

TRED AVON RIVER OYSTER SANCTUARY RESTORATION

Angie Sowers
USACE-Baltimore
25 July 2016

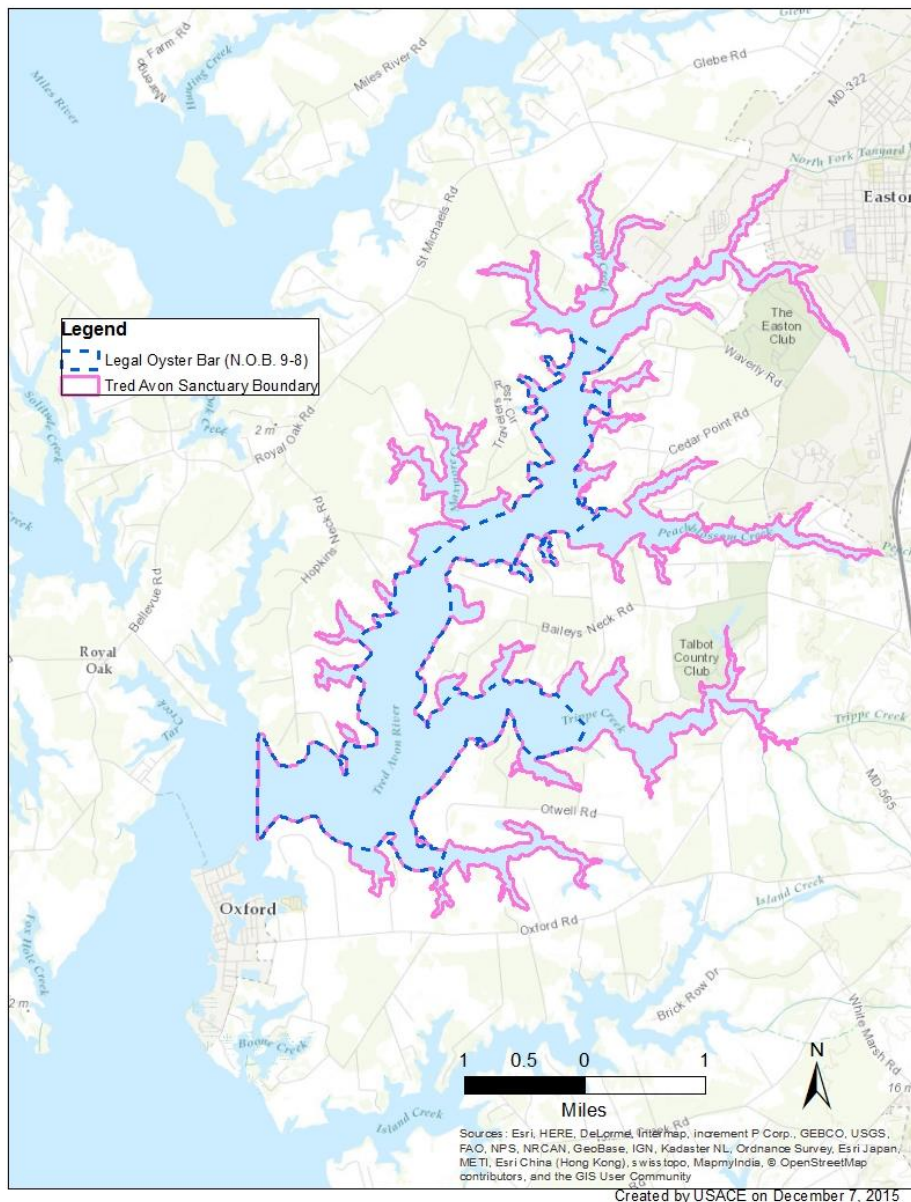
“The views, opinions and findings contained in this report are those of the authors(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other official documentation.”



**US Army Corps
of Engineers.**



TRED AVON RIVER OYSTER SANCTUARY



Previous efforts:

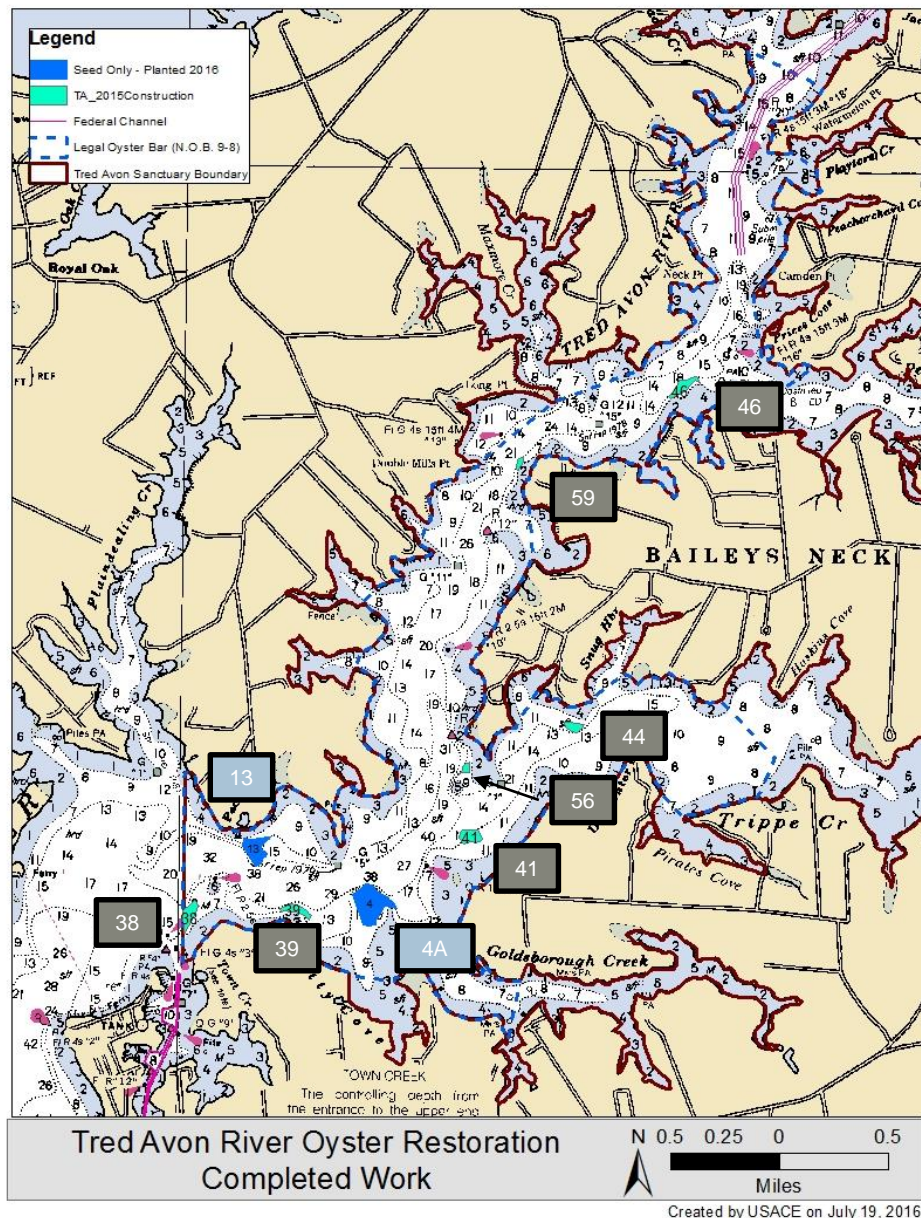
- Late winter 2015 – concerns raised over placement of alternate substrate
- Spring 2015 - series of meetings and site visits conducted with representatives from DNR, USACE, watermen, and Governor Hogan's office
 - Rock substrate shifted to Harris Creek project and mixed shell shifted to Tred Avon to minimize reef acreage constructed using rock in the Tred Avon
 - Agreement to proceed with 24 acres of alternate substrate reef restoration in waters > 9 ft MLLW
- June 2015 – mixed shell resources from Atlantic Coast become unavailable
 - 16 acres of reef completed
 - 8 acres incomplete
- December 2015 – request made to hold construction of remaining 8 acres until 5 year report released



US Army Corps
of Engineers.



COMPLETED WORK



Substrate Reefs

| Tributary Plan Location (Site ID # on map) | Size (ac) | Substrate Type | Substrate Planting Height (ft) | Year Planted |
|--|-----------|----------------|--------------------------------|--------------|
| SS_38 | 3.31 | rock | 1 | 2016 |
| SS_39 | 2.67 | mixed shell | 1 | 2016 |
| SS_41 | 3.44 | rock | 1 | 2016 |
| SS_44 | 1.75 | mixed shell | | 2015 |
| SS_46 | 3.29 | rock | 1 | 2016 |
| SS_56 | 0.80 | mixed shell | | 2015 |
| SS_59 | 0.74 | mixed shell | 1 | 2016 |
| <i>Total Acreage</i> | 16.01 | | | |

Seed Only Sites

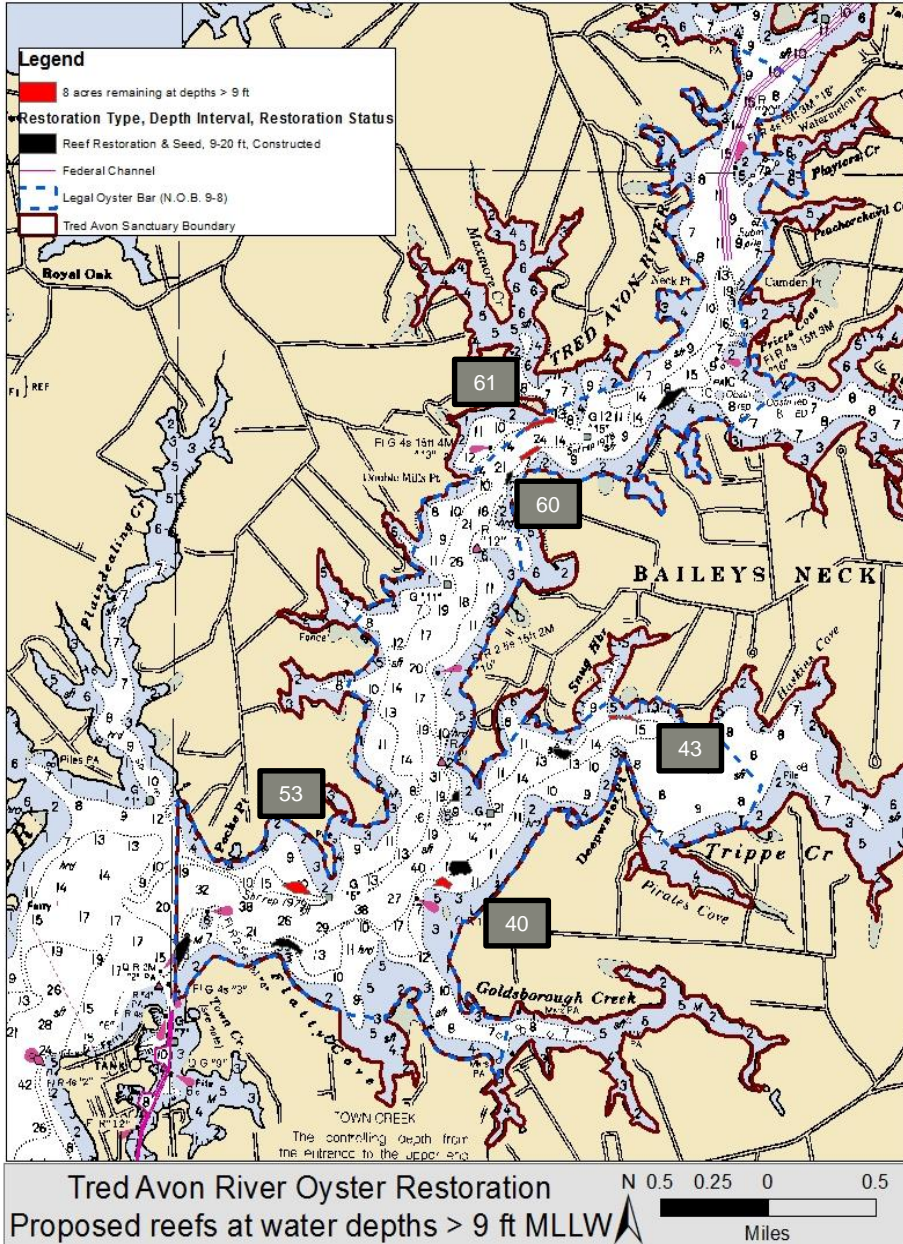
| Tributary Plan Location (Site ID # on map) | Size (ac) | Year Planted |
|--|-----------|--------------|
| SO_04A | 12.98 | 2016 |
| SO_13 | 5.94 | 2016 |
| <i>Total Acreage</i> | 18.92 | |



US Army Corps
of Engineers.



PROPOSED WORK



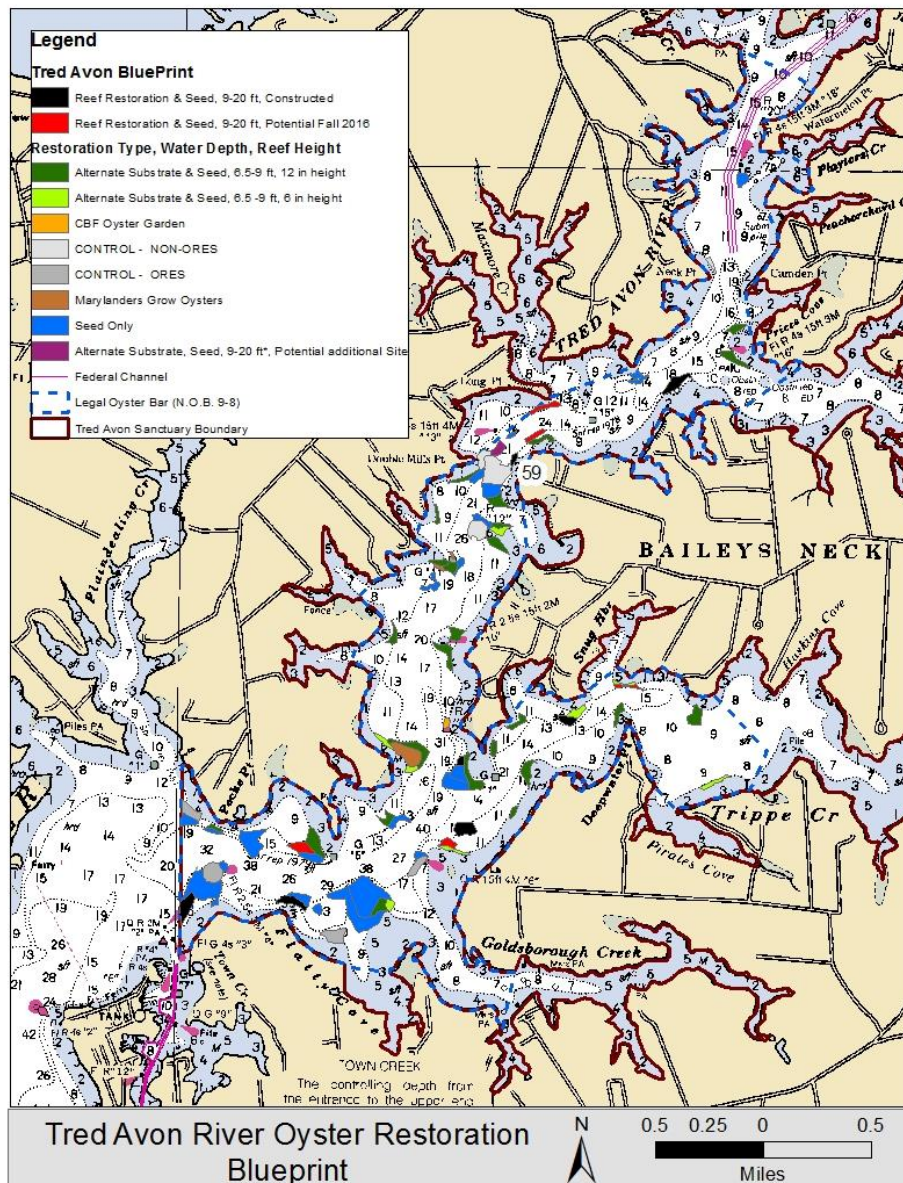
| Tributary Plan Location (Site ID) | Size in Acres | Substrate Type | Substrate Planting Height (ft) |
|-----------------------------------|---------------|----------------|--------------------------------|
| SS_61 | 1.90 | mixed shell | 1 |
| SS_60 | 1.32 | mixed shell | 1 |
| SS_40 | 1.37 | mixed shell | 1 |
| SS_53 | 2.63 | mixed shell | 1 |
| SS_43 | 0.81 | mixed shell | 1 |
| <i>Total acreage</i> | 8.03 | | |



US Army Corps of Engineers.



FULL RESTORATION PLAN



US Army Corps of Engineers.



RESTORATION PLAN BY ACREAGE

This is the full restoration plan as outlined in the Tributary Plan. These numbers include the 8 acres that is the focus of the OAC decision (portion of row 2) plus restoration that is the focus of the draft Environmental Assessment that is currently under review (row 3).

Restoration Target = 146 acres

| Treatment | Total Planned Acreage | Total Acreage Completed |
|--|-----------------------|-------------------------|
| Seed Only | 71 | 18.92 |
| Alternate Substrate and Seed (9 – 20 ft MLLW) | 26 | 16 |
| Alternate Substrate and Seed (6.5 – 9 ft MLLW) | 57 | 0 |



SCHEDULE FOR CONSTRUCTION OF 8 ACRES

Pending decision to move forward,

- Award contract by 30 September 2016 (end of fiscal year)
- Construct reefs between December and March 2016

