



Policy 1-11 Public Dialogue
Listings based on Human Health Criteria
December 2016
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Key Issues	Ecology Thinking
<p>Are tissues from fish and shellfish appropriate for use with the Water Quality Assessment? Are they inconsistent with the Administrative Procedures Act? Should the use of tissue be continued or discontinued?</p>	<p>Tissue concentrations (apart from the new methylmercury criterion) are not direct water quality numeric criteria, thus cannot be used to measure compliance with the numeric human health <i>criteria</i> found in WAC 173-201A-240(5) and 40 CFR 131. Tissue concentrations can, however, be used in part to determine if narrative water quality standards found at WAC 173-201A-240(1), 260 and 300, are being met.</p> <p>Ecology has used resident fish tissue in listing decisions for several listing cycles, in accordance with Policy 1-11. This was done using a fish tissue equivalent concentration (FTEC) to back-calculate to surface water concentrations using bioconcentration factors (BCF) that were used to derive the human health criteria in the National Toxics Rule.</p> <p>Ecology considers pollutant concentrations in tissues to be an important factor to measure how well the designated use of “harvest” in the Water Quality Standards is being maintained. Other waterbody-specific factors that could also be considered, or used in conjunction with tissue, include the presence or absence of harvestable fish or shellfish and presence of a fish advisory issued by the Washington Department of Health.</p> <p>Ecology maintains that tissue should continue to be used in the assessment process, but how tissue is used is part of the public discussion around revision of Policy 1-11.</p>
<p>Should Ecology adopt fish tissue concentration criteria through rule-making and/or adopt a means for establishing narrative criteria based on tissue concentrations?</p>	<p>Ecology does not believe it is practical or necessary to adopt numeric tissue concentrations into rule. The current narrative criteria, as written, can be used to address the uses associated with human health protection.</p>

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<p>How many tissue values are sufficient for use as the sole basis of a category 5 listing?</p>	<p>Now that the state has new human health criteria, based on different assumptions about consumption and the species that are consumed, it is reasonable to reassess the current approach (one composite tissue sample of at least 3 individuals, or, an average of the three highest individual tissue sample values from a waterbody) used in listing waters as impaired based on tissue. That reassessment includes discussion on how tissue samples would be used to place a waterbody in Category 5.</p>
<p>Clarify the procedures used to list and delist waters based on use of tissues.</p>	<p>Policy 1-11 revisions will address both how waters are listed and delisted for the human health criteria and the related uses. Ecology's goal is to have a transparent process as the Policy is revised. Through this process we intend to provide our rationale and clarify how different media and accompanying data could be used, including the uncertainties and assumptions embedded in the use of tissue.</p>
<p>Does tissue have too many uncertainties and assumptions embedded in its use to be a reliable tool in the assessment?.</p>	<p>Ecology considers tissue to be a reliable tool for water quality assessment and has used tissue since the 1996 list. However, using tissue to make impairment decisions for a waterbody requires consideration of several factors that will be discussed in more detail. Ecology's goal is to have a transparent process as Policy 1-11 is revised, and to provide rationale and clarification on how different media and accompanying data could be used, including the uncertainties and assumptions embedded in them.</p>
<p>Should sample data from anadromous fish be used in the assessment?</p>	<p>Ecology uses data in the assessment that are representative of the site where the data are collected from. The Water Quality Data Act (2004; codified in RCW 90.48.570 through 90.48.590) requires that Ecology use credible data where the "samples or measurements are representative of water quality conditions at the time the data were collected" (RCW 90.48.585(1)(b)). Because anadromous fish can pick up pollutants far from the waterbody in which they are sampled, there is low confidence that they represent water quality conditions at the time or location of sampling. The majority of the toxics sampling for the Water Quality Assessment comes from the Department of Ecology and our monitoring program is focused on resident fish because of some of these uncertainties.</p> <p>To date, Ecology has used only resident tissue data to represent the water quality conditions at the sampling location. At present Ecology is inclined to continue using local data (i.e. resident fish and shellfish only) to represent local water quality conditions at the time and place data are collected.</p>

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<p>Use of FTECs alone is a narrow interpretation of Washington's narrative toxics criteria for protection of designated uses - fish advisories and impacts to wildlife also should be used under the narrative criteria.</p>	<p>The narrative toxics criterion can be used to address any existing and designated uses to which toxics are relevant. However, in the current Policy 1-11 review, Ecology is focusing on the designated uses of harvest, drinking water, and aquatic life. Ecology is considering use of fish advisories as one type of information that could be used in a multiple-lines-of-evidence approach to assess the harvest use.</p>