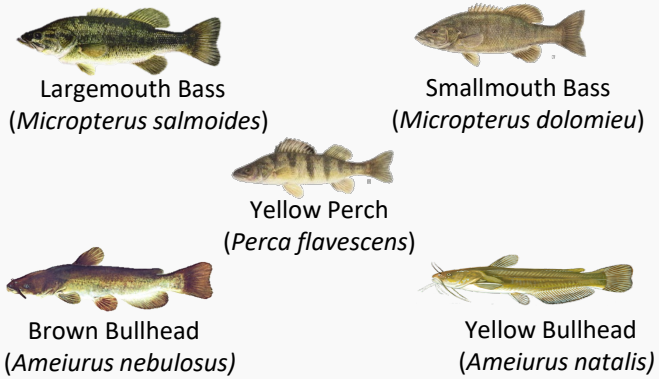
Ongoing Long-Term Monitoring Activities

- Reminder: OU2 remedy is two parts - dredging and monitored recovery
- Purpose: Monitor water, fish and sediment to track recovery of the river over time as it relates to project targets and goals
- Overview of long-term monitoring program activities:
  - <u>Water Column</u> (on-going)
    - Routine sampling at Bakers Falls, Rogers Island, TID, Schuylerville and Waterford
    - High flow sampling at Waterford and Schuylerville
  - <u>Fish</u>
    - Spring and fall collection scheduled annually
    - Spring collection scheduled for June 2023
    - 300 to 400 fish collected annually
    - Includes limited water and fish from Lower Hudson

<u>Spring Collection:</u>

Sport fish Fillet Samples



<u>Fall Collection:</u>

Whole body pumpkinseed samples
Whole body composite forage samples

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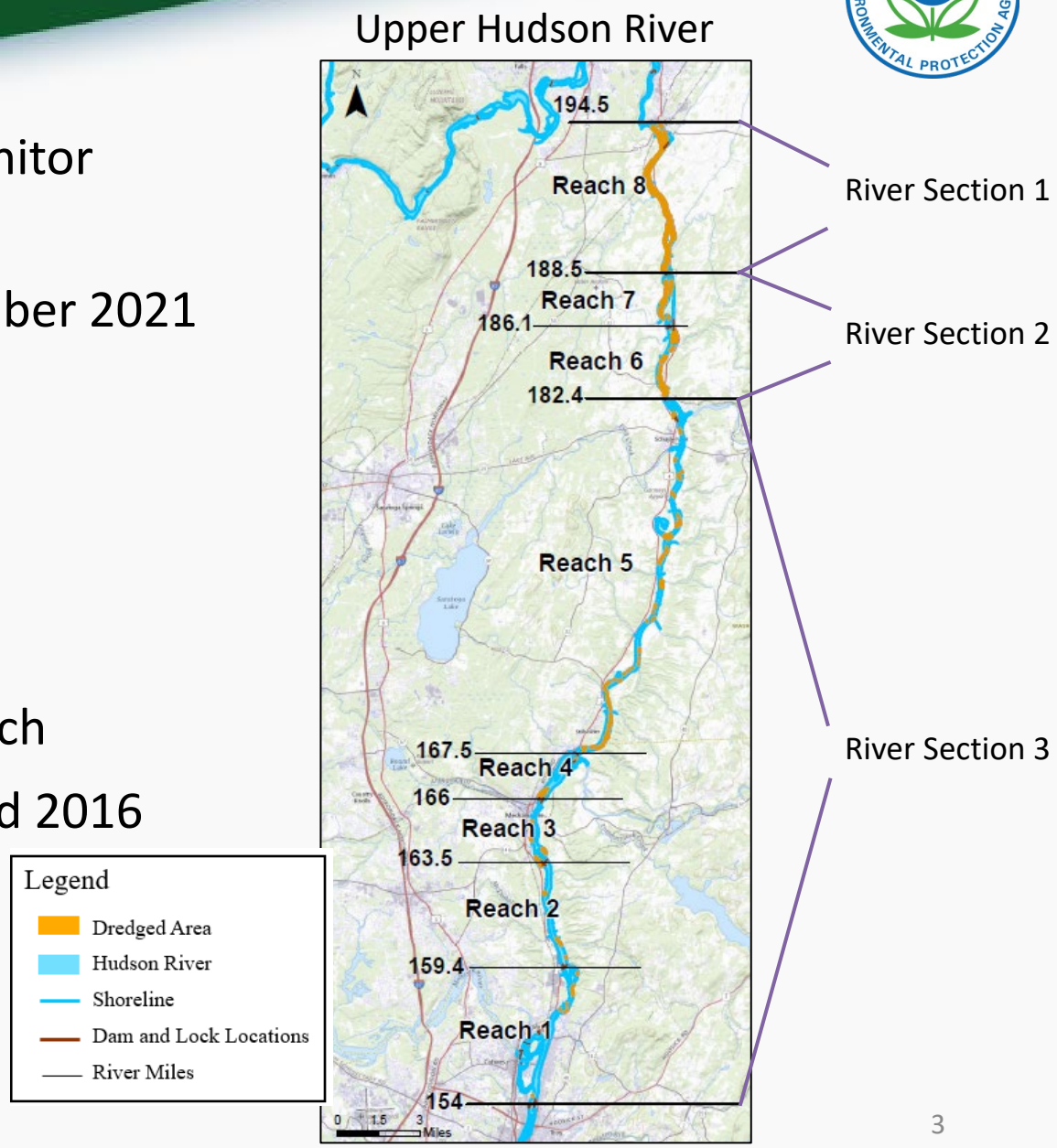
Ongoing Long-Term Monitoring Activities

- Overview of long-term monitoring program activities (cont'd)
  - Sediment
    - Surface sediment sampled in 2021
    - Beryllium 7 (Be-7) sampled in May/June 2022
    - Ongoing data analysis of results
    - Next surface sediment sampling event scheduled for 2026
  - Caps
    - Next survey scheduled 2023

Summary of Surface Sediment Program

- Purpose: Collect surface sediment samples to monitor recovery
- Surface sediments collected September to November 2021
  - Data received on 8/16/2022
  - 745 samples collected (0 – 2 inches)
  - Next round of sampling 2026 (every five years)
- Summary of Five-Year Review Data Evaluations
  - PCB concentration by river section and river reach
  - Change in PCB concentration between combined 2016 (GE)/2017(DEC) and 2021(GE)
  - Areas of interest review



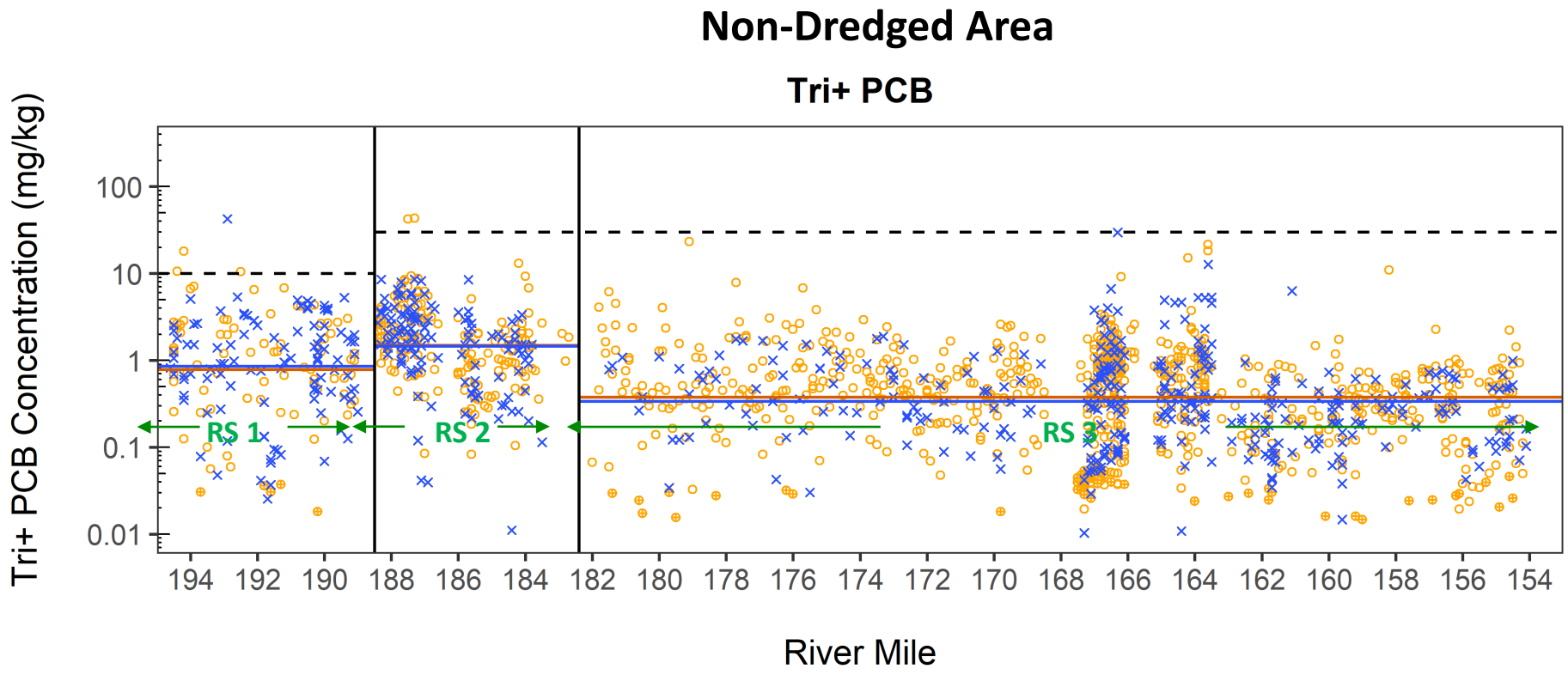
Summary of Sediment Data Evaluation

- Post-dredging surface sediment PCB concentrations
  - 99% of samples below Record of Decision specified surface sediment remediation criterion
  - Majority of samples contained less than 1 ppm Tri+ PCB
  - River-Wide-Area (RWA) weighted average Tri+ PCB concentrations were 0.97, 1.5 and 0.44 ppm in River Sections 1, 2, and 3, respectively
- Evaluation of change in PCB concentration between 2016/2017 and 2021
  - For River Section 1 and 2, RWA weighted average Tri+ PCB were similar between 2016/2017 and 2021
  - For River Section 3, RWA weighted average Tri+ PCB decreased between 2016/2017 and 2021
  - Dredged area (backfill) surface sediment has slightly increased as expected
- Review areas of interest
  - Average Tri+ PCB concentrations in the three areas has decreased from 2016/2017 to 2021
  - The size of the three areas has not increased
  - Areas of interest will continue to be monitored as part of surface sediment sampling program

Sediment Data for Non-Dredge Area

Legend

- 2016/2017 Detect
- 2016/2017 Non-Detect
- 2021 Detect
- 2016/2017 Geometric Mean
- 2021 Geometric Mean
- Tri+ PCB Dredging Criteria
- River Section Bound



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Habitat Response Actions

- Response actions occur annually based on needs identified in surveys completed in the previous year
  - New survey approaches include drone and bio-sonics
  - High flows can be challenging
    - — Make surveys difficult to conduct
    - — Response actions may be less successful
- Response actions are planned for 2023
  - Submerged Aquatic Vegetation
    - — Seed buoys
  - Riverine Fringing Wetlands
    - — Wave break logs
    - — Wild rice seeding
    - — Planting
    - — Invasive species removal
- Next steps
  - Continued progress toward meeting project requirements
  - Compare data to project benchmark/success criteria

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Questions

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*Updated web addresses for EPA site webpage and CAG webpage:

http://www.epa.gov/hudsonriverpcbs

https://hudsoncag.wspis.com

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