



UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY

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OFFICE OF
WATER AND
WATERSHEDS

October 3, 2014

Paula Wilson
Idaho Department of Environmental Quality
1410 N. Hilton
Boise, Idaho 83706

RE: EPA Comments on Idaho Mixing Zone Proposed Rule, Docket No. 58-0102-1401

Dear Ms. Wilson:

EPA appreciates the opportunity to provide comments on the Idaho Mixing Zone Proposed Rule, Docket No. 58-0102-1401, which the Idaho Department of Environmental Quality (DEQ) issued for public comment September 3, 2014 through October 3, 2014. We commend DEQ for all its efforts throughout the rulemaking process to inform stakeholders, consider recommendations, and improve the draft mixing zone rule.

Our detailed comments, provided in the attachment, give recommendations to address our remaining concerns. Some of these comments reiterate previous recommendations we provided in May, June, and July 2014 during the negotiated rulemaking process because we do not believe that DEQ has fully addressed these comments. For example, EPA continues to recommend that DEQ incorporate our recommended rule language changes to provide clear parameters ensuring mixing zones are as small as practicable, protect beneficial uses, and specifically protect threatened and endangered species. In addition, our comments continue to reflect our concern that the rule language needs to be clearer and more specific to support the development of more detailed implementation guidance.

We strongly urge DEQ to incorporate our recommendations into the final draft of the mixing zone rule to facilitate a more efficient review process when DEQ submits the final rule to EPA for Clean Water Act review and action. We are available if you

would like to discuss our comments further, and we look forward to continued work with DEQ on this effort. Please contact me at (208) 378-5771 if you have any questions.

Sincerely,



Cyndi Grafe
Idaho Mixing Zone Rulemaking Liaison

cc: Barry Burnell, DEQ (e-mail)
Don Essig, DEQ (e-mail)

Enclosure:

Attachment A:

*Summary of EPA Comments – Idaho Department of Environmental Quality (DEQ)
Mixing Zone Proposed Rule, Docket No. 58-0102-1401*

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Attachment A:

Summary of EPA Comments – Idaho Department of Environmental Quality (DEQ) Mixing Zone Rule Docket No. 58-0102-1401

I. Mixing Zones for Point Source Discharges – 060.01.

Mixing Zone Authorization – “Must Authorize”

EPA is concerned that the first sentence of this section could be misinterpreted. A literal reading of this sentence, without reference to the rest of the rule, implies that DEQ must authorize mixing zones. Other parts of the rule clearly specify circumstances when a mixing zone shall not be authorized, so there is a sound argument against such an interpretation. But, for purposes of clarity and to avoid a potential argument that DEQ has some sort of nondiscretionary duty (“must authorize”) to authorize mixing zones when permits are issued or renewed, EPA recommends the revisions identified below.

Mixing Zone Authorization – “Until Permit Renewal or Modification”

EPA recommends clarifying the mixing zone authorization language referring to permit renewal and modification. The phrase stating the mixing zone authorization is valid “until permit renewal” could imply that the mixing zone authorization somehow continues independently of the permit, which is not the case. For instance, a permit may expire and not be administratively continued before being renewed. Or, the permit could be terminated or not renewed simply because the applicant never applied for a renewal.

Additionally, stating the mixing zone is valid “until permit...modification,” without qualification, may also be problematic. There are cases where a permit modification could change permit conditions that don’t impact the mixing zone. These types of modifications should not be construed as affecting the validity of the mixing zone authorization.

EPA recommends the following revisions to address the above points:

01. Mixing Zones for Point Source Discharges. A mixing zone, including its size, configuration and location, ~~is must be~~ authorized by the Department ~~each at the~~ time a permit is issued, ~~or~~ renewed, or materially modified and is valid ~~until permit renewal or modification~~ as long as the permit remains in effect.

Narrative Criteria - 060.01 citation addition

EPA continues to recommend including narrative criteria 200.03, “Deleterious Materials.” This addition would address the WQS Handbook’s recommendation that mixing zones be free from substances in concentrations that produce objectionable color, odor, taste, or turbidity (EPA 2012, Section 5.1.1). DEQ states that 200.05 is broad enough to include taste and odor effects (DEQ 2014). However, the definition of “Deleterious Material” (IDAPA 58.01.02.010.20) specifically addresses taste and odor effects, whereas 200.05 does not. Additionally, 200.05

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addresses only “floating, suspended, or submerged” matter, which, arguably, would exclude dissolved matter. There are cases where dissolved matter impacts taste and odor.

EPA recommends the following revision to address this concern:

01. ...Narrative criteria in Subsections [200.03](#) and 200.05 apply within the mixing zone.

II. Impaired Waters - 060.01.a.

In previous comments, EPA stated concerns regarding the proposed rule language in 060.01.a. and the types of analyses that would allow authorization for mixing zones for a given pollutant when the receiving water does not meet water quality criteria for that pollutant (EPA July 2014).

DEQ responded that it “does not believe that this language will impede the agency from restricting the size of a mixing zone where an established allocation or analysis exists. The intent of this language is to make clear that absent a TMDL, there may be equivalent processes that have already been undertaken and can be used to evaluate the impact of an authorized discharge to the receiving water body.” (DEQ 2014)

EPA continues to recommend that mixing zones only be authorized in impaired waters where the permitting authority can ensure that the authorized loadings will be in compliance with water quality standards. Given the current rule wording, EPA has concerns that “other applicable plans” are not defined. Important elements of TMDLs and 4b plans, which may provide a basis for mixing zones, includes analysis of loading from all sources and reasonable assurance that reductions from other sources exist. The latter is crucial to ensure that other sources are controlled and concentrations will be reduced below the applicable criteria or target, such that a mixing zone could be allowed. We are not aware of mechanisms which provide this assurance other than approved TMDLs and 4b plans, hence we recommend limiting consideration of mixing zones in impaired waters to circumstances where approved TMDLs or 4b plans are in place.

In our experience, we have found that some wasteload allocations in TMDLs are set such that mixing zones are not appropriate. For that reason, we further recommend that, even if a TMDL or 4b plan is in place, the application of a mixing zone be evaluated on a case-by-case basis to verify that it is appropriate.

EPA acknowledges there may be very limited cases where exceptions occur. We would expect DEQ to provide the specifics of these exceptions, in rule or guidance, thorough requirements for justification and supporting analysis, and an opportunity for public comment.

III. No Larger Than Necessary - 060.01.c.

EPA continues to recommend that the second sentence regarding “no larger than necessary” be identified as a stand-alone provision since it applies more broadly in the rule and would provide DEQ latitude with guidance development (EPA June, July 2014).

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DEQ did not incorporate these recommendations because the agency does not believe documentation justifying the mixing zone is necessary in every case. DEQ also responded that the clarification of “no larger than necessary” is more suited to a guidance document for further specifics. (DEQ 2014)

EPA understands the appropriateness of providing greater detail in guidance. However, EPA does not agree that documentation justifying the mixing zone may not be necessary in every case. We believe that DEQ should have clear latitude to make a mixing zone determination and require additional justification as appropriate. Even if a discharger is not required to provide the Department with an analysis in every case, DEQ should be able to demonstrate that any mixing zone it authorizes is consistent with the substantive requirements of the mixing zone policy to protect existing and designated uses.

The concept of “no larger than necessary,” or “as small as practicable” as stated in the EPA Handbook (<http://water.epa.gov/scitech/swguidance/standards/handbook/>), serves as a fundamental principle to the mixing zone policy. In particular, as stated in EPA’s previous comments, the restrictions described in Subsection 060.0.h. should not be used as default starting points for the mixing zone size. DEQ responded that clarification of the phrase “no larger than necessary” is more suited to a guidance document where it may be more fully described. (DEQ 2014)

EPA remains concerned that the proposed language may not afford DEQ the latitude to adequately implement the rule intent for this provision. In DEQ’s previous mixing zone implementation guidance (DEQ 2009), there were public comments that DEQ should draw upon legally enforceable rule language for requirements, not a guidance document. EPA believes additional clarification in rule would prevent confusion and promote enforceability of the fundamental principle that mixing zones be no larger than necessary.

For these reasons, EPA recommends the following language:

xx. The Department shall determine if a mixing zone is appropriate on a case-by-case basis in accordance with the provisions of this section and shall not authorize a mixing zone that is determined to be larger than is necessary. The Department shall determine if a mixing zone is needed given siting, technological, and managerial options.

IV. Bioaccumulative Pollutants – 010.xx. and 060.01.d.iii.

EPA agrees with DEQ that there could be unreasonable interference from mixing zones that allow the bioaccumulation of certain pollutants (DEQ 2014). In the proposed rule, DEQ defines bioaccumulation using thresholds for the bioaccumulation and bioconcentration factors and provides an example of unreasonable interference for bioaccumulation of pollutants.

010. Definitions

XX. Bioaccumulative Pollutants. A compound with a bioaccumulation factor of greater than one thousand (1,000) or a bioconcentration factor of greater than three hundred (300).

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060.01

d. Mixing zones, individually or in combination with other mixing zones, shall not cause unreasonable interference with, or danger to, beneficial uses. Unreasonable interference with, or danger to, beneficial uses includes, but is not limited to, the following:
(x-xx-15)

iii. Bioaccumulation of pollutants (as defined in Section 010) resulting in tissue levels in aquatic organisms higher than the applicable water column criteria would predict.

In our previous comments, EPA recommended DEQ explain the basis of the thresholds so stakeholders could provide more informed comments about this rule provision (EPA July 2014). DEQ responded that it “is currently reviewing literature sources and other arenas for more details about what is considered an appropriate threshold for defining bioaccumulation.” (DEQ 2014) EPA recommends that in response to this comment DEQ provide the basis for the selected bioaccumulation pollutant thresholds, and particularly if the thresholds should be revised based on new information.

As stated in our previous comments, EPA recommends a thorough description, in rule or guidance, of how DEQ will implement this rule provision. In particular, EPA concerns include: impacts that may extend beyond the boundaries of a given mixing zone with resulting impairment of a water body’s beneficial uses, particularly where stationary species or life stages are present; where uncertainties exist regarding the assimilative capacity of a water body; or where bioaccumulation in the food chain is known to be a problem. EPA’s concerns also extend to wildlife in addition to aquatic life. Further, EPA recommends the guidance address sediment contamination as well as water column toxicity. As noted in our previous comments, the effects of persistent and bioaccumulative pollutants may not be detected for some distance from the point of discharge, well outside the mixing zone, or possibly not in the water column at all. (EPA July 2014)

V. Unreasonable Interference Attraction Behavior – 060.01.d.xx.

In previous comments, EPA recommended adding a separate provision for attraction behavior (EPA June, July 2014). DEQ responded that it “believes that all possible avenues of unreasonable interference that could occur because of attraction to the mixing zone are covered under other provisions of section 060.01.d unreasonable interferences.” (DEQ 2014)

In reviewing section 060.01.d, EPA believes several of the attraction behavior cases have been addressed. However, we continue to have concerns regarding attraction behavior due to organic material that could be a food source for aquatic life or wildlife. The EPA Handbook recommends for wastewater plumes that tend to attract aquatic life the incorporation of measures to reduce the toxicity (e.g., via pretreatment, dilution) to minimize lethality or any irreversible toxic effects on aquatic life (<http://water.epa.gov/scitech/swguidance/standards/handbook/>). In particular, the attraction can cause aquatic life and wildlife to hang around longer within a mixing zone and consequently, be exposed to higher concentrations of pollutants for longer periods of time. For example, this situation has been a concern in Alaska near seafood processing plant discharges. EPA continues to recommend DEQ address this type of attraction behavior in the rule provision.

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VI. Threatened and Endangered Species and Critical Habitat

In previous comments, EPA raised concerns and provided recommendations regarding how the Idaho Mixing Zone Rule may address threatened and endangered species and critical habitat for such species (EPA May, June, July 2014).

The proposed rule has removed all references to ESA listed species and critical habitat. DEQ responded that it “believes that protecting aquatic life beneficial uses inherently includes all aquatic organisms, including those listed as endangered or threatened.” Additionally, the agency stated concerns that adding ESA language might suggest that “DEQ is required to perform analysis similar to that done by the Services for Section 7 of the ESA.” The agency noted that “DEQ does not have the authority or the expertise to implement provisions of the ESA” (DEQ 2014).

EPA agrees with the general premise that protection of aquatic life beneficial uses includes the protection of all aquatic organisms, such as ESA listed species. However, EPA believes it is important for the rule language to specifically reference protections for ESA listed species to make it clear that DEQ has the authority to ensure those species are protected when authorizing mixing zones. This recommendation is consistent with a number of EPA policy documents, such as EPA’s Technical Support Document for Water Quality-Based Toxics Control, EPA guidance on mixing zones, and the Advance Notice of Proposed Rule Making (ANPRM, EPA 1998), which address the need to assess and ensure mixing zones are limited in a manner that protect ESA listed species.

In addition, EPA is not recommending that DEQ revise the rule so that ESA Section 7 federal procedural requirements would be binding on the State. EPA is aware of other states that include reference to specific protections for ESA listed species in their water quality regulations and develop or follow state coordination procedures and processes to implement such provisions.

EPA recommends the following rule provision to ensure mixing zones are established in a manner that protects ESA listed species:

060.01.xx. Mixing zones shall be sized, configured and located to avoid or minimize adverse effects to ESA-listed species and critical habitat designated for those species.

VII. Mixing Zone Restrictions - 060.01.h.

EPA previously recommended clarification that the restrictions described in Subsection 060.0.h. are not the default starting points for the mixing zone size (EPA June, July 2014). We contended the wording in Subsection 060.01.i. could imply that if a demonstration is not done to justify either a smaller or larger mixing zone, then a mixing zone at the 25% thresholds presented in Subsection 060.01.h. would likely be authorized.

It is our understanding in DEQ’s response that the rule does not preclude the agency from determining that a smaller mixing zone may be appropriate or even not necessary “...given site-

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specific conditions and analyses, including modifications or upgrades to treatment” (DEQ 2014). Further, it is our understanding based on DEQ’s response that the restrictions described in Subsection 060.0.h. will not be used as default starting points for the mixing zone size. EPA continues to recommend DEQ ensure the rule provision clearly allows the agency to expand on details in guidance and fully implement the rule’s intent as described in the *Negotiated Rule Summary* (DEQ 2014).

VIII. Nonflowing Waters – 060.01.h.ii.

EPA remains concerned that the “nonflowing waters” provisions only address new discharges (EPA July 2014). In DEQ’s response, the agency stated that “As existing dischargers to non-flowing waters renew permits, the size and necessity of the mixing zone can be re-examined to determine if it complies with the draft Section 060.01.d” (DEQ 2014). This could be interpreted to mean that there are no longer any numeric size restrictions for mixing zones for existing discharges to nonflowing waters.

Therefore, EPA continues to strongly recommend that the proposed size and location restrictions for mixing zones in nonflowing waters apply to all discharges (new and existing), except for the requirement to use diffusers. At a minimum, EPA strongly recommends DEQ grandfather existing dischargers to lakes and reservoirs such that subsequent evaluations of whether mixing zones are appropriate and needed will be done within the existing, not to exceed, size restrictions for mixing zones in such waters.

ii. For all ~~new~~ discharges to nonflowing waters ~~authorized after July 1, 2015:~~

(1) The size of the mixing zone is not to exceed five percent (5%) of the total open surface area of the water body or one hundred (100) meters from the point of discharge, whichever is smaller;

(2) Shore-hugging plumes are not allowed; ~~and~~

iii. For all new discharges to nonflowing waters authorized after July 1, 2015:

(1) Diffusers shall be used.

IX. Outfall Design Shore Hugging Plumes – 060.01.j.ii.

EPA appreciates the addition of “other aquatic life” to the rule language and strongly supports DEQ plans to provide more information regarding shore-hugging plumes in guidance. However, the potential impacts of shore-hugging plumes are not limited to aquatic life, wildlife can be impacted as well (EPA June, July 2014). Furthermore, in addition to being a source of food and cover for aquatic life, shorelines can provide other features, such as spawning habitat.

As mentioned in our previous comments, often, shoreline plumes do not mix as well with receiving water and, therefore, do not dilute as well as plumes located away from the shoreline. Therefore, shore-hugging plumes could result in pockets of poorly mixed effluent along the

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shoreline, potentially causing adverse impacts to aquatic life and/or human health. For these reasons, shore-hugging plumes can present cases where a mixing zone may need to be very restrictive or prohibited.

Therefore, we strongly recommend these considerations be addressed in the rule with additional clarification in guidance, if necessary, to prevent confusion concerning enforceable requirements.

X. Points of Compliance as Alternatives to Mixing Zones - 060.02.

Although points of compliance are referred to as alternatives to mixing zones, EPA believes they are functionally the same as mixing zones because they authorize dilution of a discharge in the receiving water and define areas where certain water quality criteria are allowed to be exceeded. Therefore, EPA continues to recommend revisions to ensure consistent implementation and protection of beneficial uses (EPA July 2014).

Specifically, EPA recommends DEQ clarify that the points of compliance shall be appropriately located to minimize localized impacts. EPA believes that the narrative criteria in Subsections 200.03 and 200.05, and the considerations for impaired waters at 060.01.a., should be applicable to the points of compliance concept, in addition to Subsection 060.01.d. Where appropriate, DEQ could further clarify the implementation of points of compliance in guidance.

02. Points of Compliance as Alternatives to Mixing Zones. Specification of mixing zones for some 404 dredge and fill activities, stormwater, and nonpoint source discharges may not be practicable due to the generally intermittent and diffuse nature of these discharges. Rather, the Department may allow limited dilution of the discharge by establishing points for monitoring compliance with ambient water quality criteria. These alternatives to a mixing zone are still subject to requirements outlined in Subsections 060.01.a., 060.01.d., 200.03 and 200.05, and shall be appropriately located to the discharge so as to minimize localized impacts.

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Citations

DEQ. (2014) Negotiated Rulemaking Summary Idaho Code § 67-5220(3)(f). Idaho Department of Environmental Quality Water Quality Standards, 58.01.02 Docket No. 58-0102-1401. August 28, 2014.

DEQ. (2009) Response to Comments: Idaho Mixing Zone Implementation Guidance. Idaho Department of Environmental Quality. December 2009.

U.S. Environmental Protection Agency. (July 2014) EPA comments on Idaho Mixing Zone Rule Draft v. 4. July 28, 2014.

U.S. Environmental Protection Agency. (June 2014) EPA comments on Idaho Mixing Zone Rule Draft v.2 Sections 060.01 (d), (h), (i), and (j). June 27, 2014

U.S. Environmental Protection Agency. (May 2014) EPA comments on Idaho Mixing Zone Rule Draft Sections 060.01 (b), (e), (f), and (h). May 21, 2014

U.S. Environmental Protection Agency. Water Quality Standards Handbook, www.epa.gov/wqshandbook

U.S. Environmental Protection Agency. (2011) 40 CFR 132.2 Water Quality Guidance for the Great Lakes System. <http://www.gpo.gov>

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U.S. Environmental Protection Agency. (1991) Technical Support Document for Water Quality-based Toxics Control. EPA/505/2-90-001, March 1991.
http://water.epa.gov/scitech/swguidance/standards/handbook/upload/2002_10_25_npdes_pubs_0wm0264.pdf