Sediment Control at Wreck Pond

Monmouth County Pilot Project

Dredging and Construction of Scour Trench

Wreck Pond West of State Route 71

Date: August 18, 2010

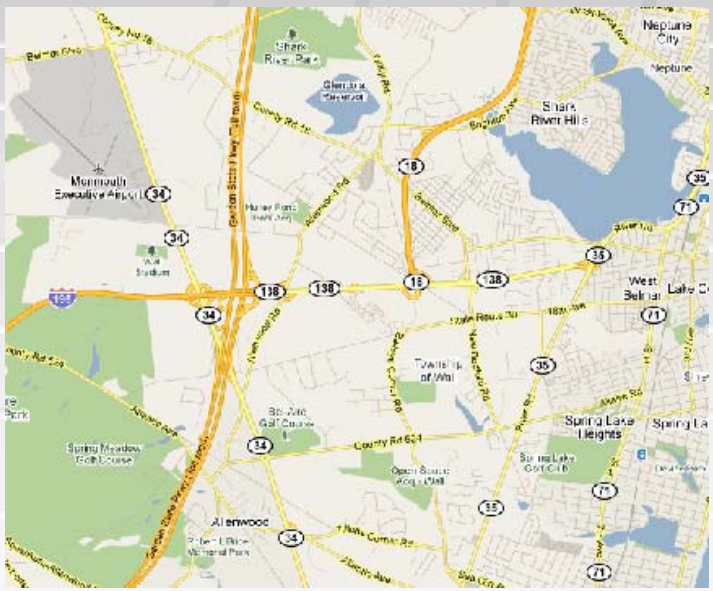
Presented by:

Monmouth County Division of Engineering & Traffic Safety
John Tobia – Director, Public Works & Engineering
Sayed Moafi, P.E. – Chief Engineer
Matthew Rutkowski – Senior Environmental Engineer

The County Proposes to Undertake a Sediment Control Pilot Project

•In October of 2008 the Wreck Pond Brook Watershed Regional Stormwater Management Plan Committee completed a Regional Stormwater Management Plan for the Wreck Pond Brook Watershed (RSWMP).

•Volume II of the RSWMP identified a number of potential projects that would aid in restoring the water quality and aesthetics of the watershed. These projects include:



•Restoration of various headwaters and environmental areas.

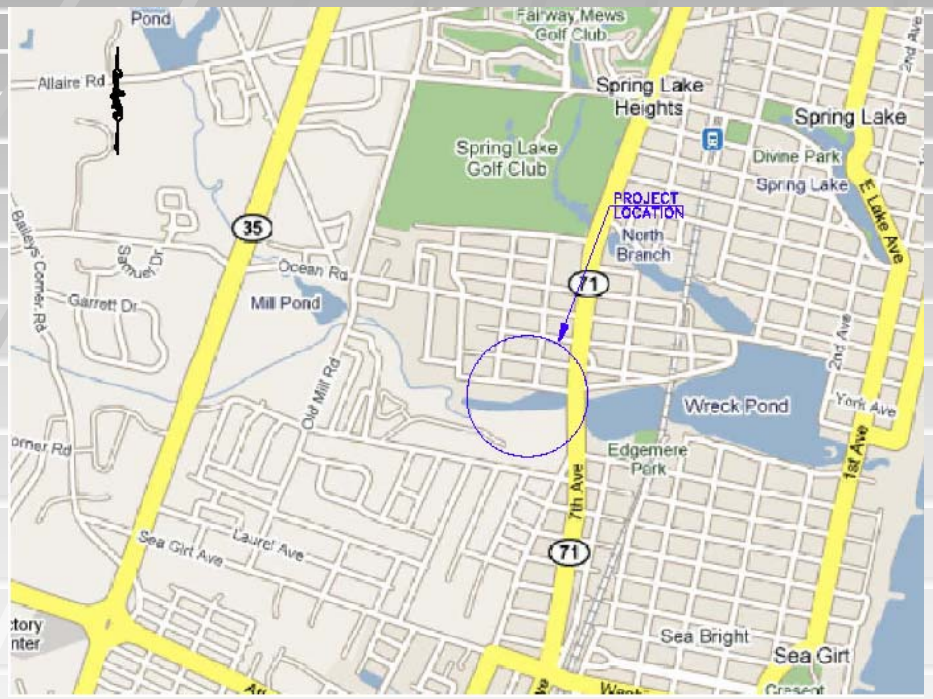
•Shoreline stabilization.

•Installation of Rain Gardens.

•Installation/construction of sediment control structures.

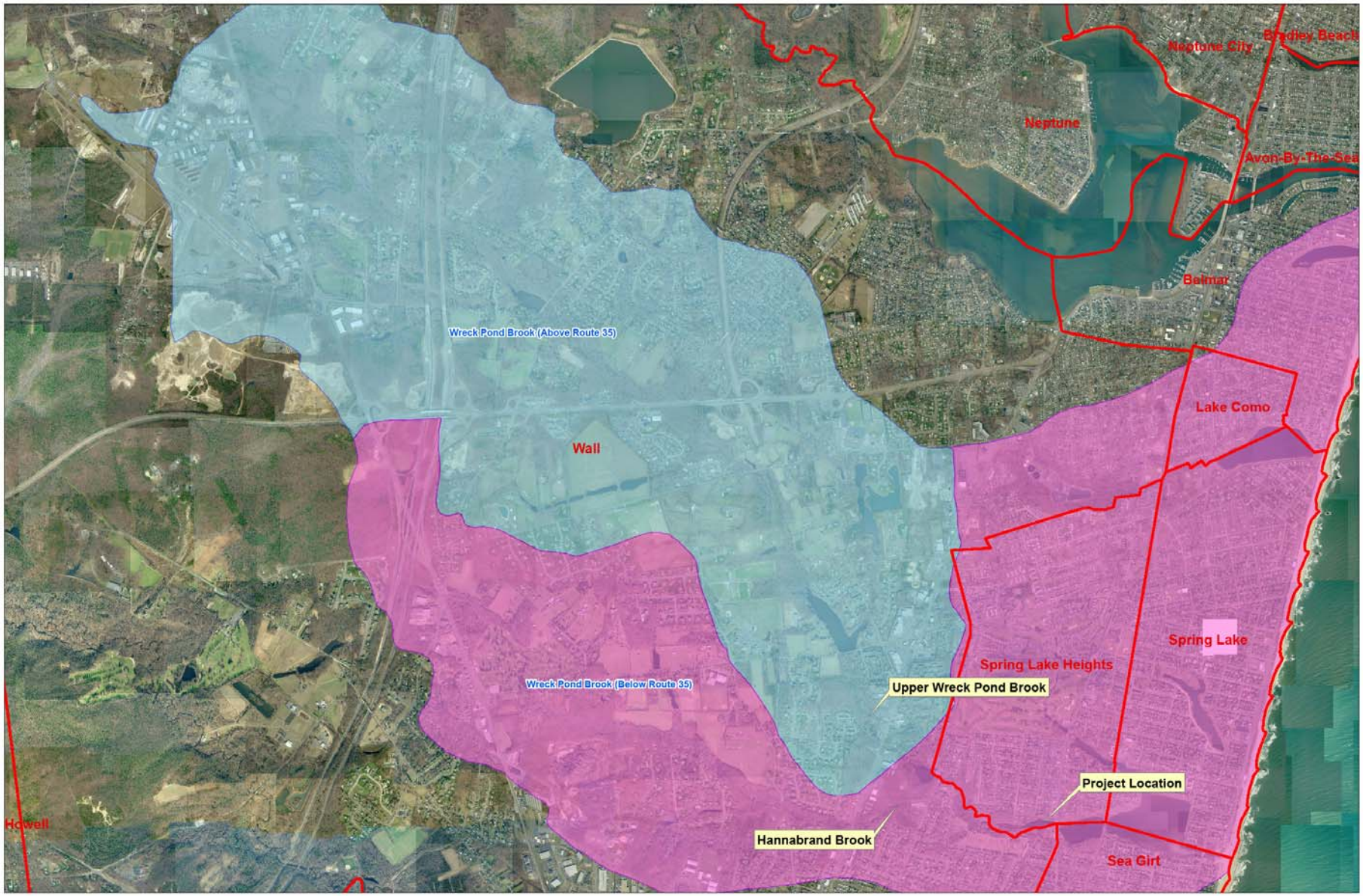
•Dredging of various ponds throughout the watershed.

The County Proposes to Undertake a Sediment Control Pilot Project

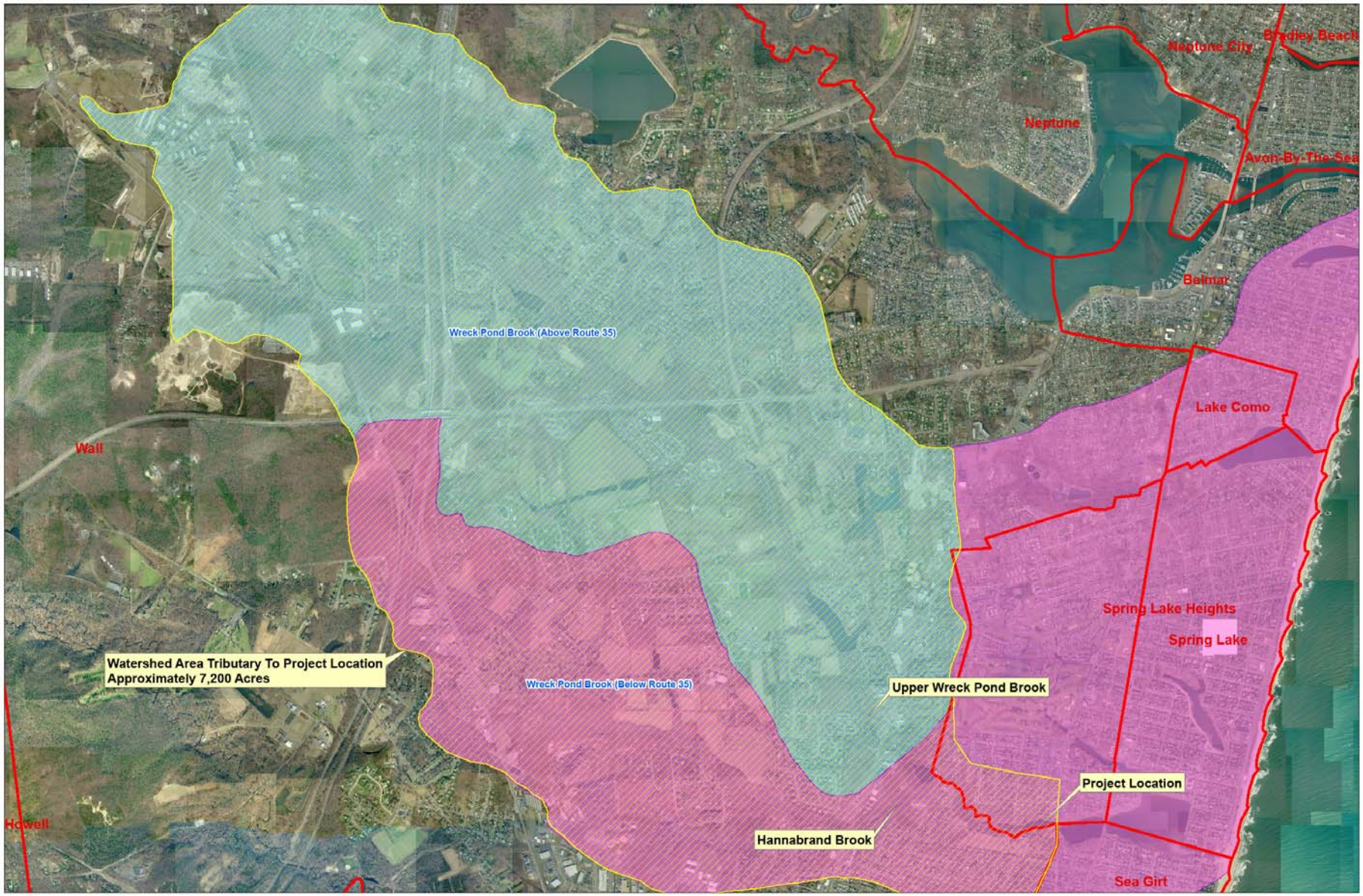


- The portion of Wreck Pond west of Route 71 was identified as a suitable location.
  - Manageable size for a pilot project, can be performed entirely by County forces.
  - Vacant area to the south offered excellent set-up and staging area.
  - Sediment tests did not identify elevated pollutant levels.
  - A significant portion of the watershed is tributary to this portion of the pond.
  - Survey with soundings was available.
  - Identified in RSWMP Volume II Section 6.2.1 as a potential sediment control structure location.
  - High visibility area with obvious need for sediment control.

Wreck Pond Watershed



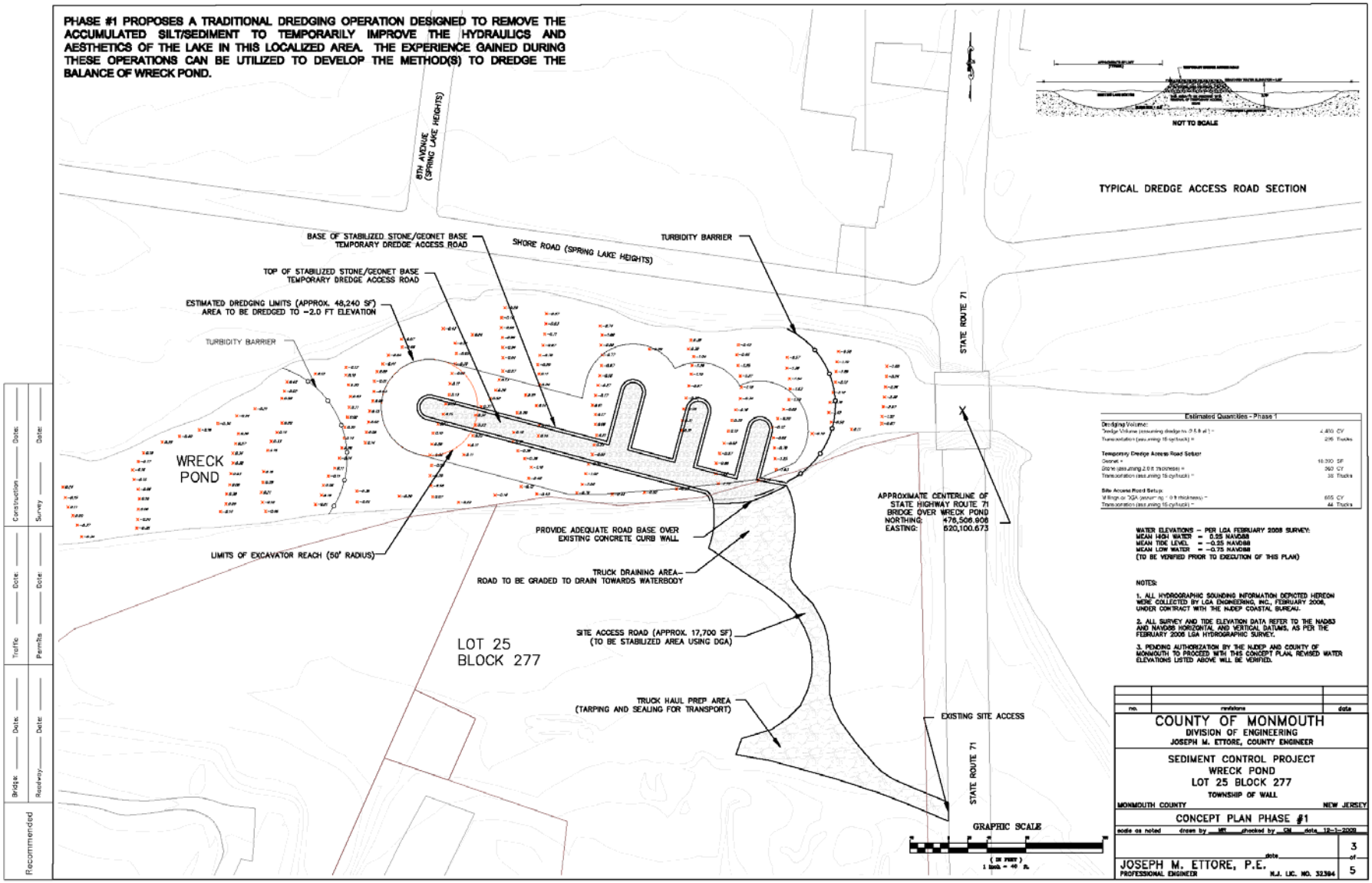
Project Tributary Area



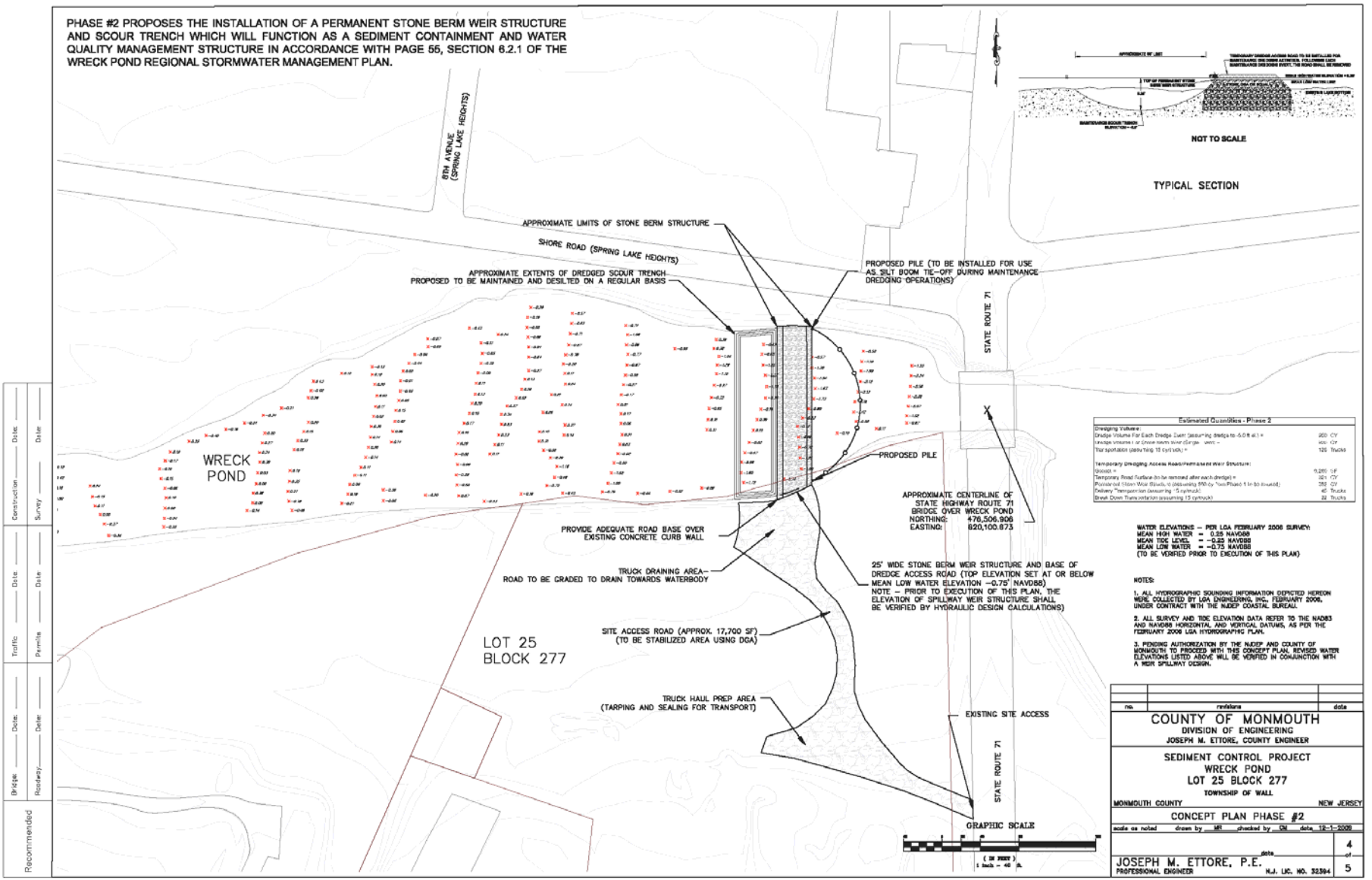
Overview


8TH AVENUE (SPRING LAKE HEIGHTS)
SHORE ROAD (SPRING LAKE HEIGHTS)
PHASE 2 DREDGING LIMITS
PHASE 1 DREDGING LIMITS
ACCESS ROAD LIMITS
STATE ROUTE 71
STATE ROUTE 71
Sediment Control Project Wreck Pond West of State Route 71
Phase 1 Dredging of Accumulated Sediment
Phase 2 Construct Weir/Scour Trench
Total Dredge Volume 4,406 CY 11,869 CY
Estimated # of trips 296 Trucks 1126 Trucks
Dredge Transportation* 28 Days 73 Days
Estimated Phase Duration 47 Days 21 Days
Site Access Road Set-Up - Stone 555 CY
Estimated # of delivery trips 44 Trucks
Dredge Access Road Set-Up - Geotex 10,500 SF 6,200 SF
Dredging Access Road Set-up - Temporary 390 CY 293 CY
Dredging Access Road Set-up - Permanent 0 CY 382 CY
Estimated # of delivery trips 0 Trucks 45 Trucks
Dredging Access Road Removal N/A 22 Trucks
Additional Considerations Anticipated to require standard dredging permits.
In addition to dredging permits, may also require Flood Hazard Area permits and analysis.
May also require NJDEP Stream Encroachment Permit analysis.
Consider dredging date restrictions due to fish and wildlife.
Consider dredging date restrictions due to fish and wildlife.
* Assuming 5 trucks available at 2 trips per truck per day. Has excludes days needed for equipment mobilization and dredge material consolidation/stockpiling to prepare material for trucking.
GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.
no. revisions date
COUNTY OF MONMOUTH
DIVISION OF ENGINEERING
JOSEPH M. ETTORE, COUNTY ENGINEER
SEDIMENT CONTROL PROJECT
WRECK POND
LOT 25 BLOCK 277
TOWNSHIP OF WALL
MONMOUTH COUNTY NEW JERSEY
AERIAL—PHASE LIMITS PLAN
scale as noted drawn by MR checked by CM date 12-1-2009
date
JOSEPH M. ETTORE, P.E.
PROFESSIONAL ENGINEER N.J. LIC. NO. 32394
2 of 5
Recommended
Bridge Date:
Roadway Date:
Traffic Date:
Permits Date:
Construction Date:
Survey Date:

Phase 1 – Traditional Dredging



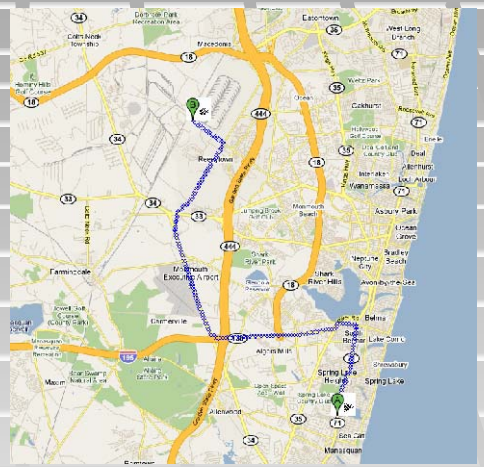
Phase 2 – Construction of Scour Trench



Haul Routes

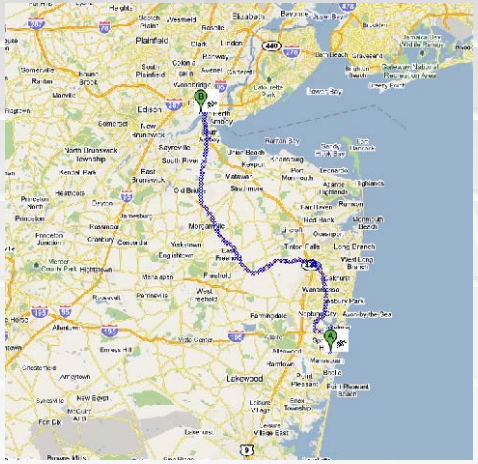
Monmouth County Reclamation Center
Haul Route

Segment	Road	Direction	Distance
1	State Route 71 N	North	2.5 miles
2	County Route 18 (16th Avenue)	West	0.5 mile
3	State Route 35 S	South	0.1 mile
4	State Route 138 W	West	3.2 mile
5	State Route 34 N	North	3.3 miles
6	Wyckoff Road	North	0.5 miles
7	County Route 549 (Shafto Road)	North	2.4 miles
8	County Route 16 (Asbury Avenue)	West	0.6 miles
	Total		**13.1 miles**



Bayshore Recycling Corporation
Haul Route

Segment	Road	Direction	Distance
1	State Route 71 N	North	2.5 miles
2	County Route 18 (16th Avenue)	West	0.5 mile
3	State Route 35 S	South	0.1 mile
4	State Route 138 W	West	3.2 mile
5	State Route 18 N	North	24.9 miles
6	State Route 9 N	North	9.8 miles
7	Smith Street	E/W	1.9 miles
8	Crows Mill Road	South	0.2 miles
	Total		**43.1 miles**



Project Summary

Sediment Control Project Wreck Pond West of State Route 71		
	Phase 1 **Dredging of Accumulated Sediment**	**Phase 2** **Construct Weir/Scour Trench**
Total Dredge Volume	4,400 CY	1,880 CY
Estimated # of trips	295 Trucks	126 Trucks
Dredge Transportation*	28 Days	12 Days
Estimated Phase Duration	47 Days	25 Days
Site Access Road Set-Up - Stone	655 CY	
Estimated # of delivery trips	44 Trucks	
Dredge Access Road Set-Up - Geonet	10,390 SF	6,260 SF
Dredging Access Road Set-up - Temporary	560 CY	321 CY
Dredging Access Road Set-up - Permanent	0 CY	352 CY
Estimated # of delivery trips	38 Trucks	45 Trucks
Dredging Access Road Removal	N/A	22 Trucks
Additional Considerations	Anticipated to require standard dredging permits.	In addition to dredging permits, may also require Flood Hazard Area permits and analysis.
		May also require NJDEP Stream Encroachment impact analysis.
	Consider dredging date restrictions due to fish and wildlife.	Consider dredging date restrictions due to fish and wildlife.

* Assuming 5 trucks available at 2 trips per truck per day. This excludes days needed for equipment mobilization and dredge material consolidation/stockpiling to prepare material for trucking.

What We Hope To Gain

- General experience in dredging operations that will translate to larger projects.
- Permitting and other agency coordination.
- Potential beneficial uses of the dredged materials.
- Sedimentation rates and maintenance requirements of scour trench.

Questions ?