State of New Jersey

CHRIS CHRISTIE
Governor

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Lt. Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION
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Trenton, NJ 08625-0420
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BOB MARTIN
Commissioner

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
70008 1140 0000 1424 8660
December 19, 2011

Re: **Draft NEW Discharge to Surface Water (DSW) Consolidated Master General Permit**
Category: BPW -Potable Water Treatment Plant (GP)
NJPDES Permit No. NJ0129500
NJPDES MASTER GENERAL PERMIT PROGRAM INTEREST
Trenton City, Mercer County

Dear Interested Parties:

Enclosed is a **draft** NEW New Jersey Pollutant Discharge Elimination System (NJPDES) Discharge to Surface Water (DSW) Consolidated Master General Permit, which has been issued in accordance with N.J.A.C. 7:14A. This permit action serves to consolidate the authorization of the discharges of similar types of wastewater from twenty-eight existing water treatment plants throughout the State.

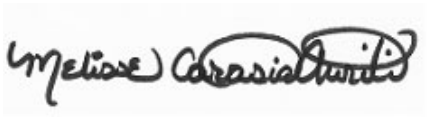
Notice of this draft permit action appeared in the Burlington County Times (Burlington County), the Courier Post Newspaper (Camden County), the Star Ledger (Essex, Somerset, Passaic and Union counties), the Trenton Times (Mercer County), the Asbury Park Press (Monmouth and Ocean counties), the Daily Record (Morris County), Today's Sunbeam (Salem County), the Courier News (Somerset, Union, Middlesex and Hunterdon counties), The New Jersey Herald (Sussex County) and in the October 5, 2011 *DEP Bulletin*. The *DEP Bulletin* is available on the internet at http://www.state.nj.us/dep/bulletin. In accordance with N.J.A.C. 7:14A-15.10(c)1i. The public comment period will close thirty days after the date of this letter. In addition, a full copy of the consolidated master general permit, including a complete description of all effluent limitations and monitoring conditions is available at www.state.nj.us/dep/dwq.

As per N.J.A.C. 7:14A-6.13(g), "Any permittee authorized by a general permit may request to be excluded from authorization under the general permit by applying for an individual NJPDES permit…" and must include in writing the reasons for the request. Individual authorizations under this consolidated master general BPW permit cannot be adjudicated whereas individual NJPDES permits are subject to the adjudication proceedings pursuant to N.J.A.C. 7:14A-17 et seq. If a permittee wishes to be excluded, they must submit a written request, within 30 days of issuance of the Final Master General Permit.

Pursuant to N.J.A.C. 7:14A-15.13 any written comments must be submitted in writing to Pilar Patterson, Chief, Bureau of Surface Water Permitting, P.O. Box 029, Trenton, NJ 08625 by the close of the public comment period. All persons, including the applicant, who believe that any condition of this draft document is inappropriate or that the Department's tentative decision to issue this draft document is inappropriate, must raise all reasonable arguments and factual grounds supporting their position, including all supporting materials, during the public comment period. The Department will respond to all significant and timely comments upon issuance of the final document. The permittee and each person who has submitted written comments will receive notice of the Department's final decision.

If you have questions or comments regarding this draft action, please contact any of the BPW Team, Michele Christopher (michele.christopher@dep.state.nj.us), Heather Genievich (heather.genievich@dep.state.nj.us) or Bela Mankad (bela.mankad@dep.state.nj.us) by email or by phone at (609) 292-4860.

Sincerely,



Melisse Carasia Auriti
Supervising Environmental Specialist
Bureau of Surface Water Permitting

Enclosures
c: Permit Distribution List
Masterfile #: 39609; PI #: 50577

Table of Contents

This DSW Consolidated Master General Permit package contains the items listed below:

New Jersey Department of Environmental Protection
Division of Water Quality
Bureau of Surface Water Permitting

PUBLIC NOTICE

Notice is hereby given that the New Jersey Department of Environmental Protection (Department) proposes to issue the NEW New Jersey Pollutant Discharge Elimination System (NJPDES) Discharge to Surface Water (DSW) Consolidated Master General Permit NJ0129500 in accordance with N.J.A.C. 7:14A-1 et seq., and by authority of the Water Pollution Control Act at N.J.S.A. 58:10A-1 et seq., for the following discharge:

This new DSW consolidated master general permit will be issued to authorize the existing discharges from twenty-eight potable water treatment plants (WTPs), into the surface waters of the State of New Jersey. The Department has determined that the wastewater characteristics, effluent limitations and monitoring conditions of the discharges are similar and as such are more appropriately controlled under a general permit. The specific limitations and monitoring conditions for each facility will be authorized through this consolidated master general permit and are summarized in the "permit summary tables." Individual authorizations will be issued for each of the twenty-eight WTPs, following the finalization of this general permit. A full copy of the consolidated master general permit, including a complete description of all effluent limitations and monitoring conditions will be made available at www.state.nj.us/dep/dwq.

As per N.J.A.C. 7:14A-6.13(d)8, the Department may notify a permittee "that a discharge is authorized by a general permit….", however, in the interest of clarity, the Department is requesting that each permittee sign an "Acknowledgement" form indicating that they understand that (1) their facility meets the eligibility criteria and is included in this Master General Permit; (2) that for those included, the "Acknowledgement" form will serve, along with their existing application already on file with the Department, as a Request For Authorization (RFA); and (3) they may "opt-out as per N.J.A.C. 7:14A-6.13(g) by making a written request (including the reasons for this decision) and submitting it within 30 days of the finalization of this Master General Permit. Individual authorizations under this consolidated master general BPW permit cannot be adjudicated whereas individual NJPDES permits are subject to the adjudication proceedings pursuant to N.J.A.C. 7:14A-17 et seq.

Although this General Permit is specifically designed for these existing twenty-eight WTPs, the Department reserves the right to include any new water treatment facilities, with similar wastewater characteristics, that have received all applicable Federal, State and local approvals, including the appropriate Departmental approvals and any necessary wastewater management plan (WMP) approvals.

This new draft NJPDES Consolidated Master General Permit has been prepared based on the administrative record which is on file at the offices of the Department, located at 401 East State Street, Trenton, New Jersey. It is available for inspection, by appointment, Monday through Friday, between 8:30 A.M. and 4:00 P.M. Appointment for inspection may be requested through the Open Public Records Act office. Details are available online at www.nj.gov/dep/opra, or by calling (609) 341-3121. Appointments for inspection of the NJPDES file only or requests for a copy of the draft document (for a nominal charge) may be made by calling Central File at (609) 292-0400.

Written comments regarding this draft document must be submitted in writing to Pilar Patterson, Chief, or Attention: Comments on Public Notice NJ0129500, at Mail Code 401-02B, Division of Water Quality, Bureau of Surface Water Permitting, P.O. Box 420, Trenton, NJ 08625-0420 by the close of the public comment period, which closes thirty calendar days after publication of this notice in the newspapers. All persons, including the applicant, who believe that any condition of this draft document is inappropriate or that the Department's decision to issue this draft document is inappropriate, must raise all reasonable arguments and factual grounds supporting their position, including all supporting materials, during the public comment period.

The Department will respond to all significant and timely comments upon issuance of the final document. The permittee and each person who has submitted written comments will receive notice of the Department's permit decision.

`New Jersey Department of Environmental Protection
Division of Water Quality
Bureau of Surface Water Permitting

FACT SHEET

Masterfile #: Varies **PI #:** Varies

This fact sheet sets forth the principle facts and the significant factual, legal, and policy considerations examined during preparation of the draft permit. This action has been prepared in accordance with the New Jersey Water Pollution Control Act and its implementing regulations at N.J.A.C. 7:14A-1 et seq. - The New Jersey Pollutant Discharge Elimination System.

PERMIT ACTION: Discharge to Surface Water (DSW) Consolidated Master General Permit

1 Background and Description of the DSW Consolidated Master General Potable Water (BPW) Permit:

In accordance with N.J.A.C. 7:14A-6.13(b)4, the New Jersey Department of Environmental Protection (hereafter "the Department") may issue one master general permit to cover a category of discharges that meet the following criteria: involve the same or substantially similar types of operations; discharge the same types of wastes; require the same or similar effluent limitations and operating conditions; require the same or similar monitoring; and in the opinion of the Department, are more appropriately controlled under a General Permit than under individual permits.

Water Treatment Plants (WTPs) operate under the Standard Industrial Code (SIC) 4941 and provide drinking water, after appropriate treatment, for domestic and industrial use. At the present time, twenty-eight WTPs in New Jersey discharge wastewater resulting from drinking water treatment to the surface waters of the State. These discharges to surface waters are currently covered under individual NJPDES/DSW permits for each WTP discharge. However, the issuance of individual NJPDES/DSW permits takes a considerably longer period of time as compared to a general permit authorization. The nature of the operations at WTPs meets all the criteria mentioned above for coverage under a General Permit. Therefore, in an effort to ensure consistency among the permits issued for all of these facilities, the Department is proposing to issue a consolidated Discharge to Surface Water (DSW) Master General BPW (category B - Potable Water) Permit (hereafter the "General Permit") to replace these existing individual WTP permits. Issuance of a General Permit serves to simplify and streamline the NJPDES permitting process, thereby making more efficient use of the permittee's and the Department's time and resources.

Although this General Permit is specifically designed for these existing twenty-eight WTPs, the Department reserves the right to include any new facilities, with similar wastewater characteristics, that have received all applicable Federal, State and local approvals, including the appropriate Departmental approvals and any necessary Wastewater Management Plan (WMP) approvals.

The Department's decision to cover existing WTP discharges under the proposed General Permit is consistent with N.J.A.C. 7:14A-6.13(d)8, which states that "the Department may notify a person (permittee) that the discharge is authorized under a general permit, even if the person (permittee) has not submitted a request for authorization." However, in accordance with N.J.A.C. 7:14A-6.13 (g) any permittee authorized by a General Permit may request to be excluded from authorization under the General Permit. Therefore, although applicable WTPs with existing individual NJPDES/DSW permits are being automatically included under the proposed General Permit at this time, the Department is requesting that the permittees submit a written acknowledgement (email or letter) of their interest to be covered under the proposed General Permit, by the close of the draft public comment period.

As per N.J.A.C. 7:14A 6.13(d)7, the Department is not requiring a separate "Request For Authorization" (RFA) for these twenty-eight facilities because each facility will sign an "Acknowledgement" form which serves as the RFA in conjunction with the current application, which is already on file with the Department. This "acknowledgement" form indicates that each permitee understands that (1) their facility meets the criteria and is included in this Master General

Permit; (2) that the "acknowledgement" form is to serve as a RFA; and (3) that they have the ability to "opt-out" and that if they choose to "opt-out", that a written request citing the reasons, must be received by the Department within 30 days of the final issuance date of this Master General Permit.

All existing facilities considered eligible under this General Permit are rated as minor facilities by the Department in accordance with the United States Environmental Protection Agency (EPA) rating criteria. Any individual authorization issued under this General Permit is given two NJPDES numbers; the NJPDES number on the individual authorization page will be specific to the individual facility whereas the NJPDES number NJ0129599 is for the master BPW permit.

The facilities to be covered under this BPW General Permit are listed in the table below.

	NJPDES #	Facility	County	Expiration Date	Renewal or R&R	Residuals Monitoring
1	NJ0034142	Aberdeen WTP/ NJ American Water	Monmouth	**2/29/2008**	**renewal**	DSW
2	NJ0034924	Atlantic Highlands WTP	Monmouth	**1/31/2011**	**renewal**	DSW
3	NJ0028649	Bordentown Water Plant	Burlington	**10/31/2011**	**renewal**	DSW
4	NJ0025721	Butler Water Department	Morris	9/30/2015	R&R	GW
5	NJ0035742	City of Salem WTP	Salem	**12/31/2011**	**renewal**	DSW
6	NJ0098540	Clyde Potts/ Southeast Morris MUA	Morris	**8/31/2009**	**renewal**	GW
7	NJ0029190	Freehold Borough WTP	Monmouth	5/31/2013	R&R	DSW
8	NJ0004731	Green Street WTP/ Mt Holly Water Co	Burlington	2/29/2012	R&R	DSW
9	NJ0035785	Green Pond Road Well Field & Treatment Plant/ Rockaway Twp	Morris	5/31/2013	R&R	none
10	NJ0031887	Harbor Road WTP/ Marlboro MUA	Monmouth	4/30/2012	R&R	DSW
11	NJ0029548	Hartford Road WTP/ Moorestown	Burlington	1/31/2012	R&R	DSW
12	NJ0068705	Heron Avenue WTP	Salem	1/31/2014	R&R	DSW
13	NJ0136603	Morris Lake WTP/ Newton	Sussex	4/30/2015	R&R	none
14	NJ0109266	Mt. Holly Water Company/ Mansfield	Burlington	**10/31/2011**	**renewal**	GW
15	NJ0025844	National Park WTP	Gloucester	1/31/2014	R&R	none
16	NJ0062111	North Jersey District Water Supply Commission (NJDWSC)	Passaic	**8/31/2010**	**renewal**	RES
17	NJ0057771	Paulsboro WTP Well #5	Gloucester	11/30/2013	R&R	none
18	NJ0026191	Paulsboro WTP Well # 4	Gloucester	11/30/2013	R&R	none
19	NJ0063711	Pequannock WTP/ Newark Watershed & Development Corp.	Passaic	10/31/2014	R&R	DSW
20	NJ0023299	Pureland WTP/ NJ American Water	Gloucester	12/31/2015	R&R	DSW
21	NJ0000965	Raritan Millstone WTP/ NJ American Water	Somerset	8/31/2014	R&R	RES
22	NJ0001198	Robert Frost Treatment Facility (Well #10)	Mercer	**11/30/2010**	**renewal**	GW
23	NJ0025453	Shorelands #1 WTP	Monmouth	5/31/2013	R&R	DSW
24	NJ0025461	Shorelands #2 WTP	Monmouth	8/31/2013	R&R	DSW
25	NJ0064271	Taylortown WTP/ Boonton	Morris	7/31/2014	R&R	DSW
26	NJ0035190	Township of North Brunswick WTP/ American Water Services	Somerset	**2/28/2011**	**renewal**	DSW
27	NJ0068730	Water Street WTP/ Pennsville Twp	Salem	1/31/2012	R&R	DSW
28	NJ0062693	Woodlane WTP/ Mt Holly Township Water Company	Burlington	**11/30/2011**	**renewal**	GW

Legend:
R&R: Revoke & Reissue
RES: A general residuals permit
GW: Discharge to Groundwater permit, which includes residuals monitoring
DSW: Discharge to Surface Water permit, which includes residuals monitoring

Of the twenty-eight water treatment plants, ten WTPs (thirteen outfalls) have at least one outfall that has not discharged since at least January 1, 2006, so there was no data to evaluate. Each of the associated permittees indicated that they wanted to continue to keep these outfalls in the permit in case there is a need to use them. Six of these ten either recycle the filter backwash back to the head of the plant or are back up plants that have not been used in many years. The remaining four of these ten WTPs have multiple outfalls which are permitted to discharge either potable water tank overflow or emergency overflows from treatment operation units.

The following table lists the facilities that have not discharged since at least January 1, 2006.

#	NJPDES #	Facility Name	Outfall	Rationale for no discharge (NODI)
1	NJ0034142	Aberdeen	001A	Filter backwash is recycled.
4	NJ0025721	Butler	003A	Overflow from potable water storage tanks
5	NJ0035742	City of Salem	002A	Only used when Lagoon #1 is out of service.
9	NJ0035785	Green Pond Road	001A	GAC filters used as backup - not used since 1989.
12	NJ0068705	Heron Avenue	001B	Backup plant – no discharge since 2002.
19	NJ0063711	Pequannock	002A 003A 004A	Emergency overflow from coagulation tank Emergency overflow from clearwell Emergency overflow from “wastewater” holding tanks
20	NJ0023299	Pureland	001A	Plant not in use.
21	NJ0000965	Raritan Millstone	001A 004A	Emergency bypass - no discharge since 2002. Filter backwash is recycled.
26	NJ0035190	Township of North Brunswick	006A	Clearwell storage tank overflow
27	NJ0068730	Water Street	001A	Filter backwash is recycled, no discharge since 1996.

In addition, there are also seven outfalls at seven plants (Freehold (001A), Hartford Road (001A), Mount Holly (001A), Paulsboro Well 5 (001A), Paulsboro Well #4 (001A), Shorelands #1 (001A), and Shorelands #2 (001A)), that rarely discharged because they are either used as a backup plant or they recycle their effluent. However, data was available for review.

Of the twenty-eight plants, seven have multiple outfalls; Butler (001A, 02A, 003A), City of Salem (001A, 002A), NJDWSC (002A, 003A), Pequannock (001A, 002A, 003A, 004A, 005A), Raritan Millstone (001A, 003A, 004A), Shorelands #2 (001B, 002B), and Twp. of North Brunswick (001A, 005A, 006A).

In summary, for the purposes of this DSW WTP General Permit universe, there are forty-one outfalls for twenty-eight facilities, of which thirteen outfalls (ten WTPs) have not discharged over the last permit cycle and seven outfalls (and WTPs) that rarely discharge, leaving a total of twenty-one outfalls that are consistently utilized.

2 Name and Address of the Applicant:

Indicated on individual authorizations

3 Name and Address of the Facility/Site:

Indicated on individual authorizations

4 Discharge Location Information and Receiving Waterbody Classification:

A copy of the appropriate section of a United States Geological Survey (USGS) quadrangle map indicating the location of the facility and discharge point(s) will be included in each individual authorization. A map depicting the locations of the included facilities is attached at the end of this Fact Sheet.

The receiving waterbody classification and outfall name for each discharge is indicated on the individual authorization page for each facility, as well as on the facility specific individual Permit Summary Tables (PSTs) located at the end of this fact sheet. Receiving waterbody classifications are obtained from N.J.A.C. 7:9B-1.1 et seq., the New Jersey Surface Water Quality Standards (SWQS). In accordance with the SWQS, saline waters are considered to be those waters classified as Saline Estuary (SE)1, SE2, SE3, or Saline Coastal (SC) and fresh waters are considered to be those waters classified as Fresh Water (FW)1 or FW2 waters. For waters with two classifications (e.g. FW2-NT/SE1), the

waterbody is defined as saline if the result of a salinity measurement exceeds 3.5 parts per thousand at mean high tide or as fresh if the salinity is less than or equal to 3.5 parts per thousand, in accordance with N.J.A.C. 7:9B-1.4.

Twenty-four of the twenty-eight WTPs covered under this General Permit discharge to FW2 waters; two (Heron Avenue, Water Street) discharge to the Delaware River Zone 5 waters; and two discharge to receiving streams with a combined classification; FW2-NT/SE1 (City of Salem) and FW2-NT/SE2 (Pureland). The table below (page 5 of 32) summarizes the receiving streams for all of the included facilities. This information is also included on the individual PSTs.

As per the SWQS at N.J.A.C. 7:9B, the designated uses for FW2, SE2 and DRBC - Zone 5 receiving waters are as follows:

FW2:
1. Maintenance, migration and propagation of the natural and established biota;
2. Primary and secondary contact recreation;
3. Industrial and agricultural water supply;
4. Public potable water supply after conventional filtration treatment (a series of processes including filtration, flocculation, coagulation, and sedimentation, resulting in substantial particulate removal but no consistent removal of chemical constituents) and disinfection; and
5. Any other reasonable uses.

SE1:
1. Shellfish harvesting in accordance with N.J.A.C. 7:12;
2. Maintenance, migration and propagation of the natural and established biota;
3. Primary and secondary contact recreation; and
4. Any other reasonable uses.

SE2:
1. Maintenance, migration and propagation of the natural and established biota;
2. Migration of diadromous fish;
3. Maintenance of wildlife;
4. Secondary contact recreation; and
5. Any other reasonable uses.

DRBC Zone 5:
The designated uses for the mainstem Delaware River and Delaware Bay are those contained in the "Delaware River Basin Commission, Water Quality Regulations, Administrative Manual - Part III," Article 3, dated October 23, 1996, including all amendments and future supplements thereto. Zone 5 is that part of the Delaware River extending from R.M. 78.8 to R.M. 48.2, Liston Point, including the tidal portions of the tributaries thereof. The quality of waters in Zone 5 shall be maintained in a safe and satisfactory condition for the following uses:
1. industrial water supplies after reasonable treatment;
2.a. maintenance of resident fish and other aquatic life,
   b. propagation of resident fish from R.M. 70.0 to R.M. 48.2,
   c. passage of anadromous fish,
   d. wildlife;
3. recreation; and
4. navigation.

The facility specific intake source water, as well as the outfall specific receiving waters and their respective classifications are summarized in the table below. Nine WTPs utilize surface water as their intake water source and nineteen use well water. Furthermore, four facilities (Clyde Potts, Morris Lake, North Jersey District Water Supply Commission (NJDWSC) and Pequannock WTP) discharge to C1 classified waters. The C1 waters are further discussed under the individual parameters in Section 6.B.

	NJPDES #	Facility	Outfall	Source Water for the WTP	Receiving Water	Receiving Water Classification
1	NJ0034142	Aberdeen WTP/ NJ American Water	001A (NODI)	Well water	Wilkson Creek	FW2-NT (C2)
2	NJ0034924	Atlantic Highlands WTP	001A	Well water	Many Mind Creek	FW2-NT (C2)
3	NJ0028649	Bordentown Water Plant	001A	Well water	Crosswicks Creek	FW2-NT (C2)
4	NJ0025721	Butler Water Department	001A 002A 003A (NODI)	Kakeout Reservoir	Stone House Brook Stone House Brook Stone House Brook	FW2-NT (C2) FW2-NT (C2) FW2-NT (C2)
5	NJ0035742	City of Salem WTP	001A 002A (NODI)	Laurel Lake	Keasbey's Creek Keasbey's Creek	FW2-NT/SE1 (C2) FW2-NT/SE1 (C2)
6	NJ0098540	Clyde Potts/ Southeast Morris MUA	001A	Clyde Potts Reservoir	Harmony Brook	FW2-TP (C1)
7	NJ0029190	Freehold Borough WTP	001A	Well water	McGellaird's Brook	FW2-NT (C2)
8	NJ0004731	Green Street WTP/ Mt Holly Water Co	001A	Well water	Rancocas Creek	FW2-NT (C2)
9	NJ0035785	Green Pond Road Well Field & Treatment Plant/ Rockaway Twp	001A	Well water	White Meadow Brook	FW2-NT (C2)
10	NJ0031887	Harbor Road WTP/ Marlboro MUA	001A	Well water	Deep Run	FW2-NT (C2)
11	NJ0029548	Hartford Road WTP/ Moorestown	001A	Well water	Kendles Run	FW2-NT (C2)
12	NJ0068705	Heron Avenue WTP	001A (NODI)	Well water	Delaware River	Zone 5
13	NJ0136603	Morris Lake WTP/ Newton	001A	Morris Lake	Morris Lake	FW2-NT (C1)
14	NJ0109266	Mt. Holly Water Company/ Mansfield	001A	Well water	Unnamed tributary to Craft's Creek	FW2-NT (C2)
15	NJ0025844	National Park WTP	001A	Well water	Hessian Run	FW2-NT (C2)
16	NJ0062111	North Jersey District Water Supply Commission	002A 003A	Wanaque Reservoir	Wanaque Reservoir Unnamed tributary to Post's Brook	FW2-TM (C1) FW2-NT (C2)
17	NJ0057771	Paulsboro WTP Well #5	001A	Well water	Mantua Creek	FW2-NT (C2)
18	NJ0026191	Paulsboro WTP Well # 4	001A	Well water	Clonmell Creek	FW2-NT (C2)
19	NJ0063711	Pequannock WTP/ Newark Watershed & Development Corp.	001A 002A (NODI) 003A (NODI) 004A (NODI) 005A	Charlotteburg Reservoir	Charlotteburg Reservoir Pequannock River Pequannock River Pequannock River Pequannock River	FW2-NT (C1) FW2-TP (C1) FW2-TP (C1) FW2-TP (C1) FW2-TP (C1)
20	NJ0023299	Pureland WTP/ NJ American Water	001A (NODI)	Well water	Wetlands to unnamed tributary to Raccoon Creek	FW2-NT/SE2
21	NJ0000965	Raritan Millstone WTP/ NJ American Water	001A (NODI) 003A 004A (NODI)	Raritan River	Raritan River via ditch Raritan River via ditch Raritan River via ditch	FW2-NT (C2) FW2-NT (C2) FW2-NT (C2)
22	NJ0001198	Robert Frost Treatment Facility (Well #10)	001A	Well water	Pond Run	FW2-NT (C2)
23	NJ0025453	Shorelands #1 WTP	001A	Well water	East Creek	FW2-NT (C2)
24	NJ0025461	Shorelands #2 WTP	001B 002B	Well water	East Creek East Creek	FW2-NT (C2) FW2-NT (C2)
25	NJ0064271	Taylortown WTP/ Boonton	001A	Boonton Reservoir	North Valhalla Brook	FW2-NT (C2)

26	NJ0035190	Township of North Brunswick WTP/ American Water Services	001A 005A 006A (NODI)	D&R Canal	D&R Canal D&R Canal D&R Canal	FW2-NT (C2) FW2-NT (C2) FW2-NT (C2)
27	NJ0068730	Water Street WTP/ Pennsville Twp	001A	Well water	Delaware River	Zone 5
28	NJ0062693	Woodlane WTP/ Mt Holly Township Water Company	001A	Well water	Unnamed tributary to Barker's Brook	FW2-NT (C2)

Water Quality Impairments: The SWQS also form the basis for the Department's Integrated Water Quality Monitoring and Assessment Report, which is developed pursuant to Sections 303(d) and 305(b) of the CWA. Sublist 5 of this Report lists the pollutant specific water quality impairments for the State's waters (303(d) list). As per New Jersey's 2008 Integrated Water Quality Monitoring and Assessment Report (which includes the 303(d) list), several of the receiving waters for the facilities covered under this General Permit are included on the 303(d) list as being impaired for various pollutants. Therefore, in accordance with N.J.A.C. 7:14A-13.5, monitoring requirements have been either retained or newly included for these pollutants in the General Permit. Receiving water specific pollutant impairments are identified on the individual PSTs at the end of this Fact Sheet.

5 Type and Quantity of the Wastes or Pollutants:

The contaminants of concern in the wastewater resulting from drinking water treatment are dependent on the source water for the WTPs, which may be either surface water or ground water. Surface water sources are expected to have a higher concentration of total suspended solids, whereas ground water sources are more likely to have a higher concentration of metals, such as iron and manganese. Therefore, the specific treatment steps utilized at WTPs vary with the nature of the source water. Typical treatment processes utilized at WTPs include oxidation, air stripping, coagulation/flocculation, sedimentation, filtration, and disinfection. Depending on the specific treatment processes utilized at a facility, the waste stream could include filter backwash, clarifier blowdown, potable water tank overflow, or water resulting from dewatering sludge and sedimentation basin cleaning. Of these processes, filtration is a treatment process that is common to both types of treatment plants, the ones that use surface water as source water as well as the ones that use ground water as source water. Filters lose their effectiveness as the filtrate accumulates and must be cleaned to avoid breakthrough. Filter cleaning is accomplished by reversing the flow of water and backwashing the filter, producing wastewater composed of the filtrate and backwash water. The filtrate includes contaminants removed from the source water as well as any additives applied to enhance their removal. Furthermore, since finished system water that enters the distribution system is often used to backwash the filters, any additives used in the finished water, such as chlorine, zinc orthophosphate, and others would also be present in the filter backwash. This General Permit covers the discharge to surface water of wastewater resulting from filter backwashing, as well as all other water treatment processes at these facilities.

The PSTs near the end of this fact sheet are for the individual facilities covered under this General Permit. These tables contain a summary of the pollutants treated and discharged from each facility as well as the proposed effluent limitations. Effluent data was obtained from the Monitoring Report Forms for the time period of January 1, 2006 to December 31, 2010. Part III of the individual authorizations will be identical to the limitations and monitoring requirements identified on the PSTs.

The individual PSTs at the end of the fact sheet list the existing permit limitations and/or monitoring requirements as well as any proposed changes for all facilities covered under this General Permit. Based on a review of the available DMR data for all the facilities covered under this General Permit, the nature of the facility's operations, the intake source water for the facility, the type of water used to backwash the filters (finished, system water or raw, source water prior to chemical addition), and the specific additives used for treatment, the proposed changes to the individual existing permit requirements have been made in this General Permit. These changes are explained in further detail under the individual affected parameters and are summarized in the table titled "WTP Consolidated General Permit (BPW): Summary of Limits and Monitoring Requirements by Parameter" found at the end of this Fact Sheet.

The following table summarizes the changes for all parameters except WET, which is discussed in further detail below in section 6.B.12 of this fact sheet. If there are no changes for a particular parameter, it is not included in this table.

						Existing		Proposed	
	NJPDES #	**Facility**	**Outfall**	**Parameter**	**Units**	**Monthly Avg.**	**Daily Max.**	**Monthly Avg.**	**Daily Max.**
1	NJ0034142	Aberdeen WTP/ NJ American Water	001A(NODI)	Manganese	µg/L	-	-	MR	MR
2	NJ0034924	Atlantic Highlands WTP	001A	Manganese	µg/L	-	-	MR	MR
3	NJ0028649	Bordentown Water Plant	001A	Phosphorus		-	-	MR	MR
4	NJ0025721	Butler Water Department	001A	Temperature	Deg C	MR	30	-	-
			002A	Temperature	Deg C	MR	30	-	-
			003A(NODI)	Temperature	Deg C	MR	30	-	-
5	NJ0035742	City of Salem WTP	001A	CPO	mg/L	-	-	MR	MR
				Phosphorus	mg/L	-	-	MR	MR
				Zinc	µg/L	-	-	MR	MR
			002A (NODI)	CPO	mg/L	-	-	MR	MR
				Phosphorus	mg/L	-	-	MR	MR
				Zinc	µg/L	-	-	MR	MR
6	NJ0098540	Clyde Potts/ Southeast Morris MUA	001A	TSS	mg/L	20	50	20	25
7	NJ0029190	Freehold Borough WTP	001A	CPO	mg/L	-	-	MR	MR
				Manganese	µg/L	-	-	MR	MR
8	NJ0004731	Green Street WTP/ Mt Holly Water Co	001A	Manganese	µg/L	-	-	MR	MR
				Phosphorus	mg/L	-	-	MR	MR
				Zinc	µg/L	-	-	MR	MR
9	NJ0035785	Green Pond Road Well Field & Treatment Plant/ Rockaway Twp	001A(NODI)	CPO	mg/L	-	-	MR	MR
				Phosphorus	mg/L	-	-	MR	MR
				Manganese	µg/L	-	-	MR	MR
				Iron	mg/L	-	-	MR	MR
10	NJ0031887	Harbor Road WTP/ Marlboro MUA	001A	Manganese	µg/L	-	-	MR	MR
11	NJ0029548	Hartford Road WTP/ Moorestown	001A	Manganese	µg/L	-	-	MR	MR
12	NJ0068705	Heron Avenue WTP	001A(NODI)	Phosphorus	mg/L	-	-	MR	MR
				Manganese	µg/L	-	-	MR	MR
				Iron	mg/L	-	-	MR	MR
				Zinc	µg/L	-	-	MR	MR
13	NJ0136603	Morris Lake WTP/ Newton	001A	TSS	mg/L	MR	20	20	40
				Temperature	Deg C	MR	MR	-	-
				Phosphorus	mg/L	-	-	MR	MR
				Zinc	µg/L	-	-	MR	MR
14	NJ0109266	Mt. Holly Water Company/ Mansfield	001A	TSS	mg/L	MR	40	20	40
				Manganese	µg/L	-	-	MR	MR
				Radium 226	PCi/L	-	-	MR	MR
				Radium 228	PCi/L	-	-	MR	MR
15	NJ0025844	National Park WTP	001A	Manganese	µg/L	-	-	MR	MR
				Iron	mg/L	-	-	MR	MR
				Radium 226	PCi/L	-	-	MR	MR
				Radium 228	PCi/L	-	-	MR	MR
16	NJ0062111	North Jersey District Water Supply Commission	002A	TSS	mg/L	20	40	20	25
				Manganese	µg/L	-	-	MR	MR
			003A	Manganese	µg/L	-	-	MR	MR
17	NJ0057771	Paulsboro WTP Well #5	001A	Manganese	µg/L	-	-	MR	MR
18	NJ0026191	Paulsboro WTP Wells # 4	001A	Manganese	µg/L	-	-	MR	MR

19	NJ0063711	Pequannock WTP/ Newark Watershed & Development Corp.	001A	NO CHANGES					
			002A(NODI)	NO CHANGES					
			003A(NODI)	NO CHANGES					
			004A(NODI)	NO CHANGES					
			005A	NO CHANGES					
20	NJ0023299	Pureland WTP/ NJ American Water	001A(NODI)	Manganese	µg/L	-	-	MR	MR
21	NJ0000965	Raritan Millstone WTP/ NJ American Water	001A(NODI)	NO CHANGES					
			003A	NO CHANGES					
			004A NODI)	NO CHANGES					
22	NJ0001198	Robert Frost Treatment Facility (Well #10)	001A	Manganese Iron Radium 226 Radium 228	µg/L mg/L PCi/L PCi/L	- - - -	- - - -	MR MR MR MR	MR MR MR MR
23	NJ0025453	Shorelands #1 WTP	001A	Phosphorus Zinc	mg/L µg/L	- -	- -	MR MR	MR MR
24	NJ0025461	Shorelands #2 WTP	001B	Phosphorus Manganese Zinc	mg/L µg/L µg/L	- - -	- - -	MR MR MR	MR MR MR
			002B	Phosphorus Manganese Zinc	mg/L µg/L µg/L	- - -	- - -	MR MR MR	MR MR MR
25	NJ0064271	Taylortown WTP/ Boonton	001A	Phosphorus	mg/L	-	-	MR	MR
26	NJ0035190	Township of North Brunswick WTP/ American Water Services	001A	NO CHANGES					
			005A	TSS Phosphorus	mg/L mg/L	20 -	60 -	20 MR	40 MR
			006A(NODI)	TSS Phosphorus	mg/L mg/L	20 -	60 -	20 MR	40 MR
27	NJ0068730	Water Street WTP/ Pennsville Twp	001A(NODI)	Phosphorus Manganese Zinc	mg/L µg/L µg/L	- - -	- - -	MR MR MR	MR MR MR
28	NJ0062693	Woodlane WTP/ Mt Holly Township Water Company	001A	Radium 226 Radium 228	PCi/L PCi/L	- -	- -	MR MR	MR MR

6 Summary of Permit Conditions:

A. Basis for Effluent Limitations and Permit Conditions – General:

The effluent limitations and permit conditions in this permit have been developed to ensure compliance with the following, as applicable:

1. NJPDES Regulations (N.J.A.C. 7:14A),
2. New Jersey Surface Water Quality Standards (N.J.A.C. 7:9B),
3. New Jersey's 2008 Integrated Water Quality Monitoring and Assessment Report (includes 305(b) Report and 303(d) List),

4. Requirements of the Delaware River Basin Commission (N.J.A.C. 7:9B-1.5(b)1) and/or Interstate Environmental Commission (N.J.A.C. 7:9B-1.5(b)2) and/or Pinelands Commission (N.J.A.C. 7:50-6.81 to 6.87) and/or the Highlands Commission (N.J.S.A. 13:20-1 et seq).,
5. Existing permit limitations in accordance with N.J.A.C. 7:14A-13.19 and 40 CFR 122.44 (antibacksliding requirements),
6. Permit limitations in accordance with N.J.A.C. 7:9B-1.5(d) (antidegradation requirements),
7. Statewide Water Quality Management Planning Rules (N.J.A.C. 7:15),
8. Sludge Quality Assurance Regulations (N.J.A.C. 7:14C)

In accordance with N.J.A.C. 7:14A-13.5, Water Quality Based Effluent Limitations (WQBELs) are imposed when it has been determined that the discharge of a pollutant causes an excursion of criteria specified in the New Jersey (State) SWQS, N.J.A.C. 7:9B-1.1 et seq., and the Federal Water Quality Standards, 40 CFR Part 131. WQBELs are authorized by Section 301 of the Clean Water Act, 40 CFR 122, N.J.S.A. 58:10A-4, and N.J.A.C. 7:14A-13.2 and 13.3. The procedures used to develop WQBELs are contained in the State and Federal Standards. Specific procedures, methodologies, and equations are contained in the current USEPA "Technical Support Document for Water Quality-based Toxics Control" (TSD) (EPA- 505/2-90-001) and are referenced in N.J.A.C. 7:14A-13.5 and 13.6.

Expression of all effluent limitations is in accordance with N.J.A.C. 7:14A-13.14 and 13.15.

As shown in the table below, loading limitations and/or monitoring requirements were specified in the existing permits of only eight of the twenty-eight WTPs. However, in accordance with N.J.A.C. 7:14A-13.14(a), due to the intermittent nature of the discharges at these facilities, any existing loading limitations specified in individual permits for these facilities have not been retained since the expression of limitations as mass is infeasible because the mass of the pollutant discharged cannot be related to a measure of operation. Since the concentration limitations have been retained and the volume of discharge is not expected to change, removal of these limitations satisfies the antibacksliding requirements of N.J.A.C. 7:14A-13.19 and the antidegradation requirements at N.J.A.C. 7:9B-1.5(d).

#	Facility Name	Outfall	TSS		COD		TOC		CPO		Iron		Phosphorus		Zinc	
			M/A	D/M	M/A	D/M	M/A	D/M	M/A	D/M	M/A	D/M	M/A	D/M	M/A	D/M
1	Aberdeen	001A (NODI)	13.6	27.1	-	-	10.2	MR	MR	0.03	1.02	2.03	MR	MR	MR	MR
4	Butler(*)	001A	0.98	1.96	-	-	-	-	MR	MR	0.07	0.14	-	-	-	-
		002A	0.45	0.9	MR	MR	-	-	-	-	0.034	0.068	-	-	-	-
5	City of Salem	001A	2.8	4.8	-	-	-	-	-	-	-	-	-	-	-	-
6	Clyde Potts	001A	-	-	-	-	-	-	MR	0.007	-	-	-	-	-	-
13	Morris Lake(**)	001A	MR	15.1	-	-	11.4	MR	MR	13.7	-	-	-	-	-	-
16	NJDWSC(***)	002A	114	227	-	-	142	MR	MR	MR	-	-	-	-	-	-
		003A	3.6	7.1	-	-	4.5	MR	MR	MR	-	-	-	-	-	-
19	Pequannock	005A	0.19	0.24	-	-	-	-	-	-	-	-	-	-	-	-
22	Robert Frost(****)	001A	1.7	3.5	-	-	2.2	MR	MR	0.0016	-	-	MR	MR	MR	MR

Legend:
M/A: Monthly Average in kg/day
D/M: Daily Max in kg/day
MR: Monitor & Report
(*): The existing permit for Butler (at DSN001A) has a CPO loading limit of 0.01 kg/day which does not become effective until 10/1/13.
(**): The existing permit for Morris Lake specifies Copper daily max loading limitation of 10.6 grams/day, but does not become effective until 4/1/15.
(***): The existing permit for NJDWSC at:
DSN002A includes a chloroform daily max loading limitation of 386 grams/day and a MR for monthly average.
DSN003A includes a monthly average and daily max of MR for chloroform
(****): The existing permit for Robert Frost also includes copper MR for loading monthly average and daily max.

B. Basis and Derivation for Effluent Limitations and Monitoring Requirements – Specific:

With the exception of the loading limitations and monitoring requirements discussed above, and the Total Suspended Solids concentration limitations for Morris Lake as discussed below, all other permit limitations and conditions in this permit action are equal to or more stringent than those contained in the existing permit. As a result, this permit action satisfies the federal and state anti-degradation regulations at 40 CFR 131.12 and N.J.A.C. 7:9B-1.5(d), and no further anti-degradation analysis is necessary.

1. Flow: This permit does not include a numerical limitation for flow. Monitoring conditions are applied pursuant to N.J.A.C. 7:14A-13.13. Due to the intermittent nature of the discharge from the facilities covered under this general permit, monitoring requirements for "Duration of Discharge" and "Total Flow" are also included in this permit. Duration of Discharge is the number of days (and not the number of times) on which a discharge occurs during a month and shall be reported as a monthly total in days/month. Therefore, if more than one discharge occurs in a day, it should only be counted as one day towards the monthly total for that month. Total Flow is the sum of the flows from each discharge event during a month and shall be reported as a monthly total in million gallons per month. Therefore, if more than one discharge occurs in a day, flow shall be measured for each discharge event to obtain the monthly total flow for that month.

2. Total Suspended Solids (TSS): The existing permits for all except two facilities (Mount Holly and Morris Lake, which are further discussed below) specify a concentration limitation of a monthly average of 20 mg/L. This limitation is consistent with recommendations presented in the USEPA memorandum dated June 13, 1974 for Water Supply Plant Permits by William Sonnett (hereafter "the Sonnett memo"). This memo identified TSS as a major pollutant of concern in discharges from WTPs and recommended that a daily maximum limitation of 60 mg/L be imposed as it was achievable using the Best Practicable Control Technology (BPT) level of treatment. However, based on the SWQS at N.J.A.C. 7:9 B-1.14(d)7, the Department has been instituting a daily maximum limitation of 40 mg/L for WTPs that discharge to receiving waters classified as FW2-Non Trout (NT), Category Two (C2) or 25 mg/L for receiving waters classified as FW2-Trout Maintenance (TM) or Trout Production (TP) waters.

   Twenty-two of the twenty-eight facilities (28 of 41 outfalls) discharge to receiving waters classified as FW2 - NT, C2 waters. For these facilities, the existing TSS limitations of 20 mg/L as the monthly average, and 40 mg/L as the daily maximum are retained in the General Permit in accordance with N.J.A.C. 7:14A-13.19. The remaining six WTPs (with 13 outfalls) are discussed below and are summarized in the following table.

#	NJPDES #	Facility Name	Receiving Water Classification	Outfall	Existing (mg/L)		Proposed (mg/L)	
					Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.
6	NJ0098540	Clyde Potts	FW2-TP (**C1**)	001A	20	50	20	25
13	NJ0136603	Morris Lake	FW2-NT (**C1**)	001A	MR	20	20	40
14	NJ0109266	Mount Holly	FW2-NT (C2)	001A	MR	40	20	40
16	NJ0062111	NJDWSC	FW2-TM (**C1**)	002A	20	40	20	25
			FW2-NT (C2)	003A	20	40	20	40
19	NJ0063711	Pequannock	FW2-NT (**C1**)	001A	20	25	20	25
			FW2-TP (**C1**)	002A(NODI)	20	25	20	25
			FW2-TP (**C1**)	003A(NODI)	20	25	20	25
			FW2-TP (**C1**)	004A(NODI)	20	25	20	25
			FW2-TP (**C1**)	005A	20	25	20	25
26	NJ0035190	Twp. of North Brunswick	FW2-NT (C2)	001A	20	40	20	40
			FW2-NT (C2)	005A	20	60	20	40
			FW2-NT (C2)	006A	20	60	20	40

The daily maximum limitations for Mount Holly and the Township of North Brunswick (DSN 002A and 003A) appear to have been based on technical errors and have been made consistent in this General Permit with all of the other plants that also discharge to FW2-NT (C2) waters. Outfall DSN 001 for the Township of

North Brunswick already had the correct limitations of 20 mg/L and 40 mg/L for the monthly average and daily maximum respectively.

Four WTPs (Clyde Potts, Morris Lake, NJDWSC (002A only), and Pequannock) discharge to Category (C1) designated waters. C1 is a designation for those State waterways that are protected from "measurable or calculable changes" in water quality. For three (Clyde Potts, NJDWSC, Pequannock) of the four plants, which have corresponding seven out of eight outfalls that discharge to C1 waters and are further classified as either FW2-Trout Maintenance (TM) (C1) or FW2-Trout Production (TP) (C1) waters, a daily maximum limitation of 25 mg/L was included based on the criteria specified for FW2-TM (C1) and FW2-TP (C1) waters in the SWQS at N.J.A.C. 7:9 B-1.14(d)7. Pequannock already had these limitations at all five outfalls in their existing permit and has consistently met the limitations. The existing permits for Clyde Potts and NJDWSC (outfall 002A) had TSS limits that the Department believes were technical errors (see the summary chart above). Therefore, based on the criteria presented in the SWQS at N.J.A.C. 7:9 B-1.14(d)7, the daily maximum limitation was changed to 25 mg/L, and is now consistent with the other TM/TP classified C1 waterways.

As mentioned above, the existing permit for one facility (Morris Lake WTP) which discharges to C1 non-trout waters, specifies a limitation of 20 mg/L as a daily maximum instead of as a monthly average. The Department believes that it was an oversight to set the maximum limit at 20 mg/L as it is inconsistent with how the Department has applied this limit in other similar facilities. To be consistent with the limitations imposed for the other twenty-four WTPs which also discharge to non-trout waters, the TSS limitations for Morris Lake shall be 20 and 40 mg/L for the monthly average and daily maximum respectively. Removal of the 20 mg/l as a daily maximum is consistent with the federal antibacksliding rules at 40 CFR 122.44(l)(2)(i)(B)(2) which allows a limitation to be made less stringent if a technical mistake was made in setting the original limit. As an existing facility with no changes to its wastewater characteristics, treatment or flow, no degradation is anticipated and no further antidegradation analysis is required pursuant to N.J.A.C. 7:9B-1.5(d).

Thus, this General Permit proposes concentration limitations of a monthly average of 20 mg/l for all of the forty-one outfalls at the twenty-eight facilities, a daily maximum of 40 mg/L for the thirty-four outfalls that discharge to FW2-NT waters and a daily maximum limitation of 25 mg/L for the seven outfalls that discharge to either FW2-TP (C1), or FW2-TM (C1) waters.

3. Total Organic Carbon (TOC): The existing permits for twenty-three facilities do not include limitations or monitoring requirements for TOC. Given that WTPs generally use high quality source waters to maximize their ability to provide a healthy and aesthetically pleasing product, TOC is not considered to be a pollutant of concern in the discharge of wastewater resulting from treating drinking water. Therefore, no new limitations or monitoring requirements for TOC have been included for these facilities in the General Permit. However, based on the minimum BOD_5 effluent standards specified at N.J.A.C. 7:14A-12.4, and the substitution of BOD_5 with TOC authorized by N.J.A.C. 7:14A-12.4(b), the existing permits for five facilities (refer to the summary chart below) specify a monthly average limitation with a daily maximum monitoring requirement. Three of these facilities (Mount Holly, NJDWSC, and Robert Frost) specify a monthly average limitation of 25 mg/L, while two (Aberdeen and Morris Lake) specify a monthly average limitation of 15 mg/L. A review of the DMR data indicates that TOC is detected in the effluent, albeit less than the limit. Therefore, these existing permit limitations and monitoring requirements are retained in the General Permit in accordance with the antibacksliding requirements at N.J.A.C. 7:14A-13.19 and 40 CFR 122.44 and the antidegradation requirements at 40 CFR 131.12 and N.J.A.C. 7:9B-1.5(d).

#	NJPDES #	Facility Name	Outfall	Existing (mg/L)		Proposed (mg/L)	
				Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.
1	NJ0034142	Aberdeen	001A	15	MR	15	MR
13	NJ0136603	Morris Lake	001A	15	MR	15	MR
14	NJ0109266	Mount Holly	001A	25	MR	25	MR

16	NJ0062111	NJDWSC	002A 003A	25 25	MR MR	25 25	MR MR
22	NJ0001198	Robert Frost	001A	25	MR	25	MR

4. Chemical Oxygen Demand (COD): As indicated in Section 6.B.3 above, given that the source waters are expected to be relatively low in organic contaminants, COD is also not considered to be a pollutant of concern in the discharge of wastewater resulting from treating drinking water. Therefore, no limitations or monitoring requirements were specified in the existing permits for twenty-one facilities. Furthermore, no new limitations or monitoring requirements for COD have been included for these facilities in the General Permit. However, the existing permits for seven facilities (listed below) include concentration limitations and/or monitoring requirements for COD. The existing permit for one facility (Taylortown) specifies concentration limitations of a monthly average of 50 mg/L and a daily maximum of 75 mg/L; the existing permits for four facilities (Clyde Potts, Green Pond, National Park, Twp. of North Brunswick) specify a daily maximum concentration limitation of 50 mg/l with a monitoring only requirement for monthly average; and the existing permits for two facilities (Butler and Harbor Road) include only monitoring and reporting requirements. A review of the available data for these two facilities with monitoring only requirements (Butler and Harbor Road) indicates that COD is detected in the effluent, albeit at very low levels, and therefore the monitoring requirements are retained in this permit. The existing permit limitations are retained in the General Permit in accordance with the antibacksliding requirements at N.J.A.C. 7:14A-13.19 and 40 CFR 122.44 and the antidegradation requirements at 40 CFR 131.12 and N.J.A.C. 7:9B-1.5(d).

   The following table summarizes the existing and proposed limits and monitoring requirements seven facilities with existing limits and monitoring requirements.

#	NJPDES #	Facility Name	Outfall	Existing (mg/L)		Proposed (mg/L)	
				Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.
4	NJ0025721	Butler	002A	MR	MR	MR	MR
6	NJ0098540	Clyde Potts	001A	MR	50	MR	50
9	NJ0035785	Green Pond	001A	MR	50	MR	50
10	NJ0031887	Harbor Road	001A	MR	MR	MR	MR
15	NJ0025844	National Park	001A	MR	50	MR	50
25	NJ0064271	Taylortown	001A	50	75	50	75
26	NJ0035190	Twp of North Brunswick	001A 005A 006A (NODI)	MR MR MR	50 50 50	MR MR MR	50 50 50

5. pH: The existing permits for two facilities (Morris Lake and Mount Holly) specify effluent limitations of a minimum of 6.5 Standard Units (S.U.) and a maximum of 8.5 S.U. These limitations are based on the SWQS at N.J.A.C. 7:9B-1.14(d) 4 and are retained in this permit. The existing permits for twenty-six facilities specify effluent limitations of a minimum of 6.0 Standard Units (S.U.) and a maximum of 9.0 S.U. These limitations are consistent with the pH limitations imposed in the majority of permits for the discharge of industrial and domestic wastewater in the State and are also consistent with the effluent quality requirements of the Delaware River Basin Commission (N.J.A.C. 7:9B-1.5(b)1) and/or Interstate Environmental Commission (N.J.A.C. 7:9B-1.5(b)2), as applicable. These existing permit limitations are retained in the General Permit in accordance with N.J.A.C. 7:14A-13.19.

6. Petroleum Hydrocarbons: The existing permits for twenty-two facilities do not include limitations or monitoring requirements for petroleum hydrocarbons. Given that WTPs generally use high quality source waters to maximize their ability to provide a healthy and aesthetically pleasing product, petroleum hydrocarbons are not considered to be a pollutant of concern in the discharge of wastewater resulting from treating drinking water. Therefore, no new limitations or monitoring requirements for Petroleum Hydrocarbons have been included for these facilities in the General Permit. However, the existing permits for six facilities (Aberdeen, Clyde Potts, Green Pond, Morris Lake, Pequannock, Township of North Brunswick) specify concentration limitations of a monthly average of 10 mg/L and a daily maximum of 15 mg/L. These

limitations are based on the effluent standards specified at N.J.A.C. 7:14A-12.8. A review of the DMR data indicates that Petroleum Hydrocarbons are detected at low levels in the effluent. Therefore, these existing permit limitations are retained in the General Permit in accordance with the antibacksliding requirements at N.J.A.C. 7:14A-13.19 and 40 CFR 122.44 and the antidegradation requirements at 40 CFR 131.12 and N.J.A.C. 7:9B-1.5(d).

7. Chlorine Produced Oxidants (CPO): Chlorine continues to be the primary disinfectant used in drinking water treatment. This is significant in that finished water, which is chlorinated, is typically used to backwash the filters. The SWQS at N.J.A.C. 7:9B-1.14 (d) specify acute and chronic criteria for CPO. Therefore, WQBELs and/or monitoring were included in 26 of the existing permits where chlorinated water (either finisher water or city water) is used to backwash the filters or chlorine is used in a treatment step prior to filtration, thereby resulting in the possibility of CPO being discharged in quantifiable amounts in the discharge. Two facilities (Harbor Road and Pureland) do not have limits or monitoring because raw unchlorinated water is used. Also, two outfalls for two facilities with several outfalls Butler (002A & 003A) and Township of North Brunswick (001A) do not need CPO limitations as those outfalls do not contain chlorine.

   In addition, there were three existing permits (City of Salem, Freehold and Green Pond) that did not have monitoring in the existing permit even though chlorinated water is believed to be in the effluent. Therefore, in accordance with N.J.A.C. 7:14A-13.5(k)3, monitoring requirements for CPO have been newly included for these facilities in the General Permit.

   Fourteen facilities have an existing daily maximum CPO concentration limitation with a monitoring requirement for monthly average. A review of the DMR data indicates that CPO is detected in the effluent. Therefore, these limitations are retained in the General Permit in accordance with N.J.A.C. 7:14A-13.19. Additionally, the existing permits for twelve other facilities specify a monitoring requirement for a monthly average and/or a daily maximum concentration. These facilities either use chlorinated water to backwash the filters or chlorine is used in a treatment step prior to discharge. WQBELs are not applicable to these facilities at this time either due to insufficient data or the availability of significant dilution in the receiving water. However, due to the possibility of CPO being detected in the effluent at these facilities, monitoring requirements have been retained in the General Permit in accordance with N.J.A.C. 7:14A-13.5(k)3.

   The table below summarizes the existing and proposed limits for CPO for each outfall at every facility.

#	NJPDES #	Facility Name	Outfall	Chlorinated/ finished water used in effluent?	Existing (mg/L)		Proposed (mg/L)	
					Monthly Avg.	Daily Max	Monthly Avg.	Daily Max
1	NJ0034142	Aberdeen WTP	001A(NODI)	yes	MR	0.04	MR	0.04
2	NJ0034924	Atlantic Highlands	001A	yes	MR	MR	MR	MR
3	NJ0028649	Bordentown Water Plant	001A	yes	MR	0.1	MR	0.1
4	NJ0025721	Butler Water Department	001A 002A 003A(NODI)	yes **no** **no**	MR - -	0.17 - -	MR - -	0.17 - -
5	NJ0035742	City of Salem WTP	001A 002A(NODI)	yes yes	- -	- -	MR MR	MR MR
6	NJ0098540	Clyde Potts/ Southeast Morris MUA	001A	yes	MR	0.051	MR	0.051
7	NJ0029190	Freehold Borough	001A	yes	-	-	MR	MR
8	NJ0004731	Green Street WTP	001A	yes	MR	MR	MR	MR
9	NJ0035785	Green Pond Road	001A	yes	-	-	MR	MR

10	NJ0031887	Harbor Road WTP	001A (raw water used)	**no**	-	-	-	-
11	NJ0029548	Hartford Road	001A	yes	MR	0.1	MR	0.1
12	NJ0068705	Heron Avenue WTP	001A(NODI)	yes	MR	MR	MR	MR
13	NJ0136603	Morris Lake WTP	001A	yes	MR	0.018	MR	0.018
14	NJ0109266	Mt. Holly/ Mansfield	001A	yes	MR	0.018	MR	0.018
15	NJ0025844	National Park	001A	yes	MR	0.02	MR	0.02
16	NJ0062111	NJDWSC	002A 003A	yes yes	MR MR	MR MR	MR MR	MR MR
17	NJ0057771	Paulsboro WTP Well #5	001A	yes	MR	MR	MR	MR
18	NJ0026191	Paulsboro Wells # 4	001A	yes	MR	MR	MR	MR
19	NJ0063711	Pequannock WTP	001A 002A(NODI) 003A(NODI) 004A(NODI) 005A	**no** **no** yes yes **no**	MR MR MR MR MR	0.01 0.01 0.01 0.01 0.01	MR MR MR MR MR	0.01 0.01 0.01 0.01 0.01
20	NJ0023299	Pureland WTP	001A(NODI) (raw water used)	**no**	-	-	-	-
21	NJ0000965	Raritan Millstone WTP	001A(NODI) 003A 004A(NODI)	yes yes yes	MR MR MR	MR MR MR	MR MR MR	MR MR MR
22	NJ0001198	Robert Frost	001A	yes	MR	0.018	MR	0.018
23	NJ0025453	Shorelands #1 WTP	001A	yes	MR	MR	MR	MR
24	NJ0025461	Shorelands #2 WTP	001B 002B	yes **no**	MR MR	0.09 0.09	MR MR	0.09 0.09
25	NJ0064271	Taylortown WTP	001A	yes	MR	MR	MR	MR
26	NJ0035190	Township of North Brunswick	001A 005A 006A(NODI)	**no** yes yes	- MR MR	- 0.02 0.02	- MR MR	- 0.02 0.02
27	NJ0068730	Water Street WTP	001A(NODI)	yes	MR	0.1	MR	0.1
28	NJ0062693	Woodlane	001A	yes	MR	0.01	MR	0.01

8. Iron (Total Recoverable (TR)): The removal of Iron at WTPs is a fundamental step in providing clean and aesthetically pleasing water to the customers. Additionally, Iron is naturally found in ground water; therefore, it is a greater parameter of concern in WTPs that use well water as the source water. As discussed earlier, there are nineteen facilities that use well water as their source water (see the chart on page 4 of this fact sheet). Iron is monitored and limited in the existing permits for four facilities (Aberdeen, Butler (001A, 002A), Green Street, and Woodlane) and is monitored in twelve others (Atlantic Highlands, Bordentown, Freehold, Harbor Road, Hartford Road, Mount Holly, Paulsboro Well #5, Paulsboro Well #4, Pureland, Shorelands #1, Shorelands #2 (001B, 002B) and Water Street). At the present time, there are no SWQS for TR Iron. However, a review of the DMR data indicates that TR Iron is consistently detected in the effluent at these facilities. Therefore, the concentration limitations of a monthly average of 1.5 mg/L and a daily maximum of 3.0 mg/L that are currently specified in the existing permits for the four facilities (Aberdeen, Butler, Green Street, and Woodlane) are retained in the General Permit in accordance with N.J.A.C. 7:14A-13.19.

   Additionally, Iron monitoring requirements have been newly included in this General Permit for four other facilities (Green Pond Road, Heron, National Park, and Robert Frost) because they use well water as their source water. Also, eight WTPs do not have monitoring requirements for Iron in their existing permits; and

furthermore none are proposed in the General Permit because they do not use well water as their source water. These include City of Salem (001A & 002A), Clyde Potts, Morris Lake, NJDWSC (002A & 003A), Pequannock, Raritan Millstone, Township of North Brunswick (001A, 005A & 006A), and Taylortown.

The following table summarizes the existing and proposed limitations and/or monitoring requirements for Iron.

#	NJPDES #	Facility Name	Outfall	Source Water for the WTP	Existing (mg/L)		Proposed (mg/L)	
					Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.
1	NJ0034142	Aberdeen WTP	001A(NODI)	Well water	1.5	3.0	1.5	3.0
2	NJ0034924	Atlantic Highlands	001A	Well water	MR	MR	MR	MR
3	NJ0028649	Bordentown Water Plant	001A	Well water	MR	MR	MR	MR
4	NJ0025721	Butler Water Department	001A 002A 003A(NODI)	Kakeout Reservoir	1.5 1.5 MR	3.0 3.0 MR	1.5 1.5 MR	3.0 3.0 MR
5	NJ0035742	City of Salem WTP	001A 002A(NODI)	Laurel Lake	none none	none none	none none	none none
6	NJ0098540	Clyde Potts/ Southeast Morris MUA	001A	Clyde Potts Reservoir	none	none	none	none
7	NJ0029190	Freehold Borough	001A	Well water	MR	MR	MR	MR
8	NJ0004731	Green Street WTP	001A	Well water	1.5	3.0	1.5	3.0
9	NJ0035785	Green Pond Road	001A	Well water	none	none	MR	MR
10	NJ0031887	Harbor Road WTP	001A (raw water used)	Well water	MR	MR	MR	MR
11	NJ0029548	Hartford Road	001A	Well water	MR	MR	MR	MR
12	NJ0068705	Heron Avenue WTP	001A(NODI)	Well water	none	none	MR	MR
13	NJ0136603	Morris Lake WTP	001A	Morris Lake	none	none	none	none
14	NJ0109266	Mt. Holly/ Mansfield	001A	Well water	MR	MR	MR	MR
15	NJ0025844	National Park	001A	Well water	none	none	MR	MR
16	NJ0062111	NJDWSC	002A 003A	Wanaque Reservoir	none none	none none	none none	none none
17	NJ0057771	Paulsboro WTP Well #5	001A	Well water	MR	MR	MR	MR
18	NJ0026191	Paulsboro Wells # 4	001A	Well water	MR	MR	MR	MR
19	NJ0063711	Pequannock WTP	001A 002A(NODI) 003A(NODI) 004A(NODI) 005A	Charlotteburg Reservoir	none none none none none	none none none none none	none none none none none	none none none none none
20	NJ0023299	Pureland WTP	001A(NODI) (raw water used)	Well water	MR	MR	MR	MR
21	NJ0000965	Raritan Millstone WTP	001A(NODI) 003A 004A(NODI)	Raritan River	none none none	none none none	none none none	none none none
22	NJ0001198	Robert Frost	001A	Well water	none	none	MR	MR
23	NJ0025453	Shorelands #1 WTP	001A	Well water	MR	MR	MR	MR
24	NJ0025461	Shorelands #2 WTP	001B 002B	Well water	MR MR	MR MR	MR MR	MR MR
25	NJ0064271	Taylortown WTP	001A	Boonton Reservoir	none	none	none	none
26	NJ0035190	Township of North Brunswick	001A 005A 006A(NODI)	D&R Canal	none none none	none none none	none none none	none none none
27	NJ0068730	Water Street WTP	001A(NODI)	Well water	MR	MR	MR	MR
28	NJ0062693	Woodlane	001A	Well water	1.5	3.0	1.5	3.0

9. Manganese (Total Recoverable): The removal of Manganese at WTPs is a fundamental step in providing clean and aesthetically pleasing water to the customers. Additionally, Manganese is naturally found in ground water; therefore, it is a greater parameter of concern in WTPs that use well water as the source water. Manganese is also introduced in the system as a component of potassium permanganate, which is often used as an oxidizing agent in drinking water treatment. Therefore, it is particularly likely to be present in the wastewater discharged from the facilities that use groundwater as source water and/or use permanganate based additives. In the existing permit, Total Recoverable (TR) Manganese is monitored and limited at one facility (Raritan Millstone) and requires monitoring at three others (Bordentown, Shorelands #1, and Woodlane). At the present time, the SWQS only specify saline criteria for Manganese. However, a review of the DMR data indicates that TR Manganese is consistently detected in the effluent. Therefore, the concentration limitations of a monthly average of 2.0 mg/L and a daily maximum of 4.0 mg/L specified in the existing permit for Raritan Millstone are retained in the General Permit in accordance with N.J.A.C. 7:14A-13.19. Consistent with the units specified in the SWQS for TR Manganese, the units specified for the concentration limitations in the existing permit for this facility have been changed from mg/L to ug/L. Thus, the concentration limitations in the existing permit for this facility are now specified as a monthly average of 2000 ug/L and a daily maximum of 4000 ug/L. Furthermore, the three facilities that currently have monitoring only requirements specified in the existing permits are facilities that use well water as source water. Therefore, the monitoring requirements specified in these permits are also retained in the General Permit.

   Additionally, TR Manganese monitoring requirements have been newly included in this General Permit for seventeen other facilities that either use well water as source water, and/or use permanganate based additives in their treatment. These facilities include: Aberdeen, Atlantic Highlands, Freehold, Green Street, Green Pond, Harbor Road, Hartford Road, Heron, Mount Holly, National Park, NJDWSC (002A, 005A), Paulsboro #5, Paulsboro #4, Pureland, Robert Frost, Shorelands #2 (001B, 002B), and Water Street.

   Seven facilities do not use well water nor permanganate as an additive and therefore no TR Manganese monitoring is proposed. These facilites include: Butler (001A, 002A, 003A), City of Salem(001A, 002A), Clyde Potts, Morris Lake, Pequannock (001A, 002A, 003A, 004A, 005A), Taylortown, Twp. of North Brunswick (001A, 005A, 006A).

   The following table summarizes the existing and proposed limits and/or monitoring requirements for Manganese.

#	NJPDES #	Facility Name	Outfall	Source Water for the WTP	Existing (mg/L)		Proposed (mg/L)	
					Monthly Avg.	Daily Max	Monthly Avg.	Daily Max
1	NJ0034142	Aberdeen WTP	001A(NODI)	Well water	none	none	MR	MR
2	NJ0034924	Atlantic Highlands	001A	Well water	none	none	MR	MR
3	NJ0028649	Bordentown Water Plant	001A	Well water	MR	MR	MR	MR
4	NJ0025721	Butler Water Department	001A 002A 003A(NODI)	Kakeout Reservoir	none none none	none none none	none none none	none none none
5	NJ0035742	City of Salem WTP	001A 002A(NODI)	Laurel Lake	none none	none none	none none	none none
6	NJ0098540	Clyde Potts/ Southeast Morris MUA	001A	Clyde Potts Reservoir	none	none	none	none
7	NJ0029190	Freehold Borough	001A	Well water	none	none	MR	MR
8	NJ0004731	Green Street WTP	001A	Well water	none	none	MR	MR
9	NJ0035785	Green Pond Road	001A	Well water	none	none	MR	MR
10	NJ0031887	Harbor Road WTP	001A (raw water used)	Well water	none	none	MR	MR
11	NJ0029548	Hartford Road	001A	Well water	none	none	MR	MR

12	NJ0068705	Heron Avenue WTP	001A(NODI)	Well water	none	none	MR	MR
13	NJ0136603	Morris Lake WTP	001A	Morris Lake	none	none	none	none
14	NJ0109266	Mt. Holly/ Mansfield	001A	Well water	none	none	MR	MR
15	NJ0025844	National Park	001A	Well water	none	none	MR	MR
16	NJ0062111	NJDWSC	002A 003A	Wanaque Reservoir	none none	none none	MR MR	MR MR
17	NJ0057771	Paulsboro Well #5	001A	Well water	none	none	MR	MR
18	NJ0026191	Paulsboro Well #4	001A	Well water	none	none	MR	MR
19	NJ0063711	Pequannock WTP	001A 002A(NODI) 003A(NODI) 004A(NODI) 005A	Charlotteburg Reservoir	none none none none none	none none none none none	none none none none none	none none none none none
20	NJ0023299	Pureland WTP	001A(NODI) (raw water used)	Well water	none	none	MR	MR
21	NJ0000965	Raritan Millstone WTP **(*)**	001A(NODI) 003A 004A(NODI)	Raritan River	2000 2000 2000	4000 4000 4000	2000 2000 2000	4000 4000 4000
22	NJ0001198	Robert Frost	001A	Well water	none	none	MR	MR
23	NJ0025453	Shorelands #1 WTP	001A	Well water	MR	MR	MR	MR
24	NJ0025461	Shorelands #2 WTP	001B 002B	Well water	none none	none none	MR MR	MR MR
25	NJ0064271	Taylortown WTP	001A	Boonton Reservoir	none	none	none	none
26	NJ0035190	Township of North Brunswick	001A 005A 006A(NODI)	D&R Canal	none none none	none none none	none none none	none none none
27	NJ0068730	Water Street WTP	001A(NODI)	Well water	none	none	MR	MR
28	NJ0062693	Woodlane	001A	Well water	MR	MR	MR	MR

(*) Note that the units for the Raritan Millstone limits are in μg/L.

10. Zinc (Total Recoverable): Zinc Orthophosphate (Klenphos) is a common additive in many water treatment facilities to assist with corrosion control. Only five facilities (Aberdeen, Bordentown, Mount Holly, Robert Frost and Woodlane) had monitoring requirements for Total Recoverable (TR) Zinc in their existing permits and as per N.J.A.C. 7:14A-13.19, are carried forward in this General Permit. Seven other facilities (City of Salem, Green Street, Heron, Morris Lake, Shorelands #1, Shorelands #2, and Water Street) also use this additive and therefore monitoring for Zinc is proposed for these facilities. The remaining sixteen facilities do not have any requirements for this parameter as it is not expected to be discharged because Zinc is not used as an additive at these facilities.

The following table summarizes the existing and proposed monitoring requirements for Zinc.

#	NJPDES #	Facility Name	Outfall	Zinc additives used?	Existing (mg/L)		Proposed (mg/L)	
					Monthly Avg.	Daily Max	Monthly Avg.	Daily Max
1	NJ0034142	Aberdeen WTP	001A(NODI)	yes	MR	MR	MR	MR
2	NJ0034924	Atlantic Highlands	001A	no	none	none	none	none
3	NJ0028649	Bordentown Water Plant	001A	yes	MR	MR	MR	MR
4	NJ0025721	Butler Water Department	001A 002A 003A(NODI)	no	none none none	none none none	none none none	none none none

5	NJ0035742	City of Salem WTP	001A 002A(NODI)	yes	none none	none none	MR MR	MR MR
6	NJ0098540	Clyde Potts/ Southeast Morris MUA	001A	no	none	none	none	none
7	NJ0029190	Freehold Borough	001A	no	none	none	none	none
8	NJ0004731	Green Street WTP	001A	yes	none	none	MR	MR
9	NJ0035785	Green Pond Road	001A	no	none	none	none	none
10	NJ0031887	Harbor Road WTP	001A (raw water used)	no	none	none	none	none
11	NJ0029548	Hartford Road	001A	no	none	none	none	none
12	NJ0068705	Heron Avenue WTP	001A(NODI)	yes	none	none	MR	MR
13	NJ0136603	Morris Lake WTP	001A	yes	none	none	MR	MR
14	NJ0109266	Mt. Holly/ Mansfield	001A	yes	MR	MR	MR	MR
15	NJ0025844	National Park	001A	no	none	none	none	none
16	NJ0062111	NJDWSC	002A 003A	no	none none	none none	none none	none none
17	NJ0057771	Paulsboro Well #5	001A	no	none	none	none	none
18	NJ0026191	Paulsboro Well #4	001A	no	none	none	none	none
19	NJ0063711	Pequannock WTP	001A 002A(NODI) 003A(NODI) 004A(NODI) 005A	no	none none none none none	none none none none none	none none none none none	none none none none none
20	NJ0023299	Pureland WTP	001A(NODI) (raw water used)	no	none	none	none	none
21	NJ0000965	Raritan Millstone WTP	001A(NODI) 003A 004A(NODI)	no	none none none	none none none	none none none	none none none
22	NJ0001198	Robert Frost	001A	yes	MR	MR	MR	MR
23	NJ0025453	Shorelands #1	001A	yes	none	none	MR	MR
24	NJ0025461	Shorelands #2 WTP	001B 002B	yes	none none	none none	MR MR	MR MR
25	NJ0064271	Taylortown WTP	001A	no	none	none	none	none
26	NJ0035190	Township of North Brunswick	001A 005A 006A(NODI)	no	none none none	none none none	none none none	none none none
27	NJ0068730	Water Street WTP	001A(NODI)	yes	none	none	MR	MR
28	NJ0062693	Woodlane	001A	yes	MR	MR	MR	MR

11. Phosphorus: Phosphorus is a component of additives, such as Polyphosphate and Zinc Orthophosphate, which are often used in drinking water treatment plants. Therefore, it has the potential to be present in the wastewater discharge from facilities that use finished water to backwash the filters. Phosphorus monitoring requirements were included in the existing permits for six such facilities (Aberdeen, Freehold, Mount Holly, Raritan Millstone (001A, 003A, 004A), Robert Frost and Woodlane), where Phosphorus containing additives were known to be used in the treatment system. In accordance with N.J.A.C. 7:14A-13.6(a) and 13.5(a), a WQBEL shall be imposed when the Department has determined that the discharge causes an excursion above the SWQS. At the present time, insufficient data exists to determine the necessity for WQBELs. Therefore, in accordance with N.J.A.C. 7:14A-13.5(k)3, the monitoring requirements specified in the existing permits for these facilities have been retained in the General Permit.

Additionally, based on information provided by the permittees regarding the additives used in their treatment system, monitoring requirements for Phosphorus have also been newly included for an additional eleven facilities that use Phosphorus based additives. These facilities with newly proposed phosphorus monitoring requirements are: Bordentown, City of Salem (001A, 002A), Green Street, Green Pond, Heron, Morris Lake, Shorelands #1, Shorelands #2 (001B, 002B), Taylortown, Twp. of North Brunswick (005A, 006A), and Water Street.

The following table summarizes the existing and proposed monitoring requirements for Phosphorus.

#	NJPDES #	Facility Name	Outfall	Phosphorus additive used?	Existing (mg/L)		Proposed (mg/L)	
					Monthly Avg.	Daily Max	Monthly Avg.	Daily Max
1	NJ0034142	Aberdeen WTP	001A(NODI)	yes	MR	MR	MR	MR
2	NJ0034924	Atlantic Highlands	001A	no	none	none	none	None
3	NJ0028649	Bordentown Water Plant	001A	yes	none	none	MR	MR
4	NJ0025721	Butler Water Department	001A 002A 003A(NODI)	no	none none none	none none none	none none none	none none none
5	NJ0035742	City of Salem WTP	001A 002A(NODI)	yes	none none	none none	MR MR	MR MR
6	NJ0098540	Clyde Potts/ Southeast Morris MUA	001A	no	none	none	none	None
7	NJ0029190	Freehold Borough	001A	yes	MR	MR	MR	MR
8	NJ0004731	Green Street WTP	001A	yes	none	none	MR	MR
9	NJ0035785	Green Pond Road	001A	yes	none	none	MR	MR
10	NJ0031887	Harbor Road WTP	001A (raw water used)	no	none	none	none	none
11	NJ0029548	Hartford Road	001A	no	none	none	none	None
12	NJ0068705	Heron Avenue WTP	001A(NODI)	yes	none	none	MR	MR
13	NJ0136603	Morris Lake WTP	001A	yes *	none	none	MR	MR
14	NJ0109266	Mt. Holly/ Mansfield	001A	yes	MR	MR	MR	MR
15	NJ0025844	National Park	001A	no	none	none	none	none
16	NJ0062111	NJDWSC	002A 003A	no no	none none	none none	none none	none none
17	NJ0057771	Paulsboro Well #5	001A	no	none	none	none	none
18	NJ0026191	Paulsboro Well #4	001A	no	none	none	none	none
19	NJ0063711	Pequannock WTP	001A 002A(NODI) 003A(NODI) 004A(NODI) 005A	no	none none none none none	none none none none none	none none none none none	none none none none none
20	NJ0023299	Pureland WTP	001A(NODI) (raw water used)	no	none	none	none	none
21	NJ0000965	Raritan Millstone WTP	001A(NODI) 003A 004A(NODI)	yes	MR MR MR	MR MR MR	MR MR MR	MR MR MR

22	NJ0001198	Robert Frost	001A	yes	MR	MR	MR	MR
23	NJ0025453	Shorelands #1 WTP	001A	yes	none	none	MR	MR
24	NJ0025461	Shorelands #2 WTP	001B 002B	yes	none none	none none	MR MR	MR MR
25	NJ0064271	Taylortown WTP	001A	yes	none	none	MR	MR
26	NJ0035190	Township of North Brunswick	001A 005A 006A(NODI)	yes	none none none	none none none	none MR MR	none MR MR
27	NJ0068730	Water Street WTP	001A(NODI)	yes	none	none	MR	MR
28	NJ0062693	Woodlane	001A	yes	MR	MR	MR	MR

12. Temperature: Temperature is limited in only one existing permit (Butler at 001A, 002A & 003A) and is monitored only in one other permit (Morris Lake). For Butler, the limitation is 30 degrees Centigrade for the daily maximum with monitoring required for the monthly average. The Response to Comments to the Amendments to the SWQS, N.J.A.C. 7:9B adopted on October 16, 2006, states that it is inappropriate to apply the temperature criteria as end-of-pipe effluent limitations; hence the Department believes that imposition of this limit was an error. Therefore, consistent with the intent of the SWQS, it is appropriate to remove it. Removal of this limitation is consistent with the antibacksliding provisions at 40 CFR 122.44(l)(2)(i)(B)(2), which allow removal of a limitation if it was imposed in error. Since the water treatment process does not include the addition of heat to the influent or effluent, no degradation will occur as a result of the removal of the limitation and/or monitoring.

13. Whole Effluent Toxicity (WET): Section 101(a) of the Clean Water Act (CWA) establishes a national policy of restoring and maintaining the chemical, physical and biological integrity of the Nation's waters. In addition, section 101(a)(3) of the CWA and the State's SWQS at N.J.A.C. 7:9B-1.5(a)4 state that the discharge of toxic pollutants in toxic amounts is prohibited. Further, 40 CFR 122.44(d) and N.J.A.C. 7:14A-13.6(a) require that where the Department determines (using site-specific WET data) that a discharge causes, shows a reasonable potential to cause, or contributes to an excursion above the SWQS, the permitting authority must establish effluent limits for WET.

    In order to determine the need for WET WQBELs, the Department has analyzed all available WET effluent data. In general, an acceptable data set consists of, at a minimum, 10 data values including the most recent 2½ years of data collection. A total of forty-one outfalls are regulated under this master general permit, and thirty-six of these have WET conditions included in their respective existing permits. The five outfalls without WET conditions in their existing permits are: Butler (003A(NODI)), Pequannock (002A (NODI), 003A(NODI), 004A(NODI)) and Township of North Brunswick (006A(NODI)). Based on the review of the applicable data sets, the Department has concluded the following:

    - The five outfalls that do not have WET requirements in their current permits are all inactive, consisting of emergency overflow from holding tanks that have not discharged between 1/1/06 and 12/31/10. One of these five outfalls (Butler 003A) is an emergency discharge from potable water tanks and as such, no WET testing is imposed consistent with Department policy. The other four outfalls, Pequannock (002A, 003A, 004A) and Township of North Brunswick (006A), have not discharged since before the last permit cycle and are not expected to. However, Acute WET testing requirements are included for these outfalls if they do discharge. The monitoring frequency is once per five years, if they discharge.

#	Facility	Outfall	Type of wastewater	Existing permit	Proposed Monitoring and frequency
4	Butler	003A (NODI)	Overflow from Potable Water Tanks	No WET requirements	No WET Testing Required
19	Pequannock	002A (NODI)	Emergency Overflow from Coagulation Tank	No WET requirements	Acute WET (cerio) (maximum of 1/ 6 months)

19	Pequannock	003A (NODI)	Emergency Overflow from Clearwell	No WET requirements	Acute WET (cerio) (maximum of 1/ 6 months)
19	Pequannock	004A (NODI)	Emergency Overflow from Wastewater Holding Tanks	No WET requirements	Acute WET (cerio) (maximum of 1/ 6 months)
26	Twp. of North Brunswick	006A (NODI)	Emergency Overflow from Clearwell	No WET requirements	Acute WET (cerio) (maximum of 1/ 6 months)

- Of the remaining thirty-six outfalls authorized under this permit, WET was not found in quantifiable amounts in the effluent at thirty-one of the outfalls. As a result, the existing WET conditions were carried forward for these thirty-one outfalls.

- WET was found in quantifiable amounts in the effluent at five of the outfalls regulated under this permit. Therefore, further analyses have been conducted for WET on these 5 outfalls. See the table below for a summary of the WQBEL analyses results.

Cause Analysis:

For WET, a cause analysis was conducted for five outfalls at four facilities in accordance with N.J.A.C. 7:14A-13.5. These five outfalls all had data showing toxicity in the effluent. When the maximum effluent value (in toxic units) exceeds the applicable site specific wasteload allocation (in toxic units), the discharge is shown to cause an exceedance of the SWQS. All of the calculation inputs for these five facilities are shown in the table below.

Using the steady state mass balance equation, acute and chronic wasteload allocations were developed utilizing the narrative criteria for toxic substances (general) specified in the SWQS at N.J.A.C. 7:9B, the permittee's long-term average flow, and MA1CD10 (1Q10) and MA7CD10 (7Q10) stream design low flows values. The 7Q10 stream design flow is utilized for the chronic calculations, while the 1Q10 stream design flow is utilized for acute calculations. Consistent with the recommendations of section 2.3.3 of the TSD, values of 0.3 acute toxic unit (TU_a) and 1.0 chronic toxic unit (TU_c) were used to interpret the narrative water quality criteria for WET contained at N.J.A.C. 7:9B-1.14(c) (see Response to Comments 13-74 through 13-89, 29 NJR 1861, (May 5, 1997)).

The time period of effluent data that was utilized for these analyses is specified for each facility in the table below.

The maximum effluent data value for each facility was compared to the site specific wasteload allocation to determine whether or not the discharge causes an exceedance of the chronic interpretation of the narrative criteria for WET identified in the SWQS.

Reasonable Potential to Cause:

For WET, a reasonable potential to cause analysis was conducted in accordance with N.J.A.C. 7:14A-13.5. When the projected maximum effluent value (in toxic units) exceeds the applicable site specific wasteload allocation (in toxic units), the discharge is shown to have reasonable potential to cause or contribute to an exceedance of the SWQS.

The projected maximum effluent value was calculated utilizing the procedures specified in section 3.0 of the TSD. For these analyses, the chronic reasonable potential multiplying factor (R.P.M.F.) was based on the number of data values in the applicable database specified in the table below, a coefficient of variation (CV), a 95% confidence level and a 95% probability basis (refer to Table 3.1 of the TSD). Multiplying the R.P.M.F. with the maximum data value results in a projected maximum data value. If the projected maximum data value exceeds the applicable site specific wasteload allocation, the discharge has reasonable potential to cause an exceedance of the chronic interpretation of the narrative criteria for WET identified in the SWQS.

Water Quality Based Effluent Limitation Derivation:

Five facilities covered under this general permit had sufficient data with consistently detected levels of toxicity to warrant WQBEL analyses. Of these five facilities, the discharge from the Clyde Potts WTP was not found to cause or have reasonable potential to cause an exceedance of the chronic interpretation of the narrative criteria for WET identified in the SWQS, therefore no new WQBELs have been calculated in this permit action. As a result, a requirement to monitor only for chronic toxicity has replaced the existing limitation for this facility in the General Permit.

The discharges from the other four facilities that were evaluated for WQBELs were found to cause an exceedance of the chronic interpretation of the narrative criteria for WET identified in the SWQS. As a result, WQBELs have been calculated in accordance with N.J.A.C. 7:14A-13.6(a), 40 CFR 122.44(d), and the TSD.

To enable a comparison between acute and chronic WET limits, the acute WLA (WLA_a) was translated to equivalent chronic toxic units (WLA_{ac}) by multiplying the WLA_a by a default acute to chronic ratio (ACR) of 10.

The acute and chronic WLAs were then converted to an acute Long Term Average (LTA_{ac}) and a chronic LTA (LTA_c) using a chronic CV and multipliers for the acute and chronic LTAs respectively. A site-specific CV was used for both outfalls at the North Jersey District Water Supply Commission (NJDWSC), while a default CV of 0.6 was used for the Morris Lake WTP and Robert Frost WTP. The LTA multipliers are based on the 99th percentile consistent with Response to Comments 13-74 through 13-89, 29 NJR 1861 and are found on Page 102 of the TSD. The resultant long term average values were evaluated and the more protective (e.g. lower) value selected for translation into a daily maximum WET limit using the applicable 99th percentile multiplier, as found on Page 103 of the TSD.

The daily maximum chronic WET limit in TU_cs was then converted to a permit limitation expressed as an IC25 (% effluent).

The discharges from the Morris Lake WTP and both outfalls at the NJDWSC are continuous, therefore, the calculated effluent limitations are appropriately expressed as IC25 as shown in the table below. The discharge from the Robert Frost WTP is intermittent, therefore, the calculated chronic limitations are inappropriate as a measure of toxicity and since the equivalent LC50 limit is greater than 100%, the applicable limit is an NOAEC = 100% due to the intermittent nature of the discharge, for which the Department has determined that chronic conditions in the receiving water should not occur. It was determined that the calculated chronic toxicity limit would not be representative for 7-day survival and growth measurement of WET and that the acute toxicity would be a more appropriate measure.

In accordance with N.J.A.C. 7:14A-6.4(a) and 13.21(b), a schedule to achieve compliance with the new acute and chronic WET WQBELs has been included in this permit. For the Robert Frost WTP and both outfalls at the NJDWSC, there are no existing WET limitations, so interim monitoring and reporting requirements have been included as authorized by N.J.A.C. 7:14A-6.2(a)14. For these three outfalls at the Robert Frost WTP and the NJDWSC, **the final effluent limitations will become effective three years from the effective date of the permit (EDP + 3 years).** For the Morris Lake WTP, the newly calculated WET limitation is less stringent than the existing WET limitation, therefore a compliance schedule is not necessary and **the final effluent limitation will become effective on the effective date of the permit authorization (EDPA)**. Language has been included in Part IV Section G of the permit to allow the Department to extend that compliance date where the permittee is conducting a toxicity investigation as specified in Part IV of the permit, but has not yet attained consistent compliance with the acute or chronic WET limit.

The test species method to be used for acute testing is specified in each individual permit summary table. For discharges going to freshwater receiving streams the more sensitive species as specified in each permit summary table is either the Fathead minnow (*Pimephales promelas*) 96 hr definitive test or the *Ceriodaphnia*

dubia 48 hr definitive test. If the discharge goes to a saline waterbody the test species method shall be the *Mysidopsis bahia* 96 hour definitive test. Such selection is based on the salinity of the receiving stream, the existing permit, N.J.A.C. 7:9B-1.5 and N.J.A.C. 7:18, the Regulations Governing the Certification of Laboratories and Environmental Measurements (N.J.A.C. 7:18).

The test species method to be used for chronic testing is specified in each individual permit summary table and for discharges going to freshwater receiving streams shall be the Fathead minnow (*Pimephales promelas*) 7-day larval survival and growth test, 40 CFR 136.3, method 1000.0. or the *Ceriodaphnia dubia,* Survival and Reproduction Test, 40 CFR 136.3, method 1002.0. If the discharge goes to a saline waterbody, the test species method shall be the *Mysidopsis bahia,* Survival, Growth, and Fecundity Test, 40 CFR 136.3, method 1007.0. Such selection is based on the salinity of the receiving stream, the existing permit, N.J.A.C. 7:9B-1.5 and the Department's "Chronic Toxicity Testing Specifications for Use in the NJPDES Permit Program" document. This document is included as Appendix A of this permit, in accordance with N.J.A.C. 7:14A-6.5, 11.2(a)2.iv and 40 CFR Part 136.

The Toxicity Reduction Implementation Requirements (TRIR) are included in accordance with N.J.A.C. 7:14A-13.17(a), 7:14A-6.2(a)5 and recommendations in Section 5.8 of the TSD. The requirements are necessary to ensure compliance with the applicable WET limitation on its effective date and to expedite compliance with the WET limitation should exceedances of the WET limitation occur. As included in section B.1 of the TRIR requirements, the initial step of the TRIR is to identify the variability of the effluent toxicity and to verify that a consistent toxicity problem does in fact exist.

Effluent samples for conducting WET testing are to be collected after the last treatment step, consistent with the collection location for all other parameters.

The following table summarizes the calculation inputs utilized for the cause, reasonable potential analyses and limitations for the five outfalls.

Facility	**Clyde Potts WTP**	**Morris Lake WTP**	**NJDWSC**	**NJDWSC**	**Robert Frost WTP**
Outfall	001A	001A	002A	003A	001A
Continuous?	Yes	Yes	Yes	No	No
Acute WLA (TU_as)	1.59	0.3	0.3	0.3	0.3
Chronic WLA (TU_cs)	5.31	1.0	1.0	1.0	1.0
LTA flow (MGD)	0.015	0.094	0.60	0.012	0.04
1Q10 (cfs)	0.1	0	0	0	0
7Q10 (cfs)	0.1	0	0	0	0
Data (Mo/Yr – Mo/Yr)	3/06 – 9/10	3/06 – 12/07	2/06 – 9/10	2/06 – 9/10	5/06 – 12/10
Max data value (TU_cs)	3.18	2.34	52.63	35.71	47.62
Does N_{max} exceed WLA?	No	Yes	Yes	Yes	Yes
Chronic RPMF	1.389	1.9	2.902	2.073	1.63
# data values	19	8	11	11	12
CV	0.6	0.6	1.63	0.91	0.6
Projected value (TU_cs)	4.42	4.45	152.72	74.04	77.49
Does Np exceed WLA?	No	Yes	Yes	Yes	Yes
ACR	10	10	10	10	10
LTA (TU_{ac}s)	5.11	0.96	0.96	0.96	0.96
LTA (TU_cs)	2.80	0.53	0.25	0.40	0.53
Acute multiplier	0.321	0.321	0.321	0.321	0.321
Chronic multiplier	0.527	0.527	0.245	0.40	0.527
DAMX limit (TU_cs)	8.72	1.64	1.81	1.81	1.64
Existing Limit	21	73	No limit	No limit	No limit
New IC25 limit (% effluent)	**MR**	**61**	**55**	**55**	--
New NOAEC limit	--	--	--	--	**100**

Footnotes:

WLA: wasteload allocation	RPMF: reasonable potential multiplying factor
TU_as: acute toxic units	CV: coefficient of variation
TU_cs: chronic toxic units	N_p: maximum projected data value
LTA: long term average	ACR: acute to chronic ratio
MGD: million gallons per day	DAMX: daily maximum
cfs: cubic feet per second	IC25: Inhibition concentration affecting 25% of test organisms
N_{max}: maximum data value	NOAEC: No Adverse Effect Concentration

Antibacksliding/Antidegradation:

The WET limitation contained in this permit for the Morris Lake WTP is numerically less stringent than the limitation in the existing permit. The reevaluation of the limitation was prompted by new information including more recent chronic WET test results (coefficients of variation).

The methodology for development of WET limitations includes using information including stream low flow statistics, current effluent data and measurements of effluent variability. This input data has changed since the permit was last issued (for actual values, see the basis section above). The State regulations at N.J.A.C. 7:14A-13.19(a) and federal statues at 40 CFR 122.44 allow for backsliding if information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance. In the case of this modification, such a situation exists. Therefore, the Department is justified in modifying the WET limitation in this fashion.

The SWQS for WET does not establish an acceptable level of toxicity for a receiving water, but rather requires "no toxics in toxic amounts". Since WET limitations are not expressed as concentrations or loadings that can be related to an instream concentration or mass, but rather as a measure of the aggregate toxicity of the effluent, any change in quality of the receiving waters must be measured using the SWQS directly. The chronic WET WQBELs proposed in this draft general permit have been developed to assure that the SWQS continue to be met *and* met without an increase in instream toxicity.

The numerical difference in the limitations is a result of the refinement of the method for developing WET limits and new effluent data. As such, there will be no change in instream toxicity as a result of the change in the effluent limitation so that the antidegradation requirements set forth in N.J.A.C. 7:9B-1.5(d) are satisfied and further antidegradation analysis is not required.

WET Monitoring Frequencies

- Acute WET – once per five years

The majority of outfalls that are regulated under this master general permit are intermittent in nature, which determines that acute WET conditions are appropriate rather than chronic WET. Many of these intermittent discharges are infrequent and have historical data showing high quality WET test results, justifying a lower frequency monitoring requirement. Specifically, twenty-nine outfalls at twenty-four water treatment plants have a requirement to monitor acute WET (LC50) **once per five years**.

- Acute NOAEC – once per six months

One outfall at the Robert Frost WTP has an NOAEC limit, which is determined when the calculated LC50 is >100% and the equivalent chronic (IC25) limit is not appropriate due to the intermittent nature of the discharge. This outfall has a requirement to conduct WET testing **once per six months**.

- Chronic WET – once per year

The chronic IC25 monitoring frequency is **once per year** for three outfalls covered by this permit, including DSN 001A at the Clyde Potts WTP, DSN 005A at the Pequannock WTP, and DSN 001A at the Township of North Brunswick WTP. Clyde Potts is the only outfall of these three that has an IC25 limitation, however, the data set consists of seventeen results of IC25 > 100% and only two detected data values, therefore, annual monitoring is sufficient.

- Chronic WET – once per six months

Three outfalls regulated under this permit have chronic IC25 limitations with a requirement to conduct WET testing **once per six months**. These three outfalls are DSN 001A at the Morris Lake WTP and DSN 002A and 003A at the NJDWSC. Toxicity has been consistently detected at these three outfalls which discharge frequently, justifying the once per 6 months testing requirement.

14. Toxics (Acids, Base/Neutrals, Metals, Pesticides, and Volatiles): The SWQS at N.J.A.C. 7:9B specify freshwater and saline criteria for several Acids, Base/Neutrals, Metals, Pesticides, and Volatiles. In accordance with N.J.A.C. 7:14A-13.6(a), a WQBEL shall be imposed when the Department determines pursuant to N.J.A.C. 7:14A-13.5 that the discharge of a pollutant causes an excursion above a SWQS. In order to evaluate the necessity for WQBELs, the Department reviewed all available data that was submitted based on the monitoring requirements specified in the existing permits for these facilities.

    The existing permits for most facilities specified only monitoring requirements for the toxic pollutants. Due to differences in the size and frequency of the discharge amongst these facilities, monitoring requirements for the toxic pollutants were included at varying frequencies in the individual existing permits. Although a few of the existing permits did not include any monitoring requirements for the toxic pollutants, several existing permits specified a once per permit cycle monitoring frequency; a few specified a twice per permit cycle monitoring frequency; some specified an annual monitoring frequency; and only two facilities specified a semi-annual monitoring frequency for these pollutants.

    Although insufficient data exist at the present time to evaluate the necessity for WQBELS for the toxic pollutants, a review of the available collective data from all the facilities indicates that these pollutants are not discharged in quantifiable amounts in the effluent. Therefore, further analyses were not conducted for these pollutants. However, monitoring and reporting requirements have been retained in the General Permit based on N.J.A.C. 7:14A-13.5(k)3 and the need to re-evaluate the necessity for WQBELs upon renewal of the permit.

    Although Copper, Nickel and Chloroform were found to be discharged in quantifiable amounts in the effluent at four facilities (Nickel at Bordentown; Copper at Bordentown, Morris Lake and Robert Frost; and Chloroform at NJDWSC (003A)), a review of the effluent data for these facilities indicates that none of these pollutants are discharged at levels above the SWQS. Since there is no cause or reasonable potential to cause an excursion of the SWQS, WQBELS were not calculated for these pollutants. However, monitoring and reporting requirements have been retained in the General Permit based on N.J.A.C. 7:14A-13.5(k)3 and the need to re-evaluate the necessity for WQBELs upon renewal of the permit.

    Effluent limitations for a toxic pollutant were included in the existing permits for two facilities: NJDWSC (002A) and Morris Lake. The existing permit for NJDWSC (002A) specifies an effluent limitation of 68 ug/L for Chloroform, which became effective on August 1, 2010. Therefore, it has been retained in the General Permit in accordance with N.J.A.C. 7:14A-13.19 and N.J.A.C. 7:9B-1.5(d). The existing permit for Morris Lake WTP, which became effective on May 1, 2010, specifies a daily maximum limitation of 14 ug/L for Copper, which was to become effective in the Final Phase on April 1, 2015. Monitoring only requirements were included in the Initial and Interim Phases, which cover the time period of May 1, 2010 to March 31, 2015. A review of the effluent data for the time period of March 2008 through July 2011, which includes eighteen data values, indicates that all data values, except two results of 44 ug/L and 47 ug/L, were non-detectable values. It is Departmental policy not to calculate WQBELs when there are only two detectable values. Since the Final Phase limitation has not yet become effective, it has not been retained in the individual authorization for this facility in the General Permit. However, monitoring is retained in this General Permit to ensure that copper levels remain non-detectable, as further discussed below.

    Antibacksliding/Antidegradation for Copper (Morris Lake WTP):

    Because the copper limitation specified in the existing permit has not yet become effective, removal of the proposed limitation does not require compliance with anti-backsliding in accordance with N.J.A.C. 7:14A-

13.19, nor an additional anti-degradation analysis of the receiving water. At this time there is insufficient data to calculate a WQBEL as only two data points of eighteen are detectable. In accordance with N.J.A.C. 7:14A-13.5(k)3, monitoring requirements for Copper have been retained in the individual authorizations, which will provide sufficient data to re-evaluate the applicability of WQBELs upon renewal of the permit.

15. Radium 226 and Radium 228: These radiological parameters are pollutants of concern in drinking water treatment plants that use groundwater as the source water. Furthermore, they have the potential to be concentrated in the greensand filters used at some of these treatment plants and as a result, be present in the backwash water. Although there are no SWQS for these radiological parameters at the present time, the Department is investigating their presence in the discharge from such facilities. Therefore, for the four facilities that use ground water as the source water and provide filtration using greensand filters, monitoring requirements have been included for these parameters. These facilities include: Mount Holly, National Park, Robert Frost and Woodlane. The presence of radium has been confirmed at one facility, the Bordentown WTP, and the requirement to monitor these radiological parameters on a quarterly basis is retained from the existing permit.

C. Monitoring Frequencies:

The discharge frequencies vary widely for the forty-one outfalls at the twenty-eight water treatment plants covered under this permit. The Department intends to make the monitoring frequencies as consistent as was possible based on the existing permit, the discharge frequency, the receiving stream and the types of parameters (flow, conventionals, toxics, WET/ WCR parameters) for each outfall. Some plants discharge continuously, some discharge one to three times a day or one time per month, and some plants have not discharged in many years because they recycle their filter backwash to the head of the plant or they are only used intermittently as a back up plant. These varied discharge frequencies require varied monitoring frequencies to sufficiently capture effluent data that is representative of each respective discharge. The table below summarizes the monitoring frequencies for the various outfalls for each of the types of parameters.

Sample Types: The required sample types for the twenty-eight facilities are “grab” for all parameters except flow and WET. The flow sample type is metered, calculated or measured and the WET sample type is composite.

Flow parameters: Monitoring requirements have been included for three flow parameters, namely, Flow, Total Flow, and Duration of Discharge at every outfall for all the facilities covered under this General Permit. The monitoring frequency for these parameters is based on the size and frequency of the discharge.

Of the forty-one outfalls regulated at the twenty eight facilities covered under this General Permit, there has been **no discharge** at **ten facilities (thirteen outfalls)** in the most recent permit cycle, as evidenced by the DMR data, which is coded as NODI in this time period. These facilities, with their respective outfalls that did not discharge are as follows: Aberdeen, Butler (003A only), the City of Salem (002A only), Green Pond, Heron Avenue, Pequannock (002A, 003A & 004A), Pureland, Raritan Millstone (001A and 004A only) Twp. of North Brunswick (006A only) and Water Street. In addition, there are **seven plants (eight outfalls) that have very infrequent discharges**: Freehold, Hartford Road, Mount Holly, Paulsboro Well #5, Paulsboro Well #4, Shorelands #1, and Shorelands #2 (001B, 002B). Therefore, the monitoring frequency for the flow parameters at these seventeen plants (twenty-one outfalls) is specified at once per discharge, in case they are needed in the future.

Based on the discharge frequency at an outfall, various monitoring frequencies for flow have been specified at the forty one outfalls in the General Permit. These include **once per discharge for twenty-one outfalls**; **once per six months for six outfalls**; **once per quarter for one outfall** (Clyde Potts); and **once per month for thirteen outfalls**. See the summary table below for the details for each type of parameter.

Conventional parameters: The monitoring frequencies for pH, TSS, CPO, Petroleum Hydrocarbons, and TOC vary from once per month to once per discharge. Thirteen outfalls have monitoring frequencies for the conventional parameters set at **once per month** and one facility (Clyde Potts) has retained **a once per quarter** frequency due to the more frequent nature of their discharge. Six outfalls have monitoring frequencies set at **once**

per six months due to the less frequent nature of their discharge, and twenty-one outfalls have monitoring frequencies set at **once per discharge** due to the very infrequent nature of their discharge.

Toxic Compounds and WET: A full priority pollutant (PP) scan including acids, base/neutrals, metals, pesticides, and volatiles is required from each facility as part of the WCR. During the initial review of all of the existing permits for all of the facilities, the Department found that the monitoring frequencies for the PP scan and WET were highly variable. After the review of the existing data, the receiving streams, the type of discharge and the frequency of the discharge, the Department was able to group most of the outfalls into three primary frequencies: once per discharge, once per six months and once per five years. There were five that didn't exactly fit and were therefore combined based on their existing data, discharge frequency, and receiving stream, as needed. These frequencies are summarized in the chart below.

As discussed above, the monitoring frequencies for WET and the WCRs are correlated in order to attain consistency as much as is possible across the range of water treatment plant outfalls. The Department evaluated all available DMR, WCR and WET data for the time period of January 1, 2006 through December 31, 2010 and compared existing monitoring frequencies to the frequency of the discharges to attain the most consistency among the forty-one outfalls. WET/ WCR monitoring frequencies are set at **once per five years** for twenty-four outfalls (at twenty-one WTPS), **once per year** for 1 outfall (Clyde Potts), **once per six months** for four outfalls (Morris Lake (001A), NJDWSC (001A, 002A), and Robert Frost (001A). Seven outfalls have no requirements because they either do not discharge or are not representative (where another outfall at the same facility is representative). These seven include: Butler's 002A (NODI), City of Salem's 002A (NODI), Pequannock's 001A, 002A, 003A, 004A, and the Township of North Brunswick's 006A (NODI). There are five outfalls (Pequannock (005A), Raritan Millstone (001A, 003A, 004A) and Taylortown (001A)) that don't fit the above referenced categories and based on their size, existing discharge frequency, they have **combined frequencies as noted in the table below.** Pequannock's 005A has a once per year frequency for WET and a once per five years frequency for the WCR parameters. Raritan Millstone's 001A (NODI) and 004A (NODI) include a WET frequency of once per five years and no WCR requirements. Raritan Millstone's 003A is the main discharge point and has a WET frequency of once in five years and retained a WCR frequency of once per year. Taylortown's 001A has a once per year frequency for the metals component of the WCR, and a once per five year frequency for WET and the other WCR constituents (acids, base neutrals and pesticides).

Some toxics (Chloroform, Copper, Iron, Manganese, and Zinc) and Phosphorus (as an additive) are included on the DMR rather than the WCR as they are expected to be present in the discharge. These parameters are discussed individually in Section B above. On the DMRs, the toxics are required to be monitored at a frequency of **once per month** at one outfall (Raritan Millstone: where Manganese is limited), **once per six months** at sixteen outfalls, and **once per discharge** at seventeen outfalls. The table below summarizes the proposed monitoring frequencies at each of the facility outfalls.

			PROPOSED Monitoring Frequencies			
NJPDES #	**Facility Name**	**Outfall**	**DMR Flow**	**DMR Conventionals**	**DMR Toxics & Phosphorus**	**WCR & WET**
NJ0034142	Aberdeen WTP	001A(NODI)	1/ discharge	1/ discharge	1/ discharge	1/ 5 years
NJ0034924	Atlantic Highlands	001A	1/ 6 months	1/ 6 months	1/ 6 months	1/ 5 years
NJ0028649	Bordentown WTP	001A	1/ month	1/ month	1/ 6 months (radium 1/ quarter)	1/ 5 years
NJ0025721	Butler Water Department	001A 002A 003A(NODI)	1/ 6 months 1/ 6 months 1/ discharge	1/ 6 months 1/ 6 months 1/ discharge	1/ 6 months 1/ 6 months 1/ discharge	1/ 5 years 1/ 5 years --
NJ0035742	City of Salem WTP	001A 002A(NODI)	1/ 6 months 1/ discharge	1/ 6 months 1/ discharge	1/ 6 months 1/ discharge	1/ 5 years --
NJ0098540	Clyde Potts/ Southeast Morris MUA	001A	1/ quarter	1/ quarter	1/ quarter	1/ year

NJ0029190	Freehold Borough	001A- infrequent discharge	1/ discharge	1/ discharge	1/ discharge	1/ 5 years
NJ0004731	Green Street WTP	001A	1/ month	1/ month	1/ 6 months	1/ 5 years
NJ0035785	Green Pond Road	001A(NODI)	1/ discharge	1/ discharge	1/ discharge	1/ 5 years
NJ0031887	Harbor Road WTP	001A	1/ month	1/ month	1/ 6 month	1/ 5 years
NJ0029548	Hartford Road	001A- infrequent discharge	1/ discharge	1/ discharge	1/ discharge	1/ 5 years
NJ0068705	Heron Avenue WTP	001A(NODI)	1/ discharge	1/ discharge	1/ discharge	1/ 5 years
NJ0136603	Morris Lake WTP	001A	1/ month	1/ month	1/ 6 month	1/ 6 month
NJ0109266	Mt. Holly/ Mansfield	001A- infrequent discharge	1/ discharge	1/ discharge	1/ discharge	1/ 5 years
NJ0025844	National Park WTP	001A	1/ month	1/ month	1/ 6 month	1/ 5 years
NJ0062111	NJDWSC	002A 003A	1/ month 1/ month	1/ month 1/ month	1/ 6 month 1/ 6 month	1/ 6 months 1/ 6 months
NJ0057771	Paulsboro Well #5	001A- backup plant	1/ discharge	1/ discharge	1/ discharge	1/ 5 years
NJ0026191	Paulsboro Well # 4	001A- backup plant	1/ discharge	1/ discharge	1/ discharge	1/ 5 years
NJ0063711	Pequannock WTP	001A 002A(NODI) 003A(NODI) 004A(NODI) 005A	1/ 6 months 1/ discharge 1/ discharge 1/ discharge 1/ month	1/ 6 months 1/ discharge 1/ discharge 1/ discharge 1/ month	-- 1/ discharge 1/ discharge 1/ discharge --	-- WET- 1/5 years WET- 1/5 years WET- 1/5 years 1/ yr-WET & 1/5 years WCR
NJ0023299	Pureland WTP	001A(NODI)	1/ discharge	1/ discharge	1/ discharge	1/ 5 years
NJ0000965	Raritan Millstone WTP	001A(NODI) 003A 004A(NODI)	1/ discharge 1/ month 1/ discharge	1/ discharge 1/ month 1/ discharge	1/ discharge 1/ month 1/ discharge	WET 1/ 5 yrs: NO WCR WET=1/ 5 yr: 1/ yr WCR WET=1/ 5 yr: NO WCR
NJ0001198	Robert Frost	001A	1/ month	1/ month	1/ 6 months	1/ 6 months
NJ0025453	Shorelands #1 WTP	001A- infrequent discharge	1/ discharge	1/ discharge	1/ discharge	1/ 5 years
NJ0025461	Shorelands #2 WTP	001B- infrequent 002B- infrequent	1/ discharge 1/ discharge	1/ discharge 1/ discharge	1/ discharge 1/ discharge	1/ 5 years 1/ 5 years
NJ0064271	Taylortown WTP	001A	1/ month	1/ month	1/ 6 month	Metals: 1/ yr A, BN & P & WET: 1/ 5 years
NJ0035190	Township of North Brunswick	001A 005A 006A(NODI)	1/ month 1/ 6 months 1/ discharge	1/ month 1/ 6 months 1/ discharge	1/ month 1/ 6 months 1/ discharge	1/ 5 years 1/ 5 years WET- 1/5 years
NJ0068730	Water Street WTP	001A(NODI)	1/ discharge	1/ discharge	1/ discharge	1/ 5 years
NJ0062693	Woodlane	001A	1/ month	1/ month	1/ 6 month	1/ 5 years

D. <u>Effective dates and Expiration Date:</u>

Although the issuance dates for the individual authorizations may vary, the effective dates and expiration dates will be identical to the dates specified in this Consolidated Master General Permit.

E. Recommended Quantitation Levels Policy (RQLs):

The Department developed the RQLs to insure that useful data is provided to the Department in order to characterize the discharger's effluent. The Department recommends that the permittee achieve detection levels that are at least as sensitive as the RQLs found in Part III. The Department has determined that the quantitation levels listed therein can be reliably and consistently achieved by most state certified laboratories for most of the listed pollutants using the appropriate procedures specified in 40 CFR Part 136. FAILURE TO ATTAIN A QUANTITATION LEVEL AS SENSITIVE AS A LISTED RQL IS NOT A VIOLATION OF THE PERMIT, BUT DOES TRIGGER SOME ADDITIONAL REPORTING REQUIREMENTS FOR THE PERMITTEE AS SPECIFIED IN PART IV OF THE PERMIT.

F. Reporting Requirements:

All data requested to be submitted by this permit shall be reported on the Discharge Monitoring Reports (DMRs) as appropriate and submitted to the Department as required by N.J.A.C. 7:14A-6.8(a).

G. General conditions:

In accordance with N.J.A.C. 7:14A-2.3 and 6.1(b), specific rules from the New Jersey Administrative Code have been incorporated either expressly or by reference in Part I and Part II.

H. Outfall Tag:

Pursuant to N.J.A.C. 7:14A-6.2(a)9, the permittee shall ensure that a tag is present to mark the location of the outfall pipe on or before the start of discharge.

I. Operator Classification Number:

The operator classification requirement is not included in the individual requests for authorization. To obtain or determine the appropriate licensed operator classification for the treatment works utilized in each individual authorization, the permittee shall contact the Bureau of Construction Management and TWA Permitting at (609) 984-4429.

J. Flow Related Conditions:

All of the WTPs currently included for authorization are existing facilities and as such have prior approval from the Office of Land Use Planning (formerly known as Planning/ Bureau of Watershed Regulation).

K. Compliance Schedule: New WET limitations are proposed for 5 outfalls (Clyde Potts (001A), Morris Lake (001A), NJDWSC (002A, 003A) and Robert Frost (001A)). Since the permittees' effluent data indicates that they may be unable to consistently comply with the final effluent limitation for WET, a schedule of compliance is included in the permit, including interim deadlines for progress or reports of progress towards compliance with the conditions of this permit, in accordance with N.J.A.C. 7:14A-6.4(a). In addition, N.J.A.C. 7:14A-13.21(b) allows the Department to include a schedule to achieve compliance with a WET WQBEL. This compliance schedule time frame is established at three (3) years and is modeled after the schedule applied to new sources, new dischargers, or expanded direct dischargers at N.J.A.C. 7:14A-13.21(c).

Beginning on EDP + 1 year and every subsequent year after, until the final effluent limitation becomes effective, the permittee must submit a progress report to the Department on the steps taken towards compliance with the final effluent limitation. The progress report must include but is not limited to the following information:

- Investigative work as to what type of treatment options or other means of compliance are considered;
- Decision on the chosen method of treatment;
- Progress on design, bidding and construction schedule;

- The permittee's intent to do studies indicated in Part IV of this permit (to obtain site specific hardness, translator and WER values).

1. Compliance Schedule for WET:

   a. During the Initial phase, from the effective date of the permit authorization (EDPA) to EDPA + 3 years, the permittee shall either monitor and report for the above referenced parameter or comply with the specified interim effluent limitation as indicated in that facility's specific permit authorization.

   b. During the Final phase, beginning EDPA + 3 years, the permittee shall meet the final effluent limitation for WET.

L. Residuals/Sludge Conditions:

All treatment works with a discharge regulated under N.J.A.C. 7:14A must have permits that implement applicable technical standards for residuals management. Generally, the permit issued to the treatment works generating the residual will include applicable residual quality monitoring as well as other general conditions required by N.J.A.C. 7:14A-6. In addition, the permit may include conditions related to any aspect of residual management developed on a case-by-case basis where the Department determines that such conditions are necessary to protect public health and the environment.

Existing dischargers that generate water treatment residuals may be required under an individual general permit authorization to submit quality, quantity and removal information on Residuals discharge monitoring reports pursuant to the Sludge Quality Assurance Regulations (SQAR, N.J.A.C. 7:14C). In cases where sludge quality information is required pursuant to SQAR, the industrial treatment works in the specified categories (see N.J.A.C. 7:14C-1.5) shall analyze the sludge removed for use or disposal for the parameters listed in the Appendix, Table VIII, as applicable. The table may be found in N.J.A.C. 7:14C and is included at the end of the Fact Sheet and is entitled: "Fact Sheet Attachment: Residuals" of the general permit.

The documents listed below have been used to establish the residual conditions of the Draft Permit:
a. United States Environmental Protection Agency "Standards for the use or disposal of sewage sludge" (40 CFR Part 503),
b. "New Jersey Pollutant Discharge Elimination System" (N.J.A.C. 7:14A),
c. Technical Manual for Residuals Management, May 1998,
d. USEPA Part 503 Implementation Guidance, EPA 833-R-95-001, October 1995. This document is a compilation of federal requirements, management practices and EPA recommended permit conditions for sewage sludge use and management practices,
e. USEPA A Plain English Guide to the EPA Part 503 Biosolids Rule, EPA/832/R-93/003, September 1994,
f. New Jersey "Statewide Sludge Management Plan", January 2006 and
g. New Jersey "Sludge Quality Assurance Regulations" (SQAR), N.J.A.C. 7:14C.

7 Variances to Permit Conditions:

Procedures for modifying a WQBEL are found in the New Jersey SWQS, N.J.A.C. 7:9B-1.8 and 1.9. If a WQBEL has been proposed in this permit action, the permittee may request a modification of that limitation in accordance with N.J.A.C. 7:14A-11.7(a). This request must be made prior to the close of the public comment period. The information that must be submitted to support the request may be obtained from the Bureau of Water Quality Standards and Assessment at (609) 777-1753.

8 Description of Procedures for Reaching a Final Decision on the Draft Action:

Please refer to the procedures described in the public notice that is part of the draft permit. In addition to the DEP Bulletin, the public notice for this permit action is published in the following newspapers, which represent the counties indicated:

Newspaper	***County***
Burlington County Times	Burlington
Courier Post Newspaper	Camden
Star Ledger	Essex, Somerset and Union
The Times	Mercer
Asbury Park Press	Monmouth and Ocean
Daily Record	Morris
Today's Sunbeam	Salem
Courier News	Somerset, Union, Middlesex and Hunterdon
The New Jersey Herald	Sussex

9 Contact Information

If you have any questions regarding this permit action, please contact Michele Christopher (michele.christopher@dep.state.nj.us), Heather Genievich (heather.genievich@dep.state.nj.us) or Bela Mankad (bela.mankad@dep.state.nj.us), of the Bureau of Surface Water Permitting by email or at (609) 292-4860.

10 Permit Summary Tables

Please refer to the attached "Permit Summary Tables" at the end of this Fact Sheet for details regarding the individual effluent limitations and monitoring requirements for each of the covered discharges.

11 Contents of the Administrative Record

The following items are used to establish the basis of the Draft Permit:

Rules and Regulations:

1. 33 U.S.C. 1251 et seq., Federal Water Pollution Control Act. [C]
2. 40 CFR Part 131, Federal Water Quality Standards. [A] [C]
3. 40 CFR Part 122, National Pollutant Discharge Elimination System. [C]
4. N.J.S.A. 58:10A-1 et seq., New Jersey Water Pollution Control Act. [A] [B]
5. N.J.A.C. 7:14A-1 et seq., New Jersey Pollutant Discharge Elimination System Regulations. [A] [B]
6. N.J.A.C. 7:9B-1 et seq., New Jersey Surface Water Quality Standards. [A] [B]
7. N.J.A.C. 7:15, Statewide Water Quality Management Planning Rules. [A] [B]
8. N.J.A.C. 7:14C, Sludge Quality Assurance Regulations. [B]
9. Delaware River Basin Commission: Administrative Manual – Part III Water Quality Regulations.
10. Interstate Environmental Commission Regulations, N.J.S.A. 32:18-1 et seq.

Guidance Documents / Reports:

1. "Field Sampling Procedures Manual", published by the NJDEP. [A]
2. "NJPDES Monitoring Report Form Reference Manual", updated December 2007, and available on the web at http://www.state.nj.us/dep/dwq/pdf/MRF_Manual.pdf.
3. "EPA Technical Support Document for Water Quality-based Toxics Control", EPA/505/2-90-001, March 1991. [A]
4. New Jersey's 2008 Integrated Water Quality Monitoring and Assessment Report (includes 305 (b) Report 303(d) List). [A] [B]
5. NJPDES/DSW Discharge Monitoring Reports and Wastewater Characterization reports (WCRs) as indicated on "Permit Summary Tables" attachment.
6. USEPA memorandum by William Sonnett, dated June 13, 1974 summarizing guidance on limitations and monitoring requirements for Water Supply Plant Permits.

Applications:

This is a new Consolidated General Permit and as such, there aren't any new applications for this General Permit. However, the individual renewal applications and the existing permits and associated DMRs/WCRs were reviewed.

Footnotes:

[A] Denotes items that may be found in the NJPDES/DSW Administrative Record Library located in the NJDEP Central File Room, 401 East State Street, Trenton, New Jersey.

[B] Denotes items that may be found on the New Jersey Department of Environmental Protection (NJDEP) website located at "http://www.state.nj.us/dep/".

[C] Denotes items that may be found on the United States Environmental Protection Agency (USEPA) website at "http://www.epa.gov/".

Fact Sheet Attachment: Residuals

Table VIII

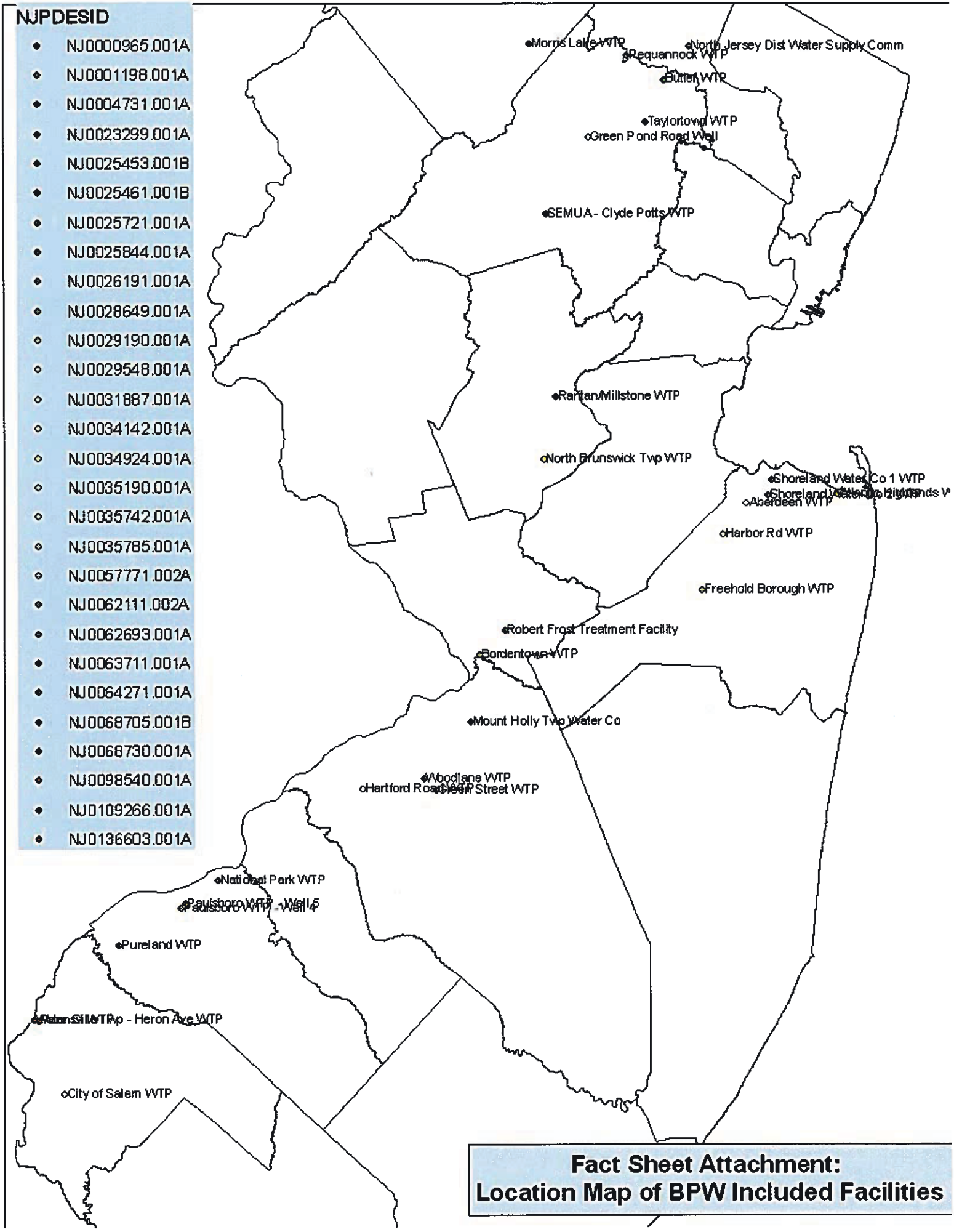
Pollutants required to be monitored for industrial treatment works in Categories 10 through 13

Parameter

Total Solids, (percent by weight)
Arsenic, total
Cadmium, total
Copper, total
Lead, total
Mercury, total
Molybdenum, total
Nickel, total
Nitrogen, Total Kjeldahl (TKN)
Nitrogen, Ammonia (NH3-N)
Nitrogen, Nitrate (NO3-N)
Phosphorous, total
Potassium, total
Selenium, total
Zinc, total
Aluminum, total[1]
Iron, total[1]
Trihalomethanes[2]
Radionuclides (pCi/g)[3]

Notes:

[1] Aluminum or iron, as applicable, are required to be tested in the sludge if an aluminum or iron containing coagulant (such as aluminum sulfate or ferric chloride) is used in the treatment process.
[2] Trihalomethanes are required to be tested in the sludge if the PWTS receives all or a portion of the water treated from a surface water source and chlorinates the water prior to distribution. The compounds required to be tested are: chloroform, bromoform, chlorodibromomethane, and Dichlorobromomethane.
[3] Radionuclides are required to be tested in the sludge if the potable water treatment system receives source water or uses additives known to or suspected of having elevated radionuclide concentrations. The radionuclides to be tested for include, but are not limited to, radium-226, radium-228, uranium-238, uranium-234, uranium-235, and thorium-232.



Fact Sheet Attachment:
Location Map of BPW Included Facilities

(#1) Aberdeen WTP/ NJ American Water – NJG0034142

Receiving Water: Wilkson Creek
Receiving Water Classification: FW2-NT (C2)
Water Quality Impairments: Chlordane, DDD, DDE, DDT, Enterococci, Mercury, pH, PCBs, Phosphorus
Source Water: Well water
Discharge Frequency: Intermittent (plant has not discharged since 2005 because the supernatant in the lagoons is recycled back to the head of the plant).
Residuals: Monitoring is included in this permit.
WCR Parameters: This monitoring frequency is retained at once per five years.
Additives: Zinc Orthophosphate and Chlorine

001A: filter backwash (using finished water) via two unlined lagoons

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06 – 12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	NODI	MR MR	MR MR	1/Discharge	Measured
Duration of Discharge	days/month	Monthly Total	NODI	MR	MR	1/Discharge	Calculated
Total Flow	million gallons/month	Monthly Total	NODI	MR	MR	1/Discharge	Calculated
Total Organic Carbon (TOC)	mg/L	Monthly Avg. Daily Max.	NODI	15 MR	15 MR	1/Discharge	Grab
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	NODI	20 40	20 40	1/Discharge	Grab
Petroleum Hydrocarbons	mg/L	Monthly Avg. Instant Max.	NODI	10 15	10 15	1/Discharge	Grab
pH	s.u.	Instant Min. Instant Max.	NODI	6.0 9.0	6.0 9.0	1/Discharge	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	NODI	MR **(1)** 0.04 **(1)**	MR **(1)** 0.04 **(1)**	1/Discharge	Grab
Iron, Total Recoverable	mg/L	Monthly Avg. Daily Max.	NODI	1.5 3.0	1.5 3.0	1/Discharge	Grab
Manganese, Total Recoverable	µg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/Discharge	Grab
Zinc, Total Recoverable	µg/L	Monthly Avg. Daily Max.	NODI	MR MR	MR MR	1/Discharge	Grab
Phosphorus, Total	mg/L	Monthly Avg. Daily Max.	NODI	MR MR	MR MR	1/Discharge	Grab
Acute WET, LC50 (*Ceriodaphnia dubia)*	% effluent	Minimum	NODI	--	MR	1/5 Years	Composite

Footnotes & Abbreviations:

MR Monitor and Report only
NODI No Discharge
-- No data available

(1) There is no enforceable quantification level included for the monthly average. However, the permittee is required to monitor and report the monthly average. The permittee shall comply with the enforceable quantification level of 0.1 as a daily maximum concentration.

(#2) Atlantic Highlands WTP – NJG0034924

Receiving Water: Many Mind Creek
Receiving Water Classification: FW2-NT (C2)
Water Quality Impairments: Chlordane, DDD, DDE, DDT, Mercury, PCBs
Source Water: Well water
Discharge Frequency: Intermittent, almost daily for 30 minutes
Residuals: Monitoring is included in this permit.
WCR Parameters: This monitoring frequency is decreased from annual to once per five years.
Additives: Aluminum sulfate, Chlorine, and Lime

001A: Filter backwash and sludge supernatant from stainless steel storage tanks
Finished water is used to backwash the filters.

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	0.0014 0.0013	MR MR	MR MR	1/6 Months	Metered
Duration of Discharge	days/month	Monthly Total	--	--	MR	1/6 Months	Calculated
Total Flow	million gallons/month	Monthly Total	--	--	MR	1/6 Months	Calculated
pH	s.u.	Instant Min. Instant Max.	6.5 8	6.0 9.0	6.0 9.0	1/6 Months	Grab
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	7.88 38	20 40	20 40	1/6 Months	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	<0.5 <0.5	MR MR	MR MR	1/6 Months	Grab
Iron, Total Recoverable	mg/L	Monthly Avg. Daily Max. # detect / # non-detect	3.00 17 39/14	MR MR	MR MR	1/6 Months	Grab
Manganese, Total Recoverable	µg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/6 Months	Grab
Acute WET, LC50 (*Ceriodaphnia dubia)*	% effluent	Minimum	100 **(1)**	MR	MR	1/5 years	Composite

Footnotes & Abbreviations:

MR Monitor and Report only
-- No data available
(1) Acute WET data ranges from LC50 = 100% to LC50 >100%.

(#3) Bordentown WTP - NJG0028649

Receiving Water: Crosswicks Creek
Receiving Water Classification: FW2-NT (C2)
Water Quality Impairments: Arsenic, Mercury, PCBs, Phosphorus, Turbidity
Source Water: Well water
Discharge Frequency: Intermittent, occurs for 15 minutes varying from every 3 to 8 hours
Residuals: Monitoring is included in this permit.
WCR Parameters: This monitoring frequency is retained at once per five years.
Additives: Chlorine, Potassium Permanganate, Lime and Klenphos

001A: lagoon water consisting of pressure filter backwash
Finished water is used to backwash the filters

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	0.02 0.31	MR MR	MR MR	1/Month	Metered
Duration of Discharge	days/month	Monthly Total	30.44	MR	MR	1/Month	Calculated
Total Flow	million gallons/month	Monthly Total	93.7	MR	MR	1/Month	Calculated
pH	s.u.	Instant Min. Instant Max.	6.05 8.8	6.0 9.0	6.0 9.0	1/Month	Grab
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	6.00 30.40	20 40	20 40	1/Month	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	0.04 0.09	MR 0.1	MR 0.1	1/Month	Grab
Phosphorus, Total	mg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/6 Months	Grab
Copper, Total Recoverable	µg/L	Monthly Avg. Daily Max. # detect / # non-detect	12.11 20.30 16/0	MR MR	MR MR	1/6 Months	Grab
Iron, Total Recoverable	mg/L	Monthly Avg. Daily Max. # detect / # non-detect	0.88 5.65 59/0	MR MR	MR MR	1/6 Months	Grab
Manganese, Total Recoverable	µg/L	Monthly Avg. Daily Max. # detect / # non-detect	64 347 59/0	MR MR	MR MR	1/6 Months	Grab
Nickel, Total Recoverable	µg/L	Monthly Avg. Daily Max. # detect / # non-detect	23.71 25.40 16/0	MR MR	MR MR	1/6 Months	Grab
Zinc, Total Recoverable	µg/L	Monthly Avg. Daily Max. # detect / # non-detect	85.09 203.00 16/0	MR MR	MR MR	1/6 Months	Grab
Radium-226, Total	PCi/L	Monthly Avg. Daily Max.	**(1)** **(1)**	MR MR	MR MR	1/ Quarter	Grab
Radium-228, Total	PCi/L	Monthly Avg. Daily Max.	**(1)** **(1)**	MR MR	MR MR	1/ Quarter	Grab
Radium-226 + Radium-228, Total	PCi/L	Monthly Avg. Daily Max.	**(1)** **(1)**	MR MR	MR MR	1/ Quarter	Grab
Acute WET, LC50 (*Ceriodaphnia dubia)*	% effluent	Minimum	--	MR	MR	1/5 Years	Composite

Footnotes & Abbreviations:

MR Monitor and Report only
-- No data available
(1) For certain parameters, monthly average monitoring and reporting requirements were not previously included in the permit but were incorporated via a major modification effective July 1, 2011. As a result, data is not available for these parameters.

(#4) Butler Water Department - NJG0025721

Receiving Water: Stone House Brook
Receiving Water Classification: FW2-NT (C2)
Water Quality Impairments: No known imapirment
Source Water: Kakeout Reservoir
Discharge Frequency: **001A**: intermittent **002A**: intermittent; **003A**: To date, NO DISCHARGE thru 003A has yet occurred.
Residuals: Monitoring is included in the groundwater permit.
WCR Parameters: For 001A and 002A, the WCR monitoring frequency is once per 5 years.
Additives: Alum (aluminum sulfate), Lime, Chlorine

001A: backwash from 3 sand filters (using finished water) via two (2) unlined lagoons

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	0.022 0.068	MR MR	MR MR	1/6 Months	Metered
Duration of Discharge	days/month	Monthly Total	--	--	MR	1/6 Months	Calculated
Total Flow	million gallons/month	Monthly Total	--	--	MR	1/6 Months	Calculated
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	<0.3 7	20 40	20 40	1/6 Months	Grab
pH	s.u.	Instant Min. Instant Max.	6.31 7.76	6.0 9.0	6.0 9.0	1/6 Months	Grab
Temperature	° C	Monthly Avg. Daily Max.	13 24	MR 30	-- --	--	--
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	0.123 0.14	MR 0.17	MR 0.17	1/6 Months	Grab
Iron, Total Recoverable	mg/L	Monthly Avg. Daily Max. # detect / # non-detect	0.14 0.62 16/3	1.5 3.0	1.5 3.0	1/6 Months	Grab
Acute WET, LC50 (*Ceriodaphnia dubia)*	% effluent	Minimum	>100 **(1)**	MR	MR	1/5 Years	Composite

Footnotes & Abbreviations:

MR Monitor and Report only
-- No data available
(1) WET data consists of one data point (>100% effluent) for this time period.

(#4) Butler Water Department - NJG0025721 (continued)

002A: decant water from 2 lined lagoons (which consists of slurry from the iron and suspended solids removal unit).

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	0.0063 0.032	MR MR	MR MR	1/6 Months	Calculated
Duration of Discharge	days/month	Monthly Total	--	--	MR	1/6 Months	Calculated
Total Flow	million gallons/month	Monthly Total	--	--	MR	1/6 Months	Calculated
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	-- --	20 40	20 40	1/6 Months	Grab
Chemical Oxygen Demand (COD)	mg/L	Monthly Avg. Daily Max.	19 30	MR MR	MR MR	1/6 Months	Grab
pH	s.u.	Instant Min. Instant Max.	6.31 7.95	6.0 9.0	6.0 9.0	1/6 Months	Grab
Temperature	°C	Monthly Avg. Daily Max.	12.9 23.2	MR 30	-- --	--	--
Iron, Total Recoverable	mg/L	Monthly Avg. Daily Max. # detect / # non-detect	0.299 1.31	1.5 3.0	1.5 3.0	1/6 Months	Grab
Acute WET, LC50 (*ceriodaphnia dubia)*	% effluent	Minimum	--	MR	MR	1/5 Years	Composite

Footnotes & Abbreviations:

MR Monitor and Report only
-- No data available

003A : overflow from (2) potable water storage tanks.
(NO DISCHARGE has occurred to date)

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	NODI	MR MR	MR MR	1/ Discharge	Measured
Duration of Flow	days/month	Monthly Total	--	--	MR	1/Discharge	Calculated
Total Flow	million gallons/month	Monthly Total	--	--	MR	1/Discharge	Calculated
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	NODI	20 40	20 40	1/Discharge	Grab
pH	s.u.	Instant Min. Instant Max.	NODI	6.0 9.0	6.0 9.0	1/Discharge	Grab
Temperature	°C.	Monthly Avg. Daily Max.	NODI	MR 30	-- --	--	--
Iron, Total Recoverable	mg/L	Monthly Avg. Daily Max.	NODI	MR MR	MR MR	1/Discharge	Grab

Footnotes & Abbreviations:

MR Monitor and Report only
-- No data available
NODI No Discharge

(#5) City of Salem - NJG0035742

Receiving Water: Unnamed tributary to Keasbey's Creek
Receiving Water Classification: FW2-NT/ SE1 tidal
Water Quality Impairments: PCBs
Source Water: Laurel Lake
Discharge Frequency: Intermittent, filters are backwashed almost everyday, but not always, depending on need; discharge duration is 12 hours each time.
Residuals: Monitoring is included in this permit.
WCR Parameters: For 001A, the WCR monitoring frequencies for metals and volatiles are retained at once per six months, and the monitoring frequencies for the acids, base-neutrals and pesticides are reduced to once per five years.
Additives: Klenphos (zinc orthophosphate), Chlorine

001A (Main Outfall): filter backwash & clarifier blowdown via 2 settling lagoons
Finished water is used to backwash the filters.

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	0.02 0.02	MR MR	MR MR	1/Month	Measured
Duration of Discharge	days/month	Monthly Total **(1)**	12 **(2)**	MR	MR	1/Month	Calculated
Total Flow	million gallons/month	Monthly Total **(1)**	0.02	MR	MR	1/Month	Calculated
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	2.75 9.5	20 40	20 40	1/Month	Grab
pH	s.u.	Instant Min. Instant Max.	6.0 8.6	6.0 9.0	6.0 9.0	1/Month	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/Month	Grab
Phosphorus, Total	mg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/6 Months	Grab
Zinc, Total Recoverable	µg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/6 Months	Grab
Acute WET, LC50 (*Ceriodaphnia dubia)*	% effluent	Minimum	84.6 **(3)**	MR	MR	1/5 Years	Composite

Footnotes & Abbreviations:
MR Monitor and Report only
-- No data available
(1) Based on the existing permit requirements, wastewater data for Duration of Discharge and Total Flow were reported as "Monthly Averages," instead of Monthly Total, as required in this permit.
(2) Based on the existing permit requirements, wastewater data for Duration of Discharge was reported in "# of hours," instead of days/month as required in this permit.
(3) Acute WET data consisted of three data values of LC50>100% reported on the DMRs for 2/08, 4/09, 4/10 and one data value of LC50 = 84.6% reported on the DMR for 5/07.

(#5) City of Salem - NJG0035742 (continued)

002A: Filter Backwash & Clarifier Blowdown via 2 settling lagoons
No discharge, only used when Lagoon #1 is out of service to be cleaned.
Finished water is used to backwash the filters.

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	NODI	MR MR	MR MR	1/Discharge	Measured
Duration of Discharge	days/month	Monthly Total	NODI	MR	MR	1/Discharge	Calculated
Total Flow	million gallons/month	Monthly Total	NODI	MR	MR	1/Discharge	Calculated
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	NODI	20 40	20 40	1/Discharge	Grab
pH	s.u.	Instant Min. Instant Max.	NODI	6.0 9.0	6.0 9.0	1/Discharge	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/Discharge	Grab
Phosphorus, Total	mg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/Discharge	Grab
Zinc, Total Recoverable	µg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/Discharge	Grab
Acute WET, LC50 (*Ceridaphnia dubia)*	% effluent	Minimum	NODI	MR	MR	1/5 Years	Composite

Footnotes & Abbreviations:
MR Monitor and Report only
-- No data available
NODI No Discharge

(#6) Clyde Potts/ Southeast Morris MUA – NJG0098540

Receiving Water: 001A to Harmony Brook, 002A to Clyde Potts Reservoir
Receiving Water Classification: FW2-TP (**C1**)
Water Quality Impairments: No known impairment
Source Water: Clyde Potts Reservoir
Discharge Frequency: Continuous
Residuals: Monitoring is included in a groundwater permit.
WCR Parameters: This monitoring frequency is established at once per year.
Additives: Not applicable (finished water is not discharged).

001A: wastewater generated during the chemical cleaning cycle of the membrane filters, stormwater, overflow from the Clyde Potts Reservoir, diverted stream flow and seepage water from the Reservoir to drains and filter blankets
Mid-process water is used to clean membrane filters before the addition of additives.

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	0.015 0.092	MR MR	MR	1/Quarter	Measured
Duration of Discharge	days/month	Monthly Total	--	--	MR	1/Quarter	Calculated
Total Flow	million gallons/month	Monthly Total	--	--	MR	1/Quarter	Calculated
pH	s.u.	Instant Min. Instant Max.	6.3 8.1	6.0 9.0	6.0 9.0	1/Quarter	Grab
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	7 18	20 50	20 25	1/Quarter	Grab
Chemical Oxygen Demand (COD)	mg/L	Monthly Avg. Daily Max.	23 35	MR 50	MR 50	1/Quarter	Grab
Petroleum Hydrocarbons	mg/L	Monthly Avg. Daily Max.	13 13	10 15	10 15	1/Quarter	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	<0.1 <0.1	MR 0.051 **(1)**	MR 0.051 **(1)**	1/Quarter	Grab
Chronic WET, IC25 (*Ceriodaphnia dubia*)	% effluent	Minimum	31.4 **(2)**	21	MR	1/Year	Composite

Footnotes & Abbreviations:

MR Monitor and Report only
-- No data available

(1) There is no enforceable quantification level included for the monthly average. However, the permittee is required to monitor and report the monthly average. The permittee shall comply with the enforceable quantification level of 0.1 as a daily maximum concentration.

(2) Chronic WET data consists of 19 data points as follows: (3/06) >100%, (6/06) >100%, (9/06) >100%, (12/06) >100%, (3/07) >100%, (6/07) >100%, (9/07) >100%, (12/07) >100%, (3/08) >100%, (6/08) >100%, (9/08) >100%, (12/08) >100%, (3/09) >100%, (6/09) 89.4%, (9/09) 31.4%, (12/09) >100%, (3/10) >100%, (6/10) >100%, (9/10) >100%.

002A discharges to the Clyde Potts Reservoir, but this discharge does not include monitoring requirements because the discharge consists of unfiltered and physically filtered reservoir water withdrawn from the Clyde Potts Reservoir and returned directly to the reservoir with no addition of pollutants.

(#7) Freehold Borough WTP - NJG0029190

Receiving Water: McGellaird's Brook
Receiving Water Classification: FW2-NT (C2)
Water Quality Impairments: No known impairment
Source Water: Well water
Discharge Frequency: Intermittent (1-2 times a year, 4-6 days each time)
Residuals: Monitoring is included in this permit.
WCR Parameters: This monitoring frequency is retained at once per year.
Additives: Lime, Sodium Hypochlorite, Fluoride, Polyphosphate (does not contain any zinc)

001A: backwash resulting from dewatering iron sludge from sludge drying beds
Finished water is used to backwash the filters.

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	0.0036 0.012	MR MR	MR MR	1/Discharge	Calculated
Duration of Discharge	days/month	Monthly Total	5	MR	MR	1/Discharge	Calculated
Total Flow	million gallons/month	Monthly Total	0.024	MR	MR	1/Discharge	Calculated
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	<1 <1	20 40	20 40	1/Discharge	Grab
pH	s.u.	Instant Min. Instant Max.	6.8 7.8	6.0 9.0	6.0 9.0	1/Discharge	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/Discharge	Grab
Phosphorus, Total	mg/L	Monthly Avg. Daily Max.	<0.1 <1	MR MR	MR MR	1/Discharge	Grab
Iron, Total Recoverable	mg/L	Monthly Avg. Daily Max. # detect / # non-detect	0.06 0.08 3/4	MR MR	MR MR	1/Discharge	Grab
Manganese, Total Recoverable	µg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/Discharge	Grab
Acute WET, LC50 (*Ceriodaphnia dubia)*	% effluent	Minimum	>100 **(1)**	MR	MR	1/5 Years	Composite
Acute WET, LC50 *(Pimephales promelas)*	% effluent	Minimum	>100 **(1)**	MR	--	--	--

Footnotes & Abbreviations:

MR Monitor and Report only
-- No data available
(1) Acute WET data consisted of one data value of LC50>100% for each test species as reported on the annual WCR for the time period of 6/09 – 5/10.

(#8) Green Street WTP/ Mt Holly Water Company - NJG0004731

Receiving Water: Rancocas Creek
Receiving Water Classification: FW2-NT (C2)
Water Quality Impairments: Arsenic, PCBs, Phosphorus
Source Water: Well water
Discharge Frequency: Intermittent (2 times a week; discharge duration is approximately 3 hours each time)
Residuals: Monitoring is included in this permit.
WCR Parameters: This monitoring frequency is retained at once per five years.
Additives: Sodium Hypochlorite, Caustic soda, Zinc Phosphate

001A: Filter Backwash via lagoon
Finished water is used to backwash the filters

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	0.05 0.05	MR MR	MR MR	1/Month	Measured
Duration of Discharge	days/month	Monthly Total	--	--	MR	1/Month	Calculated
Total Flow	million gallons/month	Monthly Total	--	--	MR	1/Month	Calculated
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	3.67 26	20 40	20 40	1/Month	Grab
pH	s.u.	Instant Min. Instant Max.	7.1 7.8	6.0 9.0	6.0 9.0	1/Month	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	0.006 0.05	MR MR	MR MR	1/Month	Grab
Iron, Total Recoverable	mg/L	Monthly Avg. Daily Max. # detect / # non-detect	0.05 2.96 60/0	1.5 3.0	1.5 3.0	1/6 Months	Grab
Manganese, Total Recoverable	µg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/6 Months	Grab
Phosphorus, Total	mg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/6 Months	Grab
Zinc, Total Recoverable	µg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/6 Months	Grab
Acute WET, LC50 (*Ceriodaphnia dubia)*	% effluent	Minimum	>100 **(1)**	MR	MR	1/5 years	Composite
Chronic WET, IC25 (*Ceriodaphnia dubia)*	% effluent	Minimum	11.9 **(2)**	MR	--	--	--

Footnotes & Abbreviations:

MR Monitor and Report only
-- No data available
(1) Acute WET data consisted of 9 data values of LC50>100% reported on the DMRs for 6/07, 10/07, 2/08, 8/08, 2/09, 8/09, 9/09, 3/10, and 8/10.
(2) Chronic WET data consisted of seven data values of IC25>100% reported on the DMRs for 2/08, 8/08, 2/09, 8/09, 9/09, 3/10, and 8/10; one data value of 69.5 reported on the DMR for 10/07; and one data value of 11.9% reported on the DMR for 6/07.

(#9) Green Pond Road Well Field & Treatment Plant/ Rockaway Twp. - NJG0035785

Receiving Water: White Meadow Brook
Receiving Water Classification: FW2-NT (C2)
Water Quality Impairments: Mercury, pH
Source Water: Well water
Discharge Frequency: GAC filters are used as backup to primary treatment of air stripping; therefore, the discharge is intermittent in nature (No discharge since 1989).
Residuals: Monitoring is not included in this permit.
WCR Parameters: The monitoring frequency is retained at once per five years.
Additives: Chlorine, Polyphosphate

001A: GAC Filters Backwash
Finished water is used to backwash the filters

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	NODI	MR MR	MR	1/Discharge	Metered
Duration of Discharge	days/month	Monthly Total	--	--	MR	1/Discharge	Calculated
Total Flow	million gallons/month	Monthly Total	--	--	MR	1/Discharge	Calculated
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	NODI	20 40	20 40	1/Discharge	Grab
Chemical Oxygen Demand (COD)	mg/L	Monthly Avg. Daily Max.	NODI	MR 50	MR 50	1/Discharge	Grab
Petroleum Hydrocarbons	mg/L	Monthly Avg. Instant Max.	NODI	10 15	10 15	1/Discharge	Grab
pH	s.u.	Instant Min. Instant Max.	NODI	6.0 9.0	6.0 9.0	1/Discharge	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/Discharge	Grab
Phosphorus, Total	mg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/Discharge	Grab
Iron, Total Recoverable	mg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/Discharge	Grab
Manganese, Total Recoverable	µg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/Discharge	Grab
Acute WET, LC50 (*Ceriodaphnia dubia)*	% effluent	Minimum	NODI	MR	MR	1/5 Years	Composite

Footnotes & Abbreviations:
MR Monitor and Report only
-- No data available
NODI No Discharge

(#10) Harbor Road WTP/ Marlboro MUA – NJG0031887

Receiving Water: Deep Run
Receiving Water Classification: FW2-NT (C2)
Water Quality Impairments: Dissolved Oxygen
Source Water: Well water
Discharge Frequency: Intermittent, discharged every month (1-52 times/month) between 2/06-9/10, lasting approximately 40 minutes each time.
Residuals: Monitoring is included in this permit.
WCR Parameters: This monitoring frequency is reduced to once per five years.
Additives: Lime

001A: Filter backwash via lagoons
Raw water is used to backwash the filters

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 2/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	0.01 0.01	MR MR	MR MR	1/Month	Calculated
Duration of Discharge	days/month (**1**)	Monthly Total	22 (**1**)	MR	MR	1/Month	Calculated
Total Flow	million gallons/month	Monthly Total.	0.29	MR	MR	1/Month	Calculated
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	9 33	20 40	20 40	1/Month	Grab
pH	s.u.	Instant Min. Instant Max.	6.1 7.98	6.0 9.0	6.0 9.0	1/Month	Grab
Chemical Oxygen Demand (COD)	mg/L	Monthly Avg. Daily Max.	35 68	MR MR	MR MR	1/Month	Grab
Iron, Total Recoverable	mg/L	Monthly Avg. Daily Max. # detect / # non-detect	14 194 51/1	MR MR	MR MR	1/6 months	Grab
Manganese, Total Recoverable	µg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/6 months	Grab
Acute WET, LC50 (*Ceriodaphnia dubia)*	% effluent	Minimum	6 (**2**)	MR	MR	1/5 Years	Composite

Footnotes & Abbreviations:

MR Monitor and Report only
-- No data available
(1) Duration of Discharge was reported as the actual number of times discharge occurred in a month, which could be up to 2 times a day in the summer months. The data ranged from a minimum of 1 discharge a month to a maximum of 52 discharges a month.
(2) Acute WET data consisted of 3 data values of LC50 = 6, 93.3 and >100 reported on the Annual WCRs for the time periods of 5/07 to 4/10.

(#11) Hartford Road WTP/ Moorestown – NJG0029548

Receiving Water: Kendles Run
Receiving Water Classification: FW2-NT (C2)
Water Quality Impairments: PCBs
Source Water: Well water
Discharge Frequency: Intermittent, Backup Plant, discharged once in 8/09
Residuals: Monitoring is included in this permit
WCR Parameters: This monitoring frequency is reduced to once per five years due to the infrequent nature of the discharge.
Additives: Lime, Chlorine

001A: Filter Backwash, Floor Drain in the Lime Room, and 4 sump pumps via lagoons and storm sewer
Finished water is used to backwash the filters

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	0.328 0.66	MR MR	MR MR	1/Discharge	Calculated
Duration of Discharge	days/month	Monthly Total	3	MR	MR	1/Discharge	Calculated
Total Flow	million gallons/month	Monthly Total	0.983	MR	MR	1/Discharge	Calculated
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	<5 <5	20 40	20 40	1/Discharge	Grab
pH	s.u.	Instant Min. Instant Max.	8.61 8.61	6.0 9.0	6.0 9.0	1/Discharge	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	-- --	MR 0.1	MR 0.1	1/Discharge	Grab
Iron, Total Recoverable	mg/L	Monthly Avg. Daily Max. # detect / # non-detect	0.49 0.49 1/0	MR MR	MR MR	1/Discharge	Grab
Manganese, Total Recoverable	µg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/Discharge	Grab
Acute WET, LC50 (*Ceriodaphnia dubia)*	% effluent	Minimum	--	MR	MR	1/5 Years	Composite

Footnotes & Abbreviations:
MR Monitor and Report only
-- No data available

(#12) Heron Avenue WTP – NJG0068705

Receiving Water: Delaware River Zone 5
Receiving Water Classification: Zone 5
Water Quality Impairments: PCBs
Source Water: Well water: wells #3 & #6
Discharge Frequency: Backup plant, no discharge since February 2002.
Residuals: Monitoring is included in this permit.
WCR Parameters: This monitoring frequency is reduced to once per five years.
Additives: Zinc Orthophosphate, Chlorine (gas), Sodium Hypochlorite, Lime, Aluminum Sulfate, polymers

001B: Filter backwash (using finished water) & clarifier blowdown
(to 2 unlined lagoons & then recycled to head of plant)

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	NODI	MR	MR	1/Discharge	Measured
Duration of Discharge	days/month	Monthly Total	NODI	--	MR	1/Discharge	Calculated
Total Flow	million gallons/month	Monthly Total	NODI	--	MR	1/Discharge	Calculated
pH	s.u.	Instant Min. Instant Max.	NODI	6.0 9.0	6.0 9.0	1/Discharge	Grab
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	NODI	20 40	20 40	1/Discharge	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	NODI	MR MR	MR MR	1/Discharge	Grab
Manganese, Total Recoverable	µg/L	Monthly Avg.	NODI	-- --	MR MR	1/Discharge	Grab
Iron, Total Recoverable	mg/L	Daily Max	NODI	-- --	MR MR	1/Discharge	Grab
Zinc, Total Recoverable	µg/L	Monthly Avg. Daily Max	-- --	-- --	MR MR	1/Discharge	Grab
Phosphorus, Total	mg/L	Monthly Avg. Daily Max	-- --	-- --	MR MR	1/Discharge	Grab
Acute WET, NOAEC (*Mysidopsis bahia)*	% effluent	Minimum	NODI	MR	MR	1/5 years	Composite

Footnotes & Abbreviations:

MR	Monitor and Report only
--	No data available
NODI	No discharge

(#13) Morris Lake WTP – NJG0136603

Receiving Water: Morris Lake
Receiving Water Classification: FW2-NT **(C1)**
Water Quality Impairments: No known impairment
Source Water: Morris Lake
Discharge Frequency: Almost continuous (daily 2-3 batches/ hour @ ~1400 gallons/ batch)
Residuals: Monitoring is not included in this permit.
WCR Parameters: This monitoring frequency is retained at once per six months.
Additives: Sodium Hypochlorite and Sodium Bisulfite, Zinc Orthophosphate, Hydrofluorosilicic Acid, Sodium Carbonate

001A: membrane filter backwash and self cleaner backwash (using finished water)

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	0.094 0.158	MR MR	MR MR	1/Month	Metered
Duration of Discharge	days/ month	Monthly Total	-- --	-- --	MR MR	1/Month	Calculated
Total Flow	million gallons/month	Monthly Total	-- --	-- --	MR MR	1/Month	Calculated
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	11 30	MR 20	20 40	1/Month	Grab
Total Organic Carbon (TOC)	mg/L	Monthly Avg. Daily Max.	5.3 12.2	15 MR	15 MR	1/Month	Grab
pH	s.u.	Instant Min. Instant Max.	6.5 7.2	6.5 8.5	6.5 8.5	1/Month	Grab
Petroleum Hydrocarbons	mg/L	Monthly Avg. Daily Max.	2.6 7.2	10 15	10 15	1/Month	Grab
Temperature	°C	Monthly Avg. Daily Max.	9 12.5	MR MR	-- --	--	--
Copper, Total Recoverable	µg/L	Monthly Avg. Daily Max. # detect / # non-detect	45.5 **(1)** 47 **(1)** 2/16	MR **(2)** MR **(2)**	MR MR	1/Month	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max. # detect / # non-detect	<0.1 <0.1 0/25	MR **(3)** 0.018 **(3)**	MR **(3)** 0.018 **(3)**	1/Month	Grab
Zinc, Total Recoverable	µg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/ 6 Months	Grab
Phosphorus, Total	mg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/ 6 Months	Grab
Chronic WET IC25 (*Pimephales promelas)*	% effluent	Minimum	42.7 **(4)**	73	61	1/ 6 Months	Composite

Footnotes & Abbreviations:

MR Monitor and Report only
-- No data available

(1) Effluent data for Copper includes 18 data values from the time period of March 2008 to July 2011.

(2) The existing permit renewal, which became effective on May 1, 2010, specifies a daily maximum limitation of 14 ug/L for Copper, which was to become effective in the Final Phase on April 1, 2015. Only monitoring requirements were included in the Interim Phase, which is the time period of May 1, 2010 to March 31, 2015. This limitation has not been retained in the General Permit, as discussed in the toxics section 6B.14.

(3) There is no enforceable quantification level included for the monthly average. However, the permittee is required to monitor and report the monthly average. The permittee shall comply with the enforceable quantification level of 0.1 as a daily maximum concentration.

(4) The last 9 data points include 4 non detectable values (>100) on 3/31/06, 12/31/06, 3/31/07, and 6/30/07 and 5 detectable values on 6/30/06 (79.5 % effluent), 9/30/06 (82.7 % effluent), 9/30/07 (42.7 % effluent), 12/31/07 (69.2 % effluent), and 3/31/08 (69.2 % effluent).

(#14) Mount Holly Water Company/ Mansfield – NJG0109266

Receiving Water: Unnamed tributary to Craft's Creek
Receiving Water Classification: FW2-NT (C2)
Water Quality Impairments: Arsenic, PCBs
Source Water: Well water
Discharge Frequency: Intermittent (no discharge since September 2006)
Residuals: Monitoring requirements are included in the groundwater permit.
WCR Parameters: This monitoring frequency is retained at once per five years.
Additives: Zinc Orthophosphate, Chlorine

001A: well blow-offs from four supply wells, sand drying bed underdrains, finished water tank emergency overflow, filter backwash, and stormwater

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	0.01 0.01	MR MR	MR MR	1/Discharge	Metered
Duration of Discharge	days/month	Monthly Total	--	MR	MR	1/Discharge	Calculated
Total Flow	million gallons/month	Monthly Total	--	MR	MR	1/Discharge	Calculated
Total Organic Carbon (TOC)	mg/L	Monthly Avg. Daily Max.	0.48 8.39	25 MR	25 MR	1/Discharge	Grab
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	2.635 29	MR 40	20 40	1/Discharge	Grab
pH	s.u.	Instant Min. Instant Max.	6.9 7.6	6.5 8.5	6.5 8.5	1/Discharge	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	<0.05 <0.05	MR 0.018 **(1)**	MR 0.018 **(1)**	1/Discharge	Grab
Iron, Total Recoverable	mg/L	Monthly Avg. Daily Max. # detect/ # non-detect	1.72 45.4 10/0	MR MR	MR MR	1/Discharge	Grab
Manganese, Total Recoverable	µg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/Discharge	Grab
Zinc, Total Recoverable	µg/L	Monthly Avg. Daily Max.	-- --	MR MR	MR MR	1/Discharge	Grab
Phosphorus, Total	mg/L	Monthly Avg. Daily Max.	-- --	MR MR	MR MR	1/Discharge	Grab
Radium-226, Total	PCi/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/Discharge	Grab
Radium-228, Total	PCi/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/Discharge	Grab
Acute WET, LC50 (*Pimephales promelas*)	% effluent	Minimum	--	MR	MR	1/5 Years	Composite

Footnotes & Abbreviations:

MR Monitor and Report only
-- No data available

(1) There is no enforceable quantification level included for monthly average. However, the permittee is required to monitor and report the monthly averages. The permittee shall comply with the enforceable quantification level of 0.1 mg/L as a daily maximum concentration.

(#15) National Park – NJG0025844

Receiving Water: Hessian Run
Receiving Water Classification: FW2-NT (C2)
Water Quality Impairments: PCBs, pH
Source Water: Well water
Discharge Frequency: intermittent, discharges backwash from 2 filters 2 times/day, for 5 to 10 minutes per day.
Residuals: Monitoring is not included in this permit.
WCR Parameters: This monitoring frequency for metals is retained at once per year and the monitoring frequency for acids, base neutrals and pesticides is retained at once per five years.
Additives: Chlorine gas

001A: sand filter backwash (using finished water)

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	0.030 0.24	MR	MR	1/Month	Metered
Duration of Discharge **(1)**	days/month	Monthly Total	29	MR	MR	1/Month	Calculated
Total Flow	Million gallons/month	Monthly Total	0.812	MR	MR	1/Month	Calculated
Chemical Oxygen Demand (COD)	mg/L	Monthly Avg. Daily Max	14 24	MR 50	MR 50	1/Month	Grab
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max	13 38	20 40	20 40	1/Month	Grab
pH	s.u.	Instant Min. Instant Max.	6.3 7.7	6.0 9.0	6.0 9.0	1/Month	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max	0.15 0.44	MR 0.02	MR **(2)** 0.02 **(2)**	1/Month	Grab
Iron, Total Recoverable	mg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/ 6 Months	Grab
Manganese, Total Recoverable	µg/L	Monthly Avg. Daily Max	-- --	-- --	MR MR	1/ 6 Months	Grab
Radium-226, Total	PCi/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/ 6 Months	Grab
Radium-228, Total	PCi/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/ 6 Months	Grab
Acute WET, LC50 (*Ceriodaphnia dubia*)	% effluent	Minimum	--	MR	MR	1/5 Years	Composite

Footnotes & Abbreviations:

MR Monitor and Report only
-- No data available
(1) The facility reports 656 (daily) discharges during this time frame, with an average of 29 days per month, over 23 months of data.
(2) There is no enforceable quantification level included for monthly average. However, the permittee is required to monitor and report the monthly averages. The permittee shall comply with the enforceable quantification level of 0.1 mg/L as a daily maximum concentration.

(#16) North Jersey District Water Supply Commission (NJDWSC) – NJG0062111

Receiving Water: Wanaque Reservoir
Receiving Water Classification: FW2-TM (**C1**)
Water Quality Impairments: Dissolved Oxygen, E.Coli, Mercury, Temperature
Source Water: Wanaque Reservoir
Discharge Frequency: Once per day for 6 to 12 hours
Residuals: Monitoring is included in a residuals permit.
WCR Parameters: This monitoring frequency is increased from annual to once per six months at outfalls 002A and 003A.
Additives: Hypochlorite, Aluminum based coagulant, Polymer, Permanganate (used infrequently)

002A: Lagoon overflow consisting of residual (sludge) side streams from settling basins and the backwashing of filters (filter backwash is recycled back to head of plant).
Filters are backwashed with filtered water before the final application of chlorine and lime.

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	0.60 2.43	MR MR	MR MR	1/Month	Estimated
Duration of Discharge	days/month	Monthly Total	--	--	MR MR	1/Month	Calculated
Total Flow	million gallons/month	Monthly Total	--	--	MR MR	1/Month	Calculated
pH	s.u.	Instant Min. Instant Max.	6.01 7.37	6.0 9.0	6.0 9.0	1/Month	Grab
Total Organic Carbon (TOC)	mg/L	Monthly Avg. Daily Max.	12 36	25 MR	25 MR	1/Month	Grab
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	12 27	20 40	20 25	1/Month	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	0.05 0.10	MR MR	MR MR	1/Month	Grab
Chloroform	µg/L	Monthly Avg. Daily Max.	113 335	MR 68	MR 68	1/Month	Grab
Manganese, Total Recoverable	µg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/6 Months	Grab
Chronic Toxicity, IC25 *Ceriodaphnia dubia*	% effluent	Minimum	1.9 **(1)**	MR	55	1/6 Months	Composite
Chronic Toxicity, IC25 *Pimephales promelas*	% effluent	Minimum	14.5 **(2)**	MR	--	--	--

Footnotes & Abbreviations:

MR Monitor and Report only
-- No data available

(1) Chronic WET data using the species *Ceriodaphnia* dubia consists of the following data points: 2/06 (8.5%), 8/06 (53.6%), 9/06 (6.1%), 3/07 (72.6%), 12/07 (2.72%), 3/08 (17.3%), 10/08 (7.8%), 3/09 (10.9%), 12/09 (1.9%), 6/10 (20.1%), 9/10 (27.9%).

(2) Chronic WET data using the species *Pimephales promelas* consists of the following data points: 2/06 (100%), 8/06 (47%), 9/06 (65.3%), 3/07 (61.6%), 12/07 (52.6%), 6/08 (81.1%), 10/08 (14.5%), 3/09 (66.6%), 12/09 (50%).

(#16) North Jersey District Water Supply Commission – NJG0062111 (continued)

Receiving water: Unnamed tributary to Posts Brook
Stream Classification: FW2-NT (C2)
Water Quality Impairments: None

003A: lagoon overflow consisting of residual (sludge) side streams from settling basins and the backwashing of filters
Filters are backwashed with finished water before the final application of chlorine and lime.

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	0.012 1.04	MR MR	MR MR	1/Month	Estimated
Duration of Discharge	days/month	Monthly Total	--	--	MR	1/Month	Calculated
Total Flow	million gallons/month	Monthly Total	--	--	MR	1/Month	Calculated
Total Organic Carbon (TOC)	mg/L	Monthly Avg. Daily Max.	7.36 11.80	25 MR	25 MR	1/Month	Grab
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	10.68 26	20 40	20 40	1/Month	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	0.04 0.09	MR MR	MR MR	1/Month	Grab
Chloroform	µg/L	Monthly Avg. Daily Max.	0.02 0.38	MR MR	MR MR	1/Month	Grab
pH	s.u.	Instant Min. Instant Max.	6.01 6.87	6.0 9.0	6.0 9.0	1/Month	Grab
Manganese, Total Recoverable	µg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/6 Months	Grab
Chronic Toxicity, IC25 *Ceriodaphnia dubia*	% effluent	Minimum	2.8 **(1)**	MR	55	1/ 6 Months	Composite
Chronic Toxicity, IC25 *Pimephales promelas*	% effluent	Minimum	23.8 **(2)**	MR	--	--	--

Footnotes & Abbreviations:

MR Monitor and Report only
-- No data available

(1) Chronic WET data using the species *Ceriodaphnia dubia* consists of the following data points: 2/06 (11.2%), 8/06 (17.5%), 9/06 (4.2%), 3/07 (22.8%), 12/07 (5.13%), 6/08 (17.1%), 10/08 (30.9%) 3/09 (10.3%), 12/09 (2.8%), 6/10 (21.5%), 9/10 (18.6%).

(2) Chronic WET data using the species *Pimephales promelas* consists of the following data points: 2/06 (54.2%), 8/06 (89.1%), 9/06 (56.6%), 3/07 (58.2%), 12/07 (27%), 6/08 (65%), 10/08 (32.8%), 3/09 (62.4%), 12/09 (23.8%).

(#17) Paulsboro WTP Well #5 – NJG0057771

Receiving Water: Mantua Creek via a publicly owned storm sewer
Receiving Water Classification: FW2-NT (C2)
Water Quality Impairments: PCBs
Source Water: Well water (#5)
Discharge Frequency: Backup plant with an intermittent discharge. When the plant operates (maximum of 3 months/year), backwash is discharged (~30,000 gallons/ cycle) for only 1 or 2 days/ month.
Residuals: Monitoring is not included in this permit.
WCR Parameters: This monitoring frequency is retained at once per five years.
Additives: Lime, Sodium Hypochlorite

002A: Sand Filter Backwash (using finished water)

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	0.0013 0.03	MR MR	MR MR	1/Discharge	Measured
Duration of Discharge **(1)**	days /month	Monthly Total	1/2 11	MR	MR	1/Discharge	Calculated
Total Flow	million gallons/month	Monthly Total	0.0375	MR	MR	1/Discharge	Calculated
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max	7 14	20 40	20 40	1/Discharge	Grab
pH	s.u.	Instant Min. Instant Max.	7.0 7.6	6.0 9.0	6.0 9.0	1/Discharge	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max # Detect/ # Non Detect	0.08 0.1 4/4	MR MR	MR MR	1/Discharge	Grab
Iron, Total Recoverable	mg/L	Monthly Avg. Daily Max.	1.7 3.8	MR MR	MR MR	1/Discharge	Grab
Manganese, Total Recoverable	µg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/Discharge	Grab
Acute WET, LC50 (*Ceriodaphnia dubia*)	% effluent	Minimum	**(2)**	MR	MR	1/5 Years	Composite

Footnotes & Abbreviations:

MR Monitor and Report only
-- No data available

(1) The discharge duration was 1 to 2 days for each of the 8 sampling events, with a total of 11 days from 1/1/06-12/31/10.

(2) The DMR information for Acute WET indicated "no discharge" for the 8 sampling events when backwash water was discharged. The existing permit required Acute WET to be sampled "once per permit cycle." During monitoring periods when sampling is not required, a "sample not required this monitoring period" indicator (Code=N) should be entered on those DMR's rather than NODI, and sampling should be conducted during the monitoring periods when it is required.

(#18) Paulsboro WTP Well #4 – NJG0026191

Receiving Water: Clonmell Creek via publicly owned storm sewer
Receiving Water Classification: FW2-NT (C2)
Water Quality Impairments: None
Source Water: Well water (#4)
Discharge Frequency: Backup plant with an intermittent discharge. When the plant operates (maximum of 3 months/year), the backwash is discharged for only 1 or 2 days/ month. However, in the last 5 years, the plant discharged only 4 days.
Residuals: Monitoring is not included in this permit.
WCR Parameters: This monitoring frequency is retained at once per five years.
Additives: Lime, Sodium Hypochlorite.

001A: Sand filter backwash (using finished water)

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	0.00095 0.03	MR	MR	1/Discharge	Measured
Duration of Discharge **(1)**	days/month	Monthly Total	2	MR	MR	1/Discharge	Calculated
Total Flow	million gallons/month	Monthly Total	0.03	MR	MR	1/Discharge	Calculated
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max	14 18	20 40	20 40	1/Discharge	Grab
pH	s.u.	Instant Min. Instant Max.	7.3 7.5	6.0 9.0	6.0 9.0	1/Discharge	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max	0.1 0.12	MR MR	MR MR	1/Discharge	Grab
Iron, Total Recoverable	mg/L	Monthly Avg. Daily Max.	2.2 2.8	MR MR	MR MR	1/Discharge	Grab
Manganese, Total Recoverable	µg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/Discharge	Grab
Acute WET, LC50 (*Ceriodaphnia dubia)* **(2)**	% effluent	Minimum	**(2)**	MR	MR	1/5 Years	Composite

Footnotes & Abbreviations:

MR Monitor and Report only
-- No data available
(1) Only discharged 4 days from 1/1/06-12/31/10.
(2) The DMR information for the parameter, Acute WET, indicated "no discharge" for the 8 sampling events when backwash water was discharged. The existing permit required Acute WET to be sampled "once per permit cycle".

(#19) Pequannock WTP/ Newark Watershed & Development – NJG0063711

Receiving Water: DSN001A discharges to the Charlotteburg Reservoir; DSN002A- DSN005A discharge to the Pequannock River
Receiving Water Classification: Charlotteburg Reservoir- FW2-TM (**C1**); Pequannock River - FW2-TP (**C1**)
Water Quality Impairments: Pequannock River – Dissolved Oxygen, Mercury
Source Water: Charlotteburg Reservoir
Discharge Frequency: 001A varies depending on rainfall; 002A NODI, 003A NODI, 004A NODI, 005A every 6 hours (~1025 gpd)
Residuals: Monitoring is included in this permit.
WCR Parameters: This monitoring frequency is established at once per five years for 005A only.
Additives: Aluminum Sulfate, Liquefied Chlorine, Polyaluminum Chloride, Lime, Sodium Silicate, Polymers

001A: Emergency overflow of supernatant from the sludge lagoon

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max	0.107 0.15	MR MR	MR MR	1/6 Months	Measured
Duration of Discharge	days/month	Monthly Total	--	MR MR	MR MR	1/6 Months	Calculated
Total Flow	million gallons/month	Monthly Total	--	MR MR	MR MR	1/6 Months	Calculated
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	10 20	20 25	20 25	1/6 Months	Grab
pH	s.u.	Instant Min. Instant Max.	6.1 6.6	6.0 9.0	6.0 9.0	1/6 Months	Grab
Petroleum Hydrocarbons	mg/L	Monthly Avg. Daily Max.	1.4 2.1	10 15	10 15	1/6 Months	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max. # detect / # non-detect	0 0 0/7	MR **(1)** 0.01 **(1)**	MR **(1)** 0.01 **(1)**	1/6 Months	Grab
Acute WET, LC50 (*Ceriodaphnia dubia)*	% effluent	Minimum	--	MR	MR	1/5 Years	Composite

Footnotes & Abbreviations:

MR Monitor and Report only
-- No data available
(1) There is no enforceable quantification level included for the monthly average. However, the permittee is required to monitor and report the monthly average. The permittee shall comply with the enforceable quantification level of 0.1 as a daily maximum concentration.

(#19) Pequannock WTP/ Newark Watershed & Development – NJG0063711 continued

INACTIVE 002A: Emergency overflow from the coagulation tank

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Average Daily Max	NODI	MR MR	MR MR	1/Discharge	Metered
Duration of Discharge	days/month	Monthly Total	--	--	MR	1/Discharge	Calculated
Total Flow	million gallons/month	Monthly Total	--	--	MR	1/Discharge	Calculated
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	NODI	20 25	20 25	1/Discharge	Grab
pH	s.u.	Instant Min. Instant Max.	NODI	6.0 9.0	6.0 9.0	1/Discharge	Grab
Petroleum Hydrocarbons	mg/L	Monthly Avg. Daily Max.	NODI	10 15	10 15	1/Discharge	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	NODI	MR **(1)** 0.01 **(1)**	MR **(1)** 0.01 **(1)**	1/Discharge	Grab
Acute WET, LC50 (*Ceriodaphnia dubia)*	% effluent	Minimum	--	--	MR	1/Discharge (**2**)	Composite

Footnotes & Abbreviations:

MR Monitor and Report only
-- No data available
NODI No Discharge
(1) There is no enforceable quantification level included for the monthly average. However, the permittee is required to monitor and report the monthly average. The permittee shall comply with the enforceable quantification level of 0.1 as a daily maximum concentration.
(2) The monitoring frequency is once per 5 years, if there is a discharge.

INACTIVE 003A: Emergency overflow from the clearwell

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Average Daily Max	NODI	MR MR	MR MR	1/Discharge	Measured
Duration of Discharge	days /month	Monthly Total	--	--	MR	1/Discharge	Calculated
Total Flow	million gallons/month	Monthly Total	--	--	MR	1/Discharge	Calculated
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	NODI	20 25	20 25	1/Discharge	Grab
pH	s.u.	Instant Min. Instant Max.	NODI	6.0 9.0	6.0 9.0	1/Discharge	Grab
Petroleum Hydrocarbons	mg/L	Monthly Avg. Daily Max.	NODI	10 15	10 15	1/Discharge	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	NODI	MR **(1)** 0.01 **(1)**	MR **(1)** 0.01 **(1)**	1/Discharge	Grab
Acute WET, LC50 (*Ceriodaphnia dubia)*	% effluent	Minimum	--	--	MR	1/Discharge (**2**)	Composite

Footnotes & Abbreviations:

MR Monitor and Report only
-- No data available
NODI No Discharge
(1) There is no enforceable quantification level included for the monthly average. However, the permittee is required to monitor and report the monthly average. The permittee shall comply with the enforceable quantification level of 0.1 as a daily maximum concentration.
(2) The monitoring frequency is once per 5 years, if there is a discharge.

(#19) Pequannock WTP/ Newark Watershed & Development – NJG0063711 continued

INACTIVE 004A: Emergency overflow from the "wastewater" holding tanks

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Average Daily Max	NODI	MR MR	MR MR	1/Discharge	Measured
Duration of Discharge	days /month	Monthly Total	--	--	MR	1/Discharge	Calculated
Total Flow	million gallons /month	Monthly Total	--	--	MR	1/Discharge	Calculated
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	NODI	20 25	20 25	1/Discharge	Grab
pH	s.u.	Instant Min. Instant Max.	NODI	6.0 9.0	6.0 9.0	1/Discharge	Grab
Petroleum Hydrocarbons	mg/L	Monthly Avg. Daily Max.	NODI	10 15	10 15	1/Discharge	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	NODI	MR **(1)** 0.01 **(1)**	MR **(1)** 0.01 **(1)**	1/Discharge	Grab
Acute WET, LC50 (*Ceriodaphnia dubia)*	% effluent	Minimum	--	--	MR	1/ Discharge (**2**)	Composite

Footnotes & Abbreviations:

MR Monitor and Report only
-- No data available
NODI No Discharge
(1) There is no enforceable quantification level included for the monthly average. However, the permittee is required to monitor and report the monthly average. The permittee shall comply with the enforceable quantification level of 0.1 as a daily maximum concentration.
(2) The monitoring frequency is once per 5 years, if there is a discharge.

005A: Screen backwash (every 6 hours) using raw water

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Average Daily Max	0.0025 0.0025	MR MR	MR MR	1/Month	Metered
Duration of Discharge	days /month	Monthly Total	--	--	MR	1/Month	Calculated
Total Flow	million gallons /month	Monthly Total	--	--	MR	1/Month	Calculated
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	4.5 20	20 25	20 25	1/Month	Grab
pH	s.u.	Instant Min. Instant Max.	6.0 7.3	6.0 9.0	6.0 9.0	1/Month	Grab
Petroleum Hydrocarbons	mg/L	Monthly Avg. Daily Max.	<5 <5	10 15	10 15	1/Month	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	0 0	MR **(1)** 0.01 **(1)**	MR **(1)** 0.01 **(1)**	1/Month	Grab
Chronic WET IC25 (*Ceriodaphnia dubia*)	% effluent	Minimum	>100 **(2)**	MR	MR	1/Year	Composite

Footnotes & Abbreviations:

MR Monitor and Report only
-- No data available
(1) There is no enforceable quantification level included for the monthly average. However, the permittee is required to monitor and report the monthly average. The permittee shall comply with the enforceable quantification level of 0.1 as a daily maximum concentration.
(2) All 5 data points from samples collected during this last permit cycle are all >100 % effluent.

(#20) Pureland WTP/ NJ American Water – NJG0023299

Receiving Water: Wetlands to unnamed tributary to Raccoon Creek.
Receiving Water Classification: FW2-NT/ SE2
Water Quality Impairments: Phosphorus, TSS
Source Water: Well water (Raritan Formation)
Discharge Frequency: Intermittent, currently the facility is not in use.
Residuals: Monitoring is included in this permit.
WCR Parameters: This monitoring frequency is retained at once per five years.
Additives: Not applicable as raw water (pre chemical addition) is used to backwash.

001A: Ion exchange backwash (using raw well water & stormwater)

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	NODI	MR MR	MR MR	1/Discharge	Metered
Duration of Discharge	days /month	Monthly Total	--	--	MR	1/Discharge	Calculated
Total Flow	million gallons /month	Monthly Total	--	--	MR	1/Discharge	Calculated
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	NODI	20 40	20 40	1/Discharge	Grab
pH	s.u.	Instant Min. Instant Max.	NODI	6.0 9.0	6.0 9.0	1/Discharge	Grab
Iron, Total Recoverable	mg/L	Monthly Avg. Daily Max.	NODI	MR MR	MR MR	1/Discharge	Grab
Manganese, Total Recoverable	µg/L	Monthly Avg. Daily Max.	NODI	-- --	MR MR	1/Discharge	Grab
Acute WET, LC50 (*Mysidopsis bahia*)	% effluent	Minimum	NODI	MR	MR	1/5 years	Composite

Footnotes & Abbreviations:

MR Monitor and Report only
-- No data available
NODI No Discharge

(#21) Raritan Millstone WTP/ American Water – NJG0000965

Receiving Water: Raritan River via a ditch
Receiving Water Classification: FW2-NT (C2)
Water Quality Impairments: Arsenic, Benzene, Mercury, Phosphorus, TSS
Source Water: Raritan River
Discharge Frequency: 001A has not discharged since 2002 and 003A discharges intermittently.
Residuals: Monitoring is included in a residuals permit.
WCR Parameters: This monitoring frequency is for 003A only and is retained at once per year.
Additives: Sodium Hypochlorite, Aluminum Sulfate, Fluoride, Phosphoric Acid, Sulfuric Acid, Polymers, Potassium Permanganate

001A: Emergency bypass from 2 concrete basins; no discharge since 2002

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	NODI	MR MR	MR MR	1/Discharge	Measured
Duration of Discharge	days/month	Monthly Total	NODI	MR	MR	1/Discharge	Calculated
Total Flow	million gallons/month	Monthly Total	NODI	MR	MR	1/Discharge	Calculated
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	NODI	20 40	20 40	1/Discharge	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	NODI	MR MR	MR MR	1/Discharge	Grab
pH	s.u.	Instant Min. Instant Max.	NODI	6.0 9.0	6.0 9.0	1/Discharge	Grab
Manganese, Total Recoverable	µg/L	Monthly Avg. Daily Max.	NODI	2000 4000	2000 4000	1/Discharge	Grab
Phosphorus, Total	mg/L	Monthly Avg. Daily Max.	NODI	MR MR	MR MR	1/Discharge	Grab
Acute WET, LC50 (*Ceriodaphnia dubia*)	% effluent	Minimum	NODI	MR	MR	1/5 Years	Composite

Footnotes & Abbreviations:
MR Monitor and Report only
NODI No Discharge

003A: Screen spray backwash (using raw river water and city water), 10 minute cycle performed once every one to two weeks in the summer and two to three times per day in the winter.

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	0.05 0.05	MR MR	MR MR	1/Month	Metered
Duration of Discharge	days/month	Monthly Total	30	MR	MR	1/Month	Calculated
Total Flow	million gallons/month	Monthly Total	1.5	MR	MR	1/Month	Calculated
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	5.4 20	20 40	20 40	1/Month	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	0.3 0.8	MR MR	MR MR	1/Month	Grab
pH	s.u.	Instant Min. Instant Max.	7.4 8.6	6.0 9.0	6.0 9.0	1/Month	Grab
Manganese, Total Recoverable	µg/L	Monthly Avg. Daily Max. # detect / # non-detect	310 3800 56/2	2000 4000	2000 4000	1/Month	Grab
Phosphorus, Total	mg/L	Monthly Avg. Daily Max.	0.6 1.4	MR MR	MR MR	1/Month	Grab
Acute WET, LC50 (*Ceriodaphnia dubia*)	% effluent	Minimum	>100 **(1)**	MR	MR	1/5 Years	Composite

Footnotes & Abbreviations:
MR Monitor and Report only
(1) Recently renewed permit. Only one data point available: >100 % effluent.

(#21) Raritan Millstone WTP/ American Water – NJG0000965 (continued)

004A: Filter backwash, only if not recycled then back thru the treatment process.

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	NODI	MR MR	MR MR	1/Discharge	Metered
Duration of Discharge	days/month	Monthly Total	NODI	MR	MR	1/Discharge	Calculated
Total Flow	million gallons/month	Monthly Total	NODI	MR	MR	1/Discharge	Calculated
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	NODI	20 40	20 40	1/Discharge	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	NODI	MR MR	MR MR	1/Discharge	Grab
pH	s.u.	Instant Min. Instant Max.	NODI	6.0 9.0	6.0 9.0	1/Discharge	Grab
Manganese, Total Recoverable	µg/L	Monthly Avg. Daily Max.	NODI	2000 4000	2000 4000	1/Discharge	Grab
Phosphorus, Total	mg/L	Monthly Avg. Daily Max.	NODI	MR MR	MR MR	1/Discharge	Grab
Acute WET, LC50 (*Ceriodaphnia dubia*)	% effluent	Minimum	NODI	MR	MR	1/5 years	Composite

Footnotes & Abbreviations:

MR Monitor and Report only
NODI No Discharge

(#22) Robert Frost Treatment Facility (Well #10) – NJG0001198

Receiving Water: Pond Run
Receiving Water Classification: FW2-NT (C2)
Water Quality Impairments: TSS, Turbidity
Source Water: Well water
Discharge Frequency: Intermittent, occurs once per day to once per three days and lasts one to three hours
Residuals: Monitoring is included in the groundwater permit
WCR Parameters: This monitoring frequency is increased to once per six months.
Additives: Hypochlorite, Fluoride, Polyphosphate, and Potassium permanganate

001A: filter backwash
Finished water is used to backwash filters

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	0.04 0.41	MR MR	MR MR	1/Month	Measured
Duration of Discharge	days/month	Monthly Total	--	--	MR	1/Month	Calculated
Total Flow	million gallons/month	Monthly Total	--	--	MR	1/Month	Calculated
Total Organic Carbon (TOC)	mg/L	Monthly Avg. Daily Max.	2.3 9.7	25 MR	25 MR	1/Month	Grab
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	2.3 13	20 40	20 40	1/Month	Grab
pH	s.u.	Instant Min. Instant Max.	6.02 8.48	6.0 9.0	6.0 9.0	1/Month	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	<0.1 <0.1	MR 0.018 **(1)**	MR 0.018 **(1)**	1/Month	Grab
Phosphorus, Total	mg/L	Monthly Avg. Daily Max.	0.09 0.25	MR MR	MR MR	1/ 6 Months	Grab
Copper, Total Recoverable	µg/L	Monthly Avg. Daily Max. # detect/ # non-detect	10 17 2/12	MR MR	MR MR	1/ 6 Months	Grab
Iron, Total Recoverable	mg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/ 6 Months	Grab
Manganese, Total Recoverable	µg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/ 6 Months	Grab
Zinc, Total Recoverable	µg/L	Monthly Avg. Daily Max. # detect/ # non-detect	27 40 3/11	MR MR	MR MR	1/ 6 Months	Grab
Radium-226, Total	PCi/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/ 6 Months	Grab
Radium-228, Total	PCi/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/ 6 Months	Grab
Chronic WET, IC25 (*Ceriodaphnia dubia*)	% effluent	Minimum	2.1 **(2)**	MR	--	--	--
NOAEC (*Ceriodaphnia dubia*)	% effluent	Minimum	--	--	100	1/ 6 Months	Composite

Footnotes & Abbreviations:

MR Monitor and Report only
-- No data available

(1) There is no enforceable quantification level included for the monthly average. However, the permittee is required to monitor and report the monthly average. The permittee shall comply with the enforceable quantification level of 0.1 as a daily maximum concentration.

(2) Chronic WET data using the species *Ceriodaphnia* dubia consists of the following data points: 5/06 (100%), 6/06 (>100%), 8/06 (41.6%), 3/07 (2.1%), 9/07 (17.9%), 12/07 (>100%), 6/08 (80%), 9/08 (>100%), 5/09 (>100%), 12/09 (>100%), 6/10 (75%), 12/10 (>100%)

(#23) Shorelands #1 WTP – NJG0025453

Receiving Water: East Creek
Receiving Water Classification: FW2-NT (C2)
Water Quality Impairments: Chlordane, DDD, DDE, DDT, Enterococci, Mercury, PCBs
Source Water: Well water
Discharge Frequency: Intermittent (discharged once in 10/06), supernatant from lagoons containing filter backwash is usually returned to the head of the plant.
Residuals: Monitoring is included in this permit
WCR Parameters: This monitoring frequency is retained at once per five years.
Additives: Sodium Hypochlorite, Sodium Hydroxide, Stern Pac (Aluminum Sulfate), Zinc Orthophosphate

001A: supernatant from lagoons containing filter backwash
Finished water is used to backwash the filters

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	0.07 0.07	MR MR	MR MR	1/Discharge	Calculated
Duration of Discharge	days/month	Monthly Total	--	MR	MR	1/Discharge	Calculated
Total Flow	million gallons/month	Monthly Total	--	MR	MR	1/Discharge	Calculated
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	4.33 6	20 40	20 40	1/Discharge	Grab
pH	s.u.	Instant Min. Instant Max.	6.82 6.98	6.0 9.0	6.0 9.0	1/Discharge	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	0.027 0.04	MR MR	MR MR	1/Discharge	Grab
Iron, Total Recoverable	mg/L	Monthly Avg. Daily Max. # detect / # non-detect	0.71 1.65 1/0	MR MR	MR MR	1/Discharge	Grab
Manganese, Total Recoverable	µg/L	Monthly Avg. Daily Max. # detect / # non-detect	17 26 1/0	MR MR	MR MR	1/Discharge	Grab
Phosphorus, Total	mg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/Discharge	Grab
Zinc, Total Recoverable	µg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/Discharge	Grab
Acute WET, LC50 (*Ceriodaphnia dubia*)	% effluent	Minimum	--	MR	MR	1/5 years	Composite

Footnotes & Abbreviations:

MR Monitor and Report only
-- No data available

(#24) Shorelands #2 WTP - NJG0025461

Receiving Water: East Creek
Receiving Water Classification: FW2-NT (C2)
Water Quality Impairments: Chlordane, DDD, DDE, DDT, Enterococci, Mercury, PCBs
Source Water: Well water
Discharge Frequency: Intermittent (discharged during 11 months between 4/06 and 11/07), filter backwash is usually returned to the head of the plant.
Residuals: Monitoring is included in this permit
WCR Parameters: The monitoring frequencies for 001B & 002B are retained at once per five years.
Additives: Sodium Hypochlorite, Lime, Stern Pac (Aluminum Sulfate), Zinc Orthophosphate

001B: Filter Backwash and Clarifier Blowdown via lagoons
Finished water is used to backwash the filters

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	0.035 0.05	MR MR	MR MR	1/Discharge	Calculated
Duration of Discharge	days/month	Monthly Total	--	MR	MR	1/Discharge	Calculated
Total Flow	million gallons/month	Monthly Total	--	MR	MR	1/Discharge	Calculated
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	4.42 8	20 40	20 40	1/Discharge	Grab
pH	s.u.	Instant Min. Instant Max.	6.7 7.97	6.0 9.0	6.0 9.0	1/Discharge	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	0.025 0.05	MR 0.09 (**1**)	MR 0.09 (**1**)	1/Discharge	Grab
Iron, Total Recoverable	mg/L	Monthly Avg. Daily Max. # detect / # non-detect	0.49 0.90 11/11	MR MR	MR MR	1/Discharge	Grab
Manganese, Total Recoverable	µg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/Discharge	Grab
Phosphorus, Total	mg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/Discharge	Grab
Zinc, Total Recoverable	µg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/Discharge	Grab
Acute WET, LC50 (*Ceriodaphnia dubia*)	% effluent	Minimum	--	MR	MR	1/5 years	Composite

Footnotes & Abbreviations:

MR Monitor and Report only
-- No data available

(1) There is no enforceable quantification level included for the monthly average. However, the permittee is required to monitor and report the monthly average. The permittee shall comply with the enforceable quantification level of 0.1 as a daily maximum concentration.

(#24) Shorelands #2 WTP - NJG0025461 (continued)

002B: Water from drainage pipes underlying sludge drying beds is usually recycled to the head of the plant; therefore, discharge is intermittent in nature (discharged during 8 months between 1/06 and 9/10).

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	0.001 0.005	MR MR	MR MR	1/6 months	Calculated
Duration of Discharge	days/month	Monthly Total	27	MR	MR	1/6 months	Calculated
Total Flow	million gallons/month	Monthly Total	0.027	MR	MR	1/6 months	Calculated
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	5.33 6	20 40	20 40	1/6 months	Grab
pH	s.u.	Instant Min. Instant Max.	7.0 7.8	6.0 9.0	6.0 9.0	1/6 months	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	0.03 0.04	MR 0.09(**1**)	MR 0.09(**1**)	1/6 months	Grab
Iron, Total Recoverable	mg/L	Monthly Avg. Daily Max. # detect / # non-detect	0.349 0.748 5/3	MR MR	MR MR	1/6 months	Grab
Manganese, Total Recoverable	µg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/6 months	Grab
Phosphorus, Total	mg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/6 months	Grab
Zinc, Total Recoverable	µg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/6 months	Grab
Acute WET, LC50 (*Ceriodaphnia dubia*)	%	Minimum	--	MR	MR	1/5 years	Composite

Footnotes & Abbreviations:

MR Monitor and Report only

-- No data available

(1) There is no enforceable quantification level included for the monthly average. However, the permittee is required to monitor and report the monthly average. The permittee shall comply with the enforceable quantification level of 0.1 as a daily maximum concentration.

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(#25) Taylortown WTP/ Boonton - NJG0064271

Receiving Water: North Valhalla Brook via publicly owned storm sewer
Receiving Water Classification: FW2-NT (C2)
Water Quality Impairments: No known impairment
Water Source: Boonton Reservoir
Discharge Frequency: Intermittent; (1)GAC filter backwash (24,000 gpd in ~8 minutes, 1 time/day; (2) potential emergency bypass of reservoir water; (3) clearwell overflow (highly unlikely)
Residuals: Monitoring is included in this permit.
WCR Parameters: The monitoring frequency for metals is retained at once per year and the monitoring frequency for acids, base neutrals and pesticides is retained at once per five years.
Additives: Orthophosphate, Aluminum Sulfate, Chlorine (gas & tablets)

001A: GAC filter backwash (using finished water), possible emergency bypass of reservoir water, & possible clearwell overflow

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	(**1**) (**1**)	MR MR	MR MR	1/Month	Metered
Duration of Discharge	days/month	Monthly Total	--	--	MR	1/Month	Calculated
Total Flow	million gallons/month	Monthly Total	--	--	MR	1/Month	Calculated
pH	s.u.	Instant Min. Instant Max.	6.9 8.0	6.0 9.0	6.0 9.0	1/Month	Grab
Chemical Oxygen Demand (COD)	mg/L	Monthly Avg. Daily Max.	12 23	50 75	50 75	1/Month	Grab
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	7 13	20 40	20 40	1/Month	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max. # detect/# non-detect	0.24 0.31 3/17	MR MR	MR MR	1/6 Months	Grab
Phosphorus, Total	mg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/6 Months	Grab
Acute WET, LC50 (*Ceriodaphnia dubia*)	% effluent	Minimum	>100 **(2)**	MR	MR	1/5 years	Composite

Footnotes & Abbreviations:
MR Monitor and Report only
-- No data available
(1) Prior flow numbers (~100,000 gpd) were reported in error. Approximately 24,000 gpd is discharged in ~ 8 minutes, one time per day.
(2) July 2010 data for both species resulted in values >100 % effluent.

(#26) Township of North Brunswick WTP/ American Water Services – NJG0035190

Receiving Water: All outfalls discharge to the Delaware and Raritan Canal
Receiving Water Classification: FW2-NT (C2)
Water Quality Impairments: Arsenic, Phosphorus
Source Water: Delaware and Raritan Canal
Discharge Frequency: 001A is intermittent but almost continuous, occurs four times per hour for a few minutes; 005A is dependent on rain events; 006A would only discharge in an emergency situation
Residuals: Monitoring is included in this permit
WCR Parameters: The monitoring frequencies for 001A and 005A are retained at once per five years.
Additives (005A and 006A only): Sodium Hypochlorite, Polyphosphate, Polyaluminum Chloride, Polymers, Caustic (Sodium Hydroxide)

001A: water from the pipe gallery sump pumps, meter pit, and some storm water runoff from on-site paved areas

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	0.0013 0.0014	MR MR	MR MR	1/Month	Measured
Duration of Discharge	days/month	Monthly Total	--	--	MR	1/Month	Calculated
Total Flow	million gallons/month	Monthly Total	--	--	MR	1/Month	Calculated
Chemical Oxygen Demand (COD)	mg/L	Monthly Avg. Daily Max.	14 37	MR 50	MR 50	1/Month	Grab
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	4 12	20 40	20 40	1/Month	Grab
Petroleum Hydrocarbons	mg/L	Monthly Avg. Daily Max.	1.7 4.7	10 15	10 15	1/Month	Grab
pH	s.u.	Instant Min. Instant Max.	6.5 8.9	6.0 9.0	6.0 9.0	1/Month	Grab
Chronic WET, IC25 (*Ceriodaphnia dubia)*	% effluent	Minimum	--	MR	MR	1/5 Year	Composite

Footnotes & Abbreviations:
MR Monitor and Report only
-- No data available

002A: Inactivated

This outfall was eliminated from the permit when DSN005A and DSN006A were created. DSN002A was a sampling point that was closer to the end of the pipe. However, the water level in the D&R Canal has gone up and samples at DSN002A included ambient water along with wastewater, so the monitoring point was moved further back into the pipe and became DSN005A. However, DSN005A now samples before the clear well overflow enters the discharge so DSN006A covers the clear well overflow discharge, which would only occur in an emergency.

003A: No requirements (Intake Screen Washwater)

No monitoring or limitations are needed at this outfall since the discharge consists of only intake screen washwater which is discharged to the same waterbody from which it is withdrawn.

004A: Inactivated

This outfall was removed from the permit as a result of the permittee's request on 5/18/11.

(#26) Township of North Brunswick WTP/ American Water Services – NJG0035190 (continued)

005A: backwash holding tank emergency overflow and storm water
Filters are backwashed using potable water. Backwash is generally recycled, will only be discharged via 005A in an emergency situation.

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	0.003 0.2	MR MR	MR MR	1/6 Months	Measured
Duration of Discharge	days/month	Monthly Total	--	--	MR	1/6 Months	Calculated
Total Flow	million gallons/month	Monthly Total	--	--	MR	1/6 Months	Calculated
Chemical Oxygen Demand (COD)	mg/L	Monthly Avg. Daily Max.	<5 <5	MR 50	MR 50	1/6 Months	Grab
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	2.5 2.5	20 60	20 40	1/6 Months	Grab
Petroleum Hydrocarbons	mg/L	Monthly Avg. Daily Max.	<1.5 <1.5	10 15	10 15	1/6 Months	Grab
pH	s.u.	Instant Min. Instant Max.	6.4 7.2	6.0 9.0	6.0 9.0	1/6 Months	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	<0.05 <0.05	MR 0.02 **(1)**	MR 0.02 **(1)**	1/6 Months	Grab
Phosphorus, Total	mg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/6 Months	Grab
Acute WET, LC50 *(Ceriodaphnia dubia)*	% effluent	Minimum	--	--	MR	1/5 Years	Composite

Footnotes & Abbreviations:

MR Monitor and Report only
-- No data available
(1) There is no enforceable quantification level included for the monthly average. However, the permittee is required to monitor and report the monthly average. The permittee shall comply with the enforceable quantification level of 0.1 as a daily maximum concentration

006A: clearwell storage tank overflow

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	NODI NODI	MR MR	MR MR	1/Discharge	Measured
Duration of Discharge	days/month	Monthly Total	--	--	MR	1/Discharge	Calculated
Total Flow	million gallons/month	Monthly Total	--	--	MR	1/Discharge	Calculated
Chemical Oxygen Demand (COD)	mg/L	Monthly Avg. Daily Max.	NODI NODI	MR 50	MR 50	1/Discharge	Grab
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	NODI NODI	20 60	20 40	1/Discharge	Grab
Petroleum Hydrocarbons	mg/L	Monthly Avg. Daily Max.	NODI NODI	10 15	10 15	1/Discharge	Grab
Phosphorus, Total	mg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/Discharge	Grab
pH	s.u.	Instant Min. Instant Max.	NODI NODI	6.0 9.0	6.0 9.0	1/Discharge	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	NODI NODI	MR 0.02 **(1)**	MR 0.02 **(1)**	1/Discharge	Grab
Acute WET, LC50 (*Ceriodaphnia dubia)*	% effluent	Minimum	--	--	MR	1/Discharge (**2**)	Composite

Footnotes & Abbreviations:

MR Monitor and Report only
-- No data available
(1) There is no enforceable quantification level included for the monthly average. However, the permittee is required to monitor and report the monthly average. The permittee shall comply with the enforceable quantification level of 0.1 as a daily maximum concentration
(2) The monitoring frequency is once per 5 years, if there is a discharge.

(#27) Water Street WTP/ Pennsville Twp. – NJG0068730

Receiving Water: Delaware River
Receiving Water Classification: Zone 5
Water Quality Impairments: PCBs
Water Source: Well water
Discharge Frequency: Intermittent; no Discharge since 1996; backwash stored in lagoons is usually recycled to the head of the plant.
Residuals: Monitoring is included in this permit.
WCR Parameters: This monitoring frequency is decreased to once per five years.
Additives: Sodium Hypochlorite, Lime, Alum Sulfate, Polyphosphate (Klenphos)

001A: Filter Backwash from secondary lagoon
Finished water is used to backwash the filters

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	MGD	Monthly Avg. Daily Max.	NODI	MR MR	MR MR	1/Discharge	Calculated
Duration of Discharge	days/month	Monthly Total	NODI	MR	MR	1/Discharge	Calculated
Total Flow	million gallons/month	Monthly Total	NODI	MR	MR	1/Discharge	Calculated
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	NODI	20 40	20 40	1/Discharge	Grab
pH	s.u.	Instant Min. Instant Max.	NODI	6.0 9.0	6.0 9.0	1/Discharge	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	NODI	MR 0.1	MR 0.1	1/Discharge	Grab
Iron, Total Recoverable	mg/L	Monthly Avg. Daily Max.	NODI	MR MR	MR MR	1/Discharge	Grab
Manganese, Total Recoverable	µg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/Discharge	Grab
Phosphorus, Total	mg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/Discharge	Grab
Zinc, Total Recoverable	µg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/Discharge	Grab
Acute WET, LC50 (*Ceriodaphnia dubia*)	% effluent	Minimum	NODI	MR	MR	1/5 Years	Composite

Footnotes & Abbreviations:

MR Monitor and Report only
-- No data available
NODI No Discharge

(#28) Woodlane WTP/ Mt Holly Township Water Company – NJG0062693

Receiving Water: Unnamed tributary to Barker's Brook via storm sewer
Receiving Water Classification: FW2-NT (C2)
Water Quality Impairments: No known impairment
Water Source: Well water
Discharge Frequency: Intermittent, one to two times per week
Residuals: Monitoring is included in a groundwater permit.
WCR Parameters: This monitoring frequency is decreased from twice per permit cycle to once per five years.
Additives: Hypochlorite, Sodium Hydroxide, and Zinc Orthophosphate

001A: Filter backwash
Finished water is used to backwash the filters.

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA 1/1/06-12/31/10	EXISTING LIMITS	FINAL LIMITS	Final Monitoring Frequency	Sample Type
Flow	GPD	Monthly Avg. Daily Max.	0.05 0.05	MR MR	MR MR	1/Month	Metered
Duration of Discharge	days/month	Monthly Total	0.17	MR	MR	1/Month	Calculated
Total Flow	million gallons/month	Monthly Total	0.05	MR	MR	1/Month	Calculated
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	3 32	20 40	20 40	1/Month	Grab
pH	s.u.	Instant Min. Instant Max.	7 8.5	6.0 9.0	6.0 9.0	1/Month	Grab
Chlorine Produced Oxidants (CPO)	mg/L	Monthly Avg. Daily Max.	0.05 0.1	MR **(1)** 0.01 **(1)**	MR **(1)** 0.01 **(1)**	1/Month	Grab
Phosphorus, Total	mg/L	Monthly Avg. Daily Max.	0.11 0.36	MR MR	MR MR	1/Month	Grab
Iron, Total Recoverable	mg/L	Monthly Avg. Daily Max.	0.18 2.21	1.5 3.0	1.5 3.0	1/ 6 Months	Grab
Manganese, Total Recoverable	µg/L	Monthly Avg. Daily Max.	17 269	MR MR	MR MR	1/ 6 Months	Grab
Zinc, Total Recoverable	µg/L	Monthly Avg. Daily Max.	3.6 34	MR MR	MR MR	1/ 6 Months	Grab
Radium-226, Total	PCi/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/ 6 Months	Grab
Radium-228, Total	PCi/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/ 6 Months	Grab
Acute WET (*Ceriodaphnia dubia)*	% effluent	Minimum	>100 **(2)**	MR	MR	1/5 Years	Composite

Footnotes & Abbreviations:

MR Monitor and Report only
-- No data available
(1) There is no enforceable quantification level included for the monthly average. However, the permittee is required to monitor and report the monthly average. The permittee shall comply with the enforceable quantification level of 0.1 as a daily maximum concentration
(2) WET data consists of 11 data points spanning from 4/07 to 12/10, all of which were LC50 >100%.

NEW JERSEY POLLUTANT DISCHARGE ELIMINATION SYSTEM

The New Jersey Department of Environmental Protection hereby grants you a NJPDES permit for the facility/activity named in this document. This permit is the regulatory mechanism used by the Department to help ensure your discharge will not harm the environment. By complying with the terms and conditions specified, you are assuming an important role in protecting New Jersey's valuable water resources. Your acceptance of this permit is an agreement to conform with all of its provisions when constructing, installing, modifying, or operating any facility for the collection, treatment, or discharge of pollutants to waters of the state. If you have any questions about this document, please feel free to contact the Department representative listed in the permit cover letter. Your cooperation in helping us protect and safeguard our state's environment is appreciated.

Permit Number: NJ0129500

Draft: Surface Water Master General Permit New

Permittee:
NJPDES Master General Permit Program Interest
Category BPW
Per Individual Notice of Authorization
DIVISION OF WATER QUALITY
Mail Code 401-02B
P.O. Box 420, 401 East State Street
Trenton, NJ 08625-0420

Co-Permittee:

Property Owner:
NJPDES Master General Permit Program Interest
Category BPW
Per Individual Notice of Authorization
DIVISION OF WATER QUALITY
Mail Code 401-02B
P.O. Box 420, 401 East State Street
Trenton, NJ 08625-0420

Location Of Activity:
NJPDES Master General Permit Program Interest
Category BPW
Per Individual Notice of Authorization
DIVISION OF WATER QUALITY
Mail Code 401-02B
P.O. Box 420, 401 East State Street
Trenton, NJ 08625-0420

Authorization(s) Covered Under This Approval	Issuance Date	Effective Date	Expiration Date
BPW -Potable Water Treatment Plant (GP)			

By Authority of:
Commissioner's Office

DEP AUTHORIZATION
Pilar Patterson, Chief
Bureau of Surface Water Permitting
Division of Water Quality

(Terms, conditions and provisions attached hereto)

PART I
GENERAL REQUIREMENTS:
NJPDES

A. General Requirements of all NJPDES Permits

1. Requirements Incorporated by Reference

a. The permittee shall comply with all conditions set forth in this permit and with all the applicable requirements incorporated into this permit by reference. The permittee is required to comply with the regulations, including those cited in paragraphs b. through e. following, which are in effect as of the effective date of the final permit.

b. General Conditions

Penalties for Violations	N.J.A.C. 7:14-8.1 et seq.
Incorporation by Reference	N.J.A.C. 7:14A-2.3
Toxic Pollutants	N.J.A.C. 7:14A-6.2(a)4i
Duty to Comply	N.J.A.C. 7:14A-6.2(a)1 & 4
Duty to Mitigate	N.J.A.C. 7:14A-6.2(a)5 & 11
Inspection and Entry	N.J.A.C. 7:14A-2.11(e)
Enforcement Action	N.J.A.C. 7:14A-2.9
Duty to Reapply	N.J.A.C. 7:14A-4.2(e)3
Signatory Requirements for Applications and Reports	N.J.A.C. 7:14A-4.9
Effect of Permit/Other Laws	N.J.A.C. 7:14A-6.2(a)6 & 7 & 2.9(c)
Severability	N.J.A.C. 7:14A-2.2
Administrative Continuation of Permits	N.J.A.C. 7:14A-2.8
Permit Actions	N.J.A.C. 7:14A-2.7(c)
Reopener Clause	N.J.A.C. 7:14A-6.2(a)10
Permit Duration and Renewal	N.J.A.C. 7:14A-2.7(a) & (b)
Consolidation of Permit Process	N.J.A.C. 7:14A-15.5
Confidentiality	N.J.A.C. 7:14A-18.2 & 2.11(g)
Fee Schedule	N.J.A.C. 7:14A-3.1
Treatment Works Approval	N.J.A.C. 7:14A-22 & 23

c. Operation And Maintenance

Need to Halt or Reduce not a Defense	N.J.A.C. 7:14A-2.9(b)
Proper Operation and Maintenance	N.J.A.C. 7:14A-6.12

d. Monitoring And Records

Monitoring	N.J.A.C. 7:14A-6.5
Recordkeeping	N.J.A.C. 7:14A-6.6
Signatory Requirements for Monitoring Reports	N.J.A.C. 7:14A-6.9

e. Reporting Requirements

Planned Changes	N.J.A.C. 7:14A-6.7
Reporting of Monitoring Results	N.J.A.C. 7:14A-6.8
Noncompliance Reporting	N.J.A.C. 7:14A-6.10 & 6.8(h)
Hotline/Two Hour & Twenty-four Hour Reporting	N.J.A.C. 7:14A-6.10(c) & (d)
Written Reporting	N.J.A.C. 7:14A-6.10(e) &(f) & 6.8(h)
Duty to Provide Information	N.J.A.C. 7:14A-2.11, 6.2(a)14 & 18.1
Schedules of Compliance	N.J.A.C. 7:14A-6.4
Transfer	N.J.A.C. 7:14A-6.2(a)8 & 16.2

PART II

GENERAL REQUIREMENTS: DISCHARGE CATEGORIES

A. Additional Requirements Incorporated By Reference

1. Requirements for Discharges to Surface Waters

a. In addition to conditions in Part I of this permit, the conditions in this section are applicable to activities at the permitted location and are incorporated by reference. The permittee is required to comply with the regulations which are in effect as of the effective date of the final permit.

i. Surface Water Quality Standards N.J.A.C. 7:9B-1

B. General Conditions

1. Scope

a. The issuance of this permit shall not be considered as a waiver of any applicable federal, state, and local rules, regulations and ordinances.

2. Permit Renewal Requirement

a. Permit conditions remain in effect and enforceable until and unless the permit is modified, renewed or revoked by the Department.

b. Submit a complete permit renewal application: 180 days before the expiration date.

3. Notification of Non-Compliance

a. The permittee shall notify the Department of all non-compliance when required in accordance with N.J.A.C. 7:14A-6.10 by contacting the DEP HOTLINE at 1-877-WARNDEP (1-877-927-6337).

b. The permittee shall submit a written report as required by N.J.A.C. 7:14A-6.10 within five days.

4. Notification of Changes

a. The permittee shall give written notification to the Department of any planned physical or operational alterations or additions to the permitted facility when the alteration is expected to result in a significant change in the permittee's discharge and/or residuals use or disposal practices including the cessation of discharge in accordance with N.J.A.C. 7:14A-6.7.

b. Prior to any change in ownership, the current permittee shall comply with the requirements of N.J.A.C. 7:14A-16.2, pertaining to the notification of change in ownership.

5. Access to Information

a. The permittee shall allow an authorized representative of the Department, upon the presentation of credentials, to enter upon a person's premises, for purposes of inspection, and to access/copy any records that must be kept under the conditions of this permit.

6. Operator Certification

a. Pursuant to N.J.A.C. 7:10A-1.1 et seq. every wastewater system not exempt pursuant to N.J.A.C. 7:10A-1.1(b) requires a licensed operator. The operator of a system shall meet the Department's requirements pursuant to N.J.A.C. 7:10A-1.1 and any amendments. The name of the proposed operator, where required shall be submitted to the Department at the address below, in order that his/her qualifications may be determined prior to initiating operation of the treatment works.

   i. Notifcations shall be submitted to:
   NJDEP
   Examinations and Licensing Unit
   Mail Code 401-04E
   P.O. Box 420
   Trenton, New Jersey 08625-0420
   (609) 777-1013

b. The permittee shall notify the Department of any changes in licensed operator within two weeks of the change.

7. Operation Restrictions

a. The operation of a waste treatment or disposal facility shall at no time create: (a) a discharge, except as authorized by the Department in the manner and location specified in Part III of this permit; (b) any discharge to the waters of the state or any standing or ponded condtion for water or waste, except as specifically authorized by a valid NJPDES permit.

8. Residuals Management

a. The permittee shall comply with land-based sludge management criteria and shall conform with the requirements for the management of residuals and grit and screenings under N.J.A.C. 7:14A-6.15(a), which includes:

   i. Standards for the Use or Disposal of Residual, N.J.A.C. 7:14A-20;

   ii. Section 405 of the Federal Act governing the disposal of sludge from treatment works treating domestic sewage;

   iii. The Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq., and the Solid Waste Management Rules, N.J.A.C. 7:26;

   iv. The Sludge Quality Assurance Regulations, N.J.A.C. 7:14C;

   v. The Statewide Sludge Management Plan promulgated pursuant to the Water Quality Planning Act, N.J.S.A. 58:11A-1 et seq., and the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq.; and

   vi. The provisions concerning disposal of sewage sludge and septage in sanitary landfills set forth at N.J.S.A. 13:1E-42 and the Statewide Sludge Management Plan.

   vii. Residual that is disposed in a municipal solid waste landfill unit shall meet the requirements in 40 CFR Part 258 and/or N.J.A.C. 7:26 concerning the quality of residual disposed in a municipal solid waste landfill unit. (That is, passes the Toxicity Characteristic Leaching Procedure and does not contain "free liquids" as defined at N.J.A.C. 7:14A-1.2.)

b. If any applicable standard for residual use or disposal is promulgated under section 405(d)of the Federal Act and Sections 4 and 6 of the State Act and that standard is more stringent than any limitation on the pollutant or practice in the permit, the Department may modify or revoke and reissue the permit to conform to the standard for residual use or disposal.

c. The permittee shall make provisions for storage, or some other approved alternative management strategy, for anticipated downtimes at a primary residual management alternative. The permittee shall not be permitted to store residual beyond the capacity of the structural treatment and storage components of the treatment works. N.J.A.C. 7:14A-20.8(a) and N.J.A.C. 7:26 provide for the temporary storage of residuals for periods not exceeding six months, provided such storage does not cause pollutants to enter surface or ground waters of the State. The storage of residual for more than six months is not authorized under this permit. However, this prohibition does not apply to residual that remains on the land for longer than six months when the person who prepares the residual demonstrates that the land on which the residual remains is not a surface disposal site or landfill. The demonstration shall explain why residual must remain on the land for longer than six months prior to final use or disposal, discuss the approximate time period during which the residual shall be used or disposed and provide documentation of ultimate residual management arrangements. Said demonstration shall be in writing, be kept on file by the person who prepares residual, and submitted to the Department upon request.

d. The permittee shall comply with the appropriate adopted District Solid Waste or Sludge Management Plan (which by definition in N.J.A.C. 7:14A-1.2 includes Generator Sludge Management Plans), unless otherwise specifically exempted by the Department.

e. The preparer must notify and provide information necessary to comply with the N.J.A.C. 7:14A-20 land application requirements to the person who applies bulk residual to the land. This shall include, but not be limited to, the applicable recordkeeping requirements and certification statements of 40 CFR 503.17 as referenced at N.J.A.C 7:14A-20.7(j).

f. The preparer who provides biosolids to another person who further prepares the biosolids for application to the land must provide this person with notification and information necessary to comply with the N.J.A.C. 7:14A-20 land application requirements.

g. Any person who prepares bulk residual in New Jersey that is applied to land in a State other than New Jersey shall comply with the requirement at N.J.A.C. 7:14A-20.7(b)1.ix to provide written notice to the Department and to the permitting authority for the State in which the bulk residual is proposed to be applied.

PART III
LIMITS AND MONITORING REQUIREMENTS

MONITORED LOCATION:	RECEIVING STREAM:	STREAM CLASSIFICATION:	DISCHARGE CATEGORY(IES):
BPW- Potable Plant Discharge	Varies		BPW - Potable Water Treatment Plant (GP)

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: at the frequency that will be specified in each individual authorization.

Comments:

Actual permit conditions and DMR reporting requirements will be specified for each individual authorization when issued. All are at least as stringent as the conditions contained below, and contain several additional parameters with varied monitoring frequencies. The receiving stream classifications vary among the individual facilities.

Table III - A - 1: Surface Water DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Duration Of Discharge	Effluent Gross Value	REPORT Monthly Total	*****	DAYS/MON	*****	*****	*****	*****	1/Month	Calculated
January thru December	QL	***	***		***	***	***			
Flow, In Conduit or Thru Treatment Plant	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	*****	*****	*****	1/Month	Measured
January thru December	QL	***	***		***	***	***			
Flow, Total	Effluent Gross Value	REPORT Monthly Total	*****	MGAL/MON	*****	*****	*****	*****	1/Month	Calculated
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6.0 Instant Minimum	*****	9.0 Instant Maximum	SU	1/Month	Grab
January thru December	QL	***	***		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: at the frequency that will be specified in each individual authorization.

Comments:

Actual permit conditions and DMR reporting requirements will be specified for each individual authorization when issued. All are at least as stringent as the conditions contained below, and contain several additional parameters with varied monitoring frequencies. The receiving stream classifications vary among the individual facilities.

Table III - A - 1: Surface Water DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Solids, Total Suspended	Effluent Gross Value	*****	*****	*****	*****	20 Monthly Average	40 Daily Maximum	MG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			

MONITORED LOCATION:
S10A SQAR Reporting

DISCHARGE CATEGORY(IES):
BPW - Potable Water Treatment Plant (GP)

Location Description

Sampling, analysis, and reporting of residuals forms required pursuant to the Sludge Quality Assurance Regulations (SQAR, N.J.A.C. 7:14C) will be contained in each individual general permit authorization that contains residuals reporting requirements.

Contributing Waste Types

Ind Residual-Water Treat

Residuals DMR Reporting Requirements:

Submit a Monthly DMR: due 60 calendar days after the end of each calendar month.

Comments:

Al and/or Fe are tested if an Al or Fe containing coagulant is used in treatment. Trihalomethanes are required if the WTP receives all or a portion of the water from surface water and chlorinates prior to distribution. Radionuclides are required if the WTP receives water or uses additives known or suspected of having elevated Radionuclides

Table III - B - 1: Residuals DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Solids, Total	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	%TS	1/Month	Composite
January thru December	QL	***	***		***	***	***			
Nitrate Nitrogen, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Month	Composite
January thru December	QL	***	***		***	***	***			
Nitrogen, Kjeldahl Total, Dry Wt	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Month	Composite
January thru December	QL	***	***		***	***	***			
Potassium Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Month	Composite
January thru December	QL	***	***		***	***	***			

Residuals DMR Reporting Requirements:

Submit a Monthly DMR: due 60 calendar days after the end of each calendar month.

Comments:

Al and/or Fe are tested if an Al or Fe containing coagulant is used in treatment. Trihalomethanes are required if the WTP receives all or a portion of the water from surface water and chlorinates prior to distribution. Radionuclides are required if the WTP receives water or uses additives known or suspected of having elevated Radionuclides

Table III - B - 1: Residuals DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Nitrogen, Ammonia Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Month	Composite
January thru December	QL	***	***		***	***	***			
Molybdenum Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Month	Composite
January thru December	QL	***	***		***	***	***			
Phosphorus Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Month	Composite
January thru December	QL	***	***		***	***	***			
Arsenic, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Month	Composite
January thru December	QL	***	***		***	***	***			
Aluminum, Total (as Al)	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Month	Composite
January thru December	QL	***	***		***	***	***			
Selenium, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Month	Composite
January thru December	QL	***	***		***	***	***			
Copper, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Month	Composite
January thru December	QL	***	***		***	***	***			

Residuals DMR Reporting Requirements:

Submit a Monthly DMR: due 60 calendar days after the end of each calendar month.

Comments:

Al and/or Fe are tested if an Al or Fe containing coagulant is used in treatment. Trihalomethanes are required if the WTP receives all or a portion of the water from surface water and chlorinates prior to distribution. Radionuclides are required if the WTP receives water or uses additives known or suspected of having elevated Radionuclides

Table III - B - 1: Residuals DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Cadmium, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Month	Composite
January thru December	QL	***	***		***	***	***			
Zinc, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Month	Composite
January thru December	QL	***	***		***	***	***			
Lead, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Month	Composite
January thru December	QL	***	***		***	***	***			
Nickel, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Month	Composite
January thru December	QL	***	***		***	***	***			
Mercury, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Month	Composite
January thru December	QL	***	***		***	***	***			
Iron, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Month	Composite
January thru December	QL	***	***		***	***	***			
Bromoform Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Month	Composite
January thru December	QL	***	***		***	***	***			

Residuals DMR Reporting Requirements:

Submit a Monthly DMR: due 60 calendar days after the end of each calendar month.

Comments:

Al and/or Fe are tested if an Al or Fe containing coagulant is used in treatment. Trihalomethanes are required if the WTP receives all or a portion of the water from surface water and chlorinates prior to distribution. Radionuclides are required if the WTP receives water or uses additives known or suspected of having elevated Radionuclides

Table III - B - 1: Residuals DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Chlorodibromomethane Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Month	Composite
January thru December	QL	***	***		***	***	***			
Chloroform Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Month	Composite
January thru December	QL	***	***		***	***	***			
Dichlorobromomethane Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Month	Composite
January thru December	QL	***	***		***	***	***			

Residuals WCR - Annual Reporting Requirements:

Submit an Annual WCR: due 60 calendar days after the end of each calendar year.

Table III - B - 3: Residuals WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Amt Sludge Rmvd, Wet Cubic Yards	Industrial Residuals	REPORT	WCY/YR	Calculated	January thru December
Amt Sludge Rmvd, Wet Metric Tons	Industrial Residuals	REPORT	WMT/YR	Calculated	January thru December
Amt Sludge Rmvd, Gallons	Industrial Residuals	REPORT	GAL/YEAR	Calculated	January thru December
Total Amount of Sludge Removed	Industrial Residuals	REPORT	DMT/YR	Calculated	January thru December
Solids, Total	Industrial Residuals	REPORT	%TS	Composite	January thru December

Residuals Transfer Reporting Requirements:

Submit a Monthly RTR: due 60 calendar days after the end of each calendar month.

PART IV

SPECIFIC REQUIREMENTS: NARRATIVE

Potable Water Treatment Plant (GP)

A. MONITORING REQUIREMENTS

1. Standard Monitoring Requirements

a. Each analysis required by this permit shall be performed by a New Jersey Certified Laboratory that is certified to perform that analysis.

b. The permittee shall perform all water/wastewater analyses in accordance with the analytical test procedures specified in 40 CFR 136 unless other test procedures have been approved by the Department in writing or as otherwise specified in the permit.

c. The permittee shall utilize analytical methods that will ensure compliance with the Quantification Levels (QLs) listed in PART III. If the permittee and/or contract laboratory determines that the QLs achieved for any pollutant(s) generally will not be as sensitive as the QLs specified in PART III, the permittee must submit a justification of such to the Bureau of Surface Water Permitting. For limited parameters with no QL specified, the sample analysis shall use a detection level at least as sensitive as the effluent limit.

d. All sampling shall be conducted in accordance with the Department's Field Sampling Procedures Manual, or an alternate method approved by the Department in writing.

e. All monitoring shall be conducted as specified in Part III.

f. All sample frequencies expressed in Part III are minimum requirements. Any additional samples taken consistent with the monitoring and reporting requirements contained herein shall be reported with the Monitoring Report Forms.

g. If annual and semi-annual wastewater testing is specified, it shall be conducted in a different quarter of each year so that tests are conducted in each of the four permit quarters of the permit cycle. Testing may be conducted during any month of the permit quarters.

h. Monitoring for Wastewater Characterization Report parameters shall be conducted concurrently with the Whole Effluent Toxicity (WET) monitoring, when feasible.

i. The permittee shall perform all residual analyses in accordance with the analytical test procedures specified in 40 CFR 503.8 and the Sludge Quality Assurance Regulations (N.J.A.C. 7:14C) unless other test procedures have been approved by the Department in writing or as otherwise specified in the permit.

B. RECORDKEEPING

1. Standard Recordkeeping Requirements

a. The permittee shall retain records of all monitoring information, including 1) all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation (if applicable), 2) copies of all reports required by this NJPDES permit, 3) all data used to complete the application for a NJPDES permit, and 4) monitoring information required by the permit related to the permittee's residual use and/or disposal practices, for a period of at least 5 years, or longer as required by N.J.A.C. 7:14A-20, from the date of the sample, measurement, report, application or record.

b. Records of monitoring information shall include 1) the date, locations, and time of sampling or measurements, 2) the individual(s) who performed the sampling or measurements, 3) the date(s) the analyses were performed, 4) the individual(s) who performed the analyses, 5) the analytical techniques or methods used, and 6) the results of such analyses.

C. REPORTING

1. Standard Reporting Requirements

a. The permittee shall submit all required monitoring results to the Department on the forms provided to them. The Monitoring Report Forms (MRFs) may be provided to the permittee in either a paper format or in an electronic file format. Unless otherwise noted, all requirements below pertain to both paper and electronic formats.

b. Any MRFs in paper format shall be submitted to the following addresses:

i. NJDEP
Mail Code 401-02B
Division of Water Quality
Office of Permit Management
P.O. Box 420
Trenton, New Jersey 08625-0420

ii. (if requested by the Northern Water Compliance and Enforcement Bureau)
NJDEP: Northern Bureau of Water Compliance and Enforcement
7 Ridgedale Avenue
Cedar Knolls, New Jersey 07927-1112
(Counties of Bergen, Essex, Hudson, Hunterdon, Morris, Passaic, Somerset, Sussex and Warren)

iii. (if requested by the Central Water Compliance and Enforcement Bureau)
NJDEP: Central Bureau of Water Compliance and Enforcement
Mail Code 44-03
4 Station Plaza
P.O. Box 420
Trenton, New Jersey 08625-0420
(Counties of Mercer, Middlesex, Monmouth, Ocean and Union)

iv. (if requested by the Southern Water Compliance and Enforcement Bureau)
NJDEP: Southern Bureau of Water Compliance and Enforcement
2 Riverside Drive, Suite 201
Camden, New Jersey 08103
(Counties of Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester and Salem)

c. Any electronic data submission shall be in accordance with the guidelines and provisions outlined in the Department's Electronic Data Interchange (EDI) agreement with the permittee. Paper copies must be available for on-site inspection by DEP personnel or provided to the DEP upon written request.

d. All monitoring report forms shall be certified by the highest ranking official having day-to-day managerial and operational responsibilities for the discharging facility.

e. The highest ranking official may delegate responsibility to certify the monitoring report forms in his or her absence. Authorizations for other individuals to sign shall be made in accordance with N.J.A.C. 7:14A-4.9(b).

f. Monitoring results shall be submitted in accordance with the current Discharge Monitoring Report Manual and any updates thereof.

g. If monitoring for a parameter is not required in a monitoring period, the permittee must report "CODE=N" for that parameter.

h. For intermittent discharges, the permittee shall obtain a sample during at least one of the discharge events occurring during a monitoring period.

i. If there are no discharge events during an entire monitoring period, the permittee must notify the Department when submitting the monitoring results. This is accomplished by placing a check mark in the "No Discharge this monitoring period" box on the paper or electronic version of the monitoring report submittal form.

j. If the permittee does not anticipate discharge events for one year or more and does not want to receive monitoring report forms (MRFs), please contact the Bureau of Surface Water Permittting at (609) 292-4860 to temporarily cease MRF generation. In the event that a discharge is expected to occur, notify the Bureau of Surface Water Permitting as far in advance as possible to resume MRF generation.

k. Duration of Discharge is the number of days (and not the number of times) on which a discharge occurs during a month and shall be reported as a monthly total in days/month. Therefore, if more than one discharge occurs in a day, it should only be counted as one day towards the monthly total for that month. Total Flow is the sum of the flows from each discharge event during a month and shall be reported as a monthly total in million gallons per month. Therefore, if more than one discharge occurs in a day, flow shall be measured for each discharge event to obtain the monthly total flow for that month.

D. SUBMITTALS

1. Standard Submittal Requirements

a. The permittee shall amend the Operation & Maintenance Manual whenever there is a change in the treatment works design, construction, operations or maintenance which substantially changes the treatment works operations and maintenance procedures.

b. The permittee shall notify the Department that a tag to mark the location of the outfall pipe has been installed consistent with N.J.A.C. 7:14A-6.2(a)9.

2. Compliance Schedule Progress Reports

a. In accordance with N.J.A.C. 7:14A-6.4(a), a schedule of compliance has been included for facilities with new Acute or Chronic WET limitations, including interim deadlines for annual progress reports that outline the progress towards compliance with the conditions of this permit.

i. Submit a Compliance Schedule Progress Report: within 12 months from the effective date of the permit authorization (EDPA) (Acute or Chronic WET).

ii. Submit a Compliance Schedule Progress Report: within 24 months from the effective date of the permit authorization (EDPA) (Acute or Chronic WET).

b. The compliance schedule progress reports shall be submitted to the following Departmental entities:

i. NJDEP
Mail Code 401-02B
Division of Water Quality
Bureau of Surface Water Permitting
P.O. Box 420
Trenton, New Jersey 08625-0420

ii. The appropriate Bureau of Water Compliance and Enforcement, as listed above in Section C.1.b.

E. FACILITY MANAGEMENT

1. Discharge Requirements

a. The permittee shall discharge at the location(s) specified in PART III of the individual authorization.

b. The permittee shall not discharge foam or cause foaming of the receiving water that: 1) Forms objectionable deposits on the receiving water, 2) Forms floating masses producing a nuisance, or 3) Interferes with a designated use of the waterbody.

c. The permittee's discharge shall not produce objectionable color or odor in the receiving stream.

d. The discharge shall not exhibit a visible sheen.

e. When quantification levels (QL) and effluent limits are both specified for a given parameter in Part III, and the QL is less stringent than the effluent limit, effluent compliance will be determined by comparing the reported value against the QL.

2. Acute Toxicity Testing Requirements (applicable only if acute toxicity monitoring or a limit is specified in Part III of the individual authorization)

a. The permittee shall conduct toxicity tests on its wastewater discharge in accordance with the provisions in this section. Such testing will determine if appropriately selected effluent concentrations adversely affect the test species.

b. Acute toxicity tests shall be conducted using the test species and method identified in Part III of the individual authorization.

c. Part III of the individual authorization may contain an effluent limitation or monitoring requirement for acute Whole Effluent Toxicity. Toxicity Reduction and Implementation Requirements may be triggered based on exceedences of this limitation. See the Toxicity Reduction and Implementation Requirements section below for more details.

d. Any test that does not meet the specifications of N.J.A.C. 7:18, laboratory certification regulations, must be repeated within 30 days of the completion of the initial test. The repeat test shall not replace subsequent testing required in Part III.

e. LC50 - Lethal Concentration - Concentration of effluent that is lethal to 50% of the test organisms, as compared to the control.

f. NOAEC (No Observable Adverse Effect Concentration): The lowest concentration of effluent where survival in the test group is not significantly different from the control. This is always set at 100% effluent.

g. The permittee shall submit an Acute Methodology Questionnaire within 60 days of commencement of discharge or of any change in laboratory.

h. Submit an acute whole effluent toxicity test report along with your Discharge Monitoring Reports within twenty-five days after the end of every month during which an acute whole effluent toxicity test was performed. These toxicity tests shall be performed according to the frequency specified in the individual General Permit Authorization. The permittee shall submit toxicity test results on the appropriate forms.

i. Test reports shall be submitted to:
NJDEP
Mail Code 401-02B
Bureau of Surface Water Permitting
P.O. Box 420
Trenton, New Jersey 08625-0420

3. Chronic Toxicity Testing Requirements (applicable only if chronic toxicity monitoring or a limit is specified in Part III of the individual authorization)

a. The permittee shall conduct toxicity tests on its wastewater discharge in accordance with the provisions in this section. Such testing will determine if appropriately selected effluent concentrations adversely affect the test species.

b. Chronic toxicity tests shall be conducted using the test species and method identified in Part III of this permit.

c. Any test that does not meet the specifications contained in the Department's "Chronic Toxicity Testing Specifications for Use in the NJPDES Program" document must be repeated within 30 days of the completion of the initial test. The repeat test shall not replace subsequent testing required in Part III.

d. IC25 - Inhibition Concentration - Concentration of effluent which has an inhibitory effect on 25% of the test organisms for the monitored effect, as compared to the control (expressed as percent effluent).

e. Test results shall be expressed as the IC25 for each test endpoint. Where a chronic toxicity testing endpoint yields IC25's from more than one test endpoint, the most sensitive endpoint will be used to evaluate effluent toxicity.

f. The permittee shall submit a Chronic Methodology Questionnaire within 60 days of commencement of discharge or of any change in laboratory.

g. Submit a chronic whole effluent toxicity test report along with your Discharge Monitoring Reports within twenty-five days after the end of every month during which a chronic whole effluent toxicity test was performed. These toxicity tests shall be performed according to the frequency specified in the individual General Permit Authorization. The permittee shall submit toxicity test results on appropriate forms.

h. Test reports shall be submitted to:
NJDEP
Mail Code 401-02B
Bureau of Surface Water Permitting
P.O. Box 420
Trenton, New Jersey 08625-0420

4. Toxicity Reduction Implementation Requirements (TRIR) (applicable only if a whole effluent toxicity limit is specified in Part III)

a. The permittee shall initiate a tiered toxicity investigation if two out of six consecutive WET tests demonstrate that the effluent does not comply or will not comply with the toxicity limit specified in Part III of the individual authorization.

i. If the exceedence of the toxicity limit is directly caused by a documented facility upset, or other unusual event which has been identified and appropriately remedied by the permittee, the toxicity test data collected during the event may be eliminated when determining the need for initiating a TRIR upon written Department approval.

b. The permittee shall begin toxicity characterization within 30 days of the end of the monitoring period when the second toxicity test exceeds the toxicity limits in Part III. The monitoring frequency for toxicity testing shall be increased to semi-monthly (i.e. every two months). Up to 12 additional tests may be required.

i. The permittee may return to the toxicity testing frequency specified in Part III if four consecutive toxicity tests conducted during the Toxicity Characterization do not exceed the toxicity limit.

ii. If two out of any six consecutive, acceptable tests again exceed the toxicity limit in Part III, the permittee shall repeat Toxicity Reduction Implementation Requirements.

c. The permittee shall initiate a preliminary toxicity identification (PTI) upon the fourth exceedence of the toxicity limit specified in Part III during toxicity characterization.

i. The permittee may return to the monitoring frequency specified in PART III while conducting the PTI. If more frequent WET testing is performed during the PTI, the permittee shall submit all biomonitoring reports to the DEP and report the results for the most sensitive species on the DMR.

ii. As appropriate, the PTI shall include:
(1) treatment plant performance evaluation,
(2) evaluation of chemical use and processes at the facility, and
(3) an evaluation of incidental facility procedures and chemical spill disposal which may contribute to effluent toxicity.

iii. The permittee shall submit a Preliminary Toxicity Identification Notification within 15 months of triggering TRIR. This notification shall include a determination that the permittee intends to demonstrate compliance OR plans to initiate a CTI.

d. The permittee must demonstrate compliance with the WET limitation in four consecutive WET tests to satisfy the requirements of the Toxicity Reduction Investigation Requirements. After successful completion, the permittee may return to the WET monitoring frequency specified in PART III.

e. The permittee shall initiate a Comprehensive Toxicity Investigation (CTI) if the PTI does not identify the cause of toxicity and a demonstration of consistent compliance with the toxicity limit in Part III can not be made.

i. The permittee shall develop a project study plan identifying the party or parties responsible for conducting the comprehensive evaluation, establish a schedule for completing the study, and a description of the technical approach to be utilized.

ii. If the permittee determines that the PTI has failed to demonstrate consistent compliance with the toxicity limit in Part III , a Comprehensive Toxicity Investigation Workplan must be prepared and submitted within 90 days.

iii. The permittee shall summarize the data collected and the actions taken in CTI Quarterly Reports. The reports shall be submitted within 30 calendar days after the end of each quarter.

iv. The permittee shall submit a Final CTI Report 90 calendar days after the last quarterly report. The final CTI report shall include the corrective actions identified to reduce toxicity and a schedule for implementing these corrective actions.

f. Upon receipt of written approval from the Department of the corrective action schedule, the permittee shall implement those corrective actions consistent with that schedule.

i. The permittee shall satisfy the requirements of the Toxicity Reduction Implementation Requirements and return to the original toxicity monitoring frequency after corrective actions are implemented and the permittee demonstrates consistent compliance with the toxicity limit in Part III in four consecutive toxicity tests.

ii. If the implemented corrective measures do not result in consistent compliance with the toxicity limit in Part III, the permittee shall submit a plan for resuming the CTI.

5. Applicability of Discharge Limitations and Effective Dates

a. This permit includes multiple phases for initial and final (if a three year compliance schedule is included for WET in the individual authorization). The initial phase limits are effective from the effective date of the permit authorization (EDPA) until EDPA + 36 months. The final limits will become effective on EDPA + 36 months.

b. The final limits will become effective on EDPA (if no compliance schedule is included for WET).

F. CONDITIONS FOR MODIFICATION

1. Causes for modification

a. The Department may modify or revoke and reissue any permit to incorporate 1) any applicable effluent standard or any effluent limitation, including any effluent standards or effluent limitations to control the discharge of toxic pollutants or pollutant parameters such as acute or chronic whole effluent toxicity and chemical specific toxic parameters, 2) toxicity reduction requirements, or 3) the implementation of a TMDL or watershed management plan adopted in accordance with N.J.A.C. 7:15-7.

b. The Department may modify individual authorizations under this permit through a minor modification in accordance with N.J.A.C. 7:14A-16.5(a)1 to reduce WET monitoring to either annual or once per permit cycle. The criteria for such reduction is a minimum of 4 consecutive data points with a result of >100. The Department may also consider site-specific characteristics such as discharge volume, location and wastewater constituents.

c. The Department may modify individual authorizations under this permit through a minor modification in accordance with N.J.A.C. 7:14A-16.5(a)1 to reduce toxics monitoring to either annual or once per permit cycle. The criteria for such reduction is a minimum of 4 consecutive non-detectable values.

G. OPERATIONAL ISSUES

1. Operational Requirements

a. Samples taken in compliance with the specified monitoring requirements shall be taken at the discharge outfall(s) specified in Part III of this permit authorization at the nearest accessible point after final treatment but prior to actual discharge.

2. Use of Chemical Addition Agents

a. If a permittee proposes addition of any chemical agents which may be found in the discharge due to their presence in backwash water, the permittee must obtain permission from the Department in writing prior to use of such compounds.

b. The permittee shall submit a letter to the Department describing the use of such chemical addition agents, including information pertaining to dosage rates and frequency of dosage, and shall also include a material safety data sheet for the product(s).

c. This letter shall be submitted to the Bureau of Surface Water Permitting, at the address indicated in the cover letter. The Department will then evaluate the submittal and notify the permittee in writing as to whether the compound can be utilized under the conditions of the individual authorization under the permit. Please note that N.J.A.C. 7:14A-22.4(a)7 does not require a treatment works approval (TWA) modification for chemical addition where it is used for purposes of improving treatment system performance.

3. Third Party Storm Sewers

a. If the permittee proposes to discharge or discharges through an off-site public or private storm drainage system, please note that this permit to discharge does not exempt, nor shall be construed to exempt, the permittee from compliance with rules, regulations, policies, and/or laws lodged in any agency or subdivision of the state having legal jurisdiction over the storm sewer system proposed for use as a wastewater conveyance.

4. Revocation of an Individual Authorization under the Permit.

a. If the permittee has permanently ceased its discharge to surface water, the permittee can request revocation of its individual authorization under the permit. The permittee can obtain the necessary revocation forms by accessing www.state.nj.us/dep/dwq or by contacting the Department's Office of Permit Management at (609) 984-4428. The permittee can also contact the appropriate Regional Enforcement Office for further guidance on closure proceedings.

b. Upon receipt of an administratively complete revocation request, the Department will verify with the appropriate Regional Enforcement Office that the discharge has ceased and that the treatment works has undergone closure, in conformance with N.J.A.C. 7:14A-23.34. The Department will then revoke such individual authorization by preparing a copy of the individual authorization page showing the revocation date of the individual authorization and sending such to the permittee. However, the Department will not revoke an individual authorization if the Site Remediation Program disagrees that revocation is appropriate.

APPENDIX A:

CHRONIC TOXICITY TESTING SPECIFICATIONS

FOR USE IN THE NJPDES PERMIT PROGRAM

Version 2.1

May 1997

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Notice: Mention of trade names or commercial products do not constitute endorsement or recommendation for use.

I. AUTHORITY AND PURPOSE

These methods specifications for the conduct of whole effluent chronic toxicity testing are established under the authority of the NJPDES permitting program, N.J.A.C. 7:14A-6.5(a)2 and 40 CFR 136, for discharges to waters of the State. The methods referenced herein are included by reference in 40 CFR 136, Table 1.A. and, therefore, constitute approved methods for chronic toxicity testing. The information contained herein serves to clarify testing requirements not sufficiently clarified in those methods documents and also serves to outline and implement the interlaboratory Standard Reference Toxicant Program until a formal laboratory certification program is established under N.J.A.C. 7:18. As such these methods are intended to be used to determine compliance with discharge permits issued under the authority of the NJPDES permit program. Tests are to be conducted in accordance with the general conditions and test organism specific method specifications contained in this document. All other conditions and specifications can be found in 40 CFR 136 and USEPA methodologies.

Until a subchapter on chronic toxicity testing within the regulations governing the certification of laboratories and environmental measurements (N.J.A.C. 7:18) becomes effective, tests shall be conducted in conformance with the methodologies as designated herein and contained in 40 CFR 136. The laboratory performing the testing shall be within the existing acute toxicity testing laboratory certification program established under N.J.A.C. 7:18, as required by N.J.A.C. 7:9B-1.5(c)5.

Testing shall be in conformance with the subchapter on chronic toxicity testing within the N.J.A.C. 7:18 when such regulations become effective. The laboratory performing the toxicity testing shall be within the chronic toxicity testing laboratory certification program to be established under that subchapter, when it becomes effective.

These methods are incorporated into discharge permits as enforceable permit conditions. Each discharge permit will specify in Part IV of the permit, the test species specific methods from this document that will be required under the terms of the discharge permit. Although the test species specific methods for each permit are determined on a case-by-case basis, the purpose of this methods document is to assure consistency among dischargers and to provide certified laboratories with information on the universe of tests to be utilized so that they can make the necessary preparations, including completing the required Standard Reference Toxicant testing. Please note that these methodologies are required for compliance testing only. Facilities and/or laboratories conducting testing under the requirements of a Toxicity Identification Evaluation or for informational purposes are not bound by these methods.

This document constitutes the second version of the NJDEP's interim chronic methodologies. This version contains no significant changes to the test methods themselves. However, in keeping with the Department's continued emphasis on good laboratory practices and quality control, the areas addressing the Standard Reference Toxicant Program, data analysis and data reporting, have been significantly revised.

II. GENERAL CONDITIONS

A. LABORATORY SAFETY, GLASSWARE, ETC.

All safety procedures, glassware cleaning procedures, etc., shall be in conformance with 40 CFR 136 and USEPA's "Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms," "Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms" and N.J.A.C. 7:18.

B. TEST CONCENTRATIONS / REPLICATES

All testing is to be performed with a minimum of five effluent concentrations plus a dilution water control. A second reference water control is optional when a dilution water other than culture water is used. The use of both a 0.5 or 0.75 dilution factor is acceptable for the selection of test concentrations. If hypothesis testing will be used to determine the test endpoint, one effluent concentration shall be the chronic permit limitation, unless the existing data for the discharge indicate that the NOEC is expected to be significantly less than the permit limit. The use of the 0.5 dilution factor may require more than five dilutions to cover the entire range of effluent concentrations as well as the chronic permit limit, since the permit limit will often not be one of the nominal concentrations in a 0.5 dilution series. In such an instance, the 0.5 dilution series may be altered by including an additional test concentration equal to the permit limit in the dilution series, or by changing the concentration closest to the permit toxicity limit to be equal to that limit. The Department recommends the use of the 0.75 dilution factor using Table 1.0 to determine test concentrations. That table establishes test concentrations based on the chronic toxicity limitation.

For either the 0.5 or 0.75 dilution factor, there shall be at least one test concentration above the permit limitation and at least three test concentrations below the permit limit along with the dilution water control unless the permit limitation prohibits such (e.g., limitations greater than 75% effluent). An effort shall be made to bracket the anticipated test result.

To use Table 1.0, locate the permit limit in column 4. The dilution series becomes the row that corresponds to the permit limit in column 4. For example, a permit limit of 41 would require a dilution series of the dilution water control, 17%, 23%, 31%, 41% and 55% effluent.

The number of replicates used in the test must, at a minimum, satisfy the specifications of the applicable methods contained herein. Increased data sensitivity can be obtained by increasing the number of replicates equally among test concentrations and thus an increased number of replicates is acceptable. Further, the use of nonparametric statistical analysis requires a minimum of four replicates per test concentration. If the data for any particular test is not conducive to parametric analyses and if less than four replicates were included, the test may not be considered acceptable for compliance purposes.

The use of single concentration tests consisting of the permit limitation as a concentration and a control is not permitted for compliance purposes, but may be used by a permittee in the conduct of a Toxicity Investigation Evaluation (TIE) or for information gathering purposes. Such a test would be considered a "pass" if there was no significant difference in test results, using hypothesis testing methods.

Table 1.0: 0.75 DILUTION SERIES INDEXED BY PERMIT LIMIT

				Permit Limit						Permit Limit	
Col #	1	2	3	4	5	**Col #**	1	2	3	4	5
	0.4	0.6	0.8	1	1.3		22	29	38	51	68
	0.8	1.1	1.5	2	2.7		22	29	39	52	69
	1.3	1.7	2.3	3	4		22	30	40	53	71
	1.7	2.3	3	4	5.3		23	30	41	54	72
	2.1	2.8	3.8	5	6.7		23	31	41	55	73
	2.5	3.4	4.5	6	8		24	32	42	56	75
	3	4	5	7	9		24	32	43	57	76
	3	5	6	8	11		24	33	44	58	77
	4	5	7	9	12		25	33	44	59	79
	4	6	8	10	13		25	34	45	60	80
	5	6	8	11	15		26	34	46	61	81
	5	7	9	12	16		26	35	47	62	83
	5	7	10	13	17		27	35	47	63	84
	6	8	11	14	19		27	36	48	64	85
	6	8	11	15	20		27	37	49	65	87
	7	9	12	16	21		28	37	50	66	88
	7	10	13	17	23		28	38	50	67	89
	8	10	14	18	24		29	38	51	68	91
	8	11	14	19	25		29	39	52	69	92
	8	11	15	20	27		30	39	53	70	93
	9	12	16	21	28		30	40	53	71	95
	9	12	17	22	29		30	41	54	72	96
	10	13	17	23	31		31	41	55	73	97
	10	14	18	24	32		31	42	56	74	99
	11	14	19	25	33		32	42	56	75	100
	11	15	20	26	35	24	32	43	57	76	
	11	15	20	27	36	24	32	43	58	77	
	12	16	21	28	37	25	33	44	59	78	
	12	16	22	29	39	25	33	44	59	79	
	13	17	23	30	40	25	34	45	60	80	
	13	17	23	31	41	26	34	46	61	81	
	14	18	24	32	43	26	35	46	62	82	
	14	19	25	33	44	26	35	47	62	83	
	14	19	26	34	45	27	35	47	63	84	
	15	20	26	35	47	27	36	48	64	85	
	15	20	27	36	48	27	36	48	65	86	
	16	21	28	37	49	28	37	49	65	87	
	16	21	29	38	51	28	37	50	66	88	
	16	22	29	39	52	28	38	50	67	89	
	17	23	30	40	53	28	38	51	68	90	
	17	23	31	41	55	29	38	51	68	91	
	18	24	32	42	56	29	39	52	69	92	
	18	24	32	43	57	29	39	52	70	93	
	19	25	33	44	59	30	40	53	71	94	
	19	25	34	45	60	30	40	53	71	95	
	19	26	35	46	61	30	41	54	72	96	
	20	26	35	47	63	31	41	55	73	97	
	20	27	36	48	64	31	41	55	74	98	
	21	28	37	49	65	31	42	56	74	99	
	21	28	38	50	67	32	42	56	75	100	

* Select the dilution series by finding the row which contains the permit limit in column #4.
NOTE: All values are in units of "% effluent" not toxic units.

C. DILUTION WATER

1. Marine and Estuarine Waters

A high quality natural water, such as the Manasquan River Inlet is strongly recommended as the dilution water source for chronic toxicity testing with marine and estuarine organisms. The use of the receiving water as the dilution water source is not required. Saline waters prepared with hypersaline brine and deionized water may also be used as dilution water. Hypersaline brines shall be prepared from a high quality natural seawater and shall not exceed a concentration of 100 ppt. The type of a dilution water for a permittee may not be changed without the prior approval of the Department.

The standard test salinity shall be 25 ppt, except for *Champia parvula*, which shall be tested at 30 ppt. Since most effluents are freshwater based, in most cases it will be necessary to adjust the salinity of the test concentrations to the standard test salinity.

2. Fresh Waters

A high quality natural water, such as Round Valley Reservoir (if access is allowed) or Lake Hopatcong, is strongly recommended as the dilution water source for chronic toxicity testing with freshwater organisms. It is not required to perform the toxicity testing with the receiving water as dilution water. Tests performed with a reconstituted water or up to 20% Diluted Mineral Water (DMW) as dilution water is acceptable. For testing with *Ceriodaphnia dubia*, the addition of 5 µg/l selenium (2 µg/l selenium with natural water) and 1 µg/l vitamin B12 is recommended (Keating and Dagbusan, 1984: Keating, 1985 and 1988). The source of a dilution water for a permittee may not be changed without the prior approval of the Department. Reconstituted water and DMW should be prepared with Millipore Super Q^{R} or equivalent, meet the requirements of N.J.A.C. 7:18-6 and should be aerated a minimum of 24 hrs prior to use, but not supersaturated.

D. EFFLUENT SAMPLE COLLECTION

Effluent samples shall be representative of the discharge being regulated. For each discharge serial number (DSN), the effluent sampling location shall be the same as that specified in the NJPDES permit for other sampling parameters unless an alternate sampling point is specified in the NJPDES discharge permit. For industrial dischargers with a combined process/sanitary waste stream, effluent sampling shall be after chlorination, unless otherwise designated in the permit.

For continuous discharges, effluent sampling shall consist of 24 hour composite samples consisting either of equal volumes taken once every hour or of a flow-proportionate composite sample, unless otherwise approved by the Department. At a minimum, three samples shall be collected as specified above, one every other day. The first sample shall be used for test initiation and the first renewal. The second sample for the next two renewals. The third sample shall be used for the final three renewals. For the *Champia* and *Selenastrum* tests, a single sample shall be collected not more than 24 hours prior to test initiation. No effluent sample shall be over 72 hours old at the time of its use to initiate or renew solutions in a test. It is acceptable to collect samples more frequently for chronic WET testing and if samples are collected daily for acute toxicity testing conducted concurrently, available samples may be used to renew the test solutions as appropriate.

For all other types of discharges, effluent sampling shall be conducted according to specifications contained within the discharge permit, methodology questionnaire or as otherwise specified by the Department. The use of grab samples or other special sampling procedures will be based on time of occurrence and duration of intermittent discharge events.

If a municipal discharger has concerns that the concentrations of ammonia and/or chlorine in an effluent are adequate to cause violations of the permit limit for chronic toxicity testing, the permittee should conduct analyses, as specified in USEPA's toxicity investigation methods documents, to illustrate the relationship between chronic effluent toxicity and chlorine and/or ammonia as applicable. This data may then be submitted to

the Department as justification for a request to use modified test procedures, which account for ammonia and/or chlorine toxicity, in future chronic toxicity tests. The Department may, where adequate justification exists, permit the adjustment of these pollutants in the effluent sample if discharge limits for these pollutants are contained in the NJPDES permit and those permit limitations are adequate for the protection of water quality. Any proposed modified test procedures to adjust effluent chlorine and/or ammonia shall be approved by the Department prior to use of those test procedures for any compliance testing.

Except for filtration through a 2 mm or larger screen or an adjustment to the standard test salinity, no other adjustments to the effluent sample shall be made without prior written approval by the Department. Aeration of samples prior to test start shall be minimized where possible and samples shall not be aerated where adequate saturation exists to maintain dissolved oxygen.

E. PHYSICAL CHEMICAL MEASUREMENTS

At a minimum, the physical chemical measurements shall be as follows:

- pH and dissolved oxygen shall be measured at the beginning and end of each 24 hour exposure period, in at least one chamber, of the high, medium and low test concentrations and the control. In order to ensure that measurements for these parameters are representative of the test concentrations during the test, measurements for these parameters should be taken in an additional replicate chamber for such concentrations which contains no test organisms, but is subject to the same test conditions.

- Temperature shall either be monitored continuously, measured daily in at least two locations in the environmental control system, or measured at the beginning of each 24 hr exposure period in at least one replicate for each treatment.

- Salinity shall be measured in all salt water tests at the beginning of each 24 hour exposure period, in at least one replicate for each treatment.

- For all freshwater tests, alkalinity, hardness and conductivity shall be measured in each new sample (100% effluent) and control.

- Nitrite, nitrate and ammonia shall be measured in the control before each renewal in the mysid test only.

- For samples of discharges where concentrations of ammonia and/or chlorine are known or are suspected to be sufficient to cause toxicity, it is recommended that the concentrations of these pollutants be determined and submitted with the standardized report form. The laboratory is advised to consult with the permittee to determine if these parameters should be measured in the effluent. Where such measurements are deemed appropriate, measurements shall be conducted at the beginning of each 24 hour exposure period. Also, since a rise in the test pH can affect the toxicity of ammonia in the effluent, analysis of ammonia during the test may be appropriate if a rise in pH is accompanied by a significant increase in mortality.

F. STATISTICS

The use of both hypothesis testing techniques and point estimate techniques are currently in use by the Department or by permittees for compliance purposes. The NJPDES permit should be checked to determine which type of analysis is required and appropriate for each specific facility. It is not acceptable to simply evaluate any data by "visual data review" unless in the analysis of survival data, no mortality occurred in the test. All data sets must be appropriately statistically evaluated.

For hypothesis testing techniques, statistical analysis shall follow the protocols in USEPA (1988, 1989) to evaluate adverse effects. A significance level of 0.05 shall be utilized to evaluate such effects. Use of a protocol not contained in these documents must be accompanied by a reference and explanation addressing its

applicability to the particular data set. Please note the following when evaluating data using hypothesis testing techniques.

Special attention should be given to the omission and inclusion of a given replicate in the analysis of mysid fecundity data (USEPA 1994, p. 275) and *Ceriodaphnia* reproduction data (USEPA 1994, page 174).

Determination of acceptability criteria and average individual dry weight for the growth endpoints must follow the specifications in the applicable documents (e.g., p.84 for saltwater methods document.)

Use of nonparametric statistical analyses requires a minimum of four replicates per test concentration. If the data for any particular test are not conducive to parametric analyses and if less than four replicates were included, the test may not be acceptable to the Department.

Where hypothesis testing is used for compliance purposes, if the results of hypothesis testing indicate that a deviation from the dose response occurs such that two test concentrations are deemed statistically significant from the control but an intermediate test concentration is not, the test is deemed unacceptable and cannot be used for compliance testing purposes.

For point estimate techniques, statistical analysis should follow the protocol contained in "A Linear Interpolation Method for Sublethal Toxicity: The Inhibition Concentration (ICp) Approach (Version 2.0), July 1993, National Effluent Toxicity Assessment Center Technical Report 03-93." Copies of the program can be obtained by contacting the Department. The linear interpolation estimate ICp values and not the bootstrap mean ICp, shall be reported for permit compliance purposes. The ICp value reported on the Discharge Monitoring Report shall be rounded off as specified in the Department's "Discharge Monitoring Report (DMR) Instruction Manual, December 1993." IC25 values shall be reported under the parameter code listed as "NOEC" on the DMR, until the DMR's are adjusted accordingly.

If the result reported by the ICp method is greater than the highest concentration tested, the test result is reported as "greater than C" where "C" is the highest tested concentration. If the ICp is lower than the lowest concentration tested, the test result is reported as "less than C" where "C" is the lowest tested concentration.

If separate NOEC's/IC25's can be calculated from multiple test endpoints, for example a reproductive endpoint and a growth endpoint, the lowest NOEC/IC25 value expressed in units of "% effluent" will be used to determine permit compliance and should, therefore, be reported as the NOEC/IC25 value for the test. If the NOEC value for growth and/or reproduction is not lower than that for survival, the NOEC/IC25 value reported for the test shall be as survival. For saltwater tests, where additional controls are used in a test (i.e. brine and/or artificial sea salt control), a T-test shall be used to determine if there is a significant difference between the original test control and the additional controls. If there is a significant difference between any of the controls, the test may be deemed unacceptable and if so, will not be used for permit compliance.

III. TEST ACCEPTABILITY CRITERIA

Any test that does not meet these acceptability criteria will not be used by the Department for any purpose and must be repeated as soon as practicable, with a freshly collected sample.

1. Tests must be performed by a laboratory approved for the conduct of chronic toxicity tests and certified for acute toxicity testing under N.J.A.C. 7:18.

2. Test results may be rejected due to inappropriate sampling, including the use of less than three effluent samples in a test and/or use of procedures not specified in a permit or methodology questionnaire, use of frozen or unrefrigerated samples or unapproved pretreatment of an effluent sample.

3. Controls shall meet the applicable performance criteria specified in the Table 2.0 and in the individual method specifications contained herein.

4. Acceptable and applicable Standard Reference Toxicant Data must be available for the test.

5. No unapproved deviations from the applicable test methodology may be present.

6. When using hypothesis testing techniques, a deviation from the dose response as explained in the statistical portion of this document shall not be present in the data.

Table 2.0: CONTROL PERFORMANCE

TEST ORGANISM	MINIMUM SURVIVAL	MINIMUM WEIGHT GAIN	MINIMUM FECUNDITY/ REPRODUCTION
Pimephales promelas	80%	0.25 mg avg	N/A
Ceriodaphnia dubia	80%	N/A	Average of $\geq$15 young per surviving female
Selenastrum capricornutum	Density $\geq 2x10^5$cells/ml	N/A	Variability in controls not to exceed 20%.
Cyprinodon variegatus	80%	0.60 mg (unpreserved) avg 0.50 mg (preserved) avg	N/A
Menidia beryllina	80%	0.50 mg (unpreserved) avg 0.43 mg (preserved) avg	N/A
Mysidopsis bahia	80%	0.2 mg per mysid avg	egg production by 50% of control females if fecundity is used as an endpoint.
Champia parvula	100%	N/A	$\geq$10 cystocarps per plant Plants in controls and lower test concentrations shall not fragment so that individual plants cannot be identified.

THE DETERMINATION OF A TEST AS UNACCEPTABLE DOES NOT RELIEVE THE FACILITY FROM MONITORING FOR THAT MONITORING PERIOD

IV. STANDARD REFERENCE TOXICANT TESTING

All chronic testing shall be accompanied by testing with a Standard Reference Toxicant (SRT) as a part of each laboratory's internal quality control program. Such a testing program should be consistent with the quality assurance/quality control protocols described in the USEPA chronic testing manuals. Laboratories may utilize the reference toxicant of their choice and toxicants such as cadmium chloride, potassium chloride, sodium dodecyl sulfate and copper sulfate are all acceptable. However, Potassium chloride has been chosen by several laboratories and is recommended by the Department. The concentration of the reference toxicant shall be verified by chemical analysis in the low and high test concentrations once each year or every 12 tests, whichever is less. It is not necessary to run SRT tests, for all species using the same SRT.

A. INITIAL STANDARD REFERENCE TOXICANT (SRT) TESTING REQUIREMENTS

At a minimum, this testing shall include an initial series of at least five SRT tests for each test species method. Acceptable SRT testing for chronic toxicity shall be performed utilizing the short term chronic toxicity test methods as specified herein. Reference toxicant tests utilizing acute toxicity testing methods, or any method other than those contained in this document are not acceptable. The laboratory should forward results of the initial SRT testing, including control charts, the name of the reference toxicant utilized, the supplier and appropriate chemical analysis of the toxicant to either address listed in the reporting requirements section herein. The initial series of a least five SRT tests for a specific test species method shall be completed and approved in writing by the Department prior to the conduct of any chronic toxicity testing for compliance purposes.

B. SUBSEQUENT SRT TESTING REQUIREMENTS

After receiving the initial approval from the Department to conduct chronic toxicity tests for compliance purposes, subsequent SRT testing shall be conducted as follows:

1. Where organisms used in testing are cultured at the testing laboratory, SRT testing should be conducted once per month for each species/method.

2. Where the laboratory purchases organisms from a laboratory certified in New Jersey for the conduct of acute toxicity testing and approved for the conduct of chronic toxicity testing for the test organism in question (i.e. the "supplier laboratory"), SRT data provided by the "supplier laboratory" for each lot of organisms purchased is acceptable as long as the SRT test result falls within the control limits of the control chart established by the "supplier laboratory" for that organism. The laboratory using purchased organisms is responsible for the results of any compliance tests they perform.

3. A testing laboratory purchasing organisms from a supplier laboratory must still perform SRT testing on a quarterly basis at a minimum, for each species they test with, in order to adequately document their own interlaboratory precision.

4. If a testing laboratory purchasing organisms elects not to use the SRT data from a "supplier laboratory" or such data is unavailable or where organisms are purchased from another organism supplier, the testing laboratory must conduct SRT testing on each lot of organisms purchased.

5. For industrial laboratories certified under N.J.A.C. 7:18 to conduct acute toxicity tests, only the SRT testing conditions specified in 2. through 4. above apply. Where that laboratory/facility cultures their own test organisms, the frequency of SRT testing required will be determined on a case by case basis, based on the frequency of testing for that facility.

NOTE: Based on these requirements, SRT data are considered applicable to a compliance test when the SRT test results are acceptable and the SRT test is conducted within 30 days of the compliance test, for the test species and SRT in question. Therefore, it is not necessary for an approved laboratory to run an SRT test every month if the laboratory is not conducting compliance tests for a particular species.

C. CHANGING OF AN ESTABLISHED REFERENCE TOXICANT

The SRT used for any species by a laboratory may be changed at any time provided that the following conditions have been satisfied:

1. A series of at least three reference toxicant tests are conducted with the new reference toxicant and the results of those tests are identified as satisfactory, in writing, by the Department.

2. Laboratories must continue using the already approved SRT in their ongoing QA/QC program, until such time as the letter referenced above, is received by the laboratory.

D. CONTROL CHARTS

Control charts shall be established from SRT test results in accordance with the procedures outlined in the USEPA methods documents. Control charts shall be constructed using IC25's using the following methods:

1. The upper and lower control limits shall be calculated by determining +/- two standard deviations above and below the mean.

2. SRT test results which exhibit an IC25 that is greater than the highest concentration tested or less than the lowest concentration tested (i.e. a definitive endpoint cannot be determined), shall not be used to establish control charts.

3. SRT tests which do not meet the acceptability criteria for a specific species shall not be used to establish control charts.

4. All values used in the control charts should be as nominal concentrations. However, the control charts shall be accompanied by a chart tabulating the test results as measured concentrations.

5. An outlier (i.e. values which fall outside the upper and lower control limits) should be included on the control chart unless it is determined that the outlier was caused by factors not directly related to the test organisms (e.g., test concentration preparation) as the source of variability would not be directly applicable to effluent tests. In such case, the result and explanation shall be reported to the Department within 30 days of the completion of the SRT test.

The control chart established for the initial series of SRT data submitted will be used by the laboratory and the Department to determine outliers from SRT test results reported in the "NJPDES Biomonitoring Report Form - Chronic Toxicity Test" submitted by the permittees for the test species. These initial control limits will remain unchanged until twenty SRT tests have been completed by the laboratory.

The following procedures shall be used for continually updating control charts after twenty acceptable SRT tests have been completed:

1. Once a laboratory has completed twenty acceptable SRT tests for a test species, the upper and lower control limits shall be recalculated with those twenty values.

2. For each successive SRT test conducted after these first twenty tests, a moving average shall be calculated and the control limits reevaluated using the last twenty consecutive test results.

3. The upper and lower control limits shall be reported on the "NJPDES Biomonitoring Report Form - Chronic Toxicity Tests" along with the SRT test result.

E. UNACCEPTABLE SRT TEST RESULTS

If a laboratory produces any SRT test results which are outside the established upper and lower control limits for a test species at a frequency greater than one test in any ten tests, a report shall be forwarded to the Department at the address contained herein. This report shall include any identified problem which caused the values to fall outside the expected range and the corresponding actions that have been taken by the laboratory. The Department may not accept or may require repeat testing for any toxicity testing that may have been affected by such an occurrence.

If a laboratory produces two consecutive SRT test results or three out of any ten test results which are outside the established upper and lower limits for a specific test species, the laboratory shall be unapproved to conduct chronic toxicity tests for compliance purposes for that test species. Reapproval shall be contingent upon the laboratory producing SRT test results within the established upper and lower control limits for that test species in two consecutive SRT tests. If one or both of those test results again fall outside the established control levels, the laboratory is unapproved for that test species until five consecutive test results within the established upper and lower control limits are submitted and approved by the Department.

F. ANNUAL SUBMITTALS

Control charts shall be forwarded to the Department on an annual basis, on the anniversary of approval for the test species.

The Department may request, at any time, any information which is essential in the evaluation of SRT results and/or compliance data.

V. TEST CANCELLATION / RESCHEDULING EVENTS

A lab may become aware of QA problems during or immediately following a test that will prevent data from being submitted or a lab may be unable to complete a tests due to sample collection or shipping problems. If for any reason a chronic toxicity test is initiated and then prematurely ended by the laboratory or at the request of the permittee, the laboratory shall submit the form entitled "Chronic Whole Effluent Toxicity Testing Test Cancellation / Rescheduling Event Form" contained herein. This form shall be used to detail the reason for prematurely ending the test. This completed form and any applicable raw data sheets shall be submitted to the appropriate biomonitoring program at the address above within 30 days of the cessation of the test.

Tests are considered to be initiated once test organisms have been added to all test chambers.

Submission of this form does not relieve the facility from monitoring for that monitoring period.

VI. REPORTING

The report form entitled "NJPDES Biomonitoring Report Form - Chronic Toxicity Tests" should be used to report the results of all NJPDES chronic compliance biomonitoring tests. Laboratory facsimiles are acceptable but must contain all information included on any recent revisions of the form by the Department. Statistical printouts and raw data sheets for all endpoints analyzed shall be included with the report submitted to the Department. Two copies of all chronic toxicity test report forms shall be submitted to the following address as applicable:

Bureau of Surface Water Permitting
New Jersey Department of Environmental Protection
Division of Water Quality
Mail Code 401-2B
PO Box 420
Trenton, NJ 08625-0420

It is not necessary to attach a copy of a test report form to the Discharge Monitoring Report (DMR) form when submitting this form to the Department. However, the results of all chronic toxicity tests conducted for compliance purposes must be reported on the DMR form under the appropriate parameter code in the monitoring period in which the test was conducted.

VII. METHOD SPECIFICATIONS

The following method specifications shall be followed as specified in the NJPDES permit. Any changes to these methods will not be considered acceptable unless they are approved in writing by the Department, prior to their use.

A. Fathead Minnow (*Pimephales promelas*), Larval Survival and Growth Test, method 1000.0
B. *Ceriodaphnia dubia*, Survival and Reproduction Test, method 1002.0
C. Algal, (*Selenastrum capricornutum*), Growth Test, method 1003.0
D. Sheepshead Minnow (*Cyprinodon variegatus*), Larval Survival and Growth Test, method 1005.0
E. Inland Silverside (*Menidia beryllina*), Larval Survival and Growth Test, method 1006.0
F. *Mysidopsis bahia*, Survival, Growth, and Fecundity Test, method 1007.0
G. *Champia parvula*, Sexual Reproduction Test, method 1009.0

VIII. REFERENCES

1. Keating, K. 1985. The influence of Vitamin B12 deficiency on the reproduction of Daphnia pulex Leydig (Cladocera). J. Crustacean Biology 5:130-136.

2. Keating, K. 1988. N.J.D.E.P. Project C29589, Fiscal 1988 Third Quarter Summary Report. Producing Nutritionally Competent Daphnids for Use in Bioassay. 44p.

3. Keating, K., and B. Dagbusan. 1984. Effect of selenium deficiency on cuticle integrity in Cladocera (Crustacea). Proc. Natl. Acad. Sci. USA 81:3433-3437.

4. NJDEP, 1993. Discharge Monitoring Report (DMR) Instruction Manual.

5. USEPA. 1994. Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms. EPA-600/4-91-003. July 1994. Second Edition.

6. USEPA. 1994. Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms. EPA/600/4-91/002. July 1994. Third Edition.

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
Mail Code 401-2B
P.O. Box 420
TRENTON, NEW JERSEY 08625-0420
BIOMONITORING PROGRAM

CHRONIC WHOLE EFFLUENT TOXICITY TESTING
TEST CANCELLATION / RESCHEDULING EVENT FORM

THIS FORM IS TO BE COMPLETED AND SUBMITTED TO THE DEPARTMENT DIRECTLY BY THE LABORATORY CONDUCTING CHRONIC TOXICITY TESTS WHENEVER A CHRONIC TOXICITY TEST IS PREMATURELY ENDED FOR ANY REASON

NJPDES No.: _____

FACILITY NAME: _____

LOCATION: _____

CONTACT: _____ PHONE: _____

CANCELLATION EVENT:

LABORATORY NAME / NUMBER: _____

CONTACT: _____

TEST START DATE: _____/_____/_____ TEST END DATE: _____/_____/_____

REASON FOR CANCELLATION: _____

_____

_____

_____

_____

_____

EFFLUENT SAMPLING:

SAMPLING POINT / DESCRIPTION OF SAMPLING SITE: _____

_____

SAMPLING INITIATED: DATE: ____/____/____ TIME: _____

SAMPLING ENDED: DATE: ____/____/____ TIME: _____

NUMBER OF EFFLUENT SAMPLES COLLECTED: _____

SAMPLE TYPE (GRAB/COMPOSITE): _____

RECEIVED IN LAB BY/FROM: _____

_____

METHOD OF SHIPMENT: _____

(ALL APPLICABLE RAW DATA SHEETS MUST BE ATTACHED)

c: Permittees authorized agent.