

MICHIGAN—OZONE (1-HOUR STANDARD)

Designated areas	Designation		Classification	
	Date ¹	Type	Date ¹	Type
* * *	*	*	*	*
Flint Area:				
Genesee County	January 16, 2001	Attainment.		
* * *	*	*	*	*
Saginaw-Bay City-Midland Area:				
Bay County	January 16, 2001	Attainment.		
Midland County	January 16, 2001	Attainment.		
Saginaw County	January 16, 2001	Attainment.		
* * *	*	*	*	*

¹ This date is October 18, 2000, unless otherwise noted.

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 132

[FRL-6898-7]

RIN 2040-AD32

Final Rule To Amend the Final Water Quality Guidance for the Great Lakes System To Prohibit Mixing Zones for Bioaccumulative Chemicals of Concern

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: Today EPA is promulgating the final rule to amend the Final Water Quality Guidance for the Great Lakes System (Guidance) to prohibit mixing zones for bioaccumulative chemicals of concern (BCCs) in the Great Lakes System, subject to certain exceptions for existing discharges. For existing discharges, the regulation prohibits mixing zones for BCCs starting 10 years after the publication date of the final BCC mixing zone rule. New discharges of BCCs are subject to the mixing zone prohibition immediately upon commencing discharge. EPA had promulgated a mixing zone provision similar to this regulation on March 23, 1995, as part of the Guidance required by section 118(c)(2) of the Clean Water Act. The provision was vacated by the U.S. Court of Appeals for the District of Columbia Circuit in the case of *American Iron & Steel Institute v. EPA*, 115 F.3d 979 (D.C. Cir. 1997), and was remanded to the Agency for further consideration. In response to the Court's remand, EPA published a proposal on

October 4, 1999, to amend the Guidance to reinstate the provision to prohibit mixing zones for BCCs (64 FR 53632). EPA received many comments from stakeholders throughout the United States on its proposal to prohibit mixing zones for BCCs in the Great Lakes Basin. This final rule reflects EPA's reconsideration of the factual record in response to the Court's remand and public comments received on its proposal.

EFFECTIVE DATE: December 13, 2000.

ADDRESSES: The public docket for this rulemaking, including the proposed rule, economic analysis, and other supporting documents, are available for inspection and copying at U.S. EPA Region 5, 77 West Jackson Blvd., Chicago, IL 60604, by appointment only. Appointments may be made by calling Mary Willis Jackson at (312) 886-3717.

FOR FURTHER INFORMATION CONTACT: Mark Morris (4301), U.S. EPA, Ariel Rios Building, 1200 Pennsylvania Avenue, NW., Washington, DC 20460 (202-260-0312).

SUPPLEMENTARY INFORMATION:

Potentially Affected Entities

Entities potentially affected by today's action are those discharging or intending to discharge BCCs to waters of the United States in the Great Lakes System. Categories and entities that may ultimately be affected include the following:

Category	Examples of potentially affected entities
Industry	Industries discharging or intending to discharge BCCs to waters in the Great Lakes System as defined in 40 CFR 132.2.

Category	Examples of potentially affected entities
Municipalities ...	Publicly owned treatment works discharging or intending to discharge BCCs to waters of the Great Lakes System as defined in 40 CFR 132.2

This table is not intended to be exhaustive, but rather is presented to provide a guide for readers regarding regulated entities likely to be affected by this action. Listed in the table are the types of entities that EPA is now aware could potentially be affected by this action. Other types of entities not listed in the table also could be affected. To determine whether your facility is affected by this action, you should examine carefully the definition of "Great Lakes System" in 40 CFR 132.2 and examine the preamble to 40 CFR part 132, which describes the part 132 regulations. If you have any questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding section titled **FOR FURTHER INFORMATION CONTACT**.

I. Legal Authority

This regulation is promulgated under the authority of sections 118, 301, 303, 402, and 501 of the Clean Water Act (CWA).

II. Introduction

Section 118(c)(2) of the CWA, as amended by the Great Lakes Critical Programs Act of 1990, required EPA to publish proposed and final water quality guidance on minimum water quality standards, antidegradation policies, and implementation procedures for the Great Lakes System. On March 23, 1995, EPA published a final rule entitled "Final Water Quality Guidance for the Great Lakes System" (Guidance) in order to satisfy this

requirement. See 60 FR 15366. The 1995 Guidance included ambient water quality criteria for 29 pollutants, including BCCs, that reflect the maximum ambient concentrations of those pollutants that could be present in waters of the Great Lakes Basin without impairing aquatic life, wildlife, or human health. The 1995 Guidance also included implementation procedures that Great Lakes States and Tribes are to use to prepare total maximum daily load (TMDL) analyses and to develop water quality-based effluent limits (WQBELs) for facilities discharging these pollutants. See 40 CFR part 132.

The Great Lakes States are the States of Illinois, Indiana, Michigan, Minnesota, Ohio, New York, Pennsylvania, and Wisconsin. The Great Lakes Tribes are those Tribes as defined in 40 CFR 132.2. Great Lakes Tribes consist of any Tribe within the Great Lakes Basin for which EPA has approved water quality standards under section 303 or that EPA has authorized to administer a National Pollutant Discharge Elimination System (NPDES) program under section 402 of the CWA.

Among the implementation procedures in the 1995 Guidance was procedure 3.C in appendix F. Under this procedure, NPDES permits would have been prohibited from including mixing zones in the calculation of water quality-based effluent limits for new discharges of BCCs after March 23, 1997, or for existing discharges of BCCs after March 23, 2007. EPA also codified exceptions for existing discharges to account for water conservation and technical and economic considerations.

Great Lakes States and Tribes were required to adopt water quality standards, antidegradation policies, and implementation procedures consistent with the criteria methodologies, policies, and implementation procedures specified in the 1995 Guidance by March 23, 1997, and to submit them to EPA for approval or disapproval. See 40 CFR 132.5. In the event EPA disapproves all or part of a State's or Tribe's submission, EPA would publish a final rule identifying the provisions of part 132 that shall apply to discharges in that State or Tribal reservation. See 40 CFR 132.5(f)(2).

The 1995 Guidance was challenged in the U.S. Court of Appeals for the District of Columbia Circuit. On June 6, 1997, the Court issued a decision upholding virtually all of the provisions contained in the 1995 Guidance (*American Iron and Steel Institute, et al. v. EPA*, 115 F.3d 979 (D.C. Cir. 1997)); however, the Court vacated the provisions of the Guidance that would have eliminated

mixing zones for BCCs (115 F.3d at 985). The Court held that EPA had "failed to address whether the measure is cost-justified," and remanded the provision to EPA for an opportunity to address this issue (115 F.3d at 997). In response to the Court's remand, EPA re-examined the factual record, including its cost analyses, and published the Proposal to Amend the Final Water Quality Guidance for the Great Lakes System to Prohibit Mixing Zones for Bioaccumulative Chemicals of Concern in the **Federal Register** on October 4, 1999 (64 FR 53632). EPA received numerous comments, data, and information from commenters in response to the proposal.

After reviewing and analyzing the information in the rulemaking record, including those comments, EPA has developed the Final Rule to Amend the Final Water Quality Guidance for the Great Lakes System to Prohibit Mixing Zones for Bioaccumulative Chemicals of Concern, to be codified in appendix F, procedure 3.C of 40 CFR part 132. This preamble describes the background and purpose of this final rule, briefly summarizes the rule's major provisions, and summarizes the major issues in the public comments received on the proposal and EPA's responses to them. A detailed discussion of EPA's analysis of comments and issues, as well as its reasons for issuing the final rule to prohibit mixing zones for BCCs in the Great Lakes Basin, are provided in additional technical and supporting documents, which are available in the docket for this rulemaking. Copies of the supporting documents also are available from EPA in electronic format (see section VIII of this preamble). For a detailed discussion of the rule's major provisions, please see the preamble to the proposed rule.

III. Summary of the Final Regulation

Today, EPA is promulgating the final rule to amend 40 CFR part 132, appendix F, procedure 3, to reinstate the mixing zone provisions for BCCs. A mixing zone is the area beyond a point source outfall (e.g., a pipe) in which concentrations of a particular pollutant from a wastewater discharge mix with receiving waters. The water is allowed to exceed the water quality criterion for that pollutant within the mixing zone. Behind the theory of using mixing zones is the belief that by mixing with the receiving waters within the zone, the discharge will become sufficiently diluted to meet applicable water quality criteria beyond the borders of that zone.

Today's rulemaking prohibits or, for existing discharges, phases out mixing zones for BCCs in the Great Lakes

System subject to certain exceptions. This means that NPDES permit limitations for BCCs discharged to the Great Lakes System must be set no higher than water quality criteria. Under today's rule, the phase-out of mixing zones is to occur, in most cases, by November 15, 2010. EPA believes this is a reasonable time frame because five out of the eight Great Lakes States have similar State-adopted BCC mixing zone provisions and the remaining three States have been aware since 1997 of EPA's intention to reinstate this provision. See 63 FR 20107 (April 23, 1998). In addition, EPA has not chosen to reduce the phase-out period to less than 10 years (the time frame originally promulgated in the 1995 Guidance), to allow affected dischargers the same time (approximately 10 years) they would have had under the original BCC mixing zone provision.

Under this amendment to Part 132, the mixing zone prohibition would be limited to BCCs—the pollutants of primary concern in the Great Lakes System. EPA's regulations applicable to the Great Lakes System define a BCC, in essence, as any chemical that (1) accumulates in aquatic organisms by a human health bioaccumulation factor (BAF) greater than 1000 (after considering various specified factors), and (2) has the potential upon entering surface waters to cause adverse effects, either by itself or in the form of its toxic transformation product, as a result of that accumulation. See 40 CFR 132.2. The table below lists the BCCs subject to today's rule.

BIOACCUMULATIVE CHEMICALS OF CONCERN (BCCs)

Lindane	Mirex
Hexachlorocyclohexane (BHC)	Hexachlorobenzene
alpha-Hexachlorocyclohexane	Chlordane
beta-Hexachlorocyclohexane	DDD
delta-Hexachlorocyclohexane	DDT
Hexachlorobutadiene	DDE
Photomirex	Octachlorostyrene
1,2,4,5-Tetrachlorobenzene	PCBs
Toxaphene	2,3,7,8-TCDD
Pentachlorobenzene	Mercury
1,2,3,4-Tetrachlorobenzene	Dieldrin

There are two components of this rule. First, today's rule prohibits the establishment of mixing zones for new discharges of BCCs to the Great Lakes

System. This prohibition takes effect as soon as EPA has approved the State's or Tribe's submission with respect to this prohibition or publishes a notice identifying that prohibition as applying within the State's or Tribe's jurisdiction. The definition of "new discharge" can be found at procedure 3.C.2 of today's rule. All other discharges of BCCs are defined as existing discharges.

Second, this regulation prohibits mixing zones for existing discharges of BCCs after November 15, 2010, subject to two exceptions: (1) promotion of water conservation; and (2) technical and economic considerations. EPA recognizes that, as a result of water conservation measures, concentrations of a BCC in an effluent may increase slightly, while the mass of the BCC being discharged does not. Therefore, the first exception would allow States and Tribes to grant mixing zones for any existing discharge of BCCs even after November 15, 2010 in cases in which it can be demonstrated that failure to grant a mixing zone would preclude water conservation measures that would lead to overall load reductions in BCCs, even though higher concentrations of BCCs may occur in the effluent. This mixing zone exception is virtually identical to the provision promulgated in 1995.

Regarding the exception for technical and economic considerations, a State or Tribe could authorize a mixing zone for existing discharges of BCCs after November 15, 2010 if the State or Tribe determines that (a) the discharger complies with all applicable requirements of CWA sections 118, 301, 302, 303, 304, 306, 307, 401, and 402 (including existing NPDES water quality-based effluent limitations) for the BCC for which the mixing zone is requested, and (b) the discharger has reduced and will continue to reduce—to the maximum extent possible—its discharge of the BCC for which the mixing zone is requested. This exception would not be available if cost-effective pollution prevention and/or other control and treatment strategies exist that make it technically feasible for the discharger to achieve the applicable water quality criteria at the point of discharge, and if the discharger, or affected community or communities, will not suffer unreasonable economic effects in implementing such strategies.

EPA has modified the technical and economic feasibility provision from the 1995 Guidance to clarify the importance of implementing only those control strategies determined to be cost-effective. EPA expects that exceptions to the BCC mixing zone provision will be granted solely at the discretion of the State or Tribe on a case-by-case basis.

See procedure 3.C.5 and 6 for more information on exceptions to the provisions contained herein. EPA received no comments concerning any aspects of either exception as proposed.

To date, the States of Illinois, Indiana, Minnesota, Michigan, and Wisconsin have adopted and submitted to EPA requirements to eliminate or, for existing discharges, to phase out mixing zones for BCCs. If these requirements are retained by the five States, and if EPA determines that they are as protective as today's final rule, EPA will approve those submissions under the procedures set forth in 40 CFR 132.5(f). Any Great Lakes State or Tribe that has not adopted BCC mixing zone provisions as protective as those in today's rule (e.g., New York, Ohio, Pennsylvania) will need to adopt such provisions and submit them to EPA for approval or disapproval pursuant to 40 CFR 132.5 by May 13, 2002, see 40 CFR 132.5(a) and (c) (as amended by today's rule.). If a Great Lakes State or Tribe fails to submit such provisions, or if EPA disapproves the submission, EPA, after giving the State or Tribe an opportunity to make necessary changes, will publish a final rule no later than November 13, 2002 identifying the provisions of today's rule that shall apply to discharges within that State's or Tribe's jurisdiction. See 40 CFR 132.5(c), (d) and (f).

IV. Comments on the Proposed Regulation

EPA solicited comments on the intended amendment in the "Proposal to Amend the Final Water Quality Guidance for the Great Lakes System to Prohibit Mixing Zones for Bioaccumulative Chemicals of Concern," which was published in the **Federal Register** on October 4, 1999 (64 FR 53632). The following sections summarize comments received and EPA's responses.

A. Support for the Regulation

Some commenters on the proposal of this rule support the elimination of mixing zones for BCCs in the Great Lakes System. The majority of these comments address issues such as (1) the consistency between the final rule, the goals of the CWA, and the goals of the Great Lakes Water Quality Agreement (GLWQA), (2) the inappropriateness of mixing zones for BCCs due to BCCs' persistence in the environment, and (3) the adverse health effects BCCs impose on fish and other aquatic organisms, wildlife, and humans. Commenters also urged EPA to extend the proposed rule so that it encompasses other national waters, to apply the prohibition to

chemicals other than BCCs, and to include chemicals with BAFs lower than the current 1000 cutoff that was established in the 1995 Guidance. These issues and requests are discussed throughout the remainder of this section.

Phasing out existing mixing zones for BCCs and prohibiting new mixing zones for BCCs will ensure that the 1995 Guidance achieves the goals of the CWA and the objectives of the GLWQA, which is an international agreement between the United States and Canada to restore and maintain the environmental integrity of the Great Lakes ecosystem. Several commenters pointed out that today's rule is an important and necessary step toward achieving the GLWQA's goals to virtually eliminate persistent and bioaccumulative toxics (Article II.a) and to reduce mixing zones to the maximum extent possible (Article IV.f). EPA acknowledges the consistency between today's rulemaking and the objectives of the GLWQA and is promulgating this amendment in an effort to conform to goals that work toward mending and upholding the integrity of the Great Lakes System.

As part of this effort, EPA has judged that mixing zones for BCCs (even of the limited size already authorized by 40 CFR part 132 under certain conditions) for existing discharges should be prohibited to the greatest extent technically and economically possible. A large number of scientists, policy makers, and other stakeholders in the Great Lakes and Canada agree on the need to virtually eliminate BCCs from the Great Lakes Basin and to reduce the size of BCC mixing zones to the maximum extent possible. This is because BCCs, due to their persistent and bioaccumulative nature, are incompatible with mixing zones. By definition, BCCs are chemicals that do not degrade over time. These chemicals accumulate in organisms living in the water and become more concentrated as they move up the food chain—from biota to fish and wildlife to humans. Because the effects of these chemicals are not mitigated by dilution, using a mixing zone to "dilute" BCC discharges is not appropriate. Commenters pointed out that dilution and dispersion are inadequate substitutes for removing and treating the BCCs before they are discharged to the Great Lakes' waters. EPA agrees with these commenters because it is the mass of BCCs that poses a problem, not just the concentration. Because dioxins, mercury, polychlorinated biphenyls (PCBs) and other BCCs degrade over long periods of time or do not degrade at all, their

buildup in pockets of sediments creates "hot spots" in the environment in which bioaccumulation of toxics in fish and other aquatic organisms can occur at levels that significantly exceed safe levels for consumption by wildlife and humans. The 1995 Guidance required a minimum 10:1 dilution ratio for lake discharges and 25 percent of the critical stream flow for tributary discharges in calculating mixing zones for all pollutants, including BCCs. See 40 CFR part 132, appendix F, procedure 3.D and 3.E. Larger mixing zones also are allowed if a particular demonstration is performed. See 40 CFR part 132, appendix F, procedure 3.F. Thus, with the currently allowable dilution, the mass of BCCs discharged from point sources to the Great Lakes System could be reduced significantly—by a factor of 10 to 100 in certain circumstances—when mixing zones for BCCs are prohibited.

Commenters on EPA's proposal support today's rule because of its ability to help decrease the amount of BCCs to which fish, wildlife, and humans are exposed. The commenters recognize the adverse effects BCCs have on human health and wildlife and that even small concentrations can increase the risks of cancer, organ failure, and a host of other maladies. One commenter noted that contaminating any waterbody with persistent toxic substances that accumulate in the food chain is never rational. Furthermore, it should not be justifiable public policy.

Because the food web that accumulates BCCs can be concentrated in tributaries, bays, and other areas where natural sinks exist—and where fish species are more diverse and productive—the elimination of mixing zones will reduce the probability of adverse effects on these organisms and those that consume them. Fewer pollutants entering the waters will reduce the detrimental effects already discovered in various fish species and wildlife.

In aquatic organisms, effects of BCCs range from death to impairment of reproduction, development, and growth (Sweeney et al., 1993). In wildlife, birds exposed to BCCs have exhibited biochemical dysfunction and metabolic effects, behavioral/neurological disorders, and reproductive impairment (Elliott et al., 1996).

For humans, as is true for wildlife, the main route of exposure to BCCs is through the consumption of Great Lakes fish, which have "uptaken" and retained the pollutants from their surrounding environment and food. Potential adverse human health effects resulting from the consumption of

contaminated fish include both the increased risk of cancer and the potential for systemic or noncancer risks such as kidney damage (U.S. EPA, 1997). As affirmed by commenters who support today's rule, women who are pregnant and children, in particular, are at risk for being adversely affected by BCCs (U.S. EPA, 1997). BCCs can induce inheritable chromosomal changes in women that could result in birth defects in their infants, cross the human placenta contributing to exposure of the fetus through placental transfer, and accumulate in body tissues. Exposure to BCCs can result in decreased fertility, premature labor, spontaneous abortion, reproductive hormone disorders, increased stillbirths, lack of mammary function, reduced libido, and delayed estrus.

Children may be at greater risk than adults. Because BCCs can accumulate in human milk, women exposed to the pollutants who breastfeed could potentially pass the chemicals on to their infants. Risks to infants and children include central nervous system effects, mortality, low IQ scores, cataracts, congestive heart failure, skin disorders, cancers, immune system dysfunction and immunosuppression, skeletal disorders, neurological/behavioral effects, and endocrinological disorders.

In addition to supporting EPA in its rationale behind the rule, as summarized in the above paragraphs, many commenters strongly advised EPA to expand the proposed rule so that the regulations apply nationwide, not just for the Great Lakes System, and that the BCC mixing zone phase-out should cover chemicals other than BCCs. One commenter noted that, although lakes lend themselves to the most easily quantifiable demonstration of risk to a particular subpopulation, the discharge of BCCs into moving waterbodies is no less problematic. EPA, under a separate undertaking, is evaluating whether mixing zones for BCCs should be prohibited in other national waters and for chemicals other than BCCs.

Commenters also urged EPA to propose an amendment that would address chemicals with a BAF that falls short of the cutoff established by the Guidance. These commenters claimed that the risks to wildlife and humans from chemicals with lower BAFs might be just as severe as those chemicals with BAFs of greater than 1000, particularly when wildlife and humans are exposed to a mix of chemicals found within fish. In response, EPA believes that the current BAFs are sufficient to protect water quality and human health. The Agency wishes to point out, however,

that 40 CFR 132.1(d) provides that the methodologies for establishing BAFs and criteria for pollutants, including BCCs, will be evaluated and revised, as appropriate, every three years.

In summary, these commenters stated their support for today's rule. Although some hope to see an extension of the mixing zone prohibition, many were satisfied with the step forward that this rule is making in helping to meet the objectives of the CWA.

B. Benefits Associated With Phase-out and Elimination of Mixing Zones for BCCs

A few commenters asserted that the proposed rule contained no evidence or documentation that restrictions on NPDES dischargers would produce any measurable change in the levels of BCCs in water, sediment, or fish tissue. Others claimed that the proposal would yield no benefits because five of the Great Lakes States have already adopted a similar prohibition on BCC mixing zones and, to date, no mixing zone credit exists for cases in which water quality exceeds applicable water quality standards. One commenter estimated that annual benefits of the proposal would amount to no more than \$1.3 to \$4.1 million.

EPA disagrees with these claims. EPA believes that the mixing zone prohibition is necessary to protect the integrity of the Great Lakes and that its benefits derive from the minimization or avoidance of the adverse effects summarized in the preceding section. The Court that struck down an earlier version of this regulation noted that EPA had adequately explained the environmental importance of eliminating mixing zones for BCCs. In addition, numerous scientists, policy makers, and other stakeholders in the United States and Canada are urging EPA to reduce the size of BCC mixing zones to the maximum extent possible, which would be a step forward in trying to virtually eliminate BCCs from the Great Lakes Basin as called for by the GLWQA.

Because BCCs are harmful to the environment, any discharge of BCCs—even those discharges that are equivalent to the applicable water quality criteria—have the potential to impair the integrity of the receiving waterbody. Using mixing zones to increase the amount of allowable discharge exacerbates this situation because the effects of BCCs are not limited to the short term, or localized zone of initial dilution, meaning that adverse effects could occur far outside the mixing zone and long after the BCC discharge occurred.

Since point sources affect waterbodies and, hence, fish tissue on a site-specific basis, removing fish advisories and restoring waters requires a reduction in the mass of BCCs that accumulate in depositional areas of the Great Lakes. The bottom levels of the food web biomagnify BCCs that concentrate in these sinks, affecting the higher levels of species that tend to be more productive in these areas. Prohibiting mixing zones for BCCs in the Great Lakes System can reduce the natural sink masses below point source discharges by a factor of 10 to 100 in some circumstances.

EPA reiterates that one of the primary purposes of the 1995 Guidance and, by extension, today's rule is to promote pollution prevention. Approximately one-third of the more than 360 hazardous pollutants in the Great Lakes System could have acute or chronic toxic effects on aquatic life, wildlife, and human health. Had the Guidance's framework been in place 30 years ago when the effects of PCBs from point source discharges began to emerge, States could have moved quickly to control these pollutants, avoiding millions of dollars in cleanup costs, human health impacts, and other environmental damage. Prompted by today's rule, dischargers can use pollutant minimization to control pollutants before new water quality problems arise. With low concentrations of new chemicals being introduced into the environment every year, it would be prudent to try to avoid future cleanup costs now.

Although EPA was not able to quantify all of these benefits in its analysis of the final Guidance as promulgated in March 1995, the Agency believes today's rule is an integral part of the framework created by the Guidance for the type of preventative measures mentioned above. EPA believes that these and other benefits derived from the Guidance and today's rule are indeed significant and, further, draws attention to the potential high costs of future cleanup that, without the help of the BCC mixing zone prohibition, may someday need to be addressed.

Some commenters asserted that the proposed rule would yield no benefits because some Great Lakes States have already adopted a similar prohibition on BCC mixing zones (e.g., Indiana). EPA observes that these commenters do not make the corresponding argument that the rule has no costs in those States. As noted above, the benefits and costs of the rule are directly linked to reducing the mass loading of BCCs to the waterbody. EPA has chosen to assess costs and benefits in these States

because EPA would be required to impose these measures through a Federal promulgation if those Great Lakes States withdraw or fail to submit such voluntarily adopted measures.

As for the claim that the annual benefits of the prohibition will be between \$1.3 million and \$4.1 million, EPA believes that this is an understatement and was made based on a misconception of the methodology EPA used in the Guidance. When EPA developed the 1995 Guidance, EPA did not estimate benefits for the entire Great Lakes Basin; rather, EPA estimated values for three case-study areas only. An extrapolation to the whole Great Lakes Basin from this small number of case studies, as the commenter has done, is inappropriate because EPA was able to estimate basinwide benefits for one benefit category only, and was not able to quantify all categories of benefits even for the three case-study areas (for example, there is no methodology for monetizing noncancer health effects from pollutants like mercury). Nor was EPA able to account for avoided future contamination and cleanup in its analysis of benefits. EPA believes that any disparity between the environmental justification for today's rule (which the Court found to be adequately explained) and estimates of monetary benefits is the result of not being able to account for all potential benefits in dollar values.

C. Source Controls, Pollution Prevention, and Waste Minimization

A number of commenters expressed the opinion that EPA, in its proposal, failed to support its statement that dischargers can comply with the prohibition through product substitution, cleaner technologies, and source controls. These commenters believe that it is unlikely that many publicly-owned treatment works (POTWs) would be able to achieve additional pollutant reductions through source controls alone, particularly for mercury. Some commenters also asserted that EPA did not evaluate the cost impacts on indirect dischargers.

EPA disagrees with these comments. The record shows that it will be technically and economically feasible for many dischargers, including POTWs, to phase out mixing zones for BCCs during the 10-year phase out period. Although EPA acknowledges that at present it may be difficult to identify potential sources of pollutants within POTW service areas, as analytical methods continue to improve, so should the POTWs' abilities to identify and control sources of BCCs and to educate the public on how to prevent pollution

by avoiding household products that contain high levels of BCCs or substituting for those products ones that are BCC-free or more environmentally friendly. As discussed below, EPA also considered the cost impact on indirect dischargers.

Even though many facilities may face challenges in achieving effluent limitations derived from Great Lakes standards for mercury, EPA's record shows that when facilities try to control mercury they have been able to achieve significant reductions in their discharge levels. As described in more detail below, in many cases these reductions have been attained by source control, not end-of-pipe treatment. These approaches succeed for other BCCs as well. Less costly than end-of-pipe treatment, source controls have included efforts to control more diffuse sources of BCCs, such as households using lindane-containing products and have resulted in substantial increases in the percentages of BCC removals (U.S. EPA, 1999).

One commenter argued that all POTWs will have a hard time meeting effluent limits for mercury unless a mixing zone is allowed. The two primary reasons for this belief are (1) that POTWs currently have high concentrations of mercury in influents from domestic sources alone (according to the commenter an approximate median of 110 ppt), and (2) that pollution prevention is cost-effective for industrial users only. The conclusion reached by this commenter, then, is that end-of-pipe treatment would need to be added if stringent limitations based on mercury water quality criteria (1.3 ng/L) are to be met. EPA believes that both of the reasons given overstate the issue and that the conclusion is based on an incorrect premise. EPA acknowledges that many POTWs have high concentrations of mercury in their influent and agrees that these high levels need to be significantly reduced if POTWs are to meet the stringent effluent limits contemplated by today's rule. The mere fact that high mercury concentrations exist, however, does not mean that they cannot be controlled at the source, prior to the time they arrive at the POTW. Indeed, EPA's record shows that source controls, pollution prevention, and waste minimization often are far more efficient and cost effective than end-of-pipe treatment for mercury. EPA does not agree that cost-effective opportunities typically occur for POTWs only when there are industrial sources with high loading rates. EPA acknowledges that if the great majority of mercury in a POTW's influent is derived from one or two

sources, obviously it would be easier and more cost-effective to control those sources than it would be to control other, more diverse sources.

Nonindustrial sources, however, such as dental and medical facilities, often discharge high concentrations of mercury. These sources are usually classified as "domestic" rather than "industrial" discharges. In those few cases in which POTWs have seriously attempted to reduce mercury from domestic sources, significant measures of success from control of commercial facilities in "domestic" wastewater have been achieved. While dental and medical facilities tend to be more widely distributed than "industrial" facilities, reductions in discharges can be organized through a variety of programs that include campaigns directed toward dental and medical practices and public education. In some cases, dental and medical offices are required to remove mercury prior to discharging to sewers. The bottom line is that the treatment of more concentrated wastestreams at the source or pollution prevention at the source is more likely to be cost-effective than treating diluted wastestreams at the POTW.

EPA understands that the control of mercury from "domestic" sources would entail costs on the part of the POTW, but such costs are likely to be considerably smaller than those required for end-of-pipe treatment. In sum, the most cost-effective way in which POTWs can substantially reduce mercury discharges thus appears to be pollution prevention and waste minimization. These programs can focus on high concentration high volume industrial discharges to the collection system as well as high concentration low volume discharges, such as those coming from medical and dental facilities. As evidence, EPA provides the example of the Western Lake Superior Sanitary District (WLSSD), which, after evaluating the costs involved in meeting more stringent water quality-based effluent limits for mercury with end-of-pipe treatment, concluded that pollution prevention techniques were the preferable control strategy. As of 1996, WLSSD had successfully reduced mercury concentrations at the wastewater treatment plant by more than 74% from 1990 dry sludge levels (from 4.50 ppm to 1.15 ppm) and by more than 97% from 1990 effluent levels (from 0.58 ppb to 0.015 ppb), which brought WLSSD well into compliance with its existing WQBEL. Additional examples of source control programs can be found in Overview of

P2 Approaches at POTWs, Draft, Office of Science and Technology, March (U.S. EPA, 1999). EPA believes that facilities like WLSSD, with the use of super clean analytical methods to better identify and characterize sources of mercury, will be able to advance their pollution prevention efforts to further reduce the levels of mercury in their sludge and effluent as mixing zones are phased out over the next 10 years.

Further, EPA believes that recent data submitted by the Association of Metropolitan Sewerage Agencies (AMSA) support EPA's position that product substitution, cleaner technologies, and source controls are the most efficient and cost-effective means of reducing BCCs. These data indicate that POTWs are achieving, on average, about 97 percent removal of mercury from their influent with an average effluent discharge concentration of about 9 parts per trillion (ppt or ng/L). Wastewater from industrial and commercial establishments, however, such as hospitals, medical waste incinerators, industrial laundries, medical/dental/clinical laboratories, dental offices, and others, can be discharged directly to the POTW's wastewater collection system virtually unregulated at concentrations that exceed 1 million ppt. Indeed, AMSA's data indicate that influent mercury concentrations at the headworks of POTWs range from 50 ppt to 1300 ppt.

What this means is that POTWs are channeling a significant amount of mercury into their sludge (approximately 30 to 40 tons nationally), which results in a release of chemicals into the environment when the sludge is disposed of through incineration or land-application practices. EPA estimates that between 0.6 and 1.9 tons of mercury are emitted each year from sewage sludge incinerators in the vicinity of the Great Lakes Basin. In essence, pollutants are merely being transferred from one medium to another. Therefore, EPA believes that the solution to controlling mercury releases to the environment is not to change the medium from the POTW's influent to its sludge and effluent, but to either prevent mercury from entering the wastewater collection system at the source through product substitution, waste minimization, or process modification, or by removing and recycling mercury at the source (i.e., employing source controls) using state-of-the-art technology. Such cost-effective source controls, which will prevent additional environmental releases, provide an auxiliary environmental benefit to today's rulemaking.

In conclusion, pollution prevention (including product substitution by households), waste minimization, and source controls for high concentration low volume industrial and commercial discharges (as well as high concentration high volume discharges) to the POTW's collection system, are the most cost-effective approaches to reducing overall environmental releases to water, as well as to air and land. At facilities in which these approaches have been implemented, substantial reductions in BCC concentrations, including mercury concentrations in POTW influents, sludges, and effluents, have been achieved. Where these reductions are insufficient to meet WQBELs, POTWs can seek an exception to the mixing zone prohibition. A condition for eligibility is that the facility has and will continue to implement controls or pollution prevention measures to reduce or ultimately eliminate the BCC. Thus, aggressive pollution prevention efforts may well achieve the necessary reductions to meet a WQBEL with no mixing zone, but if not, will help the facility to qualify for an exception.

With respect to costs, in 1995, EPA estimated potential costs to indirect dischargers of implementing the Guidance with the mixing zone provision to be between \$6.6 million and \$19.9 million per year (in 1994 dollars). In addition, EPA's estimate of total costs to direct and indirect dischargers to implement the Guidance in 1995 (including the mixing zone provision) of \$60 million to \$380 million per year included source control costs for POTWs (i.e., costs to control indirect discharges). EPA's analysis of today's rule provides an estimate of the portion of the \$60 million to \$380 million cost range that is attributable to just the phase out and elimination of mixing zones. By including costs for source controls at POTWs, EPA's cost estimates reflect costs that could be passed on to dischargers to POTWs. EPA also conducted an analysis of potential impacts on small entities. Although this analysis looks at small dischargers that are direct dischargers (the Guidance only regulates direct dischargers), EPA did not find a significant impact on small entities. In addition, an independent economic analysis of the Guidance (including the BCC mixing zone prohibition) concluded that it would have an imperceptible impact on the region's economy (DRI/McGraw-Hill, 1993). Thus, EPA can only conclude that the impacts on many industries discharging to POTWs will not be significant.

D. Other Cost Issues Related to Rulemaking Implementation

A commenter from California expressed concern that end-of-pipe treatment would be necessary to meet water quality-based effluent limitations based on water quality criteria for BCCs in the Great Lakes and that such treatment would cost \$2.45 billion to implement in California alone. Additional commenters cited an Ohio study that reported that EPA's cost estimates were too low and that the elimination of mixing zones for BCCs in the Great Lakes will result in significant costs for dischargers.

EPA disagrees with the claim that today's rule would force the construction and operation of extraordinary treatment. As discussed earlier EPA believes that an aggressive pollutant minimization program consisting of source controls, pollution prevention (e.g., product substitution or process modification), and public education, can attain effluent limits based on achieving criteria end-of-pipe. While there are new data showing that mercury comes from a variety of sources and products (e.g., industrial, commercial, household), no one to date has demonstrated that an aggressive long-term pollutant minimization program containing these features has failed in this regard, or that, as a result, the State or community had to force the construction of extraordinary end-of-pipe treatment that was later determined to be cost "ineffective" with no environmental benefit. In addition, the sampling results presented by AMSA for mercury at POTWs in and out of the Great Lakes Basin do not provide evidence that Great Lakes standards for BCCs cannot be met without end-of-pipe treatment. EPA recognizes that discharges from some facilities exceed the mercury criterion, but, based on results from facilities that have tried to control mercury, significant reductions in discharge levels have been achieved. In many cases, these reductions have been attained by source control, not end-of-pipe treatment, demonstrating the feasibility of this approach. (Refer to section IV.C for more discussion on the benefits of source controls). EPA also notes that if, after ten years, it appears that a pollution minimization program at a facility will not achieve the necessary BCC reductions, today's rule affords States and Tribes the flexibility to authorize BCC mixing zones when additional controls are not technically feasible or cost-effective.

Even though the rule is only applicable to the Great Lakes Basin, EPA disagrees with the claim that

implementing the rule in California would cost \$2.45 billion. The cost tables offered by the commenter to support this estimate do not provide information on the current levels of mercury or other BCC concentrations in California POTWs, the estimated reductions needed to achieve revised standards for BCCs, or the treatment already in place at these facilities. Instead, the cost tables provide only calculations of a worst-case estimate assuming all California POTWs would need to implement lime precipitation, carbon adsorption, and reverse osmosis. A thorough facility-level analysis, which was not furnished by the commenter, is essential if the commenter wishes to provide meaningful cost estimates. Further, EPA has not seen impacts of the magnitude indicated by the commenter in other regions of the country that have aggressive water quality standards programs. Moreover, data for California POTWs evaluated by EPA as part of analysis of the California Toxics Rule do not support the claim that all POTWs would need end-of-pipe treatment to meet criteria end-of-pipe for mercury and other BCCs in California.

With respect to comments regarding the Ohio mercury study, EPA believes that Ohio's alternative cost analysis for mercury is not compelling here because it assumes that end-of-pipe treatment is necessary in cases when EPA would conclude otherwise. EPA believes that this is an artificial analysis of the options required of dischargers. EPA's own estimates instead assume a combination of end-of-pipe treatment and lower cost alternatives such as process modification, waste minimization, pollution prevention, source controls, and public education. In addition, Ohio's estimates are also not comparable to EPA's because they reflect not only the costs of today's mixing zone rule but also costs associated with the Guidance promulgated in 1995. EPA's estimates for today's rule reflect only the impact of the BCC mixing zone provision, not the impact of the entire 1995 Guidance. Using this estimate, as well as information on the contribution of air sources to mercury water concentrations in Ohio, Ohio adopted a variance provision for mercury for point source dischargers that requires dischargers, in order to obtain the variance, to implement a plan of study and pollutant minimization plan for identifying and reducing loadings of mercury. Thus, Ohio variance provision employs much the same control strategies contemplated by EPA.

E. Point Source Loadings

Some commenters on EPA's proposed rule argued that point sources contribute a relatively insignificant amount of BCCs (mercury, in particular) when compared to the total accumulation of BCCs in the Great Lakes caused by other sources, such as atmospheric deposition.

EPA disagrees with the assertion that point source loadings are insignificant and believes that comparing the total contribution of BCCs from point sources and atmospheric sources to the entire Great Lakes System often ignores the nature of point source discharges and their spatial impact on the environment. Macro-scale analyses of the atmospheric contribution of BCCs to the Great Lakes System is not comparable with localized point source studies because those analyses assume that atmospheric deposition is constant and uniform over a significantly larger geographical area like the Great Lakes Basin. The water column concentrations from air deposition derived from such assumptions simply assume that the Great Lakes Basin is one unique, enormous, completely mixed system. These assumptions are used by researchers who study the fate and transport of pollutants on a large-scale system, not by researchers who address localized impacts on a much smaller scale, such as the ones created by point source dischargers.

By their very nature, point source discharges create "hot spots" within the Great Lakes System where elevated concentrations of BCCs have a potential adverse impact on aquatic life, wildlife, and human health. In other words, a point source discharge does not disperse and mix completely throughout the entire Great Lakes System, as is assumed for BCCs from atmospheric deposition. Therefore, comparing contributions from the two sources on such a large scale conceals the real impact of BCCs from point source discharges. In fact, when assessing the impact of a point source discharge, water quality analysts do not perform a mass balance on the entire lake system, but rather on the specific zone of influence of the point source discharge where atmospheric deposition may be insignificant and generally not taken into account.

F. TMDLs and Other CWA Issues

Some commenters asserted that a BCC mixing zone prohibition is inconsistent with the Clean Water Act and implementing regulations and they argue that EPA erroneously concluded that mixing zones are never permissible

in impaired waters. Others assert that today's rule would interfere with States' abilities to control discharges through a TMDL process. Other commenters simply assert that BCC mixing zones should be available wherever the area of impact from the discharge is not biologically significant.

With respect to the first assertion, the question of when and whether mixing zones (for any pollutant) are permissible in impaired waters is outside the scope of today's rule. Today's rule applies only after the permitting authority has determined that a mixing zone for BCCs might otherwise be available in the Great Lakes System under the Clean Water Act and State and federal implementing regulations and standards. Today's rule establishes restrictions on the availability of such mixing zones. In addition, the general availability of mixing zones in impaired waters was not relevant to EPA's cost estimates for today's rule. Rather, EPA estimated its costs for this rule based on the perhaps over-broad assumption that mixing zones for BCCs would be available throughout the Great Lakes for each discharger with known or suspected BCC discharges.

EPA's discussion in the preamble to the proposed rule about the availability of mixing zones in impaired waters generated considerable concern that EPA was announcing a new policy banning mixing zones in impaired waters. EPA does not have a general policy on the availability of mixing zones in impaired waters at this time and generally defers to States on this issue. What the preamble discussion reflected was the application of provisions in procedure 3 governing the calculation of wasteload allocations in various situations. Under procedure 3.B.c.3, background levels of the pollutant must be accounted for in determining wasteload allocations (WLAs). When background levels of the pollutant for which a mixing zone is sought already exceed the applicable criterion in the receiving water, there may be no available dilution, despite the availability of a mixing zone. (Exceptions might be where there are no currently available data for calculating background values as provided in 3.B.9 or where anticipated loading reductions would lower background levels (see 3.C.3.b.iii) and "free up" assimilative capacity for use in calculating WLAs.) Thus, the preamble discussion in the proposal used the absence of a mixing zone as a simplified way of discussing other procedures that might have the same effect when calculating WLAs for discharges to impaired waters.

With respect to the second assertion, EPA agrees that today's rule limits the discretion of Great Lakes States to use a TMDL as a vehicle for establishing mixing zones for BCCs in the Great Lakes System. EPA believes that this restriction is reasonable because of the documented environmental and health effects caused by BCCs in the Great Lakes System. EPA notes, however, that Great Lakes States are not absolutely foreclosed from authorizing a mixing zone for BCCs in the context of a TMDL. For existing dischargers, today's rule provides for a 10-year phase-out period that allows dischargers sufficient time to develop and implement control strategies to achieve WQBELs based on meeting water quality criteria end-of-pipe. The rule also provides for exceptions to the mixing zone prohibition for existing discharges of BCCs. In addition to the water conservation exception, the rule authorizes an exception to account for technical and economic circumstances. This exception could be employed, at the discretion of the State, beyond the 10-year period (perhaps implemented through a TMDL) if the State determines that more aggressive controls aimed at achieving criteria at the end of the pipe would not be cost-effective or economically or technically feasible for the existing BCC discharge in question.

Finally, in response to the third assertion, regarding the availability of mixing zones when the impact is not biologically significant, EPA is particularly concerned with how commenters are defining "not biologically significant." EPA does not consider mixing zones an entitlement and does not agree that it is reasonable to not seek reduction of mass loadings of BCCs to areas of the Great Lakes System that no longer are considered "biologically significant." In many cases, these areas have been biologically impacted because of the discharge of these pollutants. That is no reason that they should remain aquatic waste dumps especially when improved water quality is feasible. Further, one of the basic tenets underlying the mixing zone prohibition is that the adverse impacts of BCC discharges can almost never be limited to areas that are determined to be biologically or otherwise insignificant. If the receiving water is connected to another waterbody, that other waterbody would almost certainly be affected adversely by BCC discharges. States, nevertheless, have the flexibility to allow a mixing zone under certain exceptions, as noted above.

G. EPA's Fulfillment of the Court Remand

In 1997, the U.S. Court of Appeals for the District of Columbia Circuit remanded the provisions of the Guidance to phase out and eliminate mixing zones for BCCs. The Court found that "[a]lthough the EPA appears to have shown that eliminating mixing zones is not without some environmental benefit, the agency simply failed to address whether the measure is cost-justified. We remand the matter in order to afford the EPA an opportunity to do just that," *American Iron & Steel Institute (AISI) v. EPA*, 115 F.3d 979 (D.C. Cir. 1997). This finding resulted because the Agency had estimated the total cost of eliminating BCC mixing zones at \$200,000 yet did not explain a comment estimating at approximately \$300,000 the cost to one town of removing the BCC mercury from its sewage discharge. Commenters on the proposal for this rulemaking asserted that EPA's revised cost estimates had been underestimated and that EPA had not yet satisfied this order.

EPA's 1995 sensitivity analysis on the BCC mixing zone provisions of the Guidance produced the \$200,000 estimate because State derived permit limits (based on State water quality standards and mixing zone requirements) and Guidance-based permit limits (derived without a mixing zone) were both below analytical method detection levels. This provided EPA with little information concerning the effectiveness of possible pollution control strategies that the Guidance might impose over those that would be required to achieve current State (i.e., pre-Guidance) permit limits. EPA recognized at the time that its mixing zone sensitivity analysis did not produce a justifiable cost estimate and supplemented it with a second analysis that evaluated the possible cost impacts of reducing potential hidden loadings of BCCs as future analytical detection methods improve. This analysis showed that if hidden loadings exist and analytical method detection levels improve, significant costs impacts from reducing BCCs could occur. However, this analysis did not evaluate the impact of the BCC mixing zone prohibition alone.

As such, EPA has reevaluated the comment from the City of Owosso on the proposed Guidance in which they asserted that it would cost \$300,000 to remove mercury from their sewage discharge. EPA notes that the \$300,000 estimate presented by the City of Owosso is not comparable to the cost that was estimated in 1995 for the

elimination of mixing zones for BCCs (\$200,000) nor is it comparable to the costs estimated for today's rule. This is because the City's cost is the total cost estimated to be necessary to comply with all of the requirements contained in the 1995 Guidance (as proposed). That is, the City did not distinguish between the original BCC mixing zone provision and the rest of the Guidance. The \$300,000 estimate does not represent the incremental cost of eliminating mixing zones for BCCs. Nor did the City provide in its comment any information regarding the State's mercury water quality standard for the receiving water (Michigan's mercury standard that it has been using for over 15 years to protect human health and wildlife is as stringent as the mercury criteria promulgated in the 1995 Guidance, but less stringent than the criteria in the proposed Guidance), or the dilution and ambient background data that is used by the State permitting authority to evaluate reasonable potential and calculate permit limits for this facility when mixing zones are allowed. Nonetheless, the City's cost estimate of \$300,000 is within the average cost range per municipal facility that EPA calculated for its economic analysis of the entire 1995 Guidance (from \$75,185 to \$822,251 under the low and high scenarios, respectively).

In addition, the City did not indicate in its comment if it had previously conducted any pollution prevention or minimization efforts among its users. Although the commenter describes the industrial contribution to its headworks as "light," this is not a sufficient argument to disregard, without further assessment, the true impact of the existing industrial discharges and the applicability of pollution prevention to control them. Most importantly, the City did not indicate whether or not it had conducted pollution prevention assessments at any medical and dental offices that it serves. Medical and dental offices have been found, in many cases, to significantly contribute to the mercury levels in the influents to POTWs but have controllable sources of mercury that are readily amenable to cost-effective pollution prevention techniques.

Nonetheless, as discussed above, EPA has revised its economic sensitivity analysis of today's BCC mixing zone provision in response to the Court remand. EPA's estimated cost range for the 1995 Guidance, which included the 1995 provision to prohibit mixing zones for BCCs, was \$60 million to \$380 million per year. EPA estimates, based on its revised analysis, that the portion of that cost range attributable to today's

rule to prohibit mixing zones for BCCs is between \$12 million and \$35 million per year (not \$200,000 as was indicated in 1995).

Not only does EPA believe that this revised estimate is reasonable, it believes that the upper estimate (\$35 million annually) may be overstated. This is because the upper estimate is based on pre-1995 effluent data. When EPA supplemented these data for today's rule using high-resolution and super clean analytical techniques for detecting BCCs in POTW effluents, it obtained the \$12 million per year estimate. This lower estimate is due to the fact that concentrations in BCCs in POTW effluents were found to be substantially lower than expected.

Complementing the Agency's opinion in this regard is DRI/McGraw-Hill's independent review of the analyses of costs for the 1995 Guidance from which the costs for the proposed rule were derived. This review found EPA to be "conservative in the sense that, on the whole, higher costs were adopted in cases where assumptions were required due to incomplete data" (DRI/McGraw-Hill, 1995). Thus, EPA expects that its cost estimates overstate, rather than underestimate, the costs associated with the Guidance and, by extension, today's rule.

For these reasons and other reasons set forth in the rulemaking record, EPA believes that its revised economic analysis provides a substantiated estimate of the potential incremental costs of the rule. EPA also believes that today's rule is "cost-justified." That is, EPA believes that the estimated costs are reasonable in view of the benefits derived from minimizing the adverse effects of pollutants such as mercury in the Great Lakes System as a result of this rule. Today's rule also complies with the test articulated in the GLWQA, which called for the reduction of BCC mixing zones to the maximum extent possible. EPA estimated that today's rule will result in a reduction of between 225,000 and 668,000 toxic-weighted pounds (or between 876 and 81,718 unweighted pounds) of pollutants from the Great Lakes System each year. This includes loadings of chlordane, DDT, dieldrin, hexachlorocyclohexane, alpha-hexachlorocyclohexane, beta-hexachlorocyclohexane, hexachlorocyclohexane, lindane, mercury, PCBs, pentachlorobenzene, 1,2,4,5-tetrachlorobenzene, 2,3,7,8-TCDD, and toxaphene. As described previously, this will reduce the accumulation of BCCs in depositional areas of the Great Lakes, reducing the probability for bioaccumulation in the

food chain and adverse effects on fish, wildlife, and humans. EPA believes that these avoided effects justify the costs even when the cost to remove a pound of a specific pollutant may be relatively high.

In addition, EPA has codified exceptions to the mixing zone prohibition to ensure that the BCC reductions achieved under the rule are both technically feasible and cost-effective. Procedure 3.C.6.a.ii states that dischargers must reduce the loadings of BCCs to "the maximum extent possible such that any additional controls or pollution prevention measures to reduce or ultimately eliminate the BCC would result in unreasonable economic effects on the discharger or the affected community because the controls or measures are not feasible or cost-effective." As noted above in Section III, EPA modified this provision from the 1995 Guidance to clarify the importance of implementing only those control strategies determined to be cost-effective. For example, if the State determined that the discharger or affected community would face unreasonable economic effects as a result of implementing the rule, it could grant the exception.

In relation to this topic, some commenters alleged that the cost justification required by the Court's remand necessitated a justification of benefits. However, as several industry commenters have observed in arguing that EPA's benefits analysis is irrelevant, the AISI Court already has held that EPA adequately explained the environmental benefits of its BCC mixing zone prohibition. Moreover, EPA may have understated the resulting benefits, because many benefits categories are not amenable to quantification (e.g., estimating the number of noncancer human health cases avoided from exposure to fish contaminated with mercury and monetizing those benefits) and can only be discussed in qualitative terms. In addition, EPA's benefits estimates do not account for the impact of pollution prevention strategies with respect to the environment as a whole; as a result of today's rule, not only will fewer BCCs be discharged into the Great Lakes System, but EPA expects that overall release of BCCs to the environment will be reduced as well, so that these pollutants are not simply transferred to the air or soil.

V. Special Provision for Certain New or Expanded Discharges of BCCs from Municipalities

In proposing today's rule, EPA requested comments on excluding from

the definition of "new discharge" any new or expanded discharges of BCCs from POTWs when such discharges are necessary to prevent a public health threat to the community. EPA did not receive any comments directed at this exclusion. The Agency is promulgating this new exclusion because it believes that it is a reasonable, common sense policy that balances competing health risks. As such, new or expanded discharges to which this exclusion applies will be treated as existing discharges of BCCs for purposes of today's rule. See procedure 3.C.2 (2).

VI. Economic Analysis

As described above in Section IV, EPA revised its analysis of the potential costs associated with eliminating and, for existing discharges, phasing out mixing zones for BCCs from the analysis that accompanied the Guidance in 1995. EPA's estimated cost range for the 1995 Guidance, which included the 1995 provision to prohibit mixing zones for BCCs, was \$60 million to \$380 million per year. EPA estimates, based on its revised analysis, that the portion of that cost range attributable to today's rule ranges from \$12 million to \$35 million per year. This estimate, and EPA's methodology, are presented in the proposal for today's rulemaking (64 FR 53632, October 4, 1999).

VII. Administrative Requirements

A. Regulatory Planning and Review (Executive Order 12866)

Under Executive Order 12866 (58 FR 51735, October 4, 1993), EPA must determine whether the regulatory action is "significant" and therefore subject to Office of Management and Budget (OMB) review and the requirements of the Executive Order. The Order defines "significant regulatory action" as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or Tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

It has been determined that this rule is not a "significant regulatory action"

under the terms of Executive Order 12866 and therefore is not subject to OMB review.

B. Regulatory Flexibility Act, as amended by the Small Business Regulatory Enforcement Fairness Act of 1996

The Regulatory Flexibility Act (RFA), as amended by the Small Business Regulatory Enforcement Fairness Act, generally requires an agency to prepare a regulatory flexibility analysis for any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of today's rule on small entities, small entity is defined as: (1) A small business based on Small Business Administration size standards; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

EPA prepared a screening analysis to evaluate the financial impact on small entity dischargers that would be subject to the requirements of the rule (i.e., NPDES permit holders that may discharge BCCs). EPA identified 2,329 of these small entities and estimated that more than 96% of them would not be significantly affected. EPA determined that potential impacts represent less than 1% of estimated revenues for 2,290 small entity dischargers under the low cost scenario and 2,244 under the high cost scenario. For small entities that may be affected more, EPA estimates the impact on small municipal dischargers to range from 3% to 5% under the low cost scenario for seven facilities, and from 3% to 14% under the high cost scenario for 43 facilities, with a midpoint of 5%. EPA determined that potential impacts on nonmunicipal dischargers represent less than 1% of estimated revenues.

EPA believes that its screening analysis is conservative (erring on the side of higher costs and greater impacts on small entities than would normally be expected) because Great Lakes States and Tribes have flexibility to authorize mixing zones for small entities under certain technical and economic circumstances and EPA's screening

analysis did not take these circumstances into consideration. EPA further believes that as States and Tribes exercise this flexibility for small municipal dischargers that may be affected by this rule the cost impact realized would be near the low end of the range. The screening analysis results were presented in more detail in the proposal for today's final rulemaking (64 FR 53632, October 4, 1999) and the analytical method is described in a document entitled RFA/SBREFA Screening Analysis for the Proposal to Amend the Final Water Quality Guidance for the Great Lakes System to Prohibit Mixing Zones for Bioaccumulative Chemicals of Concern (August 1999).

EPA's analysis was based on the projected impact of the rule on existing small entities; however, the rule may also affect small entities that do not yet exist or that do not discharge BCCs at this time but may choose to do so in the future. EPA does not expect that new small entities discharging to the Great Lakes will experience significant economic impacts because, in EPA's view, it is highly unlikely that any new discharger would discharge BCCs in quantities to be affected by the proposed mixing zone prohibition. First, most BCCs are already banned from use and/or production or are severely restricted in use. Therefore, EPA does not expect them to be present in a new discharger's effluent above criteria levels. Second, for the few remaining BCCs that may be contaminating effluent as a result of household products or products and chemicals used in production, municipalities and commercial and industrial users of those products should be able to use substitutes for these products, rely on cleaner technologies that do not require their use or that do not produce BCCs as a by-product, or employ source controls to reduce releases of BCCs to acceptable levels. These pollution prevention alternatives often are significantly more cost-effective than the end-of-pipe treatment technologies that could be used in their place.

After considering the economic impacts of today's final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. This rulemaking amends the 1995 Water Quality Guidance for the Great Lakes System to establish requirements that apply in the first instance to Great Lakes States and Tribes. Today's rule restricts the current discretion of States and Tribes to allow mixing zones when establishing water quality-based effluent limitations for discharges of BCCs to the

Great Lakes System. Great Lakes States and Tribes (or EPA, if a State or Tribe fails to do so) must adopt requirements to ensure that all discharges of BCCs to the Great Lakes System receive limits no greater than the water quality criteria for those BCCs. In the case of existing discharges of BCCs, Great Lakes States and Tribes need not require attainment of such limitations until November 15, 2010. Great Lakes States and Tribes also retain some discretion after that date to authorize mixing zones for existing discharges of BCCs in specified circumstances.

The RFA only requires analysis of the economic impacts of a rule on the small entities that are subject to the requirements of a rule. *United Distribution Cos. v. FERC*, 88 F.3d 1105 at 1170 (D.C. Cir. 1996), quoting *Mid-Tex Elec. Co-op v. FERC*, 773 F.2d 327, 342 (D.C. Cir. 1985). Today's rule applies to States and Tribes in the Great Lakes System when issuing NPDES permits. It establishes requirements that Great Lakes States and Tribes must adopt and apply to all new and existing discharges of BCCs in the Great Lakes System, including discharges from small entities. The universe of dischargers affected by the rule is certain and Great Lakes States and Tribes have no discretion in implementing the rule with respect to new BCC discharges and only limited authority to modify the requirements with respect to existing BCC discharges. In this sense, the rule imposes requirements on new and existing dischargers in the Great Lakes System.

The requirements in this rulemaking do not become binding requirements on direct dischargers until they are used to derive effluent discharge limitations as conditions in an NPDES permit issued to the discharger. However, effluent limitations based on today's regulations must be included by NPDES permitting authorities as permit conditions when the permitting authority issues or reissues permits to direct dischargers discharging BCCs to the Great Lakes System. Based on this consideration, EPA has concluded that small entities will be subject to the regulation for purposes of the RFA, and EPA has accordingly evaluated the impact of the rule on small entities. Based on its assessment, the Agency concludes that this rulemaking will not have a significant economic impact on a substantial number of small entities for the reasons explained above.

Although this final rule will not have a significant economic impact on a substantial number of small entities, EPA nonetheless has tried to reduce the impact of today's rule on small entities

by authorizing an exception, granted solely at the discretion of the State or Tribe on a case-by-case basis, under certain circumstances. EPA believes that small entity dischargers will have an easier time meeting an economic threshold that would qualify them for the exception. Prior to promulgation of the final 1995 Water Quality Guidance, which contained the BCC mixing zone prohibition, EPA received in excess of 23,000 pages of information and data from over 6,000 respondents on its April 16, 1993, proposal. To stay abreast of public expectations for the final Guidance, EPA continued to meet with State, Local, and Tribal government officials, financial officials and co-regulators, the regulated community and environmental interests to listen and openly discuss their concerns. During the post-proposal process for the Guidance, EPA participated in over 40 such meetings with over 1,000 stakeholder representatives including small entities. The comments and issues raised by the various stakeholders were considered in EPA's option selection process and regulatory impact analysis for developing the final Guidance. The open public process resulted in meaningful changes to the final Guidance. Many of the provisions outlined in the proposal were revised for the final Guidance to increase flexibility for State, local, and Tribal implementation, and to reduce the impact of the Guidance on large and small entities. Today's final rule builds on that process.

C. Paperwork Reduction Act

An agency may not conduct or sponsor and a person is not required to respond to a collection of information, unless it displays a currently valid OMB control number under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* The OMB control number for EPA's regulations are listed in 40 CFR part 9 and 48 CFR Chapter 15. Under this rule, the Great Lakes States and Tribes must adopt and submit to EPA provisions that are as protective as this amendment. See 40 CFR 132.1 and 132.5(a). EPA received approval from OMB for that information collection as part of the 1995 rulemaking. OMB renewed its approval in September 30, 1998. The OMB control number is 2040-0180 and is listed in 40 CFR part 9. EPA will renew this information collection prior to the date by which Great Lakes States and Tribes must make submissions consistent with today's rule.

D. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public

Law 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and Tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal Mandates" that may result in expenditures to State, local, and Tribal governments, in the aggregate, or to the private sector, of \$100 million or more in any one year. Before EPA promulgates a rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and to adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if the Administrator publishes with the rule an explanation why that alternative was not adopted.

Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including Tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of the affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

As noted above, this rule amends part 132 to prohibit mixing zones for BCCs in the Great Lakes System. EPA has determined that this rule does not contain a Federal mandate that may result in expenditures of \$100 million or more for State, local, and Tribal governments, in the aggregate, or the private sector, in any one year. The total annual impact of this rule on State, local, and Tribal governments and the private sector is not expected to exceed \$12 to \$35 million. Thus, today's rule to amend part 132 to prohibit mixing zones for BCCs in the Great Lakes System is not subject to the requirements of sections 202 and 205 of the UMRA.

EPA has determined that this rule contains no regulatory requirements that might significantly or uniquely affect small governments. As described above,

EPA does not expect that small governments, including Tribal governments with responsibility for implementing this rule, and small governments operating POTWs discharging to the Great Lakes, will experience significant economic impacts because most BCCs are already banned from use or are severely restricted in use. In those rare instances where the few remaining BCCs (i.e., BCCs that are not already banned or severely restricted) are found contaminating effluent to unacceptable levels as a result of household products or products and chemicals used in production, municipalities and commercial and industrial users of those products should be able to use substitutes for these products, rely on cleaner technologies that do not require their use or that do not produce BCCs as a by-product, or employ source controls to reduce releases of BCCs to acceptable levels. In addition, for existing discharges, there is some flexibility and discretion in how the rule is to be implemented by States and Tribes within the NPDES permit program. Thus, today's rule is not subject to the requirements of section 203 of UMRA.

E. Executive Order on Federalism

Executive Order 13132, entitled "Federalism" (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" is defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government."

This final rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. Today's rule simply requires the Great Lakes States to add one discrete provision to the regulations and policies they were already required to adopt pursuant to the 1995 Guidance. EPA's estimated cost range for the 1995 Guidance, which included the 1995 provision to prohibit mixing zones for BCCs, was \$60 million to \$380 million per year. EPA estimates that only a small portion of that cost

range, \$12 million to \$35 million per year, is attributable to today's rule. Similarly, this rule will not have a substantial direct effect upon the distribution of power and responsibilities among the various levels of government because the States retain primary responsibility for administering their NPDES permit programs, through which this rule is implemented. The rulemaking authorizes EPA to promulgate these mixing zone provisions only if an authorized State has failed to act. Accordingly, these provisions will not have a substantial direct effect on States or on intergovernmental relationships or responsibilities. Thus, the requirements of section 6 of the Executive Order do not apply to this final rule.

Although section 6 of Executive Order 13132 does not apply to this rule, EPA extensively involved State, local, and Tribal government representatives in the development of this amendment, notably during the process of developing the 1995 Guidance, which contained the original version of today's rule. The process used to develop the Guidance marked the first time that EPA had developed a major rulemaking effort in the water quality standards program through a regional public forum. The public process, which lasted over a seven-year period and involved Great Lakes States, EPA, and other Federal agencies in open dialogue with citizens, Tribal and local governments, and industry in the Great Lakes Basin, is described further in the preamble to the Guidance. See 60 FR 15383 (March 23, 1995). As described above, today's action by EPA reinstates a provision nearly identical to the provision in the 1995 Guidance that was vacated by the Court in *AISI*. It thus reflects the State, local, and Tribal government input EPA received during the 1995 Guidance rulemaking.

F. Executive Order 13084: Consultation and Coordination with Indian Tribal Governments

Under Executive Order 13084, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments or unless EPA consults with those governments. If EPA complies by consulting, Executive Order 13084 requires EPA to provide to the Office of Management and Budget, in a separately identified section of the preamble to the

rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected officials and other representatives of Indian tribal governments "to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities."

Today's rule does not significantly or uniquely affect the communities of Indian Tribal governments or impose substantial direct compliance costs on them. See section VII. D above for more discussion. Therefore, the requirements of section 3(b) of Executive Order 13084 do not apply to this rule. Nonetheless, EPA has extensively involved Great Lakes State, local, and Tribal governments in the development of this amendment, notably during the process of developing the 1995 Guidance, which contained the original version of this rule. Today's action by EPA proposes to reinstate a provision nearly identical to the provision in the 1995 Guidance that was vacated by the Court in *AISI*. It thus reflects the State, local, and Tribal government input EPA received during the 1995 Guidance rulemaking.

G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

Executive Order 13045: "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997) applies to any rule that: (1) is determined to be "economically significant" as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

This rule is not subject to the Executive Order because it is not economically significant as defined in Executive Order 12866. As noted earlier, however, children may be at a greater risk to BCCs than adults. If they are at greater risk, then they will benefit the most from this rule to prohibit mixing zones for BCCs in the Great Lakes System.

H. Endangered Species Act

Section 7 of the Endangered Species Act (ESA) requires Federal agencies, in consultation with the U.S. Fish and Wildlife Service (FWS) and National Marine Fisheries Service (NMFS), to ensure their actions are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of habitat of such species that have been designated as "critical." Consultation is designed to assist Federal agencies in complying with the requirements of section 7 by supplying a process within which FWS and NMFS provide such agencies with advice on whether an action complies with the substantive requirements of ESA.

In accordance with these requirements, EPA completed consultation with the FWS on the 1995 Guidance, and the FWS issued a biological opinion concluding that the Guidance was not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of species' critical habitat. As explained above, today's rule essentially reinstates, with some clarification, the BCC mixing zone provisions of the 1995 Guidance. Since the substance of today's rule has already been the subject of section 7 consultation, the effects of today's rule have been addressed by the Services' prior biological opinion.

I. National Technology Transfer and Advancement Act

As noted in the proposed rule, Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Public Law 104-113, section 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through the Office of Management and Budget, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

Today's rule does not involve technical standards; therefore, EPA did not consider using any voluntary consensus standards. EPA received no comments on this aspect of the rulemaking and no commenter identified any potentially applicable

voluntary consensus standards for use in this regulation.

J. Submission to Congress and the General Accounting Office

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This rule is not a major rule as defined by 5 U.S.C. 804(2). This rule will be effective December 13, 2000.

VIII. Supporting Documents

All documents that are referenced in this preamble are available for inspection and photocopying in the docket of the 1995 Guidance and the docket of this rulemaking at the address listed at the beginning of this preamble. A reasonable fee will be charged for photocopies.

EPA is also making a number of documents available in electronic format at no incremental cost to users of the Internet (<http://www.epa.gov/ost/GLI>). These documents include the contents of this **Federal Register** document and several other supporting documents and materials.

IX. References

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Elliot, J.E., R.J. Norstrom, A. Lorenzen, L.E. Hart, H. Philibert, S.W. Kennedy, J.J. Stegeman, G.D. Bllward, and K.M. Cheng. 1996. Biological effects of polychlorinated dibenzo-p-dioxins, dibenzofurans, and biphenyls in bald eagle (*Haliaeetus leucocephalus*) chicks. *Environmental Toxicology and Chemistry* 15: 782-93.

Mason, R.T., and K.A. Sullivan. 1997. Mercury in Lake Michigan. *Environmental Science and Technology* 31: 942-47.

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U.S. EPA. 1995. Regulatory Impact Analysis for the Final Great Lakes Water Quality Guidance. U.S. Environmental Protection Agency, Washington, D.C.

U.S. EPA. 1997. Guidance for Assessing Chemical Data for Use in Fish Advisories. Volume 2. Risk Assessment and Fish Consumption Limits. EPA 823-B-97-009. U.S. Environmental Protection Agency, Washington, D.C.

U.S. EPA. 1999. Overview of Pollution Prevention Approaches at POTWs. Draft. Office of Science and Technology. U.S. Environmental Protection Agency, Washington, D.C.

List of Subjects in 40 CFR Part 132

Environmental protection, administrative practice and procedure, Great Lakes, Indian lands, Intergovernmental relations, Reporting and recordkeeping requirements, Water pollution control.

Dated: November 2, 2000.

Carol M. Browner,
Administrator.

For the reasons set out in the preamble, Title 40, chapter I, part 132 of the Code of Federal Regulations is amended as follows:

PART 132—WATER QUALITY GUIDANCE FOR THE GREAT LAKES SYSTEM

1. The authority citation for part 132 continues to read as follows:

Authority: 33 U.S.C. 1251 *et seq.*

2. Section 132.5 is amended by revising paragraphs (a) and (c) to read as follows:

§ 132.5 Procedures for adoption and EPA review.

(a) Except as provided in paragraph (c) of this section, the Great Lakes States and Tribes shall adopt and submit for EPA review and approval the criteria, methodologies, policies, and procedures developed pursuant to this part no later than September 23, 1996. With respect to procedure 3.C of appendix F of this part, each Great Lakes State and Tribe shall make its submission to EPA no later than May 13, 2002.

* * * * *

(c) The Regional Administrator may extend the deadline for the submission required in paragraph (a) of this section if the Regional Administrator believes that the submission will be consistent with the requirements of this part and can be reviewed and approved pursuant to this section no later than March 23, 1997, or, for procedure 3.C of appendix F of this part, no later than November 13, 2002.

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3. Appendix F of part 132 is amended by adding procedure 3.C to read as follows:

Appendix F of Part 132—Great Lakes Water Quality Initiative Implementation Procedures

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Procedure 3: * * *

C. *Mixing Zones for Bioaccumulative Chemicals of Concern (BCCs)*. The following requirements shall be applied in establishing TMDLs, WLAs in the absence of TMDLs, and preliminary WLAs for purposes of determining the need for WQBELs under procedure 5 of appendix F, for BCCs:

1. There shall be no mixing zones available for new discharges of BCCs to the Great Lakes System. WLAs established through TMDLs, WLAs in the absence of TMDLs, and preliminary WLAs for purposes of determining the need for WQBELs for new discharges of BCCs shall be set no higher than the most stringent applicable water quality criteria or values for the BCCs in question. This prohibition takes effect for a Great Lakes State or Tribe on the date EPA approves the State's or Tribe's submission of such prohibition or publishes a notice under 40 CFR 132.5(f) identifying that prohibition as applying to discharges within the State or Federal Tribal reservation.

2. For purposes of section C of procedure 3 of appendix F, new discharges are defined as: (1) A "discharge of pollutants" (as defined in 40 CFR 122.2) to the Great Lakes System from a building, structure, facility, or installation, the construction of which commences after the date the prohibition in section C.1 takes effect in that State or Tribe; (2) a new discharge from an existing Great Lakes discharger that commences after the date the prohibition in section C.1 takes effect in that State or Tribe; or (3) an expanded discharge from an existing Great Lakes discharger that commences after the date the prohibition in section C.1 takes effect in that State or Tribe, except for those expanded discharges resulting from changes in loadings of any BCC within the existing capacity and processes (e.g., normal operational variability, changes in intake water pollutants, increasing the production hours of the facility or adding additional shifts, or increasing the rate of production), and that are covered by the existing applicable control document. Not included within the definition of "new discharge" are new or expanded discharges of BCCs from a publicly owned treatment works (POTW as defined at 40 CFR 122.2) when such discharges are necessary to prevent a public health threat to the community (e.g., a situation where a community with failing septic systems is connected to a POTW to avert a potential public health threat from these failing systems). These and all other discharges of BCCs are defined as existing discharges.

3. Up until November 15, 2010, mixing zones for BCCs may be allowed for existing discharges to the Great Lakes System pursuant to the procedures specified in sections D and E of this procedure.

4. Except as provided in sections C.5 and C.6 of this procedure, permits issued on or after this provision takes effect in a Great Lakes State or Tribe shall not authorize mixing zones for existing discharges of BCCs to the Great Lakes System after November 15, 2010. After November 15, 2010, WLAs established through TMDLs, WLAs established in the absence of TMDLs, and preliminary WLAs for purposes of determining the need for WQBELs under procedure 5 of appendix F for existing discharges of BCCs to the Great Lakes System shall be equal to the most stringent applicable water quality criteria or values for the BCCs in question.

5. *Exception for Water Conservation*. Great Lakes States and Tribes may grant mixing zones for any existing discharge of BCCs to the Great Lakes System beyond the date specified in section C.4 of this procedure where it can be demonstrated, on a case-by-case basis, that failure to grant a mixing zone would preclude water conservation measures that would lead to overall load reductions in BCCs, even though higher concentrations of BCCs occur in the effluent. Such mixing zones must also be consistent with sections D and E of this procedure.

6. *Exception for Technical and Economic Considerations*. Great Lakes States and Tribes may grant mixing zones beyond the date specified in section C.4 of this procedure for any existing discharge of a BCC to the Great Lakes System upon the request of a discharger, subject to sections C.6.a through C.6.c below.

a. The State or Tribe must determine that:

- The discharger is in compliance with and will continue to implement, for the BCC in question, all applicable requirements of Clean Water Act sections 118, 301, 302, 303, 304, 306, 307, 401, and 402, including existing National Pollutant Discharge Elimination System (NPDES) water-quality based effluent limitations; and
- The discharger has reduced and will continue to reduce the loading of the BCC for which a mixing zone is requested to the maximum extent possible, such that any additional controls or pollution prevention measures to reduce or ultimately eliminate the BCC discharge would result in unreasonable economic effects on the discharger or the affected community because the controls or measures are not feasible or cost-effective.

b. Any mixing zone established pursuant to this section shall:

- Not result in any less stringent limitations than those existing prior to November 13, 2000;
- Be no larger than necessary to account for the technical constraints and economic effects identified pursuant to paragraph C.6.a.ii above;
- Meet all applicable acute and chronic aquatic life, wildlife and human health criteria and values within and at the edge of the mixing zone or be consistent with the applicable TMDL or assessment and remediation plan authorized under procedure 3.A.
- Be accompanied, as appropriate, by a permit condition requiring the discharger to implement an ambient monitoring plan to

ensure compliance with water quality standards and consistency with any applicable TMDL or such other strategy consistent with Section A of this procedure, including the evaluation of alternative means for reducing the BCC from other sources in the watershed; and

v. Be limited to one permit term unless the permitting authority makes a new determination in accordance with this section for each successive permit application in which a mixing zone for the BCC is sought.

c. For each draft NPDES permit that would allow a mixing zone for one or more BCCs after November 15, 2010, the fact sheet or statement of basis for the draft permit that is required to be made available through public notice under 40 CFR 124.6(e) shall:

- Specify the mixing provisions used in calculating the permit limits; and
- Identify each BCC for which a mixing zone is proposed.

7. Any mixing zone authorized under sections C.3, C.5 or C.6 must be consistent with sections D and E of this procedure, as applicable.

* * * * *

[FR Doc. 00-28709 Filed 11-9-00; 8:45 am]

BILLING CODE 6560-50-P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 63

[B Docket No. 97-142, FCC 00-339]

Rules and Policies on Foreign Participation in the U.S. Telecommunications Market

AGENCY: Federal Communications Commission.

ACTION: Final rule; announcement of effective date.

SUMMARY: This document announces the effective date of rules. The Commission amended its rules regarding the prior notifications of foreign affiliations, and the rules contained information collection requirements. These rules become effective on November 9, 2000.

EFFECTIVE DATE: The amendments to 47 CFR 63.11 published at 65 FR 60113, October 10, 2000, become effective on November 9, 2000.

FOR FURTHER INFORMATION CONTACT: Peggy Reitzel, Telecommunications Division, International Bureau, (202) 418-1499.

SUPPLEMENTARY INFORMATION: On September 12, 2000, the Commission adopted an order clarifying and revising rules regarding prior notifications of foreign affiliations, a summary of which was published in the **Federal Register**. See 65 FR 60113, October 10, 2000. Section 63.11 of the rules contained