



Idaho Department of
Environmental Quality

RESPONSE TO COMMENTS: IDAHO MIXING ZONE IMPLEMENTATION GUIDANCE



December 2009

1.0 RESPONSE TO COMMENTS

From August 20, 2008 through December 6, 2008, nine individuals submitted written comments to DEQ on behalf of themselves, industries, municipalities, environmental groups, or governmental agencies. The commenters included:

- Association of Idaho Cities (AIC)
- City of Nampa (Nampa)
- City of Twin Falls (TF)
- Idaho Association of Commerce and Industry (IACI)
- Idaho Conservation League (ICL)
- Idaho Mining Association (IMA)
- MixZon, Inc.
- Simplot
- U.S. Environmental Protection Agency (EPA)

DEQ extracted verbatim excerpts from the comments documents and grouped them according to the applicable Draft TPM section. Comments that were general in nature (rather than directed at a specific section of the document) were grouped together and are presented in Section 1.A below. Comments applicable to Sections 1 of the Draft TPM are presented in Section 1.B below. Comments applicable to the mixing zone rules, mixing zone approval process, and monitoring are summarized in Sections 1.C, 1.D, and 1.E, respectively. Sections 1.F and 1.G address comments regarding the incomplete versus complete mixing and the mixing zone determinations/water quality modeling sections of the Draft TPM. Section 1.H addresses comments concerning the Draft TPM glossary, Section 1.I deals with comments regarding the mixing zone request form, and Section 1.J. deals with the mixing zone modeling case study comments.

1.1 General Comments

Comment 1-1 (IMA)

There does not appear to be any legitimate justification for the Draft Mixing Zone Technical Procedures Manual (TPM). Has DEQ's prior mixing zone determinations caused unreasonable interference to beneficial uses in the past? If not, IMA is concerned about the TPM going forward in its current form. We are particularly concerned how EPA or third parties might use the TPM to limit DEQ's historical flexibility in making mixing zone decisions. That would result in shrinking or eliminating mixing zones in the future. Further, will EPA take the position that they must approve the TPM as part of the agency's review of Idaho Water Quality Standards? Absent clear answers to these questions, IMA questions the need for the Manual.

Response 1-1:

This guidance document is intended to clarify what constitutes an appropriate biological, chemical, and physical appraisal. Such an appraisal is required prior to DEQ authorizing a mixing zone. DEQ is preparing this document in order to ensure that mixing zones are authorized in a consistent manner across the state and that such authorizations are defensible in the event of an environmental lawsuit. In addition, the implementation of DEQ's mixing zone policy is a significant issue in the ongoing Endangered Species Act (ESA) consultations on Idaho's toxic criteria. The TPM will be expected to alleviate some of the federal agency concerns over Idaho's adoption of the toxics criteria.

This guidance document does not limit DEQ's flexibility or authority in mixing zone authorizations nor does it intend to eliminate mixing zones in the future. It merely provides a framework for conducting mixing zone evaluations and ensuring authorized mixing zones will not unreasonably interfere with the beneficial use of the water body as a whole. Implementation of this guidance document may result in smaller or

larger mixing zones. The TPM will enable DEQ to more effectively and consistently authorize mixing zones and will increase the predictability of mixing zone authorizations.

The mixing zone policy in Idaho's water quality standards (WQS) is already approved by EPA, and DEQ is not proposing new mixing zone rules at this time. As such, DEQ sees no reason for EPA to assert that it must review and approve of our guidance document. To date, EPA has not indicated that they believe approval of this document is a necessary part of its review of Idaho WQS.

Comment 1-2 (IMA)

The TPM imposes many additional obligations and incorporates many new standards beyond what is authorized under DEQ current mixing zone rule at IDAPA 58.01.02.060. For example, the TPM stipulates that mixing zones must be "as small as possible" and that mixing zones should only be authorized when achieving water quality criteria at the end of the pipe is "technologically and economically infeasible." There is no such authorization for this requirement under Idaho Rules, Idaho statutes or the federal Clean Water Act. Further, the TPM stipulates that narrative criteria must be met within the mixing zone. Similarly, there is much discussion in the TPM regarding banning or limiting mixing zones for pollutants that allegedly bioaccumulate, allegedly impact fish passage and that allegedly cause fish avoidance along with proposed standards. There are no such requirements in DEQ rules.

Response 1-2:

The TPM is guidance, and as such, does not impose new standards beyond what is currently in rule. The Clean Water Act and its implementing regulations allow states a great deal of flexibility in the development of mixing zone policies. DEQ has capitalized on this flexibility in the development of a mixing zone evaluation process that is protective of the beneficial uses of the receiving water body while allowing for some consideration of dilution in the receiving water body.

DEQ has removed the "as small as possible" and "technologically and economically infeasible" concepts (see response to comment 3-2) and has clarified that DEQ may consider dilution when evaluating compliance with numeric interpretations of narrative criteria. The TPM provides examples of what DEQ considers to be unreasonable interference with or danger to existing beneficial uses. In these examples, it would be necessary for DEQ to deny or limit the size of a mixing zone. Please see response to comment 3-2.

Comment 1-3 (IMA)

Under the Clean Water Act, its implementing rules and cases interpreting the Act, it is clear that mixing zone decisions are solely state decisions. Numerous parts of the TPM cite an EPA Guidance document on mixing zones and then uses EPA Guidance as basis to impose new standards and requirements under IDAPA 58.01.02.060. See TPM at Sections 1.2, 2.2.3, 2.35 and 2.5.1. If DEQ wishes to rely upon EPA Guidance documents to impose obligations on Idaho discharges, it must go through rulemaking to incorporate such requirements. IMA is concerned that the TPM's significant reliance upon EPA Guidance documents will turn a state mixing zone decision into an EPA decision. Further, many sections of the TPM describes EPA involvement in state mixing zone decisions that appear inappropriate. Illustrative of this point is the stipulation in Section 2.4 that EPA must approve chemical analysis proposed to support a mixing zone; in Section 2.8.1 that EPA must determine when de minimis mixing zones are authorized; and, in Section 3 which generally describes EPA role in mixing zone determinations. IMA believes that mixing zone decisions are to be made by DEQ based on Idaho rules.

Response 1-3:

We agree that mixing zones are a state decision. In the development of the TPM, DEQ compiled information from other state and federal documents and incorporated information that the agency believed was important and necessary for the implementation of Idaho's mixing zone policy. The TPM provides guidance on how DEQ will make mixing zone decisions and how DEQ will conduct necessary coordination with EPA, the permitting authority in Idaho. As the permitting authority, EPA is responsible for conducting reasonable potential analyses as well as establishing effluent limitations. Mixing zones authorized by DEQ are incorporated into EPA's evaluation; thus, it is imperative that EPA and DEQ concur on the data used. Furthermore, while Idaho is the lead authority in authorizing mixing zones, it is

in the TCMC report were derived from scientific studies that tested various species (e.g. rainbow trout, cutthroat trout, and whitefish). As such, the thresholds could be used for mixing zone evaluations across the state, absent additional research by the discharger.

Comment 3-58 (AIC):

Page 2-13. Specify whether the principle of 25% stream width for zone of passage would also satisfy the requirement to not elicit an avoidance response. Satisfying the zone of passage should not require a separate analysis of avoidance behavior unless justified by DEQ.

Response 3-58:

The concern with avoidance of a discharge plume is its potential impediment to passage, so the zone of passage analysis is the same as the avoidance analysis. While the principal of 25% of stream width is based upon limiting interference with fish passage, there is no a priori assurance it will. However, DEQ believes that in some instances (such as minor dischargers with large dilution factors in areas where no sensitive or threatened/endangered species occur) it is acceptable to presume that mixing zones utilizing 25% or less of the stream width and volume would allow an adequate zone of passage for fish. Yet in some instances, more detailed evaluations (modeling the concentration isopleths within the stream channel in conjunction with an evaluation of water depth and velocity) will be required.

Comment 3-59 (AIC):

Page 2-13, Table 3. Please clarify how DEQ intends to apply concentrations listed in Table 3 that are higher than background levels.

Response 3-59:

The TPM is not meant to cover all possible scenarios in great detail; however, the document has been revised to indicate that site specific information may be used to determine alternative avoidance thresholds.

Comment 3-60 (ICL):

Page 2-14. The document states "The applicant for a mixing zone **may be required** to provide documentation that the pollutants discharged do not have the potential to interfere with present or future salmonid spawning, incubation, or rearing activities in the vicinity of the proposed mixing zone." (emphasis added) DEQ needs to be clearer and state than an applicant "needs to provide" this documentation.

Response 3-60:

DEQ has revised the sentence to state that when a discharge is located near spawning habitat, the discharger needs to evaluate and document the potential for the discharge to interfere with spawning, rearing, or incubation activities in the water body. If DEQ deems the potential to be unreasonable, they will work with the discharger to relocate or reconfigure the diffuser to reduce the interference.

Comment 3-61 (Simplot):

Page 2-14. The following statement appears to be "declarative" as having the same force and effect as a rule:

- *In order for a mixing zone to be allowed in any spawning area, the applicant must demonstrate that (1) there will be no adverse impact to spawning salmonids, salmonid eggs, or alevins within the mixing zone when the discharge will occur, and (2) that the discharge will not adversely affect the capability of the area to support ongoing and future spawning, incubation, and rearing activities. Whether or not the mixing zone is to be authorized during fish spawning seasons should be carefully investigated."*

This language is not in the rule. The rule does not state that there must be no adverse impact for a mixing zone to be granted in regards to salmonid spawning. Salmonid spawning is a beneficial use that needs to be evaluated, but as stated in earlier comments, the standard is **unreasonable interference with or danger to**