## **ENVIRONMENTAL PROTECTION**

## WATER RESOURCE MANAGEMENT

**New Jersey Pollutant Discharge Elimination System** 

Treatment Works Approvals, Capacity Assurance Program, and Sewer Ban Program

Adopted Amendments: N.J.A.C. 7:14A-22.8, 22.16, and 22.17

Proposed: October 19, 2015, at 47 N.J.R. 2582(a) (see also 47 N.J.R. 2695(a)).

Notice of Proposed Substantial Changes on Adoption of Proposed Amendments: November 7,

2016, at 48 N.J.R. 2196(a).

Adopted: April 7, 2017, by Bob Martin, Commissioner, New Jersey Department of

Environmental Protection.

Filed: April 13, 2017, as R.2017 d.091, **with substantial changes** to proposal after additional notice and public comment, pursuant to N.J.S.A. 52:14B-4.10.

Authority: N.J.S.A. 13:1D-9, 13:1E-1 et seq., 58:10A-1 et seq., 58:11-49 through 58, and 58:11-64 et seq.

DEP Docket Number: 08-15-09.

Effective Date: May 15, 2017.

Expiration Date: November 2, 2022.

The Department of Environmental Protection (Department) is adopting amendments to the New Jersey Pollutant Discharge Elimination System (NJPDES) rules with respect to the capacity assurance program (CAP) provisions that are part of the rules governing treatment

works approvals (TWAs) at N.J.A.C. 7:14A-22, Treatment Works Approval, Sewer Ban, Sewer Ban Exemptions.

The purpose of the CAP rule at N.J.A.C. 7:14A-22.16 is to establish a mechanism for ensuring that a treatment works, which includes both the treatment plant and the associated conveyance system(s), will avoid hydraulic overloads that could result in either a violation of New Jersey Pollutant Discharge Elimination System (NJPDES) permit discharge limits or in unpermitted discharges.

The adopted amendments address the threshold at which the CAP requirements are triggered, the information gathered and evaluated as part of the capacity analysis, and the basis for relief from the CAP requirements. An additional unrelated amendment updates the TWA application requirements to include the submittal of GPS coordinates for certain aspects of a proposed TWA project.

The adoption document may be viewed or downloaded from the Department of Environmental Protection's website at http://www.nj.gov/dep/rules/adoptions.html.

**Summary** of Hearing Officer's Recommendations and Agency Response:

A public hearing was held on the original notice of proposal on December 3, 2015, at which four persons commented. The Department held a public hearing on the notice of substantial changes on adoption of proposed amendments on December 9, 2016, at which four persons commented. Both public hearings were held at the Department's headquarters in Trenton, and Tracy Shevlin served as hearing officer. After reviewing the comments received, the Hearing Officer has recommended that the proposal be adopted with the changes described in

GOVERN.

the summary of public comments and agency responses, below. The Department accepts the

Hearing Officer's recommendation. A record of the public hearings is available for inspection in

accordance with applicable law by contacting:

Department of Environmental Protection

Office of Legal Affairs

ATTN: DEP Docket No. 08-15-09

401 East State Street

Mail Code 401-04L

PO Box 402

Trenton, NJ 08625-0402

**Summary** of Public Comments and Agency Responses:

The Department received comments during the initial 60-day comment period following

the publication of the original rule proposal. These comments are summarized below, grouped in

separate sections depending on whether the comment prompted a modification to the rules as

originally proposed. Additionally, the Department received comments on the notice of proposed

substantial changes on adoption of proposed amendments, which are included, along with the

Department's response thereto, in a separate section below.

1. Comments Received During Comment Period on the Proposal, Giving Rise to

**Substantial Changes on Adoption** 

In response to some of the comments received during the public comment period on the original rule proposal, the Department proposed to make substantive changes to the proposal, subject to additional notice and public comment, in accordance with the Administrative Procedure Act at N.J.S.A. 52:14B-4.10. The proposed substantial changes on adoption and the comments prompting them were the subject of a Notice of Proposed Substantial Changes on Adoption of Proposed Amendments, published in the November 7, 2016, New Jersey Register. (See 48 N.J.R. 2196(a).) The comments and responses below are those published in that notice. Comments were received from:

- James Cosgrove, PE, Vice President/Principal, Kleinfelder, on behalf of:
   Ronald Anastasio, PE, Executive Director, Somerset Raritan Valley Sewerage
   Authority; John Kantorek, PE, Executive Director, Stony Brook Regional Sewerage
   Authority; Christopher Manak, Superintendent, Madison-Chatham Joint Meeting;
   JoAnn Mondsini, Executive Director, Rockaway Valley Regional Sewerage
   Authority; and Donato Nieman, Township Administrator, Montgomery Township
- 2. Margaret Gallos, Association of Environmental Authorities
- 3. Robert Goodsell, Post Polak Goodsell & Strauchler
- 4. Toni Granato and Jeff Tittel, New Jersey Chapter, Sierra Club
- 5. Jerry Haimowitz, PE
- 6. Nancy Hedinger, President, League of Women Voters of New Jersey
- Andrea Leshak, Hackensack Riverkeeper and NY/NJ Baykeeper; Deborah A. Mans, NY/NJ Baykeeper; and Captain Bill Sheehan, Hackensack Riverkeeper
- 8. Bill Simmons

## 9. Bill Wolfe

The comments received and the Department's responses are summarized below. The number(s) in parentheses after each comment corresponds to the respective commenter(s) within this section.

1. COMMENT: As proposed, the rule allows a treatment plant to reach 100 percent of its permitted flow - its capacity - before it has to submit a plan to reduce the flow or ban new sewer connections. It will take at least six months to prepare and submit a CAP, additional time for the Department to review and approve the plan, and even more time for the plan to be implemented. Based on a threshold of 100 percent of permitted flow, during this time, the facility will be discharging at levels above its permit limits. The Department states that even when a treatment plant is operating at 100 percent of its permitted flow, the plant can operate without violating effluent limits, because plants are often designed to handle flows of up to two and a half times their average permitted flow.

The Department's optimism is predicated on an unpublished study of treatment plants that found only a weak correlation between the percentage of flow and violations in water quality. The result is that 129 of 189 facilities studied by the Department triggered the CAP rule requirements in the existing rules - but only 34 out of 189 facilities will trigger the CAP requirements in the proposed rules. The flow study should have been published and there should have been sufficient time for reviewing it. Instead, the only explanation the Department is

giving the public to justify such a consequential change in policy is a summary in the preamble of the CAP rule. There should be a peer-reviewed study, and public discourse. (6 and 8)

2. COMMENT: The existing rule requires facilities to review their infrastructure conditions at an 80 percent threshold. The Department states that fewer facilities will trigger the CAP if the threshold is raised. From a big picture standpoint, this is ill-advised, because fewer will review infrastructure conditions. This will improperly increase development and hinder water conservation efforts.

The Department's basis for the change to a threshold of 100 percent of permitted flow is an analysis that seems designed to demonstrate that the threshold can be increased. Although the Department states there is a low correlation between the 80 percent threshold and actual NJPDES violations, there was some correlation. By increasing the threshold, the Department will increase the number of NJPDES violations. The Department should be going in the other direction, toward no NJPDES violations. (9)

3. COMMENT: Moving the CAP threshold from 80 percent of permitted flow based on a three-month consecutive average to 100 percent of permitted flow over 12 consecutive months is a major change. It appears certain this change increases the likelihood of degrading the State's water quality. A three-month average coupled with an 80 percent threshold captures peak flow exceedances that then trigger a capacity analysis report faster than using the proposed 12-month average coupled with a threshold of 100 percent of permitted flow. This change will have a particularly egregious impact for source systems subject to seasonal peak flows. Shifting to a

12-month average and 100 percent of permitted flow threshold (which smooths and masks the seasonal peaks) effectively insulates systems subject to seasonal flows from scrutiny and reporting, even though they are operating at flows well above the permitted value for a good part of the year. (6)

4. COMMENT: A major change in the Department's proposal is that the threshold for requiring a CAP has been increased from 80 percent to 100 percent of permitted capacity. In other words, under the proposed rule, wastewater treatment plant permittees would not have to conduct analysis or consider implementing corrective measures until the treatment plant reaches or exceeds 100 percent of permitted capacity. When a treatment plant reaches 100 percent of permitted capacity, however, it is already too late.

Allowing permittees to postpone capacity analysis until their flow reaches 100 percent of permitted capacity risks further degrading water quality and increasing the likelihood of NJPDES permit violations. The Department recognizes these risks in the proposed rule, and yet the Department nevertheless concludes that requiring a CAP when the 100 percent permitted flow threshold is reached is "appropriate to protect water quality and ensure adequate treatment and conveyance capacity." The Department claims that the amended threshold of 100 percent permitted flow will provide adequate time for the permittee to develop and implement measures because treatment plants are "often designed to handle flows of up to two and one half times their average permitted flows." However, just because it may be technologically feasible for a wastewater treatment plant to process more flow than the permitted flow, it is not clear that the additional flow itself would not cause NJPDES permit violations. The Department does not

explain why exceedances in permitted flow will not lead to NJPDES permit violations, particularly for facilities that have monthly permitted flow limits.

Furthermore, the Department's decision to increase the threshold to 100 percent of permitted capacity is unreasonable, as the evidence that the Department is relying on does not support increasing the threshold. The Department's stated basis for increasing the threshold from 80 percent to 100 percent of permitted capacity is an evaluation of the correlations among treatment plant NJPDES permit violations, percentage of committed flow to permitted flow over various time periods, and flow averaging periods. This evaluation has not been published or made available to the public, and the Department's description of its evaluation in the proposed rulemaking raises several questions. First, why did the Department exclude other Department permit violations and limit its evaluation only to those violations based on oxygen demanding parameters and total suspended solids? Other permit violations could be more closely related to percentage of permitted flow. Second, why did the Department not consider relevant differences between the treatment plants that it evaluated? It might be the case that newer, larger, or more technologically advanced wastewater treatment plants can handle more than 80 percent of permitted flow without resulting in permit violations, while older or smaller treatment plants cannot. Third, why did the Department not consider the impact on water quality from the additional permit violations that would likely result from the relaxation of the threshold?

In short, the Department should not relax the threshold from 80 percent to 100 percent of permitted flow because such a shift would lead to more NJPDES permit violations. The purpose of the CAP rule is to prevent treatment plant hydraulic overflows and resulting NJPDES permit violations. The best way to accomplish this purpose is to maintain a conservative threshold that

will trigger analysis and corrective action in sufficient time to prevent NJPDES permit violations. (7)

- 5. COMMENT: The use of 100 percent of capacity instead of 80 percent of capacity for the CAP threshold is a threat to future development. It takes years to plan and build the typical sewage treatment plant upgrade. If a plant must spend a year performing receiving water quality studies and proposes discharge limit changes which environmental groups litigate, just determining the design parameters could be a multiyear process. If a protracted planning period results in the plant violating its permit limits, then it falls under a sewer ban and development stops in a very disruptive way. A better idea is to keep the 80 percent threshold. The Department can look at the growth projections submitted and any potential discharge limit changes and determine when actual water quality will be impacted, when discharge limit studies should be conducted, and when design and construction could commence. (5)
- 6. COMMENT: Under the existing rule with the 80 percent threshold based on a three-month average, plants would have to adjust their processes to allocate and reduce flows in order to avoid triggering a CAP. Changing the threshold to 100 percent over 12 months means the plants at any one time could be discharging 2.5 times more than permitted flow. This means more pollution violations, resulting in impacts to public health and drinking water. A treatment plant will not need to take corrective action until there is no capacity left. Only if the treatment plant reaches the 100 percent permitted flow limit, would it have to take action to reduce pollution. Fewer plants will take action to reduce flows, causing more development and more pollution.

Towns can keep issuing permits and increasing sewer connections without taking into account water conservation. (4)

- 7. COMMENT: The Department is correct to base the CAP trigger on a 12-month average actual flow as compared to permitted flow. The calculation in the existing rule, based on a three-month average flow, is too easily impacted by seasonal weather fluctuations. However, the CAP triggers in the Water Quality Management Planning (WQMP) proposal and in the CAP proposal are inconsistent. In the WQMP proposal, planning agencies and wastewater treatment plants initiate a wastewater capacity analysis when actual flow reaches 80 percent of design capacity, whereas in the CAP rule proposal, the requirement is that this begins when the actual flow reaches 100 percent of design capacity. It is not in the interest of prudent planning to leave capacity studies until flow reaches full design capacity. An 80 percent threshold may generate unnecessary capacity studies, and that is an inefficient use of the time and funds of both the regulators and the regulated community; therefore, a threshold of 90 percent of design capacity is an appropriate compromise between these two considerations. (2)
- 8. COMMENT: The rule should require a CAP when the average flow over 12 consecutive months exceeds 90 percent of the permitted flow. This would provide ample time to plan for any required expansions, but would still reduce the number of facilities that enter the capacity assurance program without any real prospect for exceeding treatment capacity. A threshold of 100 percent gives a facility no buffer between plant capacity and the CAP threshold. (1)

9. COMMENT: The existing CAP requirement is triggered when 80 percent of a plant's design flow is reached over a consecutive three-month period. The proposed amendment would replace the 80 percent threshold with a new threshold based on the average flow over 12 consecutive months as reported on DMRs. This modification is sound and better reflects when a CAP should be required. (3)

#### RESPONSE TO COMMENTS 1 THROUGH 9:

Analyses in the Notice of Proposal Summary

As stated in the notice of proposal Summary (47 N.J.R. at 2585), when the Department conducted the analyses on which it based the amendments in the notice of proposal, the Department reviewed DMR data from 189 permittees, and approved but not yet operational flows as identified under TWA permits in the Department's New Jersey Environmental Management System (NJEMS) database. These 189 permittees were all the plants that discharge treated domestic wastewater to surface waters in the State.

For purposes of the original analyses described in the notice of proposal Summary, the Department considered flow averaged over a 12-month period (October 2012 through September 2013); the maximum three-month rolling average flow over a five-year period (October 2008 through September 2013); and the maximum 12-month rolling average flow over a five-year period (October 2008 through September 2013). The Department considered data over a five-year period in order to account for varying amounts of precipitation that may occur in any given year. In addition, the extended time period allowed the Department to consider more data points than would be available if it considered only a single 12-month period.

The original analysis, which assessed 189 domestic treatment plants that discharge to surface water, concluded that 129 treatment plants would have triggered the CAP requirements at the existing rule's 80 percent, three-month rolling average threshold over a five-year period (October 2008 through September 2013) (47 N.J.R. at 2585). The 129 figure is the number of individual domestic treatment plants that would have triggered the CAP requirements at the 80 percent threshold during at least one of the 58 three-month periods during the five-year period (without counting a plant twice).

Similarly, the original analysis concluded that 34 of the 189 treatment plants would have triggered the CAP requirements at the proposed rule's threshold of 100 percent permitted flow over a 12-month rolling average from October 2008 through September 2013. This number represented the number of treatment plants that would trigger the CAP requirements based on committed flow (the sum of flow reported on a permittee's DMRs, plus flow that is approved but not yet operational) compared to permitted flow. Taking into account only flow as reported on permittees' DMRs, and as intended under the adopted rule, the original analysis shows that only 28 of the 189 treatment plants would have triggered CAP requirements at a threshold of 100 percent of permitted flow.

The Water Pollution Control Act at N.J.S.A. 58:10A-6.h(3) provides that any permit issued for a discharge from a municipal treatment works shall require the permittee, "as actual flows to the facility approach design flow or design loading limits, to submit to the commissioner or local agency for approval, a program which the permittee and the persons responsible for building and maintaining the contributory collection system shall pursue in order to prevent overload of the facilities." In accordance with the NJPDES rules at N.J.A.C. 7:14A-1.2,

"municipal treatment works" is defined as the treatment works of any municipality, county, or State agency or any agency or subdivision created by one or more municipal, county, or State governments and the treatment works of any public utility as defined in N.J.S.A. 48:2-13. Therefore, the capacity assurance program does not apply to all 189 treatment plants in the State that discharge to surface water, but only to the above described municipal treatment works. There are 147 municipal treatment plants that discharge to surface water, and six municipal treatment plants that discharge to ground water. Consequently, the Department revisited the data in preparing the notice of substantial change.

As shown in Table 1 below, the Department recompiled the DMR and TWA data from March 2015 through February 2016, to determine the treatment plants' reported flow as a percentage of permitted flow over a 12-month rolling average. This percentage determines whether a treatment plant will trigger the CAP, under the CAP threshold as originally proposed or as modified on adoption. If the percentage is greater than 95 percent, the treatment plant would trigger the CAP under the rule as modified on adoption. If the percentage is greater than 100 percent, the treatment plant would trigger the CAP under both the rule as originally proposed and also under the rule as modified on adoption.

Taking into account the monthly flows (from DMRs) of the 147 municipal treatment plants that are subject to the CAP and that discharge to surface water, the Department's analysis indicates that two facilities, Long Hill Township Sewage Treatment Plant (125 percent of permitted flow) and Fieldsboro Wastewater Treatment Plant (106 percent), would trigger a CAP if the threshold were set at 100 percent permitted flow (as originally proposed). If the CAP threshold is set at 95 percent of permitted flow, as the Department proposed in the notice of

substantial change, two additional facilities, Frenchtown Wastewater Treatment Plant (96 percent) and Caldwell Wastewater Treatment Plant (95 percent), would trigger a CAP.

The Department also analyzed monthly flow during the same single 12-month period for the six municipal treatment plants that discharge to ground water and determined that only one municipal treatment plant (Chester Borough Wastewater Treatment Facility (132 percent)) would trigger a CAP if the threshold were set at 95 percent of permitted flow.

Although the adopted rule considers only flow reported on DMRs when determining whether a facility meets the threshold for CAP reporting, approved but not yet operational flow is relevant to the Department's analysis. As shown in the table, the approved but not yet operational flow of these facilities was 2.3 percent of the permitted flow on average. The approved but not yet operational flow of approximately 54 percent (80 of 147) of the treatment plants is one percent of permitted flow or less; approximately 88 percent (130 of 147) of the treatment plants have approved but not yet operational flow that is five percent or less of permitted flow. A facility with reported flow of 95 percent of permitted flow, plus 2.3 percent approved but not yet operational flow, has a buffer of 2.7 percent before its committed flow (reported flow plus approved but not yet operational flow) reaches its permitted flow. The Department believes this is a reasonable period of time for a treatment plant to comply with the CAP, and is consistent with the near-term focus of the CAP, in contrast to the longer-term planning focus of the wastewater capacity analysis of the WOMP rules.

## Table 1

# **New Jersey Wastewater Treatment Plant Capacity Analysis**

Municipal Treatment Plants that Discharge to Surface Water and that are Potentially Subject to the CAP

Based on information available to the Department as of February 29, 2016

							Correlation Co	efficient = 0.2
			Estimate of					
			Flows from					
			Approved but					
			Not Yet					
			Operational			Approved but		
			Flow from			Not Yet	Max 12-Mth Rolling	# of Months from
		Permitted	3/2011 through	Reported	Reported Flow	Operational Flow	Avg. Reported Flow	3/2011 through
		Flow (3)	2/2016 <sup>(2)</sup>	Flow (1)	<sup>(1)</sup> as a % of	as a % of	from 3/2011 through	2/2016 (i.e. 5 years)
		(MGD)	(MGD)	(MGD)	Permitted Flow	Permitted Flow	2/2016 (i.e. 5 years)	with at Least One
							Divided by Permitted	Numerical Violation
NJPDES #	Facility Name	[a]	[b]	[c]	[c]÷[a]	[b]÷[a]	Flow	of NJPDES Permit <sup>(4)</sup>
NJ0020028	BERGEN CNTY UTILITIES	75	2.3139	69.554	92.7%	3.1%	123.0%	13

	AUTHORITY (BCUA)							
NJ0020141	MIDDLESEX CNTY UA	147	4.2173	100.055	68.1%	2.9%	88.0%	13
NJ0020184	NEWTON WASTEWATER TREATMENT PLANT	1.4	0.0133	0.915	65.4%	1.0%	95.0%	3
NJ0020206	ALLENTOWN BORO WWTP	0.238	0	0.131	55.1%	0.0%	64.0%	11
NJ0020290	CHATHAM TWP MAIN STP	1	0.155	0.817	81.7%	15.5%	84.0%	2
NJ0020371	CAPE MAY REG WTF	3	0.0057	1.253	41.8%	0.2%	44.0%	0
NJ0020389	CLINTON TOWN WWTP	2.03	0.0173	1.070	52.7%	0.9%	74.0%	0
NJ0020427	CALDWELL WASTEWATER TREATMENT PLANT	4.5	0.0525	4.258	94.6%	1.2%	102.0%	3
NJ0020532	HARRISON TWP MULLICA HILL WWTP	0.8	0.0041	0.443	55.4%	0.5%	61.0%	1
NJ0020591	BERGEN COUNTY UTILITIES  AUTHORITY - EDGEWATER	6	0.095	3.111	51.9%	1.6%	59.0%	9
NJ0020605	ALLAMUCHY SEWERAGE TREATMENT PLANT	0.6	0	0.245	40.8%	0.0%	54.0%	0
NJ0020915	LAMBERTVILLE MUNICIPAL UTILITY AUTH	1.5	0	0.812	54.1%	0.0%	68.0%	4
NJ0020923	TRENTON SEWER UTILITY	20	0.0912	11.130	55.7%	0.5%	62.0%	0
NJ0021016	PASSAIC VALLEY SEWERAGE COMM	330	6.3005	225.917	68.5%	1.9%	83.0%	7
NJ0021113	WASHINGTON BORO	1.157	0	0.583	50.4%	0.0%	79.0%	0

	WWTP							
NJ0021326	MEDFORD LAKES BOROUGH STP	0.55	0	0.348	63.2%	0.0%	73.0%	0
NJ0021334	MENDHAM BORO	0.45	0	0.335	74.4%	0.0%	94.0%	0
NJ0021342	SKYVIEW / HIBROOK WTP	0.023	0	0.016	71.4%	0.0%	74.0%	0
NJ0021369	HACKETTSTOWN MUA	3.3	0	2.037	61.7%	0.0%	76.0%	0
NJ0021598	PENNSVILLE SEWERAGE AUTHORITY	1.875	0	1.458	77.8%	0.0%	86.0%	0
NJ0021601	CARNEYS POINT STP	1.3	0.0058	0.947	72.8%	0.4%	94.0%	0
NJ0021610	RIVERTON STP	0.22	0	0.168	76.2%	0.0%	78.0%	0
NJ0021636	NEW PROVIDENCE WWTP	1.5	0.0066	1.233	82.2%	0.4%	119.0%	1
NJ0021709	CENTRAL AVE WASTEWATER TREATMENT PLANT	3.65	0.0972	1.908	52.3%	2.7%	63.0%	0
NJ0021717	BUENA BOROUGH MUA	0.4	0.0051	0.322	80.6%	1.3%	88.0%	1
NJ0021890	MILFORD SEWER UTILITY	0.4	0.0356	0.214	53.5%	8.9%	68.0%	0
NJ0021954	CLOVERHILL STP	0.5	0.132	0.308	61.5%	26.4%	74.0%	0
NJ0022021	SWEDESBORO WTP	0.35	0.0508	0.194	55.3%	14.5%	73.0%	2
NJ0022047	RARITAN TOWNSHIP MUA	3.8	0.0668	2.893	76.1%	1.8%	84.0%	1
NJ0022063	SUSSEX COUNTY HOMESTEAD WTP	0.05	0	0.010	20.0%	0.0%	37.0%	0

	WOODSTOWN							
NJ0022250	WASTEWATER TREATMENT	0.53	0.034	0.436	82.3%	6.4%	82.0%	2
	PLANT							
NJ0022349	ROCKAWAY VALLEY REG SA	12	0.3053	8.596	71.6%	2.5%	95.0%	1
	SKILLMAN VILLAGE							
NJ0022390	WASTEWATER TREATMENT	0.5	0.0555	0.085	17.0%	11.1%	17.0%	3
	PLANT							
NJ0022489	WARREN TWP SEWERAGE	0.47	0	0.322	68.5%	0.0%	87.0%	0
1430022403	AUTH STAGE I-II STP	0.47	Ü	0.322	00.370	0.070	37.070	o l
NJ0022497	WARREN STAGE IV STP	0.8	0.0129	0.482	60.2%	1.6%	73.0%	0
NJ0022519	RIVERSIDE SEWERAGE	1	0.0415	0.555	55.5%	4.2%	83.0%	0
1430022313	AUTHORITY	1	0.0415	0.333	33.370	4.270	03.070	o l
NJ0022675	ROXBURY TOWNSHIP	2	0	1.468	73.4%	0.0%	108.0%	12
NJ0022845	HARRISON BROOK STP	2.5	0	1.851	74.1%	0.0%	96.0%	0
NJ0022918	ROOSEVELT BORO WTP	0.25	0	0.169	67.7%	0.0%	83.0%	0
NJ0022985	WRIGHTSTOWN BOROUGH	0.337	0	0.078	23.0%	0.0%	26.0%	1
1130022383	STP	0.337	O	0.078	23.0%	0.0%	20.0%	1
	WILLINGBORO WATER							
NJ0023361	POLLUTION CONTROL	5.22	0.0796	3.557	68.1%	1.5%	77.0%	1
	PLANT							
NJ0023493	WASHINGTON TOWNSHIP	0.5	0.0101	0.387	77.3%	2.0%	122.0%	0
	MUA WTP							

NJ0023507	DELRAN TWP SEWER UTILITY DEPT	2.5	0	2.113	84.5%	0.0%	90.0%	1
NJ0023698	POMPTON LAKES BORO MUA	1.2	0	0.728	60.7%	0.0%	80.0%	0
NJ0023701	FLORENCE TOWNSHIP STP	2.5	0.0367	1.330	53.2%	1.5%	72.0%	0
NJ0023728	PINE BROOK STP	8.8	0.1229	7.183	81.6%	1.4%	89.0%	1
NJ0023787	EAST WINDSOR WATER POLLUTION CONTROL PLANT	4.5	0.035	2.617	58.1%	0.8%	66.0%	1
NJ0023809	LOWER TOWNSHIP MUA	4	0.006	1.953	48.8%	0.2%	52.0%	0
NJ0024007	CINNAMINSON SA	2	0.0588	1.237	61.9%	2.9%	71.0%	6
NJ0024015	MOUNT HOLLY WPCF	7.675	0.0216	3.044	39.7%	0.3%	44.0%	0
NJ0024023	PENNS GROVE SEWERAGE AUTHORITY	0.75	0	0.352	46.9%	0.0%	60.0%	2
NJ0024031	ELMWOOD WTP	2.978	0.1546	1.985	66.6%	5.2%	68.0%	0
NJ0024040	WOODSTREAM STP	1.7	0.001	1.012	59.5%	0.1%	60.0%	0
NJ0024449	PALMYRA STP	1.05	0	0.447	42.5%	0.0%	47.0%	0
NJ0024465	LONG HILL TOWNSHIP OF	0.9	0	1.124	124.9%	0.0%	143.0%	1
NJ0024473	ATLANTIC COUNTY  UTILITIES AUTH WWTF	40	0.5545	27.567	68.9%	1.4%	73.0%	2
NJ0024490	VERONA TWP WTP	3	0.0338	1.404	46.8%	1.1%	83.0%	0

NJ0024511	LIVINGSTON WATER  POLLUTION CONTROL  FACILITY	4.6	0.1165	2.637	57.3%	2.5%	78.0%	2
NJ0024520	TOWNSHIP OF OCEAN SEWERAGE AUTHORITY	7.5	0.031	4.076	54.4%	0.4%	64.0%	0
NJ0024562	SOUTH MONMOUTH REGIONAL STP	9.1	0.0303	4.910	54.0%	0.3%	61.0%	0
NJ0024643	RAHWAY VALLEY SEWERAGE AUTH	40	0.9105	30.079	75.2%	2.3%	82.0%	1
NJ0024651	CUMBERLAND COUNTY UTILITIES AUTHORITY	7	0.0119	2.571	36.7%	0.2%	48.0%	9
NJ0024660	BURLINGTON CITY STP	2.7	0.0153	1.668	61.8%	0.6%	93.0%	0
NJ0024678	BORDENTOWN SA BLACK'S CREEK STP	3	0.0374	1.444	48.1%	1.2%	70.0%	0
NJ0024686	GLOUCESTER CNTY UTIL AUTH	27	1.1591	18.013	66.7%	4.3%	76.0%	2
NJ0024708	BAYSHORE REGIONAL SEW AUTH	16	0.1905	7.186	44.9%	1.2%	53.0%	2
NJ0024716	PHILLIPSBURG TOWN STP	3.5	0.0572	2.460	70.3%	1.6%	77.0%	13
NJ0024741	JOINT MEETING OF ESSEX AND UNION COUNTIES	75	1.0848	53.420	71.2%	1.4%	87.0%	2
NJ0024759	EWING-LAWRENCE SA WTP	16	0.2325	10.708	66.9%	1.5%	79.0%	9

NJ0024783	LONG BRANCH SEWERAGE AUTHORITY	5.4	0.164	3.328	61.6%	3.0%	69.0%	0
NJ0024791	RIDGEWOOD VILLAGE WPC FACILITY	5	0.5183	2.316	46.3%	10.4%	61.0%	0
NJ0024813	NORTHWEST BERGEN CNTY UA	16.8	0.09	8.513	50.7%	0.5%	72.0%	3
NJ0024821	PEMBERTON TOWNSHIP MUA STP	2.5	0.0215	1.706	68.2%	0.9%	79.0%	0
NJ0024856	SALEM CITY WASTEWATER TREATMENT FACILITY	1.4	0.0024	0.833	59.5%	0.2%	62.0%	0
NJ0024864	SOMERSET RARITAN VALLEY	21.3	0.4527	14.783	69.4%	2.1%	92.0%	1
NJ0024872	TNSA SEWERAGE TREATMENT PLANT	8.5	0.0821	4.972	58.5%	1.0%	64.0%	1
NJ0024902	HANOVER SEWERAGE AUTHORITY WTP	4.61	0.3542	1.963	42.6%	7.7%	47.0%	0
NJ0024911	BUTTERWORTH WATER POLLUTION CONTROL UTILITY	3.3	0.0932	1.242	37.6%	2.8%	52.0%	0
NJ0024929	WOODLAND WATER POLLUTION CONTROL UTILITY (WPCU)	2	0.0078	0.855	42.8%	0.4%	52.0%	0

[	MOLITOR WATER							
NJ0024937	POLLUTION CONTROL	3.5	0.0345	2.205	63.0%	1.0%	71.0%	1
	FACILITY							
NJ0024953	LINDEN ROSELLE SA	17	0.5418	11.159	65.6%	3.2%	76.0%	4
NJ0024970	PARSIPPANY TROY HILLS	16	0.2712	9.004	56.3%	1.7%	99.0%	1
NJ0024996	MOORESTOWN TWP WWTP	3.88	0.0563	2.970	76.5%	1.5%	77.0%	1
NJ0025038	SECAUCUS MUA	5.12	0.1208	2.666	52.1%	2.4%	72.0%	4
NJ0025160	HAMMONTON WWTP	1.6	0.0126	0.258	16.1%	0.8%	29.0%	0
	HARTFORD RD WATER							
NJ0025178	POLLUTION CONTROL	6	1.0086	4.077	67.9%	16.8%	74.0%	3
	FACILITY							
NJ0025241	ASBURY PARK WTP	4.4	0.0266	2.106	47.9%	0.6%	59.0%	1
NJ0025321	NORTH HUDSON SEWERAGE AUTHORITY	10	0.2242	7.964	79.6%	2.2%	99.0%	10
NJ0025330	CEDAR GROVE STP	2	0.0018	1.414	70.7%	0.1%	76.0%	4
NJ0025356	MIDDLETOWN SA (TOMSA)	10.8	0.2696	6.368	59.0%	2.5%	71.0%	1
NJ0025496	MORRISTOWN SEWER	4.8	0.0422	2.403	50.1%	0.9%	59.0%	0
100023430	UTILITY	4.0	0.0422	2.403	30.1%	0.5%	33.076	U
	FLORHAM PARK WATER							
NJ0025518	POLLUTION CONTROL	1.4	0.3606	0.903	64.5%	25.8%	70.0%	0
	FACILITY							
NJ0026018	OCEAN COUNTY UTILITIES	20	0.0443	6.900	34.5%	0.2%	38.0%	0

	AUTHORITY - SWPCF							
NJ0026085	ADAMS STREET WTP	20.8	0.3754	12.908	62.1%	1.8%	68.0%	0
NJ0026174	CRESCENT PARK STP	0.064	0	0.022	33.9%	0.0%	45.0%	10
	DELAWARE #1 WATER							
NJ0026182	POLLUTION CONTROL	80	7.1347	54.475	68.1%	8.9%	72.0%	0
	FACILITY							
NJ0026301	HAMILTON TWP WPCF	16	0.2119	9.146	57.2%	1.3%	61.0%	0
NJ0026387	BERNARDSVILLE STP	0.8	0	0.494	61.8%	0.0%	82.0%	0
NJ0026719	ALBERT C WAGNER YOUTH  CORRECTIONAL FACILITY	1.3	0.0867	0.800	61.6%	6.7%	62.0%	0
NJ0026735	TWO RIVERS WATER RECLAMATION AUTHORITY	13.83	0.1999	9.217	66.6%	1.4%	77.0%	0
NJ0026832	MEDFORD TWP WASTEWATER TREATMENT PLANT	1.75	0.0373	0.988	56.5%	2.1%	75.0%	18
NJ0026867	WHITE ROCK STP	0.11453	0.0438	0.087	76.3%	38.2%	116.0%	0
NJ0026905	STAGE II TREATMENT PLANT	0.63	0	0.527	83.6%	0.0%	84.0%	0
NJ0027006	RINGWOOD ACRES TREATMENT PLANT	0.036	0	0.031	86.5%	0.0%	87.0%	0
NJ0027057	SPARTA PLAZA WTP	0.05	0	0.035	69.8%	0.0%	76.0%	1
NJ0027481	BEVERLY SEWERAGE	1	0.0042	0.407	40.7%	0.4%	51.0%	0

	AUTHORITY							
NJ0027545	LOGAN TOWNSHIP MUA	2	0.1159	1.302	65.1%	5.8%	66.0%	0
NJ0027561	DELAWARE TOWNSHIP MUA	0.065	0	0.033	50.2%	0.0%	62.0%	0
NJ0027669	AWOSTING STP	0.065	0.0003	0.045	69.2%	0.5%	114.0%	3
NJ0027677	OLDE MILFORD ESTATES STP	0.172	0	0.103	60.1%	0.0%	62.0%	9
NJ0027685	HIGHVIEW ACRES STP	0.2	0	0.066	32.9%	0.0%	45.0%	5
NJ0027774	OAKWOOD KNOLLS WWTP	0.035	0	0.022	63.6%	0.0%	67.0%	0
NJ0027821	MUSCONETCONG SEWERAGE AUTHORITY	5.79	0.2809	2.187	37.8%	4.9%	49.0%	0
NJ0027961	BERKELEY HEIGHTS WPCF	3.1	0.0425	1.296	41.8%	1.4%	53.0%	1
NJ0028002	MOUNTAIN VIEW STP	13.5	0.0449	6.735	49.9%	0.3%	66.0%	0
NJ0028142	NORTHERN WATER POLLUTION CONTROL FACILITY	32	1.6077	22.013	68.8%	5.0%	71.0%	0
NJ0028541	BIRCH HILL PARK STP	0.02	0	0.015	75.0%	0.0%	145.0%	15
NJ0029084	WOODCLIFF STP	2.91	0.0788	2.318	79.6%	2.7%	113.0%	3
NJ0029386	TWO BRIDGES  WASTEWATER TREATMENT  PLANT	7.5	0.2096	5.180	69.1%	2.8%	111.0%	1
NJ0029408	OCEAN CNTY UA	32	0.5563	19.875	62.1%	1.7%	67.0%	0

NJ0029467	MILLVILLE (WTP) CITY OF	5	0	2.341	46.8%	0.0%	48.0%	12
NJ0029475	HIGHTSTOWN BORO AWWTP	1	0	0.701	70.1%	0.0%	86.0%	1
NJ0029831	FRENCHTOWN WASTEWATER TREATMENT PLANT	0.15	0	0.144	96.1%	0.0%	164.0%	6
NJ0030333	GREENWICH TOWNSHIP  STP	1	0	0.457	45.7%	0.0%	62.0%	3
NJ0031119	STONY BROOK RSA- RIVER ROAD STP	13.06	0.4578	8.988	68.8%	3.5%	83.0%	0
NJ0031810	FIELDSBORO WWTP	0.1	0.003	0.106	106.1%	3.0%	119.0%	10
NJ0035114	BELVIDERE WWTF	0.5	0.0042	0.268	53.7%	0.8%	68.0%	0
NJ0035301	STONY BROOK RGNL SEWERAGE AUTH	0.3	0.0012	0.279	93.1%	0.4%	103.0%	0
NJ0035319	STONY BROOK RSA	0.3	0.0003	0.233	77.8%	0.1%	98.0%	0
NJ0035343	OCEAN CITY REG WTF	8.24	0.0072	3.086	37.4%	0.1%	38.0%	0
NJ0035483	OXFORD AREA WTF	0.5	0	0.263	52.6%	0.0%	75.0%	0
NJ0050130	RIVERSIDE FARMS STP	0.145	0	0.062	42.5%	0.0%	52.0%	0
NJ0050369	WARREN STAGE V STP	0.38	0	0.181	47.7%	0.0%	56.0%	0
NJ0050423	HANCOCKS BRIDGE STP	0.05	0	0.008	16.0%	0.0%	40.0%	0
NJ0050580	HAMPTON COMMONS WASTEWATER FACILITY	0.05	0	0.031	61.5%	0.0%	80.0%	0

				>-05%·	3 (2%)	Average		
NJ0109061	LONG VALLEY VILLAGE WTP	0.244	0	0.121	49.5%	0.0%	61.0%	0
NJ0098922	READINGTON-LEBANON SA	0.8	0.0448	0.690	86.2%	5.6%	104.0%	2
NJ0069523	CHERRY VALLEY STP	0.286	0.0012	0.171	59.7%	0.4%	71.0%	4
NJ0069167	MAPLE SHADE TWP PARK  AVE WWTP	3.4	0	2.539	74.7%	0.0%	82.0%	1
NJ0067733	OXBRIDGE WASTEWATER TREATMENT PLANT	0.088	0	0.042	48.0%	0.0%	48.0%	0
NJ0062201	CANTON VILLAGE STP	0.05	0	0.037	73.8%	0.0%	74.0%	1
NJ0060038	PIKE BROOK STP	0.67	0.0135	0.458	68.4%	2.0%	74.0%	2
NJ0053759	WANAQUE VALLEY REGIONAL SEWERAGE AUTHORITY	1.25	0.0364	0.833	66.6%	2.9%	90.0%	0
NJ0053350	SUSSEX CNTY MUA UPPER WALLKILL FACILITY	3	0.0681	1.285	42.8%	2.3%	65.0%	0
NJ0053112	CHAPEL HILL ESTATES STP	0.01	0	0.006	64.2%	0.0%	70.0%	0
NJ0053007	WILDWOOD/LOWER REGION WTF	14	0.042	4.080	29.1%	0.3%	32.0%	1
NJ0052990	CAPE MAY COUNTY MUA	7.67	0.0983	3.462	45.1%	1.3%	47.0%	0

>=95%: 3 (2%) <u>Average</u> >=100%: 2 (1%) 2.3%

> <u>Median</u> 0.8%

- (1) Equal to the one-year Average from March 2015 through February 2016 based on monthly average flow data reported on DMRs. For QA/QC purposes, if the reported monthly average flow value was greater than 10 times the permitted flow, the Department did not use the data in the analysis; the permittee's data are incorrect, likely either because the decimal point was placed incorrectly, or the permittee used the wrong units (gallons per day instead of millions of gallons per day) in its DMR.
- (2) This estimate is based on the permits where the permittee has not reported that flow designated as approved but not yet operational has become operational, and is included in reported flow.
- (3) This flow is equal to the "permitted capacity of the treatment plant."
- (4) Concentration or loading limit NJPDES permit violations only (that is, not percent removal limitations).

Correlation between Flow and Permit Violations (BOD5, CBOD5, and TSS)

The Department originally proposed to change the threshold from 80 percent of permitted flow to 100 percent of permitted flow, based on a review of the goals of the capacity analysis conducted under the Water Quality Management Planning (WQMP) process and the CAP rule and the Department's evaluation of the correlation among surface water treatment plants' NJPDES permit violations and the percentage of existing flow as a percentage of permitted flow over various time periods. The Department considered violations for oxygen demanding parameters (BOD<sub>5</sub> or CBOD<sub>5</sub>) and total suspended solids (TSS), since these parameters are common across all treatment plants that discharge treated domestic wastewater to surface water, are integral to the design of the treatment plants, and are related to the performance criteria for the treatment plants as reflected in their NJPDES permit limits. While some facilities have limits for other parameters, the other parameters are not common across all of the facilities and were, therefore, not considered.

The original analysis, discussed in the notice of proposal Summary (47 N.J.R. at 2585), indicated a weak correlation between flow and violations for selected parameter limits, meaning violations of BOD<sub>5</sub>, CBOD<sub>5</sub>, and TSS would not be expected to increase as committed flow approaches permitted flow over the varying timeframes (47 N.J.R. at 2585). Specifically, the results of the original analysis showed a correlation coefficient of 0.1 using the maximum 12-month rolling average over a five-year period from October 2008 through September 2013.

During the period it was reviewing the public comments on the notice of proposal, the Department performed a new analysis that included only domestic municipal treatment plants to which the CAP applies (147 facilities), and flow as reported on DMRs. The adopted CAP

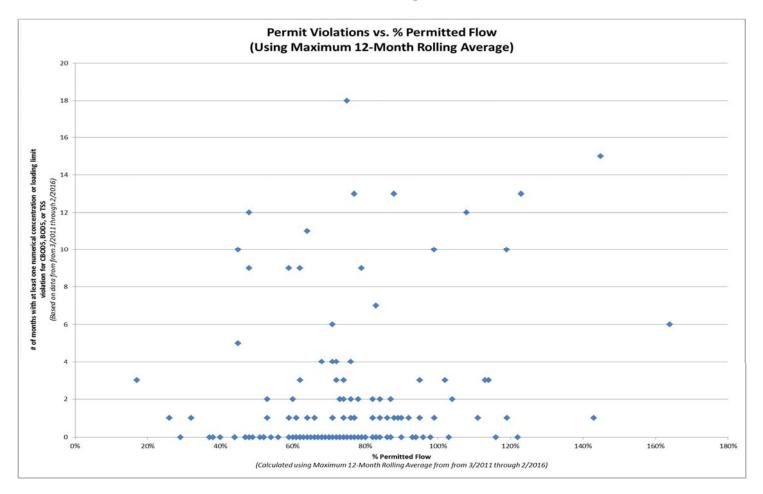
threshold is based on reported flow, rather than committed flow, making reported flow appropriate for the analysis. The Department considered DMR and TWA data from March 2011 through February 2016 (the Department used a more recent five-year period in the new analysis), to determine the percent of permitted flow that is reported flow, and correlation between reported flow and violations. The new analysis shows a correlation coefficient of 0.2 between the maximum 12-month rolling average of reported flow and the number of permit violations for BOD<sub>5</sub>, CBOD<sub>5</sub>, and TSS over the five-year period. The new analysis is based upon the data in the two rightmost columns of Table 1 above, which is plotted on the graph in Figure 1 below. Both the original and new analyses found a weak correlation between the two variables. This weak correlation is exhibited in Figure 1, where a high number of violations is observed at relatively low flows and, conversely, a lesser number of violations is observed at higher flows. Therefore, an increase in the percentage of reported flow to permitted flow would not be expected to result in an increase in the number of NJPDES permit effluent violations incurred by a treatment plant. The Department recognizes, however, that if a treatment plant exceeds its maximum design capacity for an extended period of time, the treatment plant will likely be unable to provide the treatment necessary to meet NJPDES permit effluent limits. It is incumbent upon a permittee to operate the treatment plant to ensure compliance with NJPDES permit conditions and requirements. This is the case no matter the CAP threshold.

Although Table 1 identifies the number of months in which a violation occurred at each treatment plant during the five-year period (March 2011 through February 2016), some of these violations may have been due to extenuating circumstances, such as construction associated with treatment plant upgrades or mechanical failure of equipment. The Department considers case-

specific circumstances when it determines the appropriate enforcement response to a facility's violation of its permit limits.

The Department did not conduct a new analysis for the six municipal treatment plants that discharge to ground water. The sample size of six was too small to obtain adequate data to determine the correlation between permitted flow and permit violations. Flow data from March 2015 through February 2016, indicated that reported flow for five of the treatment plants was between 43 and 81 percent of permitted flow, and reported flow for one treatment plant was 132 percent of permitted flow. None of the five facilities had a flow greater than 81 percent of permitted flow; therefore, only one of the municipal treatment plants that discharge to ground water would trigger the CAP under either a CAP threshold of 95 or 100 percent of permitted flow.

Figure 1



#### CAP Threshold - Flow as a Permit Condition

As stated above, the Department found little correlation between increased flow as reported on DMRs and violations of CBOD<sub>5</sub>, BOD<sub>5</sub>, or TSS parameters. However, increased flow could have an impact on violations to the extent that flow is a NJPDES permit limit for some treatment plants. Whether or not flow from the treatment plant reaches the CAP threshold, the permittee must regularly monitor and report its flow on DMRs, and is responsible to ensure that the treatment plant operates without violating its permit limits and/or conditions.

Flow is an NJPDES permit limit for the six municipal wastewater treatment plants that discharge to ground water (Chester Borough Wastewater Treatment Facility, Hammonton Waste Water Treatment Plant, Jackson Township Municipal Utilities Authority, Kings Grant Sewage Treatment Plant, Landis Sewerage Authority, and Sussex County Municipal Utilities Authority), and for five of the municipal treatment plants that discharge to surface water (Passaic Valley Sewerage Commission and the four treatment plants that discharge to the Pinelands waters and the Great Swamp - Buena Borough Municipal Utility Authority, Medford Lakes Borough Sewerage Treatment Plant, Hammonton Wastewater Treatment Plant, and Township of Morris Water Pollution Control Utility's Woodland Sewage Treatment Plant). Depending on the facility, the flow limit is based on either a daily maximum or a monthly average.

Under the rule as proposed, with a CAP threshold of 100 percent of the facility's permitted flow and the reported flow averaged over a 12-month period, a facility with flow as a permit limit would likely violate its permit before its average flow reached the CAP threshold; the 12-month average smooths daily or monthly fluctuations in flow. In order for a 12-month

average flow to equal permitted flow, some daily or monthly flows will likely exceed permitted flow.

A violation of flow as a permit limit is independent of the CAP threshold. If a treatment plant's flow exceeds its permitted limit, it is in violation of its permit, regardless of the CAP threshold. That said, commenters have expressed concern that a treatment plant that has flow as a permit limit will violate its permit before its flow reaches the CAP threshold, if the CAP threshold is 100 percent of permitted flow. The argument implies that a facility will conduct no advance planning or analysis prior to reaching the CAP threshold, even if the treatment plant repeatedly exceeds its permitted flow. This ignores the Water Quality Management Planning rules, discussed further below. It also does not take into account adopted N.J.A.C. 7:14A-22.16(b), which allows the Department to require a CAP if permitted flow is exceeded as a result of wet weather events, or adopted new N.J.A.C. 7:14A-22.16(d), which requires the owner or operator of a conveyance system to, within 180 days of notification by the Department, conduct a capacity analysis and submit a capacity analysis report when the Department finds circumstances exist that are likely to result in excessive flow that may cause NJPDES permit violations or contribute to the discharge of untreated sewage at a combined sewer overflow or through sanitary sewer overflows. The causes for the Department to require a CAP analysis and report include: existing flows approach the design capacity of the conveyance system; there is excessive inflow and infiltration (I/I) in the conveyance system; the conveyance system is connected to a combined sewer system or a plant that receives flow from municipalities that have such systems; there has been an unpermitted discharge from the treatment works; and the 12consecutive-month average flow equals or exceeds the permitted flow at the receiving treatment

plant, and a municipality or sewage authority has not cooperated with the permittee to conduct the capacity analysis as required under adopted N.J.A.C. 7:14A-22.16(a) when the threshold was met (47 N.J.R. at 2584). In addition, the permittee has the responsibility to properly operate and maintain its treatment plant and be proactive in order to avoid overloads and violations of its NJPDES permit limits and conditions.

The 11 facilities with flow as a permit limit could potentially violate their flow limit before their flows reach the 95 percent CAP threshold under the rule as modified on adoption, since the permit limit is based on either a daily maximum or monthly average flow versus an annual average flow, as stipulated in the CAP requirements. Nevertheless, lowering the CAP threshold to below 95 percent of permitted flow would prematurely subject the majority of regulated facilities without permit flow limits to the rigorous CAP requirements. The Department is attempting to balance the benefits of the CAP against the requirements, including the associated work and financial burdens, imposed by the CAP on permittees. The 11 permittees with flow as a permit limit may need to address capacity issues at their facilities prior to triggering a CAP in order to avoid potential flow violations. As stated in the notice of proposal Summary, permittees are subject to enforcement action for effluent limit violations regardless of whether a CAP has been triggered or implemented (47 N.J.R. at 2585). In light of the consequences of repeated violations, including financial consequences, it is in the interest of the permittee to ensure that its flow remains below the permitted flow.

CAP Analysis Compared to Wastewater Capacity Analysis under the WQMP Rules

The Department stated in the notice of proposal Summary that the amended CAP threshold of 100 percent of permitted flow would provide adequate time for the permittee to develop and implement measures to address potential hydraulic overloading of the plant (47 N.J.R. at 2585). In proposing the threshold, the Department attempted to balance the permittees' need for time to develop and implement such measures against the adopted rule's more extensive CAP analysis.

Some commenters suggest that the CAP threshold and the requirement to conduct a wastewater capacity analysis under the WOMP rules at N.J.A.C. 7:15 should be the same, at 80 percent, and suggest that establishing a higher CAP threshold will allow a treatment plant to avoid planning or evaluating its capacity until its flow triggers the CAP threshold. This is not the case. The purpose of the wastewater capacity analysis under the WQMP rules differs from the CAP analysis. As stated in the notice of proposal Summary (47 N.J.R. at 2585), the wastewater treatment capacity analysis is intended to identify potential shortfalls between the anticipated demand for flow from existing and future development in the sewer service area of a treatment plant, and the permitted flow of the plant. It is premised on a longer-term look at the circumstances of the treatment plant and the effects of development in the sewer service area. The existing flow that is compared against permitted flow is the highest consecutive 12-month rolling average over the most recent five-year period as of the date of wastewater management plan (WMP), and the threshold that triggers the wastewater capacity analysis is when that flow is 80 percent of permitted flow. This approach is intended to facilitate the development of wastewater management strategies well in advance of permitting, financing, and design, should construction of new or expanded infrastructure be deemed necessary.

As part of the planning process, the regional planning entity coordinates with the Department and the permittee to determine if the remaining projected growth in the sewer service area will result in a capacity deficit. If the potential for a capacity deficit exists, the regional planning agency is required to analyze effective strategies to address the deficiency. Effective strategies could include an assessment of proposed alternatives included in the CAP rule. This planning process is expected to provide adequate time for the permittee and local officials to plan for future capacity needs well in advance of anticipated connections for new developments.

On the other hand, the CAP provisions in the NJPDES rules focus on evaluating the capacity of an existing treatment plant and conveyance system, and the near-term implementation of measures to avoid hydraulic overloads that could result in violations of the treatment plant's NJPDES permit limits or unpermitted discharges. Thus, the capacity analysis is triggered when reported flow at the treatment plant averaged over 12 consecutive months reaches the CAP threshold. It is because of the differences in focus that the CAP threshold need not be the same as the trigger for a capacity analysis occurs required under the WQMP rules. The Department acknowledges that it does take years to plan, conduct the necessary studies, design, finance, and build sanitary sewer system improvements. Therefore, for planning purposes, it is appropriate that a WQMP wastewater capacity analysis considerably earlier than a CAP analysis.

The WQMP wastewater capacity analysis considers what will be needed in the future.

The CAP analysis considers what is needed in the near term to ensure proper operation and to avoid potential violations resulting from exceedances in permitted flow. A treatment plant with

reported flow at 80 percent of permitted flow is not likely to suffer a chronic hydraulic overload, such that a detailed CAP analysis would be useful. Therefore, an 80 percent threshold would impose the extensive CAP requirements on far more facilities than needed to perform the analysis, and would also require the analysis sooner in the life of a facility than is useful.

Similarly, a CAP threshold of 90 percent, as some commenters suggest, is also not appropriate. A facility that is approaching 90 percent of its permitted flow may be able to operate for years before it moves even a few percentage points toward the permitted flow. Such facilities are in sewer service areas that are unlikely to expand, or that can expand only marginally (for example, towns or counties with very little growth potential). It would be premature to require these facilities to perform the complex analyses that a CAP requires when the facilities may not reach their permitted flow for years, if ever.

The rule as modified on adoption does not preclude a permittee from assessing capacity at any time prior to reported flow reaching the 95 percent threshold, such as the WQMP may require. The responsibility to meet regulatory requirements, including ensuring that NJPDES permit discharge limits and conditions are met at all times, and to adequately address future development and capacity needs, continues to lie with the permittee and local agencies/officials. The permittee should be proactive and implement measures when they are appropriate and necessary to ensure adequate treatment capacity.

Development and Conservation in the Sewer Service Area

The Department does not anticipate that amending the CAP threshold will allow increased development in sewer service areas, or reduce water conservation efforts. Under the

existing rule, when a treatment plant's committed flow reaches the 80 percent threshold, it is required to submit a CAP, but reaching the CAP threshold does not prohibit additional connections to the treatment plant. The existing rule at N.J.A.C. 7:14A-22.17 requires the permittee or municipality to impose a sewer connection ban when inadequate conveyance capacity exists or there are recurring NJPDES violations of effluent limits. Neither the rule as proposed nor as modified on adoption alter this requirement. The CAP threshold, whether at 80 percent or 95 percent, is a trigger to initiate a CAP; it does not change the amount of flow that the treatment plant is allowed to discharge. Similarly, the hydraulic flexibility discussed above that allows a treatment plant to accommodate wet weather events or seasonal fluctuations in flow does not necessarily mean that a treatment plant is able to treat more sewage from new connections. Long-term planning for the sewer service area is accomplished through the WQMP process. In the nearer term, the CAP rules require assessment of alternatives, as well as the development of appropriate capital improvement plans, schedules for implementation, and the identification of financing mechanisms, to address potential issues associated with inadequate conveyance or treatment capacity.

One of the purposes of the amendments to the rules, as the Department stated in the notice of proposal Social Impact statement (47 N.J.R. at 2586), is to help ensure the timely development of any necessary operational or capital improvements to the system and avoid the need to deny new treatment works approvals that would increase flows into potentially compromised systems that could discharge untreated sewage or violate NJPDES permit limits and potentially negatively impact public health or the environment. Among the requirements of a CAP analysis as set forth at adopted N.J.A.C. 7:14A-22.16(c)2 is an evaluation of alternative

measures that would maximize conveyance and treatment of existing flows, reduce existing flows below permitted flow at the treatment plant, and ensure adequate conveyance capacity, and/or increase the capacity of the treatment works. The minimum requirements for this evaluation include (among other things) a review of current and proposed water conservation measures to reduce flow. These CAP program rules are, therefore, intended to further protect the environment and conserve resources, not hinder conservation efforts.

## 2. Comments Received During Comment Period on the Proposal, Not Giving Rise to the Notice of Substantial Changes on Adoption of Proposed Amendments

The Department received comments during the initial 60-day comment period following the publication of the original rule proposal that did not give rise to the notice of proposed substantial changes on adoption of proposed amendments. Comments were received from:

- 1. Janice Cooper
- 2. James Cosgrove, PE, Vice President/Principal, Kleinfelder, on behalf of: Ronald Anastasio, PE, Executive Director, Somerset Raritan Valley Sewerage Authority; John Kantorek, PE, Executive Director, Stony Brook Regional Sewerage Authority; Christopher Manak, Superintendent, Madison-Chatham Joint Meeting; JoAnn Mondsini, Executive Director, Rockaway Valley Regional Sewerage Authority; and Donato Nieman, Township Administrator, Montgomery Township
- 3. Margaret Gallos, Association of Environmental Authorities
- 4. Robert Goodsell, Post Polak Goodsell & Strauchler
- 5. Toni Granato and Jeff Tittel, New Jersey Chapter, Sierra Club

- 6. Jerry Haimowitz, PE
- 7. Nancy Hedinger, President, League of Women Voters of New Jersey
- 8. Andrea Leshak, Hackensack Riverkeeper and NY/NJ Baykeeper; Deborah A. Mans, NY/NJ Baykeeper; and Captain Bill Sheehan, Hackensack Riverkeeper
- 9. Bill Simmons
- 10. Bill Wolfe

The comments received and the Department's responses are summarized below. The number(s) in parentheses after each comment identify the respective commenter(s) listed above. The number(s) in parentheses after each comment corresponds to the respective commenter(s) within this section. The comments are numbered sequentially to continue from section 1 above.

Capacity Assurance Program (CAP) - General

10. COMMENT: The existing rules governing the CAP, at N.J.A.C. 7:14A-22.16, require that whenever the committed flow reaches or exceeds 80 percent of the permitted capacity of a treatment works, the participating municipalities and/or sewerage authorities must submit to the Department a CAP to be implemented "in order to *prevent* an overloading of their facility or a violation of their NJPDES permit" (emphasis added). Under the proposed rule, the Department now states that the purpose of the CAP rule "is to establish a mechanism for ensuring that treatment works ... will *avoid* hydraulic overloads that could result in violation(s) of NJPDES permit discharge limits or unpermitted discharges" (emphasis added). Though a seemingly minor change, the Department's description of the program as establishing a mechanism for

avoiding hydraulic overloads rather than requiring specific actions to prevent overloading or violations of NJPDES permits is representative of the Department's proposal as a whole. That is, the Department is proposing amendments that transform the CAP from an active program requiring tangible actions on the part of wastewater treatment plant permittees in order to prevent NJPDES permit violations into a passive approach that imposes no requirements on permittees until the permittees may already be violating their NJPDES permits. (8)

RESPONSE: In the notice of proposal Summary, the Department characterized the purpose of

the CAP rule (both existing and amended) as establishing "a mechanism for ensuring that treatment works ... will avoid hydraulic overloads that could result in violation(s) of NJPDES permit discharge limits or unpermitted discharges." (See 47 N.J.R. at 2583.) Both the existing and adopted rules require a capacity analysis be conducted when the flow at the treatment plant reaches the CAP threshold. The adopted rules do not allow the permittee to remain passive. On the contrary, the adopted rules require the permittee to commit to implementing specific measures, as analyzed in the capacity analysis report, in order to prevent overload of the facilities.

The Department anticipates that the adopted rule will improve the program by providing more rigorous requirements for permittees when the reported flows to the treatment plant reach 95 percent of the permitted flow. Under the adopted rule, the permittee must conduct a more rigorous analysis than under the existing rules, and must actually implement measures; therefore, the Department anticipates that the adopted rules will better help avoid hydraulic overloads of the treatment works and avoid NJPDES violations. The adopted amendments to the CAP rule enhance the effectiveness of the CAP with respect to the roles and responsibilities of the various

entities involved in addressing potential capacity shortfalls and the information gathered and evaluated as part of the capacity analysis. Under the adopted rule, the capacity analysis is more extensive, requiring the assessment of the treatment works (treatment plant and conveyance system); evaluation of alternatives that would maximize conveyance and treatment of existing flows, reduce existing flows, and/or increase the capacity of the treatment works; identification of the alternative(s) that will be implemented; establishment of an implementation schedule; and identification of the financing mechanism(s) for the selected alternative(s). The capacity analysis report must assess dry weather treatment capacity at the plant, wet weather treatment capacity at the plant, sources and extent of inflow and infiltration; the amount of flow for TWAs that have been issued but are not yet in operation and those projected flows anticipated to accommodate growth over the next 20 years; current operation and maintenance practices to maximize conveyance and treatment; planned improvements to the treatment works; pending applications to NJPDES or TWA related to capacity and compliance status. However, the adopted rules allow the permittee to select alternatives for implementation that may not include all of those assessed. The permittee is also required to certify that the selected alternative will be implemented on the schedule submitted.

The existing rules do not require a schedule for implementation of measures, description of how those measures might be financed, or certification ensuring their implementation. These new requirements are designed to ensure that the permittees consider available alternatives and commit to implement selected measures needed to ensure adequate conveyance and treatment capacity and avoid violations of permit limits on a predetermined schedule.

See the Response to Comments 1 through 9 above for a discussion of the correlation

among surface water treatment plants' NJPDES permit violations and the percentage of existing flow as a percentage of permitted flow over various time periods. See the response to those same comments for a discussion of violation of flow as a permit limit being independent of the CAP threshold.

11. COMMENT: The proposed amendments would require a capacity analysis report, rather than the existing CAP, and eliminate several requirements imposed under the existing rules. Notably changed is that important corrective measures imposed under the previous CAP, such as water conservation measures and reduction of inflow and infiltration (I/I), are no longer explicit requirements, and are merely identified as potential alternative measures that must be considered. (8)

RESPONSE: The adopted rules continue to implement tangible, substantive measures to reduce flow. The capacity analysis report, required under the adopted rule, includes and expands on measures identified in the existing CAP rule as identified above in the Response to Comment 10. The rule also requires an evaluation of alternative measures that would maximize conveyance and treatment of existing flows, reduce flows below permitted flow, and ensure adequate conveyance capacity and/or increase that capacity. This evaluation includes, at a minimum, current and proposed water conservation measures to reduce flow, strategies to reduce inflow, including disconnection of roof leaders, sump pumps and other sources of inflow, and redirect the inflow to storm sewers to the extent feasible; strategies to maximize current conveyance and treatment capacity, including operation and maintenance practices or increases in permitted flow to the treatment plant; and capital improvements to expand existing conveyance or treatment;

identification of and justification for the measure(s) selected based on the evaluation of alternatives; and an implementation schedule. Although the adopted rule does not require that each of these specific measures be implemented, it does require that the permittee conduct a detailed assessment of the conditions identified in existing N.J.A.C. 7:14A-22.16(b)1, which are listed among the conditions at adopted N.J.A.C. 7:14A-22.16(c)1, and that the permittee select one or more alternative measures to maximize conveyance and treatment of existing flows, reduce existing flows below permitted flow and ensure adequate conveyance capacity, and/or increase the capacity of the treatment works. Once the permittee selects alternative measures, it must commit to implementing those that it selects.

The adopted rule also requires the permittee to describe how the alternatives will be financed, and expands on current public notification requirements by requiring the owner/operator of the treatment or conveyance system to make a copy of the capacity analysis report available to the public on their website and offices. These new requirements are all intended to improve awareness of the current status of the treatment works and the selected measures and finances necessary to avoid overloads or potential NJPDES violations.

See the Response to Comment 23 for a discussion of water conservation.

12. COMMENT: The Department appears to disregard the time it will take for a permittee to conduct a capacity analysis, submit a capacity analysis report, and then actually implement corrective measures. The Department's failure to consider the time delay between when a treatment plant reaches or exceeds its permitted capacity is unreasonable, especially considering the Department has proposed extending the deadline for permittees to submit a capacity analysis

report from 45 days to 180 days. Under the proposed rule, a treatment plant could be found to be exceeding permitted flow based on a 12-consecutive-month average, then given an additional period of six months before it even submits a capacity analysis report, let alone implement corrective measures. This extension of the report submission deadline, on top of the weakening of the threshold, could lead to even more NJPDES permit violations. (2, 7, 8, and 9) RESPONSE: The adopted rule establishes a CAP threshold of 95 percent, as discussed in the Response to Comments 1 through 9. This threshold provides a buffer between permitted flow and the time the CAP is triggered. The Department anticipates that this will allow sufficient time for a permittee to prepare and submit a capacity analysis report, and implement corrective measures. The extension of time to submit the report (from 45 to 180 days following triggering the CAP) reflects the increased complexity of the capacity analysis that the adopted rule requires, as well as the submittal and certification of the implementation schedule for the measures that will be undertaken to address potential flow overload, and the requirement to identify the means by which the measures will be financed. (See 47 N.J.R. at 2583.) As stated in the Response to Comments 1 through 9, depending on its service area, a treatment plant may operate for years before it moves even a few percentage points toward the permitted flow. While average annual flows generally do not increase significantly from year to year, the permittee should monitor annual average flow to estimate, anticipate increases over time, and be proactive to ensure that there is adequate capacity for growth in the service area.

See the Response to Comments 1 through 9 for a discussion of the correlation among surface water treatment plants' NJPDES permit violations and the percentage of existing flow as a percentage of permitted flow over various time periods. See the response to those same

comments for a discussion of violation of flow as a permit limit being independent of the CAP threshold.

13. COMMENT: The proposed rule requires quarterly reports (WQM-007) to be submitted once the CAP is triggered. The rules should allow a permittee to submit a one-time report, rather than quarterly reports, where the permittee can demonstrate that the treatment plant will not exceed its capacity, even at build out. For example, if 90 percent of the permitted capacity is the threshold for a CAP and the capacity analysis shows that the present flow of the treatment plant is at 92 percent of the capacity, then the requirement to do a capacity analysis is triggered. If that analysis shows that at build out the treatment plant is at 98 percent of capacity, then a one-time report should be all that is required, since the permittee has demonstrated that the treatment plant will never reach its permitted capacity. This concept will result in even greater efficiency for the Department and have absolutely no adverse environmental impacts. (2) RESPONSE: The requirement to submit the WQM-007 form quarterly provides the Department with the ability to monitor existing and committed flows for a period of time, including flows unrelated to new development, such as I/I, as measured as part of buildout. The WQM-007 form is a single page indicating flows at the treatment plant. The benefit from the Department's receiving the form outweighs the minimal burden on the permittee in preparing and submitting the form. The adopted rule allows the permittee to request discontinuation of quarterly reporting when the permittee can demonstrate that flow, as reported on the DMRs is below the threshold for 36 consecutive months. As discussed in the notice of substantial changes on adoption of proposed amendments, 48 N.J.R. at 2196, the Department believes that it is appropriate to

continue to monitor the actual and committed flow of a treatment plant whose reported flow is at or above the threshold.

14. COMMENT: The Department proposes at N.J.A.C. 7:14A-22.16(d) to require the owner/operator of a conveyance system to perform a capacity analysis under certain circumstances. Under the proposed rules, owners/operators of conveyance systems that have excessive I/I, sanitary sewer overflows, or CSOs can be required to study capacity issues at the discretion of the Department based on non-cooperation with the treatment plant authority in conducting its capacity analysis. This requirement is appropriate, since wet-weather flows to treatment plants are greatly affected by conveyance systems that are often outside the permittee's control. (2 and 3)

RESPONSE: The Department acknowledges the commenters' support for the amendments.

15. COMMENT: Previously, a municipality and the sewer authority were both required to submit plans, but now only the sewage treatment plant will be responsible. This will undermine a municipality's authority to intervene and take action if there are issues with the plan. It also takes away the municipality's ability to submit a plan, and reduces the municipality's ability to deal with problems. Without proper planning, by only having sewerage authorities apply, municipalities can keep issuing construction permits without water conservation measures in place. (5)

RESPONSE: The original intent of the CAP program was for a municipality and the permittee to work together when preparing a CAP. The proposed amendments did not change this, but provided clarifying language that further defined the roles and responsibilities of the permittees, participating municipalities, and sewage authorities to ensure that the goals of the program are met. The adopted rule requires that the permittee, in coordination with participating municipalities and sewerage authorities, submit a capacity analysis report. The Department encourages a coordinated effort. The owner/operator of a conveyance system continues to be responsible for maintaining and operating the system in a compliant way, and the adopted amendments to the CAP rule do not undermine the municipality's authority to deal with problems or to require water conservation efforts. Adopted N.J.A.C. 7:14A-22.16(d) allows the Department to require a municipality, if it is the owner or operator of the conveyance system, to perform a capacity analysis and submit a capacity analysis report.

See the Response to Comments 1 through 9 and 48 N.J.R. at 2210 for a discussion of development and water conservation in the sewer service area.

*CAP Threshold – Reported Flow as a Percent of Permitted Flow* 

16. COMMENT: The Department has proposed at N.J.A.C. 7:14A-22.16(a) and 22.17(c) to change the threshold for requiring a capacity analysis. The existing rule triggers a CAP when committed flow reaches 80 percent of the permitted flow, whereas the proposed rule triggers a CAP when the average flow over 12 consecutive months reaches the permitted flow. Committed flow is the flow received at the treatment plant plus the projected flow from approved but not yet operational TWAs. Existing flow is only the flow received at the treatment plant. Thus, the

Department is eliminating projected flow from approved but not yet operational TWAs from the determination of when a treatment plant reaches or exceeds permitted flow. Although the Department claims that approved but not yet operational projects that have received TWAs represent a relatively small portion of committed flow, it still remains that by eliminating this projected flow, permittees will essentially ignore additional flow that could push permitted flow above permitted flow in the near future.

Although the Department desires to have the capacity assurance threshold be based on actual flow rather than committed flow, using actual data from monthly discharge reports will simplify the process of determining how close a facility is to its permitted flow. This is a smart simplification that will reduce the implementation effort for both NJPDES permittees and the Department. However, such a change will only work if there is some buffer between the threshold and permitted flow of the plant. If a buffer is not included, the Department should maintain the current use of committed flow, rather than existing flow, so that permittees acknowledge projected flow in their determination of whether a treatment plant has reached or exceeded permitted flow. (2 and 8)

RESPONSE: See the Response to Comments 1 through 9 and 48 N.J.R. at 2199 for a discussion of actual flow as compared to committed flow, and the buffer that results from approved but not yet operational flow. The Department has determined that reports of committed flow are not always accurate, making them a less appropriate basis for the CAP threshold. Committed flow includes the sum of all flows anticipated from approved but non-operational connections to the treatment plant. When the connection is complete, Form WQM-005 is to be submitted to the

Department, at which time the Department identifies the connection as operational and no longer part of "anticipated from approved but non-operational connections." The flow from the connection is measured and reported on the treatment plant's monthly DMR. If the form WQM-005 is not submitted, as is often the case, the flow from the new connection is over counted; it is part of the flow reported on the DMR, and is also included on the flow anticipated from approved but non-operational connections. Depending on the number of connections that have not yet been reported to the Department, the treatment plants' committed flow could be inaccurately calculated to be much closer to permitted flow than what is shown on the DMRs plus what is approved but truly not yet connected. The remaining capacity at the plant is, therefore, underestimated.

## *CAP Threshold – Averaging Period*

17. COMMENT: The use of a 12-month rolling average instead of a three-month rolling average will allow summer low flows to hide serious spring I/I problems. It will postpone renewal and replacement decisions, which will only increase the liability for deferred maintenance. These high flow spring events often lead to flooded basements and separate storm water overflows. This rule change gives politicians the opportunity to decrease the quality of service to the public, so they can avoid spending money on renewal and replacement. (6)

RESPONSE: The Department acknowledges that a 12-month average smooths daily or monthly fluctuations in flow (48 N.J.R. at 2209). As discussed in the Response to Comments 1 through 9, a violation of a permit limit is independent of the CAP threshold. A treatment plant can

experience hydraulic overflows notwithstanding that its reported flows do not meet the CAP threshold. The argument that a permittee will disregard these overflows implies that a permittee will conduct no advance planning or analysis prior to reaching the CAP threshold, even if the treatment plant repeatedly exceeds its permitted flow, such as during seasonal wet weather. This ignores the requirements of the Water Quality Management Planning rules. (See CAP analysis compared to wastewater capacity analysis under the WQMP rules, 48 N.J.R. at 2210, and the Response to Comments 1 through 9) It also does not take into account adopted N.J.A.C. 7:14A-22.16(b), which allows the Department to require a CAP if permitted flow is exceeded as a result of wet weather events, or new N.J.A.C. 7:14A-22.16(d), which requires the owner or operator of a conveyance system to, within 180 days of notification by the Department, conduct a capacity analysis and submit a capacity analysis report when the Department finds circumstances exist that are likely to result in excessive flow that may cause NJPDES permit violations or contribute to the discharge of untreated sewage at a combined sewer overflow or through sanitary sewer overflows. The causes for the Department to require a CAP analysis and report include: existing flows approach the design capacity of the conveyance system; there is excessive I/I in the conveyance system; the conveyance system is connected to a combined sewer system or a plant that receives flow from municipalities that have such systems; there has been an unpermitted discharge from the treatment works; and the 12-consecutive-month average flow equals or exceeds 95 percent of the permitted flow at the receiving treatment plant, and a municipality or sewage authority has not cooperated with the permittee to conduct the capacity analysis as required under adopted N.J.A.C. 7:14A-22.16(a) when the threshold was met (47 N.J.R. at 2584). In addition, the permittee has the responsibility to properly operate and maintain its

treatment plant and be proactive in order to avoid overloads and violations of its NJPDES permit limits and conditions.

18. COMMENT: Those responsible for compliance with the regulations should be afforded the flexibility, based upon their site-specific conditions, to look back further if the prior 12-month period is not representative and if the obligation to maintain permit compliance, or compliance with contractual obligations, warrants. (2)

RESPONSE: The Department has determined that it is appropriate to amend the threshold so that the CAP is triggered when the most recent 12-month average flow reaches or exceeds 95 percent of the treatment plant's permitted flow. As stated in the notice of proposal, 48 N.J.R. at 2585, "Averaging flow over only three months may undermine the accuracy of the CAP rule threshold as a predictor of potential hydraulic overloads at the treatment plant because if those three months constitute a period of wet weather the flow will trend high, or, conversely, if rainfall or snowmelt is minimal during those three months the flow will trend low. The proposed 12-consecutive-month period over which reported flow will be averaged will provide a more accurate representation of the existing flow at the treatment plant and the potential impact of that flow on the treatment plant's capacity. The capacity analysis requirements need not always be triggered because of seasonal fluctuations and/or wet weather events since the resulting changes in flow can typically be accommodated through hydraulic flexibility within the treatment plant."

The adopted rule does not prohibit a permittee from looking back further than the previous 12-month period and/or performing a CAP, if it chooses to do so. However, the CAP threshold will continue to be based on the most recent 12 consecutive month average reported

flow. See also the discussion of long-term planning and the wastewater capacity analysis process under the WQMP rules at N.J.A.C. 7:15 in the Response to Comments 1 through 9, and 48 N.J.R. at 2210.

Flow, Wet Weather Events, I/I

19. COMMENT: Proposed N.J.A.C. 7:14A-22.16(b) allows the Department to require a permittee at which NJPDES permitted flow is occasionally exceeded during wet weather events to conduct a capacity analysis and submit a report. What does the Department mean by "occasionally"? If applied liberally, "occasionally" could allow the Department to impose the CAP requirements more frequently than it does under the existing 80 percent three-month consecutive average threshold. A preferable threshold would be along the lines of "... at which the NJPDES permitted flow is regularly (or routinely) exceeded during wet weather events ...."

RESPONSE: The use of "occasionally" in adopted N.J.A.C. 7:14A-22.16(b) is consistent with the use of "occasionally" in existing N.J.A.C. 7:14A-22.16(b). The existing rule allows the Department to consider a TWA for additional flow for a treatment plant that is subject to excessive I/I to the extent that its NJPDES permit limits for flow are "occasionally exceeded during wet months." The existing rule requires the permittee to submit the same information as is required when the CAP is triggered, plus the treatment plant must be able to treat flows in excess of its permitted capacity and still maintain compliance with the pollutant limits in its NJPDES permit. The adopted rule allows the Department to require the new, more extensive

capacity analysis when a treatment plant's NJPDES permitted flow is "occasionally exceeded during wet weather events."

The Department will use its discretion in requiring a CAP from a permittee based on a treatment plant's history and the Department's stated purpose of the CAP provision, which is to ensure that hydraulic overloads in the treatment works that could result in unpermitted discharges or violations of NJPDES permit limits are avoided. Conditions under which a permittee will be required to conduct a capacity analysis and submit a report will be case-specific and based on factors, such as if wet weather results in unpermitted discharges, how frequently wet weather events cause the NJPDES permitted flow to be exceeded, and whether there are any permit violations associated with the occurrence(s).

20. COMMENT: Proposed amendments to the rule will allow treatment works to avoid capacity reviews because the proposed rule does not account for I/I, leaky pipes, or combined sewer overflows (CSOs). This rule violates anti-backsliding conditions under the Clean Water Act and undermines total maximum daily loads (TMDLs), which are clean-up plans for many of the State's rivers. The proposed rule also violates EPA rules. In addition, many plants are oversized to begin with and built without anti-degradation criteria. Now they can have additional flows, which violate water quality standards because the rule is based on average flow, not direct discharge. Many of the streams that experience discharge never had a proper anti-degradation analysis. (5 and 7)

RESPONSE: The comment implies that the adopted rule will allow additional connections to a treatment plant that would have been precluded under the existing rule. Under both the existing and adopted N.J.A.C. 7:14A-22.17, a permittee or municipality shall impose a sewer connection ban when inadequate conveyance capacity exists or there are recurring NJPDES violations of effluent limits. In addition, the adopted rules do not change any NJPDES permit limits or conditions. The CAP threshold, whether at 80 percent or 95 percent, is a trigger to initiate a CAP; it does not change the amount of flow that the treatment plant is allowed to discharge. The responsibility to meet the NJPDES permit discharge limits and to ensure that there is adequate capacity prior to allowing additional connections continues to reside with the permittees, authorities, or municipalities. In addition, adopted N.J.A.C. 7:14A-22.16(d) requires the owner/operator of a conveyance system to submit a capacity analysis report, when notification has been sent from the Department requiring such action, to address problems related to excessive I/I or combined sewer systems.

The adopted rule does not violate anti-backsliding requirements. Generally, the anti-backsliding regulations prohibit the reissuance of NJPDES permits containing effluent limitations or conditions less stringent than the final limits contained in the previous permit. The adopted amendments will not result in less stringent limits. A TMDL is the sum of individual wasteload allocations for point sources, load allocations for nonpoint sources of pollution, other sources such as tributaries or adjacent segments, and allocations to a reserve capacity or margin of safety for an identified pollutant. TMDLs are developed to address water quality impairments. As stated above, the adopted amendments do not change existing NJPDES

discharge limits or conditions, nor do they revise any water quality standard or permit limit, or impact or revise any point source allocations adopted under an approved TMDL.

The CAP rule does not require monitoring of surface water impacts or set treatment standards for meeting discharge limits. Rather, the CAP rule establishes a mechanism for ensuring that a treatment works, which includes both the treatment plant and the associated conveyance system(s) (not the receiving waterbody), will avoid hydraulic overloads that could result in violation(s) of NJPDES permit discharge limits or unpermitted discharges. An anti-degradation analysis is required for new or expanded discharges to surface water in accordance with the NJPDES and SWQS rules. The CAP rule does not address new or expanded discharges, rather it provides an appropriate mechanism for examining existing treatment works conditions to ensure compliance with an existing permit and effluent limitations.

21. COMMENT: Flow itself is a permit limit, so if a facility violates flow, that is a violation.

The proposed rules are creating the scenario that will result in increasing flow violations. (10)

RESPONSE: Flow is an NJPDES permit limit for the six municipal wastewater permits that discharge to ground water, and for five municipal treatment plants that discharge to surface water. In a permit where flow is limited, the Department assesses a penalty when a treatment plant's flow, as reported in its DMR, exceeds the permit limit. See CAP Threshold – Flow as a Permit Condition in the Response to Comments 1 through 9 and 48 N.J.R. at 2209 for a discussion of the adopted CAP threshold with respect to facilities that have flow as a permit condition.

## Miscellaneous Comments

22. COMMENT: The analysis referenced in the notice of proposal did not mention what the environmental benefits of the CAP have been over time, how many CAPs were submitted, what the CAPs required, and the results of the Department's review of the CAPs. The Department is looking at a statistical analysis ostensibly designed to demonstrate that the threshold can be increased, whereas there is no benefit analysis shown on the other end of the ledger as to what the program has accomplished over time and what the State is losing by going from the 80 percent to permitted flow. (10)

RESPONSE: The CAP rule was designed to be a proactive tool to assist the permittee in understanding and evaluating potential capacity issues before any NJPDES violations might occur. However, the majority of submitted plans did not include detailed assessments or schedules for implementation of any proposed actions.

As discussed in the Response to Comments 1 through 9 and at 48 N.J.R. at 2208, the Department found a low correlation between flow and permit violations (BOD<sub>5</sub>, CBOD<sub>5</sub>, and TSS). Thus, an increase in flow as reported on DMRs relative to permitted flow is unlikely to result in additional NJPDES violations for the parameters assessed. Accordingly, changing the threshold from committed flow at 80 percent of permitted flow to reported flow of 95 percent of permitted flow is unlikely to have an environmental impact from increased violations.

The Department estimates that over the past 20 years it has received approximately 33 plans under the existing CAP rules. As shown in Table 1 in the Response to Comments 1 through 9, the number of plans submitted is substantially lower than the number of treatment plants that have reached the existing CAP threshold, and should have submitted a capacity

analysis. The Department expects a higher level of compliance with the adopted rules than it experienced with the existing rules, since it will be easier for the Department and the permittee to determine when the threshold is triggered (based on reported flow instead of committed flow), and since the adopted rules require that a specific alternative(s) be selected, and that a schedule and certification be submitted. (See also the Response to Comment 49.) The adopted rules also require a more specific and rigorous assessment of alternatives, as well as the development of appropriate capital improvement plans, schedules for implementation, and the identification of financing mechanisms to address potential issues associated with inadequate conveyance or treatment capacity, and certification to ensure its implementation. As stated in the notice of proposal Environmental Impact statement (47 N.J.R. at 1586), the Department anticipates that the adopted amendments will add to the positive environmental impact that the existing CAP requirements have provided.

For longer-term planning purposes, and to ensure adequate regulatory oversight at both the planning and permitting stages, the Department will continue to rely on the WQMP rules. See CAP Analysis Compared to Wastewater Capacity Analysis under the WQMP Rules in the Response to Comments 1 through 9 and 48 N.J.R. at 2210 for a discussion of the comparative foci of the CAP analysis and the wastewater capacity analysis.

23. COMMENT: The purpose of the CAP program is to protect water quality. A CAP is not just some concept of planning. It includes assessing alternatives for flow reduction, such as water conservation measures. Water conservation, like energy conservation, is the most cost effective and environmentally sound way to manage a resource. Water conservation measures

are being ignored by the Department, and not only ignored but actually rolled back. That is poor public policy and is a reversal of what the Department has been trying to do for over 30 years. The State is also losing a tool known as a sewer connection ban, which prevents developers from constructing new sewer generating structures when there is not enough waste water capacity. A sewer ban forces the owner/operator of the treatment plant to get something done on the ground in terms of improving waste water management. Taking the sewer ban tool off the table creates a huge loss of leverage by the Department and gives a green light to developers and local sewer authorities to do things that are reckless that will, in the long run, either pollute local water bodies that are receiving that wastewater or will create unrealistic development expectations as to whether or not you can build compatibly with the environmental constraints. (5) RESPONSE: The Department continues to support water conservation as a viable means to reduce wastewater flows and conserve valuable drinking water supplies. Although the Department did delete the requirement at existing N.J.A.C. 7:14A-22.16(a)1 that the permittee must implement water conservation measures, the Department still requires a review of current and proposed water conservation measures to reduce flow along with other options when it evaluates alternative measures. Adopted N.J.A.C. 7:14A-22.16(c)2 identifies current and proposed water conservation measures to reduce flow among the alternative measures that a permittee must assess as part of the capacity analysis. Once the permittee identifies and justifies alternative measures, it must select and implement measures based on an evaluation of the alternatives (N.J.A.C. 7:14A-22.16(c)3 and 4). The Department believes that the amended rule goes further than the existing rule in that it requires an evaluation of alternative measures to maximize conveyance and treatment of existing flows, reduce existing flows below permitted

flow at the treatment plant, ensure adequate conveyance capacity, and/or increase the capacity of the treatment works. Although not part of the Department's rules, water conservation efforts are further enhanced by local plumbing codes that require water conservation, and modern appliances and fixtures that are designed to be water efficient.

The sewer connection ban at N.J.A.C. 7:14A-22.17 remains an available tool. With the exception of the amendment to identify the CAP threshold at N.J.A.C. 7:14A-22.17(c), N.J.A.C. 7:14A-22.17, Sewer ban imposition, is unchanged from the existing rule. Moreover, under adopted N.J.A.C. 7:14A-22.16(e)1iv, when the Department approves a permittee's CAP, the permittee or the owner or operator of the conveyance system must give public notice that includes a statement that a sewer connection ban may be imposed, or that the Department may cease to issue TWAs for projects that convey flow to the treatment plant.

See the Response to Comments 1 through 9 and 48 N.J.R. at 2210 for a discussion of development and water conservation in the sewer service area.

24. COMMENT: The proposed change to the CAP threshold will result in no environmental review or planning, more sewer service areas, and more pollution. The Department is allowing more expansion in sewer service areas in the WQMP rule and getting around the Water Quality Planning Act, while weakening the CAP rule to allow more sewer plant discharges. The process for review is now backwards and will allow plants to discharge first and plan second. In addition, in the new WQMP rule there will no longer be Department oversight or evaluation of environmental impacts like water supply, sprawl, and storm water discharge. (5)

25. COMMENT: The proposed WQMP rule is a little different from the existing CAP rule. When a treatment plant reaches 80 percent of its flow capacity, the county or other water management planning agency must, again, only coordinate with the Department and treatment plant to determine if there will be a capacity deficiency. Coordination is not a capacity plan. (9) RESPONSE TO COMMENTS 24 AND 25: The capacity analyses in the WQMP rules at N.J.A.C. 7:15-4.5 and in the CAP program at N.J.A.C. 7:14A-22.16 are intended to be complementary approaches that work together to prevent degradation of water quality. The respective thresholds ensure that necessary wastewater treatment planning for an area begins early enough in the process to avoid capacity issues and involves the wastewater management planning agency, in addition to the permittee. As discussed in the Response to Comments 1 through 9 and 48 N.J.R. at 2210 (CAP Analysis Compared to Wastewater Capacity Analysis under the WQMP Rules) and the notice of proposal Summary at 47 N.J.R. at 2585, the purpose of the wastewater capacity analysis under the WOMP rules differs from the CAP analysis. The wastewater treatment capacity analysis is intended to identify potential shortfalls between the anticipated demand for flow from existing and future development in the sewer service area of a treatment plant, and the permitted flow of the plant. It is premised on a longer-term look at the circumstances of the treatment plant and the effects of development in the sewer service area. Water quality management planning takes place much earlier than a capacity analysis under the adopted CAP rules. The WQMP wastewater capacity analysis considers what will be needed in the future. The CAP analysis considers what is needed in the near term to ensure proper operation and to avoid potential violations resulting from exceedances in permitted flow.

The WOMP rule was developed, in part, to avoid having wastewater flow to a treatment plant exceed its capacity to treat it. N.J.A.C. 7:15-4.5(b)1 through 3 outline the requirements for a wastewater management planning agency to calculate the future buildout for wastewater flow from developed and under/undeveloped parcels within the sewer service area. This analysis serves to demonstrate the full potential for wastewater flow if every parcel within the sewer service area were built upon, based on the current zoning, and allows a planning agency to determine early on how close a treatment plant may be to reaching its capacity. N.J.A.C. 7:15-4.5(b)4 requires the wastewater management planning agency to evaluate strategies to address any potential gap in treatment capacity in the event the buildout analysis shows that the projected future flow to the treatment plant exceeds its permitted capacity. A third protection, N.J.A.C. 7:15-4.5(b)5, requires a wastewater management planning agency to coordinate with the Department and the entity responsible for the wastewater treatment plant when the existing flow exceeds 80 percent of that treatment plant's permitted flow. Again, the goal is to start planning when the potential for exceeding the permitted flow is a possibility. The WOMP rules provide for planning with respect to determining which areas are best suited for sewers. As part of the review, the Department conducts an environmental review to determine what environmentally sensitive areas are present. These include areas mapped as threatened or endangered species, Natural Heritage Priority Sites, Category One waters, and wetlands. There is also a review to determine if the project is in a coastal planning area or has 201 Federal Plan grant limitations that prohibit the extensions of sewers into the area.

The adopted CAP rule will not lead to increased pollution. The adopted amendments do not change NJPDES permit discharge limits or conditions. The CAP rule is intended to ensure

permittees continue to meet permit requirements as flows to the facility approach design flow or design loading limits. If a permittee violates the conditions of its permit, it is subject to penalty. It may also be subject to a CAP, even if the reported flow at the treatment plant has not reached the CAP threshold. The responsibility to meet regulatory requirements, including ensuring that NJPDES permit discharge limits and conditions are met at all times, and to adequately address future development and capacity needs, continues to lie with the permittee and local agencies/officials. The permittee should be proactive and implement measures when they are appropriate and necessary to ensure adequate treatment capacity, and avoid permit violations.

See the Response to Comments 1 through 9 and 48 N.J.R. at 2210 for a discussion of development in sewer service areas as a result of the adopted CAP threshold, and a comparison of the CAP analysis under the NJPDES rules and the wastewater capacity analysis under the WQMP rules (48 N.J.R. at 2210).

26. COMMENT: Under the proposed WQMP rules, there is no planning or environmental review. The sewer plants are really looking to the NJPDES program for planning and review. However, by setting the CAP threshold at 100 percent of permitted flow, there will not be planning or review under the CAP rules, either. (5)

RESPONSE: To the extent this comment relates to amendments to the WQMP rules (47 N.J.R. 2531(a)), it is beyond the scope of this rulemaking. The Department published the adoption of amendments to the WQMP rules on November 7, 2016 (48 N.J.R. 2244(a)). For a discussion of the adopted CAP threshold, see the Response to Comments 1 through 9 and the notice of substantial changes on adoption of proposed amendments, 48 N.J.R. 2196(a). For a discussion

of the interplay between the WQMP rules and the CAP rule, see the Response to Comments 1 through 9, and the Response to Comments 24 and 25.

## 3. Comments Received on Notice of Proposed Substantial Changes on Adoption of Proposed Amendments

The Department received comments during the 60-day comment period following the publication of the notice of proposed substantial changes on adoption of proposed amendments. Comments were received from:

- James Cosgrove, PE, Vice President/Principal, Kleinfelder, on behalf of:
   Ronald Anastasio, PE, Executive Director, Somerset Raritan Valley Sewerage Authority;
   John Kantorek, PE, Executive Director, Stony Brook Regional Sewerage Authority;
   Christopher Manak, Superintendent, Madison-Chatham Joint Meeting; JoAnn Mondsini,
   Executive Director, Rockaway Valley Regional Sewerage Authority; and Donato
   Nieman, Township Administrator, Montgomery Township
- 2. Toni Granato and Jeff Tittel, New Jersey Chapter, Sierra Club
- 3. Zachary Lees, Clean Ocean Action
- 4. Swarna Muthukrishnan, Clean Ocean Action
- 5. Dennis Palmer, Landis Sewerage Authority
- 6. Jean Publiee
- 7. Mike Russell
- 8. Jamie Zaccaria, New Jersey Chapter, Sierra Club

The comments received and the Department's responses are summarized below. The number(s) in parentheses after each comment identify the respective commenter(s) listed above. The number(s) in parentheses after each comment corresponds to the respective commenter(s) within this section. The comments are numbered sequentially to continue from sections 1 and 2 above.

Capacity Assurance Program (CAP) - General

27. COMMENT: The adopted CAP threshold of 95 percent is acceptable. (1)

28. COMMENT: The adopted CAP threshold is appropriately based on a 12-month average. (5) RESPONSE TO COMMENTS 27 AND 28: The Department acknowledges the commenters' support for the adopted CAP threshold.

*CAP Threshold – Reported Flow as a Percent of Permitted Flow* 

29. COMMENT: The return to average or above average rainfall, increased economic activity resulting in more building permits in sewer service areas, and the potential need for additional affordable housing units will affect treatment plant capacity in the near term. Reducing the CAP threshold from 100 percent of permitted capacity to 95 percent is good; however, prudent planning would be an earlier CAP threshold of 90 percent. (5)

30. COMMENT: A 95 percent threshold will provide a circuit breaker in a way to address flows, growth, committed versus actual flows, and the necessary upgrades or other improvements to handle the buildout. Even so, a threshold of 95 percent may not allow time for a plan to be prepared and reviewed. Counties are the lead agencies, and they can delegate to municipalities, but the treatment authority is the driver for the capacity analyses. The treatment

authority has no planning authority. A threshold of 95 percent may not allow enough time for a plan to work its way through the county and/or municipality before the flow at a facility reaches permitted flow. The regulated community has seen numerous changes in the focus of the CAP program, resulting in significant delays. Does a 95 percent threshold provide enough time? No. The Department should adopt a 90 percent threshold. (5)

RESPONSE TO COMMENTS 29 AND 30: For a discussion of the interplay between CAP analysis and wastewater capacity analysis under the WQMP rules for planning purposes, please see the Response to Comments 1 through 9 (48 N.J.R. at 2210), and the Response to Comments 24 and 25. Please see the Response to Comments 1 through 9 regarding the adopted CAP threshold and the buffer that the adopted threshold provides before reported flow at a treatment plant reaches permitted flow.

31. COMMENT: It takes time to perform the capacity analysis, prepare and submit a capacity analysis report, and perform I/I remediation work and other actions to address capacity issues. There is also an additional concern about timing where WQMP amendments are required. Waiting until a plant reaches 95 percent of capacity before planning for and implementing these actions provides zero margin for error or inaction, and in reality, would be too late for a facility to address capacity issues. There are more than 80 facilities that are five million gallons per day or smaller and that are less able to handle higher flows as they approach design capacity. (3, 4, and 5)

RESPONSE: The Department acknowledges that it can take several years to plan, conduct the necessary studies, design, finance, and build sanitary sewer system improvements. The WQMP

rule, as adopted in November 2016, requires that a wastewater treatment plant and the wastewater management planning agency assess treatment plant capacity necessary to satisfy anticipated long-term flow needs when the highest 12-month average flow over a five-year period reaches 80 percent of the permitted flow. When an assessment is required, the wastewater management planning entity shall coordinate with the Department and the permittee to determine if the remaining projected growth will result in a capacity deficit. And if the potential for a capacity deficit exists, the wastewater management planning agency is required to analyze effective strategies to address the deficiency. This planning process is expected to provide adequate time for the permittee and local officials to plan for future capacity needs of the sewer service area well ahead of the time of anticipated connections for new developments.

The adopted CAP rule requires a detailed assessment and selection of alternatives when the reported flow reaches 95 percent of permitted flow and is intended to avoid potential issues associated with existing infrastructure limitations and increasing flows, in the near term. The rule does not preclude the detailed assessment of treatment works capacity at any time prior to the 95 percent threshold. The ability to accommodate additional flows is system specific. For example, treatment plants, independent of total capacity, may employ multiple treatment trains or have the ability to equalize flow in order to meet permit limits. Regardless of treatment plant size/capacity, the responsibility to meet regulatory requirements, including ensuring that NJPDES permit discharge limits are met at all times, and to adequately address future development and capacity needs continues to lie with the permittee and local agencies/officials. All permittees should be proactive and implement measures when it is appropriate and necessary to ensure adequate treatment capacity. NJDEP acknowledges that, while all systems need to

ensure adequate capacity, smaller treatment systems may have a may have an increased awareness of the timing and extent of potential growth and increased flows due to their smaller service area. If expansion of the treatment plant is anticipated to be necessary, the permittee should contact the Department as early as possible to determine necessary steps, including studies and permits. See also the Response to Comments 1 through 9.

32. COMMENT: Neither the notice of proposal nor the notice of substantial changes on adoption justifies or provides evidence supporting an increase of the CAP to 95 percent or 100 percent. No evidence, peer reviewed study, or data analysis was provided to support increasing CAP threshold. While the correlation between violations and flow may be statistically insignificant, the Department has not presented data that analyze flow rates in relation to specific violations or exceedances, as each one impacts the water in which it is discharged differently. (3 and 4) 33. COMMENT: It is not clear what prompted the Department to amend the CAP threshold from the 80 percent threshold to 100 percent and then to 95 percent. (4) RESPONSE TO COMMENTS 32 AND 33: The Department provided the data and analyses on which it is basing the adopted rules as part of its notice of substantial changes on adoption. See 48 N.J.R. 2196(a) and the Response to Comments 1 through 9 for more detail about the Department's analysis.

The WQMP and CAP proposals established thresholds of 80 percent and 100 percent, respectively. The WQMP rule has since been adopted (see 48 N.J.R. 2244(a), November 7, 2016). However, the Department determined that it is appropriate to amend the CAP rule on adoption to provide a CAP threshold to 95 percent of permitted flow. The Department discussed

the modification on adoption in the notice of proposed substantial changes on adoption of proposed amendments published November 7, 2016, at 48 N.J.R. 2196(a), and in the Response to Comments 1 through 9. Since these two programs have different objectives that are meant to work in coordination with each other, it was determined that different thresholds were appropriate. Please also see the Response to Comments 1 through 9 for a discussion of the relationship between the two programs.

*CAP Threshold – Averaging Period* 

34. COMMENT: The CAP threshold should be based on a three-month average flow, and be set at 80 percent of permitted flow. (2, 3, 4, and 8)

RESPONSE: See the Response to Comments 1 through 9 and 48 N.J.R. at 2196(a) for a discussion of the adopted CAP threshold.

35. COMMENT: By changing the averaging period for the CAP threshold from three months to one year, the amendments will significantly reduce the number of facilities that must submit a CAP and would allow for more connections to treatment plants, resulting in more pollution. With yearly averages, the permit can be violated many times without any consequences to address the pollution. Plants could even be discharging 2.5 times permitted flow. (2 and 8) RESPONSE: As discussed in the response to prior comments, the adopted rules do not allow violations of permit conditions without consequences. Not only are violations subject to penalties, but also, the adopted rules allow the Department to require a CAP under circumstances other than average flow meeting the adopted CAP threshold. See the Response to Comments 1

through 9 for a discussion of the number of facilities that must submit the CAP, the effect of the averaging period, and flow as a permit condition. See also the Response to Comment 17 for a discussion of the adopted averaging period. As discussed in the Response to Comments 1 through 9, the Department does not anticipate that there will be increased development or a reduction in water conservation efforts as a result of the adopted amendments.

Flow, Wet Weather Events, I/I

36. COMMENT: Neither the notice of proposal nor the notice of substantial changes on adoption considers the size and capacity of the different systems. The proposed rule is a blanket regulation for all facilities in New Jersey. However, the wet weather related exceedances and water quality related problems described above disproportionately impact the ability of smaller, and older, systems to handle these rain events. Incidentally, the rule proposal does not differentiate between types and sizes of treatment plants, which is a dangerous and improper oversight when considering the many different sizes, ages, and types of treatment methods of the facilities in New Jersey, and how each one can handle flows above their permit and design capacity. The rules must take into account smaller, more rural plants, which would have a much different capital improvement and capacity approach than a larger more urban plant. The CAP proposal did not consider the different methods of treatment processes. One size fits all planning requirement is ineffective. (3 and 4)

RESPONSE: The Department acknowledges that the age and size of a treatment plant and rate of growth within the service area may play a role in the treatment plant's ability to adequately treat hydraulic fluctuations within its conveyance and treatment system. Each of those factors (age

and size of a treatment plant, and rate of growth within a service area) will affect when a treatment plant may be required to conduct a capacity analysis and submit a report. As the commenters state, a smaller or older treatment plant may be more affected by wet weather events than a larger or newer plant. If the frequency of the violations as a result of wet weather is sufficient to cause the Department to require the permittee to submit a capacity analysis report under N.J.A.C. 7:14A-22.16(b), then the permittee will need to address capacity sooner, rather than later. However, that is the very point of the CAP rule; it is a mechanism for ensuring that treatment works will avoid hydraulic overloads that could result in violations of NJPDES permit discharge limits or unpermitted discharges, and is unique to each treatment plant. If a treatment plant (whether it is older, smaller, or in a growing sewer service area) is subject to repeated violations, it must implement measures to come into and maintain compliance. This may include imposition of a sewer ban under N.J.A.C. 7:14A-22.17.

37. COMMENT: The CAP threshold, even at 95 percent, would create a risk of more frequent wet weather related violations, exceedances, and I/I problems. A 12-month average smooths and masks seasonal peaks and storm event flows, allowing more of the issues that come as a result of these events. (3 and 4)

RESPONSE: See the Response to Comment 17 for a discussion of the effect of a 12-month average and the need for long-term capacity planning.

38. COMMENT: An I/I reduction program is necessary for facilities to ensure that wet weather flows do not proportionally increase as infrastructure ages. To this end, any facility granted

relief from planning, designing, and constructing additional treatment works should provide proof of an adequate, ongoing I/I reduction program. (1)

RESPONSE: The reduction of infiltration and inflow are strategies that the Department requires be considered when flows through the conveyance system to the treatment plant reach the CAP threshold, or when flows cause sanitary sewer overflows. (N.J.A.C. 7:14A-22.16(c)2.) The Department will continue to monitor flows (as reported on the WQM-007 form) for treatment plants that reach or exceed 95 percent of permitted flow, until the treatment plant requests and qualifies for relief from the quarterly reporting requirements by reducing reported flow to below the CAP threshold for a period of 36 consecutive months.

In addition, adopted N.J.A.C. 7:14A-22.16(b) authorizes the Department to require a permittee to submit a capacity analysis and report if NJPDES permitted flow at the treatment plant is occasionally exceeded during wet weather events. See the Response to Comment 19 for further discussion of wet weather.

39. COMMENT: Flow is an enforceable permit condition and the Department must enforce exceedances of NJPDES permitted flows. Flow rates are an enforceable component of the NJPDES permit, and are red flags for potential exceedances of permit parameters and the need for anti-degradation review of receiving waters. (3 and 4)

RESPONSE: See CAP Threshold – Flow as a Permit Condition in the Response to Comments 1 through 9 and 48 N.J.R. at 2209 for a discussion of the adopted CAP threshold with respect to facilities that have flow as a permit condition.

40. COMMENT: The definition of flow has changed and would allow flows to be reduced and avoid the CAP threshold. (2 and 8)

RESPONSE: The Department has not amended the definition of flow. Rather, it has changed a component for calculating whether a facility has reached the CAP threshold from average committed flow over a three-month period to average reported flow over a 12-month period. A permittee that reduces its flow so that its reported flow, averaged over 12 months, does not reach 95 percent of permitted capacity is not required to conduct a capacity analysis and submit a report, unless one of the other bases for a capacity analysis is present (N.J.A.C. 7:14A-22.16(b) or (d)).

41. COMMENT: Capacity assurance, especially in coastal areas where there are still small sewage treatment plants, is a serious issue. During rain events these small treatment plants get a lot of infiltration and water flow. What comes out at the end of the pipe is more important than what the permitted capacity is, but permitted capacity is part of the NJPDES program and needs to be enforced. The threshold being changed from 80 percent to 95 percent ignores the permitted flow of these plants. (3)

RESPONSE: Flow is an NJPDES permit limit for the six municipal wastewater permits that discharge to ground water, and for five of the municipal treatment plants that discharge to surface water. For those facilities, flow is an enforceable permit limit. All treatment plants are subject to NJPDES permits that contain parameters for various substances, such as the BOD<sub>5</sub>, CBOD<sub>5</sub>, and TSS that are discussed in the Response to Comments 1 through 9. These are "end

of pipe" parameters, and the Department does monitor permittees discharges, including flow when that is limited in an NJPDES permit. The Department imposes mandatory penalties, in accordance with N.J.A.C. 7:14-8.5, for serious violations or significant non-compliance of any limited parameter.

## Miscellaneous Comments

- 42. COMMENT: The Department's proposed amendments at N.J.A.C. 7:14A-22.16(d) are appropriate. (1)
- 43. COMMENT: The proposed substantial changes on adoption to the CAP rule are appropriate. (7)

RESPONSE TO COMMENTS 42 and 43: The Department acknowledges the commenters' support of the modifications to the rule on adoption.

44. COMMENT: The proposed substantial changes on adoption of these CAP rules are not sufficient to meet water quality and protect ecological function and human health. (3, 4, and 6) RESPONSE: The adopted rules are intended to ensure that as flow approaches the treatment plant's permitted flow, the treatment plant remains able to operate effectively and in accordance with the conditions of the NJPDES permit. If the conveyance system is inadequate or not properly maintained, sanitary sewer overflows may occur, resulting in the potential for negative impacts to human health and the environment that could result from the discharge of raw sewage (47 N.J.R. at 2584). As set forth in the notice of proposal Environmental Impact statement, the adopted amendments will enhance the effectiveness of the capacity assurance program by

defining roles and responsibilities of the permittees, participating municipalities, and sewage authorities, and by requiring more detailed assessment of alternatives, as well as the development of appropriate capital improvement plans, schedules for implementation, and the identification of financing mechanisms to address potential issues associated with inadequate conveyance or treatment capacity (47 N.J.R. at 2586).

In order to protect human health, the environment, and water quality, the adopted rules not only make use of the CAP threshold that triggers a capacity analysis, but also authorize the Department to require a capacity analysis from a permittee of a treatment plant at which the NJPDES permitted flow is occasionally exceeded during wet weather events (N.J.A.C. 7:14A-22.16(b), and see the Response to Comment 19). The Department may also request a capacity analysis and report from the owner or operator of a conveyance system, under specific conditions enumerated in adopted N.J.A.C. 7:14A-22.16(d). Each of these provisions is designed to address the concerns the commenters raise.

For a discussion of the correlation between flow and permit violations, which may affect water quality, see the Response to Comments 1 through 9 above and 48 N.J.R. at 2208.

45. COMMENT: WQM-007 Forms should be waived for facilities that have demonstrated through the planning process that they will not exceed their capacities (100 percent of permitted flow), even at buildout. (1)

RESPONSE: See the Response to Comment 13 for a discussion of relief from quarterly reporting requirements for a treatment plant that is not anticipated to exceed its permitted capacity.

46. COMMENT: The requirement for maintaining flows below permitted levels, along with performance of a capacity analysis and submission of a capacity analysis report, is of significant concern. Such a requirement could potentially necessitate the expenditure of many tens of thousands of dollars (at a minimum) to evaluate, design, and construct expansions to treatment facilities that have already achieved full build-out or are under the permitted flow when full build-out is achieved, or when the facility is above permitted flow at full build-out but still meets all NJPDES effluent limitations. (1)

RESPONSE: The Department expects that only under very limited circumstances (for instance, the service area for the treatment plant is, or will be at full build-out under the existing treatment plant capacity with no expectation that redevelopment will increase flows) would a permittee be able to provide an acceptable justification for "no action" once the CAP requirements are triggered. Even though flow is not a limited parameter for the treatment plant, and a permittee may be meeting all discharge limits, a re-rating of the treatment plant would be necessary if flow is above the permitted level.

47. COMMENT: The proposed rule requires a facility that reaches or exceeds the 95 percent flow threshold to only reduce or maintain flows. The ability of a facility to maintain 95 percent of design capacity flows is contrary to the purpose of the CAP process. Planning should proactively address the problems that the capacity analysis identifies; the CAP rule must require concrete actions to reduce flows. (3 and 4)

RESPONSE: The purpose of the CAP rule is to ensure that treatment plants have adequate capacity to treat flows generated within their sewer service area. Although a treatment plant's

flow should remain at or below permitted flow, very few NJPDES permits have flow as a limited parameter. Where an NJPDES permit does not contain flow as a limited parameter, the treatment plant is able to exceed permitted flow without it being a permit violation, as long as all other discharge limits are being met. See CAP Threshold – Flow as a Permit Condition in the Response to Comments 1 through 9 and 48 N.J.R. at 2209 for a discussion of the adopted CAP threshold with respect to facilities that have flow as a permit condition.

Although actions to reduce actual flows are encouraged, there is no mechanism in place for the Department to require that a permittee reduce flow if the treatment plant is meeting all discharge limits. Please also see the Response to Comment 46 for a discussion about treatment plant re-rating.

- 48. COMMENT: The proposed rules do not adequately address the circumstances at all facilities. The Department should allow an alternate analysis method using "design loading limits" as the threshold for implementing costly infrastructure modifications and expansion. (1). RESPONSE: The CAP threshold is and has always been based solely on flow in order to demonstrate conveyance and treatment hydraulic capacity. As an option, the permittee may contact the Department for a re-rating of the treatment plant's permitted flow through the NJPDES and Treatment Works Approval programs, which may or may not result in the permittee being relieved of the CAP requirements.
- 49. COMMENT: Under the existing regulations with an 80 percent three-month average threshold, there were fewer facilities that submitted a CAP than were required, and therefore,

improvements were not being performed. How will the Department ensure or enforce compliance with the adopted rule? (4)

RESPONSE: The Department expects that there will be a higher level of compliance and more meaningful submittals under the changed rules. This expectation is based upon improvements that the Department is making to the reporting and enforcement processes. The Department will post data on its website to identify treatment plants that are approaching (or have exceeded) the CAP and WQMP thresholds. The Department has also modified its WQM-007 form, which permittees that have triggered the CAP submit quarterly, to include a section in which the permittee must indicate whether it is in compliance with the construction schedule in their approved capacity assurance report. In addition, the adopted rule requires a permittee that is subject to the CAP to submit a schedule for completion of approved improvements. This schedule will make it easier for the Department to determine whether a permittee is complying with CAP requirements.

50. COMMENT: Revise the language of N.J.A.C. 7:14A-22.16(a) to better clarify the Department's intent. As proposed, the new regulation could be interpreted that the permittee (treatment facility) is solely responsible for a treatment works capacity analysis for the entire collection system hydraulically connected to their facility (which could span several towns) and that the member towns must only "cooperate" with such an assessment. (1) RESPONSE: The adopted rule does not place the obligation to prepare a capacity analysis and submit a capacity analysis report solely on the permittee. N.J.A.C. 7:14A-22.16(a) requires the permittee to conduct the capacity analysis and submit the report "*in coordination with*"

participating municipalities and sewage authorities." The Department intends that "coordination" under the rule be more than simple consultation or cooperation. This is reflected in the adopted N.J.A.C. 7:14A-22.16(d)5, which allows the Department to require the owner or operator of a conveyance system to conduct a capacity analysis and submit a report if "the 12-consecutive-month average flow equals or exceeds 95 percent of the permitted flow at the receiving treatment plant and any municipality or sewage authority has not cooperated with the permittee to conduct a capacity analysis." The rule identifies that the permittee, in coordination with participating municipalities and sewage authorities, shall submit a capacity analysis report. If the participating municipalities and sewage authorities refuse to coordinate with the permittee, N.J.A.C. 7:14A-22.16(d) allows the Department to require the participating municipalities and sewage authorities prepare a capacity analysis and submit a capacity analysis report. The Department expects that municipalities and sewage authorities will conduct their own evaluations in relation to their infrastructure in order to work with the permittee to identify the best alternatives and develop solutions to ensure adequate capacity.

Comments Submitted on the Proposal and Again on the Notice of Substantial Changes on Adoption (substantively addressed under part 2 above)

51. COMMENT: The proposed change to the CAP threshold will result in no environmental review or planning, more sewer service areas, and more pollution. The Department is allowing more expansion in sewer service areas in the WQMP rule and getting around the Water Quality Planning Act, while weakening the CAP rule to allow more sewer plant discharges. The process for review is now backwards and will allow plants to discharge first and plan second. In

addition, in the new WQMP rule there will no longer be Department oversight or evaluation of environmental impacts like water supply, sprawl, and storm water discharge. (2 and 8) RESPONSE: See the Response to Comments 24 and 25.

52. COMMENT: Those responsible for compliance with the regulations should be afforded the flexibility, based upon their site-specific conditions, to look back further if the prior 12-month period is not representative and if the obligation to maintain permit compliance, or compliance with contractual obligations, warrants. (1)

RESPONSE: See comment 18 and the attendant response.

53. COMMENT: Proposed amendments to the rule will allow treatment works to avoid capacity reviews because the proposed rule does not account for I/I, leaky pipes, or combined sewer overflows (CSOs). This rule violates anti-backsliding conditions under the Clean Water Act and undermines total maximum daily loads (TMDLs), which are clean-up plans for many of the State's rivers. The proposed rule also violates EPA rules. In addition, many plants are oversized to begin with and built without anti-degradation criteria. Now they can have additional flows, which violate water quality standards because the rule is based on average flow, not direct discharge. Many of the streams that experience discharge never had a proper anti-degradation analysis. (2 and 8)

RESPONSE: See comment 20 and the attendant response.

54. COMMENT: Previously, a municipality and the sewer authority were both required to submit plans, but now only the sewage treatment plant will be responsible. This will undermine a municipality's authority to intervene and take action if there are issues with the plan. It also takes away the municipality's ability to submit a plan, and reduces the municipality's ability to deal with problems. Without proper planning, by only having sewerage authorities apply, municipalities can keep issuing construction permits without water conservation measures in place. (2)

RESPONSE: See comment 15 and the attendant response.

## **Federal Standards Statement**

Executive Order 27 (1994) and N.J.S.A. 52:14B-1 et seq. (P.L. 1995, c. 65), require State agencies that adopt, readopt, or amend any State rules that exceed any Federal standards or requirements to include in the rulemaking document a Federal standards analysis. The Treatment Works Approval rules have no Federal counterpart and are not promulgated under or subject to any Federal law. Accordingly, no further analysis is required.

**Full text** of the adoption follows (additions to proposal indicated in boldface with asterisks \*thus\*):

7:14A-22.16 Capacity assurance program

- (a) If the average flow over 12 consecutive months, as reported in DMRs by the permittee of a treatment plant, reaches or exceeds \*95 percent of\* the permitted flow of that treatment plant, the permittee, in coordination with participating municipalities and sewage authorities, shall:
- 1. Conduct a capacity analysis that assesses the treatment works; evaluates alternative measures that would maximize conveyance and treatment of existing flows, reduce \*or maintain\* existing flows \*below permitted flow\*, and/or increase the capacity of the treatment works; identifies the alternative(s) that will be implemented; establishes an implementation schedule; and identifies the financing mechanism(s) for the selected alternatives;
  - 2. 3. (No change from proposal.)
- (b) (No change from proposal.)
- (c) The capacity analysis report submitted under (a) or (b) above or (d) below shall include:
  - 1. (No change from proposal.)
  - 2. Based on the assessment of the treatment works described at (c)1 above, an evaluation of alternative measures that would maximize conveyance and treatment of existing flows, reduce \*or maintain\* existing flows below permitted flow at the treatment plant and ensure adequate conveyance capacity, and/or increase the capacity of the treatment works. This evaluation shall include, at a minimum:
    - i. v. (No change from proposal.)
  - 3. 6. (No change from proposal.)
- (d) Within 180 days of notification by the Department, the owner or operator of a conveyance system shall conduct a capacity analysis as described at (a)1 above and submit a capacity

analysis report as described in (c) above. The following are causes for requiring a capacity analysis and report under this subsection:

- 1. -4. (No change from proposal.)
- 5. The 12-consecutive-month average flow equals or exceeds \*95 percent of\* the permitted flow at the receiving treatment plant and any municipality or sewage authority has not cooperated with the permittee to conduct the capacity analysis required pursuant to (a) above.
- (e) (g) (No change from proposal.)
- (h) The permittee may submit a request to discontinue quarterly submittal of the WQM-007 Form required under (a) above if the permittee \*has completed the selected alternative(s) in (c) above as approved by the Department and\* can demonstrate that flow, as reported in DMRs, has decreased to below \*95 percent of\* the permitted flow for 36 consecutive months. The Department's approval of such request does not exempt that permittee from the application of the requirements of this section in the future.
- (i) (No change from proposal.)

7:14A-22.17 Sewer ban imposition

- (a) (b) (No change.)
- (c) For surface water dischargers, violations of NJPDES effluent requirements for flow, percent removal, or toxicity shall not require the imposition of a sewer connection ban. In the case of a treatment facility at or above \*95 percent of\* its permitted flow, the facility shall be subject to the provisions of the Capacity Assurance Program specified at N.J.A.C. 7:14A-22.16.

(d) - (f) (No change.)