

**Department of Environmental Quality  
Water Quality Standards, 58.01.02  
Docket No. 58-0102-1401**

**Negotiated Rulemaking Summary  
Idaho Code § 67-5220(3)(f)**

This rulemaking was initiated to update DEQ's Mixing Zone Policy in the Water Quality Standards to take into account modern tools for evaluating mixing, lessons learned from years of implementation, and to provide greater clarity for DEQ and the regulated community.

Key information considered by DEQ was provided by the public during the negotiated rulemaking process. Members of the public participated in the negotiated rulemaking process by attending the meetings and by submitting written comments. All comments received during the negotiated rulemaking process were considered by DEQ when making decisions that resulted in drafting the rule.

The negotiated rule drafts contain revisions made based on meeting discussions and written comments submitted. At the conclusion of the negotiated rulemaking process, DEQ formatted the final rule draft for publication as a proposed rule in the Idaho Administrative Bulletin. The negotiated rulemaking record, which includes the negotiated rule drafts, written public comments received, and documents distributed during the negotiated rulemaking process, is available at [www.deq.idaho.gov/58-0102-1401](http://www.deq.idaho.gov/58-0102-1401).

Written comments were accepted on drafts of the rule after each of the three negotiated rulemaking meetings. These comments were addressed at subsequent meetings and changes to the draft language were made in consideration of the comments received. However, some issues remain unresolved. In general these unresolved issues fall into the following categories:

1. How Endangered Species Act (ESA) listed species are taken into account,
2. Definitions (thermal shock and zone of initial dilution),
3. Determining the necessity, size and location of the mixing zone,
4. Application of narrative criteria, and
5. Items included as unreasonable interferences, specifically bioaccumulation and attraction to the mixing zone.

Issue #1 - ESA listed species:

During the course of the negotiated rulemakings, issues regarding protection of ESA listed species and their critical habitat were raised. Representatives from Idaho Conservation League (ICL), EPA, NOAA National Marine Fisheries Service (NMFS), Fish and Wildlife Service (FWS) all questioned the impact this mixing zone policy would have on threatened and endangered species. It was noted that not specifically calling out ESA listed species within the rule may impact the decision of NOAA and FWS when this rule is submitted to them for consultation. Representatives from Idaho Association of Commerce and Industry (IACI), Clearwater Paper, and Idaho Water Users pointed out that inclusion of reference to the ESA might require DEQ to attempt analysis similar to that done by NMFS and FWS when determining if jeopardy to a listed species or adverse modification to critical habitat is occurring. During the course of the negotiated rulemaking meetings language specifically identifying ESA listed species was added and subsequently moved to different sections of the rule.

ICL, EPA, NMFS, FWS, Clearwater Paper, and Simplot all submitted written comments regarding the addition of language specifically calling out endangered species protections when evaluating a mixing zone. Upon final consideration of all comments submitted, DEQ believes that protecting aquatic life beneficial uses inherently includes all aquatic organisms, including those listed as endangered or threatened. Additionally, adding language in the mixing zone policy that refers to "adverse modification", "critical habitat", or ESA listed species may suggest that DEQ is required to perform analysis similar to that done by the Services for Section 7 of the ESA. DEQ does not have the authority or the expertise to implement provisions of the ESA. For these reasons, DEQ determined to remove all references to ESA listed species and critical habitat.

DEQ did choose to add language to section 060.01.d.i specifically identifying "*any life stage of fish or other aquatic life*" as recommended by EPA to address concerns expressed that only fish were being considered during an evaluation of the mixing zone.

Issue #2 - Definitions (thermal shock, and zone of initial dilution):

Written comments regarding DEQ's addition of a definition of thermal shock were received from EPA. DEQ does not believe that the suggested changes add clarity to the rule language.

Regarding the zone of initial dilution, comments were received about the definition and application under section 060.01.d (unreasonable interference). Suggestions for changing the definition were proposed and where they added clarity to the definition DEQ accepted those changes. Comments submitted by ICL question the appropriateness of a zone of initial dilution where acute water quality criteria may be exceeded. DEQ argues that the zone of initial dilution is an area of reduced size (as compared to the overall mixing zone) where the concentration(s) of the pollutant(s) may exceed the acute water quality criteria. However, this does not mean that organisms drifting through this zone will suffer immediate and lethal effects. Acute criteria are calculated to avoid lethality and are composed of three things; frequency, duration, and magnitude. Therefore, even though the concentration within the zone may be greater than the magnitude of the criteria; the duration and frequency components within the definition of zone of initial dilution ensure that unreasonable interference to beneficial uses or lethality does not occur.

Issue #3 - Determining the necessity, size, and location of the mixing zone:

The Mixing Zone Policy considered by the negotiated rulemaking group provided that DEQ shall not authorize a mixing zone that is determined to be larger than is necessary. Several participants commented that the rule should require that an applicant for a mixing zone provide, in every instance, written documentation that justifies the size mixing zone requested. For example, EPA commented that the rule should require the submission of an analysis that demonstrates a mixing zone is needed given siting, technological, and managerial options.

DEQ has retained in the rule the requirement that a mixing zone not be larger than necessary. DEQ does not believe, however, that a person requesting a mixing zone must in every case submit documentation justifying the mixing zone, and therefore, did not include the language suggested by EPA. ICL and EPA also requested that clarification of the phrase "larger than necessary" be added to the draft rule. This phrase, for the purposes of this section and for the authorization of mixing zones, means that if DEQ determines a discharger only needs a 5% mixing zone in order to meet criteria, then DEQ will authorize only the 5% and not some larger size mixing zone. This section does not preclude DEQ from determining that a mixing zone is not necessary at all given site-specific conditions and analyses, including modifications or upgrades to treatment. While both ICL and EPA requested further clarification of this phrase in rule, DEQ's believes that this clarification is more suited to a guidance document where it may be more fully described.

DEQ did respond to the comments regarding showing that a mixing zone is necessary by modifying the draft rule language to include an analysis regarding need of the type suggested by EPA and others for mixing zone requests that were larger than the 25% stream width and volume limits identified in Section 060.01.h. DEQ believes that in these cases the analyses is warranted in every case to ensure that a full review of the necessity of a larger mixing zone is done to protect beneficial uses.

Other concerns regarding the size and location of the mixing zone were raised, particularly in response to DEQs addition of size restrictions in non-flowing waters. In consideration of the written comments received from ICL and EPA regarding non-flowing waters, DEQ added a definition of mean detention time. DEQ did not accept the suggested change from EPA regarding Section 060.01.h.ii. DEQ believes that the size restrictions in non-flowing waters would be most appropriate for dischargers to those waters whose facilities are constructed after the effective date of the rule. Current dischargers to non-flowing waters have already developed facility plans and treatment options and are operating within the constraints of DEQ's current mixing zone policy which limits the mixing zone to no greater than 10% of the surface area of the lake. 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.

Issue #4 - Application of narrative criteria:

EPA commented during negotiated rulemaking and in written comments recommendations that DEQ include reference to the narrative standard 200.03 for deleterious materials to address taste and odor considerations. DEQ disagrees that this addition to the already referenced section 200.05 Floating, Suspended or Submerged Matter adds clarity or improves the effectiveness of the rule. Taste and odor considerations would more likely be addressed by the language in 200.05 which state that surface waters shall be free from “floating, suspended or submerged **matter of any kind** in concentrations causing nuisance or **objectionable condition** or that may impair designated beneficial uses” (emphasis added). DEQ believes the additional language is unnecessary and it has not been added to the draft rule.

Issue #5 - Unreasonable interferences, specifically bioaccumulation and attraction to the mixing zone.

The issue of bioaccumulation was raised several times throughout the course of the negotiated rulemaking meetings. DEQ contends that bioaccumulation of certain pollutants in fish should be considered an unreasonable interference since it will impact human health in a negative manner for those choosing to catch and consume fish which have spent time in contact with those bioaccumulative pollutants. The majority of the comments focus on DEQ defining what is meant by bioaccumulation. DEQ attempted to define bioaccumulation in terms of setting a reasonable threshold for the bioaccumulation factor. More information has been requested on this and DEQ is currently reviewing literature sources and other arenas for more details about what is considered an appropriate threshold for defining bioaccumulation. After consideration of the comments received, DEQ added language that specifies two threshold values for determining bioaccumulation; a bioaccumulation factor greater than 1000 or a bioconcentration factor greater than 300. DEQ has determined that the draft rule language as written is broad enough to address these concerns and will allow DEQ, where appropriate, to consider the bioaccumulative nature of the discharge.

The proposed rule does not imply that DEQ will undertake additional calculations to derive a different criterion for a specific bioaccumulative pollutant present in the discharge, or that DEQ will require the discharger to collect fish tissue data. DEQ does however believe that bioaccumulative pollutants should be scrutinized more rigorously than some other pollutants. In particular, DEQ recognizes that bioaccumulation is already taken into account in the derivation of human health criteria, and that excessive bioaccumulation that would cause problems is indicated when measurements of a bioaccumulative substance in fish tissue or other aquatic life show greater bioaccumulation is occurring. DEQ intends to incorporate these concepts in its mixing zone guidance.

In addition to bioaccumulation, EPA continues to stress that a provision for attraction to the mixing zone as an unreasonable interference is appropriate. DEQ 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. EPA speaks specifically of the impacts to nonmotile and sessile organisms from authorized mixing zones. DEQ added, in section 060.01.d.i, “injury to attached aquatic life” as an example of unreasonable interference with or danger to uses. DEQ believes this language helps to address EPA’s concern with nonmotile organisms.

The attached table provides specific written comments received by DEQ that do not necessarily fit into the previous categories and DEQ’s response.

Proposed Rule Section	Commenter/ Comment	Response
<p><b>060.01.a</b></p>	<p><b>EPA</b>  EPA believes that mixing zones in impaired waters should receive greater scrutiny. Any effluent limit must be derived from and ensure compliance with State water quality standards, including the State’s mixing zone policy (40 C.F.R.§122.44(d)(1)). Ultimately, the burden is on the permitting authority to comply with water quality standards.</p> <p>While EPA understands DEQ’ s need for flexibility, we are concerned that the rule language below is too encompassing and would not provide the agency with the ability to appropriately restrict the mixing zone, or ensure that the balance of loading from all sources would achieve water quality standards when mixing zones are allowed. For this reason, we recommend removing the general, catch-all phrases.</p> <p>a. Mixing zones shall not be authorized for a given pollutant when the receiving water does not meet water quality criteria for that pollutant; provided, however, the Department may authorize a mixing zone when the permitted discharge <del>meets</del> <u>is consistent with</u> an approved TMDL <u>wasteload</u> allocation or <u>similar allocation in an approved</u> <del>other applicable plans or analyses; such as 4b plans, watershed loading analyses, or facility specific water quality analyses;</del> that demonstrate that authorizing a mixing zone is consistent with achieving compliance with water quality standards in the receiving water. (x-xx-15)</p>	<p>DEQ has accepted some, but not all, of EPA’s suggested language in this section. DEQ did not remove the “general, catch-all phrases” as recommended by EPA because DEQ 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.</p>
	<p><b>ICL</b>  We support the provision that states that mixing zones shall not be authorized for a given pollutant when the receiving water does not meet water quality standards for that pollutant.</p> <p>We do not object to the portion of this section’s language that states that a mixing zone may be authorized for a given pollutant when the receiving water does not meet water quality standards for that pollutant if that discharge is consistent with a TMDL wasteload allocation. However, we oppose the notion that some other</p>	<p>As noted in the response to EPA’s comment above, DEQ believes there are instances, other than when there is a TMDL allocation, in which the agency may allow a mixing zone in an impaired water. DEQ will only allow mixing zones in impaired waters when there is a demonstration that doing so is still consistent with restoring compliance with water quality</p>

	<p>‘applicable plans or analyses’ should be allowed to justify a mixing zone as a substitute for a TMDL wasteload allocation. TMDL WLAs go through a defined, rigorous development process that includes public comment and EPA approval. These ‘other’ plans and analyses do not necessarily receive the same scrutiny and effort and thus should not be held up as equal.</p> <p>The above statements notwithstanding, we think that DEQ should seek to make its mixing zone policy implementation consistent with its antidegradation implementation. To this end, mixing zones should not be authorized for any pollutants when a receiving water is not in compliance for any pollutant; even if the pollutant in the discharge is different than the pollutant that is exceeding water quality criteria.</p> <p>DEQ’s antidegradation policy adheres to a ‘waterbody by waterbody’ approach. However, DEQ’s mixing zone policy seeks to take advantage of a ‘pollutant by pollutant’ approach. This inconsistency needs to be resolved to ensure constant water quality protection.</p>	<p>standards. Mixing zones are granted on a case-by-case basis via the 401 certification process and are thus, subject to public comment. Any analysis that DEQ accepts as a justification for a mixing zone in an impaired water body will be made available to the public as part of the 401 certification and permitting process.</p>
<p><b>060.01.d</b></p>	<p><b>EPA</b>  EPA also recommends DEQ clarify its interpretation of “beneficial uses” in response to comment, rule and guidance, and consistently use this terminology throughout. Some rule sections may use “existing,” and in others “designated,” and still others just “beneficial uses.” Presently, it’s not clear that Idaho’s definitions of designated and existing uses are included in the beneficial uses definition at 010.08. This inconsistency could result in different interpretations regarding the scope of the mixing zone rule as well as other rules.</p>	<p>To clarify, the general term “beneficial uses” is all-encompassing (includes the more specific “designated uses” and “existing uses” terms). The intent of using the more general term is to be less verbose in this, and other subsections, of the rule.</p>
<p><b>060.01.d.</b> <b>ii</b></p>	<p><b>Clearwater Paper</b>  The language is unclear. Since the term "cold water refugia" is not defined or referenced in Idaho rules, we recommend this term be defined or deleted from the Rule.</p>	<p>“Cold water refugia” is a term which is very commonly used in aquatic ecology to describe areas within a stream which are persistently cooler than adjacent areas – such as deep pools, overhanging vegetation and undercut banks – which provide respite to aquatic organisms from warmer temperatures (either natural or anthropogenic) which may interfere with their physiological processes.</p>

		DEQ does not believe this term needs to be defined or otherwise removed from the rule.
<b>060.01.d. vi</b>	<b>Clearwater Paper</b> The language is unclear. Use of the undefined terms of "impede" and "recreation" makes this section ambiguous and unclear. What activities are covered by the term "recreation"? When would a mixing zone "impede" recreation?	According to IDAPA 58.01.02.100.02, recreation can be split into two categories: primary and secondary contact recreation. Primary contact recreation includes activities in which ingestion of untreated surface water is <i>likely</i> to occur, such as: swimming, water skiing and skin diving; while secondary contact recreation includes activities in which ingestion of untreated surface water is <i>unlikely</i> to occur, such as: fishing, boating and wading. A mixing zone may impede (hinder, or interfere with) recreational activities if coming into contact with the water within the mixing zone causes an inability to safely and/or enjoyably recreate for any number of reasons including, but not limited to: becoming sick from accidental ingestion, developing a rash, causing aquatic macrophyte growth which limits one's ability to swim, boat or fish, etc.
<b>060.01.g</b>	<b>ICL</b> This section prohibits overlapping mixing zones for independent activities. We believe that this section should be strengthened by providing some minimum distance between two such mixing zones. This minimum distance between mixing zones will lessen the impact on aquatic life and will also ensure that the mixing zones do not inadvertently overlap as stream channel morphology, flow volume and stream temperature change.	DEQ believes the issue of overlapping mixing zones has already been adequately addressed in other sections of the rule, such as 060.01.d, in which DEQ added that mixing zones, <i>individually or in combination with other mixing zones</i> , shall not cause unreasonable interference with, or danger to, beneficial uses.”.
<b>060.01.h. ii.3</b>	<b>ICL</b> DEQ should state what the intent of using a diffuser is – this way DEQ can be sure that the diffuser is designed to achieve the desired effect.	Diffusers are used to encourage rapid and complete mixing. Additional discussion on the use of diffusers will be provided in guidance.

<p><b>060.01.j.i</b></p>	<p><b>EPA</b>  EPA reiterates concerns regarding shore-hugging plumes and recommends that DEQ revise the current provision to address other aquatic life, in addition to migrating fish, and to address wildlife. EPA recommends a broader provision.  ii. Avoid shore-hugging plumes in those water bodies where the littoral zone is a major supply of food, <del>and cover,</del> <u>or other critical habitat features</u> for migrating fish, <u>other aquatic life, or wildlife,</u> or where recreational activities are impacted by the plume.</p>	<p>Additional information regarding shore-hugging plumes will be detailed in guidance. DEQ added EPA’s recommended “other aquatic life” language to this section.</p>
<p><b>060.02</b></p>	<p><b>ITD</b>  In Drafts 1-3, DEQ Mixing Zone policy 060.02 was written for Nonpoint Source Discharges and to allow for the establishment of compliance point monitoring. Currently, DEQ's §401 certification of General NPDES Permits and U.S. Army Corps of Engineer §404 permits incorporate compliance point monitoring requirements consistent with this section which ITD believes is being inappropriately applied since they are not nonpoint actual sources.</p> <p>Draft 4 removed the nonpoint source language which ITD agrees with, but still allows for no mixing zone consideration for stormwater and 404 activities/discharges. While DEQ may not be able to formally incorporate mixing zones into NPDES General Permits or §404 permits, ITD believes there is significant room to incorporate more flexibility in compliance point sampling based on site specific information. Allowing more flexibility in this area based on the limited duration, intensity, and frequency of turbidity releases under these permits would have substantial fiscal impact to ITD contracts and allow more funds to be spend on Idaho's infrastructure and less on water quality monitoring that has little short or long term benefit to the resource.</p> <p>ITD applauds the recognition by DEQ that points of compliance be considered for discharges of this nature. But the language is very vague as written. ITD suggests consideration of the some or all of the following language.</p> <p>Add a section 02.a. for discharges covered under General Permits or Individual §404 Permits  02.a The Department recognizes that discharges covered under General Permits or Individual §404 Permits are generally intermittent and diffuse,</p>	<p>DEQ agrees that 404 dredge and fill activities and storm water discharges are not nonpoint source discharges. DEQ has modified the language in this section to be clear that this section addresses <i>both</i> nonpoint source discharges and 404 and storm water permitted discharges.</p> <p>Thank you for your comment regarding the need for a consistent approach to determining points of compliance for ITD projects. Given the inherent variability of project types and the water bodies receiving dischargers from the types of activities ITD conducts, it is not feasible to establish, in rule, such specific guidelines. DEQ believes it is best to continue conditioning these types of discharges on a case-by-case basis through the regulatory permitting and certification process.</p>

	<p>and are often necessary to accommodate important economic and social development. The Department reserves the right to determine whether a project has economic and social development value and may determine mixing zone allowances or compliance points for sampling accordingly. A short-term and temporary reduction in water quality may occur without long term adverse changes to water quality and without violating Tier 2 protections.</p> <p>If implementation of permit provisions and appropriate Best Management Practices cannot prevent a brief exceedance at the point of discharge or immediately down-current of the project disturbance, the Department reserves the right to consider alternative compliance points for monitoring compliance with ambient water quality standards based on some or all of the following project specific conditions:</p> <ul style="list-style-type: none"><li>I. Pollutants generated by the anticipated discharge</li><li>II. Whether receiving water designated and existing beneficial uses according the Integrated Report will be maintained and protected as a whole</li><li>III. Anticipated background water quality, taking into account seasonal variation, at the time of the anticipated discharge</li><li>IV. Anticipated flow rates of the receiving water at the time of the discharge</li><li>V. Nature; scope, and scale of the activity generating the anticipated discharge</li><li>VI. Location of discharge relative to drinking water wells or drinking water intakes</li></ul>	
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