October 24, 2005

Mr. Benjamin Grumbles
Assistant Administrator for Water
U.S. Environmental Protection Agency (EPA)
Ariel Rios Building (4101M)
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: *Blending Guidance*

Dear Ben:

The Natural Resources Defense Council (NRDC) and the National Association of Clean Water Agencies (NACWA) have worked together to develop the attached proposal clarifying the standard that wastewater treatment plants have to meet in order to bypass secondary treatment during peak wet weather flows. We urge you to adopt this proposal as a replacement for the proposed EPA wastewater blending policy that was withdrawn by EPA and voted against by the House of Representatives on May 19, 2005. As you know, EPA encouraged NRDC and NACWA to work together on a compromise approach to address the questions and comments raised regarding blending. This proposal represents a good faith effort by both organizations to work together to develop a consensus resolution to a challenging issue.

The attached proposal is intended to serve as an EPA interpretive guidance. It would not create new requirements or impose new obligations on wastewater treatment plants. Instead, it would interpret existing federal regulatory requirements in light of the differing views and questions raised about how existing requirements apply to wastewater treatment bypasses.

Among other important outcomes, by adopting this proposal, EPA would ensure that peak wet weather flow bypasses of secondary treatment in separate sewer systems are authorized only *after* an analysis of the wastewater collection and treatment system demonstrates to the permitting authority that there are no feasible alternatives to an anticipated bypass. This proposal would emphasize the importance of wastewater treatment plants maintaining and upgrading their facilities and collection systems to avoid bypassing peak wet weather flows whenever feasible. Further, this proposal would involve the public in the discussion of peak flow management at the local level; ensure that peak wet weather flow management approaches at a public utility are recorded in National Pollutant Discharge Elimination System (NPDES) permits; and reduce potential public exposure to waterborne diseases.

This proposal also would provide needed certainty to wastewater treatment operators regarding the showing they need to make to their permitting authorities and public to receive authorization to bypass peak wet weather flows when full treatment is not

feasible. Such certainty is important to all parties involved in the discussion of blending – permit writers, other regulators, and the public – and will help them know what to expect, what questions to ask, and will clarify what steps to take to ensure public health protection.

Finally, this proposal would provide EPA staff and permit writers with clear guidance to make permitting decisions concerning whether – and if so, under what conditions – peak flow bypasses can be authorized at wastewater treatment plants. Under this proposal, EPA would work to ensure implementation of this guidance through the NPDES permitting process and through appropriate enforcement actions against those agencies that fail to implement it expeditiously.

We urge EPA to move forward to adopt and implement this guidance as soon as possible to reduce regulatory confusion and to improve water quality and public health. Prompt adoption and implementation of this proposal would be beneficial for the public, EPA, states, and wastewater treatment plants nationwide.

Sincerely yours,

Nancy Stoner /dd by

Nancy Stoner
Director, Clean Water Project
Natural Resources Defense Council

Alexandra Dapolito Dunn

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Enclosure

Cc: Jim Hanlon

Guidance on Peak Wet Weather Flow Diversions
(October 27, 2005)

Introduction

Many municipalities currently have situations in which high peak influent flows during significant wet weather events exceed the treatment capacity of existing secondary treatment units. In these situations, wet weather flows are sometimes diverted around secondary treatment units and then either recombined with flows from the secondary treatment units or discharged directly into waterways from the treatment plant. This guidance only applies to those diversions as they occur in separate sanitary sewer systems. The process by which wet weather diversions can be approved in NPDES permits for POTWs serving combined sewer systems was previously outlined in the 1994 CSO Policy, 59 *Fed Reg.* 18,693-18,694 (April 19, 1994). Nothing in this guidance addresses the requirements for POTWs serving combined sewer systems.

While EPA recognizes that peak wet weather flow diversions may be necessary in some circumstances to prevent temporary loss of function of secondary treatment units, the Agency and stakeholders have been concerned for some time that peak wet weather flow diversions could have adverse environmental or public health impacts because of the higher expected pollutant load of diverted flows.

Accordingly, EPA believes that POTW reliance on peak wet weather flow diversions as a long-term wet weather management approach should be minimized to the maximum extent feasible taking into account the factors discussed in this guidance. EPA anticipates that, over time, the need to undertake peak wet weather flow diversions can be eliminated from most systems in a variety of ways, such as by enhancing storage and treatment capacity and reducing sources of peak wet weather flow volume. EPA expects that aggressive efforts by sewage treatment plants in consultation with permitting authorities can lead to dramatic reductions in the volume and duration of peak wet weather flows and can improve the treatment and quality of peak wet weather flow discharges. EPA also believes that the involvement of the general public can improve the assessment of various options to minimize peak wet weather flow diversions.

In recent years there has been substantial confusion regarding the regulatory status of peak wet weather flow diversions. In some cases, such diversions have been considered a bypass and held to the criteria of the Clean Water Act's (CWA's) bypass regulation (40 CFR 122.41(m)). In other cases, diversion scenarios have

been constructed and permitted at facilities without consideration of the bypass regulation criteria.

In 2003, EPA proposed a policy to clarify the regulatory status of peak wet weather flows that are combined with secondary effluent, a practice known as "blending." 68 *Fed. Reg.* 63,042 (Nov. 7, 2003). In that proposed policy, EPA stated that if certain procedures were followed, peak wet weather flow blending would *not* be considered a bypass under 40 CFR 122.41(m). The Agency received over 98,000 comments on the proposed policy and withdrew it on May 19, 2005. EPA has taken the many comments received into consideration in developing this guidance.

Applicability of the Bypass Regulation to Blending

This guidance provides the Agency's interpretation that the 40 CFR 122.41(m) bypass regulation applies to peak wet weather diversions that are recombined with flow from the secondary treatment units. If the criteria of 40 CFR 122.41(m)(4)(i)(A)-(C) are met, permitting authorities can authorize peak wet weather flow diversions in a National Pollutant Discharge Elimination System (NPDES) permit for discharges from a publicly owned treatment works (POTW) as an *anticipated bypass* under 40 CFR 122.41(m)(4)(ii).

This guidance:

- Interprets the provisions of 40 CFR 122.41(m)(4)(i)(A)-(C) as they apply to peak wet weather flow diversions from POTWs serving *separate sanitary sewer systems;*
- Interprets the term "no feasible alternatives" in 40 CFR 122.41(m)(4)(i)(B) as it applies to peak wet weather flow diversions at such POTWs;
- Does not apply to discharges or overflows prior to the headworks of a POTW;
- Does not provide a mechanism to authorize dry weather diversions or peak wet weather flow diversions where the diverted flow is not recombined with flow from the secondary treatment units prior to discharge;
- Promotes POTWs minimizing peak wet weather influent flow, and maximizing peak wet weather flow treatment of the greatest volume of wet weather influent; and
- Promotes reporting and public notification of peak wet weather diversion events.

A combination of approaches can be used to achieve the goals of this guidance. These approaches include:

- ensuring full utilization of available secondary treatment capacity;
- reducing infiltration and inflow (I/I);
- maximizing the use of the collection system for storage;
- providing off-line storage;
- having sufficient secondary treatment capacity; and
- providing supplemental biological or physical/chemical treatment for the diverted flow.

EPA recognizes that these approaches, alone or in combination, may not be sufficient in some cases to enable a POTW to process its peak wet weather flows through its secondary treatment units. In such cases, a POTW may have no feasible alternative to peak wet weather flow diversions. This guidance is designed to set forth a process for determining whether or not such feasible alternatives to peak wet weather flow diversions exist. If the permitting authority determines that there are no feasible alternatives to peak wet weather flow diversions using the analysis set forth in this guidance, then the permitting authority may authorize peak wet weather flow diversions as an anticipated bypass in accordance with 40 CFR 122.41(m) in a new or renewed NPDES permit. The only flow that can be authorized as an anticipated bypass around secondary treatment units is flow that is anticipated to exceed the peak flow capacity of the secondary treatment unit(s) even after implementation of the feasible technologies and approaches identified via the process outlined in this guidance. Permitting authorities should include an implementation schedule in the permit for the feasible technologies and approaches that must be made and the associated flow volumes. In NPDES permits with such implementation schedules, any anticipated bypass is contingent upon the POTW's performance of the implementation schedule.

A thoughtful public planning process at the local level is important to minimize or eliminate overflows in the collection system, minimize I/I into the collection system, maximize treatment of all flows, and improve wet weather flow management. EPA recommends that POTWs work with their permitting authorities and local communities to proactively minimize peak wet weather influent flow volume and improve effluent quality, reduce the frequency and volume of diversion events, and improve the structural integrity and capacity of collection systems and the reliability of POTWs.

The use of diversions around secondary treatment units to manage peak wet weather flows is not necessary in many cases and cannot be authorized if feasible alternatives are identified through the analysis described below. Accordingly, on permit renewal, the presumption by the permitting authority will be against the

utility's continued use of diversions to manage peak wet weather flows. This presumption can be overcome by the POTW again demonstrating that there are no feasible alternatives to such diversions through updating and resubmission of the utility analysis described in this guidance, ensuring that the submission identifies any changes at the facility, progress made in relevant areas, any new circumstances, the timing of ongoing projects or construction, or I/I reduction schedules. Timely permit renewals for facilities that employ peak wet weather diversions should be a priority. Because of the importance of regular analysis of the ongoing need to utilize diversions at a particular facility, NPDES permits for facilities that employ or seek to employ peak wet weather diversions should be timely renewed rather than administratively continued.

The determination of what constitutes a "peak wet weather event," during which the use of a peak wet weather diversion may be authorized by a permitting authority as an anticipated bypass, will be a site-specific determination. Certainly, EPA does not expect diversions to be used for routine rain events. EPA also cannot reasonably set or endorse an "acceptable" number of anticipated bypasses (*e.g.*, five per year). Such a one-size-fits all approach would not recognize the site-specific nature of peak wet weather diversions and could lead to excessive use of diversions in some communities. Rather, it is EPA's intention through this guidance to ensure that POTWs, permitting authorities, and the general public determine what constitutes a peak wet weather event for a POTW for which there is no feasible alternative to a peak wet weather diversion, based upon past diversions, opportunities for eliminating or reducing diversions, and future considerations (*e.g.*, population growth, projected weather patterns). Where such peak wet weather diversions cannot be feasibly avoided, consideration should be given to the use of additional technologies that will maximize treatment of diverted flows. EPA will not support the use of peak wet weather diversions when the peak flows are largely due to poor (or lack of) collection system maintenance or the lack of investment in or upgrades to treatment capacity.

Permitting authorities and POTWs must ensure that all flows that will be diverted from the secondary treatment units in peak wet weather events receive a minimum of primary treatment and any supplemental treatment or technology shown feasible using the factors outlined in this guidance. Effluent limitations, including the 85 percent removal requirement (unless the POTW meets the requirements of 40 CFR 133.103(d) (less concentrated influent wastewater for separate sewers)) and other secondary treatment requirements and any more stringent limitations necessary to meet water quality standards, must be met by all facilities at the point of discharge, including when diverting. Failure to meet effluent limitations is a permit violation.

Permitting authorities should ensure that the facility, including when diverting, does not have the reasonable potential to cause or contribute to any water quality standards violation.

EPA recognizes that some POTWs may be implementing technologies more advanced than or supplementary to secondary treatment. The Agency encourages the use and permitting of such technologies (*e.g.,* membrane, tertiary) where they produce a higher quality effluent. In the case where a POTW is using, or plans to use, technology that is more effective in baseline pollutant removal than is required by secondary treatment, the permitting authority should take that improved baseline performance into consideration when determining whether peak flow diversions are allowed and under what conditions.

No Feasible Alternatives Analysis Process

A permitting authority's determination as to whether or not there is a feasible alternative to peak wet weather diversions at a POTW shall be made using the following inputs and criteria, which interpret 40 CFR 122.41(m)(4)(i)(A)-(C). At the time of NPDES permit application or NPDES permit renewal:

1. POTWs seeking approval of peak wet weather diversions as an anticipated bypass should submit a comprehensive analysis (*utility analysis*) to the permitting authority that:

    a. documents current treatment plant design capacity for all treatment units, the maximum flow that can be processed through those units, and the feasibility of increasing such treatment capacity and related costs;
    b. estimates the frequency, duration, and volume of current wet weather diversions, and evaluates alternatives to reduce the frequency, duration, and volume of such occurrences and related costs;
    c. estimates the potential for future peak wet weather diversions based upon information such as predicted weather patterns, population growth, and projected treatment plant and collection system changes (*e.g.,* upgrades, extensions, deterioration) and evaluates options for reducing diversions based on these variables;
    d. assesses existing storage within the collection system or on-site and options for enhanced utilization or expansion (taking into account physical and technological considerations) of that storage to reduce the frequency, duration, and volume of peak wet weather diversions, and the related costs;

e. assesses other ways to reduce peak wet weather flow volumes, such as limiting collection system extensions or slug loadings from indirect dischargers;
f. evaluates technologies – such as supplemental biological treatment, physical chemical treatment, ballasted flocculation, deep bed filtration, or membrane technology – that are or could be used to provide additional treatment to peak wet weather flows or peak wet weather diversions and the costs of implementing those technologies;
g. evaluates the extent to which the POTW is maximizing its ability to reduce I/I throughout the entire collection system (*i.e.,* both operated by the utility and satellite), including the use of existing legal authorities, potential improvements in the timing or quality of such efforts, and options for obtaining or expanding legal authorities to reduce I/I from satellite collection systems;
h. evaluates peak flow reductions obtainable through implementation of existing Capacity, Management, Operations, and Maintenance (C-MOM) programs and potential improvements in the timing or enhancement of those programs and the related costs; or, if no such program exists, reductions obtainable through the development and implementation of a C-MOM program and the related costs;
i. assesses the community's ability to fund the peak wet weather flow improvements discussed in the utility analysis, taking into consideration: current sewer rates, planned rate increases, and the costs, schedules, anticipated financial impacts to the community of other planned water and wastewater expenditures, and other relevant factors impacting the utility's rate base, using as a guide EPA's *CSO Guidance for Financial Capability Assessment and Schedule Development,* EPA 832-B-97-004;
j. proposes a protocol for monitoring the recombined flow at least once daily during diversions for all parameters for which the POTW has daily effluent limitations or other requirements (*e.g.*, monitoring only requirements), the total volume diverted, and the duration of the peak wet weather diversion event; and
k. projects the POTW effluent improvements and other improvements in system performance that could be expected should the technologies, practices, and/or other measures discussed in the utility analysis be implemented.

2. The permitting authority should:

   a. make the utility analysis publicly available with other draft permit information for public review and comment;
   b. review and evaluate the utility analysis and require measures to be undertaken to provide the highest possible treatment to the greatest possible peak wet weather flow, taking into account the full range of economic, environmental, public health, and engineering considerations;
   c. review and approve or deny the peak wet weather diversions sought by the POTW based on the determination of whether there are feasible alternatives to those diversions using the analysis set forth in this guidance;
   d. include a permit provision recognizing any approved peak wet weather diversions as anticipated bypasses, and specify the conditions for allowing such diversions;
   e. include a permit provision requiring any POTW that has an approved anticipated bypass to provide notice of the peak wet weather diversion event consistent with 40 CFR 122.41(m)(3);
   f. include a permit provision requiring any POTW that has an approved anticipated bypass to monitor the recombined flow at least once daily during diversions for all parameters for which the POTW has daily effluent limitations or other requirements (*e.g.*, monitoring only requirements), the total volume diverted, and the duration of the peak wet weather diversion event;
   g. describe in the permit Fact Sheet prepared under 40 CFR 124.8(b) how the peak wet weather event was calculated, the reason for allowing peak wet weather diversions, and any requirements for such peak wet weather diversions;
   h. ensure that permit load limitations account for the anticipated flow into secondary treatment units during both wet and dry weather conditions;
   i. include permit provisions for public notification (*e.g.*, via utility website) of the peak wet weather diversion event within 24 hours of the inception of each event; follow up public notification of the duration and volume of the event within 48 hours of its cessation; and for public review of the POTW's peak wet weather flow diversion practices upon request;
   j. include permit provisions requiring the POTW to review, and revise if necessary, local pretreatment limits for indirect dischargers to take into account peak wet weather diversion events (*e.g.*, significant industrial users with batch discharging);
   k. if the discharge will be to sensitive receiving waters (*i.e.*, waters used for recreation; drinking water; shellfish beds; waters formally designated by

state or federal authorities as requiring special consideration or protection; waters with threatened or endangered species), ensure that the impact of any peak wet weather diversion events on these waters is minimized and that permit limitations are set accordingly; and

l. rigorously review each and every POTW permit renewal request that seeks continued authorization of peak wet weather diversions to ensure that a comprehensive utility analysis is submitted and evaluated consistent with (I) and that peak wet weather diversions are authorized only when no feasible alternatives to them are identified through the process set forth in this guidance.

3. EPA will:

a. use this guidance in making NDPES permitting decisions for all POTWs in non-authorized states;
b. review permits in NPDES delegated states within the timelines specified in 40 CFR 123.44 for all POTWs seeking authority for diversions pursuant to this guidance to ensure that they are consistent with this interpretation of the regulations;
c. ensure that appropriate enforcement actions are taken against POTWs that fail to move forward expeditiously to implement their responsibilities identified pursuant to this interpretation of the regulations; and
d. ensure that monitoring data received from POTWs concerning peak wet weather diversions is available to the public on EPA's website in a searchable and correctable database.