



NATIONAL COUNCIL FOR AIR AND STREAM IMPROVEMENT, INC.  
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Paula Wilson  
Idaho Department of Environmental Quality  
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RE: Water Quality: Docket No. 58-0102-1401 - Proposed Rule  
Rulemaking initiated to update DEQ's Mixing Zone Policy  
in the Water Quality Standards

The National Council for Air and Stream Improvement, Inc. (NCASI) is an independent, nonprofit membership organization that provides technical support to the forest products industry on a wide range of environmental issues. An important part of our mission is to ensure that regulatory decision making is based on sound science. In this capacity, NCASI reviewed the Proposed Rule Rulemaking initiated to update DEQ's Mixing Zone Policy in the Water Quality Standards, and offers the following comments.

NCASI is concerned that the proposed language for denying the use of a mixing zone for bioaccumulative pollutants could result in denial of a mixing zone under conditions when a beneficial use may in fact not be jeopardized. Conversely, the proposed language could result in allowance of a mixing zone when a designated use would in fact be jeopardized. There are several reasons for this.

- 1. The definition of a bioaccumulative pollutant is inconsistent with EPA guidance.**  
IDEQ's proposed rule defines a "bioaccumulative pollutant" as "a compound with a bioaccumulation factor of greater than one thousand (1000) or a bioconcentration factor of greater than three hundred (300)." The basis for these thresholds is not given and is inconsistent with EPA guidance which considers a chemical to be bioaccumulative if its bioconcentration factor (BCF) is greater than or equal to 1000 (USEPA Toxic Substances Control Act). IDEQ should provide some justification for using a different value if bioaccumulation is addressed in this rulemaking.
- 2. Available bioaccumulation factors are unlikely to be representative of Idaho waters.**  
Bioaccumulation of any chemical is a phenomenon specific to each water body and is a function of the numbers and types of organisms present and their relationships in the food

web. Ideally, Idaho would develop a set of bioaccumulation factors (BAFs) for each waterbody that could be used to develop water quality criteria (WQC). To our knowledge Idaho has not developed BAFs for state waters. Due to resource constraints most states simply adopt the BAFs (or bioconcentration factors, BCFs, that are currently used in lieu of BAFs) recommended by EPA.

EPA recently developed an update to their recommended WQC for the protection of human health (HHWQC), including new BAF values for each chemical. These BAFs were developed using a mathematical model calibrated on data from a specific food web, that of the Great Lakes. The model EPA used was designed as a screening tool to rank the bioaccumulation potential of chemicals. Thus, these proposed recommended BAFs provide at best a gross estimate of bioaccumulation, and as such are not likely to accurately represent any specific water body outside of the Great Lakes. For a variety of reasons related to the unique nature of Great Lakes food webs, it is likely that these BAFs over-predict bioaccumulation potential for most waters.

3. **The rule provides no guidance on monitoring to assess bioaccumulation.** For example, for which organisms would tissue residue-equivalent concentrations have to exceed a water quality criterion? Aquatic life criteria are typically based on toxicity to specific organisms, so these would need to be specified in the rule language or other guidance. For water quality criteria for the protection of human health, species consumed by humans would be of sole interest. These need to be defined. How many organisms would be required to constitute a sample of sufficient size? What percentage of the organisms tested would have to exceed a criterion? The proposed language fails to address any of these important issues and creates a situation where a mixing zone could be allowed or denied based on erroneous, incomplete or inappropriate data.

In summary, the proposed language regarding bioaccumulative pollutants could lead to poorly informed decisions that may adversely affect both NPDES permit holders and ambient water quality, and should therefore be deleted from the proposed rule.

Sincerely,



Steve Stratton  
West Coast Regional Manager, NCASI

cc: Marv Lewallen, Clearwater Paper  
Christian McCabe, Northwest Pulp & Paper Association  
Paul Wiegand, NCASI