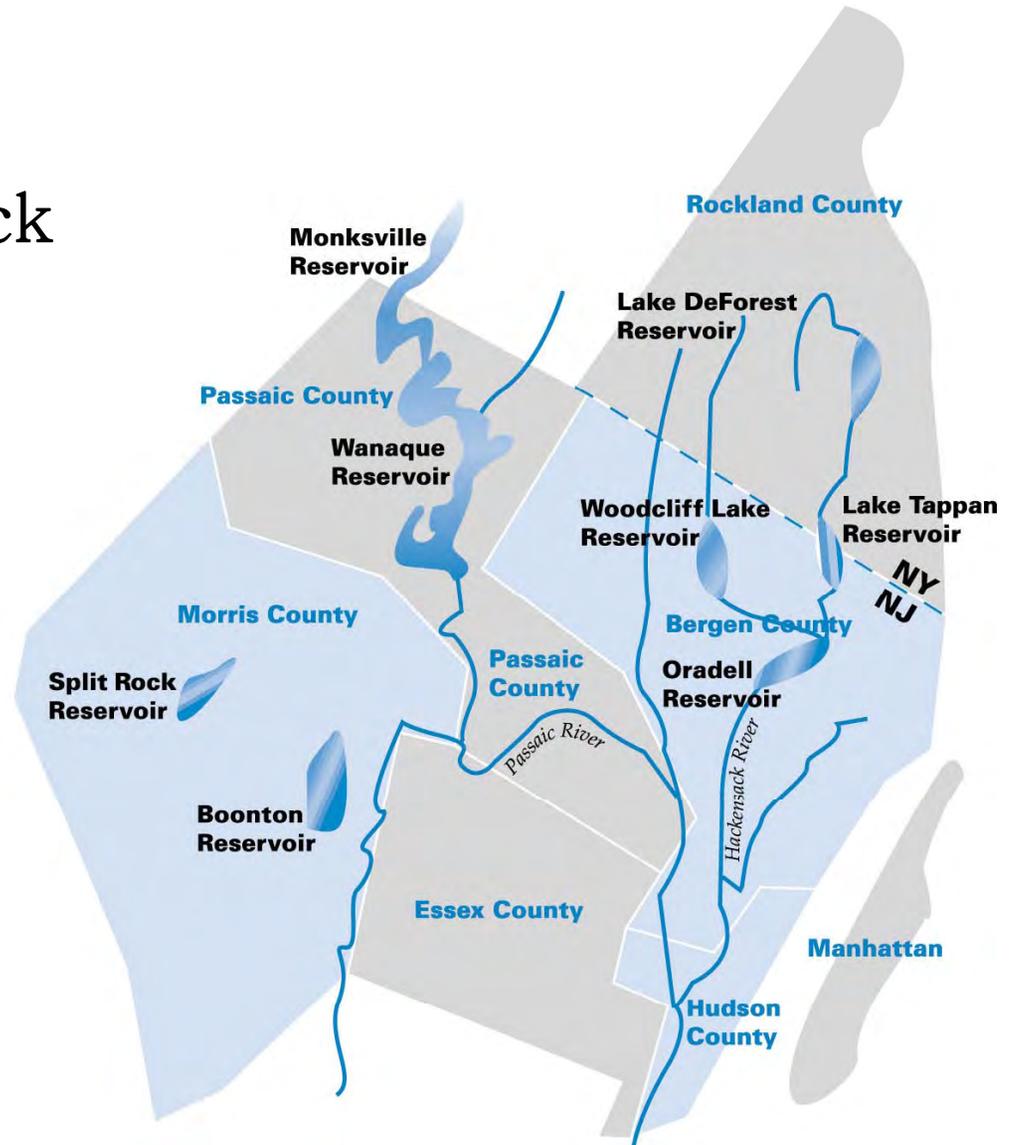


OVERVIEW OF UNITED WATER WATER SUPPLY SYSTEM



- 4 Reservoir Hackensack River Basin System
- 50% owner with NJDWSC for the Wanaque South Project
- Operations for Jersey City



WATER SUPPLY



- UWNJ serves a population of approximately 800,000 in 60 municipalities in Bergen and Hudson Counties
- UWNJ supplies 9 communities with wholesale water to support their systems
- Haworth Water Treatment Plant pumps an average of 115 million gallons per day with peak day of 190 MGD

WE HAVE WORKED TOGETHER AND PLEDGE TO CONTINUE TO WORK TOGETHER



As Seen In...

12/13/95 Pg. 1

The Record Flooding problems in Hillsdale, Westwood: two perspectives

ON Nov. 21 the Concerned Citizens Committee of Hillsdale and Westwood held a public meeting that was heavily attended by state, county, and local officials to address flooding problems downstream from the Woodcliff Lake Reservoir. Many people feel that the issue stems from a lack of water management by United Water Resources, whose position is that it is in the water business, not the flood control business.

A 1986 state Department of Environmental Protection study completed by the Soil Conservation Service called for older bridges in the area to be replaced along with dredging of the Pascack Brook. The problems that plague us are complex, but this first public meeting with elected and water company officials was a step in the right direction to seek both short- and long-term solutions. We have to work together in this matter.

The Concerned Citizens Committee asked that United Water Resources immediately regulate the level of the reservoir. We want the company to offer a 24-hour hot line for emergency contacts and to report water levels in all four of its reservoirs. We like to see capital investment to alleviate the flooding problems. We'd want the company to assist state, county, and local officials in solving other problems such as rebuilding older bridges, which act as dams and cause water to back up, and dredging and lining the channels.

Elected officials have been to our neighborhoods to see the horrific flooding, and they promise to begin the process of fixing the problem. We call for an agreement where UWR lowers the reservoir. We will seek legislation to regulate water companies in New Jersey for water or flood control.

According to the Dam Safety Act, permit by rule says a dam's "design must be based upon a spillway design storm that results in rainfall of 50 percent greater than a 24-hour, 100-year Type III storm." Water company officials publicly acknowledge that this flooding was caused by a two-year storm, so the integrity of the dam and its ability to hold water might be questionable at best.

For the DEP, we call for updates on its 1986 study and assistance from the Army Corps of Engineers in solving our problems. We'd like to learn which, if any, of our 50 states have flood control regulations in place for water utility companies. Why not here in New Jersey, which might be considerably more densely populated than other regions?

We urge our local officials to modify their negotiated verbal agreement to a formal signed agreement with United Water, placing it in a wintertime mode of lowering the reservoir.

A joint task force has been set up and will include representatives from our committee. We have received assurances that this group of state, county, and local officials will meet often to resolve this complex problem. For folks living in this area, please keep the faith, but don't forget that we share the same goal in working toward a solution. Channel your energy in a positive way and work with the officials in solving the problems, once and for all.

Jim Moldow, Brian Konikoff, and Fran Yates are leaders of Concerned Citizens of Westwood and Hillsdale.

Provided by the Corporate Communications Department

As Seen In...

12/13/95 Pg. 1a

The Record

Let's look at the real cause

By FRANK J. De MICCO

THE flooding issues faced by the low-lying areas of Hillsdale and Westwood, as illustrated in recent media reports, is both unfortunate and in need of action. Yes, the factors contributing to these concerns and the real solutions are much more complicated than originally portrayed to the media and the public.

In order to understand why certain sections of Hillsdale experience flooding problems, we must consider the risks inherent in the location of the affected properties.

The low-lying areas of Hillsdale and Westwood, just below the Woodcliff Lake Reservoir, rest directly in a nationally designated flood plain. This is an area that traditionally has flooded during rainstorms, even before homes or businesses ever were constructed on the affected properties.

In fact, even if the reservoir did not exist, the area still would flood due to its topographical position in the valley. This is why United Water — Hackensack Water at that time — opposed development along this floodway as far back as the 1920s.

Since development has occurred despite our original reservations, it is important to understand that the only true solution to property flooding now rests downstream of the reservoir.

The root cause of the flooding problem is an inadequate stream channel that causes the banks of the Pascack Brook to overflow at only a two-year storm. A two-year storm is characterized by only about one-inch of rain in an hour.

This premise is documented in the Floodplain Management Study performed and endorsed in 1986 by the U.S. Department of Agriculture's Soil Conservation Service. Recent contact with the Dam Safety Division and the Floodplain Management Division confirms that these conclusions remain true.

In its Pascack Brook Flood Control Feasibility Study, drafted in the late 1970s, the U.S. Army Corps of Engineers also addressed this issue. The study called for dredging the brook and widening its channel to allow a greater flow of water to pass through the brook and not into the federally designated flood area. The plan also called for replacement of seven bridges that obstruct the flow in the Pascack Brook. Since 1977, three of those bridges have been replaced.

A similar plan was implemented in successfully addressing the same type of flooding problems along the Ho-Ho-Kus Brook in Ho-Ho-Kus and Ridgewood. Despite a long history of floods, the deepening of the brook's channels and upgrading of relevant bridges essentially have solved the problem for that community. The state has begun another such project in the Haledon-Paterson area along Molly Ann's Brook.

It also is important to note that the Woodcliff Lake Reservoir is one of the primary potable water sources for northern New Jersey. Artificially reducing its levels would not solve the flooding issues, but would jeopardize the water supply to 800,000 families. The drought concerns faced during this past year underscore the dangers of tampering with available water supplies.

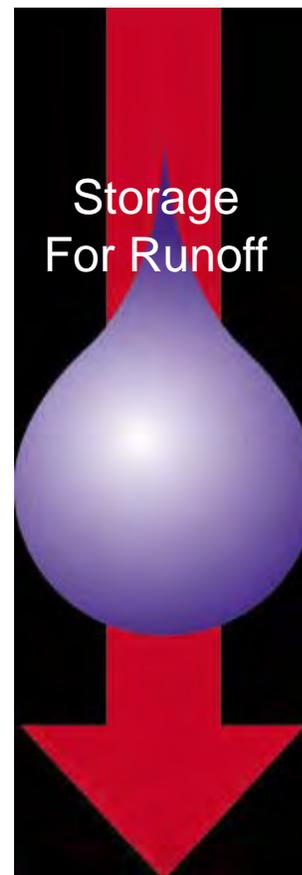
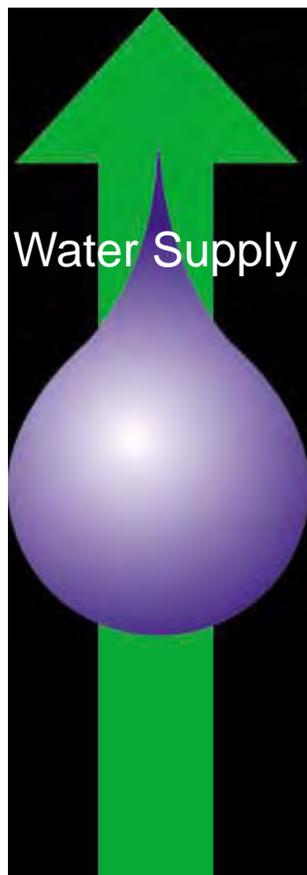
In addition to assistance in pursuing a state sponsored solution to the issue, United Water also has offered to work jointly with elected officials in Hillsdale and Westwood in developing an early warning system. In fact, United Water consistently budgeted for such a project after the 1986 state study. However, the two communities have yet to apply for the necessary grants. After meeting with local officials recently, United Water again has pledged both financial and technical support in developing such an early warning system.

The key to any solution is cooperation — and United Water will continue to offer assistance to the local community in order to address this issue. However, we look to all other interested parties to do the same in order to establish real solutions to the flooding concerns.

Frank J. De Micco is senior vice president of operations for United Water Resources.

Provided by the Corporate Communications Department

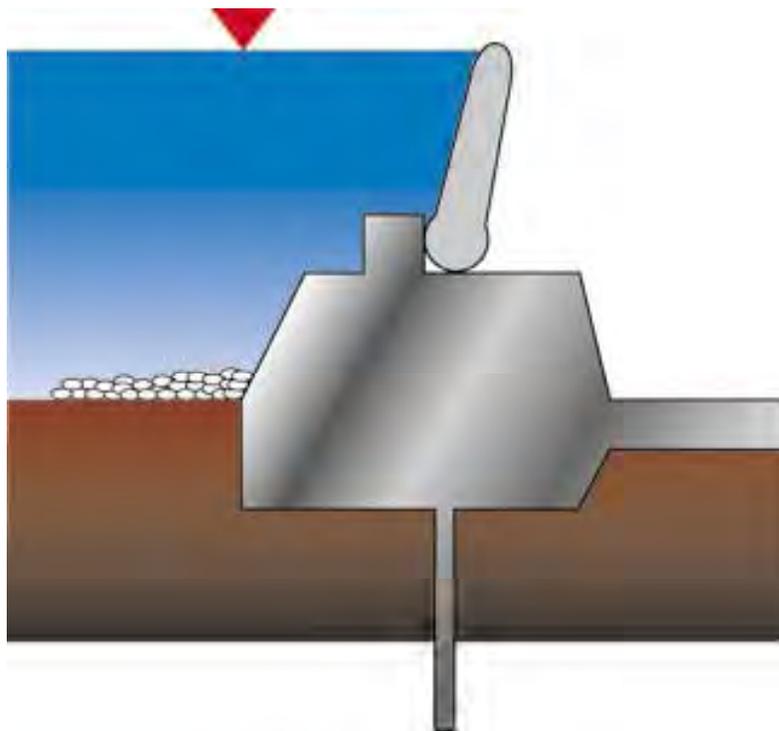
Competing Needs



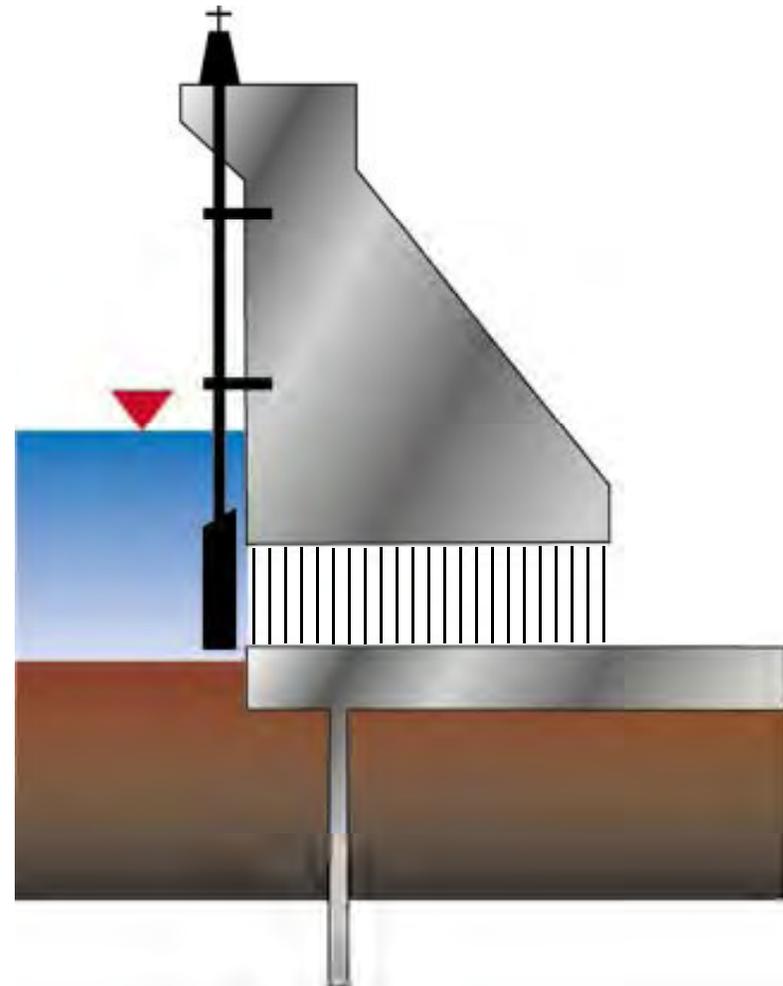
State-wide > 4 Million

Water Supply and Flood Attenuation
are mutually exclusive competing purposes

DAM DESIGNS ARE DIFFERENT

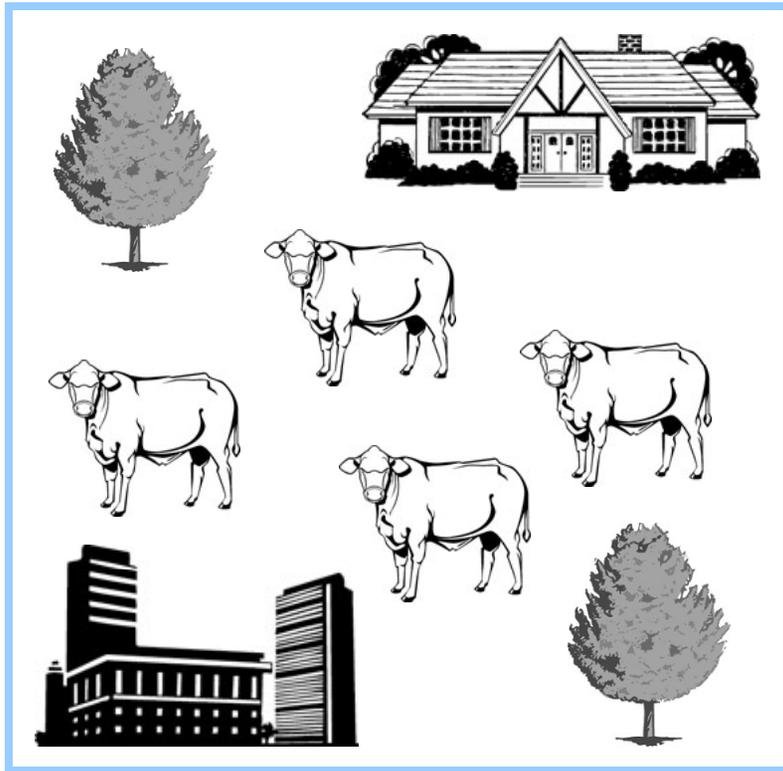


Water Supply

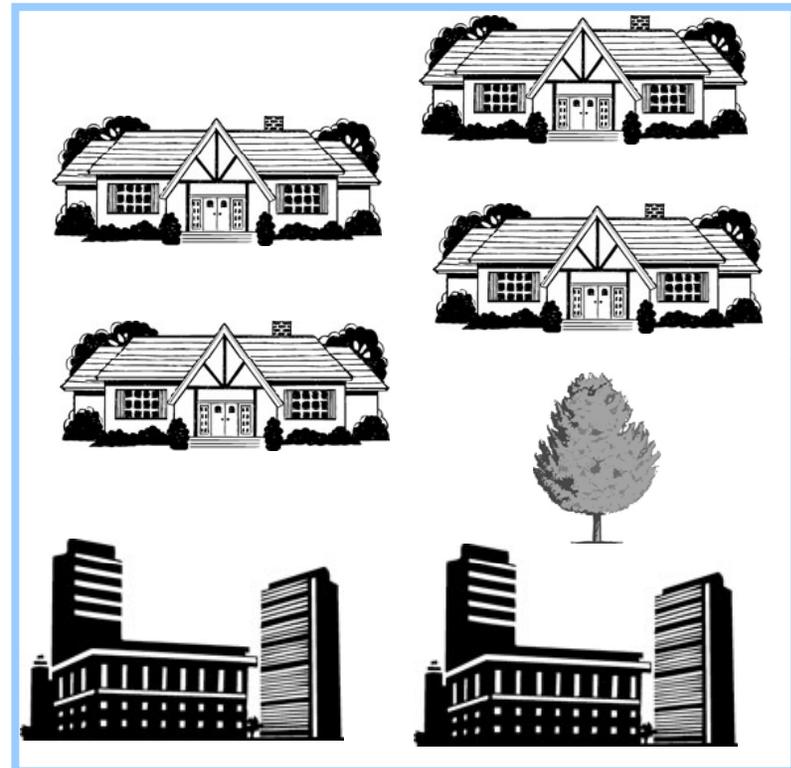


Flood Control

Land Use Changes

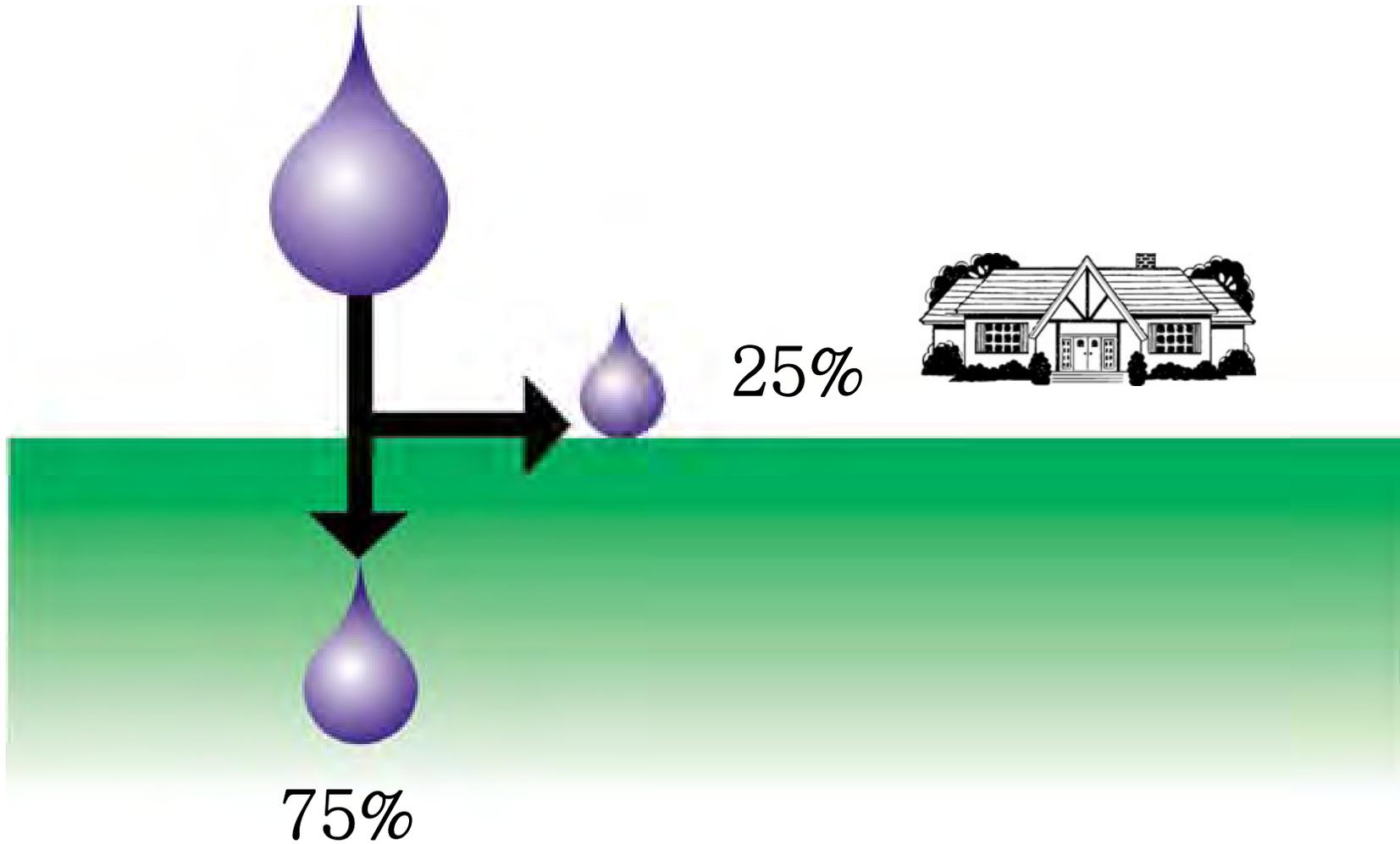


Developed:	15%
Undeveloped:	83%
Wetlands:	2%

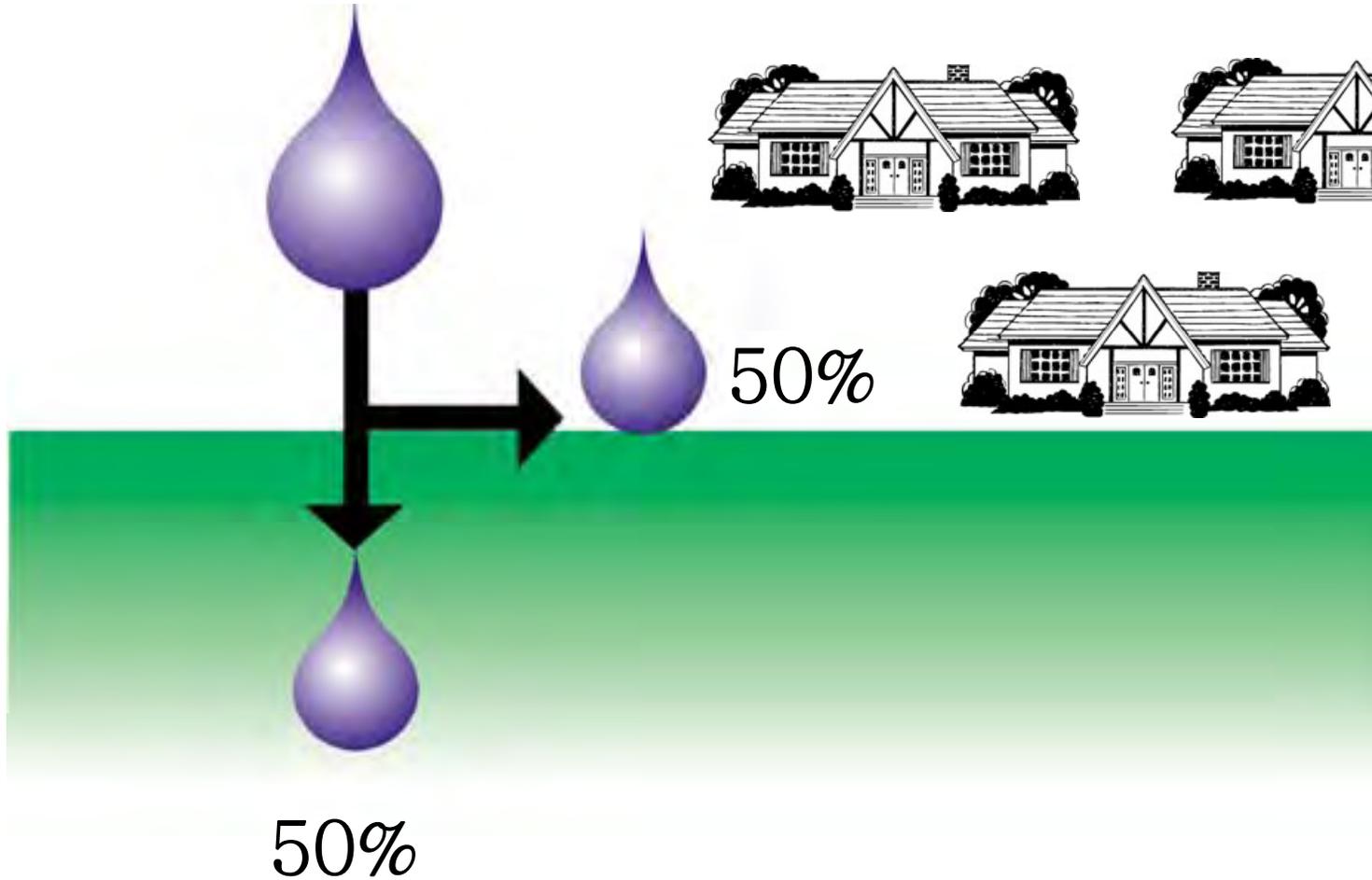


Developed:	72%
Undeveloped:	28%
Wetlands:	0%

1960's RUNOFF



RUNOFF TODAY



- 100% increase in runoff

STORMWATER RUNOFF



- Woodcliff Lake Reservoir is 871 million gallons
- 300 million gallons is within range of the spillway gates
- A four (4") inch rain storm can produce more than 800 million gallons in the basin
- Water supply reservoirs cannot retain these storms
- In the last 30 years we have a history of droughts in our region:
 - 1981-82, 1985, 1993, 1995, 1998, 1999, 2000, 2002, 2005, 2010
- There have also been serious rainfall deficits in other years that did not reach the severity of drought

WATER SUPPLY IS A VITAL RESOURCE



- The health, safety, and economic well being of the people we serve depends on adequate water supply
- This must not be diminished by reducing the available water stored in our reservoirs

THE SOLUTION



- **Better land use and zoning regulation**
- **Restoration of the natural brook and stream channels**
- **Blue acre funding to purchase vulnerable homes in the flood zone to recover natural flood plains**
- **Diligently protect our flood plains to remain undeveloped as the natural, permanent solution to attenuate flooding**
- **Increase state spending for flood control management**



June 2, 2011

Subject: Pascack Brook Walkthrough

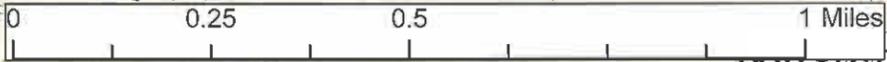
On May 13th, 2011 United Water assisted state, local, and county officials with the Pascack Brook walkthrough to help document locations of current impediments between the Woodcliff Lake Dam and Harrington Park. Locations where continued monitoring was warranted for possible future impediments were also documented. These concerns pointed out to United Water during the walk were photographed and turned to GPS data points to log the location for reference purposes. For your reference, a map showing the points of current and potential future obstructions that were identified during the walk has been generated. The points correlate to the spreadsheet details and appropriate photograph.

Sincerely,

Doug Reger
Hydraulic Modeler



		Drawn By: Paul Kaczka	Date: 05.18.2011
		Scale: As Shown	Sheet: Sheet 1 of 1
<h2>United Water New Jersey</h2>			
<h3>Pascack Brook Survey</h3>			
<p>This drawing is provided by UNITED WATER NEW JERSEY solely for display and is subject to the company be held responsible for any use of this document for purposes other than which the company be held responsible for any use of this document for purposes other than which it is intended.</p>			
<p>This (map/report/publication) was created using County of Bergen Geographic Information System digital data, but this is a secondary product and has not been verified and is not authorized by the County of Bergen.</p>			



Pascack Brook Walk - Woodcliff Lake Dam to Harrington Park
May 13, 2011

<u>Map Point No.</u>	<u>Picture No.</u>	<u>Description</u>
1	1	Tree #1 - Listing Position
2	2	Rock Shoal #1
3	3	Tree #2 - Listing Position
3	4	Tree #2 - Listing Position
2	5	Rock Shoal #1
4	6	Tree #3 - Down across brook
4	7	Rock Shoal #2
5	9	Snag Debris - East Bank
6	10	Rock Shoal #3
7	11	Construction Debris - Attempted bank stabilization
8	12	Rock Shoal #4
9	13	Rock Shoal #5 (~120' x 30') & Tree #4 - listing position
10	14	Pipe Debris
11	15	Rock Shoal #6 & Tree #5 - listing position
12	16	Concrete Debris
13	17	Mulch, Soil Stock Piles Hillsdale DPW
14	18	Sand Bar #7 (~10' x 80')
15	19	Rock Shoal #8 (~30' x 110')
15	20	Tree #6 - in Brook
16	21	Shopping Carts & Debris continuing ~20' downstream
17	22	Rock Shoal #9 (~40'x 40')
18	23	Shopping Cart
19	24	Tree #7 - Listing across brook still alive
20	25	Tree #8 - East Bank
21	26	Concrete Block Debris
22	27	Rock Shoal #10 (~110' x 40')
23	28	Tree #9 Dead/cut at property edge
24	29	East Bank collapse/yard debris dumping
24	30	East Bank collapse/yard debris dumping
24	31	East Bank collapse/yard debris dumping
25	32	Tree #10 - in brook
26	33	Tree Stump in brook & Rock Shoal #11
27	34	Property Debris
28	35	Tree #11 West Bank - Rock Shoal #12
29	36	Property/Concrete Debris
30	37	Tire & Debris
31	38	Yard Waste
32	39	Wood chips and tree clearing
33	40	Yard Debris & Rock Shoal #13 (~100' x 15')
33	41	Yard Debris & Rock Shoal #13 (~100' x 15')
33	42	Yard Debris & Rock Shoal #13 (~100' x 15')
34	43	Rock Shoal #14 & Pavers dumping
34	44	Rock Shoal #14 & Pavers dumping
35	45	Boat Dock & Yard Waste
35	46	Boat Dock & Yard Waste





3



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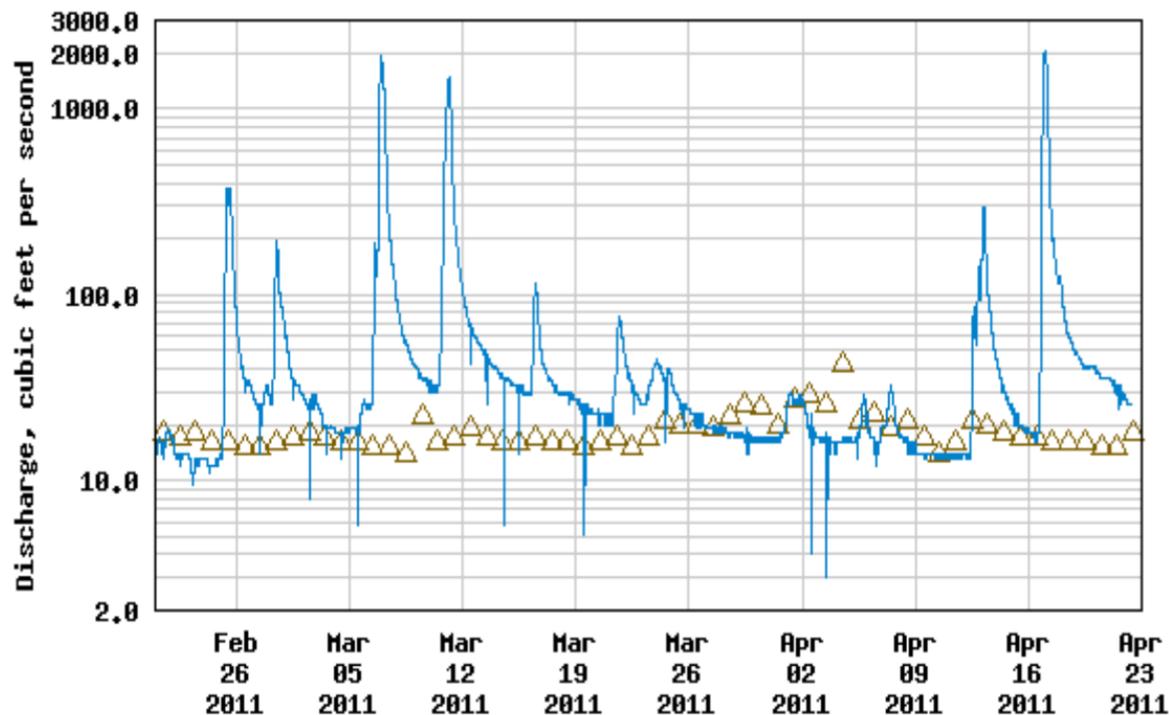


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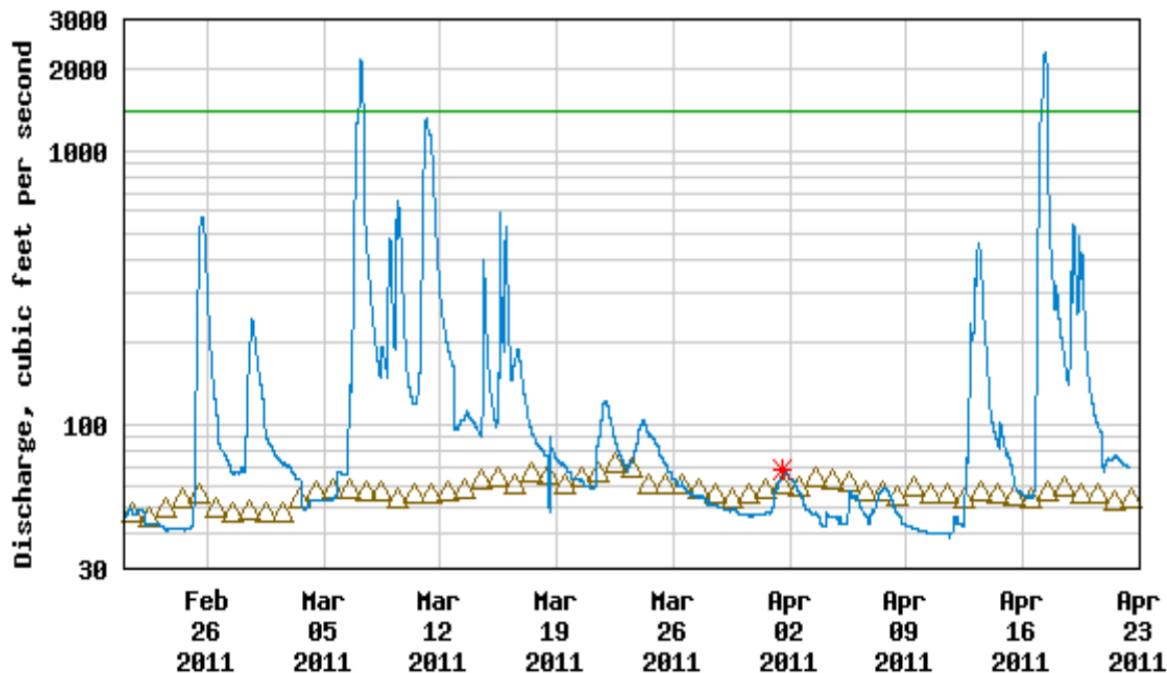


2021/05/15

USGS 01377370 Pascack Brook at Park Ridge NJ



USGS 01377500 Pascack Brook at Westwood NJ

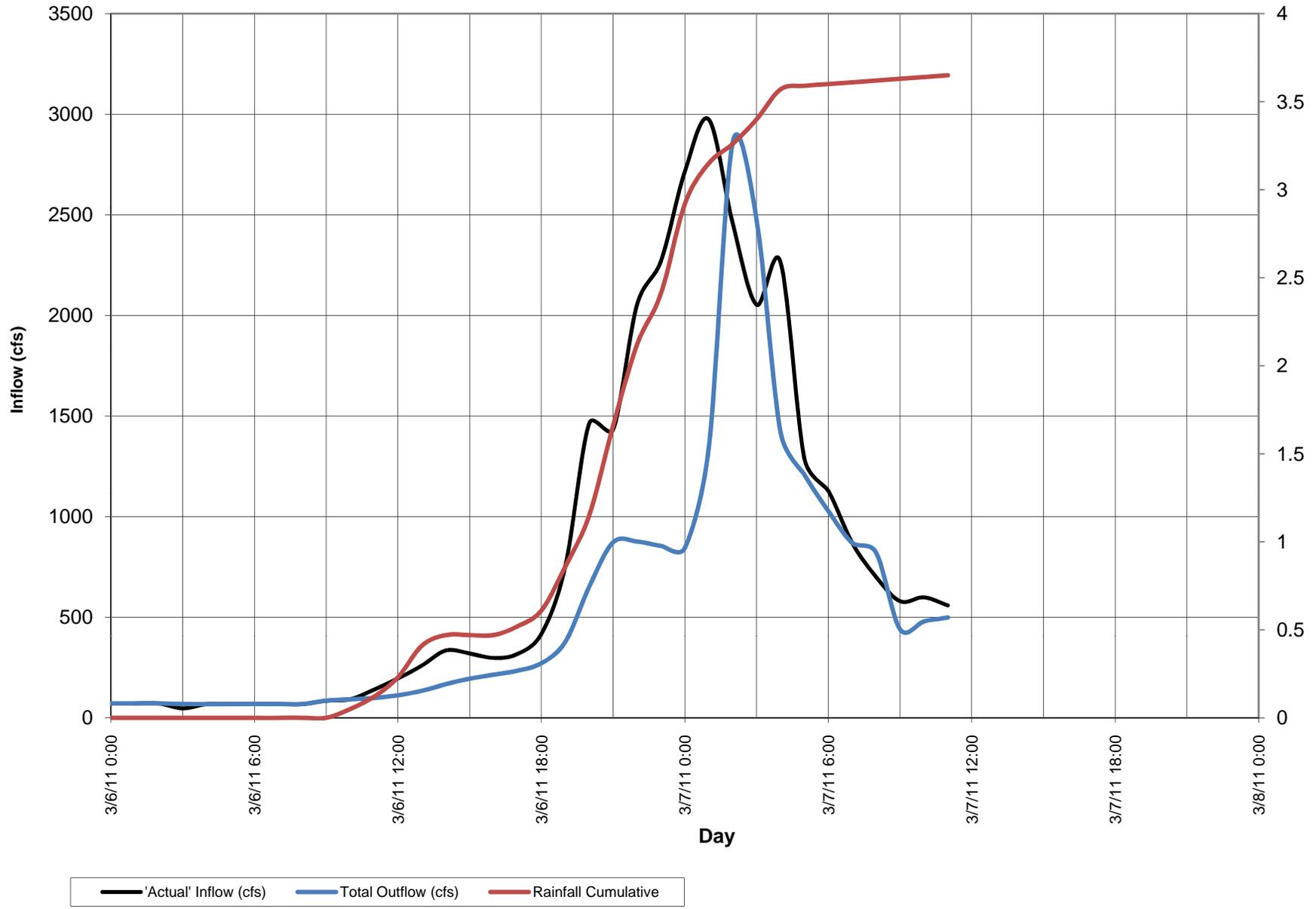


----- Provisional Data Subject to Revision -----

- △ Median daily statistic (76 years)
- ★ Measured discharge
- Discharge
- Discharge at floodstage

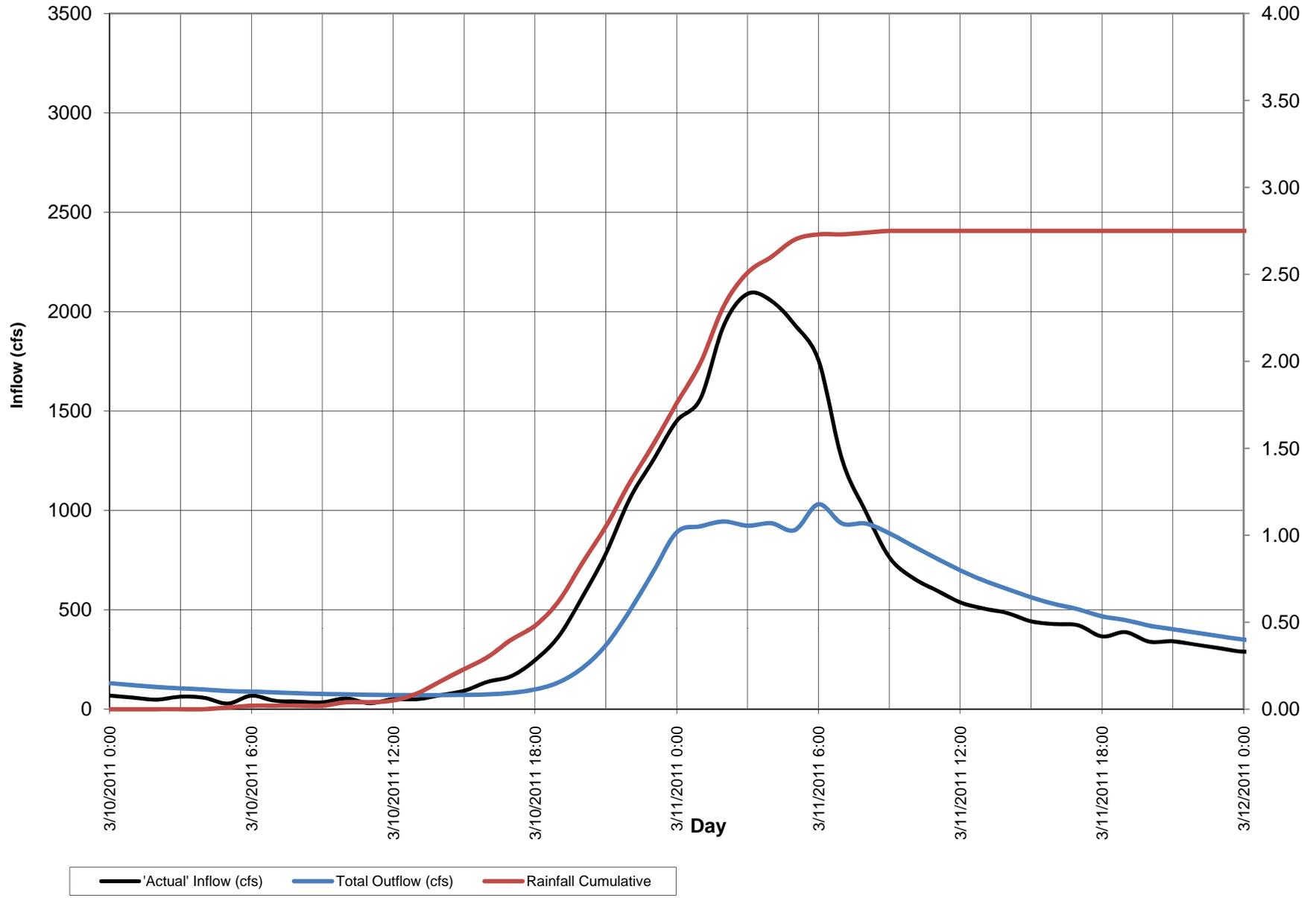
Woodcliff Lake Dam - Mar 6-7, 2011 Storm

DRAFT



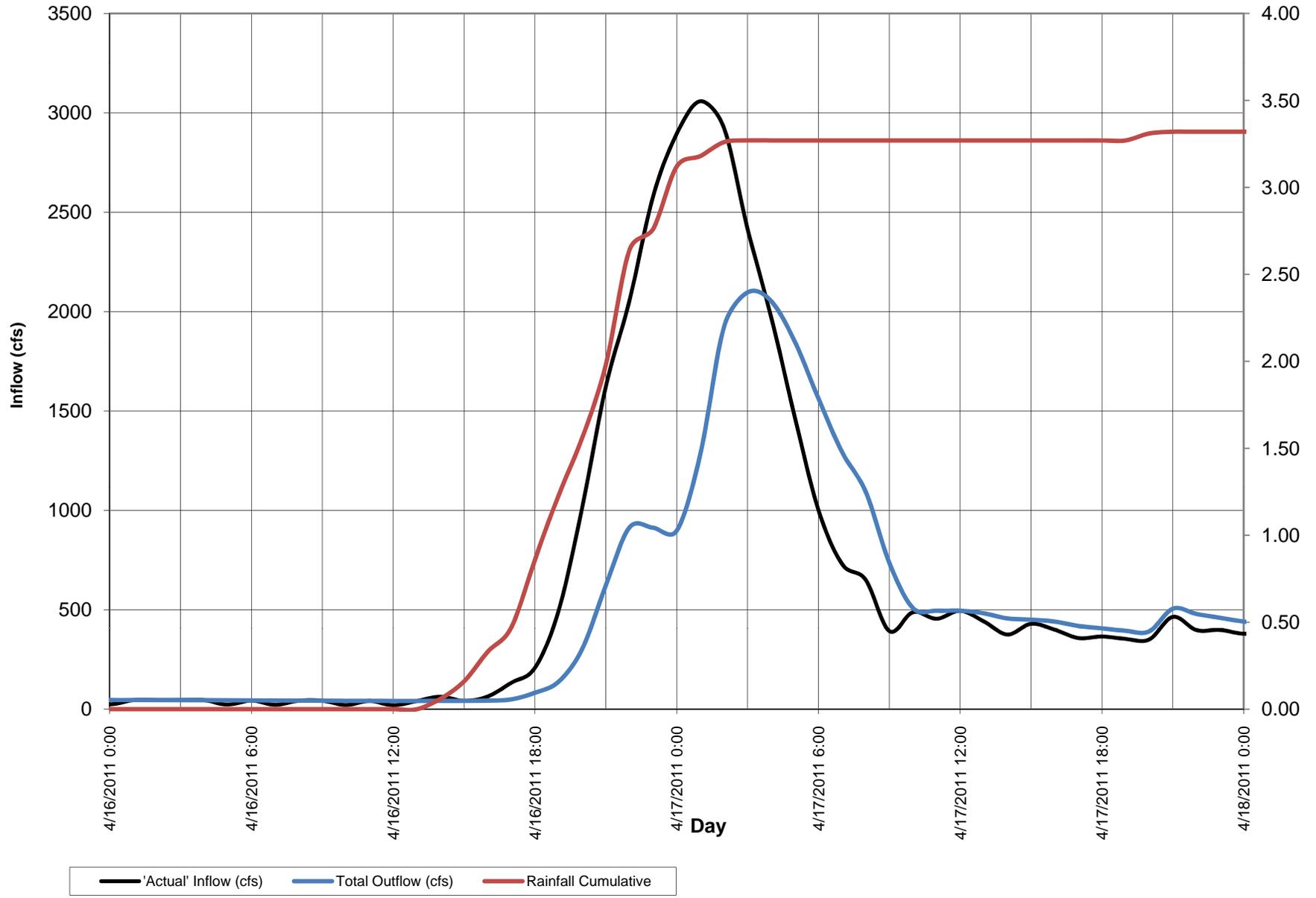
Woodcliff Lake Dam - Mar 10-11, 2011 Storm

DRAFT

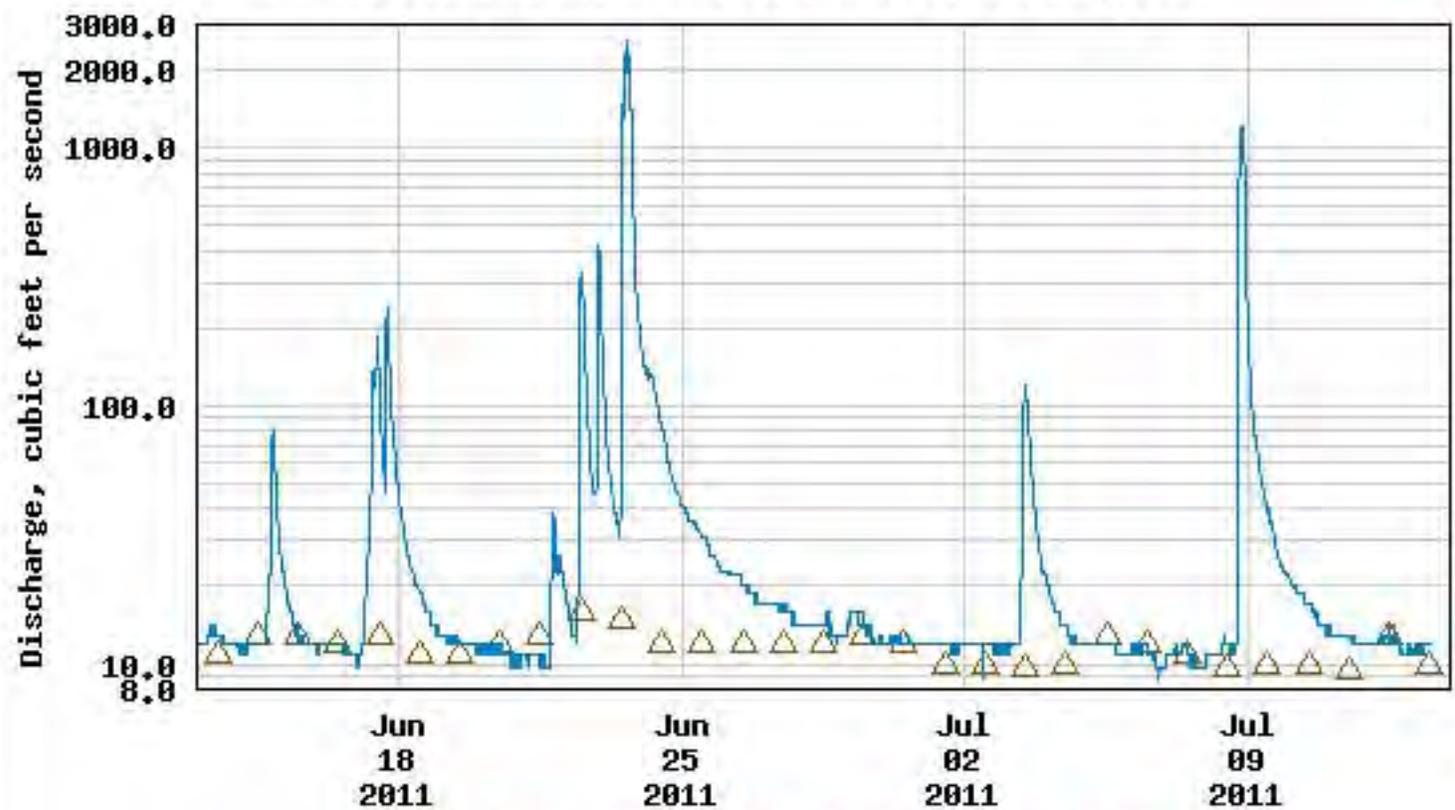


Woodcliff Lake Dam - Apr 16-17, 2011 Storm

DRAFT



USGS 01377370 Pascack Brook at Park Ridge NJ

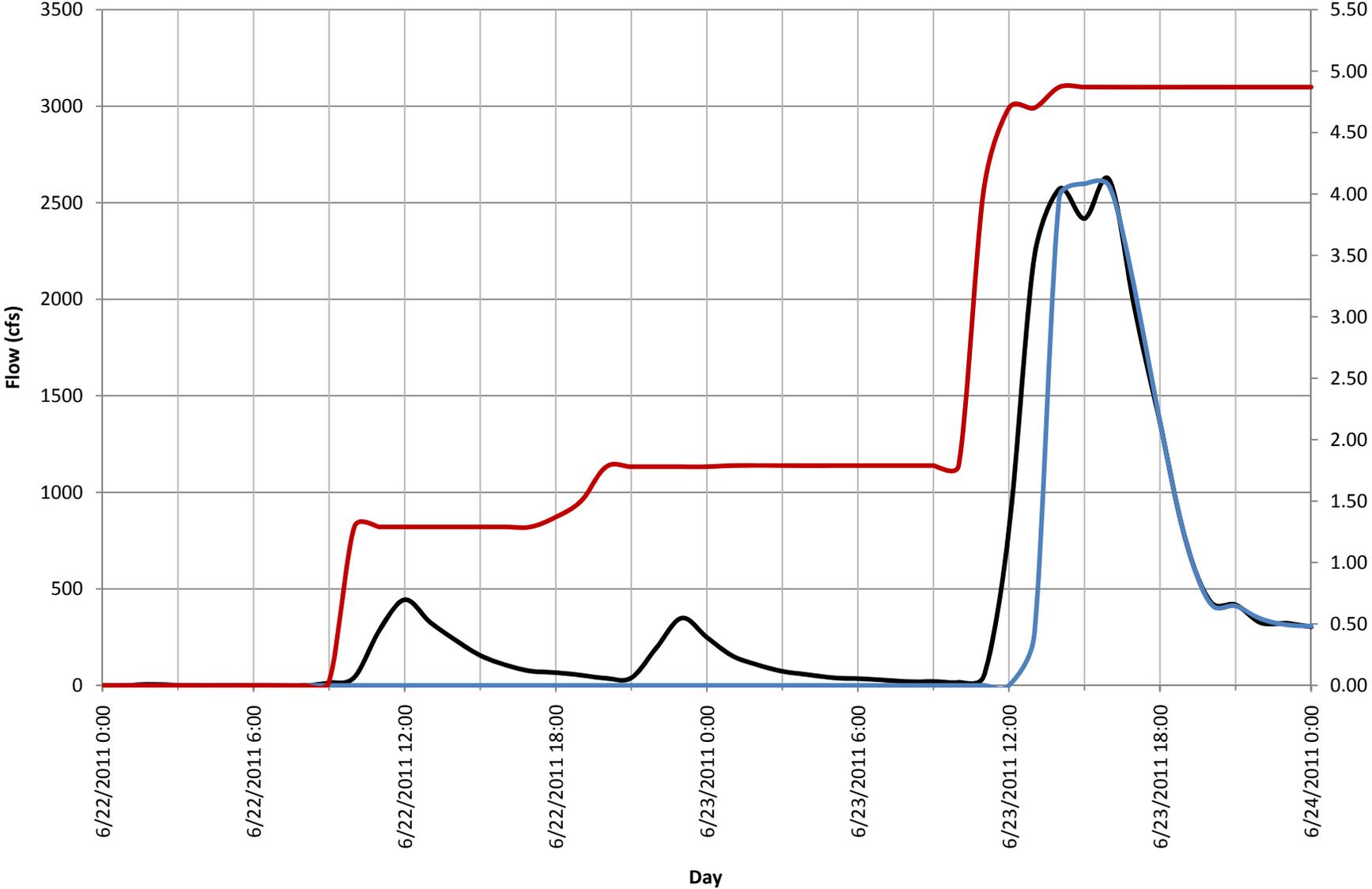


----- Provisional Data Subject to Revision -----

△ Median daily statistic (7 years) — Discharge

Woodcliff Lake Dam - June 23, 2011 Storm

DRAFT



— 'Actual' Inflow (cfs) — Total Outflow (cfs) — Rainfall Cumulative



ASSISTANCE PLEDGED BY UNITED WATER

○ Assist in Funding for Early Warning System

- Ultrasonic Level Gage at Patterson Street Bridge calibrated to Levels I-V
- To be constructed, operated and monitored by Boroughs of Hillsdale and Westwood
- Consider schedule with planned bridge replacement

○ USGS Streamflow/ Precipitation and NOAA Weather Internet Sites

- Continue efforts to review together the resources available for “real-time” information on the Internet

○ Swift-water Rescue Training

- Provide swift-water training for emergency response personnel
- Coordinate efforts with existing swift-water response teams

○ Blue Acres

- Assist Boroughs of Westwood and Hillsdale with applying for funding for purchasing the most vulnerable homes and businesses

○ Floodplain Management Website – example follows



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Employee Access

[Remote Email](#)



"EVENTS"

G r x e d s W d n h f f d v k l r q #
E h q h i l w # E u h d v w # d q f n u

I d a p h u v # P d n h w

Latest News

- [7/20/2011 Emergency Water Restrictions Discussed -Press Release](#)
- [Canvass of Ridgewood Households For Dogs and Cats](#)
- [Village Council Special Public Meetings Concerning Proposed Valley Expansion](#)
- [Kasschau Shell - Outdoor Entertainment Every Tuesday and Thursday Night](#)
- [Ridgewood Water Meter Reading](#)
- [New Reduced PARKING FEES in Ridgewood Parking LOTS](#)
- [2011 Ridgewood Water Consumer Confidence Report](#)
- [Come Join the Fun at Graydon Pool!](#)
- [PSE&G Solar Project in Ridgewood](#)
- [Audit Report on Public Works Fleet Services](#)
- [2011 Budget](#)
- [FiOS Now Broadcasting Ridgewood Village Council Meetings](#)
- [New H Zone Ordinance](#)
- [REGISTRATION Required for Landscapers and Landscaping Services](#)
- [New - Electronics Waste Must be Recycled!](#)
- [November 12, 2011 - FREE SHRED DAY FOR RIDGEWOOD RESIDENTS](#)
- [NY Times Article includes Ridgewood Real Estate](#)
- [SOLID WASTE AND BULK PICK-UP REMINDER](#)
- [Ridgewood's Flood Rating is #7 - 15% Discount on Residential Insurance](#)

Recent News

- [Commercial Power - Landscaping and Tool Regulations](#)
- [2009 Village Audit](#)
- [West Bergen Supportive Housing, 234 S. Broad Street Information](#)
- [New Jersey Special Needs Registry For Disasters](#)
- [Village of Ridgewood Policy includes Civil Rights Act](#)
- [Village Council Rules of Procedure](#)
- [SENIOR CITIZEN BUS - Call for a Ride!](#)
- [Ensure that your number is on the Bergen County Emergency Call List](#)
- [NJ State Resources to Help in Tough Economic Times](#)
- [PEDESTRIAN SAFETY LAWS CHANGED - APRIL 1, 2010](#)
- [SPECIAL NEEDS ASSISTANCE FORM - Office of Emergency Management](#)
- [OVERNIGHT PARKING PERMIT for Central Business District Locations](#)
- [Ridgewood Public Access Channel](#)
- [Broken Parking Meters](#)

[DUF K I Y H G H R V W W C P O L F N # H U H](#)

August Events

W x h v g d | # ; 235 Q h z f r p h u v # O d g l v # x p p h u # v r f l d c
 V d w e u g d | # ; 239 U l g j h z r r g # W d d n # G d | v 0 # ; 272829
 Z h g q h v g d | # ; 264 G r x e d s W d n h I d v k l r q # E h q h i l w # E u h d v w # d q f n u

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- [Village Forms](#)
- [Vital Statistics](#)
- [Request for Police Records](#)
- [Request for Government Records](#)
- [Citizen Volunteer Leadership Form](#)
- [Right to Appeal](#)

Division of Engineering - Village Floodplain Management

General Information

Location:
 Hours: 8:30am - 4:30pm Monday through Friday
 Phone: (201) 670-5500 x238 Fax: (201) 670-7305

Department News

Flood Plains In The Village Of Ridgewood

The Village Of Ridgewood has a number of streams with a flood plain associated with it, Ho-Ho-Kus Brook, Saddle River, Goffle Brook, Diamond Brook, and Sprout Brook a nondelineated stream behind Gateway Road.

These streams are limited in capacity and tend to exceed there banks during heavy rain falls similar to [Tropical Storm Floyd](#) on September 16, 1999 (which can be considered a 100 year flood event) and more recently during the [Nor'easter](#) on April 15, 2007 (which can be considered a 20 year storm event).

As each storm event varies in duration and inches of rainfall, flow varies through each section of the stream dependant on flow restrictions ie, bridges, culverts, dams and weirs. Preventitive maintenance to keep these areas clear is the Village's primary goal in keeping flooding to the minimum.

Flood information for the Village is available in the Engineering Division Office. Flood maps from FEMA and the New Jersey Department Of Environmental Protection are available. Documentation from FEMA is available stating the property and/or structure is located in the floodplain.

Flood Insurance: The Village of Ridgewood participates in the [Community Rating System](#) (CRS) and has a **rating of Class 7**, which is administered by the [National Flood Insurance Program](#) (NFIP). Because we participate in the CRS program, anyone in the Village of Ridgewood can purchase flood insurance. Please note that standard homeowner's insurance does not cover damage from floods. Most homeowner's who have paid off their homes do not continue the flood insurance as required by most mortgage companies. Here are some common [Myths and Facts](#) about the National Flood Insurance Program.

Activities/Resources

Flood Plain Resources

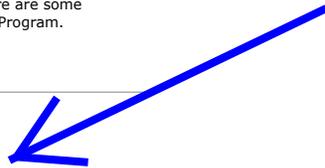
- [Flood Plain Management Plan](#)
- [-->Flood Plain Management Plan 2010 Annual Report](#)
- [---->2010 Repetitive Loss Outreach Letter](#)
- [Annual Flood Letter 2010](#)
- [Letter To Realtors 2010](#)
- [FEMA - Map Of Homes In The Flood Plain 2006](#)
- [Elevation Certificates for Homes on the Flood Fringe](#)
- [Open Space Lands Within The Flood Plain](#)
- [USGS Saddle River Flood Gauge](#)
- [USGS HoHoKus Brook Flood Gauge](#)

Flood Plain Regulations

- [NJDEP-NEW 2007 Flood Hazard Area Control Act Rules N.J.A.C.7:13](#)
- [E-Code for Villaege of Ridgewood, NJ](#)

Flood Links:

- [FEMA](#)
- [Flood Insurance: Top 10 Things Every Homeowner Should Know](#)
- [FEMA - What to do before, during and after](#)
- [FEMA Map Service Center](#)
- [Floodsmart.gov - Facts & Statistics](#)
- [NJDEP - Guide to Stream Encroachment Permitting Program](#)
- [National Weather Service](#)
- [American Red Cross](#)
- [Bergen County Office of Emergency Management](#)
- [Bergen County Automated Flood Warning System](#)





VILLAGE OF RIDGEWOOD

BERGEN COUNTY, NEW JERSEY

DEPARTMENT OF PUBLIC WORKS

DEPARTMENT OF PUBLIC WORKS
 Christopher J. Rutishauser, P.E., C.P.W.M.
 Director of Public Works/Village Engineer

131 N. MAPLE AVENUE
 RIDGEWOOD, NJ 07450
 PHONE: (201) 670-5500x238
 FAX: (201) 670-7305

FLOOD HAZARDS

This notification is being mailed annually to all known addresses located within the flood plain, also known as the Flood Hazard Area, as delineated on the Federal Insurance Rate Maps (FIRM) for the Village of Ridgewood, with the most recent revision date of September 30, 2005, to inform residents and businesses about flood hazards associated with our rivers, brooks, and other minor water courses and to suggest possible actions you can take to protect yourself.

FLOOD HAZARD AREAS

The Village of Ridgewood is subject to riverine flooding along the Ho-Ho-Kus Brook, Saddle River, Goffle Brook, Diamond Brook, and several unnamed drainage ditches and tributaries. A detailed map showing the 100-year flood plain is on file in the office of the Village Engineer at Village Hall, Level 3, 131 North Maple Avenue, (201) 670-5500, Ext. 238.

The 100-year floodplain is the area that will be flooded on the average of once every 100 years. It has a 1% chance of being flooded in any given year. Put another way, it has about a 30% chance of being flooded over the life of a 30-year mortgage. Smaller floods have a greater chance of occurring in any year and can still create a significant flood hazard to people and property close to the waterways. Also, larger floods can and do occur. Floodwaters can rise very fast. Hazards of floods include fast moving waters, sometimes accompanied by trees and other debris.

FLOOD WARNINGS

The Village of Ridgewood has developed an emergency evacuation system, in conjunction with the State and Bergen County, which includes floods and hurricanes. The Mayor, in concert with the Emergency Management Coordinator, has the responsibility to decide on partial or total evacuation. Warnings will be disseminated by radio, WWOR (710 AM), WPAT (93.7 FM), WCBS (880 AM) and WINS (1010 AM), by police vehicles equipped with public address systems, and by door to door notification. The flood warning system is intended to provide up to one hour advance warning of a flood hazard. In the event evacuation becomes necessary, shelters will be open at local schools as necessary, with the cooperation of the Red Cross. You may also visit the Village web site at www.ridgewoodnj.net for flood information.

FLASH FLOOD WATCH means that fast flooding is possible within the watch area. FLASH FLOOD WARNING means that flash flooding is imminent or has been reported in the warning area.

FLOOD SAFETY

If you live near a brook or creek, you should be concerned about the flood hazard. There are several actions you can take to mitigate the flood hazard, including:

1. Know the flood warning procedures.
2. Plan escape routes to high ground.
3. During times of heavy rainfall, monitor the level of water in the drainage way. Stay tuned to radio or TV for possible flood warnings. WWOR (710 AM), WPAT (93.7 FM), WCBS (880 AM) and WINS (1010 AM) will broadcast flood watches and warnings.
4. Evacuate the flood hazard area in times of impending flood or when advised to do so by the police or fire department after shutting off the gas, electricity and heating system.
5. Do not attempt to cross a flooding stream on foot or by car.
6. If your car stalls in high water, abandon it immediately and seek higher ground.
7. Keep children away from flood waters, ditches, culverts and storm drains.
8. Be especially cautious at night.
9. Check the Village web site at www.ridgewood.nj.net for up to date information.
10. Avoid downed power lines.
11. Real time stream flows can be monitored online at <http://water.usgs.gov/> click on Daily Stream flow (left side margin) then click on New Jersey. On the New Jersey map, move your cursor to highlight local monitoring points of interest (Ho-Ho-Kus Brook at Ho-Ho-Kus, NJ and Saddle River at Ridgewood, NJ). Below are the links.
 - Ho-Ho-Kus Brook, <http://waterdata.usgs.gov/nj/nwis/uv?01391000>
 - Saddle River, http://waterdata.usgs.gov/usa/nwis/uv?site_no=01390500

MAP DETERMINATIONS

The Village of Ridgewood's Engineering Division provides verbal map determinations and letters for anyone wishing verification of their location within the flood hazard areas. Base flood elevations will also be provided to the public upon request.

FLOOD PROTECTION LIBRARY

The Village of Ridgewood Library, Main Branch, located at 125 North Maple Avenue, has established a library of 6 books, several pamphlets, Flood Insurance Rate Maps and Flood Insurance Study, available for public inspection. These books deal with hurricane safety, flood hazard mitigation, flood insurance, coastal construction, and retrofitting of an existing structure. Also, at the library is a telephone directory of frequently called numbers of the New Jersey Department of Environmental Protection.

FLOOD PROTECTION ASSISTANCE

The Village of Ridgewood's Department of Buildings and Inspections located at our Village Hall, Level 3, 131 North Maple Avenue, has personnel available to provide technical advice to Property Owners interested in retrofitting existing structures, and new construction. Personnel from the Department of Buildings and Inspections, upon request, will meet with the Property Owner to advise the owner of appropriate protection measures, and reviewing final plans upon submission.



FLOOD INSURANCE

Your homeowners' insurance policy will not cover losses due to flooding. The Village of Ridgewood participates in the National Flood Insurance Program, which makes flood insurance available to everyone in the Village of Ridgewood.

For many people, their home and its contents represent their greatest investment. We strongly urge you to buy flood insurance to protect yourself from devastating losses due to flooding.

Information about flood insurance can be obtained from your insurance agent, or by calling the National Flood Insurance Program at 1-800-611-6122, www.fema.gov/plan/prevent/floodins/infocon.shtm. You do not have to live in the floodplain to qualify for flood insurance. Property owners can insure their buildings and contents and renters can insure their possessions.

Just because your house has not flooded in the recent past does not mean that you are safe. There is a thirty day waiting period before a flood insurance policy takes effect, so you should call your insurance agent now.

PROPERTY PROTECTION MEASURES

All new construction in the Flood Hazard Area of the Village of Ridgewood must be built to the floodplain ordinance regulations. Existing residences and commercial buildings located in the Flood Hazard Area can be protected by several measures to withstand floods. Depending on the situation, location and the property owner's availability of funds, the following measures can be used:

1. Install a sump pump system to dispose of infiltrating water. Do not direct water into the sanitary sewer collection system. Such an action is prohibited by the Village Code.
2. Strengthen basement walls.
3. Install water resistant materials, such as paints, floors, carpets, doors and windows.
4. Elevate electrical and mechanical equipment in the basement.
5. Flood proof walls, windows and doors.
6. Construct flood walls or closures.
7. Elevate structures.
8. Consider the installation of a check valve on your house sanitary sewer house lateral to minimize backups.

FLOOD HAZARD AREA DEVELOPMENT PERMIT REQUIREMENTS

To regulate development in the Flood Hazard Area, the Village of Ridgewood, in conjunction with State and Federal agencies, has developed a Flood Damage Prevention Ordinance. The purpose of the ordinance is to protect the public health and safety, prevent construction that would increase flooding and preserve the natural environment. The ordinance is under the jurisdiction of the Village Department of Buildings and Inspections. This ordinance requires that any new or substantially improved structures be constructed so that the lowest floor, including basement, is elevated to or above the base flood elevation.

No development in the Flood Hazard Area, whether construction of structures or installation of fill, is permitted without approvals from the Village Engineer, appropriate Village Board, and possibly the New Jersey Department of Environmental Protection. The Construction Code Department can then issue the proper permits.

Should illegal development be observed in the Flood Hazard Area, you are urged to call the Village Engineer at (201) 670-5500, Ext. 238, Construction Code Department (201) 670-5500, Ext. 213, Police Department (201) 670-5500, Ext. 400), or the NJDEP at 1 877 WARN DEP.

DRAINAGE SYSTEM MAINTENANCE

The various watercourses and storm sewers are necessary to prevent flooding to properties. To keep the drainage systems flowing freely, the Village has prohibited the following activities in the open channels, and also in closed sewers and their vicinity. Remember, "Nothing but rain should go in the drain".

1. Dumping any solid waste, (including pet droppings), garbage, trash, leaves, grass or debris.
2. Dumping untreated sewage or industrial wastes.
3. Storage of pesticides, flammable, explosive and hazardous materials.

Any violations of these regulations should be immediately reported to the Police Department.

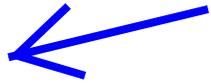
NEW RIPARIAN BUFFER REGULATIONS

The purpose of the riparian buffer is to restore and maintain the chemical, physical and biological integrity of the open water resources in the Village. The buffer area is regulated by the New Jersey Department of Environmental Protection and enforced by the Village through Ordinance Number 3225, dated November 9, 2009. The riparian zone is designed to protect the lands and vegetation within and directly adjacent to all surface waters. This zone / buffer is measured from the top of bank and is calculated depending on the class rating of the water body. Currently, all of Ridgewood's riparian buffers are 50 feet from the top of either side's bank.

COMMUNITY RATING SYSTEM

The Village has, in conjunction with the State, lowered its rating classification by undertaking various programs developed by the Federal Emergency Management Agency. Therefore, when you renew your Flood Insurance Policy, please check for your "Community Rating Number" stated on your policy. Ridgewood's current Community Rating Number is seven (7). Should your policy indicate something other than seven (7), please call your insurance agent in order to correct the error. For every CRS point below 10, you should receive a 5% reduction in your flood insurance premiums. Ridgewood residents should, therefore, receive a 15% reduction for properties in the "A" and "AE" Zones.

This Brochure has been prepared by the Village of Ridgewood, Department of Public Works, Engineering Division, Level 3,131 North Maple Avenue, Ridgewood, New Jersey 07450-3287, (201) 670-5500 Ext. 238. Please visit our website for additional useful information, www.ridgewoodnj.net/find/fpm.





VILLAGE OF RIDGEWOOD
BERGEN COUNTY, NEW JERSEY
DEPARTMENT OF PUBLIC WORKS

DEPARTMENT OF PUBLIC WORKS
Christopher J. Rutishauser, P.E., C.P.W.M.
Director of Public Works / Village Engineer

131 N. MAPLE AVENUE
RIDGEWOOD, NJ 07450
PHONE: (201) 670-5500, Ext. 238
FAX: (201) 670-7305

September 23, 2010

To: Ridgewood Realtors/Insurers/Bankers

Re: Flood Insurance Rate Map Information
File CRS No. 320

The Village of Ridgewood, through the Engineering Division, provides the following Flood Insurance Rate Map (FIRM) Information free of charge to residents, prospective buyers, realtors, bankers, insurers, and concerned citizens:

- A. Whether or not a particular property is in a Special Flood Hazard Area.
- B. Ridgewood's Community Number, 340067, for map information.
- C. The Panel Number and Suffix.
- D. The date of the FIRM's Index.
- E. The FIRM Zone of a particular property.
- F. The Base Flood Elevation.
- G. The Elevation Datum.
- H. In some cases the existing floor elevation and ground elevations are on file and the Engineering Division also maintains elevation certificates for review.

Information can be obtained by calling, writing or stopping by the Engineering Division's office at Village Hall, 131 North Maple Avenue, or by telephone, at (201) 670-5500, Ext. 238. Additional information and links can be found on the Village's website, www.ridgewoodnj.net/find/fpm

The Village provides this service as a convenience to the community. Lenders are legally responsible for determining if flood insurance is required for a loan. The Village in no way intends to assume the lenders responsibility.

Very truly yours,

Christopher J. Rutishauser, PE, CPWM
Public Works Director/Village Engineer

CRS 2010 File 320



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National Water Information System: Web Interface

[USGS Water Resources](#)

Data Category:

Real-time

Geographic Area:

United States

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[News](#) updated July, 2011

USGS 01390500 Saddle River at Ridgewood NJ

PROVISIONAL DATA SUBJECT TO REVISION

Available data for this site

Time-series: Real-time data

GO

Estimated flood stage for this gage is 6 feet.

LOCATION. --Lat 40°59'06", long 74° 05'26" referenced to North American Datum of 1983, Ridgewood Village, Bergen County, NJ, Hydrologic Unit 02030103, on left bank 15 ft upstream from bridge on State Highway 17 in Ridgewood and 2.8 mi upstream from Hohokus Brook.

DRAINAGE AREA. --21.6 mi².

PERIOD OF RECORD. --Continuous-record gaging station, October 1954 to September 1974, October 1977 to current year. Annual maximum, water years 1975-77.

GAGE. --Water-stage recorder and crest -stage gage. Datum of gage is 71.74 ft above NGVD of 1929 (levels from New Jersey Geological Survey benchmark).

EXTREMES OUTSIDE PERIOD OF RECORD. --Flood of July 23, 1945 reached a discharge of 6,400 ft³/s (based on slope-area computation at site 1.6 mi upstream; adjusted for change in drainage area).

COOPERATION. --Funding for this gage is provided by the New Jersey Department of Environmental Protection, the U.S. Geological



Survey and the U.S. Army Corps of Engineers, New York District, Passaic Flood Warning System.

[Boating Safety Tips](#)

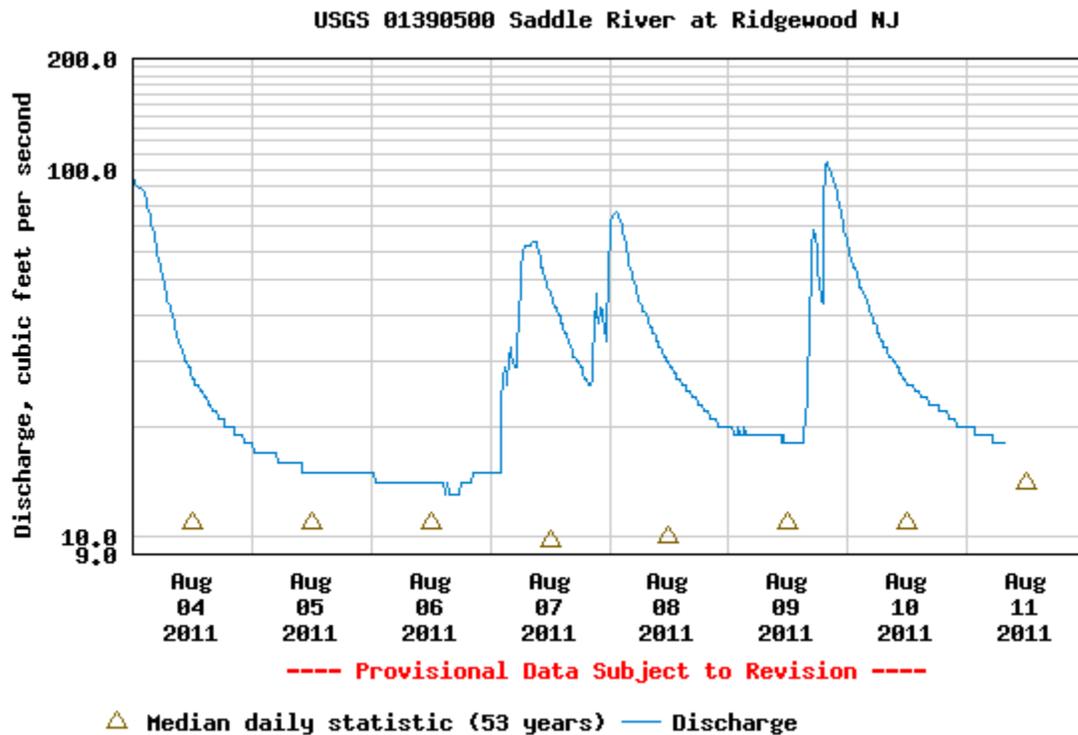
This station managed by the West Trenton, NJ Water Science Center.

<p>Available Parameters</p> <p><input type="checkbox"/> All 2 Available Parameters for this site</p> <p><input checked="" type="checkbox"/> 00060 Discharge</p> <p><input checked="" type="checkbox"/> 00065 Gage height</p>	<p>Output format</p> <p><input checked="" type="radio"/> Graph</p> <p><input type="radio"/> Graph w/ stats</p> <p><input type="radio"/> Graph w/o stats</p> <p><input type="radio"/> Table</p> <p><input type="radio"/> Tab-separated</p>	<p>Days</p> <p>7</p> <p>(1-120)</p>	<input type="button" value="GO"/>
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[Summary of all available data for this site](#)

Discharge, cubic feet per second

Most recent instantaneous value: 18 08-11-2011 07:30 EDT



Create [presentation-quality](#) / [stand-alone](#) graph. Subscribe to [WaterAlert](#)

Daily discharge statistics, in cfs, for Aug 11 based on 53 years of record [more](#)

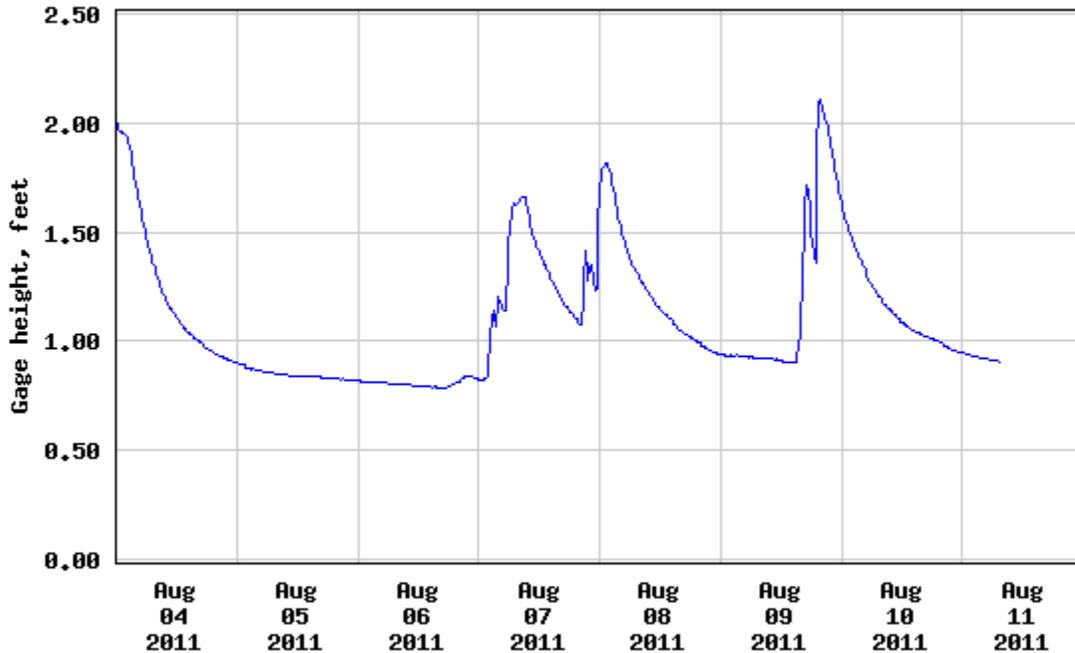
Min (1995)	25th percentile	Median	Most Recent Instantaneous Value Aug 11	Mean	75th percentile	Max (2000)
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Min (1995)	25th percentile	Median	Most Recent Instantaneous Value Aug 11	Mean	75th percentile	Max (2000)
2.3	7.3	14	18	22	23	191

Gage height, feet

Most recent instantaneous value: 0.90 08-11-2011 07:30 EDT

USGS 01390500 Saddle River at Ridgewood NJ



----- Provisional Data Subject to Revision -----

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[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)

Title: USGS Real-Time Water Data for the Nation

URL: <http://waterdata.usgs.gov/nwis/uv?>



Page Contact Information: [New Jersey Water Data Support Team](#)

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National Water Information System: Web Interface

[USGS Water Resources](#)

Data Category:

Real-time

Geographic Area:

New Jersey

GO

[News](#) updated July, 2011

ALL DATA ARE AT LOCAL TIME

USGS 01391000 Hohokus Brook at Ho-Ho-Kus NJ

PROVISIONAL DATA SUBJECT TO REVISION

Available data for this site

Time-series: Real-time data

GO

Flood stage for this gage is 3 feet.

LOCATION. --Lat 40°59'52", long 74° 06'43" referenced to North American Datum of 1983, Ho-Ho-Kus Borough, Bergen County, NJ, Hydrologic Unit 02030103, on left bank 500 ft upstream from bridge on Maple Avenue in Ho-Ho-Kus, and 3.5 mi upstream from mouth.

DRAINAGE AREA. --16.4 mi².

PERIOD OF RECORD. --Continuous-record gaging station, water years 1954-73, 1977-96, and 2006 to current year. Annual maximum, water years 1997 to 2005.

GAGE. --Water-stage recorder and crest-stage gage. Datum of gage is 120.09 ft above NGVD of 1929. Diurnal fluctuations in stage and flow are probably due to sewage effluent that enter the stream not too far upstream of the gage.

COOPERATION. --Funding for this gage is provided by the U.S. Army Corps of Engineers, New York District, Passaic Flood Warning System.



[Boating Safety Tips](#)

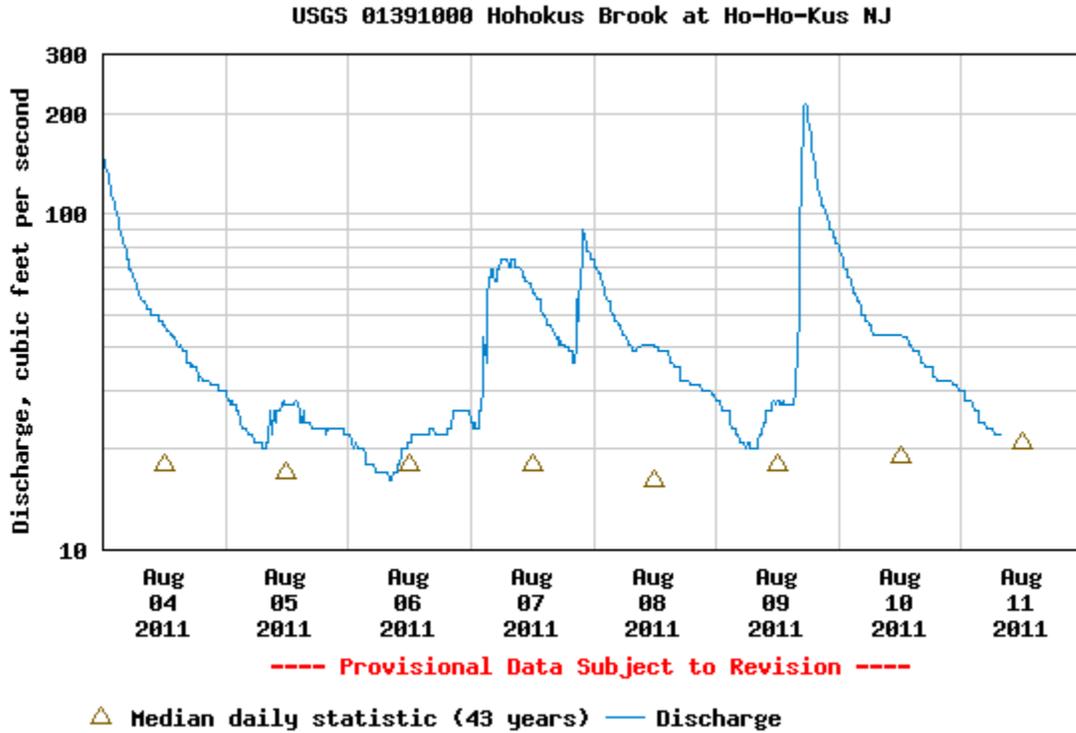
This station managed by the West Trenton, NJ Water Science Center.

<p>Available Parameters</p> <p><input type="checkbox"/> All 2 Available Parameters for this site</p> <p><input checked="" type="checkbox"/> 00060 Discharge</p> <p><input checked="" type="checkbox"/> 00065 Gage height</p>	<p>Output format</p> <p><input checked="" type="radio"/> Graph</p> <p><input type="radio"/> Graph w/ stats</p> <p><input type="radio"/> Graph w/o stats</p> <p><input type="radio"/> Table</p> <p><input type="radio"/> Tab-separated</p>	<p>Days</p> <p>7</p> <p>(1-120)</p> <p>GO</p>
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[Summary of all available data for this site](#)

Discharge, cubic feet per second

Most recent instantaneous value: 22 08-11-2011 07:30 EDT



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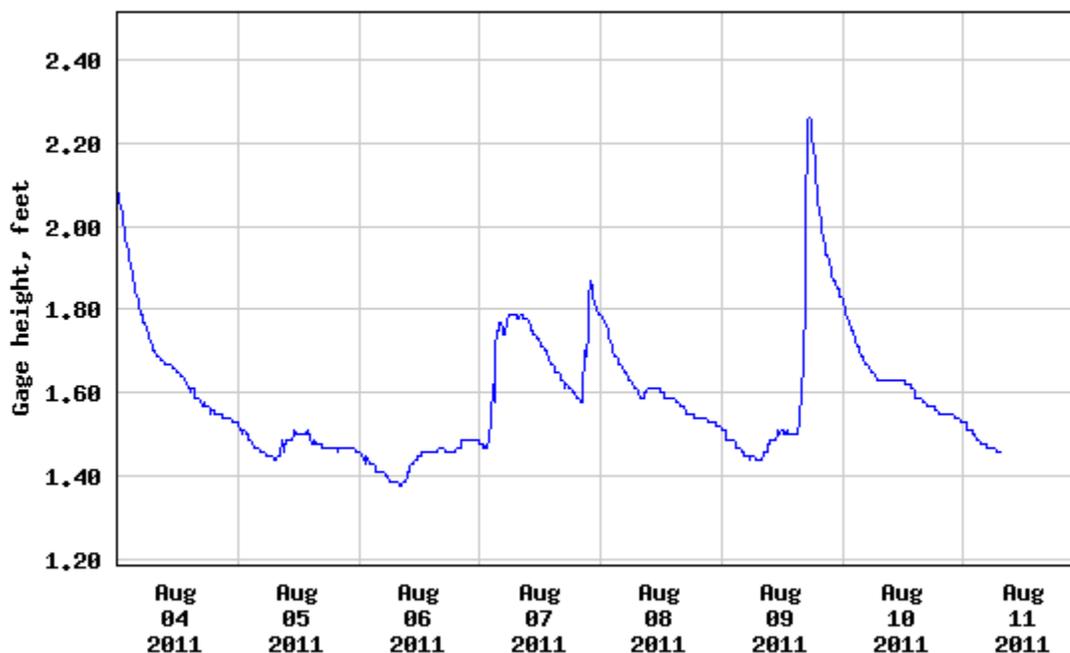
Daily discharge statistics, in cfs, for Aug 11 based on 43 years of record [more](#)

Min (1957)	25th percentile	Median	Most Recent Instantaneous Value Aug 11	Mean	75th percentile	Max (1990)
3.6	12	21	22	24	31	94

Gage height, feet

Most recent instantaneous value: 1.46 08-11-2011 07:30 EDT

USGS 01391000 Hohokus Brook at Ho-Ho-Kus NJ



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Page Last Modified: 2011-08-11 08:28:08 EDT

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Flood Insurance: Top 10 Things Every Homeowner Should Know

Release Date: February 16, 2007

Release Number: 1675-010

» More Information on Kansas Severe Winter Storm

1. Everyone lives in a flood zone.

- You don't need to live near water to be flooded.
- Floods are caused by storms, melting snow, hurricanes, and water backup due to inadequate or overloaded drainage systems, dam or levee failure, etc.

2. Flood damage is not covered by homeowner's policies.

- You can protect your home, business, and belongings with flood insurance from the National Flood Insurance Program (NFIP).
- You can insure your home with flood insurance for up to \$250,000 for the building and \$100,000 for building's contents.

3. You can buy flood insurance no matter what your flood risk is.

- It doesn't matter whether your flood risk is high, medium, or low, you can buy flood insurance as long as your community participates in the National Flood Insurance Program. And, it's a good idea to buy even in low or moderate risk areas: almost 25 percent of all flood insurance claims come from low to moderate risk areas.

4. There is a low-cost Preferred Risk Policy for homes in low to moderate risk areas.

- Homeowners can insure buildings and contents for as little as \$180 per year.
- Business owners can insure buildings and contents for as little as \$500 per year.
- Residential renters can insure contents for as little as \$39 per year.

5. Flood insurance is affordable.

- The average flood insurance policy for a single family, one floor, no basement home in a floodplain zone costs a little more than \$500 a year for about \$65,000 of coverage for building and contents.
- In comparison, a \$50,000 disaster home loan can cost you more than \$240 a month at 4 percent interest over 20 years.

6. Flood insurance is easy to get.

- You can buy NFIP flood insurance from private insurance companies and agents.
- Some companies may allow the purchase of flood insurance with credit.
- You may be able to purchase flood insurance with a credit card.

7. Contents coverage is separate, so renters can insure their belongings too.

- Up to \$100,000 contents coverage is available for homeowners and renters.
- Whether you rent or own your home or business, make sure to ask your insurance agent about contents coverage. It is not automatically included with the building coverage.

8. Up to a total of \$1 million of flood insurance coverage is available for non-residential buildings & contents.

- Up to \$500,000 of coverage is available for non-residential buildings.
- Up to \$500,000 of coverage is available for the contents of non-residential buildings.

9. There is usually a 30-day waiting period before the coverage goes into effect.

- Plan ahead so you're not caught without flood insurance when a flood threatens your home or business.

10. Federal disaster assistance is not the answer.

- Federal disaster assistance is only available if the President declares a disaster.
- More than 90 percent of all disasters in the United States are not declared federal disaster areas. Flood insurance pays even if a disaster is not declared.

FEMA prepares the nation for all hazards and manages federal response and recovery efforts following any national incident. FEMA also initiates mitigation activities, trains first responders, works with state and local emergency managers, and manages the National Flood Insurance Program and the U.S. Fire Administration. FEMA became part of the U.S. Department of Homeland Security on March 1, 2003.



Flood

Floods are one of the most common hazards in the United States. Flood effects can be local, impacting a neighborhood or community, or very large, affecting entire river basins and multiple states.

However, all floods are not alike. Some floods develop slowly, sometimes over a period of days. But flash floods can develop quickly, sometimes in just a few minutes and without any visible signs of rain. Flash floods often have a dangerous wall of roaring water that carries rocks, mud, and other debris and can sweep away most things in its path. Overland flooding occurs outside a defined river or stream, such as when a levee is breached, but still can be destructive. Flooding can also occur when a dam breaks, producing effects similar to flash floods.

Be aware of flood hazards no matter where you live, but especially if you live in a low-lying area, near water or downstream from a dam. Even very small streams, gullies, creeks, culverts, dry streambeds, or low-lying ground that appear harmless in dry weather can flood. Every state is at risk from this hazard.

What is the flood risk where I live?

How can I protect myself from a flood?

- Know your flood terms
- What to do before a flood
- What to do during a flood
- What to do after a flood



Flood: Know Your Terms

Familiarize yourself with these terms to help identify a flood hazard:

Flood Watch:

Flooding is possible. Tune in to NOAA Weather Radio, commercial radio, or television for information.

Flash Flood Watch:

Flash flooding is possible. Be prepared to move to higher ground; listen to NOAA Weather Radio, commercial radio, or television for information.

Flood Warning:

Flooding is occurring or will occur soon; if advised to evacuate, do so immediately.

Flash Flood Warning:

A flash flood is occurring; seek higher ground on foot immediately.



WOODCLIFF LAKE DAM IMPROVEMENTS PROJECT OVERVIEW

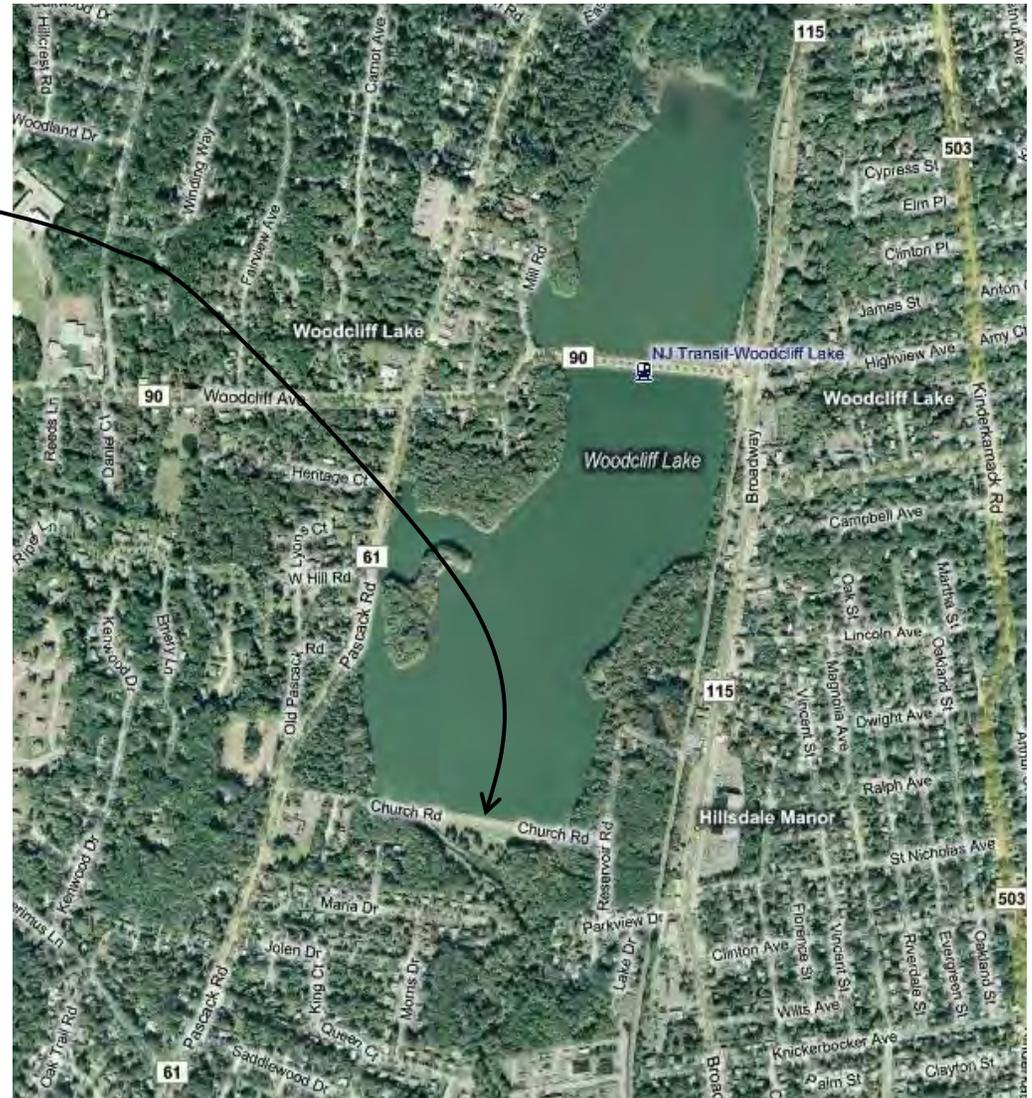
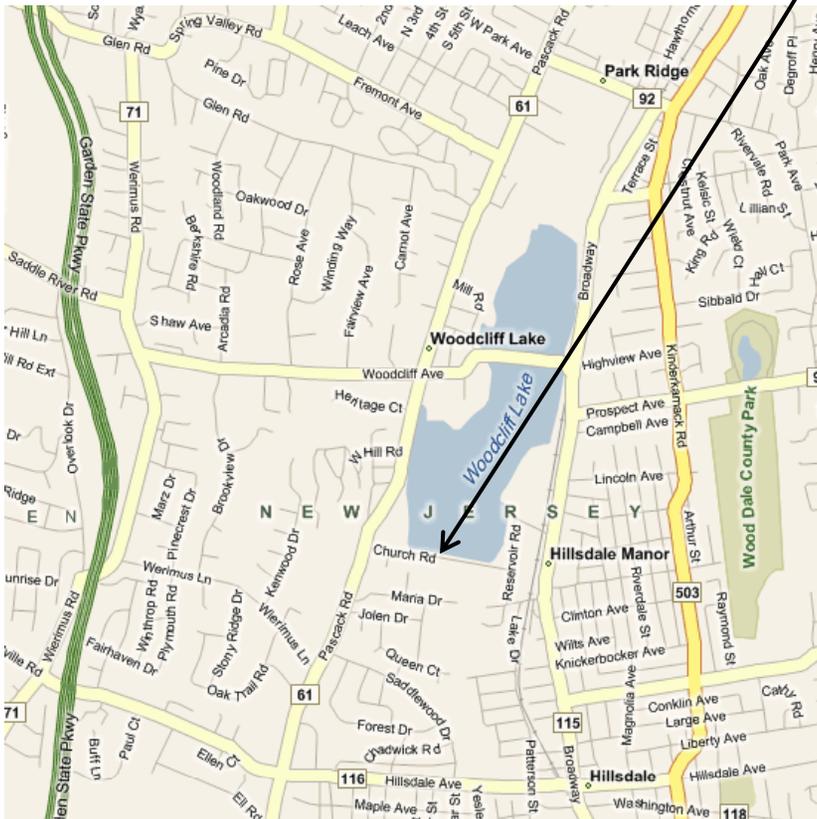
August, 2011



BUCK
SEIFERT
& JOST INC.

Location Map:

- Woodcliff Lake Dam is located in Woodcliff Lake and Hillsdale, Bergen County, NJ





PROJECT PURPOSE:

○ Woodcliff Lake Dam

- Class I – High Hazard Potential Dam
 - Required Spillway Capacity of Probable Maximum Precipitation (PMP) Storm Event

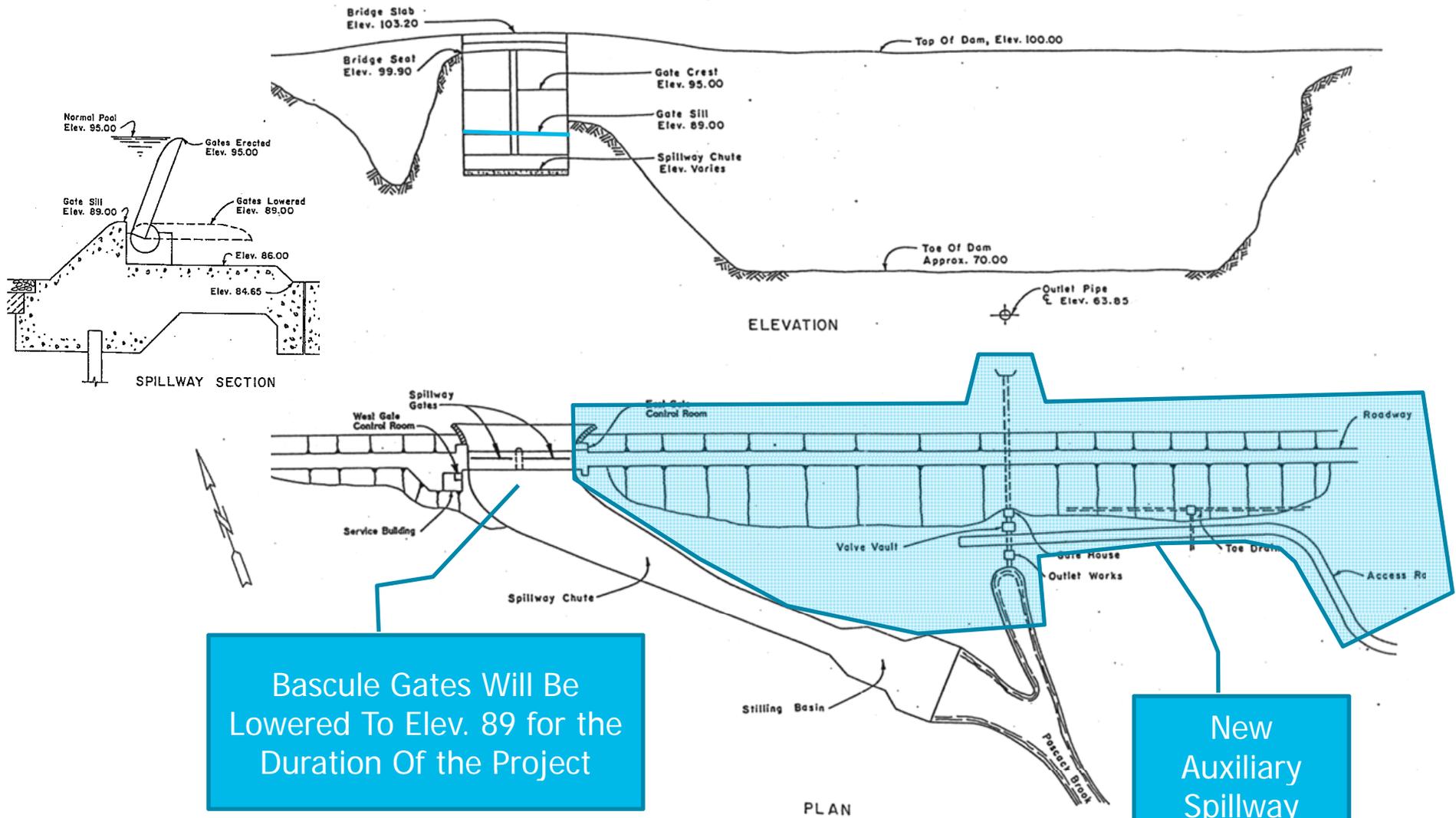
○ Probable Maximum Flood (PMF) re-evaluated in 2007

- Increased in magnitude, resulting in overtopping of existing dam configuration by 2 feet
 - Overtopping Earthen Dam → Erosion

○ Planned Improvements

- Auxiliary Spillway with Overtopping Protection
- Rehabilitation of the Low Level Outlet
- Raise Two (2) Low Lying Reservoir Embankment Areas
- Remove the Existing Downstream Gate House and Appurtenances
- Provide Two (2) New Toe Drain Weir Chambers

Woodcliff Lake Dam Existing Plan and Elevation:



Bascule Gates Will Be Lowered To Elev. 89 for the Duration Of the Project

New Auxiliary Spillway Work Area

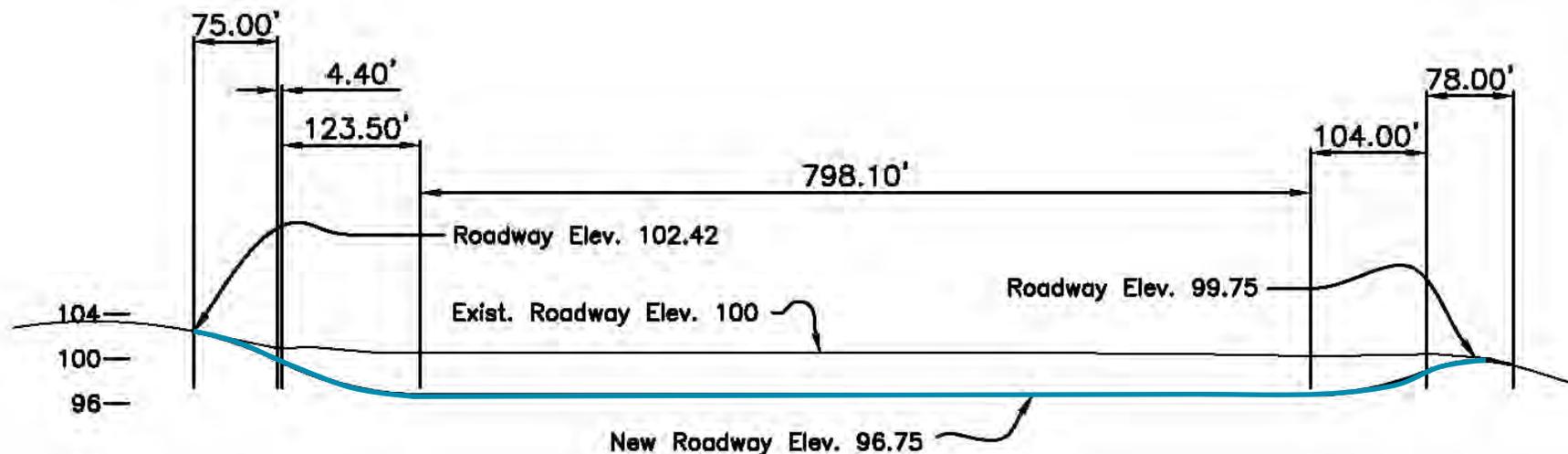
NEW AUXILIARY SPILLWAY:

Location

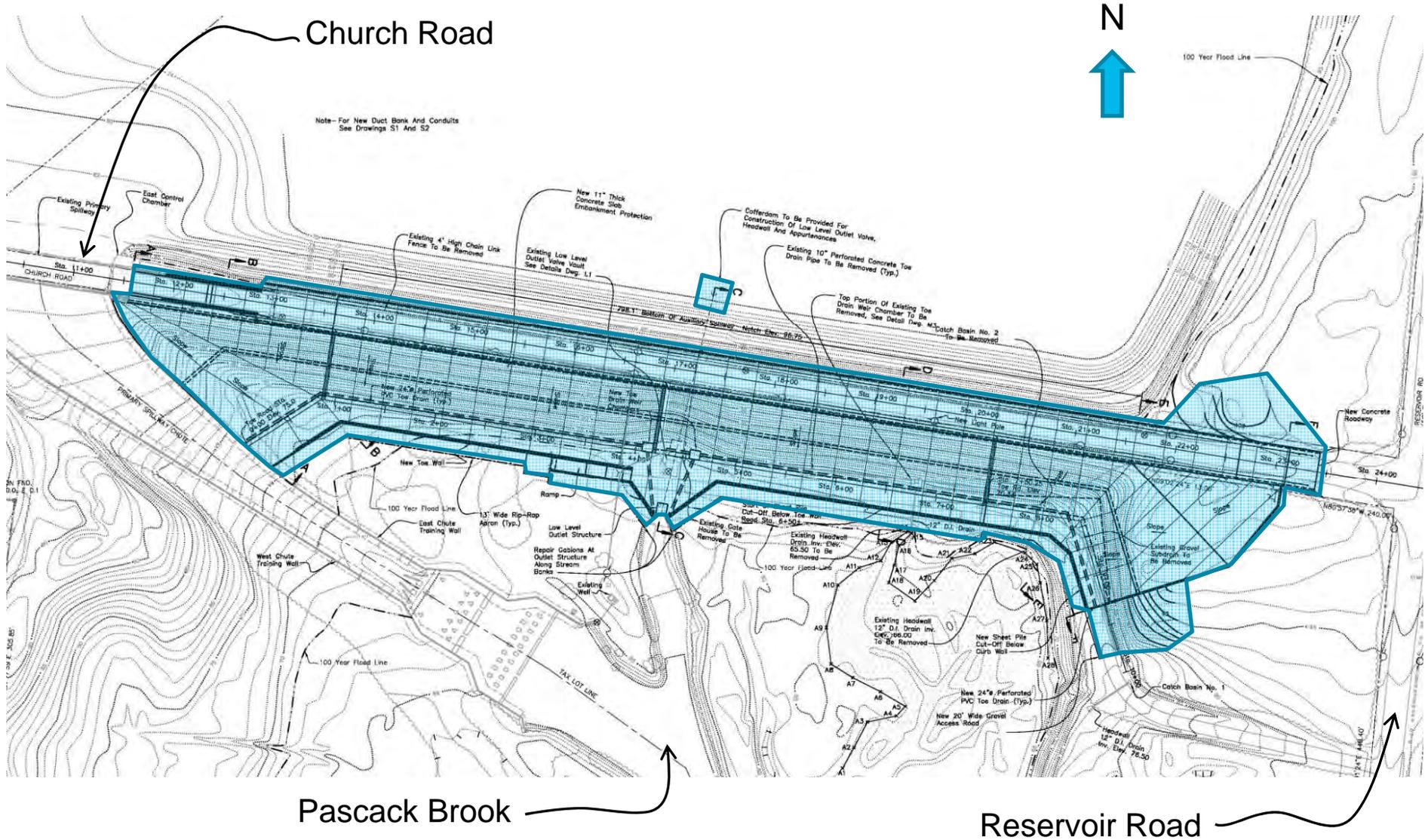
- East of Existing Primary Spillway

Goals

- Provide Additional Spillway Capacity
- Not in Service for Small Storms (\leq 100 Year Storm)



NEW AUXILIARY SPILLWAY SITE PLAN:



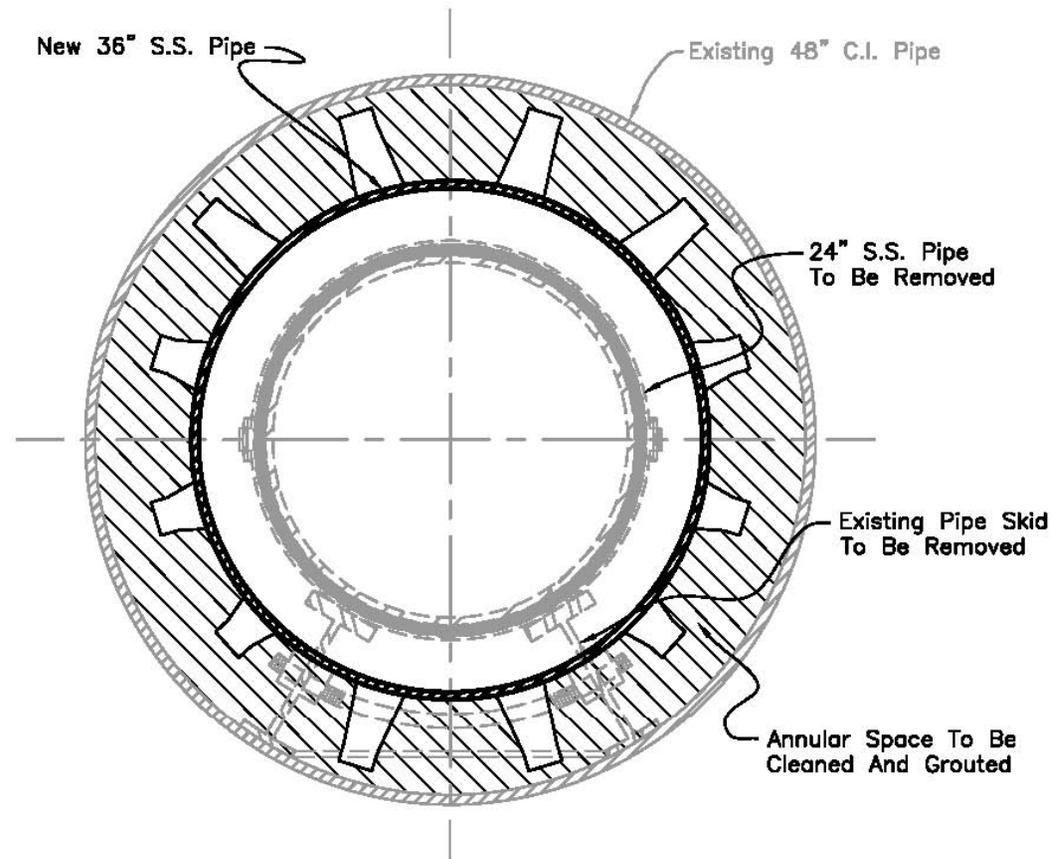
REHABILITATION OF LOW LEVEL OUTLET:

Existing Low Level Outlet

- 24" Stainless Steel (SS) Pipe Within Original Cast Iron (CI) 48" Pipe
 - 48" CI Pipe Installed in 1903
 - 24" SS Pipe Upgrade in 1984

Planned Improvements

- Remove 24" SS Pipe
- Inspect, Clean, and Repair Original 48" CI Pipe
- Insert New 36" SS Pipe
- Grout Annular Space
- Provide New Pneumatically Operated 36"Ø Submersible Ball Valve on Upstream Side
- Provide Pneumatic Operator For Existing 24"Ø Ball Valve in Existing Downstream Vault



ADDITIONAL WORK:



- Other Dam Maintenance Items Will be Addressed in This Project :

Replace Gabions at Outlet



Replace Upstream Rip-Rap Along Crest



Remove Existing Metal Stairs



Map Of South East Side of the Woodcliff Lake Reservoir

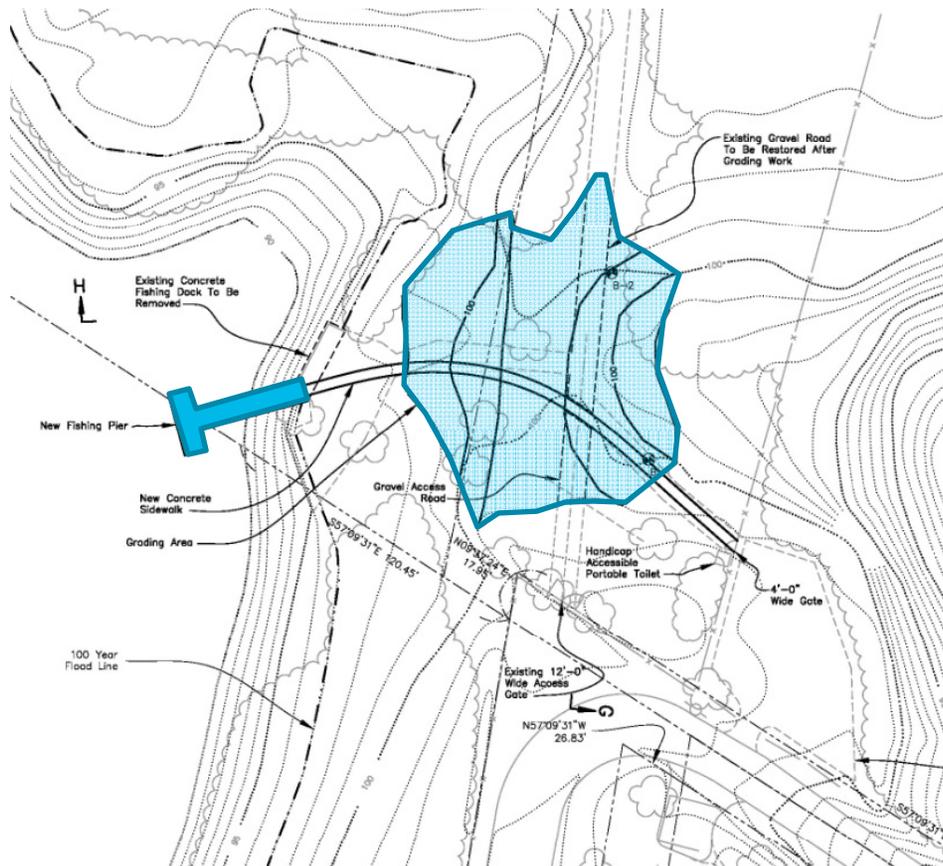
○ Two Low Lying Areas

- Min. Elev. 99
- Does Not Provide 1' of Freeboard for Wave Action / Erosion

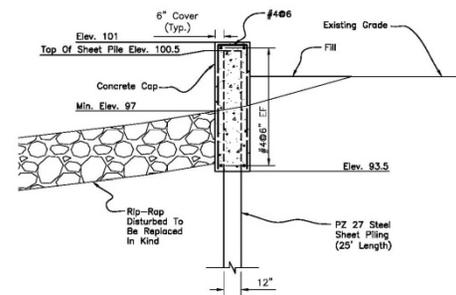


EMBANKMENT AREAS No. 1 AND No. 2:

- **Low Areas Shall be Raised to Prevent Flow**
 - Embankment Area 1 – Fill (9,500 Square Foot Area)
 - Embankment Area 2 – Concrete Capped Steel Sheet Piling (600 Feet Long)



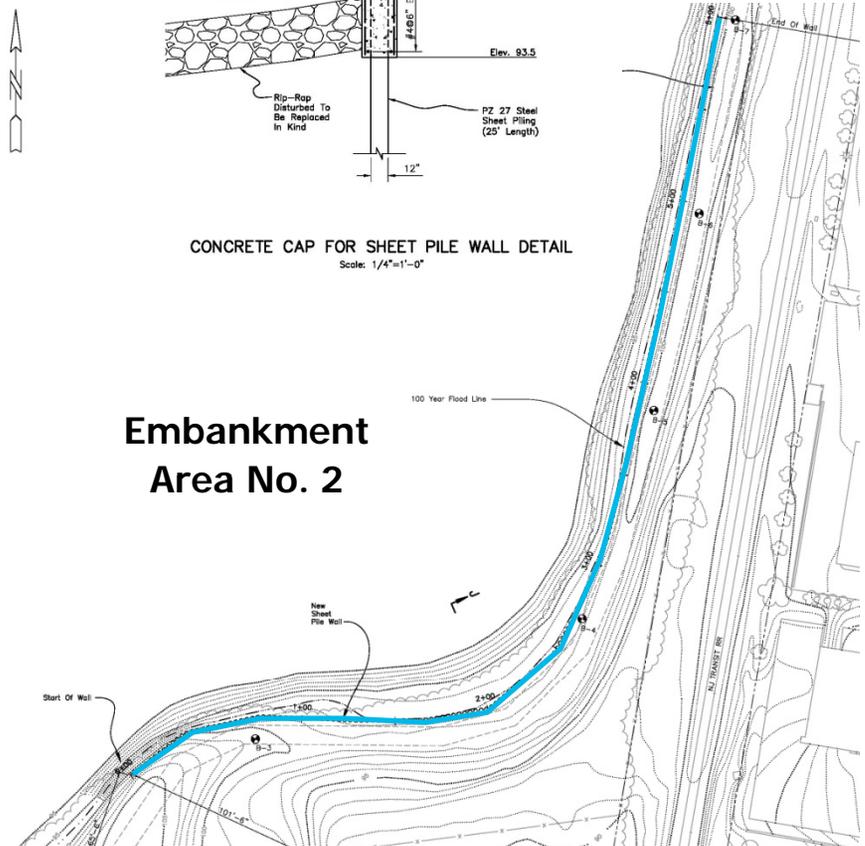
Embankment Area No. 1



CONCRETE CAP FOR SHEET PILE WALL DETAIL
Scale: 1/4"=1'-0"



Embankment Area No. 2

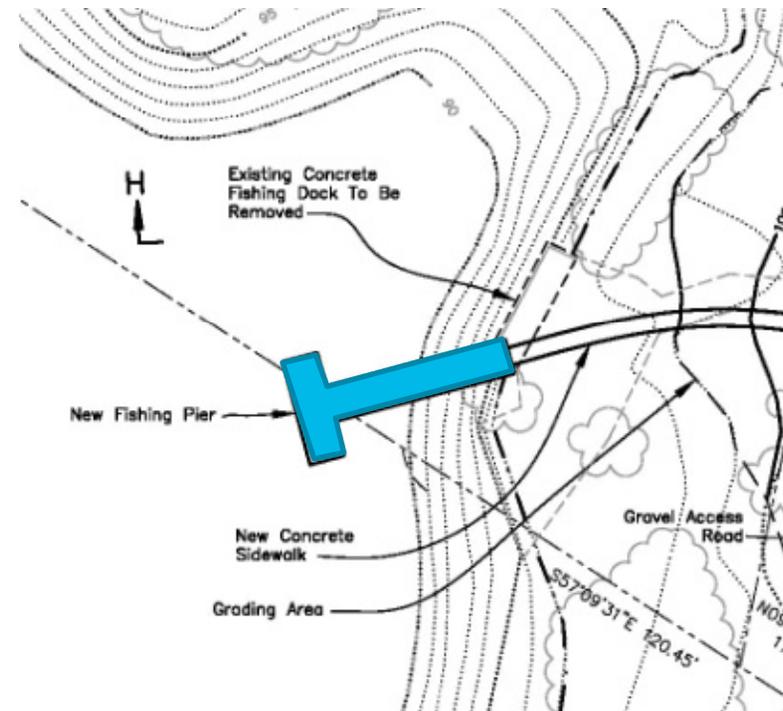


FISHING AREA IMPROVEMENTS:

- Improvements will be provided for fishing area
 - Remove Existing Concrete Fishing Dock
 - Install 50' Long Fishing Pier
 - Allows for Fishing when Reservoir Elevation is at Elev. 91.



Existing Fishing Dock To Be Removed



Embankment Area No. 1



PROJECT DESCRIPTION – WORK SUMMARY

○ Provide additional spillway capacity

- Auxiliary Spillway
 - Relocation of PSE&G Electrical Lines
 - Storm Water Detention

○ Low Level Outlet Rehabilitation

- Piping Improvements
- Valve Improvements
- Cofferdam Installation
 - Lowering of Reservoir
 - Fish Salvage

○ Raising of Low Lying Areas

- Improvements to Fishing Area



PROJECT SCHEDULE MILESTONE DATES:

- **July 22, 2011**
 - Documents Transmitted to Bidders
- **Aug. 2, 2011**
 - Mandatory Pre-Bid Meeting
- **Sep. 2, 2011**
 - Last Day For Questions
- **Sep. 16, 2011**
 - Bids Due
- **Sep. 2011**
 - NJDEP Issues Permits for Construction (Estimated)

Construction to Proceed Within 6 Months of Permit Approval
- **Oct. 2011**
 - Contract Awarded
- **Mar. 2012**
 - Construction Begins (Anticipated Date)
 - Church Road Closed
 - Reservoir Lowered to Elev. 89
 - Install Conduit, Duct Banks and Hand Hole for Temporary Underground 13KV PSE&G Lines
 - Estimated 21 Months for Construction
- **Sep. 1, 2012 to Oct. 31, 2012**
 - Reservoir Lowered
 - Installation of Cofferdam(s)
- **Dec. 2013**
 - Anticipated Project Completion
 - Church Road Reopened
 - Reservoir Level Allowed to Return to Elev. 91 and Bascule Gates Return to Normal Operation