OFFICE OF WATER
WASHINGTON, D.C. 20460

January 19, 2024

MEMORANDUM

SUBJECT: CSO Temporal Recreational Uses or WQS variances based on 40 CFR 131.10(g)(3)

FROM: Deborah G. Nagle, Director
Office of Science and Technology

DEBORAH NAGLE
Digitally signed by DEBORAH NAGLE
Date: 2024.01.19 10:36:15 -05'00'

TO: Water Division Directors, Regions 1-10

The Environmental Protection Agency periodically receives requests to approve designated use revisions and water quality standards (WQS) variances for certain state, territorial, or tribal waters. In particular, the EPA has heard from some states regarding communities with combined sewer overflows (CSOs) that anticipate achieving the CSO performance objectives based on their long-term control plans (LTCPs) but post-construction compliance monitoring (PCCM)[1] indicates they may still be unable to comply with the water quality-based effluent limits (WQBELs) necessary to achieve the applicable bacteria criteria and recreational use once construction is complete. Communities that have been successful in significantly reducing the number of CSOs are now interested in working with their states and the EPA to consider revising WQS, as appropriate, and as envisioned as an option in the CSO Control Policy.[2] This memorandum is intended to provide considerations for the EPA's review of revisions to state[3] recreational uses[4] and associated bacteria criteria based on a demonstration that "[h]uman caused conditions or sources of pollution prevent the attainment of the use and … would cause more environmental damage to correct than to leave in place," per 40 CFR 131.10(g)(3) (commonly referred to as Factor 3).[5]

[1] PCCM is the ninth element of the LTCP (see II.C.9 at 59 Fed. Reg. 18694). Permittees are expected to conduct PCCM throughout implementation of their LTCP. The PCCM program should be adequate to verify compliance with WQS; and ascertain the effectiveness of CSO controls (see II.C.4.a(i), (ii), (iii), and II.C.4.b at 59 Fed. Reg. 18692).
[2] 59 FR 18694
[3] This memo is directed to states and territories only because there are no tribes with responsibility for CSOs. For simplicity, the term "states," as used in this memo, includes any territories with responsibility for CSOs.
[4] This memo discusses the two types of revisions that may be appropriate for CSO impacted waters. The first is adopting a CSO temporal recreational designated use instead of a primary contact recreation use and the other is a WQS variance to the applicable primary contact recreation use. CSO temporal designated uses are discussed later in the memo.
[5] This memo does not impose legally binding requirements on the EPA, states, or the regulated community, nor does it confer legal rights or impose legal obligations upon any member of the public. The CWA provisions and the EPA regulation described in this document contain legally binding requirements. This memo does not change or substitute for any CWA

This memorandum focuses on the phrase "would cause more environmental damage to correct than to leave in place." In some situations, a state may believe there are more environmentally beneficial alternatives for a waterbody than "correcting" the human caused condition or sources of pollution (e.g., additional CSO controls beyond those in the current LTCP) such that forgoing those greater environmental benefits would cause "more environmental damage." This Memorandum discusses using 40 CFR 131.10(g)(3) in a manner that will facilitate continued progress towards improving water quality through implementation of non-CSO pollution control activities that result in greater environmental benefits after communities complete construction of approved CSO controls and where PCCM indicates that the remaining CSOs cannot comply with WQBELs necessary to meet WQS for bacteria and the recreational use. Specifically, this Memorandum identifies information that states should submit to the EPA, in the future, pursuant to the regulatory requirement to demonstrate that they have satisfied Factor 3. Greater detail is provided later in the memo, but in summary, in reviewing standards revisions the EPA will consider whether a state has adequately demonstrated that:

(1) implementing non-CSO control alternatives (e.g., green infrastructure[6] in both the separate and combined parts of the collection system to address non-CSO sources of bacteria, enhanced stormwater control beyond Municipal Separate Storm Sewer System (MS4) permit requirements, septic system improvement programs, transition from septic to municipal sewer connection) would result in a greater environmental benefit[7] by reducing bacteria to better protect recreation uses in the same geographic area of the same waterbody/waterbodies impacted by the CSOs;
(2) such non-CSO control alternatives are not already required, financially committed to, or otherwise in progress[8] and could not be implemented, as a practical matter, if the community were required to remedy the remaining CSOs after construction of controls identified in its LTCP (i.e., the greater environmental benefits would be forgone absent the designated use revision or WQS variance); and
(3) such non-CSO control alternatives will, in fact, be implemented to realize the greater environmental benefit if the EPA were to approve the designated use revision or WQS variance.

In addition, states must be diligent in conducting timely reexaminations of new information and WQS variance reevaluations consistent with relevant regulatory requirements (e.g., 40 CFR 131.20 and 131.14(b)(1)(v)). For example, when conducting a triennial review or WQS reevaluation for CSO-related WQS revisions, states should evaluate progress achieved from implementing the non-CSO control alternatives, the extent the greater environmental benefit has been realized, and whether

provision or the EPA regulation. The general description provided here may not apply to a particular situation based upon the circumstances. This document is not intended to bind any EPA decisionmakers as they review use attainability analyses or WQS variances submitted by states. Notwithstanding anything in this document, each WQS action must be evaluated on a case-by-case basis in accordance with the CWA and the EPA's implementing regulation at 40 CFR Part 131.

[6] 33 U.S.C. § 1362(27)

[7] "Environmental benefit," for purposes of this document, means a change in environmental conditions to the same geographic area of the same waterbody that results in a greater measurable benefit to water quality and public health via bacteria reductions and increased opportunities for safe recreation.

[8] There may be ongoing programs or initiatives that are serving to reduce non-CSO bacterial loads, but which may or may not continue into the future. Where decisions to continue such programs are made periodically based on the circumstances at that time, states may be able to demonstrate that continuing such programs would be precluded, as a practical matter, absent the designated use revision or WQS variance. The EPA would consider such demonstrations even though the programs are in progress at the time of the submission.

implementing additional non-CSO activities will provide a greater environmental benefit than additional CSO controls.

This memorandum is specific to situations where a CSO community has achieved or will achieve significant reductions in its CSOs after implementing its LTCP, but PCCM indicates it is unable to comply with the WQBELs necessary to achieve the bacteria criteria for the recreation use. Such WQS revisions, when adopted consistent with the regulation, would allow the state and community to holistically consider, identify and commit to addressing non-CSO sources of bacteria to continue to improve water quality, provide increased opportunities for safe recreation and achieve a greater health benefit to their public.

STATUTORY AND REGULATORY BACKGROUND

The primary objective of the CWA is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." (33 USC 1251(a)). At section 101(a)(2) (33 USC 1251(a)(2)), the CWA further provides that the nation's waters must achieve "*wherever attainable,* an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water" (emphasis added). CWA section 303(c) (33 USC 1313(c)) indicates that water quality standards shall "serve the purposes of" the CWA. The EPA's implementing regulation at 40 CFR 131.10 interprets these provisions by requiring waters to be designated for the uses specified in CWA section 101(a)(2) unless such uses are shown to be unattainable.

The EPA's regulation at 40 CFR 131.10(g) provides that a state may remove or revise a designated use specified in CWA section 101(a)(2) or a subcategory of such a use, that is not an existing use,[9] if the state conducts a use attainability analysis (UAA) (defined at 40 CFR 131.3(g)) pursuant to 40 CFR 131.10(j) to demonstrate that attainment of the designated use is not feasible. 40 CFR 131.10(g) also requires the adoption of the highest attainable use, as defined at 40 CFR 131.3(m). The factor(s) evaluated in a UAA vary and depend, in part, on what designated use is being evaluated, but it is often important to consider the existing chemical, physical, and biological conditions, what site-specific conditions may be precluding attainment of the use, and whether those site-specific conditions are controllable. The EPA explained in the preamble to its 2015 final WQS rule revising 40 CFR 131 (80 FR 51025):

"When conducting a UAA and soliciting input from the public, states and authorized tribes need to consider not only what is currently attained but also what is attainable in the future after achievable gains in water quality are realized. The EPA recommends that such a prospective analysis involve the following:

- Identifying the current and expected condition for a waterbody;
- Evaluating the effectiveness of best management practices (BMPs) and associated water quality improvements;
- Examining the efficacy of treatment technology from engineering studies; and

[9] Defined at 40 CFR 131.3(e) as: those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards.

- Using water quality models, loading calculations, and other predictive tools."

The EPA's regulation at 40 CFR 131.10(b) also specifies that, "In designating uses of a water body and the appropriate criteria for those uses, the State shall take into consideration the water quality standards of downstream waters and shall ensure that its water quality standards provide for the attainment and maintenance of the water quality standards of downstream waters."

Where the state demonstrates that the designated use is not feasible to attain for a specified period of time, but incremental water quality progress can be made, it could adopt a WQS variance. The EPA's regulation at 40 CFR 131.14 identifies the supporting documentation that must be submitted with a WQS variance (40 CFR 131.14(b)(2)). Similar to designated use revisions, 40 CFR 131.14 requires that the state demonstrate that attaining the designated use and criterion is not feasible throughout the term of the WQS variance because of one of the factors listed at 40 CFR 131.14(b)(2)(i)(A) and adopt the highest attainable condition. The required analysis should also be prospective, but with an aim to identify the specific period of time the designated use is unattainable and what can be done during the WQS variance term to make incremental water quality progress.

The EPA's regulation at 40 CFR 131.5 further specifies how the EPA evaluates any submission of new or revised WQS from a state and the accompanying supporting documentation. Specifically, 40 CFR 131.5 provides that in determining whether to approve or disapprove a WQS submission, the EPA's review includes determining whether the state has adopted designated uses consistent with the CWA, including 40 CFR 131.10 (40 CFR 131.5(a)(1)), whether any adopted variances are consistent with 40 CFR 131.14, (40 CFR 131.5(a)(4)), and whether any WQS that do not include the uses specified in CWA section 101(a)(2) "are based upon appropriate technical and scientific data and analyses" (40 CFR 131.5(a)(7)).

The EPA's regulation at 40 CFR 131.20 specifies that states must hold public hearings for the purpose of reviewing applicable WQS, including federally promulgated water quality standards, at least once every three years. 40 CFR 131.20 further provides that states must "re-examine any waterbody segment with water quality standards that do not include the uses specified in section 101(a)(2) of the Act every 3 years to determine if any new information has become available. If such new information indicates that the uses specified in section 101(a)(2) of the Act are attainable, the State shall revise its standards accordingly." 40 CFR 131.14(b)(1) provides additional reevaluation requirements for WQS variances longer than 5 years.

FACTOR 3 – "WOULD CAUSE MORE ENVIRONMENTAL DAMAGE TO CORRECT THAN TO LEAVE IN PLACE"

40 CFR 131.10(g)(3) may apply where "human caused conditions or sources of pollution prevent the attainment of the use and … would cause more environmental damage to correct than to leave in place."[10] One application of this factor is where controlling the pollutant would itself cause environmental damage. For example, dredging a waterbody to remove contaminated sediment may be

[10] The full regulatory text of 40 CFR 131.10(g)(3) reads "Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place." This memo does not address the "cannot be remedied" portion of this provision.

needed to attain the designated use. However, doing so may stir up the pollutant in the sediment and release the pollutant into the water column, thus causing more environmental damage to the waterbody for a period of time as compared to leaving the contaminated sediment in place. Whether such a scenario justifies a use change or WQS variance would be determined on a case-by-case basis based on the site-specific factors.

A different application of this factor could involve waters impacted by CSOs. In accordance with the CSO Control Policy, which is referenced in the CWA at section 402(q) (33 USC 1342(q)),[11] most CSO communities have developed and are implementing LTCPs that identify CSO control projects with the goal of meeting applicable WQS requirements.[12] Some communities may find that, even after achieving the performance objectives to which they committed in their LTCP, PCCM[13] indicates that they will be unable to comply with WQBELs necessary to attain WQS (i.e., the applicable bacteria criteria recreational uses). In such cases, communities may consider implementing or be required (e.g., through an NPDES permit, an enforcement mechanism) to implement additional CSO controls. Such additional controls may be needed to protect sensitive areas, as described by the CSO Control Policy.[14] An option, as outlined in CWA section 402(s),[15] is for CSO communities to develop and implement an Integrated Plan to look at a broad suite of water quality requirements holistically and allow communities to prioritize and sequence, where appropriate, those infrastructure projects that provide the greatest or fastest environmental and public health benefits.

Another option, consistent with the CSO Control Policy and where appropriate based on site-specific conditions, states may consider is revising the recreational use applicable to the CSO-impacted waters through adoption of a temporal designated use or a WQS variance. A temporal designated use, such as a temporal recreation use in the context of CSOs (e.g., CSO wet weather limited use for a CSO-impacted waterbody), would reflect that primary contact recreation and corresponding bacteria criteria can be attained at all times, except when and for some period of time after the occurrence of a CSO discharge that is consistent with the LTCP performance objectives. The CSO Control Policy refers to such uses as “partial uses” at 59 FR 18695 and specifies that, "In making such adjustments to their uses, States must ensure that downstream uses are protected, and that during other seasons or after the storm event has passed, the use is fully protected.”

It is reasonable to interpret the phrase “would cause more environmental damage to correct than to leave in place” to include consideration of environmental benefits for a waterbody that would be forgone if implementing additional CSO control projects beyond the LTCP performance objectives

[11] The Wet Weather Water Quality Act of 2000 amended the CWA to add section 402(q), which requires “[e]ach permit, order, or decree issued pursuant to this chapter after December 21, 2000, for a discharge from a municipal combined storm and sanitary sewer shall conform to the Combined Sewer Overflow Control Policy signed by the Administrator on April 11, 1994.” 33 U.S.C. 1342(q)(1).

[12] 59 FR 18692

[13] PCCM is the ninth element of the LTCP (see II.C.9 at 59 Fed. Reg. 18694). Permittees are expected to conduct PCCM throughout implementation of their LTCP. The PCCM program should be adequate to verify compliance with WQS and ascertain the effectiveness of CSO controls (see II.C.4.a(i), (ii), (iii), and II.C.4.b at 59 Fed. Reg. 18692).

[14] 59 FR 18696

[15] In 2019, the Water Infrastructure Improvement Act (H.R. 7279) amended the CWA to add section 402(s) that defines an Integrated Plan as one developed in accordance with the 2012 Integrated Municipal Stormwater and Wastewater Planning Approach Framework; and requires the EPA to inform municipalities of the opportunity to develop an Integrated Plan that may inform permit terms and conditions to help meet their existing CWA obligations (33 USC 1342(s)).

would preclude, as a practical matter, implementation of non-CSO control alternatives that would control or mitigate bacteria sources in a manner that would achieve a greater environmental benefit. The EPA's regulation at 40 CFR 131.10(g)(3) contains the expression "more … than", which calls for a comparison. The portion relevant here calls for a comparison between "leav[ing] in place" the "human caused conditions or sources of pollution" and "correct[ing]" them. The regulation uses the expression "environmental damage" to denote what states are to compare. The ordinary meaning of the word "damage" is "harm" or "unpleasant effects." Collins Online Dictionary, https://www.collinsdictionary.com/us/dictionary/english/damage. In the context of CSOs, such a comparison could, in some instances, show more environmental damage (understood as harm or unpleasant effects) from correcting the remaining CSOs where such correction would, as a practical matter, result in a missed opportunity to achieve a greater environmental benefit to the waterbody and better protection of the primary contact recreation use and public health through increased control or mitigation of other bacteria sources. It is important to consider the points articulated in this memorandum in the context of such an interpretation.

When states and communities are evaluating non-CSO control alternatives to achieve a greater environmental benefit, they may consider controls on point and/or nonpoint sources of pollution.[16] While the CWA provides the EPA and authorized states with the authority to control pollution from point sources,[17] the CWA gives authorized states the primary authority to control pollution from nonpoint sources.[18] The EPA's preamble to the 2015 final WQS rule revisions explains that "Nonpoint sources can have a significant bearing on whether the designated use and associated criteria for the waterbody are attainable. It is essential for states … to consider how controlling these sources through application of cost-effective and reasonable BMPs could impact water quality" (80 FR 51038). Doing so could provide insight on the non-CSO control alternatives that a state should evaluate further to determine whether implementing such alternatives would result in a greater environmental benefit than eliminating or further reducing CSOs consistent with 40 CFR 131.10(g)(3).

When evaluating alternatives to determine whether implementing non-CSO control alternatives would result in a greater environmental benefit, the alternatives and resulting environmental benefits should be related to water quality, bacteria reductions and the impact to recreation uses in the same geographic area of the same waterbody impacted by the CSOs. For example, it would not be appropriate to use this approach to justify a CSO temporal recreation use or a WQS variance to address

[16] 80 FR 51021

[17] CWA section 301 specifically provides that "the discharge of any pollutant by any person shall be unlawful" except in compliance with the terms of the Act, including industrial and municipal effluent limitations specified under CWA sections 301 and 304, including "any more stringent limitation, including those necessary to meet water quality standards, treatment standards, or schedules of compliance established pursuant to any [s]tate law or regulations." 40 CFR 122.44(d)(1)(vii)(A) specifically addresses point sources and WQS by specifying that "when developing water quality-based effluent limits . . .the permitting authority shall ensure that . . .the level of water quality to be achieved by limits on point sources . . .is derived from and complies with all applicable water quality standards." (80 FR 51021).

[18] Generally, the EPA does not control pollutants from nonpoint sources directly but has influence over nonpoint sources through oversight and assistance to states. For example, in CWA section 319(h), there is a national program to control nonpoint sources of water pollution. Under this provision of the CWA, the EPA provides states with support to address nonpoint source pollution through primarily non-regulatory means, including guidance, technical assistance, and grant funding to implement state, territorial, and tribal nonpoint source programs. The EPA, National Nonpoint Source Program: A Report on Highlights of the Section 319 Program, pp. 3 & 4 (2023), https://www.epa.gov/system/files/documents/2023-02/nps_program_highlights_report-508.pdf.

water quality issues in a separate waterbody or to control a pollutant other than bacteria. This is particularly important when reviewing a WQS submission to help mitigate or avoid disproportionately burdening communities with environmental justice concerns with continued pollution by addressing pollution elsewhere and thus redistributing environmental benefits. States can also consider implementing pollutant reduction options that provide environmental benefits beyond the immediate receiving water *in addition to* the immediate receiving water and/or that provide pollutant reductions that impact the recreation use *in addition to* bacteria reductions.

HISTORY OF FACTOR 3 AND CSOS AND ITS RELEVANCE TO FUTURE DECISIONS

Prior to the issuance of this memorandum providing more holistic considerations for the EPA's review, the EPA evaluated Factor 3 in the context of CSOs and forgone benefits on a case-specific basis in two instances in Indiana. Specifically, the EPA approved Indiana's removal of the primary contact recreation uses and the replacement of those uses with CSO Wet Weather Limited Use designations for specific water bodies near two CSO communities in Indiana. Both instances were based on state public participation processes and WQS submissions to EPA that occurred during 2019 - 2021. In those instances, the EPA did not have detailed supporting documentation that more environmentally beneficial activities would, in fact, be implemented in lieu of additional CSO controls.

The EPA's work over the last several years provided the agency with important first-hand practical information and experiences to inform a comprehensive analysis of the complex policy issues regarding application of Factor 3 to CSO communities on a larger scale. As more CSO communities, nationally, near the completion of their LTCP in the coming years and decades, the EPA anticipates that the agency may receive additional requests from states to approve adopted CSO temporal recreation uses and WQS variances for CSO communities. Therefore, the EPA developed this memorandum to guide the agency in supporting states and CSO communities that are completing or near completing construction of the CSO controls in their LTCP and have been conducting PCCM. This memorandum may be useful to agency staff in communicating with states contemplating the development and adoption of a CSO temporal recreation use or WQS variance.

After further consideration of the national policy interests implicated by these issues and experience gained in case-by-case application of this regulation, as well as the importance to state and local governments of clarity and consistency in implementation of the regulation, going forward, the EPA will expect more supporting documentation than was previously provided to EPA to demonstrate, in accordance with 40 CFR 131.10(g)(3), that "[h]uman caused conditions or sources of pollution prevent the attainment of the use and . . . would cause more environmental damage to correct than to leave in place." As stated above, the EPA will be looking for adequate supporting documentation that there will be greater environmental benefits from controlling other sources of pollution than the benefits that would be achieved from additional CSO controls; and that the non-CSO control alternatives will, in fact, be implemented, prior to concluding that the "human . . . sources of pollution" (i.e., CSOs) that "prevent the attainment of the use" "*would cause more environmental damage* to correct than to leave in place" (emphasis added).

As the EPA gains additional experience with WQS requests from states on behalf of CSO communities that are completing or near completing construction of the CSO controls in their LTCP and have been

conducting PCCM, the EPA will continue to evaluate the implementation of 40 CFR 131.10(g) in the context of CSO-related designated use revisions. The EPA will consider providing further information on this issue, as needed and appropriate, in accordance with the CWA.

THE EPA REVIEW AND ADVICE FOR STATES

In reviewing a state's CSO temporal recreation use designation or WQS variance based on Factor 3, the EPA staff should determine whether the submission and supporting documentation includes an adequate scientific and technical basis to demonstrate that it "would cause more environmental damage" to eliminate or further reduce CSOs beyond the LTCP performance objectives (40 CFR 131.5(a)(7), 131.6(b), 131.6(f) and 131.10(g)) and whether the state adopted the highest attainable use or highest attainable condition. One way the EPA Regions can support states is by recommending that they prepare and provide a robust alternatives analysis addressing each of the following:

1) Non-CSO Control Alternatives and Greater Environmental Benefits

A. Non-CSO Control Alternatives – Whether the state identified and characterized the contributing non-CSO sources of bacteria and developed a comprehensive list of the specific non-CSO control alternatives that would be implemented to achieve a greater environmental benefit in the waterbody.

B. Greater Environmental Benefit – Whether the state provided sufficient documentation, with clear and measurable data informing a quantitative analysis, demonstrating that implementing non-CSO control alternatives would provide a greater environmental benefit than only eliminating or further reducing CSOs.[19]

Greater environmental benefits from non-CSO control alternatives could include greater reductions in bacteria resulting in more safe recreation days overall. For example, a state may be able to demonstrate that a community can achieve greater environmental benefits, in terms of reduced bacteria levels in the waterbody that result in increased opportunities for safe recreation,[20] by controlling certain non-CSO sources of bacteria (e.g., green infrastructure[21] in both the separate and combined parts of the collection system to address non-CSO sources of bacteria, enhanced stormwater control beyond MS4 permit requirements, septic system improvement programs, transition from septic to municipal sewer connection) compared to controlling the remaining CSOs that occur during very large storms. States may also be able to identify reductions to pollutants that impact the recreation use *in addition to* bacteria that could be achieved by implementing the non-CSO controls, such as reducing nutrients to minimize harmful algal blooms. Where the totality of such pollutant reductions results in more safe recreation days overall, implementing non-CSO control projects could achieve a greater

[19] Such analyses should consider and document the impacts of projected changes in precipitation patterns and/or sea level rise due to climate change on current and future infrastructure, including measures needed to maintain the achieved performance objectives of the LTCP as precipitation patterns change.

[20] "Safe recreation" in this context refers to being able to recreate in waters that are meeting the bacteria criteria deemed to be protective of primary contact recreation.

[21] 33 U.S.C. § 1362(27)

environmental benefit than only implementing the CSO controls. As discussed earlier, the greater environmental benefit should be related to water quality, bacteria reductions and the impact to recreation uses, and apply in the same geographic area of the same waterbody impacted by the CSO. States can also consider the environmental benefit of implementing pollutant reduction options beyond the immediate receiving water *in addition to* the immediate receiving water, as well environmental benefits of implementing non-CSO controls that would result in pollutant reductions that impact the recreation use *in addition to* bacteria reductions.

The EPA recommends the Integrated Planning Framework[22] to document, with clear and measurable data informing a quantitative analysis, the demonstration that implementing non-CSO control alternatives would provide a greater environmental benefit than only eliminating or further reducing CSOs. An Integrated Plan prepared in accordance with the EPA's *Integrated Municipal Stormwater and Wastewater Planning Approach Framework*[23] should, under Element 4 of the Integrated Planning Framework, describe projected pollutant reductions, benefits to receiving waters, and other environmental public health benefits associated with each project alternative. The analyses supporting the selection of non-CSO control alternatives in the Integrated Plan should demonstrate how the permittee expects to achieve greater environmental benefits resulting in more safe recreation days overall compared to the environmental benefits that would result from reductions that would be achieved through CSO control projects alone.

When evaluating whether implementing non-CSO control alternatives would provide a greater environmental benefit than eliminating or further reducing CSOs, states must "take into consideration the water quality standards of downstream waters and shall ensure that its water quality standards provide for the attainment and maintenance of the water quality standards for downstream waters," pursuant to 40 CFR 131.10(b). **It is also important to consider impacts to sensitive areas, described in the CSO Control Policy, when evaluating whether implementing such alternatives will provide a greater environmental benefit.** Regions should work closely with states as well as their HQ counterparts to determine which of the alternatives analyzed would provide a greater environmental benefit.

C. Length of Time to Achieve the Greater Environmental Benefits – Whether the state provided sufficient information to document the length of time that it would take to implement those non-CSO control alternatives and realize the greater environmental benefit as compared to the time it would take to implement additional CSO controls that would "correct" the human caused condition or sources of pollution. Such a timing consideration could influence an evaluation of whether there is truly a "greater environmental benefit" (e.g., if implementing additional CSO controls would take 5

[22] Guidance on Integrated Planning is available here: https://www.epa.gov/npdes/integrated-planning-municipal-stormwater-and-wastewater.

[23] CWA Section 402(s) defines an integrated plan a "a plan developed in accordance with the Integrated Municipal Stormwater and Wastewater Planning Approach Framework, issued by the Environmental Protection Agency and dated June 5, 2012." (CWA 402(s)(3)(a)(1)).

years but implementing non-CSO control alternatives would take 15 years to realize the environmental benefits, then consideration should be given as to whether implementing non-CSO control alternatives still constitutes "greater environmental benefit.")

2) ***Potential for Environmental Benefits to be Forgone*** – Whether a state provided sufficient information to document that such non-CSO control alternatives are not already required,[24] financially committed to, or otherwise in progress[25] as well as sufficient information to document that implementing such alternatives would be precluded, as a practical matter, and their environmental benefits forgone if additional CSO controls were required.

   Factor 3 specifies that a state may be able to justify a use change if it can demonstrate that human caused conditions or sources of pollution "would cause more environmental damage to correct than to leave in place." As discussed above, the interpretation described in this memo is that "more environmental damage" can mean that forgoing a greater environmental benefit would result in "more environmental damage." Therefore, the EPA Regions should advise states that, to conclude, consistent with 40 CFR 131.10(g)(3), that addressing the CSO pollution "would cause" more environmental damage to correct, their supporting documentation should demonstrate that the non-CSO control alternatives would not be implemented without the EPA's approval of the CSO temporal recreation use designation or WQS variance. Relying upon non-CSO controls that are already required, financially committed to, or otherwise in progress would not result in incrementally greater environmental benefits than the environmental benefits of additional CSO controls because such non-CSO controls are or would be implemented without regard to any WQS revision. Therefore, these non-CSO controls are not material to evaluating whether the "more environmental damage" part of Factor 3 is being met.

   One way a state could demonstrate this is by submitting, as part of the supporting documentation for the WQS revision, a letter signed by the same authority transmitting the WQS revision that provides an analysis explaining why implementing the non-CSO control alternative could not occur, as a practical matter (e.g., financial considerations, opportunity cost analysis) if the community is also required to remedy the remaining CSOs after construction of controls identified in their LTCP. This letter should include detailed information (e.g., financial data and pollutant reduction estimates) to support the conclusion. The EPA would review this information in the same manner as it would all other supporting documentation when determining whether the WQS revision is consistent with the CWA and applicable regulations.

3) ***Demonstration that the Non-CSO Control Alternatives Will, In Fact, be Implemented*** – Whether the state provided sufficient information to demonstrate that such non-CSO control

[24] A community may be able to use a WQS variance to reprioritize any activity, even those already required, to get greater environmental benefits sooner.

[25] There may be ongoing programs or initiatives that are serving to reduce non-CSO bacterial loads, but which may or may not continue into the future. Where decisions to continue such programs are made periodically based on the circumstances at that time, states may be able to demonstrate that continuing such programs would be precluded, as a practical matter, absent the designated use revision or WQS variance. The EPA would consider such demonstrations even though the programs are in progress at the time of the submission.

alternatives will, in fact, be implemented to realize the greater environmental benefit if the EPA were to approve the CSO temporal recreation use or WQS variance.

As discussed earlier in this memorandum, to demonstrate Factor 3 applies, the regulation requires a state to show that correcting the human caused condition or source of pollution *would cause more environmental damage* than leaving it in place. Specifically, a greater environmental benefit will be forgone, thus causing more environmental damage, if the non-CSO control alternatives are not implemented. Therefore, where a state is pursuing the adoption of a CSO temporal recreation use or WQS variance under 40 CFR 131.10(g) or 40 CFR 131.14(b)(1)(ii) by "demonstrat[ing]" that it has satisfied the "more environmental damage" component of Factor 3 laid out in the regulations, it would need to demonstrate that the non-CSO control alternatives will, in fact, be implemented.

When pursuing a designated use revision, one way a state may demonstrate that the non-CSO control alternatives will, in fact, be implemented is by:

(1) Adopting, as part of the WQS, the CSO temporal recreation use, associated criteria and a statement that implementing the non-CSO control alternatives specified in the supporting documentation submitted to EPA will result in protection of primary contact recreation when the waterbody is not impacted by CSO discharges (e.g., **when CSOs are discharging and up to four days after a CSO event)**; and
(2) Submitting, with the WQS revision, an NPDES permit that, under CWA section 301(b)(1)(C), would include a WQBEL[26] that would only become applicable if the EPA approves the state's CSO temporal recreation use.

A state can work with the EPA to identify the best way to submit the NPDES permit with the revised WQS submission package to demonstrate Factor 3, depending on the case-specific situation and sequencing of WQS and permitting actions. For example, a state could make this demonstration by submitting with the WQS revision a draft NPDES permit[27,28] that, under CWA section 301(b)(1)(C), includes two WQBELs for bacteria recognizing the two potential WQS scenarios that may be applicable after the EPA's action on the WQS submission. The first WQBEL would be derived from the currently applicable designated use and criteria. The second WQBEL would be derived from the CSO temporal recreation use, the associated criteria, and the statement regarding protection of primary contact recreation in the waterbody submitted to the EPA for review. The terms and conditions associated with the second WQBEL would include the non-CSO control alternatives identified in an Integrated Plan or other documentation provided to support the applicability of 40 CFR 131.10(g)(3) and the revised WQS. The draft permit would need to be clear that the second WQBEL only applies if the EPA approves the CSO temporal recreation use, associated criteria, and WQS statement that serves as the basis for the second WQBEL. In the absence of an EPA approval, the first WQBEL will

[26] In this case, to derive from and comply with the applicable WQS, the permit may need to include an enforceable permit compliance schedule to implement the non-CSO control alternatives specified in the supporting documentation submitted to EPA.
[27] In this case, draft permit means draft or proposed permit per 40 CFR 123.44(j).
[28] Any such permit incorporating non-CSO control alternatives specified in an Integrated Plan would be written in accordance with CWA sections 402(s)(3) and (4).

apply. [29] The EPA will continue to implement its oversight authority to review state issued permits consistent with 40 CFR 123.44.[30]

It is important to note that the evaluation of whether the state has demonstrated the non-CSO control alternatives will, in fact, be implemented is similar for either the adoption of a CSO temporal recreation use or WQS variance. With a WQS variance, the EPA's WQS regulation at 40 CFR 131.14 provides a built-in mechanism for states to identify a highest attainable condition that reflects the greatest bacteria reduction achievable considering both the CSO controls already implemented and the non-CSO control alternatives that will be implemented to protect primary contact recreation during non-CSO times. The WQS variance would specify the non-CSO control alternatives that will be implemented, and the time needed to implement them (i.e., the WQS variance term) to attain the highest attainable condition and realize the greater environmental benefit. In addition, 40 CFR 131.14(c) states that, "Any limitations and requirements necessary to implement the WQS variance shall be included as enforceable conditions of the NPDES permit for the permittee(s) subject to the WQS variance." Therefore, where non-CSO control alternatives to realize the greater environmental benefits are included in the WQS variance, they would be part of the applicable WQS, once the WQS is approved, and must be incorporated in the relevant NPDES permit. Thus, identifying the specific non-CSO control alternatives to be implemented in the WQS variance would likely satisfy the need to provide sufficient information to demonstrate that such alternative activities will, in fact, be implemented once the WQS variance was approved, as discussed above.

TRIENNIAL REVIEWS AND WQS VARIANCE REEVALUATIONS

40 CFR 131.20(a) requires a state to re-examine waters with designated uses that do not include CWA section 101(a)(2) uses, such as a CSO temporal recreation use, during each triennial review to determine whether new information has become available and, if so, whether such new information indicates the CWA section 101(a)(2) use (e.g., primary contact recreation designated use) is attainable.[31] Therefore, states must re-examine any waterbody segment designated for CSO temporal recreation uses as well as any CSO-related WQS variance, consistent with 40 CFR 131.20(a) to determine whether any new information has become available to indicate that a primary contact recreation use is attainable at all times. If new information indicates that the primary contact recreation use is attainable at all times, the state shall revise its standards accordingly (40 CFR 131.20(a)). To guide states in this review, the EPA should also recommend states review the following

[29] If a state issues a final permit that substantially differs from the draft permit the EPA reviewed, such as by modifying or removing WQBELs included in the draft permit, the EPA would have administrative recourse to object to the final permit (40 CFR 123.44(c)(3) & (j)).

[30] 40 CFR 123.44 describes the regulations for the EPA review of and objections to State permits. 40 CFR 123.44(j) specifically describes the EPA's authority to review draft permits (pre-public comment) rather than proposed permits (post public comment). In such a case, a proposed permit need not be prepared by the State and transmitted to the EPA for review unless the State proposes to issue a permit which differs from the draft permit reviewed by the EPA, the EPA has objected to the draft permit, or there are significant public comments.

[31] Note that the EPA's requirement at 40 CFR 131.20(a) to conduct a triennial review applies to all WQS, including WQS variances.

where the adoption of a CSO temporal recreational use or WQS variance is based on the Factor 3 approach described in this memorandum:

1. whether the specified non-CSO control alternatives were implemented as scheduled,
2. the extent to which the greater environmental benefits have been realized, and
3. whether any newly available information indicates that non-CSO sources of bacteria have been controlled to a level such that implementing additional CSO controls would provide the greater environmental benefit.

The state should submit the results of this evaluation to the EPA along with the results of the triennial review.[32] The CWA makes clear that each state's fulfillment of their triennial review responsibilities is an integral part of the section 303(c) program. However, it is important to note that where states do not conduct the triennial review or do not make any revisions where new information indicates that revisions are needed consistent with 40 CFR 131.20(a), the public may petition the EPA to determine if new or revised federally promulgated WQS are necessary per CWA section 303(c)(4)(B) and 40 CFR 131.22(b).

The EPA's regulation at 40 CFR 131.14(b)(1)(v) requires states to also conduct a reevaluation for WQS variances longer than 5 years, such as a CSO-related WQS variance. States must use all existing and readily available information and submit the results of this reevaluation to the EPA within 30 days of completion. When adopting a WQS variance for CSO-impacted waters using the approach described in this memorandum, the state must acquire and use updated information, including public input, to evaluate whether the WQS variance continues to achieve a greater environmental benefit than controlling the remaining CSOs. If a state does not conduct its reevaluation consistent with the applicable schedule, the WQS variance will no longer be applicable until the reevaluation is completed and the results are submitted to the EPA.

To ensure timely re-examinations of CSO temporal recreation uses and WQS variance reevaluations, consistent with 40 CFR 131.20(a) and 131.14(b)(1)(v), states should work with stakeholders in the affected watershed to establish a sampling and analysis plan as well as a reporting plan so that data will be available to them to support future triennial reviews (e.g., ambient data to support future WQS decisions) and WQS variance reevaluations.

CONCLUSION

This memorandum provides critical information states could submit to EPA to justify the adoption of a CSO temporal recreation use or a WQS variance for a CSO-impacted waterbody to demonstrate that implementing non-CSO control alternatives would result in a greater environmental benefit, but would be precluded, as a practical matter, if the community were required to implement additional CSO controls. As mentioned earlier, adopting a temporal recreation use or WQS variance for CSO-impacted waters, when adopted consistent with the regulation, would allow a state and the community to holistically consider, identify, and commit to addressing sources of bacteria other than CSO discharges

[32] 40 CFR 131.14(b)(1) requires a separate reevaluation for WQS variances longer than 5 years to be conducted no less frequently than once every 5 years (as specified in the state regulations) that can inform triennial reviews.

to continue to improve water quality, provide opportunities for safe recreation and achieve a greater health benefit to the public. These actions will help move the nation's waters further towards the CWA objectives.

If you have any questions about this memorandum, please do not hesitate to contact me, Sara Hisel-McCoy, or Ed Dunne in my office. If you need support with a state's interest in Factor 3, please feel free to contact me, Corey Buffo or SHPD's regional WQS liaisons.

cc. Bruno Pigott, OW
Stacey Geis, OECA
Steve Neugeboren, OGC, Water Law Office
Andrew Sawyer, OW, Office of Wastewater Management
WQS Branch Chiefs, Regions 1-10
WQS Section Chiefs, Regions 1-10
Regional WQS Coordinators, Regions 1-10