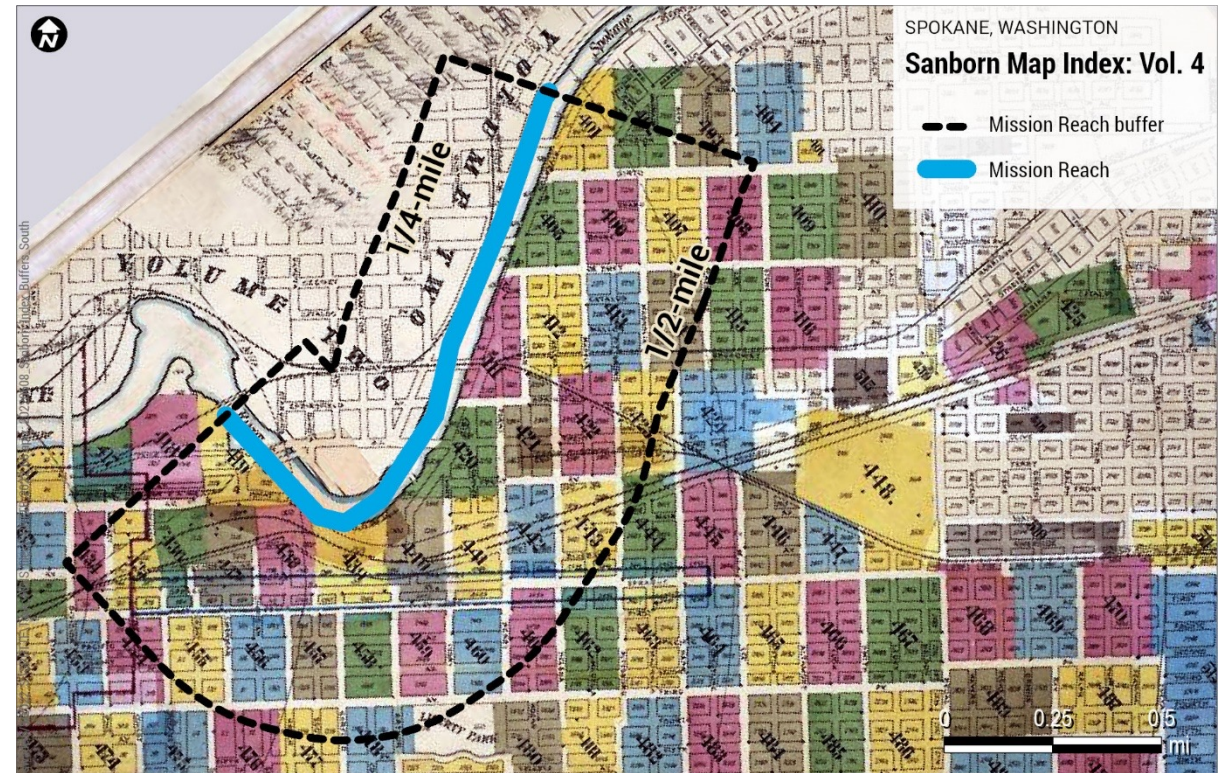
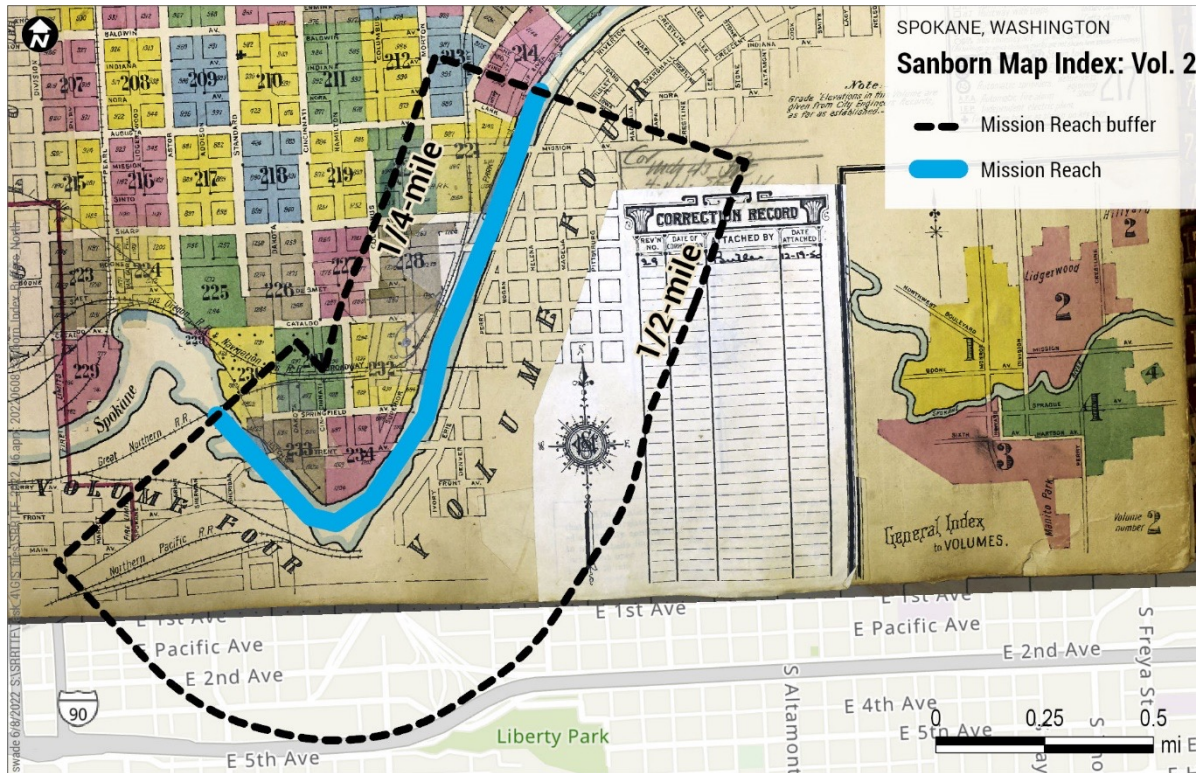
Sanborn Map Indices Show Specific Maps in Area

- Sanborn atlas indices show specific maps to target for acquisition and review
- Costs limited by purchasing only the most relevant maps



Recommendation on Maps to Purchase and Review

- Review all maps within ½ mile on south side of the Mission Reach, within ¼ mile on north side
 - Recognizes direction of groundwater flow, locations of most industry



Sanborn Map Review Costs

- Estimated costs for map acquisition and documentation of potential historical PCB source facilities

Publication Year	Count of Maps to Review	Count of Maps Already Acquired	Maps to Purchase	Review Cost
1950	51	51	0	\$4,460
1960	11	11	0	\$1,220
1970	11	0	11 / \$880	\$1,220
1980	51	0	51 / \$4,080	\$4,100
Total	124	62	62 / \$4,960	\$11,000

- \$6000 already authorized for purchase of maps

Historical Review

- Schedule
 - Completion fall, 2022
- Budget
 - \$32,000

Deliverable	Completion Date
Technical memorandum documenting Sanborn review	August 26, 2022
Technical memorandum documenting historical report review	August 26, 2022
Technical memorandum prioritizing site and recommending next steps	September 30, 2022

Item	Budget
Develop scope of work	\$4000
Purchase of additional Sanborn maps	\$5000
Sanborn map review	\$ 311 ,000
Review of identified reports	\$5000
Review of relevant groundwater monitoring data	\$5000
Assessment/prioritization of identified sites	\$4000
Reporting	\$3000
Total	\$5732,000

Mission Reach Sediment/Biofilm Sampling

- Background/Purpose

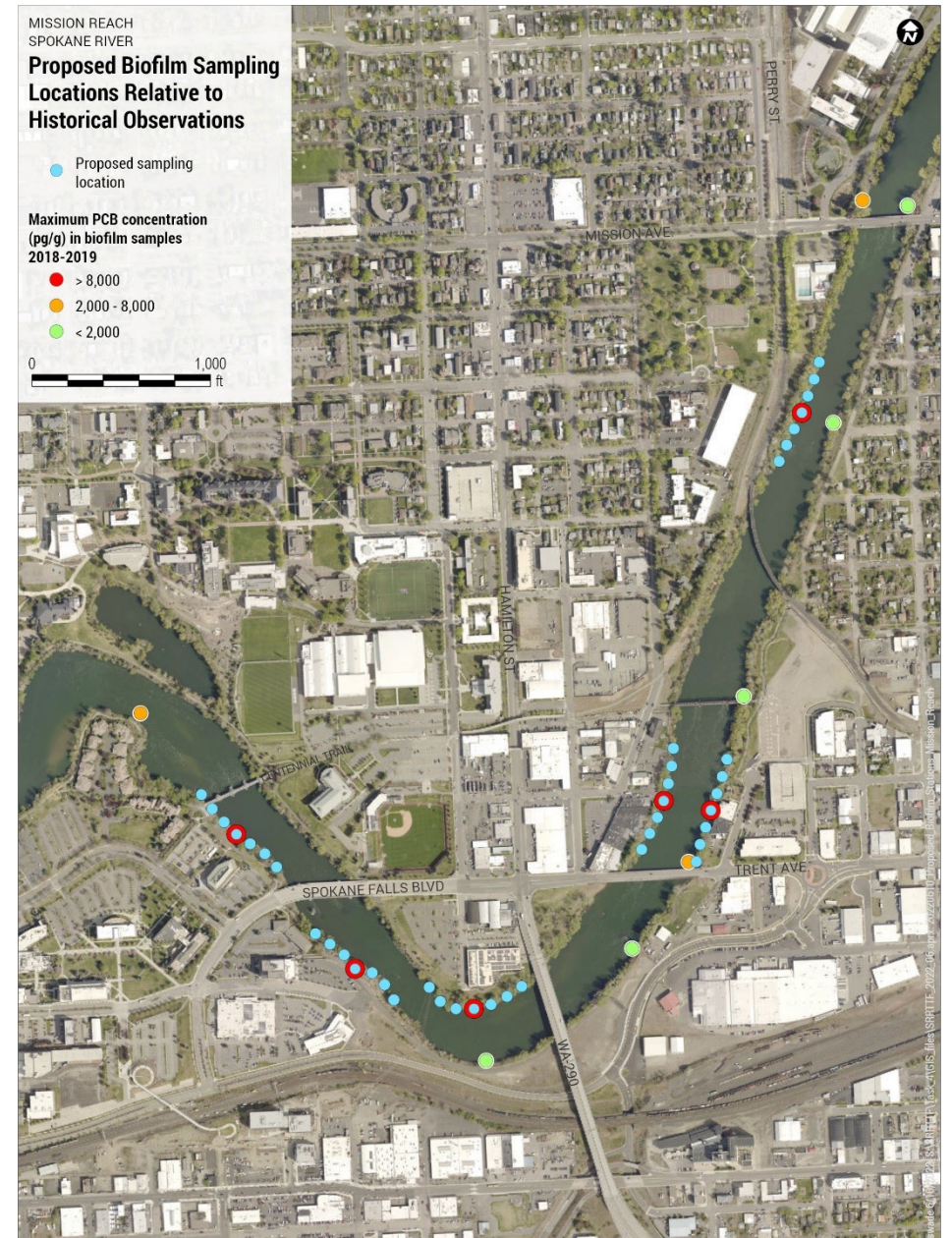
- PCBs in Mission Reach bed sediments/biofilm and are of interest because:
 - they can help identify the location where previously unidentified sources of PCBs enter
 - they represent PCB exposure to the base of the benthic food chain and can be informative in terms of describing bioaccumulation of PCBs in fish

- Scope

- Collect ~50 bed sediment/biofilm PCB samples
 - Targeted high spatial resolution biofilm sampling near areas of historical hot spots
 - Direct vicinity of all metallic objects identified during object detection survey
- Interpret data regarding
 - Location of PCB sources to the Mission Reach
 - Overall benthic characteristics related to bioaccumulation

Proposed Biofilm Sampling Locations

- Targeted high spatial resolution sampling near areas of historical hot spots
 - Seven stations spaced 100 feet apart centered around each of the locations with highest observed biofilm PCB concentrations



Proposed Sediment Sampling Locations

- Targeted sampling near:
 - all metallic objects identified during object detection surveys
 - Previous locations of elevated sediment PCB concentrations



Mission Reach Sediment/Biofilm Sampling

- Schedule

- Completion early winter, 2023

Deliverable	Completion Date
Draft QAPP	June 29, 2022
Final QAPP	July 29, 2022
Samples collected	September 30, 2022
Laboratory results	November 15, 2022
Draft technical report	December 30, 2022
Final technical report	February 21, 2023
Data loaded to Ecology's EIM	March 15, 2023

- Budget

- \$156,000

Item	Budget
Scopes of Work	\$5000
Draft QAPP	\$3000
Final QAPP	\$3000
Field labor and coordination	\$40,000
Laboratory analyses	\$66,000
Data validation and assessment	\$9,000
Reporting	\$12,000
Data uploading	\$8,000
Project management	\$10,000
Total	\$156,000