



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

JON S. CORZINE
Governor

LISA P. JACKSON
Commissioner

DIVISION OF WATER SUPPLY
WATER SUPPLY PERMITTING
BUREAU OF WATER ALLOCATION
P.O. BOX 426
TRENTON, NEW JERSEY 08625-0426
TEL. # 609-292-2957
FAX. # 609-633-1495

MEMORANDUM

TO: Interested Parties

FROM: Erin Schumacher

SUBJECT: Decision on the Matter of Mount Holly Water Company
dba New Jersey American Water
Water Allocation Permit No. 5378
Program Interest Id: 5025X
Activity No. WAP020001

Date: **JUN 06 2008**

This is to advise you that the subject permit was approved in two phases. The initial phase grants the applicant a maximum diversion limit of 88.7 million gallons per month (mgm) and 803 million gallons per year (mgy) from Wells 1, 2, 3, and 4 screened in the Middle Potomac Raritan Magothy (PRM) aquifer. The final phase of the permit including the approval of Wells 5, 7, and 8 screened in the Middle PRM aquifer and the increase in allocation to 160 mgm and 1364 mgy will go into effect once the Bureau of Water Allocation (Bureau) receives background static water level measurements from all observation wells and the Bureau approves the monitoring plan revision to address potential private well impacts.

Due to the level of concern raised by local residents regarding the potential impacts of the proposed diversion, in addition to standard water allocation permit conditions, the permit contains provisions to revise the monitoring plan for long term monitoring of dedicated observation wells completed in the Upper PRM, Middle PRM, Merchantville Woodbury, and PRM confining units. The monitoring plan shall include the locations of observation wells, number of observation wells, monitoring schedule for continual static water level monitoring in the observation wells during the initial and final phases, reporting schedule, and how NJAW will monitor the appropriate aquifers and confining units to assess well impact issues associated with the increase in allocation. NJAW must submit background static water level measurements from all observation wells during the initial permit phase prior to the final phase of the permit becoming effective.

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my comments

A copy of the Water Allocation Permit, Decision Maker's Statement, Hearing Officer's Report, Final Staff Report and Staff Report Addendum have been enclosed for your review.

Pursuant to N.J.A.C. 7:19-2.13, the permittee or any other person alleging to be adversely affected by this decision may contest the decision and request a contested case hearing pursuant to the Administrative Procedure Act, N.J.S.A. 52:14B-1, within 20 calendar days of the date upon which the notice of decision is received.

If you have any questions or would like to make an appointment to review the permit file, please contact this office at (609) 292-2957.

Enclosure

CERTIFIED MAIL

7007 0220 0002 1055 9187



OK

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

JON S. CORZINE
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DIVISION OF WATER SUPPLY
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HEARING OFFICER'S REPORT

TO: Michele Putnam, Director
Division of Water Supply

THROUGH: Fred Sickels, Assistant Director for
Water Supply Permitting

FROM: Joseph A. Miri, Ph.D., Hearing Officer

IN THE MATTER OF: Water Allocation Permit No. 5378
Mount Holly Water Company dba New Jersey
American Water Company

In compliance with the provisions of N.J.S.A. 58:1A-1 et seq., Mount Holly Water Company, dba New Jersey American Water (MHCW), 84 Mill Street, Mt. Holly New Jersey 07762, filed an application with the Department of Environmental Protection (Department) on July 21, 2002 to divert a maximum of 210 million gallons of water during any month (mgm) at a maximum rate of 6,389 gallons per minute (gpm) not to exceed 2.143 billion gallons per year (bgy). On December 9, 2005 a revised allocation request was filed to divert a maximum of 178.35 mgm not to exceed 1.458 bgy at a maximum rate of 5,600 gpm from existing Wells Nos. 1- 4 and new Well Nos. 5, 7 and 8. The wells are 470 to 536 feet deep and screened in the Middle Potomac-Raritan-Magothy aquifer. On December 9, 2005 MHCW also requested to increase the combined maximum monthly allocation limit for permits nos. 5378 and 5025 from 184 mgm to 273.65 mgm.

Diversion is for the purpose of public community supply and serves the following communities: Easthampton, Hainesport, Burlington, Lumberton, Mansfield, Mt. Holly and Westhampton.

A public hearing was required pursuant to public objection received by the Department.

SUMMARY OF PUBLIC HEARING

A public hearing was held before me on March 28, 2006 at the Mansfield Township Municipal Complex, 24548 East Main Street, Columbus, New Jersey. The hearing proceeding was recorded by a certified court stenographer and a transcript is included as part of the hearing record. The hearing record was held open until April 28, 2006. Comments prior to, during, and after the public hearing were received from over 30 interested parties, including the applicant, and a number of private citizens. Present at the hearing was Diane Zalaskus, Chief, and Erin Schumacher, Senior Geologist, both of the Bureau of Water Allocation.

At the hearing, Ms. Schumacher said the Department recommends that the three new wells be approved and that the annual allocations be increased to 160 mgm and 1,364 mgy based on the supported 10-year demand of 145.047 mgm and 1,240.052 mgy for increased development and a 10% safety factor. She stated that the Department also recommends that the combined monthly allocation for Permits Nos. 5025 and 5378 be increased to 255 mgm based on the recommended monthly allocation increase for 5378 and the presently approved monthly limit for 5025.

The major concerns emphasized in the oral testimony and written comments were: domestic well interference; the settlement agreement between New Jersey American Water Company (NJAW) and NJDEP; Critical Water Supply Area No. 2; stream flow depletion; impacts to known contaminant sites; modeling; and the source of water for the withdrawal.

Private citizens (PC) made numerous claims of wells going dry, declining water levels in existing domestic wells, impacts to water quality, the need for replacement wells and pumps having to be dropped, repaired or replaced.

In response to the complaints, the Bureau required MHWC to investigate the complaints and re-evaluate the impacts to all wells screened in the Upper PRM and Middle PRM within the radius of influence. The reported results were forwarded to the New Jersey Geological Survey (NJGS). NJGS concluded, among other things, that: 1) the increase in diversion would cause significant drawdown in the Middle PRM aquifer but that the Middle PRM is thick and prolific and should be able to support both public and domestic use; 2) the probability of wells failing would depend largely on their construction and in well drawdown during use; 3) more specific information on domestic wells would be needed to determine if any individual wells would fail; 4) options are available for most wells that fail as a result of interference from the proposed diversion.

The Bureau required the applicant to submit two additional reports investigating impacts to private wells. Results showed that only three wells were found to have possible adverse impacts. BWA noted that any impacts to these wells will be required to be remedied pursuant to a NJDEP-approved contingency plan (as a condition of the allocation permit). The Bureau found that no wells would be adversely affected by the

new wells and the recommended increased allocation since any interference can likely be remedied by lowering the pump.

BWA indicated that there is a procedure for dealing with well interference created by the diversion outlined in permit condition #23, which requires that the permittee investigate to the Department's satisfaction complaints by users of wells or surface water supplies within the zone of influence to determine what impact the diversion has had on such wells or surface supplies. The Bureau said that any well or surface supply which becomes damaged, dry, has reduced capacity, reduced water quality or is otherwise rendered unusable as a water source as a result of the permittee's diversions shall be repaired or replaced at the expense of the permittee. In addition, BWA said a well monitoring plan is to be implemented to aid in interpolation and resolution of well interference issues.

Stipulation of Settlement Agreement

The Columbus Baptist Church said that NJDEP will not allow MHWC to serve its new building, which will replace two buildings at the Church's existing location, because of a settlement agreement signed in 1997 between NJAW and NJDEP. Under the stipulation of settlement, NJAW agreed that it would not serve customers in areas designated as P-4 (rural) in the State Development and Redevelopment Plan unless directed to do so by a "State agency with jurisdiction over" Mt. Holly Water Company. BWA said, in response, that the CBC site consisted of new development with considerable new additional water demand. As a result, the Department could not approve it to be connected to NJAW. Once there was local approval and, as a compromise, the Department agreed to allow the CBC to hook up to the NJAW water main solely for fire protection service. This allowed CBC to avoid the high cost of installing a storage tank, which would be necessary for the large quantity of water needed in fire suppression. The Bureau also indicated that there are proposed changes to the PA-4 designation pending through an application before the State Planning Commission. If these changes are approved, the Bureau said, the connection to public water can be approved.

Water Supply Critical Area No. 2

Pinelands Nursery asked why it was denied a water allocation permit because it was in a "designated depleted area" while MHWC will "be allowed to send water out of this designated depleted area." A comment was made that the current diversion is probably creating drawdown that extends in the critical area, thus any new drawdown would be in addition to preexisting effects. It was asked why the applicant was not required to conduct an aquifer test. The Crafts Creek Spring Hill Brook Watershed Association made the comment that the original mapping of Critical Water (Supply) Area 2, in Burlington County needs to be reconfigured to address the serious increases in water withdrawn in Mansfield, Bordentown, Florence and Chesterfield areas. The Association said new hydrogeological studies should be done now and, given the potential negative consequences, MHWC's requested increase should be denied.

In response, BWA indicated that the MHWC application for the new wells and increase in allocation is located outside the Critical Area 2 boundary and therefore is not prohibited from being approved. It stated further that the Bureau's analysis and the NJGS modeling indicates that this diversion at the recommended rate can be approved as it will not adversely affect the safe or dependable yield of the critical aquifer. BWA also noted that aquifer testing was performed at the well field in 1995 and, pursuant to N.J.A.C. 7:19-2.2 (c), it waived the aquifer testing requirement as sufficient hydrological information was submitted to allow a comprehensive hydrological evaluation of the proposed diversion. The Bureau indicated, however, that such waiver didn't relieve the applicant of the requirement to do a comprehensive hydrologic evaluation of the available information regarding the requested well sites and the allocation increase.

Regarding the Agricultural Certification application by PN, BWA said it was withdrawn on March 25, 2005 and an Agricultural Registration allowing a diversion of up to 100,000 gpd was applied for and became effective on July 20, 2005.

Stream Flow Depletion

Numerous points were made on these issues:

1. A NJGS memo indicates as much as 5 feet of drawdown within the outcrop area of the geologic formations.
2. Drawing water from the outcrop areas will cause aquifer transmissivity channels in the Delaware River (streambed) to develop aquatard and aquaclude conditions.
3. Ionic reactions to the precipitation of naturally occurring minerals due to oxidation will block pore spaces and limit transmissivity.
4. Biofilm masses will form in the confines areas of outcropping aquifers from nutrient rich oxygen laden Delaware River water drawn deeply into these thin areas of the aquifer, thus forming bacterial colonies feeding on the nutrients and naturally occurring minerals and iron in the previous anaerobic hydrologic transmissivity channels.
5. Overdrafting conditions are causing potential for excessive land subsidence, further reducing transmissivity as confining areas compress closer together.
6. The former natural hyporheic zones in the Delaware River at these recharge areas must already have been altered because of the change in substrates hydrological flow. The resultant degrading of former natural linkages between hyporheic zone and surrounding habitats will reduce the ability of the river's naturally occurring nitrification cycles from actuating at former levels. This will result in loss of water quality.
7. A United States Geological Survey (USGS) publication indicated that stream flow is similar to flow during pre-pump conditions except in the outcrop area of the three PRM aquifers. Along the PRM outcrop areas locally in Middlesex County and near the Delaware River in Gloucester, Camden and Burlington Counties, flow to streams decreased 10 to 50 in./yr. The publication indicated that these reductions occurred at over 13 mgd draw. It was commented that we are now above that amount of draw. It was further commented that streams in the area are habitats for threatened and endangered species and that a complete range of hydrological studies should be done before the water allocation is increased for MHWC.

The Bureau responded that MHCW pumping should not have adverse impact on stream flow since the wells are completed in the Middle PRM which is a confined aquifer and there is a significant confining layer at the site that extends regionally. BWA said the radius of influence may extend to the Delaware River but due to the lack of connection between the Middle PRM aquifer and surficial sources the wells will not impact these surficial sources. Finally, the Bureau indicated that there are no examples of chemical and biological changes within the aquifers subsequently decreasing transmissivity in NJ and that NJGS is not aware of this process affecting the productivity of any aquifer near a boundary with a large river in NJ.

Impacts to Known Contaminated Sites

The comment was made that increased drawdown would create steeper hydraulic gradients in the area and potentially accelerate contaminant migration from a service station 2,800 feet to the south. In response, BWA noted that the MHCW wells are screened more than 400 feet below land surface in the confined Middle PRM aquifer and that any contamination that may be present in the shallow aquifer most likely would not pose a threat to the PRM. The Bureau indicated that increased drawdown is unlikely to affect the contaminated site in the outcrop area and there is significant confining layer at the site.

Concerns were raised as to the validity of contaminated site information submitted by responsible parties to the DEP. Two Hamilton Township sites were presented as examples. BWA duly noted this comment. It pointed out that the projects referred to are not in the purview of the Bureau's Water Allocation Program. The BWA analysis of the application, in conjunction with the NJGS modeling reveals that "due to the confined nature of the wells the proposed diversion will not interfere with the contaminated sites and it does not have any adverse impacts and meets statutory and regulatory requirements..."

Modeling

Concerns were raised regarding decisions based on modeling and a lack of confidence in information submitted by the applicant. In response, the Bureau noted that no specific rationale was provided regarding modeling deficiencies and it referred to its responses to several comments summarized above under Stream Flow Depletion and Impacts to Known Contaminated Sites.

Source of Water

One commenter raised concerns that groundwater supply is already under threat in New Jersey. This person said that MHCW should use water from the Delaware River available through pipelines or build its own. By way of response, BWA noted that MHCW draws its water from the Middle PRM aquifer while the most of the residents draw from aquifers and confining units above the Middle PRM. BWA also noted that there is a procedure for dealing with actual cases of interference and, as a backup,

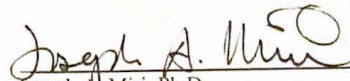
MHWC has a water transfer arrangement to obtain up to 3 mgd from the Tri-County System.

FINDINGS

It is noted that the Staff Report Addendum states that the permit is being approved in phases. The initial phase includes the currently approved sources and allocations and the final phase includes the new wells and the increase in diversion. The Addendum also indicates that the new wells and the recommended increase will not become effective until the revised monitoring plan is submitted and approved by BWA and the background static water levels from all observation wells are submitted.

The above summary accurately reflects the relevant substantive issues raised during the public hearing and in written correspondence received by the Department concerning this application. The Final Staff Report and the Staff Report Addendum contain the Bureau's responses to these issues. A review of these issues and the Bureau's responses indicates that it has adequately addressed the issues and has done so in a reasonable manner.

Date June 2, 2008


Joseph A. Miri, Ph.D.,
Hearing Officer



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

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JON S. CORZINE
Governor

LISA P. JACKSON
Commissioner

MEMORANDUM

TO: Interested Parties

FROM: Diane Zalaskus, ^WChief
Bureau of Water Allocation

SUBJECT: Decision on the Matter of Mount Holly Water Company
dba New Jersey American Water
Water Allocation Permit No. 5378
Program Interest No. 5025X
Activity No. WAP020001

DATE: June 4, 2008

Pursuant to the provisions of the Water Supply Management Act, NJSA 58:1A et seq., the following finding and decision are rendered in this matter.

I have reviewed the Final Staff Report, Staff Report Addendum, Permit Requirements and the Hearing Officer's Report for the Department's decision-making process, and have found that the concerns that were raised have been adequately addressed and that the recommendations of the Final Staff Report are reasonable.



State of New Jersey

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June 5, 2008

Mount Holly Water Dba NJ American Water
213 Carriage Lane
Delran Township, NJ 08075
Attn: David J. Forcinito

Dear Mr. Forcinito:

Re: Water Allocation Permit - Modification
Program Interest ID: 5025X
Activity No. WAP020001

Enclosed is a permit issued pursuant to the Water Supply Management Act, N.J.S.A. 58:1A-1 et seq. This permit becomes effective on June 7, 2008 and is to divert water from seven wells in the following Municipalities and Counties:

MUNICIPALITY	COUNTY
Mansfield Twp.	Burlington

The contingency plan submitted September 14, 2007 is approved by the Bureau of Water Allocation.

This modification to add Wells 5, 7, and 8, increase the allocation from 88.7 mgm to 160 mgm and from 803 mgy to 1364 mgy, and increase the combined monthly allocation for both 5378 and 5025 from 184 mgm to 255 mgm is conditionally approved through a phased permit.

The Final phase of this permit including the approval of Well 5 (2800051617), Well 7 (2500051616), and Well 8 (2800051615) and the increase in allocation to 160 MGM and 1364 MGY will not go into effect until the Bureau receives the background static water level measurements from all observation wells and the Bureau approves the monitoring plan revision to address potential private well impacts.

WAP020001 is your Permit Activity Number, and 5025X is now your Program Interest ID and will appear on all forms and correspondence from the Bureau of Water Allocation. Reference your Program Interest ID and Activity No. in all correspondence.

Be advised that as you are responsible for complying with the terms and conditions of the enclosed permit you should review them thoroughly. Failure to comply with any or all of the terms and conditions could result in penalties and/or revocation of the permit.

Within 20 calendar days following your receipt of this permit you may submit a request for an adjudicatory hearing to contest the conditions of this permit. Regulations regarding the format and requirements for requesting an adjudicatory hearing may be found in N.J.A.C. 7:19-2.13.

To request a hearing, the permittee must complete the enclosed Tracking Form and supply all the information specified in Part III of the Tracking Form. A copy of the completed, signed and dated Tracking Form, together with all of the information required by Part III of the Tracking Form, including attachments where specified, must be submitted to:

1. Janis Hoagland, Director
New Jersey Department of Environmental Protection
Office of Legal Affairs
P.O. Box 402
Trenton, New Jersey 08625

2. Diane E. Zalaskus, P.E., Bureau Chief
New Jersey Department of Environmental Protection
Division of Water Supply
Bureau of Water Allocation
P.O. Box 426
Trenton, New Jersey 08625

Very truly yours,



Diane E. Zalaskus, P.E.
Bureau Chief
Bureau of Water Allocation

Enclosure

CERTIFIED MAIL NO. _____

c: Bureau of Water Allocation
Southern Bureau of Water Compliance & Enforcement Element
William Muszynski, Delaware River Basin Commission
Erin Schumacher, BWA



State of New Jersey
 Department of Environmental Protection
 Bureau of Water Allocation
 PO Box 426, Trenton, New Jersey 08625-0426



Water Allocation Permit

The New Jersey Department of Environmental Protection grants this permit* in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents.

Program Interest ID: 5025X Permit Number: WAP020001	Issuance Date: 06/05/2008	Effective Date: 06/07/2008	Expiration Date: 05/31/2018
Name and Address of Applicant MOUNT HOLLY WATER DBA NJ AMERICAN WATER 213 Carriage Lane Delran Township, NJ 08075		Location of Activity/Facility Mount Holly Twp Burlington	
		Type of Permit Water Allocation Permit - Modification	Statute(s) N.J.S.A. 58:1A-1

This permit grants permission to divert water from the approved sources in the attached permit inventory, in the following municipalities, for the following water uses:

MUNICIPALITY	COUNTY	Water Uses:
Mansfield Twp	Burlington	Public Community Supply

This permit is subject to the attached Conditions.

Approved by the authority of:
 Lisa Jackson, Commissioner
 Department of Environmental Protection

Diane E. Zalaskus
 Diane E. Zalaskus, P.E., Bureau Chief
 Bureau of Water Allocation

6/5/08
 Date

* Permit means Certification, Approval, Registration, Equivalency, etc.

**MOUNT HOLLY WATER DBA NJ AMERICAN WATER
5025X**

Water Allocation Permit : WAP020001

Permit Inventory

Water Diversion Sources - Water may be diverted under this permit from the following sources:

Source Designation (Well Permit No. or Intake No.)	Description	Subject Item ID
2800035140	WELL 1	WSWL0000066087
2800035141	WELL 2	WSWL0000066088
2800035936	WELL 3	WSWL0000066092
2800035937	WELL 4	WSWL0000066093
2800051615	WELL 8	WSWL0000213377
2800051616	WELL 7	WSWL0000213378
2800051617	WELL 5	WSWL0000213379

Group Subject Items - The following items are grouped sources for the purpose of setting permit requirements outlined in this document:

Group Designation	Group Description	Group Subject Item ID	Group Members
MOUNT HOLLY WATER DBA NJ AMERICAN WATER	5378 WA PERMIT - ALL DIVERSION SOURCES	WSWA0000075756	MIDDLE POTOMAC RARITAN MAGOTHY AQUIFER SOURCES, WELLS 1, 2, 3, 4, 5, 7, & 8 (WARG809964)
MIDDLE POTOMAC RARITAN MAGOTHY AQUIFER SOURCES	WELLS 1, 2, 3, 4, 5, 7, & 8	WARG0000809964	2800035140, WELL 1 (WSWL066087)
			2800035141, WELL 2 (WSWL066088)
			2800035936, WELL 3 (WSWL066092)
			2800035937, WELL 4 (WSWL066093)
			2800051615, WELL 8 (WSWL213377)
			2800051616, WELL 7 (WSWL213378)
			2800051617, WELL 5 (WSWL213379)
FINAL PHASE ADDITIONAL APPROVED DIVERSION SOURCES	WELLS 5, 7, & 8	WARG0000864877	2800051615, WELL 8 (WSWL213377)
			2800051616, WELL 7 (WSWL213378)

MOUNT HOLLY WATER DBA NJ AMERICAN WATER
5025X

Water Allocation Permit : WAP020001

Group Subject Items - The following items are grouped sources for the purpose of setting permit requirements outlined in this document:

Group Designation	Group Description	Group Subject Item ID	Group Members
FINAL PHASE ADDITIONAL APPROVED DIVERSION SOURCES	WELLS 5, 7, & 8	WARG0000864877	2800051617, WELL 5 (WSWL213379)

**MOUNT HOLLY WATER DBA NJ AMERICAN WATER
5025X**

Water Allocation Permit : WAP020001

Permit Requirements

Limit Requirements

The following limits apply and are the maximum permitted allocation:

Initial Permit Phase from 06/07/2008 -

Subject Item	Parameter	Limit
MOUNT HOLLY WATER DBA NJ AMERICAN WATER, 5378 WA PERMIT - ALL DIVERSION SOURCES (WSWA75756)	Maximum Diversion Rate	<= 3200 Gallons Per Minute. [N.J.A.C. 7:19- 2]
	Water Diverted	<= 88.7 Million Gallons Per Month. [N.J.A.C. 7:19- 2] <= 803 Million Gallons Per Year (Wells 5, 7, and 8 may not be operated under the initial phase of this permit.). [N.J.A.C. 7:19- 2]

Final Permit Phase

Subject Item	Parameter	Limit
MOUNT HOLLY WATER DBA NJ AMERICAN WATER, 5378 WA PERMIT - ALL DIVERSION SOURCES (WSWA75756)	Maximum Diversion Rate	<= 5600 Gallons Per Minute. [N.J.A.C. 7:19- 2]
	Water Diverted	<= 160 Million Gallons Per Month. [N.J.A.C. 7:19- 2] <= 1364 Million Gallons Per Year. [N.J.A.C. 7:19- 2]

Other Limit Requirements

Initial Permit Phase from 06/07/2008 -

Subject Item	Parameter	Limit
2800035140, WELL 1 (WSWL66087)	Rated Pump Capacity	<= 800 Gallons Per Minute. [N.J.A.C. 7:19- 2]
2800035141, WELL 2 (WSWL66088)	Rated Pump Capacity	<= 800 Gallons Per Minute. [N.J.A.C. 7:19- 2]
2800035936, WELL 3 (WSWL66092)	Rated Pump Capacity	<= 800 Gallons Per Minute. [N.J.A.C. 7:19- 2]
2800035937, WELL 4 (WSWL66093)	Rated Pump Capacity	<= 800 Gallons Per Minute. [N.J.A.C. 7:19- 2]

Final Permit Phase

Subject Item	Parameter	Limit
2800035140, WELL 1 (WSWL66087)	Rated Pump Capacity	<= 800 Gallons Per Minute. [N.J.A.C. 7:19- 2]
2800035141, WELL 2 (WSWL66088)	Rated Pump Capacity	<= 800 Gallons Per Minute. [N.J.A.C. 7:19- 2]

MOUNT HOLLY WATER DBA NJ AMERICAN WATER

5025X

Water Allocation Permit : WAP020001

Other Limit Requirements

Final Permit Phase

Subject Item	Parameter	Limit
2800035936, WELL 3 (WSWL66092)	Rated Pump Capacity	<= 800 Gallons Per Minute. [N.J.A.C. 7:19- 2]
2800035937, WELL 4 (WSWL66093)	Rated Pump Capacity	<= 800 Gallons Per Minute. [N.J.A.C. 7:19- 2]
2800051615, WELL 8 (WSWL213377)	Rated Pump Capacity	<= 800 Gallons Per Minute. [N.J.A.C. 7:19- 2]
2800051616, WELL 7 (WSWL213378)	Rated Pump Capacity	<= 800 Gallons Per Minute. [N.J.A.C. 7:19- 2]
2800051617, WELL 5 (WSWL213379)	Rated Pump Capacity	<= 800 Gallons Per Minute. [N.J.A.C. 7:19- 2]

Monitoring Requirements

Initial Permit Phase from 06/07/2008 -

Subject Item	Requirement	Frequency	Monitored Parameter	Monitoring Method
2800035140, WELL 1 (WSWL66087)	Static water levels for each well indicated shall be monitored. [N.J.A.C. 7:19- 2]	Each Month	Static Water Level	Airline, Tape, or Gage
2800035141, WELL 2 (WSWL66088)				
2800035936, WELL 3 (WSWL66092)				
2800035937, WELL 4 (WSWL66093)				
2800051615, WELL 8 (WSWL213377)				
2800051616, WELL 7 (WSWL213378)				
2800051617, WELL 5 (WSWL213379)				
2800035140, WELL 1 (WSWL66087)	The monthly diversion from each source indicated shall be monitored. [N.J.A.C. 7:19- 2]	Each Month	Water Diverted	Meter
2800035141, WELL 2 (WSWL66088)				
2800035936, WELL 3 (WSWL66092)				
2800035937, WELL 4 (WSWL66093)				

Final Permit Phase

Subject Item	Requirement	Frequency	Monitored Parameter	Monitoring Method
2800035140, WELL 1 (WSWL66087)	Static water levels for each well indicated shall be monitored. [N.J.A.C. 7:19- 2]	Each Month	Static Water Level	Airline, Tape, or Gage

**MOUNT HOLLY WATER DBA NJ AMERICAN WATER
5025X**

Water Allocation Permit : WAP020001

Monitoring Requirements

Final Permit Phase

Subject Item	Requirement	Frequency	Monitored Parameter	Monitoring Method
2800035141, WELL 2 (WSWL66088)	Static water levels for each well indicated shall be monitored. [N.J.A.C. 7:19- 2]	Each Month	Static Water Level	Airline, Tape, or Gage
2800035936, WELL 3 (WSWL66092)				
2800035937, WELL 4 (WSWL66093)				
2800051615, WELL 8 (WSWL213377)				
2800051616, WELL 7 (WSWL213378)				
2800051617, WELL 5 (WSWL213379)				
2800035140, WELL 1 (WSWL66087)	The monthly diversion from each source indicated shall be monitored. [N.J.A.C. 7:19- 2]	Each Month	Water Diverted	Meter
2800035141, WELL 2 (WSWL66088)				
2800035936, WELL 3 (WSWL66092)				
2800035937, WELL 4 (WSWL66093)				
2800051615, WELL 8 (WSWL213377)				
2800051616, WELL 7 (WSWL213378)				
2800051617, WELL 5 (WSWL213379)				

Record Keeping Requirements

Initial Permit Phase from 06/07/2008 -

Subject Item	Requirement	Frequency	Monitored Parameter	Record Keeping Method
MOUNT HOLLY WATER DBA NJ AMERICAN WATER, 5378 WA PERMIT - ALL DIVERSION SOURCES (WSWA75756)	A log book of month end meter readings for each diversion source shall be maintained on site. [N.J.A.C. 7:19- 2]	Each Month	Meter Reading	Log Book

**MOUNT HOLLY WATER DBA NJ AMERICAN WATER
5025X**

Water Allocation Permit : WAP020001

Record Keeping Requirements

Final Permit Phase

Subject Item	Requirement	Frequency	Monitored Parameter	Record Keeping Method
MOUNT HOLLY WATER DBA NJ AMERICAN WATER, 5378 WA PERMIT - ALL DIVERSION SOURCES (WSWA75756)	A log book of month end meter readings for each diversion source shall be maintained on site. [N.J.A.C. 7:19- 2]	Each Month	Meter Reading	Log Book

Submittal/Action Requirements

Initial Permit Phase from 06/07/2008 -

Applicable Subject Items	Submittal/Action Type	Requirement
2800035140, WELL 1 (WSWL66087)	Submit Public Quarterly Report	The required monitoring results shall be recorded on the form provided by the Department. The completed form shall be submitted within 30 days after the end of each quarter. [N.J.A.C. 7:19- 2]
2800035141, WELL 2 (WSWL66088)		
2800035936, WELL 3 (WSWL66092)		
2800035937, WELL 4 (WSWL66093)		
2800051615, WELL 8 (WSWL213377)		
2800051616, WELL 7 (WSWL213378)		
2800051617, WELL 5 (WSWL213379)		
2800051615, WELL 8 (WSWL213377)	Submit Well Drilling Permit Application(s) to Redesignate Well Use	The permittee shall obtain a new well permit number, through the service of a New Jersey licensed well driller, to redesignate Well No. 8 well use to a public community supply well. The well drilling permit application to redesignate the well use shall be submitted to the Water Allocation Permit Reviewer, not the Well Permitting section, prior to placing the source into operation . This well shall not be utilized until the redesignation is approved and the final phase of the permit is effective. [N.J.A.C. 7:9D-1.11]
2800051616, WELL 7 (WSWL213378)		The permittee shall obtain a new well permit number, through the service of a New Jersey licensed well driller, to redesignate Well No. 7 well use to a public community supply well. The well drilling permit application to redesignate the well use shall be submitted to the Water Allocation Permit Reviewer, not the Well Permitting section, prior to placing the source into operation . This well shall not be utilized until the redesignation is approved and the final phase of the permit is effective. [N.J.A.C. 7:9D-1.11]

**MOUNT HOLLY WATER DBA NJ AMERICAN WATER
5025X**

Water Allocation Permit : WAP020001

Submittal/Action Requirements

Initial Permit Phase from 06/07/2008 -

Applicable Subject Items	Submittal/Action Type	Requirement
2800051617, WELL 5 (WSWL213379)	Submit Well Drilling Permit Application(s) to Redesignate Well Use	The permittee shall obtain a new well permit number, through the service of a New Jersey licensed well driller, to redesignate Well No. 5 well use to a public community supply well. The well drilling permit application to redesignate the well use shall be submitted to the Water Allocation Permit Reviewer, not the Well Permitting section, prior to placing the source into operation. This well shall not be utilized until the redesignation is approved and the final phase of the permit is effective. [N.J.A.C. 7:9D-1.11]
MOUNT HOLLY WATER DBA NJ AMERICAN WATER, 5378 WA PERMIT - ALL DIVERSION SOURCES (WSWA75756)	Submit Well Status Report	The report shall include an update on the status and performance of Wells 2800000020, 2800006305, and 2800006541 and how any impacts to these wells will be remedied. The report shall be submitted within 90 days of the effective date of this permit. [N.J.A.C. 7:19- 2]
2800051615, WELL 8 (WSWL213377)	Submit Proof of Calibrated Flow Meter Installation	The permittee shall install a calibrated totalizing flow meter on the specified diversion sources. Proof of installation shall be submitted prior to placing the source into operation. [N.J.A.C. 7:19- 2]
2800051616, WELL 7 (WSWL213378)		
2800051617, WELL 5 (WSWL213379)		
2800035140, WELL 1 (WSWL66087)		
2800035141, WELL 2 (WSWL66088)	Submit Proof of Flow Meter Calibration	Proof of flow meter calibration for the specified diversion sources shall be submitted within 60 days of the effective date of this permit. [N.J.A.C. 7:19- 2]
2800035936, WELL 3 (WSWL66092)		
2800035937, WELL 4 (WSWL66093)		
MOUNT HOLLY WATER DBA NJ AMERICAN WATER, 5378 WA PERMIT - ALL DIVERSION SOURCES (WSWA75756)		

**MOUNT HOLLY WATER DBA NJ AMERICAN WATER
5025X**

Water Allocation Permit : WAP020001

Submittal/Action Requirements

Initial Permit Phase from 06/07/2008 -

Applicable Subject Items	Submittal/Action Type	Requirement
MOUNT HOLLY WATER DBA NJ AMERICAN WATER, 5378 WA PERMIT - ALL DIVERSION SOURCES (WSWA75756)	Submit Water Conservation and Drought Management Plan	The permittee shall continue to implement, to the satisfaction of the Department, a water conservation and drought management program. The program shall encourage water conservation in all types of use within the area served by the permittee, including actions taken pursuant to this program and the impact thereof. An update to the water conservation and drought management plan shall be submitted. Submit according to the following schedule: on or before April 30, 2009 and then prior to April 30 every other year thereafter. [N.J.A.C. 7:19- 2]

Final Permit Phase

Applicable Subject Items	Submittal/Action Type	Requirement
2800035140, WELL 1 (WSWL66087)	Submit Public Quarterly Report	The required monitoring results shall be recorded on the form provided by the Department. The completed form shall be submitted within 30 days after the end of each quarter. [N.J.A.C. 7:19- 2]
2800035141, WELL 2 (WSWL66088)		
2800035936, WELL 3 (WSWL66092)		
2800035937, WELL 4 (WSWL66093)		
2800051615, WELL 8 (WSWL213377)		
2800051616, WELL 7 (WSWL213378)		
2800051617, WELL 5 (WSWL213379)		
2800051615, WELL 8 (WSWL213377)	Submit Well Drilling Permit Application(s) to Redesignate Well Use	The permittee shall obtain a new well permit number, through the service of a New Jersey licensed well driller, to redesignate Well No. 8 well use to a public community supply well. The well drilling permit application to redesignate the well use shall be submitted to the Water Allocation Permit Reviewer, not the Well Permitting section, prior to placing the source into operation . This well shall not be utilized until the redesignation is approved and the final phase of the permit is effective. [N.J.A.C. 7:9D-1.11]
2800051616, WELL 7 (WSWL213378)		The permittee shall obtain a new well permit number, through the service of a New Jersey licensed well driller, to redesignate Well No. 7 well use to a public community supply well. The well drilling permit application to redesignate the well use shall be submitted to the Water Allocation Permit Reviewer, not the Well Permitting section, prior to placing the source into operation . This well shall not be utilized until the redesignation is approved and the final phase of the permit is effective. [N.J.A.C. 7:9D-1.11]

**MOUNT HOLLY WATER DBA NJ AMERICAN WATER
5025X**

Water Allocation Permit : WAP020001

Submittal/Action Requirements

Final Permit Phase

Applicable Subject Items	Submittal/Action Type	Requirement
2800051617, WELL 5 (WSWL213379)	Submit Well Drilling Permit Application(s) to Redesignate Well Use	The permittee shall obtain a new well permit number, through the service of a New Jersey licensed well driller, to redesignate Well No. 5 well use to a public community supply well. The well drilling permit application to redesignate the well use shall be submitted to the Water Allocation Permit Reviewer, not the Well Permitting section, prior to placing the source into operation. This well shall not be utilized until the redesignation is approved and the final phase of the permit is effective. [N.J.A.C. 7:9D-1.11]
MOUNT HOLLY WATER DBA NJ AMERICAN WATER, 5378 WA PERMIT - ALL DIVERSION SOURCES (WSWA75756)	Submit Well Status Report	The report shall include an update on the status and performance of Wells 2800000020, 2800006305, and 2800006541 and how any impacts to these wells will be remedied. The report shall be submitted within 90 days of the effective date of this permit. [N.J.A.C. 7:19- 2]
2800051615, WELL 8 (WSWL213377)	Submit Proof of Calibrated Flow Meter Installation	The permittee shall install a calibrated totalizing flow meter on the specified diversion sources. Proof of installation shall be submitted prior to placing the source into operation. [N.J.A.C. 7:19- 2]
2800051616, WELL 7 (WSWL213378)		
2800051617, WELL 5 (WSWL213379)		
2800035140, WELL 1 (WSWL66087)		
2800035141, WELL 2 (WSWL66088)	Submit Proof of Flow Meter Calibration	Proof of flow meter calibration for the specified diversion sources shall be submitted within 60 days of the effective date of this permit. [N.J.A.C. 7:19- 2]
2800035936, WELL 3 (WSWL66092)		
2800035937, WELL 4 (WSWL66093)		
MOUNT HOLLY WATER DBA NJ AMERICAN WATER, 5378 WA PERMIT - ALL DIVERSION SOURCES (WSWA75756)		
MOUNT HOLLY WATER DBA NJ AMERICAN WATER, 5378 WA PERMIT - ALL DIVERSION SOURCES (WSWA75756)	Submit Renewal Application	A renewal application shall be submitted three months prior to the expiration date. [N.J.A.C. 7:19- 2]

MOUNT HOLLY WATER DBA NJ AMERICAN WATER
5025X

Water Allocation Permit : WAP020001

Text Requirements

All Phases

MOUNT HOLLY WATER DBA NJ AMERICAN WATER, 5378 WA PERMIT - ALL DIVERSION SOURCES (WSWA75756)

1. Final phase of this permit including the approval of Well 5 (2800051617), Well 7 (2500051616), and Well 8 (2800051615) and the increase in allocation to 160 MGM and 1364 MGY will not go into effect until the Bureau receives the background static water level measurements from all observation wells and the Bureau approves the monitoring plan revision to address potential private well impacts. [N.J.A.C. 7:19- 2]
2. The combined monthly diversion from Permit Nos. 5025 and 5378 shall be monitored and recorded on forms provided by the Department. [N.J.A.C. 7:19- 2]
3. Pursuant to the August 4, 1997 Stipulation of Settlement Condition No. 5 concerning Areas of Delivery, water will not be delivered from the Mansfield Project in the areas designated as Farmland Preservation areas by Burlington County or those designated as P-4 in the State Development Plan unless directed to do so by a State agency with jurisdiction over Mount Holly Water Company (dba New Jersey American Water) or for court approved projects. [N.J.A.C. 7:19- 2]
4. The total diversion from the sources included under Permits 5025 and 5378 shall not exceed the limits specified in Activity WAX050001 or any superceding combined limits. [N.J.A.C. 7:19- 2]
5. Water may be diverted under this permit for public community supply. However, water shall not be used to serve non-potable, consumptive purposes for new projects that are greater than 50 percent non-potable and greater than 50 percent consumptive, where, as determined by the Department, alternate water sources, including but not limited to reclaimed water for beneficial reuse, are feasible to serve the non-potable, consumptive needs of the project. [N.J.A.C. 7:19- 2]
6. Water may be diverted under this permit only from the approved diversion sources at the maximum rates specified. [N.J.A.C. 7:19- 1]
7. A major modification of this permit may be required in order to request the approval of any additional diversion sources or an increase in the pumping capacity. [N.J.A.C. 7:19- 2]
8. All diversion sources shall be metered with a totalizing flow meter. [N.J.A.C. 7:19- 2]
9. At a minimum, each diversion source flow meter shall be calibrated at least once every five years. [N.J.A.C. 7:19- 2]
10. Each flow meter shall be calibrated to within five percent accuracy. [N.J.A.C. 7:19- 2]
11. All wells shall be equipped with a metal tag showing the well permit numbers (source designation) as listed in the allocation permit inventory or have the well permit numbers painted on the casings. [N.J.A.C. 7:19- 2]
12. The pumping equipment capacity shall not be increased without prior approval from the Bureau of Water Allocation. [N.J.A.C. 7:19- 1]
13. Any well not intended for use shall be decommissioned in accordance with N.J.A.C. 7:9D-3.1 et seq. [N.J.A.C. 7:9D-3]
14. Any required chemical analysis shall be performed by a New Jersey Certified Laboratory. [N.J.A.C. 7:19- 2]
15. Wells shall be constructed so that static water level (depth to water) can be determined at any time. [N.J.A.C. 7:19- 2]
16. Static water level shall be measured and reported as depth to water, in feet, from ground surface. [N.J.A.C. 7:19- 2]
17. For pumping wells, static water level (depth to water) shall be taken when the well pump has been shut down for a recovery period of at least 12 hours. If the well cannot be shut down for the required period, it must be noted on an addendum to the Quarterly Monitoring Report form. Please note on the addendum the number of hours the well was shut down or that the reading is a pumping level. [N.J.A.C. 7:19- 2]
18. All new services shall be metered in accordance with all applicable laws, regulations or codes including, but not limited to, the Water Supply Management Act and the Delaware River Basin Commission Rules. [N.J.A.C. 7:19- 6]
19. All existing services shall be metered. [N.J.A.C. 7:19- 6]
20. Water charges for each service connection shall be based in part on metered usage. [N.J.A.C. 7:19- 6]
21. The monthly quantity of water transferred and delivered to/received from interconnections shall be reported as part of the water system monitoring on separate forms provided by the Department. [N.J.A.C. 7:19- 2]
22. The Department may modify, suspend or terminate this permit, after due process, for violations of permit conditions, N.J.S.A. 58:1A-1, N.J.A.C. 7:19-1 et seq., any orders issued by the Department, or when in the public interest. [N.J.A.C. 7:19- 2]

**MOUNT HOLLY WATER DBA NJ AMERICAN WATER
5025X**

Water Allocation Permit : WAP020001

Text Requirements

All Phases

MOUNT HOLLY WATER DBA NJ AMERICAN WATER, 5378 WA PERMIT - ALL DIVERSION SOURCES (WSWA75756)

23. The permittee shall investigate to the Department's satisfaction complaints by users of wells or surface water supplies within the zone of influence of its diversion to determine what impact the diversion has had on such wells or surface water supplies. A report on these investigations shall be forwarded to the Bureau of Water Allocation. Any well or surface water supply which becomes damaged, dry, has reduced capacity, reduced water quality or is otherwise rendered unusable as a water source as a result of the permittee's diversions shall be repaired or replaced at the expense of the permittee. Work shall be in accordance with all State, County and Municipal construction standards for potable water. After reviewing all applicable investigational reports the Department of Environmental Protection will make the final determination regarding the validity of such complaints, the scope or sufficiency of such investigations, and will determine how to resolve any problems resulting from the diversion. [N.J.A.C. 7:19- 2]
24. This permit is issued for a limited period, and is not subject to automatic renewal. [N.J.A.C. 7:19- 2]
25. The permittee is subject to such fees as may be prescribed by the regulations. [N.J.A.C. 7:19- 3]
26. The permittee shall have the right to apply at any time for modification of this permit by submission of the appropriate application forms. [N.J.A.C. 7:19- 2]
27. The permittee may informally discuss the terms and conditions of this permit at any time with the Bureau of Water Allocation. [N.J.A.C. 7:19- 2]
28. Approval of this application is subject to the granting of any approval by the Delaware River Basin Commission which may be required under the provisions of the Delaware River Basin Compact. [N.J.A.C. 7:19- 2]
29. The permittee shall obtain approval from the Bureau of Water Systems and Well Permitting before using the diversion for public water supply. [N.J.A.C. 7:19- 2]
30. In addition to the specific management requirements cited above, and when so directed by the Department, the permittee shall comply with applicable portions of the Water Supply Management Rules (N.J.A.C. 7:19-6 et seq. and N.J.A.C. 7:19-8 et seq.) to include the determination of dependable yield; unaccounted-for water; rehabilitation; system pressure and storage; interconnections; and operation of interconnections. [N.J.A.C. 7:19- 6]
31. If the permittee violates any condition of this permit, the permittee is subject to administrative penalties up to \$5000 per day per offense as specified in N.J.S.A. 58:1A-16 and N.J.A.C. 7:19-18.2. [N.J.A.C. 7:19-18]
32. The issuance of this permit shall not be deemed to affect in any way action by the Department of Environmental Protection of the State of New Jersey on any future application. [N.J.A.C. 7:19- 2]
33. No change in plans or specifications shall be made except with the prior written permission of the Department of Environmental Protection of the State of New Jersey. [N.J.A.C. 7:19- 2]
34. The granting of this permit shall not be construed to in any way affect the title or ownership of property, and shall not make the Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:19- 2]
35. This permit does not waive the obtaining of Federal or other State or local government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:19- 2]
36. A copy of this permit shall be kept at the facility site, and shall be exhibited upon request of any person. [N.J.A.C. 7:19- 2]
37. The Department has the right to enter and inspect any site, building, or equipment, or any portion thereof, owned or operated by the permittee, at any time, in order to ascertain compliance or noncompliance with N.J.S.A. 58:1A-1 et seq., 58:4A-4.1 et seq., 58:12A-1 et seq., these rules, or any other agreement or order issued or entered into pursuant thereto. Such right shall include, but not be limited to, the right to require the testing of any equipment at the facility, to sketch or photograph any portion of the site, building or equipment, to copy or photograph any document or records necessary to determine such compliance or noncompliance, and to interview any employees or representative of the owner, operator, or permittee. Such right shall be absolute and shall not be conditioned upon any action by the Department, except the presentation of appropriate credentials as requested and compliance with appropriate standard safety procedures. [N.J.A.C. 7:19- 2]
38. This permit may be transferred, with the consent of the Department, but only for the identical use of the waters. [N.J.A.C. 7:19- 2]
39. If the authorized diversion privileges are not currently diverted, subject to contract, or reasonably required for a demonstrated future need, they shall revert back to the State upon renewal or modification of the permit. [N.J.A.C. 7:19- 2]

MOUNT HOLLY WATER DBA NJ AMERICAN WATER
5025X

Water Allocation Permit : WAP020001

Text Requirements

All Phases

MOUNT HOLLY WATER DBA NJ AMERICAN WATER, 5378 WA PERMIT - ALL DIVERSION SOURCES (WSWA75756)

40. The permittee shall protect each source from vandalism, tampering, and contamination at all times. [N.J.A.C. 7:19- 2]
41. This permit shall expire as indicated on the permit approval cover page. [N.J.A.C. 7:19- 2]

**MOUNT HOLLY WATER DBA NJ AMERICAN WATER
5025X**

WA Cross-Permit : WAX050001

Permit Requirements

Limit Requirements

The following limits apply and are the maximum permitted allocation:

Initial Permit Phase from 06/07/2008 -

Subject Item	Parameter	Limit
TOTAL, PERMITS 5025, 5378 (WSWA813736)	Water Diverted	<= 184 Million Gallons Per Month. [N.J.A.C. 7:19- 2]

Final Permit Phase from 06/07/2008 -

Subject Item	Parameter	Limit
TOTAL, PERMITS 5025, 5378 (WSWA813736)	Water Diverted	<= 255 Million Gallons Per Month. [N.J.A.C. 7:19- 2]

Monitoring Requirements

Initial Permit Phase from 06/07/2008 -

Subject Item	Requirement	Frequency	Monitored Parameter	Monitoring Method
TOTAL, PERMITS 5025, 5378 (WSWA813736)	The monthly diversion quantity from the group of sources indicated shall be monitored. [N.J.A.C. 7:19- 2]	Each Month	Water Diverted	Meter

Final Permit Phase from 06/07/2008 -

Subject Item	Requirement	Frequency	Monitored Parameter	Monitoring Method
TOTAL, PERMITS 5025, 5378 (WSWA813736)	The monthly diversion quantity from the group of sources indicated shall be monitored. [N.J.A.C. 7:19- 2]	Each Month	Water Diverted	Meter

Submittal/Action Requirements

Initial Permit Phase from 06/07/2008 -

Applicable Subject Items	Submittal/Action Type	Requirement
TOTAL, PERMITS 5025, 5378 (WSWA813736)	Submit Public Quarterly Report	The required monitoring results shall be recorded on the form provided by the Department. The completed form shall be submitted within 30 days after the end of each quarter. [N.J.A.C. 7:19- 2]

MOUNT HOLLY WATER DBA NJ AMERICAN WATER
5025X

WA Cross-Permit : WAX050001

Submittal/Action Requirements

Final Permit Phase from 06/07/2008 -

Applicable Subject Items	Submittal/Action Type	Requirement
TOTAL, PERMITS 5025, 5378 (WSWA813736)	Submit Public Quarterly Report	The required monitoring results shall be recorded on the form provided by the Department. The completed form shall be submitted within 30 days after the end of each quarter. [N.J.A.C. 7:19- 2]

Text Requirements

Initial Permit Phase from 06/07/2008 -

TOTAL, PERMITS 5025, 5378 (WSWA813736)

1. As specified in Permit No 5378 (5025X Activity No. WAP020001) the final phase will not go into effect until the Bureau receives the background static water level measurements from all observation wells and the Bureau approves the monitoring plan revision to address potential private well impacts. [N.J.A.C. 7:19- 2]

All Phases

TOTAL, PERMITS 5025, 5378 (WSWA813736)

1. This document represents permit conditions that require the permittee to report aggregate monitoring data from two other permit activities. [N.J.A.C. 7:19- 2]
2. The total diversion from Permits 5025 (WAP040001) and 5378 (WAP020001) shall not exceed 184 million gallons per month during the initial phase and 255 million gallons per month during the final phase. [N.J.A.C. 7:19- 2]

03/04/2008

FINAL
STAFF REPORT

In the matter of

Mount Holly Water Company
dba New Jersey American Water

Application No. 5378 to
modify permit to divert
water from four existing
wells and three new wells
screened in the Middle-
Potomac-Raritan-Magothy
Aquifer in Mansfield
Township, Burlington County

In compliance with the provisions of N.J.S.A. 58:1A-1 et seq., Mount Holly Water Company, 84 Mill Street, Mt. Holly, New Jersey 08060, filed an application with the Department of Environmental Protection on July 21, 2002 to divert a maximum of 210.03 million gallons of water during any month (mgm) at a maximum rate of 6389 gallons per minute (gpm) not to exceed 2143 million gallons per year (mgy). On December 9, 2005 a revised allocation request was filed to divert a maximum of 178.35 mgm not to exceed 1458 mgy at a maximum rate of 5600 gpm from existing Well Nos. 1-4 and new Well Nos. 5, 7, and 8; 470-536 feet deep screened in the Middle Potomac-Raritan-Magothy aquifer. On December 9, 2005 Mount Holly Water Company also requested to increase the combined maximum monthly allocation limit for permits 5378 and 5025 from 184 mgm to 273.65 mgm.

This request represents an increase of 89.65 mgm and 655 mgy above the existing overall allocation of 88.7 mgm and 803 mgy and the addition of 3 new sources.

Mount Holly Water Company dba New Jersey American Water has a cross permit limit of 184 mgm from permit numbers 5025 and 5378.

Diversion is for the purpose of public community supply and serves the following communities: Eastampton, Hainesport, Burlington, Lumberton, Mansfield, Mt. Holly, and Westampton.

Public notice was required due to the requested increase in allocation and due to the addition of three proposed wells.

A hearing was required pursuant to public objection received by the Department. The hearing was held on March 28, 2006.

Background/Findings of Fact

1. Water is requested to be diverted under this modified permit for public community supply from the following sources at the maximum rates specified below:

Groundwater

Well Permit No.	Well Name or Designation	Pump Capacity (gpm)	Depth (feet)	Aquifer
2800035140	Well 1	800	530	Middle PRM
2800035141	Well 2	800	527	Middle PRM
2800035936	Well 3	800	536	Middle PRM
2800035937	Well 4	800	536	Middle PRM
2800051617	Well 5	800	521	Middle PRM
2500051616	Well 7	800	532	Middle PRM
2800051615	Well 8	800	470	Middle PRM

2. This application request is for a modification of an allocation granted previously under 5378 issued 10/15/97.
- 3a. A review of quarterly diversion reports indicates the following water use:

Permit 5378

Year	Annual Use (mg)	Maximum Monthly Use (mg)	Average Monthly Use (mg)	Existing Allocation (mgm)	(mgy)
1999	49.714	6.475 (July)	4.143	88.7	803
2000	619.681	87.512 (Oct.)	51.640	88.7	803
2001	843.813**	114.362 (Apr.)*	70.318	88.7	803
2002	729.723	92.307 (July)*	60.810	88.7	803
2003	760.124	100.930 (July)*	63.344	88.7	803
2004	668.046	76.916 (June)	55.671	88.7	803
2005	773.812	85.100 (Aug.)	64.484	88.7	803
2006	753.096	85.316 (May)	62.758	88.7	803

* monthly allocation exceeded in 2001, 2002, and 2003

** annual allocation exceeded in 2001

3b. Permits 5025 and 5378 combined

Year	Annual Use (mg)	Maximum Monthly Use (mg)	Average Monthly Use (mg)	Existing Allocation (mgm)
1999	967.094	141.249 (July)	80.591	184
2000	1420.940	155.355 (July)	118.412	184
2001	1660.148	176.771 (Aug.)	138.346	184
2002	1507.449	186.996* (July)	125.621	184
2003	1529.203	191.862* (July)	127.434	184
2004	1458.053	162.579 (July)	121.54	184
2005	1497.040	172.453 (Sept.)	124.753	184
2006	1508.421	171.047 (May)	125.702	184

* allocation exceeded

3c. Permits 5025, 5378, and water received from Tri County Project

Year	Annual Use (mg)	Maximum Monthly Use (mg)	Average Monthly Use (mg)	Quantity Received Annually (mg)
1999	1328.319	171.559 (July)	110.693	361.225
2000	1631.437	192.740 (Oct.)	135.953	210.497
2001	1660.148	176.771 (Aug.)	138.346	0
2002	1508.690	186.996 (July)	125.724	1.241
2003	1556.839	193.339 (July)	129.737	27.636
2004	1600.436	191.413 (July)	133.370	142.383
2005	1711.583	197.221 (Sept.)	142.632	214.543
2006	1682.186	215.234 (Aug.)	140.292	173.765

4. The population served is approximately 40,263, which represents an average monthly consumption of 78 gpcd, and a peak monthly consumption of 117 gpcd based upon 2006 water use data, with a 68 percent residential use component.
5. The applicant's diversion sources are located within: Planning Area 14, Rancocas Creek and Camden Delaware Tributaries Watersheds as designated by the New Jersey State Water Supply Master Plan; the Southwest Drought Region; and the Rancocas Creek and Camden Delaware Watershed Management Area.
6. A site inspection was not conducted.

The sources are located as follows:

Well Name	X	Y	Location
Well 1	430460.634	458212.416	Off of 206 & Columbus Hedding Rd.
Well 2	430717.7	458518.1	Off of 206 & Columbus Hedding Rd.
Well 3	431022.429	458250.367	Off of 206 & Columbus Hedding Rd.
Well 4	430795.65	458818.429	Off of 206 & Columbus Hedding Rd.
Well 5	431209.74	457842.43	Off of 206 & Columbus Hedding Rd.
Well 7	430343.12	458786.53	Off of 206 & Columbus Hedding Rd.
Well 8	430625.84	459109.39	Off of 206 & Columbus Hedding Rd.

7. Flow meters for all diversion sources have not been calibrated within the past 5 years. The most recent date of calibration is January 12, 1998.
8. The applicant has failed to comply with existing permit conditions Nos. 2, 3, and 4 dealing with exceeding the monthly allocation in April 2001, July 2002, and July 2003, exceeding the combined monthly allocation in July 2002 and July 2003, exceeding the annual allocation in 2001, and calibrating the meters every five years. The installation of calibrated flow meters on Well Nos. 5, 7, and 8 will be required prior to placing the new sources into operation.
9. The diversion is in the Delaware River Basin and is subject to the requirements of DRBC. The applicant has not obtained approval from the Commission.
10. Water, after use, will be discharged to Mount Holly Sewerage System for treatment and discharge to the Delaware River under Permit Nos. NJ60147796 and NJ60155268. The treatment works are not under a sewer connection ban or other restriction imposed by NJDEP.
11. The system has interconnections with the Tri-County Project and the other Mount Holly system sources regulated under Permit No. 5025.
12. The system is 100 percent metered.
13. The applicant has indicated that their unaccounted-for-water is 10.63 percent.
14. The water system has storage capacity of 4.25 MG, as compared with a 2006 average water demand of 4.612 MGD.
15. The applicant has submitted a Water Conservation Plan. The most recent plan was submitted July 26, 2007.

16. Sub-surface diversions in the same aquifer within the radius of influence include the following:

PI ID	Well Owner	Well Permit	Distance (miles)	Depth (feet)	Capacity (gpm)
5285	Mount Holly Water Company dba New Jersey American Water	2800015286	2.61	205	365
5285	Mount Holly Water Company dba New Jersey American Water	2800012349	2.64	216	250
10634W	Burl. County Waste	2800020539	2.66	220	70
BU201R	Pinelands Nursery	2800037884	1.75	270	50
BU201R	Pinelands Nursery	2800018111	1.72	258	50
BU201R	Pinelands Nursery	2800047868	1.78	270	50
11086W	Township of Florence	2700015343	3.06	160	50
11086W	Township of Florence	2700015345	3.11	210	50
11086W	Township of Florence	2700015342	3.36	110	50
10146W	North Burlington Jr. & Sr. High Schools	2800003560	1.72	315	180
10146W	North Burlington Jr. & Sr. High Schools	2800015589	1.70	268	150
10711W	Columbus Farmers Market	2800028844	2.20	460	40
10711W	Columbus Farmers Market	2800028845	2.20	266	35
10890W	Stepan Co.	2800035104	3.35	170	100

17. Public water supply wells regulated by the Water Allocation Permit program, within a 5-mile radius include the following:

Well Owner	No. Of Wells	Depth (feet)	Aquifer	Capacity (gpm)	Distance (miles)
Mt. Holly Water dba NJ American Water (5025)	2	205-216	Upper PRM	250-365	2.66-2.69
Florence Township (5256)	3	137-141	Middle PRM	620-730	4.83-4.93
Mt. Holly Water dba NJ American Water (5285)	2	205-217	250-365	800	2.61-2.66

18. According to the DEP-GIS-Imap 2001 Contaminated Sites list, and OPRA On-line Report web page information, potential pollution sites within twice the radius of influence, up to one mile, of the diversion include:

Name of Source	Distance (feet)	(Formation) Aquifer Affected	Lead Agency
Texaco Service Station, Mansfield Twp.	2312	N/A *	BUST

* This contaminated site is from an underground storage tank therefore the contamination is most likely shallow and in the surficial aquifer and should not be impacted by or affect this diversion.

19. The estimated consumptive use of water is 100 percent, which is equivalent to 4.61 mgd for 2006 including Tri-County Water.

Staff Analysis and Conclusions

1. The applicant's failure to comply with conditions 2, 3, and 4, dealing exceeding the monthly allocation in April 2001, July 2002, and July 2003, exceeding the combined monthly allocation in July 2002 and July 2003, exceeding the annual allocation in 2001, and calibrating the flow meters should be addressed through the applicant remaining below their monthly and annual allocations; and submitting proof of totalizing flow meter calibration for all sources.
2. NJGS conducted ground-water-modeling simulations to analyze the original proposed increase in allocation. NJGS used the most recent USGS RASA ground-water flow model and used only the specific MODFLOW file relative to the diversion that was edited to simulate the proposed pumping. The model was simulated over a yearly stress period to represent the requested diversion. The Department did not require a pump test for this modification. The existing Mansfield wells range in depth from 438 to 533 feet deep and are screened in the Middle Potomac-Raritan-Magothy (PRM) aquifer. The maximum drawdown at the end of a yearly pumping period was predicted to be 40 feet in the Middle PRM aquifer and 5 feet in the Upper PRM aquifer at the wellfield. The three new wells are located in close proximity to the other Mansfield Wells and just outside the Water Supply Critical Area 2. The NJGS model simulated a drawdown of up to 10 feet that extends into the depleted portion the Middle PRM aquifer in of Critical Area 2. Modeled drawdown extending into the depleted portion of Critical Area 2 within the Upper PRM aquifer was calculated at about 4 feet. The model also simulated that the drawdown would intersect streams and wetlands in the area near the Delaware River with as much as 5 feet of drawdown within the outcrop area of the geologic formations. The majority of the leakage into the aquifer appears to be from recharge from

the outcrop area and leakage from overlying units rather than from the Delaware River. The model simulated that most of the Public Supply wells within the radius of influence would experience a minor drawdown of less than 5 feet. A search of the Highview and NJEMS databases showed that there are 139 domestic wells completed in the Middle PRM aquifer within the radius of influence of the proposed diversion. The other large capacity wells within the radius of influence should have sufficient water above their pumps to not be adversely affected by this diversion.

NJGS did additional analyses using the model to determine the impacts to Critical Area 2 if the increase was 85, 75, and 50 percent (1821.55, 1607.25, and 1071.50 mgd respectively) of the requested increase. The drawdown in the depleted portion of Critical Area 2 would be approximately 6 feet at 85 percent of the requested allocation, 4 feet at 75 percent, and there would be no drawdown in the depleted portion of Critical Area 2 at 50 percent.

3. The applicant's current proposed monthly water use is excessive as the requested allocation is not justified based on the supporting information for the demand projections as discussed in Staff Analysis Conclusion 4 below.

- 4a. Demand projections provided by the applicant indicate that their ten-year demands will be 247.69 MGM, and 2916 MGY for the Mansfield Area. These figures appear to be based on the plant capacity of 8 MGD. Analysis of this in conjunction with the requested allocation limits of 178.35 mgd and 1458 mgd, historical use and supporting documentation provided with the application shows that an allocation of 160 mgd is more appropriate. The recommended limit is based on the supported demand of 145.047 mgd for increased development with a 10 percent safety factor. Analysis of supporting documentation submitted by the applicant indicates that an annual allocation of 1364 mgd is more appropriate. The recommended limit is based on 1240.052 mgd for increased development with a 10 percent safety factor. Both the monthly and annual demand figures calculated by BWA are based on the applicant's letter of December 28, 2004. However, the Bureau did not include the projections for developments currently served by other systems. If recommended limits are not sufficient to meet the water demand, the allocation can be supplemented from the Tri-County project. The permit should be phased. The initial phase will continue the currently approved sources and allocations. The recommended increase and wells will not become effective until the Final Phase of the permit after a revision to the monitoring plan is approved by the Bureau, and background static water level measurements from all observation wells are submitted to the Bureau.

- 4b. On December 9, 2005 Mount Holly Water Company requested to increase the combined maximum monthly allocation limit for permits 5025 and 5378 from 184 mgm to 273.65 mgm. The recommended combined monthly limit for 5378 and 5025 of 255 mgm is based on the monthly increase for 5378. The increased combined limit will become effective in the final phase.
5. According to the August 1, 1997 Stipulation of Settlement Condition No. 5, concerning Areas of Delivery, Mount Holly Water Co. agreed not to deliver water from the Mansfield Project in the areas designated as Farmland Preservation areas by Burlington County or those designated as P-4 in the State Development Plan unless directed to do so by a State agency with jurisdiction over Mount Holly. The agreement did not preclude Mount Holly Water Company from the delivery of water to court approved projects. A map showing the areas of potential 2005-2012 growth was submitted by the applicant with their application. These areas have been verified as not being designated Farmland Preservation areas or P-4 areas.
6. Public community water supply systems are in the public interest because they are generally safer and more reliable than individual domestic wells that are not subject to the same testing, monitoring and standards as a public community supply system. Historically the Department has viewed local governmental approval of a project as signifying that it is in the public interest. Therefore the proposed diversion is considered to be in the public interest in accordance with N.J.A.C. 7:19-2.2(f)1.
7. Natural replenishment of the Potomac-Raritan-Magothy aquifer has not been occurring on a regional basis, as is illustrated by the findings of U.S. Geological Survey Water Resources Report 00-4143. This report documents the expansion of the regional cone of depression in this aquifer's potentiometric surface.

The applicant has indicated that approval of the use of Wells 5, 7 and 8 would not exceed the natural replenishment or safe yield of the water resource or threaten to exhaust such waters, or render them unfit for use. The Bureau's analysis of the application in conjunction with the NJGS modeling indicates that this diversion at the requested rate will cause drawdown within Critical Area 2 but the pumping is moved away from the center of the Critical Area which will have a lesser impact. Diversion at the recommended rate of 160 mgm and 1364 mgy will increase drawdown by no more than 4 to 6 feet within the depleted portion of Critical Area 2.

Therefore, approval of this application at the recommended rates is in accordance with N.J.A.C. 7:19-2.2(f)2.

In order to confirm this and given the proposed increases in diversions in this region, static water level reports should be required as a condition of this permit to determine future trends.

8. Between 8,976 and 17,663 feet away from the proposed diversion there are 52 large capacity wells. The NJGS reanalysis of the proposed diversion at the recommended rates anticipates a long-term drawdown <5 feet at a distance of 19,332 feet based upon seven wells (4 existing and 3 proposed) operating at 5600 gpm. The large capacity wells identified as being within the 19,332 foot radius of influence should have sufficient water above their pumps under normal conditions so that interference experienced should not adversely impact their ability to pump their allocations.

According to the Bureau's records there are 139 small capacity private wells located within the radius of influence of the proposed diversion in the same aquifer. There are 1652 small capacity private wells located within the radius of influence in the following units: Middle PRM (139), Upper PRM (447), PRM Confining Unit (386), Merchantville-Woodbury Confining Unit (381), Englishtown Aquifer (253), and Higher Units (46).

Most of these wells can be excluded from experiencing impacts attributable to the increased allocation based upon supplemental information submitted as a result of the public hearing. However, it appears as if 83 wells may be vulnerable to interference as a result of this diversion at the requested rate. This interference is not considered adverse since any interference can most likely be remedied by the lowering of pumps. In addition, the Bureau is recommending approval of a lesser allocation than requested so associated interference would be even less than projected by the applicant's consultant. Three of these wells may be particularly vulnerable to interference as lowering their pumps may not remedy potential impacts, Nos. 2800000020, 2800006305, and 2800006541. The status and performance of these wells should be closely assessed. However, Mount Holly Water Company dba New Jersey American Water is required to have an approved contingency plan in place should any wells be adversely affected by the increase. NJAW proposed that if Tindik, Mosie, and Iron wells are found to still be in operation, they will be assessed by a licensed water well contractor, who will access the wells and determine their static and pumping water levels, their specific capacities, and their pump settings and capacities prior to the implementation of the allocation increase. Three, six, nine, and twelve months after the implementation of the allocation increase, the static and pumping water levels will again be measured. NJAW also proposed that they will continue to monitor the static water levels in observation wells on the Mansfield Well Field property that are screened in the upper portions of the

Middle PRM aquifer, the Upper PRM aquifer, a sand unit contained within the upper beds of the Magothy Formation, and a sand unit contained within the Merchantville Formation. NJAW proposes to measure the onsite wells using digital data loggers every three hours. The proposed monitoring plan does not adequately address the potential for regional private well impacts since the monitoring is limited to onsite wells. Therefore, NJAW shall submit a revision for approval to the September 14, 2007 monitoring plan for long term monitoring of dedicated observation wells completed in the Upper PRM, Middle PRM, PRM confining unit, and Merchantville Woodbury confining units for Bureau of Water Allocation approval. The monitoring plan shall include the locations of observation wells, number of observation wells, monitoring schedule for continual static water level monitoring in the observation wells during the initial and final phases, reporting schedule, and how NJAW will monitor the appropriate aquifers and confining units to assess well impact issues associated with the increase in allocation. NJAW must submit background static water level measurements from all observation wells during the initial permit phase prior to the final phase of the permit becoming effective. The proposal shall be submitted within 90 days of the effective date of this permit.

Therefore, the proposed diversion is just and equitable to the users of the wells as it does not adversely affect other existing withdrawals, in accordance with N.J.A.C. 7:19-2.2(f)3.

Therefore, approval of this application at the recommended rates is in accordance with N.J.A.C. 7:19-2.2(f)3.

9. Analysis of applicant's chloride data indicates that chloride concentrations range from 0.19 to 30.1 mg/l in the Middle PRM aquifer at this location.

Salt water intrusion is not expected to occur because there are no sources of salt water in close proximity to the applicant's wells.

Therefore, approval of this application at the recommended rates is in accordance with N.J.A.C. 7:19-2.2(f)4.

10. Based upon available information, the diversion is not expected to contribute to the spread of groundwater pollution. The NJGS analysis of the diversion indicates that increased drawdown is unlikely to effect the contaminated sites in the outcrop area, due to the lack of connection between the aquifers in the outcrop area and there is a significant confining layer (Merchantville-Woodbury Formations) at the site. The proposed diversion is deep enough and sufficiently confined that it should not spread ground water

contamination nor interfere with any groundwater remediation in accordance with N.J.A.C. 7:19-2.2(f)4.

11. The applicant has indicated that the new diversion sources are not located in a freshwater wetlands or transition area per N.J.A.C. 7:19-2.2(f)6 with the exception of proposed Well 7. Although there are wetlands within 200 feet of the proposed well, it appears that wetlands in the area may be perched and/or sustained by local surficial water bearing units. The Bureau of Freshwater Wetlands has been notified of the proposed diversion.
12. The proposed diversion is located within planning area 14, Rancocas Creek, of the New Jersey Statewide Water Supply Plan, August 1996 (NJSWSP). According to the NJSWSP most of the area is located within Critical Area 2. The NJSWSP recommends that the primary solutions to the water supply situation in this region are the Tri-County Project and subregional alternatives. The NJSWSP groundwater supply management recommendations state that continued evaluation by local entities and NJDEP of alternative water supplies is recommended for those municipalities and new growth areas in the region not anticipated to be tied into the Tri-County service area for water supplies.

Therefore, this application is in accordance with N.J.A.C. 7:19-2.2(h).

13. The applicant has an alternate source of water through the other Mount Holly System and the Tri-County project.

Summary

The Department has completed its review of this application pursuant to N.J.A.C. 7:19-1 et. seq. The review of this application reveals that it does not have any adverse impacts and meets, based upon the information certified to in the application, the statutory requirements of N.J.S.A. 58:1A-1 et. seq.

Therefore, based upon a review of the information submitted with the application, existing water allocation files, and the attached New Jersey Geological Survey review of the application, the following conclusions have been reached regarding this application:

This modification to add Wells 5, 6, 7, and 8, increase the allocation from 88.7 mgm to 160 mgm and from 803 mgy to 1364 mgy, and increase the combined monthly allocation for both 5378 and 5025 from 184 mgm to 255 mgm should be conditionally approved through a phased permit in

accordance with the following recommendations as the applicant has satisfied the requirements of N.J.A.C. 7:19-2.2 et seq.

- NJAW is required to submit proof of flow meter calibration for Wells 1, 2, 3, and 4 within 60 days of the effective date of this permit.
- NJAW must redesignate Well 5 (2800051617), Well 7 (2800051616), and Well 8 (2800051615) to public community supply wells.
- Pursuant to Text Condition 23 of the Water Allocation Permit the permittee shall investigate to the Department's satisfaction complaints by users of wells or surface water supplies within the zone of influence of its diversion to determine what impact the diversion had on such wells or surface water supplies. A report on these investigations shall be forwarded to the Bureau of Water Allocation. Any well or surface water supply which becomes damaged, dry, has reduced capacity, reduced water quality or is otherwise rendered unusable as a water source as a result of the permittee's diversions shall be repaired or replaced at the expense of the permittee. Work shall be in accordance with all State, County and Municipal construction standards for potable water. After reviewing all applicable investigational reports the Department of Environmental Protection will make the final determination regarding the validity of such complaints, the scope or sufficiency of such investigations, and will determine how to resolve any problems resulting from the diversion.
- NJAW shall submit a status report on the performance of Wells 2800000020, 2800006305, and 2800006541 and address how any impacts to these specific wells will be remedied.
- NJAW shall submit a revision to the September 14, 2007 monitoring plan for long term monitoring of dedicated observation wells completed in the Upper PRM, Middle PRM, PRM confining unit, and Merchantville Woodbury confining units for Bureau of Water Allocation approval. The monitoring plan shall include the locations of observation wells, number of observation wells, monitoring schedule for continual static water level monitoring in the observation wells during the initial and final phases, reporting schedule, and how NJAW will monitor the appropriate aquifers and confining units to assess well impact issues associated with the increase in allocation. NJAW must submit background static water level measurements from all observation wells during the initial permit phase prior to the final phase of the permit becoming effective. The proposal shall be submitted within 90 days of the effective date of this permit.

- NJAW must submit proof of calibrated flow meter installation for Wells 5, 7, and 8 prior to use of these sources.

References

In addition to the historical information on file at the Bureau of Water Allocation and the application submitted, the following information sources were also utilized to establish the recommendations contained within this Staff Report:

LaCombe, Pierre J. Rosman, Robert 2001. Water Levels in, Extent of Freshwater In, and Water Withdrawal from Ten Confined Aquifers, New Jersey and Delaware Coastal Plain, 1998. Water-Resources Investigations Report 00-4143. Washington, D.C. United States Government Printing Office.

August 1996. Water for the 21st Century: Vital Resource, New Jersey Statewide Water Supply Plan. New Jersey Department of Environmental Protection - Office of Environmental Planning, Trenton, New Jersey.

Recommendations

Issuance of the permit is recommended with an expiration date of 10 years from the effective date and is subject to the attached specific conditions:

Date: March 4, 2008

Erin Schumacher
Erin Schumacher
Bureau of Water Allocation

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05/28/2008

**STAFF REPORT
ADDENDUM**

IN THE MATTER OF

Mount Holly Water Company
dba New Jersey American Water

Water Allocation Permit No. 5378 to divert water from four existing wells and three new wells screened in the Middle Potomac-Raritan-Magothy aquifer in Mansfield Township, Burlington County

In compliance with the provisions of N.J.S.A 58:1A-1 et seq., Mount Holly Water Company dba New Jersey American Water, 84 Mill Street, Mount Holly, New Jersey 08060, filed an application with the Department of Environmental Protection on July 21, 2002 to divert a maximum of 210.03 million gallons of water during any month (mgm) at a maximum rate of 6389 gallons per minute (gpm) not to exceed 2143 million gallons of water per year (mgy). On December 9, 2005 a revised allocation request was filed to reduce the diversion amount to a maximum of 178.35 mgm, not to exceed 1458 mgy, at a maximum rate of 5600 gpm from existing wells, Nos. 1-4, and new wells Nos. 5, 7, and 8; 470-536 feet deep screened in the Middle Potomac-Raritan-Magothy (PRM) aquifer. On December 9, 2005 Mount Holly Water Company also requested to increase the combined maximum monthly allocation limit for permits 5378 and 5025 from 184 mgm to 273.65 mgm.

Background

Public Notice was required due to the requested increase in allocation and due to the addition of three new wells.

Requests for a hearing were filed upon the notice of application published on December 26, 2005 in the Burlington County Times. A Public Hearing was held on March 28, 2006 at the Mansfield Township Municipal Complex, Courtroom, 24548 East Main Street, P.O. Box 249, Columbus, New Jersey 08022. The comment period was held open until April 28, 2006 by the Hearing Officer. Comments prior to, during, and after the hearing were received from over 30 interested parties including the applicant Mount Holly Water Company dba New Jersey American Water (NJAW), Crafts Creek Spring Hill Brook Watershed Association (CCSHB), Columbus Baptist Church (CBC), Pinelands Nursery (PN), and a number a private citizens (PC). Comments pertaining to hydrogeological monitoring and stream flow depletion were sent to the New Jersey Geological Survey (NJGS) for review. The following is a summary of the comments/issues raised, and the Bureau's responses.

As a result of the public hearing and complaints received from private well owners experiencing problems with their wells the Bureau of Water Allocation (Bureau) initiated an investigation into the impacts to private well owners. The Bureau required that NJAW investigate the complaints received and re-evaluate the potential impacts to all wells screened in the Upper PRM and Middle PRM aquifers within the radius of influence. NJAW was required to submit a report identifying the locations of all wells in the investigation and impacts to said wells.

NJAW submitted a report January 2, 2007 with additional information submitted on January 15, 2007. The report submitted January 2, 2007 was forwarded to NJGS and they responded in a memo dated January 31, 2007 with the following conclusions. NJGS concluded that wells completed in the Englishtown aquifer would not be affected by the diversion and that drawdown in the upper PRM aquifer would occur but to a lesser degree than in the middle PRM aquifer. NJGS stated that an additional 1-5 feet of drawdown could be experienced by wells in the upper PRM aquifer and that more information was needed on specific domestic wells within this unit to determine the available drawdown and threat from interference. They also concluded that regionally water levels in the upper PRM have recovered approximately 10 feet and may offset any interference. NJGS concluded that approval of the increase in diversion would cause significant drawdown in the middle PRM aquifer but that the middle PRM is thick and prolific and should be able to support both public and domestic use. The probability of wells failing would depend largely on their construction and in well drawdown during use. NJGS stated that more specific information on domestic wells would be needed to determine if any individual wells would fail. Finally they stated that there are options available for most wells that could fail due to interference. In a January 17, 2007 response letter the Bureau requested supplemental information including that NJAW address all of the wells within the radius of influence and whether or not the proposed increase in diversion will have an impact on these wells. The Bureau also required NJAW to submit a database of all the wells within the radius of influence to include the well permit number, depth to top of open interval, depth to bottom of open interval, static water level at time of drilling, pump setting, aquifer in which the well is screened, and possible drawdown attributable to the NJAW increase.

A second report investigating impacts to private wells was submitted by NJAW on May 7, 2007 in response to the Bureau's January 17, 2007 letter. The Bureau responded with another letter dated May 24, 2007 confirming that the aquifer designations should be based on the published elevations of aquifer tops and bottoms and interpolation to nearby boreholes. The Bureau required two separate maps depicting the locations of the Upper and Middle PRM wells with the predicted drawdown contours and a corresponding table listing the well owner, state well permit number, depth to top of open interval, depth to bottom of open interval, static water level at time of drilling, pump setting, and a column quantifying the possible drawdown to each of these wells. The Bureau required that all wells where impacts are not anticipated to be adverse color-coded one color, while any possibly affected wells should be color-coded another color, and that the 1998 Potentiometric Contours for the Upper PRM aquifer and the Middle PRM aquifer be displayed on the appropriate map. A map depicting the locations of the wells screened in

the PRM confining unit with corresponding table listing the well owner, state well permit number, depth to top of open interval, depth to bottom of open interval, static water level at time of drilling and pump setting for the map was also required. The Bureau required that an attempt at assessing the vulnerability of these wells was to be made based on the distance of these wells from the well field, available well construction data and the units in which they are completed as water level elevations are not readily available for the confining unit.

A third report was submitted by NJAW on June 19, 2007. This third report identified ninety-two wells as being potentially impacted by the increase in allocation. Twelve of those ninety-two wells were labeled as having possible impacts causing them to pump into the screened interval. The report was forwarded to NJGS and they made the following recommendations. NJGS recommended a 30 day aquifer stress test, measuring static water levels in the confining unit, NJAW should reinvestigate the 2003 synoptic water levels, and that a contingency plan should be put in place. In lieu of aquifer testing, the Bureau required NJAW to re-evaluate the geologic units of the wells labeled with potential screen impact. A fourth report on the impacts to private wells within the radius of influence was submitted September 14, 2007. This report demonstrated that only three of the twelve wells may experience adverse interference, possibly causing pumping in the screened interval. Analysis of the status and performance of these three wells will be required by the permit.

Comments/Response

Well Interference

- 1) Comment/Issue- (PC) Private citizens raised concerns about adverse impacts to domestic wells. There were numerous claims of wells going dry, declining water levels in existing wells, impacts to water quality, the need for replacement wells and pumps having to be dropped, repaired or replaced. DEP has not reached out to the citizens with these problems. Clarification was requested regarding draft permit condition no. 22 that requires the water company to repair or replace wells that are impacted by the proposed diversion and the procedures for reporting well problems. Monetary compensation from DEP was requested to cover costs incurred by residents with well problems. Questions were raised as to why the water company is allowed to take the resident's water and pump it elsewhere and to whom the water belongs.

NJAW stated that it did thoroughly investigate all the hydrogeological and environmental impacts not only to Mansfield Township but regionally as well. It further stated that there will be no negative impacts environmentally or to the critical area boundary. NJAW was required to investigate all impacts to private wells. Any potential impacts can be covered through a phased permit and a contingency plan.

Response- Pursuant to the Water Supply Management Act, N.J.S.A. 58:1A-et seq., the water resources of the State are public assets of the State held in trust for its citizens. In response to the comments made at the public hearing the Bureau required NJAW to conduct an investigation of all of the private wells within the radius of influence of the requested increase in allocation. NJAW submitted four reports detailing possible impacts to these wells. Only three wells were found to have possible adverse impacts. Any impacts to these wells will be required to be remedied pursuant to an approved contingency plan. The Bureau maintains its finding that no wells would be adversely affected by the new wells and the recommended increase in allocation since any interference can likely be remedied by lowering the pump. The Bureau also reviewed published reports regarding the water supply in Mansfield Township. The water levels in the Englishtown aquifer appear to be increasing as shown by the USGS Water-Resources Investigations Report 00-4143. Other potential causes of the reported well problems could be attributable to an increased number of private wells over time and the associated pumpage from those wells in the Mount Laurel-Wenonah aquifer, climatic conditions and aging wells and pumps. The procedure for dealing with well interference created by the diversion is outlined in permit condition 23. As per condition 23, it is required that the permittee investigate to the Department's satisfaction complaints by users of wells or surface water supplies within the zone of influence of its diversion to determine what impact the diversion has had on such wells or surface water supplies. A report on these investigations shall be forwarded to the Bureau of Water Allocation. Any well or surface water supply which becomes damaged, dry, has reduced capacity, reduced water quality or is otherwise rendered unusable as a water source as a result of the permittee's diversions shall be repaired or replaced at the expense of the permittee. When impacts occur to wells, the well owner should report the problem to the Bureau. As per text requirement no. 3, the permittee will be required to have a contingency plan in place should any private wells be impacted prior to approval of the new wells and increased allocation by the Bureau. In addition, a well monitoring plan is to be implemented to aid in interpolation and resolution of well interference issues.

Stipulation of Settlement Condition

- 2) Comment/Issue- (CBC) The Columbus Baptist Church is currently a customer of Mount Holly Water Company (MHWC). However, we are about to begin a new building project, which has preliminary approval of the Township and will involve taking down two existing buildings and putting up one new building. The DEP has viewed this project as a new service even though the church is already a customer of MHWC and therefore have denied water service to our new church building. This will require us to drill a well and install an underground water storage tank system with fire pumps and generators to meet current codes and fire protection. We ask the DEP to consider that the church is an existing customer and allow the new building to be served as we are merely trying to improve our property. The reason that the DEP denied the Columbus Baptist Church fire

service and additional domestic service connection is because we are located in the rural designation of P-4. We would like to see the Stipulation of Settlement condition reworded to allow for fire service and new service could be connected where there is an existing main going past the property. There is a 12-inch main with good flow that was tested by the Water Company that passes the property, yet we cannot connect to it. The other thing to consider is to drop that whole condition altogether since MHWC and NJAW are one company now because whatever was the root cause of the settlement condition in the first place has probably been resolved since it is one company now.

(PC) Concerns are raised regarding the Baptist Church and other existing residences that are unable to hook up to this water supply. It is believed that the State would have more control over the water supply if people did not have as many private wells and more people were hooked into the public supply because it is monitored. The DEP is urged to look into these situations and maybe make a new consideration about existing homes because a lot of people that have moved into new structures do have public water.

Response- The CBC site consisted of new development with considerable new and additional water demand. As a result, the DEP could not approve it to be connected to NJAWC. Once there was local approval and, as a compromise, the DEP agreed to only allow the CBC to hook to the NJAW water main for fire protection for the large quantity of water to avoid the high cost of installing a storage tank for water needed for fire suppression. The CBC cannot use this water for potable or sanitary purposes as the new church building is located within the P-4 area and NJAW is prohibited from delivering water within this zone pursuant to the August 1, 1997 Stipulation of Settlement. Water for potable and sanitary uses must come from a private well. Although the water companies have merged, removal of the stipulation of settlement is beyond the scope and authority of this permit action. There are proposed changes to the PA-4 designation pending through an application before the State Planning and Redevelopment Commission including the site where the CBC is located. If these changes are approved, the connection to public water can be approved.

Critical Area 2

- 3) Comment/Issue- (PC) Has the critical water area map has ever been revised and has it been investigated again?

(PN) In March 2005, Pinelands Nursery was denied a water allocation permit from the DEP because the nursery is in a designated depleted area. This obviously has a big impact on our business. We grow native plants for restoration projects, a very green company. But we are now limited to the amount of plants we can grow because we are limited by water. Why should the MHWC be allowed to send

water out of this designated depleted area when my business has been denied using this water right here in town?

(PC) As stated in the NJGS review, results of the model simulations indicate that up to 10 feet of drawdown would extend into Critical Area No. 2 within the Middle PRM aquifer from the additional pumping at the well field. Model drawdown extending into the critical area within the Upper PRM was calculated at about five feet. The current diversion at the well field is probably creating drawdown that extends into the critical area, thus any new drawdown would be in addition to preexisting effects. It is asked why the applicant was not required to submit an aquifer test.

(CCSHB) "Because of a cone of depression that is a physical function of large withdraws of water, at the arbitrarily mapped line for these Mansfield wells, the original mapping of Critical Water Area 2, in Burlington County needs to be reconfigured to address the serious increases in water withdraws in the Mansfield, Bordentown, Florence and Chesterfield areas. These maps are not reflective of what is happening in this area now. New updated hydrogeological studies should be done now. It is our thought that with all of the potential negative consequences mentioned above, MHWC's application for withdraw of 178.35 million gallons of water per month from the wells located in Mansfield Township should be denied. For now, withdraw of additional water, which will be diverted to communities south of Mansfield Township should be drawn from the Delaware River surface pipe, which is located in Delran, New Jersey. Mansfield's ground water resources cannot be depleted to make up for water shortages in other parts of our county or State. This is a regional problem that has no easy solution. If we do not make economic and natural resource sustainability New Jersey's mission, taxpayers, not water companies, will bear the responsibility and cost of replacing our potable water supply. How will MHWC compensate Mansfield Township and Mansfield's residents when our streams and wells no longer provide water for our citizens?"

(NJAW) MHWC found the Mansfield site early in the 90's when we were notified that the state would be reducing allocation amounts as a result of Critical Area 2.

Response- The Critical Area map has not been revised since it was established on January 15, 1993. However, re-evaluation of Water Supply Critical Area No. 2 is currently ongoing. Pursuant to N.J.A.C. 7:19-8.3(i), the DEP is prohibited from approving new or increased allocations from affected aquifers within the critical area boundary. The Mount Holly Water Company application for the new wells and increase in allocation is located outside the Critical Area 2 boundary and therefore not prohibited from being approved. Pursuant to N.J.A.C. 7:19-8.3(j), the Bureau's analysis of the application in conjunction with the NJGS modeling indicates that this diversion at the recommended rate can be approved as it will not adversely affect the safe or dependable yield of the critical aquifer. Aquifer testing was performed at the well field in 1995. Pursuant to N.J.A.C. 7:19-2.2(c)

the Bureau waived the aquifer testing requirement as sufficient recent hydrogeologic information was submitted to allow a comprehensive hydrological evaluation of the impacts of the proposed diversion. However, this waiver did not relieve the applicant of the requirement to submit a comprehensive hydrologic evaluation of the available information in relation to the requested well sites and associated increase in allocation. Refer to Response to Comment 1 above regarding the water company's obligation for impacts attributable to the diversion.

The referenced Agricultural Certification application for wells within the critical area aquifer was withdrawn on March 24, 2005 and an Agricultural Registration allowing the diversion of up to 100,000 gallons per day was applied for and set effective on July 20, 2005.

Stream depletion

- 4) Comment/Issue- (PC) Private citizen raised concerns over her observation of the streams and tributaries drying up and to the cause of this.

(PC)With regard to the impact to surface water as stated in the Memorandum by NJGS, the drawdown created by the proposed diversion appears to intersect streams and wetlands in the area near the Delaware River with as much as five feet of drawdown simulated to occur within the outcrop area of the geologic formations.

(CCSHB) The Crafts Creek Spring Hill Brook Watershed Association is comprised of concerned citizens, not scientists who have tried to get together to do something positive for the watershed. Mr. Robert Tallon, the President of the CCWSA, made the following comments:

“Although the possibility, at this time, of salt water intrusions into our potable water sources is not likely to happen here, overdrawing of our ground water resources will create a host of negative consequences that will limit the potential for clean potable water for Mansfield Township residents. The granting of Mount Holly Water Company's request to divert additional water from existing and new wells screened in the Middle Potomac-Raritan-Magothy Aquifer in Mansfield Township should be denied for the following reasons:

1. Drawing water from the outcrop areas of the Delaware River, in a reverse flow, can and will, to some degree, become problematic due to the feather edge nature of these outcrops at the river confluence. Aquifer transmissivity channels in the Delaware River can and will certainly develop aquatard and aquaclude conditions.
2. Ionic reactions to naturally occurring minerals being precipitated from a dissolved state into a solid state from oxidation reactions will block pore spaces and limit hydrologic transmissivity.

3. Biofilm masses will form in the confined areas of outcropping aquifers from nutrient rich oxygen laden water from the Delaware River being drawn deeply into these thin areas of the Aquifer, thus forming induced bacterial colonies feeding on river nutrients and naturally occurring minerals and iron in the previous anaerobic hydrologic transmissivity channels or pore spaces. These bacterial colonies will have a mucosa quality similar to biofilm slime found on any natural streambed. The only difference is these colonies will inhabit the whole strata between the aquifer's confining layers inward from the river outcrop areas. Although this would potentially clean the water somewhat, aquatard or aquaclude conditions would result from pore space habitation of heavy populations of induced aerobes, oxidized and stabilized compounds resulting from digestion by aerobes would be unable to be reversed flushed after consumption, thus blocking in pore spaces.

4. Overdrafting conditions are causing potential for excessive land subsidence even further reducing transmissivity as the aquifer's confining areas compress closer together, never to return to former structural dimensional integrity, as when former artesian conditions prevailed. This is now occurring in the Atlantic City area and from my observations over the last 50 years, here at the Crystal Lake area.

5. The former natural hyporheic zones in the Delaware River at these recharge areas must already have been altered because of the change in substrates hydrological flow. This results in the degrading of former natural linkages between hyporheic zone and surrounding habitats, thus reducing the Delaware River's ability of naturally occurring nitrification cycles from actuating at former levels. This will result in loss of water quality. As reported in *Biochemistry* 39:327-342, 1997, the South Platt River, located in Colorado, reductions of nitrates in summer conditions, over a six kilometer length of river, showed reductions of 90 percent because of normal hyporheic zone meiofauna reactions.

6. Vertical leakage studies need to be done to protect Crafts Creek and Spring Hill Brook from drying up. A United States Geological Survey publication, (Ground Water Flow in the New Jersey Coastal Plain) states, "Stream flow is similar to flow during pre-pump conditions except in the outcrop areas of the three Potomac-Raritan-Magothy aquifers. However, along Potomac-Raritan-Magothy outcrop areas locally in Middlesex County and near the Delaware River in Gloucester, Camden and Burlington Counties, flow to streams decreased 10 to 50 in/year. These reductions were in unconfined parts of PRM at over 13 million gallons a day draw." We are now past that with water withdraws from Bordentown, Florence and Mansfield's wells combined. Complete mapping and test wells of Spring Hill Brook and Crafts Creek, here in Mansfield Township, needs to be started to determine the flow of these streams now. The Mount Holly Water Company's well system is located between both HUC 14s where these streams are located. Both of these streams are the documented habitats of

threatened and endangered species. A complete range of hydrological studies should be done on stream morphology and aquifers all the way down to bedrock before additional water allocation is granted to Mount Holly Water Company.”

(PC) Over the last 51 years, one concerned citizen observed the streams and tributaries drying up. Streams that farmers used to leave their cows in during the summer and used as a water source are not available any longer. Intermittently when there's a heavy rain, there is water flow. Although there has been no scientific studies done on the water levels in these streams, firsthand observations indicate that streams are drying up.

Response- The pumping from the Mount Holly Wells should not have an adverse impact on streams and tributaries. The wells are completed in the Middle PRM aquifer which is a confined aquifer and there is a significant confining layer (Merchantville-Woodbury Formations) at the site that extends regionally. The radius of influence may extend to the Delaware River but due to the lack of connection between the Middle PRM aquifer and surficial sources the wells will not impact these surficial sources. However, stream flow can be impaired by dry climatic conditions, increasing impervious cover and increasing shallow unconfined aquifer withdrawals. No examples of chemical and biological changes within the aquifers subsequently decreasing the transmissivity is occurring in New Jersey. NJGS is not aware of this process affecting the productivity of any aquifer near a boundary with a large river in New Jersey.

Impacts to Known Contaminated Sites

- 5) Comment/Issue- (PC) The section of the report that NJGS analyzed indicates that the closest known contaminated site is a Texaco Service Station 2,800 feet south of the site. Due to the semi confined nature of the aquifers being pumped, any contamination sources existing in the region may be influenced to migrate towards the wells due to the increased pumping. Increased drawdown, approximately 25 feet, was simulated to occur in the area of the closest site. This increased drawdown would create steeper hydraulic gradients in the area and potentially accelerate contaminant migration.

Response- The Mount Holly Mansfield wells are discreetly screened more than 400 feet below the land surface in the confined Middle PRM aquifer. The referenced NJGS drawdown predictions would occur in the same aquifer in which the wells are completed. Any contamination that may be present in the shallow aquifer most likely would not pose a threat to the PRM. The potential for contaminants to travel through the unsaturated zone to the deeper PRM wells would also be unlikely. As stated in item 10 of the Staff Analysis and Conclusions section of the draft and final staff report and in the NJGS review, increased drawdown is unlikely to effect the contaminated sites in the outcrop area, due to the lack of connection between the aquifers in the outcrop area and there is a

significant confining layer (Merchantville-Woodbury Formations) at the site. The proposed diversion is deep enough and sufficiently confined that it should not spread ground water contamination nor interfere with any groundwater contamination site.

- 6) Comment/Issue- (PC) Concerns were raised regarding the validity of contaminated site information submitted by responsible parties to the DEP. Two examples of Hamilton Township sites were presented concerning DEP Site Remediation Program decisions based on faulty information. The DEP is urged to review the information provided by the responsible parties, but the DEP should also do their own independent analysis.

Response- This comment is duly noted. The referenced projects do not come under the purview of the Water Allocation Program and have no bearing on this application. The Department's analysis of the application in conjunction with the NJGS modeling reveals that due to the confined nature of the wells the proposed diversion will not interfere with contaminated sites and it does not have any adverse impacts and meets the statutory and regulatory requirements of N.J.S.A. 58:1A-1 and N.J.A.C. 7:19-2.2(f)4.

Modeling

- 7) Comment/Issue- (CCSHB) Concerns are raised regarding decisions based on modeling. The concerned citizen expressed a lack of confidence in information submitted by the applicant. It is suggested that there should be reductions, not increases, due to aquifer depletions in the area. It is requested that actions to be taken be specified if streams are depleted and if wells are adversely impacted.

Response- No specific rationale was provided regarding the modeling deficiencies. The Department's analysis of the application in conjunction with the sophisticated NJGS modeling reveals that it does not have any adverse impacts and meets the statutory requirements of N.J.S.A. 58:1A-1. As stated in Response to Comment 1 above and pursuant to permit requirement 23, adverse impacts attributable to the applicant's diversion will be required to be remedied by the permittee. As stated in Response to Comments 4, 5, 6, and 7 above, due to the confined nature of the diversion, there is no evidence that adverse impacts will occur to the surficial and shallow aquifer system. Therefore, the Department is recommending approval of the application at the recommended rates.

Source of Water

- 8) Comment/Issue- (PC) Concerns were raised regarding the source of water that Mount Holly gets its allocation from. The concerned citizen noted that the residents of Mansfield Township get their water from private wells and that

Mount Holly is less than 10 miles from the Delaware River. This citizen also raised concerns that the groundwater supply in New Jersey is already under threat. It is recommended that Mount Holly's request be denied and that Mount Holly should tap into the water pipelines from the Delaware River or build their own.

Response- MHWC dba NJAW draws its water from the Middle PRM aquifer. The majority of residents draw from aquifers and confining units above the Middle PRM aquifer. However, as stated above the procedure for dealing with interference is outlined in permit condition 23. As a backup, MHWC dba NJAW has a Water Transfer arrangement where by up to 3 mgd can be obtained from the Tri-County System.

Discussion

The above comments include well interference, the stipulation of settlement, Critical Area 2, impacts to known contaminated sites and lack of confidence in modeling. The Department's analysis and conclusions referenced in these comments and discussed in the Draft Staff Report and were based on the hydrogeologic report submitted by the applicant as part of the permit application. The Department's analysis of the application in conjunction with the NJGS modeling reveals that it does not have any adverse impacts at the recommended rates. Pursuant to permit requirement 23, adverse impacts attributable to the applicant's diversion will be required to be remedied by the permittee. However, due to the confined nature of the diversion, there is no evidence that adverse impacts will occur to the surficial and shallow Englishtown aquifer system or users of those resources. The diversion will not adversely affect the safe and dependable yield of the Middle PRM aquifer within Critical Area 2. There will be no impacts to contaminated sites associated with the increase diversion. These conclusions are based on independent modeling performed by the NJGS. Therefore, the Department is recommending approval of the application through a phased permit at the recommended rates.

Amendments

Based upon a review of information contained in the file and the referenced materials, including the comments and correspondence received as part of the hearing process, it is recommended that the following changes be made to the draft staff report and permit where applicable and contained in the final draft staff report and permit requirements:

1. The permit is being approved through phases. The initial phase will continue the currently approved sources and allocations. The final phase includes Wells 5, 7, and 8 and the increase in diversion. The recommended increase and wells will not become effective until the revised monitoring plan is submitted and approved by the Bureau and the background static water levels from all observation wells are submitted.

2. Static Water Levels for Wells 1, 2, 3, 4, 5, 7, and 8 must be measured each month and reported quarterly during both the initial and final phases.
3. Wells 5, 7, and 8 are required to be redesignated in the initial phase to public community supply prior to use.
4. Proof of flow meter calibration for Wells 1, 2, 3, and 4 must be submitted within 60 days of the effective date of the permit during the initial phase.
5. Proof of calibrated flow meter installation on Wells 5, 7, and 8 prior to use is required in the final phase.
6. Pursuant to Text Condition 23 of the Water Allocation Permit the permittee shall investigate to the Department's satisfaction complaints by users of wells or surface water supplies within the zone of influence of its diversion to determine what impact the diversion had on such wells or surface water supplies. A report on these investigations shall be forwarded to the Bureau of Water Allocation. Any well or surface water supply which becomes damaged, dry, has reduced capacity, reduced water quality or is otherwise rendered unusable as a water source as a result of the permittee's diversions shall be repaired or replaced at the expense of the permittee. Work shall be in accordance with all State, County and Municipal construction standards for potable water. After reviewing all applicable investigational reports the Department of Environmental Protection will make the final determination regarding the validity of such complaints, the scope or sufficiency of such investigations, and will determine how to resolve any problems resulting from the diversion.
7. NJAW shall submit a status update on the performance of Wells 2800000020 (Tindik), 2800006305 (Mosie), and 2800006541 (Irons) and address how any impacts to these specific wells will be remedied.
8. NJAW shall submit a revision to the September 14, 2007 monitoring plan for long term monitoring of dedicated observation wells completed in the Upper PRM, Middle PRM, PRM confining unit, and Merchantville Woodbury confining units for Bureau of Water Allocation approval. The monitoring plan shall include the locations of observation wells, number of observation wells, monitoring schedule for continual static water level monitoring in the observation wells during the initial and final phases, reporting schedule, and how NJAW will monitor the appropriate aquifers and confining units to assess well impact issues associated with the increase in allocation. NJAW must submit background static water level measurements from all observation wells during the initial permit phase prior to the final phase of the permit becoming effective. The proposal shall be submitted within 90 days of the effective date of this permit.