

## **Fish Consumption as a Driver of Risk-Management Decisions and Human Health–Based Water Quality Criteria**

N Judd<sup>1</sup>, Y Lowney<sup>2</sup>, P Anderson<sup>3</sup>, S Baird<sup>4</sup>, SM Bay<sup>5</sup>, J Breidt<sup>6</sup>, M Buonanduci<sup>3</sup>, Z Dong<sup>7</sup>, D Essig<sup>8</sup>, MR Garry<sup>9</sup>, RC Jim<sup>10</sup>, G Kirkwood<sup>4</sup>, S Moore<sup>5</sup>, C Niemi<sup>11</sup>, R O'Rourke<sup>12</sup>, B Ruffle<sup>4</sup>, LA Schaider<sup>7</sup> and DE Vidal-Dorsch<sup>5</sup>

<sup>1</sup>*Windward Environmental, Seattle, Washington, USA*

<sup>2</sup>*Exponent, Boulder, Colorado, USA*

<sup>3</sup>*ARCADIS, Chelmsford, Massachusetts, USA*

<sup>4</sup>*AECOM, Chelmsford, Massachusetts, USA*

<sup>5</sup>*Southern California Coastal Water Research Project, Costa Mesa, California, USA*

<sup>6</sup>*Department of Statistics, Colorado State University, Fort Collins, Colorado, USA*

<sup>7</sup>*Harvard T.H. Chan School of Public Health, Boston, Massachusetts, USA*

<sup>8</sup>*Idaho Department of Environmental Quality, Boise, Idaho, USA*

<sup>9</sup>*Exponent, Bellevue, Washington, USA*

<sup>10</sup>*L.E.A.D. Agency, Miami, Oklahoma, USA*

<sup>11</sup>*Washington State Department of Ecology, Lacey, Washington, USA*

<sup>12</sup>*Port Gamble S'Klallam Tribe, Kingston, Washington, USA*

### **ABSTRACT**

The use and interpretation of fish consumption surveys and interviews, the application of fish consumption rates for sediment evaluation and cleanup, and the development of human health water quality criteria (HH WQC) are complex and interrelated issues. The present article focuses on these issues using examples from the United States, although the issues may be relevant for other countries. Some key considerations include the fact that there are many types of fish consumption surveys (e.g., 24-h recall surveys, food frequency questionnaires, creel surveys), and these surveys have different advantages and limitations. Identification of target populations for protection, identification of the species and quantities of fish consumed, and determination of bioaccumulation assumptions are important factors when developing water quality and sediment screening levels and standards. Accounting for the cultural importance of fish consumption for some populations is an even more complex element. Discussions about HH WQC often focus only on the fish consumption rate and may not have broad public input. Some states are trying to change this through extensive public participation efforts and use of probabilistic approaches to derive HH WQC. Finally, there are limits to what WQC can achieve. Solutions beyond the establishment of WQC that target toxics reduction from other sources may provide the greatest improvements to water quality and reductions in human health risks in the future.

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