



Princeton Hydro

# **Conceptual Designs for the Creation of Wetland BMPs at West Milford Lake Subsequent to the Breaching of the Existing Dam Structure, West Milford Township, Passaic County, New Jersey.**

## **PREPARED FOR:**

Township of West Milford  
1480 Union Valley Road  
West Milford, NJ 07480

## **PREPARED BY:**

Princeton Hydro, LLC  
120 East Uwchlan Avenue, Suite 204  
Exton, Pennsylvania 19341

## **FUNDING PROVIDED IN PART BY:**

Association of New Jersey Environmental Commissions  
P.O. Box 157  
Mendham, New Jersey 07945

*April 2008*

Princeton Hydro, LLC Project No. 0127.010

## **Introduction**

In June 2007, the West Milford Environmental Commission received a grant from the Association of New Jersey Environmental Commissions (ANJEC) through the Smart Growth Planning Grant Program in order to explore possible ideas and concepts relating to the rehabilitation of West Milford Lake after the eventual breach of the West Milford Lake Dam. The New Jersey Department of Environmental Protection (NJDEP) Bureau of Dam Safety and Flood Control has classified this dam as a Class 1, High Hazard structure and as such, the dam would either have to be brought into compliance with the New Jersey Dam Safety Standards or be permanently breached.

The owner of the West Milford Lake Dam was the West Milford Lake Tax Payers Association. As the owner of the dam, the Association was ordered to either rehabilitate the dam in order to bring it into compliance or remove it. A notch was cut in the structure several years ago in an effort to relieve stresses on the dam until the Association could acquire funds for rehabilitation (Civil Dynamics, Inc. 2006). When these funds were not acquired, the attorney for the Association signed a court order on March 23, 2005, which stated that the Bureau of Dam Safety would take responsibility for breaching the dam.

Princeton Hydro, LLC and Lynn Ecological Associates were contacted by the Township of West Milford to formulate some conceptual ideas for West Milford Lake once the dam is permanently breached. Funding for this initial conceptual design project was provided by the aforementioned ANJEC grant and the Township of West Milford.

## **Background**

West Milford Lake is located in the Township of West Milford, Passaic County, New Jersey. The lake has a surface area of approximately 12 acres and was formed by the damming of a tributary of Belchers Creek, the main inlet of Greenwood Lake. Based on the Stormwater Implementation Plan, which was developed for the New Jersey end of the Greenwood Lake watershed, the outflow of West Milford Lake typically has elevated sources of total phosphorus (TP), the primary limiting nutrient for algae and aquatic plant growth in Greenwood Lake. Funding for the Stormwater Implementation Plan was provided through a Non-Point Source (SFY04 NPS) grant, awarded to the Township by NJDEP. This Plan was reviewed by NJDEP and approved for use in the Township's efforts to comply with this contribution toward reducing its existing total phosphorus (TP) load entering Greenwood Lake through its watershed-based Total Maximum Daily Load (TMDL) analysis.

The TMDL analysis is a means of quantifying the existing load of a particular pollutant and identifying a targeted load that would result in an acceptable water quality endpoint. The Greenwood Lake TMDL focuses on TP as the primary pollutant of concern since it stimulates algal and aquatic plant growth. In the case of lakes and nutrients such as phosphorus, annual loading is more relevant in terms of water quality relative to daily loading.

In order for the New Jersey side of the Greenwood Lake watershed to comply with the stormwater portion of its phosphorus TMDL, its contribution to the lake must be reduced by at least 305 kg (671 lb). If West Milford Lake was converted into some type of regional wetland Best Management Practice (BMP) stormwater facility, it is estimated that it would remove approximately 20 kg (44 lbs) of TP per year, at a minimum.

Of six baseline (non-storm event) sampling events conducted as part of the SFY04 NPS grant awarded to the Township, TP concentrations of West Milford Lake's outflow exceeded the State's standard for TP in flowing systems twice (0.10 mg/L as per N.J.A.C. 7:9B-1.5(g)3). During the other four sampling events, the outflow had either the highest or one of the highest TP concentrations of the eight stream sampling stations monitored throughout the Greenwood Lake watershed.

Observations of the dam at West Milford Lake indicate that the elevated TP concentrations measured in the lake's outflow are the result of cracks in the dam, allowing phosphorus-rich bottom water to leak into the outflow. Thus, as a result of the current status of the dam, West Milford Lake is a substantial source of phosphorus for Belchers Creek and Greenwood Lake. An added level of TP reduction could be achieved by either repairing the dam or removing it and lowering the lake's water level. Either scenario would eliminate the conditions that allow phosphorus-enriched water from leaking into the tributary of Belchers Creek.

The West Milford Environmental Commission also noted that West Milford Lake had been identified in "A Visual Plan for West Milford." This document was the result of an open, public planning process in the summer of 2006, partially funded by a "Smart Future Grant" from the Office of Smart Growth. In the process, residents identified West Milford Lake as a potential town park easily accessible to the downtown business district. The report states that the West Milford Lake area "should be recreated into a park that incorporates a public green into a more natural and informal coastline crisscrossed by pedestrian pathways" and that "this park should provide opportunities to those looking for active and passive recreation." The Environmental Commission felt that this work supported their desire to further study the situation through the 2007 ANJEC grant.

### **Proposed Permanent Dam Breach by Civil Dynamics, Inc.**

In July 2006 Civil Dynamics, Inc. presented a schematic plan for the permanent breaching of the West Milford Lake Dam on behalf of the State of New Jersey, Department of Treasury, Division of Property Management and Construction (Civil Dynamics, Inc. 2006). The proposed breach control structure would be a fifty-foot long concrete spillway section. The core wall will be cut to create a spillway at elevation 661, with a notch at elevation 652 to create the step. This will ultimately lower the water level of the lake by 12 feet, and decrease the surface area of the lake from approximately 12 acres to approximately 0.25 acres.

The portion of the core wall, which will remain as the new breach control structure, will be capped with concrete. A concrete discharge apron will be constructed downstream of the proposed spillway and riprap will be placed downstream from the apron to transition into the existing discharge channel. The spillway will be backfilled with compacted embankment fill material. This material will come from the excavated material from the construction of the breach control structure. The lake sediment will be stabilized (using a low, rock cofferdam) and the lake water level will be lowered gradually to control the outflow to the Belchers Creek tributary. Additional sediment stabilization efforts will include the planting of grasses and other low, lying vegetation.

## **Public Outreach**

As part of the Scope of Services for the ANJEC grant, the Township of West Milford held a total of five open public meetings to discuss the project and possible design concepts. The first of these meetings was preliminary and took place August 13, 2007 during the Township's Environmental Commission meeting. During this time the project goals and tasks were discussed.

The second meeting took place on September 10, 2007 prior to the Environmental Commission meeting. Mark Gallagher and Trevor Conlow from the Natural Resources Division of Princeton Hydro conducted a site visit with Rob Sparkes and William Drew from the Township, Les Lynn from Lynn Ecological Services, and Pat Rector from the NJ DEP prior to this meeting. The goal of the site visit was to obtain more site-specific information on West Milford Lake to assist with the conceptual designs.

The September 10 meeting served as the first public meeting in which the initial / general concepts were presented to the citizens of West Milford and the West Milford Lake community. Press releases were published in all local newspapers and personal invitations were sent to residents of the West Milford Lake community by the Environmental Commission chair Steve Sangle. These initial designs assumed that the lake would be lowered by approximately 8 feet instead of 12 feet; as such, these designs displayed a much larger area of water than the final conceptual designs.

Scenario 1 was a basic constructed stormwater wetland design in which areas of high marsh and low marsh surrounded the baseflow channel and the future extent of the lake. A forebay was included in the design as a feature to help trap suspended sediments. Scenario 2 was similar in design to Scenario 1 with added areas of smaller open water habitats (micro ponds). The idea in this design was to have these micro ponds be interconnected with multiple baseflow channels between them. This would have the dual purpose of creating more habitats for waterfowl and more opportunities to settle suspended sediments. Scenario 3 displayed a meandering baseflow channel between the forebay and smaller future lake. The idea in this scenario was to create a riparian floodplain habitat around the baseflow channel. All three of these preliminary conceptual designs are provided in Appendix A



Public response to these conceptual designs was difficult to gauge due to the nature of the meeting. After the initial presentation of the designs, the remainder of the meeting was dominated by questions about the dam breach itself. As such, comments were geared more towards the reasons for the eventual permanent breaching of the dam, rather than what could be done once the dam is breached.

During the third meeting conducted on November 5, 2007 Dr. Fred Lubnow of Princeton Hydro and Dr. Les Lynn continued the discussion with the public on the potential conversion of West Milford Lake into a wetland BMP. A number of citizens continued to express concern of the project, however, it was emphasized that the State will eventually remove the dam so some pro-active planning would only benefit the municipality. A survey requesting input from the public on the potential designs and uses of the West Milford Lake after the dam is breached was distributed. The survey revealed that the local community favored the site to include a Boardwalk for recreational use, be adjacent to some type of nature center, harbor a variety of wetland, animal and bird species, and serve as an effective means of reducing the phosphorus load entering Belchers Creek.

The fourth meeting was held during the first forty-five minutes of the December 10, 2007 Environmental Commission meeting. In an effort to better convey to the public what West Milford Lake may look like after it is converted to a BMP a PowerPoint presentation was developed by Princeton Hydro, the West Milford Planning Department and Dr. Lynn, and then presented to the public by Dr. Lynn (a copy of the presentation is provided in Appendix B). To encourage discussion and expand on the potential role of the created BMP, Dr. Lynn suggested creating an “experimental forest” on the site in which an Atlantic white cedar forest ecosystem could potentially be created. Selected images from “A Vision Plan for West Milford” were used in the presentation to further stimulate public interest in the project.

The comments made by the members of the West Milford Lake community generally focused on the aesthetic components of the project. For instance, it was proposed that the old Club House could be the site for a future community building or environmental education center. A wetland boardwalk and/or bridge across the lake were also a prominent idea discussed at this meeting. All of the ideas generated at this time were taken into consideration for the final revisions for the three conceptual designs.

### **Final Concept Designs**

During the fifth and final public meeting conducted on February 4, 2008, the final proposed designs for the three possible BMP scenarios were presented. These final designs were prepared after reviewing the comments and suggestions made by the citizens of West Milford along with the information gathered from the preliminary site visit. These designs are more dependent on the substrate (sediments) than any other factor. More detailed sediment sampling and fieldwork would have to be conducted in order to better assess which scenario would be most suitable and provide more detailed cost assessments. For convenience, copies of the three final scenarios are provided in

Appendix C. A list of some of the plant species that would be selected for the proposed wetland BMP scenarios is also provided in Appendix C.

Scenario 1 would be implemented if the sediments prove to be firm and stable. In this case, the stream would be expected to either find its original streambed, or create a new and fairly stable channel. Some intermittent channels may be formed over time by the movement of stormwater moving through the system. The stream channel would then be further stabilized using small-scale bioengineering techniques and supplemental plantings. Areas upslope from the stream channel would be converted to a grassland meadow ecosystem.

The cost for the design and implementation of Scenario 1 is estimated to be between \$100,000.00 and \$200,000.00. The exact cost will be determined largely on the extent of any earth moving and/or clearing and grubbing that would be required to stabilize the site. While some State and County permits would be required, the extent of permitting would be low for Scenario 1, relative to Scenarios 2 and 3.

Scenario 2 would be implemented if the sediments prove to be fine and relatively unstable. In this case the original stream channel would need to be found and some of the legacy sediments would need to be removed from the lakebed. This would provide the opportunity to re-grade some of the adjacent material and also remove some of the phosphorus-rich sediments. Biologs (coir logs), boulders and perhaps riprap would be used to further stabilize the stream channel. Areas of wetland would be created in the proximity of the floodplains of the stream channel, and a riparian buffer would be established. An upland meadow would also be established as part of this scenario.

Of the three scenarios this would be the most expensive to design and implement, primarily due to the anticipated amount of dredging that would be required. Based on a preliminary assessment, it is estimated that Scenario 2 would cost approximately \$1.06 million to design and implement. In addition to being the most expensive scenario, the extent of permitting is anticipated to be more extensive since the project will include dredging.

Scenario 3 would be implemented if the original stream channel is found and the material is more stable relative to Scenario 2. In this case the goal would be to establish a 150 ft riparian buffer along either side of the original stream channel. Originally, the goal was to re-create conditions that the mimic the State's C1 and Highlands requirement of having 300 ft riparian zones along existing waterways. However, the re-creation of such a buffer is not feasible given the close proximity of existing homes and other structures.

Scenario 3 is estimated to cost approximately \$750,000.00 for design and implementation. The extent of permitting for Scenario 3 is estimated to be similar to that described for Scenario 2.

It should be noted that each of these scenarios consist of a main stream channel that ultimately leads to an area of wetland and pond that will form at the breached dam (what

remains of West Milford Lake). Areas of wetland could be created adjacent to the stream channel for all scenarios, but the main wetland will be located near the dam, surrounding the pond. Additionally, all three concepts will utilize the comments made by the public regarding aesthetics and recreational activities such as a wetland boardwalk and tree plantings around the perimeter of the area.

A number of potential sources of funding for the design and implementation of the proposed wetland BMP could be considered. Some of the possible grant programs include, but are not limited to, the State's Non-Point Source Pollution Program (Section 319(h) of the Clean Water Act) and the NJDEP Wetland Mitigation Program. However, it should be emphasized that other local, State and Federal Programs should be reviewed for their potential in providing funding for the proposed West Milford Lake wetland BMP project. The long-term goal would be to obtain some type of grant funding to cover the design and implementation costs of the project, while the Township would be responsible for the long-term maintenance and care of the site.

Also, it should be mentioned that there was a meeting with the NJDEP Bureau of Dam Safety and Flood Control on February 21st, 2008, which will be the agency responsible for the removal of the existing dam structure at West Milford Lake. At this meeting the Township and Princeton Hydro explained the conceptual idea behind the proposed project and its value relative to lowering the phosphorus load entering Greenwood Lake and aiding in compliance with its TMDL, providing recreational and open space lands for the Township residents, and creating an ecosystem conducive for wildlife and native vegetation.

While much of what would be accomplished after the dam is removed is beyond the jurisdictional influence of Dam Safety, they were certainly receptive to the project. Of the three scenarios they agreed that Scenario 1 would have the lowest amount of complications (i.e. permitting, funding) relative to Scenarios 2 and 3. Thus, if asked in writing, Dam Safety would provide a letter of support for any potential application submitted for grant funding toward the project.

In a letter from John Moyle, Bureau Manager, dated April 10, 2008, he states that if the Township decides to buy the property, the DEP would not require the Township to pay for the cost and construction of the breach. Future maintenance and operation of the site structures would be the responsibility of the Township (see Appendix D).

Finally, West Milford Township Environmental Commission met in a special session on March 17<sup>th</sup>, 2008 to discuss the scenarios and concluded that Scenario 1 is the most preferred due to the relatively lower costs, amount of permitting and required long-term maintenance. A presentation was made to the Planning Board on April 3, 2008 at which time the Board concurred with the Environmental Commission by unanimously endorsing Scenario 1. In conclusion, the Environmental Commission recommends to the Township that Scenario 1 is the preferred project for the West Milford Lake site after the dam is removed.

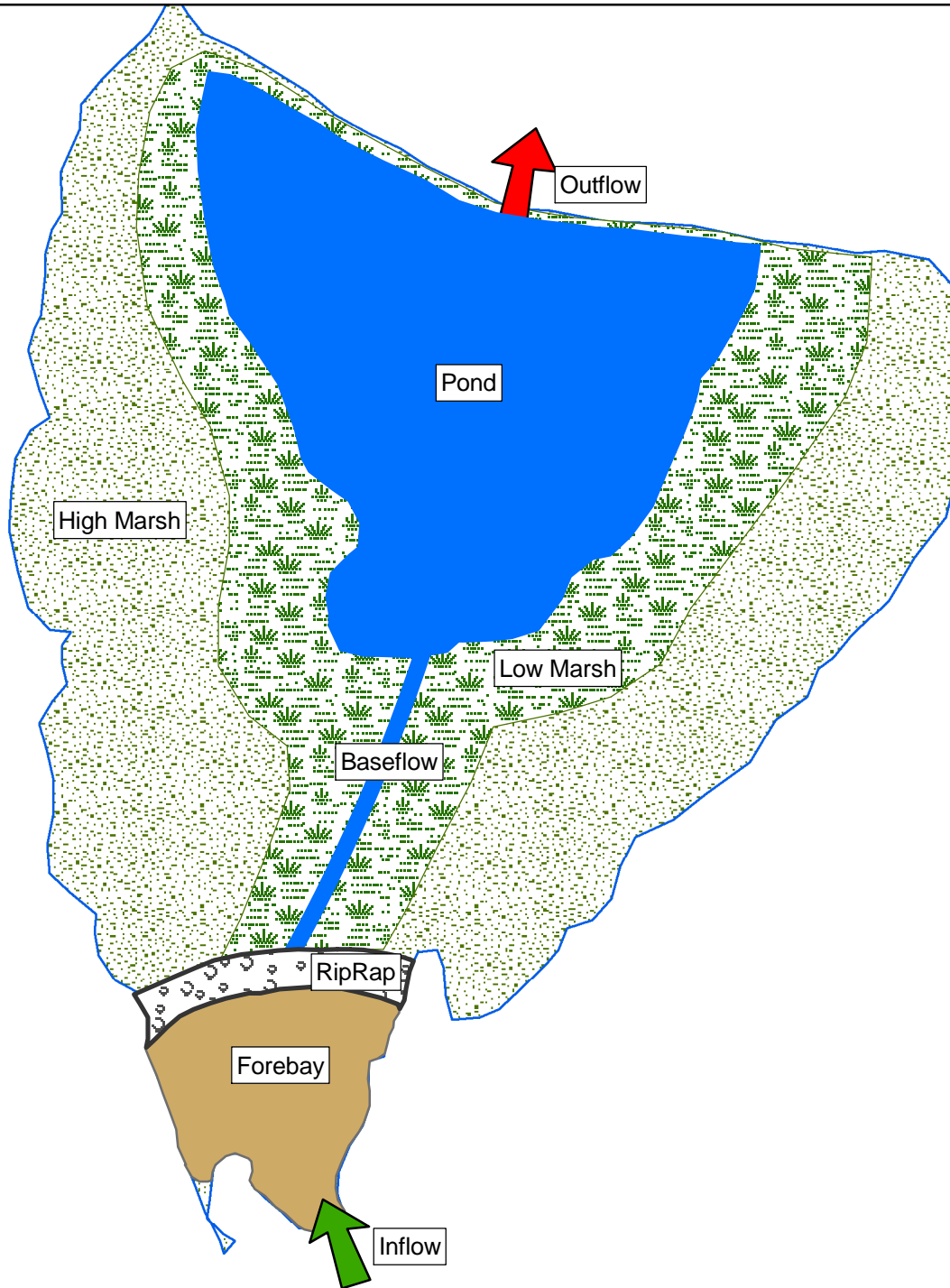
## **References**

Civil Dynamics, Inc. 2006. *Schematic Design Phase report for the Dam Removal*. Stockholm, New Jersey.

Princeton Hydro, LLC. 2006. *Stormwater Implementation Plan for the New Jersey End of the Greenwood Lake Watershed*. Ringoes, New Jersey.

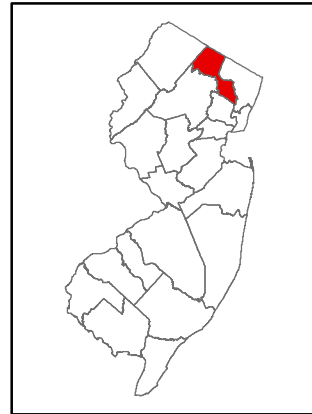
# **Appendix A**

## **Conceptual Designs**



Princeton Hydro

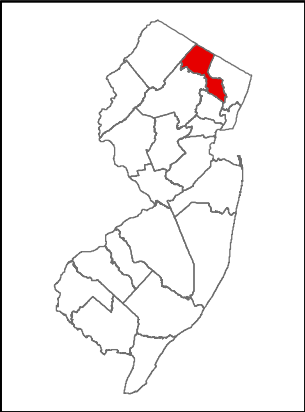
New Jersey County Map



Prepared By:  
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 Suite 204  
 Exton, PA 19341

WEST MILFORD LAKE  
 Scenario I: Constructed  
 Stormwater Wetland



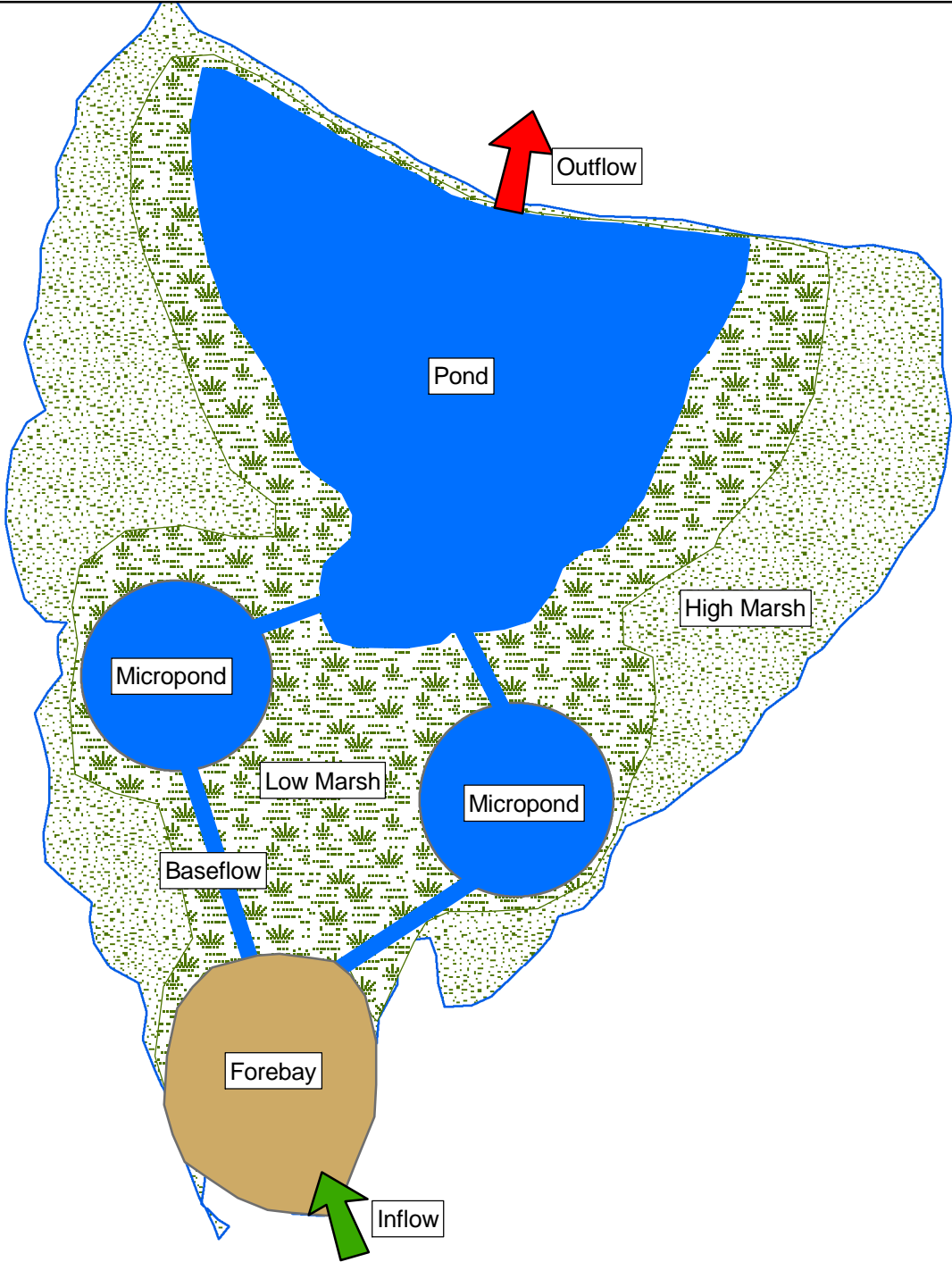


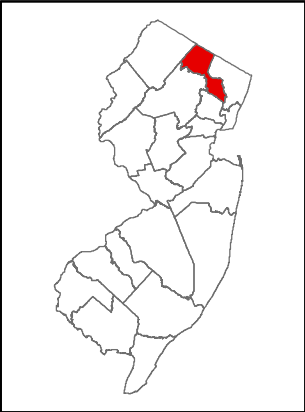
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WEST MILFORD LAKE  
Scenario 2: Series of Interconnecting Ponds



Princeton Hydro



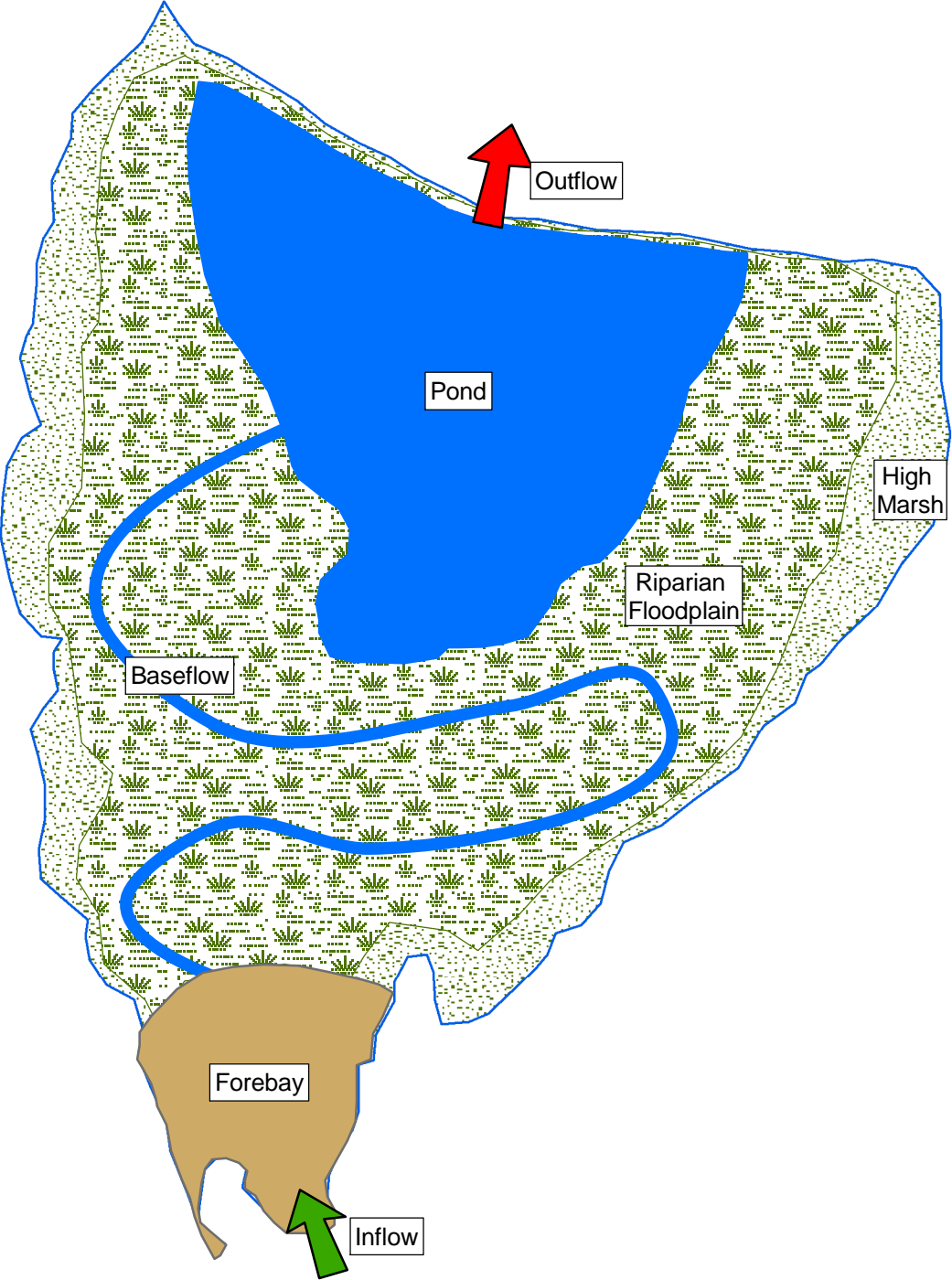


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WEST MILFORD LAKE  
Scenario 3: Baseflow  
with Riparian Floodplain  
Habitat





# **Appendix B**

**PowerPoint Presentation  
December 2007**

# West Milford Lake





# Pre-Dam Removal in Lambertville, NJ



© 2007 Tele Atlas  
© 2007 Europa Technologies  
Image © 2007 State of New Jersey

© 2007 Google™



# Dam Removal in Lambertville, NJ





# Post-Dam Removal in Lambertville, NJ





# Pennswood Village Buck County, PA





# Shoreline Erosion - Lake Luxembourg, PA 2000





# Shoreline Stabilization - Lake Luxembourg 2001





# Shoreline Stabilization - Lake Luxembourg 2005





# Shoreline Stabilization - Lake Luxembourg 2006



# Sediment Removal – Harveys Lake, PA





# Sediment Removal – Harveys Lake, PA



APR 30 2003



# Wetland Boardwalk East Goshen, PA





# Environmental Boardwalk West Milford





# Environmental Boardwalk West Milford





# Environmental Boardwalk West Milford





# Environmental Boardwalk West Milford





# Environmental Boardwalk West Milford





# Nature Center - Pokagon State Park, Indiana



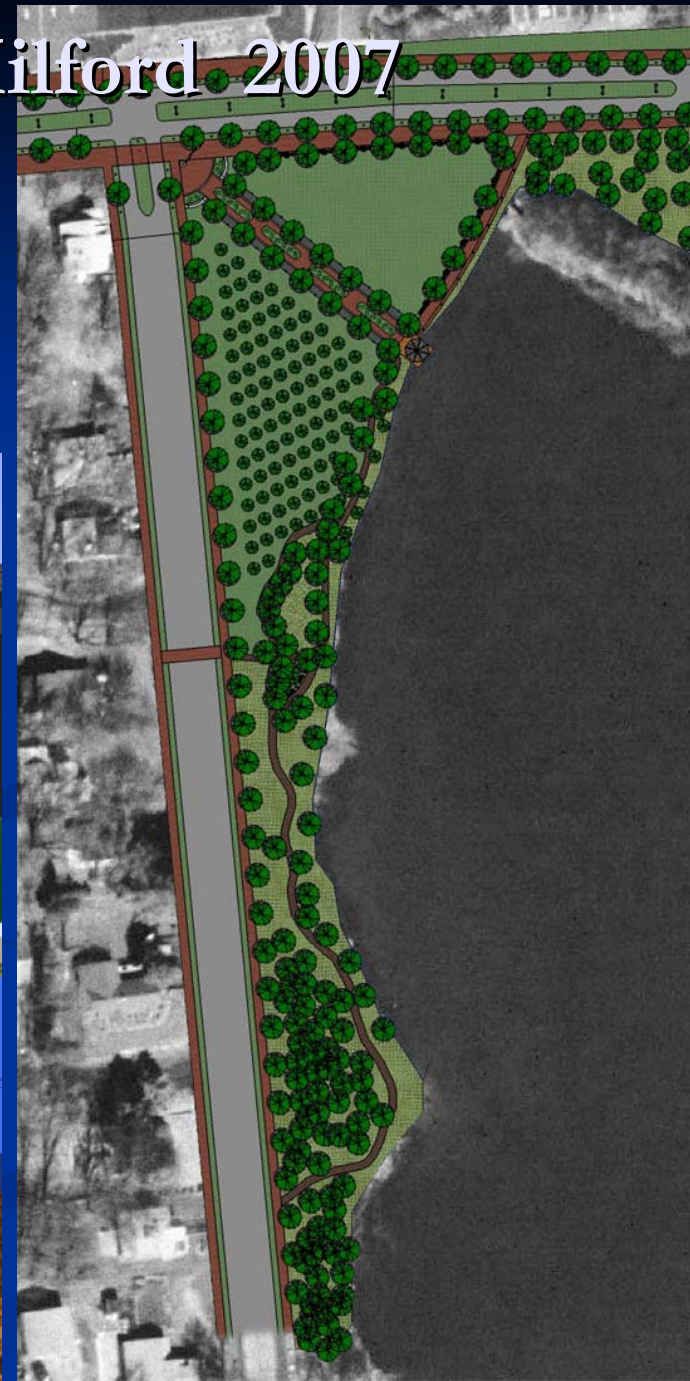


# A Vision Plan for West Milford 2007



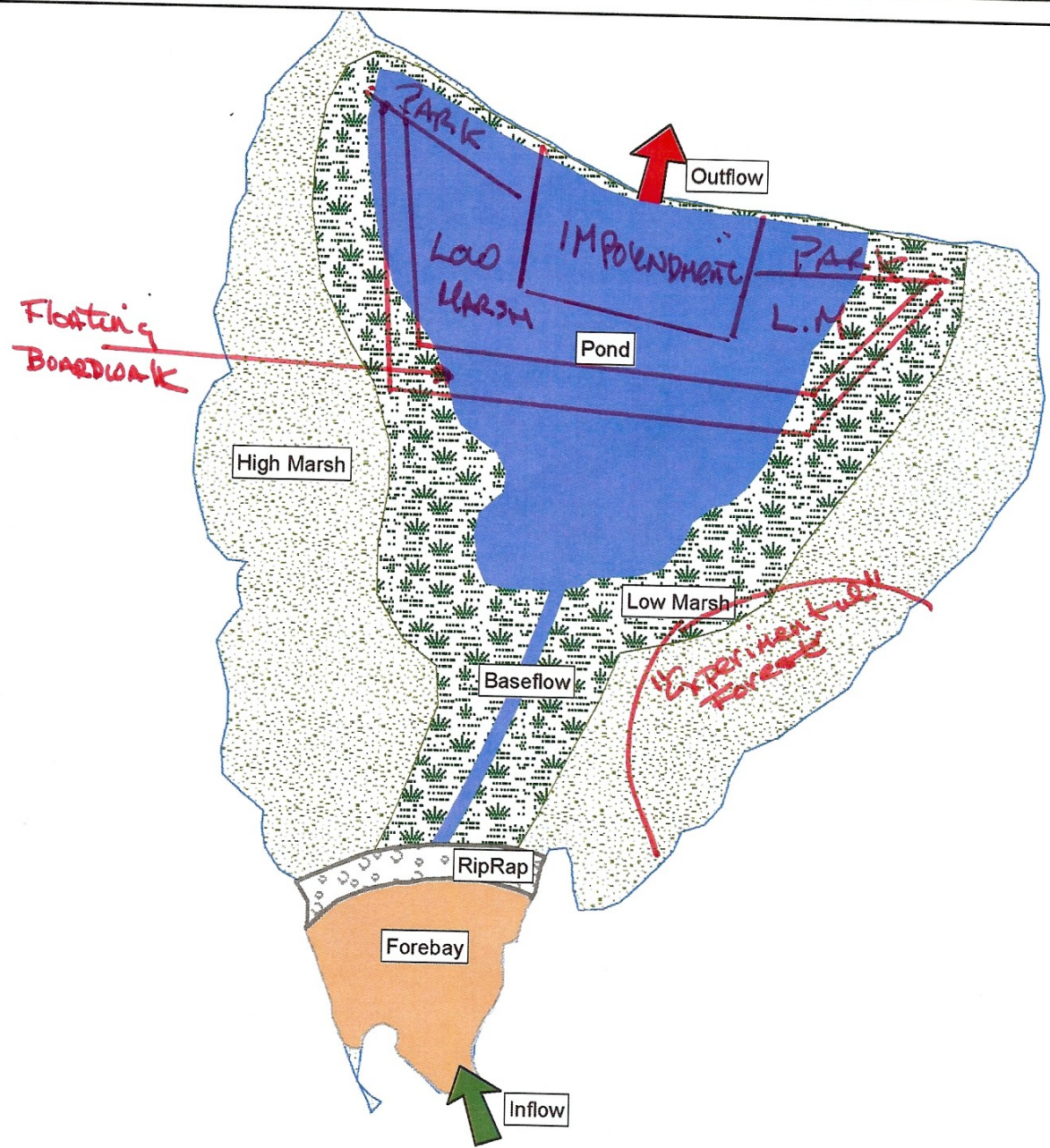


# A Vision Plan for West Milford 2007





# A Scenario



# West Milford Lake



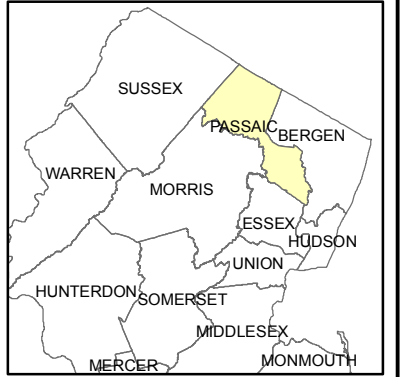
# **Appendix C**

## **Final Conceptual Designs and Plant List**





New Jersey County Map



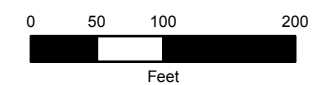
PREPARED BY:  
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PREPARED FOR:  
 TOWNSHIP OF WEST  
 MILFORD, PASSAIC  
 COUNTY, NJ

DRAWING NAME:  
 SCENARIO I FOR  
 WEST MILFORD LAKE

LEGEND

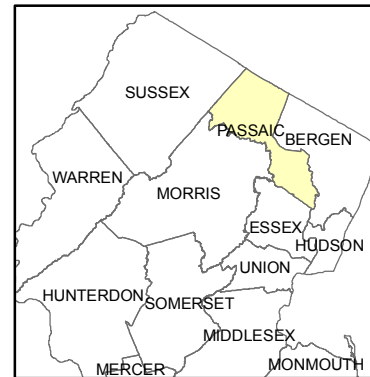
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- STREAM CHANNEL
- HIGH MARSH
- LOW MARSH
- UPLAND MEADOW
- RIPARIAN BUFFER
- FLOODPLAIN WETLAND
- BIOLOGS
- BOULDERS/ ROCKS
- EXPERIMENTAL FOREST
- DECIDUOUS TREES
- ORNAMENTAL TREES
- PICNIC TABLES
- PLAYGROUND
- EE CENTER
- BOARDWALK
- SETTLING POND





Princeton Hydro

New Jersey County Map



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PREPARED FOR:  
 TOWNSHIP OF WEST  
 MILFORD, PASSAIC  
 COUNTY, NJ

DRAWING NAME:  
 SCENARIO II FOR  
 WEST MILFORD LAKE

**LEGEND**

- POND
- STREAM CHANNEL
- HIGH MARSH
- LOW MARSH
- UPLAND MEADOW
- RIPARIAN BUFFER
- FLOODPLAIN WETLAND
- BIOLOGS
- BOULDERS/ ROCKS
- EXPERIMENTAL FOREST
- DECIDUOUS TREES
- ORNAMENTAL TREES
- PICNIC TABLES
- PLAYGROUND
- BOARDWALK
- SETTLING POND

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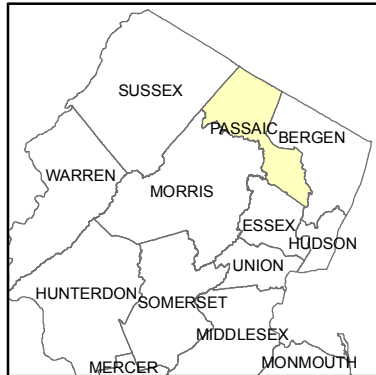
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Princeton Hydro

New Jersey County Map

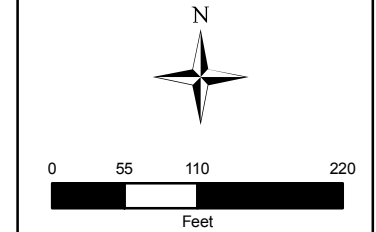


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PREPARED FOR:  
 TOWNSHIP OF WEST  
 MILFORD, PASSAIC  
 COUNTY, NJ

DRAWING NAME:  
 SCENARIO III FOR  
 WEST MILFORD LAKE

- LEGEND
- POND
  - STREAM CHANNEL
  - HIGH MARSH
  - LOW MARSH
  - UPLAND MEADOW
  - PROPOSED RIPARIAN BUFFER
  - SETTLING POND



## Plant List for West Milford Lake Conceptual Designs

### Floodplain Wetland / Low Marsh

Common Name	Scientific Name
Common three-square	<i>Scirpus pungens</i>
River birch	<i>Betula nigra</i>
Tussock sedge	<i>Carex stricta</i>
Soft rush	<i>Juncus effusus</i>
Redosier dogwood	<i>Cornus sericea</i>
Softstem bulrush	<i>Scirpus tabernaemontanii</i>
Blue-flag iris	<i>Iris versicolor</i>
Sweetflag	<i>Acorus americanus</i>
Swamp azalea	<i>Rhododendron viscosum</i>
Boneset	<i>Eupatorium perfoliatum</i>
Steeplebush	<i>Spiraea tomentosa</i>

### High Marsh / Riparian Buffer

Common Name	Scientific Name
Inkberry holly	<i>Ilex glabra</i>
Winterberry	<i>Ilex verticillata</i>
Tussock sedge	<i>Carex stricta</i>
Blunt spikerush	<i>Eleocharis obtusa</i>
Spicebush	<i>Lindera benzoin</i>
Red Maple	<i>Acer rubrum</i>
River birch	River birch
Swamp milkweed	<i>Asclepias incarnata</i>
Redosier dogwood	<i>Cornus sericea</i>
Highbush blueberry	<i>Vaccinium corymbosum</i>
Atlantic White Cedar	<i>Chamaecyparis thyoides</i>
Ironwood	<i>Carpinus caroliniana</i>
Swamp azalea	<i>Rhododendron viscosum</i>

### Upland Meadow

Common Name	Scientific Name
Broomsedge	<i>Andropogon virginicus</i>
Butterfly weed	<i>Asclepias tuberosa</i>
Common milkweed	<i>Asclepias syriaca</i>
Black-eyed Susan	<i>Rudbeckia hirta</i>
Spotted horsemint	<i>Monarda punctata</i>
Purple Joe-pye	<i>Eupatorium purpureum</i>
Switchgrass	<i>Panicum virgatum</i>

# **Appendix D**

## **Bureau Communications**

# Township of West Milford



March 5, 2008

Office of the Township Administrator  
1480 Union Valley Road  
West Milford, NJ 07480-1303  
(973) 728-2710  
Fax: (973) 728-2884

John Moyle, Manager  
NJ DEP  
Bureau of Dam Safety & Flood Control  
501 East State Street, P.O. Box 419  
Trenton, NJ 08625

Dear Mr. Moyle,

As you may know, the Township of West Milford has recently been researching the feasibility of turning the upcoming breaching of West Milford Lake dam into an asset. The possibility of improving water quality and providing a park setting for the Central Business District has been the topic of recent open public meetings sponsored in part by an Association of New Jersey Environmental Commissions grant. In that regard, the Township may also consider acquisition of the lakebed.

This past February 21<sup>st</sup>, William Drew and Rob Sparkes of the West Milford Planning Department met with Russell Ray and John Kale of the Bureau of Dam Safety and Flood Control to discuss the West Milford Lake dam situation. Also in attendance were Chris Adams of Civil Dynamics (the Bureau's consultant), and Fred Lubnow and Geoff Goll of Princeton Hydro (the Township consultant). It was understood that the Bureau is moving ahead with the breaching. While the Township may be interested in acquiring ownership of the property, the responsibility of paying for the breaching would be beyond the Township's ability. Mr. Kale advised my staff that historically in situations like this the Township would not be held responsible for the Bureau's incurred expenses.

For the Township to move ahead with any future plans for the property, we would need to be assured of this and, as such, are requesting confirmation from your office or, if necessary, the Attorney General's office that the Township would not be expected to reimburse the Bureau for the expense of the breaching if the Township were to acquire the property in the future.

It is the Township's intention to make the best of this unfortunate event and we hope that a mutually beneficial solution can be achieved.

Sincerely,

Richard Kunze  
Township Administrator

cc: Mayor and Council  
West Milford Environmental Commission  
West Milford Planning Board

PLANNING DEPT.  
Twp. of West Milford

APR 16 2008  
**R E C E I V E D**

JON S. CORZINE  
Governor



**State of New Jersey**  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
Natural and Historic Resources  
Office of Engineering & Construction

LISA P. JACKSON  
Commissioner

APR 10 2008

Mr. Richard Kunze  
Township Administrator  
Township of West Milford  
1480 Union Valley Road  
West Milford, NJ 07480-1303

Re: West Milford Lake Dam  
NJ File No. 22-96

Dear Mr. Kunze:

This is with reference to your letter dated March 5, 2008, regarding West Milford Lake Dam, located in West Milford Township, Passaic County.

In response to your question concerning the dam breach and future owner responsibilities, if the Township decides to buy the property, the Department will not require the Township to pay for the cost and construction of the breach. After the breach plan has been constructed, a low hazard dam will remain. Should the Township acquire the land, the Township will then be responsible for the operation and maintenance of this structure in accordance with N.J.S.A. 58:4-1 et seq.

Should you have any questions regarding this matter, please contact John F. Kale of this office at (609) 984-0859.

Sincerely yours,

A handwritten signature in black ink that reads "John H. Moyle".

John H. Moyle, P.E., Manager  
Bureau of Dam Safety and Flood Control

C: West Milford Township Engineer & Clerk  
Passaic County Engineer

N:\SHARED\NHRG\Damsafe\08letter\22096JFK8a.doc

APR 14 2008