



Frequently Asked Questions Capacity Assurance Program - CAP

DISCLAIMER: The following questions and answers are provided for general information purposes only and are not intended to replace or alter the binding effect of any part of the rules at N.J.A.C. 7:14-22.

1. What is the Capacity Assurance Program (CAP), and what is its purpose?

The CAP is a mechanism for ensuring that treatment works, which includes both the wastewater treatment plant and the associated conveyance system(s), will avoid hydraulic overloads that could result in violation(s) of New Jersey Pollutant Discharge Elimination System (NJPDES) permit discharge limits or unpermitted discharges. This is accomplished by requiring that a plan be prepared and submitted to the Department which includes a capacity analysis of both the treatment and conveyance systems.

2. How does the threshold that triggers the CAP in the new rule differ from the former rule?

The new rule raises the threshold for triggering the CAP from 80 percent of permitted flow (based on a 3-month consecutive average using committed flow) to 95 percent of permitted flow (based on an average of reported flows over 12 consecutive months).

3. Why was 95 percent of permitted flow chosen as the threshold for triggering the CAP?

Because the design capacity of a treatment plant is based on conservative assumptions regarding flow, the Department concluded that requiring a permittee to perform a capacity analysis when the 95 percent of permitted flow threshold is triggered should provide adequate time for the permittee to develop and implement measures to address hydraulic overloading of the plant. Specifically, the treatment works approval rules at N.J.A.C. 7:14A-23.13(o) require that a treatment plant be hydraulically designed to handle daily flows up to 2.5 times the average permitted flow. In addition, wastewater treatment plants typically have controls within the treatment train that allow the operator additional flexibility to address fluctuations in flow at the plant. Finally, recent amendments to the trigger in the Water Quality Management Planning rules require a wastewater capacity analysis at 80 percent of permitted flow to address future wastewater needs.

When evaluating a higher threshold for the CAP, the Department compared different percentages of permitted flow to violations of NJPDES permits. The Department found that there was a weak correlation between the percent of flow and non-compliance for three common

surface water parameters (BOD₅, CBOD₅ and TSS) that are integral to the treatment plant design and related to the performance criteria for the plants, as reflected in their NJPDES permit limits. However, a threshold set close to or at 100 percent of permitted flow allows for little to no buffer between the time the CAP analysis is due and when the facility's flow reaches permitted flow.

The Department has determined that a CAP threshold 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.

Based on the above, the Department raised the threshold to 95 percent of permitted flow for the CAP (See "Response to Comments 1 Through 9" in the adoption of the new amendments, published in the New Jersey Register on May 15, 2017 at 49 N.J.R. 1191(a)).

4. Why is the time period for determining the threshold amended from 3 months to 12 months?

The Department chose to utilize a 12-month consecutive average over a one year period to 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. Specifically, averaging flow over three months could be influenced by seasonal weather such as periods of wet weather (trending high) or periods of minimal rainfall (trending low).

5. What is the difference between permitted flow and committed flow?

Permitted flow, as defined at N.J.A.C. 7:14A-1.2, means a treatment works' maximum allowable flow (usually in millions of gallons per day) as stated in the facility's NJPDES permit or Treatment Works Approval (TWA), whichever is more stringent. Committed flow, which is also defined in N.J.A.C. 7:14A-1.2, means the sum of the actual flow plus the sum of all flows which are anticipated from connections which have been approved, but are not yet in operation.

6. Why use reported flow vs. committed flow in the new rule?

The Department chose to utilize reported flow, as reported in the required monthly submittal of Discharge Monitoring Reports (DMRs), instead of committed flow for ease of determining when the threshold is triggered. As indicated above, committed flow is the sum of the actual flow plus the sum of all flows from connections which have been approved by the issuance of a TWA but are not yet in operation. Flows from approved connections that are not yet in operation typically represent a relatively small portion of committed flow. Therefore, since actual flow accounts for the majority of flow expected to impact the wastewater treatment plant in the near future, it is an appropriate standard to be utilized for determining the CAP threshold.

7. Who is required to prepare a Capacity Assurance Report (CAR)?

A permittee, in coordination with the owner(s)/operator(s) of the contributing wastewater conveyance system(s), must prepare a CAR. In some instances, the owner/operator of a wastewater conveyance system will be required to prepare a CAR. See FAQ 9 for additional detail.

8. When is a permittee required to prepare a CAR?

A permittee must prepare a CAR when the average flow over 12 consecutive months reaches or exceeds 95 percent of the permitted flow of their treatment plant.

9. When is an owner/operator of a wastewater conveyance system required to prepare a CAR?

The owner/operator of a wastewater conveyance system must prepare a CAR when notified by the Department. The following are causes for requiring a CAR:

- Existing flows to the treatment works approach the design capacity of the conveyance system;
- Excessive infiltration and inflow (I/I) exists in the conveyance system;
- The conveyance system is hydraulically connected to a combined sewer system or a treatment plant that receives flow from municipalities with a combined sewer system;
- There has been an unpermitted discharge from the treatment works, including sanitary sewer overflows; or
- 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 required capacity analysis.

10. What is the proposed timeline/deadline for the submission of a CAR?

The CAR must be submitted to the Department within 180 days of the last day of the final month of the 12-consecutive month period that the treatment plant reaches or exceeds 95 percent of its permitted flow, or within 180 days of notification by the Department (in cases addressing wet weather events or conveyance system issues).

11. What needs to be submitted with the CAR?

The regulatory requirements have been expanded to include: an assessment of the treatment works; 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; the identification and justification for measures selected; the establishment of an implementation schedule; and a description of the mechanism to finance the selected alternative(s) and a certification that the chosen alternative will be implemented.

12. When a CAR is submitted, is there a proposed requirement to make it available to the public?

The CAR must be made available to the public on the website and at the office of the permittee or the owner/operator of the conveyance system.

13. Are there reporting requirements associated with the CAP?

A completed WQM007 Form must be submitted to the Department beginning the last day of the month following the date the 95 percent threshold is met, and quarterly thereafter.

14. Is there a mechanism in place for being relieved of the continuing obligation of the CAP?

Yes, the permittee may submit a request to discontinue quarterly submittal of the WQM007 Form if the permittee can demonstrate that the flow, as reported in DMRs, has decreased to below 95 percent of the permitted flow for 36 consecutive months. However, the Department's approval of such request would not exempt the permittee from having to comply with the CAP requirements in the future.

15. How much Infiltration and Inflow (I/I) work needs to be performed (if it is the selected alternative)?

The amount of I/I work that needs to be performed will be dependent upon the volume of flow that exceeds the permitted flow of the treatment plant. At a minimum, the proposed I/I reduction should be enough to reduce the committed flow and anticipated flows from future growth to be below the treatment plant's permitted flow.

16. When does the amended CAP rule become effective?

The amended CAP rule became effective on May 15, 2017. If at the time the CAP rule was adopted a treatment plant has averaged 95 percent of its permitted flow over 12 consecutive months, a capacity analysis needs to be performed and a CAR must be submitted as detailed above in FAQ 10 and FAQ 11.

17. Are there any requirements prior to reaching the 95 percent of permitted flow threshold?

Permittees may be requested by the Department to submit a CAR if they occasionally exceed their permitted flow during wet weather events.

Even though the proposed CAP requirements typically aren't triggered until the permittee reaches the 95 percent of the permitted flow based on a 12-consecutive month average, permittees should regularly assess optimally efficient ways to convey and treat existing flows, ways to reduce existing flows, and the necessity to increase the capacity of the treatment works. In addition, permittees should already be assessing and evaluating the items to be analyzed to properly operate and maintain their system.

The owner/operator of a wastewater conveyance system may be required to prepare a CAR under certain circumstances when notified by the Department (See FAQ #9 for additional detail).

Be advised that the Water Quality Management Planning rules (N.J.A.C. 7:15) require that a wastewater management agency must conduct a wastewater capacity analysis and determine future wastewater needs as part of developing its wastewater management plan (WMP). In the wastewater planning context, 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 that 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 WMP preparation 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, design, and construction of new infrastructure should that be determined necessary.

18. What if the permittee or owner/operator of a conveyance system doesn't comply with the CAP requirements?

The amended CAP rule now includes a requirement that clarifies that the Department may stop issuing TWAs that would result in additional flows to a treatment plant if the permittee, any of the participating municipalities, a sewage authority, or the owner/operator of the conveyance system does not submit a CAR that meets the requirements of the rule, or does not implement the capacity assurance measures established through the CAR and implementation schedule required by the rule.

In addition, the Department can take enforcement action for non-compliance with the requirements of the rule.

19. If the average flow over 12 consecutive months is less than the permitted flow of a wastewater treatment plant, is there sewer capacity available for my project?

There may not necessarily be sewer capacity available at a treatment plant even though its average flow is less than the permitted flow (<100%). The allocation of sewer capacity is a local issue and is controlled by the wastewater treatment plant owner and any agreements with contributing municipalities. A portion of or all of the remaining flow may have been allocated to future projects that have not yet been permitted or constructed. Contact the receiving wastewater treatment plant to see if any capacity is remaining.
