



Fox River Remedy Implementation Overview and Key RA Metrics (OU1 and OUs 2-5)


Presented by
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OU 1



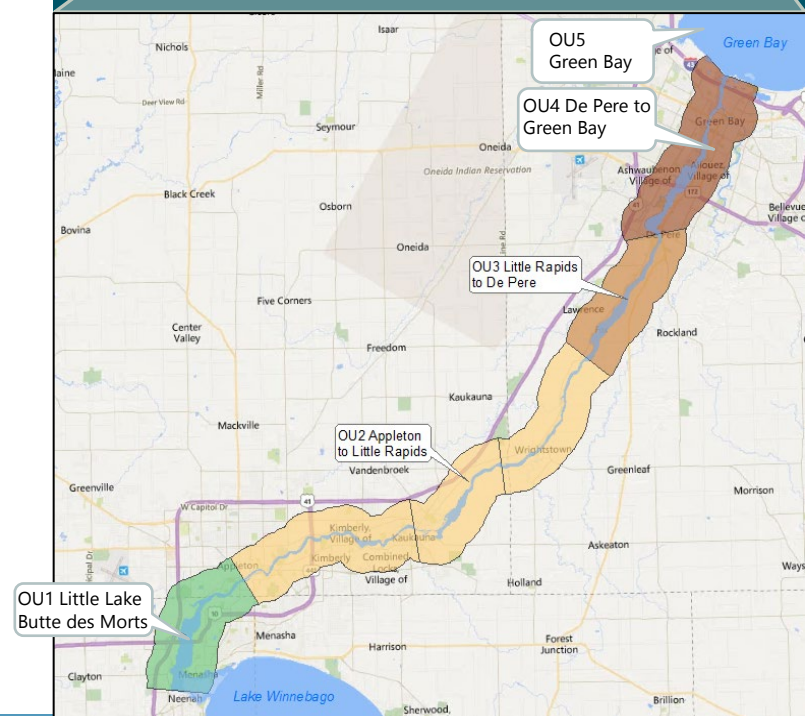


OU2-5

History and Background

History and Background

- Lower Fox River (39 miles)
 - OU1 Lake Winnebago to Appleton Dam (including all of Little Lake Butte des Morts)
 - OUs 2-4 Located between Appleton and Green Bay, Wisconsin
 - OU 5 Green Bay (Lake Michigan)
 - Clients
 - GW Partners (OU1)
 - Lower Fox River Remediation LLC (OU2-5)
 - Agencies/Oversight Team
 - USEPA, WDNR, Contractors
- History
 - Home to 24 historical and active paper and pulp mills
 - PCBs released into river between 1950s and 1970s
 - Fish advisory since 1976



History and Background



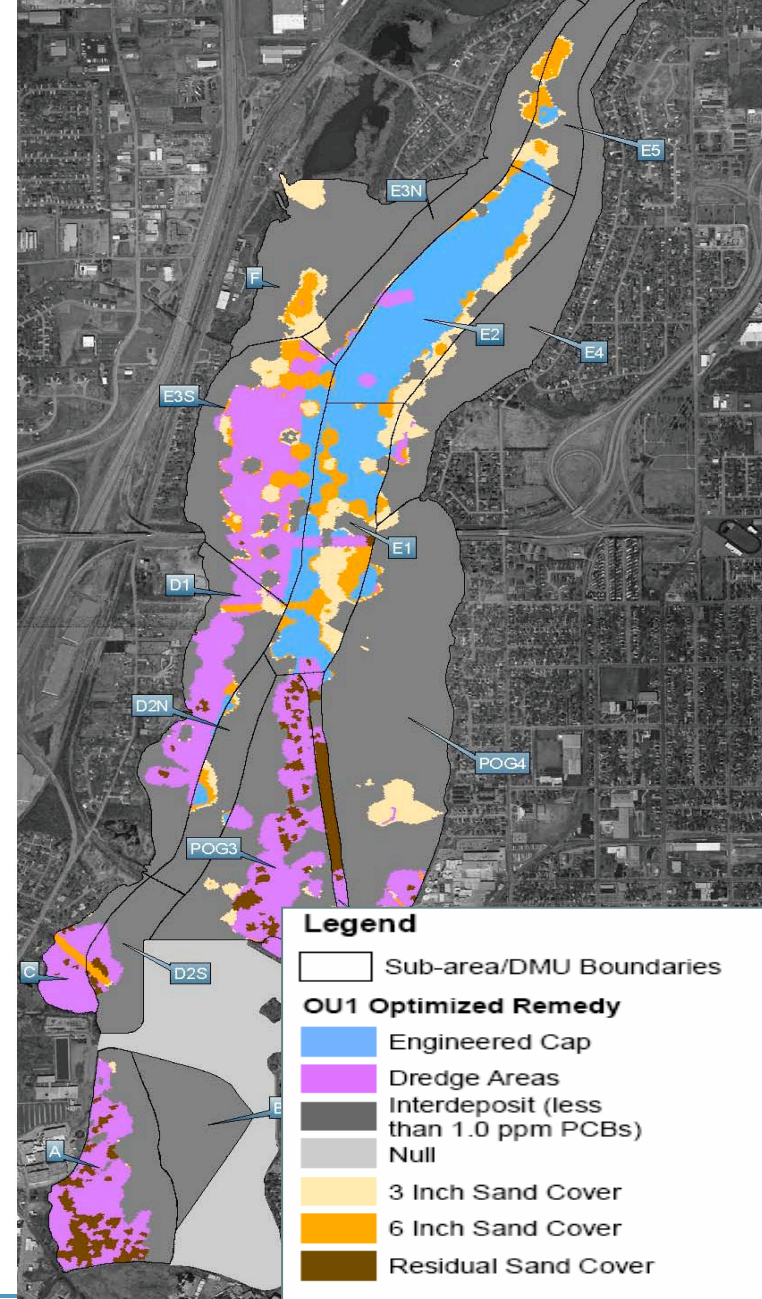
Source: University of St. Thomas, Google Image Search, 2018

- Remediation of the Lower Fox River
 - OUs 1 and 2 Record of Decision (ROD) issued in 2002
 - OUs 3-5 ROD issued in 2003
 - OU 1 ROD Amendment issued 2008
 - OUs 2-5 ROD Amendment issued in 2007

OU 1 History and Background

Contracting Method

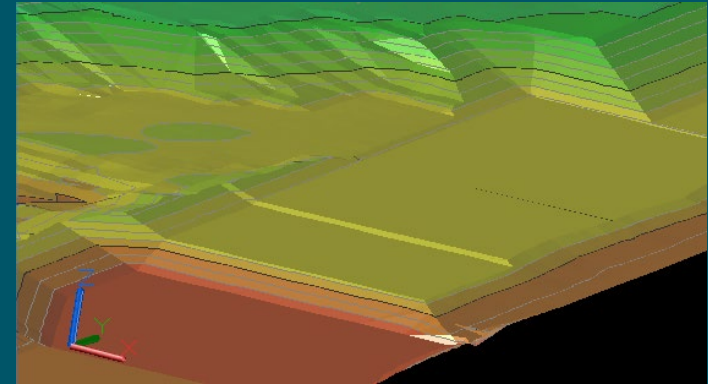
- Design-Build, transferring to Design, Bid, Build
- Lead Contractor : CH2MHILL, transferred to JF Brennan
- Engineering: Foth & CH2MHILL
- Dredging: J.F. Brennan
- Sediment Processing: Infrastructure Alternatives
- Water Treatment: CH2MHILL
- Quality Assurance: Foth



OUTs 2-5 History and Background

Contracting Method

- Design-Build
- Lead Contractor
 - Tetra Tech EC, Inc.
- Subcontractors
 - Construction: J.F. Brennan Marine
 - Sediment Processing: Stuyvesant Projects Realization, Inc. (SPRI)
 - Engineering: Anchor QEA, LLC, Tetra Tech CES
- Quality Assurance
 - Foth



OU 1 Remedial Action Timeline

- Initiated design of sediment dewatering pad and water treatment system in 2003
- Completed construction of sediment dewatering pad and water treatment system and began in-river work in August 2004
- Completed dredging work in June 2008
- Completed capping work in May 2009



OUs 2-5 Remedial Action Timeline

- Initiated design of Sediment Processing Facility : 3/2008
- Completed construction of Sediment Processing Facility and began in-river work : 4/28/2009
- Completed remediation of OU2 : 2009
- Completed remediation of OU3 : 2011
- Complete remediation of OU4/5 : July, 2020

Key Remedial Action Metrics

Production Activity	OU1	OUs 2-5
Production Days for In-river Operations	N.D.	1,600 non-TSCA 44 TSCA
MGP Impacted Sediment Mechanically Dredged (in-situ cy)	NA	31,465
Filter Press Drops	NA	183,111
Non-TSCA and MGP Waste Disposal (short tons)	355,292	3,334,354
TSCA Waste Disposal (short tons)	3,756	80,340
Water Treated and Discharged (10 ⁶ gals)	N.D.	8,776.7
PCB Mass Removed (lbs)	1,826	TBD
Final Post-Remedy SWAC (ppm)	0.23	TBD

ND = not determined; NA = not applicable; TBD = to be determined

Key Remedial Action Metrics

Production Activity	OU1	OUs 2-5
Dredging (in-situ cy)	368,100 non-TSCA 3,425 TSCA	5.875 million non-TSCA 115,348 TSCA
Engineered Caps, Primary Remedy (acres)	114	146.5
Engineered Caps, Residual (acres)	NA	8.7
Special Remediation Area Caps (acres)	NA	9.04
Shoreline Caps (acres)	NA	0.54
Sand Covers, Primary Remedy (acres)	107	107.8
Sand Covers, Residual (acres)	36.5	510.2

NA = not applicable

Remedial Action Equipment









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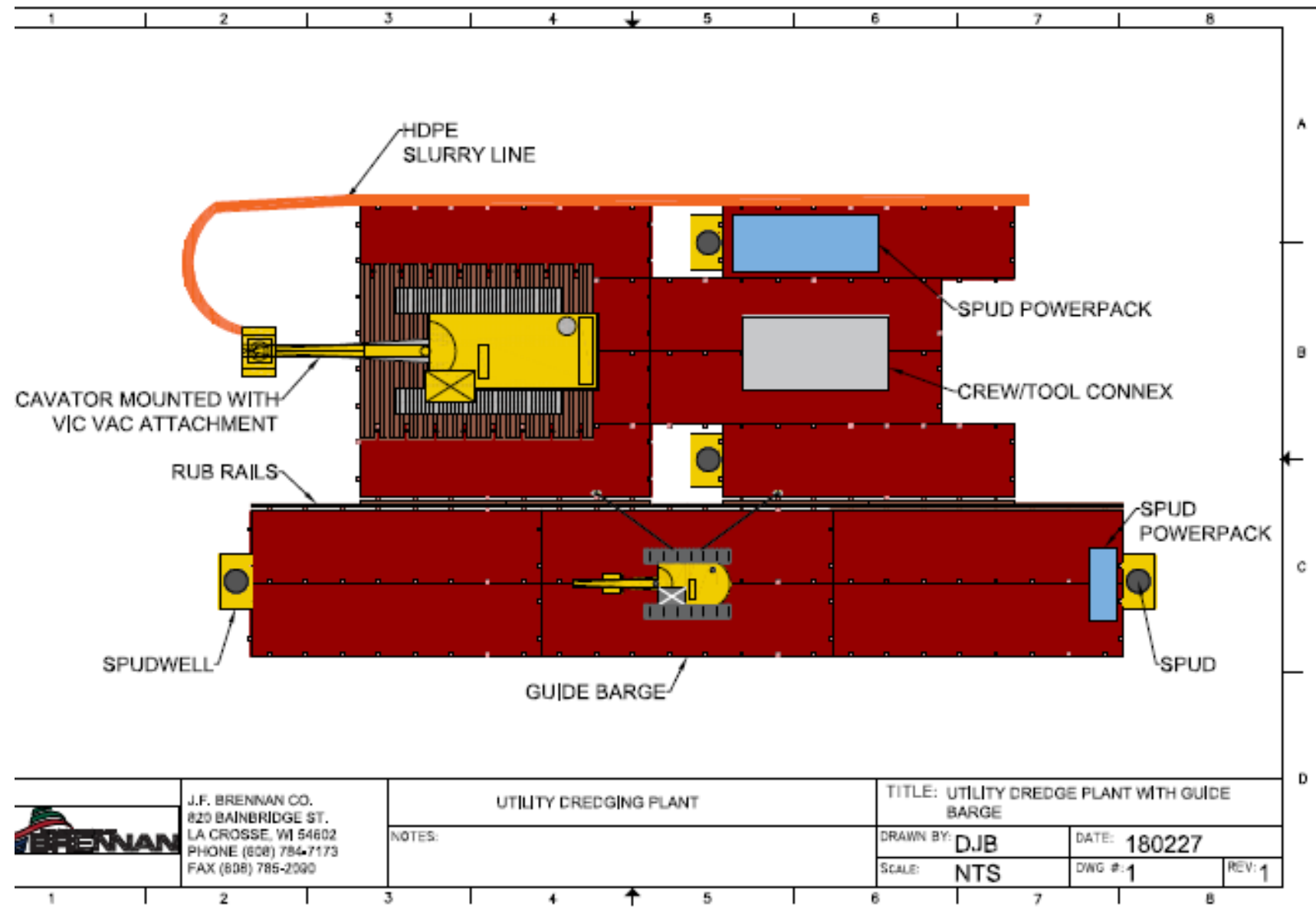




Fox River
Engineered Cap Design









Field Locating and Remediation Above Submerged Utilities



Source: J.F. Brennan, 2017

J.F. Brennan's VIC VAC™ includes flexible agitating tines to allow for increased productivity in areas of dense sediment



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Questions

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