



PUBLIC NOTICE

US Army Corps
of Engineers
New York District
Jacob K. Javits Federal Building
New York, N.Y. 10278-0090
ATTN: Regulatory Branch

In replying refer to:
Public Notice Number: NAN-2014-01315-WCA
Issue Date: August 12, 2015
Expiration Date: September 10, 2015

To Whom It May Concern:

The New York District, Corps of Engineers has received a mitigation bank prospectus to establish the Oradell Reservoir Wetland Mitigation Bank. This notice is to inform interested parties of the proposed activities and solicit comments.

AUTHORITY: Issuance of a public notice regarding a proposed mitigation bank prospectus is required pursuant to the "Compensatory Mitigation for Losses of Aquatic Resources; Final Rule," (Rule) as published in April 10, 2008, Federal Register, Vol. 73, No. 70, Pages 19594-19705 (33 Code of Federal Regulations, Parts 325 and 332). The authorization of the proposed wetland mitigation bank may be reviewed under a separate future permit action pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344).

APPLICANT: GV Oradell LLC
91 Fieldcrest Avenue
Raritan Plaza II, Suite A-1
Edison, New Jersey 08837

ACTIVITY: The prospective mitigation bank sponsor, GV Oradell LLC, has requested Department of the Army authorization to provide compensatory mitigation for unavoidable freshwater wetland impacts associated with Department of the Army permits issued under Section 404 of the Clean Water Act (33 U.S.C. 1344) at an existing 44.37 acre New Jersey Department of the Environmental Protection (NJDEP) approved freshwater wetland mitigation bank known as the "Oradell Reservoir Wetland Mitigation Bank".

It should be noted that on March 2, 1994, the State of New Jersey assumed the Federal Section 404 permit program from the U.S. Army Corps of Engineers. On that date, the NJDEP became the agency responsible for regulating Section 404 activities in certain waters and wetlands within the State of New Jersey. The Oradell Reservoir Wetland Mitigation Bank is located within an area assumed by the State of New Jersey. While this bank is located within an assumed area of New Jersey, GV Oradell LLC proposes to provide compensatory mitigation at this site for unavoidable freshwater wetland impacts in both assumed and non-assumed freshwater wetlands.

All aspects associated with the objectives, establishment, operation, monitoring/maintenance, and long term management of the proposed bank is discussed in the "Oradell Reservoir Wetland Mitigation Bank Prospectus" dated January 2015. To view the Prospectus please visit the Public Notices section of the New York District's Regulatory Branch page online at: www.nan.usace.army.mil/PublicNotices and select the public notice labeled NAN-2014-01315-WCA.

The proposed mitigation bank may be one of a number of practicable options available to applicants to compensate for unavoidable impacts to aquatic resources associated with Department of the Army permits issued under Section 404 of the Clean Water Act (33 U.S.C. 1344).

CENAN-OP-RW
PUBLIC NOTICE NO. NAN-2014-01315-WCA

The mitigation bank prospectus will be reviewed by the New York District of the U.S. Army Corps of Engineers in consultation with a group of federal and state agency representatives known as the Interagency Review Team (IRT). The New York District of the U.S. Army Corps of Engineers is the chair of the IRT.

WATERWAY: Oradell Reservoir (Hackensack River Watershed)

LOCATION: Borough of Closter and Borough of Haworth, Bergen County, New Jersey

FEDERAL EVALUATION OF THE PROPOSAL: The Corps of Engineers is soliciting comments from the public; federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate this proposed mitigation bank. The New York District Corps of Engineers in evaluating this proposal will consider any comments received. Comments will be used to assess the potential for the proposed mitigation bank to provide appropriate compensatory mitigation for activities authorized by Department of the Army permits.

ALL COMMENTS REGARDING THE PROSPECTUS MUST BE PREPARED IN WRITING AND MAILED TO REACH THIS OFFICE BEFORE THE EXPIRATION DATE OF THIS NOTICE, otherwise, it will be presumed that there are no objections to the activity.

It is requested that you communicate the foregoing information concerning the activity to any persons known by you to be interested and who did not receive a copy of this notice. If you have any questions concerning this application, you may contact this office at (917) 790-8412 and ask for Jim Cannon.

In order for us to better serve you, please complete our Customer Service Survey located at <http://www.nan.usace.army.mil/Missions/Regulatory/CustomerSurvey.aspx>.

For more information on New York District Corps of Engineers programs, visit our website at <http://www.nan.usace.army.mil>.


Jodi M. McDonald
Chief, Regulatory Branch

ORADELL RESERVOIR WETLAND MITIGATION BANK PROSPECTUS

**Freshwater Wetland Restoration (Re-Establishment & Rehabilitation) &
Upland Forest Enhancement**

Prepared By:

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Prepared For:

Bank Sponsor
GV Oradell LLC
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January, 2015

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1 MITIGATION BANK DESCRIPTION

This mitigation bank description and prospectus is presented in accordance with the requirements for a Prospectus as detailed in "Compensatory Mitigation for Losses of Aquatic Resources; Final Rule", 33 CFR Parts 325 and 332 and 40 CFR Part 230 of April 10, 2008. As this proposed bank consists of non-tidal freshwater wetlands, this prospectus also incorporates all of the required data pursuant to the NJ Freshwater Wetlands Protection Act (NJAC 7:7A-15.0) as more fully set forth in the executed MBI between the bank sponsor and NJDEP dated April 10, 2014.

The proposed bank is part of a larger tract known as Block 200, Lots 1 & 2, and Block 1100, Lot 1 located in the Borough of Haworth, as well as Block 201, Lots 2 & 3 located in the Borough of Closter, Bergen County, New Jersey—as depicted in the attached Figures 1 and 2.

1.1 Objectives of the Proposed Mitigation Bank – 33 CFR 332.8 d-2 (i)

The applicant and Bank Sponsor is GV Oradell LLC. The fee simple title owner of the land is United Water New Jersey, Inc., who consents to the filing of this bank prospectus and development of the proposed mitigation bank. GreenVest, LLC is acting as agent for the Sponsor. GreenVest, LLC (GV), on behalf of the sponsor, is requesting Department of the Army and Interagency Review Team (IRT) review and comment on this Prospectus to establish federal approval for this mitigation bank. The 44.37 acre mitigation bank (see Attached Mitigation Plan) would provide wetland mitigation for permitted impacts pursuant to Section's 404 and 401 of the Clean Water Act, Interagency Compensatory Wetland Mitigation Agreement (1997), the NJ Freshwater Wetlands Protection Act, NJ Flood Hazard Area Control Act within the banks approved service area (SA). The approved SA is known as: NJDEP Watershed Management Area 5 (Hackensack, Hudson, Pascack) consisting of the following USGS HUC's;

02030103170

02030101170

02030103180

02030104010 – Eastern portion

1.2 How the Mitigation Bank will be Established and Operated – 33 CFR 332.8 d-2 (ii)

The Sponsor will establish, operate, and maintain the mitigation bank in accordance with the provisions of the to be approved IRT Mitigation Banking Instrument (MBI), the NJDEP approved MBI executed on April 10, 2014, as well as all other United States Army Corps of Engineers (USACE), laws, regulations and/or permits; including any special conditions thereto contained. The contemplated restoration will be accomplished using both tried and tested ecosystem restoration design/construction methods, in conjunction with proprietary methods used by GreenVest and others, such as the USFWS, NOAA and NJDEP. GreenVest has successfully applied similar restoration and rehabilitation measures proposed herein on multiple sites located in Middlesex, Monmouth, Ocean, Burlington, Atlantic Counties in NJ as well as other jurisdictions.

The proposed Oradell Reservoir Mitigation Bank site is adjacent and tributary to the Oradell Reservoir. This reservoir supplies drinking water to nearly one million residents of Hudson and Bergen County, NJ. As a result of the proposed bank's immediate proximity to the reservoir, the implementation of this project as proposed will have a net positive impact on improving and maintaining the reservoir's water quality. The ORMB is situated along the Oradell Reservoir's eastern shoreline, where the proposed bank site is bordered to the east by dense residential and commercial uses, and to the south and north by residential uses. The entire tract is embedded within a heavily urbanized portion of Bergen County (See Figure 1 and 2).

1.3 Proposed Credit Generation & Ratios

The release of credits will be based upon the release schedule approved in the final MBI and successful achievement of performance standards, as approved by the IRT. The Sponsor proposes that awarded credits will be available to be used as mitigation in accordance with applicable requirements of federal and state law. One (1) credit from the Bank would mitigate for one (1) acre of authorized wetland impact. Proposed utilization of credits would be submitted to the USACE and/or NJDEP for consideration in conjunction with the applications or permits for such projects on a case-by-case basis.

The Sponsor would submit an accounting statement to the Interagency Review Team (IRT) each time credits are debited or additional credits are released. The Sponsor will maintain a credit ledger consisting of all debits and credits to and from the bank. The reporting requirements will be clearly set forth in the approved MBI.

Upon submittal of all appropriate documentation by the Sponsor and subsequent approval by the IRT, the sponsor proposes that credits would become available for sale to approved permittees/buyers in accordance with the credit totals presented in Table 1.

Table 1.1: Credit Generation and Associated Ratios

The following bullets and table summarize the requested credit ratios and corresponding yield:

- 2 acres of wetland restoration/re-establishment is equal to 1 credit; or
- 3 acres of wetland restoration/re-habilitation (Area-A) is equal to 1 credit; or
- 5 acres of wetland restoration/re-habilitation (Area-B) is equal to 1 credit; or
- 13 acres of upland enhancement is equal to 1 credit; or

CREDIT VALUES

SITE ELEMENTS	Area	Ratio	Credits
Wetland Restoration/Re-establishment (Creation)	1.16	2:1	0.58
Wetland Restoration/Rehabilitation (Area-A)	13.72	3:1	4.57
Wetland Restoration/Rehabilitation (Area-B)	28.48	5:1	5.70
Upland Enhancement	1.01	13:1	0.08
Totals	44.37		10.93

2 Ecological Suitability of the Site to Achieve the Objectives of the Proposed Mitigation Bank, Including the Physical, Chemical and Biological Characteristics of the Bank Site and how that Site will Support the Planned Types of Aquatic Resources and Functions – 33 CFR 332.8 D-2(A)

The present degraded/impaired condition of the acreage subject to this proposal is the cumulative result of in-situ and regional land use practices over the past century. A brief description of the sites history is relevant in understanding the present purpose, need and context for a large-scale restoration project and mitigation bank on this site and within this region.

2.1 Baseline Conditions

Historically, the entire site and surrounding environs were part of a large forested system adjacent to the tidally influenced waters of the Hackensack River. Around the turn of the century, most of the headwater wetlands on the ORMB site and elsewhere in the non-tidal reaches of the Hackensack River were cleared for agricultural purposes, resulting in more rapid surface runoff, as well as increased sediment and nutrient loading. In 1921, the Oradell Dam was constructed for purposes of generating potable water supply for the region and in the process creating the Oradell Reservoir. The bank site is located approximately 2 miles above the current head of tide artificially created by the construction of the dam. According to the Hackensack River Keeper, the construction of the dam effectively created “two rivers,” one freshwater system and one estuarine system below the dam. Historically, ditches were installed in to facilitate drainage throughout the overall tract and specifically within several wetland and vernal pool areas within the bank acreage. The ditch and channelized stream network directly impacts site hydraulics and the hydroperiod of this impaired wetland system. These hydrologic and hydraulic alterations have impaired historic system structure and functionality, which supports the need for restoration.

As a headwater system, the primary hydrologic inputs should include precipitation, surface runoff and groundwater. In this case, the shallow perched groundwater table has been effectively altered. The majority of the ORMB site is comprised of poorly drained soils associated with Pascack Silt Loam Series, with the remaining portions of the tract underlain by Riverhead Sandy Loam. Contrary to the NRCS Soil Survey for this site, most of soils underlying wetland areas mapped as Riverhead are consistent with Pascack Silt Loam. These soils are poorly drained and exhibit a high water table. Direct precipitation, surface runoff and shallow groundwater will support the proposed hydroperiod in the restored condition. The site is chiefly comprised of aggressive and invasive assemblages of vegetation (common reed, mile-a-minute weed and Japanese stilt grass) across several habitat types including open wet meadow, emergent and scrub-shrub wetlands and wetlands/uplands which are comprised of very openly dispersed, evenly aged, mature trees. These impaired areas are surrounded by patches of functional upland and wetland forest. As such, the bank site exhibits sparse vertical and horizontal structure, low habitat and species diversity and most importantly impaired hydrology and hydraulics.

2.2 Ecological Suitability

All onsite wetlands are characterized by the EPA as priority wetlands, for among other things, the provision of avian, mammalian and fish habitat along with “immanent threats” to the long term existence and functionality of this system. One of this site’s greatest assets is its large size in conjunction with its high value as a scarce urban resource. Urban restoration projects can be challenging, however this is far outweighed by the local and regional value of these scarce resources and the need to restore these impaired urban resources.

The contemplated restoration activities will lift numerous functions and values on this site and influence the same within this heavily urbanized watershed. These include wildlife habitat, Threatened & Endangered Species (TE) habitat, vegetative diversity and complexity, systemic function, flood storage, groundwater recharge, water quality improvement/maintenance, nutrient cycling/uptake (Nitrogen and Phosphorous uptake and sequestration), and sediment/erosion control. In addition to ecological value, an added benefit is increased groundwater recharge and surface/groundwater quality improvements contributing directly to the water quality and supply in the Oradell Reservoir. This enhanced and fully integrated system will help improve the biological, chemical and physical integrity of the Watershed and Eco-Region.

Re-establishment of native cover and the vertical continuum of vegetative strata within the enhanced forested and open canopy wetland system will increase nutrient uptake/cycling, reduce sediment/nutrient loading, increase soil stability and groundwater recharge, as well as enhance the structure and function for wildlife.

The result will be a highly functional, 44.37± acre headwater system that will be fully integrated with the surrounding upland acreage to the north and west.

Summary of Proposed Functional Uplift

- Restore site hydrology and the suite of chemical, physical and biological process influenced by the same.
- Restore historic patterns of seasonal groundwater discharge/recharge.
- Improve water quality, onsite, in the Reservoir and the downstream USEPA Impaired 303(d) listed waters of the Hackensack River and Newark Bay.
- Restore systemic structure and function.
- Restore the biological, chemical and physical integrity of onsite wetlands, and influence the same in the downstream receiving waters of the Oradell Reservoir, Hackensack River, Newark Bay and associated aquatic resources.
- Restore and preserve the integrity of a large scale forested headwater system in the headwaters of the Hackensack/Passaic/Newark Bay Complex.
- Improve critical habitat and functional linkages between headwater and estuarine systems.
- Functionally re-establish plant species diversity, composition, structure and function through implementation of an invasive exotic species eradication/control plan coupled with a native species planting plan.
- Restore/Enhance vernal habitat facilitating colonization by local populations of vernal pool amphibians and/or providing a viable opportunity for re-introduction of the same.
- Increase surface water and flood storage and restore seasonal patterns of groundwater discharge/recharge.
- Increase sediment trapping and restore historic patterns of nutrient cycling.
- Restore and Enhance habitat for threatened & endangered species, endemic wildlife, and other aquatic and seasonal dependent wildlife across the Site.

The plan as proposed will include restoring a mosaic of freshwater and upland habitat types including; emergent, forested, scrub-shrub, upland forest/scrub-shrub and meadow and open water.

3 Proposed Ecosystem Restoration

This proposal is predicated on GV's experience in successfully implementing similar projects in the Northern Piedmont Eco-Region, along with studies conducted on this site, similar restoration projects conducted by others, evaluation of regional programmatic objectives, and watershed based needs/goals. Executing this project as proposed will result in significant ecological uplift by re-establishing and rehabilitating historic, headwater system structure and function. Although fairly simple in its design and implementation the project will result in a complex set of chemical, physical and biological changes restoring this headwater system's historic functions and structure. Small changes in hydroperiod and hydrology can generate pronounced effects on species composition, system richness and ecosystem productivity. The main element of this proposal is the restoration of historic hydrology and hydraulics (HH). Secondary restoration elements include invasive species eradication/control, restoration of habitat diversity and structure which includes and native planting across 42.2 acres of impaired freshwater wetlands. This proposal specifically includes HH restoration and native planting applied to all 42.2 wetland acres, 1.16 acres of freshwater wetland re-establishment, and 1.01 acres of upland enhancement.

Summary of Proposed Restoration Activities

- Hydrologic & Hydraulic restoration achieved through grading, stream restoration, log debris vane installation and strategic ditch plugging.

- Implementation of an invasive/exotic vegetation eradication and control plan.
- Clearing and grubbing plus creation of natural micro topography.
- Installation and maintenance of deer exclusion fencing.
- Implementation of a site-wide native planting plan.
- Deed restriction and preservation in perpetuity of all 44.37± acres within the boundaries of the Oradell Reservoir Mitigation Bank.
- Implementation of adaptive management, long-term maintenance and monitoring assuring successful achievement of goals and objectives.

4 Assurance of sufficient water rights to support the long-term sustainability of the mitigation bank – 33 CFR 332.8 d-2(B).

Primary hydrologic inputs to the ORMB site are direct precipitation, overland flow, channelized surface flow, and groundwater. Data collection from six (6) onsite groundwater wells and one staff gauge commenced in September of 2012, and will continue to be collected through the completion of construction. This data confirmed that the site possesses adequate hydrology to support jurisdictional, albeit partially drained wetlands, but more importantly achievement of the banks HH and other restoration objectives. Furthermore, the drainage area, tributary to the headwater wetlands subject to this Mitigation Bank, is owned by United Water. As stated herein, United Water has granted their permission to develop this mitigation bank. In addition, United Water is dedicated to the long term maintenance and monitoring of the completed bank project which supports its mission to maintain the highest water quality in the Oradell Reservoir.

5 Proposed Service Area – 33 CFR 332.8 d-2 (iii)

The proposed service area for this bank is located in the eastern half of the Hackensack – Passaic Watershed, HUC 8 02030103. The Service Area includes all and/or a portion of the four (4) USGS HUC 11's listed below. These HUC's comprise all of NJDEP Watershed Management Area (WMA) 5, inclusive of the politically designated region of WMA 5 known as the New Jersey Meadowlands District. The proposed service area is depicted in Figure 5: Service Area Map (attached).

Specific HUC-11 watershed unit numbers as follows:

WMA-5

02030103170

02030101170

02030103180

02030104010 – Eastern portion

These four (4) USGS HUC 11's (NJDEP WMA 5) form a major portion of the Hackensack/Passaic/Newark Bay complex, defined as the Hackensack/Passaic/Newark Bay Study Area in the Hudson Raritan Estuary Comprehensive Restoration Plan (HRE CRP). The ORMB site is located in the headwaters (a formerly tidal reach) of the Hackensack River—one of two major rivers feeding the Newark Bay, with the other major source of freshwater being the Passaic River. The proposed service area is contained within the Level III USEPA Northern Piedmont Eco-region that is characterized by similar topography, soils, hydrology, ecological community and vegetative composition. Therefore, we submit that the service area requested is justified and appropriate. The bank sponsor proposes that credits generated from this bank would provide advance mitigation to third parties for freshwater wetland impacts within the banks approved service area.

6 The General Need For and Technical Feasibility of the Proposed Mitigation Bank – 33 CFR 332.8 d-2 (iv)

6.1 General Need

The Sponsor has determined that there is need and demand for this large scale, freshwater wetland Bank project based on ecological, local/regional watershed planning, local/regional NGO, socioeconomic and prospective demand for freshwater wetland mitigation. Intense land development, dense transportation networks, creation of impervious surface area, and water quality impairments, both historic and current, have eliminated, severely fragmented, and greatly altered the natural landscape and system functions throughout Northern Piedmont Plains Eco-region. Non-tidal headwater wetlands, particularly forested, have sustained perhaps the greatest losses in area and functional capacity due in part to the scarcity of this habitat type and its sensitivity to changes in water quality and quantity (NJWAP).

The following facts, sourced from various studies by the USEPA, New Jersey Wildlife Action Plan (NJWAP) and NJDEP Division of Watershed Management, among others, apply to the Northern Piedmont Plains Eco-region within which Watershed Management Area 5 is located:

- Watershed Management Area 5 (WMA 5) is the most populated WMA in the State of NJ. More than 50% of this watershed is developed and under intensive residential (30%), commercial and industrial use.
- The entire length of the Hackensack River below the Oradell Dam is characterized as a 303(d) Impaired Waterway.
- The lower reaches of the Hackensack and Passaic Rivers are heavily contaminated and thus significantly impaired by former and current industrial uses. Contaminants include dioxin, PCBs, PAHs and metals including mercury. The presence of high level of contamination severely limits the economic and ecological viability of large-scale restoration in the lower reaches of WMA 5.
- The Piedmont Plains landscape received nearly half of all development that occurred in New Jersey during the period between 1984 and 1995, with forested freshwater wetlands sustaining the greatest losses resulting ranking this community as the rarest in the Northern Piedmont.
- Opportunities to provide forested freshwater wetland mitigation in the Northern Piedmont and more specifically within the heavily urbanized Counties of Essex, Hudson and Bergen are very limited due to the significant level of development that has already occurred in this region.
- Changes in groundwater/surface water quantity and quality, as well as habitat loss and fragmentation, were the chief sources of loss and impairment, and continue to be the highest threat to the productivity and health of natural habitats (freshwater wetland and upland) and wildlife within the Northern Piedmont area (NJWAP 2008).
- The Oradell Reservoir supplies drinking water to over 1,000,000 residents in Hudson and Bergen Counties. Surface water quality in the reservoir is important as a potable water supply, but also as a headwater tributary to the aquatic system in the NJ Meadowlands.
- The proposed project supports the restoration, protection and preservation goals for species of greatest conservation need and the ecological systems identified in the NJ Wildlife Action Plan as well as the HRE CRP. These proposed measures include the restoration of forested, emergent, scrub-shrub and vernal wetlands next to a large body of open water thereby creating and enhancing habitat for T&E species such as: the Bald Eagle, Black-crowned Night heron, and Red-Shouldered Hawk.

The facts presented above support the value of the ORMB on a local, eco-region and watershed scale. This project meets a stated regional need; addresses regional status and trends of habitat losses; is a scarce urban resource located in one of the most densely populated regions in the state; possesses tremendous potential for

ecological lift; has recognized value by the region's major environmental groups, State and Federal resource agencies as being an important restoration project and will address the programmatic objectives of the Hudson-Raritan Estuary Comprehensive Restoration Plan (HRE-CRP) and New Jersey Wildlife Action Plan (NJWAP). In summary, this site embodies a significant regional opportunity to restore and preserve a large tract of wetland and upland habitat, help to meet a large number of water quality, wildlife habitat quality, sediment quality, open space, recreation, education and other programmatic objectives on one site.

6.2 Regional Need for Freshwater Wetland Mitigation

The significant demand for freshwater wetland mitigation within this watershed is tied to two primary factors: 1) A dearth of viable non-tidal, freshwater mitigation sites that are not grossly contaminated, outside or above potential brackish/saltwater flood damage, will not be impacted by the Rebuild By Design project and contemplated flood control in the region or are not already under public ownership and 2) there are presently no true freshwater, but more importantly no true forested, freshwater wetland mitigation banks approved to service impacts within WMA 5. There is a significant demand for freshwater wetland mitigation within WMA 5, with no available freshwater mitigation credits to service existing and future needs over the next 5+ years.

The two established, tidally influenced banks located within the NJ Meadowlands District and this watershed, 1) MRI-3 Bank and has 21.045 credits remaining, and 2) Kane Bank, currently has 41.745 credits remaining which may only be sold to NJ's four public transportation agencies. It is important to note that although both MRI-3 and Kane are authorized to sell credits for non-tidal wetland impacts (SS/EM only), they are both comprised of tidally influenced salt marsh habitat. Therefore, the ORMB once approved will be the only non-tidal, freshwater wetland mitigation bank in WMA 5 able of truly compensating "in-kind" within this watershed and thus the most appropriate bank to offset losses to freshwater wetlands (forested, scrub-shrub, emergent) impacts. Therefore, significant justification exists for establishing WMA 5, inclusive of the New Jersey Meadowlands District as the SA for the ORMB based on the aforementioned watershed, regulatory (in-watershed and in-kind mitigation), ecological, hydrological and a very practical need based basis.

6.3 Technical Feasibility

The proposed bank is technically feasible and incorporates recognized ecosystem and engineering design principals that have been applied successfully on other restoration sites throughout New Jersey over the past several decades by the bank sponsor and others. The proposed restoration will be implemented using means and methods successfully employed by GreenVest and others, such as the USFWS, NOAA and NJDEP. As previously stated, the bank as proposed herein has undergone extensive review receiving state approval from the NJDEP. The State MBI was executed between the bank sponsor and NJDEP on April 10, 2014.

7 The Proposed Ownership Arrangements and Long-Term Management Strategy for the Mitigation Bank Project Site – 33 CFR 332.8 d-2 (v)

The property owner is United Water New Jersey, Inc. and bank sponsor is GV Oradell LLC. The Bank Sponsor has secured permission in the form of an executed License Agreement from United Water New Jersey, Inc. to develop a mitigation bank on the portions of this subject property.

After approval of the mitigation bank and prior to construction, GV shall execute and record a conservation restriction or easement applied to the entire mitigation area located within the proposed bank. The conservation restriction or easement shall meet the requirements of the 33 CFR Parts 325 and 332 and 40 CFR Part 230.

A physical maintenance and monitoring plan for the proposed project will be developed and implemented for a minimum of five-year duration following the completion of construction. A construction completeness

report will be prepared immediately upon completion of the proposed mitigation project. Subsequent monitoring reports will be submitted to USACE annually after the completion of the first growing season. The first monitoring visit will examine the initial vegetative response of the plants to their new environment and although potentially not part of the 5 year monitoring program will begin upon completion of planting. Subsequent seasonal and semi-annual monitoring visits will then provide a regular schedule for data gathering, maintenance, and repair of the mitigation site, as required. Any corrective actions will be swiftly documented and submitted to USACE and NJDEP for review and approval prior to implementation. Annual Reports will be submitted prior to the end of each calendar year (December 31), documenting plant community conditions within the restoration areas and documenting hydrologic/soil data within the restoration areas and reference plots and annual credit value debits and balances. The Annual Report will also include a proposed plan of action for the following year including maintenance activities and proposed or needed adaptive management measures.

GV, as the mitigation bank operator, will maintain the bank during construction, through bank closure. The Bank will be closed at the end of its operational life, which is 5 years from the date of the completion of construction, successful completion of all performance standards, or until the sale of all credits, whichever comes last. At that time, Green Trust Alliance, Inc (GTA) an affiliated 501(c)(3), as long-term steward, shall with landowner be responsible for managing the Bank in perpetuity in accordance with the terms of the Long-term Management Plan established for the project and the terms of the recorded Conservation Restriction.

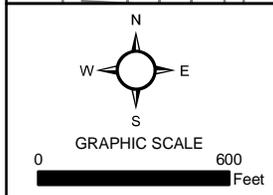
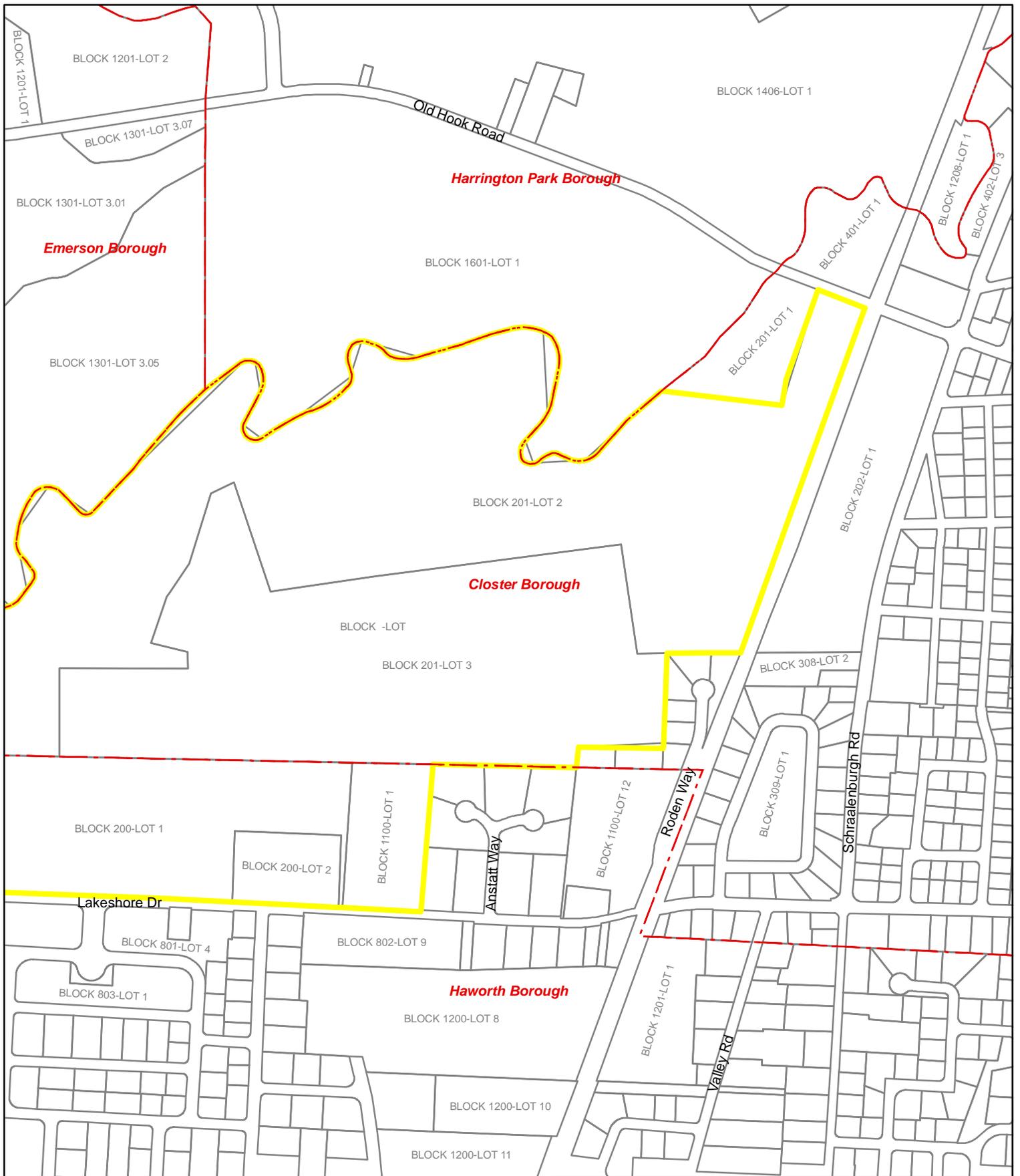
8 The Qualifications of the Sponsor – 33 CFR 332.8 d-2 (vi)

GreenVest, has sponsored, owned and operated mitigation banks and implemented Turnkey Mitigation projects in New Jersey and other Mid-Atlantic States for over 20 years. GV projects have been approved by the New York and Philadelphia Districts of the Army Corp of Engineers and the NJDEP, many of which have passed monitoring and maintenance periods and have been successfully closed. In addition to GV's mitigation banking experience, GV's team of ecologists and scientists have been involved in the design and construction of thousands of acres of wetland restoration projects in NJ and across the Mid-Atlantic. GreenVest currently owns and/or operates 6 approved mitigation banks in NJ with a seventh under review, including the first and only bank in the NJ Pinelands Region. GreenVest has also implemented dozens of turnkey mitigation projects over the last 20 years accepting 100% of the responsibility and liability for meeting both NJDEP and ACE's performance standards and success criteria.

9 Conclusion

The Oradell Reservoir Mitigation Bank provides an excellent and appropriate opportunity to restore, integrate and preserve a forested headwater system in the upper reaches of the Northern Piedmont Plains Eco-region, HUC 8 Watershed 02030103 (Hackensack-Passaic) and WMA 5 which will contribute to local, regional and watershed based programs goals and efforts. The bank project as proposed is technically feasible, ecologically suitable, possesses sufficient water rights, carries a recognized need for "in-kind" freshwater wetland mitigation, particularly forested, within WMA 5 and the NJ Meadowlands District, and will be implemented by an experienced and qualified bank sponsor/operator with over 20 years' experience in NJ. Therefore, we respectfully submit that IRT approval of this NJDEP approved freshwater wetland mitigation bank will provide an efficient and economic mitigation solution for "in-kind" impacts within this WMA 5 and the New Jersey Meadowlands District.

FIGURES



-  NJ Municipal Boundaries
-  Oradell Reservoir Mitigation Bank
-  Bergen Co. Parcel Boundaries

Data Sources:
 * NJGIN Info. Warehouse
 * GreenVest, LLC

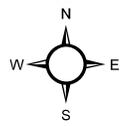
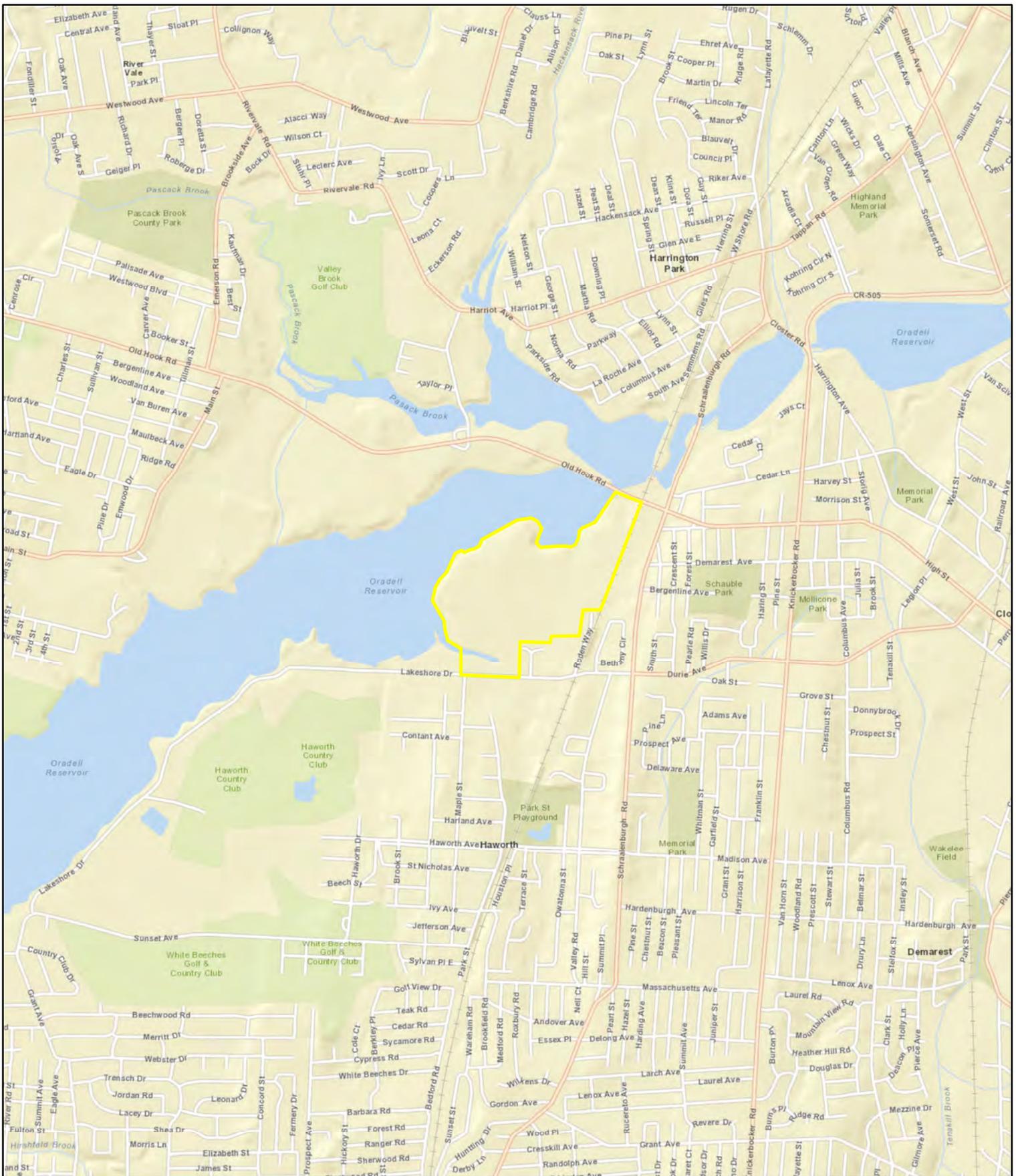
GreenVest
 One Step Ahead.

MARYLAND 726 Second Street Suite 3B Annapolis, MD 21403 410-268-7422 (p) 410-268-7423 (f)	NEW JERSEY 91 Fieldcrest Ave., A-1 Raritan Plaza II Edison, NJ 08837 732-902-6644 (p) 732-902-6643 (f)	NORTH CAROLINA 4405 Dewees Court Raleigh, NC 27612 919-787-5829 (p) 410-268-7423 (f)
---	--	---

**ORADELL RESERVOIR MITIGATION BANK
 Tax Map**

**BLOCK 1100 - LOT 1, BLOCK 200 - LOTS 1 & 2
 BOROUGH OF HAWORTH
 BLOCK 201 - LOTS 2 & 3
 BOROUGH OF CLOSTER
 BERGEN COUNTY, NEW JERSEY**

SCALE: 1 inch = 600 ft DATE: 04/12/2013 FIGURE: 1



GRAPHIC SCALE
0 2,000 Feet

Oradell Reservoir Mitigation Bank

Data Sources:
 * Esri Street Map 2011
 * NJGIN Info. Warehouse
 * GreenVest, LLC

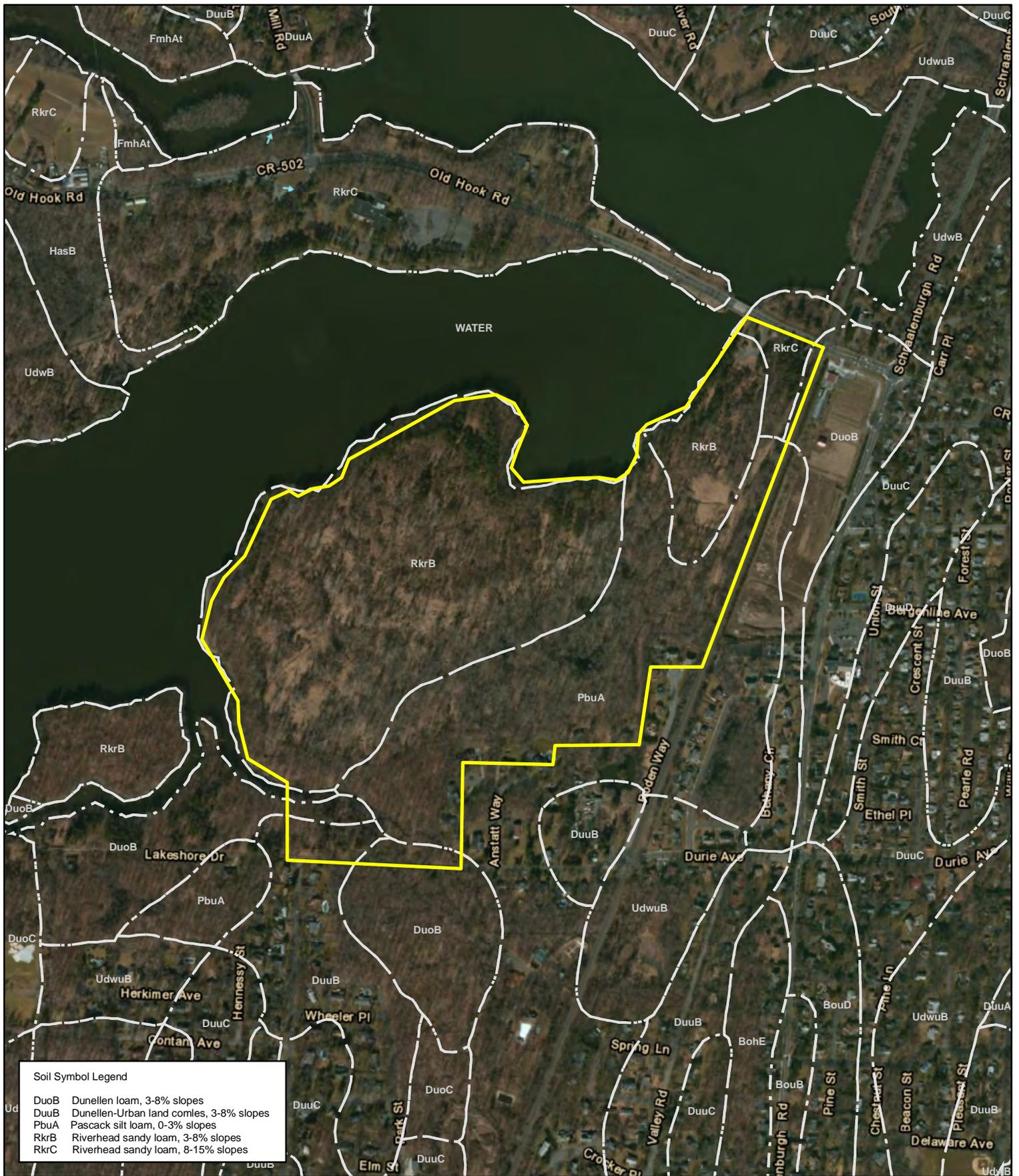
GreenVest
One Step Ahead.

MARYLAND 726 Second Street Suite 3B Annapolis, MD 21403 410-268-7422 (p) 410-268-7423 (f)	NEW JERSEY 91 Fieldcrest Ave., A-1 Paritan Plaza II Edison, NJ 08837 732-902-6644 (p) 732-902-6643 (f)	NORTH CAROLINA 4405 Dewees Court Raleigh, NC 27612 910-787-5829 (p) 410-268-7423 (f)
---	--	---

**ORADELL RESERVOIR MITIGATION BANK
Site Location Map**

**BLOCK 1100 - LOT 1, BLOCK 200 - LOTS 1 & 2
BOROUGH OF HAWORTH
BLOCK 201 - LOTS 2 & 3
BOROUGH OF CLOSTER
BERGEN COUNTY, NEW JERSEY**

SCALE: 1 inch = 2,000 ft DATE: 04/12/2013 FIGURE: 2



Soil Symbol Legend

DuoB	Dunellen loam, 3-8% slopes
DuoB	Dunellen-Urban land comles, 3-8% slopes
PbuA	Pascack silt loam, 0-3% slopes
RkrB	Riverhead sandy loam, 3-8% slopes
RkrC	Riverhead sandy loam, 8-15% slopes

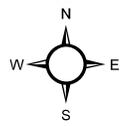
Data Sources:
 * Esri Street Map 2011
 * NRCS Soil Series - Bergen County, NJ
 * GreenVest, LLC

GreenVest
 One Step Ahead.

MARYLAND 726 Second Street Suite 3B Annapolis, MD 21403 410-268-7422 (p) 410-268-7423 (f)	NEW JERSEY 91 Fieldcrest Ave., A-1 Raritan Plaza II Edison, NJ 08837 732-902-6644 (p) 732-902-6643 (f)	NORTH CAROLINA 4405 Dewees Court Raleigh, NC 27612 910-787-5829 (p) 410-268-7423 (f)
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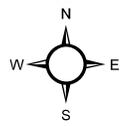
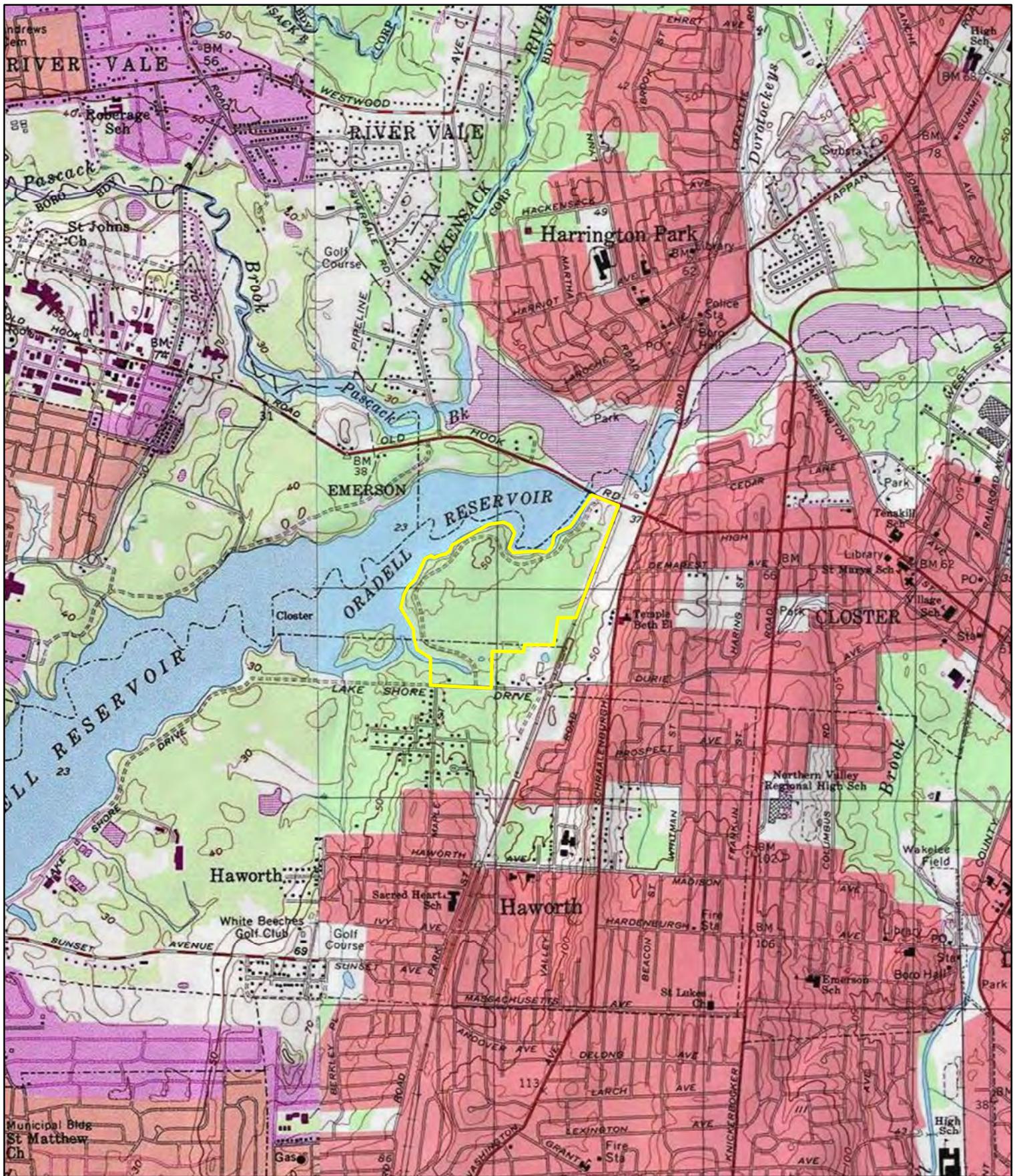
ORADELL RESERVOIR MITIGATION BANK
 Soil Survey Map

BLOCK 1100 - LOT 1, BLOCK 200 - LOTS 1 & 2
BOROUGH OF HAWORTH
BLOCK 201 - LOTS 2 & 3
BOROUGH OF CLOSTER
BERGEN COUNTY, NEW JERSEY



Oradell Reservoir Mitigation Bank

NRCS Soil Series



 Oradell Reservoir Mitigation Bank

Data Sources:
 * Esri USGS Topo Map
 * NJGIN Info. Warehouse
 * GreenVest, LLC

MARYLAND
 726 Second Street
 Suite 3B 21403
 Annapolis, MD 21403
 410-268-7422 (p)
 410-268-7423 (f)

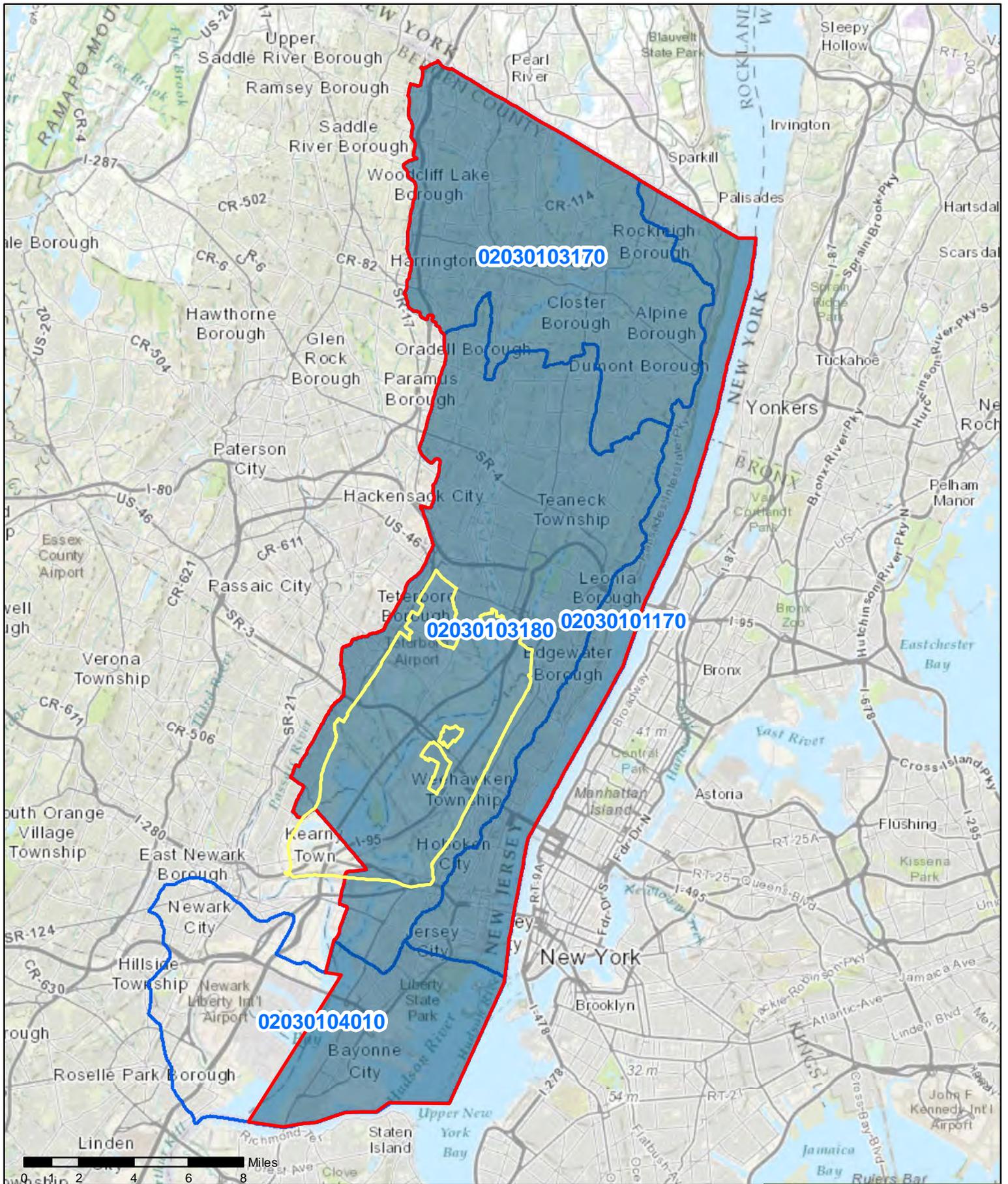
NEW JERSEY
 91 Fieldcrest Ave., A-1
 Raritan Plaza II
 Edison, NJ 08837
 732-902-6644 (p)
 732-902-6643 (f)

NORTH CAROLINA
 4405 Dewees Court
 Raleigh, NC 27612
 919-787-5829 (p)
 410-268-7423 (f)

ORADELL RESERVOIR MITIGATION BANK
 Regional USGS Topographic Map

BLOCK 1100 - LOT 1, BLOCK 200 - LOTS 1 & 2
 BOROUGH OF HAWORTH
 BLOCK 201 - LOTS 2 & 3
 BOROUGH OF CLOSTER
 BERGEN COUNTY, NEW JERSEY

SCALE: 1 inch = 2,000 ft DATE: 04/12/2013 FIGURE: 4



- Proposed Service Area
- Hackensack Meadowlands District
- NJDEP WMA 05 Boundary
- USGS HUC 11 Boundaries

Oradell Reservoir Mitigation Bank
Proposed Service Area

Borough of Haworth, Bergen Cty., NJ
 Block 1100, Lot 1; Block 200, Lots 1 & 2

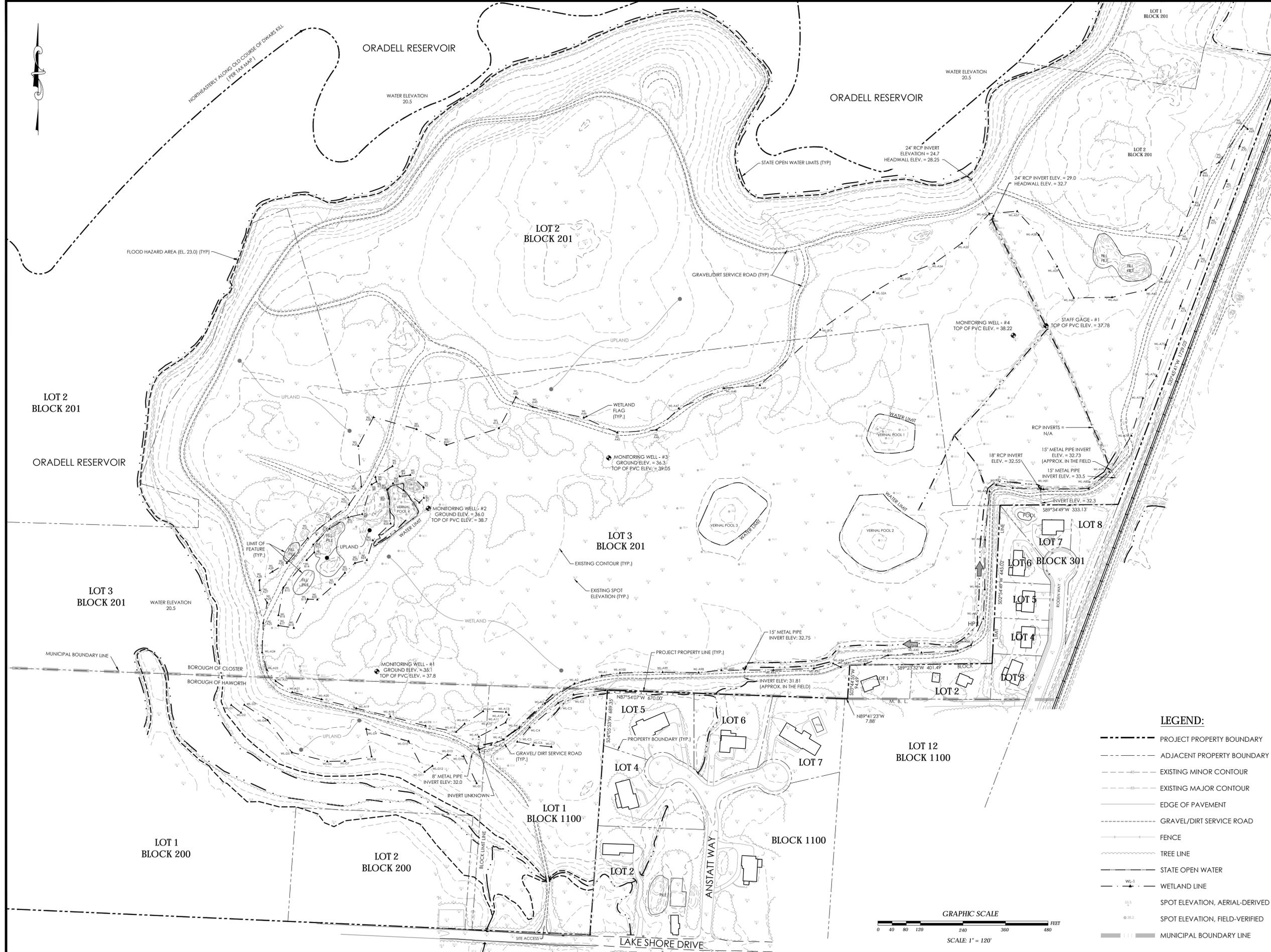
Borough of Closter, Bergen Cty., NJ
 Block 201, Lots 2 & 3

GreenVest
 200 5th Street, 4th Floor
www.greenvest.com

MARYLAND	NEW JERSEY	NORTH CAROLINA
210 Najoles Road, Suite 202 Millersville, MD 21108 410.987.550 (p) 410.987.5501 (f)	91 Fieldcrest Ave. Raritan Plaza II, A-1 Edison, NJ 08837 732.902.6644 (p) 732.902.6643 (f)	4405 Dewees Court Raleigh, NC 27612 919.349.2224 (p) 410.987.5501 (f)

Scale: 1 in = 24,000 ft Date: 1/9/2015

DRAWINGS



CALL BEFORE YOU DIG!
 NEW JERSEY LAW REQUIRES
 3 WORKING DAYS NOTICE FOR
 CONSTRUCTION PHASE AND 10 WORKING
 DAYS IN DESIGN STAGE - STOP CALL
 NEW JERSEY ONE CALL SYSTEM, INC.
 REFERENCE NEW JERSEY TITLE 48, CHPT. 2, ARTICLE 9
 1-800-272-1000

- PROJECT NOTES**
- PROJECT DATA SOURCES:
- HORIZONTAL DATUM IS NAD 1983. FEET. VERTICAL DATUM IS NAVD 1988. FEET.
 - PROPERTY BOUNDARY, AND TOPOGRAPHIC AND EXISTING SITE FEATURES WERE PROVIDED IN DIGITAL FORMAT BY GREENVEST, LLC, ON NOVEMBER 20 AND 28, 2012.
 - BOUNDARY & TOPOGRAPHIC SURVEY PREPARED FOR LOTS 2 & 4, BLOCK 101 AND LOTS 1, 2 & 3, BLOCK 201 BOROUGH OF CLOSTER, BERGEN COUNTY, NEW JERSEY AND LOTS 1 & 2, BLOCK 200 AND LOT 1, BLOCK 1100 BOROUGH OF HAWORTH, BERGEN COUNTY, NEW JERSEY, BY MICHAEL A. CATALANO LAND SURVEYING - PLANNING, P.O. BOX 252, 17 HIGH STREET, NEWTON, NEW JERSEY 07860, DATED NOVEMBER 23, 2012.
 - TOPOGRAPHIC INFORMATION FROM AERIAL SURVEY FLOWN ON NOVEMBER 19, 1997 BY ATLANTIS AERIAL SURVEY CO., INC. AND WAS SUPPLEMENTED BY MICHAEL A. CATALANO LAND SURVEYING.
 - WETLAND DELINEATION COMPLETED BY GREENVEST, LLC IN JUNE 2012.
 - FLOOD HAZARD ELEVATION IS EL. 24.0 (NGVD 1929) OR EL. 23.0 (NAVD 1988). FLOOD ELEVATIONS DERIVED FROM THE STATE OF NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION - DIVISION OF WATER RESOURCES, DELINEATION OF FLOODWAY AND FLOOD HAZARD AREA FOR ORADELL RESERVOIR, BOROUGH OF CLOSTER, BERGEN COUNTY, NEW JERSEY.
 - ELEVATIONS IN NAVD 1988 CAN BE CONVERTED TO NGVD 1929 BY ADDING 1.0 FEET.

DATE	DESCRIPTION
REVISIONS	

STATE OF NEW JERSEY CERTIFICATE OF AUTH. NO.: 24GA27976800

MARY L. PAIST-GOLDMAN
 Professional Engineer
 NJ Lic. No. GE-45798

DATE



SCIENTISTS AND ENGINEERS
 1108 OLD YORK ROAD, SUITE 1
 P.O. BOX 720
 RINGOES, NEW JERSEY 08551
 PHONE: 908.237.5660
 FAX: 908.237.5666
 WWW.PRINCETONHYDRO.COM



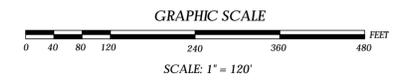
PROJECT NAME/LOCATION:
 ORADELL RESERVOIR MITIGATION BANK
 BLOCK 200, LOTS 1 & 2, AND BLOCK 1100 LOT 1,
 BOROUGH OF HAWORTH
 BLOCK 201, LOTS 2 & 3, BOROUGH OF CLOSTER
 BERGEN COUNTY, NEW JERSEY

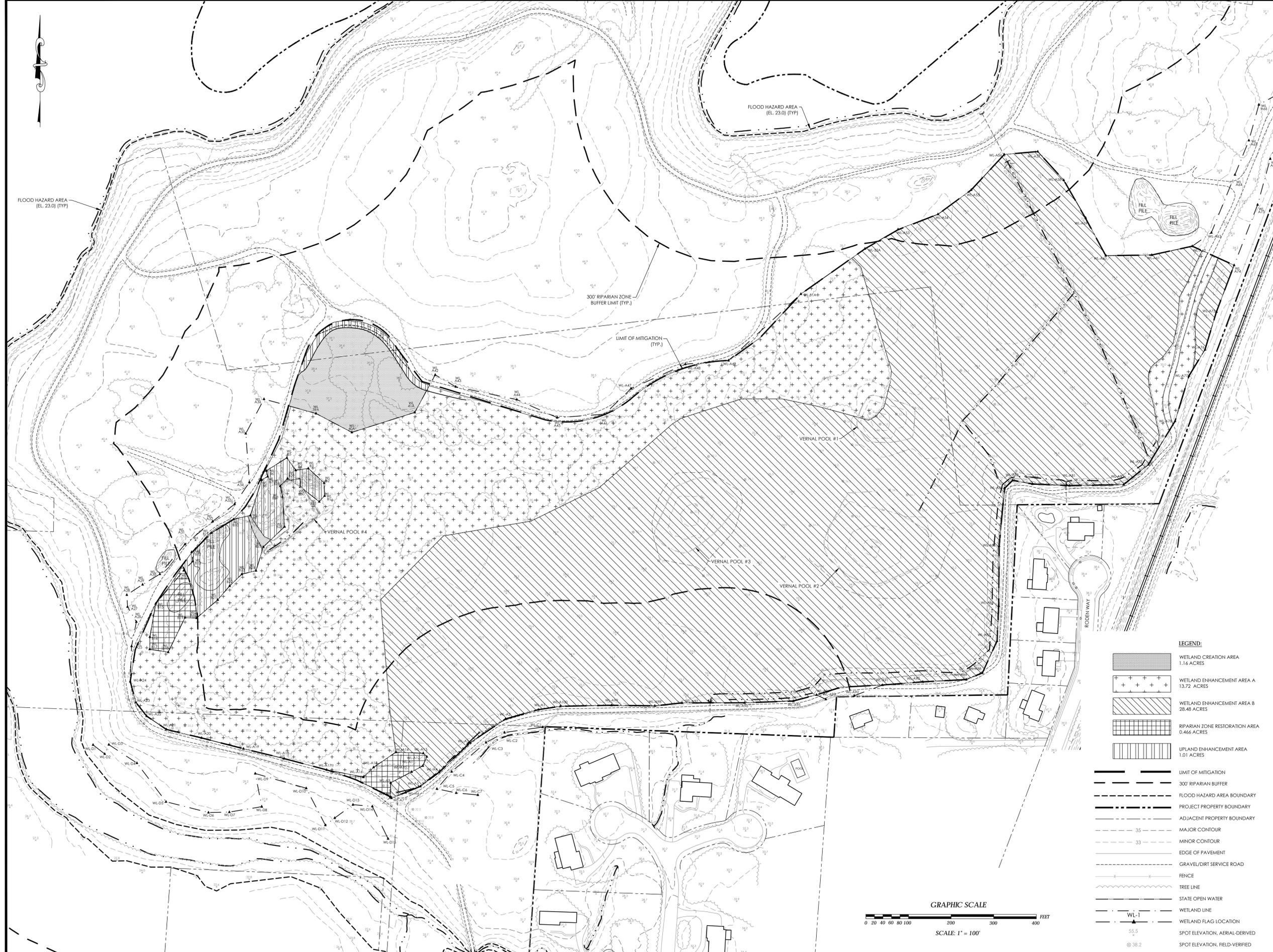
DRAWING NAME:
 EXISTING CONDITIONS PLAN

DATE:	04/24/2013
PROJECT NO.:	995.017
SCALE:	1" = 120'
DRAWN BY:	LK/LC
CHECKED BY:	MPG

SHEET NO. **2** OF **10**

- LEGEND:**
- PROJECT PROPERTY BOUNDARY
 - ADJACENT PROPERTY BOUNDARY
 - EXISTING MINOR CONTOUR
 - EXISTING MAJOR CONTOUR
 - EDGE OF PAVEMENT
 - GRAVEL/DIRT SERVICE ROAD
 - FENCE
 - TREE LINE
 - STATE OPEN WATER
 - WETLAND LINE
 - SPOT ELEVATION, AERIAL-DERIVED
 - SPOT ELEVATION, FIELD-VERIFIED
 - MUNICIPAL BOUNDARY LINE





CALL BEFORE YOU DIG!
 NEW JERSEY LAW REQUIRES
 3 WORKING DAYS NOTICE FOR
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PROJECT NAME/LOCATION:
 ORADELL RESERVOIR MITIGATION BANK
 BLOCK 200, LOTS 1 & 2, AND BLOCK 1100 LOT 1,
 BOROUGH OF HAWORTH
 BLOCK 201, LOTS 2 & 3, BOROUGH OF CLOSTER
 BERGEN COUNTY, NEW JERSEY

DRAWING NAME:
 MITIGATION PLAN

DATE:	04/24/2013
PROJECT NO.:	995.017
SCALE:	1" = 100'
DRAWN BY:	LK/LC
CHECKED BY:	MPG

SHEET NO.
 3 OF 10

- LEGEND:**
- WETLAND CREATION AREA
1.16 ACRES
 - WETLAND ENHANCEMENT AREA A
13.72 ACRES
 - WETLAND ENHANCEMENT AREA B
28.48 ACRES
 - RIPIARIAN ZONE RESTORATION AREA
0.466 ACRES
 - UPLAND ENHANCEMENT AREA
1.01 ACRES
 - LIMIT OF MITIGATION
 - 300' RIPIARIAN BUFFER
 - FLOOD HAZARD AREA BOUNDARY
 - PROJECT PROPERTY BOUNDARY
 - ADJACENT PROPERTY BOUNDARY
 - MAJOR CONTOUR
35
 - MINOR CONTOUR
33
 - EDGE OF PAVEMENT
 - GRAVEL/DIRT SERVICE ROAD
 - FENCE
 - TREE LINE
 - STATE OPEN WATER
 - WETLAND LINE
 - WETLAND FLAG LOCATION
 - SPOT ELEVATION, AERIAL-DERIVED
55.5
 - SPOT ELEVATION, FIELD-VERIFIED
38.2

