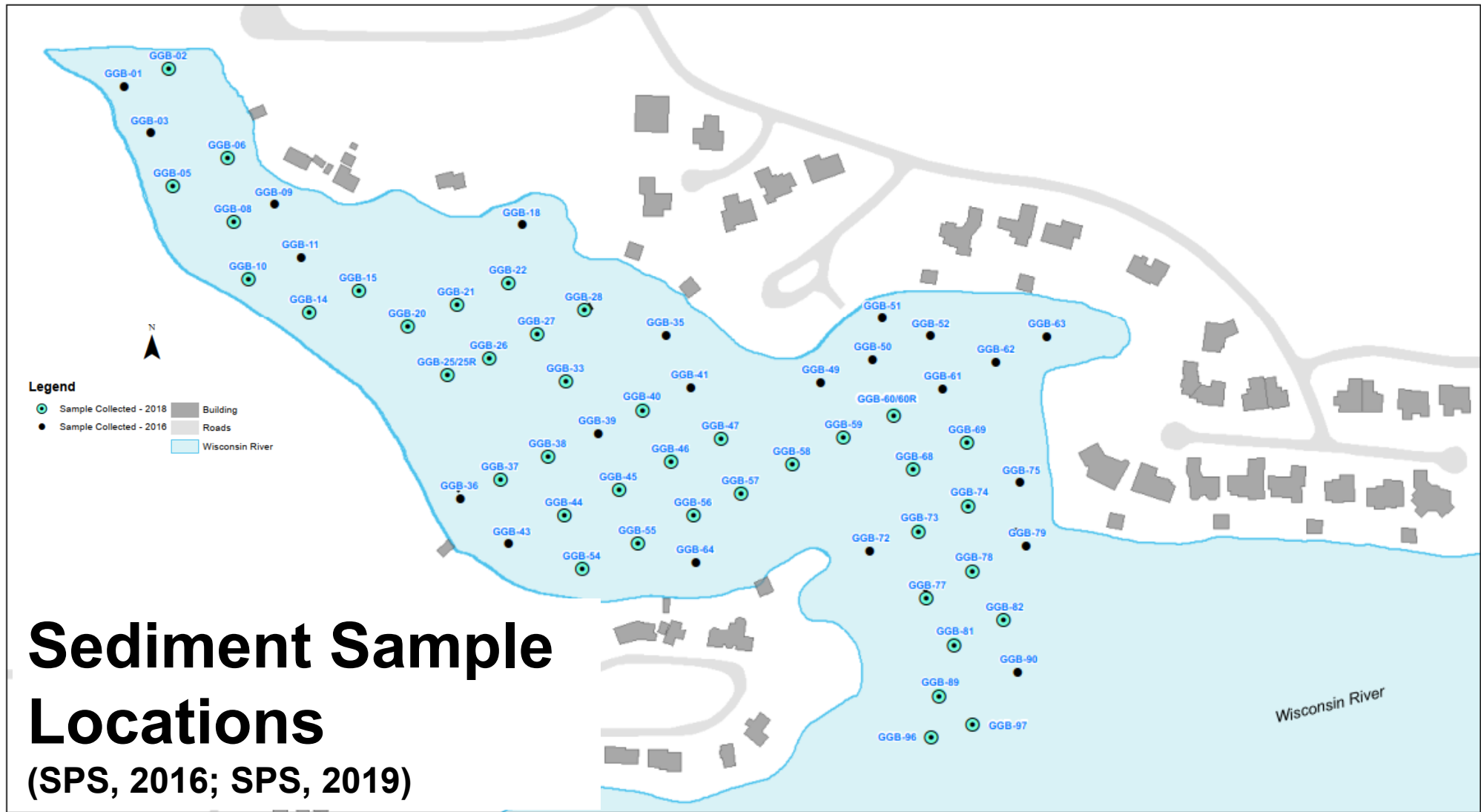


Gruber's Grove Bay Sediment Update

April 20, 2023

Agenda

- 1. Summary of total mercury data**
- 2. Sediment maps**
- 3. Discussion**
- 4. Next steps**



Sediment Sample Locations

(SPS, 2016; SPS, 2019)

Total Mercury Data

Sediment Data Summary

- **63 surface samples**
- **63 subsurface samples**
- **Areas within both sediment layers exceeded background**

Total Mercury Summary Statistics (mg/kg)

Data Grouping	No. of Samples	Minimum	Maximum	Median	Upper Confidence Limit
Surface	63	0.022	6.3	1.5	2.1
Subsurface	63	0.0093	12.4	0.25	1.8

Sediment Maps for Mercury

- **Maps for total mercury concentration** were prepared for two sediment horizons based on the most complete sample datasets (2016 and 2018).
 - Surface: 0 to 0.5 ft
 - Subsurface: Greater than 0.5 ft

References:

SPS, 2016. Gruber's Grove Bay, Sediment Sampling Report, Badger Army Ammunition Plant. Sediment Sampling Report – Final. SpecPro Professional Services, LLC. July 2016.

SPS, 2019. Gruber's Grove Bay, Sediment Sampling Report, Badger Army Ammunition Plant. SpecPro Professional Services, LLC. March 2019.

Surface sediment (0 to 0.5 ft)
Total mercury concentration
exceeded background across
the main channel of GGB.

Sediment Surface Layer Estimates

- Surface Sample Locations

Bathymetric Contours - 2016

- Bathymetric Contours - 2016

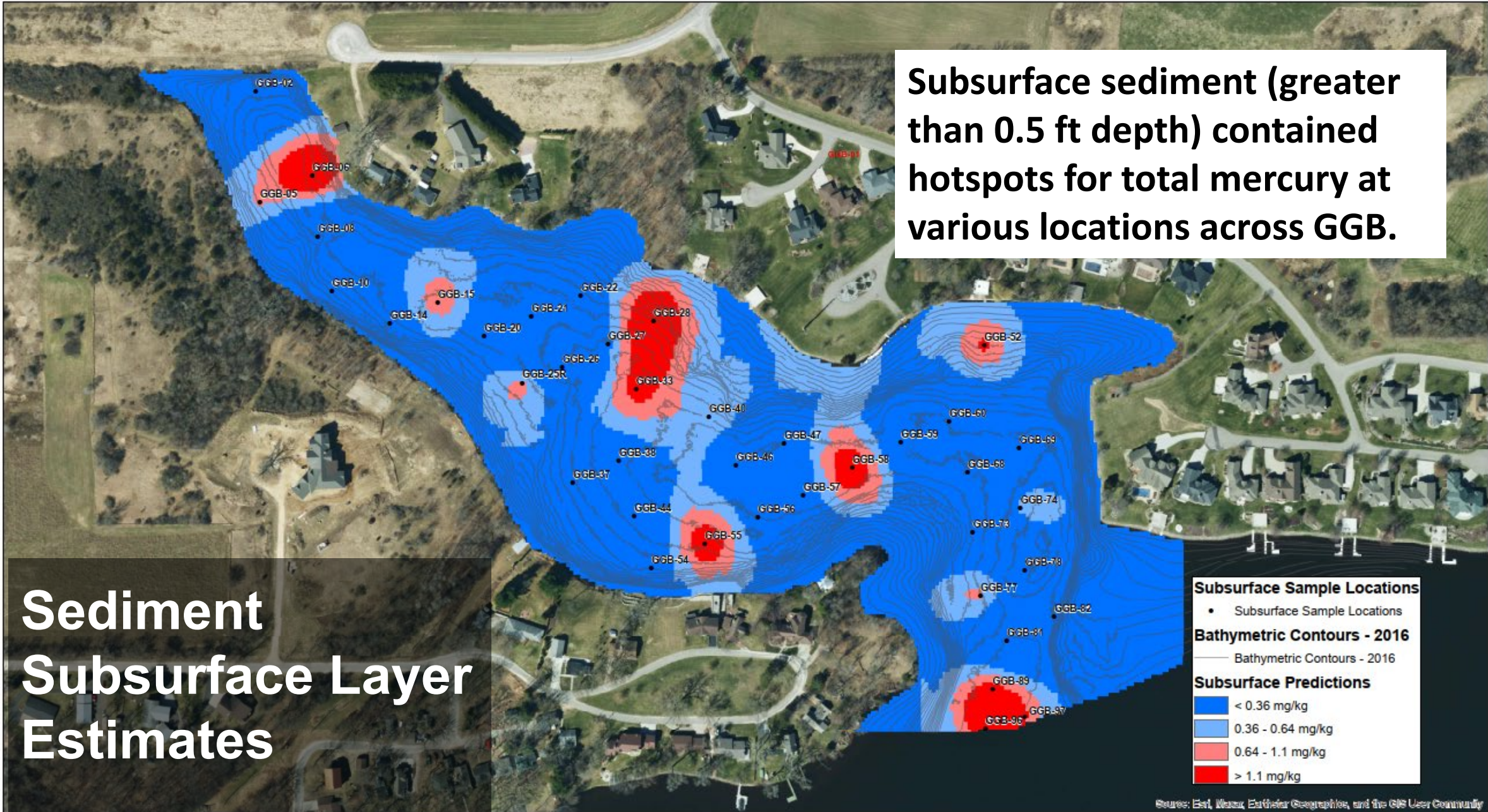
Surface Predictions

- < 0.36 mg/kg
- 0.36 - 0.64 mg/kg
- 0.64 - 1.1 mg/kg
- > 1.1 mg/kg

Source: East, Water, Earthier Geographics, and the GIS User Community

Subsurface sediment (greater than 0.5 ft depth) contained hotspots for total mercury at various locations across GGB.

Sediment Subsurface Layer Estimates



Source: Est. Water, Estuarine Geophysics, and the GGB User Community

Summary

- **Sampling grid was limited along margins of sediment occurrence.**
 - This limited our ability to clearly identify boundaries for mercury at some locations of GGB.
- **Existing sample datasets did not allow for accurate estimates for changes over time.**
 - This was due to differing characterization priorities for each sampling event.

Next Steps

Additional work in progress will be presented at the next RAB meeting:

- **Human health and ecological risk assessment review -**
Risk interpretation from previous data collected within GGB after remedial dredging efforts in 2006.
- **Review of receptors** in the conceptual site model.
- The Army is evaluating the need for additional sampling and a **Data Gaps Investigation (DGI)** is being considered.
 - A DGI identifies key needs for additional investigation work to develop remediation plans. The information acquired during a data gap investigation should aid in decision making.

Thank you

QUESTIONS?