

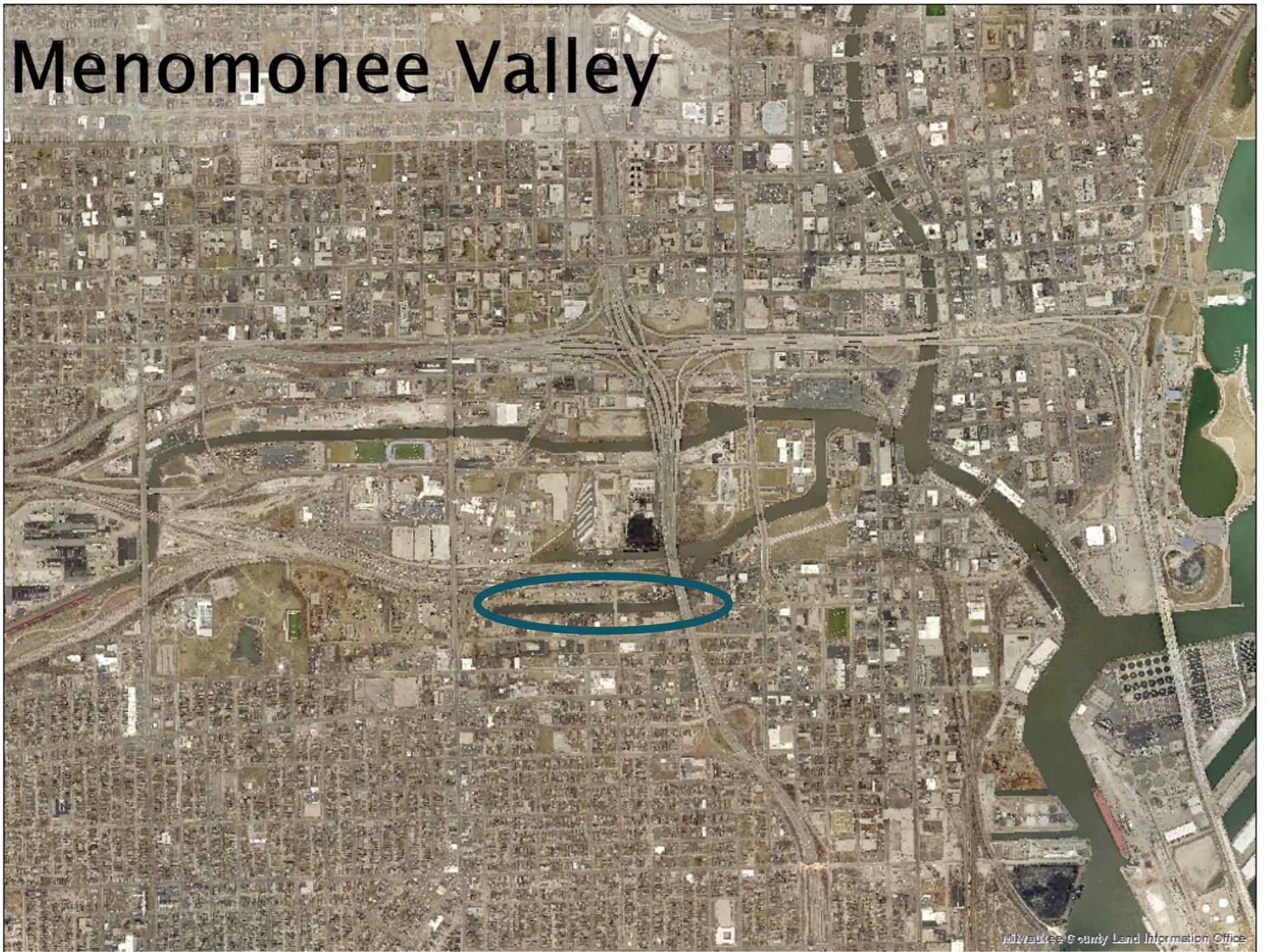
Burnham Canal Wetland Project

**Menomonee Valley Partners
Bruce/Pierce/Virginia Stakeholder Mtg
February 3, 2020**

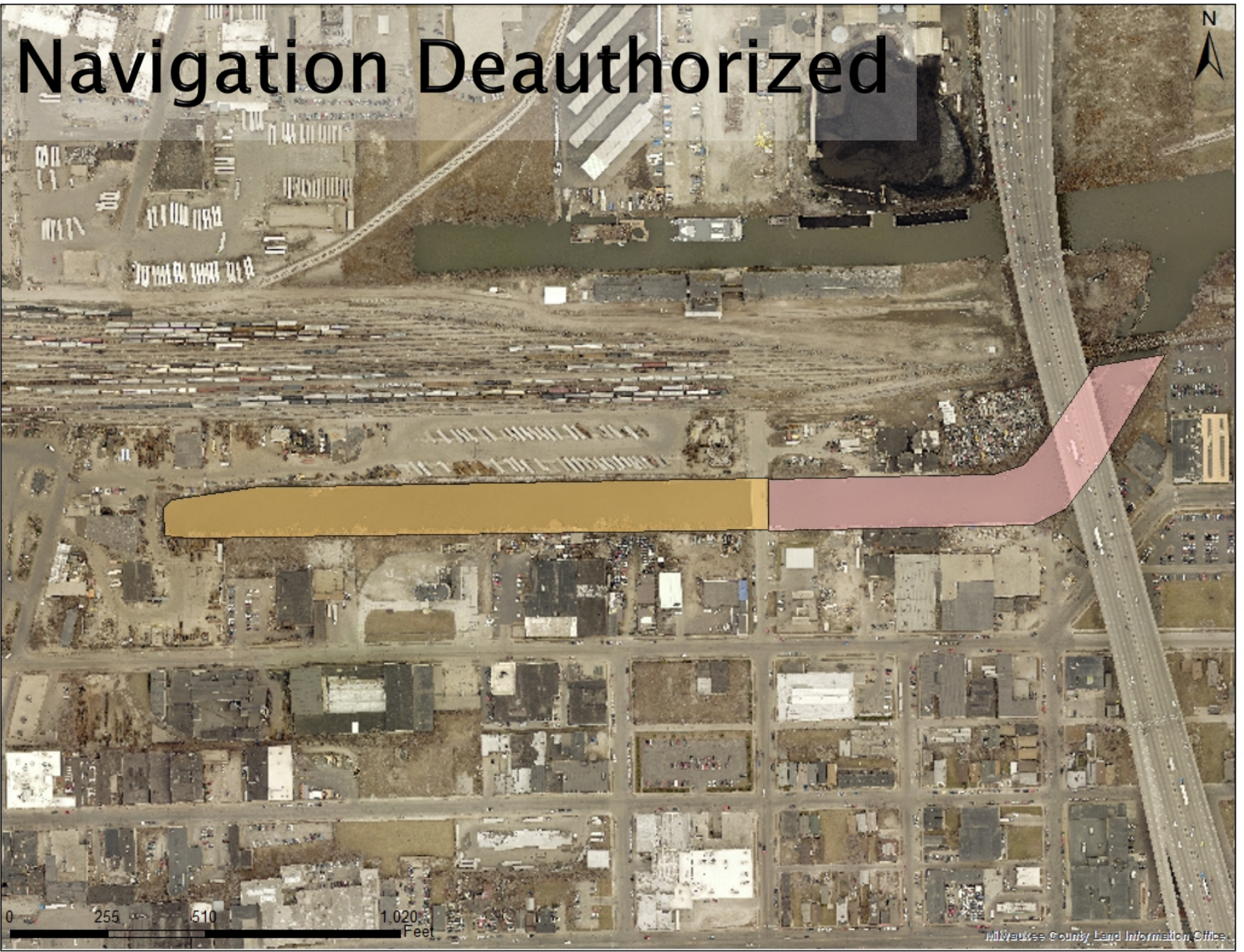
1872 Milwaukee



Menomonee Valley



Navigation Deauthorized



0 255 510 1,020 Feet



West End



0 255 510 1,020 Feet

Superfund Alternative Site – Sediment Contamination

- ▶ Metals: cadmium, chromium, copper, lead, mercury, nickel, silver, zinc
- ▶ Polycyclic aromatic hydrocarbons
- ▶ Harm to benthos
- ▶ No harm to public health
- ▶ Record of Decision in 2011
- ▶ USEPA approved remedial design

Miller Compressing

- ▶ Cooperating responsible party
- ▶ Metal recycler
- ▶ Predominant landowner west of 11th Street
- ▶ Wire reclamation furnace
 - Western end of canal
 - 1970s and 1980s



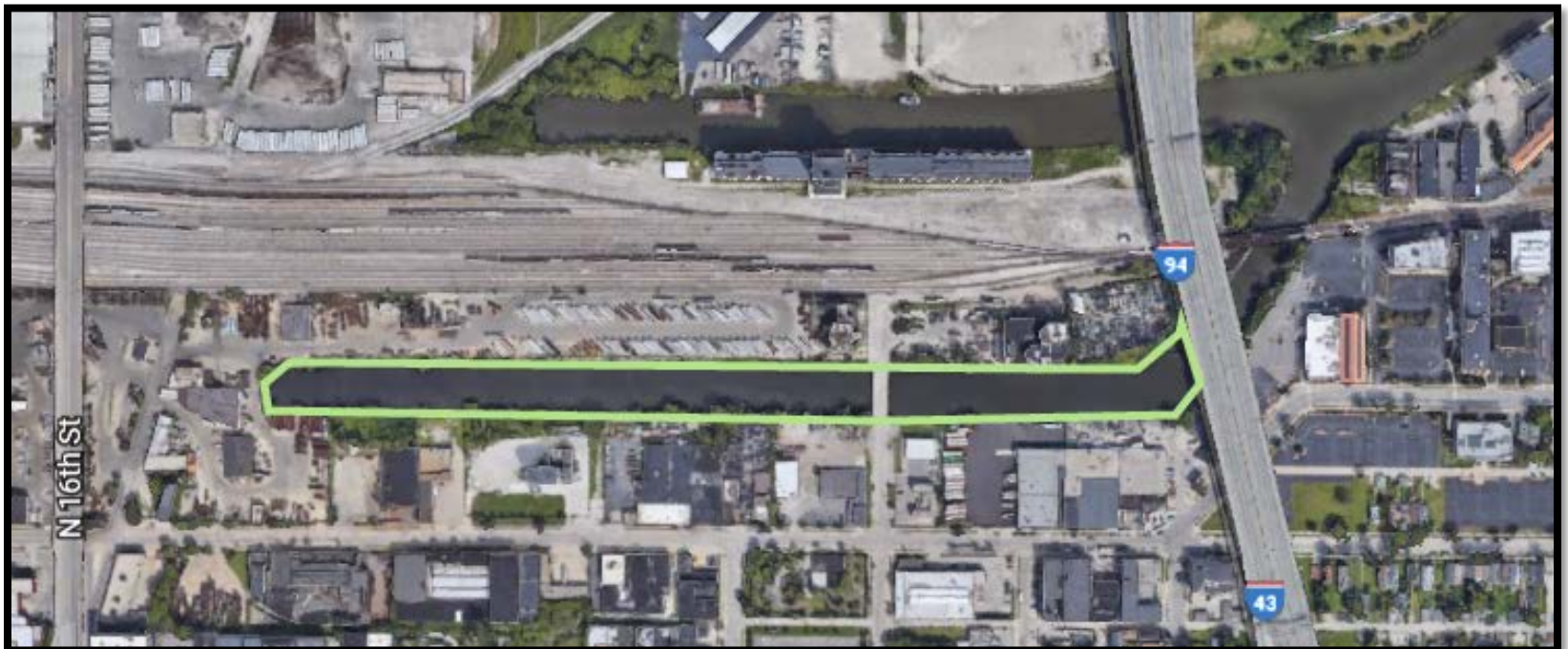
Remedial Action

- ▶ West end excavation
 - Soil
 - Sediment
- ▶ 12 inch cap on sediment west of 11th Street
- ▶ Nothing east of 11th Street
- ▶ Limited habitat improvement



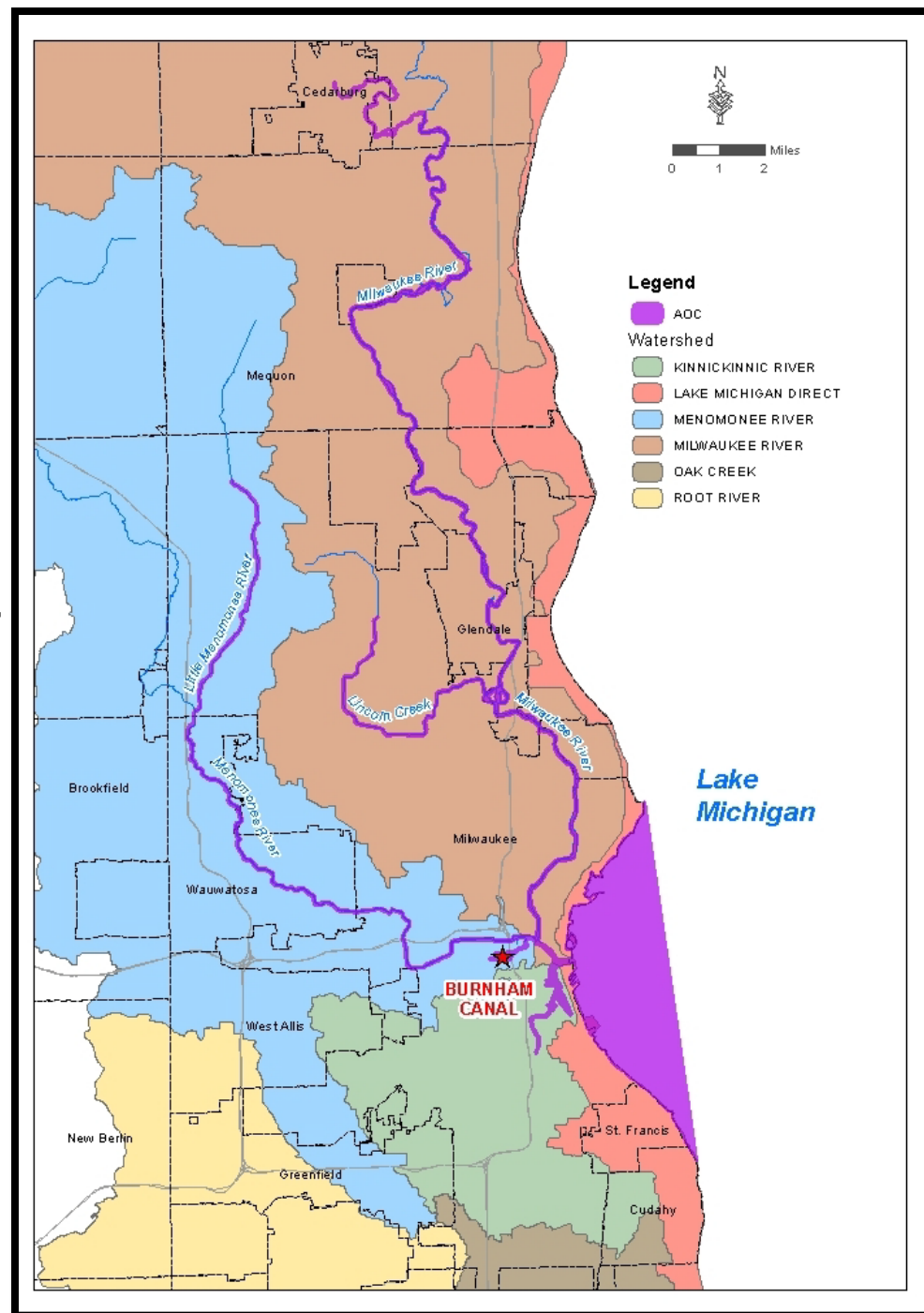
Proposed Wetland Project

- ▶ Extend cover to the east
- ▶ Increase depth of cover
- ▶ Establish emergent vegetation
- ▶ Incorporate habitat benefits



Benefits AOC

- ▶ Caps contaminated sediments
- ▶ Improve aquatic habitat
 - Enhance fish spawning opportunities
 - Improve conditions for Benthos
- ▶ Enhance/improve terrestrial, semi-aquatic or riparian habitat
- ▶ Improve terrestrial riparian habitat connectivity



Existing Canal (2012)



Burnham Canal Remediation/Ecosystem Restoration Design

Artistic Rendering

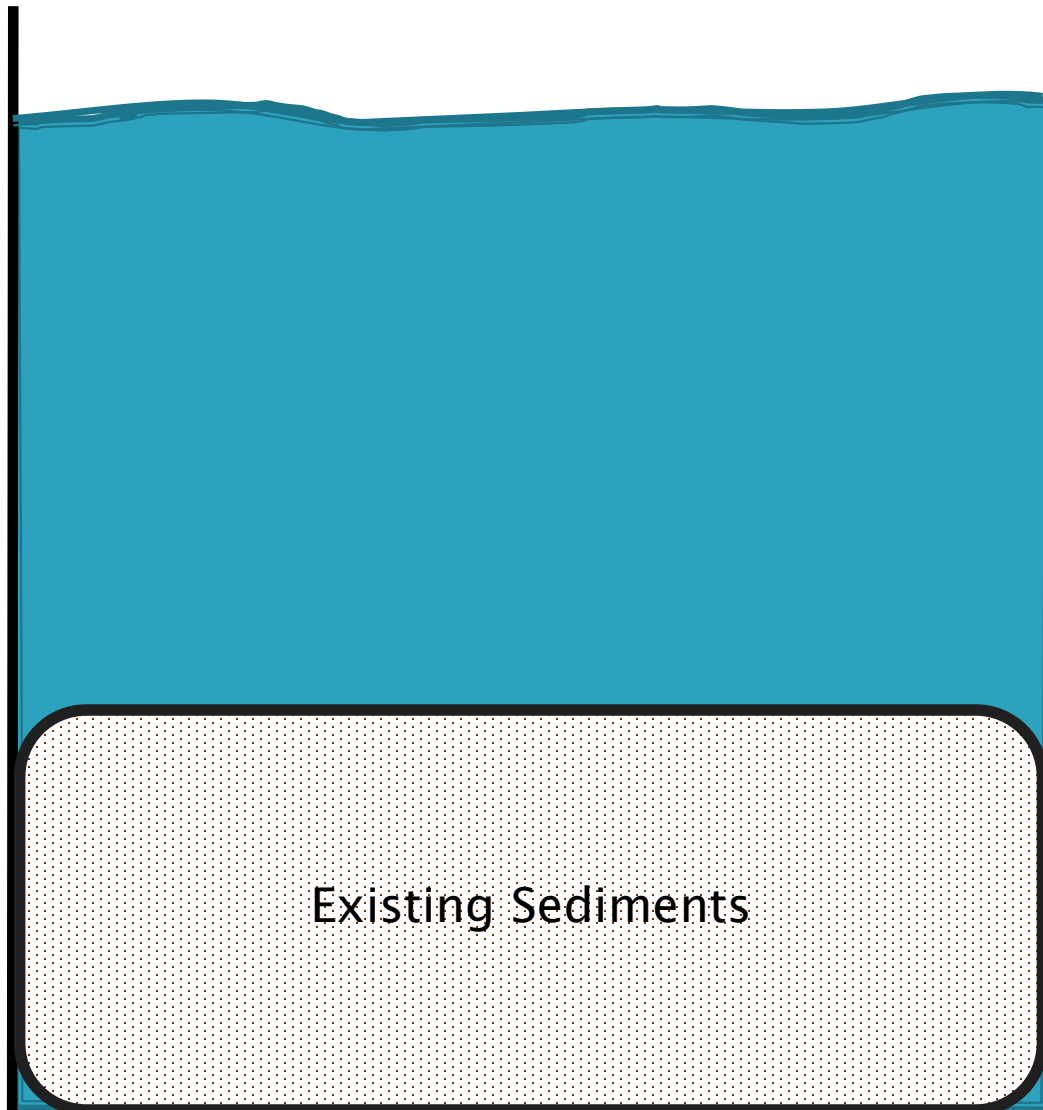


Artist: Ricardo J. Garcia-Diaz

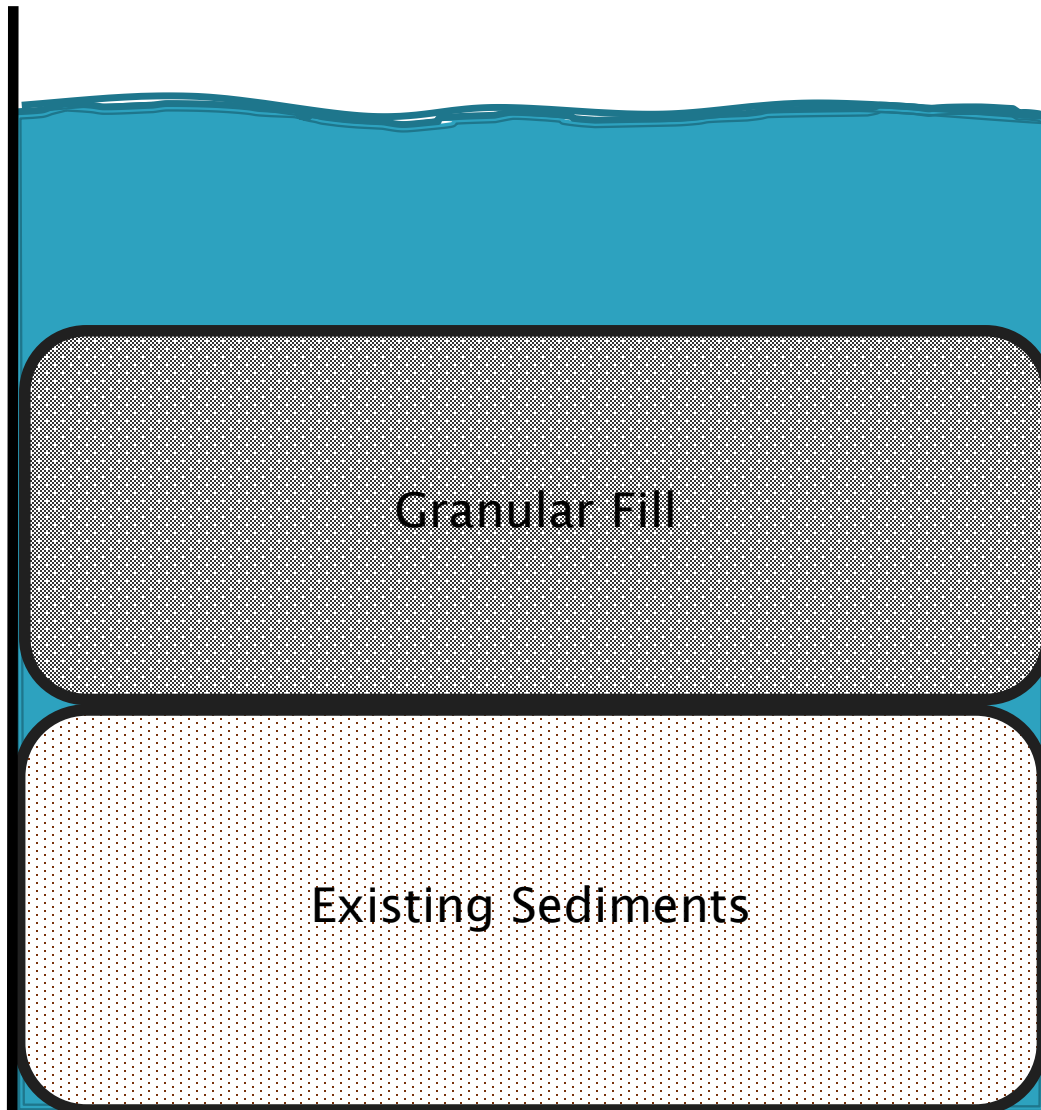
Project Constraints

- ▶ Bulkheads (i.e. dock walls) are old and many are in poor condition
 - Cannot dewater canal
- ▶ Fill:
 - Need granular material to fill in wet
 - Local soils are primarily clay
- ▶ Thick layer of weak, compressible sediments
 - 2–3 year settlement period required following fill placement
- ▶ Deep outfalls must be maintained

Wetland Base Construction



Wetland Base Construction



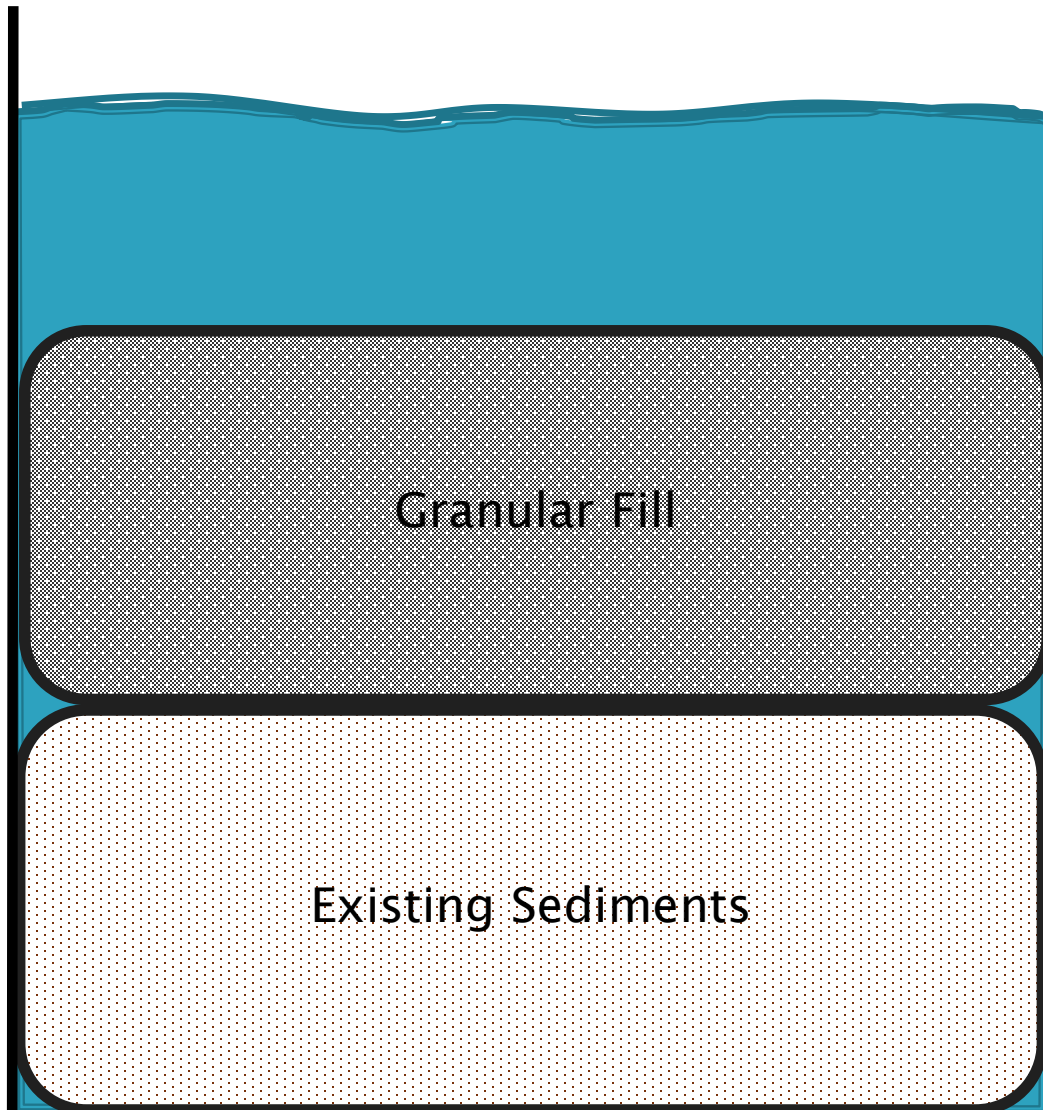
Wetland Base Construction



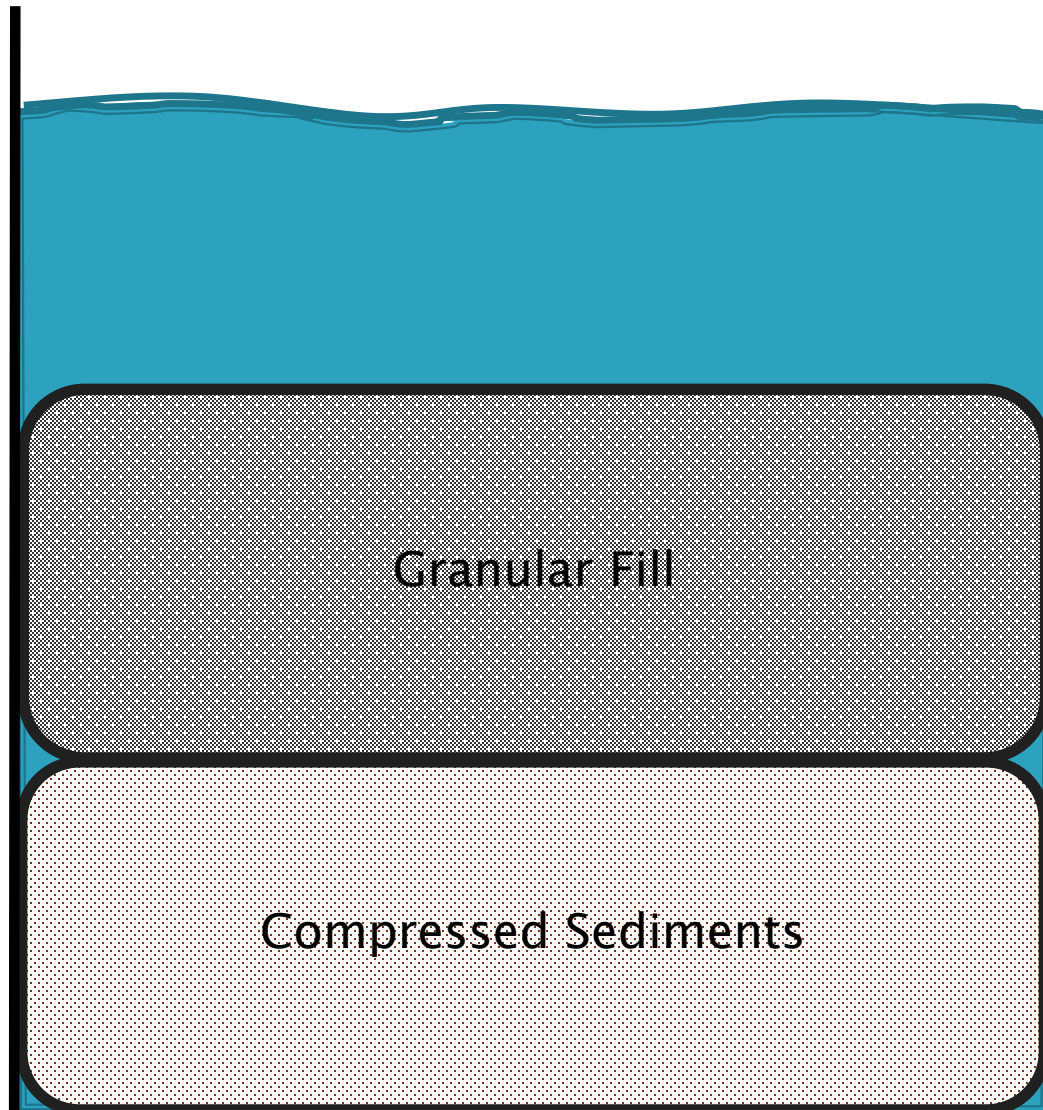
Miller Compressing Corp

MMSD

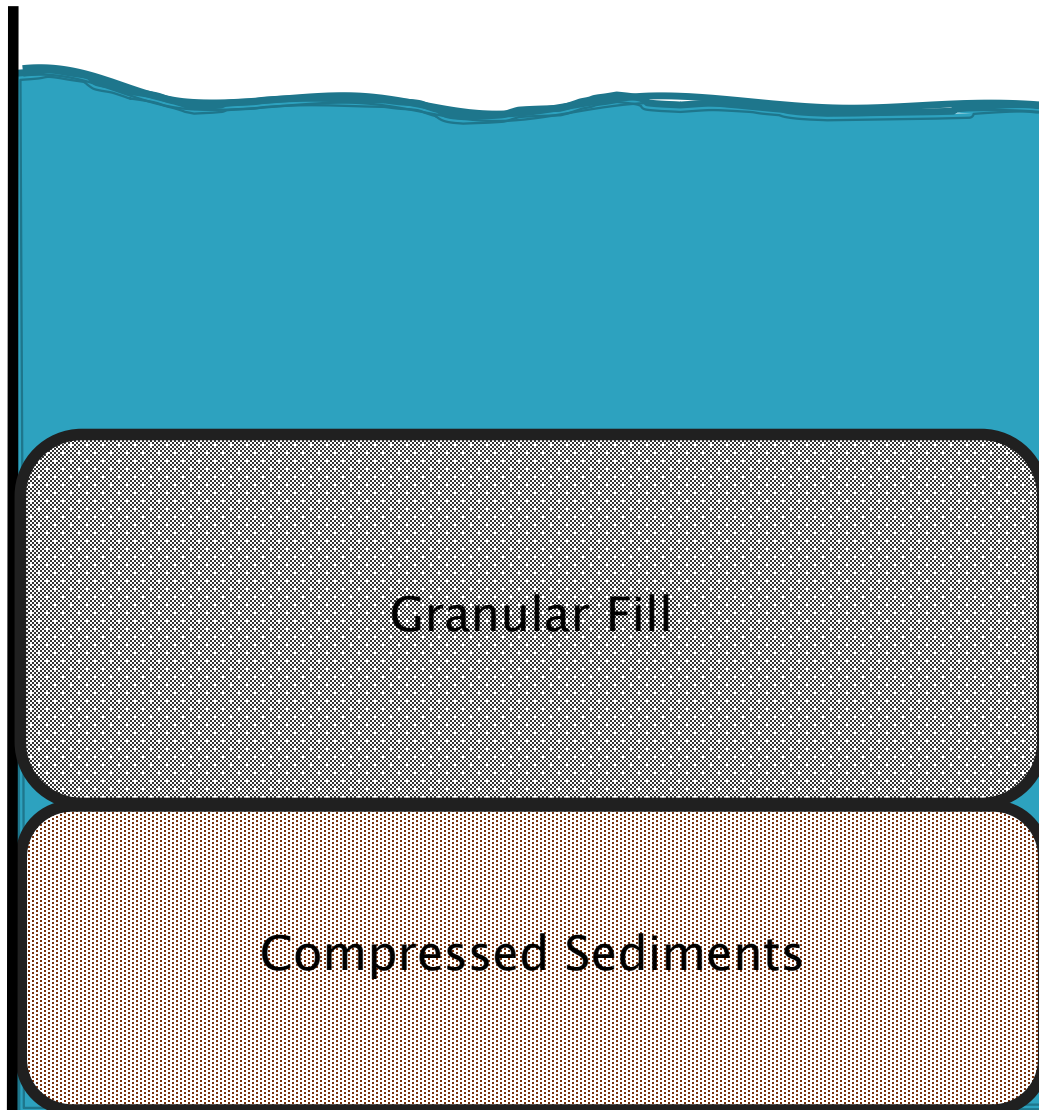
Wetland Base Settlement



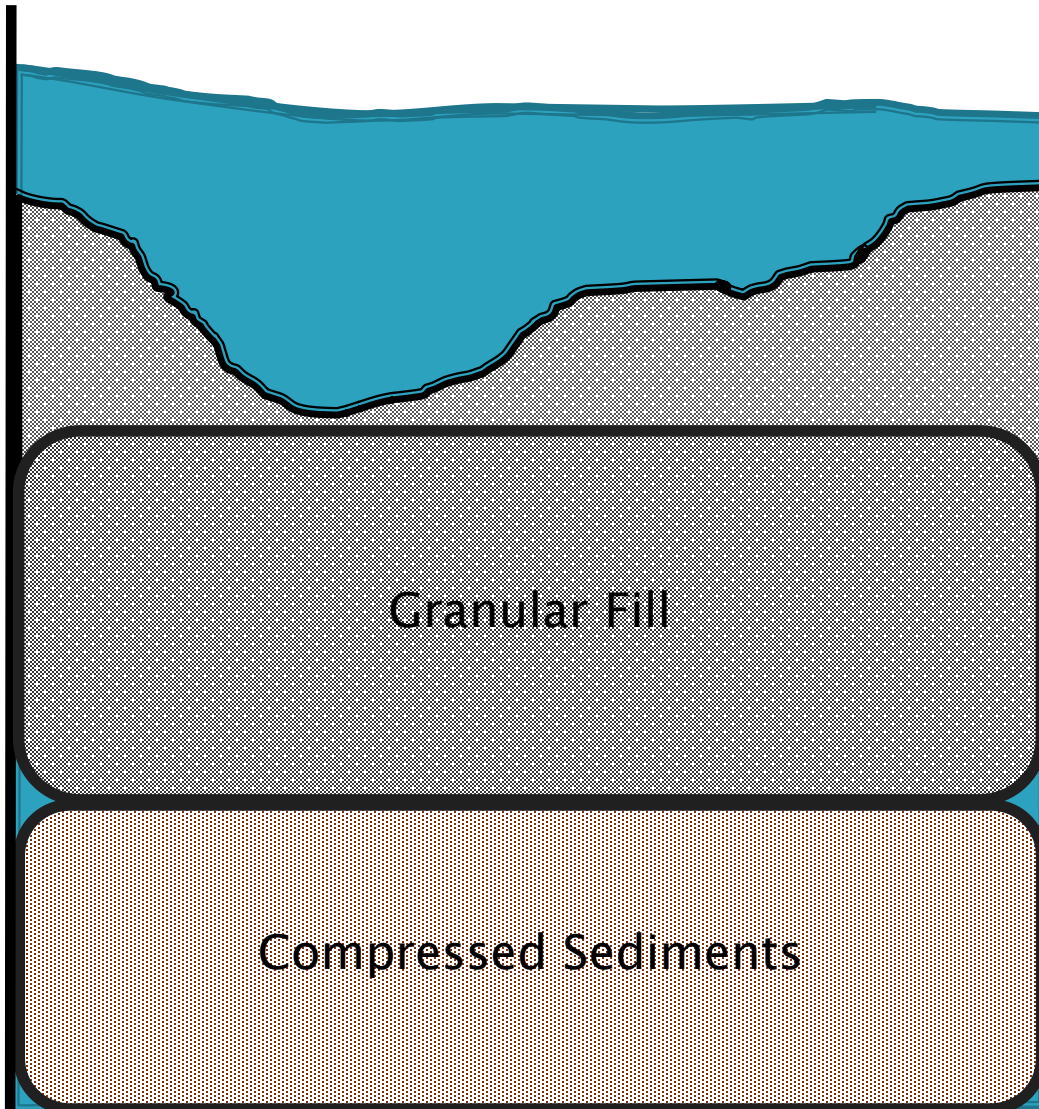
Wetland Base Settlement Year 1



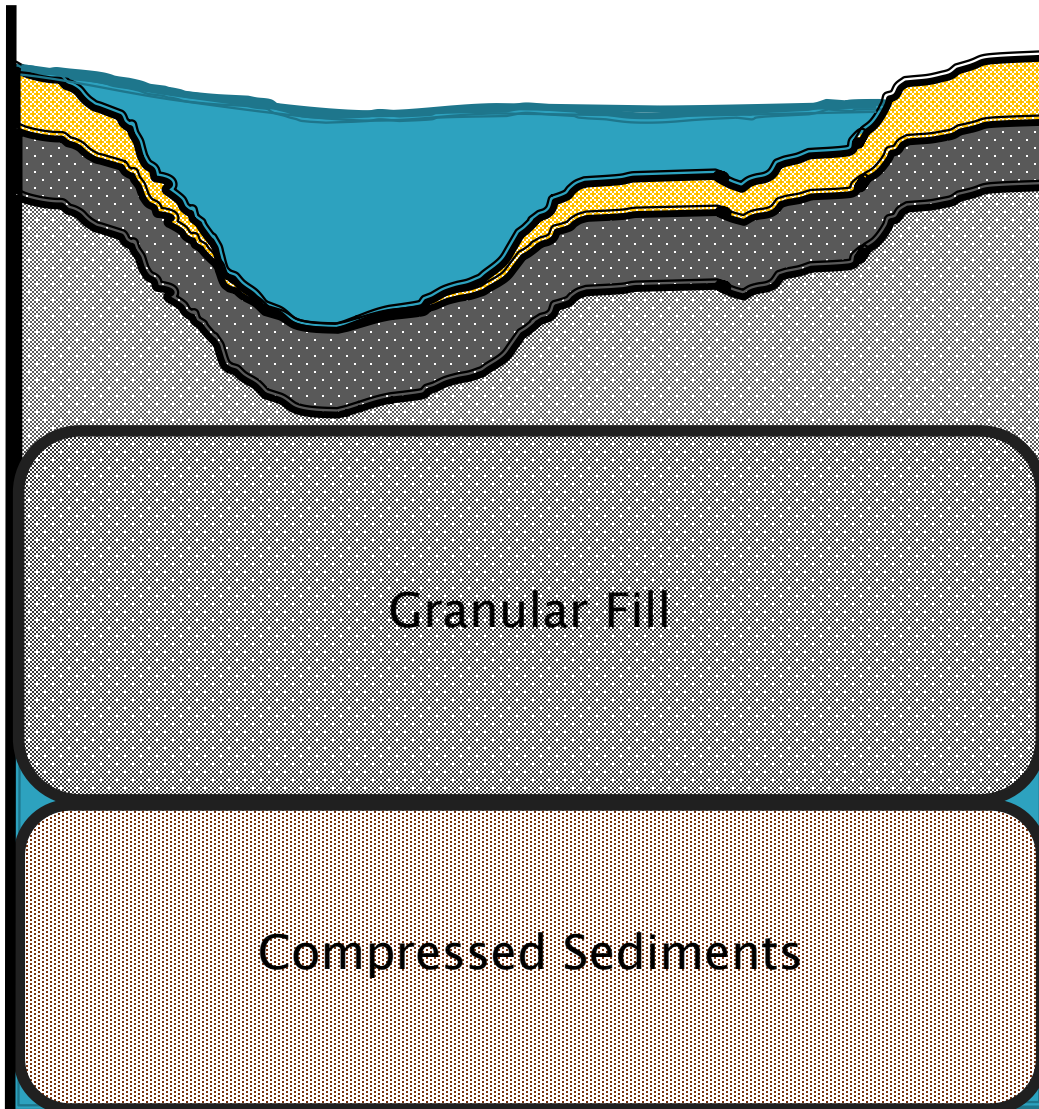
Wetland Base Settlement Year 2



Wetland Construction



Wetland Construction



Burnham Canal Remediation/Ecosystem Restoration Design

Phase II, Artistic Rendering



Artist: Ricardo J. Garcia Diaz

Schedule

- ▶ Wetland Base Construction (MCC & MMSD):
Summer/Fall 2020–2021
- ▶ Monitor Settlement: 2022–2024
- ▶ Wetland:
 - Construction: 2025–26
 - Establish Vegetation: 2026–2031

Budget & Funding

- ▶ Total Project Costs (MMSD/WDNR Portion): \$8M
 - Wetland Base east of S. 11th Street
 - Wetland throughout canal
 - 3–5 year vegetation establishment period
- ▶ Design funded and developed by USACE
- ▶ Funding for wetland base construction east of S. 11th Street – Provided by USEPA (GLRI)
- ▶ MMSD/WDNR will request future funding from USEPA for wetland construction