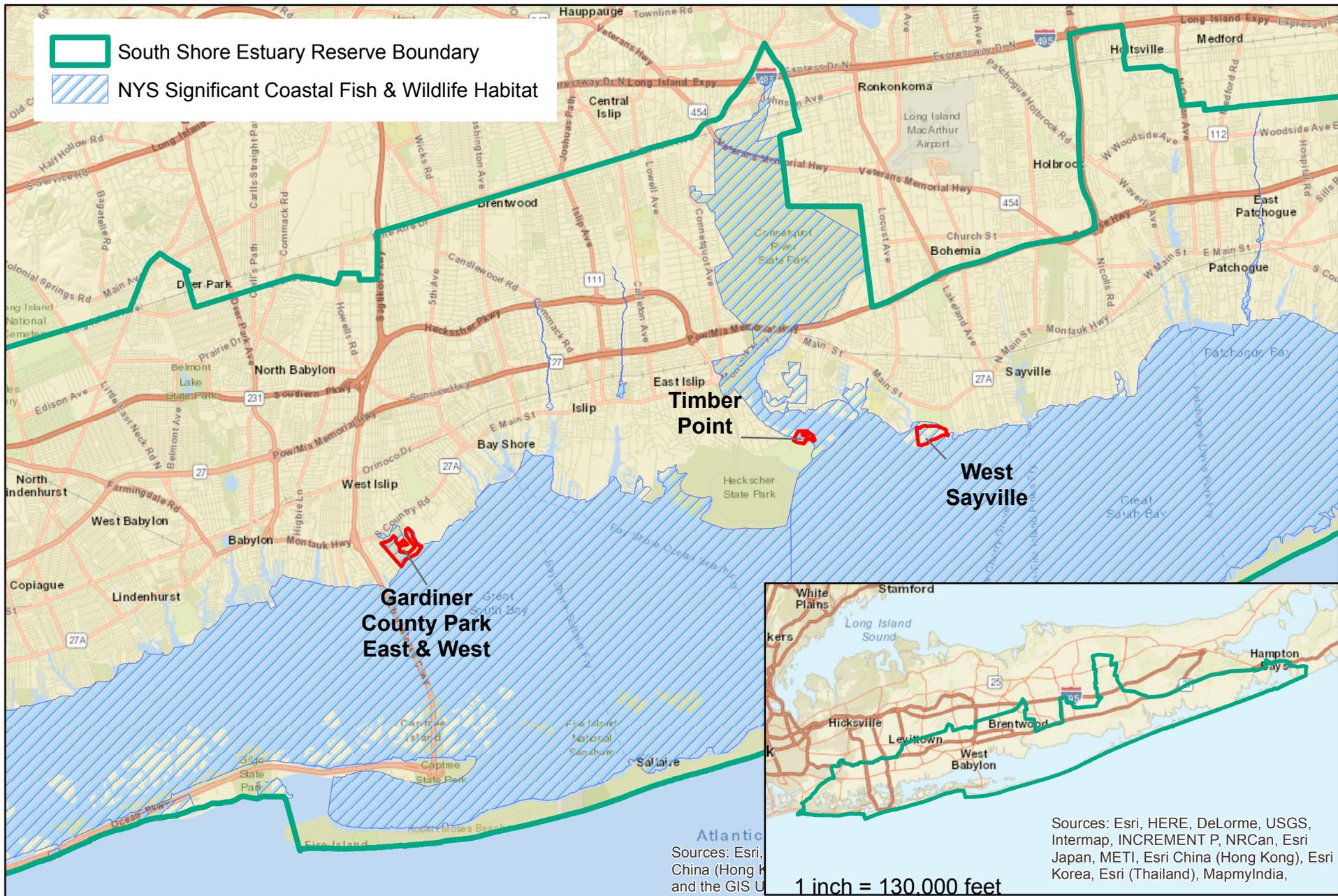


APPENDIX B

Figures



**FIGURE 1-1
SOUTH SHORE ESTUARY RESERVE BOUNDARY MAP AND
SITE LOCATION MAP**

Source: ESRI wms; SSER commission; NYSDEC
Scale: 1 inch = 12,000 feet



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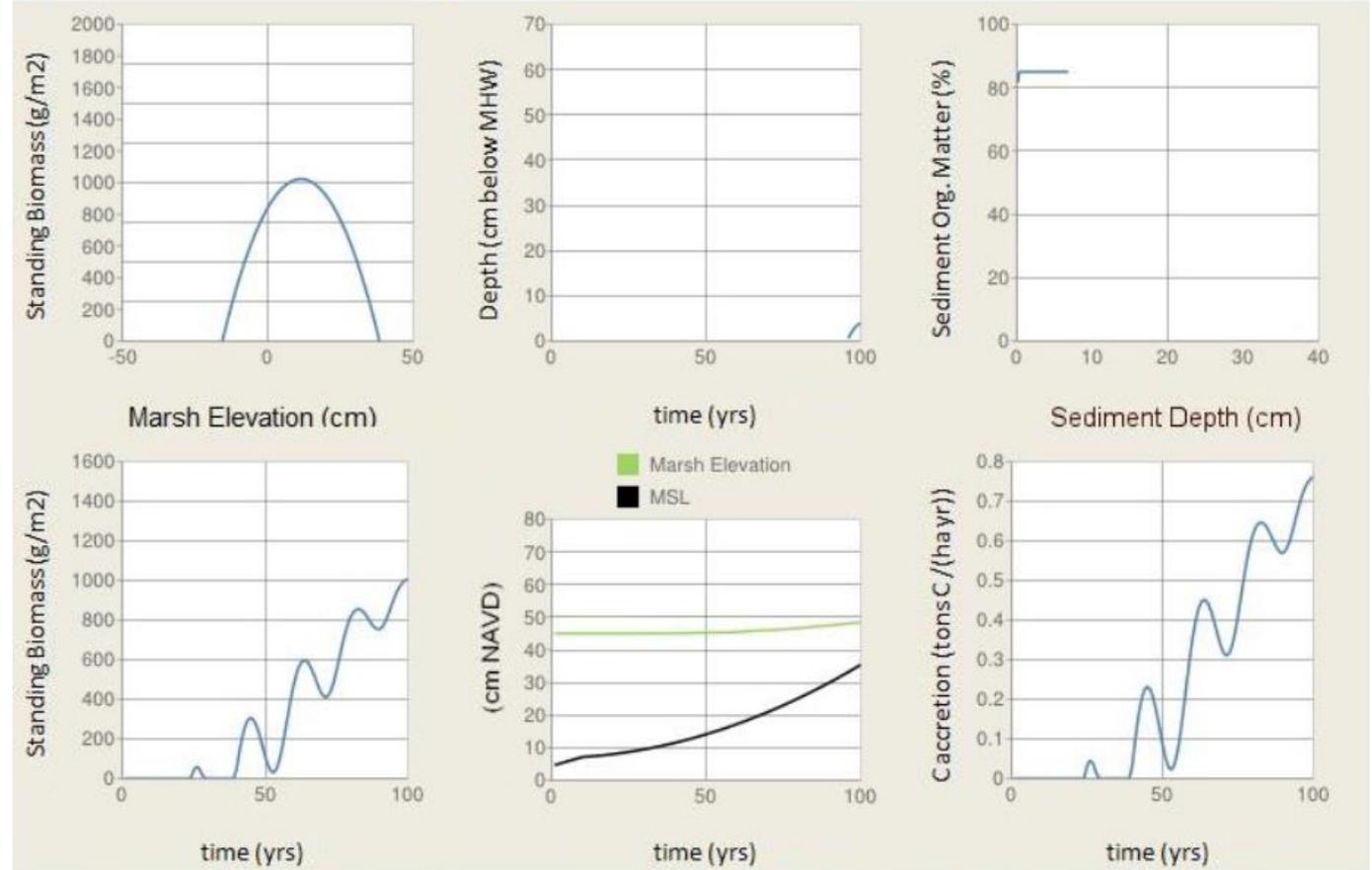
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The Marsh Equilibrium Model MEM 3.4

Computes C-Sequestration and Marsh Responses to Sea-Level Rise

Options		
<input checked="" type="checkbox"/>	Simulate Restoration	
<input type="checkbox"/>	Use My Biomass Profile	
<input checked="" type="checkbox"/>	Seasonal Biomass	
Physical Inputs		
Start	1991	year
Century Sea Level Rise	27.7	cm
Mean High Water	18.4	cm NAVD
Mean Sea Level	4.4	cm NAVD
Lunar Nodal Amp	3.1	cm
Initial Rate SLR	0.27	cm/yr
Suspended Sed. Conc.	20	mg/liter
Marsh Elevation	45	cm NAVD
Biological Inputs		
Max Veg Elev	38.4	cm
Min Veg Elev	-15.6	cm
Max Peak Biomass	1017	g/m ²
OM Decay rate	-0.8	1/time
Roots&Rhizome:Shoot Ratio	3	g/g
BG turnover rate	3	year ⁻¹
Refractory Fraction (kr)	0.02	g/g
Max (95%) Root Depth	10	cm
Trapping Coef & Settling Velocity		
ks	3.22E-02	cm ⁻¹ yr ⁻¹
q	1.5E-03	g cm ⁻² yr ⁻¹



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JT Morris 6-9-10



FIGURE 1-2 - GARDINER COUNTY PARK MARSH EQUILIBRIUM MODEL

Source: MEM Model, Morris et al 2012.
Scale: N/A



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**FIGURE 1-3
GARDINER COUNTY PARK AERIAL MAP**

Source: NYS Orthophotography, 2013
Scale: 1 inch = 750 feet



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**FIGURE 1-4
TIMBER POINT AERIAL MAP**

Source: NYS Orthophotography, 2013
Scale: 1 inch = 200 feet



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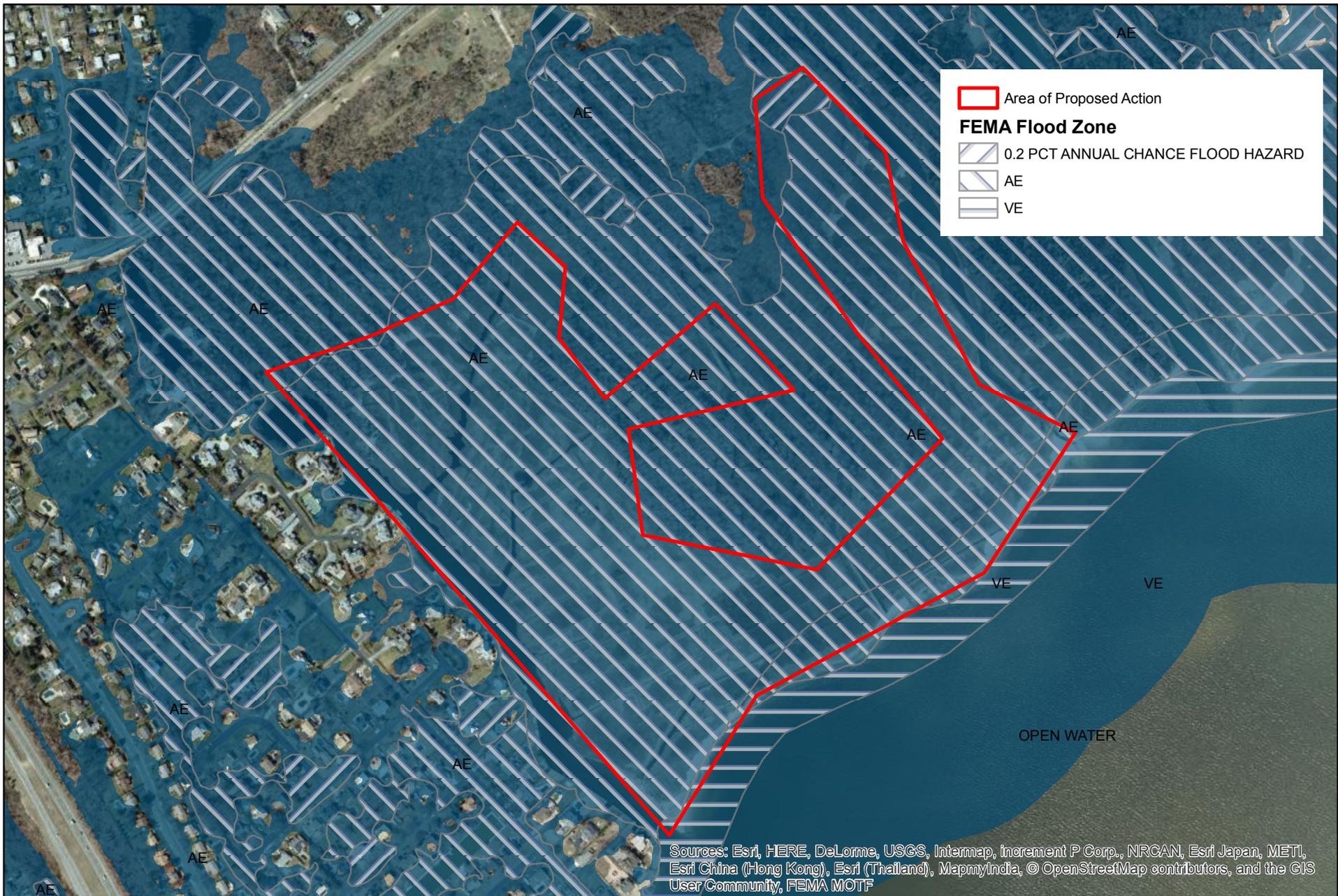
**FIGURE 1-5
WEST SAYVILLE AERIAL MAP**

Source: NYS Orthophotography, 2013
Scale: 1 inch = 400 feet



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**FIGURE 3-1 - GARDINER COUNTY PARK
FLOOD ZONES AND HURRICANE SANDY SURGE BOUNDARY MAP**

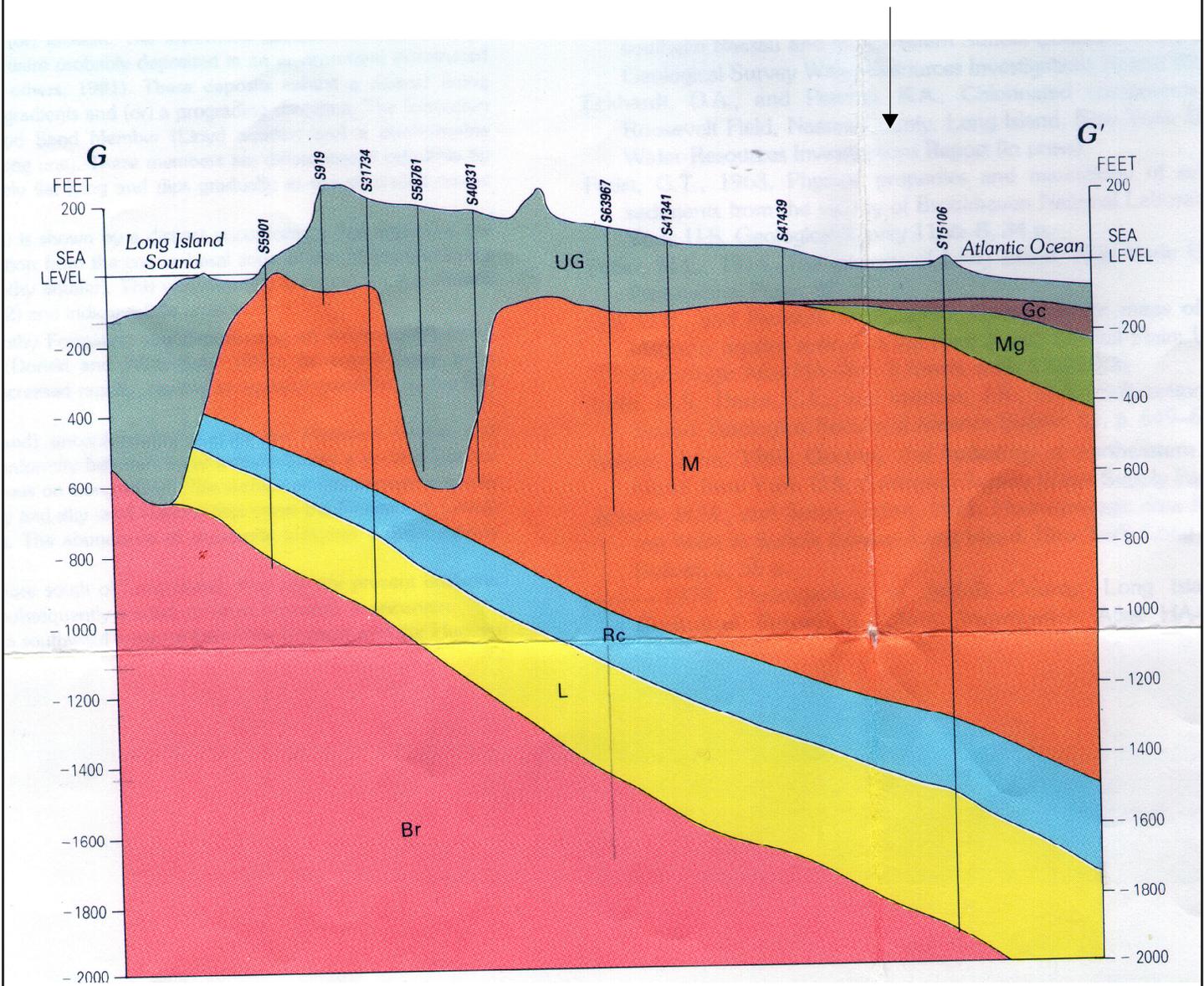
Source: ESRI wms; FEMA 100yr layer, Suffolk Cty, 2013; FEMA Sandy wms
Scale: 1 inch = 600 feet



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Approximate location of project site



**FIGURE 3-10 - WEST SAYVILLE
GEOLOGIC CROSS-SECTION**

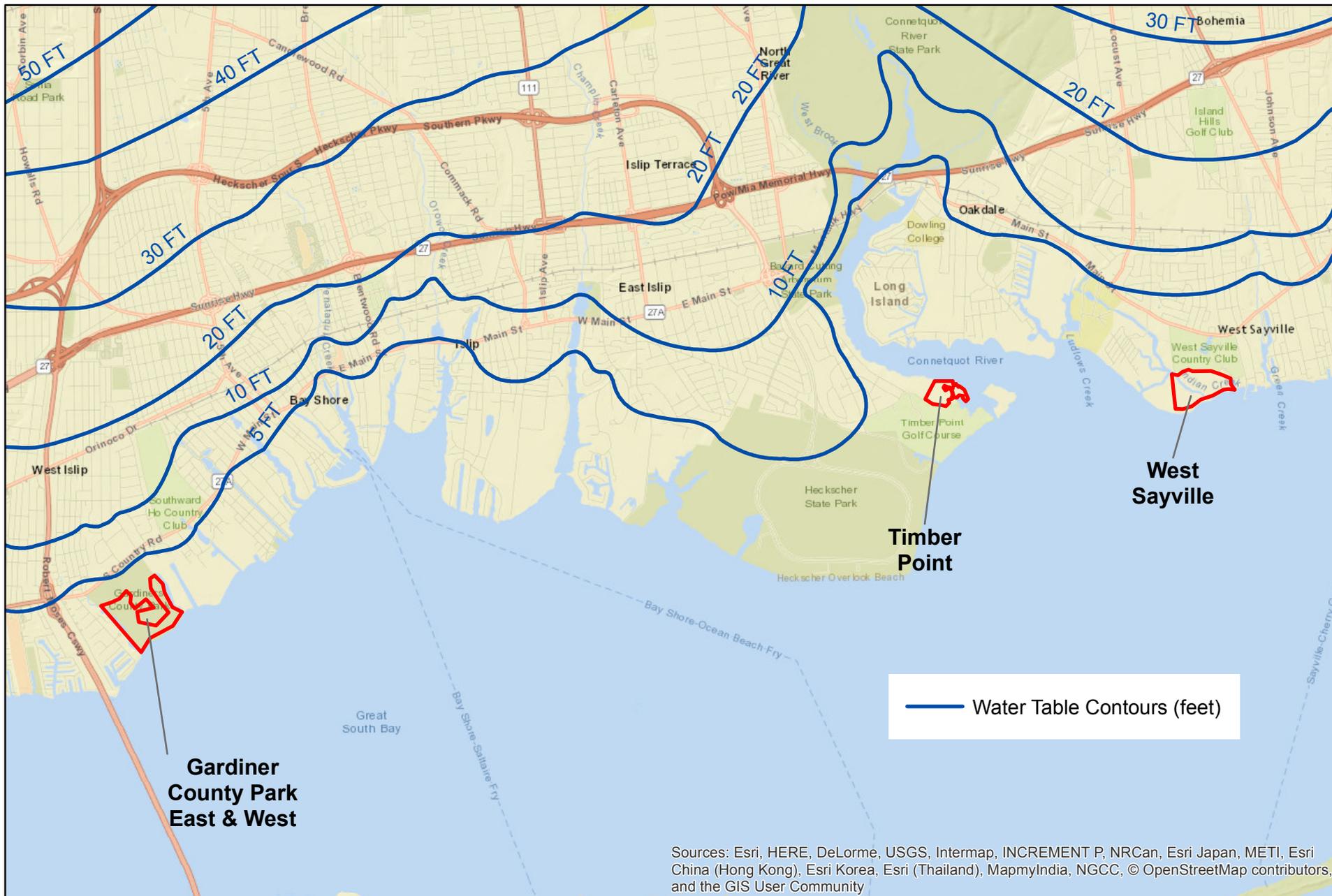
Source: section G from Smolensky, et. al; USGS
Hydrologic Atlas:709, 1990
Scale: NTS, Vertical exaggeration



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Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

**FIGURE 3-11
WATER TABLE MAP**

Source: ESRI wms; USGS Scientific Invest. Map 3326, 2013 data
Scale: 1 inch = 6,000 feet



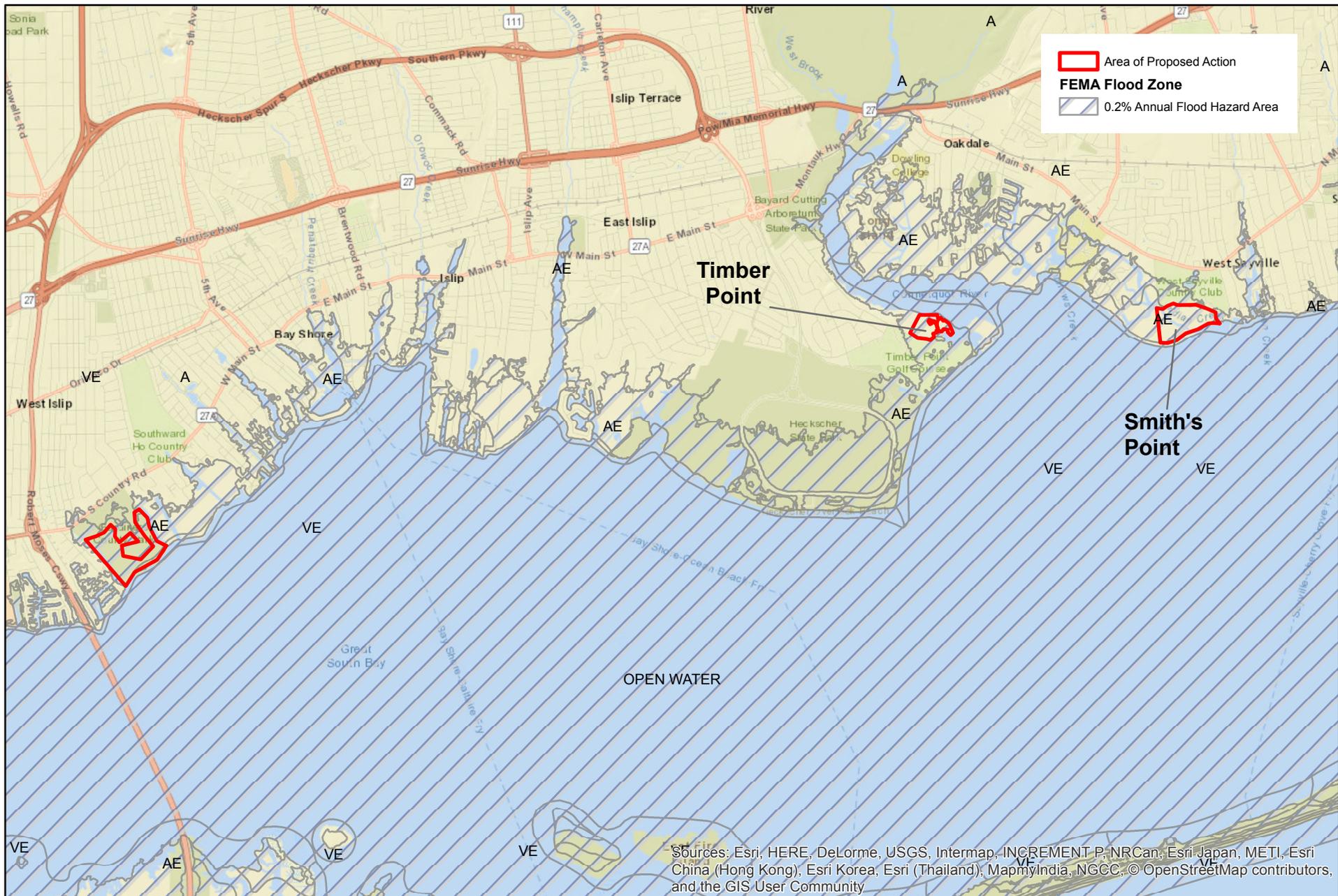


FIGURE 3-12
FEMA 0.2% ANNUAL FLOOD BOUNDARY

Source: ESRI wms; FEMA 100yr layer, Suffolk Cty, 2013; FEMA Sandy wms
 Scale: 1 inch = 6,000 feet





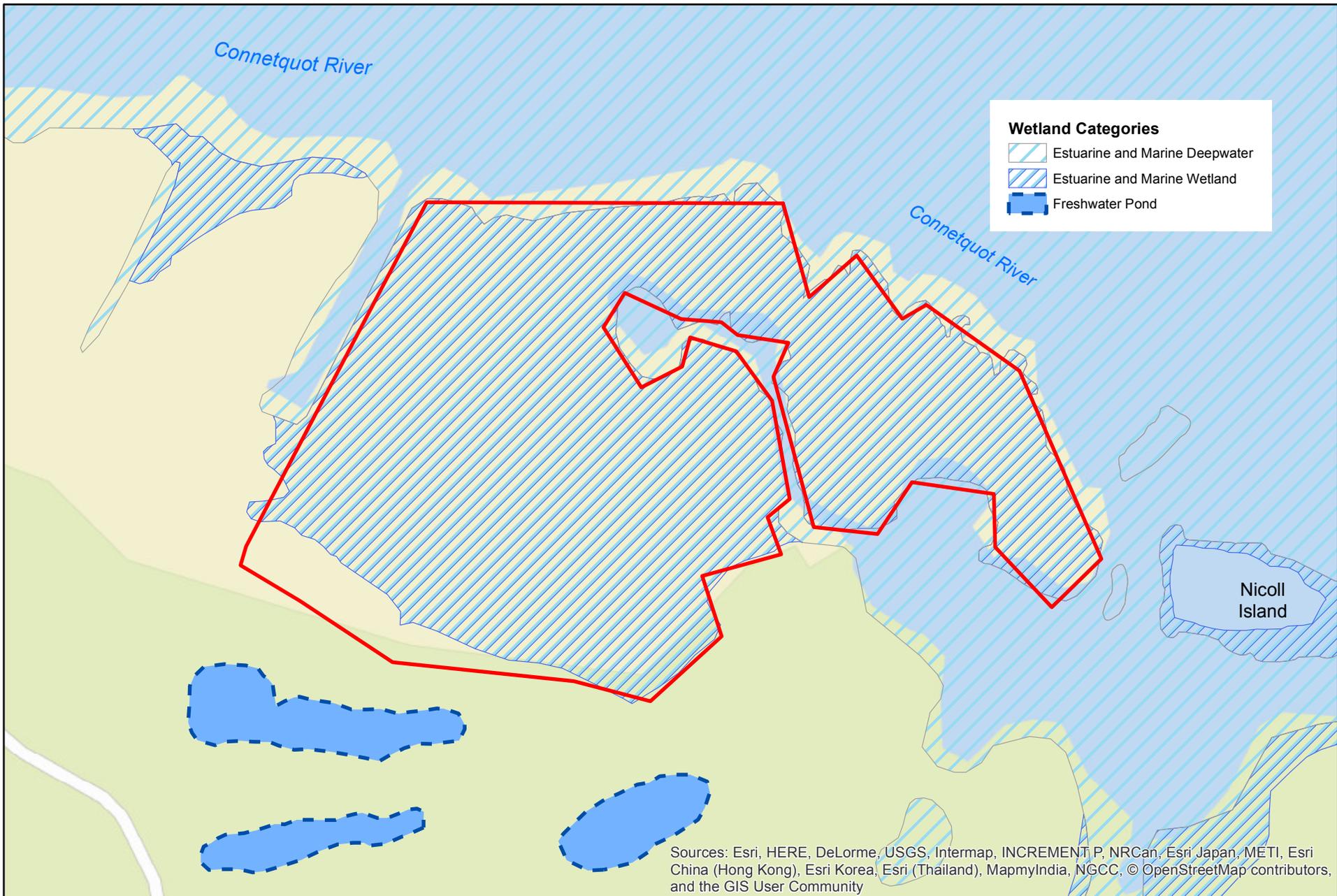
FIGURE 3-13 - GARDINER COUNTY PARK NATIONAL WETLANDS INVENTORY MAP

Source: ESRI wms; USF&W nwi wetlands layer
 Scale: 1 inch = 1,000 feet



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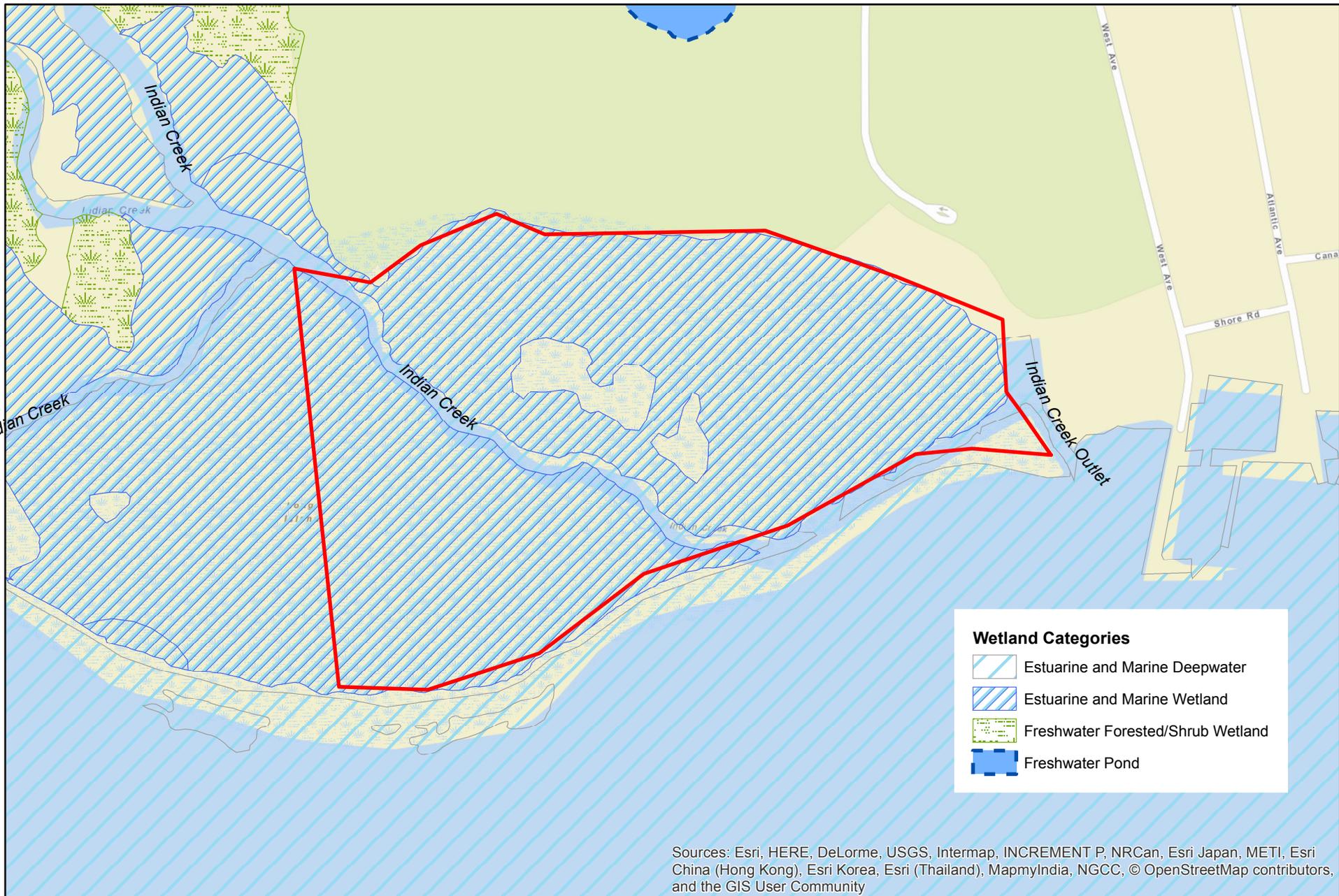
**FIGURE 3-14 - TIMBER POINT
NATIONAL WETLANDS INVENTORY MAP**

Source: ESRI wms; USF&WS NWI layer
Scale: 1 inch = 300 feet



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**FIGURE 3-15 - WEST SAYVILLE
NATIONAL WETLANDS INVENTORY MAP**

Source: ESRI wms; USF&W NWI layer
Scale: 1 inch = 500 feet



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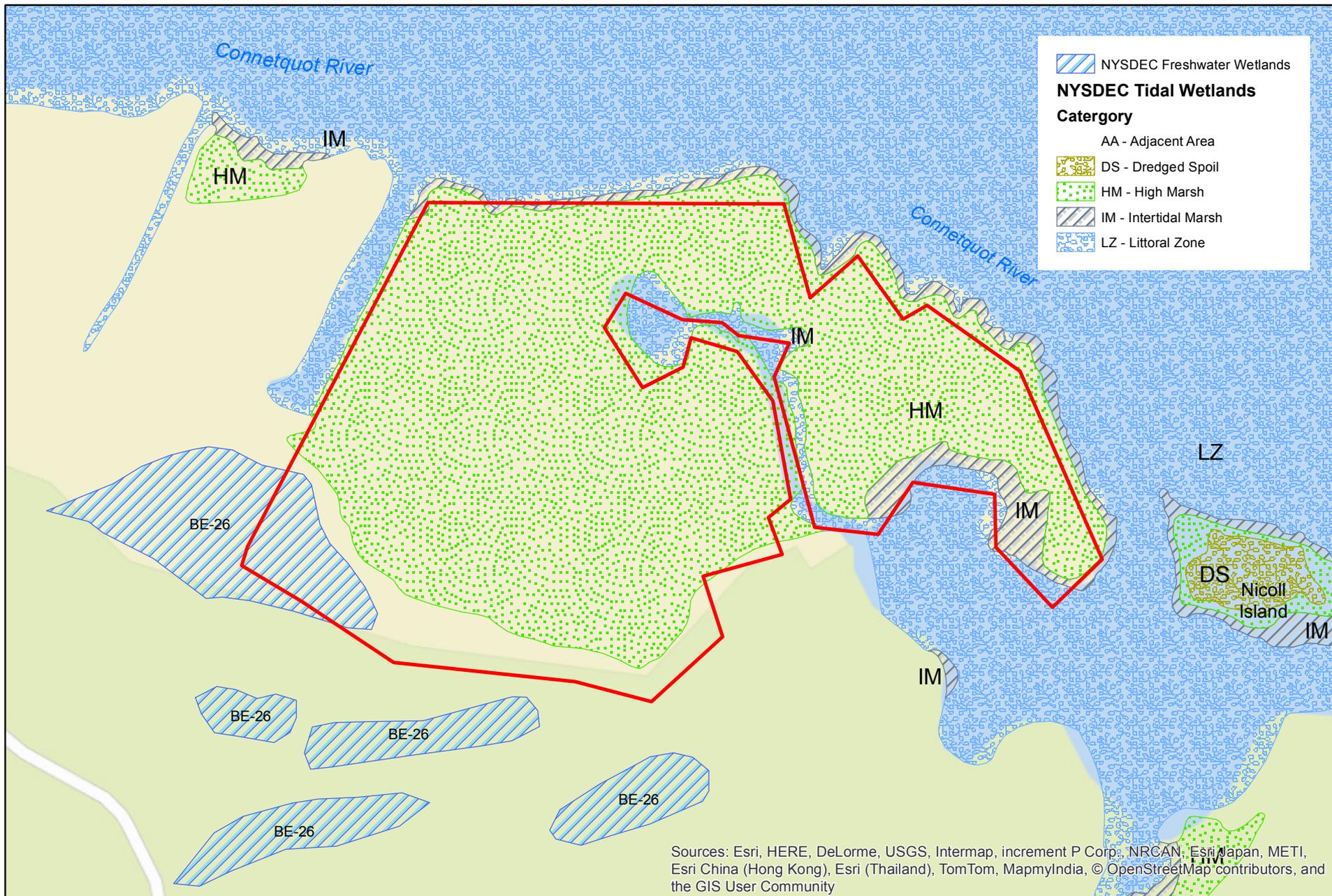




**FIGURE 3-16 - GARDINER COUNTY PARK
NYSDEC FRESHWATER AND TIDAL WETLANDS MAP**

Source: ESRI wms; NYSDEC Freshwater & Tidal Wetlands
Scale: 1 inch = 600 feet





**FIGURE 3-17 - TIMBER POINT
NYSDEC FRESH AND TIDAL WETLANDS MAP**

Source: ESRI wms; NYSDEC Fresh & Tidal Wetlands
Scale: 1 inch = 300 feet



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**FIGURE 3-18 WEST SAYVILLE
NYSDEC FRESHWATER AND TIDAL WETLANDS MAP**

Source: ESRI wms; NYSDEC Freshwater & Tidal Wetlands
Scale: 1 inch = 1,000 feet



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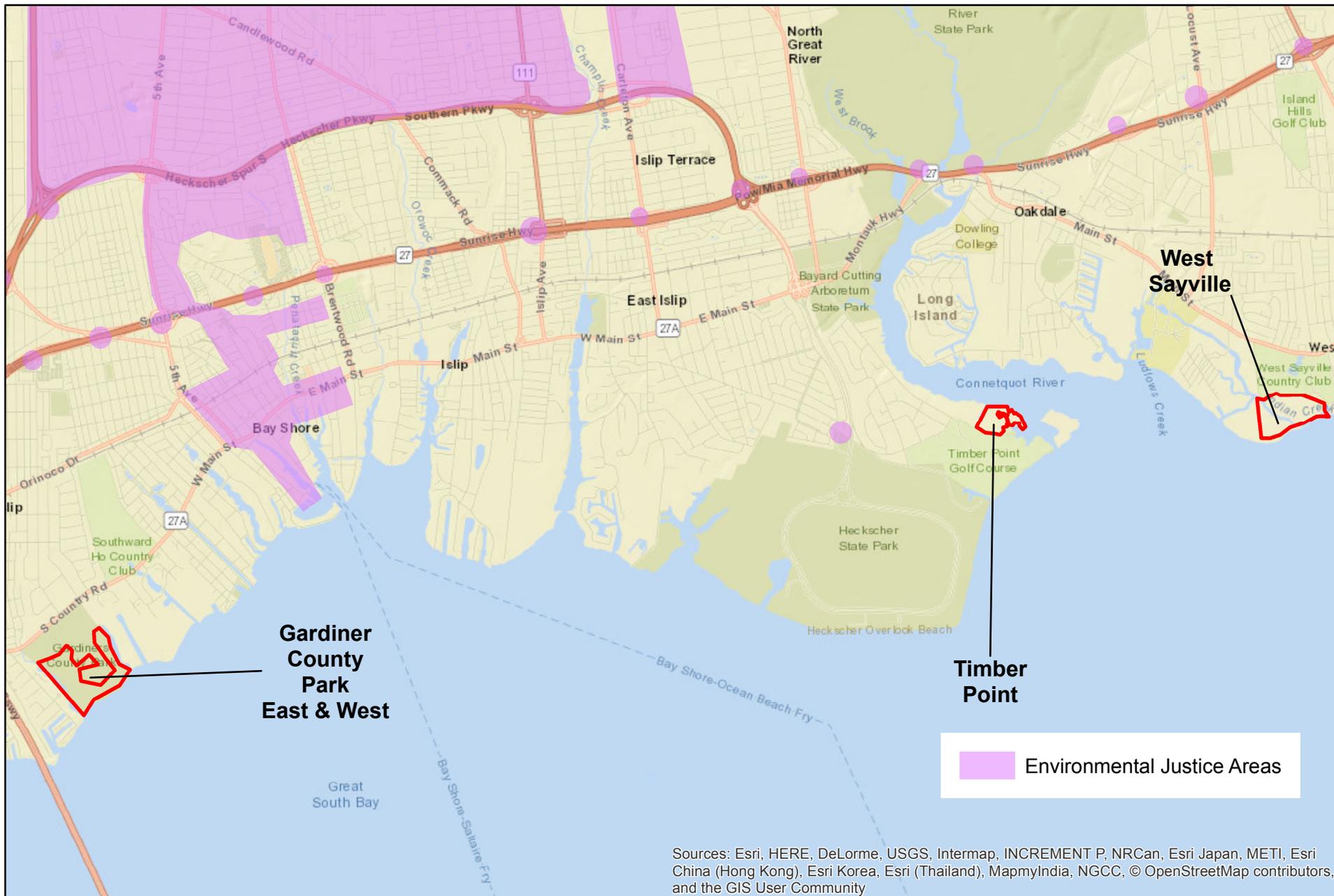
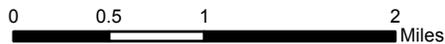


FIGURE 3-19
POTENTIAL ENVIRONMENTAL JUSTICE AREA MAP

Source: ESRI wms; NYSDEC office of Environmental Justice

Scale: 1 in = 1 miles



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Area of Proposed Action
FEMA Flood Zone
 0.2 PCT ANNUAL CHANCE FLOOD HAZARD
 AE
 VE
 Sandy Storm Surge Extent

Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), MapmyIndia, © OpenStreetMap contributors, and the GIS User Community, FEMA MOTF

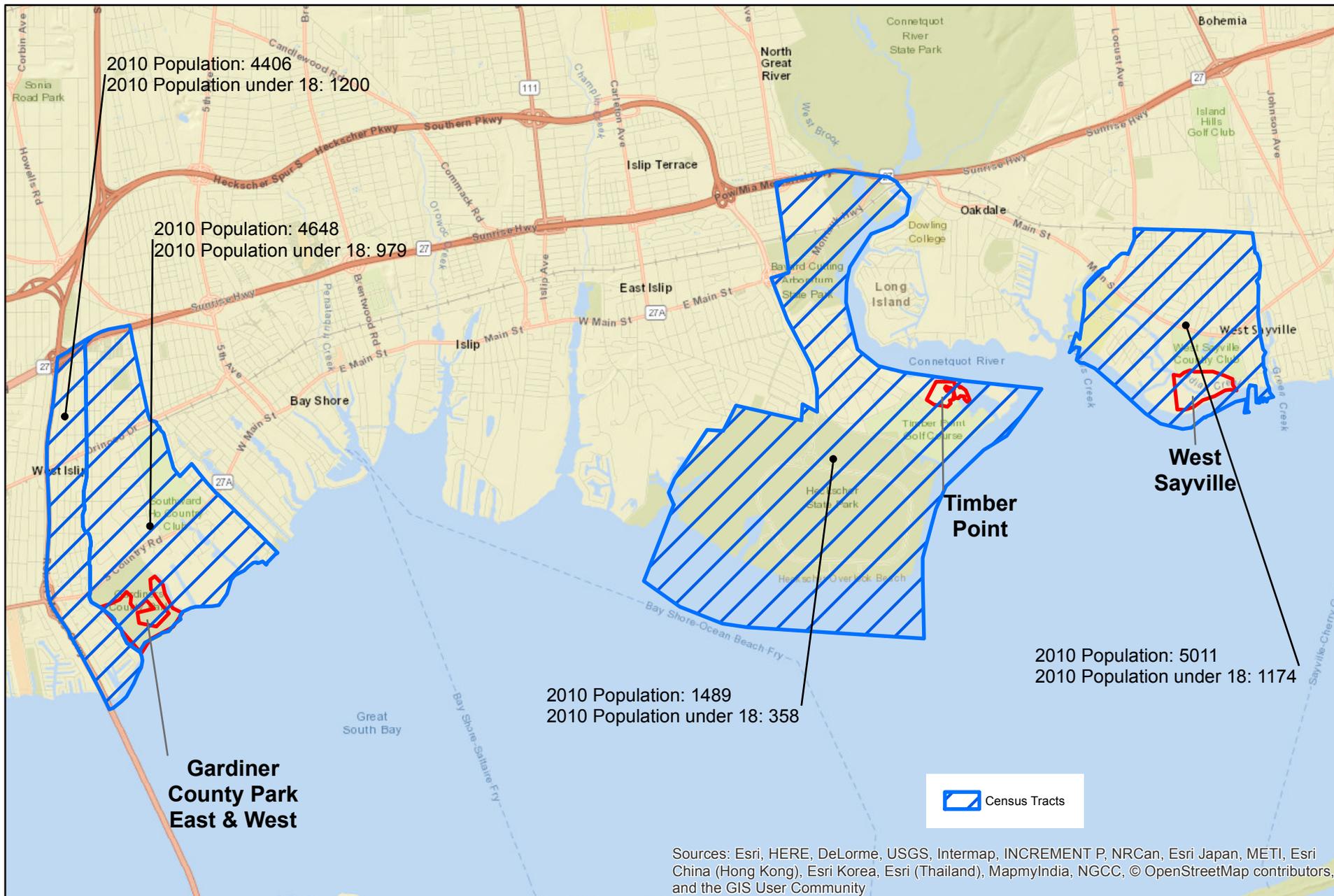
**FIGURE 3-2 - TIMBER POINT
FLOOD ZONES AND HURRICANE SANDY SURGE BOUNDARY MAP**

Source: ESRI wms; FEMA 100yr layer, Suffolk Cty, 2013; FEMA Sandy wms
 Scale: 1 inch = 200 feet



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**FIGURE 3-20
CENSUS TRACTS MAP**

Source: ESRI Web Mapping Service, US Census 2010
Scale: 1 inch = 6,000 feet



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**FIGURE 3-21 - GARDINER COUNTY PARK
LAND USE MAP**

Source: NYS Orthophotography, 2013
Scale: 1 inch = 600 feet



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**FIGURE 3-22 - TIMBER POINT
LAND USE MAP**

Source: NYS Orthophotography, 2013
Scale: 1 inch = 400 feet



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**FIGURE 3-24 - WEST SAYVILLE
LAND USE MAP**

Source: NYS Orthophotography, 2013
Scale: 1 inch = 500 feet



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**FIGURE 3-24- GARDINER'S POINT
AREAS AT RISK TO STATIC SEA LEVEL RISE**

Source: NYSEMO GIS, March 2009
Scale: 1" = 1,000'



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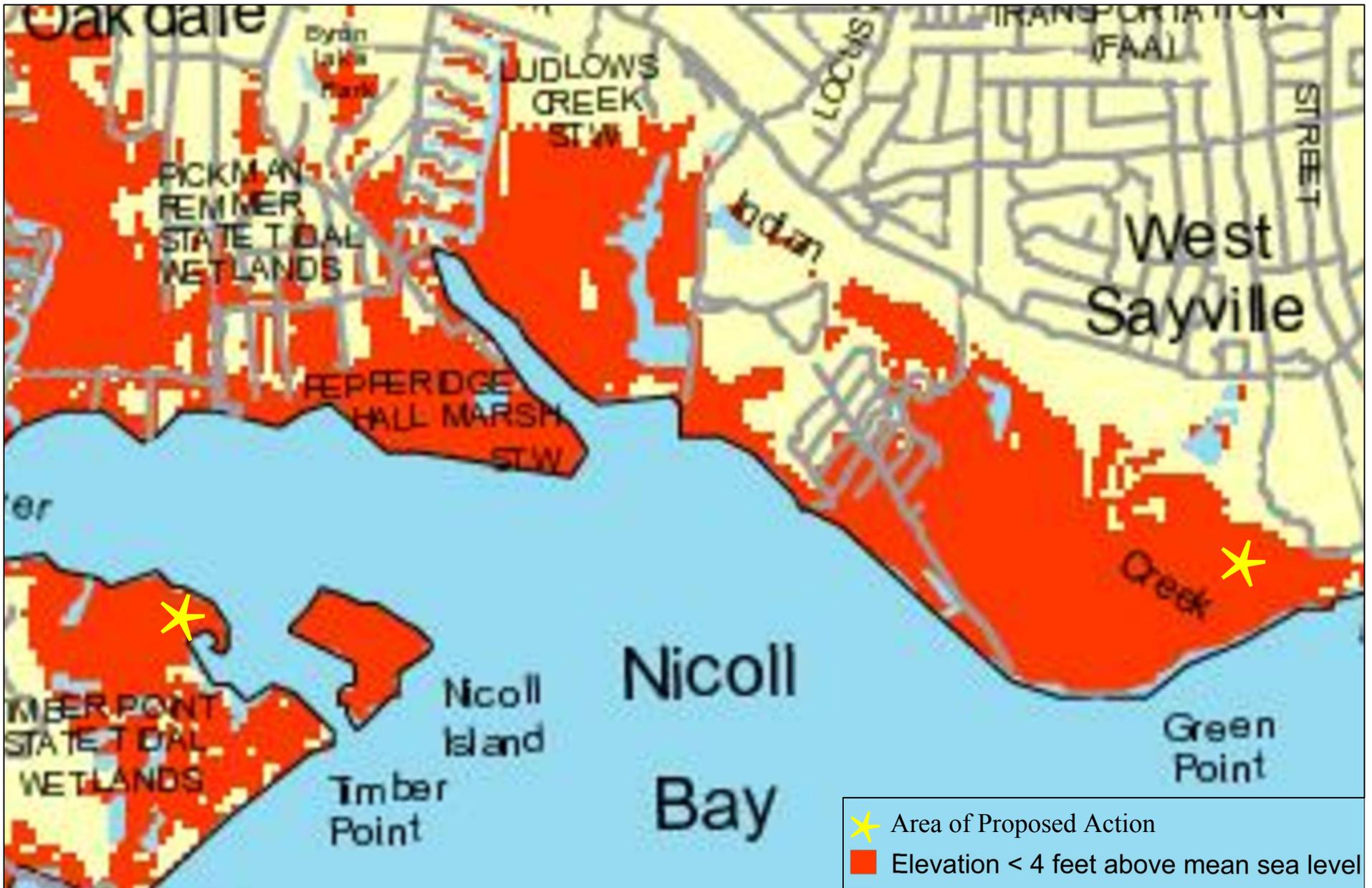
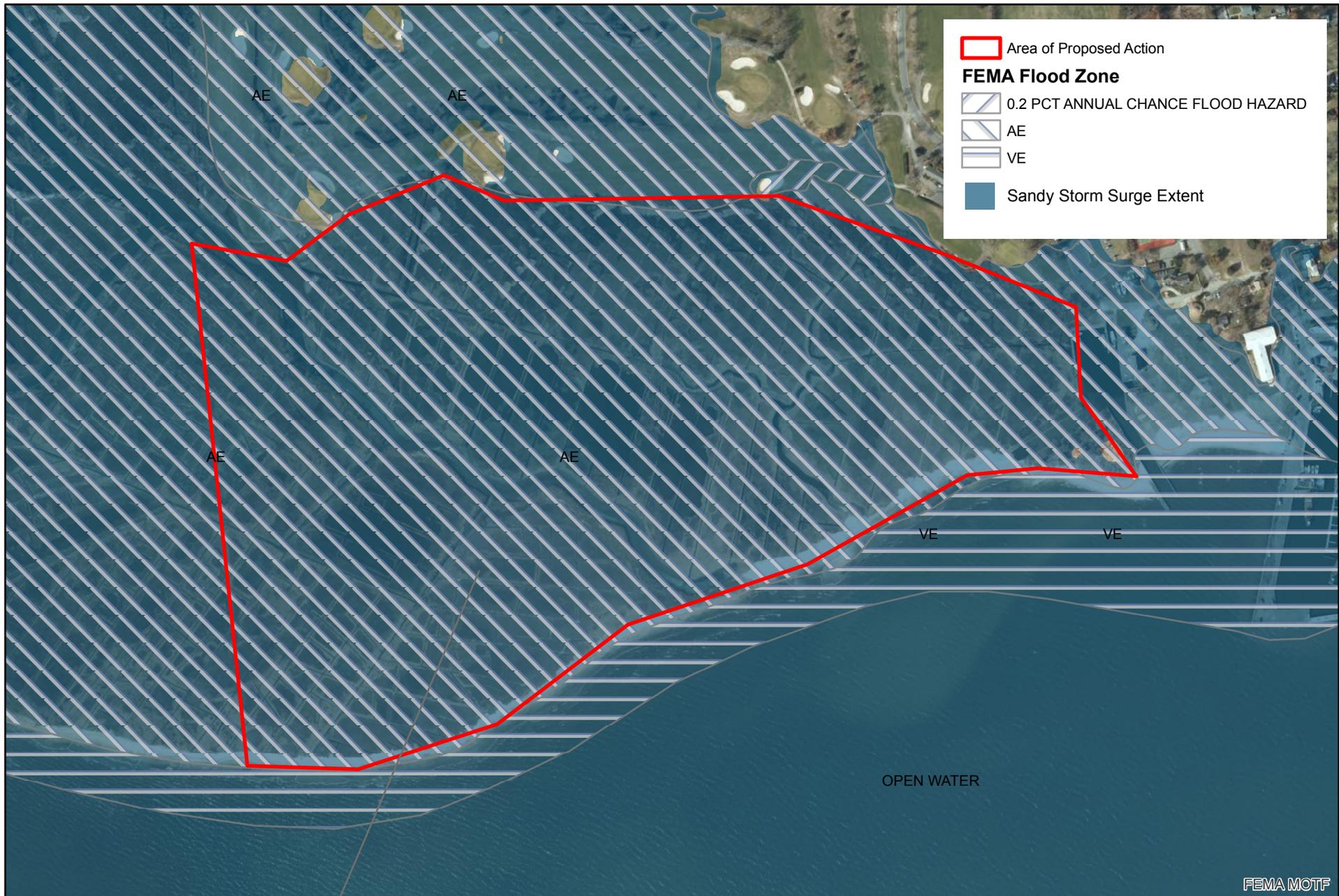


FIGURE 3-25
AREAS AT RISK TO STATIC SEA LEVEL RISE

Source: NYSEMO GIS, March 2009
 Scale: 1" = 1,500'



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**FIGURE 3-3 - WEST SAYVILLE
FLOOD ZONES AND HURRICANE SANDY SURGE BOUNDARY MAP**

Source: ESRI wms; FEMA 100yr layer, Suffolk Cty, 2013; FEMA Sandy wms
Scale: 1 inch = 400 feet



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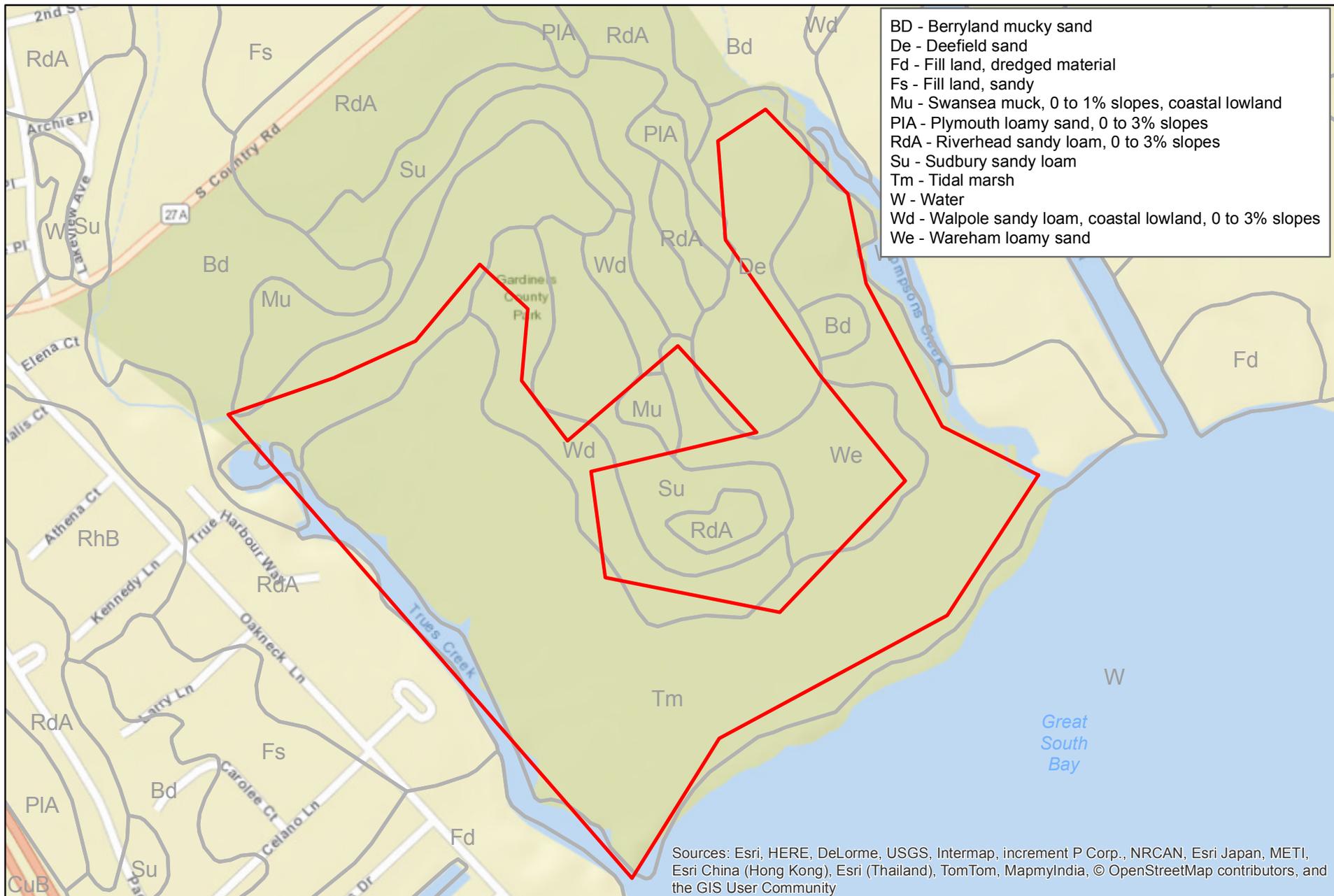


FIGURE 3-4 - GARDINER COUNTY PARK SOIL MAP

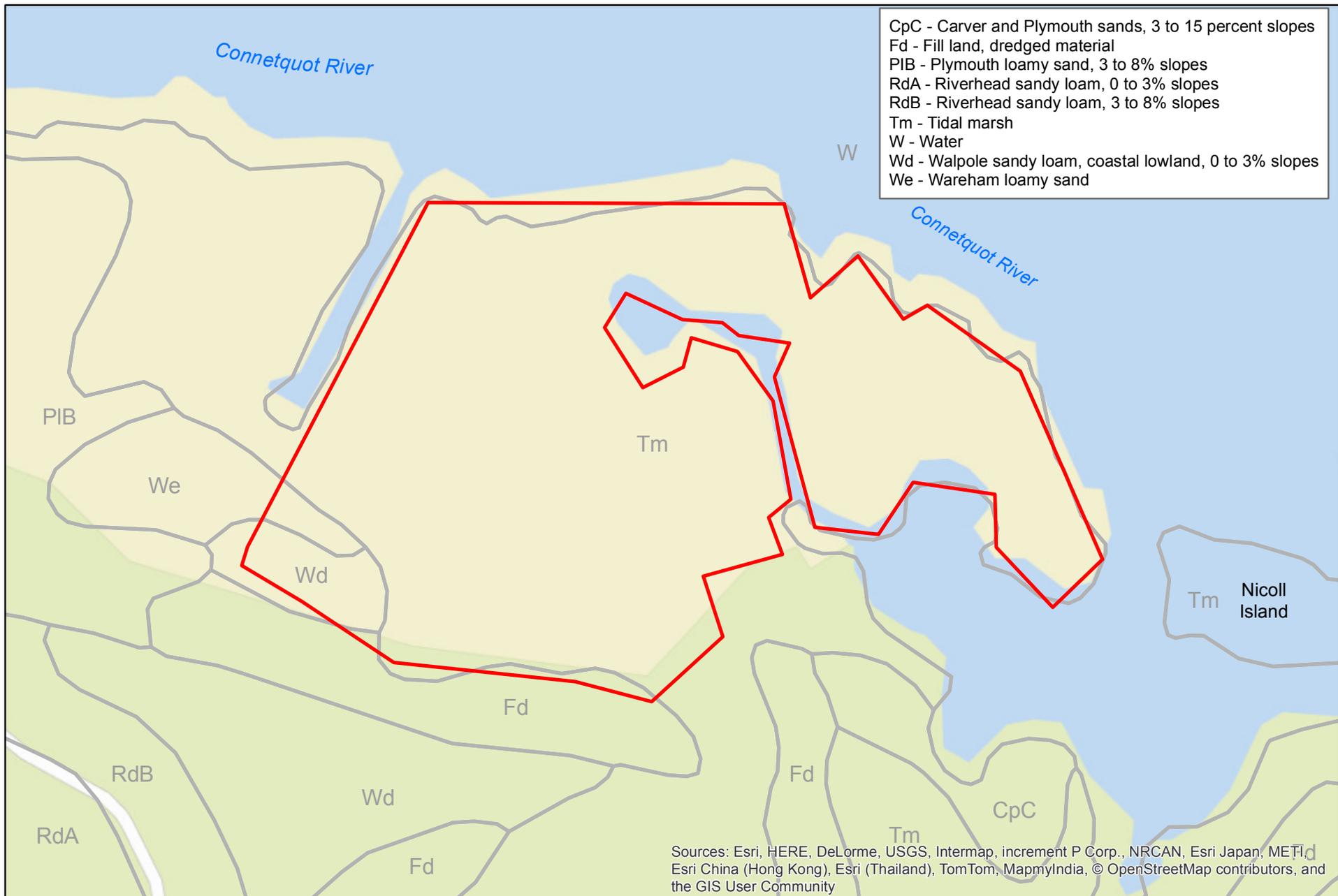
Source: ESRI wms; USDA, NRCS soil, 2013
 Scale: 1 inch = 600 feet



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**FIGURE 3-5
TIMBER POINT SOIL MAP**

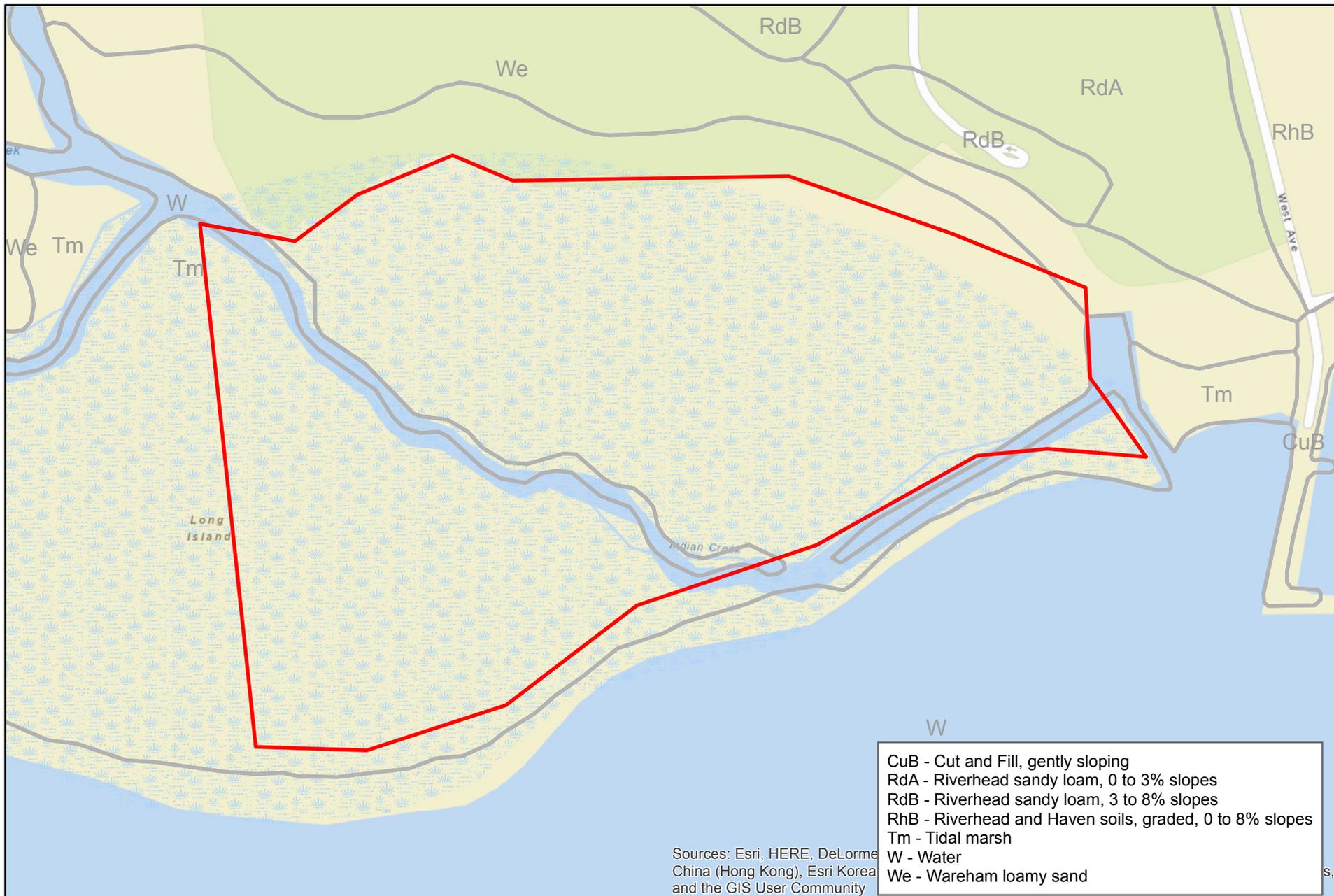
Source: ESRI wms; NRCS Soil, 2013
Scale: 1 inch = 300 feet



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**FIGURE 3-6
WEST SAYVILLE SOIL MAP**

Source: ESRI wms; USDA, NRCS soil, 2013
Scale: 1 inch = 400 feet



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Approximate location of project site

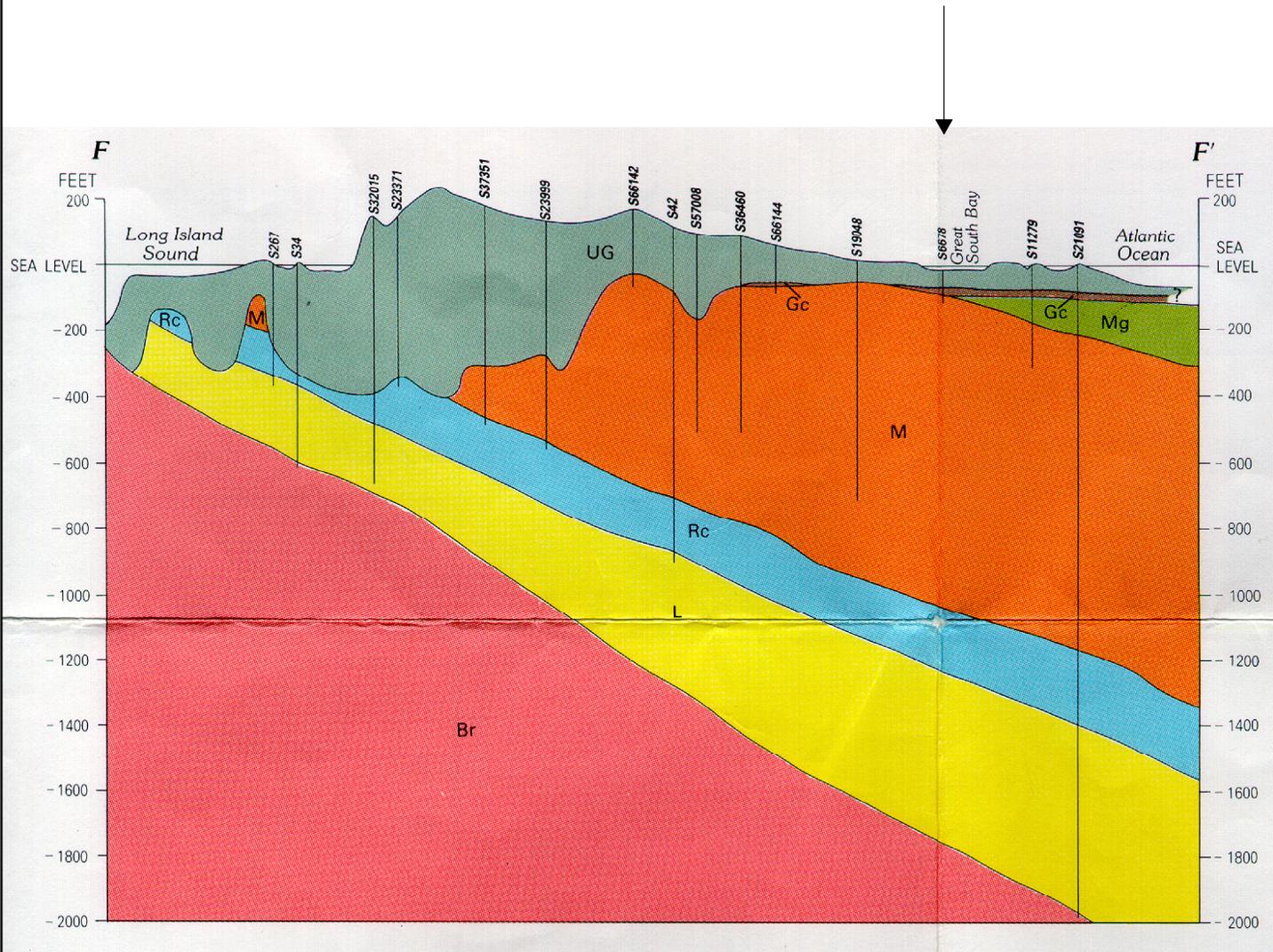


FIGURE 3-8 - GARDINER COUNTY PARK GEOLOGIC CROSS-SECTION

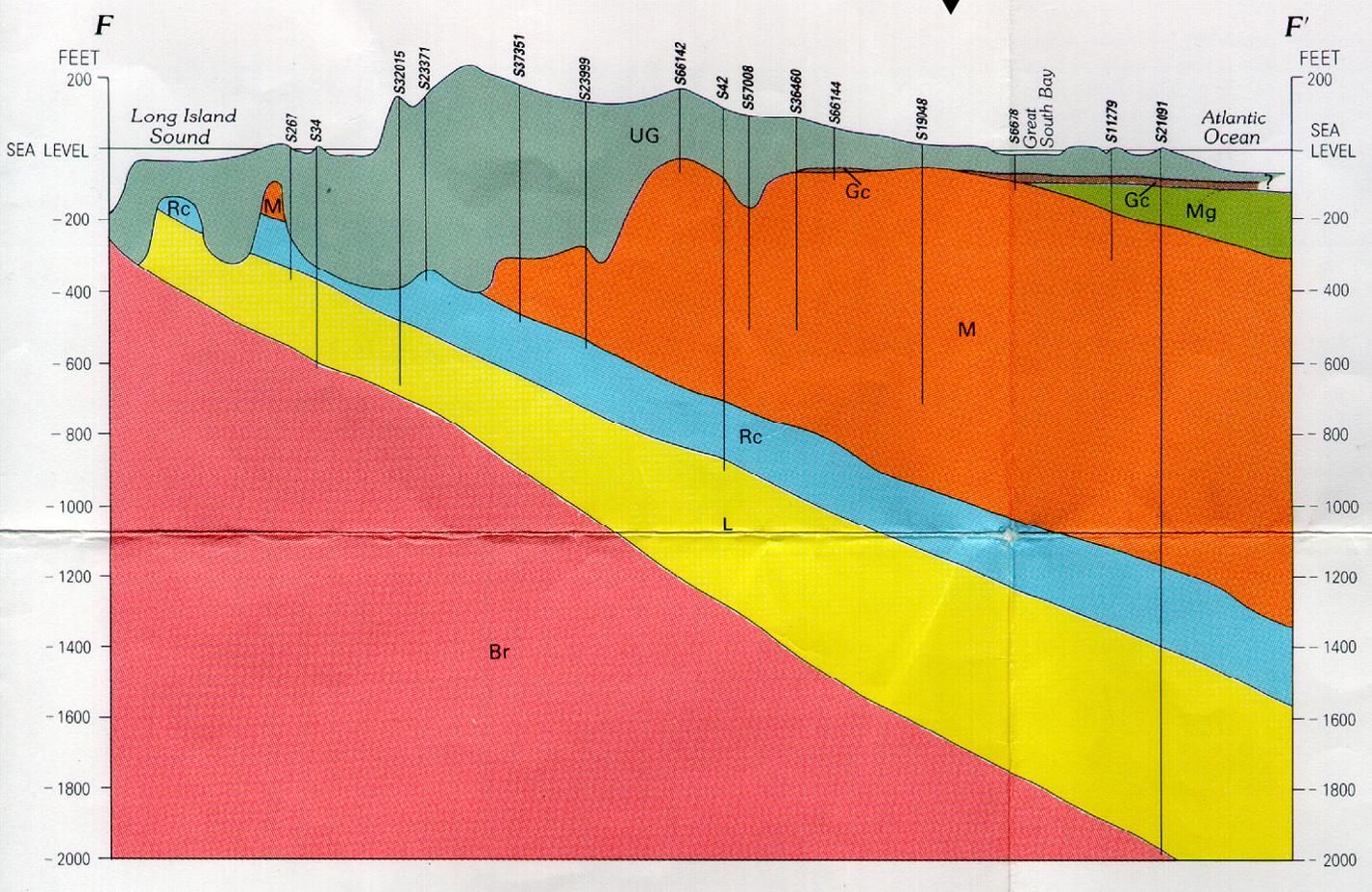
Source: section F from Smolensky, et. al; USGS Hydrologic Atlas:709, 1990
 Scale: NTS, Vertical exaggeration



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Approximate location of project site



**FIGURE 3-9 - TIMBER POINT
GEOLOGIC CROSS-SECTION**

Source: section F from Smolensky, et. al; USGS
Hydrologic Atlas:709, 1990
Scale: NTS, Verticle exaggeration



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