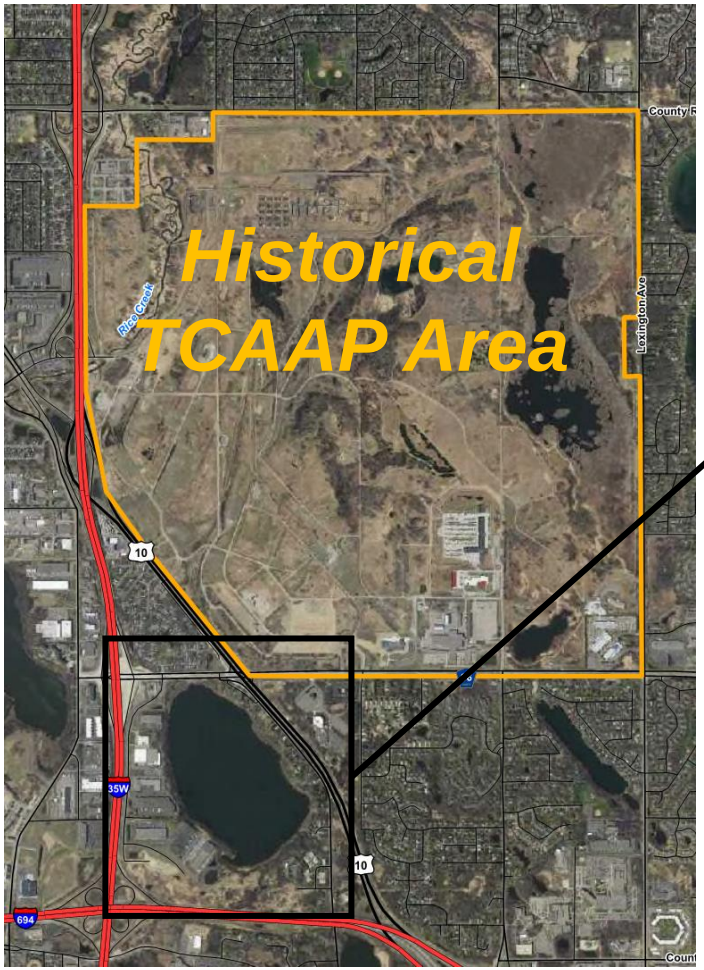
TCAAP RAB Meeting – July 20, 2021



Agenda – July 20, 2021 at 7PM

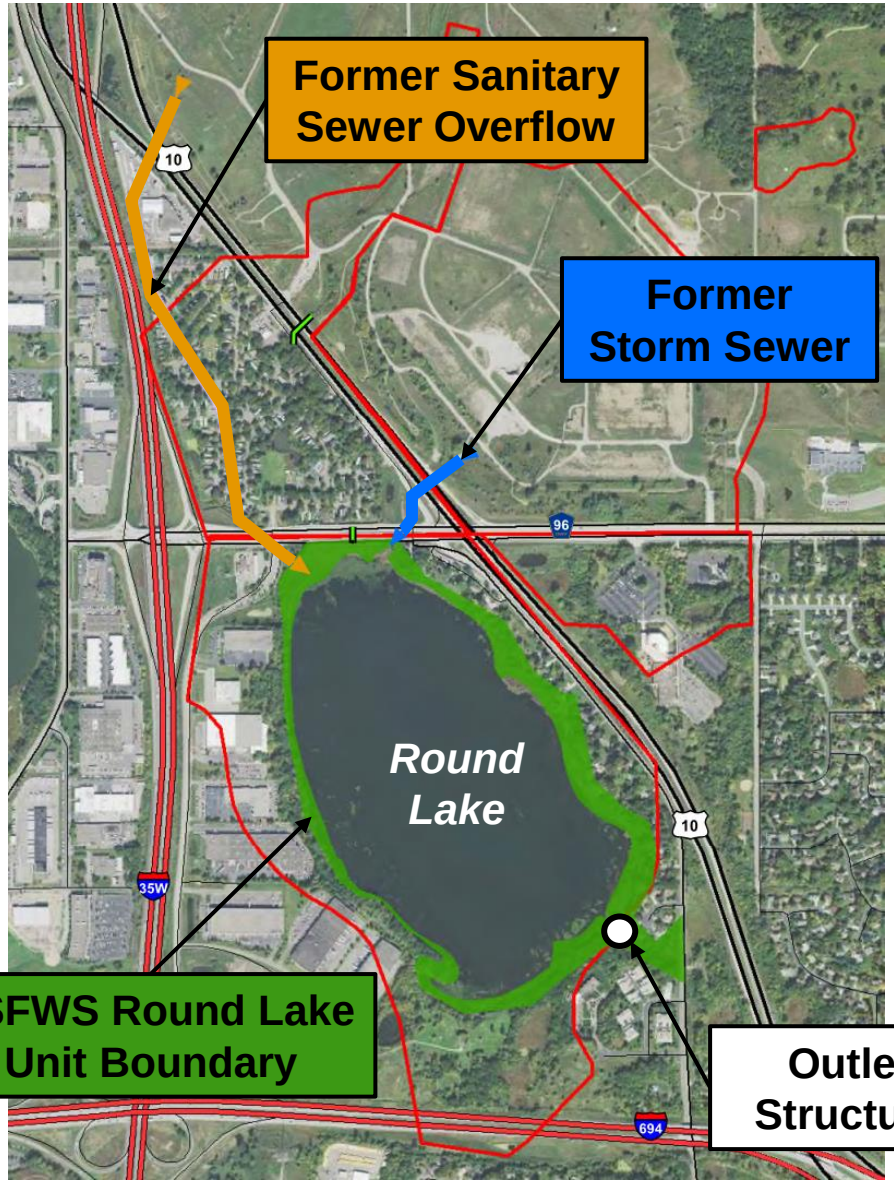
- Review/Approve minutes of last meeting
- Questions on the Supplemental RI/FS
- Explanation of Round Lake Proposed Plan
- Questions on the Proposed Plan
- Official Public Comments for Round Lake Proposed Plan

This meeting is being recorded

- This meeting is being recorded and may be published on the internet.
- By speaking at the meeting, you consent to having your comments recorded.

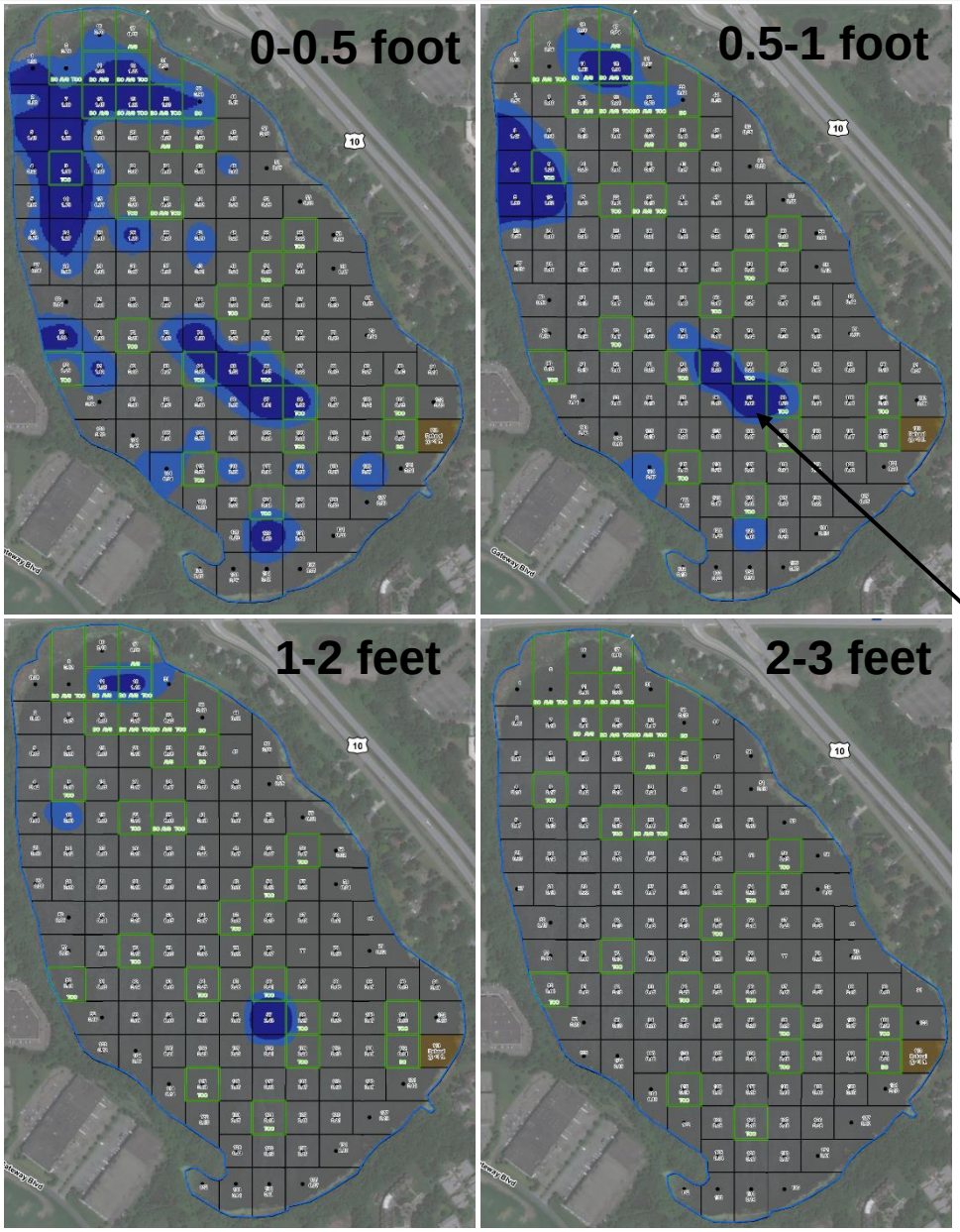
Questions on Supplemental RI/FS

Round Lake - Background



- Round Lake formerly part of TCAAP
- Transferred to the U.S. Fish & Wildlife Service in 1974.
- Historical releases of hazardous substances from TCAAP to Round Lake were associated with the discharge of industrial processing wastewater, sanitary sewer, and storm sewer discharges.

Round Lake - Background



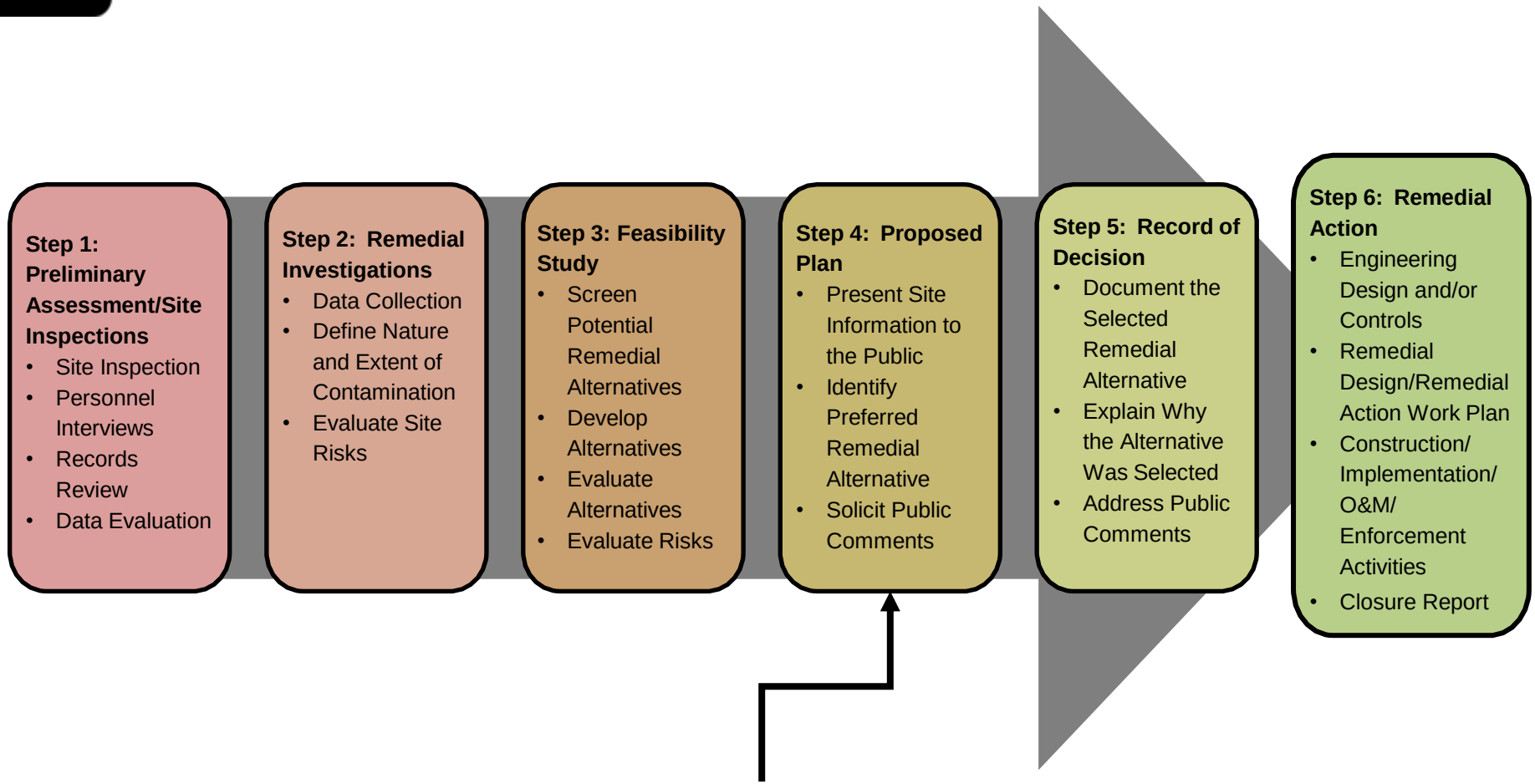
Contaminants of concern

- Metals (cadmium, chromium, copper, lead, silver, vanadium, and zinc) and
- Polychlorinated biphenyls (PCBs)

Concentrations that require remediation shaded in blue

Contaminants generally limited to the upper foot of sediment

Round Lake – CERCLA Process



Currently soliciting public comments on Proposed Plan

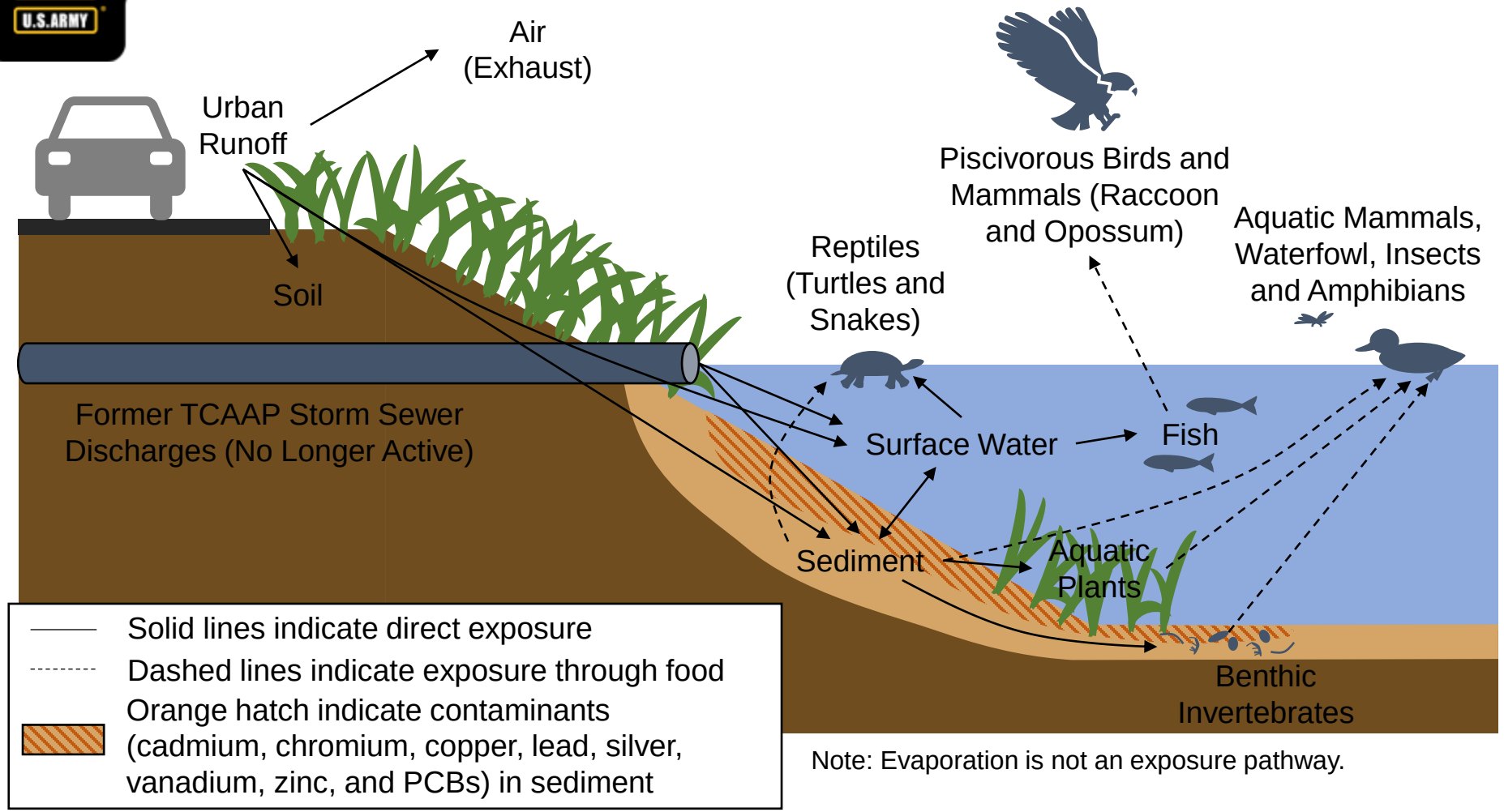
Round Lake - Background

- Because there is a mixture of contaminants, and to provide a general depiction of metals concentrations in sediments at various sediment depths, a mean probable effect concentration quotient (mPEC-Q) is used to measure success.
- The Remedial Investigation (RI) was conducted between 1987 and 2011.
- USEPA requested a Feasibility Study (FS).
- Supplemental RI/FS accepted by MPCA and USEPA in March 2021. Available to the community for review.

Risk Assessment

- Remedial investigations collected sediment data to inform evaluation of risks
- Human Health Considerations
  - Current and future use is as a unit of the Minnesota Valley NWR
  - Exposure for site workers
  - Potential for future fish consumption
- Ecological Considerations
  - Benthic invertebrates
  - Fish
  - Aquatic invertebrates
  - Amphibians
  - Piscivorous birds and mammals
- Human Health Risk Assessment identified no risk to humans.
- Ecological Risk Assessment concluded ecological risks were low.

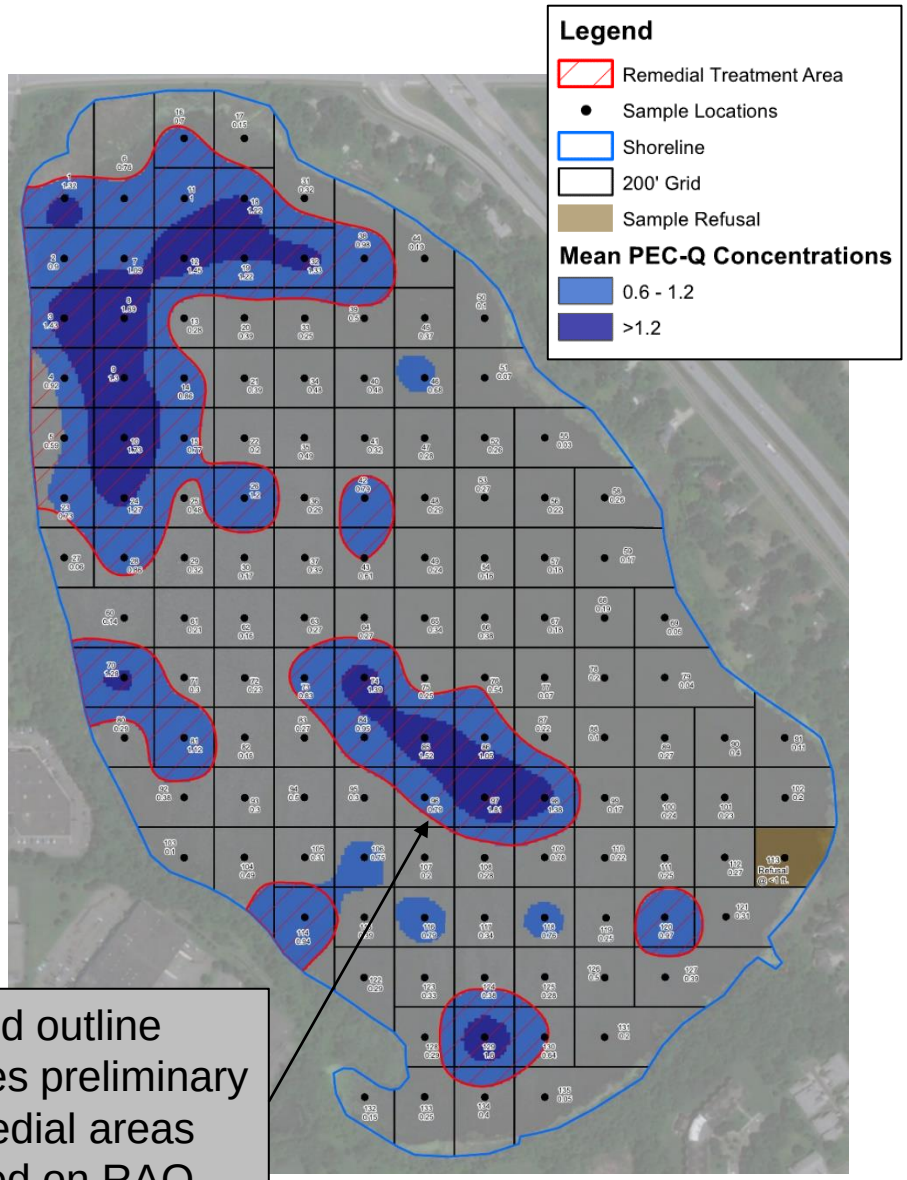
Potential Ecological Exposure Pathways



Note: Evaporation is not an exposure pathway.

The potential for adverse effects is limited to benthic invertebrates and waterfowl that ingest them.

Round Lake – Remedial Action Objective



Red outline indicates preliminary remedial areas based on RAO

- Preliminary Remedial Action Objective (RAO):

  To minimize the potential for adverse effects to benthic populations and the waterfowl that ingest them from exposure to the contaminated sediments from TCAAP-related discharges by achieving an mPEC-Q of 0.6.

- Final RAOs will be established in the Record of Decision (ROD)

Identifying, Screening and Selecting Alternatives

Identify General Response Actions and Technologies

- Broad classes of responses or remedies that may be implemented.

Screen Technologies

- Initial screen based on effectiveness, implementabilty, and cost.

Develop Alternatives

- Retained technologies combined into alternatives that can address all components of the site.

Key General Response Actions and Technologies

Removal/ Dredging	Confined Aquatic Disposal (CAD)	Land Use Controls	In-Situ Treatment
In-situ Covering	Monitored Natural Recovery	Monitoring	

Green – retained for further evaluation

Round Lake – Remedial Alternatives

Alternative	Remedy	Retained
1	No Action	Yes*
2	Monitored Natural Recovery	No
3	Enhanced Monitored Natural Recovery	No
4A	Removal and Disposal Offsite	Yes
4B	Removal and Disposal at TCAAP Impoundment	Yes
5	In-Situ Cover	Yes
6A	Removal, Disposal Offsite, and In-Situ Cover	Yes
6B	Removal, Disposal at TCAAP Impoundment, and In-Situ Cover	Yes
7	Near Shore Confined Aquatic Disposal	Yes
8	Deep Water Confined Aquatic Disposal	Yes
9	Deep Water Confined Aquatic Disposal and In-Situ Cover	Yes

*No Action retained for comparison only

Round Lake – Alternative Comparison

Nine criteria established by CERCLA for evaluation of remedial alternatives:

Threshold Criteria	Overall protection of human health and the environment
	Compliance with applicable or relevant and appropriate requirements (ARARs)
Balancing Criteria	Long-term effectiveness and permanence
	Reduction of toxicity, mobility, and volume through treatment
	Short-term effectiveness
	Implementabilty
	Cost
Modifying Criteria	State acceptance
	Community acceptance

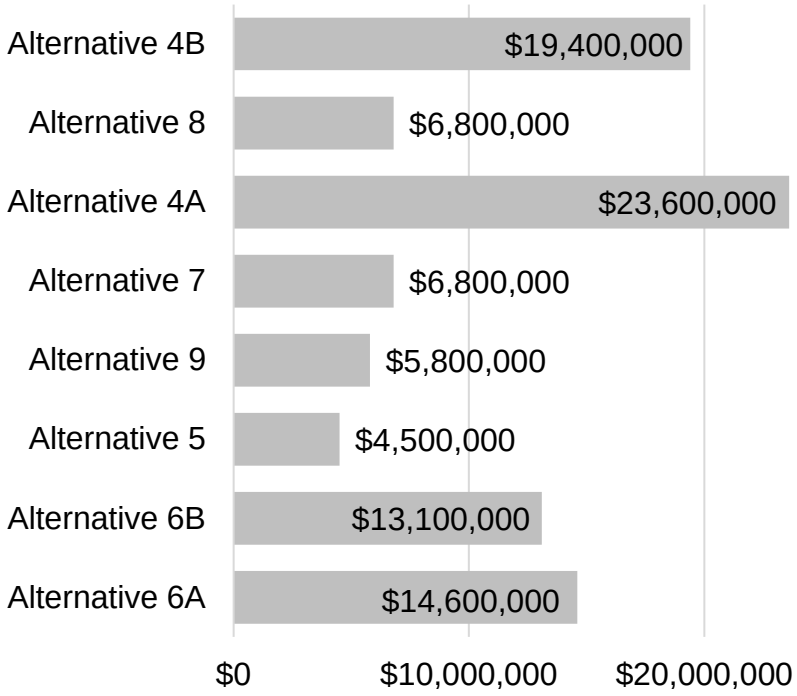
Round Lake - Evaluation of Alternatives

	Alt 4A Removal	Alt 4B Removal	Alt 5 Cover	Alt 6A Removal and Cover	Alt 6B Removal and Cover	Alt 7 Nearshore CAD	Alt 8 Deep Water CAD	Alt 9 Deep Water CAD and Cover
Protectiveness – HH short term	◔	◔	◕	◐	◐	●	●	●
Protectiveness – HH long term	●	●	●	●	●	●	●	●
Protectiveness – Eco short term	◔	◔	◕	◐	◐	◔	◔	◐
Protectiveness-Eco long term	●	●	◐	◐	◐	◐	◕	◐
ARARs	●	●	●	●	●	●	●	●
Long Term Effectiveness	●	●	◔	◐	◐	◐	◕	◐
Reduction of Toxicity, Mobility and Volume	◐	◐	◐	◐	◐	◐	◐	◐
Short-Term Effectiveness	◔	◐	◐	◔	◐	◕	◕	◕
Implementability	◐	◐	●	◕	◕	●	●	◕
Cost	◔	◔	◕	◔	◔	◕	◕	◕
State Acceptance	●	●	○	○	○	○	◔	○
Community Acceptance	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
USFWS	●	●	○	○	○	○	○	○

As the circle becomes more filled, the alternative becomes more desirable.

Cost Comparison and Ranking

Estimated Remedial Cost



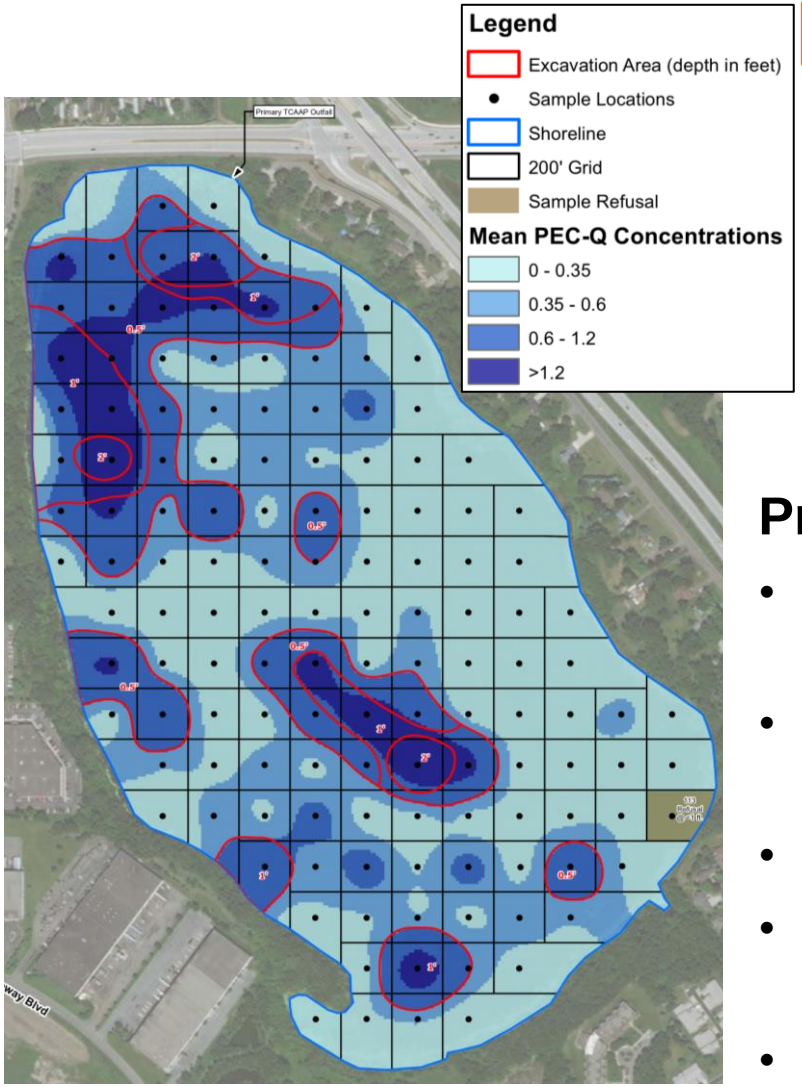
Alternative Ranking:

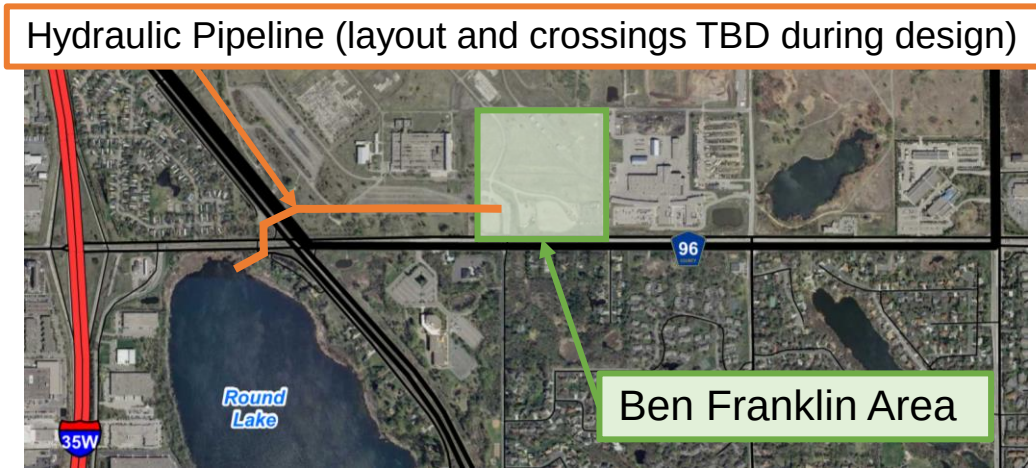
1. Alternative 4B – Removal and TCAAP Disposal
1. Alternative 8 – Deep Water CAD
3. **Alternative 4A – Removal and Offsite Disposal**
4. Alternative 7 – Near Shore CAD
4. Alternative 9 – Deep Water CAD, In-Situ Cover
6. Alternative 5 – In-Situ Cover
7. Alternative 6B – Removal, TCAAP Disposal, and In-Situ Cover
8. Alternative 6A – Removal, Offsite Disposal, and In-Situ Cover
9. Alternative 1 – No Action

- Alternatives 4B and 8 not implementable based on available site conditions.
- Alternative 4A is the highest ranking alternative that is implementable.

Round Lake – Preferred Alternative

Alternative 4A – Removal and Offsite Disposal





Primary Design Elements

- Mechanical or hydraulic dredging to remove 82,000 CY of sediment
- Hydraulic transport of sediment as a slurry to Ben Franklin area
- Dewater in geotextile tubes
- Onsite treatment of water prior to discharge to Round Lake or municipal sewer
- Off-site disposal at landfill.

Round Lake – Preferred Alternative

Alternative 4A – Removal and Offsite Disposal

Implementability

- Access required for launching equipment near shore
- Pipeline may require access agreements and dedicated utility conduit
- Water management at dewatering area, including treatment and potential discharge to lake or sewer
- Traffic and trucking implications for offsite disposal

Effectiveness

- Highly effective for long-term remediation of lake sediments
- Relatively high construction-related impacts
- Offsite transport has relatively high impacts to the general public and workers due to construction and trucking

Total Cost

Alternative 4A - $23,600,000

Timeframe: 2 – 4 years

Round Lake – Next Steps

- Supplemental RI/FS – Complete
- Proposed Plan – Available for public comment
- Record of Decision – will document selected alternative
- Remedial Action – will include remedial design, construction and reporting

More Information

Public Comment Period – **July 9 – August 13, 2021**

Administrative Record and Information Repository available at:

- Arden Hills Army Training Site
  4761 Hamline Avenue North
  Arden Hills, MN 55112
- Please call (651) 282-4420 for an appointment.

Electronic copies of the Proposed Plan can be provided by email and are available for download at:

https://tcaaprab.org

Point of Contact

- Linda Albrecht, Department of the Army
  Remedial Project Manager, TCAAP
  - Email - Linda.B.Albrecht.civ@mail.mil
  - Phone - (210) 861-4050

Questions

Next Meeting Agenda – September 21, 2021 at 7PM

- Review/Approve minutes of last meeting
- Old Business
- Cleanup status update
- New business
- Next meeting agenda
- Establish next year of meetings
- Public comments

How to Submit Comments on Proposed Plan

The 30-day public comment period is open beginning **July 9, 2021**.

Written comments and questions should be submitted no later than **August 13, 2021**, and directed to:

U.S. Army Environmental Command
2455 Reynolds Road, Mailstop 112
ATTN: Linda Albrecht, TCAAP PP
JBSA Fort Sam Houston, TX 78234-7558

Email - Linda.B.Albrecht.civ@mail.mil

We are going to adjourn this RAB meeting and you may submit oral comments for the record.

NOTE – If you are submitting written comments, oral comments are not necessary.

If you are submitting oral comments, written comments are not necessary.

Questions

Round Lake - ARARs

- Applicable or Relevant and Appropriate Requirements (ARARs)
  - Federal, state, and local
  - Action, chemical or location specific
  - Additional “to be considered” guidance

Activities with Potential ARARs

In-Water Work

Water Treatment and Discharge

Noise and Dust

Waste Management

Wildlife and Wetland Conservation