



Terry Creek Dredge Spoils/Hercules Outfall

Operable Unit 1: Outfall Ditch



Brunswick, GA



Introductions

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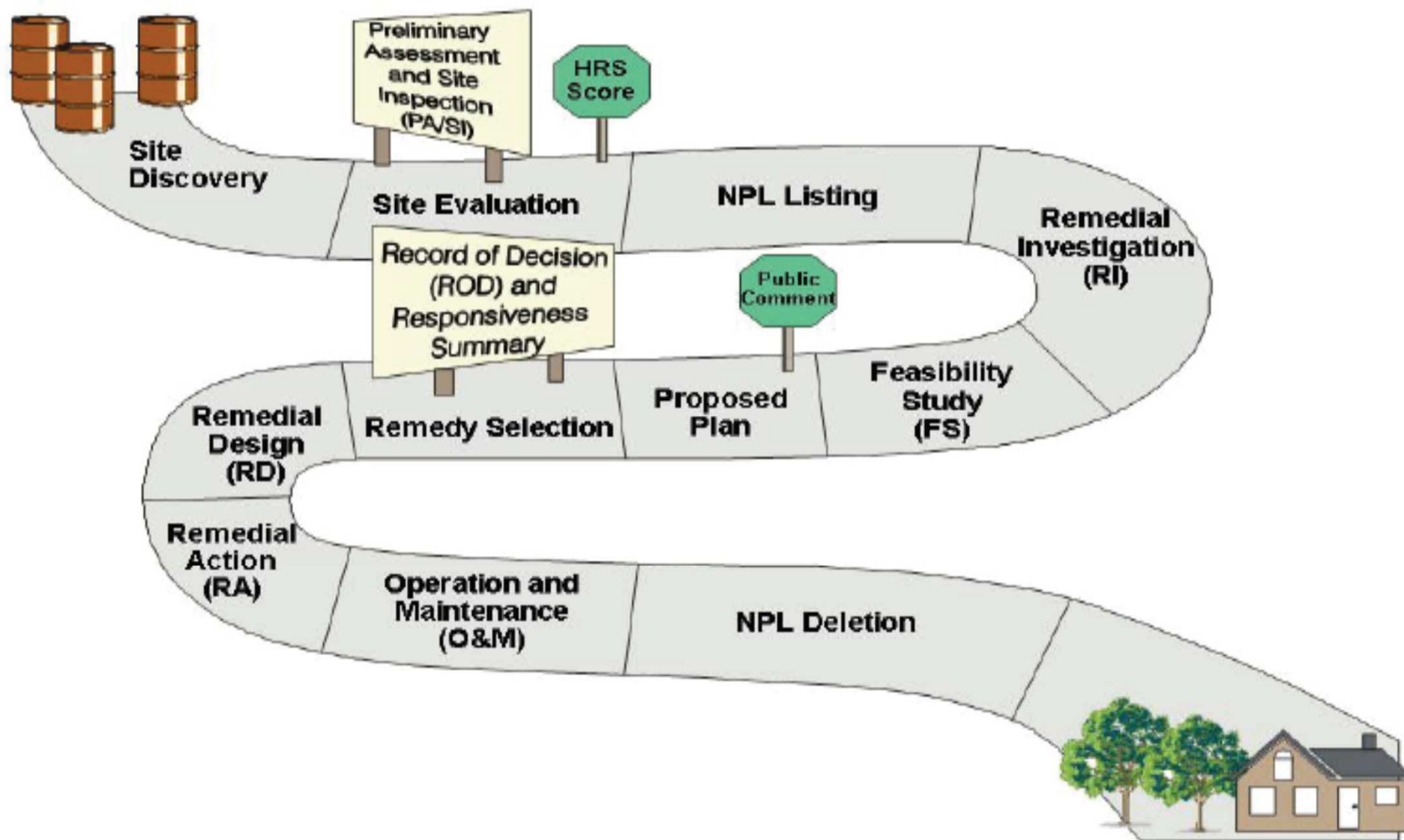
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Superfund Remedial Process





Terry Creek Dredge Spoils Site Brunswick, GA

- The Site is large and complex and consists of 3 operable units:
 - OU1: Outfall Ditch
 - OU2: Dredge Spoils and Upland Soils
 - OU3: Terry and Dupree Creeks
- The Consent Decree is only for the interim action at OU1: Outfall Ditch
- OU2 Dredge Spoils and OU3 Terry and Dupree Creeks separate actions and RI/FS to be performed for each



Site History

- Hercules produced toxaphene between 1948 to 1980 and it was banned in 1990
- Wastewater was discharged to the Outfall Ditch from 1948 to 1972
- A wastewater treatment plant was installed in 1972
- USACE conducted dredging during the 1970s and 1980s creating the 3 dredge spoils areas
- Site proposed to the NPL in 1997
- EPA oversaw sediment dredging removal actions in 1999 to 2000
- 9 fish sampling events from 1997 to 2017
- Fish consumption guidelines have been put in place by GA Dept. of Natural Resources
- Facility currently operating as Pinoa



Community Participation

- Proposed Plan for Operable Unit 1 - Issued in June 2015
- OU1 Proposed Plan Public Meeting held on July 30, 2015
- Public comments accepted from June 29 to September 11, 2015
- Public availability session and meetings with Glynn County and City of Brunswick on December 8, 2015
- Interim Record of Decision signed June 19, 2017
- May 3, 2018 – Public availability session for all sites in Brunswick
- Consent Decree for OU1 lodged on May 16, 2018, and 120 days public comment period until September 20, 2018



Toxaphene

- Used as insecticide.
- Technical Toxaphene (TT) is comprised of hundreds of congeners.
- TT is quickly transformed in the environment, such that the mix of congeners and the concentrations of congeners are not the same as a laboratory standard of TT.
- Therefore, the weathered toxaphene no longer matches the analytical standard for TT.
- EPA developed a method, 8276, to analyze for individual toxaphene congeners which was used to sample sediment in Outfall Ditch during RI.
- Limited toxicity data for weathered toxaphene.

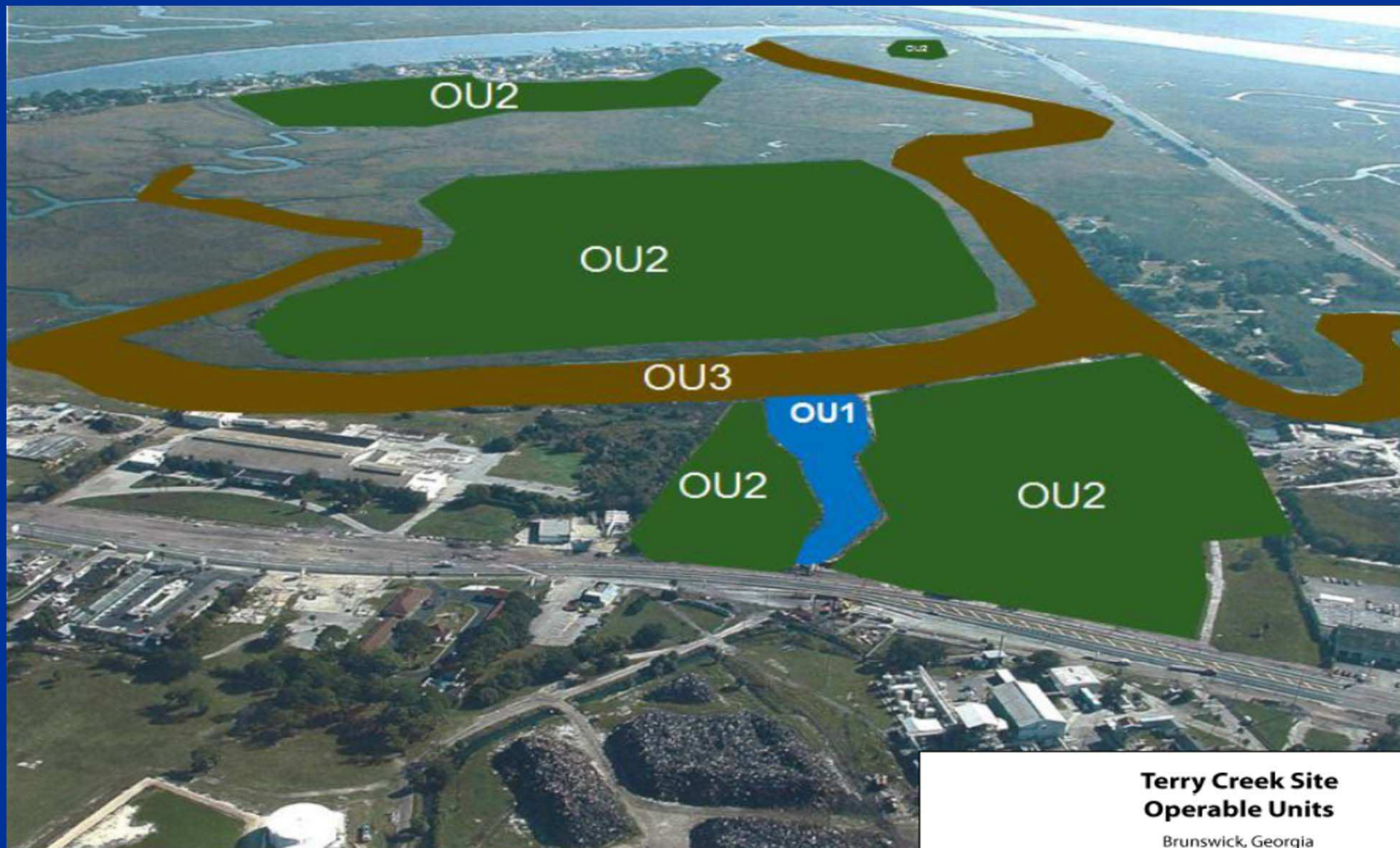


Site Detail





Operable Units



Terry Creek Site Operable Units

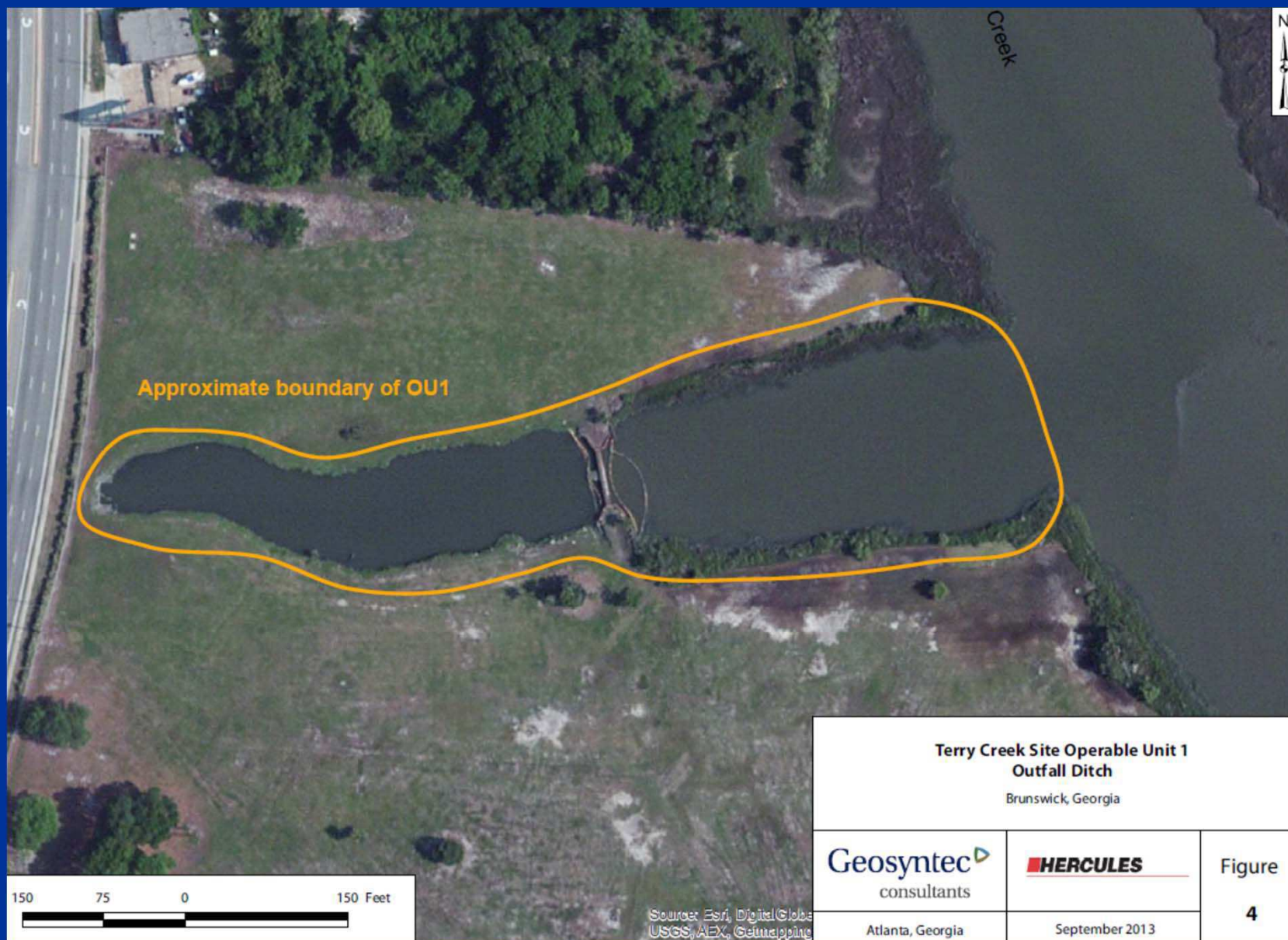
Brunswick, Georgia

Geosyntec
consultants
Atlanta, Georgia

HERCULES

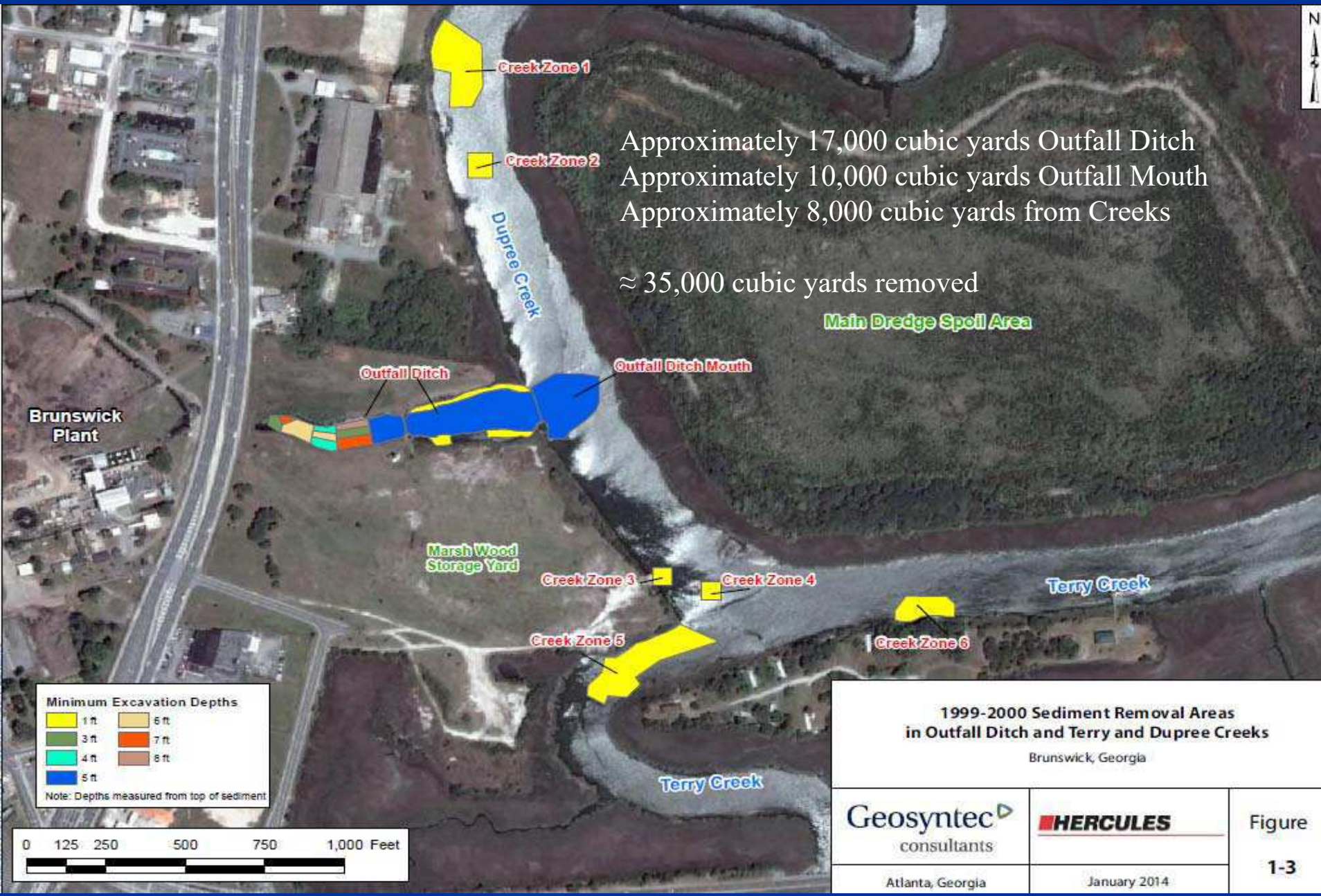


Operable Unit 1: Outfall Ditch





Previous Removal Action





EPA Selected Interim Remedy – June 2017

- Concrete-Lined Channel Re-Routed With Limited Sediment Removal:
 - Reroute the discharge into a new concrete lined channel parallel to Outfall Ditch
 - Excavate and dispose of sediment within triple box culvert
 - Removal of the existing weir
 - Place Geotextile fabric over existing sediment
 - Backfill the Outfall Ditch
 - Armoring of slope into Dupree Creek with riprap
 - Development of long term monitoring plan during Remedial Design to ensure the effectiveness of the interim remedy
 - Institutional Controls to prevent unauthorized disturbance of the soil cover and other remedy components



Revisions Based On Public Input

- An interim remedy was selected instead of a final remedy
- Modified the environmental covenant to be less restrictive to encourage redevelopment
- Required the development of a long term monitoring plan during the Remedial Design to evaluate the effectiveness of the interim remedy



Conceptual Drawing of Interim Remedy





Example New Ditch





Purpose of a Consent Decree

- To expedite remedial actions and minimize litigation to save taxpayers money
- The participation by a PRP in a Consent Decree shall not be considered an admission of liability pursuant to Section 122 of CERCLA
- Whenever practicable and in the public interest, the EPA shall facilitate agreements for the performance of a response action
- Agreements for the performance of remedial action must be documented in a Consent Decree and lodged in the appropriate U.S. District Court
- At least 30 days before any Consent Decree may become final, notice of the proposed settlement must be published in the Federal Register providing the public an **opportunity to file written comments relating to the proposed settlement**



Terms of Proposed Consent Decree

- Performance and funding by Hercules of all actions required by OU1 Interim Record of Decision (estimated to be approximately \$4,488,450)
- Timelines for performance of Work are contained in the Statement of Work
- Payment of all past unrecovered response costs at the Site (\$153,009.48)
- Payment of all of EPA's oversight costs relating to implementation of the OU1 interim remedy (estimated to be approximately 10% of the remedy costs)
- Provide liquid financial assurance to fund the Work (\$4,488,450) to guarantee Work will be completed
- Total savings to the taxpayer – estimated to be approximately \$5,090,304.48



Consent Decree

- June 19, 2017 - Interim Record of Decision OU1: Outfall Ditch
 - September 29, 2017 - EPA sent Hercules Special Notice Letter
 - January 3, 2018 - Hercules submitted good faith offer
 - May 16, 2018 - DOJ lodged Consent Decree
-
- CD comment period extended to September 20, 2018 for a total of 120 days
-
- Submit comments:

By email: pubcomment-ees.enrd@usdoj.gov

By US mail: Assistant Attorney General, U.S.
DOJ--ENRD, P.O. Box 7611
Washington, DC 20044-7611



RCRA Corrective Action at Facility

- Corrective action lead by GAEPD
- In 2010, Hercules performed remediation of the N-street ditch and SWMW-5
- Contamination beyond the facility boundaries is in the deep portion of the shallow aquifer
- Shallow wells offsite have been sampled and continue to be sampled under the current permit but have not shown evidence of contamination
- There are over 100 groundwater monitoring wells



New Science

- EPA Region 4 requested assistance from toxicologists at the National Center for Environmental Assessment (NCEA) as part of ongoing process to resolve technical issues for the site
- August 2018 - Provisional Peer-Reviewed Toxicity Value released
- A Provisional Peer-Reviewed Toxicity Value (PPRTV) is defined as a toxicity value derived for use in the Superfund Program.
- PPRTVs are derived after a review of the relevant scientific literature using established Agency guidance on human health toxicity value derivations.



EPA/690/R-18/002 | July 31, 2018 | FINAL

Provisional Peer-Reviewed Toxicity Values for Technical Toxaphene (CASRN 8001-35-2) Weathered Toxaphene, and Toxaphene Congeners



U.S. EPA Office of Research and Development
National Center for Environmental Assessment, Superfund Health Risk Technical Support Center (Cincinnati, OH)



Toxicity Values for Toxaphene

Toxicity data are available for:

- Carcinogenic toxicity value for technical toxaphene (IRIS)
- Non-cancer reference dose for technical toxaphene (PPRTV)
- Non-cancer reference dose for weathered toxaphene (PPRTV)

Toxicity data that are NOT available:

- Carcinogenic toxicity value for weathered toxaphene
- Toxicity values for specific toxaphene congeners
- The PPRTV did not address potential ecological toxicity



Use of the PPRTV

- PPRTV provides some toxicity values that can be used in risk assessments and to develop clean-up goals for toxaphene and weathered toxaphene
- Application of the PPRTV at this site will require resolution of additional technical issues, such as determining the best analytical method(s) for analysis of “total toxaphene residues”, which will take some time
- The PPRTV does not change the protectiveness of the proposed interim action



Risk Assessment

- Human health risk assessment:
 - Contaminants present in sediment
 - Minimal risk for humans from direct exposure to sediment in ditch (trespassers/recreators)
 - a statistically significant concentration gradient with fish collected closer to the Outfall Ditch having higher body burdens of toxaphene residues
- Ecological risk assessment:
 - potential for unacceptable risks to ecological receptors from direct contact with sediment
 - reduction in downstream transport is expected to have a substantial net benefit to the overall health of the ecological community of the larger creek system



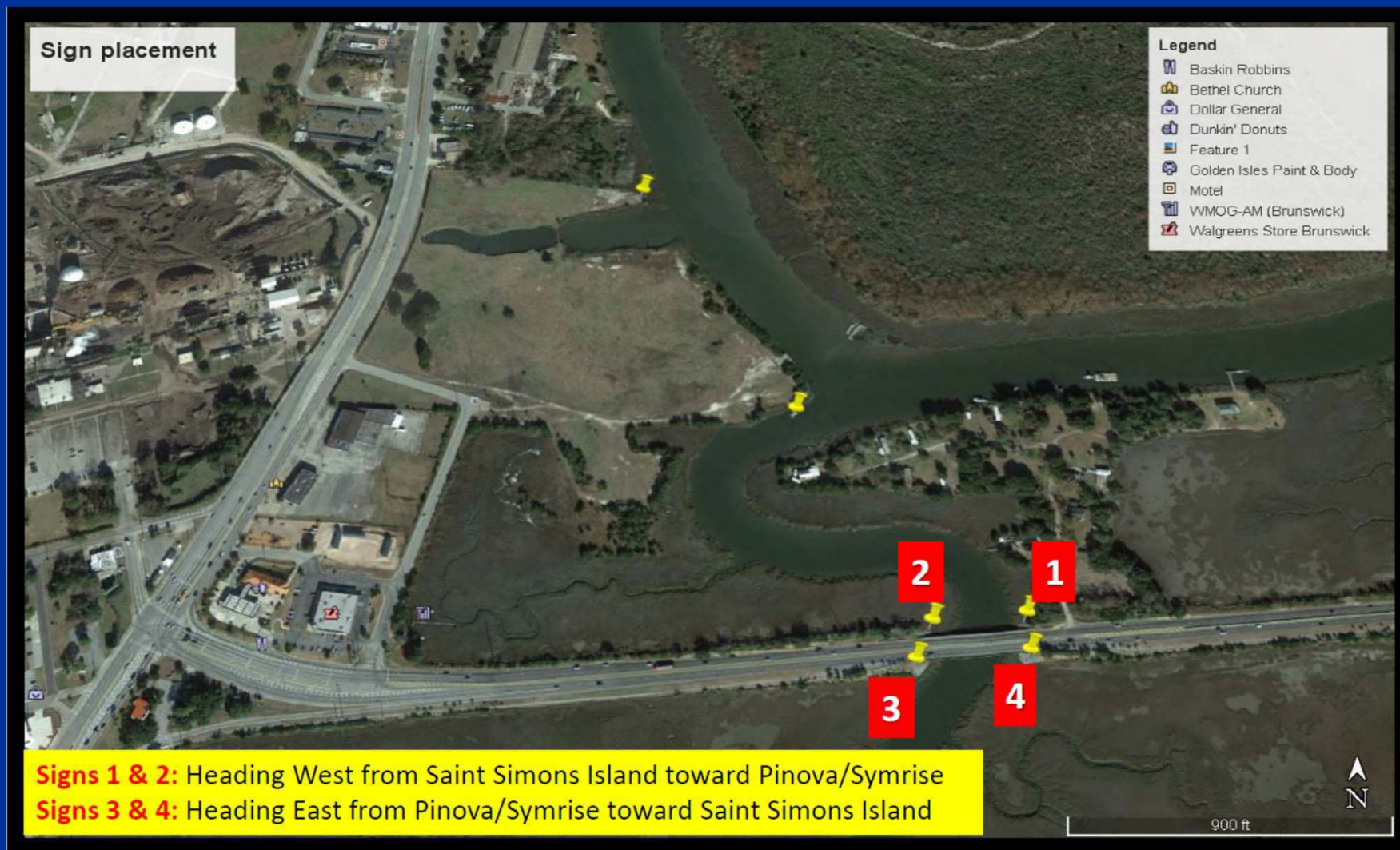


Fish Advisory Signs





Fish Advisory Signs





Site Contacts

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